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BOARD

Brian Rodan
Managing Director

Paul Angus
Technical Director

Keith Murray
Non-Executive Director

HEAD OFFICE
Level 2,
41 Ord Street
West Perth WA 6005

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

Compelling Comparisons Between Reefton and Fosterville Gold Deposits

Siren Gold Limited (ASX: **SNG**) (**Siren** or the **Company**) is pleased to provide an update on the correlation and similarities between its Reefton Project exploration sites and Fosterville in the Victorian Goldfields.

The Reefton Goldfield has been correlated to the Lachlan Fold Belt[1] that contains the Victorian Goldfields (Figure 1). Gold mineralisation in Victoria is associated with two main events at ~445Ma and ~380-370Ma[2]. The ~445Ma event is thought to have involved crustal thickening and the circulation of metamorphic fluids through the crust[3] and formed gold deposits at Bendigo, Castlemaine, Maldon and Daylesford. The ~380-370Ma event is restricted largely to the Melbourne and eastern Bendigo Zones and is responsible for the emplacement of gold at the Fosterville Goldfield[4].

There are two distinctive sub-types of orogenic gold mineralisation in Victoria. The deeper (6-12kms) mesothermal deposits that formed almost all the significant gold deposits in the Bendigo and Stawell zones and the shallower (<6km) epizonal gold deposits in the Melbourne zone and eastern Bendigo zone, including Fosterville. The latter gold mineralising event in Victoria is characterised by arsenopyrite / pyrite hosted refractory gold and stibnite associated gold, which are indicative of shallower emplacement depth[5].

Gold mineralisation at Reefton also occurred in two distinct events, with the first stage comprising gold mineralised quartz veins and a second characterised by quartz, stibnite, arsenopyrite, pyrite and gold. Stibnite was found in many of the quartz lodes at Reefton, locally making up 10–30% of some veins[6]. Stibnite was reported from mines at Blackwater, Globe Progress, Crushington, Capleston–Specimen Hill, Big River (Figures 1 and 2), Ajax, Murray Creek, Blacks Point–Painkiller, Merrijigs and Alexander River[7].

At Big River a stockpile of stibnite ore was left at the historic battery (Figure 5), as stibnite caused some metallurgical issues during the gold recovery process. The sample in Figure 2 was assayed several times and returned assays ranging from of 62.8 to 82.3g/t Au and 20.5% stibnite.

At Fosterville the gold associated with disseminated acicular arsenopyrite is thought to be an earlier event that was later overprinted by gold-stibnite mineralisation. The gold hosted arsenopyrite is pervasive throughout the deposit but a narrow window of vein hosted gold-stibnite mineralisation exists from ~800m to 1,350m depth, below which there is vein hosted gold mineralisation only[8]. The two gold mineralisation events are thought to have occurred around 430 and 370 million years (Ma) ago ~60Ma apart[8].

The acicular arsenopyrite mineralisation at Alexander River looks very similar to the Fosterville mineralisation and probably represent that same initial gold mineralisation event. The visible gold at Alexander River is often associated with styolitic seams (Figure 7), as is probably part of the initial gold mineralisation event at Reefton. The acicular arsenopyrite and later gold-stibnite at Reefton also indicates that it was emplaced in the epizonal environment.

A comparison of deformation, metamorphism and mineralisation between the Reefton Goldfield, the Bendigo and Ballarat deposits, including Fosterville, is shown in Table 1. The similarities between Siren's Alexander River project (Figure 8) and Fosterville at this early stage are particularly compelling, with the structural setting and age being very similar. The Fosterville mineralised shoots extend for at least 1,350m below surface and 2,400m down plunge (Figure 9). Disseminated acicular arsenopyrite gold dominates to 800m below surface. Between 800m and 1,350m arsenopyrite gold continues but stibnite-gold mineralisation dominates. Below 1,350m there is only free gold in quartz.

