



## DECEMBER 2016 QUARTERLY ACTIVITIES REPORT

### Key points

- 48 new anomalies in second VTEM survey and on ground acquired since first VTEM survey at Skellefte project, Sweden
- Skellefte drilling campaign systematically testing first of over 100 VTEM targets
- Drilling at Baloo has doubled the depth extent of known mineralization
- Well funded with A\$21.8 million cash at Quarter's end

### CORPORATE

#### Capital structure

50,000 options were exercised during the quarter, increasing the total shares on issue by the same amount to a total of 246,052,452. 43.8 million unlisted options remain on issue, which if exercised, would represent an income of A\$17.5 million to the Company.

8.4 million shares were released from escrow during the quarter.

#### Finance

A total of A\$2.8 million was spent during the quarter, comprising A\$1.8 million on exploration, A\$0.1 million on net corporate costs including business development, overheads and payments for fixed assets, and A\$0.5 million on staffing costs for all pre-resource exploration and corporate activities. In addition to day-to-day operating expenditure, a payroll tax payment was made to the Office of State Revenue of A\$201,000, which is expected to be refunded as a result of an audit in December 2016.

Cash at the end of the quarter totalled A\$21.8 million.

Planned expenditure for the coming quarter is anticipated to be approximately A\$3.3 million, and budgeted expenditure for the subsequent final three months of the current Australian financial year (FY1617) to end June 2017 is approximately A\$2 million.

## **Management**

Subsequent to the quarter's end, Tony Walsh was appointed as Company Secretary to replace Anna Neuling whilst on parental leave. During this time Anna will stay on as a non-executive director of the Company. Tony brings a wealth of corporate expertise to the Company, having worked for the ASX for 14 years, including being the ASX liaison with the JORC committee, and also having subsequently held various company secretary, director and chairman roles with a variety of ASX and AIM listed exploration and mining companies.

## **EXPLORATION**

Drilling commenced on the first few of over 100 VTEM anomalies at the Company's Skellefte project in Sweden during the quarter, and in Western Australia, drilling at the Baloo gold deposit confirmed the presence of gold mineralization over a broad area down dip of the current Mineral Resource estimate envelope. An additional 48 new VTEM anomalies were also identified in the Company's second regional VTEM geophysical survey and on ground acquired since the first survey at the Skellefte project.

### **Skellefte, Sweden (100% S2)**

*The Skellefte district of northern Sweden is a prolific mining district that contains numerous major polymetallic zinc-copper-gold-silver volcanogenic massive sulphide (VMS) deposits, including those that underpin Boliden's mining and smelting operations. S2 has approximately 551 square kilometres of ground, which it considers highly prospective for similar polymetallic VMS mineralization and also orogenic shear zone hosted lode gold mineralization.*

#### **Bjurtraskgruvan prospect**

The Bjurtraskgruvan prospect was identified during the quarter. It comprises outcropping massive sulphide mineralization (see Figure 1) together with mineralized intercepts in limited historical drilling, and is coincident with one of the many new EM anomalies ("Vargfors 401-4") identified in the Company's new VTEM survey (see ASX announcements of 23 November 2016 and 19 December 2016 and below).

Ten rockchip and float samples collected from this outcrop are all enriched in either zinc or copper-gold-silver, as follows:

- Three samples grade 2.68%-6.47% zinc, with negligible copper, gold or silver
- Seven samples grade 4.71%-13.25% copper, 0.26g/t-6.74g/t gold and 30g/t-95g/t silver, with negligible zinc





Figure 1. Photo of outcropping massive sulphide mineralization at the Bjurtraskgruvan prospect.

The historical drilling outlines two south dipping lenses of zinc and copper bearing massive sulphide mineralization, extending down plunge from the outcrop to a vertical depth of 120 metres and remaining open down plunge beneath this (see Figures 2 and 3). Key historical intercepts (interpreted to approximate true width) from this mineralized zone include:

- 3.8m @ 5.9% zinc, 0.6% copper, 8g/t silver from 86m in hole BJG80009
- 6.2m @ 3.9% zinc, 0.4% copper, 3g/t silver from 97.4m in hole BJG80007
- 6.1m @ 3.6% zinc, 0.2% copper, 4g/t silver from 30.5m in hole BJG80001
- 4.1m @ 2.0% zinc, 1.3% copper, 12g/t silver from 97.4m in hole BJG80008

A new ground-based moving loop EM (MLEM) survey undertaken to confirm the VTEM anomaly has identified a strong conductor which plunges gently to the southwest in a position consistent with the known mineralization (see Figures 2 and 3).

The Company plans to drill down plunge of this early in the new year, as many of the known VMS deposits of the Skellefte belt form plunging lenses and pipes which have relatively modest strike lengths but which extend from near surface to depths of 1,500 metres.

