



# IMX Resources

## **EL 17/2007 “Dunns” Annual Report for the Period 24<sup>th</sup> October 2007 to 23<sup>rd</sup> October 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 little outcrop no ground work was carried out. An airborne VTEM (EM) survey identified numerous 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)

EL17\_2007\_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 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- Paleozoic sequence is locally overlain by Tertiary basalts occurring mainly as hill cappings. Basalt compositions range from basanite through alkali olivine basalts to tholeiites.

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 sulfide bearing sedimentary rocks, imply that the region has potential for Ni- Cu sulfide deposits. 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 17/2007 was granted to Goldstream Mining NL (now IMX Resources NL) and covers an area of approximately 165 km<sup>2</sup> in the Land District of Wellington & Russell vicinity of Salmon River for a term of 5 years from the 24<sup>th</sup> October 2007.

Table 1 Licence Details

<b>Licence</b>	<b>Granted</b>	<b>Expiry</b>	<b>Year</b>	<b>Area</b>
EL17/2007	24 <sup>th</sup> October 2007	24 <sup>th</sup> October 2012	5	165 km <sup>2</sup>

## **3.0 REVIEW OF PREVIOUS WORK**

Very limited exploration has been carried out within EL17/2007. ANZECO (Kinnane 1972) carried out stream sediment sampling and located sites with very high Sn (max 1.08%) and Cr (max. 33%) in heavy mineral concentrates. Subsequent work revealed that the high Cr and Sn contents originated in widespread alluvial terraces related to Arthur River.



