



## Quarterly Activities Report – December 2012

### SOVEREIGN GOLD COMPANY LIMITED

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#### Latest News

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#### ASX Symbol: SOC

Sovereign Gold Company is exploring for large Intrusion-Related Gold Systems in New South Wales.

Sovereign Gold's project area covers over 2,650 square kilometres.

The principal project is located around the township of Uralla, 21km southwest of Armidale, New South Wales, Australia, with superb infrastructure logistics. It is close to major roads, rail, airport, labour source, university, power, and engineering.

Available production records indicate that the Rocky River-Uralla Goldfield yielded 5,193 kg (approximately 167,000 ounces) of gold mostly from Tertiary deep leads during the period 1858-1967.

Sovereign Gold's exploration objective is to locate the hard rock sources.

#### Precious Metal Resources Ltd (ASX: PMR)

Sovereign Gold holds an 81.26% interest in PMR.

PMR is conducting exploration at Halls Peak, NSW, which is the inferred volcanic centre for extensive small but high grade Volcanic Massive Sulphide (VMS) deposits rich in copper, lead, zinc and silver, with variable but largely untested gold values.

Additionally, PMR has identified a potential large SEDEX deposit under the Halls Peak project area.

This quarterly operations report is dated 31<sup>st</sup> January 2013 and is for the three months ending 31<sup>st</sup> December 2012.

#### Corporate

- A total of \$21 million funding from Jiangsu Geology and Engineering Co Ltd (**SUGEC**), a Chinese SOE, to fast track exploration and development for two year funded program over multiple tenements, an increase of over \$15 million of funding announced in March 2012
- Exploration expenditure for the six months to 31 December 2012, including SUGEC earn-in is \$1,682,072
- Sovereign Gold holds an 81.2% equity position in Precious Metal Resources Limited (Appendix A)

#### Register snapshot

On 31 December 2012, Sovereign Gold had 139,163,842 ordinary shares quoted on the Australian Securities Exchange on issue and 7,250,000 unquoted options.

#### Exploration

An extensive exploration programme is continuing at EL 7768 and EL 7491, funded under the terms of the SUGEC Cooperation Agreement announced in March 2012, whereby SUGEC can earn a 30% interest through expenditure of \$2 million in each respective tenement.

#### Highlights

- Frasers Find results - up to 25.1 g/t gold and 141 g/t silver
- Gold bearing structure in Martins Shaft dyke doubled in length to 730 metres at EL 7491
- Newly discovered gold mineralisation in dyke hosting Martins Shaft on EL 7491
- Further IRGS discovered on EL 7766, recent assays up to 79.3 g/t Au (gold) and 96.4 g/t Ag (silver)
- Further discoveries following airborne geophysical survey at EL 7491

#### Frasers Find up to 25.1 g/t gold & 141 g/t silver (ASX: 21 December 2012)

- Gold encountered in drill holes along 256 metres of strike (still open)
- Large intrusive feeder source – shallow drilling confirms gold occurs in sheeted veins and narrow high-grade lode structures representing the high level portion above a larger intrusive feeder source
- Vector to deeper intrusive gold source – drilling confirms the Frasers Find Mine is part of an extensive gold plumbing system and has provided a vector to the deeper intrusive source of the gold

Drilling during the December quarter confirmed the Frasers Finds mine was developed on a narrow, high grade gold vein that, more significantly, is part of large gold-bearing fracture zone that widens to the south-west towards a small circular, 'blind' (concealed) pluton indicated by the airborne geophysical survey conducted by Sovereign Gold.

This is potentially the causative gold-bringing pluton and the several large fractures radiating from it have acted as conduits for gold-bearing fluids. The small pluton has intruded and fractured the larger Uralla Granodiorite as evidenced in drill holes by a widening of the mineralised zone (consisting of narrow auriferous alteration veins) towards the deeper, primary, source of the gold fluids.

