

# **Queen Charlotte Antimony-Gold Exploration Permit Granted**



Siren Gold Limited (ASX: SNG) (Siren or the Company) is pleased to announce that an exploration permit over the historic Endeavour Antimony mine, located in Marlborough, 120kms east of Sams Creek has been granted.

# **Highlights**

- Siren has been granted the Queen Charlotte Exploration Permit that contains the Endeavour mine.
- The Endeavour mine was historically **New Zealand's largest antimony producer**. •
- Around 3,000t of stibnite ore (antimony) was recovered from the Endeavour mine and direct shipped to England in the late 19<sup>th</sup> Century.
- Metallurgical testwork was completed on Endeavour antimony samples (average 18.7% antimony) in 1977. A stibnite concentrate grading 63% antimony and an overall recovery of 90% was obtainable in a two-stage flotation process.
- Stibnite ore was mined along strike for 1,200m and a vertical extent of 400m. •
- The antimony mineralisation mined contained approximately 2g/t Au but the gold was not recovered.
- The Endeavour antimony mine is part of a larger shear zone that extends for at least 5-6kms and includes at • least two other antimony occurrences.
- The mineralisation and structure at the Endeavour mine look very similar to the Auld Creek mineralisation in Reefton.
- Siren is particularly encouraged by the 400m vertical extent exposed in the old mine workings at Endeavour.
- By comparison, only a 150m vertical extent has been tested by drilling at Auld Creek, which contains an • inferred mineral resource estimate of 105koz at 3.9g/t Au and 14,500t at 1.7% antimony.

# Siren Chair and Interim Managing Director, Brian Rodan commented:

"The Company is very happy to have successfully applied for and been granted the exploration permit over the historic Endeavour Antimony mine. The addition of the High-Grade Queen Charlotte Antimony / Gold asset will allow Siren to build substantial scale along with the existing Langdon's Antimony / Gold asset near Reefton . Antimony is one of the few elements classified as a 'critical and 'strategic' mineral by countries including the United States, China, Australia, Russia, the European Union, and more recently New Zealand, underscoring its special geopolitical value. The price of Antimony has recently reached new highs, trading at over US\$50,000/t, supply is forecast to drop due to lower grade / old mines coming to an end and China has recently decided to stop exporting Antimony to other countries, all of which point to a very positive environment for Siren to explore and grow the Antimony and Gold business in New Zealand ".

#### **Registered Address**

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#### Corporate

Brian Rodan Chairman & Interim Managing Director Sebastian Andre **Paul Angus Technical Director** 

Keith Murray Non-Executive Director Company Secretary

#### **Projects**

Sams Creek Gold Langdons & Queen Charlotte Antimony - Gold **Shares on Issue** Shares: 218,970,608



# Background

Sams Creek Gold Limited, a wholly owned subsidiary of Siren, has been granted the Queen Charlotte exploration permit that contains the historic Endeavour antimony mine (Figure 1). The Queen Charlotte gold-antimony mineralisation that contains the historic Endeavour antimony mine is 120kms to the east of Sams Creek. This mine was the largest antimony mine in New Zealand, producing over 3,000t of stibnite (antimony) ore that was direct shipped to England between 1870 and 1890 (see ASX Announcement dated 25 October 2024).

The new permit enhances Siren's focus as a New Zealand gold and antimony explorer, with three key projects in the upper South Island of New Zealand: Sams Creek gold project in Upper Takaka, Langdons antimony-gold project near Reefton and now the Queen Charlotte antimony-gold project in Marlborough.

The Sams Creek Project is based on a gold mineralised porphyry dyke that is up to 50m thick, extends for 7kms along strike, has a vertical extent of at least 1km and is open at depth. The Sams Creek current Mineral Resource Estimate (MRE) is **824koz of gold @ 2.8g/t Au**<sup>1</sup>. Siren lodged a Mining Permit Application for Sams Creek with New Zealand Petroleum & Minerals (NZPAM) on 21 March 2025. This is a key step in transitioning from exploration to the mining stage, enabling development upon receipt of the necessary consents and access agreements.

The Langdon's prospecting permit (PP 60893) is located in the Paporoa goldfield, approximately 50kms SW of Reefton (Figure 1). The Greenland Group rocks that host the mineralisation in the Reefton goldfield also outcrop in a NE trending belt, 25kms to the west. Langdon's Antimony Lode was discovered in 1879. Early reported grades were up to **2,610g/t Au and 1,120g/t Ag**. The Langdon and Victory reefs were mined successfully for five years, with a reported production of 1,586oz of gold from 809 tons of ore for an **average grade of 60g/t Au**.

The prices of gold and antimony have increased significantly in recent times, with both reaching record prices, of US\$3,300/oz and ~USD\$50,000/t, respectively (Figure 2).

