

**Dundas Mining Pty Ltd**  
**Annual Report on Exploration**  
**EL 28/1988 “Mt Zeehan”**  
**Dec. 2017 to Dec. 2018**

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## **Abstract**

Allegiance Mining Pty Ltd, holders of EL 28/1988 and owners of the nearby Avebury nickel + cobalt mine, was purchased in mid-July by Dundas Mining Pty Ltd. Dundas in turn is being managed by Lottah Mining Pty Ltd.

In the first full year under the new ownership work has consisted of a thorough review of previous exploration and mining activity with over 170 reports downloaded from MRT's website, appraised and summarised.

That work is ongoing, however, there are a number of preliminary recommendations for work programmes in the 2018/19:

- Follow up drilling of anomalous nickel mineralisation intercepts (A223/A223A) in the Trial Harbour/Denali area, with 2 x 200m diamond drill holes proposed.
- 3D modelling of the Burbank/Trial Harbour magnetic anomalies.
- Consideration of drilling deeper, stratigraphic hole targeting source of magnetic anomaly at Fen Creek along with possible expansion of Fen Creek soil geochemistry grid.

It is expected that exploration of the tenement will intensify following the reopening of the Avebury mine with the generation of concentrate and resultant cash flow.

**The owners of the Avebury nickel + cobalt mine have a major advantage in exploration on EL 28/1988 as**

- **Lower grade discoveries will be considered economic due to the lack of capital required to build a mill and thus have much greater chance of development.**
- **Discoveries will turn more quickly into development and thus jobs**

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## 1.0 Introduction

EL 28/1998 “Mt Zeehan” is a category 1 exploration licence held by Allegiance Mining Pty Ltd, a subsidiary of Dundas Mining Pty Ltd. Lottah Mining Pty Ltd is managing and operating the project on behalf of Dundas Mining Pty Ltd.

### 1.1 Location and access

EL 28/1988 covers an area of 25 km<sup>2</sup> on Tasmania’s west coast between Zeehan and Trial Harbour.

Access to the tenement is achieved from the Trial Harbour road. Access within the tenements is limited to a few tracks with helicopter support required for much of the area.



**Figure 1.1: EL 28/1988 location. Coloured symbols within the ML’s are the solid wireframe shapes of the Avebury ore lenses.**

## 1.2 Land status and usage

The tenement includes land under the following categories – Authority Land, Conservation Area, Crown Land, Informal Reserve, Private Parcel, Public Reserve, Regional Reserve, State Forest.

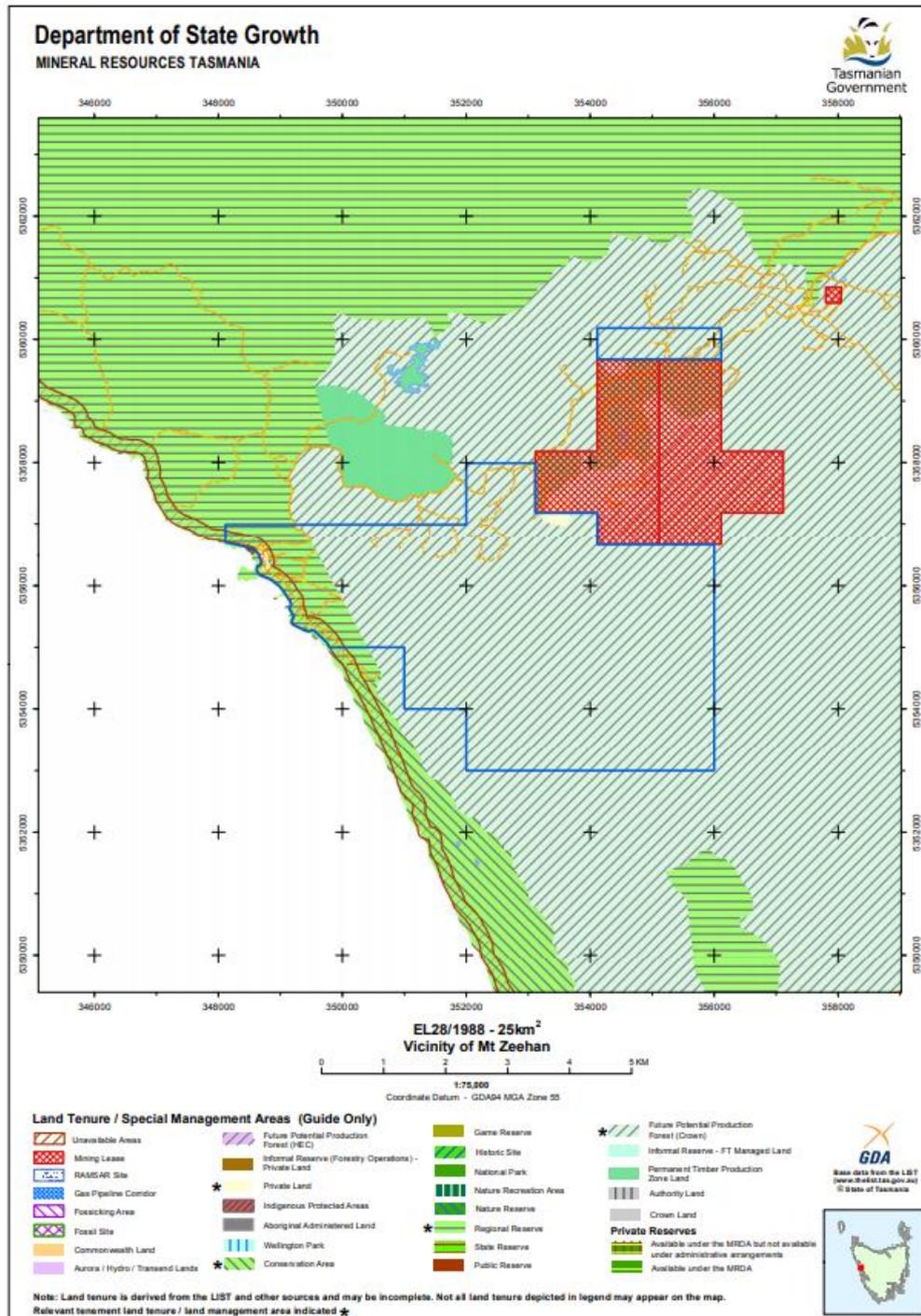


Figure 1.2: EL 28/1988 tenement land use map (courtesy of the Department of Energy and Resources, Mineral Resources Tasmania).

### 1.3 Tenure

EL28/1988 was initially 13 square km and covered the current Avebury and Avebury East Mining leases, with 3M/2003 excised in 2003 and 6M/2007 excised with the delineation of the East Avebury Resource in 2007. In 2013 three tenements EL 28/1998, EL22/1997 and EL37/2003 were amalgamated into a single 25 square km tenement EL 28/1998.

In mid-2017 Dundas Mining Pty Ltd acquired the Avebury Nickel Mine and associated tenements by a friendly take-over of Allegiance Mining Pty Ltd in which name the tenements remain.

The exploration and mining history of this area spans some 140 years, and as expected the tenure progression is suitably complex. In an attempt to clarify the various exploration efforts and their relevance to the current tenement a 'tenement evolution table' has been included below (Table 1.3), and previous tenement diagrams have been included as Appendix 2.

**Table 1.1 Tenement Evolution Table** (Showing the previous exploration licences that have covered areas contained within the current licence EL28/1988)

<b>EL28/1988</b>	<b>EL37/2003</b>	EL48/2007
		EL19/1997
		EL8/1994
		EL6/1992
		EL33/1989
		EL50/1986
		EL19/1986
		EL34/1971
		EL6/1969
		EL7/1968
	<b>EL22/1997</b>	EL13/2012
		EL48/2007
		EL19/1997
		EL6/1992
		EL95/1987
		EL19/1986
		EL5/1983
		EL11/1976
		EL5/1976
		EL7/1968
	<b>EL28/1988</b>	EL13/2012
		EL48/2007
		EL95/1987
		EL19/1986
		EL5/1983
EL11/1976		
EL5/1976		
EL7/1968		

#### **1.4 Exploration focus**

Dundas Mining Pty Ltd have acquired the Avebury nickel + cobalt mine with the full intent to reopen the operation in the near term.

As owners of a fully operational mill designed for nickel and cobalt ores Dundas Mining Pty Ltd's focus on exploration is primarily nickel +/- cobalt mineralisation.

Dundas Mining Pty Ltd is aware of the relationship between nickel + cobalt mineralisation and ultramafic bodies such as that found on EL 28/1988, and gabbros such as those found at the Melba Flats field.

As a mining company Dundas Mining Pty Ltd is also interested in any commodities of commercial value which may be located on EL 28/1988.

## 2.0 Geology

The following is an amalgamation of excerpts of the Trial Harbour and Avebury geology taken from the 2001 Geological Mapping Report by Reid.

“The Ni potential of the Avebury and Trial Harbour area is closely tied to ultramafics, which are interbedded with volumetrically abundant Crimson Creek Formation, comprising a sequence of greywacke and siltstone with minor conglomerate, lithic wacke and massive basalt. Minor gabbro is spatially associated with the ultramafics.”

“The Crimson Creek Formation consists of a turbiditic sequence of volcanoclastic lithic wacke and laminated siltstone and mudstone interbedded with tholeiitic basalt, overlying the Precambrian-aged Success Creek Group with transitional conformity (Brown, 1986).

Brownish to grey medium grained and variably hornfels greywacke and dark grey siltstone units are the most common lithology, with shale and conglomeratic units being volumetrically less abundant. The siltstones are frequently thin bedded, whereas thickly bedded to massive greywacke forms intervals to 40m or more in thickness. These units are very similar to those described by Brown (1986), who reports that throughout the Crimson Creek Formation, the sedimentary units are fairly uniform, immature, turbiditic flows of angular tholeiitic volcanic material intermixed with a non-volcanic component that varies from place to place but is dominated overall by quartz-rich sedimentary rock grains.”

“The Crimson Creek Formation in the Trial Harbour area is generally similar to that at Avebury, although finer sedimentary units are more common in the former area. The greater abundance of finer units in conjunction with rare conglomerates suggest a more distal to source and deeper basinal deposition environment was present at Trial Harbour, compared with Avebury.”

“Ultramafic rocks at Avebury [uncommonly] outcrop over 1.8km of strike, extending outside the are mapped to the west and possibly east.”

“In hand specimen, the ultramafics are typically massive and strongly serpentised with medium to coarse grained equigranular texture evident only locally. In many instances, particularly in Comstock Creek, these units are difficult to identify, either as a result of strong calc-silicate alteration overprint or weathering. In these uncertain cases, factors such as proximity to a conglomerate unit and/or elevated Ni indicate that an ultramafic is likely to be present. Peridotite and dunite have been identified in thin sections from drill core. Low concentrations of sulphide (typically <1%) are present, mostly in the form of pyrrhotite with lesser pentlandite and other nickel sulphides.”

“The ultramafics at Trial Harbour are similar to those at Avebury, although they are more widespread and thicker. Spinifex textures are also more common.”

“The ultramafic flows at Avebury and Trial Harbour may have formed in an oceanic basin rift environment distal to the Crimson Creek Formation source during the early to middle Cambrian. A relatively quiet environment prior to ultramafic [emplacement] is likely considering that the ultramafics are underlain by a significant thickness of siltstone at both Avebury and Trial Harbour.”

“North-south aligned faults are common, particularly in the Avebury Prospect area where a faulted structural corridor is interpreted to extend south from the Tenth Legion area. At Tenth Legion this fault zone forms the ill-defined N-S aligned faulted contact between the Mclvor Hill Gabbro and Precambrian Oonah Formation. Faults of northerly orientation are not readily apparent at Trial Harbour.

An E-W aligned fault traverses the southern margin of the Avebury area, forming the contact between the Crimson Creek Formation and younger Ordovician and Silurian-aged sediments. The Ordovician rock comprise siliciclastic conglomerate (Mt Zeehan Conglomerate correlate), quartz

sandstone and siltstone, as well as limestone (Gordon Limestone equivalent). The Silurian sediments largely comprise quartz sandstone, a correlate of the Crotty Quartzite (Brown et al., 1994). This structure also extends west of the coast at Trial Harbour, where ultramafics and Crimson Creek Formation greywacke are in faulted contact with Precambrian Oonah Formation sandstones and siltstones. The Trial Harbour area is also disrupted by WNW oriented faults, which locally pinch out and separate Cambrian ultramafics and sediments from Silurian sandstone, calcareous siltstone and conglomerate. The Silurian age of the latter rocks is locally confirmed by the inclusion of crinoid trace fossils.

The Heemskirk Granite which outcrops to the north west of Avebury and north of Trial Harbour, is a meta-to per-aluminous body comprising layered biotite granite ('Red' granite) intruded by a sill-like more alkalic biotite-muscovite granite ('White' granite). Crimson Creek Formation sediments at Avebury are commonly hornfels and granite-related calc-silicate, silica-serpentinite and quartz-magnetite alteration is evident, suggesting that the granite underlies the area at depth.

Extensive Quaternary sedimentation is not readily apparent at Avebury, whereas, at Trial Harbour old stranded coastal sand and pebble deposits are evident, along with recent dune sands and alluvium. Isolated alluvium is also evident at elevation, such as on a flat spur on the southern flanks of the hill hosting the Nickel Reward deposit."

### 3.0 Review of Previous Work

Exploration and mining activities within the current tenement (EL28/1988) have been extensive and diverse, with activities dating back to the mid 1870's and encompassing numerous commodities including tin, lead-zinc-silver and nickel. As such, reviewing the history of the area is a complex task. To maximise clarity, chronological tables of activity history have been included in this report. Table 3.1 below comprises a general summary of activity, however a more extensive tabular summary (including references) is included as Appendix 1 and previous tenement location diagrams are included as Appendix 2.

Mount Heemskirk is something of a centrepiece for exploration, prospecting and mining in the area and following the discovery of alluvial tin in its shadow in 1876, the 'Heemskirk tin boom' spearheads activity until its collapse in 1884. Prospecting and small mining operations for lead-zinc-silver follow from 1890, and the first nickel mine in the area – Nickel Reward – reportedly opening soon after in 1900. Tin investigations tentatively continue with Loftus-Hill carrying out an economic evaluation of the area in 1920. Exploration, prospecting and mining for these commodities sporadically continue until the late 1950's when larger companies waded into the fray and apply a broader approach that the progression of technology and a relatively larger budget allows.

Regional geophysical surveys and mapping by Rio Tinto, CRA, EZ and the Mines Department provide the basis for broader geological understanding of the area and localised geochemical surveys and drilling follow. However, these programmes generally tended to focus on lead, zinc, silver, tin and copper in areas previously worked, often omitting nickel.

The 1970's herald a concerted and expansive effort in the Mount Heemskirk and Little Henty River areas by numerous companies that continues for over two decades. Difficult terrain prevent these efforts from being comprehensive, however substantial magnetics, IP, gravity, drainage, soil, auger and rock chip geochemistry, drilling and mapping coverage was achieved. Outside of the outcropping Trial Harbour Ultramafic, nickel was still generally not targeted.

