

ST GEORGE MINING LIMITED

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ASX: SGQ

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## PINE CREEK – CONFIRMATION OF LARGE GOLD SYSTEM

### HIGHLIGHTS

- **Large gold system confirmed at Pine Creek from results of geochemical surveys**
- **Initial diamond drill hole at Pine Creek (PCDD001) is strongly altered and contains anomalous levels of rare earth elements (REE)**
- **Comprehensive exploration review generates new focused gold target in north of property**
- **Platform established for focused advancement of exploration at Pine Creek**

### Overview

Australian gold and nickel focused explorer, St George Mining Limited (**ASX: SGQ**) (**'St George Mining'** or **'the Company'**) is pleased to announce an exploration update on its 80% owned Pine Creek Property in the Northern Territory.

The Company's Pine Creek Property is located on the western edge of the Pine Creek Orogen. The initial gold discovery at the Pine Creek Property was made by Homestake Gold Australia Ltd (HGAL) on the margin of the Daly Basin and the larger potential at this Property remains undercover.

Exploration activity by St George Mining during 2011 included: re-logging the two historical diamond holes drilled by Homestake Gold Australia Ltd (HGAL) on the Pine Creek Property, conducting a multi-element MMI soil geochemical survey that covered and in-filled an older MMI gold survey by HGAL, and the drilling of the diamond drill hole PCDD001.

A comprehensive technical review of all previous exploration information has enabled us to both confirm the large gold system inferred at Pine Creek, and to identify a new priority gold target that appears to be close to the central part of the gold system. These results provide a solid platform from which to execute future exploration work at Pine Creek in an expedient and focused manner, in order to realise the exploration potential at Pine Creek.

## Confirmation of Large Gold System at Pine Creek

A large gold system at the Pine Creek Property was inferred from the two historical HGAL diamond drill holes – FEND14 and FEND18 – each of which had significant gold intersections in what was a previously unexplored area. FEND18 was the discovery drill hole and was drilled 1,200m SSE of FEND14 (see Table 1).

This large gold system has now been confirmed with the completion of a successful MMI (Mobile Metal Ion) soil geochemical survey over the gold target area that includes the two historical holes.

HOLE ID	NORTHING	EASTING	DIP (degrees)	AZM (degrees)	DEPTH (m)	FROM (m)	TO (m)	WIDTH (m)	GRADE (g/t Au)
FEND 14	8472737	746928	-68	264	650	610	627	17	0.74
FEND 18	8471548	747190	-68	264	649	423	425	2	2.24
						431	433	2	4.89
					Inc.	431	432	1	8.68
						438	444	6	3.48
					Inc.	441	442	1	8.32
						463	464	1	1.81

**Table 1- Higher grade intersections of FEND18 and FEND14**

The two drill holes were analysed using the industry-leading CSIRO HyLogger technology, which is a hyperspectral logging tool that uses various light bands to determine mineral content. Minerals in gold systems typically form in discrete zones that can be mapped using geophysical and geochemical surveys. These zones are progressive from the peripheral to the central part of the gold system. The mineral zoning reflects local changes of several key physical and chemical conditions within the larger system, and can be used to determine the position of a drill holes in relation to the centre of the gold system.

The results showed that despite the higher grade and the presence of visible gold in FEND18, it was the lower grade FEND14 drill hole that was closer to the core of the gold system. This finding has been supported by the MMI multi-element soil geo chemical survey conducted by St George Mining in 2011.

The closed spaced MMI survey was conducted over an area that covered the NNW trend between FEND18 in the south and FEND14 in the north. The survey found that most of the southern survey area was underlain by granite (represented by high and consistent Cerium values) and that FEND18 and PCDD001 were situated immediately north of the structural granite margin to the south (see Figure 3). The local presence of a significant granite-intrusive is an important exploration criterion. Statistically, 90% of gold deposits in the Pine Creek Orogen are located within 2.5km of granite contact when evaluated in 3D (see *“Timing of gold mineralisation in the Pine Creek Orogen, Northern Territory, Australia: its significance to the thermal-aureole gold model”* by A.K. Sener, D.I. Groves & I.R. Fletcher, *Mineral Exploration and Sustainable Development*, Mill Press Rotterdam 2003 (ISBN 907701777) ).