# TASMANIA DUNNS

Figure 1

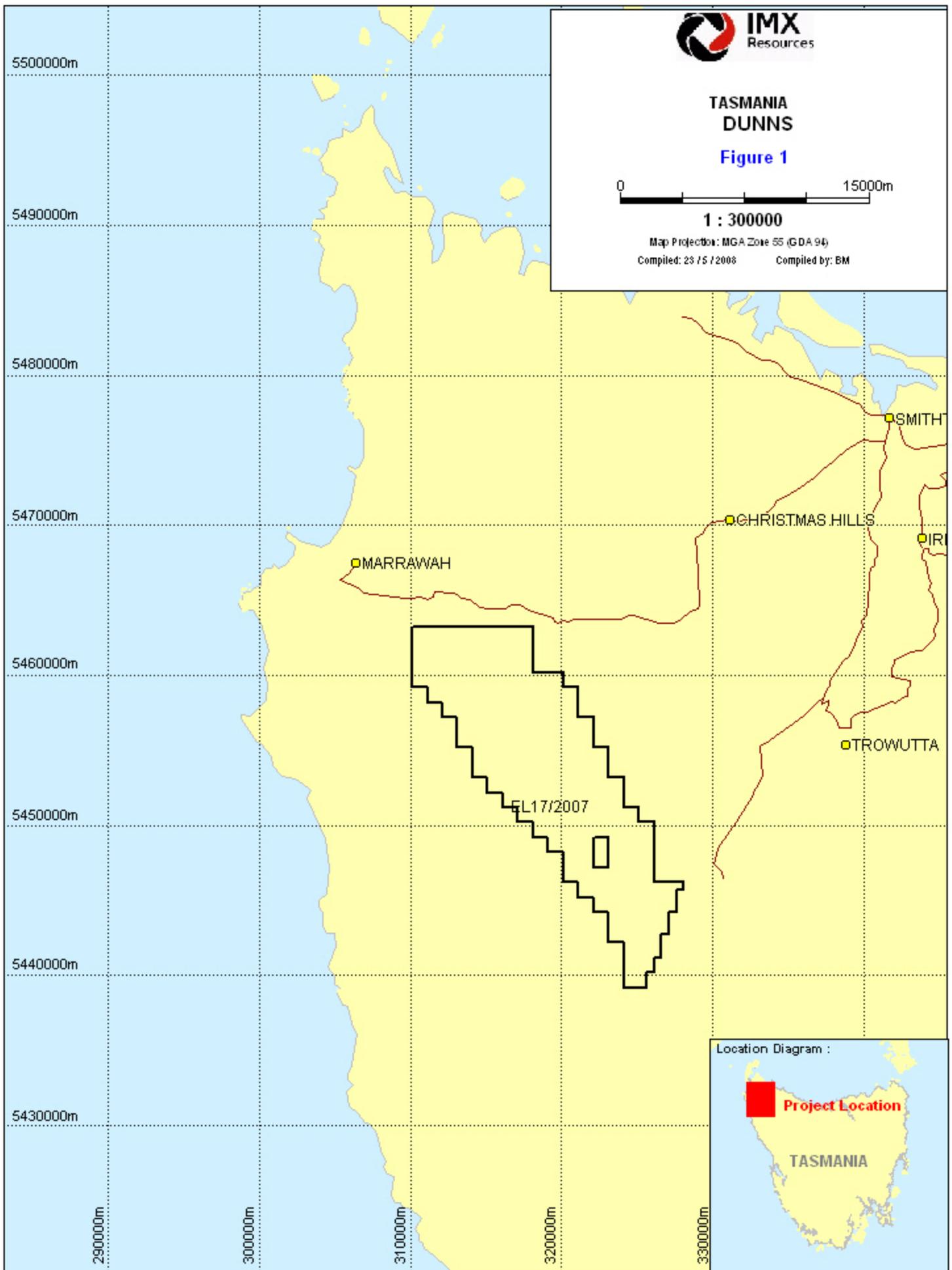


1 : 30000

Map Projection: MGA Zone 55 (GDA 94)

Compiled: 28 / 5 / 2008

Compiled by: BM



Similar terraces are also widespread further north in the Montagu Swamp Area, and all the terraces have been investigated for their Cr contents e.g. BHP (1998). While the Cr grades may be high in small samples the tonnages are orders of magnitude too low for a Cr deposit.

The chromites form 2 populations with one possibly originating in the local volcanic and subvolcanic intrusions, whereas the main population are more likely to originate in rocks similar to the Cambrian basic-ultrabasic complexes further south. The origin of the alluvial chromites is also discussed by Everard et al. (2007)

Pacific Nevada carried out stream sediment sampling, rock chip sampling and a combined airborne EM a magnetic survey exploring for sediment hosted base metal deposits in the southern part of E17/2007, but the project was terminated after one season as the results were not promising.

Imdex (2005) has explored for silica flour over silicified carbonates, and a silica flour mine is being developed near the Arthur River.

A detailed aeromagnetic survey with 200m line spacing flown by AGSO/ MRT in 1996 has been valuable in locating intrusions due to the generally poor outcrop.

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

Due to the poor outcrop in the area little surface work was carried out. Eight rock chip samples were collected along forest tracks and in clear felled areas. An airborne EM (VTEM) survey conducted by Geotech Airborne Pty Ltd of 420 line km was carried out over the central part of the tenement to focus exploration on areas with possible mineralisation. 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. The results have been only partly interpreted.

#### **5.0 DISCUSSION OF RESULTS**

Strong leaching of stream sediments, soils and rocks are widespread in western Tasmania so surface samples may not give a reliable indication of basemetal values in unleached rocks, which may explain why previous stream sediment and soil surveys have not been successful. The strong leaching is well displayed in a road metal quarry on Chatlee Rd where the vertically dipping sandstones and siltstones are strongly leached to a depth of 4-5m. A good example of leaching may be stream sediment samples around the Balfour Cu Prospect, where all the stream sediments show low Cu values, despite Balfour being a Cu prospect. Resistant minerals like cassiterite and chromite survive the strong leaching, whereas most of the base metals bearing minerals are strongly leached.

In EL 17/2007 stream sediment and soil sampling is of limited use as much of the prospective parts of the stratigraphy is covered by alluvial terraces, and stream samples in these areas mainly consists of reworked alluvials.