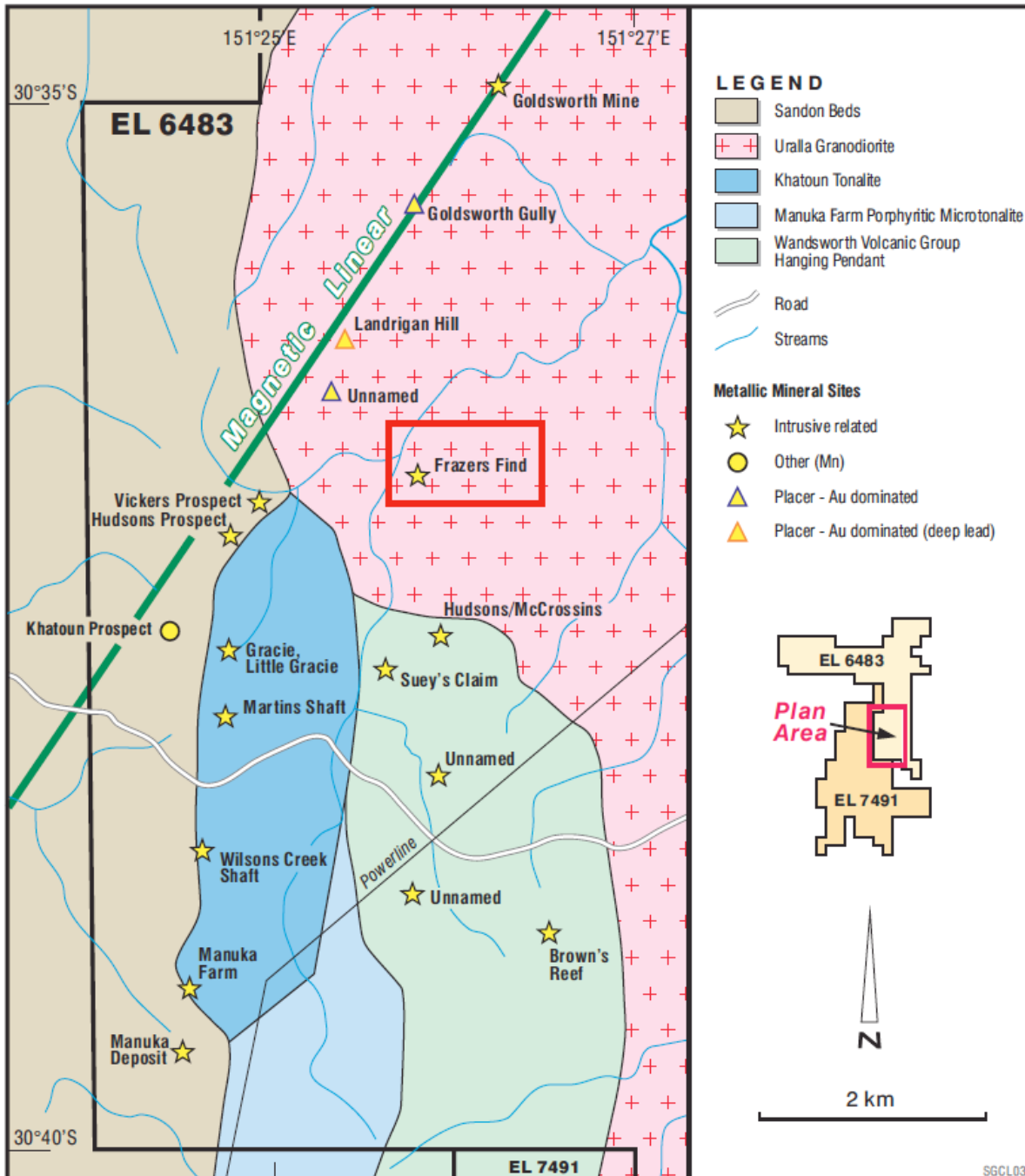
The very shallow drilling has intersected mineralisation with high Ag (silver), Pb (lead) and Zn (zinc) indicating this mineralisation represents



the distal, low temperature end of the auriferous fluid plumbing – vector to the main, deeper, source of the gold mineralisation. This high level metallogenic association also indicates the entire system is preserved at depth.

13 diamond holes were drilled. All holes were shallow and ranged from downhole depths of 13.4 metres to 55.80 metres.

Mature drilling of similar Intrusion-Related Gold System (IRGS) structures within Australia and overseas has shown these to be typically deep tapping structures that extend beyond 480 metres vertically (still open). This preliminary shallow drilling program has provided precision targeting for the planned deep drilling program in 2013.



Location of Frasers Find and other principal auriferous hard rock mines. The striking structural and magmatic control to mineralisation indicates the existence of a large IRGS. Many gold lodes plot on the north-east trending magnetic linear. Note also the NNE trending series of mines along contact of the small plutons (Khatoun Tonalite and Manuka Farm Porphyritic Microtonalite) and the Sandon Beds.



The shallow drilling program has established the presence of classic IRGS sheeted gold-bearing sulphide veins in granite within a long structural corridor radiating from a potential blind pluton. The high silver, lead and zinc contents indicates these veins are the distal (cool end) expression of the deeper intrusive feeder zone of this gold mineralisation

The shallow drilling program coupled with geophysical studies has provided strong evidence for a potential for a large gold target at depth.

#### **Gold-Bearing Structure in Martins Shaft Dyke Doubled in Length (ASX: 6 December 2012)**

- Length of the gold-bearing structure increases from 340 metres to 730 metres
- Gold in altered dyke hosting Martins Shaft. Potential for repetitions of large Martins Shaft-style gold lodes
- Drilling underway on walk-up priority drilling targets

Sovereign Gold continued exploration on a large gold-bearing structure 2.7km northwest of Martins Shaft (ASX: 2 November 2012). Diamond drilling commenced on Monday 26th November. Initial fieldwork sampled outcrop from this north-east trending alteration structure that showed anomalous gold over 340 metres with 8 samples averaging 1.37g/t gold (range 0.4 – 2.32g/t gold) over 197 metres. Samples contained up to 308 g/t silver.

This discovery was in EL 7491, under joint venture with SUGEC who are sole funding \$2 million on the tenement to March 2014, as part of a total exploration budget of \$21 million. In the collaborative program, SUGEC and Sovereign Gold's geoscientists conducted intensive exploration along the structure in November and confirmed a continuous alteration zone, cutting felsic dykes and metasediments, that extends for at least 730 metres.

This very large structure has the potential to host a major gold deposit. Two shallow (maximum depth 20 metres) diamond drill holes have been completed that show alteration over several metres downhole. The holes were drilled under surface outcrop of mineralisation within felsic dykes and metasediments and encountered phyllic altered felsic dyke associated with sheeted veining, pervasive alteration, brecciation and yellow limonite after sulphides. This alteration is strikingly similar to that encountered in Martins Shaft and repetitions of this type of gold lode are highly probable given that this 730 metre long mineralised structure cuts the same dyke hosting Martins Shaft.

