ARROWHEAD
BUSINESS AND INVESTMENT DECISIONS

Due Diligence and Valuation Report

Arrowhead Code:	19-20-05
Coverage initiated:	October 27, 2022
This document:	October 11, 2023
Fair share value bracket- Relative Valuation:	AUD 0.21 – AUD 0.47
Share price (October 11, 2023):	AUD 0.065[i]

Analysts

Ayushi Saraswat
ayushi.saraswat@arrowheadbid.com

Sumit Wadhwa
sumit.wadhwa@arrowheadbid.com

Company:	Siren Gold Limited
Ticker:	ASX: SNG
Headquarters:	Perth, Australia
Chairman:	Brian Rodan
Technical Director:	Paul Angus
Website:	www.sirengold.com.au

Market Data

52-Week Range:	AUD 0.062 – AUD 0.21[ii]
Average Daily Volume (3M Avg.):	170,219[iii]
Market Cap (October 11, 2023):	AUD 10.3 million (mn)[iv]

Company Overview: Siren Gold Limited (Siren Gold) is a gold exploration company listed in Australia (ASX: SNG) with the objective of exploring and developing gold projects in New Zealand. Siren Gold has a c. 1,096 square kilometer (km^2) tenement package with numerous historic high-grade gold mines. It is focused on the high-grade Reefton Goldfield, which has produced over 2 million ounces (Moz) @ 16 grams/ton (g/t). Siren Gold, via its 100% owned subsidiary Reefton Resources Pty Limited (RRL), is currently exploring key projects, including Alexander River, Big River, Lyell, Golden Point (Auld Creek), and Sams Creek. The total historical production from these gold projects is 268 kilo ounces (koz) @ 25.6g/t gold (Au). The company's tenements in the Reefton Goldfield have geological similarities with the highly prospective Victorian Goldfields in southeastern Australia. The high-grade intersections at Alexander River and Big River reveal epizonal and antimony characteristics similar to Victoria's Fosterville Mine. Siren Gold's most advanced project is the Alexander River project, which has a current Mineral Resource Estimate (MRE) of 169.6koz at 5.0g/t Au and an exploration target of 500-700koz @ 5-7g/t. This is followed by Big River with a MRE of 105.5koz at 3.94g/t and an exploration target of 250-500koz at 7-9g/t. Siren Gold completed the acquisition of Sams Creek from Sandfire Resources Limited (ASX: SFR) in October 2022 for AUD250k. Sams Creek comprised an MRE of c. 824.4 koz @ 2.82g/t on a 100% basis. In December 2022, the company was awarded the Cumberland Permit in a competitive tender. The Cumberland permit is part of the Globe Progress Mine. SNG's Global MRE totals 1.27Moz of gold and 8.7kt of antimony for 1.33Moz AuEq @ 3.3 g/t AuEq (100% basis). The company is targeting to increase its current MRE to 2.5-3.0Moz @ 4-6g/t in the next two years. On October 07, 2020, the company was listed on ASX through an Initial Public Offer (IPO) raising AUD 10.0 mn. SNG is headquartered in Perth, Western Australia.

Key Highlights: (1) SNG announced an updated MRE of c. 132koz @ 7.1g/t AuEq, containing 66koz @ 3.5g/t, Au and 8,700t of antimony @ 1.5% Sb for the Auld Creek Prospect; **(2)** It announced its maiden MRE for Big River and Supreme where the MRE for Big River is estimated at c. 834kt of ore with 105.5koz @ 3.94g/t Au, while its MRE for Supreme project is estimated at c. 1,052kt of ore with 103.3koz @ 2.71g/t grade;**(3)** SNG is targeting to reach 2.5- 3.0Moz @ 4-6g/t Au in the next two years; **(4)** Applied for two additional prospecting permits in Langdons and Grey River; **(5)** Applied for the extension of existing permits at Alexander River, Big River and Waitahu; **(6)** Acquired the Sams Creek Gold Project from SFR for AUD 250k, with a MRE of 9.1Mt @ 2.82g/t for 824.4koz (100% basis); **(7)** Recently conducted metallurgical test work on Alexander, Big River and Sams Creek indicates impressive gold extractions of 92-98%; **(8)** Siren Gold is to strategically focus its drilling activities on the Alexander River, Big River, Cumberland, Sams Creek, Lyell and Auld Creek projects over the next 12 months; **(9)** Supreme, which lies within the recently acquired Cumberland tenement, hosts all the larger mines in the Reefton Goldfield with mineralization being similar to the historical Globe-Progress mine that produced 1.1Moz @ 6g/t Au; **(10)** SNG raised c. AUD 2.0 mn to fund its drilling and exploration program for high-priority target areas; **(12)** Recently, SNG appointed Mr. Victor Rajasooriar as a Non-Executive Director.

Key Risks: (a) Delays in the granting of relevant regulatory approvals could slow down activities in the short term, impeding growth; **(b)** Inability to secure sufficient funds for financing operations would postpone/hamper the company's growth plans, leading to a delay or cancellation of certain activities or projects; **(c)** Studies undertaken to determine the feasibility of a project can't confirm its economic viability and may result in sunk cost.

Valuation and Assumptions: Given the due diligence and valuation estimates, Arrowhead believes that Siren Gold's fair enterprise value per share lies in the AUD 0.21 to AUD 0.47 range, derived using a Relative Valuation.

See important disclosures on page 57 of this report.

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1. Investment Thesis

Arrowhead is updating its coverage on Siren Gold Limited with a fair enterprise value of AUD 0.21 per share in the low-bracket scenario and AUD 0.47 per share in the high-bracket scenario, derived using a Relative Valuation methodology (EV/Mineral Resources multiple).

Siren Gold is a gold exploration company focused on the high-grade Reefton Goldfield located in the South Island of New Zealand. Currently, the competitive landscape of New Zealand is considered low with high entry barriers. The company has a large strategic holding in an underexplored, high-grade goldfield with a rich history of gold production. There are many similarities in the geology of gold mineralization in the Reefton Goldfield to those of the epizonal gold deposits of Victoria (Australia). Key projects of the company include Alexander River, Big River, Golden Point (Auld Creek) and Lyell. Also, the strategic acquisition of Sams Creek might lead Siren Gold to a multi-million-ounce gold discovery, with significant potential upside for shareholders. The company is also backed by significant shareholdings by management and the board of directors.

Under-explored, large holding in a high-grade goldfield with a history of producing more than 2Moz could provide significant tailwinds

Siren Gold has a strategic tenement holding of c. 1,096 km^2 with numerous historic high-grade gold mines in the Reefton Goldfield, a part of the Lachlan Fold Belt formed when the Gondwana continent was split up around 80 mn years (Ma) ago. The Reefton Goldfield in the South Island of New Zealand has produced over 2Moz of gold at an average recovered grade of 16g/t from 84 historical mines. Siren Gold's Reefton tenements are under-explored and have the potential to add significant additional new gold resources along a 35km structural corridor. The company has drill permits for the Big River, Alexander River, Golden Point and Sams Creek tenements and permits to conduct surface sampling at Reefton South and Lyell. Recently, Siren Gold has been granted an exploration permit of Cumberland (historic production of 45koz @ 14.2g/t) which is a part of the Globe Progress mine at Reefton Goldfield, with a historical production of 1.1Moz @ 6g/t Au, including 420koz @ 12.2g/t in underground and 700koz @ 2g/t from an open pit. This tenement is in the center of the 35km long structural corridor that hosts the largest mines in the Reefton Goldfield. The addition of Cumberland permit to Siren Gold's tenement will give new impetus that has the potential to pave the way for future development.

Mineral Resource Estimate for the Alexander River and Big River project might pave the way for significant opportunities

The Alexander River Project is located c. 26km southeast of Reefton, in the South Island of New Zealand. Historically, until the closure of the mine in 1943, it produced a total of 41,089 oz of gold from 48,492 tonnes of quartz lode, with an average recovered grade of approximately 26.4 g/t Au. Alexander River has an Exploration Target of 500-700koz @ 5-7g/t Au and includes an Inferred Mineral Resource Estimate of 1.07Mt @ 5.0g/t Au for 169.6koz Au. Recently, the company announced its maiden MRE of Big River and estimated c. 834kt of ore with 105.5 koz @ 3.94 g/t Au.

Comparing the geological characteristics of the Alexander River and Big River projects with the Fosterville Gold Mine in Victoria may result in unlocking further high-grade gold deposits

The Reefton and Lyell goldfields contain epizonal mineralization similar to the Fosterville and Costerfield mines in Victoria. Alexander River (greater than 26g/t Au historical mine) and Big River (greater than 34g/t Au historical mine) both share the same epizonal characteristics as Fosterville. The discovery of the Fosterville epizonal high-grade gold deposits in the Ordovician metasediments within the Victorian goldfields brought a lot of success, producing over 2Moz. Siren Gold expects that drilling at greater depth may provide further similarities and could be the source of high-grade gold.

Strategic acquisition of Sams Creek might pave the way for multi-million-ounce gold discovery

Siren Gold strategically acquired Sams Creek from SFR in October 2022 for AUD 250k. Sams Creek is located 140km North-East of Reefton and 100km North-East of Lyell. The Sams Creek Gold Project has a significant Joint Ore Reserve Committee (JORC) (2012) Indicated and Inferred Mineral Resource of 9.1Mt @ 2.82g/t for 824.4koz, with significant potential for expansion. Extensive gold mineralization is hosted within a 40m thick porphyry dyke that extends for over 7km.

Favorable metallurgical test work shows possibility of high recovery of gold

Siren Gold has conducted metallurgical test work on Alexander, Big River and Sams Creek which indicates impressive recovery grade of gold could be achieved. Metallurgical test work indicates recoveries ranged from 79.5% to 87.5% and averaged 83.8% (gold recovery grade). When the mineralization was floated and acid leached, then the total recoveries ranged from 83% to 91.3% for an average of 87.2%. The company has conducted metallurgical test work which suggests that gold recovery of c. 90-93% could be achieved on the Alexander and Big River projects, while the Sams Creek project indicates that a gold recovery ranged from 88.5-95.5%.

Significant holdings by management and the board instills confidence among stakeholders

Management and the board hold a significant shareholding in the company (c. 15.0%). They also have a record of accomplishment of gold discovery in New Zealand and significant underground mining experience.

Significant high-grade Antimony resources in Reefton Goldfield might provide opportunities for an additional revenue stream

Apart from numerous high-grade gold mines, Reefton Goldfield also contains significant high-grade antimony resources, particularly at Auld Creek and Langdons. Recent excavation at Auld Creek has further confirmed the presence of Sb mineralization. The presence of additional antimony in the ore can increase the comparable gold grade by at least 3-5g/t. Because of its uniqueness in properties, antimony finds usage in many end-user industries. China, Russia, and Tajikistan (c. 90% of the global supply) majorly control supply. The price of antimony has been increasing at a CAGR of 17% in the last 6 years and the global antimony market is projected to grow at a CAGR of c. 7% for the next 12 years, thereby unlocking significant additional revenue streams like in the case of Costerfield Mine in Victoria, which is a significant global producer of antimony (among the top 5 in the world). As a result, Siren Gold also has the potential to add this valuable by-product to any possible future gold production.

Comparable listings have generated significant shareholder value

Recent listings of companies like Bellevue Gold, Spectrum Gold and Auteco Minerals have generated significant value for shareholders. The historical production of Bellevue Gold stood at 800koz @ 15g/t. The historical production of Spectrum Gold and Auteco Minerals stood at 85koz @ 21g/t and 1.5Moz @ 16g/t, respectively. Similarly, the historical production of Reefton Goldfield stood at over 2Moz @ 16g/t where Siren Gold has c. 1,096 km^2 of tenement holding. So, Siren Gold may follow a similar share price trajectory as Bellevue Gold, Spectrum Gold and Auteco Minerals.

However, certain risks could impede growth plans

Delays in the granting of relevant regulatory approvals might impede growth

Discovery of an economically viable mineral deposit requires various approvals, consents, licenses and permits before mining can commence. Also, obtaining necessary resource consents can be subject to numerous conditions and is time-consuming in nature. Any delay in regulatory approvals or consents might impede the company's operational and financial performance and future growth plans. Amendments to laws by regulators may provide further headwinds. Mining and exploration permits are also subject to periodic renewal. There is no assurance that current or future permits or future applications for production permits will be approved in their entirety, and some of the permit areas applied for may be excluded.

With high spending comes financing risks

Siren Gold is in a capital-intensive industry. Hence, the company may need equity or debt financing to secure additional funds to meet forecast expenditure. Such financing would be required to support ongoing operations and implement planned strategies. The inability to secure sufficient funds would postpone/hamper the company's growth plans, leading to the delay or cancellation of certain activities or projects.

Investment thesis conclusion

We think Siren Gold has a huge opportunity to target the under-explored Reefton, Lyell and Sams Creek projects, where it has large strategic tenement holdings. The company expects to reach a MRE of 2.5-3.0Moz @ 4-6g/t Au in the next 24 months from its current MRE of 1.2Moz at 3.08g/t Au. This is underpinned by the Alexander River, Big River, Auld Creek, Cumberland and Sams Creek Gold projects. However, its ability to finance and obtain all relevant regulatory approvals in a timely manner could pose a threat.

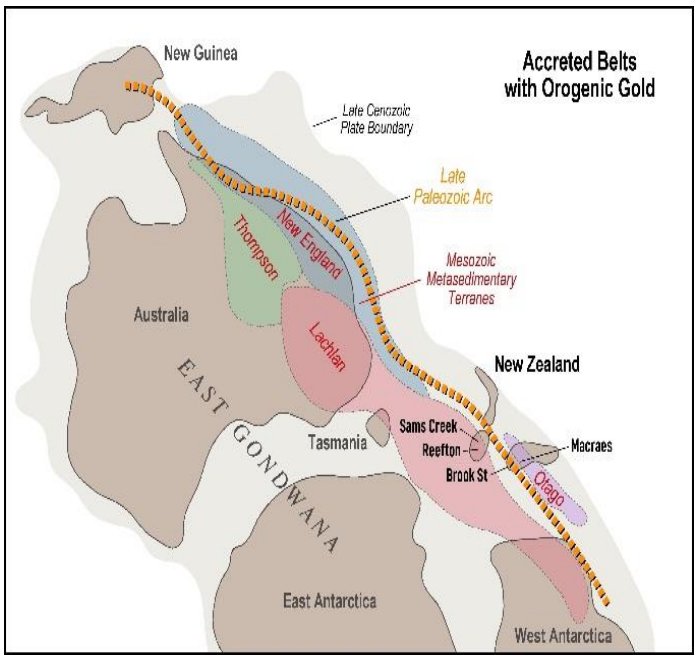
2. Business Overview

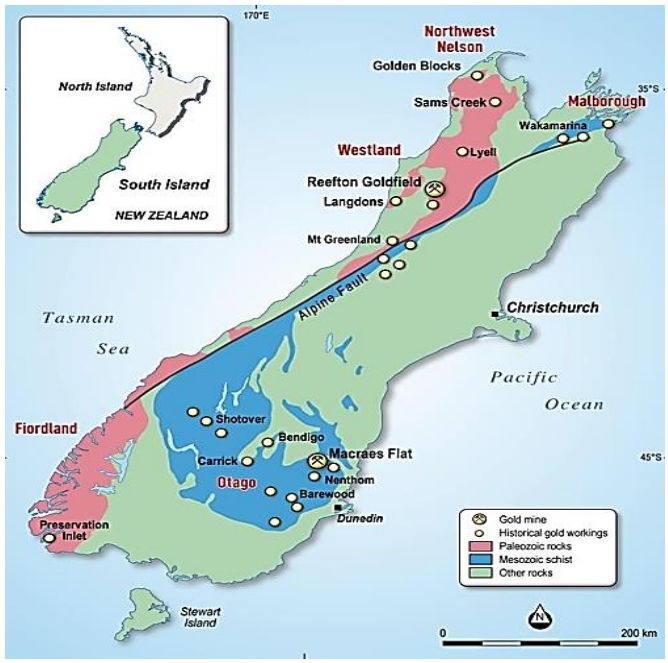
2.1 Background[v]

Incorporated in 2017, Siren Gold Limited is a gold exploration company listed in Australia. The objective of the company is to acquire, explore and develop gold projects in New Zealand. It is focused on the high-grade Reefton Goldfield. Siren Gold has a c. 1,096 km^2 tenement package, with numerous historic high-grade gold mines. In 2018, Reefton Resources Pty Limited (RRL) was incorporated in New Zealand as a wholly owned subsidiary. RRL is the holder of the company's Reefton, Lyell and Sams Creek projects. Siren Gold is headquartered in Perth, Western Australia.

On October 07, 2020, the company was listed on the Australian Securities Exchange (ASX) through an IPO raising AUD 10.0 mn. Funds raised from the IPO have been spent on exploration, strategic acquisitions and working capital requirements.

Exhibit 1: Geographical presence[vi]





2.2 Reefton Goldfield

2.2.1 History[vii]

Western New Zealand was originally part of Gondwana and lay adjacent to eastern Australia until around 80M years ago. The northwest of the South Island of New Zealand comprises an area of predominantly early Paleozoic rocks in broad northerly trending belts that terminate at the Alpine Fault. These Paleozoic rocks are divided into the Buller Terrane, Takaka Central and Takaka Eastern belts. These belts correspond with the Lachlan Fold Belt's Western, Central and Eastern belts. The Buller and Western Lachlan belts contain orogenic gold deposits like Bendigo, Ballarat and Fosterville in Australia and the Reefton, Lyell and Golden Point Goldfields in New Zealand. The Sams Creek porphyry dyke (SCD) is located in the Eastern Takaka Terrane, equivalent to the Eastern Lachlan belt that hosts porphyry copper and gold deposits.

The Greenland Group Paleozoic rocks that host the gold mineralization extend intermittently over 200km from south of Reefton to northwest Nelson. The Greenland Group rocks were originally part of the Lachlan Fold Belt in Victoria, Australia, and were later separated. The gold mineralization has important similarities to the mineralization at Bendigo and Ballarat in southeastern Australia.

The Reefton Goldfield in the South Island of New Zealand, where Siren Gold has a large strategic tenement holding, was first discovered in 1866 and produced over 2Moz of gold at an average recovered grade of 16g/t from 84 historic mines.

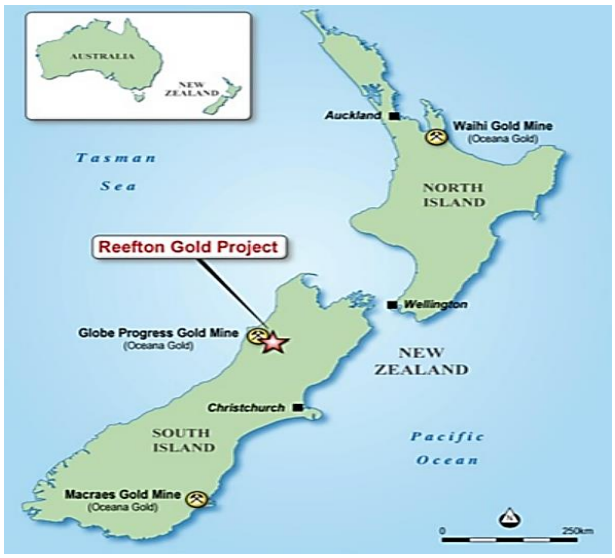
2.2.2 Geological Position[viii]

Reefton Goldfield is situated in late Cambrian to early Ordovician Greenland Group sedimentary rocks. These rocks consist of interbedded, massive to thinly bedded, quartz-rich sediments comprising gradational psammitic (greywacke) and pelitic (argillite) rock types.

The Greenland Group sediments are moderately deformed and have undergone a late Silurian to mid-Devonian, low-grade metamorphic event. Metamorphism is to sub/low greenschist facies, with illite clay facies predominating. Widespread folding was synchronous with metamorphism, and this deformation predates granitoid emplacement. Deformation due to east-west compression resulted in the formation of close to tight, upright, north-south trending fold axes with a single pervasive and penetrative steeply dipping axial planar cleavage.

As deformation progressed, fold hinges were commonly sheared out by high-angle reverse faults and bedding concordant quartz veins formed between discrete bedding planes. These discordant shear zones now host the bulk of the gold mineralization in the Reefton Goldfield. They are thought to have formed as a late-stage, partially strike-slip event at the culmination of the deformation. The Lyell Goldfield can be thought of as a northern extension of the Reefton Goldfield (Blakemore 2016).

Exhibit 2: Reefton Goldfield geographical presence[ix]



2.2.3 Structure[x]

Gold mineralization in the Reefton Go ldfield is structurally controlled, where the formation of the different deposit types is interpreted to be due to focusing of the same hydrothermal fluid into different structural settings during a single gold mineralization event. However, some of the deposits appear to have been re-worked, with gold and sulfide mineral remobilization having occurred during a later phase of brittle deformation.

In general, two mineralization styles are present:

- "Blackwater Style" comprises undeformed quartz lodes.
- "Globe-Progress Style" comprises highly deformed quartz – pug breccia material with a halo of disseminated mineralization.

The "Globe-Progress Style" in the eastern corridor includes the Capleston, Crushington, Globe Progress, Cumberland, Alexander River, and Big River mines, while the "Blackwater Style" in the western corridor extends from Reefton south through the Golden Point, Morning Star, Blackwater and Homer mines. The eastern corridor potentially contains the thicker, high-sulfur sheared deposits, while the western corridor contains low-sulfur, narrow high-grade quartz veins.

2.2.4 Mining and Exploration History[xi]

Historically, Reefton Goldfield has been explored and mined for hard rock, alluvial gold and coal.

Alluvial gold was first discovered in 1866 in Redmans Creek, followed by further discoveries throughout the area. There have been four cycles of alluvial gold mining in the region. The first discovery of auriferous quartz in the Reefton area was made in 1870 in the headwaters of Murray Creek. During 1874-75, several lodes were mined, with the highest being c. 30koz pa. In 1899, Consolidated Goldfields New Zealand (CGNZ) started to operate in the Reefton area. The last of CGNZ's operations, the Blackwater Mine, closed in 1954.

The Reefton corridor extends 35km in length and has produced over 2Moz Au @ 16g/t from 84 historic mines.

Exhibit 3: Total underground gold production of Reefton Goldfield[xii]

Mine	Production Tonnes (t)	Production Ounces (oz)	Recovered Au Grade (g/t)	Percentage of Total Au (oz)
Blackwater	1,603,157	740,403	14.2	35.9
Globe-Progress	1,062,727	418,345	12.2	20.3
Wealth of Nations	458,038	208,980	14.2	10.1
Keep-It-Dark	333,780	182,616	17.0	8.8
Big River	124,060	135,965	34.1	6.6
Ajax/Golden Fleece	136,642	89,636	20.4	4.3
Welcome/Hopeful	44,867	88,607	61.4	4.3
Alpine United	146,640	80,510	15.6	3.9
Alexander River	48,492	41,089	26.4	2.0
Murray Creek Mines	52,943	33,887	19.9	1.6
Fiery Cross	24,956	27,843	34.8	1.3
Just-In-Time	13,755	17,168	38.8	0.8
Total Production	**4,050,053**	**2,065,149**		**100**

Siren Gold's Big River and Lyell (Alpine United) projects were the 5th and 8th largest mines by output.

Exhibit 4: Reefton Goldfield mine recovered gold production (koz) till 1954[xiii]

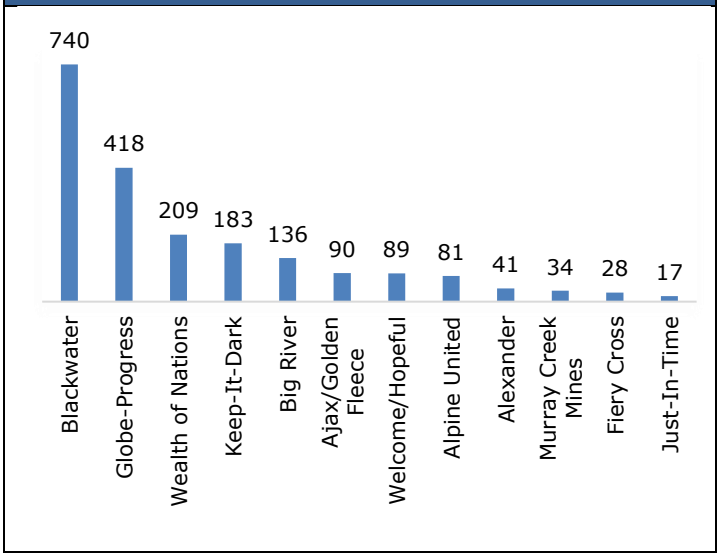
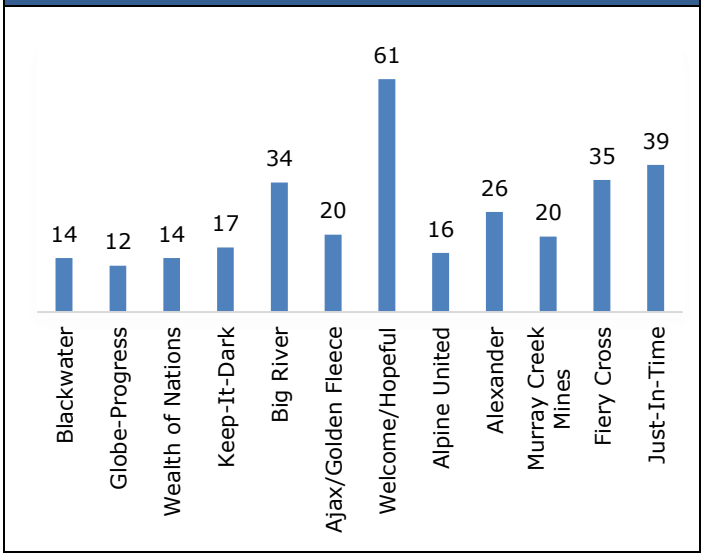


Exhibit 5: Reefton Goldfield mine recovered gold grades (g/t)[xiv]



Historically, mining in Reefton was focused on free gold within the quartz lodes using stamper batteries.