The MMI survey recorded the highest Au + Ag + Mo values in the NW of the survey area. Elevated levels of these element associations are typically indicative of proximity to the core of a gold system. These high geochemical values are in the area surrounding FEND14. The HyLogger analysis of FEND14 indicated a high Mg-chlorite response, which indicates a proximity to the inner part of a gold system.

Structural analysis of other gold deposits in the Pine Creek Orogen indicate a consistent pattern where gold mineralisation is mainly localised in the northerly trending hinges and moderately dipping western limbs of thrust folds. The earlier thrust folds are later reactivated as shear zones with shearing being most intense in the hinge areas and the sharply overturned subvertical eastern limbs.

### **First Orientated Core Hole at the Pine Creek Property**

PCDD001 was drilled adjacent to FEND18. It was the first orientated core hole drilled at the Pine Creek Property and reached the target depth of 550m. The orientated drill hole initially encountered generally flat lying post-mineral sediments before passing into a long interval of intense alteration and brecciation, which obscured any specific structural features.

The CSIRO HyLogger spectral mineral analysis and visual core logging shows the hole to be pervasively altered (silica + albite + pyrite). The drill hole did not intersect any anomalous gold mineralisation, despite its proximity to FEND18.

The technical review of the exploration data now suggests FEND18 encountered a steeply dipping footwall zone of gold mineralisation which is hosted within the narrow and sharply overturned eastern limb of a thrust fold. PCDD001, which was marginally to the east, now appears to have intersected the footwall of the overlying Koolpin formation, the target formation for gold mineralisation. The footwall of the Koolpin formation is the unconformable subvertical boundary between the overlying South Alligator group of sediments and the underlying Mt Partridge group. This unconformity is a major and long lived structural zone and this would explain the intense alteration, mineralisation and brecciation encountered in PCD001.

The lack of any anomalous gold levels in association with the silicification and sulphide mineralisation initially identified in the drill core, now suggests this is related to the younger hydrothermal event at Pine Creek, which is linked to uranium and/or rare earth mineralisation.

This interpretation is also consistent with the anomalous levels of rare earth elements encountered in PCDD001.

### **Intersection of Anomalous Rare Earth Levels**

The core tenement of the Pine Creek Property (EL27732) and on which PCDD001 is located is immediately south of the Quantum Rare Earth Project of TUC Resources Ltd (ASX: TUC).

Accordingly, PCDD001 was tested for a select and indicative group of heavy, medium and light rare earth elements, along with the gold assays.

PCDD001 contained significant levels of recrystallised sulphides and this is consistent with a post-gold hydrothermal event, potentially associated with the later uranium and/or rare earth mineralisation found at Pine Creek.

Anomalous levels of each of the representative rare earth elements – Lanthanum (La), Samarium (Sm) and Yttrium (Y) - were encountered in PCDD001. Samples showed values up to 558ppm La, 76.6ppm Y and 40.8ppm Sm. Further investigation of these high rare earth responses will include the re-assaying of the drill core for the entire suite of rare earth elements.

### **New Exploration Target at Pine Creek**

The St George MMI survey recorded the highest gold + silver + molybdenum (Au + Ag + Mo) values in the NW of the survey area and in the vicinity of the historic FEND14 drill hole. The high Mg-chlorite response in FEND14 is consistent with alteration that is associated with the more central part of the gold system.

Our recent technical review has created a predictive model that considers all previous exploration information at the Pine Creek Property, including the review of the older and more coarsely spaced MMI survey conducted by HGAL in the late 1990's. The more recent St George MMI survey was able to validate the integrity of the older HGAL MMI survey, which extends beyond the St George sample grid.

The review of available geological, geochemical and geophysical data has highlighted a substantial new area of interest that covers the main anomaly of Au + Ag + Mo identified by the St George MMI survey. The St George survey shows the anomaly remains open to the north. The HGAL geochemical sampling extends the area of the St George gold anomaly to the north and north-west.

The combination of the St George and HGAL MMI surveys highlights a broad gold anomaly that also identifies a potential mineralisation to the west of the area that has been the main exploration focus. This finding is indicative of the presence of mineralisation on a flatter westerly dipping limb of the thrust fold. At the nearby Cosmo Howley gold mine (+2M oz Au, and approximately 30km NE of St George's ground) the bulk of the gold mineralisation is situated on the hinge zone and the western limb of the thrust fold (the 'anticline').