The Alexander River deposit has only been drilled to around 500m below the highest outcrop at Bull shoot (Figure 8). This represents around 1,000m down plunge compared to 2,400m at Fosterville and 2,400m at the Blackwater mine, 10kms to the west of Alexander River. This corresponds to the acicular arsenopyrite zone at Fosterville (Figure 9). Gold mineralisation intersected at Alexander River is currently dominated by disseminated acicular arsenopyrite mineralisation (Figure 6) with some visible gold in quartz veins, particularly in the deepest hole drilled to date (Figure 7). Only limited stibnite mineralisation has been observed at Alexander River to date, however, as shown in Figure 9, this may just reflect the relatively shallow sampling compared with Fosterville to date.

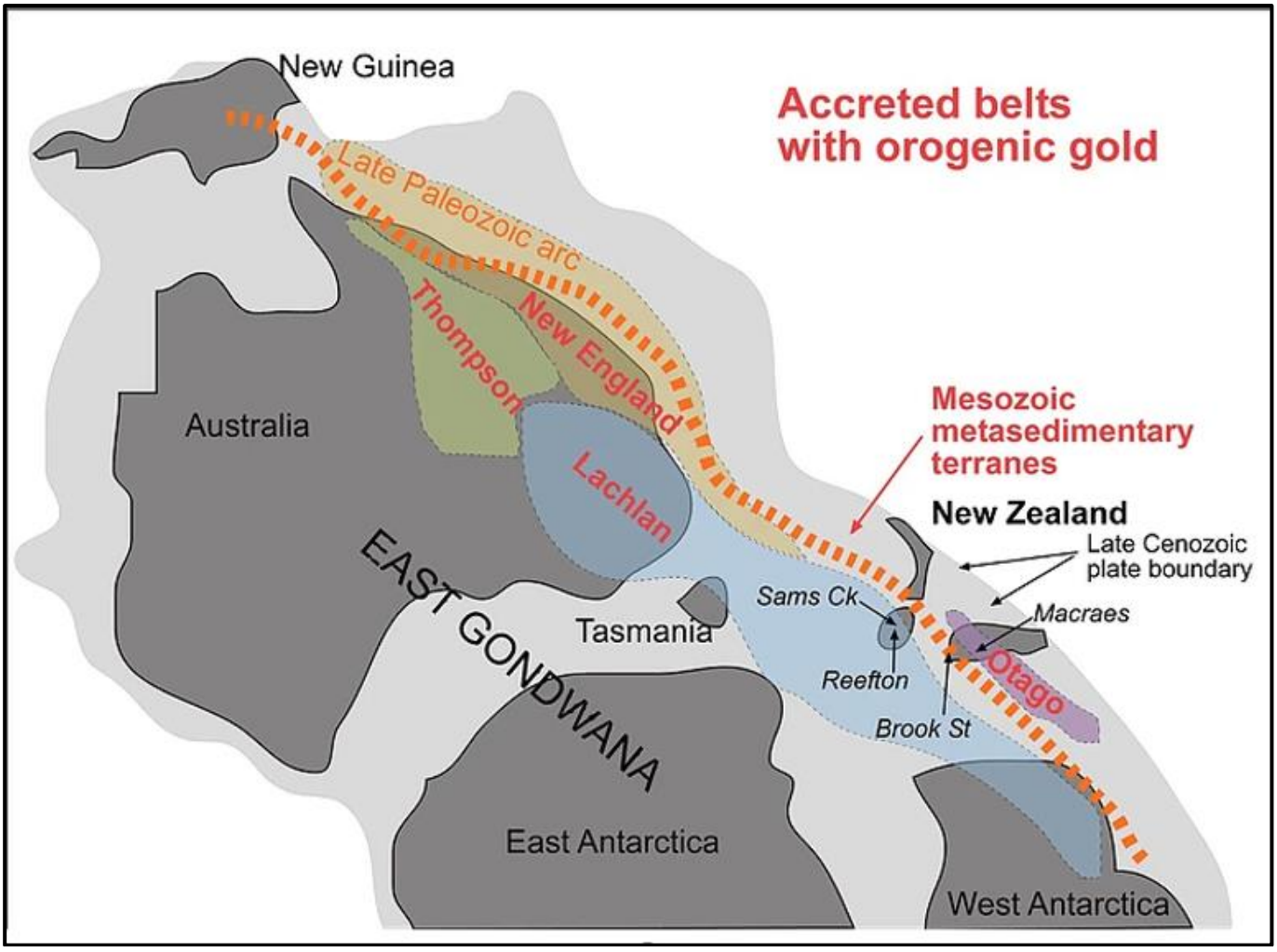

Figure 1. Gondwanaland showing the Lachlan Fold Belt and Reefton Goldfield ([1]Cooper 1992).