Due to extractive technology limitations, the gold within the sulfides contained in the host rock and pug zones was often left behind as this material could not be processed. However, Reefton was the first mine in the world to use cyanide systems to extract gold from sulfide material.

Recent mining and processing undertaken by Oceana Gold Limited (OGL) at the Globe-Progress Mine has demonstrated that the remaining gold is readily recoverable via modern processing techniques.

Exhibit 6: Lyell Goldfield Battery[xv]

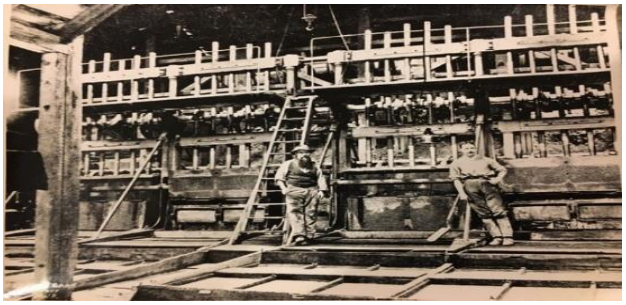
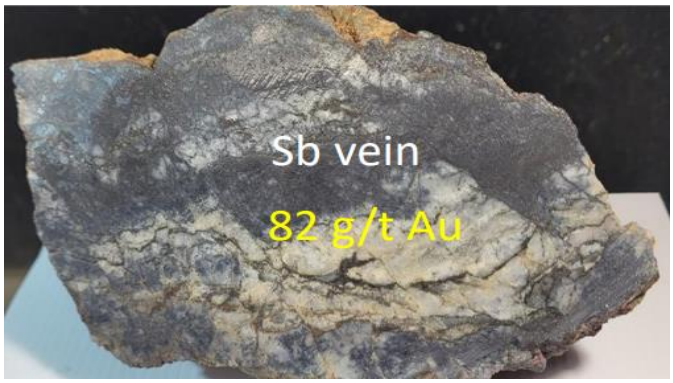
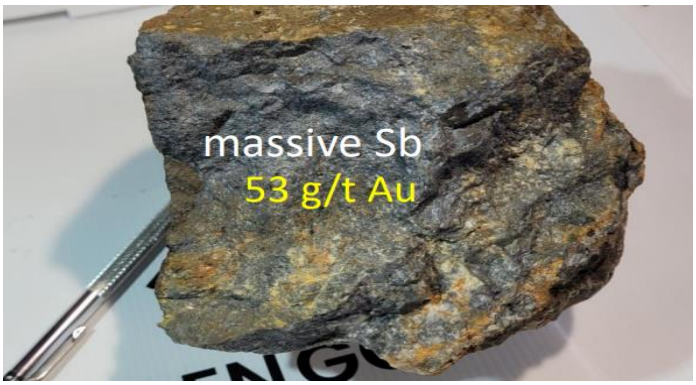


Exhibit 7: Historically, Untreatable ore with high stibnite contents[xvi]





2.2.5 Correlation and similarities between Reefton Goldfield and Victorian Goldfields[xvii]

There are many similarities in the geology of gold mineralization in the Reefton Goldfield to those of the mesothermal gold deposits of Victoria (Australia).

The Reefton Goldfield has been correlated to the Lachlan Fold Belt that contains the Victorian Goldfields. Gold mineralization in Victoria is associated with two main events at c. 445 Ma and c. 380-370 Ma. The c. 445 Ma event is thought to have involved crustal thickening and the circulation of metamorphic fluids through the crust and formed gold deposits at Bendigo, Castlemaine, Maldon and Daylesford. The c. 380-370 Ma event is restricted to the Melbourne and eastern Bendigo Zones and is responsible for the emplacement of gold at the Fosterville and Costerfield mines.

The orogenic gold mineralization in Victoria follows two distinctive sub-types:

- Mesothermal deposits
- Epizonal deposits

The deeper (6-12km) mesothermal deposits formed almost all the significant gold deposits in the Bendigo and Stawell zones. The shallower (<6km) epizonal gold deposits are in the Melbourne zone and eastern Bendigo zone, including Fosterville and Costerfield. The epizonal deposit is characterized by arsenopyrite-/pyrite-hosted refractory gold and stibnite-associated gold, which are indicative of shallower emplacement depth.

Gold mineralization at Reefton also occurred in two distinct stages:

- The first stage comprises gold mineralized quartz veins.
- The second stage is characterized by quartz, stibnite, arsenopyrite, pyrite and gold.

Stibnite was found in many quartz lodes at Reefton, making up 10-30% of some veins. Stibnite was reported from mines at Blackwater, Globe Progress, Crushington, Capleston – Specimen Hill, Big River, Ajax, Murray Creek, Blacks Point – Painkiller, Merrijigs and Alexander River.

At Fosterville two gold mineralization events occurred. Initially gold-hosted arsenopyrite, which is present throughout the deposit, but a narrow vein hosting gold-stibnite mineralization exists from c. 800m to 1,350m depth, below which there is vein-hosted gold mineralization only. The acicular arsenopyrite mineralization in the Reefton Goldfield looks similar to the Fosterville mineralization and may represent that same initial gold mineralization event. The acicular arsenopyrite and gold-stibnite at Reefton also confirmed their presence in the epizonal environment.

Exhibit 8: Superimposition of Fosterville and Alexander River Long Section showing shoot geometry and mineralization types[xviii]

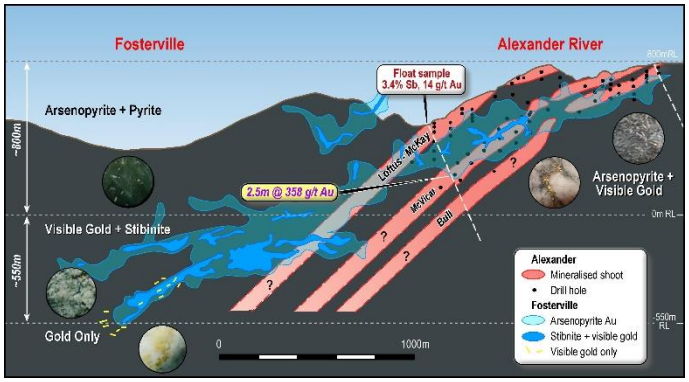


Exhibit 9: Comparison of Reefton and Victorian Goldfields[xix]

Mineralisation Controls	Bendigo-Ballarat Zone		Reefton Zone
	Bendigo-Ballarat	Fosterville	
Age of Host Rocks	●	●	●
Host Rock Lithology	● ●	● ●	●
Deformation style during Mineralisation	●	●	●
Ore Types	●	●	●
Chemical Association	●	●	●
Mineralised shoots		●	●
Depth of Mineralisation	●	●	●
	Mesothermal	Epizonal	Epizonal

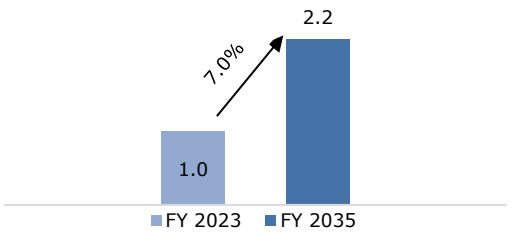
2.2.6 Antimony and its importance

Overview

The word Antimony (Sb) (a semi-metallic chemical element) is derived from the Greek words "anti" and "monos," which together mean "not found alone." The element's historical name, stibium, inspired the chemical symbol Sb. Antimony metal is extracted primarily from stibnite, which contains 72% of antimony and 28% sulfur.

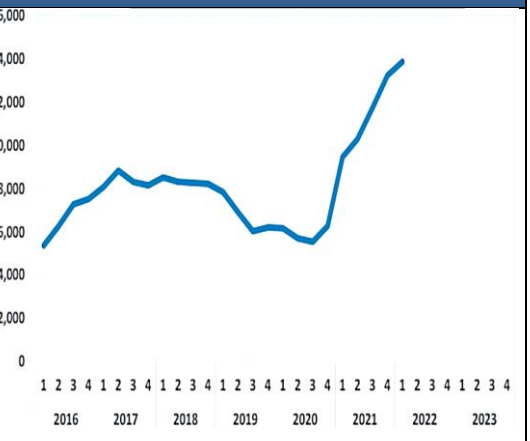
The global antimony market size in FY 2023 stood at USD 0.97 bn. It is projected to grow at a CAGR of 7.0% for the next 12 years to reach c. USD 2.2 bn by FY 2035.

Exhibit 10: Global Sb Market (USD bn.)[xx]



Sb is mined in only a few countries, with China being its largest producer, accounting for c. 75-80% of worldwide production. It has been seen that China, Russia and Tajikistan have generated c. 90% of cumulative world antimony production in the last 7 years. The top seven Sb producing countries, are China, Russia, Tajikistan, Myanmar, Bolivia, Turkey and Australia. The average price of Sb increased at a CAGR of 17% in the last 6 years (The price of antimony has increased significantly since 2016 and has reached USD 14,000 per tonne in 2023), majorly driven by supply-side risk, as China imposed restrictions for several years on the export of antimony-based products, which led to reduced availability and increased prices.

Exhibit 11: Average Quarterly Sb Price (USD/tonne)[xxi]



Sb is used for many technological and industrial purposes. Antimony finds usage in Liquid Metal Batteries and their latest new technology called Molten Salt Batteries (Liquid Metal Batteries). These batteries will be used for large-scale renewable energy storage, with antimony as a primary mineral. Due to its flame retardant & anti-corrosion properties, Antimony is also used as a critical material in Lithium-Ion batteries, Solar Panels & Wind Turbines in the renewable energy space. Historically, Antimony has been used as Flame Retardant. Antimony salts are also used in the rubber and textile industries, in medicine and glassmaking. This has led to the high economic importance of Sb.

Exhibit 12: Cumulative World Sb Production[xxii]

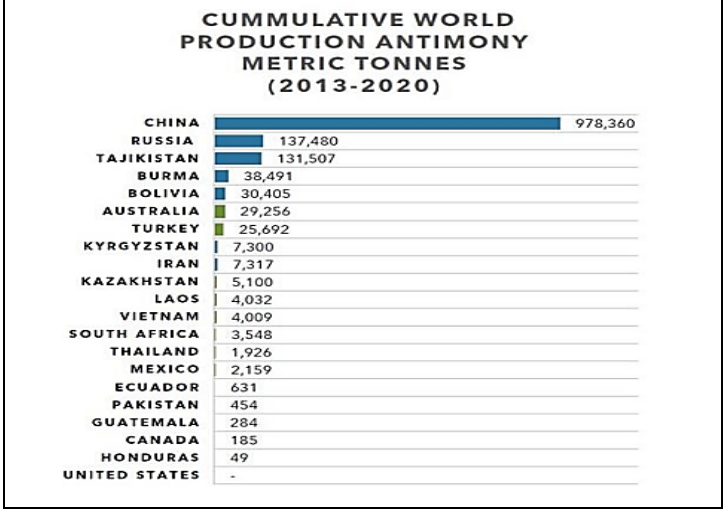
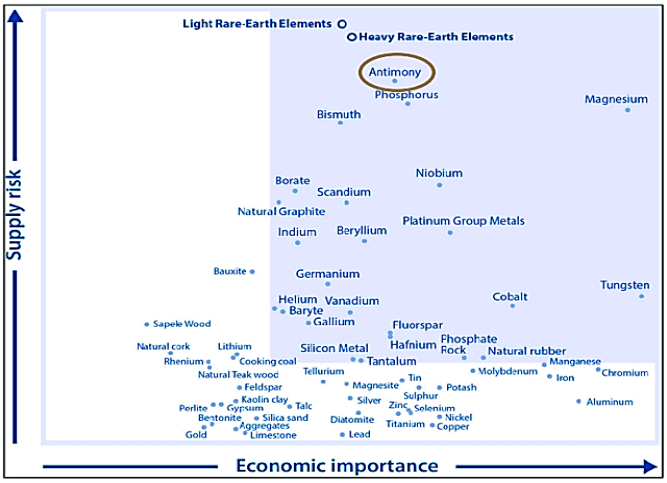


Exhibit 13: Illustration of critical metals based on economic importance[xxiii]



Presence of Antimony in Reefton Goldfields

The Reefton Goldfields are a significant source of antimony. The Goldfields share the epizonal characteristics of the Fosterville epizonal deposit, which is characterized by arsenopyrite-/pyrite-hosted refractory gold and high stibnite-associated gold.

The gold mineralization at Reefton is characterized by quartz, stibnite, arsenopyrite, pyrite and gold. Stibnite has been found in many quartz lodes at Reefton, making up 10-30% of some veins. Stibnite has been reported from mines at Blackwater, Globe Progress, Crushington, Capleston – Specimen Hill, Big River, Ajax, Murray Creek, Blacks Point – Painkiller, Merrijigs and Alexander River.

The similarities between Alexander River and Fosterville mineralization shows that in Fosterville the mineralized shoots extend for at least 1,350m below the surface and 2,400m down the plunge. Disseminated acicular arsenopyrite gold dominates up to 800m below the surface. Between 800m and 1,350m, arsenopyrite gold continues, but stibnite-gold mineralization dominates. However, the Alexander River deposit has only been drilled to around 500m below the highest outcrop at Bull shoot which represents about 1,000m down the plunge, compared to 2,400m at Fosterville. This corresponds to the acicular arsenopyrite zone at Fosterville. Gold mineralization intersected at Alexander River is currently dominated by acicular arsenopyrite mineralization with some visible gold in quartz veins. Only limited stibnite mineralization has been observed at Alexander River but may reflect the relatively shallow sampling compared with Fosterville.

Similarly, at Big River, a stockpile of stibnite ore was left at the historic battery. Later, the sample of Sb was assayed several times and returned assays ranging from of 62.8 to 82.3g/t Au with 20.5% stibnite.

In Auld Creek, trenching has encountered strong stibnite mineralization of 1.7% Sb across the Bonanza Reef, and 2.3% Sb across the Fraternal Reef. Rock chip sampling of the mullock dumps at Fraternal and Bonanza workings returned 29% Sb and 42% Sb, respectively. Exploration done by OGL between 1996-2013 shows that highest grades in the deposit are generally associated with strong stibnite mineralization. Historically, high-grade gold and stibnite has been mined near the surface from quartz reefs and mineralized breccias at the Bonanza and Fraternal Reefs. Recent excavation in Auld Creek has confirmed the presence of massive Sb veins similar to Costerfield and Fosterville mine.

Similarly, the Langdons area contains numerous high-grade Sb reefs ranging from 0.6 to 2.7m wide and up to 0.6m thick and with massive stibnite mineralization that could exceed 20% Sb.

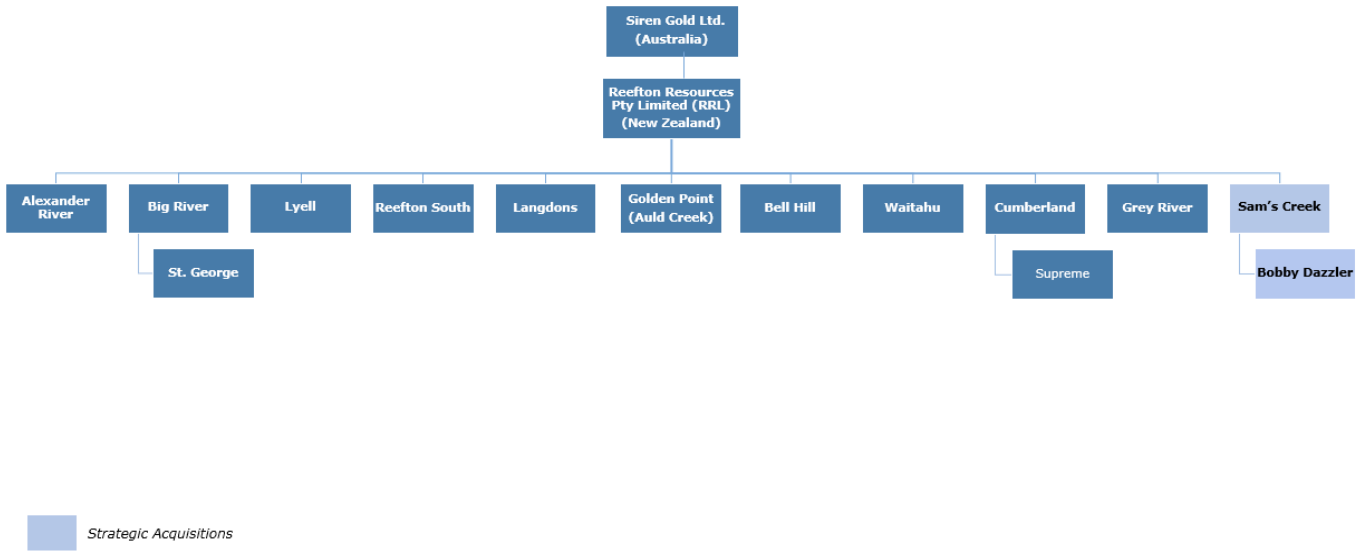
The company continues to explore for high-grade gold as the priority mineral with the aim of re-opening the Reefton Goldfield and consolidating the Reefton belt with Lyell & Sams Creek. Stibnite is viewed as an attractive mineral based on the price and demand for stibnite, which is expected to increase across global markets. It offers a compelling economic opportunity for Siren Gold.

2.3 Project[xxiv]

The company, through RRL, has secured the following tenements:

- Alexander River
- Big River
- St. George
- Lyell
- Reefton South
- Golden Point / Auld Creek
- Bell Hill
- Waitahu
- Langdons
- Cumberland
- Sam's Creek

Exhibit 14 : Siren Gold's tenement structure



Current Status of tenements

- **New prospecting permit status:** Siren Gold has applied for two additional prospecting permits:
  - Langdons
  - Grey River
- **Extensions of exploration permit status:** Siren Gold has applied for the extension of existing permits:
  - Alexander River
  - Big River
  - Waitahu
- **Disposal:** Siren Gold has not disposed of any of its tenements during the quarter.

2.3.1 Alexander River (EP 60446)[xxv]

Overview and History

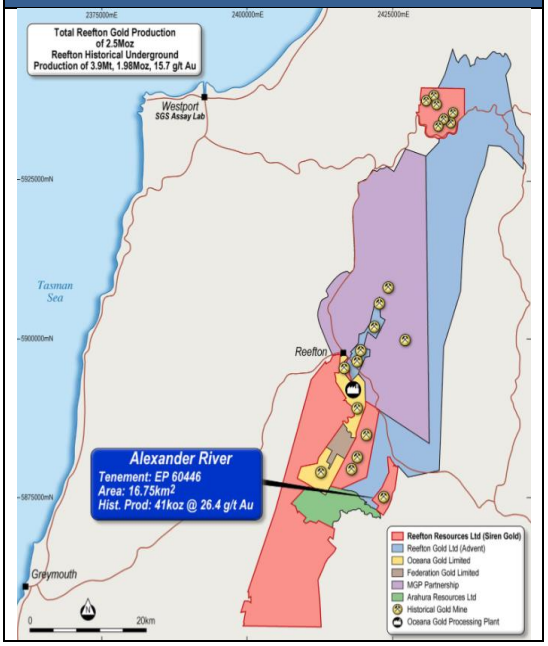
The Alexander River Project is located c. 26km southeast of Reefton, in the South Island of New Zealand.

The Alexander River Project overlays the Alexander River Mine, a group of mines along a series of ore shoots or lodes. The discovery of quartz float in the Alexander River in 1920 led to the development of the last quartz mining area in the Reefton Goldfield. Until the closure of the mine in 1943, it produced a total of c. 41koz of gold from 48,492 tonnes of quartz lode, with an average recovered grade of approximately 26.4g/t Au.

The field consists of a series of shallow plunging quartz shoots along a north-northeast trending reef-track or shear zone c. 1.2km in length. The shoots from southwest to the northeast were named:

- Bull
- Firmiston
- McVicar
- Bruno
- McKay
- Loftus and Mullocky

Exhibit 15: Geographical location of Alexander River[xxvi]



Due to the lack of outcrop and the shallow plunge of the ore shoots, rugged topography, and the site isolation at the time, it took time and significant underground development before sufficient ore was located to justify the construction of a stamper battery. The hardness of the lode material in the Loftus and Mullocky shoots prevented their full development, and most of the focus and development went into the McVicar shoot. As a result, most of the production came from McVicar, which was developed down to the No.6 adit level, 260m below the surface. The other shoots were only prospected or developed on one or two adit levels. The mine finally closed in late 1943 after all the ore on the No.6 level had been extracted, and no further portions of the lode had been developed.

Mapping and Geochemical Sampling

The Alexander River mineralization stretches for over 1.2km and comprises high-grade quartz reefs and disseminated mineralization. Surface trenching and channel sampling show that the mineralization ranges from 2-15m thick, with an average thickness and grade of 4m @ 8g/t Au. Major mineral shoots identified by surface sampling are as follows:

- Bull
- McVicar
- Bruno
- Loftus-McKay

Mapping has confirmed the identification of two separate reefs of the Alexander River mineralized zone:

- The Bull-McVicar-Bruno reef track (McVicar Reef)
- Loftus-McKay

McVicar Reef is East North-East striking, steeply South-East dipping, while the Loftus-McKay reef track extends from Bruno into Mullocky Creek and is North North-East striking and dips 50 degrees to the North-West. In both the reefs, the intersection between an anticline hinge and a mineralized fault likely controls the trend and plunge of gold-bearing shoots.

Drilling, Exploration Activities with Intersections and Target

Before Siren Gold, only limited drilling had been completed at Alexander River. Siren Gold drilled 106 diamond drillholes for 20,000m. The company believed that the shoots continue from surface for at least 1,350m down the plunge and are still open at depth. Siren Gold also discovered a new McVicar's West shoot, which extends for at least 600m from the bottom of McVicar Mine and is also open at depth.

Three companies have undertaken exploration data collection within the Alexander River Project area since the closure of the Alexander River Mine. The companies are as follows:

- CRAE
- OGL
- Kent Exploration NZ Ltd (Kent)

Several drilling and trenching activities have been carried out in the shoots, which produced the following impressive trenching and drillhole intersection grades:

Exhibit 16: Trenching and drillhole intersection grades[xxvii]

Shoots	Grades	Types
Bull	4.5m @ 12.9g/t	Trenching
	7.9m @ 3.3g/t	Drillhole
McVicar (East and West)	8.0m @ 7.5g/t	Trenching
	2.2m @ 35.4g/t	Trenching
	4.1m @ 10.6 g/t	Drillhole
	9.9m @ 6.4 g/t	Drillhole
	2.5m @ 358 g/t	Drillhole
	2.1m @ 18 g/t	Drillhole
Bruno	9.3m @ 10.7g/t	Trenching
	4.2m @ 7.6g/t	Trenching
	3.0m @ 19.0g/t	Trenching
	3.0m @ 8.5g/t	Trenching
	2.7m @ 15.7g/t	Trenching
	2.4m @ 9.3g/t	Trenching
Loftus-McKay	15m @ 7.4g/t	Trenching
	21.8m @ 2.3g/t	Drillhole
	2m @ 26.3g/t	Drillhole
	5m @ 9.1g/t	Drillhole

An exploration target of 500-700koz @ 5-7g/t Au has been estimated at the Loftus-McKay, McVicar West and Bull West if the shoots extend for 1,000m below surface. The exploration target reflects the potential of the deposit. The MRE shows that the grade of the McVicar West and Loftus-McKay shoots increases with depth. Recent exploration was focused on Loftus McKay and McVicar West shoots on the North-East side of the fault.

MRE

The updated Alexander River Inferred MRE is 1.07 Mt @ 5.0g/t Au for 169.6koz at a 1.5g/t cut-off and 35g/t top-cap.

Exhibit 17: Inferred resource summary at different cut-off grades[xxviii]

Cut-off Grade	Tonnes (kt)	Grade (g/t Au)	Ounces (koz)
1.0	1,249	4.4	177
1.5	**1,066**	**5.0**	**170**
2.0	869	5.7	159
2.5	723	6.4	148

Exhibit 18: Inferred resource summary by material type – 1.5g/t Au cut-off[xxix]				
Material Type	**Tonnes (kt)**	**Grade (g/t Au)**	**Ounces (koz)**	**% MRE**
Transition	437	4.0	55.6	32.8
Fresh	629	5.6	114.0	67.2
Total	**1,066**	**5.0**	**169.6**	**100.0**

Exhibit 19: Inferred resource summary by shoot type – 1.5g/t Au cut-off[xxx]				
Shoot	**Tonnes (kt)**	**Grade (g/t Au)**	**Ounces (koz)**	**% MRE**
McVicar East	40.7	5.9	7.6	4.5
Bull East	322.2	2.6	26.4	15.6
Bruno	101.3	5.5	17.9	10.6
Loftus-McKay	194.8	5.3	33.1	19.5
McVicar West	407.1	6.5	84.5	49.8
Total	**1,066**	**5.0**	**169.6**	**100.0**

The McVicar West Shoot contains 50% of the MRE, with an average grade of 6.5 g/t Au with a top-cap of 35g/t.

Deposit Geology

The Alexander River Project lies in a separate fault-bounded block of the Ordovician Greenland Group metasedimentary rocks c. 5km southeast of the main belt. These rocks are weakly metamorphosed, variably deformed and are the primary host rocks for gold mineralization.

The quartz lodes at the Alexander River Project are fissure reefs hosted by a northeast trending shear zone. The shear has been interpreted as near-vertical or dipping steeply east to west and disrupted by later faulting. The historically mined quartz lodes plunge shallowly to the northeast within the shear. Gold mineralization shows a close but not linear relationship with arsenopyrite and, to a lesser degree, pyrite.

