

# **QUARTERLY ACTIVITIES REPORT**

# Quarter Ended 30 September 2023

**Siren Gold Limited** (ASX: **SNG**) (**Siren** or the **Company**) is pleased to provide the following summary of its activities for the three months ended 30 September 2023

# Highlights

- A maiden Auld Creek Mineral Resource Estimate (MRE) of 132koz @ 7.1g/t AuEq, containing 66koz @ 3.5g/t Au and 8,700t of antimony @ 1.5% Sb.
- The MRE comprises the **Fraternal Shoot only** and is based on existing surface trenches and drillholes, extending to approximately 175m below the surface.
- The Fraternal Shoot remains open at depth, with three other additional shoots identified at Auld Creek (Fraternal North, Bonanza and Bonanza East Shoots).
- The MRE includes the following significant intersections:
  - 35.0m @ 4.1g/t Au, 2.9% Sb or 35.0m @ 11.0g/t AuEq,
  - o 6.0m @ 4.1g/t Au, 4.1% Sb or 6.0m @ 13.8g/t AuEq,
  - 34.0m @ 1.6g/t Au, 0.7% Sb or 34.0.0m @ 3.3g/t AuEq, and
  - o 20.7m @ 5.9g/t Au, 2.6% Sb or 20.7m @ 12.0g/t AuEq.
- Siren's Reefton Mineral Resource estimate now stands at 444koz of gold and 8.7kt of Sb for 511koz @ 4.4 g/t AuEq.
- Siren's Global Mineral Resource estimate now stands at **1.27Moz of gold and 8.7kt of Sb for 1.33Moz @ 3.3** g/t AuEq (100% basis).
- Drilling recommenced at the end of September, with the initial drill program targeting the Bonanza East Shoot at Auld Creek.

# Background

Siren is a New Zealand focussed gold explorer, with two key projects in the upper South Island at **Reefton** (Reefton and Lyell goldfields) and **Sams Creek** (Figure 1).

Western New Zealand was originally part of Gondwana and lay adjacent to eastern Australia until around 80 million 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. The Eastern Takaka

#### **Registered Address**

Siren Gold Limited Level 2 41 Ord Street West Perth WA 6005

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

#### t: +61 8 6458 4200 e: admin@sirengold.com.au w: sirengold.com.au

#### Corporate

Brian Rodan Managing Director Paul Angus Technical Director Keith Murray Non-Executive Director Victor Rajasooriar Non-Executive Director Sebastian Andre Company Secretary

#### Projects

Sams Creek Project Reefton Project

#### **Capital Structure**

Shares: 158,951,804 Options: 9,293,262



and Eastern Lachlan belts host porphyry-Au and porphyry copper-gold deposits, like Cadia and Ridgeway, respectively.

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 and stibnite associated gold, which is very similar to the Reefton and Lyell mineralisation.

Siren holds a large (1,000km<sup>2</sup>), strategic package of tenements in the Reefton, Lyell and Sams Creek goldfields (Figures 20 and 21 and Annexure 1).

Siren's Global Mineral Resource Estimate now stands at **1.27Moz of gold and 8.7kt of antimony for 1.33Moz @ 3.3 g/t AuEq** (100% basis) at a 1.5g/t cut-off.

Project	Status	Cut-off g/t	Tonnes Mt	Au g/t	Sb %	Ounces koz	Sb kt	AuEq g/t	AuEq koz
Reefton	Inferred	1.5*	3.53	3.81	1.5	444.2	8.7	4.40 <sup>1</sup>	510.8 <sup>1</sup>
Sams Creek <sup>2</sup>	Indicated and Inferred	1.5	9.10	2.82		824.4		2.82	824.4
Total	Inferred	1.5	12.63	3.10		1,268.6	8.7	3.26	1,335.2

#### Table 1. Reefton and Sams Creek MRE's (100% basis)

<sup>1</sup>Based on gold equivalent formula of AuEq = Au g/t + 2.36 x Sb% using a gold price of US\$1,750/oz & antimony price of US\$13,000 per tonne

<sup>2</sup>Siren owns 81.2% of the Sams Creek Project.

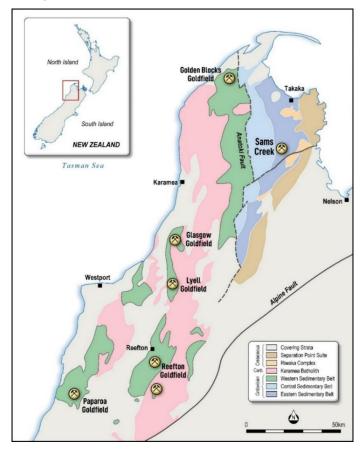


Figure 1. Simplified geology plan of the Upper South Island, New Zealand.



# **Reefton Gold Project**

The Reefton Goldfield was discovered in 1866 and produced ~**2Moz** 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.

OceanaGold Limited (OGL) developed an open pit on the historic Globe Progress mine between 2007 and 2015. OGL recovered an additional 700koz at around 2g/t Au, increasing total hard rock production to around **2.7Moz @ 12g/t Au**.

Federation Mining Limited (FML) a privately owned company, is currently developing the Snowy River Mine on the Birthday Reef (Figure 2), which historically produced 740koz of gold at an average recovered grade of 14.2g/t. FML plan to mine the Birthday Reef below the historic mine, with an estimated production of 700koz. FML have developed twin 3.2km declines and are currently resource drilling from underground, with the aim of producing around 70koz of gold per annum for 10 years from the end of 2024.

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.

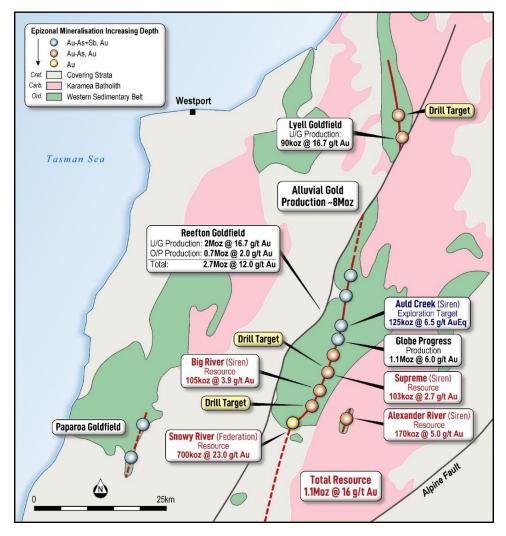


Figure 2. Simplified geology plan of the Reefton and Lyell Goldfields.



## **Auld Creek**

The Auld Creek Prospect is contained within Siren's Golden Point exploration permit and is situated between the highly productive Globe Progress mine, which historically produced **418koz @ 12.2g/t** Au, and the Crushington group of mines that produced **515koz @ 16.3g/t Au**.

More recently OGL mined an open pit and extracted an additional 600koz of gold from lower grade remnant mineralisation around the historic Globe Progress mine.

Collectively these mines produced 1.6Moz at 10g/t Au.

The Auld Creek Prospect represents high-grade **gold-antimony (Sb)** mineralisation that was potentially offset to the west, along NE-SE trending faults between Globe Progress and Crushington.

Siren has acquired the Cumberland exploration permit that was part of the Globe Progress mining permit.

Siren now holds the ground immediately to the north (Auld Creek) and south (Cumberland) of the Globe Progress mine.

The gold-antimony mineralisation extends from Auld Creek south through Globe Progress and the Cumberland prospects (Figure 3) and on to Big River, **a strike length of 12kms,** with **9kms** in Siren's permits and the remaining **3kms** in the Globe Progress reserve area.

The Globe Progress mineralisation extends for over 200m vertically below the bottom of the open pit before it was offset by the Chemist Shop Fault (CSF). The offset mineralisation on the other side of the CSF has not been found.

