



# ASX ANNOUNCEMENT

ASX : CXO

6<sup>th</sup> June 2012

## More copper assays confirm potential for large-scale system on SA Yorke Peninsula Project

### HIGHLIGHTS

- **Additional copper mineralisation has been identified in a number of holes in Core's first diamond drilling program on its Yorke Peninsula project in SA**
- **Copper sulphides found with IOCG (Iron Oxide Copper Gold) style alteration within 12km long Palace Structural Zone**
- **Copper assays confirmed in all 3 drillholes at Wauraltee Prospect**
- **Follow-up work already underway on Yorke Peninsula**

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New results announced today from Core Exploration Ltd's (ASX:CXO) 2,000m maiden diamond drill program on the Company's Yorke Peninsula project west of Adelaide have identified additional zones of low levels of copper mineralisation.

The mineralisation is associated with alteration typical of other IOCG (Iron Oxide Copper Gold) style deposits in South Australia.

New results from drillhole WTDD008 at the project's Wauraltee prospect include 5m @ 0.1% copper (197-202m) containing 1m at 0.36% copper (Table 1, Figure 1). Visible copper sulphides have been identified in all 3 holes drilled over 350m of the 1,500m long and 300m wide coincident gravity and magnetic anomaly at Wauraltee (Figures 3 & 4).

Copper mineralisation intersected is within zones of IOCG style alteration. The widths of mineralised alteration intersected in drill core vary from narrow veins to up to 5 metres wide.

**Importantly, the information obtained from this drilling program will enable Core to identify drill targets which have the potential for higher or economic copper intersections.**

The zones of alteration and mineralisation are steeply dipping and are in a similar orientation to the dominant NE/SW structural direction of the 12km-long Palace Structural Zone. This opens the potential for this large-scale 12km zone to host copper deposits and



control IOCG-style mineralisation, which has parallels with Hillside’s structural setting along the related Pine Point Fault Zone.

Core’s Yorke Peninsula project is located on the southern portion of the Olympic IOCG Province which hosts Rex Minerals’ Hillside Project, BHP Billiton’s Olympic Dam mine and OZ Mineral’s Prominent Hill mine and recently acquired Carrapateena Project.

Drillhole	From (m)	To (m)	Width (m)	Grade Copper (Cu)
<b>WTDD001</b>	<b>226</b>	<b>228</b>	<b>2</b>	<b>0.23%</b>
<i>including</i>	<b>227</b>	<b>228</b>	<b>1</b>	<b>0.45%</b>
<b>WTDD002</b>	147.8	151	3.2	0.07%
<i>including</i>	<b>147.8</b>	<b>150</b>	<b>2.2</b>	<b>0.10%</b>
<b>WTDD002</b>	159	160	1	0.07%
<b>WTDD002</b>	165	166	1	0.26%
<b>WTDD002</b>	181	185	4	0.06%
<b>WTDD002</b>	201	202	1	0.05%
<b>WTDD002</b>	<b>242</b>	<b>245</b>	<b>3</b>	<b>0.13%</b>
<i>including</i>	<b>242</b>	<b>245</b>	<b>2</b>	<b>0.19%</b>
<b>WTDD002</b>	247	250	3	0.09%
<i>including</i>	<b>249</b>	<b>250</b>	<b>1</b>	<b>0.25%</b>
<b>WTDD006</b>	239	241	2	0.06%
<b>WTDD006</b>	250	255	5	0.05%
<i>including</i>	<b>254</b>	<b>255</b>	<b>1</b>	<b>0.17%</b>
<b>WTDD006</b>	259	263	4	0.05%
<b>WTDD006</b>	269	270	1	0.07%
<b>WTDD006</b>	<b>346</b>	<b>349</b>	<b>3</b>	<b>0.16%</b>
<i>including</i>	<b>347</b>	<b>348</b>	<b>1</b>	<b>0.37%</b>
<b>WTDD007</b>	139	141	2	0.07%
<b>WTDD008</b>	195	196	1	0.07%
<b>WTDD008</b>	<b>197</b>	<b>202</b>	<b>5</b>	<b>0.10%</b>
<i>including</i>	<b>199</b>	<b>200</b>	<b>1</b>	<b>0.36%</b>

Table 1. Significant copper drill intersections, Palace Structural Zone, Yorke Peninsula.