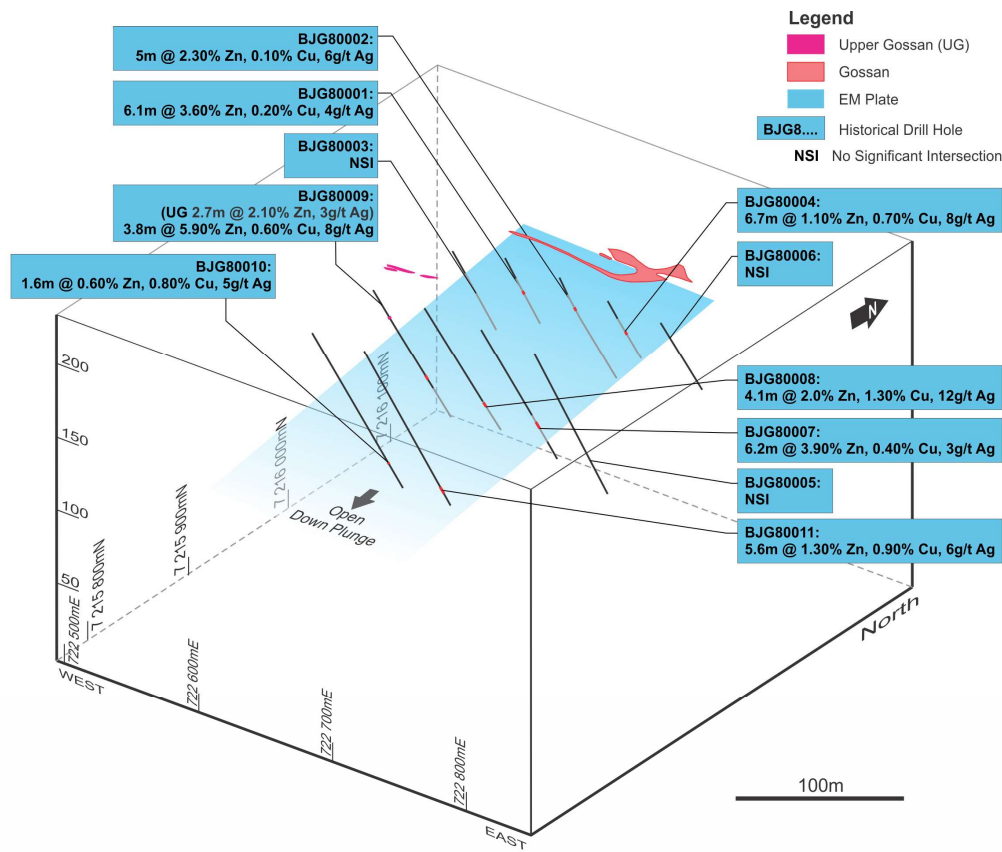


Figure 2. Isometric view of the known extent of the Bjurtraskgruvan VMS deposit, showing historical drilling, the new MLEM conductor, and the mineralized outcrop.