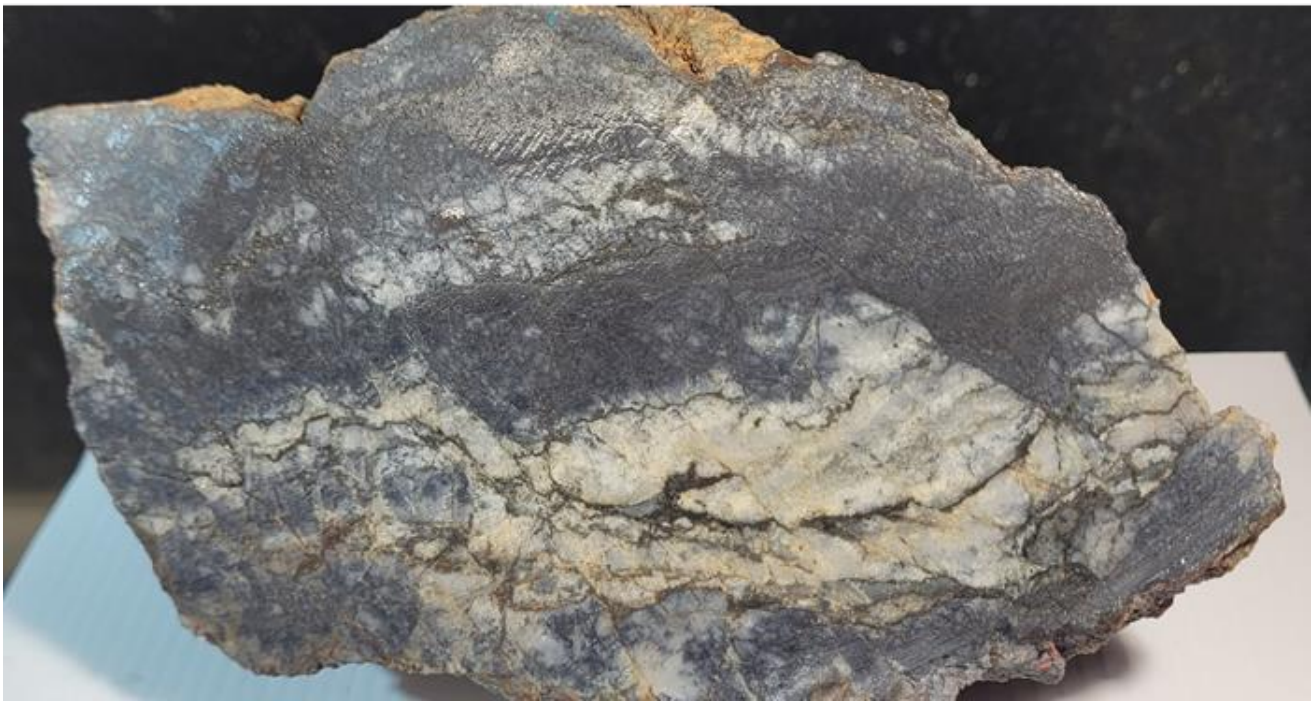

Figure 2. Stibnite vein from a stockpile at Big River Battery contains 20.5% antimony and 82.3 g/t Au

Figure 3. Massive stibnite vein from the Big River Battery stockpile.