The basic rocks collected are not very magnesian showing low mg values. Cu/ Pd ratios are high and the collected rocks are unlikely to be associated with Ni- Cu sulfide mineralisation.

The preliminary interpretations indicate the presence of numerous conductors at least some of which are associated with basic/ ultrabasic intrusions. Further interpretations and ground EM surveys are required to determine the strengths of the conductors. Southern Geoscience Consultants (SGC) is processing the results and final data is yet to be received by the client.

Most of the interpreted conductors are located in recently cleared forest areas so little clearance will be required during the next phase of work.

## **6.0 CONCLUSIONS**

Ground EM surveys are required to determine the nature of the conductors and to locate drilling targets.

## **7.0 ENVIRONMENT**

As no vegetation or water courses were disturbed out no surface rehabilitation work is required.

## **8.0 EXPENDITURE**

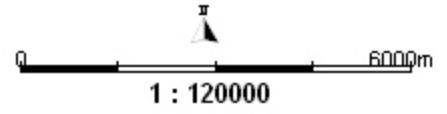
Expenditure for Dunn EL17/2007 for the reporting period is listed below. This summary includes all expenses accrued up the end of July 2008.

Total expenditure for the reporting period was \$ **70,055**.

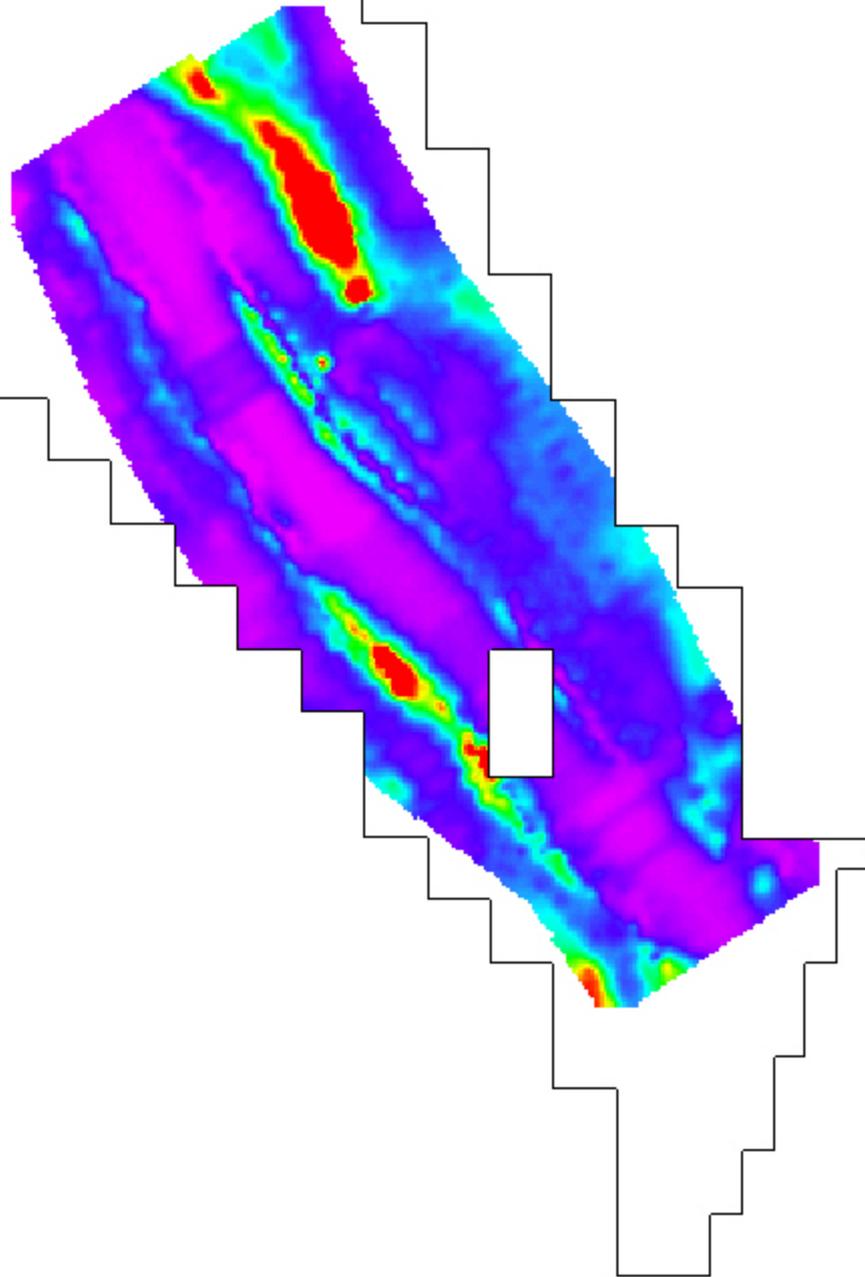
Table 2 Expenditure 2007 to 2008.

