



# EL46/2006 “Smithton” Partial Relinquishment Report

Volume 1 of 1

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## **SUMMARY**

Exploration Licence 46/2006 was granted to IMX Resources Ltd on 10<sup>th</sup> July 2007. The licence is located approximately 9km east of Smithton in the district of Wellington as part of a Ni-Cu sulfide exploration project.

EL46/2006 is considered to have potential to host Ni-Cu sulfide mineralisation in subvolcanic basic-ultrabasic intrusions. Assessment of targets over the past two years has resulted in a decreased prospectivity for parts of the original licence area. A partial relinquishment of 49 km<sup>2</sup> is made for the licence area.

The area surrendered is on the margins of the existing EL46/2006 licence and is not considered prospective for Ni-Cu sulfide mineralisation. This report covers activities conducted solely on the partially relinquished portion of the licence.

## **KEY WORDS**

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

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EL46\_2006\_2009\_Partial Relinquishment Report.pdf

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## **1.0 INTRODUCTION**

This report details all exploration work undertaken on the surrendered portion of Exploration Licence 46/2006, 'Smithton' during the reporting period 10<sup>th</sup> July 2007 to 9<sup>th</sup> July 2009.

Smithton is located approximately 9 km east of Smithton in the district of Wellington. Access is via the Bass Highway. EL46/2006 is situated on the Smithton 1:25,000 map sheet.

