



# IMX Resources

## **EL 49/2006 “West Montagu” Final Report for the Period 10th July 2007 to 9th July 2013.**

Volume 1 of 1

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## **ABSTRACT**

IMX Resources Ltd considered the Smithton area in NW Tasmania to have potential to host Ni-Cu sulphide mineralisation in sub-volcanic basic-ultrabasic intrusions. To pursue this target, several exploration licences were applied for in 2006 – 2011, one of which - EL49/2006 - is the subject of this report.

During the period of tenure 189 Mobile Metal Ion, seven heavy mineral concentrates and six rock chip samples were collected, a VTEM survey carried out, four RC holes drilled and magnetic data were remodelled.

Due to contracted budgets, a decision was made to rationalise the company's asset portfolio and as such, all NW Tasmanian licences, including EL49/2006, were relinquished in favour of more advanced projects elsewhere.

Total expenditure for the reporting period was **\$254,159**.

## **KEYWORDS**

Tasmania North West, Burnie 250,000 map sheet, Smithton, geochemistry, Ni-Cu sulphide mineralisation, MMI sampling, HMC sampling, RC drilling.

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EL492006\_201306\_01\_report.pdf  
EL492007\_02\_Appendix1\_SSamp.txt  
EL492007\_03\_Appendix2\_DHColl.txt  
EL492007\_04\_Appendix2\_DHAssay.txt  
EL492007\_05\_Appendix2\_DHSurvey.txt  
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## 1.0 INTRODUCTION

The following report details work conducted at IMX Resources Ltd's ('IMX') EL49/2006 – 'West Montagu' during the period 10<sup>th</sup> July 2007 to 9<sup>th</sup> July 2013. The tenement is located 25km west-south west of Smithton, NW Tasmania (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 (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 siliciclastic rocks (Forest Conglomerate), a carbonate -chert-shale unit (Black River Dolomite) dated at 750-650 Ma, rift tholeiite and associated volcanoclastic units (Kanunna 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 Kununna Group. The Proterozoic- Paleozoic sequence is locally overlain by Tertiary basalts occurring mainly as hill cappings. Basalt compositions range from basanite through alkali olivine basalts to tholeiite.

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. Possible sulphur sources for Ni sulphide deposits are present in the Cowrie Siltstone (Rocky Cape Group) and in shales of the Black River Dolomite.