Soil sampling and trenching at Auld Creek has defined an arsenic soil anomaly over 700m along strike and clearly defines the **Fraternal** and **Bonanza** mineralisation (Figure 3). The Fraternal zone has been subdivided into the Fraternal and Fraternal North zones and Bonanza into the Bonanza and Bonanza East zones. The Fraternal and the Bonanza reefs dip steeply to the west, and the Bonanza East reef dips to the east and appears to link the two west dipping reefs (Figure 3).



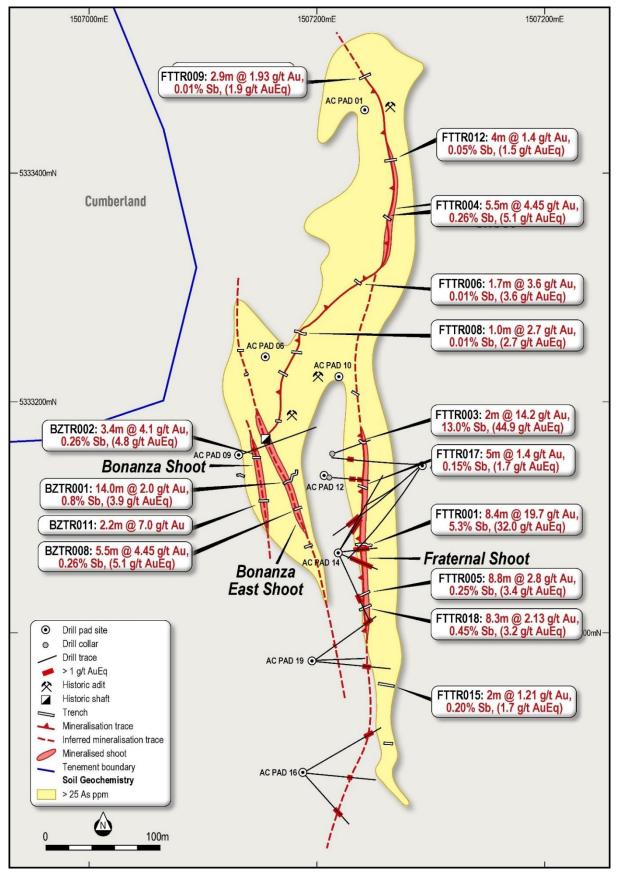


Figure 3. Auld Creek trench plan.



Trench ID	Mineralised Zone	From	То	Interval (m)	True Width (m)	Au g/t	Sb %	AuEq g/t¹
FTTR001	Fraternal	3.5	11.9	8.4	8.4	19.7	5.3	32.0
FTTR002	Fraternal	0.0	1.5	1.5	1.5	17.1	9.0	38.3
FTTR003	Fraternal	3.0	5.0	2.0	2.0	14.2	13.0	44.9
FTTR004	Fraternal North	1.3	6.8	5.5	5.5	4.45	0.26	5.1
FTTR005	Fraternal	1.0	9.8	8.8	8.5	2.82	0.26	3.4
FTTR006	Fraternal North	1.9	3.6	1.7	1.7	3.61	0.01	3.6
FTTR018	Fraternal	2.2	10.5	8.3	8.3	2.13	0.45	3.2
BZTR001	Bonanza East	2.5	16.5	14.0	14.0	2.0	0.82	3.9
including		10.5	16.5	6.0	6.0	2.5	1.55	6.2
BZTR002	Bonanza	0.0	3.4	3.4	3.4	4.1	0.26	4.8
BZTR008	Bonanza East	1.0	7.0	6.0	6.0	4.5	0.26	5.1
BZTR011	Bonanza	1.4	3.6	2.2	2.2	7.0	0.00	7.0

Table 2. Significant Auld Creek trench intercepts.

<sup>1</sup> Based on gold equivalent formula of AuEq = Au g/t + 2.36 x Sb%.

#### Fraternal

To date the drilling at Auld Creek has focussed on the Fraternal mineralisation with 14 diamond holes completed, with 8 holes defining the interpreted Fraternal Shoot (Figure 4 and Table 3). This shoot is interpreted to extend along strike for around 150-200m and plunge approximately 45° to the south. Drilling to date has intersected the shoot to 175m below the surface (Figure 6).

Previously reported **Fraternal** diamond drilling downhole intercepts include:

- o 35.0m @ 4.1g/t Au, 2.9% Sb or 35.0m @ 11.0g/t AuEq (RDD087),
- o 6.0m @ 4.1g/t Au, 4.1% Sb or 6.0m @13.8g/t AuEq (RDD086),
- o 34.0m @ 1.6/t Au, 0.7% Sb or 34.0m @ 3.3g/t AuEq (RDD085),
- o 20.7m @ 5.9g/t Au, 2.6% Sb or 20.7m @ 12.0g/t AuEq (ACDDH004), and
- 17.9m @ 2.3g/t Au, 0.1% Sb or **17.9m @ 2.6g/t AuEq** (ACDDH005).

Siren has completed the maiden Auld Creek MRE for the Fraternal Shoot based on an underground mining scenario (see ASX Announcement dated 21 August 2023).

The Inferred MRE includes 66koz at 3.5g/t Au and 8.7kt at 1.5% Sb for 132koz of AuEq at 7.1g/t AuEq at a 1.5g/t AuEq cut-off (Table 4). An image of the AuEq block model is shown in Figure 7.

Four diamond holes are planned to test the mineralisation a further 100m down plunge (Figure 7).



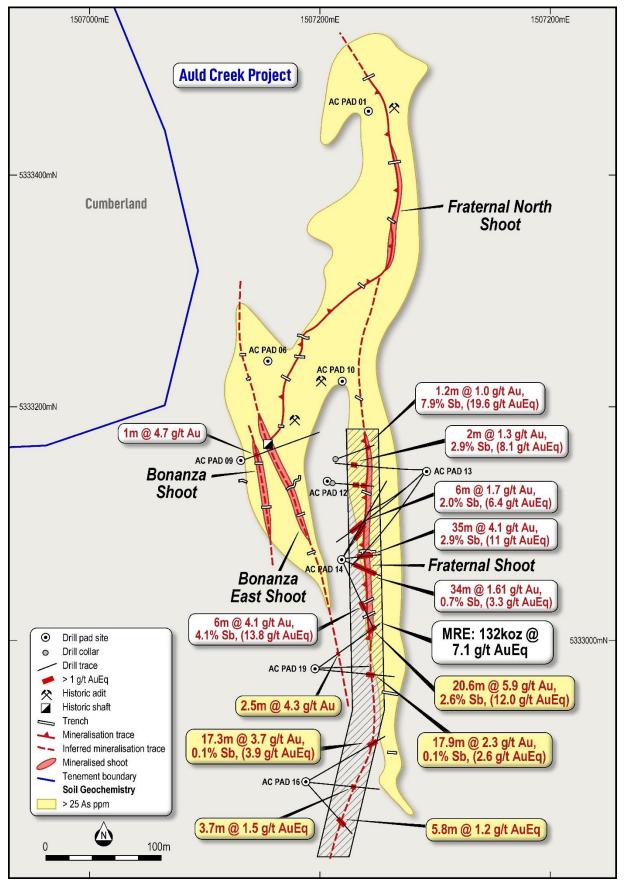


Figure 4. Auld Creek drillhole plan showing downhole intersections.