Comparison

The Alexander River Project can be compared with the following:

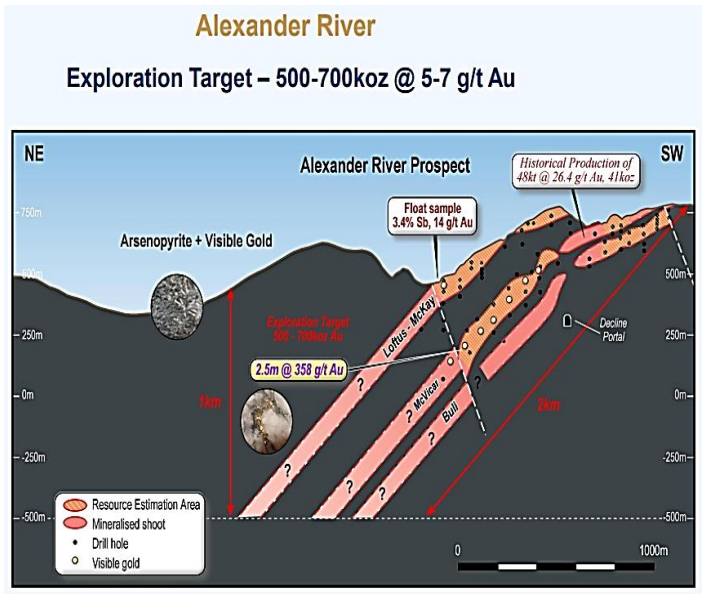
- Blackwater Mine
- Fosterville

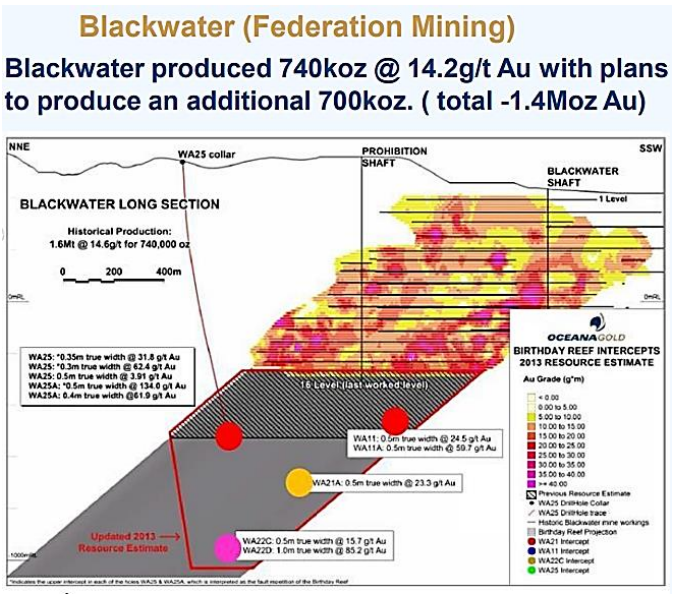
Alexander River Project vs Blackwater Mine

Historically, the Blackwater Mine project produced 740koz @14.2g/t, with plans to produce an additional 700koz of resources to a depth of 1,500m (0.9Mt @ 23g/t).

Exhibit 20: Comparison between Alexander River and Blackwater mine[xxxi]		
Particulars	**Alexander River Project**	**Blackwater Mine**
Strike Length	1,200m	800m
Historical production	41koz @ 26.4g/t	1.58Mt @ 14.6g/t for 740koz
Depth	McVicar Lode mined up to 250m and current depth potential is unknown	Mined up to 700m and open at depth to 1,500m

Exhibit 21: Schematic comparison between Alexander River and Blackwater mine[xxxii]



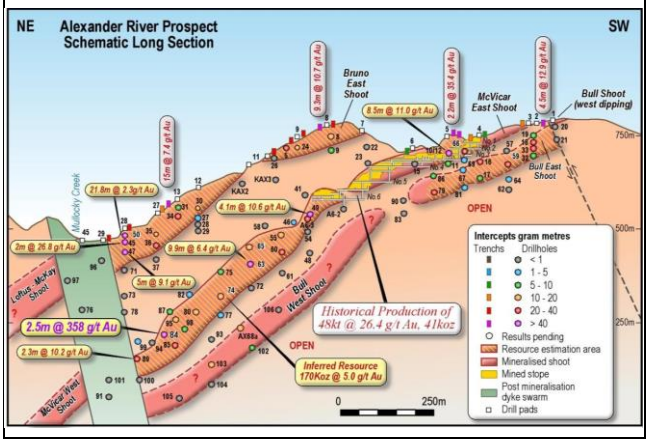


Alexander River Project vs Fosterville

The similarities between Alexander River and Fosterville in the early stages are particularly compelling, with the structural setting and age being remarkably similar.

The Fosterville mineralized shoots extend for at least 1,350m below the surface and 2,400m down the plunge. Disseminated acicular arsenopyrite gold dominates to 800m below the surface. Between 800m and 1,350m, arsenopyrite gold continues, but stibnite-gold mineralization dominates. Below 1,350m, there is only free gold in quartz. Fosterville arsenopyrite mineralization initially resulted in the mill feed grade of 4-5g/t Au. The mill feed grade increased to 15.7g/t in 2017 when the stibnite–gold mineralization was being mined and increased to 33.9g/t in 2020 when the vein that hosted visible gold was intersected.

Exhibit 22: Alexander River schematic long section[xxxiii]



The Alexander River deposit has only been drilled to around 500m below the highest outcrop at Bull shoot. This represents about 1,000m down the plunge, compared to 2,400m at Fosterville and 2,400m at the Blackwater mine. This corresponds to the acicular arsenopyrite zone at Fosterville. Gold mineralization intersected at Alexander River is currently dominated by acicular arsenopyrite mineralization with some visible gold in quartz veins. Only limited stibnite mineralization has been observed at Alexander River until now, reflecting the relatively shallow sampling compared with Fosterville.

Result

Recently the samples from Alexander River which were tested have responded positively to a flowsheet of gravity recovery followed by flotation, pressure oxidation and cyanidation, leading to a gold recovery of 93%.

Tenement Ownership Details

Exhibit 23: EP 60446 details[xxxiv]

Permit No.	Location	Grant Date	Expiry Date	Duration	Area (ha)	Minerals
60446	West Coast Region	10/05/2018	09/05/2023	5 Years	1,675.459	Gold, Silver

2.3.2 Big River (EP 60448)[xxxv]

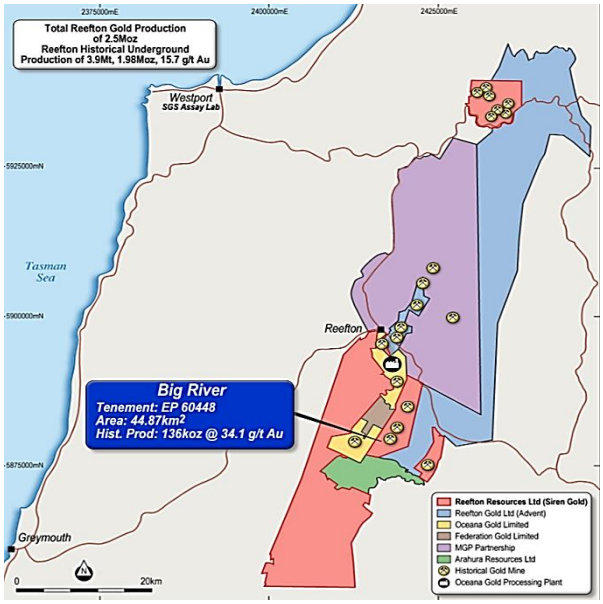
Overview and History

The Big River project is located c. 15km southeast of Reefton. The mineralization at Big River is associated with the Sunderland Anticline that extends for at least 5km through Big River North, the historic Big River mine and St George.

Gold mineralization is predominantly hosted in sheared anticline hinges with complex cross-cutting structures that create dilatational structures that have allowed mineralization to be hosted in the host rock, fault gouge and quartz reefs with an extension of at least 5km through Big River North, the Big River Mine and the St George areas.

The Big River Project overlays the area of the Big River Mine, which produced c. 136koz of gold at an average recovered grade of 34.1g/t and was mined down 12 levels to 560m below the surface between 1880 and 1942. The mineralized zone lies 4km east of the Blackwater mine, which produced 740koz at 14.2g/t Au. The Big River mine closed in 1942 due to a shortage of labor.

Exhibit 24: Geographical location of Big River[xxxvi]

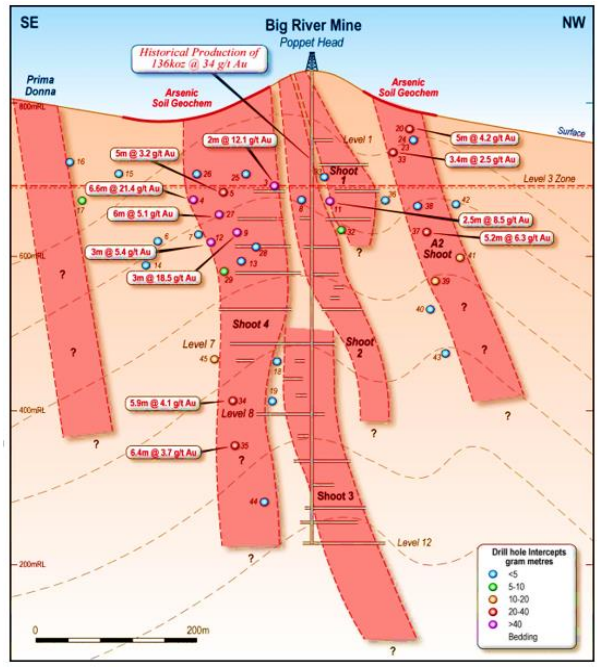


Mapping and Sampling

The historic Big River mine workings coupled with historic mine reports show that major ore shoots mined around the main Sunderland Anticline are as follows:

- Shoot 1 (mined to level 4)
- Shoot 2 (mined to level 6)
- Shoot 3 (mined to level 12)
- Shoot 4 (mined to level 7)
- A2 Shoot
- Prima Donna

Exhibit 25: Big River schematic long section[xxxvii]



Drilling, Exploration Activities with Intersections and Target

Exploration data collection has been undertaken within the Big River Project area by two companies since the closure of the Big River Mine:

- CRAE
- OGL

Diamond drilling undertaken by OGL resulted in high-grade intersections:

- 6.6 @ 21.4g/t from 127m incl. 0.8m @ 71.5g/t and 0.7m @ 54.5g/t (BR004)
- 3m @ 18.5g/t from 147m incl. 1m @ 45.2g/t (BR009)
- 2.0m @ 12.1g/t from 99m incl. 0.7m @ 26.6g/t (BR003)
- 2.5m @ 8.5g/t from 139m incl. 0.5m @ 22.7g/t (BR011)

Siren Gold has been exploring with a major focus on Shoot 4, which yielded impressive results. Siren Gold extended Shoot 4 to c. 400m below the surface. This hole intersected approximately 100m below mine Level 7, the deepest level Shoot 4 was mined to before the mine closed in 1942 during World War 2.

Siren Gold's significant intersections are:

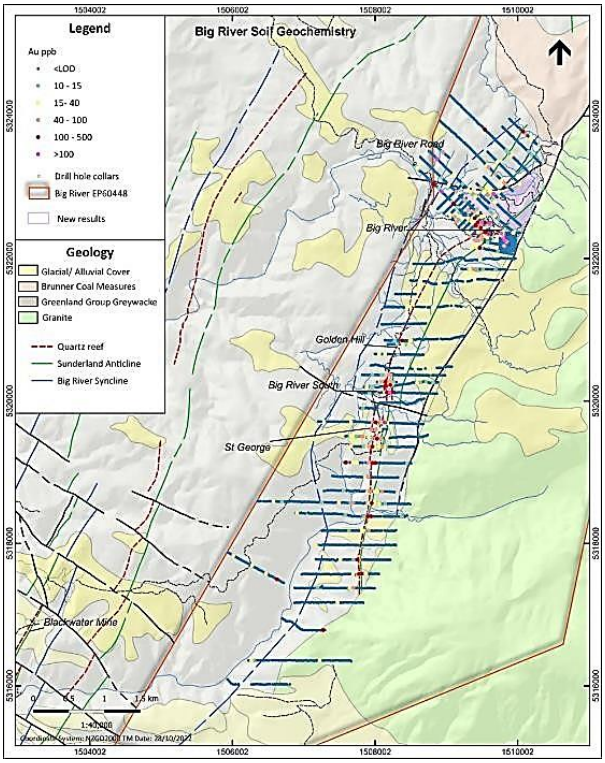
- 6m @ 21.4g/t (Shoot 4)
- 3m @ 18.5g/t (Shoot 4)
- 2m @ 12.1g/t (Shoot 4)
- 6m @ 5.1g/t (Shoot 4)
- 3m @ 5.4g/t (Shoot 4)
- 5.9 @ 4.1g/t (Shoot 4)
- 6.4 @ 3.7g/t (Shoot 4)
- 2.5m @ 8.5g/t (Shoot 1)
- 5m @ 4.2g/t (A2 Shoot)
- 3.4m @ 2.5g/t (A2 Shoot)
- 5.2m @ 6.3g/t (A2 Shoot)

A total of 19 drillholes were drilled near the Big River Mine underground workings. Drilling defined a moderately northeast dipping structure of variable mineralization abundance with a strike length of c. 260m and up to 450m down dip. The two common styles of mineralization identified in the drilling process are:

- Free gold hosted in grey-white quartz.
- Gold associated with disseminated fine-grained sulfides.

Big River Mine is interpreted to be hosted in the sheared-out hinge of an anticline. A total of seven drillholes were completed at Big River South and St George for a total of 926 m, with the same styles of mineralization encountered at Big River being intersected.

Exhibit 26: Big River Gold soil geochemistry[xxxviii]



Siren Gold has estimated an Exploration Target of between 100koz and 125koz at a gold grade between 7-9g/t Au for Shoot 4. The company considers that Big River has an initial potential of 250koz to 500koz.

MRE

The company recently announced a Maiden JORC (2012) MRE for the Big River Gold Project, which stood at 0.834 Mt @ 3.94g/t Au for 105.5koz at 1.5g/t cut-off while at 1.0g/t cut-off the MRE stood at 1.171 Mt @ 3.15g/t Au for 119.3koz. MRE includes Shoot 4 and A2 based on an underground mining scenario.

Exhibit 27: Inferred resource summary at different cut-off grades[xxxix]

Cut-off Grade	Tonnes (kt)	Grade (g/t Au)	Ounces (koz)
1.0	1,171	3.15	119.3
1.5	**834**	**3.94**	**105.5**

Exhibit 28: Inferred resource summary by shoot type – 1.5g/t Au cut-off[xl]

Shoot	Tonnes (kt)	Grade (g/t Au)	Ounces (koz)	% MRE
Shoot 4 Upper	238	3.99	30.5	28.9%
Shoot 4 Lower	423	4.34	59.0	55.9%
A2 Shoot	173	2.87	16.0	15.2%
Total	**834**	**3.94**	**105.5**	**100.0%**

In the future, additional drilling activity will focus on defining the high-grade pods and may help increase the grade and ounces in the Big River MRE.

Deposit Geology

The area is predominantly underlain by a basement sequence of monotonous, inter-bedded quartzose sandstone and shale of the Ordovician Greenland Group. These rocks are weakly metamorphosed and variably deformed and are the primary host rocks for gold mineralization. Two-fold hinges have been mapped with reasonable confidence throughout the project area. These folds are thought to have played a critical role in the distribution of mineralization.

Comparison

Big River has similar geology to the Bendigo fields with gold mineralization hosted in the anticline hinges, but also shows cross-cutting structures like Fosterville with high grades.

Result

Samples from Big River recently tested have responded positively to a flowsheet of gravity recovery followed by flotation, pressure oxidation and cyanidation, leading to a gold recovery of 91%.

Tenement Ownership Details

Exhibit 29: EP 60448 details[xli]

Permit No.	Location	Grant Date	Expiry Date	Duration	Area (ha)	Minerals
60448	West Coast Region	20/06/2018	19/06/2023	5 Years	4,847.114	Gold, Silver

2.3.3 St. George (EP 60448)[xlii]

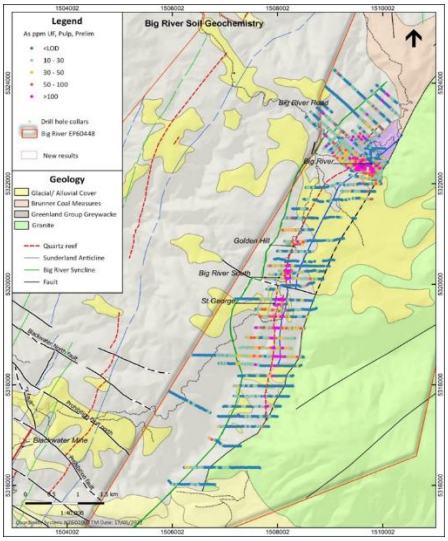
Overview and History

St George is in the southern half of the Big River area and lies 1.6km south of the Big River mine, and 4km east of the Blackwater mine. The Big River South area comprises the Golden Hill, Big River South and St George historic mine areas.

In Golden Hill, a 0.6m to 2m wide quartz reef was found in the late 1800s. The quartz reef was traced in a series of trenches over a strike length of 900m. A 55m-long drive was developed on the northern section of the reef that averaged 0.5m thick, and 39 tons were mined and crushed for an average grade of 7g/t.

Big River South was discovered in 1908. It was a 45m-long reef with a width of 1.5m. The visible gold was estimated to grade between 23-32g/t and had similarities with the nearby Blackwater Reef. In both the reefs, since then, no further mining activities have been conducted.

Exhibit 30: St. George arsenic soil geochemistry[xliii]



St George was found after several gold-bearing outcrops were found in the 1890s. Encouraging results emerged when a 30m drive was completed on a 1m reef containing quartz and a black pug. It resulted in 70oz being recovered from 30 tons of ore with an estimated grade of 72g/t. Subsequently, a further three reefs were discovered, from which 37oz were recovered from 16 tons of ore with an estimated grade of 72g/t. No further mining activities were continued in this area due to a lack of funding. In 1910, a 571m long tunnel was driven north from the Snowy River. Several small gold reefs or quartz boulders intersected along the drive, but none were developed.

Drilling and Exploration Activities with Intersections and Target

St George No. 1 level tunnel, which previously produced 70oz gold from 30 tonnes (72g/t Au), is open from the entrance to a crosscut at 65m. The quartz reef is visible in the tunnel roof and wall from 25m, and is dipping steeply to the east and west. Quartz in the roof and wall of the adit is variable, showing bucky, white quartz veins with arsenopyrite-rich stylolite and fine visible gold. With a total sampling length along the adit being 36m with 1m rock chips along the exposed quartz vein, the gold grade of the reef ranges from 0.6g/t Au to 144.0g/t Au, with an average of 30.7g/t Au.

The St George No. 2 level tunnel followed the same strike as the No. 1 level adit and collapsed. The crushing and gold recovery figures remain unknown. However, the second crushing in the St George claim overall produced 37oz gold from 16 tonnes (72g/t Au).

Exhibit 31: Cross Section: St George Mine[xliv]

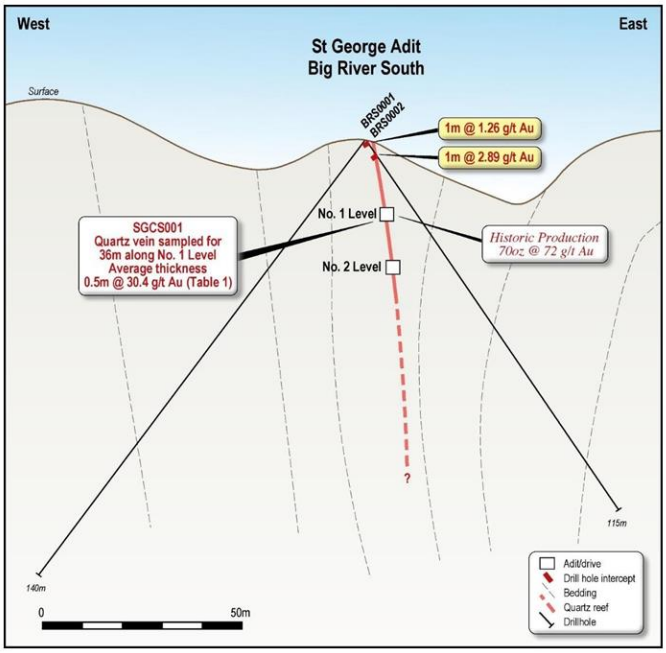
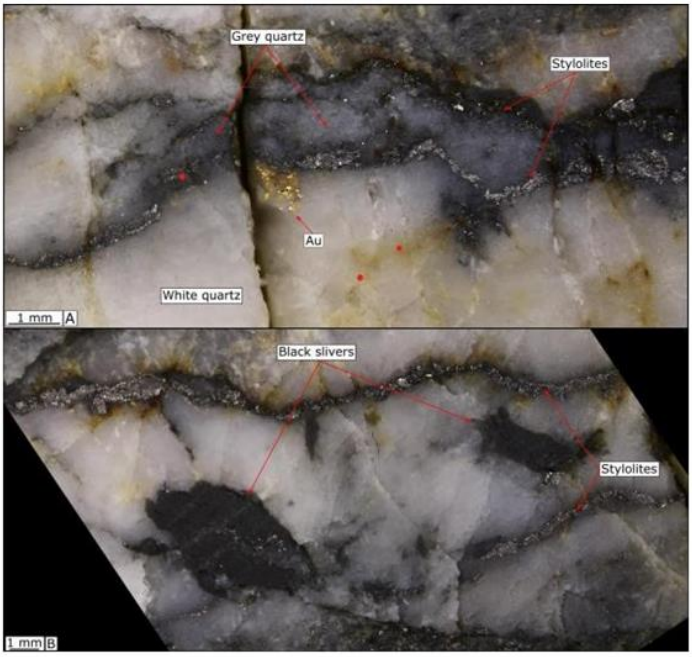


Exhibit 32: Quartz from St George Adit showing sulphitic stylolite within white quartz veins, comprising arsenopyrite and gold[xlv]



OGL drilled seven diamond holes at Big River South and St George in 2011-12 for a total of 926m.

Intersection result and grade:

- 6m @ 0.85g/t Au from 3m, including 1m @ 1.26g/t Au and 1m @ 2.89g/t Au in BRS002
- 1m @ 5.5g/t in BRS006
- 4m @ 2.1g/t Au in BRS004

St George quartz reef has a similar grade and thickness to the historic Blackwater mine located 4km to the Southwest. The Blackwater Reef has an average thickness of 0.7m at an estimated in situ grade of c. 23g/t Au. The Blackwater Reef was mined along strike for over 800m and down to 700m below surface, producing 740koz @ 14.2g/t Au. Furthermore, drilling by OGL shows that the reef extends for another 750m below the last mined level.

These results confirm the high-grade gold mineralization, evident at Big River South, continues along the quartz reef c. 3km south. It is a high-priority target for future drilling as the company experiences enormous potential to expand on the current resource base.

2.3.4 Lyell (EP 60479)[xlvi]

Overview and History

The Lyell project area is the northern extension of the Reefton Goldfield. Lyell is located 40km north of Reefton. The gold-bearing quartz lodes were worked over a strike length of 5km.

The main gold deposits within the Lyell Project include the Alpine United, Tichborne and Break of Day mines. Within these mines, gold tends to occur primarily in narrow high-grade quartz veins controlled by fold-related high-angle shears and faults within the Greenland Group.

The initial discovery of rich alluvial ground in Lyell Creek was in 1862, when at least 10,000 oz of gold were mined during the first gold rush, with the biggest nugget weighing 90 oz reported from Irishman's Creek. Lyell Goldfield also produced gold nuggets up to 52oz. Two nuggets of 3.7oz and 1.2oz were recently recovered.

The Lyell Project and the surrounding Lyell District contain approximately 21 historic mines, with a total historic underground production of approximately 91koz gold at an average recovered grade of 18.4g/t from narrow high-grade quartz veins. The most significant and profitable of these mines was the Alpine United Mine, which operated between 1874 and 1912. Total production from the Alpine United Mine is estimated at c. 80koz gold at a grade of 16.8g/t gold. The key mine is Alpine United from steeply north-plunging ore shoots in an anticline hinge that were mined to 550m and are open at depth.

Exhibit 33: Soil Geochemistry of Lyell[xlvii]

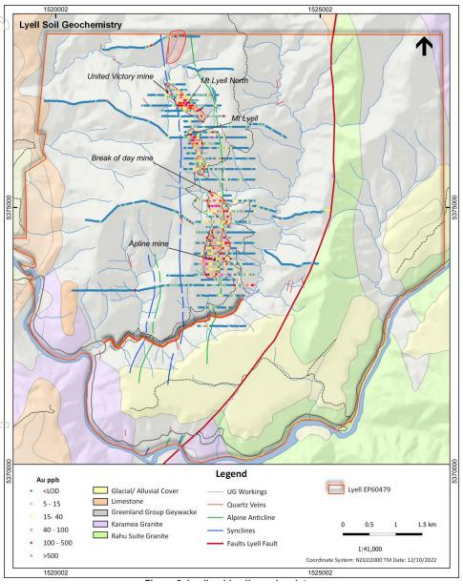


Exhibit 34: High grade (+10g/t) historical mines of Lyell Goldfield between 1874 and 1911[xlviii]

Mine	Quartz crushed (t)	Production (oz)	Grade (g/t)	Percentage of total oz
Alpine United	149,024	80,514	17.0	88.1%
Lyell Creek	135	450	104.0	0.5%
Break of Day	2,180	4,598	66.0	5.0%
Croesus	2,773	1,897	21.0	2.1%
Tyrconnell	201	1,672	259.0	1.8%
United Italy	513	2,219	69.0	2.4%
Total	**154,826**	**91,350**	**18.4**	**100%**

Mapping and Sampling

Recent soil sampling at Lyell shows northwest trending gold anomaly that intersects the anticline around the Alpine United mine. The anomaly extends for over 3kms, as shown by the red dotted line (Exhibit 32), where it potentially intersects a syncline around the United Victory mine. The Break of Day mine is also located along this anomaly. The soil samples along the north-west gold trend identify several anomalous areas shown by the black circles (Exhibit 32) which may represent mineralized shoots similar to Alexander River. Outcrop of acicular arsenopyrite mineralization was found along this gold anomaly at Mt Lyell (Exhibit 32). The outcropping mineralized zone extends for around 50m along strike and up to 10m thick. This mineralization is similar to the disseminated acicular arsenopyrite mineralization found at Alexander River. Rock chip results ranging from 0.7 to 8.6g/t Au, along with visible gold, were found in quartz float at the Break of Day mine 1km to the south.

