

**RL 15 & 23 / 1987  
FOSTERS MARSHES**

**NORTH EAST TASMANIA**

**COMBINED ANNUAL REPORT**

**PERIOD ENDING 30<sup>TH</sup> MAY 2007**



**VAN DIEMAN MINES PTY LIMITED**

**10<sup>th</sup> June 2007**

**PREPARED BY:**  
Neil R. Kinnane - Director  
Exploration and Development

## EXECUTIVE SUMMARY

The company has now completed a thorough reworking of the GIS database and has corrected many of the X, Y & Z location coordinates for old drill holes. This has resulted in a more definitive interpretation of the bedrock topography within the two tenements. While the work has not altered the interpretation of a tine bearing marine embayment there are some significant changes to the bounding features of that basin.

The embayment is open to the west where it passes over some shallow basement highs into the Boobyalla Sub-Basin. To the west basement rises abruptly and terminates against Jurassic dolerite. A small sub-basin, the Scoloch Sub-Basin, connected to the main basin by two channels developed around basement highs has been defined in the east.

The higher levels of data accuracy will now enable the resource / reserve to be recalculated and several mining scenarios including single and double dredging and a combination of these and dry mining will be investigated.

At this time the resource remains unchanged from that previously calculated and as detailed in the Van Dieman Mines plc Prospectus dated November 2004.

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## 1.0 INTRODUCTION:

The Company has continued to acquire data both from archival material and by DGPS survey pick-up in the field. This has led to a reinterpretation of the regional basement topography and general geological setting within and adjacent to the marine embayment. Basement topographic interpretation has defined a series of “sub-basins”; specifically the Boobyalla and the Scoloch sub-basins.

Work is continuing on the depositional environment around the southern embayment margins, in particular at the Braithwaite’s, McGregor, Beltz and Aberfoyle workings. The drill defined orebody located at Braithwaite’s within EL 23/1987 appears in part to consist of a series of steep northward trending tin bearing channels that ultimately flow into the deeper main embayment. There is evidence to support some marine influence within these channels and they may well have been very active during periods of marine regression within the embayment, becoming less active with evidence of marine activity as the embayment transgressed onto the southern raised granitic basement.

DGPS survey work is ongoing and during the coming year. The collection of data relating to cultural and Aboriginal heritage, flora and fauna, and water quality will continue. Preliminary studies of the resource have been commenced with particular emphasis on better defining the resource boundaries.

## 2.0 LOCATION AND ACCESS:

The Great Northern Plain Project area is located in north eastern Tasmania in the Gladstone District approximately 90 kilometres north east of the northern City of Launceston. More specifically the cassiterite bearing estuarine and alluvial deposits are located approximately 10 km north-west of Gladstone and north and east of the Ringarooma River.

The tenements are located almost totally within private land, Rushy Lagoon and Red Hill pastoral holdings. Location plans are presented here in three formats, on an aerial photographic base (Figure 1), on 100K Topographic Mapping (Figure 2) and on SRTM Elevation Imagery (Figure 3).

