



# IMX Resources

## **EL 49/2006 'West Montagu' Annual Report for the Period 9th July 2007 to 9th July 2008.**

Volume 1 of 1

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## **ABSTRACT**

Subvolcanic intrusions associated with the Neoproterozoic Spinks Creek Volcanics are considered targets for Ni exploration. Due to dense forest with poor or no outcrop little ground work was carried out. An airborne VTEM (EM) survey identified conductors that will be ground checked during next reporting period.

## **KEYWORDS**

Tasmania North West, Smithton, EM(VTEM) survey, magnetics, geochemistry, Ni-Cu sulfide mineralisation

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## DIGITAL FILES (ON REPORT CD)

EL49\_2006\_2007\_A\_01\_ReportBody.pdf

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## **1.0 INTRODUCTION**

The Rocky Cape region of northwest Tasmania consists of thick weakly metamorphosed deformed Neoproterozoic sedimentary and volcanic successions (Calver 1998). The oldest exposed succession consists of orthoquartzites, siltstone and minor carbonate (the Rocky Cape Group) that underlies the Togari Group. The Rocky Cape Group is younger than 1200Ma. An angular unconformity separates the Rocky Cape Group from the Togari Group which occupies the Smithton Synclinorium in far northwest Tasmania... The Togari Group (Everard et al. 2007) consists of siliciclastics (Forest Conglomerate), a carbonate - chert-shale unit (Black River Dolomite) dated at 750-650 Ma, rift tholeiites and associated volcanoclastics (Kanunnah Subgroup) and dolostone (Smithton Dolomite) dated at 580-545 Ma. The Black River Dolomite contains stromatolites and probably had evaporitic affinities. The Smithton Dolomite is overlain by Middle to Late Cambrian sandstone and shale, the Scopus Formation. On older maps e.g. the 1: 50 000 SMITHTON sheet all carbonates and dolostones are shown as Smithton Dolomite.

Dolerite dykes dated at 600-588 Ma and differentiated basic- ultrabasic intrusions related to the tholeiitic sequence were emplaced into the sequence below the Kanunnah Group. The Proterozoic- Palaeozoic sequence is locally overlain by Tertiary basalts occurring mainly as hill cappings. Basalt compositions range from basanite through alkali olivine basalts to tholeiites. For a detailed description of the geology see Everard et al. (2007)

Both the Rocky Cape Group and the Togari Group were deformed during the Cambrian and the Devonian.

The presence of subvolcanic basic-ultrabasic intrusions in a sequence of sulfide bearing sedimentary rocks, imply that the region has potential for Ni- Cu sulfide deposits. On published maps ultramafics in the South Forest Area are shown as dolerites. Possible sulfur sources for Ni sulfide deposits are present in the Cowrie Siltstone (Rocky Cape Group) and in shales of the Duck River Dolomite.

## **2.0 TENURE**

Exploration Licence 48/2006 granted to Goldstream Mining NL (now IMX Resources NL) and covers an area of approximately 136 km<sup>2</sup> in the Land District of Wellington vicinity of West Montagu for a term of 5 years from the 10<sup>th</sup> July 2007.

Table 1 Licence Details

<b>Licence</b>	<b>Granted</b>	<b>Expiry</b>	<b>Year</b>	<b>Area</b>
EL49/2006	10 <sup>th</sup> July 2007	10 <sup>th</sup> July 2012	5	136 km <sup>2</sup>