The gold soil anomaly at Mt Lyell North was mapped. Although outcrop is poor, a 100m long mineralized zone was identified based on sub-crop and float samples. Samples with disseminated acicular arsenopyrite assayed up to 4.8g/t Au, while samples that also contained thin less than 4mm grey quartz veinlets, included assays of 37g/t Au, 22g/t Au and 6g/t Au. Recently, the company has been undertaking mapping and geochemical and geophysical surveys in the area to evaluate drill targets for a maiden drilling program.

Drilling, Exploration Activities with Intersections and Target

Exploration data collection has been undertaken by the following companies since the suspension of historic mining and prospecting in 1937:

- Otter Minerals (Otter)
- OGL
- Auzex Resources NZ Pty Ltd (Auzex)
- Kent
- Tectonex Ltd

Significant results were obtained by Auzex Resources Limited in 2011, when it drilled six diamond holes in two areas, 400m and 1km to the north of the Alpine United mine, resulting in 2m @ 4.6g/t Au from 62m near the Break of Day mine, which produced 4,600oz of gold at an average grade of 66g/t. Siren Gold plans to commence drilling at Lyell in Q4 2022.

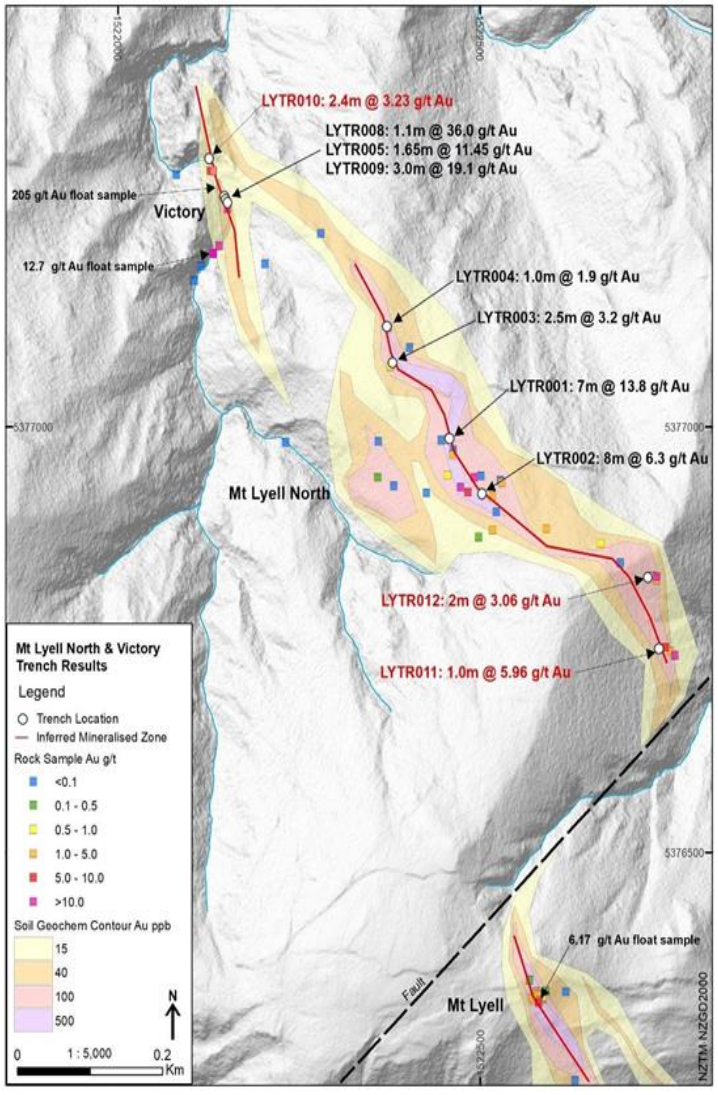
Previously, the company reported some high-grade intersections which were as follows:

- LYTR001 intersection stood at 7m @ 13.8g/t with 1m grade as high as 25 g/t.
- LYTR002 intersection stood at 8m @ 6.3g/t with 1m grade as high as 29.7 g/t.
- LYTR003 intersection stood at 2.5m @ 3.2g/t while LYTR004 returned 1.0m @ 1.9g/t intersections.
- LYTR005 returned 1.7m @ 11.5 g/t comprising a 0.5m quartz reef with visible gold that assayed 15 g/t surrounded by disseminated arsenopyrite mineralized sandstone that assayed 6.7 g/t and 14.9 g/t.
- LYTR008 returned 1.1m @ 36.0 g/t, comprising a 0.43m quartz reef with visible gold that assayed 70.0 g/t, surrounded by disseminated arsenopyrite mineralized sandstone that assayed 31.0g/t and 3.2g/t. Also, a float sample from United Victory Reef with significant visible gold was assayed at 205 g/t. Moreover, an acicular arsenopyrite mineralized outcrop was also found 30m to the south of LYTR008 returning 6.4 g/t, while a float sample of sulfide-rich sandstone, a further 50m upstream from the reef outcrop, returned 12.7 g/t with 0.24% Sb.
- LYTR009 returned 3.0m @ 19.1 g/t, comprising a 0.4m quartz reef with visible gold that assayed 39.0 g/t, surrounded by disseminated arsenopyrite mineralized sandstone that assayed 42.0 g/t and 1.4 g/t.

Recently, three new trenches have been excavated at the Northwest and Southeast ends of the 1-km-long soil anomaly, which are as follows:

- LYTR010 returned an average mineralization of 2.4m @ 3.2g/t. This tranche sampled 50m to the north of the Victory reef which intersected in disseminated mineralization, extending the Victory

Exhibit 35: Lyell North trench results[xlix]



mineralization to around 75m and open to the Northwest and Southeast.

- LYTR011 and LYTR012 were excavated, which exposed disseminated acicular arsenopyrite mineralization, with LYTR011 intersecting 1m @ 6.0g/t and LYTR012 intersecting 2m @ 3.1g/t.

All 10 trenches at Mt Lyell North have intersected mineralization greater than 1.9g/t Au. Recent mapping and trenching indicated that Mt Lyell North – Victory Reef appears to be dipping steeply to the east, and subsequently, some of the planned drill pads have been moved while some new pads targeting the Victory Reef have been identified. The company has made a revised application, including 18 drill pads to Department of Conservation (DoC) with drilling scheduled to commence from Q4 2023.

MRE

Siren Gold has not yet published any MRE for its Lyell Goldfield.

Geology

The Lyell Goldfield is a northern extension of the Reefton Goldfield, which is situated in late Cambrian to early Ordovician Greenland Group sedimentary rocks. These rocks consist of interbedded, quartz-rich sediments.

Tenement Ownership Details

Exhibit 36: EP 60479 details[I]

Permit No.	Location	Grant Date	Expiry Date	Duration	Area (ha)	Minerals
60479	West Coast Region	13/12/2018	12/12/2023	5 Years	5,424.592	Aluminum, Antimony, Bismuth, Copper, Gold, Ilmenite, Iron, Iron sand, Lead, Magnesium, Magnetite, Manganese, Molybdenum, Nickel, Platinum group metals, rare earth elements, Rutile, Silver, Tantalum, Tin, Titanium, Tungsten, Vanadium and Zinc

2.3.5 Reefton South (PP 60465)[Ii]

Overview and History

Reefton South Permit covers early Ordovician Greenland Group rocks to the west of the Cumberland and Blackwater mines and buried Greenland Group rocks south of Blackwater. The Greenland Group rocks are interpreted to extend south of Blackwater, beneath a veneer of glacial moraine, and have not been explored for hard rock gold deposits.

The largest gold mine in the Reefton Goldfield, Blackwater (740koz, inferred resource of 700koz), lies close to the cover boundary. The Reefton South area also possesses a significant history of alluvial gold mining with an estimated 8Moz of gold recovered along the West Coast south of Reefton.

The Reefton South PP expired on 7 August 2022 and was replaced with an exploration permit application.

Tenement Ownership Details

Exhibit 37: PP 60465 details[Iii]

Permit No.	Location	Grant Date	Expiry Date	Duration	Area (Ha)	Minerals
60465	West Coast Region	Application Stage		5 Years	25,519	Aluminum, Antimony, Bismuth, Copper, Gold, Ilmenite, Iron, Iron sand, Lead, Magnesium, Magnetite, Manganese, Molybdenum, Nickel, Platinum group metals, rare earth elements, Rutile, Silver, Tantalum, Tin, Titanium, Tungsten, Vanadium and Zinc

2.3.6 Golden Point / Auld Creek (EP 60648)[liii]

Overview and History

The Golden Point exploration permit was previously part of the Reefton South prospecting permit. It is located 3km west of the Globe Progress mine, producing 420koz of gold from a historic underground mine and 700koz from a recently opened pit mined by OGL. The Golden Point Reef was mined between 1884-1908 and 1,357 tons of quartz were mined from a 1.1m thick reef to recover 410koz for an average grade of 9.4g/t.

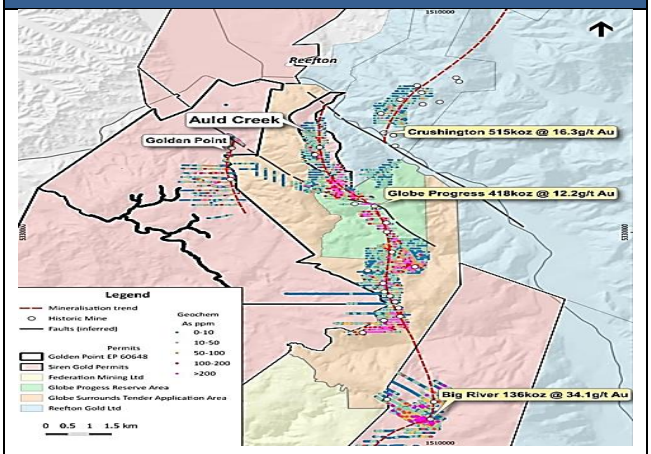
Two historical mines (the Golden Point and Morning Star mines) are situated northwest of the Globe Progress Mine.

Exhibit 38: Historical production and grade between 1884 and 1908[liv]

Year	Quartz crushed (t)	Production (oz)	Grade (g/t)
1884	2	25	357
1884	1,000	307	9.5
1894	155	44	9.1
1907	100	18	5.6
1908	100	16	5.1
Total	**1,357**	**410**	**9.4**

The Auld Creek Prospect is contained within the Golden Point exploration permit. It is situated between the highly productive Globe Progress mine, which historically produced 418koz @ 12.2g/t and the Crushington group of mines that produced 515koz @ 16.3g/t. The Auld Creek prospect lies within this permit and sits on a continuation of the Reefton Line of Lode along the strike from Globe Progress and only 2km from the Crushington mines.

Exhibit 39: Geographic location of Golden Point[lv]



Mapping and Sampling

Mapping and soil sampling indicated that the reef extends for at least 2kms along the strike.

Drilling Trenching and Exploration Activities

Siren Gold has completed infill soil sampling to better define the soil anomalies. The arsenic soil anomaly now extends for over 700m along strike and clearly defines the Fraternal and Bonanza mineralization. The Fraternal zone has been subdivided into the Fraternal and Fraternal North zones. Siren Gold has excavated four trenches across the Fraternal mineralized zone (FTTR001, FTTT002, FTTR003 and FTTR005) and two trenches across the Fraternal North Shoot (FTTR004 and FTTR006) and one trench across the Bonanza Shoot (BZTR001) and Bonanza West Shoot (BZTR002). Two trenches were also excavated between the Fraternal and Fraternal North Shoots (FTTR007 and FTTR008) and one trench 100m further to the north FTTR009.

Previously reported Fraternal intersections include the following:

- 8.4m @ 19.7g/t, with 5.3% Sb for 32.0g/t AuEq (FTTR001)
- 2.0m @ 14.2g/t with 13.0% Sb for 44.9g/t AuEq (FTTR003)
- 8.4m @ 2.8g/t Au, 0.24% Sb for 3.2g/t AuEq
- 6.0m @ 2.5g/t Au, 1.6% Sb for 6.2g/t AuEq
- 8.8m @ 2.8g/t Au, 0.26% Sb for 3.4g/t AuEq
- 8.3m @ 2.1g/t Au, 0.5% Sb for 3.2g/t AuEq

The recent excavation of a number of new trenches across all the mineralized zones has resulted in an intersection of 8.3m @ 2.1 g/t with 0.45% Sb for 3.3g/t AuEq from FTTR018 at the southern end of the Fraternal Shoot, which has been further extended by c. 25m to around 200m.

In Bonanza zone trench, the previous assayed results are:

- 14m @ 2g/t with 0.82% Sb for 3.3g/t AuEq, with a higher-grade section of 6m @ 2.5g/t with 1.6% Sb for 5.0g/t AuEq (BZTR001)

- 2.7m @ 2.85g/t with 0.15% Sb for 3.1g/t AuEq (BZTR002)
- 12m @ 4.1g/t Au with 2.9% Sb for 8.7g/t AuEq (RDD087)
- 18m @ 2.7g/t AuEq including 4.5 @ 3.0 g/t Au with 3.2% Sb for 8.1g/t AuEq (RDD085)
- 6m @ 1.75g/t Au, 2.0% Sb for 6.4g/t AuEq (RDD0081)

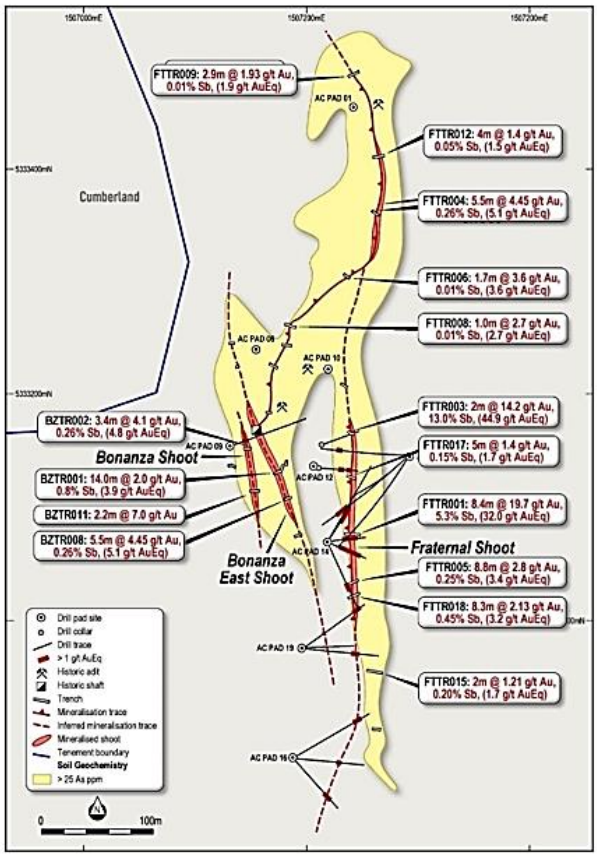
Recent excavations were from BZTR008 6.0m @ 4.9g/t with 0.30% Sb for 5.6g/t AuEq, while BZTR002 was extended, which returned 3.4m @ 4.1g/t with 0.26% Sb for 4.8g/t AuEq. New Bonanza East included an intersection of 5.5m @ 4.5g/t Au, 0.26% Sb for 5.1g/t AuEq and new Bonanza intersections included 3.4m @ 4.1g/t Au, 0.26% Sb for 4.8g/t AuEq and 2.2m @ 7.0g/t Au.

In terms of drilling, the previously reported Fraternal diamond drillhole intersections were:

- 35m @ 4.1g/t Au, 2.9% Sb or 35m @ 11.0g/t AuEq (RDD087)
- 6m @ 4.1g/t Au, 4.1%Sb or 6m @13.8g/t AuEq (RDD086)
- 34.0m @ 1.6g/t Au, 0.7% Sb or 34.0m @ 3.3g/t AuEq (RDD085)
- 20.7m @ 5.9g/t Au, 2.6% Sb or 20.7m @ 12.0g/t AuEq (ACDDH004), with the first 4.6m averaging 10.7g/t Au, 3.9% Sb for 19.9g/t AuEq
- 17.9m @ 2.3g/t Au, 0.1% Sb or 17.9m @ 2.6g/t AuEq (ACDDH005)

Siren's recently commenced diamond drilling program is focused on depth extension of the interpreted south-plunging Fraternal shoot, with initial holes drilled to the south of current drilling.

Exhibit 40: Auld Creek trench locations and results[lvi]



- ACDDH007 resulted in an intersection of 26.5m @ 2.7g/t Au, 0.07% Sb or 26.5m @ 2.9g/t AuEq, which is inclusive of 17.5m @ 3.7g/t Au, 0.1% Sb or 17.5m @ 3.9g/t AuEq. This intersection also includes 8.5m @ 6.7g/t Au;
- ACDDH006 was drilled 175m. A thinner 8.6m mineralized zone was intersected, which returned 8.6m @ 1.3g/t Au, 0.2% Sb or 8.6m @ 1.7g/t Au. This includes 3.1m @ 1.7g/t, 0.5% Sb or 3.1m @ 2.8g/t AuEq;
- ACDDH008 and ACDDH009 have also intersected the mineralized shoot with assays awaited;

The latest assays confirm the presence of consistent high-grade gold across the entire Fraternal intercept, thereby raising expectations about the type of mineralization evident in the drillholes at Auld Creek. The drillhole AXDDH009 also intersected a broad zone of mineralization. ACDDH009 extended the Fraternal Shoot to approximately 225m down plunge and 90m below the surface. Recently OGL mined an open pit and extracted an additional 600koz of gold from lower-grade remnant mineralization around the historic Globe Progress mine. The Globe progress mineralization extends for over 200m vertically below the bottom of the open pit before being offset by the Chemist Shop Fault (CSF). The offset mineralization of the other side of the CSF has not been found.

Exhibit 41: Auld Creek Exploration Targets[lvii]

Tonnes	550,000	650,000
Gold (g/t)	3.0	3.5
Sb (%)	1.2	1.5
Gold (oz)	55,000	65,000
Sb (t)	7,500	8,500
AuEq (g/t)	6.0	7.0
AuEq (oz)	115,000	130,000

Exploration Targets and Models

Based on the available trench and drillhole assay data (excluding ACDDH008 and ACDDH009), an exploration target model was created using Leapfrog Edge for the Fraternal Shoot. Also, separate models were completed for gold and antimony, which extend down the plunge for c. 185m. These models will give an indication of the amount and tenor of gold and antimony mineralization discovered until now.

The model comprises the results of 18 diamond drillholes for a total of 2,382.1m and 9 surface trenches. The processes applied in creating the exploration target models are similar to those of models used to define an MRE. The database was validated, followed by a grade domain based on geological and structural mapping and assay data. The grade domain contacts are based on a nominal 0.5 g/t AuEq cut-off, using the Leapfrog Geo vein modeling technique. An exploration target of 115,000 to 130,000 AuEq oz with 7,500 to 8,500 tonnes of Antimony down to 90m below surface, for the Fraternal Shoot at Auld Creek, has been estimated. Also, the results from exploration data analysis and variography were compared to those for Reefton projects, which showed that Auld Creek and Reefton projects had similar densities.

Currently in the exploration target, the Fraternal North, Bonanza and Bonanza West shoots have not been included. If the Fraternal Shoot continues to plunge shallowly to the south and extends for c. 1km, it will still only be c. 200m below the surface, as the topography profile is similar to the interpreted plunge of the shoot**.**

Exhibit 42: Auld Creek East-West schematic cross section[lviii]

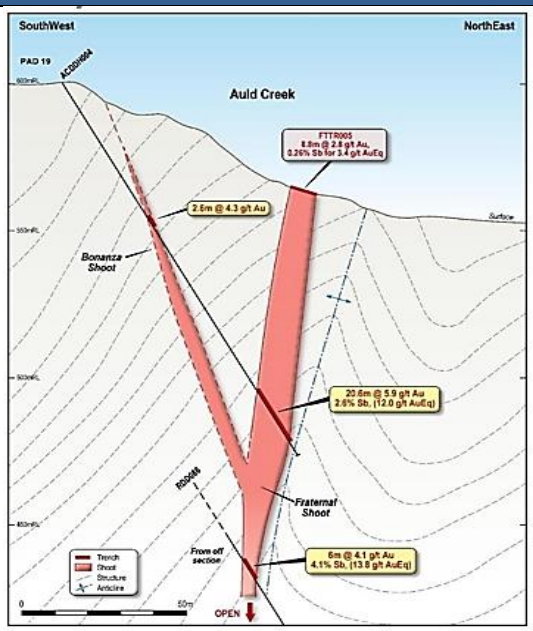
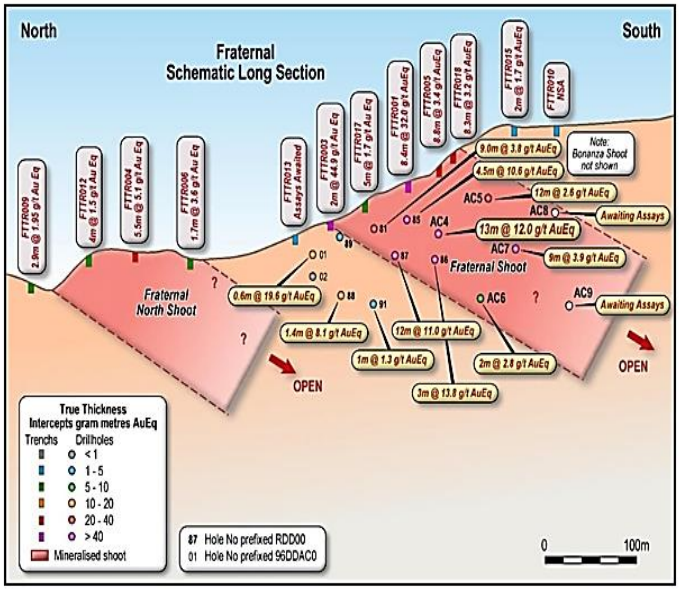


Exhibit 43: Auld Creek North-South schematic long section[lix]



MRE

Siren has completed its maiden Auld Creek MRE, which comprises the Fraternal Shoot only. The MRE is based on existing surface trenches and drillholes, which extend c. 170m below the surface. The Maiden JORC (2012) MRE for Auld Creek Project stood at 0.58 Mt @ 3.53g/t Au for 65.8koz at 1.5g/t cut-off and 8.7kt of antimony @ 1.5% Sb with 132.4koz AuEq @ 7.1g/t AuEq. The Fraternal Shoot remains open at depth and three additional shoots have also been identified at Auld Creek, namely, Fraternal North, Bonanza and Bonanza East Shoots.

Exhibit 44: Auld Creek Mineral Resource Estimate at various cut-offs[lx]

AuEq Cut-off (g/t)	Status	Tonnes (kt)	Au (g/t)	Ounces (koz)	Sb%	Kt	AuEq g/t	AuEq (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**

Exhibit 45: Inferred resource summary of Auld Creek – 1.5g/t Au cut-off[lxi]							
Project	**Tonnes (Mt)**	**Grade (g/t Au)**	**Sb%**	**Ounces (koz)**	**Sb (Kt)**	**AuEq (g/t)**	**AuEq (koz)**
Auld Creek	0.58	3.53	1.5	65.8	8.7	7.10	132.4

Tenement Ownership Details

Exhibit 46: EP 60648 details[lxii]						
Permit No.	**Location**	**Grant Date**	**Expiry Date**	**Duration**	**Area (Ha)**	**Minerals**
60648	West Coast Region	19/03/2021	18/03/2026	5 Years	4,622.7	Gold, Silver

2.3.7 Bell Hill (PP 60632)[lxiii]

Overview and History

The Bell Hill Prospecting Permit was granted in December 2021. The permit is located approximately 40km south of Reefton and abuts the southern boundary of the Reefton South permit. The project contains a continuation of the buried Greenland Group rocks found in the Reefton South permit. There has been no historical hard rock mining, but alluvial gold is mined from the overlying gravels sourced from Greenland Group. There has been historical alluvial mining in creek beds of gold shedding from the Greenland Group. However, there has been no known history of hard rock mining in the immediate permit area.

Tenement Ownership Details

Exhibit 47: PP 60632 details[lxiv]						
Permit No.	**Location**	**Grant Date**	**Expiry Date**	**Duration**	**Area (Ha)**	**Minerals**
60632	West Coast Region	15/12/2021	14/12/2023	2 Years	36,487.0	Gold, Silver

2.3.8 Waitahu (PP 60759)

Tenement Ownership Details

The Waitahu Prospecting Permit was granted in December 2021 and covered the northern extension of the Golden Point reef under the cover.