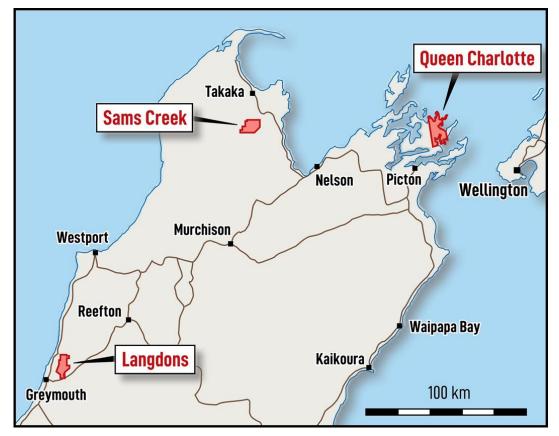
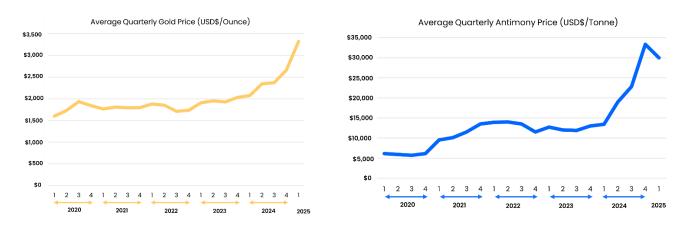


Figure 1. Siren's Gold and Antimony Projects.

<sup>1</sup> Comprised of 3.29Mt Au at 1.5 g/t for 295.6koz Indicated and 5.81Mt Au at 1.5 g/t for 528.8koz Inferred.







# **Endeavour Inlet Mine**

In 1873 mineralisation containing 60% antimony was discovered in a landslide near the saddle between Endeavour Inlet and Port Gore within a line of mineralisation running from Titirangi Bay through the Endeavour Inlet to Resolution Bay. This mine was the largest antimony mine in New Zealand, producing over 3,000t of stibnite (antimony) ore that was direct shipped to England between 1870 and 1890 (Figures 3 and 4). The high-grade ore was sorted by hand and exported untreated, while the lower grade ore was for a period treated at a smelter adjacent to the mine (MacDonnell 1993).

The historic workings penetrated less than 100m deep into a mineralised system that is 1-2kms long and has a surface exposure extending more than 400m vertically. In addition to the antimony, this mineralised system contains significant gold, but it was not recovered.



Figure 3. Antimony Mine, Endeavour Inlet. Nelson Provincial Museum, Tyree Studio Collection: 181917.



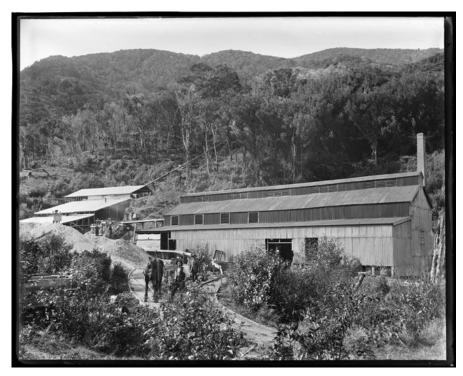


Figure 4. Stibnite Sheds, Endeavour Inlet. Nelson Provincial Museum, Tyree Studio Collection: 179109.

Detailed records and mapping of the Endeavour Inlet mineralised system are very sparse and fragmented. A comprehensive overview of this mineralised system was largely developed by geologist Franco Pirajno (Pirajno 1979) and is the basis for the current understanding of the system. He proposed that there may be three parallel major shear zones that strike NNW-SSE, one of which passes through the Endeavour Inlet mineralised zone (Figure 5).

The known part of the Endeavour mineralised zone is about 1,200m long (Figure 6). The Endeavour mineralisation may connect with the East Endeavour Inlet and the Resolution Bay mineralisation along strike to the SE, which would increase the strike length to 5-6kms (Figure 3). The known vertical extent of the Endeavour mine exceeds 400m, but the total vertical extent could be significantly greater (Figure 7).





Figure 5. Exploration permit application (purple line), Potential shear zones (red dotted lines) and outcropping antimony mineralisation (red stars).