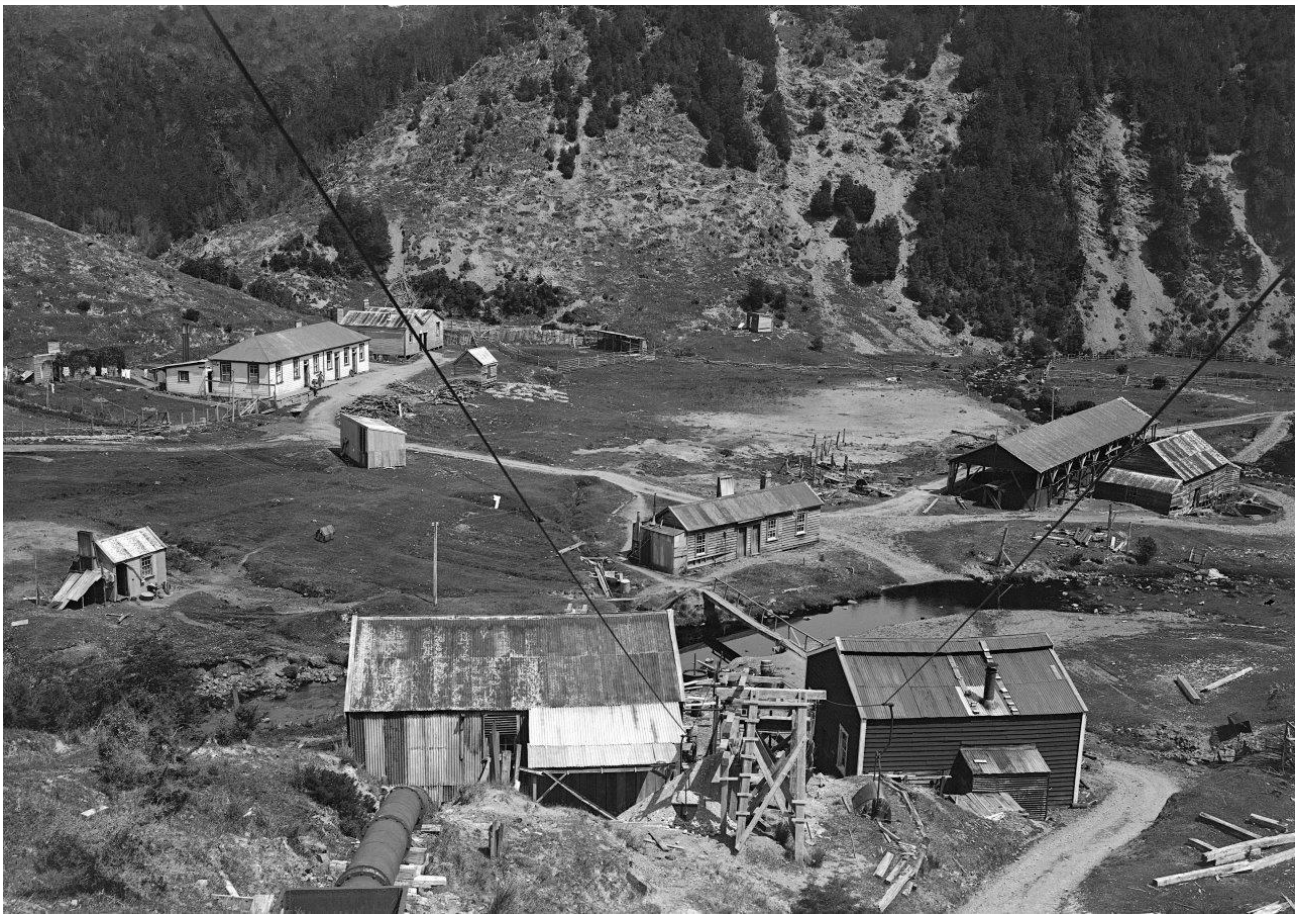

Figure 4. A photo of the Historic Big River battery (foreground) and cyanide tanks (in the shed middle RHS).

Figure 5. Stibnite ore stockpile at the remains of the historic Big River Battery shown in Figure 4.