#### **Sovereign Gold-SUGEC Project Summaries – Multiple Gold and Base Metal Targets (ASX: 28 November 2012)**

##### **Sovereign Gold-SUGEC Cooperation Agreements**

Sovereign Gold and SUGEC have entered into cooperation agreements with respect to seven tenements prospective for gold in the Rocky River-Uralla Goldfield.

SUGEC is funding up to \$11 million on Sovereign Gold tenements (and an additional \$10 million on three tenements held by Sovereign Gold's subsidiary, Precious Metal Resources Limited). SUGEC will be entitled to a 30% interest in each respective tenement upon meeting the associated expenditure commitment for that tenement.

<b>EL 7491</b>	Contains an extension of the newly discovered IRGS in EL 6483.  Several areas, within EL 7491, of newly discovered gold mineralisation in dyke hosting Martins Shaft.  Large gold-bearing alteration zone to the north-west of Martins Shaft.  10 rock samples collected from outcrop showed anomalous gold over 340 metres and 8 of these returned between 0.4 – 2.32g/t Gold along 197 metres of this north-east trending alteration structure. Samples contained up to 9.9oz/t Silver.  Potentially hosts a bulk open-cuttable gold target that extends from surface.
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- EL 7768** Prospective for IRGS, copper/base metals, antimony, molybdenum and tin.
- Mineralisation includes Baxters Antimony Mine - drill intersections of antimony (Sb) up to 3.5m wide with grades up to 10.1% antimony (Sb).
- Successful exploration completed to date in EL 7491 and EL 7768: Over 2,600 soil and stream sediment samples have been collected within EL 7491 and EL 7768 together with a detailed ground magnetic survey over both ELs. This work has resulted in the discovery of several geochemical and geophysical anomalies.
- Shallow and deep drilling is planned following further infill, close-spaced geochemical and geophysical surveys.
- EL 7770** Host to VMS polymetallic (especially copper) mineralisation and exhalative gold mineralisation, as well as epigenetic structurally controlled gold mineralisation related to regional deformation and granite intrusions.
- A number of Cyprus-type submarine exhalative copper-rich deposits occur within the EL. These include deposits such as Trough Gully and Fishers Copper Mine from which 2,572 tonnes and 2,643 tonnes of copper ore were produced respectively.
- The copper-rich lenses can extend for over 150 metres along strike, are up to 4 metres wide and can extend 60m down dip. Grades were generally between 2% and 4.5% copper with some ore from Fishers Copper Mine averaging more than 15% copper.
- The last exploration was in 1970-71 where a percussion drill hole intersected an interval of about 1.5m averaging 5.45% copper in an interval of around 4.5 metres downhole at 2.45% copper. Assays of mineralisation from Fishers Copper Mine showed the mineralisation contained about 30 grams/tonne silver and 1.5-3 grams/tonne gold. Several other copper deposits are known and require follow-up exploration (GS2009-0901 R00037944).
- EL 7770 contains over 22 gold prospects including 12 in the Limbri area that could potentially be indicative of larger, stratabound exhalative gold deposits.
- EL 7766** Sovereign Gold's specialist exploration team has identified two potential IRGS within EL 7766.
- These comprise the Tilbuster and Puddledock hard rock gold deposits. Both these new IRGSs host repetitions of the geological setting of the Rocky River-Uralla Goldfield.
- The forgotten gold lodes of the Tilbuster gold area have received virtually no exploration for 100 years and have never been drilled.
- The Tilbuster hard rock gold deposits consist of a series of historic gold mines that extend north-easterly for 1,850 metres; these structurally controlled gold lodes occur over a maximum known width of 150 metres. Potential large gold-hosting target.
- Recent assays of mineralisation from dumps around the Great Britain Mine (Tilbuster) returned grades up to 79.3 g/t Gold and 96.4 g/t Silver, while at the Zulu Reef: a trial crushing in 1895 of 8 tonnes yielded 38.25 grams/tonne gold.
- EL 7700 and EL 7701** Significant potential for gold (Au), molybdenum (Mo), tin (Sn), antimony (Sb), copper (Cu), lead (Pb) and zinc (Zn).
- Major Mineralised Structures - Host to Potential IRGS
- Large Gostwyck gold-bearing alteration structure over 1km long that comprises disseminated gold in granite and associated shear hosted mineralisation in the granite's roofing rocks. Several small gold prospects are associated with this mineralisation.
- Sovereign Gold geologists believe that the Mount Butler area contains newly discovered structurally controlled sulphide alteration that is potentially the distal portion of a large epithermal system.
- Parlour Mountain Leucoadamellite (granite): Large ring structures associated with a mineral bringing pluton. Base metals along a 1km long structure. Several small tin (Sn), molybdenum

(Mo), copper (Cu), lead (Pb), zinc (Zn), silver (Ag) and bismuth (Bi) deposits along margin of granite.

EL 7701 contains the northern and western extension of the Parlour Mountain mineralisation. Hosts the Boorolong Molybdenite Mine that contains several small lodes grading 0.15% Mo and 0.07% Bi.