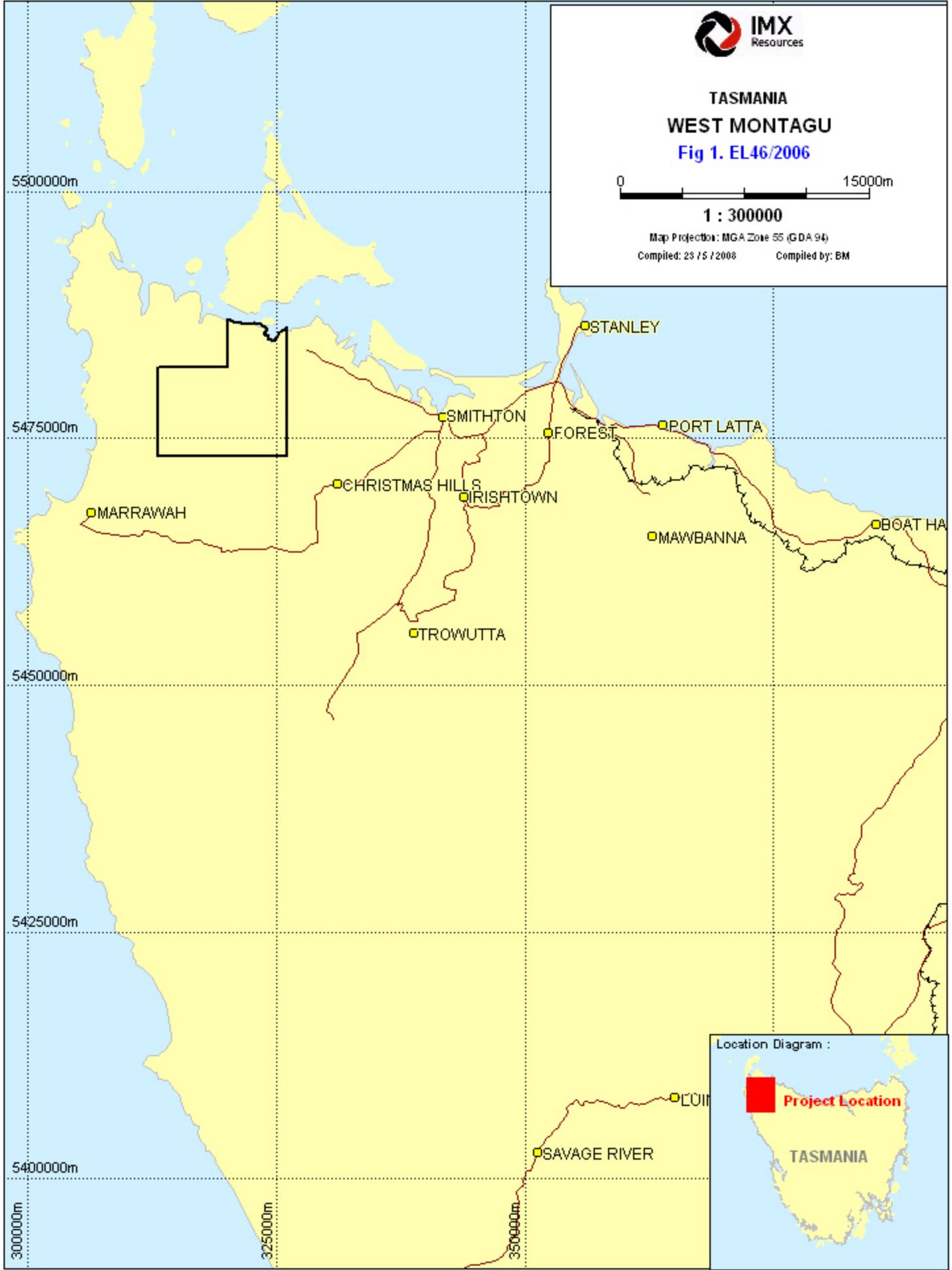
TASMANIA  
WEST MONTAGU

Fig 1. EL46/2006



1 : 300000

Map Projection: MGA Zone 55 (GDA 94)  
Compiled: 28 / 5 / 2008      Compiled by: BM



### **3.0 REVIEW OF PREVIOUS WORK**

Relatively little exploration has been carried out in EL 49/2006. The earliest work involved heavy mineral exploration but no significant concentrations were located. However small amounts of Sn in samples from Ann Bay along the northwest coast and a perceived similarity to the geology of King Island led Geopeko to explore a large area of NW Tasmania including the Montague Area for dolomite hosted Sn- W mineralisation during 1981-84. The work involved an airborne magnetic survey, auger drilling and geochemical sampling. A magnetic low surrounded by magnetic highs over basalts was interpreted as a concealed granite. It is now considered more likely that the magnetic low is due to nonmagnetic Rocky Cape rocks.

No significant Sn-W anomalies were located, but the program identified elevated levels of Ni and Cr both in metasediments and in basic volcanics. The Ni and Cu levels are similar to those in subvolcanic picritic intrusions on King Island. The program was stopped due to the closure of Geopeko's Tasmania Office.

During 1998 Pacific Nevada explored most of the Smithton Synclinorium for Au or Cu/ Au in Proterozoic Iron formations or for Proterozoic sediment hosted Cu. They collected stream sediment samples, pan concentrates, BLEG samples and rock chip samples but did not locate any significant anomaly.

A detailed aeromagnetic survey with 200 m line spacing was flown over the tenement by AGSO/ MRT in 1996.

### **4.0 EXPLORATION COMPLETED DURING THE REPORT PERIOD**

Exploration activities during the period included the completion of an airborne EM survey and an open file data review public datasets including EM, magnetics and geochemistry. Topographic and geological maps were purchased and landholder information sourced to enable field activities.

