



# IMX Resources

## **EL 48/2006 “Mt Lileah” Annual Report for the Period 10th July 2011 to 9th July 2012.**

Volume 1 of 1

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## **ABSTRACT**

EL48/2006 'Mt Lileah' 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, a MMI geochemical survey was conducted in areas where conductivity indicated potential intrusion sites in 2010. The sampling programme was infilled during 2011-12

Expenditure for the reporting period is \$31,546.

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## 1 INTRODUCTION

The following report details work conducted at IMX Resources Ltd's ('IMX') EL 48/2006 – 'Mt Lileah' during the period 10<sup>th</sup> July 2011 to 9<sup>th</sup> July 2012. The tenement is located 13km south of Smithton, in the Land District of Wellington and vicinity of Lileah (Figure 1).

### 1.1 Exploration Rationale

EL48/2006 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 (Calver 1998). 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 (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 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 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 Togaru Group were deformed during the Cambrian and the Devonian.

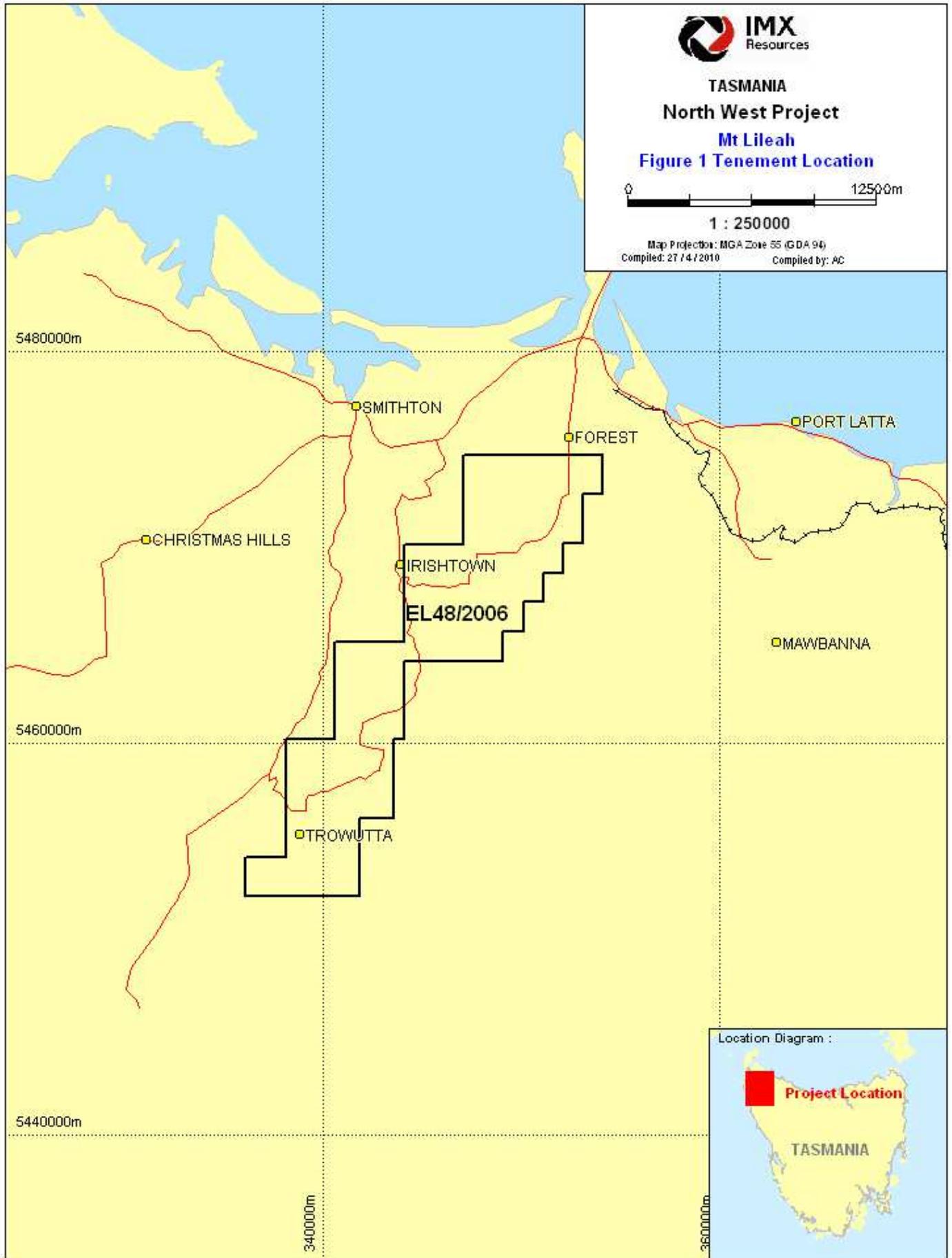
The presence of subvolcanic basic-ultrabasic intrusions in a sequence of sulphide bearing sedimentary rocks, imply that the region has potential for Ni-Cu sulphide deposits. On published maps ultramafics in the South Forest Area are shown as dolerite (Brown, 1989). Possible sulphur sources for Ni sulfide deposits are present in the Cowrie Siltstone (Rocky Cape Group) in shales of the Black River Dolomite and in Keppel Creek Formation.