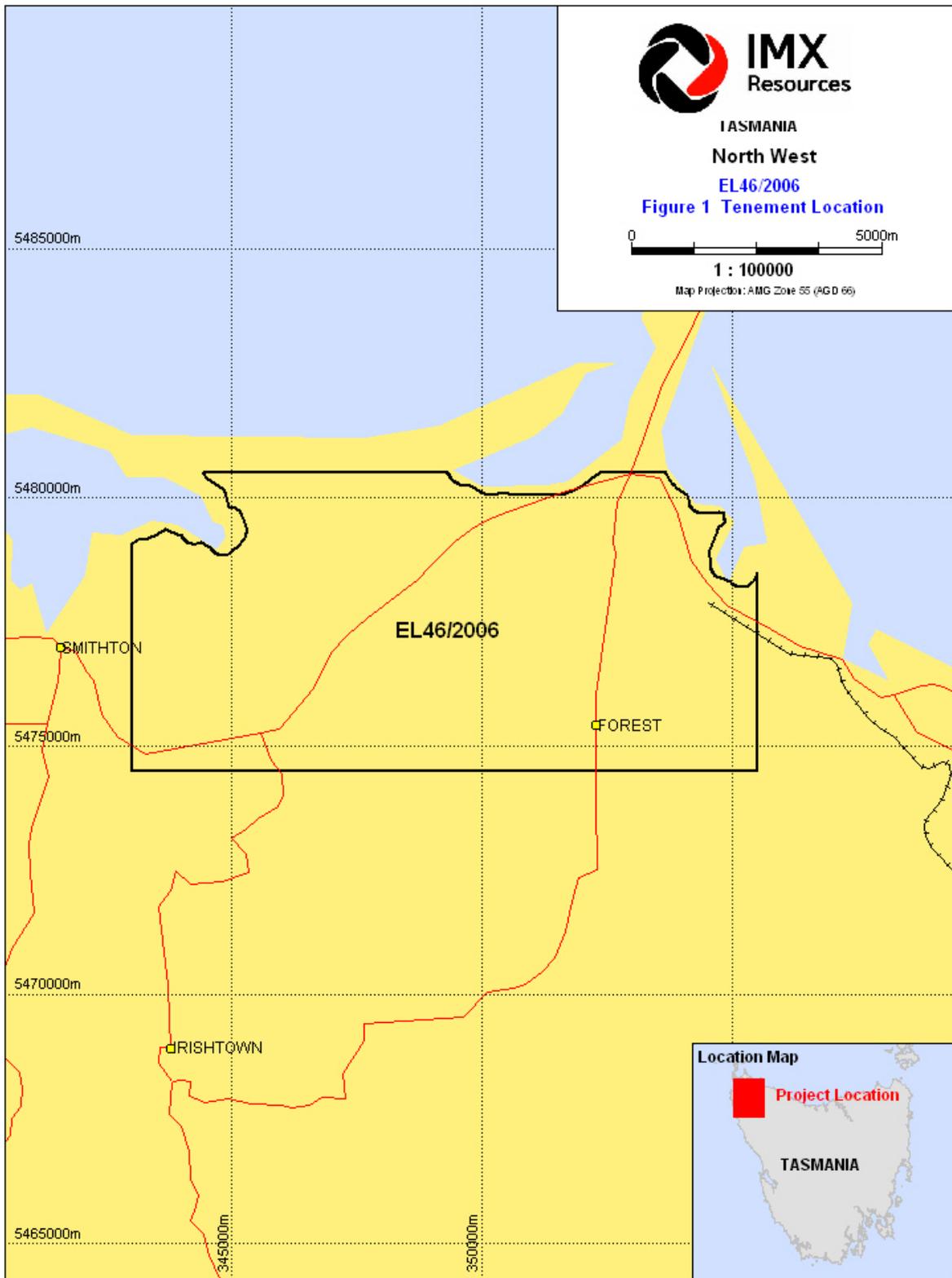
## **2.0 TENURE**

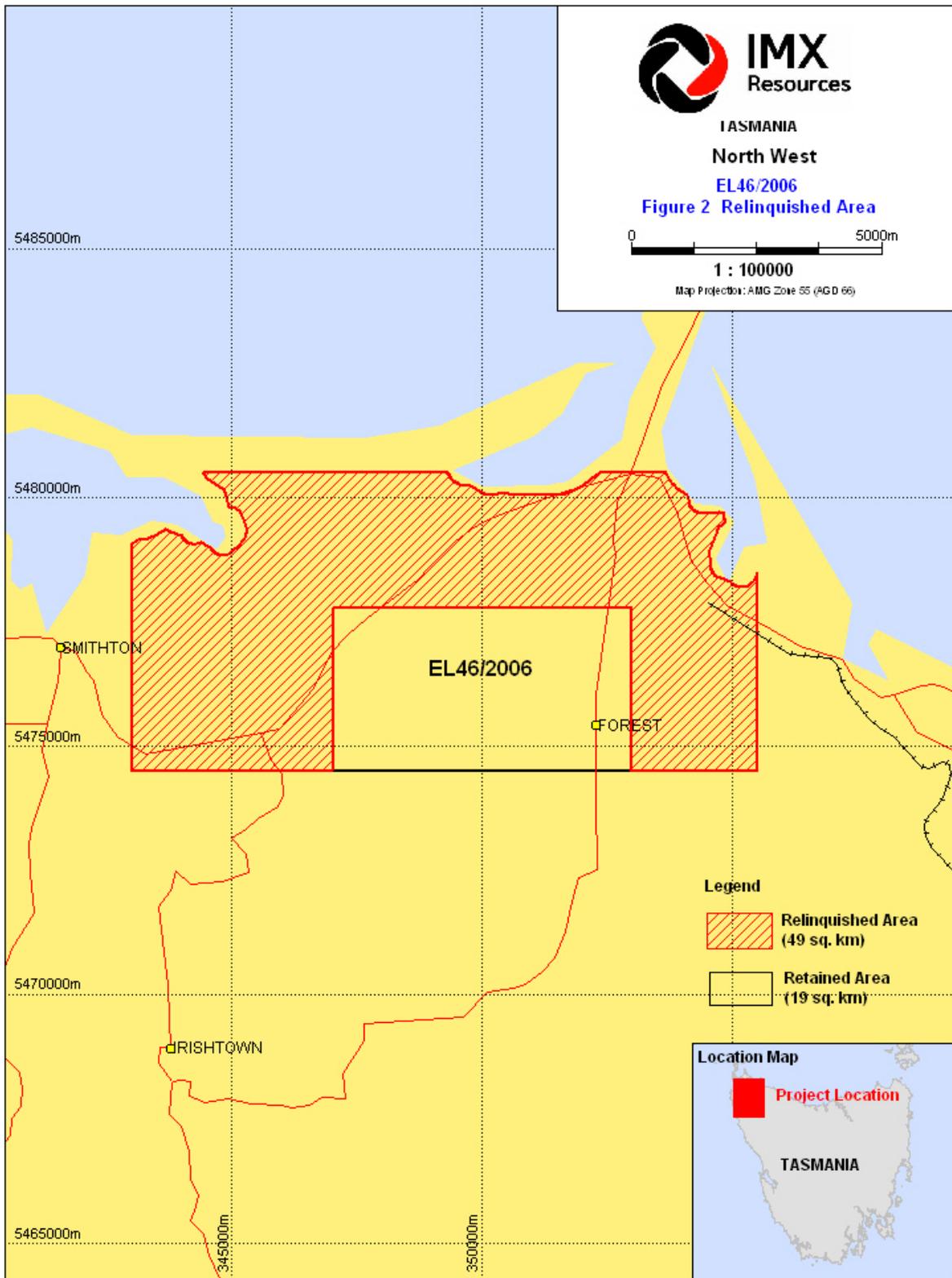
Exploration Licence 46/2006 was initially granted to Goldstream Mining NL (now IMX Resources Ltd) and covers an area of approximately 68 km<sup>2</sup> in the Land District of Wellington vicinity of Forrest for a term of 5 years from the 10<sup>th</sup> July 2007.