Geotech Airborne Pty Ltd conducted an airborne EM (VTEM) survey on the 5<sup>th</sup> March to the 11<sup>th</sup> March 2008 over the area between West Montagu and the north coast covering an area of 48 line km. Principal geophysical sensors included a versatile time domain electromagnetic (VTEM) system and a cesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter.

### **5.0 DISCUSSION OF RESULTS**

Outcrop is very limited in the area covered by the VTEM survey, with most of the area being grassland and a minor proportion is covered by coastal swamps. Highly conductive units were identified in the NE corner of the area surveyed. The conductivity may be caused by high salt content of the groundwater or by graphitic metasediment or less likely by sulfides associated with basic/ ultrabasic intrusions.

The conductive units follow the perimeter of a circular weakly magnetic unit and dips are shallow away from the magnetic low. When all the airborne data have been interpreted it is likely that a ground EM survey will be carried out to determine the origin of the highly conductive response.

Additional processing is in progress. Preliminary draft survey maps are shown in Figure 2-5. Southern Geoscience Consultants (SGC) is processing the results and final data is yet to be received by the client.

## **6.0 CONCLUSIONS**

The entire area covered by the VTEM survey show high conductivity and a ground EM survey or drilling is required to determine the nature of the conductive rocks.

## **7.0 ENVIRONMENT**

No ground exploration activities were conducted during the period.

## **8.0 EXPENDITURE**

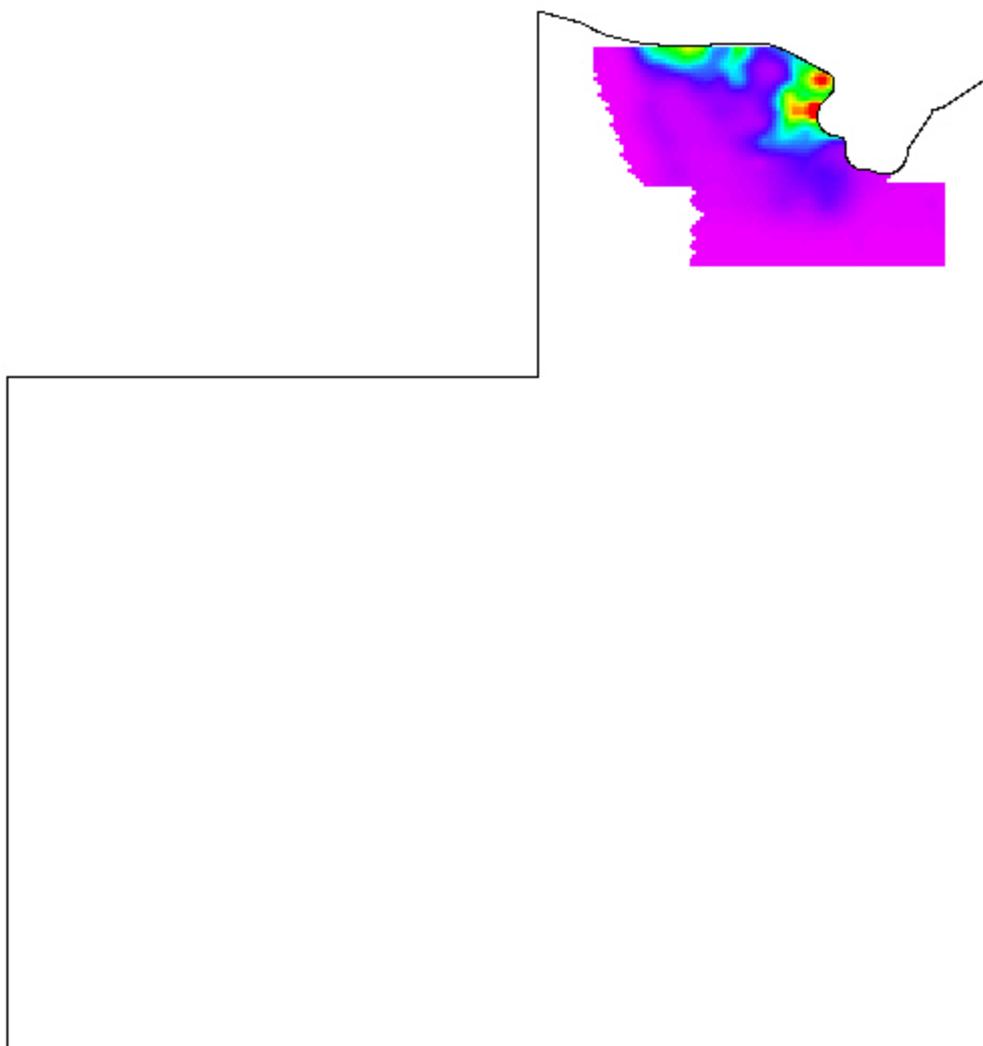
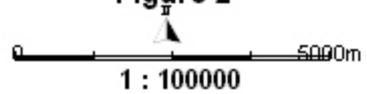
Expenditure for West Montagu, EL49/2006 for the reporting period ending 9<sup>th</sup> July 2008 is listed below. This summary includes all expenses accrued up the end of May 2008.