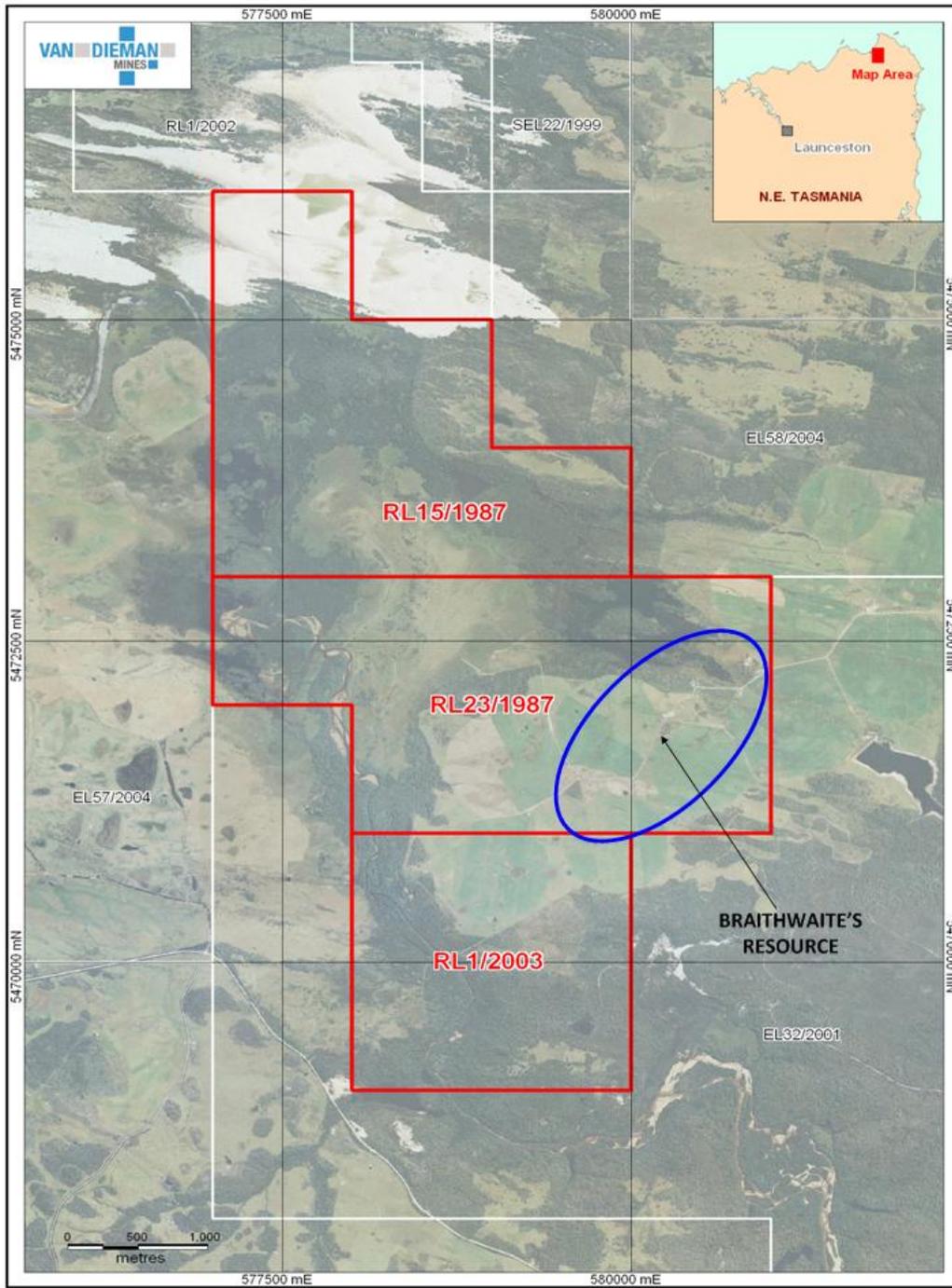


Figure 1 - Tenement Location Map (on aerial photography)