<b>Items</b>		<b>Amount</b>
<b>Geological Consultants</b>	\$	4,991
<b>Geophysical Consultants</b>	\$	955
<b>Geophysical Data</b>	\$	37,321
<b>Geochemical Data</b>	\$	13,346
<b>Tenement Administration</b>	\$	1,706
<b>Vehicles - Fuel</b>	\$	71
<b>Computer Software</b>	\$	670
<b>Accommodation</b>	\$	845
<b>Travel</b>	\$	562
<b>Assaying</b>	\$	40
<b>Geological Salaries</b>	\$	410
	<b>Total</b>	<b>\$ 60,917</b>
<b>Overheads (15%)</b>	\$	9138
	<b>TOTAL EXPENDITURE</b>	<b>\$ 70,055</b>

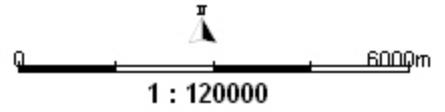
Tasmania  
EL17/2007  
EM(VTEM) CH10  
Figure 2



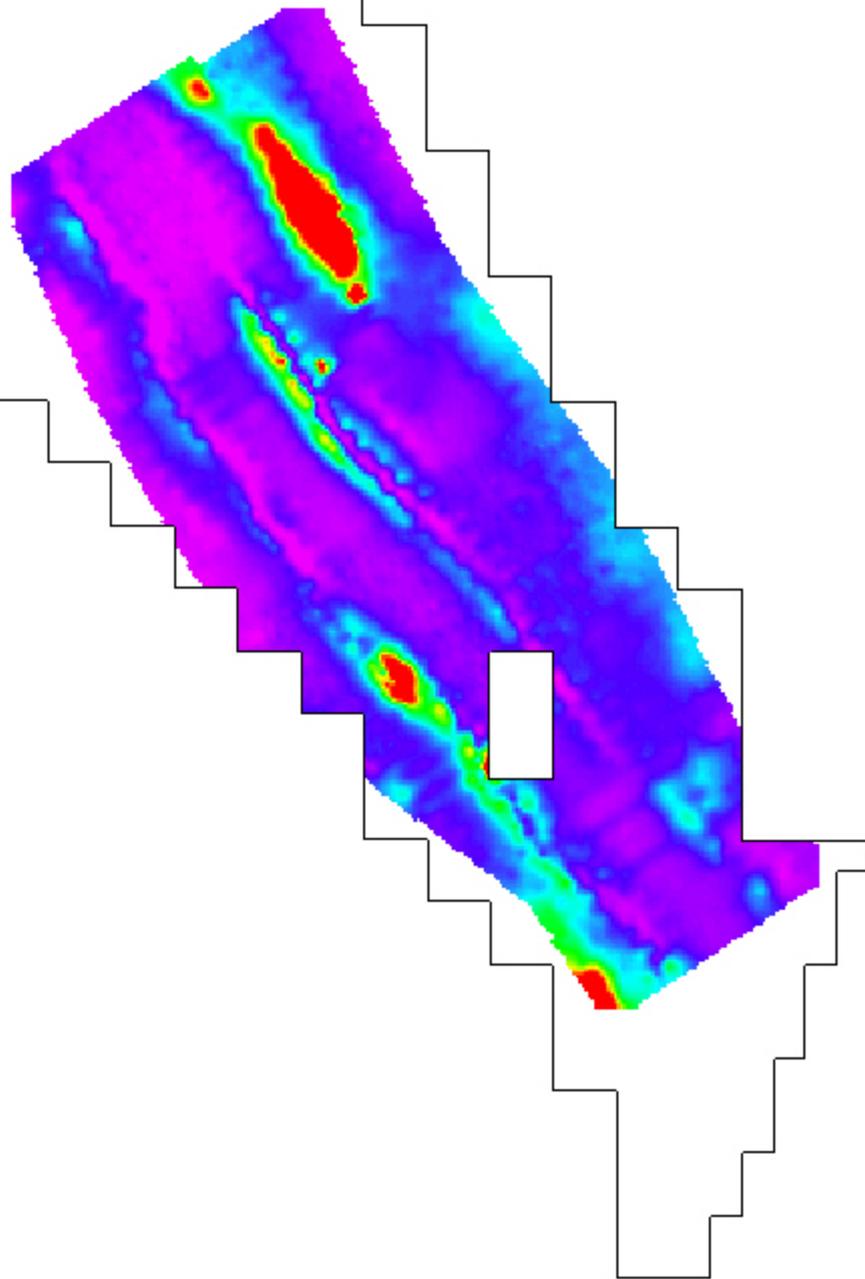
EL17/2007



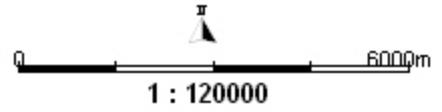
Tasmania  
EL17/2007  
EM(VTEM) CH15  
Figure 3