Total expenditure for the reporting period was \$ **45,514.70**

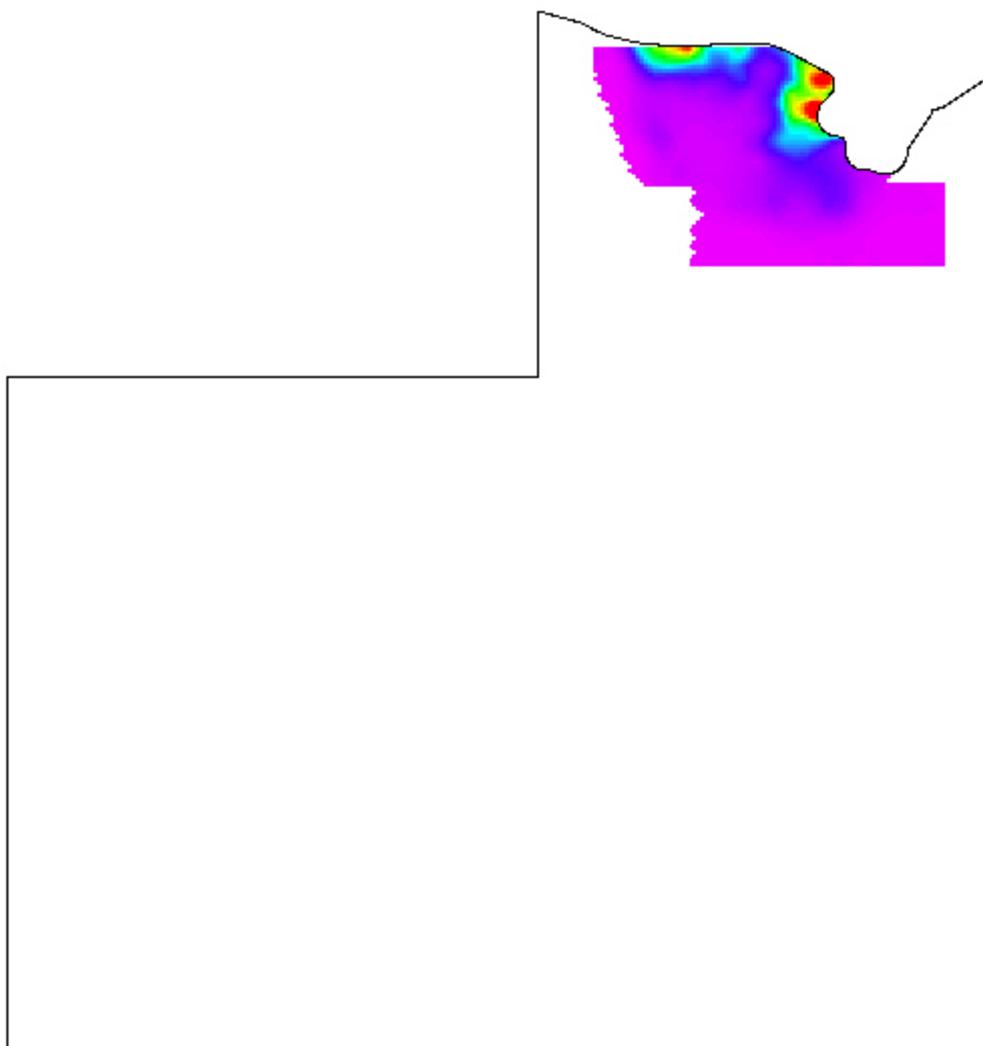
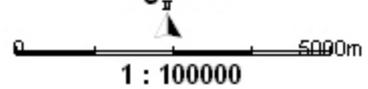
Table 2 Expenditure 2007 to 2008.