VDMmap0508-011

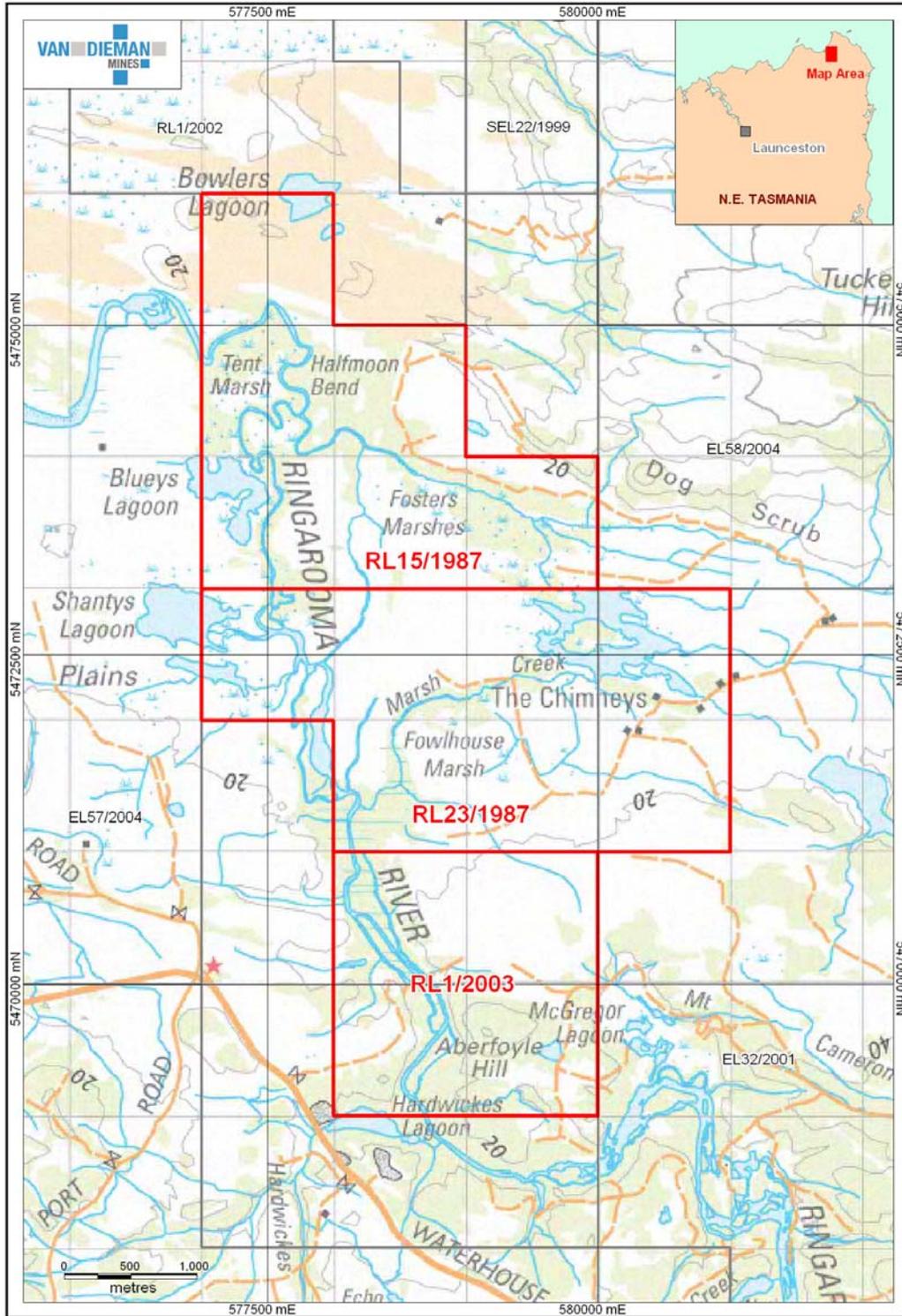


Figure 2 - Tenement Location Map (on 100K Topography)

