



## SOVEREIGN GOLD COMPANY LIMITED

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### Latest News

[www.sovereigngold.com.au](http://www.sovereigngold.com.au)

### Directors / Officers

Charles Thomas (Chairman)  
Rocco Tassone (MD)  
Patrick Glovac

### ASX: SOC

### Qualifying Statements

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

Mr Robertson is a qualified geologist and is a contractor of Sovereign Gold Company Limited.

Mr Robertson 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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Resources. Mr Robertson consents to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.

The information in this announcement that relates to geophysical reporting and interpretation is based on results and interpretations compiled by Dr. Alexander Prikhodko, P. Geo., PhD, Senior Geophysicist, VTEM Interpretation Supervisor, Geotech Ltd. Dr. Alexander Prikhodko is a practising Member of the Association of Professional Geoscientists of Ontario, a Recognised Overseas Professional Organisation included in a list promulgated by the ASX from time to time and consents to the inclusion in this report of the geophysical information and interpretation in the form and context in which it appears.

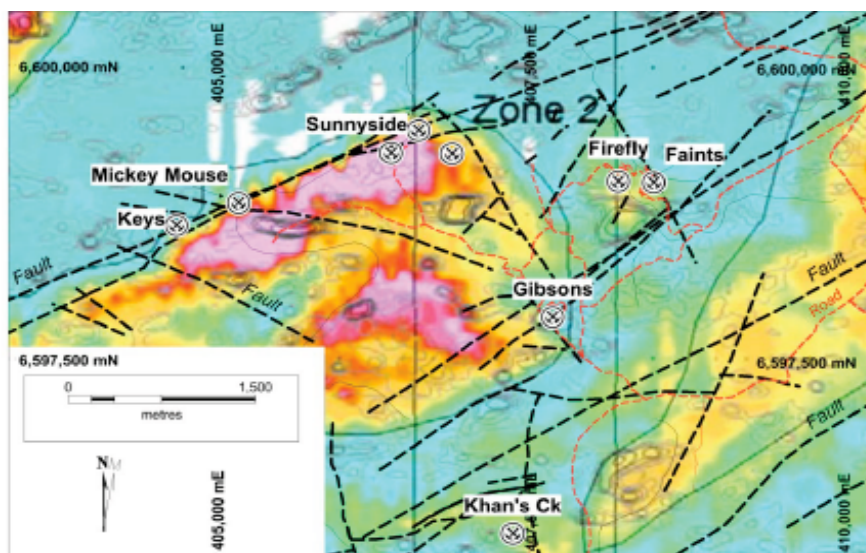
ASX Release  
9 November 2016

## Halls Peak Zinc Update – VTEM Anomalous Conductive Zones

- Highly prospective VTEM Conductor Zones identified, Spike Island, Sunnyside, Khans Prospect, Mickey Mouse and Keys
- Negotiations ongoing with land owners to access highly prospective Spike Island anomalous conductive zone within EL7679
- Discussions with JV partners have also commenced regarding Spike Island
- Accessible VTEM conductor zones remain a priority target adding to the Gibsons Prospect currently being drilled
- Additional fieldwork should be conducted within areas of EL5339 known as Amoco Grid prospective for gold anomalies

Sovereign Gold Company Limited (ASX: SOC) (**Sovereign or the Company**) is pleased to provide an update on the highly prospective VTEM conductor zones within the Halls Peak project. The Company will further update the market on the current diamond drilling focussing on the high-grade base metal extensions at Gibsons (Figure 1).

Figure 1 presents the significant anomalous conductive zones within the Halls Peak project as reported to ASX on 1 September 2016 and Figure 2 provides a comprehensive outline of Historical Mines within the project area.