In 1997 Allegiance Metals in joint venture with CRA/Rio Tinto commenced a short program of diamond drilling targeting a strong magnetic anomaly, discovering the Avebury nickel sulphide deposit and definitively adding nickel prospectivity to the broader area. This renewed exploration efforts in the area considerably and in the subsequent decade, Avebury was developed into a working nickel mine in the mid 2000's and a number of other areas prospective for nickel were targeted including Trial Harbour, Fen Creek, Area D/West Avebury, Burbank and Pontiac.

The plummet of nickel prices during the Global Financial Crisis of 2008/2009 resulted in the closure of Avebury mine and the associated halt to all exploration and apart from a small quantity of drilling by MMG in 2010, very little activity has taken place since.

**Table 3.1 Summary of Tenement Activity History**

Year	Activity	Tenement	Company
1876	Discovery		
1879	Mining		WCMC
1884	Market Collapse		
1900	Mining		
1920	Evaluation		Government
	Drilling		
1930	Drilling		Mines Dep
1938	Mine Closure		
1946	Exploration		NBH/BHS
	Geophysics		ZEx

	Drilling		
1947	Mining Report		Government
1954	Mine Opening		
1957	Geophysics		Rio & EZ
	Evaluation	SPL302	
1958	Mapping		Rio
	Geophysics	SPL302	CRA
1960	Mine Closure		
1962	Mapping		Mines Dep
1965	Geochemistry	SPL1	EZ
	Drilling		
1966	Geochemistry		Placer
	Geophysics		
1968	EL7/1968 Granted	EL7/1968	Texins
	Geochemistry		
1969	Drilling	EL7/1968	Geophoto
	Evaluation		
	Geochemistry	SPL22	EZ
	Geophysics	EL7/1968	Texins
		Mapping	SPL22
	Research		
	1970	Geophysics	
EL Relinquished		SPL87	EZ
Geochemistry		EL7/1968	Texins
Drilling			
Evaluation		SPL22	EZ
		EL7/1968	
1971	Drilling	SPL22	Tenneco
			EZ
	Dewatering		Tenneco
	Mapping	EL7/1968	Texins
			Tenneco
	Geochemistry	EL7/1968	Texins
		SPL95	
	EL Modification	EL7/1968	
	Petrology	SPL95	
	Geophysics		
	EL7/1968		
SPL Granted	SPL95		
Gridding	EL7/1968		
1972		EL Modification	
		Geophysics	
	Geochemistry		
	Relinquishment	SPL22	EZ
1973	Geophysics	EL7/1968	Texins/APM
	Gridding		
	Mapping		
	Joint Venture		

	EL Modification			
1974	Geochemistry	SPL129, EL11/1976	MLMRC, Renison, Gold Fields	
	Geophysics			
	Mapping			
	Evaluation			
	Petrology			
1975	Gridding	SPL129	Renison	
	Mapping			
	Geochemistry			
	Geophysics			
	Drilling			
1976	Drilling	EL11/1976		
	Geophysics			
	Geochemistry			
	Evaluation			
1977	Gridding	EL11/1976		
	Geophysics			
	Drilling			
	Geochemistry			
	Mapping			
1978	Research	SPL129		
	Geophysics			
	Geochemistry			
	Mapping	EL4/1978	Amoco	
	EL Granted			
	Geochemistry			
1979	Geophysics	SPL129	Renison	
	Drilling			
	Drilling	EL11/1976		
	Geochemistry	SPL129		
	Mapping	EL4/1978	Amoco	
	Gridding			
	Geochemistry			
	Geophysics			
1980	Drilling	SPL129	Renison	
	Geochemistry	SPL129, EL11/1976		
	Gridding	EL11/1976		
	Drilling			
	Mapping			
	Geophysics			
	1981	Gridding	EL4/1978	Amoco
		Geochemistry		
		Drilling		
		Trenching		
		Geophysics		
Evaluation				
1981	Evaluation	SPL129, EL11/1976	Renison	

	Mapping	EL4/1978	Amoco
	Geophysics		
	Geochemistry		
	Drilling		
	Geochemistry		
	Geophysics		
	Diamond Drilling		
1982	Geophysics	SPL129, EL11/1976	Renison, Mt Lyell, Gold Fields
	Geochemistry		
	Drilling		
	Gridding	EL4/1978	Amoco
	Geophysics		
	Geochemistry		
	Drilling		
Costeans			
1983	Aerial Photography	EL5/1983	Gold Fields
	Drilling	EL11/1976	Renison, Mt Lyell, Gold Fields
	Petrology		
	Geochemistry		
	Geophysics	EL4/1978	Amoco/EZ
	Joint Venture		
	Mapping		
	Evaluation		
	Geochemistry		
	Geophysics		
	Drilling		
	Petrology		
	Costeans		
	Metallurgy		
1984	EL Modification	SPL129, EL11/1976	Gold Fields
	EL Modification	EL11/1976	Renison, Mt Lyell, Gold Fields
	Gridding		
	Geophysics		
	Geochemistry		
	Drilling		
	EL Modification	Amoco/EZ	
	Costeans		
	Geophysics		
	Geochemistry		
	Drilling		
EL Modification	EL4/1978	Amoco/Cyprus/EZ	
Gridding			
Mapping			
Geochemistry			
Geophysics			
Drilling			
Costeans			
Petrology			
Lead Isotopes			
Company Changes			
Submission	EL11/1976	Gold Fields, Mt Lyell, Renison	
Geophysics			
1986	Evaluation	EL4/1978	Amoco/ Cyprus/EZ
1987	Geochemistry	EL19/1986	RW Creasy
	Drilling	EL4/1978	Cyprus/EZ

	Evaluation			
1988	EL Modification			
	Drilling			
	Geochemistry	EL50/1986	NMS (Geopeko?)	
	EL Granted		Duke Of Avram	
1989	EL Modification		Major Mining	
	Geophysics			
1991	Joint Venture		CRAE/Major Mining	
	Evaluation			
1992	Geophysics	EL28/1988		
	Drilling			
	Geochemistry			
1993	Petrology			
	Drilling			
	Geochemistry			
	EL Modification			
1994	Mapping			
	Company Changes			Major Mining/ Allegiance
	Geochemistry		EL28/1988	CRA/Allegiance
	Geophysics			
	Drilling			
	Submission	EL4/1978	Amoco	
1995	Air core Drilling	EL28/1988	CRA/ Allegiance	
1995	Evaluation	EL8/1994 (EL14/1994, EL15/1994)	Allegiance	
	Geochemistry	EL14/1994		
1996	Relinquishment	EL15/1994		
	EL Modification	EL14/1994		
	Research	EL28/1988		CRA/Allegiance
	Geophysics			
1997	Drilling		CRA/Rio	
	Company Changes			
	Petrology	EL28/1988	Allegiance/Rio	
	EL Modification			
	Company Changes			
1998	Evaluation	EL28/1988, EL22/1997	Allegiance	
	Geophysics	EL28/1988		
	EL Extension			
	Access			
	Geophysics			
	Petrology			
	Drilling			
1999	Geochemistry			
	Geophysics			
	Drilling			
	Surveying			
	Petrology			
2000	Mapping	EL28/1988, EL22/1997		
	Geochemistry			
	Petrology	EL28/1988		
	Evaluation	EL28/1988, EL22/1997, EL43/1992		
2001	Evaluation	EL28/1988		
	Geochemistry			

	Evaluation			
	Drilling			
2002	Geophysics		MRT	
	Evaluation	EL28/1988	Allegiance	
	Petrology			
	Drilling			
EL Modification				
2003	Evaluation	3M/2003	Allegiance	
	Application			
	Drilling			
	Submission			SPL129, EL11/1976
2004	Drilling	EL28/1997, EL22/1997	Allegiance	
	Geophysics			
2005	Evaluation	3M/2003		
	Application			
	Petrology			EL22/1997
	Drilling			EL22/1997, 3M/2003
2006	Drilling	EL28/1988, EL22/1997		
	Drilling	EL28/1988		
2007	Drilling	EL22/1997 (EL28/1988, 3M/2003)		
	Evaluation	EL28/1988		
	EL Modification	6M/2007, EL28/1988		
2008	Company Changes			Allegiance/Zinifex
	Company Changes			Zinifex/Oxiana/OZ
	EL Modification	6M/2007, EL28/1988		OZ
	Drilling	EL28/1988		
	Petrology			
2009	Mine Closure	3M/2003		
	Track cutting	EL37/2003		
	Geochemistry			
	Mapping			
	Company Changes		OZ/MMG	
2010	Drilling	EL28/1988	MMG	
	Survey			
2011	Geophysics	EL28/1988, EL22/1997		
	Drilling	EL28/1988		
	Survey			
	Evaluation			
2012	Geophysics	EL37/2003, EL22/1997, EL28/1988		
2013	EL Modification	EL28/1988		
2017	Company Changes	EL28/1988, 3M/2003, 6M/2007		Lottah/MMG

#### **4.0 Exploration completed during the reporting period December 2017 to December 2018**

In the first full year under the new ownership work has consisted of a thorough review of previous exploration and mining activity with over 170 reports downloaded from MRT's website, appraised and summarised.

A summary of exploration over the tenement is given in table 3.1 with a more detailed version in appendix 1. The full list of reports downloaded and appraised is given in the references.

This work has led to the definition of a number of higher priority work programmes which can be carried out in the coming year regardless of the results of the ongoing review. These are detailed in section 5.0.

## **5.0 Discussion**

In the wake of over 140 years of prospecting, mining and exploration in the area of EL28/1988, and with a primary focus on nickel + cobalt prospectivity, there remain a number of targets to explore.

### **Trial Harbour**

The Trial Harbour prospect is comprised of a large magnetic anomaly associated with the Trial Harbour ultramafic beginning on the southern margin of the Heemskirk Granite and with an approximate east-south-east trend. Within this area there are two recorded historic nickel workings: Nickel Reward and Denali. Both lie to the east of the Trial Harbour township. Around 25 drill-holes have been drilled in the immediate area since the 1970's. Various geochemical surveys, mapping and geophysical surveys have also been carried out.

Rock chip geochemistry shows, unsurprisingly, that the Trial Harbour Ultramafic is anomalous for nickel and at least half a dozen of the drill holes in the area have narrow intercepts (generally around 1m) of potentially ore grade nickel.

Further work appears warranted and is expected to include lithological modelling and further diamond drilling. Given the difficult terrain and a desire to be mindful of environmental impacts, helicopter mobilisation of any drilling programs would likely be required.

### **Fen Creek**

The Fen Creek prospect appears to be a south-eastern extension of the Trial Harbour magnetic anomaly, located approximately 2 Km south-south-west of the Avebury deposit. In 2009, 10 Km of gridding was cut, followed by a soil sampling, mapping a rock chip sampling program. This program identified minor anomalous nickel, copper and arsenic with somewhat stronger corresponding chrome and zinc anomalies but appears to have only been partially completed. In the following year, a 428m long diamond hole was drilled in the area but failed to intersect any of the anticipated ultramafic.

Again, further work on this prospect would appear warranted. Further diamond drilling would be optimal, however infill and expansion of the existing soil geochemistry survey (especially to the north-west) may also provide vectoring assistance. Helicopter mobilisation of any programs in this area would likely be required.

### **Burbank**

The Burbank prospect is a roughly south-east trending linear magnetic anomaly which appears to link the Trial Harbour and Fen Creek anomalies. Rock chip sampling and mapping of this prospect were carried out in 2000, and as a result, from 2002 to 2010, 12 holes were drilled.

While Burbank has previously been assessed as less prospective, the mineralised zones intersected to date require further investigation, especially given the extension of the magnetic anomaly they are contained within (and the likely corresponding extension of the ultramafic body) toward the Fen Creek prospect. Modelling of existing data with reference to the Firewood Siding Fault and Ultramafic intercepts followed by further diamond drilling are advisable.

### **West Avebury/Area D**

During the mid to late 1970's this area was explored by Renison and the Mount Lyell Mining and Railway Company for lead-zinc. IP and Magnetics surveys identified a number of semi-discrete anomalies which were followed by soil geochemistry and mapping programmes, culminating with 3 drill holes (TH1-TH3). In 1998 TH3 was re-logged and assayed (with somewhat disappointing results) and in subsequent years a follow-up mapping and rock chip sampling programme was carried out. In 2006 a diamond hole (A154) was drilled to the west of Area D (also known as West

Avebury) targeting the depth extension of the outcropping West Avebury ultramafic unit encountered in previous mapping. A154 intercepted granite at around 500m which was interpreted as having inundated the ultramafic at this depth.

This inundation by the granite at shallower than anticipated depths somewhat reduces the prospectivity of the West Avebury ultramafic units, however shallower drilling investigations of the potential ultramafic extent would still seem advisable.

### **Pontiac**

The Pontiac prospect is a strongly altered ultramafic located to the north of Avebury. It is identifiable in magnetic surveys as sub-linear roughly north trending magnetic peaks. Pontiac has been intersected by 3 drill holes and encountered in surface mapping, however mineralisation appears to be variable and generally of lower grade.

While these initial results are not hugely encouraging, this prospect is still of interest and warrants further investigation (especially given its proximity to existing infrastructure).

## **6.0 Proposed Works Programme 2018/19 year**

EL 28/1988 is highly significant to the long-term future of the Avebury operation and will be a focus of exploration in the coming year.

It is expected that exploration will ramp up considerably once the mine is up and running and a cash flow is generated.

Exploration leading to discoveries made by the Avebury mine's operators have a number of advantages for the State. In particular the threshold for discovery

The review of previous exploration is ongoing however a number of prospects and work programmes have been identified.

Work proposed for the coming year consists of:

- Follow up drilling of anomalous nickel mineralisation intercepts (A223/A223A) in the Trial Harbour/Denali area, with 2 x 200m diamond drill holes proposed.
- Modelling of the Burbank/Trial Harbour magnetic anomalies.
- Consideration of drilling deeper, stratigraphic hole targeting source of magnetic anomaly at Fen Creek along with possible expansion of Fen Creek soil geochemistry grid (Commitment to this will be pending re-opening and production at Avebury Mine).

## 7.0 Expenditure

Exploration expenditure for EL 28/1988 for the period December 2017 to December 2018 was \$16,950 bringing the total to date to \$9,455,356.

	\$
Geology	13,500
Geochemistry	0
Geophysics	0
Remote Sensing	0
Drilling	0
Gridding	0
Land Access	0
Rehabilitation	0
Feasibility Studies	0
Other	2,200
Administration	<u>1,250</u>
Total	16,950

## **8.0 Environmental**

There has been no exploration activity on the tenement and therefore no environmental disturbance. There are believed to be no outstanding liability issues.