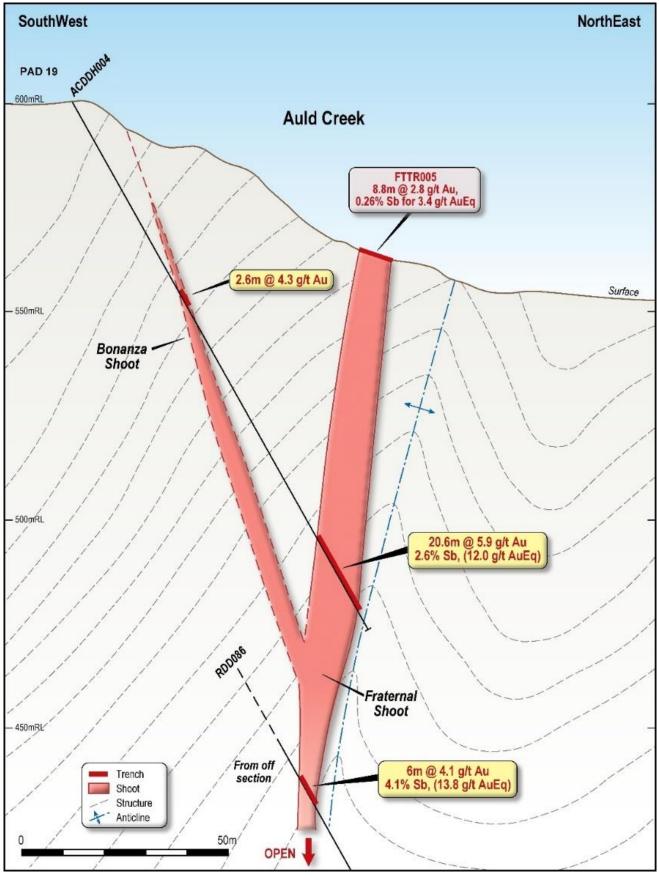


Figure 5. Auld Creek schematic cross section ACDDH004.



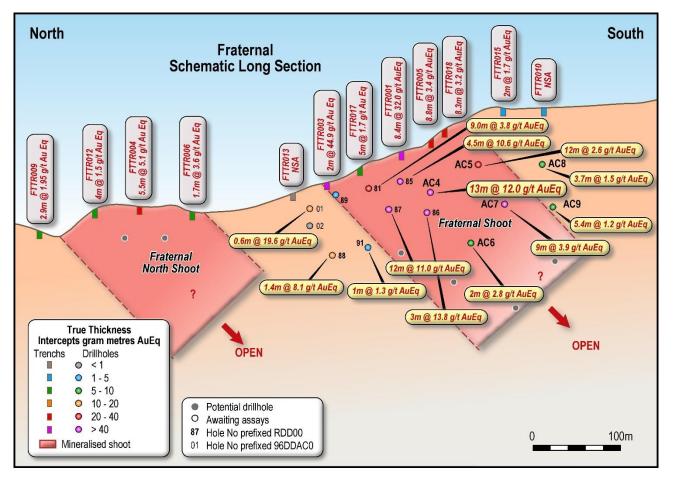


Figure 6. Fraternal N-S schematic long section showing true width intersections.

Hole ID	Mineralised Zone	From	То	Interval (m)	True Width (m) <sup>1</sup>	Au g/t	Sb %	AuEq g/t²
96DDAC001	Fraternal	51.9	53.1	1.2	0.6	1.0	7.9	19.6
RDD0081	Fraternal	45.0	51.0	6.0	3.0	1.7	2.0	6.4
	Fraternal	57.0	67.0	11.0	6.0	2.2	0.1	2.5
RDD0081a	Fraternal	57.0	67.0	10.0	5.5	1.7	0.1	1.9
RDD0085	Fraternal	30.0	64.0	34.0	20.5	1.6	0.7	3.3
Incl		30.0	37.0	7.0	4.5	3.0	3.2	10.6
Incl		43.0	51.0	8.0	5.2	2.6	0.2	3.0
Incl		59.0	64.0	5.0	3.4	1.6	0.0	1.7
RDD0086	Fraternal	90.0	96.0	6.0	3.0	4.1	4.1	13.8

#### Table 3. Significant Fraternal drillhole intercepts.



Hole ID	Mineralised Zone	From	То	Interval (m)	True Width (m) <sup>1</sup>	Au g/t	Sb %	AuEq g/t²
RDD0087	Fraternal	63.0	98.0	35.0	12.0	4.1	2.9	11.0
Incl		63.0	81.0	18.0	5.5	5.7	4.8	17.1
RDD0088	Fraternal	125.0	127.0	2.0	1.4	1.3	2.9	8.1
ACDDH004	Bonanza East	53.3	55.9	2.6	2.0	4.3	0.0	4.3
ACDDH004	Fraternal	116.2	136.8	20.6	13.0	5.9	2.6	12.0
Incl		116.2	120.8	4.6	3.0	10.7	3.9	19.9
ACDDH005	Fraternal	59.4	77.3	17.9	12.0	2.3	0.1	2.6
Incl		59.4	63.3	3.9	2.6	3.3	0.1	3.6
Incl		67.3	77.3	10.0	6.7	2.8	0.1	3.1
ACDDH006	Fraternal	147.5	156.1	8.6	4.0	1.3	0.2	1.7
Incl		147.5	150.4	3.1	2.0	1.7	0.5	2.8
ACDDH007	Fraternal	124.0	150.5	26.5	15.0	2.7	0.07	2.9
Incl		133.0	150.5	17.5	9.0	3.7	0.1	3.9
Incl		142.0	148.5	8.5	4.5	6.7	0.0	6.7
Incl		142.0	148.5	6.5	3.7	8.5	0.0	8.5
ACDDH008	Fraternal	72.1	76.3	4.2	4.0	1.5	0.0	1.5
ACDDH009	Fraternal	118.7	124.2	5.5	2.7	1.1	0.0	1.1

<sup>1</sup> Based on gold equivalent formula of AuEq = Au g/t + 2.36 x Sb%.

<sup>2</sup> True widths are based on a sectional interpretation of the Fraternal mineralised zone dipping steeply (~85°) to the west. This dip may vary as more data becomes available and the true widths may change.

AuEq Cut-off (g/t)	Status	Tonnes (kt)	Au (g/t)	Ounces (koz)	Sb%	Kt	AuEq g/t	AuEq¹ (koz)
0.0	Inferred	645	3.29	68.2	1.36	8.8	6.51	135.0
1.0	Inferred	636	3.32	67.9	1.38	8.8	6.58	134.7
1.5	Inferred	580	3.53	65.8	1.51	8.7	7.10	132.4

<sup>1</sup> Based on gold equivalent formula of AuEq = Au g/t + 2.36 x Sb%.



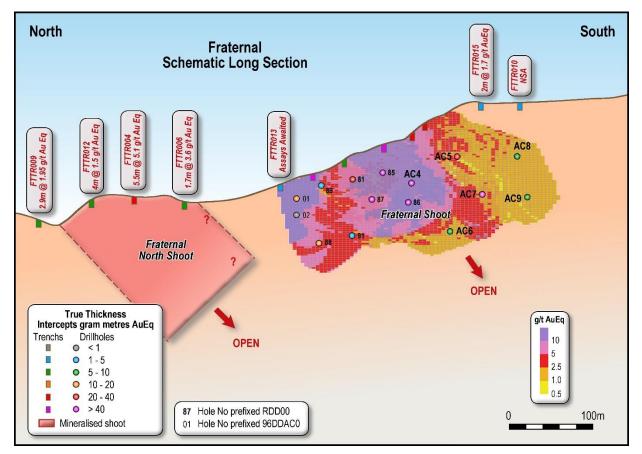


Figure 7. Long section with gold equivalent block model for the Fraternal Shoot.

#### **Fraternal North**

Fraternal North is a second potential shoot on the Fraternal shear zone. The Fraternal North Shoot is based on three trenches; **5.5m @ 5.1g/t AuEq**, 1.7m @ 3.6g/t AuEq and 4m @ 1.5g/t AuEq (Figures 3 and 6).

Two holes are planned to test the mineralisation below the Fraternal North trenches (Figure 6).

#### **Bonanza East**

The Fraternal and the Bonanza reefs dip steeply to the west, and the Bonanza East reef dips to the east and appears to link the two west dipping reefs (Figure 3).