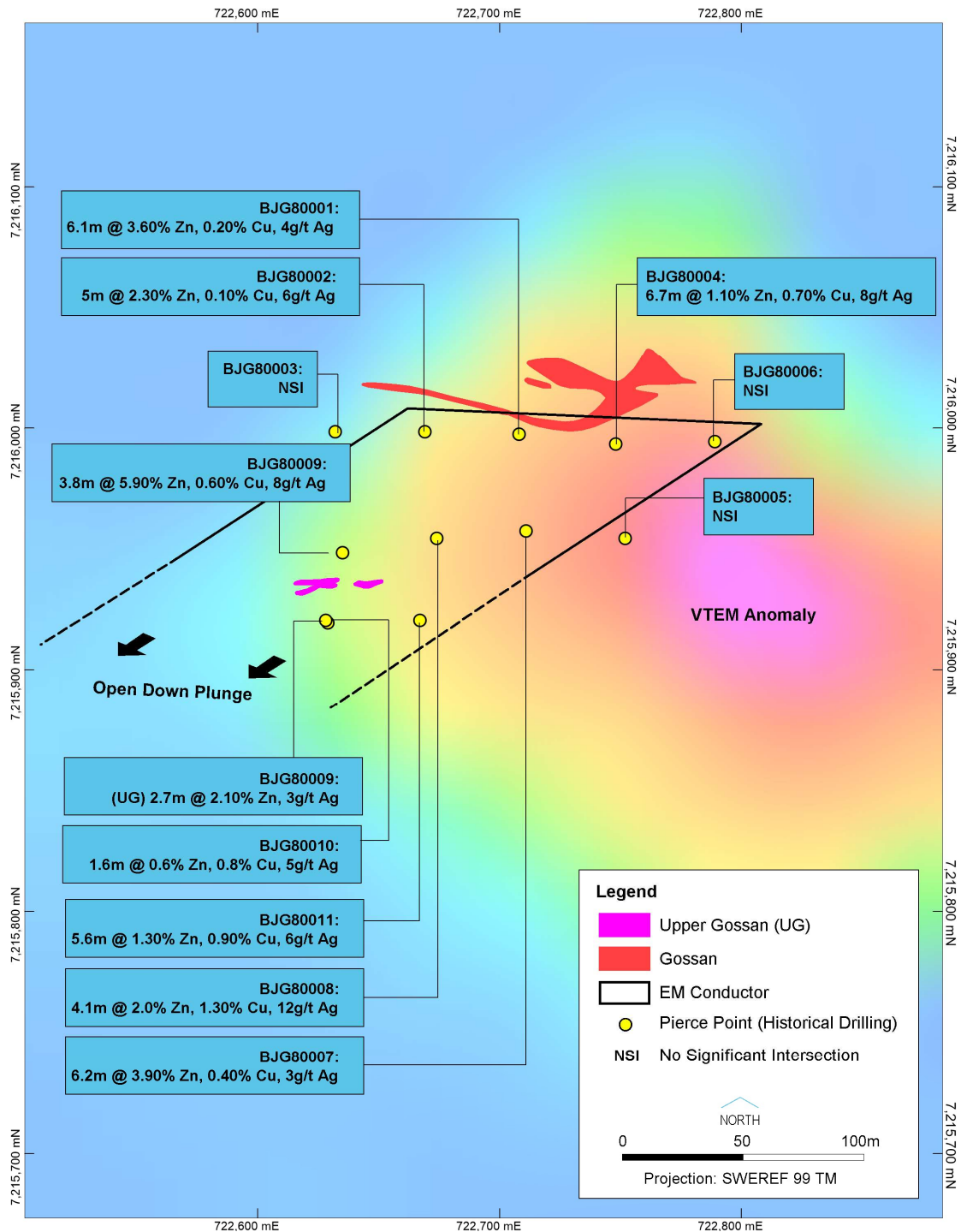


Figure 3. Plan projection view of the known extent of the Bjurtraskgruvan VMS deposit, showing historical drilling, the new MLEM conductor, and the mineralized outcrop.

### Svan Vit prospect

The first follow up drillhole (SSVT170004) at the Svan Vit prospect, drilled to the southeast of the original drillholes reported on 21 April 2016, intersected a 1.65 metre wide zone containing several narrow zones of stringer sphalerite mineralization (see ASX announcement of 19 December 2016 and Figure 4). Assays recently received average 2.18% zinc, 21g/t silver and 0.6g/t gold over this interval. Subsequent downhole EM (DHEM) in this and the original holes indicates that this hole was drilled a significant distance (70 metres) from the conductor as modelled in the new DHEM, which is located to the northwest of the original drilling (see Figure 5). This conductor will be drilled in the March quarter.



Figure 4. Photograph of stringer sphalerite zones intersected in hole SSVT170004 at the Svan Vit prospect. This intercept averaged 2.18% zinc, 21g/t silver and 0.6g/t gold over a 1.65 metre interval.

### Other targets

Drilling has been completed at the Svansle 403-2, Svansle 403-3, and Udden 401-13 VTEM targets (see ASX announcements of 23 November 2016 and 19 December 2016). In each case, the VTEM anomaly was explained by the presence of sulphide (pyrrhotite) or shale.

These EM anomalies are the first three of over 100 anomalies identified in the Company's two VTEM surveys. More anomalies that have been ground-proofed by MLEM and BOT sampling are scheduled for drilling between now and April 2017.