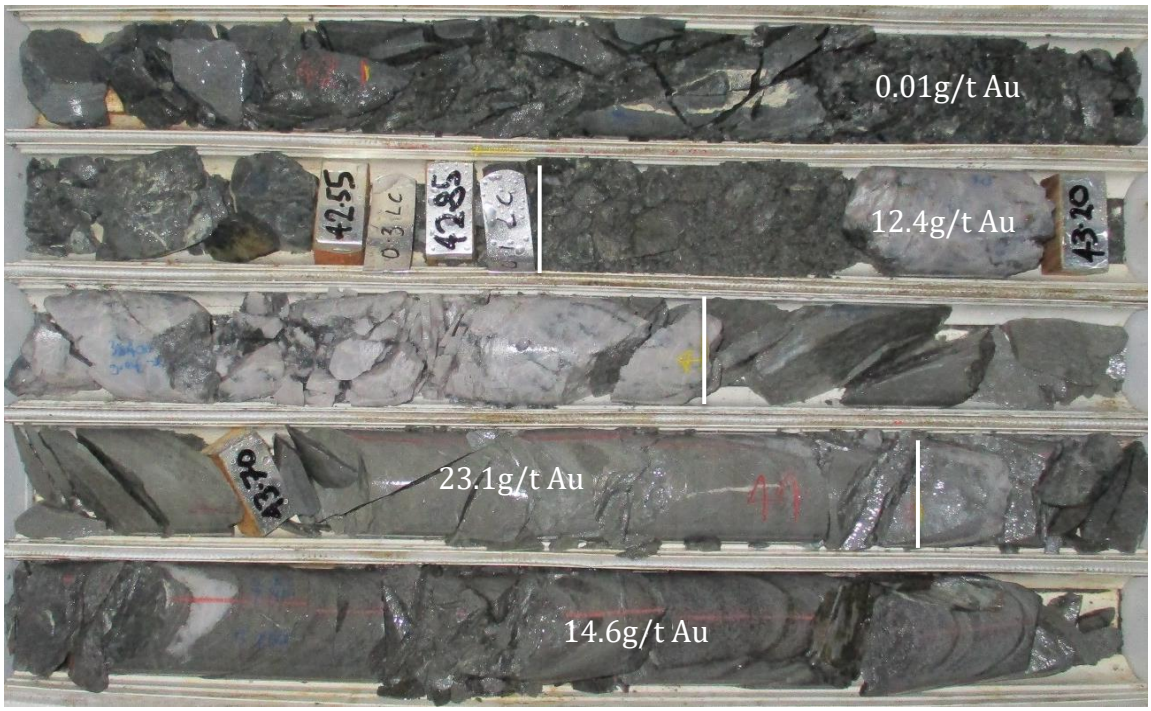

Figure 6. Hangingwall quartz vein with disseminated acicular arsenopyrite in the footwall in AX34.

Figure 7. Significant visible gold in a stylolitic seam in hole AX84 at Siren's Alexander River project.