Exhibit 48: PP 60759 details[lxv]						
Permit No.	**Location**	**Grant Date**	**Expiry Date**	**Duration**	**Area (Ha)**	**Minerals**
60759	North Extension of Golden Point Reef	17/12/2021	16/12/2023	2 Years	4,999.1	NA

2.3.9 Langdons (PPA 60893)[lxvi]

Overview and History

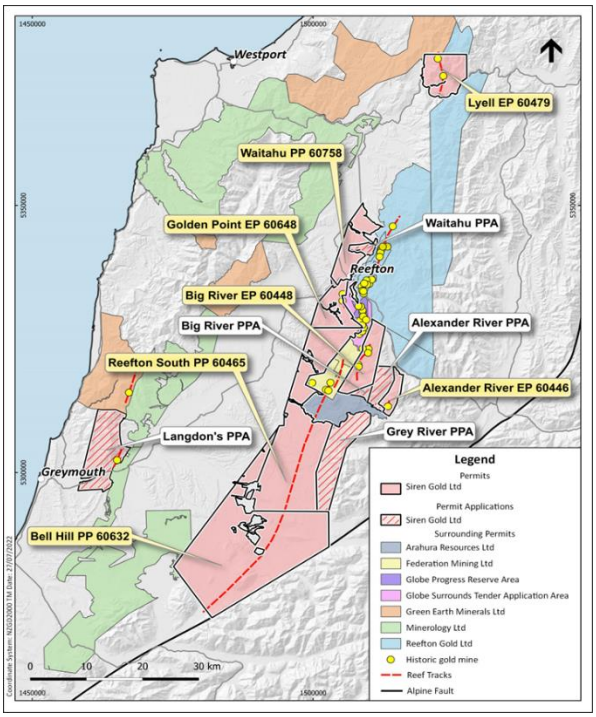
Siren Gold has applied for a new prospecting permit over Langdons Reef near Reefton. The Langdons area contains several high-grade Au-Sb reefs ranging from 0.6 to 2.7m wide, which were mined with a recovered grade of 60g/t Au and an early reported grade up to 2,610g/t Au and 1,120g/t Ag.

The Langdon and Victory reefs were mined for five years with reported production of 1,586oz of gold from 809 tons of ore for an average grade of 60g/t Au. After the second world war, the Langdons and Victory mines were revitalized, but working ceased in 1952 due to a lack of ore.

A description of the nearby Victory Reef suggests that gold can be observed in white quartz, stibnite and pyrite. Thin quartz veinlets with stringers of stibnite were also found at Langdons Reef. Gold and arsenopyrite traces were also found in the wall rock, suggesting similar characteristics to the Reefton Goldfield. Some unnamed reefs mined around Langdons Reef also contained copper sulfides. Early descriptions described a 0.6m - 2.7m thick quartz vein intruding Greenland Group metasedimentary rocks. This included up to 0.6m thick massive stibnite mineralization that could exceed 20%.

Until the present, only one hole has been drilled in the area which intersected the Victory Reef (1m @ 30g/t).

Exhibit 49: Geographical location of Langdons[lxvii]



Drilling and Exploration activities

Once the permit is granted, Siren Gold intends to conduct mapping, rock chip sampling over the exposed reefs and conduct a soil sample program over the 5km x 1km area of exposed prospective Greenland Group rocks.

MRE

Siren Gold has not yet published any MRE for its Langdons Project.

Tenement Ownership Details

Siren Gold has been granted prospecting permit for two years.

Exhibit 50: PPA 60893 details[lxviii]

Permit No.	Location	Grant Date	Expiry Date	Duration	Area (Ha)	Minerals
60893.01	West Coast Region	25/05/2023	24/05/2025	2 Years	7,305.2	Gold, Silver

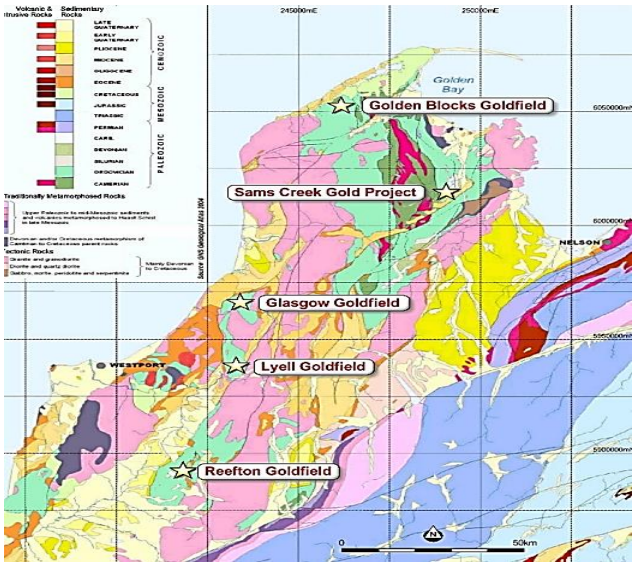
2.3.10 Sam's Creek (EP 40338)[lxix]

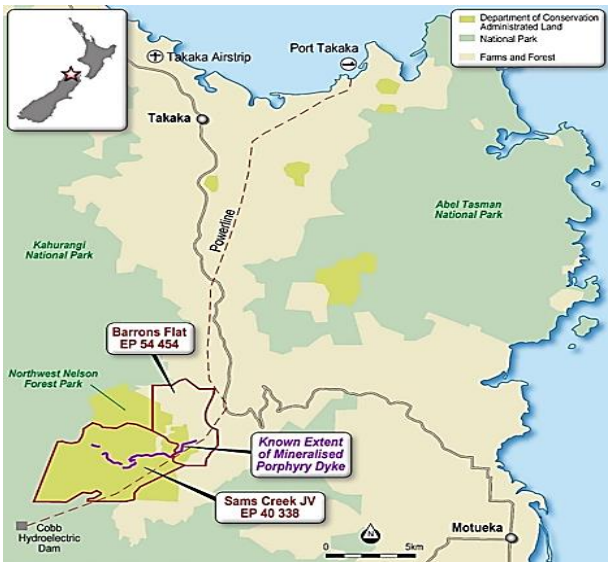
Overview and History

Siren Gold acquired the Sams Creek Gold Project in New Zealand from Sandfire Resources Limited (ASX: SFR) for AUD 250k.

The Sams Creek Gold Project is located 140km northeast of Reefton and 100km northeast of Lyell. The Sams Creek Project is in Golden Bay, approximately 20km south of Takaka and 20km northwest of Motuaka, at the northern end of the South Island of New Zealand. The project is well-connected and is close to a main road and the power line from the Cobb hydroelectric dam.

Exhibit 51: Geology showing Paleozioc rocks in green (LHS) and Geographic location of Sams Creek (RHS)[lxx]



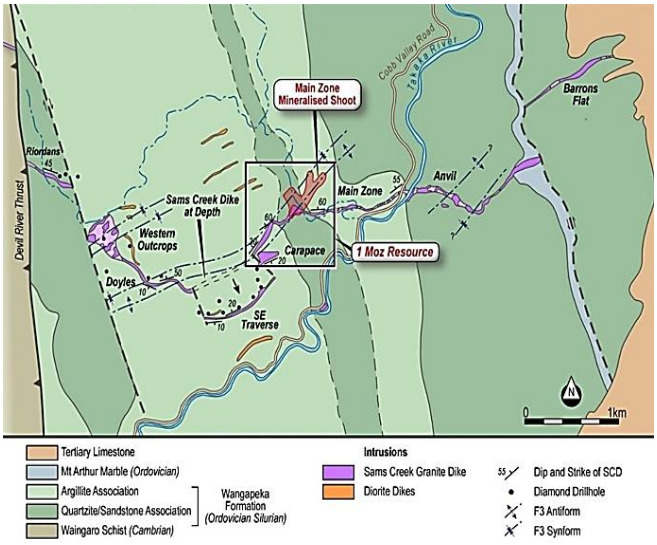


The Project comprises two exploration tenements:

- Barrons Flat (EP 54454), which is 100% held by Sams Creek Gold Limited (SCGL), a wholly owned subsidiary of Sandfire.
- 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.

The Sams Creek Gold Project is divided into several exploration prospects along the strike of SCD. It includes Riordans, Western Outcrops, Doyles, SE Traverse, Carapace, Main Zone, Anvil and Barrons Flat. The dyke is up to 60m thick and can be traced east-west over 7km along the strike. The dyke dips steeply to the north, where it intrudes quartzite- and sandstone-dominated lithologies, but dips more shallowly to the North-West and South-East between the Carapace and Western Outcrops, where it intrudes argillite. The SCD has been folded into gentle North-East plunging folds, with the gold veins preferentially forming in the fold hinges, resulting in North-East plunging mineralized shoots.

Exhibit 52: Geology of the Sams Creek deposit (LHS) and cross section through the Main Zone (RHS)[lxxi]



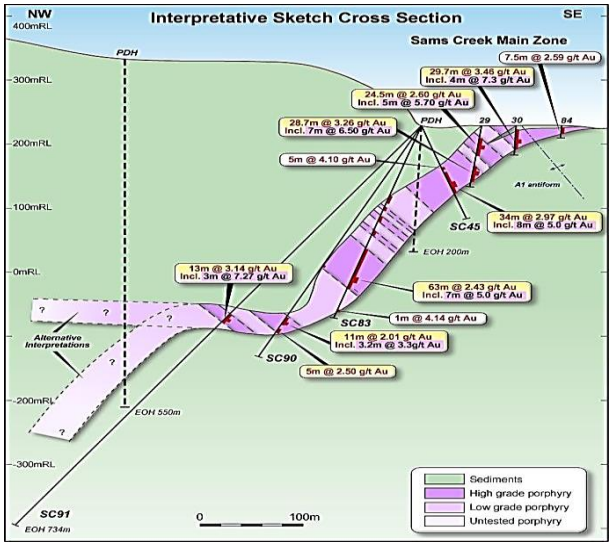
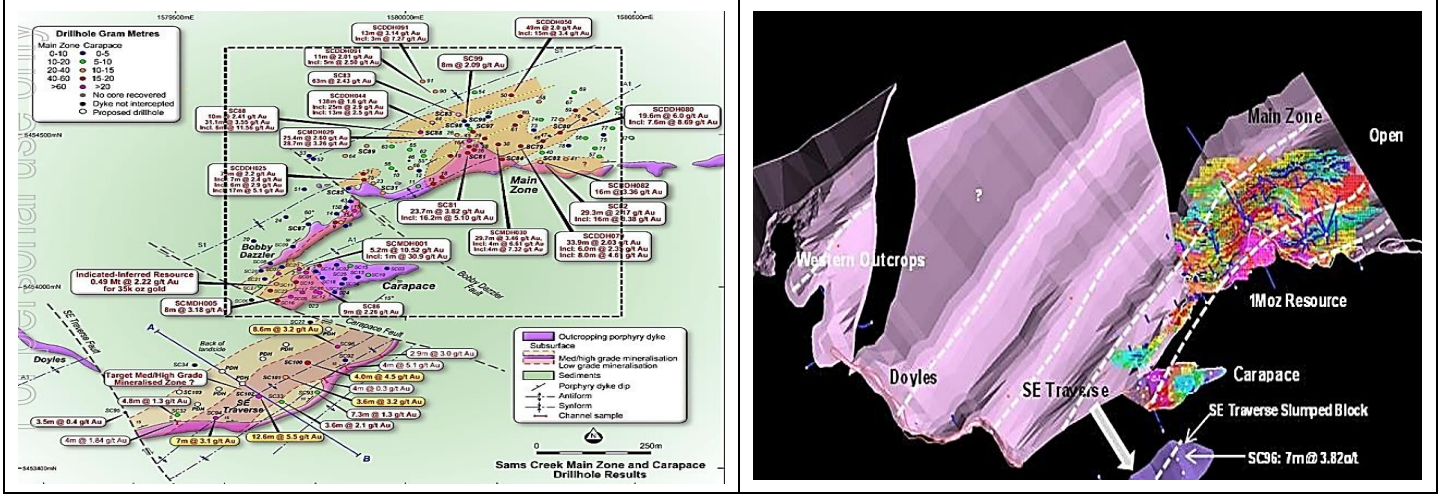


Exhibit 53: Plan view from Doyles to Main Zone showing A1 anticline and drillhole results (mineralized shoots shown orange) (LHS) and Sams Creek Dyke plan view (RHS)[lxxii]



Mineralization

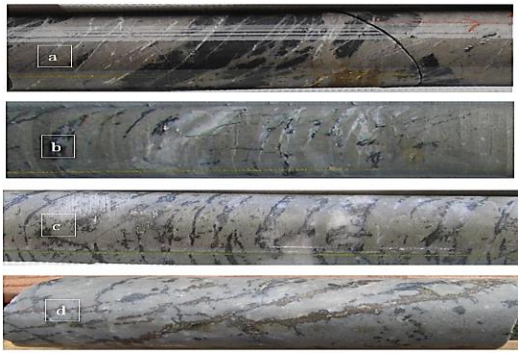
The geological and geochemical characteristics of SCD indicate that it is a member of Intrusion-related Gold Deposits (IRGDs). Globally, IRGDs has proven to be a source of multi-million-ounce resources where Pogo (5.0Moz), Donlin Creek (10.0Moz) and Fort Knox (7.0Moz) in Alaska; Kidston (4.0Moz) and Cadia (15.0Moz) in Australia and Vasilkovskoe (10.0Moz) in Kazakhstan are the cases in point.

The SCD is described as distal deposits located in the host sediments outside the contact aureole of the source intrusion. These deposits have Gold (Au), Arsenic (As), Stibnite (Sb), Mercury (Hg), Zinc (Zn), Lead (Pb) and Silver (Ag) mineral associations, which may lie over 1km from the source. At structurally higher levels, silver dominates over gold with Ag:Au ratios at 30:1, while at lower levels gold dominates silver, with ratios around 0.3:1, along with base metals (Zn and Pb), thereby reflecting the possibility of increase in proximity of the source intrusion with the top of the dyke showing signs of epithermal-style mineralization.

The porphyry dyke is variably mineralized and has been modified by at least four mineralization stages, which are as follows:

- Stage I: Magnetite-ankerite and biotite alteration (Fig. a)
- Stage II: Quartz and pyrite (Fig. b)
- Stage III: Arsenopyrite, pyrite and quartz veins (Fig. c)
- Stage IV: Base metal veins. (Fig. d)

Exhibit 54: Four stages of alteration[lxxiii]



Stage III – being the main gold mineralizing event, mineralization consists of irregular to planar gold-bearing arsenopyrite, pyrite and quartz veins. Although these veins do not appear to contain any gold but appear to be associated with the high-grade gold zones. Stage III arsenopyrite veins have later been cut by Stage IV base metal veins (15mm thick), which contain chalcopyrite, galena, sphalerite and pyrite. These veins dip steeply to the southwest, orthogonal to the Stage III auriferous veins. The vein orientation and mineralogy changes through Stages II to IV, indicating that the SCD is being rotated and fluid chemistry changing as the mineralization progresses.

The SCD has been folded into northeast plunging folds, with the gold veins getting formed in the fold hinges, resulting in northeast plunging mineralized shoots. Three folds have been intersected in the Main Zone with additional folds mapped on surface and indicated in the soil and rock chip sampling. These additional mineralized fold hinges have the potential to significantly increase the Sams Creek MRE.

Sams Creek Mineral Resource Estimate

The updated resource estimate of Sams Creek estimated 9.1Mt @ 2.82 g/t for 824.4koz, with a cut-off grade of 1.5g/t on a 100% basis. The Sams Creek Resource has incorporated data from the Bobby Dazzler deposit of 16.7 koz at 2.6g/t.

Exhibit 55: Resource estimate at a 1.5g/t cut-off (100% basis)[lxxiv]				
2022 Sams Creek Mineral Resource Estimate				
Category		**Tonnes (Mt)**	**Grade (g/t Au)**	**Contained Gold (koz)**
Main Zone	Indicated	3.29	2.80	295.6
Total	**Indicated**	**3.29**	**2.80**	**295.6**
Main Zone	Inferred	3.79	2.71	330.0
SE Traverse	Inferred	1.28	3.56	146.1
Carapace	Inferred	0.54	2.06	36.0
Bobby Dazzler	Inferred	0.20	2.59	16.7
Total	**Inferred**	**5.82**	**2.84**	**528.8**
Total		**9.1**	**2.80**	**824.4**

Siren Gold considers that Sams Creek is a potential underground mine and believes an underground mining scenario could be improved by trimming some of the low-grade dyke and using separate domains for the high-grade mineralization along the fold hinges and lower-grade fold limbs.

Drilling, Exploration Activities and Target

A total of 137 diamond holes drilled over 20km at Sams Creek focused primarily on the 1.5km section of the SCD between southeast Traverse and Main Zone, which corresponds c. 20% of the SCD strike and is open at depth.

Gold mineralization is contained in sulfide veins that dip to the southeast, perpendicular to the dyke, while the drillholes that have been drilled down the dyke are perpendicular to these veins and give the best representation of the gold grade. Some of the intersections are:

- DDH84SC019 – Drilled obliquely down the dyke and intersected 183m @ 2.46g/t Au from 31m (inclusive of all the samples). Using an approximate 2g/t cut-off, the intersections are broken into 8 sections, with an average intersection of 101m @ 3.39g/t Au for 342 gram meters;
- DDH84SC016 – Intersected 7 intervals with an average intersection of 87m @ 4.2g/t Au for 366 gram meters;

Magnetic Anomaly

Exhibit 56: Arsenic soil geochemistry, SCD wireframe (grey), MRE block model and Magnetic anomaly[lxxv]

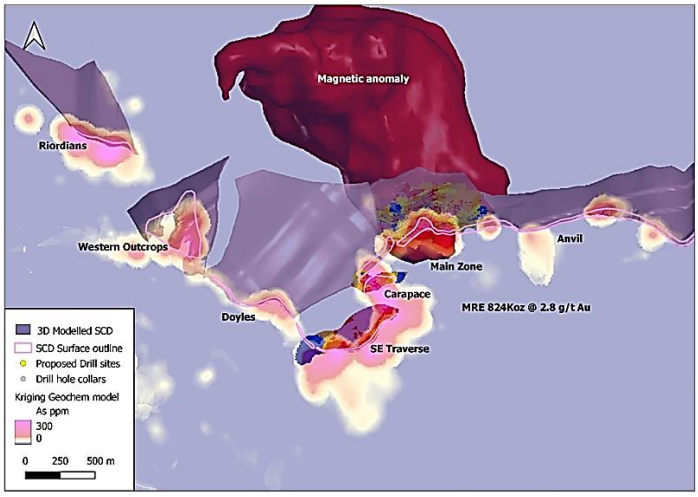
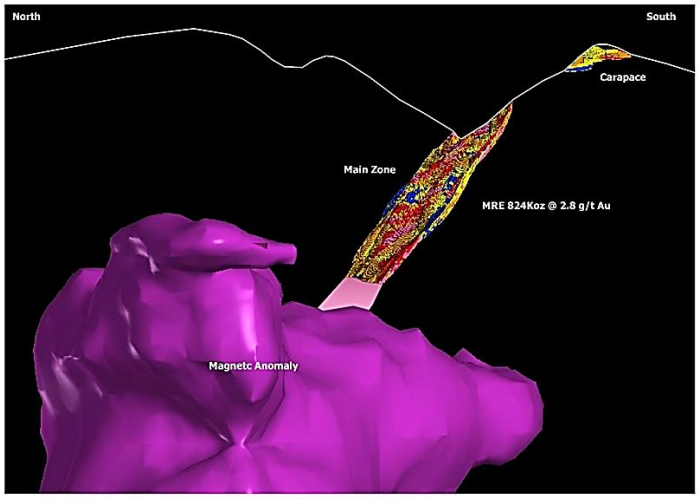


Exhibit 57: 3D Image of the SCD MRE and magnetic anomaly[lxxvi]



With the completion of Magnetic/Radiometric survey of Sams Creek by Southern Geoscience Consultants (SGC) – a magnetic source was found located directly down dip from the mineralized Sams Creek dyke. This anomaly have the

potential to represent a magmatic intrusion, which could be the source of the Sams Creek dyke. SGC also completed the 3D inversions of the Sams Creek's Magnetic/Radiometric survey shown in the above exhibit.

It is expected that at deeper levels, SCD may intersect the modelled intrusion, with a potential increase in metals like Bismuth (Bi), Tellurium (Te), Tungsten or Wolfram (W) and Molybdenum (Mo).

Wolframite – an Iron-manganese-tungsten oxide, is found in association with pyrite and arsenopyrite at 463.7m in intersection - DDHSC069, with an occurring in relatively large grains (up to 1 mm). Wolframite is associated with an early high-temperature with near-source mineral in granite-associated mineralized systems, thereby indicating its presence with enriched tungsten in the hydrothermal fluids. Also, the presence of scheelite at Sams Creek cannot be ruled out.

Furthermore, a Molybdenite mineralized granodiorite porphyry associated with Copper (Cu) skarn is located at Copperstain Creek 30kms to NNW of Sams Creek and is expected that it could be a correlative of the Sams Creek intrusion.

Soil Geochemistry

Ionic Leaching Method – a proprietary partial leach assay technique used to explore post mineral or residual cover. It is used to identify buried or blind mineral deposits by examining only part of the chemical signature of the mineralization.

The method is different from the conventional soil sampling which assays samples from C-horizon, which at Sams Creek is c. 0.5m to 1.0m below the surface, where the Ionic Leaching technique, a sample is collected immediately below the surface humus layer, which is c. 0.1m below the surface.

Exhibit 58: Conventional soil sample locations displaying arsenic (as ppm) overlying the Sams Creek MRE block model[lxxvii]

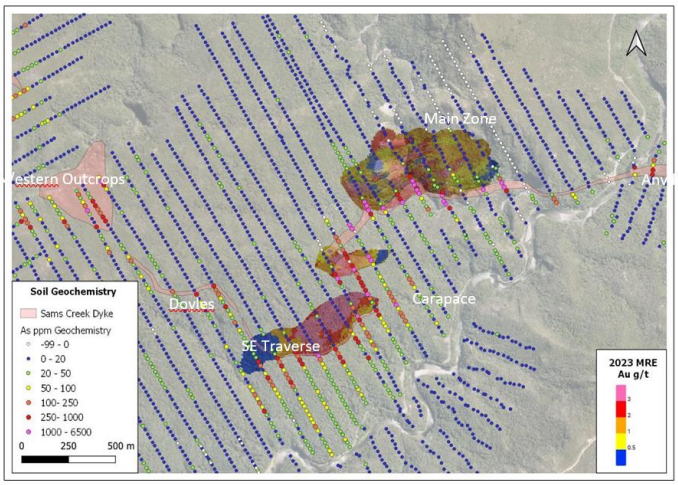
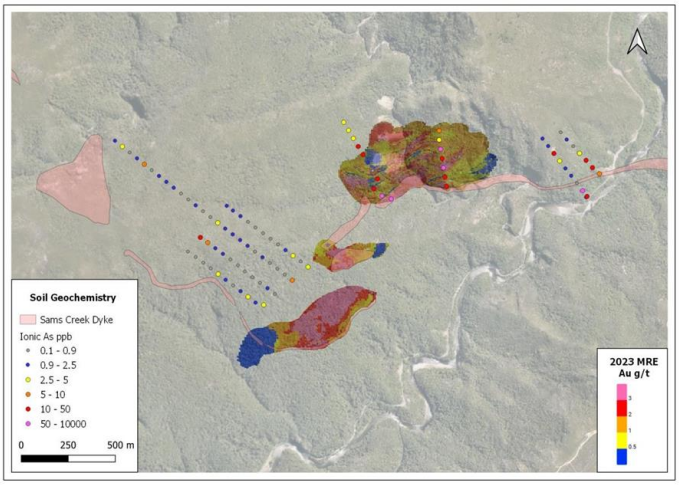


Exhibit 59: Ionic Leach sample locations displaying arsenic (as ppb) overlying the Sams Creek MRE block model[lxxviii]



The conventional arsenic soil identifies the outcropping dyke, with areas of down slope dispersion especially around the southeast Traverse. However, conventional soils do not detect subsurface mineralization, while the Ionic Leach samples show arsenic mineralization. Additionally, it also indicates that there is a shoot at Anvil where a fold hinge has been mapped and rock chips up to 20g/t Au have been returned.

This technique, i.e., Ionic Leaching can potentially be used to see through the overburden and identify mineralized shoots. It will be extended along the strike and down dip from Riordan's to Barron Flat, for a total of c. 500 samples. The results of this survey will be used to target the next stage of drilling. The next steps include field exploration with additional mapping, ionic leach soil sampling, followed by diamond drilling.

This resulted in an access agreement with DoC for allowing 100 drill pads. Also, the requirement for an Annual Work Program (AWP) has been identified, which outlines 23 drill pads in the next 12 months at Doyles Main Zone and Anvil. Drilling is scheduled to commence later in the year when the Ionic Leaching and structural mapping is completed.

Results

Recent metallurgical test work was completed where high gold recoveries were achieved by flotation, acid leach and cyanidation. The gold extractions ranged from 88.6% to 95.5%.