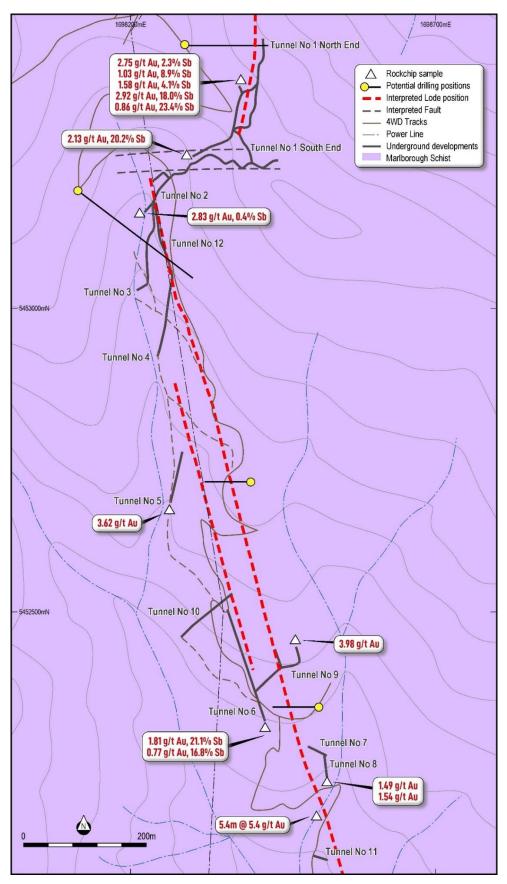


Figure 6. Plan view of the Endeavour mine mineralisation (adapted from Green 2015).



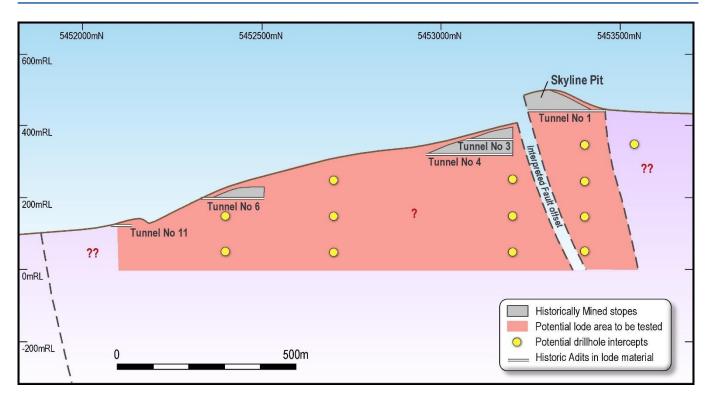


Figure 7. Schematic long section through the Endeavour mine, showing potential drillhole intercepts (Green 2015).

Within the known 1,200m strike length, the partially sheared main vein structure is fairly continuous. It is believed to have an E-W fault offset (in the vicinity of Tunnel No 2) of about 150m (Figures 6 and 7). There is good evidence that 2 or 3 sub-parallel mineralised vein structures may exist, but with one dominant coherent mineralised vein (Green 2015). The main vein is known to be lenticular and varies in width from less than 10cm to over 3m. Where there are sub-parallel mineralised structures the spacing varies between 25-100m. The general strike of these quartz veins is approximately 350°, dipping to the east at 60-70°.

Some parts of the mineralised structure are characterised by layered or banded veining, with no shearing. The highgrade antimony zones in the Skyline pit and Tunnel No 1 have some bands dominated by massive stibuite, with adjacent bands comprising a mix of quartz and stibuite.

Stibnite is generally massive in the upper levels of the mine (Figures 8 and 9), where it fills open spaces or replaces quartz. Usually, stibnite and arsenopyrite are mutually exclusive, and where they occur together stibnite is clearly later than arsenopyrite mineralisation (Pirajno 1979).





Figure 8. Stibnite-Quartz vein mineralisation remaining in the wall of the Skyline Pit at the uppermost part of the Endeavour Inlet mineralisation (Green 2015).

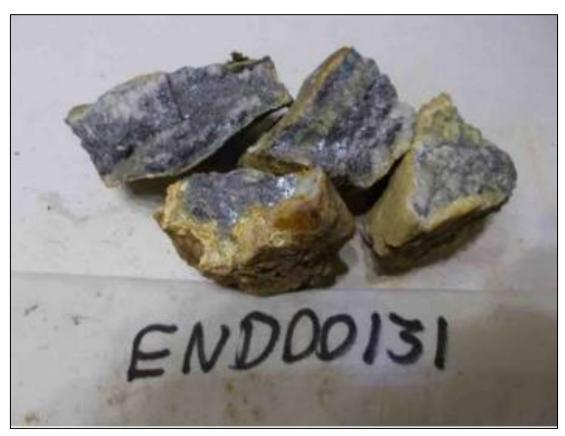


Figure 9. Stibnite bearing ore from the mullock heap below adit No 1 at 440mRL (Green 2015).



Very little exploration has been undertaken, with only limited mapping, stream, soil and rock chip sampling completed. No drilling has been undertaken except for 3 short holes drilled from underground in the 1970's by Mineral Resources Limited (Green 2015).

Samples of outcrop and mullock were taken from different RL's in the historic mine workings by two parties (MacDonnell 1993 & Green 2015) as shown in Table 1 below. These samples indicated two areas of high-grade antimony around the surface pit (~500mRL) to Level No.1 (~440mRL), and around Level No.6 (~200mRL). Higher grade gold (~3g/t Au) with little or no antimony occurs between these two levels (~440-200mRL).