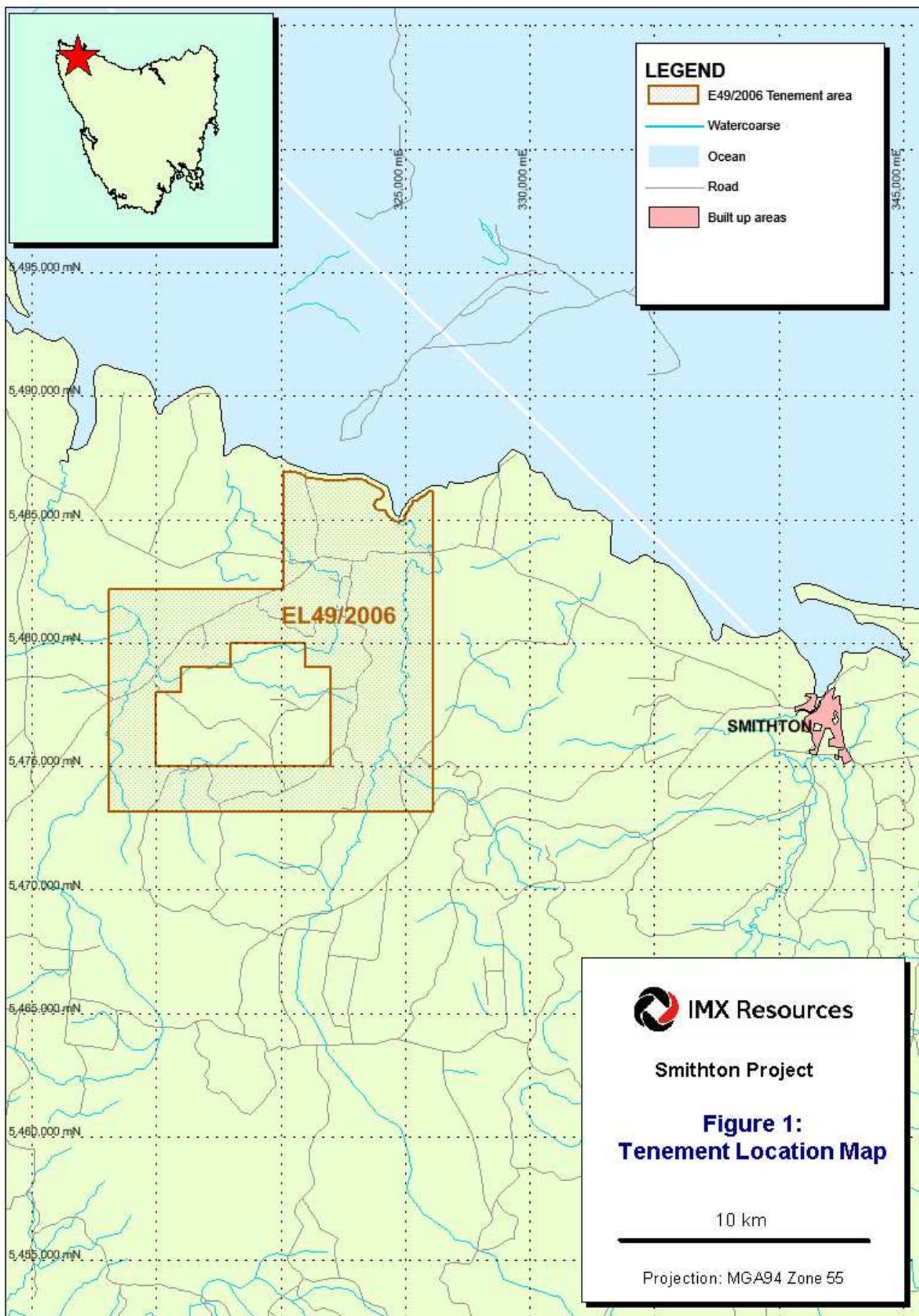
## 2.0 TENURE

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>. A one-year extension of term was granted in 2012 for the full area of the licence.

The licence is subject to a Joint Venture with Mr F. Barrett (4% ownership). Due to rationalisation of property assets and refocusing of budgets, IMX decided not to continue tenure in the Smithton Project. Table 1 summarises the tenement details and Figure 1 shows its location.

**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>
	10 <sup>th</sup> July 2011	9 <sup>th</sup> July 2012	5	105 km <sup>2</sup>
	10 <sup>th</sup> July 2012	9 <sup>th</sup> July 2013	6	105 km <sup>2</sup>



### **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 (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 rocks logged as 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. They reported high Cr-Ir values in one stream sediment sample from Bond Tier, but there is some ambiguity regarding the coordinates.

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

### **4.0 EXPLORATION COMPLETED DURING LIFE OF EL49/2006**

All results, including sample description, location, survey and assay data were presented in Barrett et al (2008), Chai (2009), Chai and Barrett (2010) and Doyle and Barrett (2011 and 2012) and is presented in this report as Appendix 1.

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).

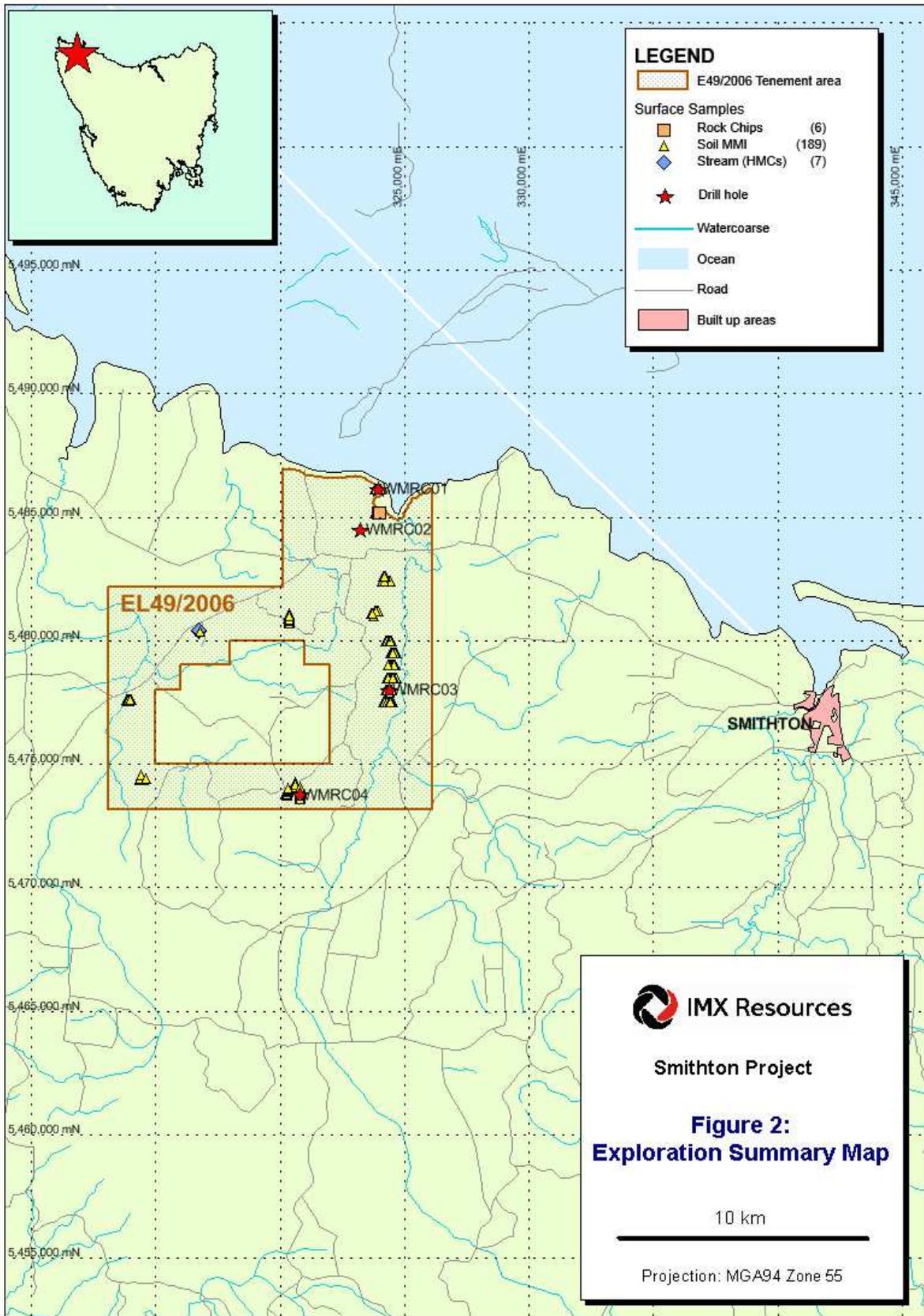
A short drilling program was conducted during May 2009 targeting VTEM conductors. Both targets are very low-lying with high water flow. The RC rig couldn't handle the large amounts of water and the two holes were abandoned without reaching targets. Consequently, the conductors interpreted from the VTEM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

