

Tracker Geoservices Pty Ltd  
36 Samson Street  
Mosman Park 6011  
PERTH, WA

ABN: 51 093 390 197  
Phone: +61 (0)8 6380 1003  
Mobile: +61 (0)407 275 906  
Email: john@canaris.com.au



**ANNUAL REPORT FOR DENISON / LONE STAR CREEK**

**LICENCE No: EL7/2014 - PERIOD: 06/02/2016 – 06/02/2017**

**By**

**John Canaris**

**5 September 2017**

**By Email: [info@mrt.tas.gov.au](mailto:info@mrt.tas.gov.au)  
Registrar of Mines Mineral Resources Tasmania  
PO Box 56, 30 Gordons Hill Road  
Rosny Park Tasmania 7018**

## **ABSTRACT**

Historically, exploration activity in the NE Tasmanian goldfields has focussed on the bonanza grades encountered the discrete sulphide gold shoots. These high-grade lode-style gold reefs found at Lefroy, Mathinna and the Tasmania Reef (Beaconsfield) are analogues to the Victorian Bendigo and Ballarat fields.

It is thought however that an alternative target exist that was not historically mined due to its lower grade, and has therefore gone largely overlooked; anecdotal field evidence and literature reviews suggest the Denison Goldfield / Lone Star Creek area is prospective for orogenic sediment-hosted disseminated gold deposits, similar to those found at Fosterville in central Victoria.

This is supported by desk top investigations and a review of available data conducted during the licence period, and recommendations made for further investigation. A bulk sampling program is proposed for the 2017 exploration year to test the antimony association and gold deportment.

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**Figure 2 – Summary Results & Location 2007 Trenching**

## **EXPLORATION COMPLETED DURING THE YEAR - REVIEW OF PREVIOUS WORK**

- A literature review was completed for gold mineralisation in the NE of Tasmania, and areas prioritised for their relevance to the above exploration model and target.
- A literature review of the geology at the Denison and Cradle Creek prospects was completed, that revealed that similarities exist to the disseminated sandstone hosted targets in Victoria.
- Research was undertaken into the relevance of the metal antimony, known to exist at the Fosterville Gold Deposit in Victoria. Victorian gold sulphide deposits commonly occur in the Silurian-Lower Devonian sediments of the Melbourne zone, similarly aged to the exploration area.
- “Gold-impregnated sandstones” are reported as a fine stock work or as disseminated with sulphides hosted in the turbidite. Interestingly there is a strong antimony association with disseminated gold at East Denison with higher levels than arsenic, whereas samples collected from the ENE-trending quartz-sulphide-gold veins have very high arsenic and low antimony.
- Open file data was brought into GIS and interrogated as part of a desk top modelling exercise for the area under lease.

## **DISCUSSION & CONCLUSION**

- The East Denison gold mineralisation is not associated with quartz-sulphide veining as in the ENE-trending reefs in the region (Lefroy etc) but rather is hosted preferentially within the sandstone units of a turbidite sequence. This is akin to +1Moz Fosterville deposit in Victoria. It provides an alternative target to the narrow high grade veining normally targeted in the area.
- It was found that occurrences of similar “disseminated” gold mineralisation were reported at the Lisle goldfield, about five kilometres along strike from East Denison and at the Potoroo Prospect. Other evidence is gleaned from Tobacco Creek and Cradle Creek where some gold was reported to be derived from a white sandstone.
- Contrasting sandstone dominated units have the potential to form large sediment-hosted disseminated gold deposits which to the authors knowledge have not been tested. It is thought rheology contrasts in particular have focussed mineralisation favouring sandstone units.
- The intriguing antimony association known from the Fosterville Gold Deposit in Victoria supports an alternative sandstone hosted turbidite target. This must be confirmed and further tested as a priority.
- Trench sampling by Lefroy Resources Limited (circa 2007) returned highly promising results associated with a steep dipping quartz stock-work system exhibiting strong silicification around the vein sets within a sericite carbonate altered bleached sandstone (Figure 2).

- Regional geological mapping and historical data assessment has identified several untested extensions from the anomaly including a second parallel trending geochemical anomaly 500m to the west.