**Figure 1: The VTEM airborne geophysical survey data showing additional significant anomalous conductive zones not reported by the previous holder (Precious Metal Resources, PMR) of EL7679 (Halls Peak) and the current drill program location being conducted at Gibsons.**

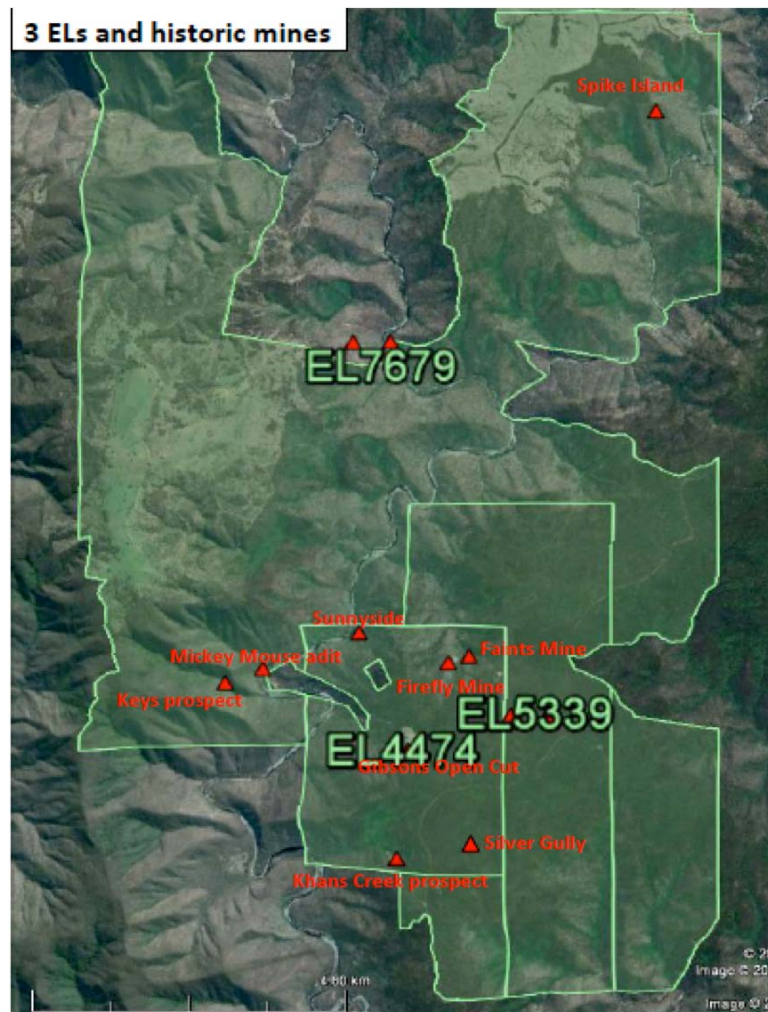


Figure 2: Historical Mines within the Halls Peak project, with the Halls Peak Tenements located 80km SE of Armidale N.S.W.

**Spike Island (EL7679)**

Negotiations with the landowners are ongoing. Drill hole locations as previously reported to ASX (1 September 2016) have been identified and the company looks forward to unlocking the potential of these targets.

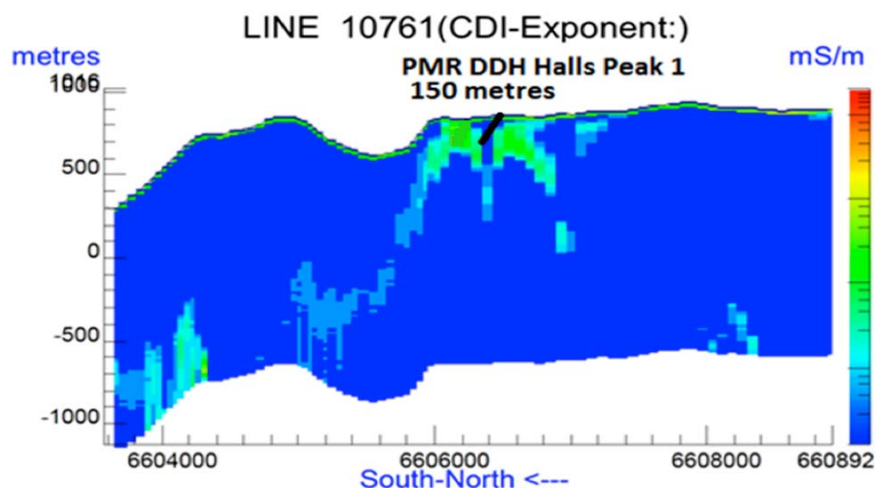
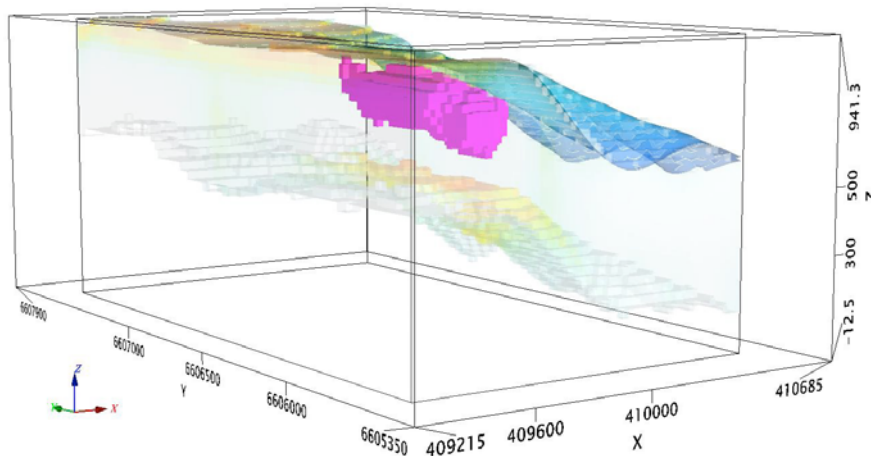