### 1.3 Tenure

EL48/2006 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 228km<sup>2</sup>. A partial relinquishment of 100km<sup>2</sup> was made during 2009 reducing the licence to 128km<sup>2</sup>. Table 1 summarises the licence history.

**Table 1: Licence Details**

Licence	Period		Year	Area
	From	To		
EL48/2006	10 <sup>th</sup> July 2007	9 <sup>th</sup> July 2008	1	228 km <sup>2</sup>
	10 <sup>th</sup> July 2008	9 <sup>th</sup> July 2009	2	228 km <sup>2</sup>
	10 <sup>th</sup> July 2009	9 <sup>th</sup> July 2010	3	128 km <sup>2</sup>
	10 <sup>th</sup> July 2010	9 <sup>th</sup> July 2011	4	128 km <sup>2</sup>
	10 <sup>th</sup> July 2011	9 <sup>th</sup> July 2012	5	128 km <sup>2</sup>



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## 2 REVIEW OF PREVIOUS WORK

Australia and New Zealand Exploration Company (ANZECO) collected stream sediment samples over much of the ground covered by EL48/2006 during 1972 as part of their regional sampling program (Kinnane, 1972). Their pan concentrates showed remarkably high values for Sn with values up to 24.2% Sn in samples from Arthur River near Kanunnah Bridge.

From 1997-2002 Morritt Holdings, Pacific Nevada and Greenstone Resources explored for epithermal gold along the Roger River Fault and over siliceous and calcareous spring mounds like Smokers Bank immediately south of Smithton (Morritt Holdings – *author unknown*, 2003; Reid, 1998; Reid and Westbrook, 1998; Westbrook, 1999). They also explored for base metal mineralisation associated with Proterozoic Iron Formations. The spring mounds were soil and stream sediment sampled and drilled using an auger, which detected low level concentrations of elements normally associated with epithermal gold but no significant gold values. Soil and rock chip sampling over ironstones at Ekberg Creek was inconclusive.

An EM survey was carried out over the Roger River Fault but no interpretations are given, and images in open file reports suggest no significant conductors were located.

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

In 2007, open file public datasets including EM, magnetics and geochemistry were reviewed and an airborne EM survey (57.96 line km) was conducted. Topographic and geological maps were purchased and landholder information sourced to enable field activities.

In 2009 Southern Geoscience Consultants (SGC) interpreted the data from the 2008 VTEM survey and the results used to find targets for soil sampling. 13 MMI soil samples were collected in March 2010 over one of the VTEM anomalies associated with an ultramafic intrusion (Chai and Barrett, 2010).

Exploration during the 2011 reporting year included field-checking geophysical anomalies and collecting surface samples (Doyle and Barrett, 2011). In total, 2 heavy mineral concentrates (HMCs) and 18 mobile metal ion (MMI) samples were collected. Only one MMI sample returned elevated geochemistry, specifically Zn. It was located over a basalt/dolomite contact characterised by an EM anomaly. Chromite from the HMCs had compositions indicating formation in a mineralising environment.