VDMmap0608-011

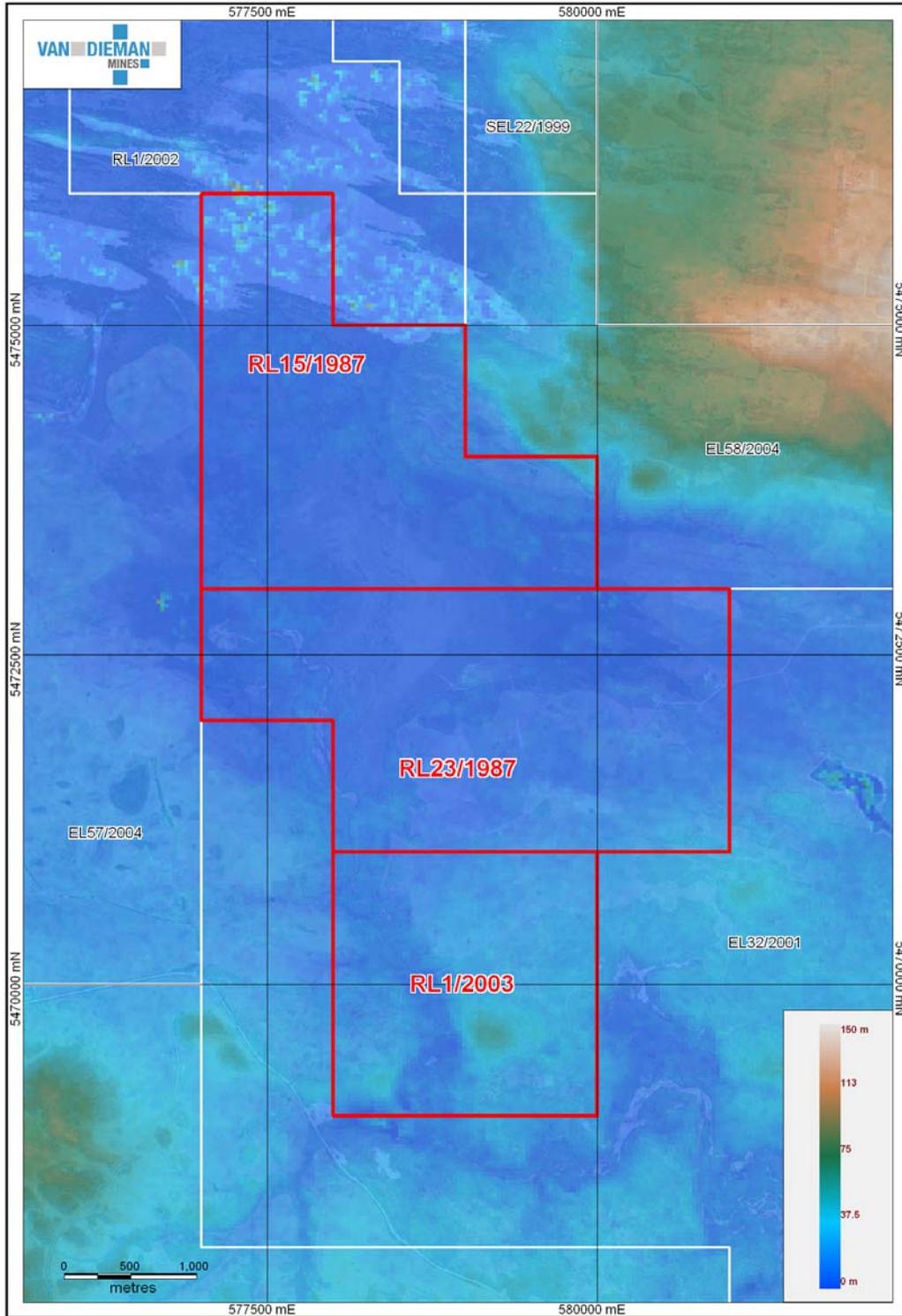


Figure 3 - Tenement Location Map (on SRTM elevation image)

VDMmap0608-011

### 3.0 HISTORICAL BACKGROUND:

Alluvial tin was first worked in the early 1880's in the Aberfoyle, McGregor's, Beltz and Taylor's areas, just south of RL'S 15 and 23/1987. The following text provides a summarized history of the main mining activity in the Great Northern Plain region. Specifically:

#### A. BELTZ WORKINGS:

Commenced by H. Beltz in 1911 and operated for a number of years.

Working continued by Ogilvie & Packett until water supply was cut-off in 1922.

In 1917 Roach drilled 39 bores in this area of those 23 drilled as three lines ahead of the face. These have not as yet been located either on the ground or on plan.

Subsequent drilling by Carey indicated deeper ground to the NW.

Little work was carried out after 1922.

**Most of these drill results have been located and transcribed to metric measurement.**

#### B. MCGREGOR'S WORKINGS:

History uncertain but was worked prior to 1902.

Government drilled a line of bores, No 6 Line in 1902.

**These results have now been located**

Mallinson worked an area to the west of McGregor's.

Difficulty encountered with water supply, main workings worked by races but became "Tailed In".

#### C. ABERFOYLE WORKINGS:

In 1906 the New Aberfoyle Company commenced operations.

New Aberfoyle was succeeded in 1909 by the Aberroe Tin Mining Co. N. L. but this group did not register its operations until 1912.

Mining continued until around 1916 at which time many of the working faces were connected resulting in three main worked cuts; the Eastern, the Main and the Western or Curnow's workings.

There are no production records for the early production years up to 1906.

From 1906 to 1916 the New Aberfoyle and Aberroe companies produced some 129.3 tons of concentrate with peak production of 22 tons occurring in 1910.

Development of all these deposits was limited by water supply and operating hydraulic head. Water races were developed from the Boobyalla River across the Ringarooma River by an inverted siphon system and from the Mt Cameron Water Race.