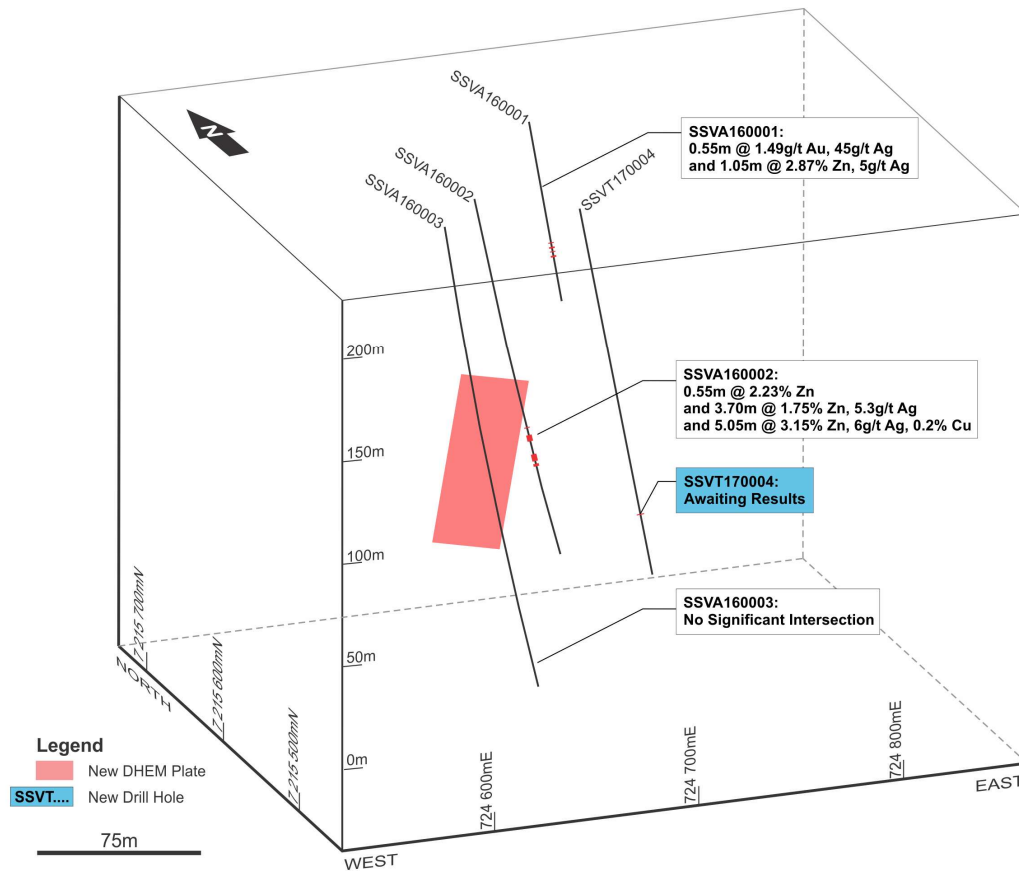


Figure 5. Isometric view of drilling at Svan Vit prospect, showing the location of the recently drilled hole (SSVA160002), which is approximately 70 metres from the redefined position of the conductor. Note that the results shown as awaited in SSVT170004 have been received and comprise a 1.65 metre thick zone grading 2.18% zinc, 21g/t silver and 0.6g/t gold.

#### Numerous strong EM conductors identified in new VTEM survey

More than 40 new EM conductors were identified during the quarter in the second VTEM survey flown by the Company and on ground acquired since the first survey was undertaken (see ASX announcement of 23 November 2016 and Figures 6 to 9). A portion of these will be verified with ground-based MLEM and BOT sampling where appropriate over the next several months.



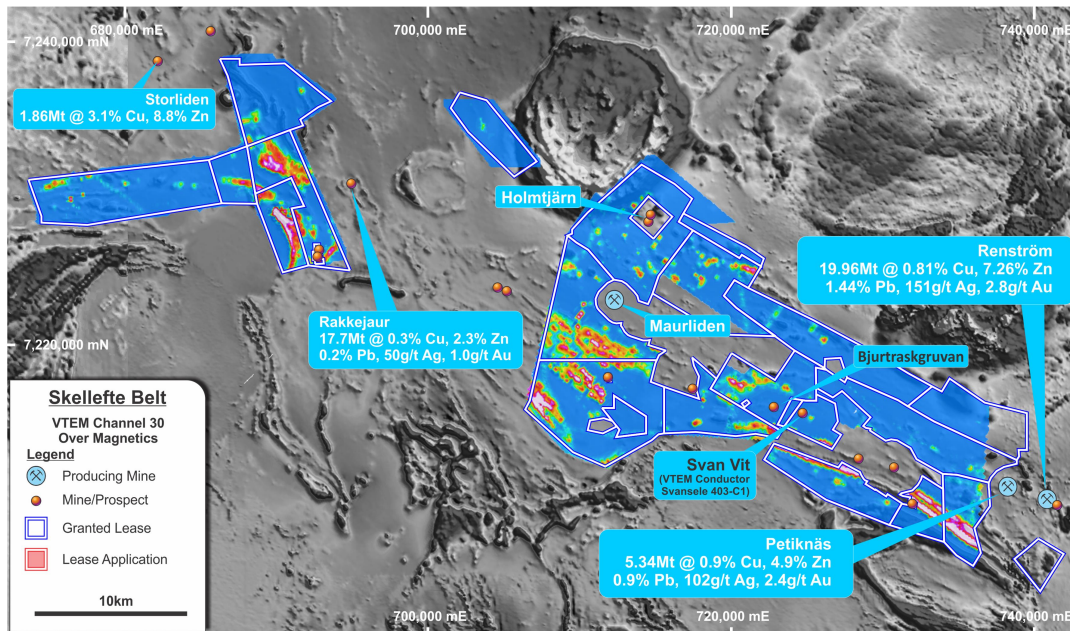


Figure 6. Overview of VTEM coverage overview, with new survey comprising 3 separate blocks of coverage (Laxselmyran block on LHS, Gallejaure block in centre, and Malanaset block on RHS), with the Malanaset block adjacent to and merged with original survey area.

