



# IMX Resources

## **EL 49/2006 “West Montagu” Annual Report for the Period 10th July 2010 to 9th July 2011.**

Volume 1 of 1

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## ABSTRACT

EL49/2006 'West Montagu' was granted to IMX Resources Ltd for a period of 5 years commencing 10 July 2007 with the intention to explore for mafic-hosted Ni-Cu sulphide mineralisation.

Following interpretation in 2009 of VTEM data collected in 2008, 6 rock chip and 20 MMI samples were collected in areas where conductivity indicated potential intrusion sites in 2010.

No significant results were returned.

Expenditure for the reporting period is \$20,052.53.

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Sample ledger: EL492006\_201106\_02\_appendix.txt

## 1 INTRODUCTION

The following report details work conducted at IMX Resources Ltd's ('IMX') EL 49/2006 – 'West Montagu' during the period 10<sup>th</sup> July 2010 to 9<sup>th</sup> July 2011. The tenement is located 15km west of Smithton, in the Land District of Wellington and vicinity of West Montagu (Figure 1).

### 1.1 Exploration Rationale

EL49/2006 is considered to have potential for Ni-Cu sulphide mineralisation in subvolcanic basic-ultrabasic intrusions.

### 1.2 Geological Setting

The Rocky Cape region of northwest Tasmania consists of thick weakly metamorphosed deformed Neoproterozoic sedimentary and volcanic successions. The oldest exposed succession consists of orthoquartzite, 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 (Calver, 1998; Everard et al. 2007) consists of siliciclastics (Forest Conglomerate), a carbonate -chert-shale unit (Black River Dolomite) dated at 750-650 Ma, rift tholeiite 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 carbonate and dolostone is shown as Smithton Dolomite (Brown, 1989).

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

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

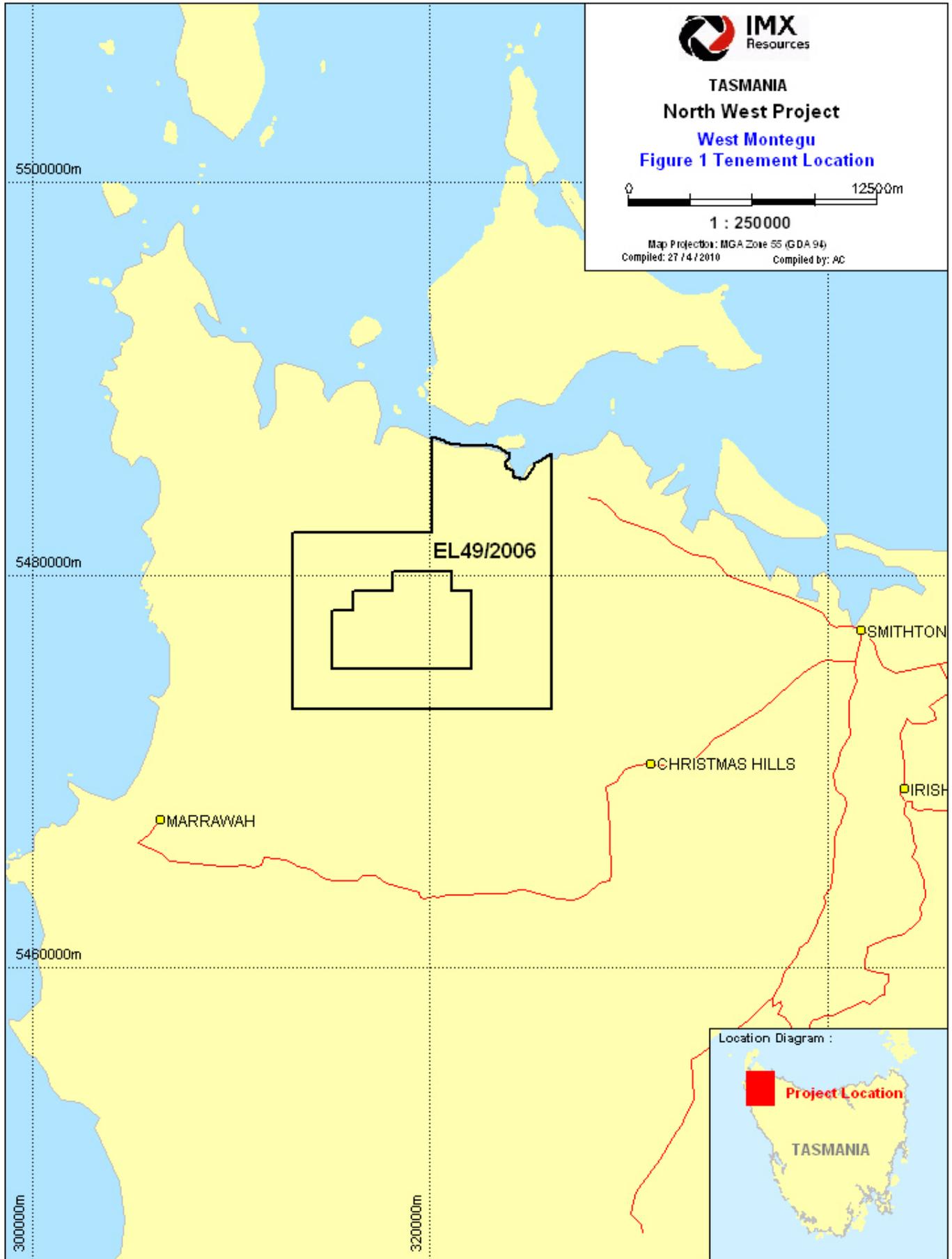
The presence of subvolcanic basic-ultrabasic intrusions in a sequence of sulphide bearing sedimentary rocks, imply that the region has potential for Ni-Cu sulphide deposits. Possible sulphur sources for Ni sulphide deposits are present in the Cowrie Siltstone (Rocky Cape Group) in shale of the Black River Dolomite and in siltstone of the Keppel Creek Formation.