Work in the area and more specifically in the Great Northern Plains appears to have recommenced in about 1935, specifically these works include:

- 1935 - Austral Malay drilled on the Great Northern Plains just north of Aberfoyle;
- 1955 - 56 - Dorset Tin Dredging investigated the area and drilled north and east of Aberfoyle looking for a dredge path onto the Great Northern Plains;
- 1958 - Rio Tinto Exploration drilled in the region but generally west and east of Aberfoyle. **Results Located;**
- 1966 - Utah development conducted regional auger drilling in the general area and it is believed conducted some backhoe pitting near Aberfoyle. **Results located;**
- 1967 - The Mines Department drilled a line of holes just north of Aberfoyle from the Delta Workings eastward to the Scoloch Lead;
- 1971 - Portland Holdings carried out pitting and auger drilling in the immediate vicinity of the old alluvial workings. **Results located.**  
Portland reported some excellent grades however their testing was not sufficient to define further resources or the directions in which the alluvial leads were trending;
- 1974 - Mines Department Tasmania conduct geophysical survey of area;
- 1978 - Preussag Australia conducted work in the region including several lines of drill holes one of which was located just north of the Aberfoyle workings;
- 1978 - Renison Limited conduct assessment of area.
- 1980 to 83 - Hellyer conduct comprehensive drilling program across the area; and
- 1995 - MacArthur carries out independent assessment of the area for Mineral Holdings which was subsequently updated by Mason in 2001.

Since the work by MacArthur and a review of that work in 2001 by Mason no other work was undertaken until VDM commenced its studies in 2003. During 2004 VDM prepared a Prospectus to gain admission to the Aim Market of the London Stock Exchange, that listing was achieved on 23<sup>rd</sup> November 2004. Terrence Willsteed & Associates prepared the Competent Persons report included in that Prospectus.

## 4.0 GEOLOGY:

Since acquiring tenure to this property VDM has continued to reassess the regional geological setting particularly as it pertains to the alluvial deposition during the Tertiary period. In 2004 the construction of a Tertiary basement map, Figure 5, confirmed the presence of a major marine embayment developed within the RL's. This work has subsequently been reassessed and this has resulted in the derivation of a new basement topographic map. See Figure 7.

### 4.1 REGIONAL SETTING:

It is not proposed to provide a detailed description of the older geological units, a brief outline of the nature of each major unit is provided, in tabulated form as Table 1 and a geological map as Figure 4.

The tabulation sets out the significance of each unit. It is the Tertiary units, in particular the basal sections, that are of economic significance as they contain the heavy mineral concentrations; cassiterite, tantalite, gold and sapphire being the most economically important.

The Tertiary marine embayment, first recognized by Mineral Holdings, is a significant local feature and appears to have hosted a number of regressive and transgressive phases during that period. The presence of the embayment is supported by drill data, the Great Northern Plains drilling, See Figure 6, and by previous basement topographic mapping, Figures 5 and 7.

Both terrestrial and marine sediments are represented in the Tertiary profile within and draped along the flanks of the embayment. A basement high located roughly along the boundary of RL 23 / 1987 and RL 1 / 2003 may host a near shore deltaic type and shoreline beach type environment with terrestrial sediments; grits, pebble and cobble beds representing terrestrial channel fill deposits and thick sands containing shelly fossils a near-shore marine environment. This interpretation may now no longer hold and a more detailed reference is made to this in Section 4.2.