#### **Large Area of Newly Discovered Gold Mineralisation in Dyke Hosting Martins Shaft (ASX: 2 November 2012)**

- Sovereign Gold's specialist IRGS exploration team discovered a large gold-bearing alteration zone to the north-west of Martins Shaft
- 10 rock samples collected from outcrop showed anomalous gold over 340 metres and 8 of these returned between 0.4 – 2.32 g/t gold along 197 metres of this north-east trending alteration structure. Samples contained up to 9.9 oz/t silver
- Potentially hosts a bulk open-cuttable gold target that extends from surface
- Walk-up priority drilling targets

Sovereign Gold reported on 10<sup>th</sup> October 2012, that it had located anomalous gold in outcrop 2.3km north-west of Martins Shaft. 10 further samples were collected at site S624<sup>1</sup>, along a north-east trending alteration structure. All samples returned anomalous gold, with 8 samples indicating the area potentially hosts a bulk open-cuttable gold target that extends from surface.

The area was selected by Sovereign Gold's specialist IRGS exploration team through identification of key diagnostic IRGS characteristics in combination with geophysical anomalies. The large, gold-bearing structure was located in EL 7491 during initial field reconnaissance with Sovereign Gold's joint venture partner SUGEC. The discovery at surface of such a large 'virgin' area of gold mineralisation testifies to the unexplored potential for discovery that exists in the Rocky River-Uralla Goldfield and other under-explored areas within Sovereign Gold's Exploration Licences.

This newly discovered, extensive area of gold mineralisation occurs in the same altered felsic dyke that hosts Martins Shaft and potentially represents a repetition of a larger Martins Shaft-style gold lode. Martins Shaft has some significant drill intersections including diamond drill hole SGRDD002 that had 22m @ 3.2 g/t Au downhole including 13m @ 5.2 g/t Au, 2m @ 18.9 g/t Au and 1m @ 22.5 g/t Au. The gold mineralisation is associated with a north-east trending shear structure that hosts brecciated (rocks that have been shattered by gold-bearing fluids) and altered rocks that have undergone quartz-sulphide-gold fluid flooding.

The main alteration zone extends north-east for at least 340 metres and is at least 38 metres wide (limit of outcrop) in places. 8 samples collected over 197 metres of strike along this main mineralised portion ranged from 0.4 – 2.32 g/t gold - average 1.37 g/t. 3 samples contained high silver contents that ranged from 0.83 - 9.9 oz/t Silver. Sample S753 also contained 0.53% antimony and 0.19% lead.

#### **Further IRGS Systems Discovered on EL 7766 – Recent Assays up to 79.3 g/t Gold and 96.4 g/t Silver (ASX: 24 October 2012)**

Sovereign Gold identified two potential IRGS within EL 7766 north of Armidale, New South Wales. These comprise the Tilbuster and Puddledock hard rock gold deposits.

Both these new IRGS's host repetitions of the geological setting of the Rocky River-Uralla Goldfield.

- The forgotten gold lodes of the Tilbuster gold area have received virtually no exploration for 100 years and have never been drilled
- The Tilbuster hard rock gold deposits consist of a series of historic gold mines that extend north-easterly for 1,850 metres; these structurally controlled gold lodes occur over a maximum known width of 150 metres. Potential large gold-hosting target

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<sup>1</sup> ASX Release, 10th October 2012, Figure 1.



- Recent assays of mineralisation from dumps around the Great Britain Mine (Tilbuster) returned grades up to 79.3 g/t gold and 96.4 g/t silver
- The Zulu Reef: Trial crushing in 1895 – 8 tonnes yielded 38.25 grams/tonne gold.

The Tilbuster gold deposits display diagnostic IRGS geological, metallogenic, structural and tectonic characteristics. These include: back-arc basin tectonic setting, metallogeny (gold, arsenopyrite, stibnite plus silver and minor base metals -lead, zinc, chalcopyrite), alteration (frequently phyllic, quartz-sericite-pyrite), location adjacent to small 'gold-bringing' granite pluton and extensive past mining of alluvial gold.

There are several gold lodes that extend for 1,850 metres with the majority being parallel and controlled by joints in hydrothermally altered granite that have acted as the conduits for gold-bearing fluids. In other IRGSs that have been extensively drilled these structures are typically deep tapping, frequently extending vertically more than 400 metres. This widespread structurally controlled mineralisation is at 'grass roots' and presents multiple walk-up drill targets.

**Record of Mineralisation within EL 7766 (Geological Survey of New South Wales)**

**Tilbuster Gold Deposits**

(Source: Dorrigo Coffs Harbour Metallogenic Notes GS1992/392 R0005090)

<b>Suite of six Gold Mines with Diagnostic Characteristics of a Large IRGS</b>	Five deposits consist of near vertical veins of quartz-gold-stibnite-arsenopyrite, calcite and dolomite in brecciated, altered granite. One deposit is in metasediments 740 metres south-west of contact with granite.
<b>The Great Britain Mine</b>	Assay from mine dump (NSW Geological Survey 1983), 33.5 grams/tonne gold, 62 grams per tonne silver. The main shaft extended to 122 metres vertically.
<b>The Zulu Reef</b>	Trial crushing in 1895 – 8 tonnes yielded 38.25 grams/tonne gold. Joint controlled veins.
<b>The Little Nell Mine</b>	Several gold-bearing reefs reported in mine area – IRGS-style sheeted veins, average grade 23 grams/tonne gold.

**Puddledock Gold Deposits**

In the Puddledock area, several quartz-stibnite-gold veins have been mined or prospected. In the vicinity of Puddledock Creek, the Whybatong Mine (private mining lease) was developed on a thin (20 to 300mm) 200 metres long quartz vein in greywacke country rock near an intrusive contact with the Tilbuster Granodiorite. Recorded production over the period 1938-42 amounted to 24.9 kg from 180t of ore – 138.3 g/t Gold (GS1975/378).