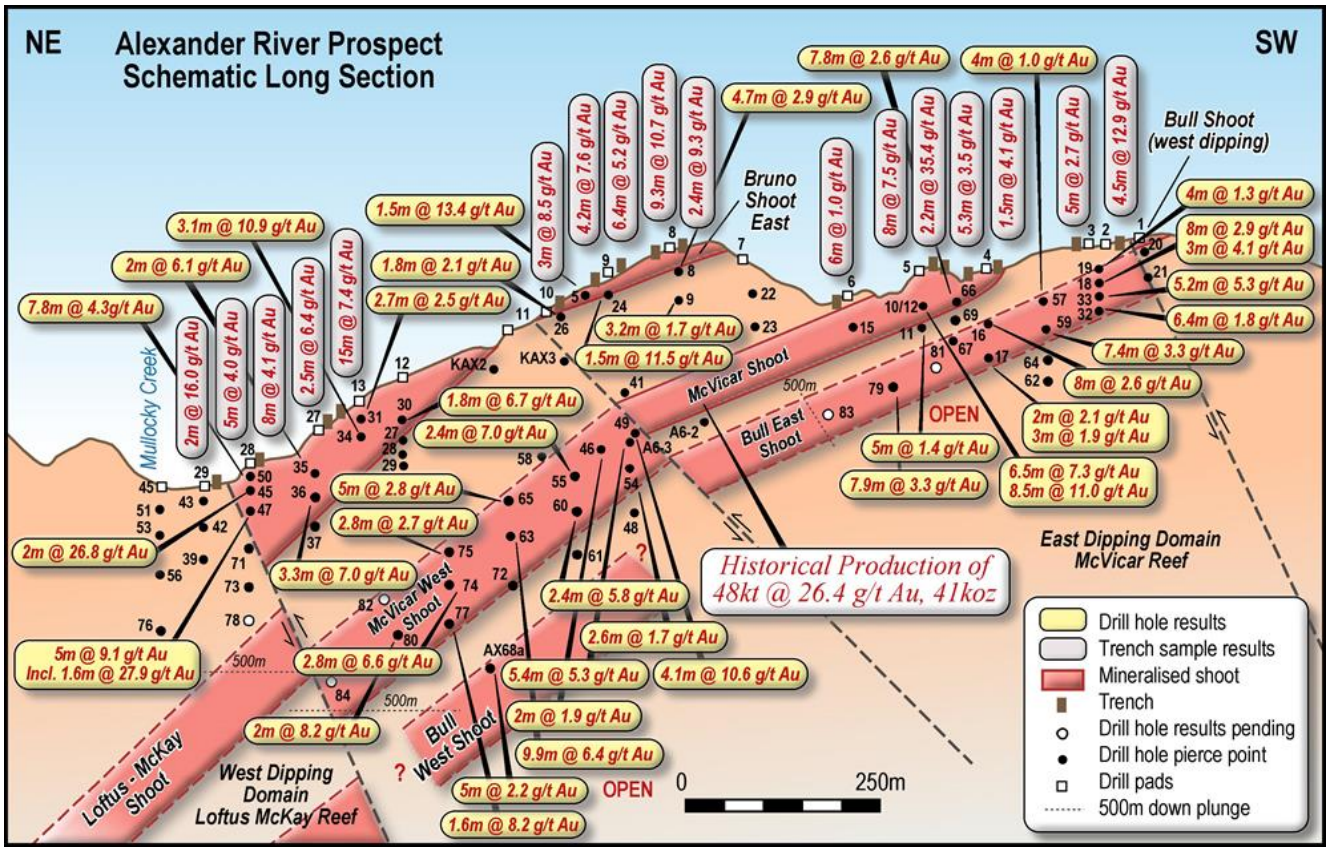

Figure 8. Alexander River schematic Long Section.