An infill MMI survey is planned for this area to the north of PCDD001 (see Figure 2) to define new targets for drill testing.

### **Building on the Foundation**

**Tim Hronsky, Technical Director of St George Mining** said:

"The confirmation of a large gold system and a focused exploration target is a milestone for us, we have now moved beyond the historical exploration information.

"The results of the comprehensive review have generated a new gold target and a clear direction of how to test it.

“The discovery of anomalous rare earth elements, in immediate proximity to a major rare earth deposit that is situated on the same structure, adds another dimension of value for our Pine Creek project.

“We have made substantial progress during our initial field season and this has provided us with a solid foundation to move forward in 2012.”

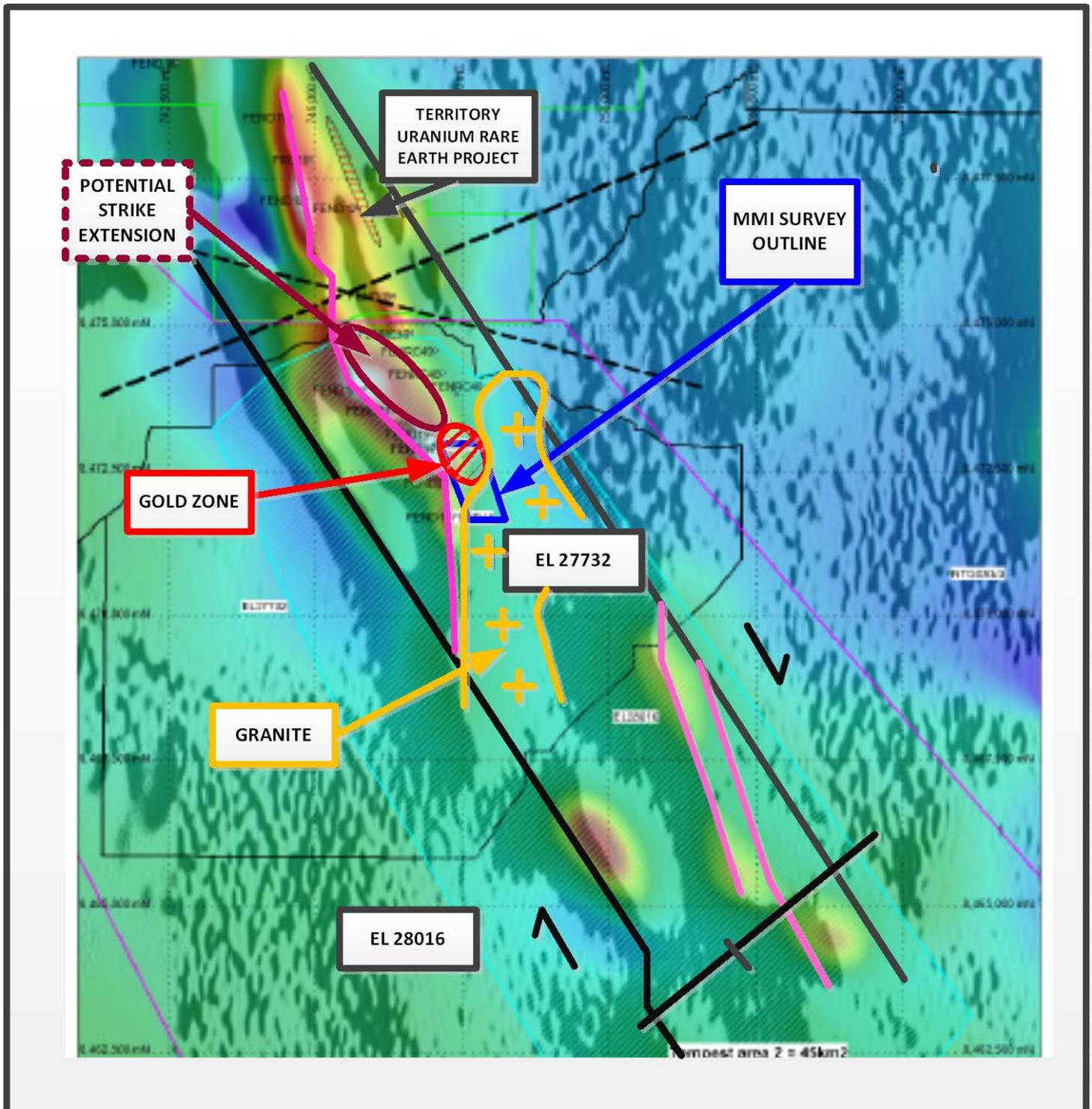
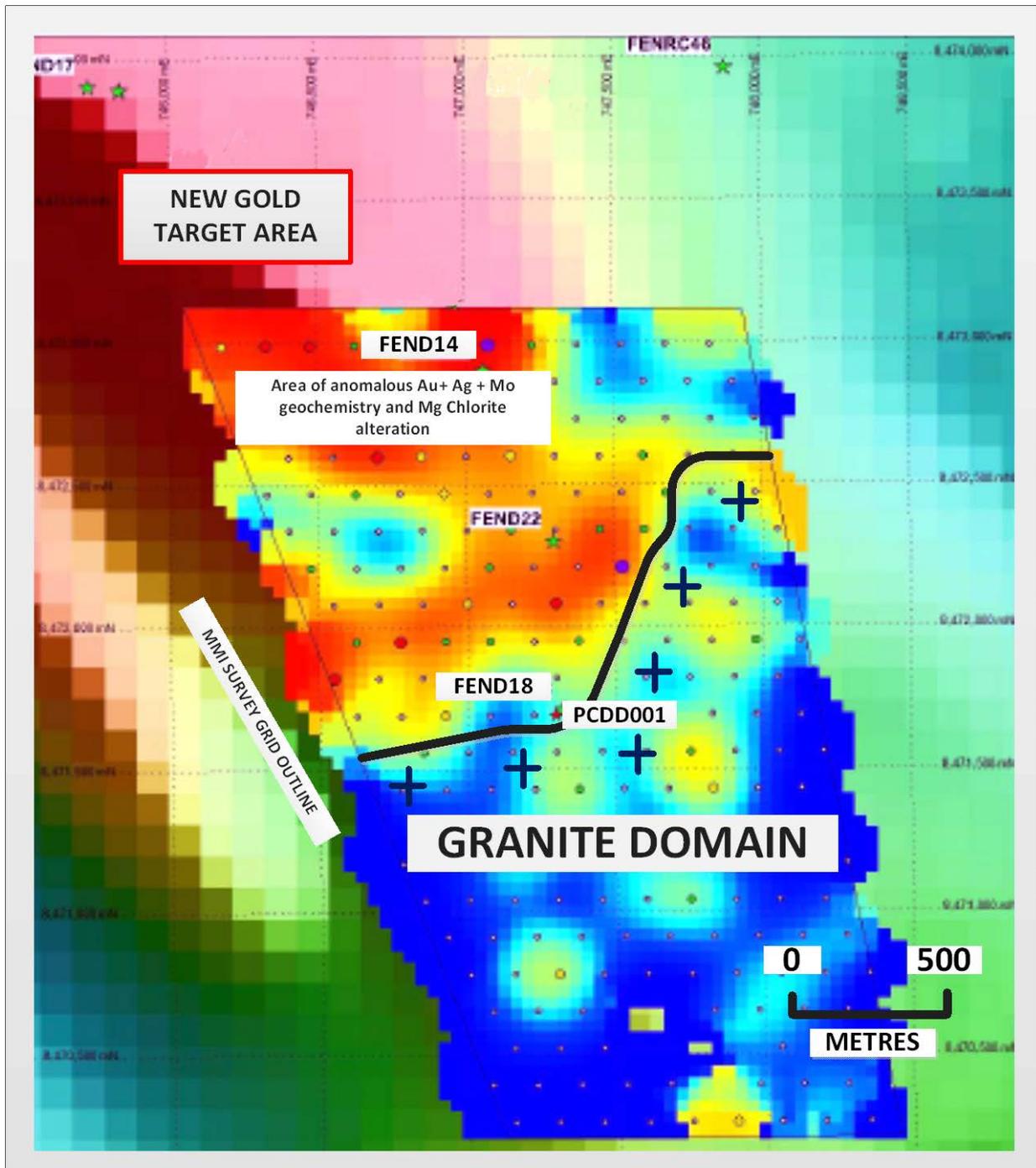
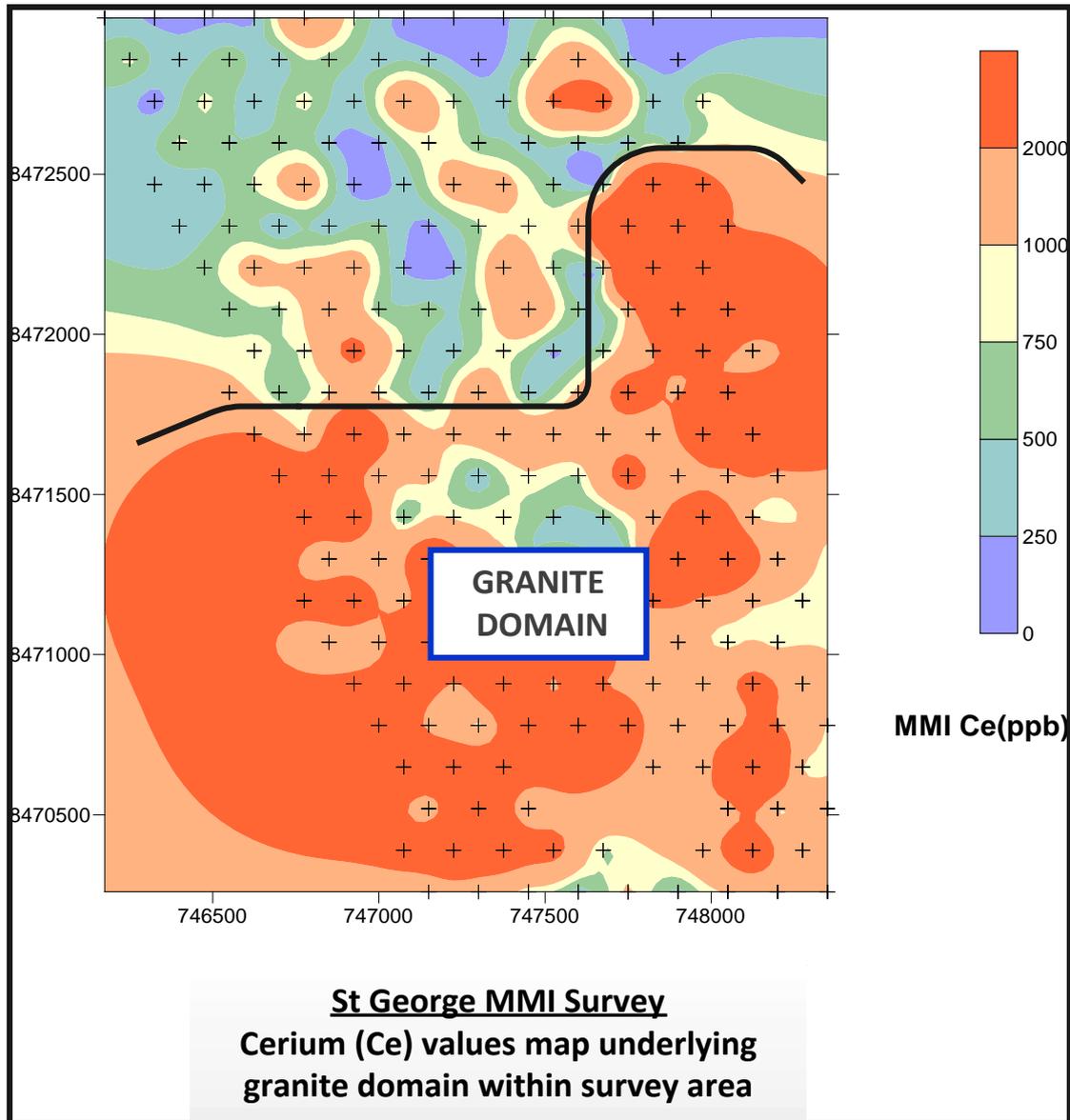