Figure 3: Spike Island Anomaly – VTEM Survey

Previously flown Heliborne VTEM (Versatile Time Domain Electromagnetic) survey detected deep conductive zones that have potential to contain continuous flat lying zinc-lead-copper-silver bearing beds.

Details from the survey report by Geotech Ltd. (the developers of the VTEM system) that interpreted this conductive zone are presented below. An exploration priority is the VTEM anomaly outlined by Dr Alex Prikhodko (Report: Detail Interpretation of VTEM Conductive Zone, for Precious Metal Resources Limited, Halls Peak Block, Armidale, New South Wales, Geotech VTEM System flown and processed by Geotech Ltd. Ontario, Canada, Survey 2012, Alexander Prikhodko, P.Geo., PhD, Senior Geophysicist, Supervisor of VTEM Interpretation Geotech Ltd.)



**Figure 4: 3D view, EM Resistivity Depth Imaging (RDI). Interpretation of the VTEM conductors at Spike Island anomaly by Geotech Airborne. Flat lying conductor in blue; Vertical conductor in purple.**

The interpretation concluded “In general the conductive zone is complex and consists of two types of conductors: 1) steeply dipping (or sub-vertical) conductors and 2) sub-horizontal blocky, lens or layer similar conductors.

#### **Sunnyside (EL4474)**

The Sunnyside historical mine location (Figure 1) is located on the VTEM anomaly and the location of the previously expired Co-Operative Drilling Grant where SOC had planned a deep hole to prove up the conductor. Unfortunately, due to a lack of funding (approx. \$30,000 pre the \$1.5m R&D received on 30 March), delayed access permission to the land and just 30 days to review the drill targets, engage a drilling contractor and mobilise the drill rig, the hole was not completed within the required time.

This location will require approximately a 500-600m diamond hole to test the conductor and further analysis since the expiration of the Co-Operative Drilling Grant has proved extremely useful and resulted in the drill location being changed in order to intersect the conductor at the lesser depth.

The company currently has an Access & Compensation Agreement with National Parks & Wildlife to permit this hole to be drilled.

#### **Khans Prospect (EL4474), Mickey Mouse and Keys (EL7679)**

This location was previously a site for underground and surface mining, with the access track in good condition and only the last several meters needing an upgrade. Although in a State Conservation Area (SCA), where exploration is allowed with Minister’s Consent, this prospect contains high mineralisation which needs to be proven.

The Mickey Mouse and Keys Prospect on the north western side of Chandler River are within a SCA in areas in steep country where drilling would prove more difficult and as a result are not as high priority short-term as Spike Island, Sunnyside and Khans Prospect.