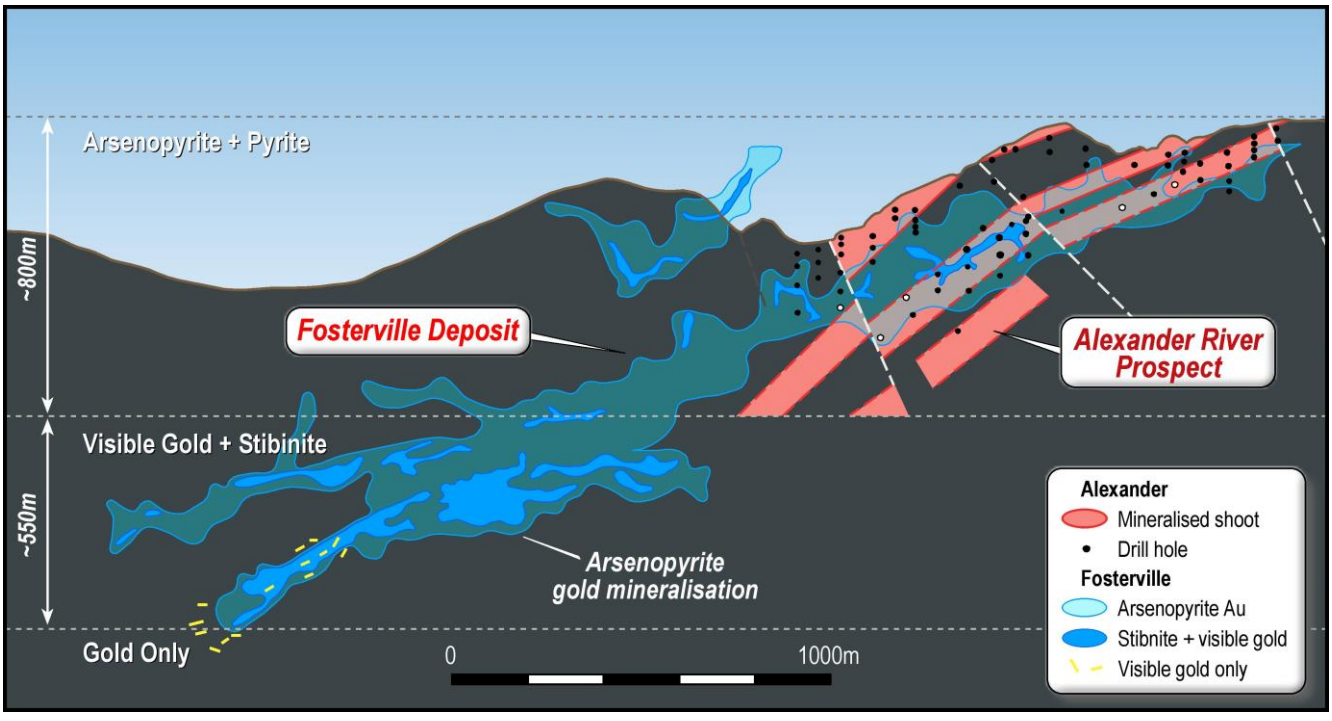

Figure 9. Fosterville Long Section showing the shoot geometry and mineralisation types[8] superimposed on the Alexander River long section.

Table 1. Comparison of deformation, metamorphism and mineralisation between the Reefton Goldfield, the Bendigo and Ballarat deposits (modified from Maw[9])

	Bendigo-Ballarat Zone		Reefton Zone
	Bendigo-Ballarat	Fosterville	
Age of Host Rocks	Ordovician	Ordovician	Ordovician
Host Rock Lithology	Metamorphosed turbiditic sequence comprises interbedded sandstones, siltstones and shales; some carbonaceous.	Metamorphosed turbiditic sequence comprises interbedded sandstones, siltstones and shales; some carbonaceous.	Metamorphosed turbidite sequence of quartz-rich sandstones and mica-rich siltstones.
Age of Mineralisation	455-420 Ma	420 - 388 Ma	Post early Devonian - 386Ma
Deformation style during Mineralisation	Mineralisation during E-W shortening produced dilatant bedding -parallel zones during folding and discordant veins related to post-fold faulting.	Mineralisation occurs during NW-SE shortening, hosted on NNW trending folds and faults during sinistral transpression.	Mineralisation occurs during NW-SE shortening. Interaction of sinistral faulting and folding produces dilutional zones at the long limb of folds on bedding and parallel shears.
Relationship to Mineralisation	Mineralisation occurs pre, syn and most abundantly post metamorphism during 453-440Ma deformational event.	Mineralisation occurs during transgressional reactivation of earlier deformed and metamorphosed structures	Mineralisation occurs during transgressional reactivation of earlier deformed and metamorphosed structures
Ore Types	Laminated massive quartz veins with some brecciation. Vein types include bedding parallel / saddle reefs. Discordant fault hosted, en echelon gashes and sub horizontal extension fractures.	Refractory gold in disseminated fine grained arsenopyrite, visible gold in quartz carbonate veins associated with stibnite, vein hosted visible gold with no associated stibnite.	Refractory gold in disseminated fine grained arsenopyrite and, quartz and pug breccias, visible gold in laminated and brecciated quartz lodes, gold associated with minor to massive stibnite veins.
Mineralised shoots		Mineralized shoots are typically 4m to 15m thick, 50m to 150m up/down-dip and 300m to 2,400m+ down-plunge.	Mineralized shoots are typically 1m to 20m thick, 50m to 150m up/down-dip and 300m to 2,400m+ down-plunge.
Chemical Association	Generally low sulphide content. Sb is absent.	Free gold and associated within sulphides. Sb rich	Free gold and associated with sulphides. Sb rich
Depth of Mineralisation	6-10kms	3-6kms	4-7kms

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Authorised by the Board of Siren Gold Limited

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

Paul Angus
Technical Director
Phone: +64 274 666 526

Competent Person Statement

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