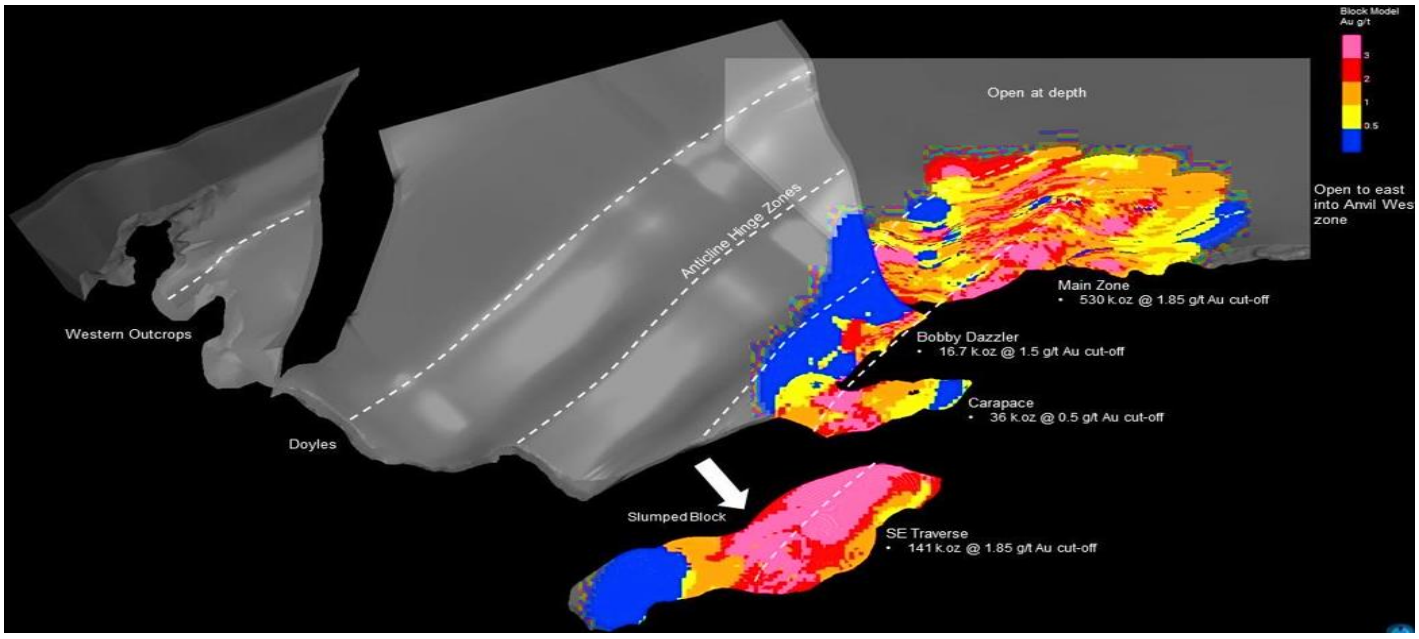
Tenement Ownership Details

Exhibit 60: EP 60747 details[lxxix]						
Permit No.	**Location**	**Grant Date**	**Expiry Date**	**Duration**	**Area (Ha)**	**Minerals**
40338	Sams Creek Gold Ltd	27/03/1998	26/03/2025	27 Years	3,046.513	NA

2.3.10.1 Bobby Dazzler[lxxx]

Bobby Dazzler prospect, which is now included within Sams Creek, lies between Main Zone and Carapace. The prospect is the along-strike, western continuation of the Sams Creek Dyke from the Main Zone deposit area, interpreted as being upthrown across the fault from the Main Zone. The Bobby Dazzler Fault, therefore, marks the eastern extent of the Bobby Dazzler deposit. The Sams Creek Dyke is also thought to be less steeply dipping within Bobby Dazzler, inferred to be generally dipping at c. 26 degrees to the north. The Bobby Dazzler deposit is open at depth and to the west and outcrops at surface along its south-eastern extent. The Sams Creek Dyke dip shallows towards the southwestern extent of Bobby Dazzler, where it transitions into the contiguous Carapace deposit.

Exhibit 61: Plan view of undrilled SCD and new MRE block model[lxxxi]



MRE

The Bobby Dazzler prospect mineral resource was classified as 'Inferred' based on the current understanding of geological and grade continuity. The MRE at a 2.0 g/t, 1.5g/t and 1.0g/t cut-offs.

Exhibit 62: Inferred resource summary at different cut-off grades (100% basis)[lxxxii]			
Cut-off Grade	**Tonnes (kt)**	**Grade (g/t Au)**	**Ounces (koz)**
1.0	264.9	2.27	19.3
1.5	**200.0**	**2.59**	**16.7**
2.0	160.1	2.80	14.4

Exhibit 63: Inferred resource summary by material type – 1.5g/t cut-off (100% basis)[lxxxiii]				
Material Type	**Tonnes (kt)**	**Grade (g/t Au)**	**Ounces (koz)**	**% MRE**
Transition	178.9	2.60	14.9	89.2
Fresh	21.1	2.57	1.7	10.8
Total	**200.0**	**2.59**	**16.7**	**100.0**

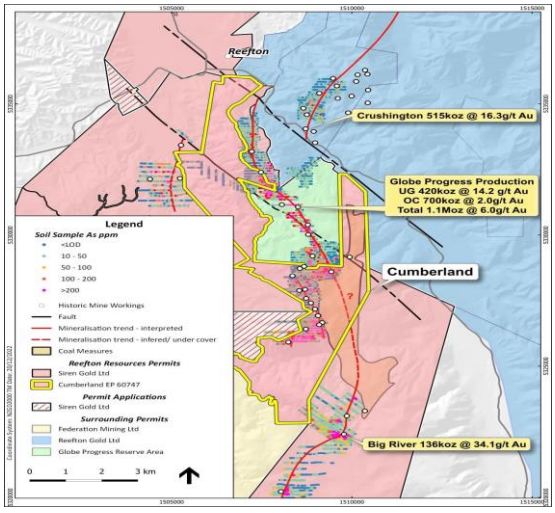
2.3.11 Cumberland (EP 60747)[lxxxiv]

Overview and History

The Globe Progress Mine is the largest mine in the Reefton Goldfield followed by Blackwater mine. Until the closure of the mine in 1926, the Globe Progress Mine produced 420koz @ 12.2g/t. In 2007, OGL re-opened the mine as an open pit and mined the low-grade remnant mineralization down to around 200m. Until the closure of the mine in 2015, OGL extracted c. 700koz @ 2g/t Au, taking the total gold production to c. 1.1Moz @ 6g/t Au.

OGL surrendered the Globe Progress mining permit in 2019, post which New Zealand Petroleum and Minerals (NZP&M) split the mining permit into two areas. The first permit area contains the Globe Progress open pit, processing plant, tailings storage facility (TSF) and waste rock stacks. The remaining permit area became open ground as Newly Available Acreage (NAA) in October 2020.

Exhibit 64: Geographical Location of Cumberland[lxxxv]



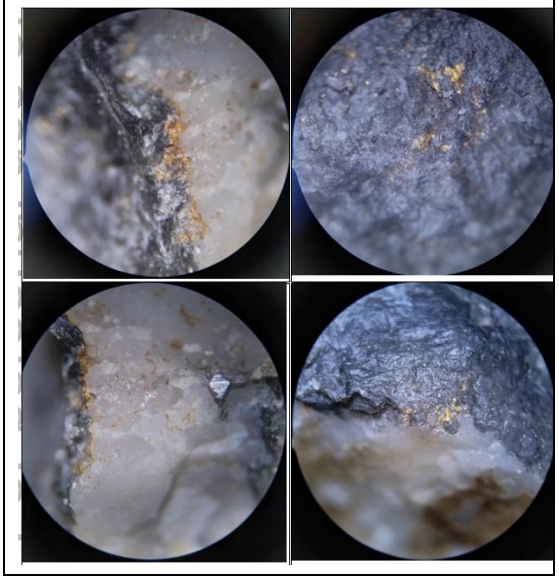
Siren Gold was granted an exploration permit for the non-reserved area for an initial period of 5 years. The Cumberland permit comprises the northern and southern areas of the previous Globe Progress mining permit. Previously in Cumberland, gold bearing reefs were first discovered at Supreme in 1872 and mining proceeded until the closure of Sir Francis Drake mine in 1923. As compared to the rest of the Reefton Goldfield, the Cumberland mines were undercapitalized and worked in small and limiting claims. There was some major development in the area with a 1.2 km long adit driven in from Rainey Creek under the Supreme and Inkerman mines to Inkerman West mine. A 600m adit was driven under the Golden Lead mine. The total production from the area was 44,626 oz of gold from 97,993 tonnes of ore at an average grade of 14.2 g/t.

Exhibit 65: Historic production from Cumberland Exploration permit[lxxxvi]				
Mine	**Production Tonnes (t)**	**Production Ounces (oz)**	**Recovered Au Grade (g/t)**	**Percentage of Total Au (oz)**
Supreme	22,214	5,268	7.4	11.8%
Inkerman	21,020	6,102	9.0	13.7%
Inkerman South	90	270	93.3	0.6%
Inkerman West	7,282	6,035	25.8	13.5%
Scotia	594	1,284	67.2	2.9%
Gallant	2,340	759	10.1	1.7%
Sir Francis Drake	16,987	5,810	10.6	13.0%
Merrijigs	259	84	10.1	0.2%
Cumberland	13,896	13,631	30.5	30.5%
Exchange – Industry	511	259	15.8	0.6%
Golden Lead – OK	11,379	2,645	7.2	5.9%
A1	1,361	2,479	56.7	5.6%
Total	**97,993**	**44,626**	**14.2**	**100%**

Drilling, Exploration Activities with Intersections and Target

The mineralization in the Cumberland permit lies along two trends. The easternmost trend includes the Supreme project, and the western trend includes the Happy Valley Shear Zone (HVSZ) that extends for over 3km from OGL's Souvenir pit, south to the A1 prospect. The Supreme mineralization potentially extends under the younger coal measures to the south and may join up with the Big River mineralization 5km to the south. Globe Progress, Supreme and Big River mineralization all consist of quartz pug breccias, while the HVSZ consists of high-grade styolitic milky quartz veins with visible gold similar to the Birthday Reef.

Exhibit 66: Visible Gold in GLA001[lxxxvii]



The mineralization in the Cumberland permit extends 3 km south of the Globe Progress mine and is open to the west and south. The area lies along the main structural corridor that hosts all the larger mines in the Reefton Goldfield and links to Siren Gold's Auld Creek prospect. The gold and stibnite mineralization extends for 10 km from Auld Creek south into the Globe Progress Mine, including the Globe Deeps area below the open pit, through Souvenir, Supreme and Big River. Siren Gold has already completed drilling of 77 drillholes for a total of 10,933 m.

The Supreme soil geochemistry shows a strong arsenic and Sb anomaly trending South-East under the cover. This anomaly abuts the cover to the east, and it is likely that the mineralization will extend under the cover and could link up with Supreme and Big River. A1 high-grade quartz reefs located within a shear zone extends for 3kms from Inkerman south through Gallant, Sir Francis Drake, Merrijigs and Exchange group of workings. The gold mineralization at Inkerman is primarily contained within lenticular quartz lodes with similar styles and grades to the Blackwater mine, with a small halo of arsenopyrite-gold mineralization. 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.

Recent drilling in Inkerman resulted in an intersection of:

- 9m @ 6.1g/t
- 2m @ 11.8g/t

Gallant contains a shear hosted, 1m-5m thick quartz vein, which extends for over 300m and dips steeply east and west. Diamond hole (GLA001) intersected a 27m mineralized zone which is dominated by a quartz reef with visible gold and disseminated arsenopyrite mineralization in the hanging wall. Detailed soil sampling and trenching has tracked the reef around 130m to the north of GLA001, with results pending.

Recent drilling in Gallant resulted in an intersection of:

- 27m @ 74.9g/t Au
- 1m @ 1,911g/t

The Merrijigs mineralization extends for around 1.5 kms from Sir Francis Drake to Exchange. The shear zone dips to the west and has a true width between 1m and 6.5m.

Recent drilling in Merrijigs resulted in an intersection of:

- 3.3m @ 5.1g/t
- 6.5m @ 4.0g/t
- 4.2m @ 17.6g/t

Merrijigs gold mineralization is associated with disseminated arsenopyrite in sheared argillite, black pug breccias and minor grey quartz veins.

The Golden Lead – A1 mineralization lies to the west of Merrijigs, which is up to 27m wide, containing narrow quartz stockwork veinlets within a crushed sandstone unit. Since the first exploration done by CARE, very little mapping has

taken place. The broad arsenic soil anomaly is up to 1km wide and open to the south and east under cover, and is largely undrilled, therefore being a key target for the company.

MRE

Siren Gold has not yet published any MRE for its Cumberland project.

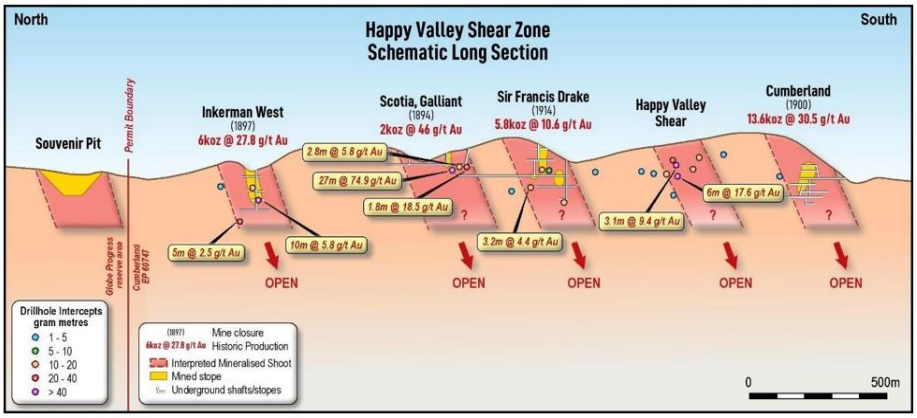
Tenement Ownership Details

Exhibit 67: EP 60747 details[lxxxviii]						
Permit No.	**Location**	**Grant Date**	**Expiry Date**	**Duration**	**Area (Ha)**	**Minerals**
60747	North and South of Globe Progress Mine	14/12/2022	13/12/2027	5 Years	2,249.77	NA

2.3.11.1 Happy Valley Shear Zone (HVSZ)

The mineralization in the Cumberland permit lies along two mineralized trends. The easternmost trend includes the Supreme project, and the western trend includes the HVSZ that extends for over 3km from OGL's Souvenir pit, south to the A1 prospect. Globe Progress, Supreme and Big River mineralization all consist of quartz pug breccias, while the HVSZ consists of high-grade styolitic milky quartz veins with visible gold similar to the Birthday Reef 12 km to the south.

Exhibit 68: Happy Valley Shear Zone



The HVSZ extends from the recently mined Souvenir pit south for over 3km to the A1 prospect. The northern 2km of the HVSZ is shown in the exhibit. This area has a number of small historic mines targeting high-grade quartz veins. Historic production was low, estimated at 27koz @ 27g/t Au.

The mineralization is interpreted to be contained in a steeply south dipping shoot. Significant drillholes include:

- 27m @ 74.9g/t Au (Gallant),
- 10m @ 5.8g/t Au (Inkerman West),
- 3.1m @ 9.4g/t Au (Happy Valley Shear unmined), and
- 6m @ 17.6g/t Au (Happy Valley Shear unmined).

The mineralization 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)
- 6.0m @ 17.6g/t Au (HVS003).

The mineralization north of Gallant is contained in a shear zone that dips to the west. Significant drillholes include:

- 10.0m @ 5.8g/t Au (97RDD022) and
- 5.0 @ 2.5g/t Au (97RDD016).

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

2.3.11.2 Supreme Gold[lxxxix]

Overview and History

The Supreme Gold project lies within the recently acquired Cumberland tenement area. The gold-bearing reefs in the Cumberland project area were first discovered at Supreme in 1872 and mining proceeded from then until 1923 when the Sir Francis Drake mine closed. As compared to the other area in the Reefton Goldfield, the historical Cumberland mines were undercapitalized, with a total production of 44.6koz of gold from c. 98.0 Kt of ore at an average grade of 14.2 g/t, while during the 1897-1905 exploration, the historic Supreme mine produced 5.2koz of gold at an average recovered grade of 7.3 g/t. The mineralization is a similar style to the Globe-Progress deposit, with high-grade quartz breccia, pug and disseminated sulfides, and remains open at depth, with significant potential for increased gold resources from additional exploration drilling.

Drilling, Exploration Activities with Intersections and Target

Some of the high-grade intersections are as follows:

- 10m @ 3.5g/t Au
- 14m @ 3.5g/t Au (RDD013)
- 14m @ 3.2g/t Au (RDD017)
- 29m @ 2.6g/t Au (RDD018)
- 9.5m @ 2.3g/t Au (RDD021)
- 9.5m @ 4.1g/t Au (RDD025).

Before Siren Gold, only limited drilling had been completed. Two companies which have undertaken the drilling work are as follows:

- Macraes Mining Limited (MMCL)
- OGL

Diamond drilling commenced at the Supreme project in 1997 when MMCL drilled 5 holes for a total of 607.2m, while OGL commenced drilling programs in 2006, 2008 and 2012, completing 31 holes for a total of 4,337.1m.

Supreme has one main shear system drilling and has intercepted parallel mineralized shears both above and below the Main shear zone. These shear zones have the potential to significantly increase the resource with more drilling and understanding. As a result, additional drilling may help increase the grade and ounces in the Supreme MRE. However, since Sb has not been tested routinely in Supreme, it might result in a potential upside to the Supreme resource.

MRE

MRE of Supreme prospect stood at 103koz @ 2.7g/t Au at a 1.5g/t cut-off while at 1.0g/t cut-off the total mineral resources stood at 125koz @ 2.26g/t Au.

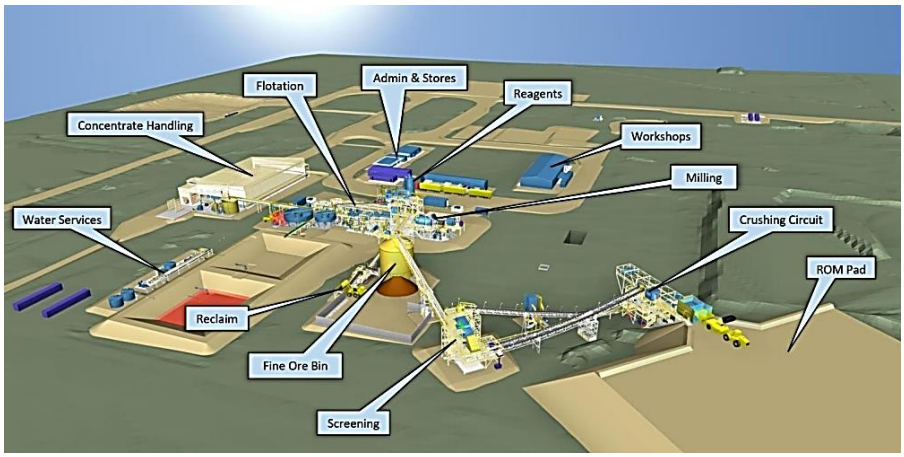
Exhibit 69: Inferred resource summary at different cut-off grades[xc]

Cut-off Grade	Tonnes (kt)	Grade (g/t Au)	Ounces (koz)
1.0	1,720	2,260	125.0
1.5	**1,052**	**2.71**	**103.3**

2.4 Process Plant and its Details[xci]

To develop a significant gold mining operation in Reefton, the company engaged GR Engineering Services Limited (GRES) with an aim 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. The key features of the processing plant are as follows:

Exhibit 70: Processing Plant concept layout[xcii]



- A processing capacity of 1.25 Mtpa, with head grade of up to 10g/t Au of catering high-grade ore
- Three-stage crushing with fine ore bin storage and emergency reclaim
- Single-stage ball mill with a flash flotation cell
- Separate gravity concentrators to treat ball mill discharge and flash flotation concentrate for producing Doré bullion output up to 80% of the gold in the feed
- Gravity plus flotation of c. 93%, with an overall recovery estimated at c. 90% with process oxidation (POX)
- Concentrate dewatering for producing transportable concentrate
- Appropriate tailings handling facilities
- Steinert Ore Sorters to reduce waste from the mining cycle and increase mill feed head grade

2.5 Business Strategy[xciii]

The Company's current business strategy is as follows:

- Further explore and expand the resources to over 3Moz
- Develop Sams Creek gold project
- Develop Auld Creek gold and antimony project by targeting down plunge extensions of the Fraternal Shoot, along with Fraternal North, Bonanza and Bonanza East Shoots
- Further explore and develop the Reefton Gold Project

It aims to produce a total of over 225,000 oz per annum from 3-5 underground regional mines and recover and produce a significant additional quantity of Antimony.

The main objectives of the company are as follows:

- Grow mineral resources organically with continued drill-focused exploration on the Company's key projects over the next 24 months.
- Focus exploration over the next 12 months on Auld Creek, Cumberland, Lyell and Sams Creek.
- Identify high-grade gold and stibnite mineralization along the Auld Creek – Cumberland line of strike.
- Explore and develop significant high-grade gold and antimony potential along the Auld Creek – Cumberland line of strike.
- Carry out Mapping and trenching on the Globe Progress North soil anomaly located approximately 500m south of Auld Creek.
- Focus drilling during the next quarter on extending the Fraternal Shoot and estimating a maiden Auld Creek MRE.

- Drill-test the Bonanza East, Bonanza and Fraternal North Shoots over the next six months.
- Commence drilling at Sams Creek, following results from the Ionic Leach survey.
- Seek further exploration, acquisition and joint venture opportunities in New Zealand and elsewhere.

Siren Gold has further potential along the entire Reefton Goldfield with significant resources and the production of exceptionally large high-grade Antimony resources like Costerfield in Victoria and Hillgrove mines in Australia.

2.6 Outlook[xciv]

Siren Gold holds a large, strategic package of tenements along the vastly under-explored Reefton region. Significantly, Siren Gold's Reefton South and Bell Hill tenements cover a further 40km of buried Greenland Group rocks that host the gold mineralization at Reefton and have the potential to host significant gold mineralization. With impressive intersection grades found in all of Siren Gold's projects, drilling over the next 12 months will focus on:

- Alexander River
- Big River
- Sams Creek
- Cumberland

Siren Gold will also focus on reconnaissance exploration for initial drilling in 2023 at:

- Auld Creek – Reefton
- Lyell
- St George – Reefton
- Doyles / Anvil – Sams Creek

Recent metallurgical test work on Alexander River, Big River indicates that a gold recovery of c. 90-93% while for Sams Creek gold recovery ranged between 88.6% to 95.5% may be achieved. The company is investigating the use of advanced ore sorting beneficiation technologies to upgrade the Reefton and Sams Creek ores prior to trucking.

The company announced its maiden MRE for Big River and Supreme (Cumberland), where the MRE for Big River is estimated at c. 834kt of ore with 105.5 koz @ 3.94 g/t grade, while its MRE for the Supreme project is estimated at c. 1,052kt of ore with 103.3 koz @ 2.71 g/t grade. The recently announced Auld creek's maiden MRE of 132.4koz AuEq @ 7.1g/t AuEq containing 0.58Mt of ore with 65.8 koz Au @ 3.53g/t Au & 8.7kt of antimony @ 1.5% Sb. This has resulted in an increased MRE for the company, which stands at 12.63Mt of ore with 1.27Moz Au @ 3.1g/t Au and 8.7kt of antimony @ 1.5% Sb with 1.33Moz AuEq @ 3.26g/t AuEq (100% basis).

Exhibit 71: Siren Gold's Global Resource estimate at 1.5g/t cut-off (100% basis)[xcv]

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

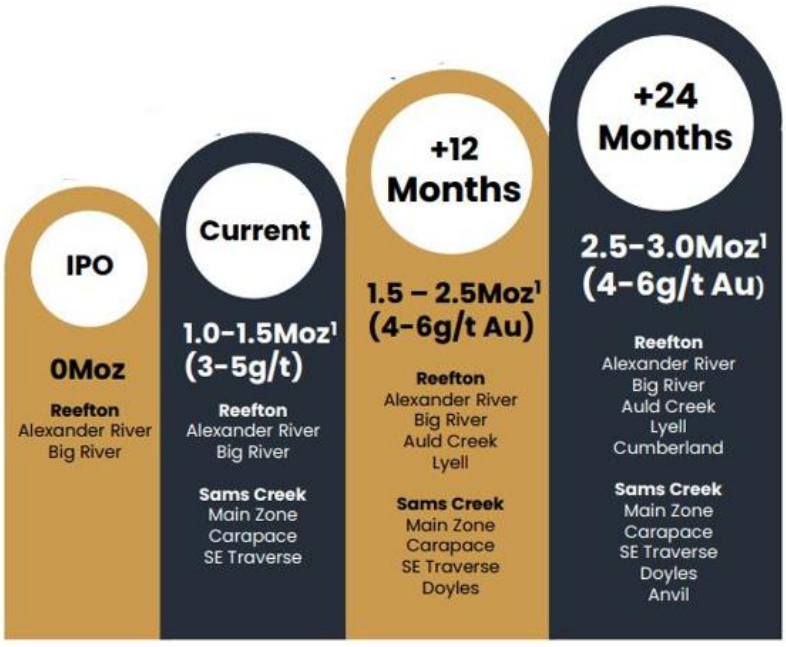
Exhibit 72: Siren Gold's Global Resource estimate at 1.5g/t cut-off (81.9% basis)[xcvi]

Project	Status	Tonnes (Mt)	Grade (g/t Au)	Sb %	Ounces (koz)	Sb (kt)	AuEq (g/t)	AuEq (koz)
Sams Creek*	Indicated	2.695	2.80		242.1		2.80	242.1
Total	**Indicated**	**2.695**	**2.80**		**242.1**		**2.80**	**242.1**
Sams Creek*	Inferred	4.758	2.83		433.1		2.83	433.1
Alexander River	Inferred	1.066	4.95		169.6		4.95	169.6
Big River	Inferred	0.834	3.94		105.5		3.94	105.5
Supreme	Inferred	1.052	2.71		103.3		2.71	103.3
Auld Creek	Inferred	0.58	3.53	1.5	65.8	8.7	7.10	132.4
Total	**Inferred**	**8.29**	**3.20**		**877.3**	**8.7**	**3.42**	**943.9**
Total	**Indicated + Inferred**	**10.985**	**3.10**		**1,119.4**	**8.7**	**3.26**	**1,186.0**

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

Siren Gold's current Exploration Target is 1.0-1.5Moz at a grade of 3-5g/t, of which the company has already achieved 1.2 Moz of high-grade gold, which is a major leap forward for the company's strategy in developing a significant regional gold mining operation at Reefton and Sams Creek in New Zealand. However, the company is targeting to reach 2.5-3.0Moz @ 4-6g/t Exploration Target in the next two years.