Only one diamond hole, ACDDH004, has been drilled into the Bonanza East mineralisation. This hole intersected **2.4m @ 4.5g/t AuEq** from 53.3m, with no significant Sb (Figure 7). Based on this drillhole intersection, trenching (BZTR0001; **6m @ 6.2g/t AuEq** and BZTR008; **6m @ 5.6g/t AuEq**) and limited historic workings, the Bonanza East Shoot is interpreted to plunge to the north, with the top and bottom limits constrained by the intersection with the Fraternal and Bonanza mineralisation. Four initial drillholes are planned to test this interpretation (Figure 8), with ACDDH010 commenced at the end of the quarter.



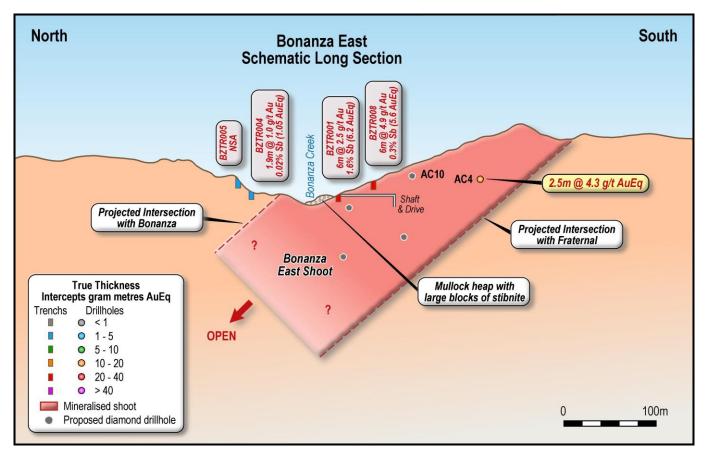


Figure 8. Bonanza East Shoot schematic long section.

#### Bonanza

The Bonanza reef was targeted by the historic explorers with a shaft and exploration drive. The reef intersected in the shaft was reported to be 2.4m thick and average 23g/t Au. Large blocks of stibnite can be found on the mullock heap, indicating that the Bonanza reef contains high-grade gold and antimony.

The Inhangahua Times reported on 13 April 1911, that the Bonanza reef was traced for 242m on surface and was up to 1.5m thick with "gold plainly seen in the stone". A 300m long tunnel was to be driven from a valley to the west, to intersect the reef around 240m below the outcrop, but was never completed.

In 1914, a drive beneath the Bonanza Shaft was revitalised and extended, returning grades up to **21.7** g/t Au.

Only one diamond hole, 96DDAC003, has been drilled into the Bonanza mineralisation, by OGL in 1996. This hole intersected 1m @ 4.7g/t Au close to the historic workings (Figure 9). Two trenches BZTR002 (**3.4m @ 4.8g/t AuEq**) and BZTR011 (**2.2m @ 7.0g/t AuEq**) indicate that the mineralisation is dipping to the west with a south plunge similar to Fraternal. Three initial drillholes are planned to test this interpretation (Figure 9).



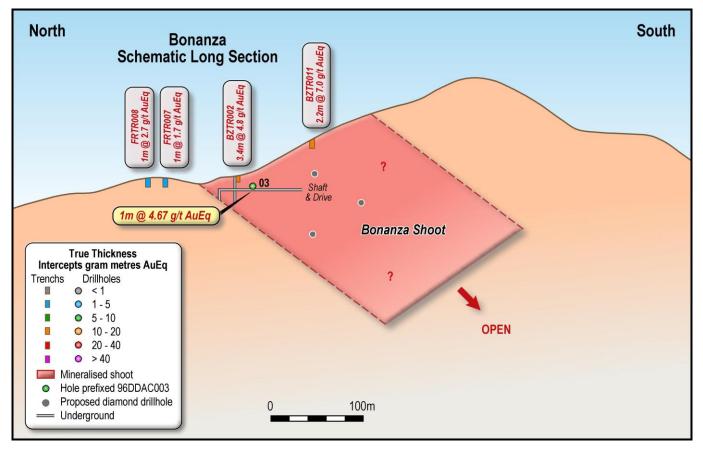


Figure 9. Bonanza Shoot schematic long section.

#### Cumberland

The Cumberland permit comprises the northern and southern areas of the previous Globe Progress mining permit, as shown in Figure 10.

The Cumberland permit joins Siren's Big River, Golden Point and Reefton South permits and abuts the Federation Mining permit, where they are currently developing the Snowy River underground mine to extract around 700koz of gold below the historic Blackwater mine.

Gold bearing reefs in the Cumberland project area were first discovered at Supreme in 1872 and mining proceeded from then until 1923 when Sir Francis Drake mine closed.

Relative to the rest of the Reefton Goldfield, the Cumberland mines were small scale and undercapitalised, with a total production of **44,626 oz** of gold from 97,993 tonnes of ore at an average grade of **14.2 g/t Au** (Table 5).

The mineralisation in the Cumberland permit lies along two mineralised trends. The easternmost trend includes the **Supreme** project, and the western trend includes the **Happy Valley Shear Zone (HVSZ)** that extends for over 3kms from OGL's Souvenir pit, south to the Al prospect (Figure 10).



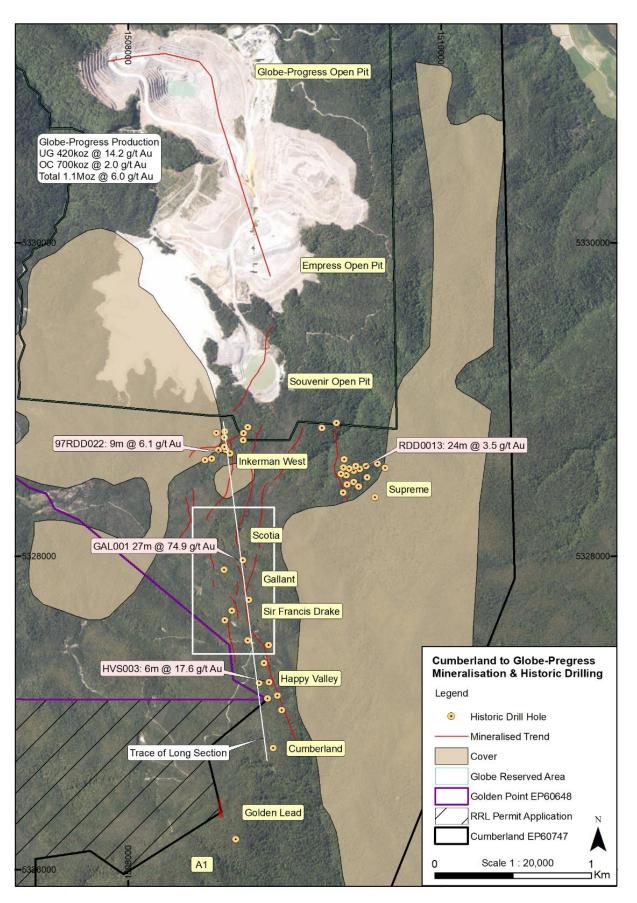


Figure 10. Cumberland Prospect.



Mine	Quartz (t)	Gold (oz)	Recovered Gold (g/t)
Supreme	22,214	5,268	7.4
Inkerman	21,020	6,102	9.0
Inkerman South	90	270	93.3
Inkerman West	7,282	6,035	25.8
Scotia	594	1,284	67.2
Gallant	2,340	759	10.1
Sir Francis Drake	16,987	5,810	10.6
Merrijigs	259	84	10.1
Cumberland	13,896	13,631	30.5
Exchange – Industry	511	259	15.8
Golden Lead – OK	11,379	2,645	7.2
A1	1,361	2,479	56.7
Total	97,993	44,626	14.2

#### Happy Valley Shear Zone

The HVSZ extends for over 3kms from the recently mined Souvenir to the A1 prospect (Figure 10). This area comprises of a number of small historic mines targeting high-grade quartz veins. Historic production was low, estimated at **27koz @ 27g/t Au**. The mineralisation is interpreted to be contained in a series of steeply south dipping shoots (Figure 11). Significant drillholes are shown in Table 6 and include;

- 27m @ 74.9g/t Au (Gallant hole GAL001),
- 9m @ 6.1g/t Au (Inkerman West hole 97RDD022),
- 3.1m @ 9.4g/t Au (Happy Valley Shear unmined hole 87DDMJ2), and
- 6m @ 17.6g/t Au (Happy Valley Shear unmined hole HSV003).