(Assays above 500ppm with 100ppm cut-off. Samples were collected from half NQ drill core. A 40g charge of pulverised sample was digested with Aqua Regia. Analysis was undertaken by ICP-MS/ICP-AES)

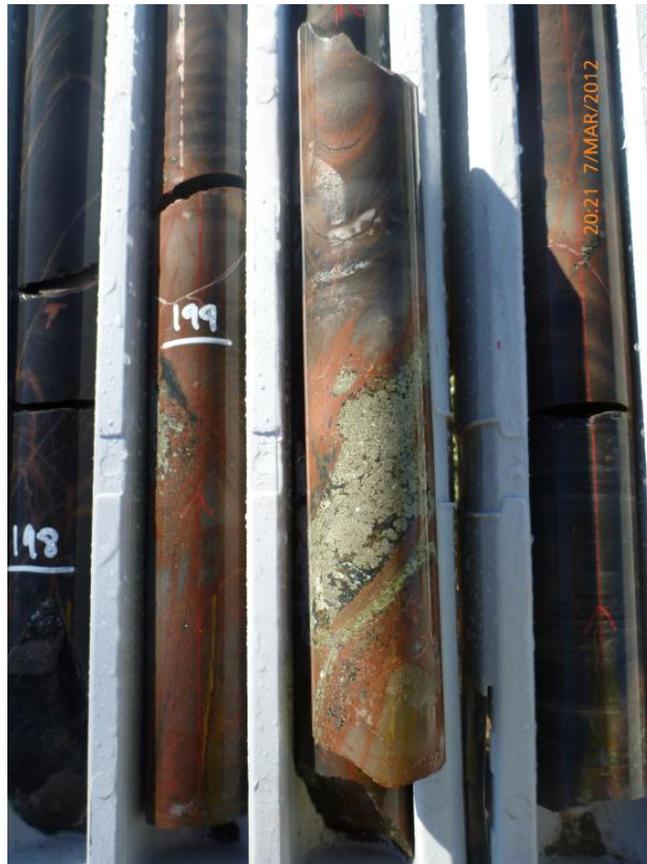


## Drill results from the Palace Structural Zone and analogies with Hillside

The geology hosting the Hillside deposit, currently being explored by Rex Minerals on the tenement adjacent to Core's holding, has many similar features to those drilled and identified within the Wauraltee Prospect within the Palace Structural Zone and has increased the Company's level of confidence in the large-scale IOCG potential of the Yorke Peninsula project.

Many of the exploration and geological characteristics that Core has identified on its project are similar to the information on hand during the early stages of exploration and important to the targeting and subsequent discovery of higher grade portions of the Hillside project.

Copper mineralisation within both the Palace Structural Zone and Pine Point Fault Zone appear to be controlled by structures of the same age, both are hosted by similar geology including Hiltaba Suite granites and mafic equivalents and Wallaroo Group Metasediments. Both appear to be related to higher temperature carbonate-amphibole+/-magnetite alteration.



*Figure 1. Albite dominant ("Red-rock") alteration and sulphide veining comprising pyrite and minor chalcopyrite in drill hole WTDD008 (199-200m @ 0.35% Copper).*