**Other Mineralisation Occurrences within EL 7766**

<b>Taits Gully Mine</b>	Silver, gold and base metal mineralisation occur over a 1.5m wide x 800m long easterly trending shear zone. Production pre 1904 averaged 1.22 kilograms/tonne of silver.  A trial parcel from the Taits Gully Au deposit assayed 38.9 grams/tonne Gold (GS1992/392 R0005090).
<b>Greengate Silver Mine</b>	Silicified shear zone with variable grades up to 26 grams/tonne silver (Ag), 4.5% zinc (Zn) and 2.3% lead (Pb).



### **Repetitions of Martins Shaft-style Gold Mineralisation Discovered Following Airborne Geophysical Survey (ASX: 10 October 2012)**

Ground truthing of geophysical targets has located several sites of gold-bearing alteration on structures in the same large felsic dyke hosting the Martins Shaft Gold lode.

- Large potential with anomalous gold in samples up to 2.7km from the Martins Shaft Gold lode
- One single area of gold-associated alteration traced for over 400 metres along strike and over 90 metres wide
- Repetitions of Martins Shaft-style Gold mineralisation
- Priority drilling targets

The alteration and mineralisation was discovered when locating geophysical anomalies on the ground. The gold-bearing structures are associated with phyllic alteration, IRGS sheeted veining and brecciation. The areas were identified after processing and interpreting the airborne magnetic and radiometric data using state-of-the-art software and specialist filters to enhance the data. This survey pinpointed potential gold-channeling structures and areas of potassic alteration (radiometric data).

An initial reconnaissance of geophysical anomalies within EL7491 was undertaken with Sovereign Gold's joint venture partner SUGEC. Only two samples were initially collected and these contained 0.77g/t Au and 0.24g/t Au (samples S623 and S624 respectively). This range of anomalous gold and the type of alteration is identical to that obtained at surface around the alteration halo above the Martins Shaft Gold lode prior to drilling. Drilling subsequently discovered very shallow (near surface), long intersections (up to 22m downhole) of gold mineralisation.

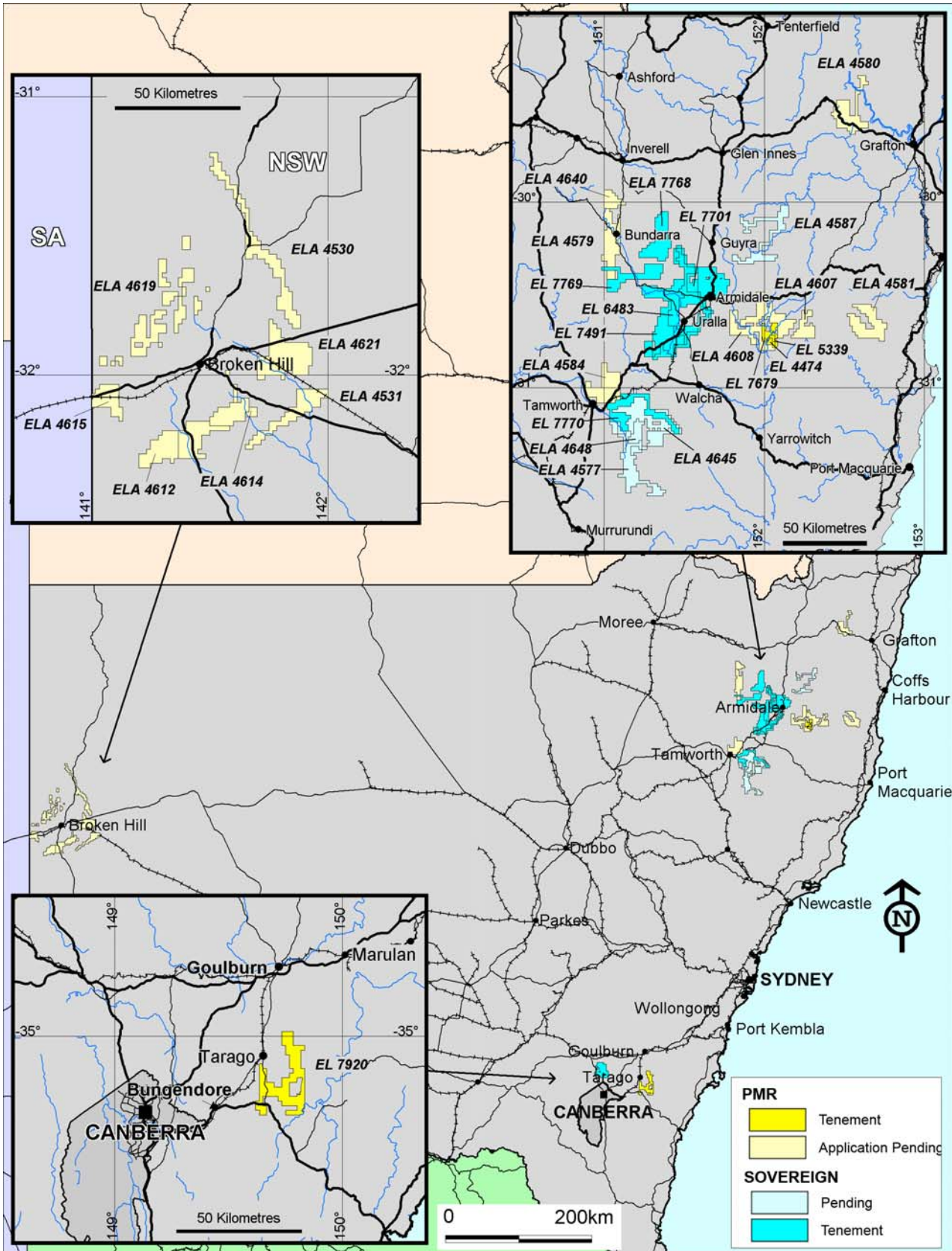
The geophysical survey has shown the dyke hosting the Martins Shaft Gold lode is much larger than previously mapped and extends around 3.7km along strike and in places is over 1km wide. This represents a massive area to explore for gold endowment. The nearest analogue to the Martin Shaft-style mineralisation is the large Donlin Creek IRGS (32M oz) gold deposit in Alaska. Both have gold mineralisation hosted in felsic dykes and share multiple similar diagnostic characteristics.