Item	Amount
<b>Geological Consultants</b>	\$ 7,824
<b>Geophysical Consultants</b>	\$ 347
<b>Geophysical Data</b>	\$ 11,541
<b>Geochemical Data</b>	\$ 13,346
<b>Tenement Costs</b>	\$ 2,469
<b>Computer Software</b>	\$ 1,860
<b>Drafting</b>	\$ 165
<b>Salaries</b>	\$ 1,440
<b>Accommodation</b>	\$ 511
<b>Food &amp; Messing</b>	\$ 10
<b>Travel</b>	\$ 65
<b>Overheads (15%)</b>	\$ 5,936.70
<b>TOTAL EXPENDITURE</b>	<b>\$ 45,514.70</b>

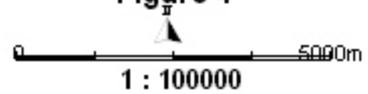
Tasmania  
EL49/2006  
EM(VTEM) CH10  
Figure 2



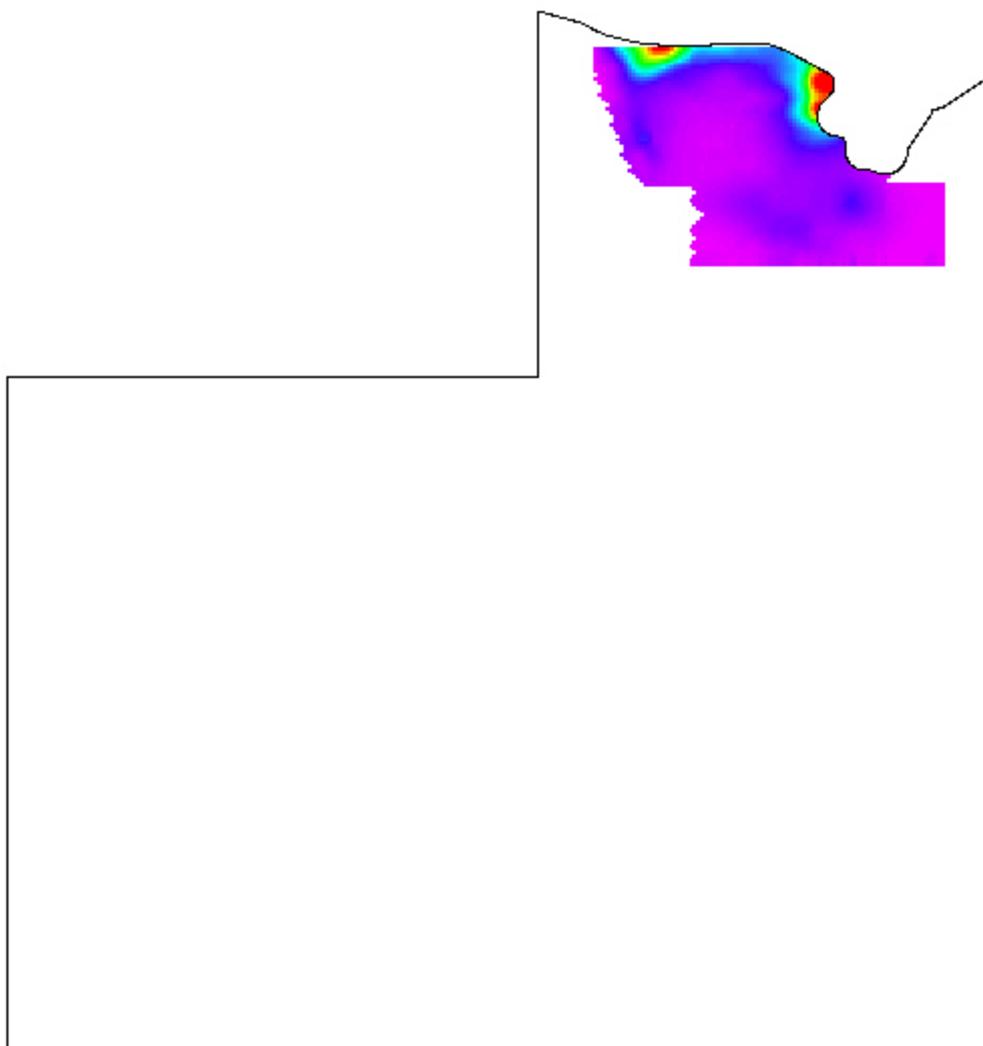
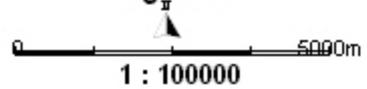
Tasmania  
EL49/2006  
EM(VTEM) CH15  
Figure 3



Tasmania  
EL49/2006  
EM(VTEM) CH20  
Figure 4



Tasmania  
EL49/2006  
EM(VTEM) CH25  
Figure 5



## **9.0 REFERENCES**

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