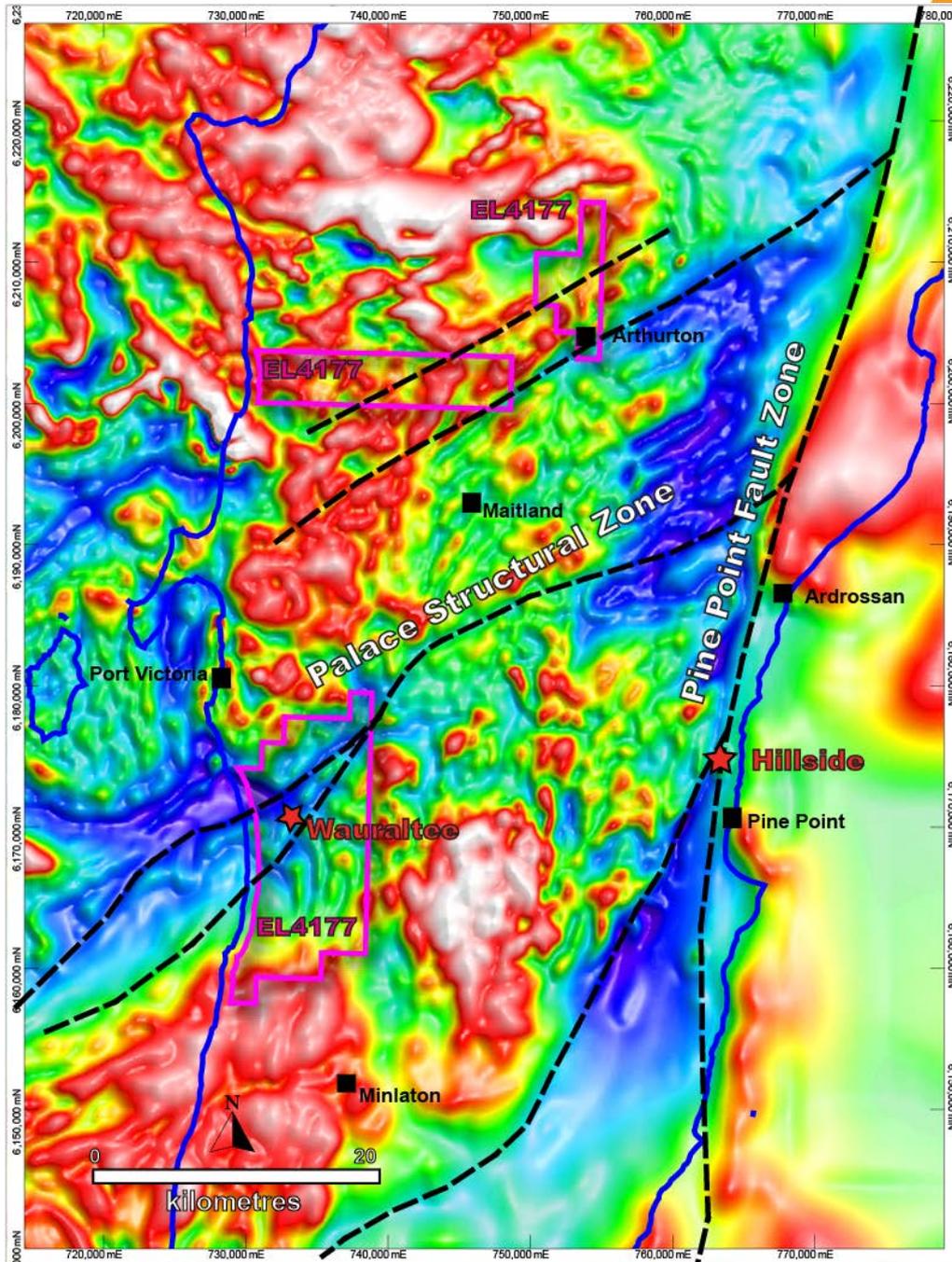
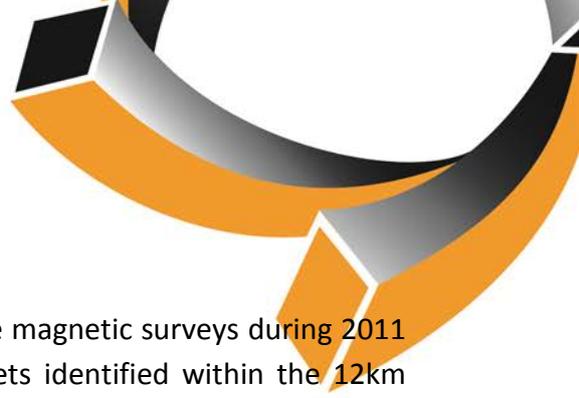


Figure 2. Palace Structural Zone and Pine Point Fault Zone comparison on magnetic image, Yorke Peninsula region, S.A.

The Palace Structural Zone transects Core’s tenement in a north easterly direction and appears to be the last dominant structural feature within the region. The structure can be traced east across the Yorke Peninsula where it merges with the Pine Point Fault Zone. The two structures appear to be contemporaneous, with the Palace Structural Zone forming a splay off of the more regionally dominant Pine Point Fault Zone (Figure 2).