## 9.0 References

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**10.0 Appendices**

### Appendix 1. Detailed Tenement Activity Table

Year	Activities	Details	Report #	Tenement	Company
1876	Alluvial tin first discovered in Heemskirk area		74_0988		
1879	Cumberland Hill Mining Begins		74_0988		West Cumberland MC
1879	Founding of West Cumberland Mining Company		74_0988		West Cumberland MC
1884	Tin Boom 'collapses'	"Heemskirk boom" ends	74_0988		
1890 - 1920	Extensive Pb-Zn-Ag Prospecting/Mining	Spray-Nubeena Lodes, Grubb's Lode	85_2315		
1900	Nickel Reward workings opened	2-3 adits, 1 shaft	08_Legge		
1920	Loftus Hill investigation of Tin Values	Economic valuation: 60,000t of proved ore at 1% Sn and 400,00t of probable ore at 1% Sn (No calculations shown)	74_0988		Government
1920 - 1930's	Drilling	Mines Department drilling assistance at Spray, Swansea and North Tasmania prospects/mines	85_2315		
1930	Drilling	2 holes. Beneath West Comet workings	71_0735		Mines Department
1938	Federation Mine Close	Approximate time	02_4673		
1946-1951	Exploration	Oceana Mine area	93_3521, 91_3312		North Broken Hill/Broken Hill South
1946 - 1960	Geophysical Surveys, Drilling	Geophysical surveys were generally unsuccessful, Drilling was near Oceana mine	93_3521, 91_3313		Zeehan Exploration P/L
1947	Mining Report	Spray Mine Focus	47_0095		Government
1954	Re-opening of Oceana		93_3521, 91_3312		
1957	Aeromagnetic survey	Anomalies in Avebury area described by EZ in 1969	08_Legge, 72_0870, 58_0256, 57_0167, 83_1916		Rio & EZ
1957	Geology Report	Renison Prospecting Area	57_0149	SPL302	Rio
1957	Appraisal	Renison Tin Field	57_0145	SPL302	Rio
1958	Regional mapping	Zeehan Area (incl. Tenth Legion)	58_0248		Rio
1958	Regional Geophysics	NW Tasmania	83_1916	SPL302	CRA
1960	Re-Closure of Oceana Mine		93_3521, 91_3312		
1962	Geological Survey Mapping	Zeehan Sheet	08_Legge		Mines Department
1965	Channel Sampling	Sweeney mine area	02_4673	SPL1	EZ
1965	Drilling	THP115, THP117, THP119, THP121, THP123	02_4673	SPL1	EZ
1966 - 1970	Soil Sampling and TURAM EM Survey	Spray mine, Spray-Nubeena lode, Drilling	93_3521, 91_3313, 85_2315		Placer Prospecting P/L
1968	EL7/1968 Granted	2 areas: 117square miles and 17 square miles	74_0988	EL7/1968	Texins Development
1968	Geochemical Survey	Incl. Stream sediments (182 samples) and limited (64 samples) rock and soil sampling. Pb, Zn, Cu, Ag, Mo	74_0988, 68_0504	EL7/1968	Texins Development
1969	Drilling Proposal	Peripatetic Mine	69_0603	EL7/1968	Geophoto
1969	Reconnaissance Report	Sylvester Mine	69_0567	EL7/1968	Geophoto

1969	Soil Geochemistry	Auger	08_Legge, 93_3519, 70_0681, 69_Hackett	SPL22	EZ
1969	Ground Magnetism & VLF	Extensive	08_Legge, 93_3519, 70_0681, 69_Hackett	SPL22	EZ
1969	IP	Extensive. McPhar Geophysics	08_Legge, 70_0681, 70_0657	SPL22	EZ
1969	Mapping		08_Legge, 93_3519, 70_0681	SPL22	EZ
1969	PhD Thesis	Klominsky, J: Regional reconnaissance of the Heemskirk Granite	74_0988		
1969	Drilling	4 holes beneath West Comet workings (drilled by Geophoto)	71_0735		Geophoto
1969	IP	40,000 line feet grid over Sylvester prospect. Austral Exploration Services.	74_0988	EL7/1968	Texins Development
1970	TURAIR EM survey	Oceana area (?)	93_3521, 91_3312		Tenneco P/L
1970	SPL87 Relinquished	Relinquished by EZ	74_0988	SPL87	EZ
1970	Geochemical Survey	Doric Prospect	74_0988	EL7/1968	Texins Development
1970	Geochemical Survey	Sylvester Prospect. Cu, Pb, Zn, Ag, Sn	74_0988	EL7/1968	Texins Development
1970	Diamond Drilling	Sylvester Prospect: Sylvester No. 1	74_0988	EL7/1968	Texins Development
1970	Diamond Drilling	THP136	70_0681	SPL22	EZ
1970	Evaluation Report	Economic Evaluation Report on Pb-Zn-Ag Deposits in Australia	70_0620	EL7/1968	
1971	Drilling	Four drill holes from the number 5 level of the Spray Mine	85_2315		Tenneco P/L
1971	Underground Sampling and Mapping	Spray Mine	85_2315		Tenneco P/L
1971	Dewatering of Spray Mine	Spray Mine	85_2315		Tenneco P/L
1971	Trial Harbour Nickel Prospect removed from EL7/68		74_0988	EL7/1968	Texins Development
1971	Soil Geochemistry	Little Henty River Area: Limited survey, 44 soil samples	74_0988	EL7/1968	Texins Development
1971	Petrology	South Heemskirk samples (17)	74_0988	SPL95	Texins Development
1971	Geochemistry	South Heemskirk: 26 rock samples from dumps and outcrops, then 32 additional samples	74_0988	SPL95	Texins Development
1971	Geophysical Surveys	South Heemskirk. VLF, Magnetometer, Radiometer. 5 traverse lines	74_0988	SPL95	Texins Development
1971	SPL95 Granted	SPL87 granted to Texins as SPL95	74_0988	SPL87, SPL95	Texins Development
1971	Diamond Drilling	11 (?) holes, Trial Harbour: THP163-THP172	08_Legge, 93_3519, 72_0870	SPL22	EZ
1971	Ground Magnetic Survey	Vertical intensity. Trial Harbour Prospect	71_0735	EL7/1968	Texins Development
1971	Soil Geochemistry	Trial Harbour prospect	71_0735	EL7/1968	Texins Development

1971	Mapping	Trial Harbour prospect	71_0735	EL7/1968	Texins Development
1971	Grid Establishment	Trial Harbour prospect	71_0735	EL7/1968	Texins Development
1972	Exchange of EL areas	2 square miles swapped between Texins and Minops P/L	74_0988	EL7/1968	Texins Development
1972	VLF-EM	Tenth Legion: 25m intervals	74_0988	EL7/1968	Texins Development
1972	magnetic Survey	Tenth Legion: 25m intervals	74_0988	EL7/1968	Texins Development
1972	Soil & Rock Geochemistry	Tenth Legion: 19600 line feet grid, 252 soil samples at 25m intervals (Pb-Zn-Ag-Mo-Sn). Limited outcrop: 15 rock samples	74_0988	EL7/1968	Texins Development
1972	Relinquishment		72_0870	SPL22	EZ
1973	Geophysics Report	Airborne EM (Scintrex)	73_0949	EL7/1968	Geophoto
1973	EM Survey	Vertical loop. Sweeney Lode. McPhar Geophysics	74_0988	EL7/1968	Texins/APM
1973	EM Survey	Vertical loop. Phar-Lap (Federation Mine). McPhar Geophysics	74_0988	EL7/1968	Texins/APM
1973	Gridding	Federation Mine area: 4,000 line feet grid	74_0988	EL7/1968	Texins/APM
1973	Gridding	Sweeney: 15,600 line feet grid	74_0988	EL7/1968	Texins/APM
1973	Mapping	Federation	74_0988	EL7/1968	Texins/APM
1973	JV with APM Minerals P/L	South Heemskirk	74_0988	EL7/1968	Texins Development
1973	Partial Relinquishment of EL7/68	9 square miles (North Heemskirk)	74_0988	EL7/1968	Texins Development
1973	Incorporation of SPL95 into EL7/68		74_0988	SPL95, EL7/1968	Texins Development
1974	Sampling	Tenth Legion	75_1114	SPL129	MLMRC/Renison
1974	IP	Area D. Scintrex	08_Legge, 75_1114	SPL129	Renison/MLMRC
1974	Magnetic Survey	Ground Magnetics, Area D	08_Legge, 75_1114	SPL129	Renison/MLMRC
1974	Mapping	Sn, Pb-Zn focus	08_Legge, 85_2323	SPL129, EL11/1976	Renison/ Gold Fields
1974	Mapping	Area D	75_1114	SPL129	MLMRC/Renison
1974	Soil Geochemistry	Area D	75_1114	SPL129	MLMRC/Renison
1974	Rock chip Geochemistry	Sn, Pb-Zn focus, no Ni assays (?)	08_Legge, 85_2323	SPL129, EL11/1976	Renison/ Gold Fields
1974	Summary and Recommendation Report		74_1031	SPL129	MLMRC/Renison
1974	Petrology	Fander	08_Legge, 74_1040	SPL129	Renison
1974	Geophysical Report	Irvine, JL	74_1040	SPL129	MLMRC/Renison
1974	Evaluation of Previous Work		74_1040	SPL129	MLMRC/Renison
1975	Mapping	Area D	76_1173	SPL129	Renison
1975	Soil Geochemistry	Area D. C-horizon samples at 30.5m intervals (continuation of earlier commenced programme?)	76_1173	SPL129	Renison
1975	Ground Magnetics Survey	Area D	76_1173	SPL129	Renison
1975	INPUT EM	Geoterrex flew the Barringer system on test lines NS in limited survey of SPL129 etc. (South Comstock?)	08_Legge, 93_3521, 91_3313, 85_2315, 75_1114	SPL129	Renison

1975	Ground Magnetism	South Comstock: 2 traverse lines	76_1173	SPL129	Renison
1975	Soil Geochemistry	South Comstock: 2 traverse lines	76_1173	SPL129	Renison
1975	Line Cutting	South Comstock: 2 traverse lines	76_1173	SPL129	Renison
1975	Diamond Drilling	TH1 (Area D ?)	75_1114	SPL129	MLMRC/Renison
1976	Diamond Drilling	TH2 (Area D)	77_1236	SPL129	Renison
1976	Ground Magnetism Survey	Area D	77_1236	SPL129	Renison
1976	Soil Geochemistry	Area D. C-horizon samples at 25m intervals on 2 lines (?)	77_1236	SPL129	Renison
1976	Report	Federation Mine Area	76_1163	EL11/1976	Renison
1977	Gradient Array IP	Federation Plateau Area. Scintrex	78_1283, 78_1270	EL11/1976	Renison
1977	Grid Establishment	Federation: 30 line Km	78_1283	EL11/1976	Renison
1977	Diamond Drilling	Sweeney's Mine Area	78_1283, 77_1240	EL11/1976	Renison
1977	Sampling	Old Workings Sweeney's	77_1240	EL11/1976	Renison
1977	Mapping	Sweeney's Mine Area (Federation)	77_1240	EL11/1976	Renison
1978	Geophysics Report	Sweeneys mine area	78_1259	EL11/1976	Renison
1978	Masters Thesis	South Heemskirk Tin Field	78_1284	EL11/1976	Renison
1978	Proton Ground Magnetism survey	Federation Plateau (same reference as East Heemskirk Proton Ground Mag Survey in 1979 or different?)	79_1371	EL11/1976	Renison
1978	Ground Magnetism Survey	East Heemskirk Grid	78_1300	SPL129	Renison
1978	IP	Pole-dipole over E Heemskirk area by Scintrex	08_Legge, 78_1300, 78_1263	SPL129	Renison
1978	Soil Geochemistry	East Heemskirk Grid by Ashton Exploration	78_1300	SPL129	Renison
1978	Mapping	East Heemskirk Grid	78_1300	SPL129	Renison
1978	Semi-Regional Stream Sediment Sampling Program	Concentrated on limestone block covered by Badger Valley Grids (Rose Valley, Baura, Greives and Myrtle) and Austral-Oceana Grids	93_3521, 91_3312	EL43/1978	Amoco
1978	Photogeological Study	Heemskirk Granite	78_1299, 78_1283	EL11/1976	Renison
1978	Geochemistry	North Austral/Maxim Grid	88_2828	EL4/1978	Amoco
1978	Gradient Array IP	North Austral/Maxim Grid	88_2828	EL4/1978	Amoco
1978	Roving Loop PEM	North Austral/Maxim Grid	88_2828	EL4/1978	Amoco
1978	Geochemistry	Austral Grid	88_2828	EL4/1978	Amoco
1978	Gradient Array IP	Austral Grid	88_2828	EL4/1978	Amoco
1978	Roving Loop PEM	Austral Grid	88_2828	EL4/1978	Amoco
1978	Geochemistry	Grieve Grid	88_2828	EL4/1978	Amoco
1978	Geophysics	Grieve Grid - chargeability	88_2828	EL4/1978	Amoco
1978	Geochemistry	Myrtle Grid	88_2828	EL4/1978	Amoco
1978	Geochemistry	Oceana Grid	88_2828	EL4/1978	Amoco
1978	Gradient Array IP	Oceana Grid	88_2828	EL4/1978	Amoco
1978	Roving Loop PEM	Oceana Grid	88_2828	EL4/1978	Amoco
1978	Magnetism	Oceana Grid	88_2828	EL4/1978	Amoco
1978	EL4/78 Granted to Amoco		89_2980	EL4/1978	Amoco
1979	Proton Ground Magnetism survey	East Heemskirk Grid	08_Legge, 79_1378	SPL129	Renison
1979	Diamond Drilling	TH3, Area D	79_1378	SPL129	Renison
1979	Diamond Drilling	SWY18, Sweeneys	79_1371	EL11/1976	Renison
1979	Soil Sampling	East Heemskirk Grid. Hand-held Auger. 25m intervals	79_1378	SPL129	Renison
1979	Mapping	East Heemskirk Grid	79_1378	SPL129	Renison
1979	Grid Extension	East Heemskirk Grid	79_1378	SPL129	Renison
1979	Diamond Drilling	Federation Plateau: FED1-FED6	79_1371	EL11/1976	Renison