Exhibit 73: Exploration Target Pathway to multi-million ounces[xcvii]



Note: The potential quantity and grade of this Exploration Target is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource

Exhibit 74: Siren Gold Exploration Targets[xcviii]

Project	Current	Exploration Targets		
		Au (g/t)	koz	Explanations
Sams Creek	Main Zone	2.4	588	
	SE Traverse	3.0	125	Based on existing drillholes average of 7m @ 4.1g/t over 600m strike and 100m dip. At a density of 2.6m^3 = 1.1Mt @ 4.1g/t = 145koz. Rounded to 3g/t and 125koz.
	Total	**2.5**	**713**	
Reefton	Alexander	5.5	500	Exploration Target of 500-700koz @ 5-7g/t. 500koz @ 5.5g/t used.
	Big River	7.0	100	Exploration Target of 100-125koz @ 7-9g/t. 100koz @ 7g/t used.
	Total	**5.8**	**600**	
Total		**4.0**	**1,313**	

Exhibit 75: Siren Gold Exploration Targets[xcix]

Project	12 Months	Exploration Targets		
		Au (g/t)	koz	Explanations
Sams Creek	Main Zone	2.4	588	Based on new Main Zone model with tighter search to increase grade but reduced ounces.
	SE Traverse	3.0	125	Based on existing drill holes average of 7m @ 4.1g/t over 600m strike and 100m dip. At a density of 2.6m^3 = 1.1Mt @ 4.1g/t = 145koz. Rounded to 3g/t and 125koz.
	Doyles	3.0	200	Exploration Target based on 1km-long fold hinge down to the Main Zone with similar grade to SE Traverse fold hinge. Based on a 1km strike @ 4.1g/t = 240koz. Rounded down to 3g/t and 200koz.
	Total	**3.0**	**800**	
Reefton	Alexander	5.5	700	Exploration Target 500-700koz @ 5-7g/t. 700koz @ 5.5g/t used with additional deeper drilling.
	Big River	6.0	400	Exploration Target based on all 6 shoots drilled down to 500m below surface.
	Total	**5.7**	**1,100**	
Total		**4.6**	**1,900**	

Exhibit 76: Siren Gold Exploration Targets[c]				
Project	**24 Months**	**Exploration Targets**		
		Au (g/t)	**koz**	**Explanations**
Sams Creek	Main Zone	3.0	600	Main Zone extends down plunge with ET increased from 500koz to 600koz.
	SE Traverse	3.0	100	Based on existing drillholes average of 7m @ 4.1g/t over 600m strike and 100m dip. At a density of 2.6m^3 = 1.1Mt @ 4.1g/t = 145koz. Rounded to 3g/t and 125koz.
	Based	3.0	400	Based on drilling a second interpreted fold hinge at Doyles. Exploration Target based on 1km-long fold hinge with similar grade to SE Traverse fold hinge. Based on a 1km strike 240koz @ 4.1g/t. Rounded down to 3g/t and 200koz for a total of 400koz.
	Total	**3.0**	**1,100**	
Reefton	Alexander	6.0	900	Based on extending the Alexander shoots a further 200m down plunge to -700mRL. This is a similar depth to the Blackwater shoot drilled until the present.
	Big River	6.0	500	Big River shoots extended to 700m below surface.
	Lyell	5.0	200	Lyell Exploration Target is based on its similarities with Alexander River, i.e., 3km-long gold and arsenic soil anomaly with disseminated acicular arsenopyrite mineralization and rock chip samples up to 9g/t. The Alpine United mine with historical production of 80koz @ 16g/t was located on the soil anamallly.
	Total	**5.9**	**1,600**	
Total		**4.7**	**2,700**	

2.7 Financials

During H1 2023, the company and its controlled entities reported an income of AUD 8,517 compared with AUD 1,394 in H1 2022. The expenses stood at AUD 967,811, of which 80% were attributed to employment costs, professional fees, public relations, rent, marketing and advertising. Net assets of the group were at AUD 17.7 mn in H1 2023, an increase of 8.5% from AUD 16.4 mn at the end of FY 2022. Cash and cash equivalents stood at AUD 953,327 at the end of H1 2023, up from AUD 353,634 at the end of FY 2022. Working capital increased to AUD 806,237 at the end of H1 2023 from AUD 215,836 at the end of FY 2022.

On September 12, 2023, the company raised capital of c. AUD 2.0 mn to fund exploration at Auld Creek, Sams Creek, Lyell, Cumberland, and Big River South.

2.8 Company Milestones

Exhibit 77: Siren Gold Milestone Timelines[ci]	
Year/ Period	**Event**
2017	• The company was incorporated
2020	• Listed on ASX • Raised AUD 10.0 mn through IPO • Initial maiden drilling in Alexander River and Big River resulted in high-grade intersection • Brian Rodan assumed the position of interim chairman following the resignation of Mr. David Filov • Intercepted quartz reef with visible gold at Big River
2021	• The Department of Conservation (DoC) approved an additional 34 exploration drill pads at Alexander River • Discovered new mineralized shoots at Alexander River • Extended mineralization at Big River by 3km towards the south • High-grade intersection led Siren Gold to extend mineralized shoots at Alexander River • Intersected significant visible gold at Alexander River

	• Intersected 50g/t gold at Alexander River (Loftus McKay Shoot) • Numerous high-grade intersections occurred at Alexander River across different shoots • Maiden Exploration target of Big River of 100-125koz @7-9g/t Au • New 3km target discovered at Lyell • Undertook scoping study for a processing plant at Reefton Goldfield for which GR Engineering Services was engaged to complete the scoping study • High-grade drillhole intersections occurred at Alexander River • Raised AUD 4.0 mn to fund the drilling activities at Alexander River and Big River • Discovered new mineralized shoots at Alexander River (McVicar West Shoot)
2022	• Undertook scoping study for an underground development at Alexander River and Big River. Siren Gold engaged Entech Pty Ltd to complete the scoping study • Discovered a new 3km mineralized zone at St George • Intersected significant visible gold at Alexander River (McVicar West Shoot) • Intersected grade of 2.5m @ 358g/t Au at Alexander River • Discovered new 3km gold zone at Lyell • Applied for a prospecting permit over Langdons Reef • Acquired Sams Creek gold project from Sandfire Resources Ltd for AUD 250k • Extended Big River A2 Shoot to 200m • Released maiden MRE of 1Mt @ 4.1g/t Au for 131koz at a cut-off grade of 1.5g/t and top cap of 35g/t • Raised AUD 4.4 mn • Applied for extension of area for exploration permit of Alexander River, Waitahu and Big River • Applied for a prospecting permit over Grey River • Discovery of high-grade gold and massive stibnite veins in Auld Creek • Appointment of mining service consultant for Sams Creek Mineral Resource Update • Intersected high-grade gold at Lyell Goldfields • Completed the acquisition of Sams Creek
2023	• Announced updated MRE of Sams Creek project • Awarded exploration permit of Cumberland, part of Globe Progress mine • Discovery of additional high-grade gold and Sb intersection at Auld Creek • Announced updated MRE of Alexander River and Sams Creek project • DoC granted access agreement for 5 years with 22 drill pads and a camp at the Auld Creek Project • Released maiden MRE of Big River and Supreme Project which resulted in an increased MRE at company level • Successfully detected mineralization 500m below surface at Sams Creek through the Ionic Leaching technique • Released maiden MRE of Auld Creek Prospect • Raised AUD 2.0 mn to fund its key high-priority projects • Appointed Mr. Victor Rajasooriar as a Non-Executive Director

2.9 Company Premiums[cii]

- **Dominant position in a proven high-grade goldfield:** Siren Gold has a c. 1,096 km^2 tenement package with numerous historic high-grade gold mines. The Reefton Goldfield in the South Island of New Zealand has produced over 2Moz of gold at an average recovered grade of 16g/t from 84 historic mines where Siren Gold has a large strategic tenement holding.
- **Alexander River and Big River projects exhibit the potential to be the next Fosterville:** The discovery of the Fosterville epizonal high-grade gold deposits in the Ordovician metasediments within the Victorian goldfields brought a lot of success by producing over 2Moz. Both Alexander River (greater than 26g/t Au historical mine) and Big River (greater than 34g/t Au historical mine) share the same epizonal and antimony characteristics with Fosterville. Siren Gold expects that deeper drilling might provide more similarities and can be a source of high-grade gold.
- **Strategic acquisition of Sams Creek might pave the way for multi-million ounces of gold discovery:** Siren Gold acquired Sams Creek from SFR for AUD 250k. The 2022 resource estimate of Sams Creek stood at 9.1Mt @ 2.82g/t for 824.4koz on a 100% basis, with a cut-off grade of 1.5g/t, has shown significant improvement from its previous MRE. The updated MRE includes Main Zone, Carapace, Bobby Dazzler and SE Traverse.

- **Favorable Metallurgical Test work:** Siren Gold has conducted metallurgical test work which suggests that gold recovery of c. 90-93% could be achieved on the Alexander and Big River projects, while the Sams Creek project indicates that a gold recovery is ranged from 88.6-95.5%.
- **Significant government assistance:** There is a significant increase in investment in Reefton Goldfields because of a supportive government and regulatory framework. Recently, the NZ Government granted a loan of NZD 15.0 mn to Federation Mining to help develop the Blackwater mine at Reefton.
- **Low competition and high entry barriers:** The New Zealand market is led by a single player named OceanaGold Limited (OGL), which has c. 80% market share in terms of gold mining volumes and revenue while the rest of the industry comprises small alluvial gold ore mining companies. Also, entry barriers are high for firms wanting to enter the industry, as gold ore mining companies require government permits to prospect, explore and develop mine sites which might lead to a long gestation period.

2.10 Company Risks[ciii]

- **Capital intensiveness leading to future funding:** The Company may need equity or debt financing to secure additional funds in case the costs exceed estimates or revenues do not meet estimates, to support its ongoing operations and implement its strategies. Inability to secure sufficient funds would postpone/hamper the company's growth plans leading to a delay or cancellation of certain activities or projects. Moreover, any additional equity financing may be dilutive to shareholders, and may involve restrictive covenants that limit the company's operations or business strategy.
- **Feasibility of the project:** The Company may progressively undertake several studies to determine the feasibility of a project. However, there can be no guarantee that any of the studies will confirm the economic viability of a project and may result in sunk cost.
- **Future exploration and permits:** The permits are for projects that are at various stages of exploration conducted to discover an economic resource. Even if an apparently viable resource is identified, there is no certainty that it can be economically exploited.
- **Delays in granting of relevant regulatory approvals and access arrangements to explore and mine might impede growth:** Discovery of an economically viable mineral deposit requires various approvals, consents, licenses and permits before mining can commence. There is no guarantee that the company will be able to obtain all required approvals, consents, licenses and permits. Also, all permits are limited to exploration activity only, without extending to full-scale mining and extraction (beyond exploration). There can be no certainty that a mining permit will be granted in the future by New Zealand Petroleum and Minerals, the relevant local authority, and the relevant landowner. Obtaining necessary resource consents can be subject to numerous conditions and is time consuming in nature, which might impede the company's operational and financial performance. Also, amendments to laws by regulators may lead to further headwinds.
- **Renewal:** Mining and exploration permits are subject to periodic renewal. There is no assurance that current or future permits or future applications for production permits will be approved in their entirety, and some of the permit areas applied for may be excluded.
- **Amendment of royalties:** Gold ore mining companies pay royalties to the government. Royalties are either 1.0% or 2.0% of the gold's value and depend on the type of mining permit obtained, as well as the gold's net sales value. Royalty regulations are detailed under the Crown Minerals (Royalties for Minerals Other than Petroleum) Regulations 2013. Any upward revision in the royalties may pose a risk to the company.
- **Fluctuations in the gold price:** The company revenue is linked to the price of gold, which may vary with market conditions. When gold prices decline, gold mining firms may reduce production until pricing is more favorable. Declines in world gold prices can therefore negatively affect the company and threaten growth. Also, favorable gold pricing can increase competition, as new companies are more likely to enter. High gold prices can turn low-grade ore deposits into viable mining sites, even if they were previously uneconomic to mine. Low gold prices often result in mines being abandoned until prices rise to a suitable level.

2.11 Shareholding Pattern[civ]

The company had 158,951,805 shares of common stock issued and outstanding on October 11, 2023. The shareholding pattern is as follows:

Exhibit 78: Top shareholding pattern (October 11, 2023)

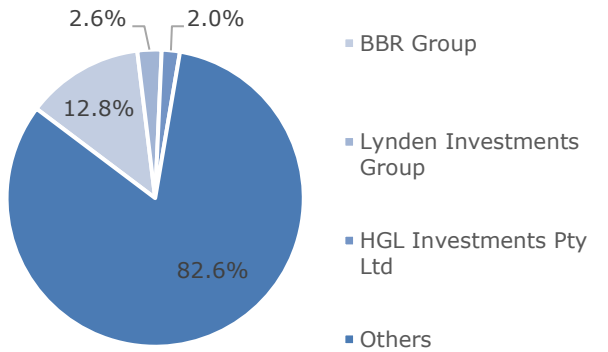


Exhibit 79: Top shareholding pattern (October 11, 2023)

Shareholders	Shares outstanding
BBR Group	20,331,052
Lynden Investments Group	4,185,833
HGL Investments Pty Ltd	3,142,857
Others	131,292,063
Total	**158,951,805**

2.11 Listing and Contact Details

Siren Gold Limited is publicly listed on the ASX and is traded under the symbol 'SNG.'

Company Contacts

Home Office

Address: Level 2, 41 - 43 Ord Street, West Perth WA 6005.

Contact No: +61 8 6458 4200

Website: www.sirengold.com.au

Email Id: admin@sirengold.com.au

3. News[cv]

- **New Non-Executive Director appointed:** On September 18, 2023, the company announced the appointment of Mr. Victor Rajasooriar as a Non-Executive Director. He is a highly experienced Australian mining executive and board director who has more than 25 years of operational and technical experience in underground and open-pit mining operations. This will add significant mining, governance and corporate capability to the company's board.
- **Capital Raise of AUD 2.0 mn:** On September 12, 2023, the company announced a capital raise of AUD 2.0 mn including a commitment of AUD 120K from directors and management (subject to shareholder approval). The proceeds from the capital raising will be used to fund exploration at Auld Creek, Sams Creek, Lyell, Cumberland and Big River South. The capital raise will also fund its working capital needs and the placement costs.
- **Maiden MRE for Auld Creek Prospect:** On August 21, 2023, the company announced the maiden MRE for its Auld Creek Prospect, estimated at c. 132koz AuEq @ 7.1g/t AuEq, containing 66koz @ 3.5g/t Au and 8,700t of antimony @ 1.5% Sb. The MRE focuses on the Fraternal Shoot, derived from existing surface trenches and drillholes, reaching approximately 170 meters below the surface. Siren's Reefton MRE now stands at 444koz of gold and 8.7kt of Sb for 511koz AuEq @ 4. 4 g/t AuEq. The company's Global MRE totals 1.27Moz of gold and 8.7kt of Sb for 1.33Moz AuEq @ 3.3 g/t AuEq (100% basis).
- **Maiden MRE for Supreme prospect:** On May 11, 2023, the company announced its maiden JORC (2012) MRE for the Supreme prospect estimated at c. 103koz at 2.7g/t Au at a 1.5g/t cut-off. Supreme lies within the recently acquired Cumberland tenement that hosts all the larger mines in the Reefton Goldfield and has a similar mineralization to the historical Globe-Progress mine. Its global MRE stood at 1.2Moz at 3.1g/t Au (100% basis).
- **Maiden MRE for Big River project:** On April 20, 2023, the company announced its maiden JORC (2012) MRE for the Big River Gold Project estimated at 105koz @ 3.94g/t from A2 Shoot and Shoot 4. As a result, its global MRE stood at 1.1Moz at 3.1g/t Au (100% basis).
- **Received Commitments to Raise AUD 2.6 mn:** On February 03, 2023, the company announced that it had received commitments from institutional, professional and sophisticated investors to raise AUD 2.6 mn, for the purpose of continued exploration at the high-grade Reefton and Sam's Creek Goldfields, specifically involving mineral resource definition, soil sampling and trenching at Big River; reconnaissance drilling, mapping and soil sampling at Sam's Creek; drilling, mapping and trenching at Lyell and Auld Creek. Some of the proceeds raised were planned to be directed toward working capital and costs of the placement.
- **Announced the updated MRE for the Alexander River and Sams Creek Projects:** On January 30, 2023, the company announced an updated MRE for the Alexander River and Sams Creek Projects. The Alexander River Inferred MRE has increased to 1.07 Mt @ 5.0 g/t for 170 koz at a 1.5g/t cut-off, a growth of 30.8% on a contained ounce basis and a growth of 21.95% on grade. Sams Creek MRE has increased to 9.1 Mt @ 2.8g/t for 824 koz at a 1.5g/t cut-off.
- **Announced update on metallurgical results and process plant scoping study:** On January 20, 2023, the company announced positive preliminary metallurgical test work results from samples from Alexander River and Big River Projects where the total recovery is estimated at 90-93% if processed with pressure oxidation, while Sams Creek recoveries achieved 89-96% by flotation and pressure oxidation.
- **Siren Gold awarded important strategic tenement:** On December 21, 2022, the company announced the grant of exploration permit of Cumberland that covers part of the expired Globe Progress mining permit at Reefton, with historic production of 45koz @ 14.2g/t. The Cumberland permit comprises the northern and southern part of OceanaGold's previous Globe Progress mining permit.
- **Announcement of updated MRE for Sams Creek Project:** On November 17, 2022, the company announced successful completion of Sams Creek MRE. Updated Sams Creek MRE of 807.8koz @ 2.82g/t, representing a 37.4% increase in contained ounces and a 16% increase in grade, inclusive of the Maiden MRE for SE Traverse prospect of 1.28Mt @ 3.56g/t for 146koz.
- **Announcement of high-grade Gold and Stibnite intersection at Auld Creek:** On November 03, 2022, the company announced that its Auld Creek epizonal deposit at Reefton has an exceptional high-grade gold-antimony mineralization which has been intersected in trenches and historical drillholes in the Fraternal zone at Auld Creek. The massive stibnite veins is similar to the Costerfield and Fosterville mines in Victoria, Eastern Australia.
- **Siren Gold announced the completion of Sams Creek acquisition:** On October 26, 2022, the company announced successful completion of Sams Creek acquisition where the company now controls 100% of the project.

- **Announcement of high-grade gold intersection at Lyell:** On October 21, 2022, the company announced 1km long north-west trending gold anomaly identified at Mt Lyell North which is 3kms north of the Alpine United mine. The Mt Lyell North 1km long gold zone has been identified as a significant new discovery. The company announced that two additional trenches (LYTR003 and LYTR004) were excavated approximately 100 and 200m north of LYTR001 across a high-grade soil anomaly, and an outcropping quartz reef with significant visible gold was found in a creek close to the United Victory mine. This reef and the adjacent country rock was channel sampled and called LYTR005. The results for the three new trenches are awaited.
- **Appointment of mining service consultant for Sams Creek Mineral Resource Update:** On October 05, 2022, the company announced the appointment of Measured Group (Measured) to provide a Mineral Resource Estimate (MRE) for the Sams Creek underground gold project in the South Island of New Zealand. The MRE will include the Main Zone, Carapace and SE Traverse based on an underground mining scenario. The company believes that there is significant potential at Sams Creek for a large underground mining operation. Golder completed a JORC Main Zone Resource estimate in 2013 (exclusive of SE Traverse prospect) for an open pit mining scenario and included large areas of low-grade mineralization. An Indicated and Inferred Resource of 1Moz @ 1.54g/t at a 0.7g/t cut-off was estimated and at 1.5g/t cut-off the estimate is 588koz @ 2.43g/t. Siren Gold considers that Sams Creek is a potential underground mine and believes the model could be improved for an underground mining scenario, by trimming some of the low-grade dyke, and using separate domains for the high-grade mineralization along the fold hinges and lower grade fold limbs. The MRE is expected to be completed in November 2022.
- **Announcement of exceptional high-grade gold and stibnite intersection at Auld Creek:** On October 04, 2022, the company announced the intersection of high-grade gold and massive stibnite veins similar to Costerfield and Fosterville mines in Victoria, Eastern Australia. High-grade gold-antimony mineralization has been intersected in trenches and historical drillholes in the Fraternal zone at Auld Creek.
- **Announcement on updated tenement status:** On July 29, 2022, the company announced that it had applied for two prospecting permit applications on Langdons and Grey River and extensions to the Alexander River, Big River and Waitahu permits. The extension permit application had been made as these areas had been vacated. The company further confirmed that the beneficial interest it held in the various tenements had not changed.
- **Alexander River Maiden Mineral Resource Estimate:** On July 20, 2022, the company announced the Maiden Mineral resource estimate for the Alexander River project. The inferred mineral resource estimate (MRE) of 1Mt @ 4.1g/t Au for 131koz at a 1.5g/t cut-off and 35g/t top-cap. The McVicar West shoot contained 50% of the MRE, with an average grade of 5.3g/t Au when a top-cap of 35g/t Au was used. If the Loftus-McKay, McVicar West and Bull West shoots were extended for 1,500m and were similar to the McVicar West Shoot, then Siren Gold's exploration Target including the MRE is estimated at 500-700koz @ 5-7g/t Au.
- **Announcement of a high-grade intersection at Alexander River:** On July 06, 2022, the company announced a high-grade intersection at the Alexander River Project of 2.2m @ 10.2g/t Au.
- **Announcement on potential at Siren's Auld Creek Prospect:** On June 09, 2022, the company announced the untapped potential of Auld Creek (within Golden Point permit), which lay between the Crushington (515koz @ 16.3g/t Au) and Globe Progress (418koz @ 12.2g/t Au). Historically, the two reefs of Auld Creek, i.e., Bonanza and Fraternal reefs, had resulted in several high-grade intersections of 2m @ 8.6g/t Au and 2m @ 5.6g/t Au, respectively.
- **Announcement on Acquisition of Sams Creek Project:** On June 03, 2022, the company announced the acquisition of Sams Creek Gold Project in New Zealand from Sandfire Resources Limited for a consideration of AUD 250k. The Sams Creek Gold Project had a Mineral Resource Estimate of 7.5Mt @ 2.43g/t Au for 599koz on contained gold with potential for expansion.
- **Announcement regarding recommencement of drilling at Reefton for a significant 2022:** On January 11, 2022, Siren Gold announced the acceleration of its exploration activities in 2022, with a total of 20,000m of diamond drilling budgeted, being an 80% increase on the 11,000m drilled in 2021. Drilling would focus on the Alexander River and Big River projects, with smaller-scale programs at Golden point and Lyell.
- **Siren Gold was listed following successful fundraising:** On October 7, 2020, gold explorer Siren Gold Limited was listed on the ASX after raising AUD 10.0 mn through an IPO offering of 40 mn shares at AUD 0.25 per share.

4. Management and Governance[cvi]

Exhibit 80: Management and governance		
Name	**Position**	**Experience**
Brian Rodan	Managing Director (MD), Executive Chairman	• Director of ASX listed Iceni Gold Limited and Augustus Minerals Limited. • MD and owner of Australian Contract Mining Pty Ltd, a mid-tier mining contracting company that completed AUD 1.5 bn of work over 20 year period prior to its sale to an ASX listed company in 2017. • Founding Director of Dacian Gold Limited and Desert Metals Limited. • Formerly Executive Director of Eltin Limited with a 15-year tenure at Australia's largest full-service ASX-listed contract mining company. • Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM).
Paul Angus	Technical Director	• Over 30 years of experience in mining and exploration in New Zealand. • Consulting for the last 13 years on various exploration and mining projects, including as a Project Manager for MOD Resources Limited at the Sams Creek Project since 2011. • Joined OGL in 1990, where he performed numerous management roles and was a part of the team which discovered more than 2Moz of gold at Macraes and Reefton and was responsible for the planning of mining at Macraes and the Frasers Underground and Reefton Goldfield feasibility studies. • Graduate of Otago University.
Keith Murray	Non-Executive Director	• Director of ASX listed Iceni Gold Limited and Desert Metals Limited. • Currently General Manager Corporate and Company Secretary for the Heytesbury Group. • Served as Group Accounting Manager, Corporate and Taxation, and joint Company Secretary of Eltin Limited, an Australia-based international mining services company. • Chartered Accountant with over 40 years of experience at general manager level in audit, accounting, tax, finance, treasury and corporate governance. • B Acc degree and a Chartered Accountant (CAANZ).
Victor Rajasooriar	Non-Executive Director	• Over 25 years of operational and technical experience in underground and open-pit mining operations. • He held senior roles with major resource companies, including Managing Director and CEO of Echo Resources Limited (ASX:EAR), and COO of Barminco. He has occupied senior technical roles with Gold Fields and Newmont Mining. • Qualifications include a Bachelor of Engineering (Mining) from the WA School of Mines. • He is a member of both the Australian Institute of Company Directors and the Australasian Institute of Mining and Metallurgy.
Sebastian Andre	Company Secretary	• Chartered Secretary with more than 10 years of experience in corporate advisory, governance and risk services. • Previously acted as an adviser at the ASX. Well-versed with the ASX Listing Rules, specializing in providing advice to companies and their boards regarding capital raisings, IPOs, backdoor listings, corporate compliance and governance matters. • Qualifications include B Acc/BA, Graduate Diploma in Finance, FGIA and is a member of the Governance Institute of Australia.

5. Industry Overview[cvii]

5.1 Industry Definition

Gold mining is extracting gold from mines using opencast and underground mining techniques. There are many primary activities involved in the mining of gold that are performed by different industry participants.

Examples of primary activities and the major products of the industry are as follows:

Primary activities:

- Gold ore mining
- Gold ore dredging
- Gold ore beneficiation
- Gold dore bar production
- Roasting and floatation extraction of gold ore
- Reworking of tailings for gold

Major products:

- Gold dore bars
- Alluvial gold
- Gold concentrate

5.2 Key industry drivers

Global factors affecting the gold mining industry in New Zealand are the global price of gold, USD per NZD, capital expenditure on mining and World GDP growth. Activities such as gold exploration, refining and opening of new mines are directly dependent on these factors. Gold ore mining is a long-term, capital-intensive business that generates a return over a long period and requires major planning and investment.