The licence initially covered an area of 68 km<sup>2</sup> and has been reduced in the current period by 49 km<sup>2</sup> to 19 km<sup>2</sup>.

Table 1 Licence Details

<b>Licence</b>	<b>Granted</b>	<b>Expiry</b>	<b>Year</b>	<b>Area</b>
EL46/2006	10 <sup>th</sup> July 2007	9 <sup>th</sup> July 2012	5	68 km <sup>2</sup>
EL46/2006	TBA	Partial Surrender		49 km <sup>2</sup>





### **3.0 REGIONAL GEOLOGY**

The Rocky Cape region of northwest Tasmania consists of thick, essentially unmetamorphosed 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. 1996) 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- 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 recent account of the Smithton Basin geology see Everard et al. (2007)

Mafic-ultramafic intrusions- shown on published maps as dolerite- in the South Forest area have been interpreted as feeders to the overlying basaltic volcanic and as possible host rocks for Ni-Cu sulfide mineralisation. Possible sulfur sources for Ni sulfide deposits are present in the Cowrie Siltstone (Rocky Cape Group) and in shales of the Duck River Dolomite.

### **4.0 PREVIOUS EXPLORATION**

Very limited work has been carried out in EL 46/2006 as most of the area is farm land, with most attention being on limestone/ dolomite.

Australia and New Zealand Exploration Company collected a few stream sediment samples during 1972 as part of their regional sampling program, but no anomalies were located and no follow up carried out. From 1997-2002 Morrith Holdings, Pacific Nevada and Greenstone Resources explored EL11/97 which large overlaps EL 46/2006 for epithermal gold along the Roger River Fault and over siliceous and calcareous spring mounds like Smokers Bank immediately south of Smithton. Exploration methods used were soil and stream sediment sampling and auger drilling of spring mounds, and they detected low level concentrations of elements normally associated with epithermal gold but no significant gold values.

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

## **5.0 EXPLORATION ACTIVITIES**

No field activities were undertaken in the surrendered portion of EL46/2006 during the report period.

Exploration activities conducted included 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.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

An assessment of the prospectivity of the EL46/2006 licence resulted for an area of 49 km<sup>2</sup> to be relinquished. The area surrendered is on the margins of the existing EL46/2006 licence and is not considered prospective for Ni-Cu sulphide mineralisation exploration.

## **7.0 REFERENCES**

Barrett, F., Manzi, M., Chai, A. 2008. EL46/2006 "Smithton" Annual Report for Period 9th July 2007 to 9th July 2008. IMX Resources Ltd.