1979	Geochemistry	South Oceana	88_2828	EL4/1978	Amoco
1979	Dipole-dipole IP	Oceana Grid	88_2828	EL4/1978	Amoco
1979	DIGHEM	Oceana Grid	88_2828	EL4/1978	Amoco
1979	Large Loop PEM	Oceana Grid	88_2828	EL4/1978	Amoco
1979	Diamond Drilling	Oceana North and South (ZT-79-2 and ZT-80_4)	88_2828	EL4/1978	Amoco
1979	Diamond Drilling	Austral Grid: 3 holes	88_2828	EL4/1978	Amoco
1979	Soil Sampling	Myrtle Grid Extension sampling	88_2828	EL4/1978	Amoco
1979	Grid Extension	Myrtle Grid	88_2828	EL4/1978	Amoco
1979	Grid Establishment	Baura Grid	88_2828	EL4/1978	Amoco
1980	Gradient Array IP	Globe Grid. By Scintrex	81_1629, 81_1550	SPL129	Renison
1980	Soil Geochemistry	Agnew Grid	81_1629	SPL129, EL11/1976	Renison
1980	Gradient Array IP	East Heemskirk Grid, Scintrex	80_1492, 80_1420	SPL129	Renison
1980	Diamond Drilling	East Heemskirk Grid: TH4, TH5, TH6	80_1492	SPL129	Renison
1980	Diamond Drilling	Federation Grid: FED7, FED8, FED9, FED10, FED11, FED12	80_1466	EL11/1976	Renison
1980	Mapping	Federation Grid Extension	80_1466	EL11/1976	Renison
1980	Magnetic Survey	Federation Grid Extension	80_1466	EL11/1976	Renison
1980	Gradient Array IP	Federation Grid Extension. Scintrex	80_1466, 80_1431	EL11/1976	Renison
1980	Grid Extension	Federation Grid	80_1466	EL11/1976	Renison
1980	Bedrock Geochemistry Sampling	Oceana Grid	88_2828	EL4/1978	Amoco
1980	Trenching	Oceana Grid	88_2828	EL4/1978	Amoco
1980	Gravity Survey	Oceana Grid	88_2828	EL4/1978	Amoco
1980	Down-hole EM	Oceana Grid	88_2828	EL4/1978	Amoco
1980	Diamond Drilling	Oceana Grid: Four Holes (incl. ZT-80-7, ZT-80-9)	88_2828	EL4/1978	Amoco
1980	Bedrock Geochemistry Sampling	Austral Grid	88_2828	EL4/1978	Amoco
1980	Trenching	Austral Grid	88_2828	EL4/1978	Amoco
1980	Gravity Survey	Austral Grid	88_2828	EL4/1978	Amoco
1980	Gridding	Austral Grid	88_2828	EL4/1978	Amoco
1980	Geochemistry	North Austral/Maxim Grid (Montagu Workings)	88_2828	EL4/1978	Amoco
1980	Gravity Survey	North Austral/Maxim Grid	88_2828	EL4/1978	Amoco
1980	PEM	North Austral/Maxim Grid	88_2828	EL4/1978	Amoco
1980	Grid Extension	North Austral/Maxim Grid	88_2828	EL4/1978	Amoco
1980	Grid Extension	Nubeena, Pyramid, Myrtle, Myrtle Extended, Grieve, Baura, Rose Valley Grids Extended	88_2828	EL4/1978	Amoco
1980	Summary of Work	Ocean prospect (R. Curtis) work carried out from 1947-1950	88_2828	EL4/1978	Amoco
1981	Evaluation of Geophysics	Federation Grid (by Mitre Geophysics)	81_1590	EL11/1976	Renison
1981	Mapping	Detailed mapping of the eastern end of SPL129 by R. Poltock	85_2315, 82_1827	SPL129	Renison
1981	Dipole-dipole IP	Line 1700W of Federation area	82_1827	SPL129, EL11/1976	Renison
1981	Geochemical Bedrock Survey	Waxman and Westons Area and line 1700W of Federation Grid. 105 samples on a 25x25m grid. Hand-held power auger	82_1827	SPL129, EL11/1976	Renison
1981	Geophysics Report	Waxman & Westons Prospect. Scintrex: IP (dipole-dipole & gradient array)	81_1515	EL11/1976	Renison

1981	Magnetometer Survey	Agnew Grid (finished remainder of survey started in 1980)	82_1827, 82_1749	SPL129, EL11/1976	Renison
1981	Soil Geochemistry	Globe Grid, B-horizon at 30m intervals	82_1827	SPL129	Renison
1981	IP	Globe Grid: Gradient array extension, then dipole-dipole on selected lines. By Mitre Geophysics	82_1827, 82_1750	SPL129	Renison
1981	Diamond Drilling	West Federation: FED14-16, Federation: FED5, FED6, FED12, FED17, FED18	81_1629	EL11/1976	Renison
1981	IP	Federation Grid: Detailed gradient array and dipole-dipole IP by Scintrex	81_1629, 81_1514	EL11/1976	Renison
1981	Ground Magnetics	Ground Magnetics by Scintrex	81_1629	EL11/1976	Renison
1981	Soil Geochemistry	Sweeneys mine area	81_1629	EL11/1976	Renison
1981	Rock Chip Geochemistry	Globe Mine Adits	81_1629	SPL129	Renison
1981	Mapping	Globe Mine Adits	81_1629	SPL129	Renison
1981	Ground Magnetics	Globe Grid, Agnew Grid	81_1629	SPL129	Renison
1981	Soil Geochemistry	Austral Grid: infill sampling	88_2828	EL4/1978	Amoco
1981	Channel Sampling	Austral Grid	88_2828	EL4/1978	Amoco
1981	Gravity Survey	Austral Grid: infill	88_2828	EL4/1978	Amoco
1981	Density Testing	Austral Drill core	88_2828	EL4/1978	Amoco
1981	Diamond Drilling	Austral Grid:7 holes (incl. ZT-81A-6)	88_2828	EL4/1978	Amoco
1981	Soil Geochemistry	Nubeena Grid	88_2828	EL4/1978	Amoco
1981	Rock Chip Geochemistry	Nubeena Grid	88_2828	EL4/1978	Amoco
1981	Gravity Survey	Nubeena Grid	88_2828	EL4/1978	Amoco
1981	PEM survey	Nubeena Grid	88_2828	EL4/1978	Amoco
1981	PEM survey	North Austral Grid (Montagu Workings)	88_2828	EL4/1978	Amoco
1981	Rock-Chip Geochemistry	Pyramid Grid	88_2828	EL4/1978	Amoco
1981	Gravity Survey	Pyramid Grid	88_2828	EL4/1978	Amoco
1981	Bedrock Geochemistry Sampling	Myrtle Grid	88_2828	EL4/1978	Amoco
1981	Gravity Survey	Myrtle Grid	88_2828	EL4/1978	Amoco
1981	Gravity Survey	Myrtle to Rose Valley (incl. Grieve and Baura)	88_2828	EL4/1978	Amoco
1981	Gravity Survey	Sassafrass Grid	88_2828	EL4/1978	Amoco
1982	Aeromagnetic survey	Stonehenge area SW of Zeehan. Large anomaly identified	08_Legge, 93_3521, 91_3313	SPL129, EL11/1976	Renison
1982	EM survey	Stonehenge area SW of Zeehan	08_Legge, 93_3521, 91_3313	SPL129, EL11/1976	Renison
1982	Bedrock Geochemistry Sampling	Stonehenge	08_Legge, 93_3521, 91_3313, 83_2052	SPL129, EL11/1976	Renison, Mt Lyell
1982	Ground Magnetics Survey	Stonehenge	93_3521, 91_3313, 85_2315, 83_2052	SPL129, EL11/1976	Renison, Mt Lyell
1982	Gradient Array IP	Stonehenge	93_3521, 91_3313, 85_2315, 83_2052	SPL129, EL11/1976	Renison, Mt Lyell
1982	VLF EM	Stonehenge	85_2315, 83_2052	SPL129, EL11/1976	Gold Fields
1982	DIGHEM	Stonehenge area SW of Zeehan	08_Legge, 93_3521, 91_3313, 85_2315,	SPL129, EL11/1976	Renison

			83_2052, 82_1887		
1982	Drilling	Globe Mine area: 2 holes, TH10-TH11	83_2052	SPL129	Gold Fields
1982	Downhole Geophysics	Three array DH surveys on DDH FED-20 to FED-23	82_1861		Renison
1982	Diamond Drilling	Federation: FED19	82_1827	SPL129, EL11/1976	Renison
1982	Soil Geochemistry	Agnew Grid infill sampling. B horizon at 30m intervals	82_1827	SPL129, EL11/1976	Renison
1982	IP	Gradient and dipole-dipole arrays over Agnew Grid	82_1827, 82_1666	SPL129, EL11/1976	Renison
1982	Diamond Drilling	Four holes on Agnew Grid: FED20-FED23	82_1827	SPL129, EL11/1976	Renison
1982	Diamond Drilling	Globe Grid: TH7, TH8, TH9	82_1827	SPL129	Renison
1982	Airborne EM Survey	By DIGHEM Ltd over Waxman & Westons, Sweeneys (Federation Grid) and eastern end of SPL129	82_1827, 82_1770	SPL129, EL11/1976	Renison
1982	Airborne Magnetics Survey	by Mitre Geophysics	88_2828, 83_1943	EL4/1978	Amoco
1982	Magnetics Survey	Myrtle to Rose Valley (incomplete - equipment malfunction)	88_2828, 83_1943	EL4/1978	Amoco
1982	Geochemistry	Myrtle to Rose Valley	88_2828, 83_1943	EL4/1978	Amoco
1982	Grid Extension	Myrtle to Rose Valley (infill lines)	88_2828, 83_1943	EL4/1978	Amoco
1982	Geochemistry	Nubeena	88_2828, 83_1943	EL4/1978	Amoco
1982	Ground Magnetics Survey	Nubeena	88_2828	EL4/1978	Amoco
1982	Diamond Drilling	Nubeena: 1 hole (+ mag sus)	88_2828, 83_1943	EL4/1978	Amoco
1982	Down-hole Geophysics	Oceana. SiroteM and Gamma density (ZT-82-10a and ZT-82-11)	88_2828, 83_1943	EL4/1978	Amoco
1982	Diamond Drilling	Oceana: 5 holes (incl. ZT-81-11, ZT-82-12)	88_2828, 83_1943, 82_1800	EL4/1978	Amoco
1982	EM-37 Survey	Oceana	88_2828, 83_1943	EL4/1978	Amoco
1982	Trenching	Geochemistry. Oceana	88_2828, 83_1943	EL4/1978	Amoco
1982	Down-hole Geophysics	Oceana Grid holes: SiroteM (ZT-80-7 and ZT-80-9), DH Gamma, mag sus	88_2828, 82_1800	EL4/1978	Amoco
1982	Diamond Drilling	Oceana Grid: ZT-80-9	88_2828	EL4/1978	Amoco
1982	Down-hole Geophysics	Austral Grid holes: SiroteM, DH Gamma, Density	88_2828, 82_1800	EL4/1978	Amoco
1982	Ground Magnetics Survey	Austral Grid	88_2828	EL4/1978	Amoco
1982	Diamond Drilling	Austral Grid	88_2828, 83_1943, 82_1800	EL4/1978	Amoco
1982	Rock-Chip Geochemistry	North Austral	88_2828, 82_1800	EL4/1978	Amoco
1982	Ground Magnetics Survey	Nubeena Grid	88_2828	EL4/1978	Amoco
1982	Grid Extension	Nubeena Grid	88_2828, 82_1800	EL4/1978	Amoco
1983	Bedrock Geochemistry Sampling	Pyramid Grid	88_2828, 84_2104	EL4/1978	Amoco/EZ
1983	Mapping	Myrtle to Rose Valley (Badger River Grids)	88_2828, 84_2104	EL4/1978	Amoco/EZ

1983	Bedrock Geochemistry Sampling	Myrtle to Rose Valley (Badger River Grids)	88_2828, 84_2104	EL4/1978	Amoco/EZ
1983	Ground Magnetism Survey	Myrtle to Rose Valley (Badger River Grids)	88_2828, 84_2104	EL4/1978	Amoco/EZ
1983	EIP Survey	North Austral	88_2828, 84_2104	EL4/1978	Amoco/EZ
1983	Drilling	North Austral (ZMG 249 and 249A, ZMG 252)	88_2828, 84_2104	EL4/1978	Amoco/EZ
1983	Petrology	Stonehenge	83_2052	SPL129	Gold Fields
1983	Drilling	TH12	93_3521, 91_3313, 85_2315, 83_2052	SPL129, EL11/1976	Renison, Mt Lyell
1983	Geophysics Report	Agnew Grid	83_2051	EL11/1976	Gold Fields
1983	Aerial Photograph Investigation Report	Beach Sands, Little Henty area	83_1992	EL5/1983	Gold Fields
1983	Bedrock Geochemistry Sampling	Federation Grid	83_2025	EL11/1976	Gold Fields
1983	Down-hole Geophysics	Federation Grid	83_2025	EL11/1976	Gold Fields
1983	Diamond Drilling	Federation Grid	83_2025	EL11/1976	Gold Fields
1983	Ground Geophysics	Federation Grid	83_2025	EL11/1976	Gold Fields
1983	Stream Sediment Sampling	Regional Program (152 Samples). Pb-Zn-Cu-Ag-Au-Sn-Ni-Cr	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Geophysics Review	Regional	88_2828	EL4/1978	Amoco/EZ
1983	Rock-Chip Geochemistry	Pyramid	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Bedrock Geochemistry Sampling	Myrtle/Grievies Grids	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Petrology	Nubeena	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Rock-Chip Geochemistry	Nubeena (including Ni)	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Geochemistry	Oceana Grid infill costeans	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Diamond Drilling	Oceana (2 holes)	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Petrography	Oceana	88_2828, 83_2024	EL4/1978	Amoco/EZ
1983	Metallurgy	Oceana	88_2828, 83_2024	EL4/1978	Amoco(Cypress)/EZ
1983	JV with EZ		89_2980	EL4/1978	Amoco/EZ
1984	Amalgamation of EL & SPL	Amalgamation of EL11/76 & SPL129	85_2315	SPL129, EL11/1976	Gold Fields
1984	Relinquishment	Relinquishment of western 44 square kilometres of EL11/76 by Gold Fields	85_2323	EL11/1976	Gold Fields
1984	Ground surveys	Stonehenge Grid	85_2315	EL11/1976	Gold Fields
1984	Stream Sediment Sampling	Stonehenge Grid	85_2315	EL11/1976	Gold Fields
1984	Down-hole EM	TH17 using SIROTEM	93_3521, 91_3313	SPL129, EL11/1976	Renison, Mt Lyell
1984	Drilling	TH17 (NNW Sunshine Mine)	93_3521, 91_3313	SPL129, EL11/1976	Renison, Mt Lyell
1984	UTEM survey	1984-1986 Follow up on EM37 (Grubbs workings?)	93_3521, 91_3313	SPL129, EL11/1976	Renison, Mt Lyell
1984	EM 37 survey	1984-1986 (Grubbs workings?)	93_3521, 91_3313	SPL129, EL11/1976	Renison, Mt Lyell
1984	Stream Sediment Sampling	North of Globe mine	85_2323	EL11/1976	Gold Fields
1984	Gradient Array IP	on west coast to Sweeneys grid (west Agnew grid?)	85_2323, 85_2315	EL11/1976	Gold Fields