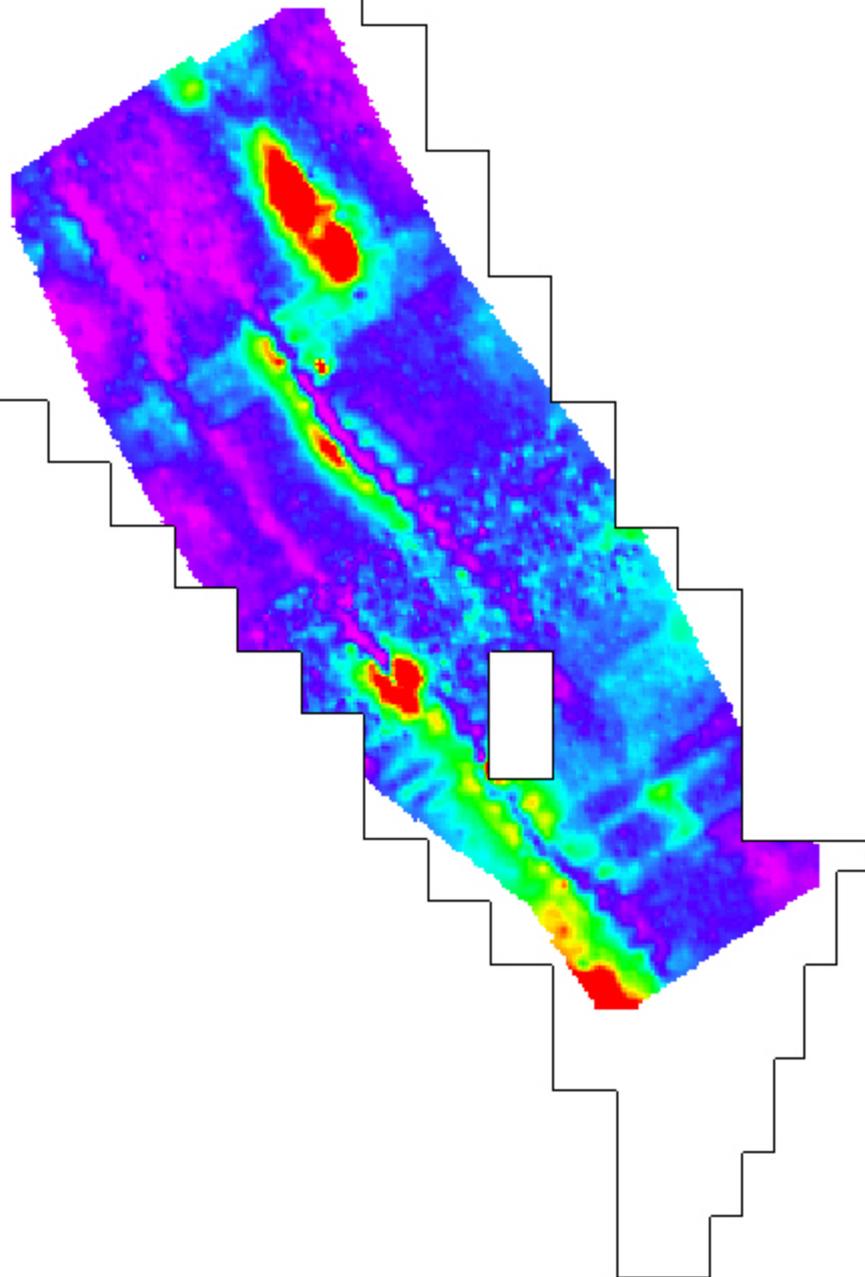
EL17/2007



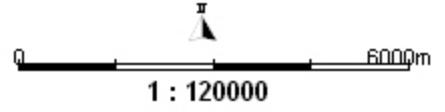
Tasmania  
EL17/2007  
EM(VTEM) CH20  
Figure 4