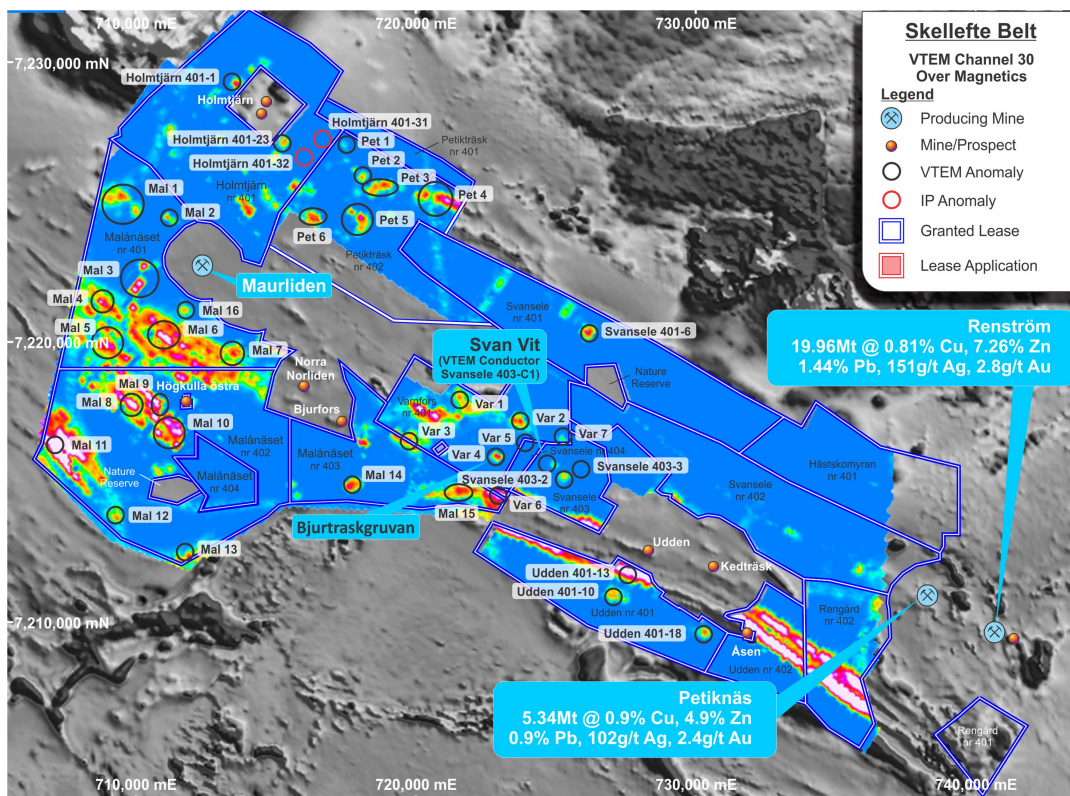


Figure 7. Detailed view of the Malanaset survey area merged with the original VTEM survey.



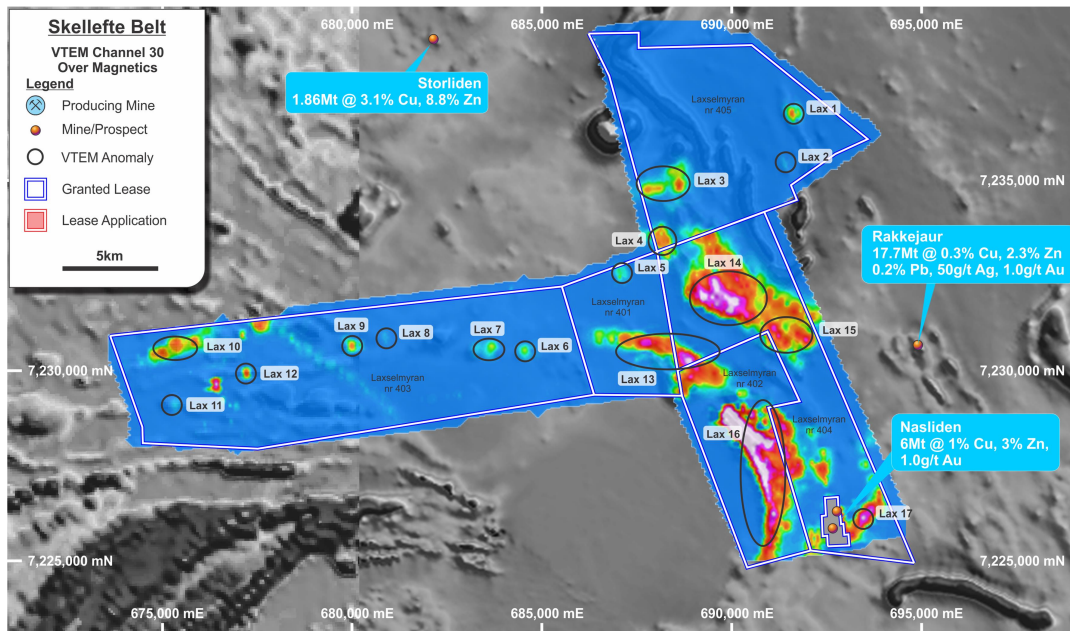


Figure 8. Detailed view of the new VTEM coverage in the Laxselmyran survey area.