In 2010, 6 rock chip and 20 mobile metal ion (MMI) samples were collected while field-checking geophysical anomalies, none of which returned significant results (Doyle and Barrett, 2011).

In 2012, MMI sampling coverage was expanded by 169 25m-spaced samples to test magnetic highs within the licence. In addition, seven heavy mineral concentrates were collected from streams.

SGC were contracted to model the dip and depth to fresh magnetic rock to determine ideal orientation for drilling planned that year (Mutton, 2012). Two RC holes were drilled for 210m. Results were not encouraging.

The location of the samples and drilling is shown in Figure 2, surface assays are presented in Appendix 1 and drilling data in Appendix 2.



## **6.0 DISCUSSION OF RESULTS**

Most of the tenement is covered by timber plantations of various ages. The basalt sequence appears to be flat lying and not easily amenable to surface sampling. A planned hole to test the ironstones at Montagu River/ Canadian Creek was not drilled, as access along steep slippery tracks was deemed too dangerous during the wet conditions. The ironstones showed strong geochemical similarity to the alkaline volcanics encountered in a drillhole in an adjoining tenement. The area around the ironstones has been tested by an IMX airborne EM survey and no strong anomaly associated with massive sulphides was found. The remainder of the tenement is covered by a Pacific- Nevada EM survey, and no strong anomalies were identified.

The main part of the tenement shows an elevated magnetic response, and the magnetic data is not very useful for identifying sampling and/ or drill targets with our current level of understanding. Blanket geochemical sampling would be very expensive and may not identify any significant targets.

## **7.0 CONCLUSIONS**

Hampered by access difficulties, the tenement was not satisfactorily tested during the tenure period. Due to company budget re-prioritisation, IMX has decided to allow the licence to lapse.

## **8.0 ENVIRONMENT**

Grass divots were replaced immediately following MMI sampling. The RC holes were drilled on existing Forestry tracks so no trees were removed. The holes were capped below surface and backfilled at the completion of the drilling. Due to fires in early 2013, rehabilitation of the drill cuttings and sumps was delayed until February. Drill holes and sample spoils have been rehabilitated according to Departmental guidelines.

## 9.0 EXPENDITURE

Expenditure for West Montagu EL49/2006 for the reporting period is summarised in Table 2. This summary includes all expenses accrued up to 30<sup>st</sup> June 2013.

Total expenditure for the reporting period was **\$254,159**.