1984	Soil Geochemistry	on west coast to Sweeneys grid (west Agnew grid?)	85_2323, 85_2315	EL11/1976	Gold Fields
1984	Gridding	Grid establishment between Sweeneys and the west coast (west Agnew grid?)	85_2323, 85_2315	EL11/1976	Gold Fields
1984	Stream Sediment Sampling	In the vicinity of the Little Henty Riv.	85_2315	EL11/1976	Gold Fields
1984	Drilling	Stonehenge Grid: TH13 (NNE Sunshine Mine), TH14 (NNE Tasmanian Mine), TH15 (NNE Sunshine Mine), TH16 (E Spray Mine)	93_3521, 91_3313, 85_2315	SPL129, EL11/1976	Renison, Mt Lyell (Gold Fields)
1984	Stream Sediment Sampling	Little Henty	84_2158	EL5/1983	Gold Fields
1984	Relinquishment	Partial Relinquishment North Western 55km2	84_2146	EL11/1976	Gold Fields
1984	Costeans	Pyramid	88_2828, 84_2208	EL4/1978	Amoco/EZ
1984	Down-hole Geophysics	North Austral: DH Sirotem	88_2828, 84_2208	EL4/1978	Amoco/EZ
1984	Wacker Sampling	Badger River Grids (Myrtle & Grieves)	88_2828, 84_2208	EL4/1978	Amoco/EZ
1984	Costeans	Badger River Grids (Myrtle & Grieves)	88_2828, 84_2208	EL4/1978	Amoco/EZ
1984	Diamond Drilling	Badger River Grids (Myrtle: ZM1003 & Grieves: ZG1001, ZG1002)	88_2828, 84_2208	EL4/1978	Amoco/EZ
1984	Geophysics	Trial GENIE EM. Badger River Grids (Myrtle and Grieves)	88_2828, 84_2208	EL4/1978	Amoco/EZ
1984	Partial Relinquishment	Reduction from 208km2 to 123km2	89_2980	EL4/1978	Amoco/EZ
1985	Mapping & Petrology	Badger River Grids (extensions)	88_2828, 86_2547	EL4/1978	Amoco/Cyprus/EZ
1985	Wacker Sampling	Myrtle, Grieves, Baura	88_2828, 86_2547	EL4/1978	Amoco/Cyprus/EZ
1985	Ground Magnetics	Badger River Grids (extensions)	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	UTEM survey	Myrtle, Grieves, Baura	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Drilling	Grieves (Winkie Drilling: 12 holes)	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Ground Magnetics Survey	Professor Grid	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Gridding	Professor Grid	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Wacker Sampling	Baura Grid	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Costeans	Baura Grid	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Costeans	Rose Valley Grid	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Petrology	Oceana	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Lead Isotopes	Oceana	88_2828	EL4/1978	Amoco/Cyprus/EZ
1985	Amoco's title and interest transferred to Cyprus Minerals		89_2980	EL4/1978	Amoco/Cyprus
1985	Geophysics	Gradient Array IP, Dipole-dipole IP, Magnetics around Globe workings by Mitre Geophysics	85_2363	SPL129	Renison
1985	Wacker Sampling	Myrtle, Baura and Rose Valley	88_2828	EL4/1978	Amoco/EZ
1985	Drilling	Myrtle, Baura and Rose Valley: "Winkie" Drilling	88_2828	EL4/1978	Amoco/EZ
1985	Diamond Drilling	Badger River Grids (ZB1004-ZB1008)	88_2828	EL4/1978	Amoco/EZ
1985	Wacker Sampling	Pyramid	88_2828, 86_2547	EL4/1978	Amoco/EZ
1985	Drilling	Pyramid: "Winkie" drilling (7 holes)	88_2828, 86_2547	EL4/1978	Amoco/EZ
1985	Submission of Transparency data for relinquished areas of EL11/79 & SPL129		85_2426	SPL129, EL11/1976	Gold Fields
1986	Exploration Summary	Gordon Limestone areas	88_2828, 86_2547	EL4/1978	Amoco/Cyprus/EZ

1987	Stream Sediment Sampling	Au/PGMs (beach sands?) focus, Fen Creek area. (nb: osmiridium & gold grains identified in panned concentrates)	08_Legge, 88_2874, 87_2715	EL19/1986	RW Creasy
1987	Diamond Drilling	Grieve Siding (7 planned holes)	88_2828, 87_2699	EL4/1978	Amoco/Cyprus/EZ
1987	Review	Queensbury Mine	88_2828, 87_2699	EL4/1978	Amoco/Cyprus/EZ
1988	EL28/1988 Granted to Duke of Avram		08_Legge	EL28/1988	
1988	Hand Auger Drilling	17 shallow holes. Rutile/zircon (mineral sands) focus	88_2803	EL50/1986	National Mineral Sands Pty Ltd (Geopeko?)
1988	Partial Relinquishment	Large area (including Fen Creek, Baura, Rose Valley, Myrtle) relinquished from EL4/78	89_2980	EL4/1978	Cyprus/EZ
1988	Diamond Drilling	5 Drill holes on Grieves Grid Area (ZG1009-ZG1013)	89_2980	EL4/1978	Cyprus/EZ
1989	Geophysical Surveys	by Scintrex (Howland-Rose) for Comstock style Zn-Pb-Ag. Gradient array IP, SP & Res (between South Comstock and Tasmanian workings).	08_Legge, 93_3519, 90_3204	EL28/1988	CRAE/Major Mining
1989	Consolidation and transfer of EL to Major Mining	consolidation: EL28/88, 8/89, 5/89, 13/89	08_Legge, 90_3204	EL28/1988	Major Mining
1991	Data Review		98_4136, 94_3655	EL28/1988	CRAE/Major Mining/(Rio?)
1991	JV with CRAE		08_Legge, 98_4138	EL28/1988	CRAE/Major Mining
1992	IP	dipole-dipole IP at Stonehenge: identified chargeable conductor exceeding 1km strike length, coincident with mapped black shale	98_4136, 94_3655	EL28/1988	CRAE/Major Mining/(Rio?)
1992	Ground Magnetics Survey	Stonehenge	92_3398	EL28/1988	CRA/Allegiance
1992	Diamond Drilling	Stonehenge: 3 holes (DD92ZS1-S3)	93_3519	EL28/1988	CRA/Allegiance
1992	Soil Sampling	Stonehenge: Pb-Zn anomalous. 25m spacing along IP traverse or 10m spacing over prev anomalies.	98_4136, 94_3655, 92_3398	EL28/1988	CRA/Allegiance
1992	Wacker Sampling	Stonehenge: 10m spacing along line 11900E	92_3398	EL28/1988	CRA/Allegiance
1992	Rock Chip Geochemistry & Lead Isotope work	Stonehenge: 31 samples (old workings incl. Grubbs, Sunshine, Swansea, Nubeena, Comstock)	92_3398	EL28/1988	CRA/Allegiance
1992	Soil Sampling	Avebury: Zn-Pb-Cu-As anomalous. 50x25m intervals (total 177 samples)	98_4136, 93_3519	EL28/1988	CRAE/Major Mining/(Rio?)
1992	Soil Sampling	Avebury: hand-augered, C-horizon soils 200x25m intervals over 1400x400m area	92_3398	EL28/1988	CRA/Allegiance
1992	Rock Chip Geochemistry	Trial Harbour: 3 samples of outcropping serpentinised dunite	92_3398	EL28/1988	CRA/Allegiance
1993	Petrology/Mineralogical Studies	Rock Chip and Core samples Trial Harbour	93_3519	EL28/1988	Allegiance/CRAE
1993	Diamond Drilling	9 shallow holes east of TH and the old Ni Reward workings. (DD93ZT1-9)	08_Legge, 98_4136, 93_3519	EL28/1988	CRAE/Major Mining/(Rio?)
1993	Diamond Drilling	Stonehenge: 3 holes, low grade Zn min	98_4136, 94_3655	EL28/1988	CRAE/Major Mining/(Rio?)
1993	Soil Sampling	Infill sampling at Avebury	98_4136, 94_3655	EL28/1988	CRAE/Major Mining/(Rio?)
1993	Rock Sampling	East of TH and the old Ni Reward workings.	08_Legge, 98_4136	EL28/1988	CRAE/Major Mining/(Rio?)
1993	Air-core Drilling	Myrtle: 63 holes	94_3655	EL28/1988	CRA/Allegiance

1993	Air-core Drilling	Pyramid: 30 holes	94_3655	EL28/1988	CRA/Allegiance
1993	Wacker Sampling	Firewood Siding: elevated Zn	94_3655, 93_3519	EL28/1988	CRA/Allegiance
1993	Soil/Rock Sampling	Trial Harbour: elevated Ni. Western half of UM at 100x25m spacing (+Adit chip sampling)	94_3655	EL28/1988	CRA/Allegiance
1993	Reduction in size of EL28/88	From 129km2 to 65km2	94_3655	EL28/1988	CRA/Allegiance
1994	Mapping	Re-mapping of Zeehan 1:50,000 geology	08_Legge		MRT
1994	Soil Sampling	Single line across mag anomaly at Avebury. Hand Augered C-horizon samples at 25m intervals (67 samples total)	98_4136, 94_3655	EL28/1988	Allegiance/CRAE
1994	Magnetometry	Single line across mag anomaly at Avebury	98_4136, 94_3655	EL28/1988	Allegiance/CRAE
1994	Drilling	Myrtle: Air-core (121 RC holes: 1876m) & diamond (3 holes: 361.4m)	94_3655	EL28/1988	Allegiance/CRAE
1994	Air-core Drilling	Pyramid: 32 holes (RC)	94_3655	EL28/1988	Allegiance/CRAE
1994	Rock sampling	Myrtle	94_3655	EL28/1988	Allegiance/CRAE
1994	Re-Logging, Re-assaying	Myrtle: old EZ core	94_3655	EL28/1988	Allegiance/CRAE
1994	Allegiance Mining NL purchases Major Mining		08_Legge, 98_4138	EL28/1988	Allegiance/CRAE
1994	Submission of Transparency data for relinquished areas of EL4/1978	Geology mapping, Soil geochemical sampling etc for Myrtle, Pyramid, North Austral, Nubeena, Rose Valley, Baura, Greives etc	94_3618	EL4/1978	Amoco
1995	Air core Drilling	Stonehenge	98_4136	EL28/1988	Allegiance/CRAE
1995	Geoelectrical Investigation		95_3740	EL8/1994 (EL14/1994 & EL15/1994)	Allegiance
1995	Soil and Rock Chip sampling	widely spaced sampling. Assays to Russia	96_3926, 95_3740	EL14/1994	Allegiance
1996	Soil Sampling	follow-up on 1995 survey	96_3926	EL14_1994	Allegiance
1996	Honours Project	Stonehenge: The Geology and Mineralisation of the Stonehenge Prospect, Zeehan, Tasmania. Mark Upton	98_4136, 97_3958	EL28/1988	Allegiance/CRAE
1996	Aeromagnetic survey	Targeting Gordon Limestone basement. 2500km heli survey, 60m line spacing. 30m height by UTS	08_Legge, 97_3958, 96_3902	EL28/1988	Allegiance/CRAE
1996	Relinquishment		96_3927	EL15/1994	Allegiance
1996	Partial Relinquishment		96_3927	EL14/1994	Allegiance
1997	Rio withdrew equity	Exchange of equity for a royalty	08_Legge	EL28/1988	Allegiance
1997	CRAE 'rationalised' into Rio Tinto		08_Legge	EL28/1988	Allegiance/Rio
1997	Partial relinquishment of EL28/88	reduced in size by 55%	98_4138	EL28/1988	Allegiance/Rio
1997	Petrology	Ashley: low sulphide content and mineralogy of niccolite-millerite-pyrrhotite-gersdorffite indicated Heemskirk fluids	08_Legge, 98_4136	EL28/1988	Allegiance/CRAE
1997	Diamond Drilling	Targeting strong mag anomaly. "Nickel discovery holes": ZA001-ZA003	08_Legge, 98_4183, 98_4136	EL28/1988	Allegiance/CRAE
1998	IP	Ground gradient array IP	08_Legge, 99_4386	EL28/1988	Allegiance
1998	Petrology	A001	99_4386	EL28/1988	Allegiance
1998	Access Road Development	2Km of access road from Trial Harbour Road	99_4386	EL28/1988	Allegiance

1998	Prospectivity Report	McKeown	98_4184	EL28/1988, EL22/1997	Allegiance
1998	EL extension support Report	Newnham	98_4182	EL28/1988	Allegiance
1998	Diamond Drilling Report	McKeown	98_4183	EL28/1988	Allegiance
1998	Aeromagnetic survey	UTS Geophysics flew Trial Harbour survey. NS lines, 50m line spacing, 50m height (squirrel AS-350B helicopter), GPS controlled	08_Legge, 98_4229, 98_4189	EL28/1988, EL22/1997	Allegiance
1998	Re-Logging, Re-assaying	TH1-TH3	98_4189	EL22/1997	Allegiance
1998	Diamond Drilling	A001-A002 (intersected Central Avebury)	08_Legge, 98_4229, 98_4183	EL28/1988	Allegiance
1999	Magnetic Susceptibility of DH	A001-A006	99_4386	EL28/1988	Allegiance
1999	Assay Comparison		99_4386	EL28/1988	Allegiance
1999	Surveying	Collars and access roads surveyed	99_4386	EL28/1988	Allegiance
1999	Downhole EM Report		99_4386, 99_4386B	EL28/1988	Allegiance
1999	Diamond Drilling Report	A001-A006	99_4386, 99_4386A	EL28/1988	Allegiance
1999	Surface EM	Zonge: time domain system with GDP32 receiver	08_Legge, 99_4386	EL28/1988	Allegiance
1999	Downhole EM	Zonge: time domain system with GDP32 receiver	08_Legge, 99_4386, 99_4386B	EL28/1988	Allegiance
1999	Diamond Drilling	4 holes plus extension of previous hole	08_Legge, 99_4386, 99_4386A	EL28/1988	Allegiance
1999	Geochemical Soil Sampling		99_4386	EL28/1988	Allegiance
1999	Petrology	A003, A004, A006	99_4386	EL28/1988	Allegiance
1999	Diamond Drilling	Stonehenge	99_4386	EL28/1988	Allegiance
2000	Mapping	Burbank	01_4621, 01_4576, 014576A	EL28/1988, EL22/1997	Allegiance
2000	Rock Chip Sampling	Burbank	01_4621, 01_4576, 014576A	EL28/1988, EL22/1997	Allegiance
2000	Mapping	West Avebury	01_4576, 01_4576A	EL22/1997	Allegiance
2000	Rock Chip Sampling	West Avebury	01_4576, 01_4576A	EL22/1997	Allegiance
2000	Mapping	Pontiac	01_4576A	EL28/1988	Allegiance
2000	Rock Chip Sampling	Pontiac	01_4576A	EL28/1988	Allegiance
2000	Mapping	Avebury	01_4523	EL28/1988	Allegiance
2000	Rock Chip Sampling	Avebury	01_4523	EL28/1988	Allegiance
2000	Mapping	Trial Harbour	01_4523	EL22/1997	Allegiance
2000	Rock Chip Sampling	Trial Harbour	01_4523	EL22/1997	Allegiance
2000	Petrology	A027/A034	01_4622	EL28/1988	Allegiance
2000	Zeehan Nickel Project Summary		00_4455	EL28/1988, EL22/1997, EL43/1992	Allegiance
2001	Project Development Recommendations Report		01_4622	EL28/1988	Allegiance
2001	Comparative Assaying		01_4622	EL28/1988	Allegiance
2001	Resource Report		01_4622	EL28/1988	Allegiance
2001	Drilling	Avebury: A027-A029, A034	01_4621	EL28/1988	Allegiance
2001	Drilling	East Avebury: A030-A033	01_4621	EL28/1988	Allegiance