A channel sample was taken across a moderately east dipping shear zone exposed on the road, cut at around the 150mRL level. This shear averaged **5.4m @ 5.4g/t Au**, 1.3% As but low Sb (Green 2015).

Samples were also taken from the tailing ponds next to the smelter (Table 1). These still contain relatively high antimony (2-9%). The gold was not recovered, indicating the grade associated with the high-grade antimony mined was around 2g/t Au (Table 1).

Metallurgical testwork was completed on antimony samples (mean assay 18.7% antimony) from Endeavour Inlet in 1977. The samples were tested for upgrading by flotation to a saleable product (60% antimony). A stibnite concentrate grading 63% antimony and an overall recovery of 90% was obtained in a two-stage process (Richards 1977).

The mineralisation and structure at the Endeavour mine look very similar to the Auld Creek mineralisation in Reefton. Siren is particularly encouraged by the 400m vertical extent exposed in the old mine workings. By comparison, only a 150m vertical extend has been tested by drilling at Auld Creek, which contains an inferred mineral resource estimate of 105koz at 3.9g/t Au and 14,500t at 1.7% antimony (see ASX announcement dated 22 October 2024).

#### **Next Steps**

- Apply for a Minimum Impact Activity (MIA) permit from the Department of Conservation (DoC);
- Undertake field mapping and rock chip sampling;
- Complete a soil sampling program over the Endeavour Mine to Resolution Bay mineralised trend;
- Channel sampling / trenching of anomalous rock chips and soil geochemistry anomalies; and
- Define Drill Targets.

# References

Green, C., 2015. MPP 53311 - Endeavour's Prospect Second Annual Report 2015. NZP&M Mineral Report No. MR5294

MacDonnell, B,J., 1993. Reconnaissance sampling Programme, Endeavour Inlet, PL312512. NZP&M Mineral Report No. MR3252

Pirajno, F., 1979. Geology, geochemistry, and mineralisation of the Endeavour Inlet antimony-gold prospect, Marlborough Sounds, New Zealand. NZ Journal of Geology and Geophysics 22, 227–236.

Richards, R,G., 1977. Laboratory Flotation of Endeavour Inlet, N.Z. Antimony Ore. Proceedings from AusIMM No, 263, September 1977.



Table 1. Samples from mullock heaps and tailings ponds.					
Sample ID	mRL-Working	Description	Gold (g/t)	Arsenic (ppm)	Antimony (%)
END00129 <sup>1</sup>	500m - skyline pit	Quartz vein	2.75	4,200	2.3
END00130 <sup>1</sup>	500m - skyline pit	High stibnite	1.03	2,400	8.9
861 <sup>2</sup>	500m - skyline pit		1.58		4.1
859 <sup>2</sup>	500m - skyline pit		2.92		18.0
860 <sup>2</sup>	500m - skyline pit		0.86		23.4
862 <sup>2</sup>	500m - skyline pit		1.09		1.2
END00131 <sup>1</sup>	440m - No.1 adit	High stibnite	2.13	3,000	20.2
851 <sup>2</sup>	400m - No.2 adit		2.83		0.4
844 <sup>2</sup>	320m - No.5 adit		3.62		0.0
843 <sup>2</sup>	Middle workings		2.97		0.0
842 <sup>2</sup>	Lower workings		3.99		0.0
841 <sup>2</sup>	220m - No.9 adit		3.98		0.0
END00132 <sup>1</sup>	200m - No.6 adit	Mod stibnite	0.77	1,620	10.8
END00133 <sup>1</sup>	200m - No.6 adit	High stibnite	1.81	7,600	21.1
840 <sup>2</sup>	160m - No.7 adit		1.49		0.0
839 <sup>2</sup>	140m - No. 8		1.54		0.1
838 <sup>2</sup>	100m below No.11		1.44		0.1
837 <sup>2</sup>	100m below No.11		1.41		0.4
831 <sup>2</sup>	Tailings		2.54		3.0
832 <sup>2</sup>	Tailings		2.60		2.7
833 <sup>2</sup>	Tailings		2.36		3.1
834 <sup>2</sup>	Tailings		1.99		2.0
835 <sup>2</sup>	Tailings		0.54		7.5
836 <sup>2</sup>	Tailings		0.42		8.8
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<sup>1</sup>Green 2015

<sup>2</sup> MacDonell 1993



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

# **Enquiries**

For more information contact:

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#### Listing Rule 5.23

The information contained in this report relating to exploration results, exploration targets and mineral resources has been previously reported by the Company (Announcements). The Company confirms that it is not aware of any new information or data that would materially affects the information included in the Announcements and, in the case of estimates of mineral resources, released on 22 October 2024, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.