#### **EXPENDITURE 2017**

- Geoscientific inc. research, geological & geophysical analysis and interpretation: \$5,000
- Mineral processing & metallurgy investigations, market: \$1,000
- Licence Rental Fees: \$250
- Administration: \$5,000

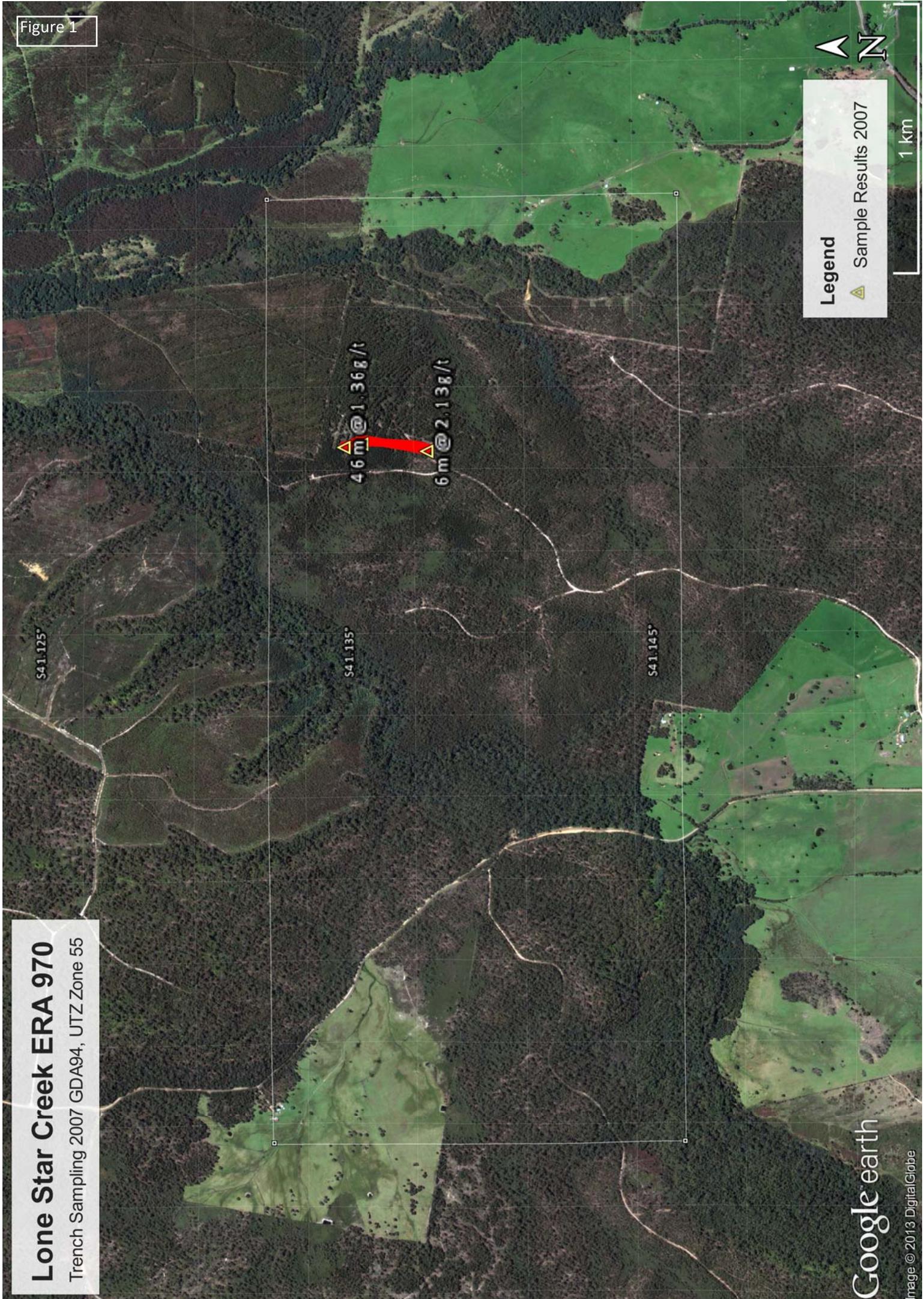
#### **PROPOSED PROGRAM 2018 - COLLECTION OF BULK SAMPLE FOR METALLURGICAL & GOLD DEPARTMENT TEST WORK**

- Travel meals & accommodation: \$10,000
- Back ho & field equipment hire: \$5,000
- Sampling equipment & consumable: \$5,000
- Bulk sample (200kgs) transport: \$2,000
- Metallurgical lab testing: \$25,000
- Reporting: \$5,000

#### **FUTURE PROGRAMS**

- At the Denison is a coherent geochemical anomaly that is approximately 800m long by 120m wide. This could be tested by a short RAB program, however this work is deferred until gold associations are better understood.

Figure 1



# Lefroy Resources Limited

Trench Sampling 2007 GDA94, UTZ Zone 55

Figure 2

42m @ 2.10g/t

△ 46m @ 1.36g/t

△ 6m @ 2.13g/t

### Legend

△ Sample Results 2007



Google earth

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100 m