Table 6. Significant drillhole intersections in the Cumberland perm	ıit.
---	------

Hole ID	Prospect	From	То	Interval (m)	True Width (m) <sup>1</sup>	Au g/t
97RDD016	Inkerman	169.0	174.0	5.0	5.0	2.4
97RDD022	Inkerman	107.0	116.0	9.0	9.0	6.1
97RDD029	Inkerman	17.0	19.0	2.0	2.0	11.8
GAL001	Gallant	31.0	58.0	27.0	5.0	74.9
including		47.0	48.0	1.0	0.2	1,911.0
GAL002	Gallant	34.7	37.5	2.8	2.8	6.3
GAL003	Gallant	39.1	40.9	1.8	1.8	18.5
GAL004	Sir Francis Drake	207.8	211.0	3.2	3.2	4.4
96DDMJ11	Sir Francis	53.9	55.5	1.6	1.6	3.7
96DDMJ12	Sir Francis	48.0	52.9	4.9	4.9	2.0
96DDMJ13	Sir Francis	152.0	155.0	3.0	3.0	3.4
87DDMJ2	Merrijigs	38.3	47.1	3.1	2.5	9.4
HVS003	Merrijigs Shear	54.0	60.0	6.0	4.2	17.6
including		58.0	58.5	0.5	0.4	198.0
RDD0013	Supreme	37.0	47.0	10.0	10.0	3.5
		59.0	73.0	14.0	14.0	3.5
RDD0017	Supreme	26.0	40.0	14.0	11.0	3.2
RDD0018	Supreme	122.0	151.0	29.0	13.0	2.6
RDD0021	Supreme	56.0	68.0	12.0	9.5	2.3
RDD0025	Supreme	79.0	98.0	19.0	9.5	4.1

<sup>1</sup> true widths estimated based on limited sectional interpretation and may change with additional data.

Gallant contains a shear hosted, 1m-5m thick quartz veins, that extends for over 300m and dips steeply east and west. Diamond hole GLA001 was drilled to the west and appears to have drilled obliquely down a steeply west dipping reef. The hole intersected a 27m mineralised zone dominated by a quartz reef with visible gold and disseminated arsenopyrite mineralisation in the hangingwall. The true thickness of the mineralised zone is estimated to be around 5m-7m thick. The average down-hole grade of the mineralised zone was **27m @ 74.9g/t Au**, which includes **1m @ 1,911g/t Au**.

The mineralisation south of Gallant is contained in a shear zone that dips to the west. Significant drillholes include: **3.2m @ 4.4g/t Au** (GLA004), **3.1m @ 9.4g/t Au** (87DDMJ02) and **6.0m @ 17.6g/t Au** (HVS003).

The mineralisation north of Gallant is contained in a shear zone that dips to the west. Significant drillholes include: **9m @ 6.1g/t Au** (97RDD022) and **5.0 @ 2.4g/t Au** (97RDD016).

The **Inkerman** mine lies approximately 300m to the east of the West Inkerman mine. Gold mineralisation at Inkerman is primarily contained within lenticular quartz lodes with similar styles and grades to the Blackwater mine, however, there is a small halo of arsenopyrite-gold mineralisation. The reef extended for 100m on surface and was mined down to 97m below surface, with a vein thickness ranging from 0.3 to 2.1m. Drillhole 97RDD022 was drilled below the old mine workings and intersected **9m @ 6.1g/t Au** from 107m, indicating that the mineralisation **remains open at depth**.

The A1 mineralisation lies a few hundred metres to the west of the HVSZ. A mineralised zone is up to **27m wide,** containing mostly narrow quartz stockwork veinlets within a crushed sandstone unit.



Siren's initial focus has been on the 700m of mineralised strike between Scotia and Sir Francis Drake (Figure 11). This area, although directly along strike to the south of the Globe Progress mine, has received only minor historic scout drilling.

The soil geochemistry indicates the HVSZ extends at least another kilometre to the south to the end of the soil sampling area and may also be covered by coal measures (Figure 10).

LiDAR assisted field mapping, trenching, soil geochemistry and previous drilling has accurately located 2-3 parallel quartz veins within the prospect. Historic and modern surface outcrop sampling of the vein system has generally returned disappointing Au grades. Siren postulates this is due to the near-surface leaching of fracture-hosted gold. Observations from the re-logging of drillholes GAL001 and GAL002 are that approximately 90% of the visible gold in drill core is fracture hosted within quartz. In addition, two quartz samples from mine dumps returned 10.5 g/t Au and 25.3 g/t Au (Figure 11) suggesting stronger gold mineralisation below the shallow weathering profile.

Trench GTTR002, located 17m NW of the GAL001 **(27m @ 74.5g/t Au**) drill collar, has located an east dipping quartz reef (Figure 12). This 1.2m wide reef, like other surface outcrops, contains only background levels of gold, but has allowed for the accurate placement of drill sites to target the structure. A cross section interpretation through this trench and GLA001 is shown in Figure 13.

An application for twenty-five drill pads and a drill camp over the Sir Francis Drake-Gallant-Scotia prospect has been submitted to the Department of Conservation.

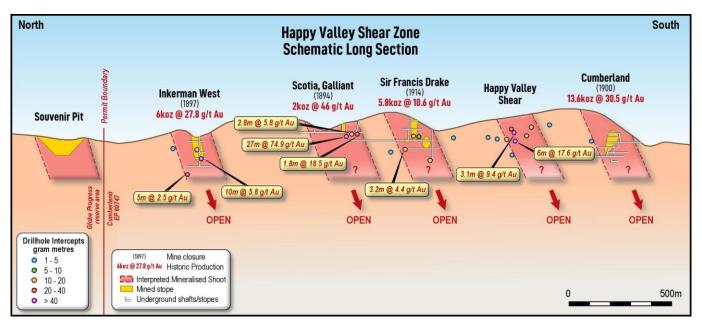


Figure 11. Happy Valley Shear Zone schematic long section

#### QUARTERLY REPORT | 31 October 2023



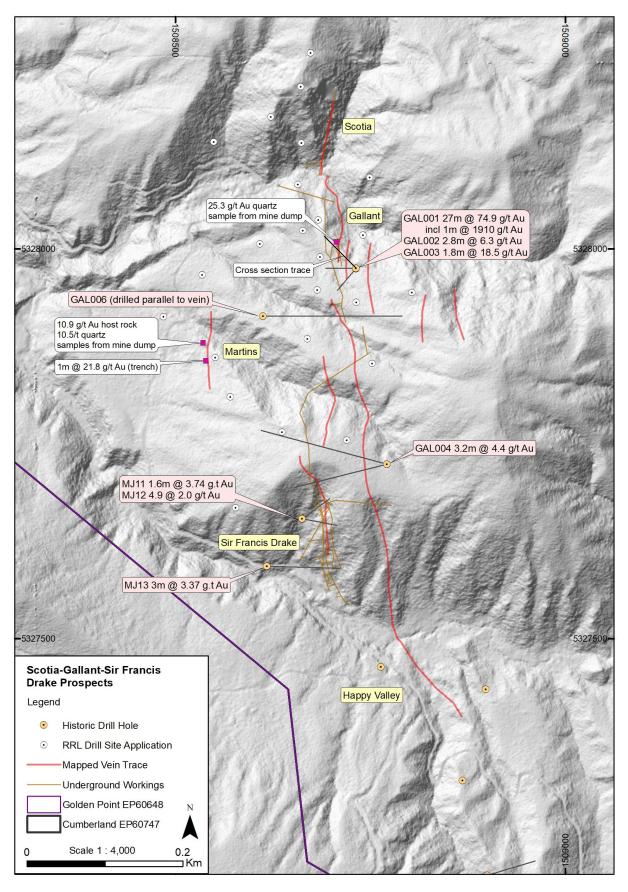


Figure 12. Northern end of the Happy Valley Shear Zone, Cumberland.