Core’s regional and subsequent detailed gravity and airborne magnetic surveys during 2011 defined a large-scale set of magnetic and gravity drill targets identified within the 12km long, 2-4km wide section of the Palace Structural Zone. These semi coincident magnetic and gravity anomalies are strong indicator of magnetite/hematite iron oxide alteration systems and potentially IOCG style mineralisation (Figure 3 & 4).

The recently identified Palace Structural Zone, had not been recognised prior to Core’s surveys in 2011 and the discovery of Hillside, and as such, had not received any drilling into basement.

Core’s drill program, which is also the first ever diamond drilling on this large 200km<sup>2</sup> area of the Yorke Peninsula, was designed to establish whether the key geological components to host IOCG style copper deposits existed, which it has done successfully.

However, not only did Core’s drilling identify similar host geology and IOCG style alteration to Hillside, importantly the assays indicate the system is also carrying copper. This key information confirms the Company’s concept that the area is prospective for large scale IOCG style copper deposits.

Six targets were tested by the drilling 8 diamond drill holes totaling 2000m during February and March 2012. Drill holes ranged from 180-360m in depth.

Of the eight completed drill holes, WTDD001, WTDD002 and WTDD008 had the most interesting alteration and associated minor copper mineralisation. All three drill holes were drilled on the Wauraltee Prospect (Tables 1 and 2).

Hole	From	To	Comments
WTDD001	161m	217.5m	Presence of deformed and altered dolerite with epidote, amphibole, carbonate and albite alteration and veining, with variable pyrite and minor chalcopyrite.
WTDD002	151	247.5	Presence of deformed and altered coarse grained gabbro with 10cm to 1m thick zones alteration and veining of carbonate, amphibole, biotite, albite and epidote +/- minor chalcopyrite and pyrite (Figure 2)
WTDD008	188.05	205	Drill hole intersected a fine granite or felsic volcanic dominated by pervasive red rock alteration of albite, epidote, pyrite +/- magnetite, amphibole and chalcopyrite. Small veins of pyrite and lesser chalcopyrite occur throughout this interval (Fig 1).

Table 2: Summary of the geology and alteration of the drill core from the Wauraltee Prospect.



## Next Steps

Core has commenced prospect scale geophysical surveys at Wauraltee and other prospects within and associated with the Palace Structural Zone. This includes tightly spaced gravity surveys and detailed ground magnetics.

Land access processes and communications with landholders in preparation for further drilling are also underway.

Planning for the next drill program will include assessment of the new geophysics currently being acquired and will be finalised once the related land access process is completed. As a result, the next round of drilling will commence later than previously expected in June.

Core Exploration's Managing Director, Mr Stephen Biggins, said that identifying copper mineralisation and the right type of alteration minerals in the Company's first effective drill program on the Yorke Peninsula tenement, "has exceeded our expectations, given that we are only in the early stages of the exploration process".

"The potential of the project has been enhanced with evidence of low levels of copper mineralisation tied to IOCG style alteration and hosted by a series of geophysical targets with potential for scale in the same geological setting as Rex's Hillside deposit," Mr Biggins said.

"What we have achieved in this early stage is to confirm copper mineralisation in a newly identified, large-scale, mineralised structure with IOCG affinities, within our 100% owned 200 square kilometre tenement located only 30km away and in the same geology as a 200 million tonne copper project - and just 80km from Adelaide.