2002	Airborne EM & Magnetism Surveys	helicopter borne frequency domain EM using Hummingbird equipment. 200m line spacing, Western Tas	08_Legge		MRT
2002	Avebury Mineral Resource Report	November 2002, Mick McKeown	02_4833	EL28/1988	Allegiance
2002	Mineralogy/Petrology Report	CMS	02_4833	EL28/1988	Allegiance
2002	Drilling Report	Trial Harbour Burbank Prospect	02_4833	EL28/1988	Allegiance
2002	Diamond Drilling	Burbank (6 short holes) B1-B6	02_4833	EL28/1988	Allegiance
2002	Diamond Drilling	Avebury (9 holes)	02_4833	EL28/1988	Allegiance
2002	Partial relinquishment of EL28/88	East of Main Avebury and East Avebury prospect	02_4833, 02_4795	EL28/1988	Allegiance
2003	DPEMP	Avebury	08_Legge, 03_4979	3M/2003	Allegiance
2003	Development Application	With West Coast Council	03_4979	3M/2003	Allegiance
2003	Geotechnical Drilling	For Main Decline: A043	03_4979	3M/2003	Allegiance
2003	Indicative Feasibility Study		03_4979	3M/2003	Allegiance
2003	Processing Negotiations		03_4979	3M/2003	Allegiance
2003	Diamond Drilling	Diamond Drilling for extension and definition of Viking	03_4979	3M/2003	Allegiance
2003	Avebury Mining Lease	Application and Granting	08_Legge, 03_4979	3M/2003	Allegiance
2003	Release/Reporting of plans found by Placer in Storage		03_4913, 03_4900	SPL129, EL11/1976	Placer Dome
2004	Diamond Drilling	Viking West: A045	04_	EL22/1997	Allegiance
2004	Diamond Drilling	B7 (poor core recovery)	04_5086	EL28/1997, EL22/1997	Allegiance
2004	Airborne Magnetic and Radiometric surveys	heli-borne by Fugro. Trial Harbour. NS lines at 50m spacing. EW tie lines	08_Legge		Allegiance
2005	Bankable Feasibility Study		08_Legge	ML3M/2003	Allegiance
2005	West Coast Council grants land use permit for Avebury		08_Legge	ML3M/2003	Allegiance
2005	Diamond Drilling	Burbank: B8-B9	05_5219	EL22/1997	Allegiance
2005	Petrology	Burbank: B8-B9	05_5219	EL22/1997	Allegiance
2005	Diamond Drilling	Viking West: A053 (Viking: A051)	05_5219	EL22/1997, 3M/2003	Allegiance
2006	Diamond Drilling	Burbank: B10, B11	06_5384	EL28/1988, EL22/1997	Allegiance
2006	Diamond Drilling	West Avebury: A154, Pontiac: P006	06_5343	EL28/1988, EL22/1997	Allegiance
2006	Diamond Drilling	North Avebury/East Avebury: A143, A148, A155, A161.	06_5384	EL28/1988	Allegiance
2007	Diamond Drilling	A165, A167, A168 (Two collared on EL28/88). A158 (collared on ML3M/03 but ended on EL22/97). A191, A188, A207 targeting sequence that thought to extend onto EL22/97	07_5504	EL22/1997 (EL28/1988, ML3M/2003)	Allegiance
2007	Diamond Drilling	Pontiac Drilling (500m south of EL22/97). A191, P007, P008	07_5504	ML3M/2003	Allegiance
2007	Diamond Drilling	Resource Definition Drilling East Avebury	07_5565	EL28/1988	Allegiance
2007	East Avebury Resource Estimation		07_5565	EL28/1988	Allegiance
2007	East Avebury Mining Lease Application		07_5565	ML6M/2007, EL28/1988	Allegiance
2008	Allegiance Mining acquired by Zinifex		08_Legge		Zinifex

2008	Partial conversion to ML	Conversion of eastern portion of EL28/1988 to ML 6M/2007	08_5757	ML6M/2007, EL28/1988	OZ
2008	Diamond Drilling	A223, A223A, A224, A221	08_5757	EL28/1988	OZ
2008	Petrographic/ Mineragraphic Report		08_5757	EL28/1988	OZ
2009	Soil Sampling	Fen Creek	09_5781	EL37/2003	OZ
2009	Mapping	Fen Creek	09_5781	EL37/2003	OZ
2009	Rock Chip Sampling	Fen Creek	09_5781	EL37/2003	OZ
2009	Track cutting	10km - Fen Creek	09_5781	EL37/2003	OZ
2010	Diamond Drilling	B012	11_6340, 10_6180	EL28/1988	MMG
2010	Botanical Survey		10_6180b	EL28/1988	MMG
2011	Diamond Drilling	TRL001	11_6340	EL28/1988	MMG
2011	VTEM survey		11_6340a	EL28/1988	MMG
2011	Aerial LIDAR	1km line spacing	11_6340, 11_6280	EL28/1988, EL22/1997	MMG
2011	Downhole EM	TRL001	11_6340	EL28/1988	MMG
2011	Flora & Fauna Survey	GHD	11_6340d	EL28/1988	MMG
2011	Investigation/Report	Unexplained VTEM anomalies	11_6340b	EL28/1988	MMG
2012	LIDAR Survey		12_6527	EL37/2003, EL22/1997, EL28/1988	MMG
2013	Amalgamation of Els	Combination of EL28/1988, EL22/1997 and EL37/2003		EL28/1988	MMG
2017	Company Changes	Purchase of Avebury		3M/2003, 6M/2007, EL28/1988	Lottah/MMG