Figure 13. Quartz reef exposed in Trench GTTR002.



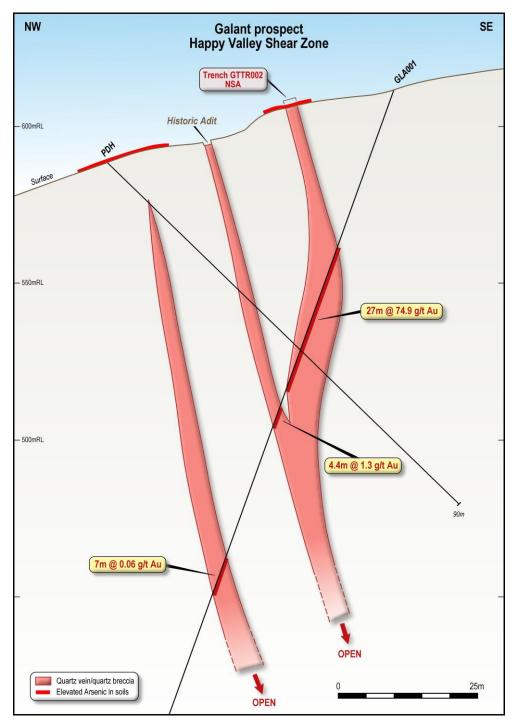


Figure 14. Cross Section through diamond hole GLA001.

# Sams Creek

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, OGL, who own the remaining 18.1% interest.



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 12). 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. Drillholes that have been drilled down the dyke are perpendicular to these veins and give the best representation of the gold grade. Diamond hole DDH84SC019 was drilled obliquely down the dyke and intersected **183m @ 2.46g/t Au** from 31m if all samples are included (Figure 21).

To date around 127 diamond holes have been drilled in this zone.

The Sams Creek MRE was completed in November 2022, with **824koz @ 2.80g/t Au** estimated at a 1.5g/t cut-off. This represents an increase of 236koz on the previous estimate, with the **grade increasing** from **2.44g/t Au to 2.80g/t Au** (+0.36g/t Au).

To date only around **15%** of the SCD has **been drill tested**. Rock chip sampling along the SCD shows that Roirdans, Western Outcrops, Doyles, Anvil West and Anvil East all have high-grade rock chips, interpreted to be associated with NE trending anticline hinges and have the potential to contain additional mineralisation. An Annual Work Program (AWP) has been lodged with the DoC to allow drilling at Doyles, Main Zone, and Anvil West later in the year.

Southern Geoscience Consultants (SGC) in Perth completed 3D inversions of the Sams Creek Magnetic/Radiometric survey in 2012. Due to the large regional gradients and prevalent remnant magnetism, both an ASVI processed dataset and a residual TMI dataset were inverted. A feature of interest that was generated in both datasets was a deep (300m+) magnetic source that is located directly down dip from the mineralised SCD (Figures 15, 17 and 18). This anomaly may represent a magmatic intrusion, which could be the source of the SCD.

At deeper levels the SCD may intersect the modelled intrusion, with a potential increase in Bi, Te, W and Mo. Wolframite (Iron-manganese-tungsten oxide) is found in association with pyrite and arsenopyrite at 463.7m in DDHSC069. The wolframite occurs in relatively large grains (up to 1 mm). Wolframite is generally found as an early high-temperature, near-source mineral in granite-associated mineralised systems. Its presence indicates enrichment in tungsten in the hydrothermal fluids and suggests that scheelite may also be present at Sams Creek (Braithwaite 2012). A molybdenite-mineralised granodiorite porphyry associated with a Cu skarn is located at Copperstain Creek 30kms to the NNW of Sams Creek (Wodzicki, 1972) and could be a correlative of the Sams Creek intrusion.



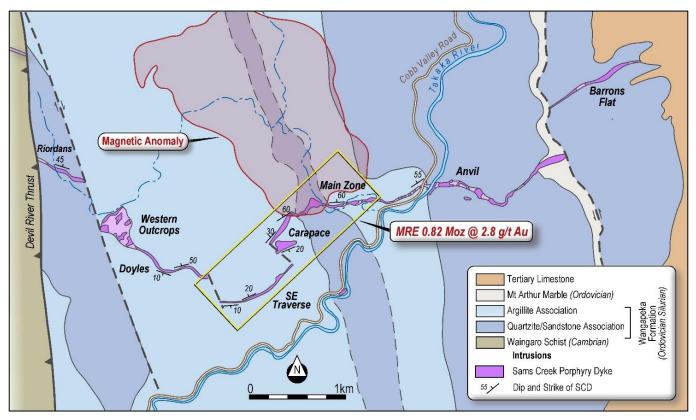


Figure 15. Plan view from Doyle's to Main Zone showing A1 anticline and drillhole results.

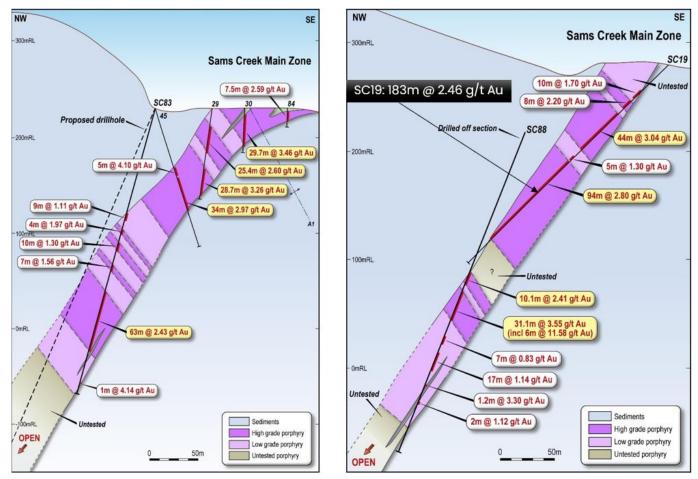


Figure 16. Main Zone cross-sections.



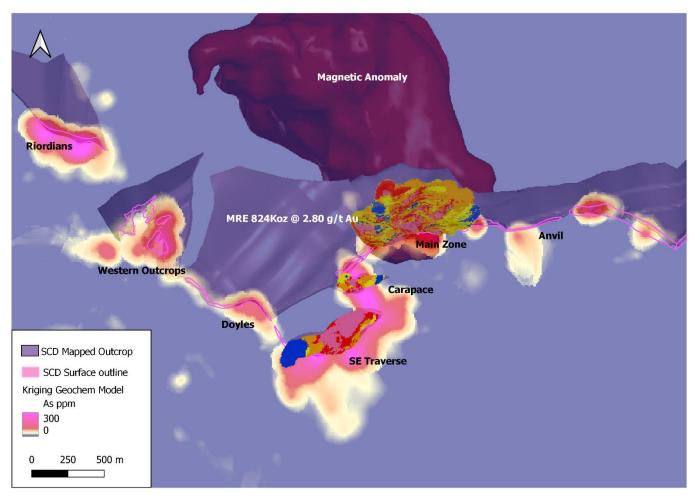


Figure 17. Arsenic soil geochemstry, SCD wireframe (grey), MRE block model and magnetic anomaly.

Brathwaite, R.L. 2012. Petrographic Examination and Report on Alteration and Mineralisation in Deep Drill Holes at the Sams Creek Project, Northwest Nelson. GNS Consultancy Report 2012/292, November 2012.