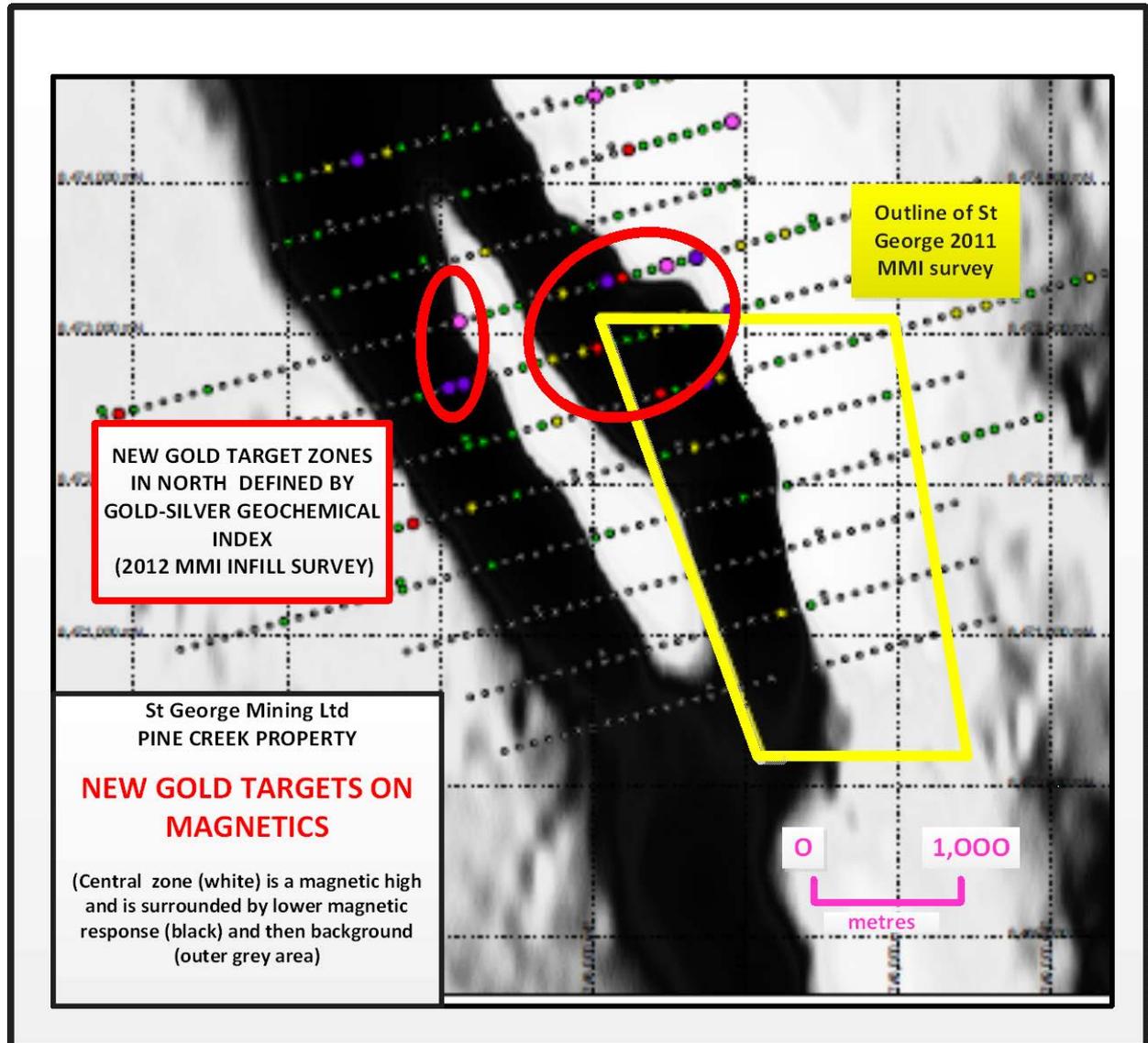
Figure 1- Interpretation of Pine Creek Project



*Figure 2 – this figure shows the indicative gold zone in the North West of the St George Mining MMI survey area, in relation to the historical and recent drilling. The gold zone remains open to the north, which is part of the new gold target*



*Figure 3 – High Cerium values dominate the southern and eastern sections of the St George Mining MMI geochemical survey and indicate an underlying granite domain*



*Figure 4- new gold targets that cover the NW corner of the 2011 St George Mining survey grid and encompass the previous Homestake survey to the N, NW and W. An Au\*Ag geochemical index is used to better define this target area.*

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**COMPETENT PERSON STATEMENT:**

The information in this announcement that relates to Exploration Results and Mineral Resources is based on information compiled by Andrew Hawker of Hawker Geological Services Pty Ltd. Mr Hawker is a member of the Australasian Institute of Mining and Metallurgy 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. This qualifies Mr Hawker as a "Competent Person" as defined in the 2004 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Hawker consents to the inclusion of information in this announcement in the form and context in which it appears.