**Amoco Grid (EL5339) (Gold Anomaly)**

This is not a VTEM conductor zone but is reported to contain a gold anomaly with at least 3 gossanous areas. Samples were previously taken from these gossans and the company will report these results once full analysed. Sovereign will also rely on a close spaced soil survey conducted by Amoco in 1982-1983. This area would require intense fieldwork prior to drilling.

*Managing Director Mr Rocco Tassone commented, "Following the completion of the current Halls Peak Diamond drill program designed to test the high grade zinc and silver extensions at Gibsons, part of our geological team will turn their attention to the highly prospective VTEM Conductor Zones outlined in this release.*

*"Earlier in the year we were unable to take advantage of a Co-Operative Drilling Grant which matched dollar for dollar up to \$90,000 spent on a deep 500-600m hole at the Sunnyside prospect. The complete lack of funding to match the grant, and a delay in gaining access and Government approval all worked against us. However, winding the clock forward this has proved rather helpful and resulted in the drill location being changed in order to intersect the conductor at the lesser depth and ultimately saving the company considerable funds.*

*"Following the completion of drilling at Mt Adrah scheduled in December the next phase of Halls Peak exploration will include drilling to determine whether these VTEM conductive anomalies are due to massive silver-copper-zinc-lead sulphide deposits from surface to 300m, similar to those historically mined in the surrounding area."*

**For further information please contact:**

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**About VTEM**

**Geotech Ltd. Ontario Canada, Airborne VTEM survey, Halls Peak N.S.W.**

During June 20th to July 13th, 2012 Geotech Ltd. carried out a helicopter-borne geophysical survey over the Hall Peak block situated approximately 34 kilometres southeast of Armidale, New South Wales, Australia.

Principal geophysical sensors included a versatile time domain electromagnetic (VTEMplus) system, and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 1221 line-kilometres of geophysical data were acquired during the survey.

The interpretation results include additional products (detail resistivity depth imaging and Maxwell plate modelling), description and recommendations for VTEM anomalous zone in the NE part of the surveyed area.

Airborne VTEM surveys use a helicopter, which suspends a high-resolution caesium magnetometer from its cargo hook. The magnetometer is described as a 26-metre transmission coil or loop, which is suspended beneath the helicopter in a tent shaped array. The inner part of the array contains a smaller diameter receiving coil, which measures the period of time it takes for an induced electro-magnetic field to dissipate through the ground, using the principle that highly conductive rocks, like those containing metals, would hold an electric charge for a longer period.

A current is transmitted through the coil, which energises the ground, creating an electromagnetic field. When the induced current is stopped, sensors on the coil record the time delay for this induced electromagnetic field to disperse. The VTEM system has the ability to generate readings at a rate of 10 samples per second, which are recorded digitally with a GPS log and radar altimeter for accurate navigation.

The VTEM system produces data that are then translated onto maps which shows regions of conductivity in the earth and EM profiles. The proposed flight paths will be orientated to suit the overall geological trend, and line spacing was designed to ensure maximum coverage.



Geotech Airborne describe the VTEM system as follows: “The VTEM or Versatile Time Domain Electro Magnetic system is the most innovative and successful airborne electromagnetic system to be introduced in more than 30 years. The proprietary receiver design using the advantages of modern digital electronics and signal processing delivers exceptionally low-noise levels. Coupled with a high dipole moment transmitter, the result is unparalleled resolution and depth of investigation in precision electromagnetic measurements.

Key features include:

- Spotting drill targets directly off of the airborne results
- Superior Exploration Depth – Over 400 metres
- Excellent resistivity discrimination and detection of weak anomalies
- Low Base Frequency (25 or 30 Hz) for Penetration through conductive cover
- High Spatial Resolution – 2 to 3 metres
- Improved Interpretability due to Receiver-Transmitter symmetry
- Virtually impervious to atmospheric activity.

The system was designed to be field configurable to best suit a large variety of different geophysical requirements from deep penetration to optimizing the discrimination within a narrow range of resistivity values. The recent surveys flown with VTEM have produced superior results over the same test areas flown by competing airborne EM surveys. VTEM has flown the Reid-Mahaffy, Caber, Perseverance and Montcalm test ranges and the results have demonstrated that VTEM provides the Industry's highest signal/noise ratio and conductor spatial resolution”.