The newly discovered gold mineralisation shows the same geochemical fingerprint as the mineralisation associated with the alteration above the Martins Shaft Gold lode. Further it is associated with extreme sodium depletion and potassium elevation that is very diagnostic of the gold precipitation event.

The areas of anomalous gold were discovered in the same dyke and gold channelling structure hosting the Martins Shaft Gold lode. They extend for at least 2.7km north-west and confirm the potential for this dyke to host multiple repetitions of Martin Shaft-style gold lodes.

The gold mineralisation at Martins Shaft is very significant as this style of mineralisation was predicted from the application of Sovereign Gold's IRGS Model. The mineralisation comprises sheeted veins and disseminated gold mineralisation within a felsic dyke and confirms the potential of the large IRGS to host several primary hard rock gold deposits. Gold has been located in drill holes to a vertical depth of 130 metres (limit of drilling) and mineralisation is still open and widening down plunge. Strong phyllic alteration extends beyond the mineralised envelope.

The felsic dyke has acted as a brittle host for magmatic fluids. It is clear from the presence of gold mineralisation and associated alteration that igneous textures are very conducive to the permeation/dissemination of gold-bearing fluids. Martins Shaft has some significant drill intersections including previously reported diamond drill hole SGRDD002 that had 22m @ 3.2 g/t Au downhole including 13m @ 5.2 g/t Au, 2m @ 18.9 g/t Au and 1m @ 22.5 g/t Au. This gold mineralisation was very close to the surface ranging from 18 - 40 metres downhole - uphole there was an alteration halo with similar alteration and mineralisation to the newly discovered areas.



Sovereign Gold and PMR Tenement Portfolio



### **Qualifying Statements**

The information in this Report that relates to Exploration Information is based on information compiled by Michael Leu who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists.

Mr Leu is a qualified geologist and is a director of Sovereign Gold Company Limited.

Mr Leu has sufficient 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 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Resources. Mr Leu consents to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.

### **JORC Code Compliant Public Reports**

The Company advises that this Quarterly Operations Report contains summaries of Exploration Results and Mineral Resources as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code").

The source of these summaries is identified in the body of this Quarterly Operations Report (under the relevant heading). The Code-compliant Public Reports or Public Reporting on which the summaries are based can be viewed on the ASX and the Company's website ([www.sovereigngold.com.au](http://www.sovereigngold.com.au)) and the Company will provide these reports, free of charge, to any person who requests it.

**References to Mines** refer to geographical names, and no inference should be made that Sovereign Gold is operating any mines at this stage of its development.

### **True Widths**

Downhole length, true width not known. All drill intersections are stated as downhole lengths, true width not yet determined.

### **Exploration Target Statements**

The potential quality and grade is conceptual in nature, that there has been insufficient exploration to define full Mineral Resources and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

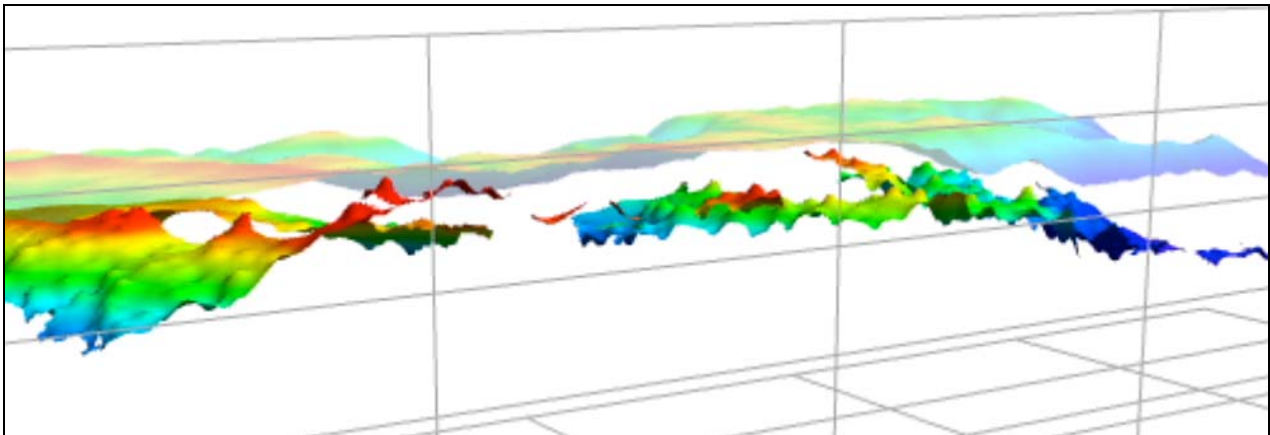


## Appendix A – Precious Metal Resources Limited (82.16%)

### 3D modelling of VTEM survey conductive layer, Halls Peak (ASX: 11 December 2012)

3D modelling of the extensive conductive layer identified at Halls Peak commenced in the December quarter.