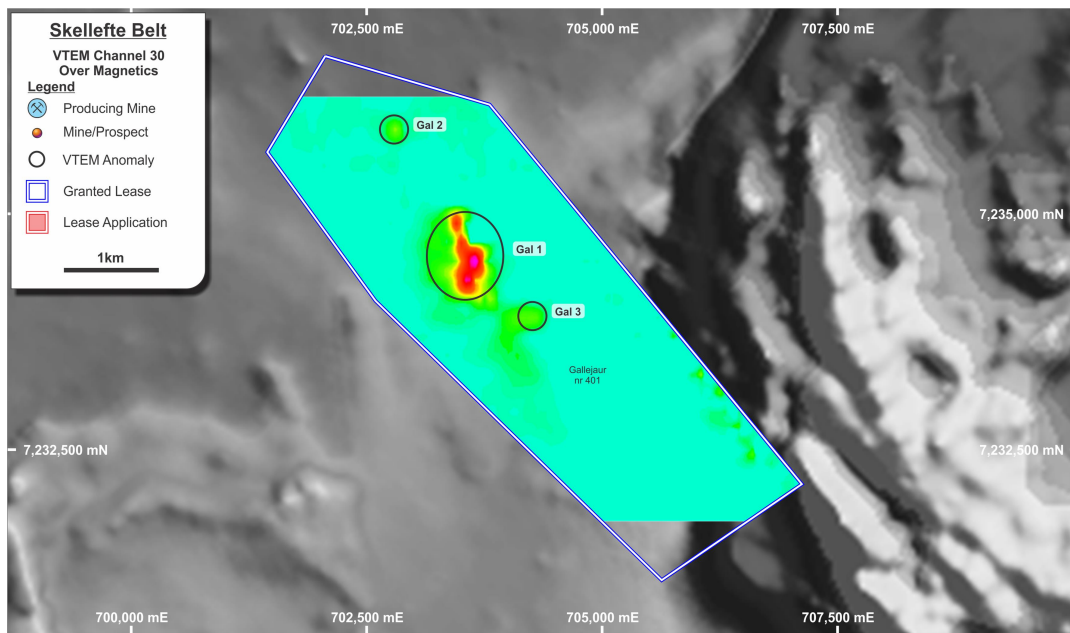


Figure 9. Detailed view of the new VTEM coverage of the Gallejaure survey area.

## Tenure

The Company continues to consolidate its ground position in the Skellefte belt, with the Petiktrask 402 exploration licence being granted during the quarter (see Figure 7).

### **Polar Bear (100% S2)**

*S2 owns 100% of the Polar Bear project. The project covers the southern continuation of the ultramafic stratigraphy which hosts the Kambalda and Widgiemooltha nickel deposits. It is largely concealed beneath the salt lake sediments and sand dunes of Lake Cowan. It also covers approximately 130 square kilometres of underexplored ground located between the world class gold producing centres of St Ives and Norseman – both ~10 million ounce camps – and southeast of the 2 million ounce Higginsville gold operations of Metals X Limited.*

Several holes were drilled down dip of the known mineralization at Baloo during the quarter (see ASX announcements of 22 November 2016 and 8 December 2016). These holes identified gold mineralization over a strike length of at least 250 metres at depths of 100-200 metres below previous drilling and below the limits of the current Baloo Mineral Resource estimate (see ASX announcement of 4 March 2016).

These intercepts confirm the presence of a 6-17m true thickness mineralized shear zone over a strike extent of at least 250 metres, some 100-200 metres below previous deepest drilling at Baloo and 100 and 150 metres below the current limit of the Baloo Mineral Resource (see Figures 10 and 11). The more strongly mineralized intercepts comprise:

- 6m @ 2.23g/t gold from 263m and 8.4m @ 1.63 g/t gold from 282m in SPBD0351, located 130m down dip of previous drilling and 120m down dip of the limit of the Baloo resource on this section
- 3.15m @ 3.45g/t gold from 303.15m in SPBD0353, located 80m south and down plunge of hole SPBD0351
- 7m @ 2.36g/t gold from 369m and 5.45m @ 3.3g/t gold from 378.75m in SPBD0352, located 100m south and down plunge of hole SPBD0351
- 11.9m @ 1.3g/t gold from 399m, 0.9m @ 44.1g/t gold from 413.75m, and 0.75m @ 2.21g/t gold from 416m in SPBD0349, located 45m south and down plunge of hole SPBD0352, and also 225m down dip of previous drilling and 130m down dip of the limit of the Baloo resource on this section

The more strongly mineralized intercepts comprise broad zones of intense small scale quartz veining and the gold, like elsewhere at Polar Bear, appears to be nuggety, resulting in narrow high grade intercepts within broader more diffuse lower grade envelopes.

The aim of this drilling was to scope the extent of mineralization and also define any sweet spots (greater grade and/or width) to vector in on discrete “shoots” within the overall shear zone. The drilling has confirmed that the mineralized shear zone is extensive, and the results suggest there may be more strongly mineralized shoots within this.

Drilling is still very widely spaced so the next stage is to tighten up the drill spacing to nominal 40m spaced centres.