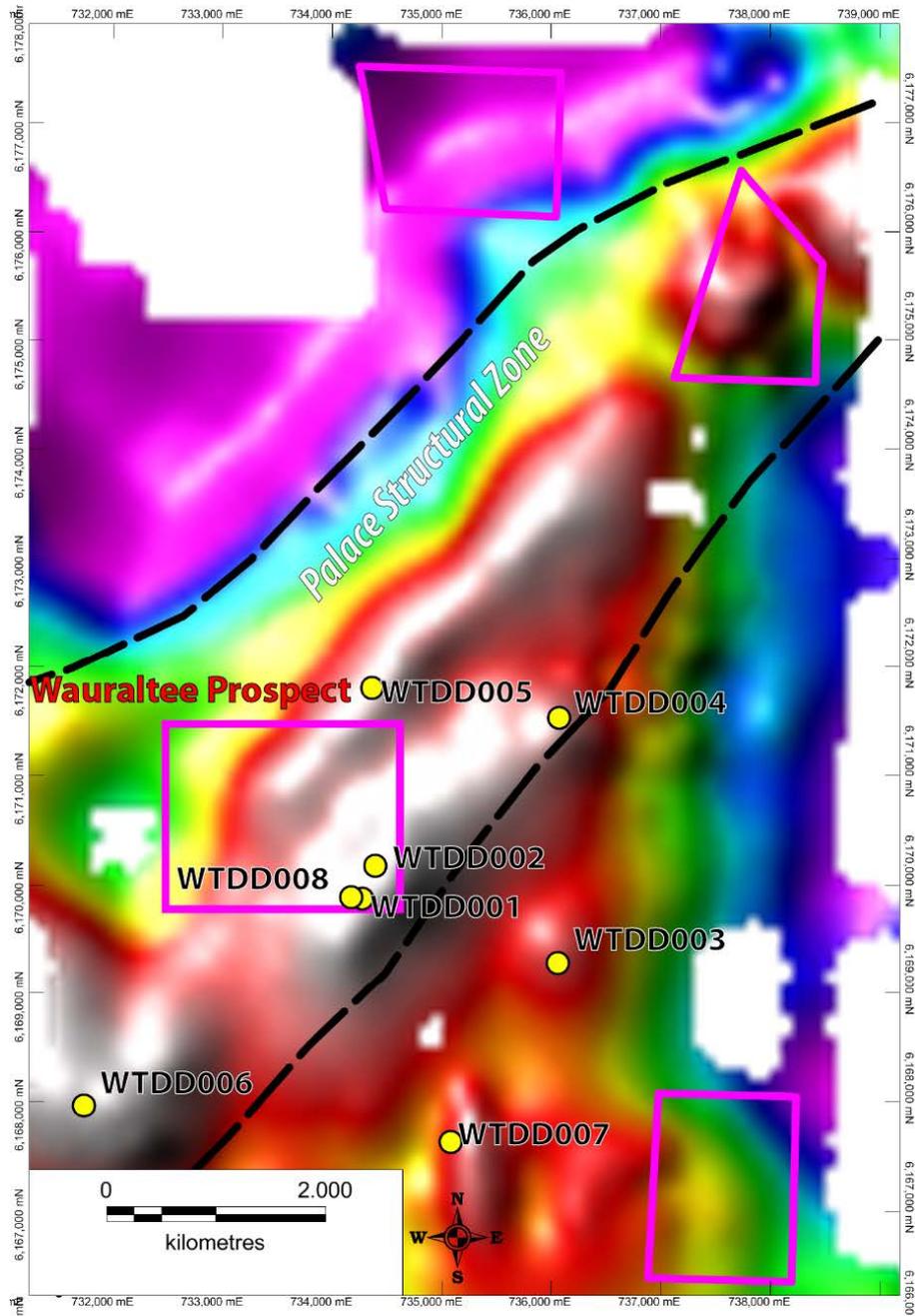
"Core remains confident in the significance of these results for the large-scale potential for this project and value to the Company. Even though the equities market is currently short-term focussed, we have witnessed a number of recent examples where the Industry is recognising the value of quality copper exploration projects in South Australia."