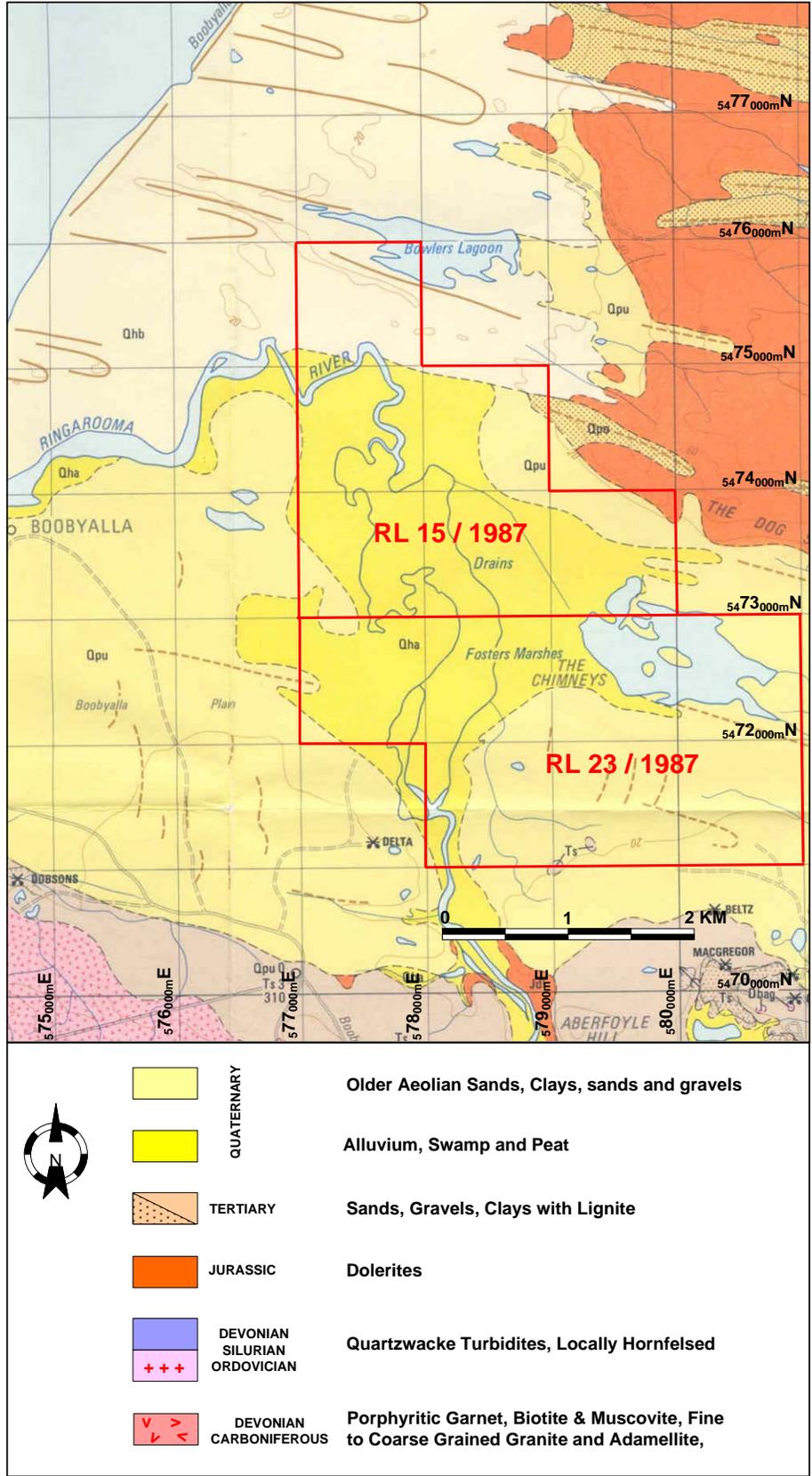


Figure 4 - Geological Map

TABLE 2 REGIONAL GEOLOGICAL SETTING MAJOR GEOLOGICAL UNITS			
AGE	UNIT	DESCRIPTION	SIGNIFICANCE
DEVONIAN - CARBONIFEROUS	Blue Tier Batholith	Porphyritic fine to coarse grained granite / adamellite and biotite-hornblende granodiorite	Forms the tin rich Mt Cameron Massif to the south of Aberfoyle and basement around the southern edge of the Tertiary marine embayment. Locally may be a source of tin.
JURASSIC	Dolerite	Dolerite	Forms a resistant basement outcrop and is the bounding feature of the eastern edge of the Tertiary marine embayment. Sporadic outcrops may occur resting on granite basement along the southern edge of the embayment
ORDOVICIAN TO DEVONIAN	Mathinna Beds	Quartzwacke turbidite sequence locally hornfelsed adjacent to granite bodies	Forms basement in parts of the Aberfoyle area and its low weathering resistance may lead to the development of tin rich Tertiary channels cut into this unit.
TERTIARY	Unnamed	Sands, clays and gravels, locally bouldery. Lignite zones at some localities. Some evidence of ferricrete and silcrete development.	Basal layers are generally tin (cassiterite) enriched, locally of economic significance. Also known to contain gold, sapphire, rutile, zircon and ilmenite.
QUATERNARY	Unnamed	Highly variable; sands, clays, peats, Aeolian dune deposits, swamp and marsh deposits.	Locally represent overburden zones over Tertiary tin bearing alluvial deposits