### 1.3 Tenure

EL49/2006 was granted to Goldstream Mining NL (now IMX) for a term of 5 years from 10<sup>th</sup> July 2007 covering an area of approximately 136km<sup>2</sup>. A partial relinquishment of 31km<sup>2</sup> was made during 2009 reducing the licence to 105km<sup>2</sup>. Table 1 summarises the licence history.

**Table 1: Licence Details**

Licence	Period		Year	Area
	From	To		
EL49/2006	10 <sup>th</sup> July 2007	9 <sup>th</sup> July 2008	1	136 km <sup>2</sup>
	10 <sup>th</sup> July 2008	9 <sup>th</sup> July 2009	2	136 km <sup>2</sup>
	10 <sup>th</sup> July 2009	9 <sup>th</sup> July 2010	3	105 km <sup>2</sup>
	10 <sup>th</sup> July 2010	9 <sup>th</sup> July 2011	4	105 km <sup>2</sup>



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## 2 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 (Large, 1982; Pemberton, 1983; Pemberton, 1984). The work involved an airborne magnetic survey, auger drilling and geochemical sampling. A magnetic low surrounded by magnetic highs over basalts was interpreted as 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. Geopeko's work was continued by Savage Resources who found anomalous Ni and Cr in auger drilling at a stratigraphic level just below the basalts.

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 (Reid, 1998). 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.

IMX contracted Southern Geoscience Consultants to interpret VTEM data collected during 2008, identifying several shallow and gently-dipping conductors below a sequence of metabasalt (Barrett et al, 2008; Chai, 2009).

A short drilling program was conducted during May 2009 targeting VTEM conductors. Both targets are very low-lying with high water flow. The RC rig couldn't handle the large amounts of water and the holes were abandoned without reaching targets. Consequently, the conductors interpreted from the VTEM survey have not been tested due to drilling problems (Chai, 2009).

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

Exploration during the 2011 reporting year included field-checking geophysical anomalies and collecting surface samples. In total, 6 rock chip and 20 mobile metal ion (MMI) samples were collected (Figure 2).

#### **3.1 MMI samples**

Two lines of MMI samples were collected during early 2011 (Figure 2). Sampling along the northern line targeted a VTEM anomaly which was drilled unsuccessfully in 2009 (Chai, 2009). Only U was elevated among the elements analysed and that could have been trapped by the organic rich soil in the low lying area. The southern line tested an area where Geopeko intersected basic rocks with elevated Cr values.

#### **3.2 Rock chip samples**

Several low lying outcrops with weakly disseminated sulphides in basic rocks were sampled adjacent to the southern line, but no significant values were obtained. All sulphides were likely to be pyrite.

#### **4 DISCUSSION OF RESULTS**

The MMI and rock chip sampling carried out in the northern part of the tenement did not locate any mineralisation and this part of the tenement has now been adequately tested. It is considered likely that the VTEM anomalies in the low lying areas close to the coast are due to salt water and / or graphite and not a result of sulphides.

Reconnaissance MMI sampling has been carried out over magnetic highs surrounding the Montagu dome structure due to the similar magnetic/ radiometric pattern to the alkaline intrusions found in another IMX tenement.

## **5 CONCLUSIONS**

The targets tested by MMI sampling have been adequately tested and no further work is planned for this part of the tenement.

Some of the magnetic highs in the southern part of the tenement have been field-checked by MMI reconnaissance sampling but results are not yet available. It is anticipated that more systematic MMI sampling will be carried out during next field season.

## **6 ENVIRONMENT**

No activities requiring rehabilitation were carried out during the year.

## 7 EXPENDITURE

As financial figures for the reporting period were not finalised by the time of writing, expenditure for EL49/2006 is presented for the year ending 30 April 2011 (Table 2). Total expenditure is \$20,052.53.

**Table 2:** Expenditure 2010 - 2011

<b>West Montagu - EL 49/2006</b>	
Assaying	\$182.08
Soil Sampling	\$625.87
Geological Salaries (recharge - staff S & W)	\$4851.00
Field Supplies	\$135.13
Geological Consultants	\$4042.50
Petrology / Mineralogy	\$952.00
Tenement Administration	\$133.00
Tenement Rentals	\$4190.00
Vehicles - Fuel	\$36.15
Light Vehicle Hire	\$145.99
Computer Software	\$1685.00
Travel & Accommodation - Domestic	\$458.26
Overheads (15%)	\$2615.55
<b>TOTAL</b>	<b>\$20,052.53</b>

## 8 REFERENCES

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## 9 KEYWORDS

Tasmania North West, Smithton, geochemistry, Ni-Cu sulphide mineralisation