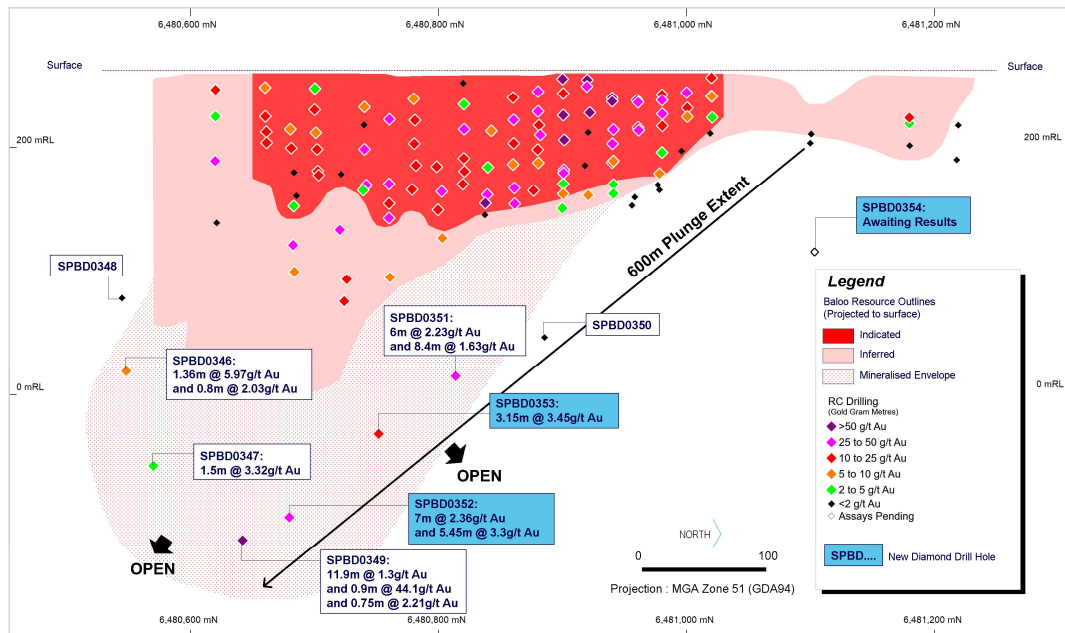


Figure 10. Long projection of the Baloo gold deposit, showing the shear zone hosting mineralization, the location and pierce points of drillholes, and the extent of gold mineralization discovered to date.

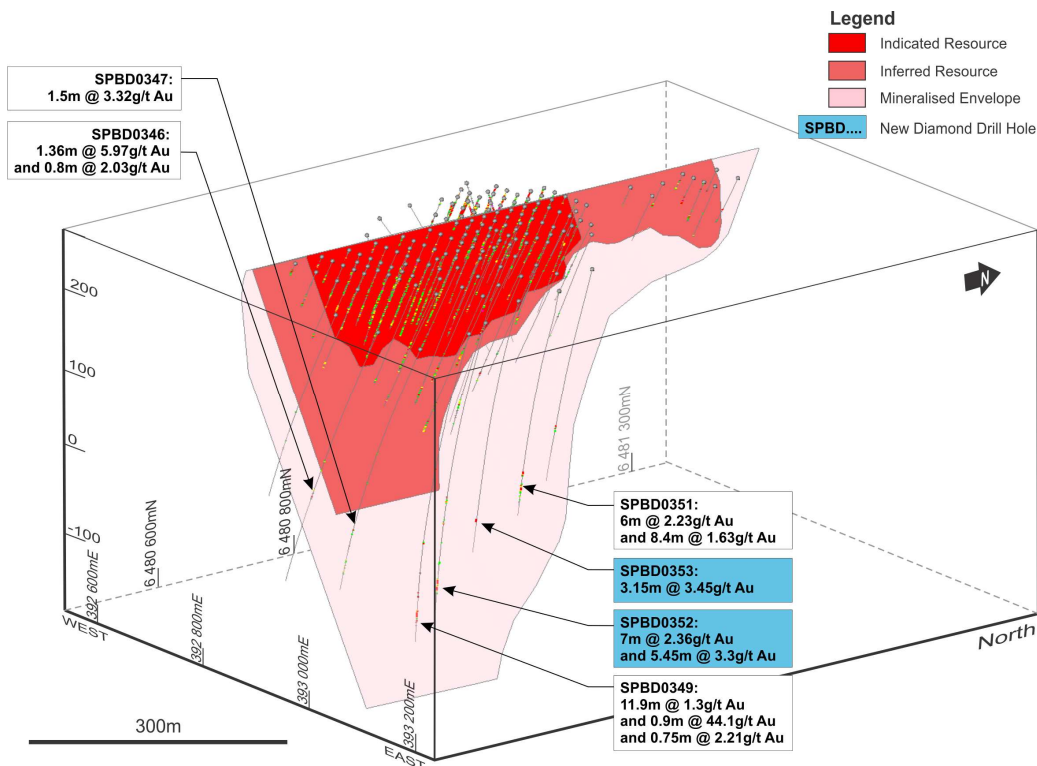


Figure 11. Three dimensional view of the Baloo gold deposit, showing the shear zone hosting mineralization, the location and pierce points of drillholes, and the extent of gold mineralization discovered to date.