**Appendix 2. Previous Tenement Location Diagrams (in relation to current EL28/1988 and Avebury and East Avebury MLs)**

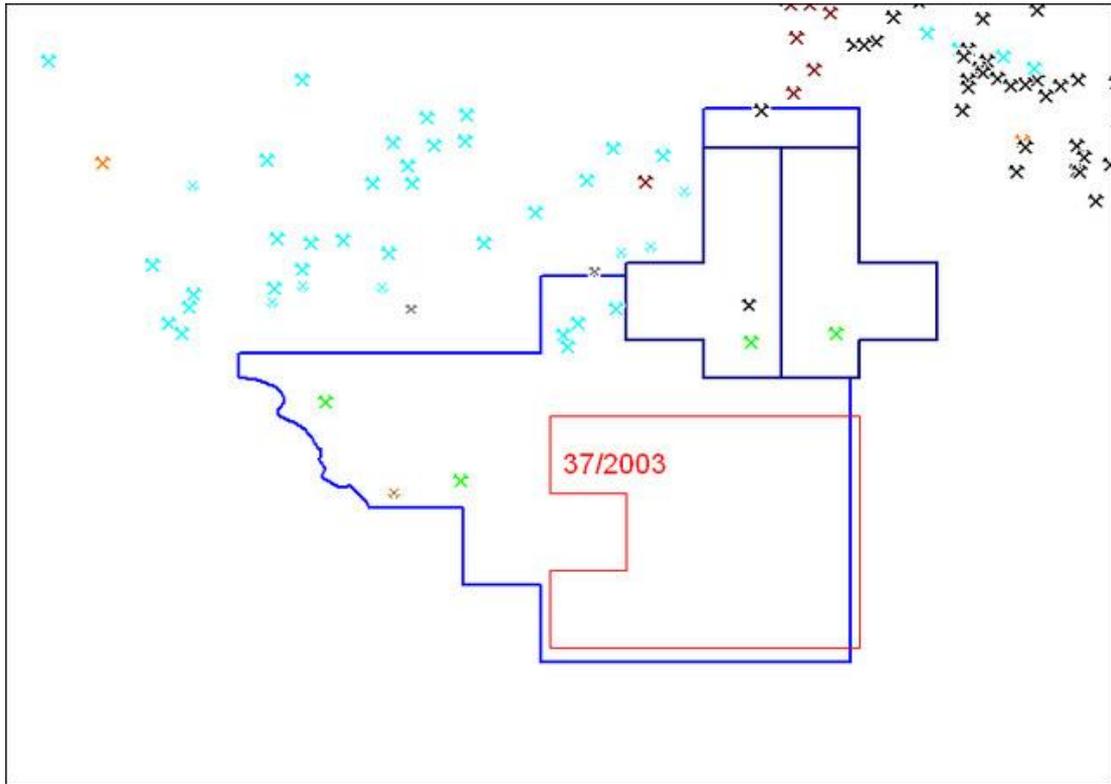


Figure 10.2.1. EL37/2003

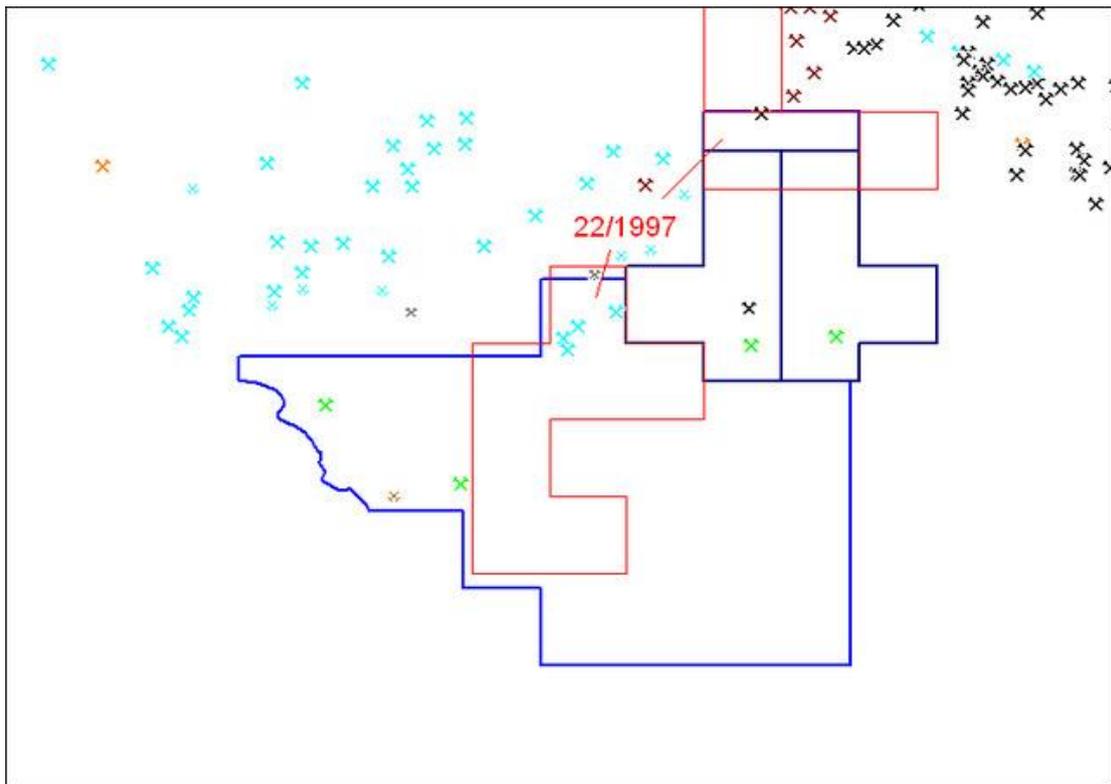


Figure 10.2.2. EL22/1997

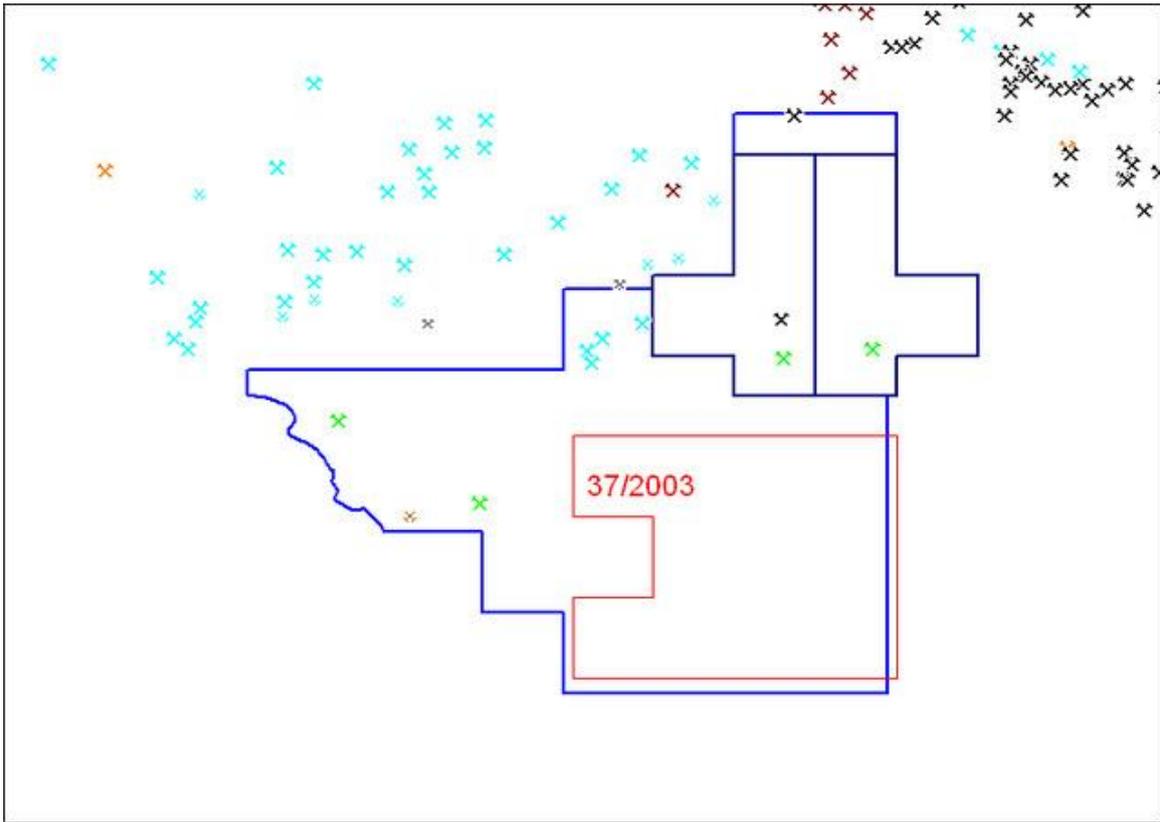


Figure 10.2.3. EL37/2003

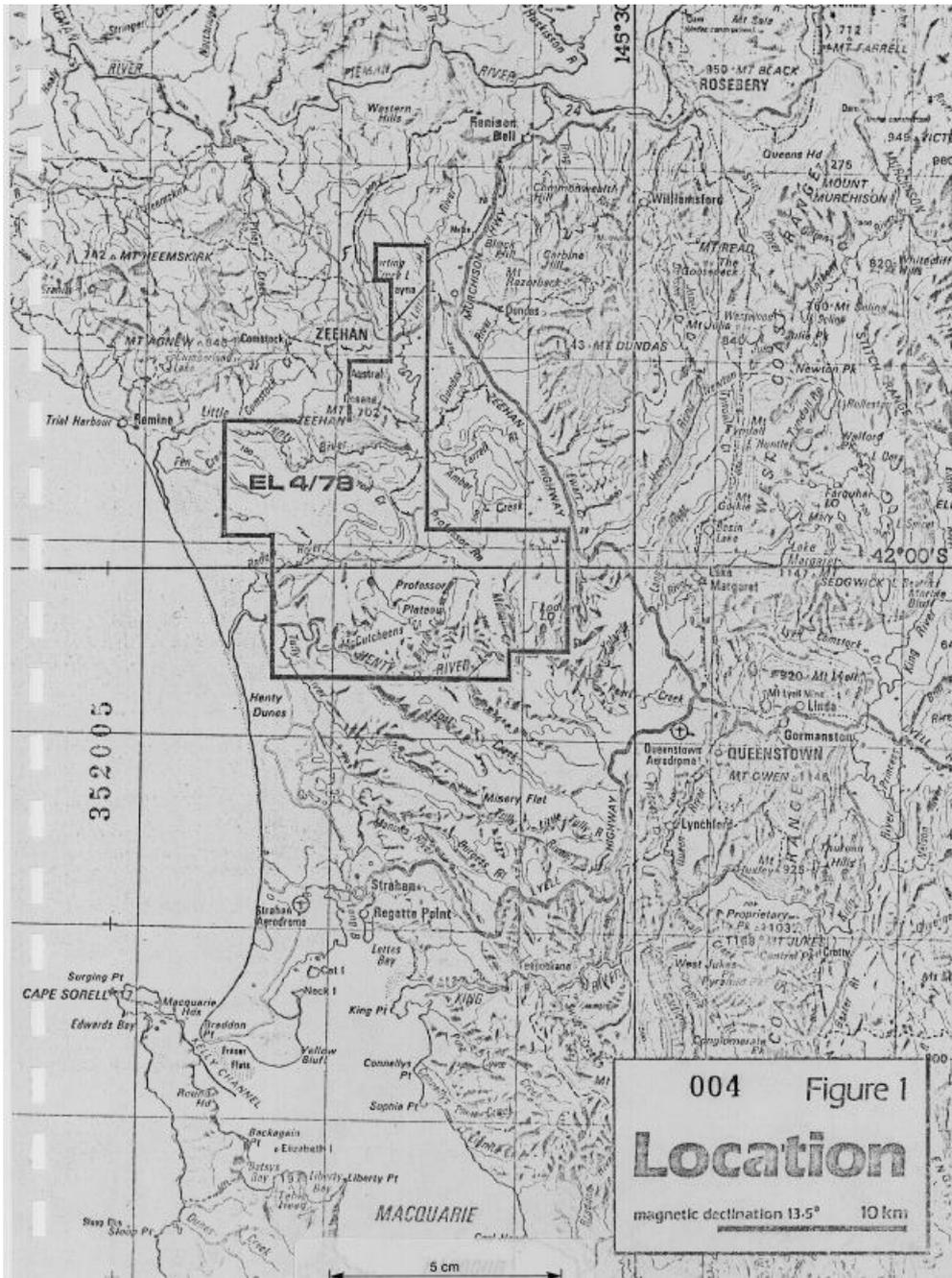


Figure 10.2.4. EL4/1978 (Source: )

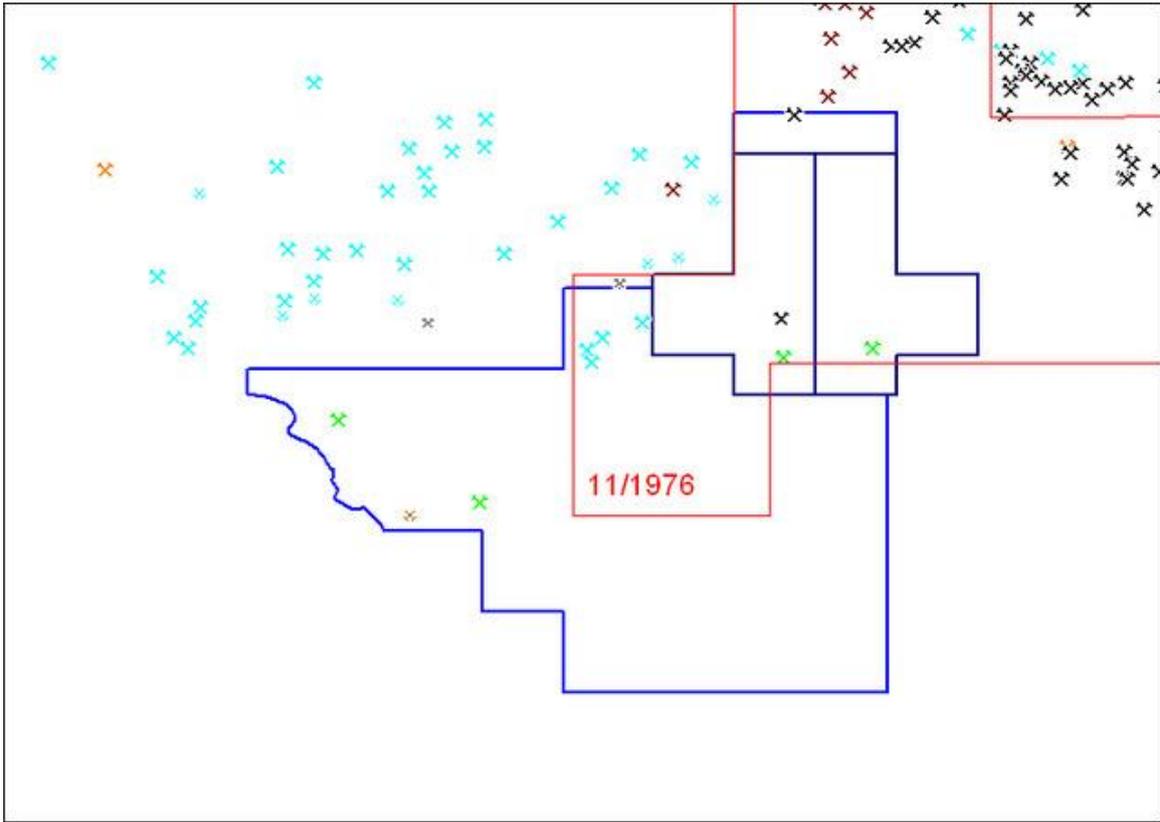


Figure 10.2.5. EL11/1976

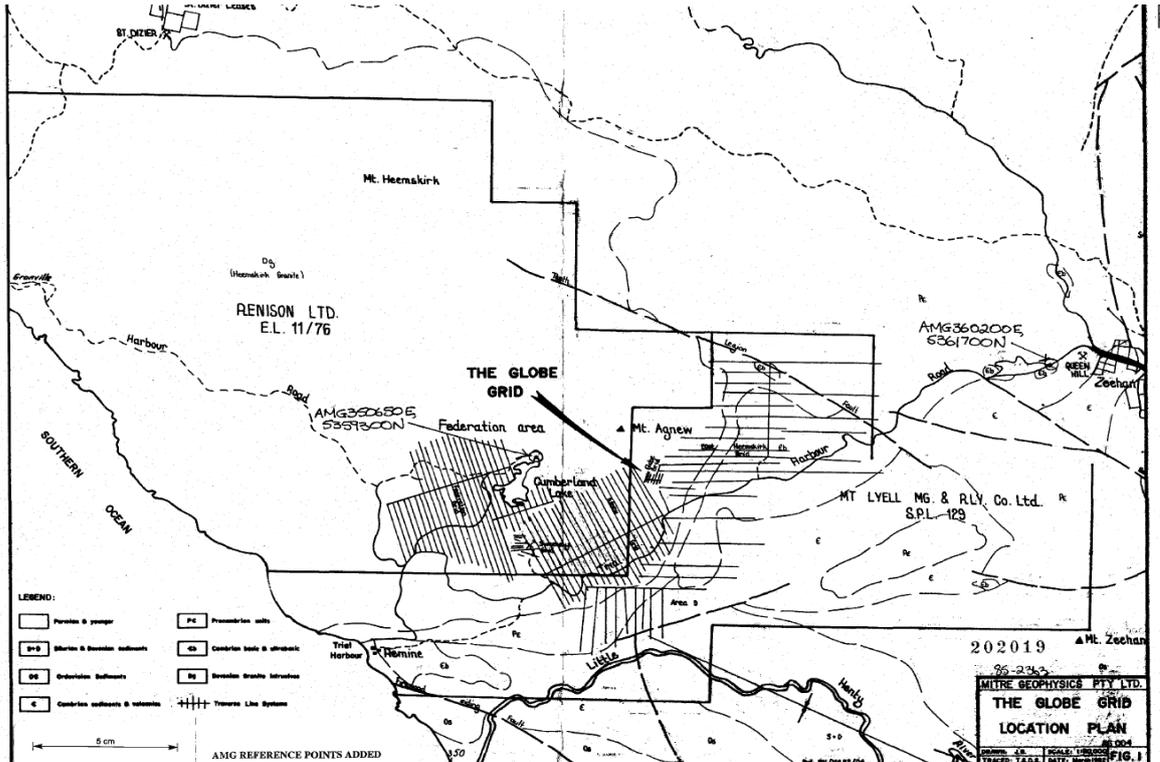


Figure 10.2.6. SPL129 (Source: )