Wodzicki, A, 1972. Mineralogy, geochemistry and origin of hydrothermal alteration and sulphide mineralisation in the disseminated molybdenite and skarn type copper sulphides deposit at Copperstain Creek, Takaka, New Zealand. New Zealand Journal of Geology and Geophysics, 15:599-631



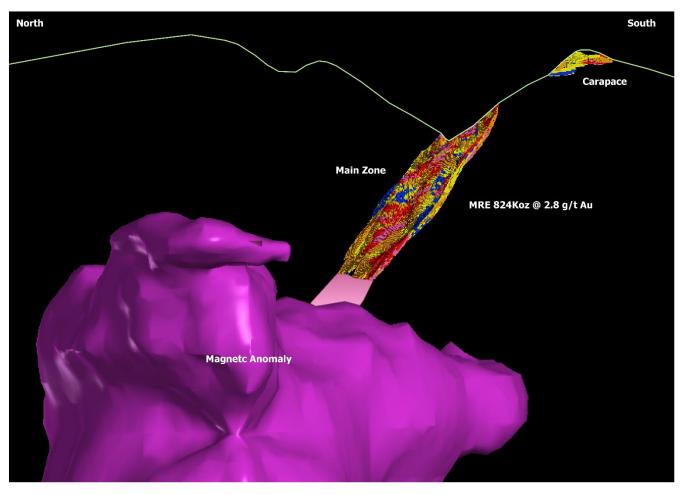


Figure 18. 3D Image of the SCD MRE and magnetic anomaly.

#### **Ionic Leach Soil Geochemistry**

lonic leach is a proprietary partial leach assay technique designed to explore through post mineral or residual cover. The method can be used to identify buried or blind mineral deposits by examining only part of the chemical signature of the mineralisation.

Samples are collected using prescribed techniques and sent to the laboratory in sealed bags in an ascollected state, instead of being dried and sieved as per normal soil sampling.

An orientation study was conducted in order to determine if Ionic Leach would be able to detect subsurface mineralisation and identify blind shoots (refer to ASX announcement dated 22 June 2023). A total of 98 samples including 4 field duplicates were sent to the ALS laboratory in Ireland.

In conventional soil sampling samples are collected from the C-horizon, which at Sams Creek is generally 0.5m to 1.0m below the surface. For Ionic Leach a sample is collected immediately below the surface humus layer approximately 0.1m below the surface.

The Ionic Leach samples were generally taken above the outcropping SCD so there would be no contamination. A cross-section through the Main Zone with conventional and Ionic Leach arsenic results is shown on Figure 24. The conventional soil detects the mineralisation where it outcrops but does not detect the subsurface mineralisation. The Ionic Leach samples appear to detect the subsurface mineralisation represented by the block model to over 500m depth below the surface (Figure 16). This technique can potentially be used to see through the overburden and identify mineralised shoots. The Ionic Leach survey has been completed along strike and down dip from Riordan's to Barron Flat (Figure 12). The results are currently being reviewed by an external consultant. The results of this survey will be used to target the next stage of drilling.



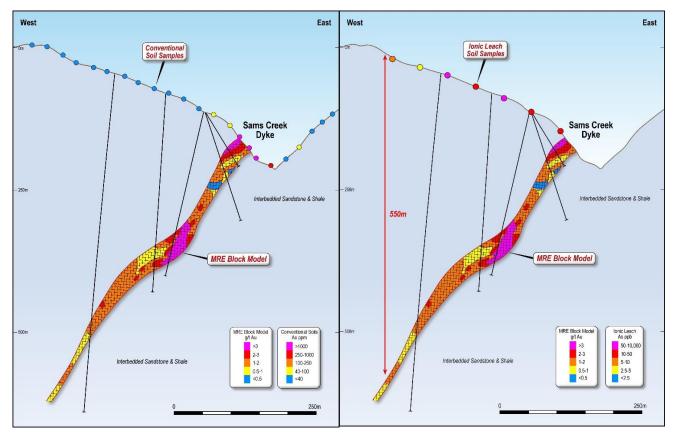


Figure 19. Cross-section showing conventional arsenic (ppm) and lonic Leach (ppb) soils overlying the Sams Creek MRE block model.

# **Global Mineral Resources Estimate**

The Auld Creek maiden MRE of 132koz @ 7.1g/t AuEq containing 66koz @ 3.5g/t Au and 8,700t of antimony @ 1.5% Sb, was completed during the quarter (Table 7).

Siren's **Reefton MRE** now stands at **444koz of gold and 8.7kt of antimony for 511koz @ 4.4 g/t AuEq** (Table 7).

The Auld Creek Resource is the fourth high grade Resource defined at Reefton, with all Resources remaining open along strike and at depth. The Auld Creek deposit is the first with high grade antinomy, which is a critical mineral in the global transition to clean energy.

Siren's Global MRE now stands at 1.27Moz of gold and 8.7kt of antimony for 1.33Moz @ 3.3g/t AuEq (100% basis) as shown in Table 8.



#### Table 7. Siren's Reefton Mineral Resource Estimate.

Project	Status	Cut- off g/t	Tonnes Mt	Au g/t	Sb %	Ounces koz	Sb kt	AuEq g/t	AuEq koz
Alexander River	Inferred	1.5	1.07	4.95		169.6		4.95	169.6
Big River	Inferred	1.5	0.83	3.94		105.5		3.94	105.5
Supreme	Inferred	1.5	1.05	2.71		103.3		2.71	103.3
Auld Creek	Inferred	1.5*	0.58	3.53	1.5	65.8	8.7	7.10	132.4
Total	Inferred	1.5	3.53	3.81		444.2	8.7	4.40	510.8

#### Table 8. Global MRE by project at a 1.5g/t Au cut-off (100% basis)

Project	Status	Cut- off g/t	Tonnes Mt	Au g/t	Sb %	Ounces koz	Sb kt	AuEq g/t	AuEq koz
Sams Creek <sup>1</sup>	Indicated <sup>1</sup>	1.5	3.29	2.80		295.6		2.80	295.6
Total	Indicated	1.5	3.29	2.80		295.6		2.80	295.6
Sams Creek <sup>1</sup>	Inferred	1.5	5.81	2.83		528.8		2.83	528.8
Alexander River	Inferred	1.5	1.07	4.95		169.6		4.95	169.6
Big River	Inferred	1.5	0.83	3.94		105.5		3.94	105.5
Supreme	Inferred	1.5	1.05	2.71		103.3		2.71	103.3
Auld Creek	Inferred	1.5*	0.58	3.53	1.5	65.8	8.7	7.10	132.4
Total	Inferred	1.5	9.34	3.20		973	8.7	3.42	1039.6
Total	Indicated + Inferred	1.5	12.63	3.10		1,268.6	8.7	3.26	1,335.2

<sup>1</sup> Siren owns 81.9% and OceanaGold Limited 18.1%

# Strategy

Siren's strategy is to grow its mineral resource organically with continued drill-focused exploration on the Company's key projects over the next 24 months.

Exploration over the next 12 months will focus on Auld Creek, Cumberland, Lyell and Sams Creek,

Siren's initial focus will be on **identifying high grade gold** and **stibnite mineralisation** along the Auld Creek – Cumberland line of strike. Siren has had immediate drilling success at Auld Creek during the June quarter and a maiden **MRE of 66koz of gold and 8700t of antimony** (Table 6) was completed on the Fraternal Shoot during the September quarter. The Fraternal Shoot has been extended to around 175m below the surface and remains open at depth. The Reefton shoots typically extend down plunge for a significant distance. The Alexander River shoots extend for 1.3kms and are still open at depth and the Blackwater Shoots extend for at least 2.0kms.

The initial strategy is to test three additional shoots (Bonanza East, Bonanza and Fraternal) that have been largely identified by mapping, soil geochemistry and trenching with shallow diamond drilling. Once the strike extent and plunge of the shoots has been identified, drilling on all four shoots can be extended down plunge.



Drilling recommenced at Auld Creek on 29 September, with the initial hole, ACDDH010, targeting the interpreted Bonanza East Shoot (Figure 7). The Bonanza East Shoot was intersected in AXDDH004 (2.5m @ 4.5g/t AuEq) while targeting the Fraternal Shoot, and in two trenches BZTR001; 6m @ 6.2g/t AuEq and BZTR008; 6m @ 5.6g/t AuEq.