### 3 EXPLORATION COMPLETED DURING THE REPORT PERIOD

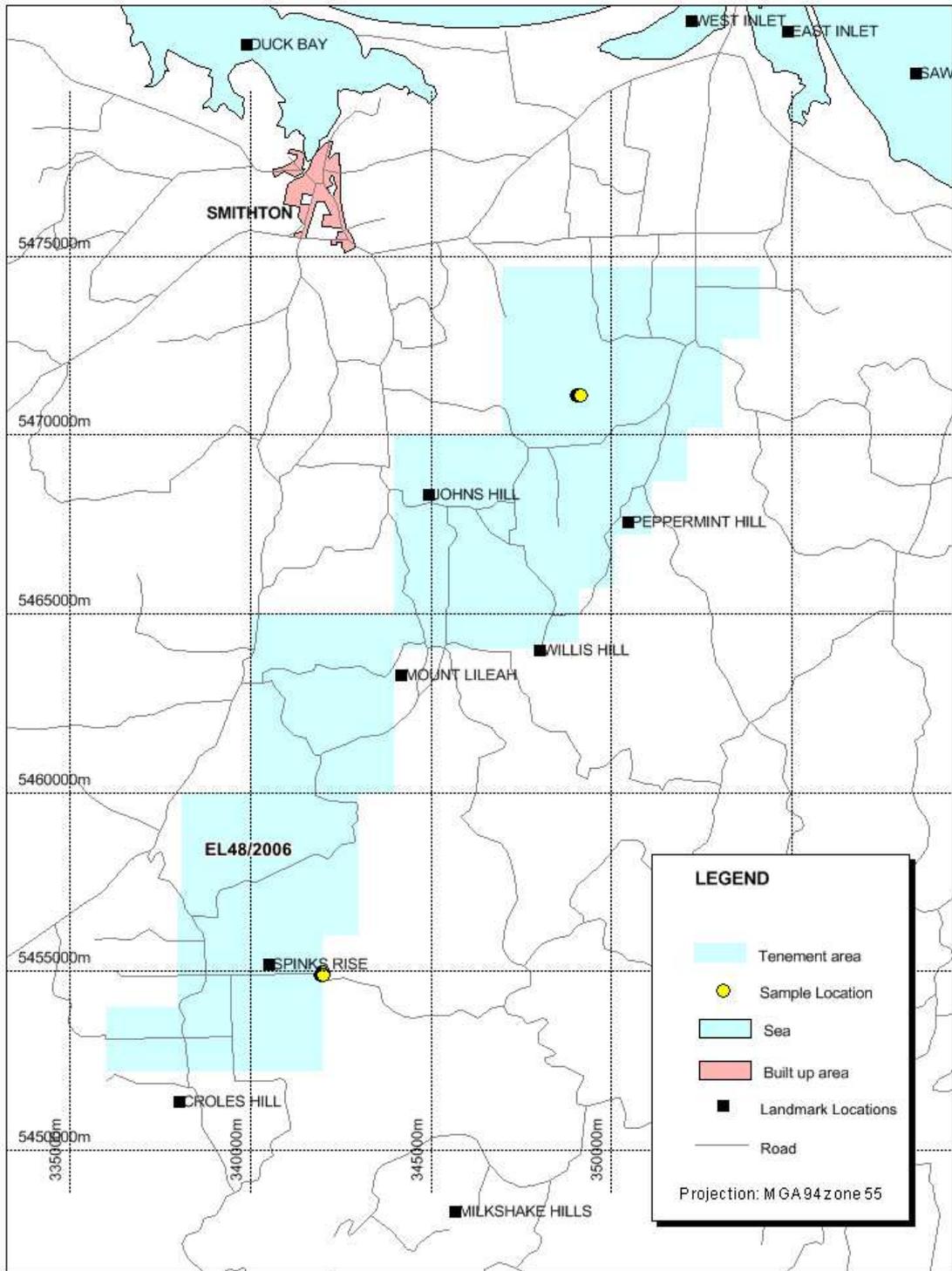
Exploration during the 2012 reporting year included infill MMI sampling around anomalous Ni MMI values over South Forest area ultrabasic rocks and infill MMI lines around Zn anomaly on Reid Road. Ten samples in total were collected which are shown in Figure 2. Highlights are presented in Table 2 and a complete results list is presented in Appendix A.

**Table 2:** Significant results – Mt Lileah

<b>Sample Number</b>	<b>Easting *</b>	<b>Northing *</b>	<b>Significant results</b>
SMM603	341940	5454900	22ppb Pd
SMM600	341,985	5,454,965	50ppb Pd

\*MGA94 55

Both SMM600 and 603 show anomalous values for As, Ga, Li, Nb, Th, Zr, Cr, Fe, Ni and Ti.