**Table 2:** Expenditure Life to Date

<b>Activity</b>	<b>Amount (AUD)</b>
Assaying	\$25,681
Soil Sampling	\$8,080
Drilling - RC	\$49,754
Geological Salaries (recharge - staff S & W)	\$33,477
Field Supplies	\$2,784
Geological Consultants	\$32,429
Geophysical Consultants	\$6,904
Geophysical Data	\$14,504
Data Entry / Drafting	\$1,297
Road , Site Works, Track Cutting	\$3,480
Heritage & Native Title	\$275
Drafting	\$165
Petrology / Mineralogy	\$2,337
Tenement Acquisition Costs	\$821
Tenement Administration	\$1,512
Tenement Rentals	\$24,454
Tenement - Rehab	\$987
Vehicles - Fuel	\$988
Vehicles - Hire	\$656
Equipment Hire	\$641
Computer (and IT support)	\$99
Computer Software	\$9,117
Consulting Fees	\$2,881
Legal	\$100
Printing & Stationery	\$33
Communication	\$334
Travel & Accomodation - International	\$266
Travel & Accommodation - Domestic	\$4,827
Food & Messing	\$1,849
Training	\$323
OVERHEADS (10%)	
Overheads (10%)	\$23,105.39
<b>TOTAL EXPENDITURE LIFE TO DATE</b>	<b>\$254,159</b>



## 10.0 REFERENCES

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- Reid R, 1998.** EL14/97 Lovells Creek Report of exploration 05-12-97 to 05-12-98. *Pacific Nevada open file report 98-4234.*

# APPENDIX 1

## Surface Sampling

### Metadata: Surface Sample

H01	Tenement Holder	IMX Resources Ltd	
H02	Tenement Name	EL49/2006	
H03	Activity	Stream Sediment samples	Mobile Metal Ion soil samples
H04	Location of the data	EL492006_02_Appendix1_Ssamp.txt	
H05	Date created	26/06/2013	
H06	Date modified	15/07/2013	
H07	Parameters of data acquisition / processing	-80# size fraction sampled	
H08	Contractor	Genalysis	Genalysis
H09	Translation Parameters		
H10	Equipment	4 Acid Digestion, MS finish	Mobile Metal Ion Analysis. ICP-MS finish.
H11	Original data format	csv	
H12	Codes	SOIL MMI	Soil sample: MMI
H13	Codes	STREAM	Stream sediment sample: heavy mineral concentrate
H14	Codes	RCHIP	Rock chip sample

# APPENDIX 2

## Drilling Data

### Metadata: Collars

H01	Tenement Holder	IMX Resources Ltd	
H02	Tenement Name	EL49/2006	
H03	Activity	RC Drilling programme	
H04	Location of the data	EL492006_03_Appendix2_DHColl.txt	
H05	Date created	26/06/2013	
H06	Date modified	15/07/2013	
	Parameters of data acquisition/		
H07	processing	RC drill chips spear	
H08	Contractor	Edrill Pty Ltd	
H09	Translation Parameters	GPS	
H10	Equipment	Globe 2000 Truck-Mounted RC Drill rig.	
H11	Original data format	csv	
H12	Codes	RC	Reverse Circulation
H13	Codes	IBF	Ian Fahey

### Metadata: Lithology

H01	Tenement Holder	IMX Resources Ltd	
H02	Tenement Name	EL49/2006	
H03	Activity	RC Drilling programme	
H04	Location of the data	EL492006_06_Appendix2_DHLith.txt	
H05	Date created	26/06/2013	
H06	Date modified	15/07/2013	
	Parameters of data		
H07	acquisition/processing	Geology logs	
H08	Contractor	Edrill Pty Ltd	
H09	Translation Parameters	GPS	
H10	Equipment	Globe 2000 Truck-mounted RC drilling rig	
H11	Original data format	excel	

### Metadata: Drillhole Assays

H01	Tenement Holder	IMX Resources Ltd	
H02	Tenement Name	EL49/2006	
H03	Activity	RC Drillhole assays	
H04	Location of the data	EL492006_04_Appendix2_DHAssay.txt	

H05	Date created	26/06/2013	
H06	Date modified	15/07/2013	
H07	Parameters of data acquisition / processing	NITON SPEAR RIFFLE	Portable XRF Composite 4-5m using spear Riffle split 1m samples
H08	Contractor	Genalysis	Genalysis
H09	Equipment	4A_ICPOES	4 acid digest, ICP finish.
H10	Original data format	csv	
H11	Codes	CHIPS  NITON SOIL  NITON ALL	RC Chip samples Portable XRF internal mode Portable XRF internal mode

### Metadata: Drillhole Surveys

H01	Tenement Holder	IMX Resources Ltd	
H02	Tenement Name	EL49/2006	
H03	Activity	RC Drilling programme	
H04	Location of the data	EL492006_05_Appendix2_DHSurvey.txt	
H05	Date created	26/06/2013	
H06	Date modified	15/07/2013	
H07	Parameters of data acquisition/ processing	Orientation of drill hole	
H08	Contractor	Edrill Pty Ltd	
H09	Translation Parameters	GPS	
H10	Equipment	Globe 2000 Truck-Mounted RC Drill rig.	
H11	Original data format	csv	
H12	Codes	NOM	Nominal