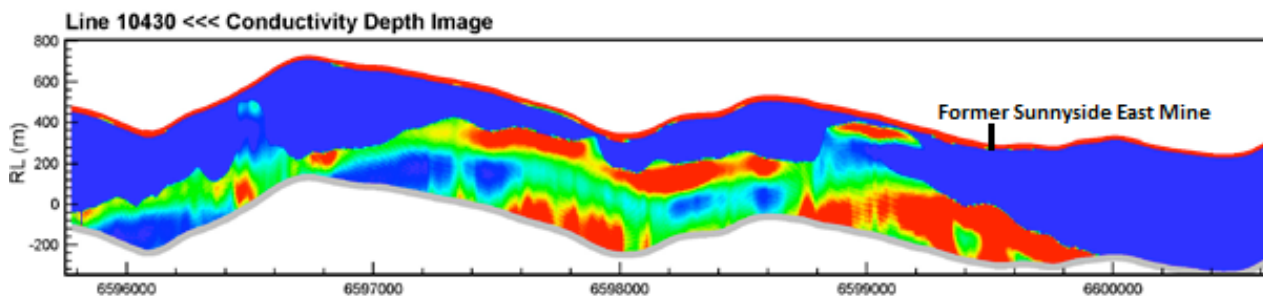
The helicopter borne VTEM survey, conducted by PMR in collaboration with SUGEC, mapped the extensive conductive layer over many parts of the Halls Peak base metals field. The modelling is aiding interpretation of the most prospective areas within PMR's project area.



*Conductive layer in strong colour, overlain by the land surface in pale colour*

### Large conductive zones beneath former Halls Peak copper zinc lead silver mines (ASX: 29 November 2012)

Large conductive zones possibly caused by base metal mineralisation have been located at depth beneath the former Keys, Mickey Mouse, Sunnyside and Sunnyside East mines at Halls Peak, 40 km east of Armidale in northern NSW.



*Conductivity Depth Image beneath the former Sunnyside East Mine.*

Interpretation by Southern Geoscience Consultants Pty Ltd has yielded detailed images showing conductivity of the rocks at depth. Clearly visible on the CDI sections are potential vertical conductors, interpreted by PMR as sulphide bearing vent zones emanating from deep within the earth. These are overlain by horizontal zones interpreted as flat-lying sediments containing sulphide minerals, which flowed from the vents onto the overlying sea floor.

### Significant gold anomalies suggest potential for Hillgrove style gold / antimony, Halls Peak (ASX: 23 October 2012)

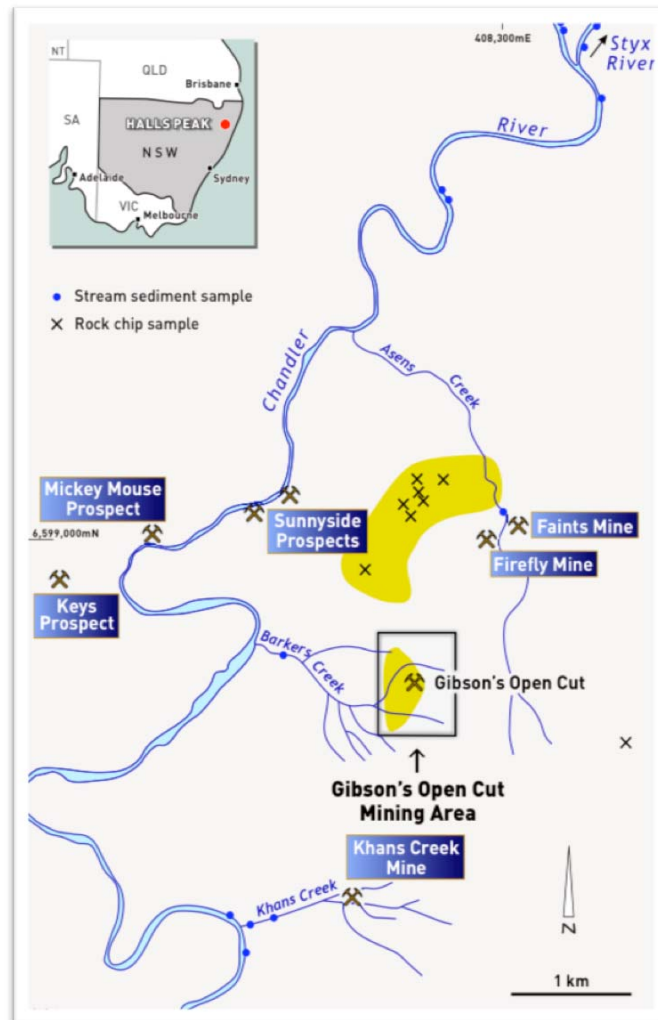
Significant gold anomalies suggesting potential for Hillgrove style gold/antimony deposits have been recognised during digitising of soil geochemical data from Halls Peak. The anomalies are consistent with geochemistry from orogenic fault vein type gold occurrences, with anomalous stibnite mineralisation. The western margin of the occurrence is 400 metres east of Gibson's Lode.

Gold was also assayed during routine copper, lead, zinc and silver soil and rock chip sampling by Amoco Minerals during their exploration in 1983 (GS 1983/360). PMR is conducting a program of digitising historic gold data. This program led to recognition of grades in excess of 0.4 grams/tonne (0.4 ppm) of gold from many soil geochemical samples.