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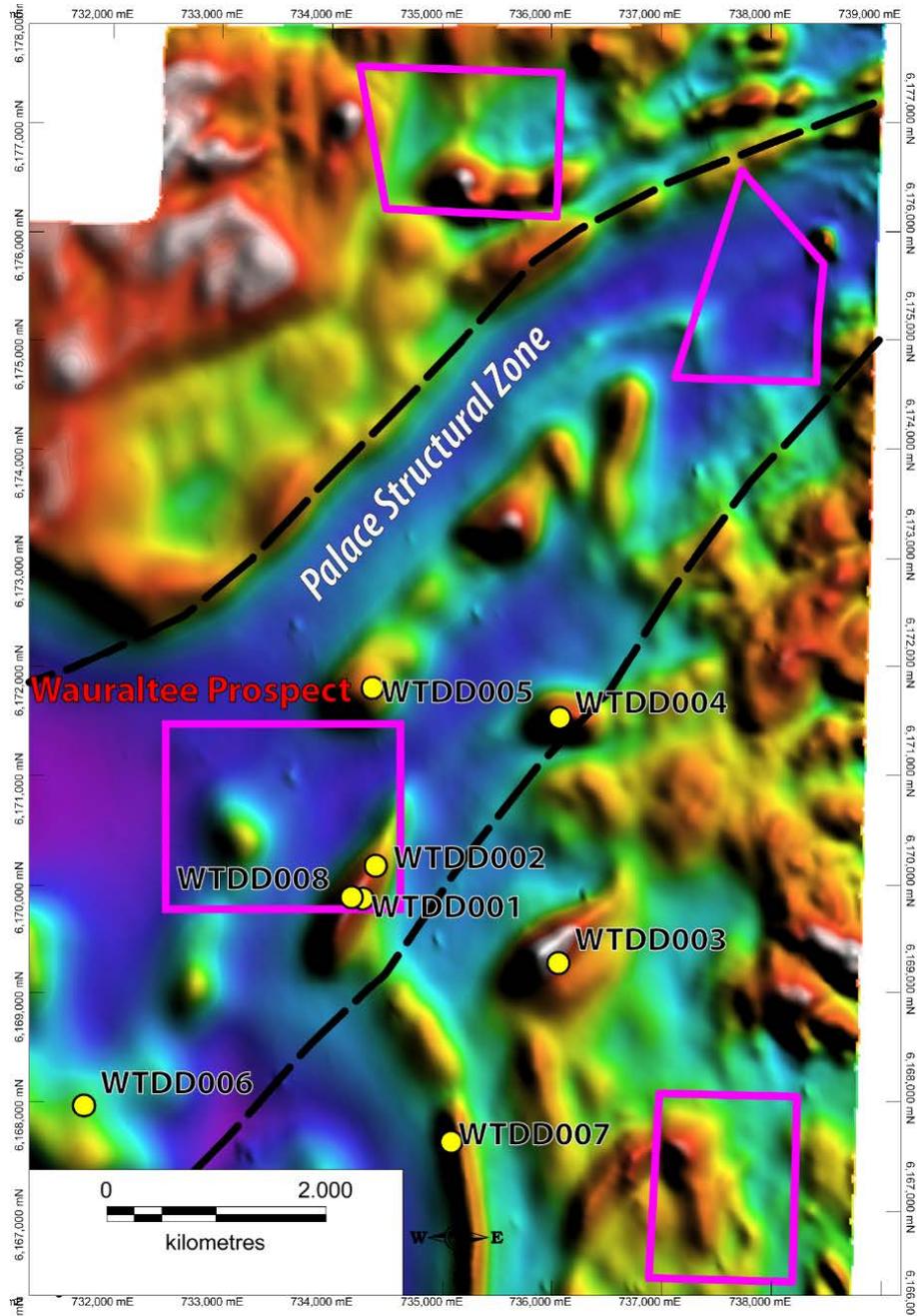
*The information in this report has been compiled by Stephen Biggins (BSc(Hons)Geol, MBA) as Managing Director of Core Exploration Ltd and who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute's codes and recommended practices. As a Competent Person, he has a minimum of 5 years relevant experience in the style of mineralisation and types of activities being reported and has given written consent to the above report in the form and context in which it appears.*



**Residual Gravity with Completed Diamond Drill Holes**

- Drill hole location
- Infill gravity and ground magnetics

*Figure 3. Core Exploration’s drillhole locations and areas follow-up prospect scale geophysics (overlain on residual gravity image), Yorke Peninsula Project, S.A.*



**Total Magnetic Intensity with Completed Diamond Drill Holes**

- Drill hole location
- Infill gravity and ground magnetics

*Figure 4. Core Exploration's drillhole locations and areas follow-up prospect scale geophysics (overlain on RTP magnetic image), Yorke Peninsula Project, S.A.*



Figure 5. Core Exploration's Yorke Peninsula Project, S.A.