### **Eundynie JV (80% S2)**

*S2 has an 80% interest in the Eundynie Joint Venture, which is adjacent to the Polar Bear project. The JV covers the southern continuation of the ultramafic stratigraphy which hosts the Kambalda and Widgiemooltha nickel deposits. It is largely concealed beneath the salt lake sediments and sand dunes of Lake Cowan. It covers approximately 76 square kilometres of underexplored ground located between the world class gold producing centres of St Ives and Norseman – both ~10 million ounce camps – and southeast of the 2 million ounce Higginsville gold operations of Metals X Limited.*

No field activities were undertaken during the quarter.

### **Norcott (100% S2)**

*S2 owns 100% of the Norcott project. The project covers the projected southern strike continuation of the regional structures that host significant gold mineralisation at the St Ives gold camp, which contains >10 million ounces of gold. It is largely concealed beneath transported cover and covers approximately 256 square kilometres of underexplored ground.*

No field activities were undertaken during the quarter.

### **For further information, please contact:**

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### **Note**

S2 Resources Limited has released exploration results to ASX during the December 2016 Quarter on 24 & 28 October 2016, 22 & 23 November 2016, and on 8 & 19 December 2016. For further details on these exploration results, competent persons statements and information required by Table 1 of JORC, S2 Resources Limited refers you to ASX announcements dated 24 & 28 October 2016, 22 & 23 November 2016, and on 8 & 19 December 2016, which are available on our website.

### **Appendix to quarterly activities report – tenement table**

Project	Tenement ID	Registered Holder	Location	Ownership %	Status
<b>Western Australia</b>					
Polar Bear	E15/1298	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E15/1461	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E15/1541	Polar Metals Pty Ltd	Lake Cowan	100% when granted	Application
Polar Bear	E63/1142	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E63/1712	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E63/1725	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E63/1756	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E63/1757	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	E63/1791	Polar Metals Pty Ltd	Lake Cowan	100% when granted	Application
Polar Bear	M15/651	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	M15/710	Polar Metals Pty Ltd	Lake Cowan	100%	Granted

Polar Bear	M15/1814	Polar Metals Pty Ltd	Lake Cowan	100% when granted	Application
Polar Bear	M63/230	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	M63/255	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	M63/269	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	M63/279	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	M63/662	Polar Metals Pty Ltd	Lake Cowan	100% when granted	Application
Polar Bear	P15/5167	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P15/5168	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P15/5638	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P15/5639	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P15/5640	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P15/5958	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P15/5959	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1587	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1588	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1589	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1590	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1591	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1592	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1593	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Polar Bear	P63/1594	Polar Metals Pty Ltd	Lake Cowan	100%	Granted
Eundynie JV	E15/1458	Shumwari Pty Ltd	Lake Cowan	80%	Granted
Eundynie JV	E15/1459	Shumwari Pty Ltd	Lake Cowan	80%	Granted
Eundynie JV	E15/1464	Shumwari Pty Ltd	Lake Cowan	80%	Granted
Eundynie JV	E63/1726	Shumwari Pty Ltd	Lake Cowan	80%	Granted
Eundynie JV	E63/1727	Shumwari Pty Ltd	Lake Cowan	80%	Granted
Eundynie JV	E63/1738	Shumwari Pty Ltd	Lake Cowan	80%	Granted
Norcott	E15/1487	Polar Metals Pty Ltd	Mt Norcott	100%	Granted
Norcott	E63/1728	Polar Metals Pty Ltd	Mt Norcott	100%	Granted
<b>Sweden</b>					
Skellefte	Rengård nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Svansele nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Gallejaur nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Svansele nr 402	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Brännäs nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Laxselmyran nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Svansele nr 403	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Båtfors nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Holmtjärn nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Tjålträsk nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Laxselmyran nr 402	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Laxselmyran nr 403	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Hästkomyran nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Rengård nr 402	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Udden nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Udden nr 402	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Vallen nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Lindbacka nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Brännäs nr 402	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Petikträsk nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Näsvattnet nr 401	S2 Sverige AB	Skellefte	100%	Granted

Skellefte	Laxselmyran nr 404	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Svansele nr 404	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Malånäset nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Malånäset nr 404	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Malånäset nr 402	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Malånäset nr 403	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Laxselmyran nr 405	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Vargfors nr 401	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Malånäset nr 405	S2 Sverige AB	Skellefte	100%	Granted
Skellefte	Petikträsk nr 402	S2 Sverige AB	Skellefte	100%	Granted
<b>Finland</b>					
<i>Reservations</i>					
Central Lapland	Kuivasalmi	Sakumpu Exploration Oy	Central Lapland	0%	Lapsed
Central Lapland	Kaarestunturi	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Paana	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Torvinen	Sakumpu Exploration Oy	Central Lapland	0%	Lapsed
Central Lapland	Selkä	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Siila	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Silmä	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Pahka	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Sisnakka	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Majava	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Jänes	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
<i>Exploration Licenses</i>					
Central Lapland	Mantovaara	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Lammasvuoma	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Nuokkio	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Kuusi	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Kerjonen	Sakumpu Exploration Oy	Central Lapland	100%	Granted