Subsequent search for the source of these anomalies has located narrow veins a few cm to 20 cm wide, floaters, and small pods of mineralisation. The rock's green colour is due to the presence of scorodite, a common mineral in orogenic gold occurrences.

These occurrences show brittle/ductile deformation and large fluid inclusions, and the chemistry demonstrates a low sulphidation environment, all typical of orogenic gold occurrences.



#### **Location of Faints-Firefly Area and Gibsons Open Cut Area**

#### **High-grade copper/ lead/ zinc pods at Halls Peak (ASX: 8 October 2012)**

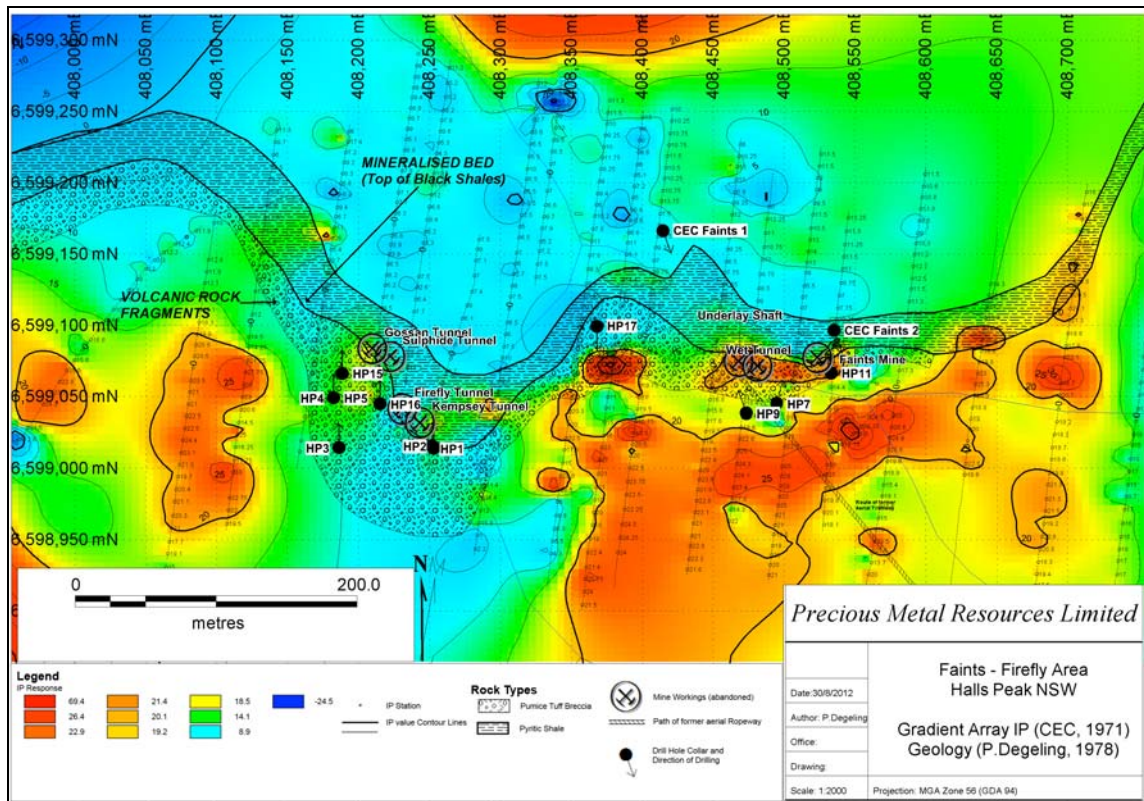
High grade copper-lead-zinc-silver bearing lenses and pods, each containing several hundred tonnes of mineralisation, have been shown to occur within the upper part of one continuous black shale bed at the historic Faints-Firefly mining area, Halls Peak. Pods in this bed were mined in at least seven localities, including the Gossan Tunnel, Silver Tunnel, Firefly Tunnel, Kempsey Tunnel, Underlay Shaft and Faints Mines. This bed containing lenses and pods extends more than 600 metres along outcrop.

The black shale bed hosting the high-grade pods was located by recent assaying. This demonstrated highly anomalous base metal and silver grades over many metres in previously unassayed core holes drilled during past exploration.

Total recorded production from all these workings amounted to 1,600 tonnes of sulphide and oxide mineralisation. The sulphide ore had an estimated average grade of 1.06% copper, 20.86% lead, 31.89% zinc and 29.6 ozs/tonne silver (Mines Dept. Annual Report, 1923).

These pods are interpreted as high-grade "black smoker" hot spring vents on the muddy sea floor.

These mineral bearing springs are interpreted to have flowed from the surface of the sea floor in which the black shales were being deposited. Columns of high-grade copper-lead-zinc-silver ("black smokers") formed over these vents, and were subsequently buried by additional mud layers. It is these, and the mineralised vents from which they flowed, that were mined selectively in the past.



**Drill Hole Locations and IP Anomalies, Faints-Firefly Area.**

**JORC Code Compliant Public Reports**

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**JORC STATEMENT**

The information in this Appendix A that relates to mineral exploration is based on information compiled by Peter John Kennewell, who is a member of the Australasian Institute of Mining and Metallurgy. Peter John Kennewell is a director of Precious Metal Resources Limited, and has sufficient 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 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Identified Mineral Resources, and Ore Reserves". Peter John Kennewell consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.