Some of the key drivers and how they affect the gold mining industry are as follows:

- **World price of gold:** The price of gold, denominated in USD, is impacted by various demand and supply factors. Demand is affected by the jewelry market, manufacturing concerns and speculative activity. Production of gold mining companies depends on the price of gold; production declines as demand for gold goes down. Declines in world gold prices can negatively affect industry and impact growth.
- **USD per NZD:** The exchange rate between the USD and NZD directly affects the returns received by domestic gold ore mining companies. An appreciating NZD against the USD means lower returns for domestic gold ore mining companies and vice versa. A weaker New Zealand dollar increases domestic gold prices and provides better returns to the industry players, also providing better opportunities for expansion and capital investment if the trend persists.
- **Capital expenditure:** Capital expenditure on mining reflects the value of companies' investment in developing mines and purchasing mining plants, equipment and vehicles. Greater capital investment in mining can, therefore, positively affect the gold ore mining industry.
- **World GDP:** Gold has various uses such as the manufacture of jewelry and components for smartphones and automobiles. It also acts as a store of value and provides a hedge against inflation and economic uncertainty, including wars, pandemic outbreaks and political turbulence. As a result, worldwide demand for gold is often inversely related to global economic performance. Strong growth in global GDP can reduce demand for gold, negatively affecting industry.

5.3 Current Performance and Trends

- **Mixed operating environment over the past five years, with the industry performing poorly:** Although the worldwide price of gold has risen strongly over the period to 2021-22, gold ore mining volumes have fallen substantially. Gold ore mining was temporarily shut down in late 2019-20 and part of 2020-21 due to the COVID-19 pandemic. This closure and market uncertainty hindered the industry. The NZD has weakened over this period, increasing prices in domestic currency terms and contributing to export growth.

- **Gold price has strengthened due to uncertain times with a favorable exchange rate:** Gold prices have been high by historical standards due to global inflation fears stemming from quantitative easing policies implemented in the US. Despite higher gold prices, gold ore mining volumes have been declining over the past five years. The NZD has also depreciated against the USD over the past five years. As gold prices are denominated in US dollars, the weaker NZD has resulted in more competitive pricing for New Zealand exports. This has increased the price of gold in local currency terms, helping to limit industry declines. Further, greater demand for gold in other countries has boosted export volumes.
- **Gold ore mining volumes have declined at an annualized 9.4% over the five years to 2021-22:** Low growth in the worldwide price of gold in 2017-18 discouraged mining companies from exploring for and mining gold. As a result, capital expenditure on mining has decreased over the past five years, led by a decline in China's demand for a range of metals and minerals. Due to the long gestation period associated with prospecting, exploring and developing gold ore mines, lower capital expenditure on mining has negatively affected the industry over the past five years. Furthermore, the industry's output fell significantly in 2019-20 and 2020-21 due to lower production by OGL, the industry's only major player with more than 80% market share. The performance of OGL significantly affects the industry's revenue and output.
- **Industry revenue declined at an annualized 4.7% over the five years to 2021-22:** In FY 2022, the industry's revenue decreased by 5.4% year-on-year (YoY), but industry profit margins have increased over the past five years. Strong growth in local gold prices has been offset by lower output, resulting in a profit margin of c. 5.5%. However, increased mining costs because of low-grade ores have brought significant headwinds to profitability. Fewer known higher-grade gold ore sites are available to mine as these have been previously accessed, and the remaining lower-grade sites are becoming increasingly costly to mine. As output declines, firms without significant economies of scale often find it uneconomical to invest large amounts of capital in industry.
- **Gold industry and its stringent regulations:** Stringent regulations, pertaining to prospecting, exploring and developing gold mines, have led to a decline in the number of industry firms over the past five years. As a result, overall employment has decreased.

Exhibit 81: Historical performance data[cviii]

Year	Revenue (USD mn)	Employment (Units)	Exports (USD mn)	Imports (USD mn)	Domestic Demand (USD mn)	Gold Production (Tonnes)
2017-18	709	1,100	548	20.8	182	10.2
2018-19	682	1,100	612	14.6	85.5	9.6
2019-20	636	1,150	579	43.1	99.8	7.7
2020-21	590	980	434	74.2	230	6
2021-22	558	960	415	43.9	187	6.1

5.4 Future Outlook

- **Global Pricing:** Following large revenue and output declines over the past five years, and as the effects of the COVID-19 pandemic dissipate, the worldwide price of gold is projected to decrease over the next five years as strong global trade growth continues and the global economy recovers. Although gold prices are anticipated to decline, prices are projected to remain high by historical standards. Overall, industry output is projected to increase at an annualized 7.4% over the five years to 2026-27.
- **Revenue and Exports:** Industry revenue is forecasted to increase at an annualized growth rate of 3.9% over the five years to 2026-27, primarily led by higher industry production. Industry profit margins are also projected to increase over the next five years. However, higher costs associated with retrieving gold ore from deeper and more difficult areas, combined with a declining grade of gold ore, will add to industry costs, thereby limiting the increase in profit margins. Industry exports are anticipated to increase over the next five years due to foreign demand growth for gold, and a lower proportion of industry output being consumed domestically over the period. Exports are projected to increase at an annualized growth rate of 3.2% over the five years to 2026-27.
- **Employment:** As the revenue and profit margin of the industry are forecast to grow over the next five years supported by favorable volume, there will be a rise in industry employment. Gold ore mining companies are anticipated to continue investing in technology and equipment, which will require greater numbers of

experienced and knowledgeable staff. Industry wages are projected to remain high to attract new employees to the industry and to compensate for the industry's demanding working conditions. Furthermore, wages are anticipated to increase as a share of industry revenue over the next five years due to higher industry employment and output volumes.

Exhibit 82: Performance outlook data[cix]

Year	Revenue (USD mn)	Employment (units)	Exports (USD mn)	Imports (USD mn)	Domestic Demand (USD mn)	Gold Production (Tonne)
2021-22	558	960	415	43.9	187	6.10
2022-23	587	1,080	433	45	200	7.30
2023-24	643	1,210	466	47.1	225	8.30
2024-25	695	1,300	496	49	249	8.80
2025-26	702	1,310	500	49.2	252	8.70

5.5 Industry Life Cycle

The Gold Ore Mining industry is in the mature phase of its economic life cycle. Its contribution to GDP is projected to increase at an annualized rate of 0.3% over the 10 years to 2026-27, which is much lower than the projected growth of GDP of 2.2%. As a result, the industry is projected to account for a smaller proportion of the national economy in 2026-27 than in 2016-17. With gold prices anticipated to decline over the next five years, while volumes grow strongly, the industry will likely remain in a mature life cycle stage. Earlier, strong growth in global gold prices has offset falling gold ore mining volumes. Furthermore, a weaker NZD has increased prices further in local currency terms and has assisted export markets by making prices more competitive in foreign markets.

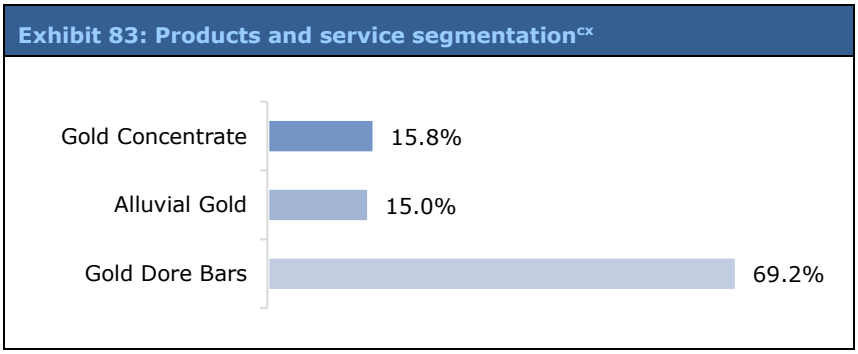
5.6 Buyers and Suppliers

- **Key Buying Industries:** Mainly Non-ferrous metal product manufacturing companies and Metal and mineral wholesaling businesses in New Zealand.
- **Key Selling Industries:** Support services for mining companies in New Zealand for regular maintenance and Industrial and Mining machinery wholesaling in New Zealand.

5.7 Products and Services

The industry's main product is gold, which is sold in three major forms. The main product segment is gold dore bars, accounting for more than 2/3 of industry revenue in 2021-22. The remaining portion is made up of Alluvial gold and gold concentrate. The products are explained in more detail below:

Exhibit 83: Products and service segmentation[cx]



- **Gold Dore Bars:** These bars are produced from gold concentrate and contain a mixture of silver and gold. The proportion of gold is 10% to 25%. The silver is removed from the mixture using further processing. Gold dore bars produced in New Zealand are processed by Perth Mint in Western Australia. This product segment accounts for almost 70% of New Zealand's gold market.
- **Gold Concentrate:** This contains silver and other metals, which are removed through further processing. Industry firms produce gold concentrate, and it is then smelted by other downstream companies to produce gold dore bars.
- **Alluvial Gold:** This type of gold is retrieved from rivers or through the process of dredging, depending on the extraction method. It typically requires less processing to separate alluvial gold from unwanted materials than gold contained in hard rock.

5.8 Factors of demand for gold

- **Gold prices are directly proportional to demand:** Historically, as the price of gold increases, its demand also increases as speculative demand anticipates higher prices. Conversely, gold may become less attractive when prices go down. Furthermore, gold is considered a luxury item; its demand increases as prices increase.
- **Store of value:** For millennia, gold has been considered a hedge against market turmoil, inflation and political turbulence and a safe asset, as it is a rare non-perishable metal. People consider it a safe asset that holds its value for a longer period.
- **Used for manufacturing purposes:** Gold is a particularly good conductor of electricity, and it is used in many electronic products. Mainly, it is used in components for smartphones, computers, automobiles and other such products.
- **Global factors:** Factors such as rising inflation, pandemic outbreaks, government disruption and economic slowdown impact gold prices. Gold prices are likely to go up in these scenarios, and gold therefore provides a hedge against these situations.

5.9 Major market for New Zealand's gold

The industry sells gold products to two main downstream markets:

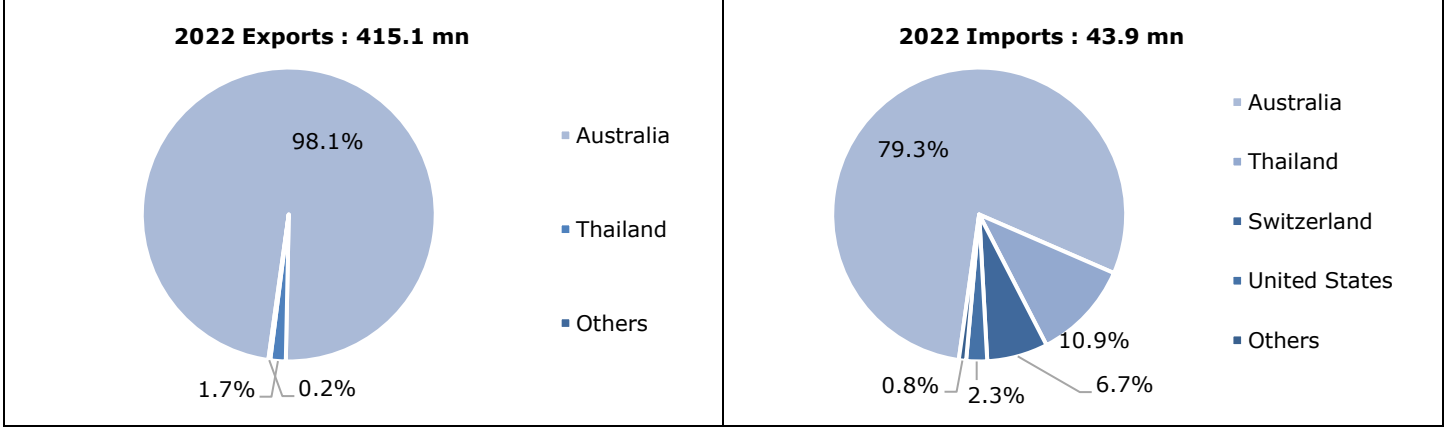
- **Exports:** These are the markets which purchase gold dore bars from gold mining firms. Australia is the biggest market for New Zealand's gold dore bars. Gold dore bars undergo a refining process at the Perth mint in Western Australia. The silver is extracted from gold dore bars and refined pure gold bullion is produced. Exports accounted for c. 74.4% of industry revenue in 2021-22, mainly due to greater global demand for gold bullion, higher global gold prices and limited price growth in the local currency.
- **Domestic Gold smelters and refineries:** Domestic smelters and refineries purify gold dore bars into gold bullion for downstream jewelry and other manufacturers. This market accounts for c. 25.6% of industry revenue. The decline as a proportion of industry revenue over the past five years was mainly due to increases in gold dore bar exports, resulting from higher gold prices.

5.10 Import Export Imbalance

International trade is high across the industry due to the large proportion of gold dore bar exports and the moderate value of competing imports. Exports, which accounted for 74.4% of industry revenue in 2021-22, are expected to increase at an annualized rate of 1.1% over the next five years. This is due to stronger global prices affecting export volumes.

Gold ore imports, which mainly include alluvial gold, are expected to increase over the five years to 2021-22. More volumes of secondary gold are coming into New Zealand for further processing and refining. Gold imports account for 23.5% of domestic demand in the current year. Furthermore, competing gold imports have increased as a proportion of domestic demand over the past five years due to lower local gold ore output volumes remaining in New Zealand.

Exhibit 84: New Zealand export and import[cxi]



5.11 Regulatory Framework

In New Zealand, the Crown owns gold, silver, coal, uranium, petroleum and other essential minerals under the Crown Minerals Act 1991. Firms wishing to explore for minerals and metals are required to obtain permits from the designated authority for that purpose. The act is administered by NZP&M, an agency designed to regulate petroleum and mineral assets owned by the New Zealand Government.

Gold ore mining companies pay royalties to the government for the permit, which depend on the type of mining permit obtained and the gold's net sales value. Royalties are either 1% or 2% of the gold's value. Other laws that govern these mining companies are related to noise, dust and water and are included in the Resource Management Act 1991. Under the Act, local authorities are required to issue consent on processes and issue environmental approvals.

5.12 Major Players

- Based in Vancouver, Canada, and headquartered in Melbourne, Australia, OceanaGold Corporation is the largest gold mining company operating in New Zealand. OceanaGold Corporation operates domestically as OGL. These mining operations comprise the Macraes open pit gold mine and the Frasers underground gold mine in Otago, in addition to the Waihi mine in Waikato. In October 2015, OGL acquired Waihi Gold Company Limited from Newmont Mining for USD 101.9 mn. The Waihi mine site comprises the Martha open pit gold mine and the Correnso underground gold mine. OGL has been a major player in the Reefton Goldfield (the mining of Globe Progress from 2006-2017), and ownership of the Blackwater mine, together with extensive exploration interests. It has carried out significant exploration programs over the past two decades.
- Federation Mining Pty Ltd offers gold and copper mining services. Federation Mining Pty Ltd was formerly known as Federation Gold Pty Ltd. The company was founded in 2019 and is based in Sydney, Australia. Federation Mining was established by experienced Australian underground mining engineer Mark Le Messurier with the purpose of building a new mining company and developing the Snowy River Gold Mine project (formerly known as Blackwater) at Reefton on the West Coast on the South Island in New Zealand. The history of the Snowy River Project dates back to 1905 when the main "Birthday Reef" was discovered by a small prospecting group. Mining is said to have commenced shortly afterwards in 1906 and the operation continued for 45 years until 1951. During this period, the mine produced c. 1.6Mt @14.6g/t for 740koz. It was worked from two shafts – the Blackwater Shaft and Prohibition Shaft – and mined to a depth of 800 m across 16 levels. The mine was still operating profitably and producing ore when the collapse of the Blackwater Shaft resulted in the closure of the operation. It is still considered one of the richest and most consistent gold reefs discovered anywhere in the world. NZP&M has already granted Federation Mining a Mining Permit for the Snowy River Mine near Reefton on the West Coast of New Zealand's South Island. The approval grants the right to mine gold and silver from the site for a 20-year period. Subject to regulatory approvals and the results of the Feasibility Study, the first gold production from the Snowy River Mine could commence by 2024. OGL's 2014 preliminary economic assessment (PEA) MRE stated the inferred resource of 0.9 Mt @ 23 g/t for 700koz. An additional exploration target of 0.2-0.3 Mt @ 20-23g/t for 130-220koz has been identified. Funding sources include an NZD 15.0 mn loan from the New Zealand Provincial Growth Fund (PGF), which shows strong support from both long-term strategic investors and also from local communities (and over AUD 60.0 mn from Australian Superannuation).
- Another major player, Reefton Goldfields Inc, with investment by Eric Sprott and others, has a tenement package of 820 km^2 with a historical production of 700koz @ 20g/t Au from 26 mines. Total production of the district was c. 3Moz @ 26g/t. The Historic mines of Reefton Goldfields Inc. tenements contain high-grade gold and antimony. Reefton Goldfield Inc. has two major areas mainly, the Capleston area comprising Pactolus and Welcome East and the Murray Creek area comprising Victoria Inglewood and Golden Treasure. The geology of gold mineralization in the Reefton Goldfield is similar to Fosterville (part of the Lachlan Fold Belt), where early-stage is associated with gold, arsenopyrite and pyrite-bearing quartz veins while late, brittle-stage brecciation is associated with stibnite and gold-bearing veins. Recent drilling activities in Pactolus resulted in the discovery of a new strike of over 2km in length. There the grades are 16.4 g/t in surface channel sampling and 8.3m @ 7.7 g/t Au (including 4m @ 12.3 g/t) in diamond drilling. In Welcome East, there is a presence of strong gold and antimony which intersects Welcome Hopeful at depth. The grades of gold antimony are found @ 9g/t with 30% Sb. A geological survey in the Murray creek area confirmed the potential production of c. 563koz of Au with abundant targets and a strong gold-arsenic-antimony geochemical signature. The Golden Treasure project in the Murray Creek area confirmed the presence of high-grade Au-Sb veins. Historical mine from the 1890s indicates 2m-wide gold-stibnite veins remain on the floor of workings while historic bulk sample tested in German metallurgical facility returned 5oz gold/tonne with 30-40% Sb. The deposit remains underdeveloped at depth and along the strike in both directions.

- Siren Gold Limited is also a major player in West Coast New Zealand along the extended Reefton line of lode that runs over 80km to Reefton in the south and to the Sams Creek Porphyry Project in the North.

5.13 Key Success Factors for Gold Mining Companies

- Gold ore mining companies must comply with environmental regulations related to noise, dust and water and mine rehabilitation. Failure to comply with government regulations can result in licensing approvals being revoked.
- Gold mining firms require access to large reserves of high-grade gold ore. Mining companies that have approval to mine areas with large proven reserves can benefit from economies of scale and potentially substantial revenue flows.
- Firms that focus on large sites with substantial gold reserves can boost their economies of scale, increasing their gold output and revenue and boosting profit margins.
- As mines grow older, it often becomes more difficult and more expensive to access gold ore. Companies with access to newer mines and higher grades of ore can generate greater revenue and profit.

6. Valuation[cxii]

The fair enterprise value for the company stood between AUD 32.9 mn and AUD 74.1 mn on October 11, 2023. The fair enterprise value per publicly traded share stood between AUD 0.21 and AUD 0.47 on October 11, 2023. The valuation approach followed is the Relative Valuation Method (EV/Inferred and Indicated Mineral Resources multiple).

6.1 Relative Valuation Method

Exhibit 8: Relative Valuation Table[cxiii]

Company Name	Ticker	Market Capitalization	Enterprise Value	Inferred Mineral Resources (in Mt)	Measured and Indicated Mineral Resources (in Mt)	Inferred Resources Grade (g/T)	EV/Inferred and Indicated Mineral Resources (EV/Mt)
Aurumin Limited	ASX:AUN	8.7	11.0	13.8	5.45	1.60	0.6
Auteco Minerals Limited	ASX:AUT	74.5	92.2	11.9	-	7.20	7.7
Labyrinth Resources Limited	ASX:LRL	8.3	7.9	3.0	1.2	5.00	1.9
Tietto Minerals Limited	ASX:TIE	380.6	412.2	51.9	50.8	1.00	4.0
Mandalay Resources Corporation*	TSX: MND	210.5	195.3	11.4	1.0	-	15.8

*Note: The comparable resource mentioned in the above table is a total proven and probable reserve

Min	0.6
Max	15.8
Median	4.0
Average	6.0

Sensitivity Analysis of Enterprise Value and Enterprise Value per Share

Sensitivity Table – Enterprise Value		Gold - Inferred and Indicated Mineral Resources (in Mt)				
		10.0	**10.5**	**11.0**	**11.5**	**12.0**
Average EV/ Inferred and Indicated Mineral Resource Multiple of comparables	**2.1**	29.9	31.4	32.9	34.4	35.9
	3.1	39.9	41.9	43.9	45.9	47.9
	4.1	49.9	52.4	54.9	57.4	59.9
	5.1	59.9	62.9	**65.9**	68.9	71.9
	5.4	62.4	65.5	68.6	71.7	74.9
	5.6	64.9	68.1	71.4	74.6	77.9
	5.9	67.4	70.7	74.1	77.5	80.9

Sensitivity Table – Enterprise Value/Share		Gold - Inferred and Indicated Mineral Resources (in Mt)				
		10.0	**10.5**	**11.0**	**11.5**	**12.0**
Average EV/ Inferred and Indicated Mineral Resource Multiple of comparables	**2.1**	0.19	0.20	0.21	0.22	0.23
	3.1	0.25	0.26	0.28	0.29	0.30
	4.1	0.31	0.33	0.35	0.36	0.38
	5.1	0.38	0.40	**0.41**	0.43	0.45
	5.4	0.39	0.41	0.43	0.45	0.47
	5.6	0.41	0.43	0.45	0.47	0.49
	5.9	0.42	0.45	0.47	0.49	0.51

Approach for Relative Valuation

Initial research has been conducted to find a set of comparables for Siren Gold Limited. Given below is the approach followed to conduct initial research:

- S&P Capital IQ, a globally accepted database, has been used to perform the screening for companies comparable to Siren Gold.
- We have applied the following criteria while screening to arrive at a set of companies that may be comparable to Siren Gold:
  - Geographic Locations: Australia or New Zealand
  - Company Status: Operating
  - Equity Security Features: Listed
  - Industry Classification: Gold
  - Business Description: Keywords – Gold exploration (mainly)
- The output of the above steps has been filtered first to exclude companies that do not have any market capitalization, enterprise value, and tickers.
- Secondly, companies engaged in mining operations, and other mineral exploration (to focus on companies engaged in gold exploration only) have been excluded. Companies that are engaged in gold exploration in different geographic locations have also been considered.
- Accordingly, the above companies (mentioned in Exhibit: 80) have been finalized as close comparable to Siren Gold Limited.

Important information on Arrowhead methodology

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent depending on the subsectors in which the research is conducted, but all Arrowhead valuation research possesses an underlying set of common principles and a generally common quantitative process.

With Arrowhead Commercial and Technical Due Diligence, Arrowhead extensively researches the fundamentals, assets, and liabilities of a company, and builds solid estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance, such as price/earnings ratios, indicated as applicable, are present mainly for reference purposes. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

Elements of comparison, such as multiple analyses, may be to some limited extent integrated in the valuation on a project-by-project or asset-by-asset basis. In the case of this Siren Gold Limited report, there are no multiple analyses integrated in the valuation.

Arrowhead BID Fair Market Value Bracket

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analysis, such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects and is especially relevant to those projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a tool for valuation. The high bracket valuation is derived from the high bracket key variables, while the low bracket valuation is based on the low bracket key variables.

In principle, an investor who is comfortable with the high brackets of our key variable analysis will align with the high bracket in the Arrowhead Fair Value Bracket, and likewise in terms of low estimates. The investor will also take into account the company intangibles, as presented in the first few pages of this document in the analysis on strengths and weaknesses and other essential company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in the investor's own analysis.

The bracket should be understood as a tool provided by Arrowhead BID for the reader of this report, and the reader should not solely rely on this information to make a decision on any particular security. The reader must also understand that, on the one hand, global capital markets contain inefficiencies, especially in terms of information, and that on the other hand, corporations and their commercial and technical positions evolve rapidly: this present edition of the Arrowhead valuation is for a short- to medium-term alignment analysis (1-12 months). The reader should refer to important disclosures on page 57 of this report.

7. Analyst Certifications

I, Ayushi Saraswat, certify that all the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

I, Sumit Wadhwa, certify that all the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

Important disclosures

Arrowhead Business and Investment Decisions, LLC has received fees in 2022 and will receive fees in 2022 from Siren Gold Limited for researching and drafting this report and for a series of other services to Siren Gold Limited, including distribution of this report and networking services. Neither Arrowhead BID nor any of its principals or employees own any long or short positions in Siren Gold Limited. Arrowhead BID's principals have received a mandate for investment banking services from Siren Gold Limited in 2022 and expect to receive compensation for investment banking activities from Siren Gold Limited in 2022 or beyond.

Aside from certain reports published on a periodic basis, the large majority of reports are published by Arrowhead BID at irregular intervals as appropriate in the analyst's judgment.

Any opinions expressed in this report are statements of Arrowhead BID's judgment to this date and are subject to change without notice.

This report was prepared for general circulation and does not provide investment recommendations specific to individual investors. As such, any of the financial or other money-management instruments linked to the company and company valuation described in this report, hereafter referred to as "the securities," may not be suitable for all investors.

Investors must make their own investment decisions based upon their specific investment objectives and financial situation utilizing their own financial advisors as they deem necessary.

Investors are advised to gather and consult multiple sources of information while preparing their investment decisions. Recipients of this report are strongly advised to read the Information on Arrowhead Methodology section of this report to understand if and how the Arrowhead Due Diligence and Arrowhead Fair Value Bracket integrate alongside the rest of their stream of information and within their decision-making process.

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Should a security described in this report be denominated in a currency other than the investor's home currency, a change in exchange rates may adversely affect the price of, value of, or income derived from the security.

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8. Notes and References

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