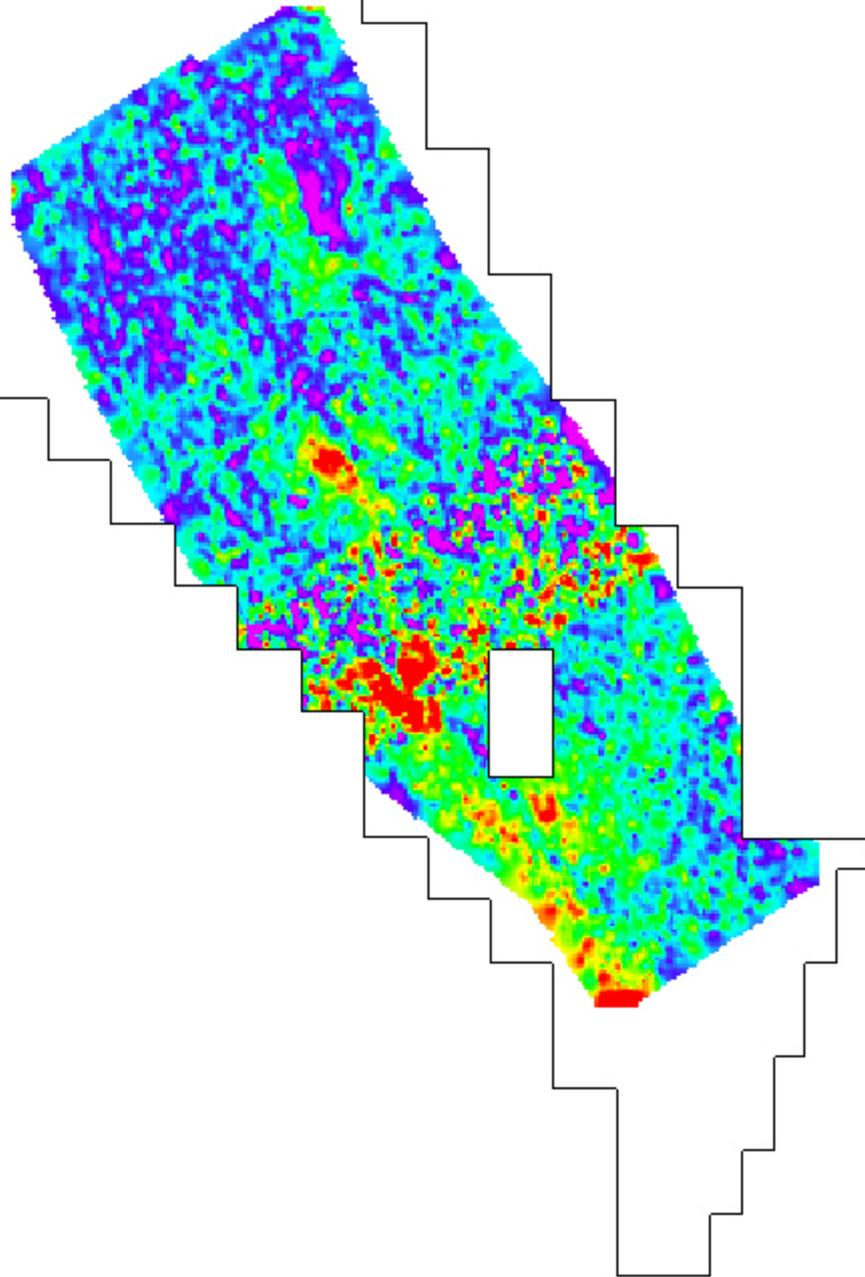
EL17/2007



Tasmania  
EL17/2007  
EM(VTEM) CH25  
Figure 5



EL17/2007



## **9.0 REFERENCES**

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# APPENDICES

**All Appendices are attached in digital format on the report CD.**

Appendix 1    Surface        EL17\_2007\_2007\_A\_02\_SurfaceGeochem.txt  
                 Sample Data

# APPENDIX 1

## Surface Sample Data

APPENDIX-1 SURFACE SAMPLE  
IMX RESOURCES NL

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Sample ID	East	North	Date	Au ppb	Co ppm	Cr ppm	Cu ppm	Fe %	Ni ppm	S ppm	Pd ppb	Pt ppb	Pt_Pd_Au ppb	Ca ppm	Mg ppm	Mn ppm	Ti ppm	V ppm	Zn ppm	Ce ppm	La ppm	Th ppm	Zr ppm	Ba ppm	Rb ppm	Sr ppm	ThO2 ppm
57923	325680	5439833	1/02/2007	2	43.2	108	91	7.75	87	101	4	4	10	59847	35988	1205	5335	178	79	102.63	61.12	8.64	149.4	556.5	16.99	533.44	9.83
57924	352685	5439816	1/02/2007	2	41.6	108	90	7.55	71	154	3	3	8	55994	50493	1391	5306	190	86	98.01	57.93	6.82	124	1230.6	74.94	442.3	7.76
57928	315885	5455498	1/02/2007	2	44.5	861	74	14.29	403	476	2	1	5	213	56123	390	17872	230	85	51.8	17.37	7.5	216.6	146.4	15.6	7.59	8.53
57929	315771	5455631	1/02/2007	2	60.6	838	21	37.66	133	1187	0.5	0.5	3	106	609	657	7200	324	73	13.32	6.02	4.23	80.1	23.7	8.44	5.13	4.81
57930	315565	5455929	1/02/2007	2	56.6	11	76	10.94	108	64	1	1	4	102454	36057	1692	19026	327	123	255.59	129.42	14.1	279.9	2179.1	16.17	1284.56	16.02
57931	315624	5455836	1/02/2007	2	162.6	42	239	16.09	281	93	2	2	6	18615	21347	2009	34192	455	245	273.69	105.15	24.7	525.7	2283.2	101.85	1017.96	28.05
57932	315746	5455667	1/02/2007	2	108.3	705	18	38.42	267	780	0.5	0.5	3	789	684	794	3054	180	88	27.68	11.01	3.55	48	71.3	6.06	28.01	4.03
57933	315747	5455666	1/02/2007	10	64.6	46	171	11.85	101	134	2	1	13	101578	37763	3172	26401	342	152	300.26	152.22	17.9	396.9	4017	28.47	2978.14	20.41