**Figure 2: Exploration activity map**

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

As a follow up to a one point MMI Ni anomaly at South Forest along strike from peridotite outcrops, a short infill MMI line was completed, but all elements of interest showed low values (SMM578-582). No further work is anticipated in this area.

Further south along Reid Road a Zn anomaly was defined during previous sampling programs, and additional samples (SMM600-606) were collected that showed Li, Mo, Pd, Zr, Cu, Ni, Fe, Ti and Zn anomalism similar to what is found associated with alkali basic/ ultrabasic rocks elsewhere in the region, but without the associated magnetic high. No drilling is planned as the anomalies do not show a consistent spatial relationship. All samples were collected within 25 m of bitumen road, and there are indication road building material from quarries elsewhere have been stockpiled here, so contamination cannot be ruled out. No immediate follow up is planned.

## 5 CONCLUSIONS

Sampling results so far have been disappointing, but only a small part of the tenement has been sampled. Depending on results from drilling in EL17/2007 and EL49/2006 sampling of magnetic highs with moderate radiometric response should be carried out.

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## **6 ENVIRONMENT**

Grass divots were replaced immediately following MMI sampling. No other ground-disturbing activities were carried out so no rehabilitation was necessary.

## 7 EXPENDITURE

As financial figures for the reporting period were not finalised by the time of writing, expenditure for EL48/2006 is presented for the year ending 30 April 2012 (Table 3). Total expenditure is \$31,546.

**Table 3:** Expenditure 2011 - 2012

<b>Activity</b>	<b>Amount (AUD)</b>
Assaying	\$2,043
Soil Sampling	\$1,903
Geological Salaries (recharge - staff S & W)	\$5,510
Field Supplies	\$140
Geological Consultants	\$7,713
Data Entry / Drafting	\$693
Heritage & Native Title	\$275
Petrology / Mineralogy	\$22
Tenement Administration	\$396
Tenement Rentals	\$5,914
Vehicles – Repairs & Maintenance	\$150
Light Vehicle Hire	\$130
Computer Software	\$2,311
Communication	\$1,226
Travel & Accommodation - Domestic	\$252
<b>Overheads (10%)</b>	<b>\$2,868</b>
<b>Total</b>	<b>\$31,546</b>

## 8 REFERENCES

Brown AV, 1989. Geological Atlas 1: 50 000 Series Sheet 21 Smithton. Explanatory Report Geological Survey Tasmania

Calver CR, 1998. Isotope stratigraphy of the Neoproterozoic Togari Group, Tasmania. Aust. Jour. Earth Sci. 45, 865-874.

Chai A and Barrett F, 2010. EL48/2006 "Mt Lileah" Annual Report for the Period 10th July 2009 to 9th July 2010. *IMX Resources Ltd unpublished report.*

Doyle T and Barrett F, 2011. EL48/2006 "Mt Lileah" Annual Report for the Period 10th July 2010 to 9th July 2011. *IMX Resources Ltd unpublished report.*

Everard JL, Seymour, DB, Reed AR, McClenaghan MP, Green, DC, Calver CR and Brown, AV, 2007. Regional geology of the southern Smithton Synclinorium. Explanatory Notes for Roger, Sumac and Dempster 1: 25 000 scale geological map sheets, far northwestern Tasmania.

Kinnane NR, 1972. Report on the geological reconnaissance and stream sediment sampling programme, northwest Tasmania. Australia and New Zealand Exploration Company. Open file report.

Morrith Holdings, 2003. Roger River Project Tasmania. ELs 11/97, 12/97, 13/97, 14/97, 61/94 and 17/01. Combined annual report to 18<sup>th</sup> December, 2002. Open file report.

Reid R, 1998. EL 12/97 Edith Creek. Report on exploration activity 05-12-97 to 05-12-98. Pacific Nevada Pty Ltd. Open file report.

Reid R and Westbrook S, 1998. EL13/97 Sumac Rivulet. Report on exploration activity 05-12-97 to 05-12-98. Pacific Nevada Pty Ltd. Open file report.

Westbrook S, 1999. EL61/94 Arthur River- Roger River. Report on exploration activity 9-6-98 to 9-6-99. Pacific Nevada Mining Pty Ltd. Open file report.

## 9 KEYWORDS

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