An additional three holes will be drilled into the Bonanza East Shoot and the rig moved to target the Bonanza Shoot (Figure 8) while results are awaited.

### **Tenement Status**

The Company confirms that all the Company's tenements remain in good standing. The Barrons Flat Appraisal Extension was granted for four years during the quarter. The Company has applied for 5-year extensions to 60446 (Alexander River), 60448 (Big River) and 60479 (Lyell) exploration permits, and 2-year extensions to 60632 and 60768 prospecting permits. The Reefton South exploration permit, the Grey River prospecting permit and Extension of Land (EOL) applications for Alexander River, Big River and Waitahu are still being processed by New Zealand Petroleum and Minerals (NZPaM).

No tenements were disposed of during the quarter. The Company further confirms that as at the end of the quarter the beneficial interest held by the Company in the various tenements has not changed. Details of the tenements and their locations are set out in Figure 17, Figure 18 and Annexure 1. The Company now has over **1,091sqkm** of applications for and granted tenements.

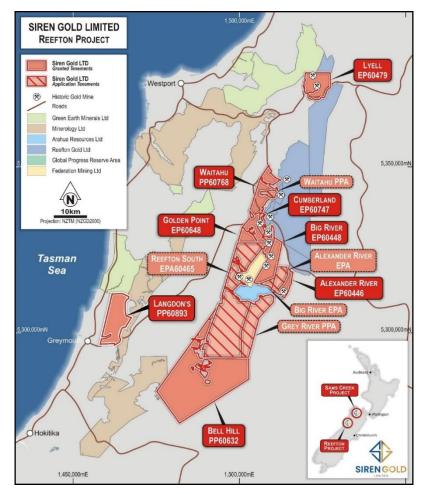


Figure 20. Reefton and Lyell Tenement Plan



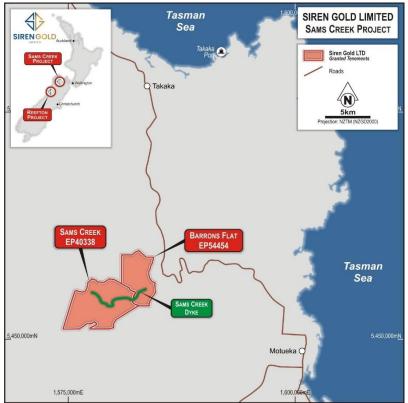


Figure 21. Sams Creek Tenement Plan

# **Corporate & Finance**

On 12 September 2023, the Company announced a capital raising of \$2m.

Cash flows relating to the quarter included \$569k spent on exploration and evaluation expenditure, which is primarily associated with the costs of exploration activities at Auld Creek, Lyell, Cumberland and Sams Creek. No expenditure was incurred on mining production or development activities during the quarter. The Company had a closing cash balance at the end of the quarter of \$1,635k. For the purposes of section 6 of the Appendix 5B, all payments made to related parties are for director fees, office rent, administration services and geological consulting services.

- ENDS -

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

For further information, please visit the Company website at <u>www.sirengold.com.au</u> or contact:

Brian Rodan – Managing Director

Phone: +61 (8) 6458 4200

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

#### Listing Rule 5.23

The information contained in this report relating to exploration results, exploration targets and mineral resources has been previously reported by the Company (Announcements). The Company confirms that it is not aware of any new information or data that would materially affects the information included in the Announcements and, in the case of estimates of mineral resources, released on 20 April 2023, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.



#### **ANNEXURE 1 – TENEMENT SCHEDULE**

TENEMENT / STATUS	OPERATION NAME	REGISTERED HOLDER	% HELD	GRANT DATE	EXPIRY DATE	AREA SIZE (HA)
EP 60446	Alexander River	Reefton Resources Pty Limited	100%	10 May 2018	5-yr Extension application to 10 May 2028	1,675.459
EP 60448	Big River	Reefton Resources Pty Limited	100%	20 June 2018	5-yr Extension application to 20 June 2028	4,847.114
EP 60479	Lyell	Reefton Resources Pty Limited	100%	13 December 2018	12 December 2023	5,424.592
EPA 60928	Reefton South	Reefton Resources Pty Limited	100%	application		25,519.0
EP 60648	Golden Point	Reefton Resources Pty Limited	100%	19 March 2021	18 March 2026	4,622.7
PP 60632	Bell Hill	Reefton Resources Pty Limited	100%	15 December 2021	14 December 2023	36,487.0
PP 60758	Waitahu	Reefton Resources Pty Limited	100%	17 December 2021	16 December 2023	4,991.1
EP 60747	Cumberland	Reefton Resources Pty Limited	100%	14 December 2022	13 December 2027	2,249.7
PPA 60893	Langdons	Reefton Resources Pty Limited	100%	25 May 2023	24 May 2025	7305.2
PPA 60894.01	Grey River	Reefton Resources Pty Limited	100%	application		7,419.0
EOL 60758.02	Waitahu	Reefton Resources Pty Limited	100%	application		692.1
EOL 60446.02	Alexander River	Reefton Resources Pty Limited	100%	Extension of land application		2,341.0
EOL 60448.02	Big River	Reefton Resources Pty Limited	100%	Extension of land application		569.8
EP 40338	Sams Creek	Sams Creek Gold Limited	81.9%	27 March 1998	26 March 2025	3,046.513
EP54454	Barrons Flat	Sams Creek Gold Limited	100%	26 September 2026	26 September 2026	1,052.3

# Appendix 5B

# Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity		
Siren Gold Limited		
ABN Quarter ended ("current quarter")		
59 619 211 826	30 September 2023	

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(569)	(1,736)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(93)	(287)
	(e) administration and corporate costs	(301)	(815)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	3	12
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(960)	(2,826)

2.	Cash flows from investing activities	)	
2.1	Payments to acquire or for:		
	(a) entities	-	
	(b) tenements	-	
	(c) property, plant and equipment	-	
	(d) exploration & evaluation	-	
	(e) investments	5	
	(f) other non-current assets	-	

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	5	(56)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	1,782	4,572
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(109)	(310)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	(26)	(70)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	1,647	4,192

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	944	328
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(960)	(2,826)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	5	(56)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,647	4,192

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(1)	(3)
4.6	Cash and cash equivalents at end of period	1,635	1,635

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,610	928
5.2	Call deposits	25	25
5.3	Bank overdrafts	-	-
5.4	Other (Corporate Credit Card)	-	(9)
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,635	944

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	(241)
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
	if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must incluc vation for, such payments.	le a description of, and an

7.	<b>Financing facilities</b> Note: the term "facility' includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	50	-
7.4	Total financing facilities	50	-
7.5	Unused financing facilities available at qu	larter end	50
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		tional financing
	Other at item 7.3 represents business credit card facilities with total limits of \$50,000 w Westpac NZ with no maturity date and is secured against a term deposit the Company with the lender.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(960)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(960)
8.4	Cash and cash equivalents at quarter end (item 4.6)	1,647
8.5	Unused finance facilities available at quarter end (item 7.5)	50
8.6	Total available funding (item 8.4 + item 8.5)	1,697
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)	1.7
	Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3 Otherwise, a figure for the estimated quarters of funding available must be included in ite	
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:	

- 8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?
- Answer: No. During the first half of CY 2023, the Company completed drilling at its Auld Creek project to increase the Company's mineral resource estimate. The focus for mapping and field sampling with limited drilling in Q3/Q4 has and will lead to a reduction in costs. In the short term, the Company expects this trend to continue until the commencement of the next exploration campaign.
- 8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

# Answer: Yes. The Company continuously evaluates its exploration activities and capital requirements which primarily drive its operating cash flows. The Company expects to focus its efforts on the work set out in section 8.8.1 above and continues to develop a suitable budget, including any requirement to raise funds.

8.8.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: Yes. Refer to answers to questions 8.2.1 and 8.2.2 above.		
Note: w	here item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.	

#### **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 October 2023

Authorised by: By the Board

#### Notes

- 1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- 2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- 4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.