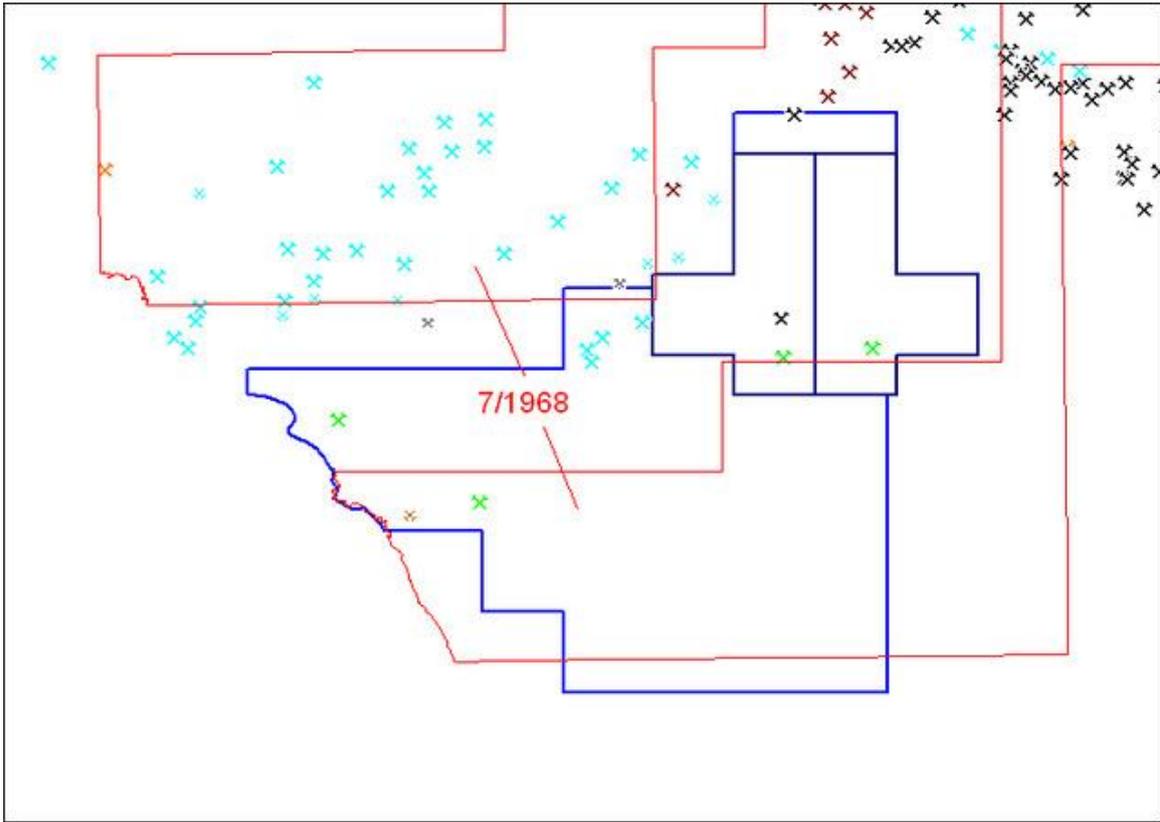


Figure 10.2.7. EL7/1968

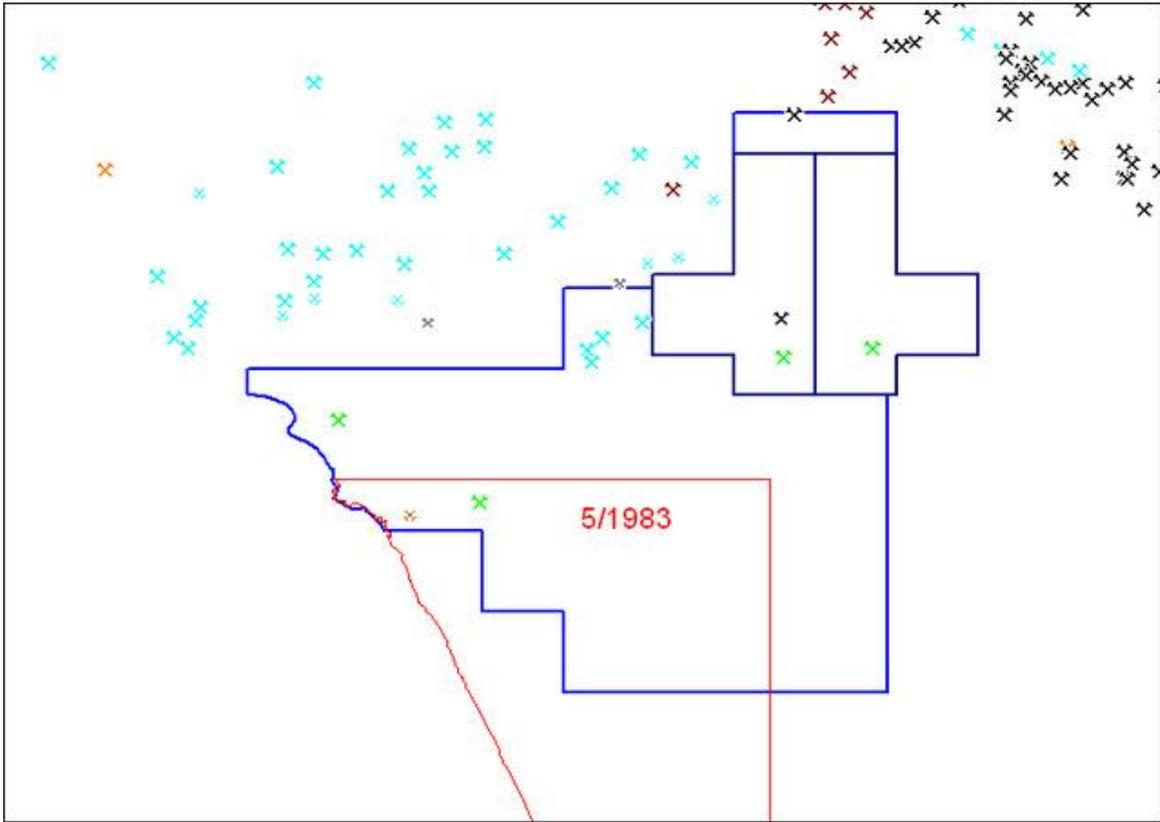


Figure 10.2.8. EL5/1983

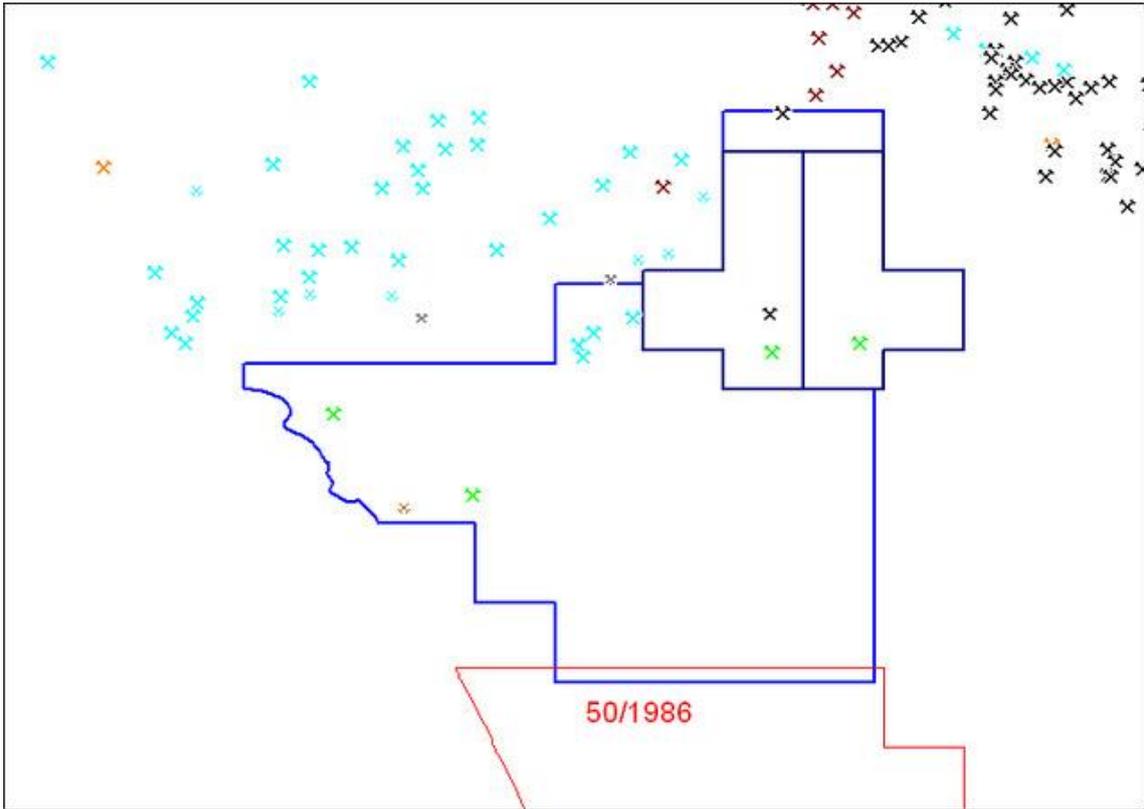


Figure 10.2.9. EL50/1986

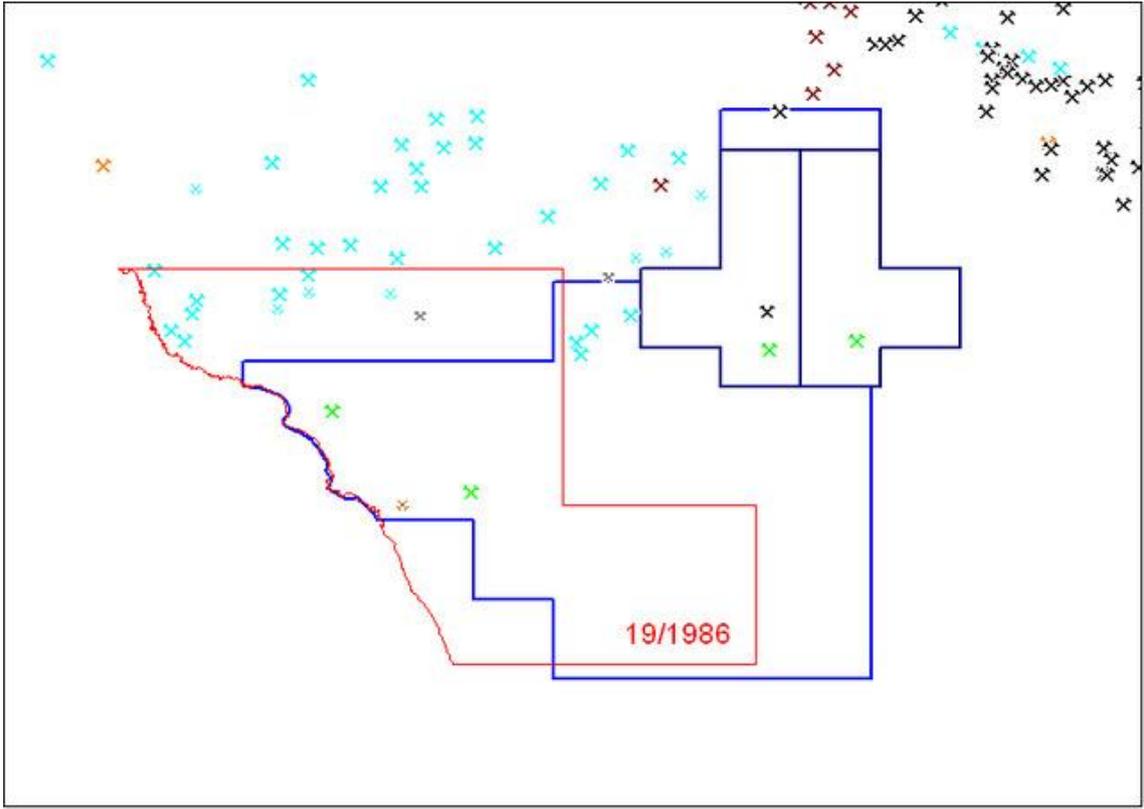


Figure 10.2.10. EL19/1986

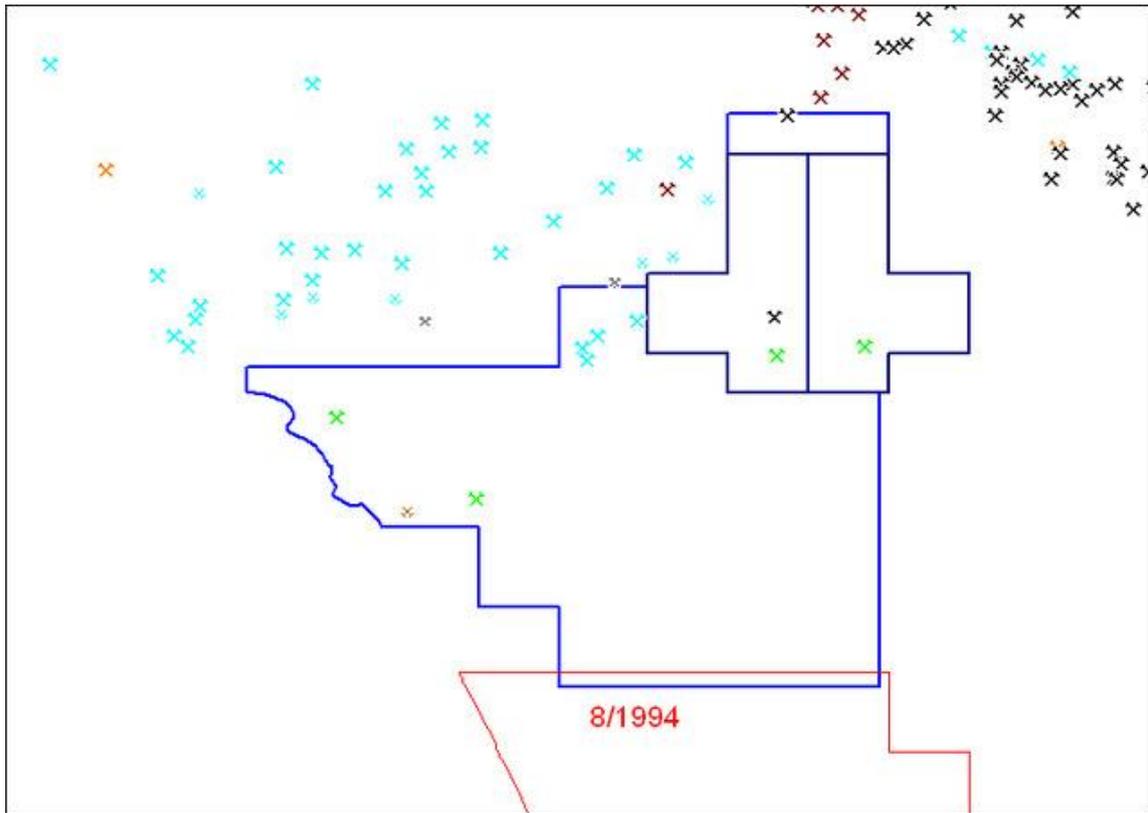


Figure 10.2.11. EL8/1994

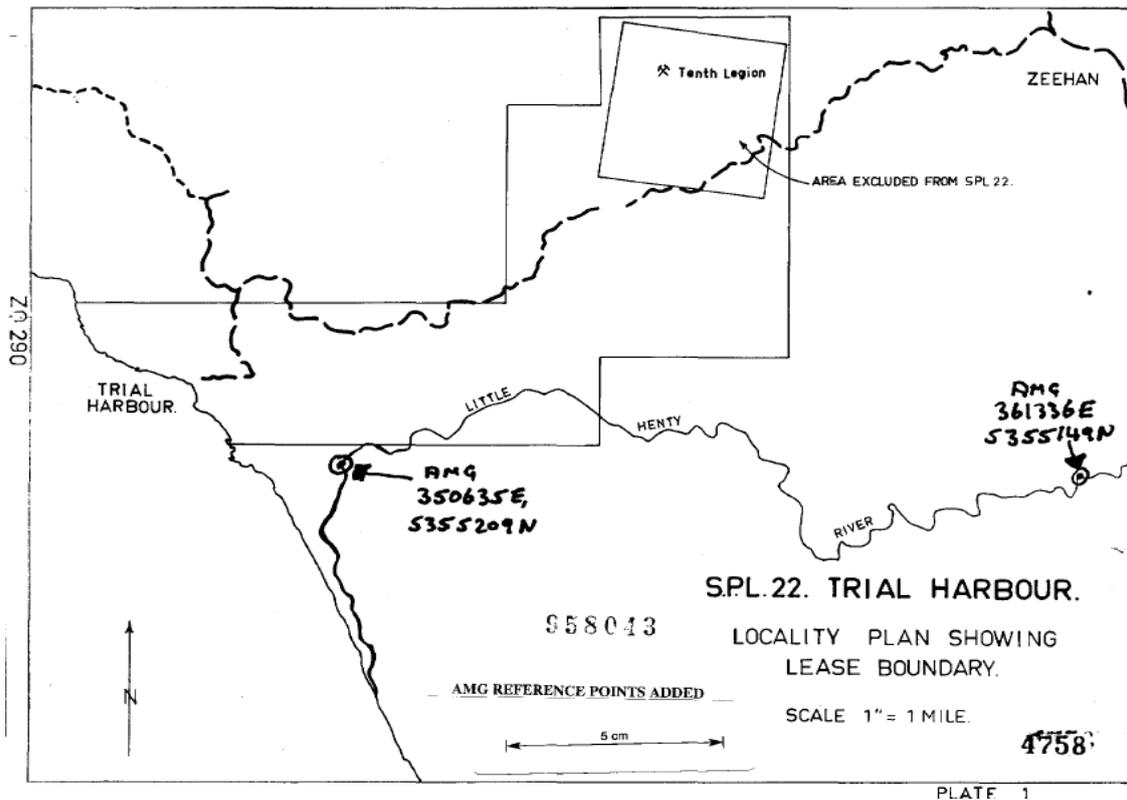


Figure 10.2.12. SPL22 (Source: )

**Appendix 3. Previous Tenement Details Table**

Year		Tenement	Tenement Name	Company
From	To			
2017	2018	ML6M/2007	East Avebury	Lottah
2017	2018	ML3M/2003	Avebury	Lottah
2017	2018	EL28/1988	Zeehan	Lottah
2010	2017	ML6M/2007	East Avebury	MMG
2010	2017	ML3M/2003	Avebury	MMG
2010	2017	EL28/1988	Zeehan	MMG
2009	2009	ML6M/2007	East Avebury	OZ
2009	2009	ML3M/2003	Avebury	OZ
2009	2009	EL37/2003	Fen Creek	OZ
2009	2009	EL22/1997	Trial Harbour	OZ
2009	2009	EL28/1988	Zeehan	OZ
2008	2008	ML6M/2007	East Avebury	Zinifex
2008	2008	ML3M/2003	Avebury	Zinifex
2008	2008	EL37/2003	Fen Creek	Zinifex
2008	2008	EL22/1997	Trial Harbour	Zinifex
2008	2008	EL28/1988	Zeehan	Zinifex
2007		EL48/2007		Accord Mining
2007	2008	ML6M/2007	East Avebury	Allegiance
2003	2008	ML3M/2003	Avebury	Allegiance
2003	2008	EL37/2003	Fen Creek	Allegiance
2002		EL13/2002		Hartz Rare Earths (Cat5)
1999	2008	EL22/1997	Trial Harbour	Allegiance
1997		EL19/1997		
1989		EL33/1989		Major Mining
1997	2008	EL28/1988	Zeehan	Allegiance
1997	1997	EL28/1988	Zeehan	Allegiance/Rio
1994		EL15/1994		Allegiance
1994		EL14/1994		Allegiance
1994		EL8/1994		Allegiance
1992		EL6/1992		Australian Zircon
1988	1996	EL28/1988	Zeehan	Allegiance/CRAE
1988	1989	EL28/1988	Zeehan	Major Mining/CRAE
1988	1989	EL28/1988	Zeehan	Major Mining
1988	1989	EL28/1988	Zeehan	Duke of Avram
1987		EL95/1987		Savage Resources
1986		EL50/1986	Trial harbour - Strahan	National Mineral Sands
1986	1988	EL19/1986	Trial Harbour	RW Creasy
1983		EL5/1983	Little Henty	Renison
1978		EL4/1978		Amoco/EZ
1976	1984	EL11/1976	Trial Harbour	Renison/Mt Lyell

1976		EL5/1976		S Harvey
1971		EL34/1971		Comalco
1969		EL6/1969		Dodson
1968	1974	EL7/1968		Texins Developments
1973	1984	SPL129		Renison
1964	1972	SPL22	Trial Harbour	EZ
1964	1966	SPL1	Trial Harbour	EZ
	1970	SPL87		EZ
1971	1973	SPL95		Texins Developments
		SPL222		
		SPL233		
		SPL302		Rio/CRA?