TABLE 1 - REGIONAL GEOLOGY  
MAJOR GEOLOGICAL UNITS

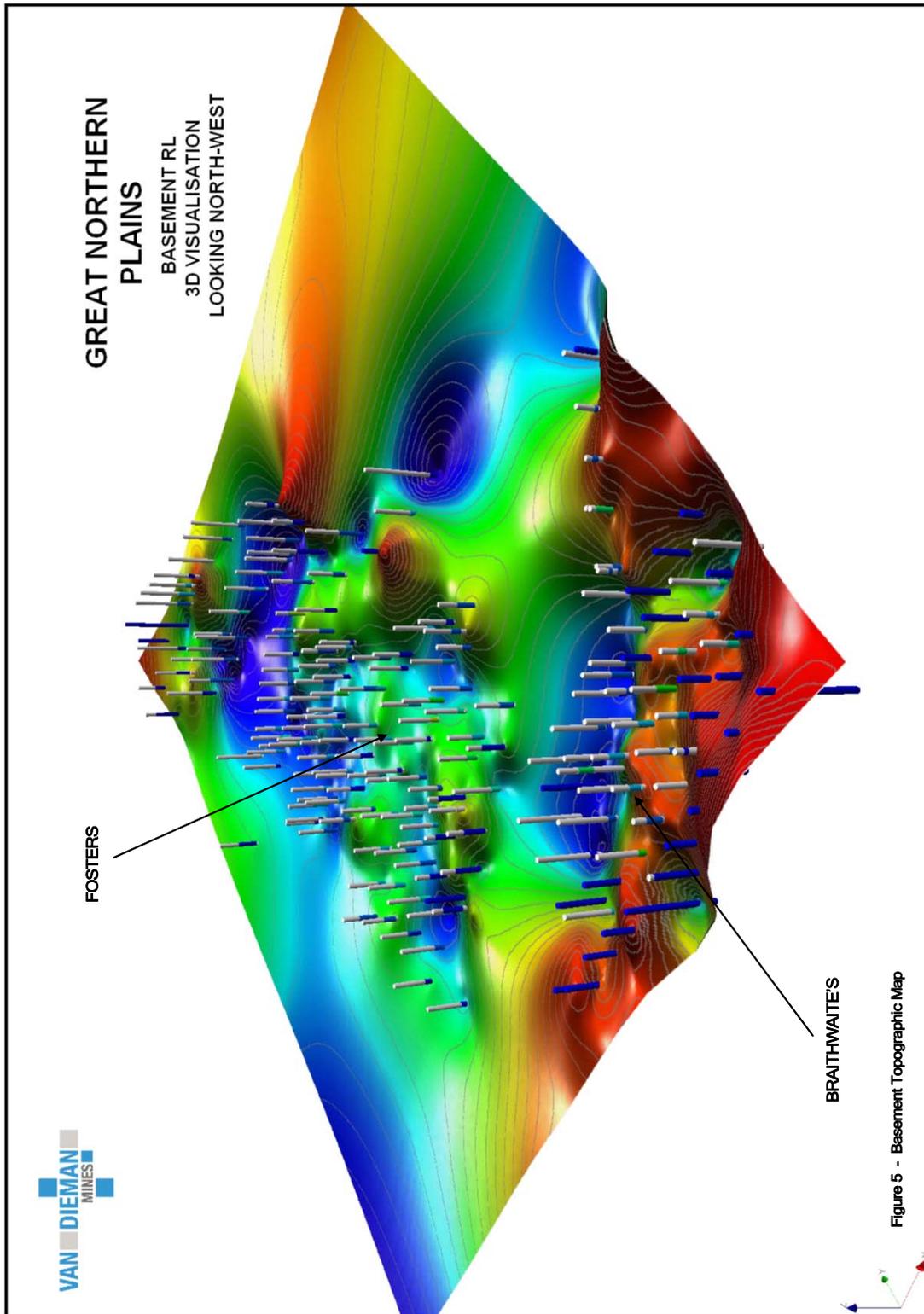


FIGURE 5 - TERTIARY BASEMENT TOPOGRAPHY WITH DRILLING  
LOOKING NORTH  
2004 INTERPRETION

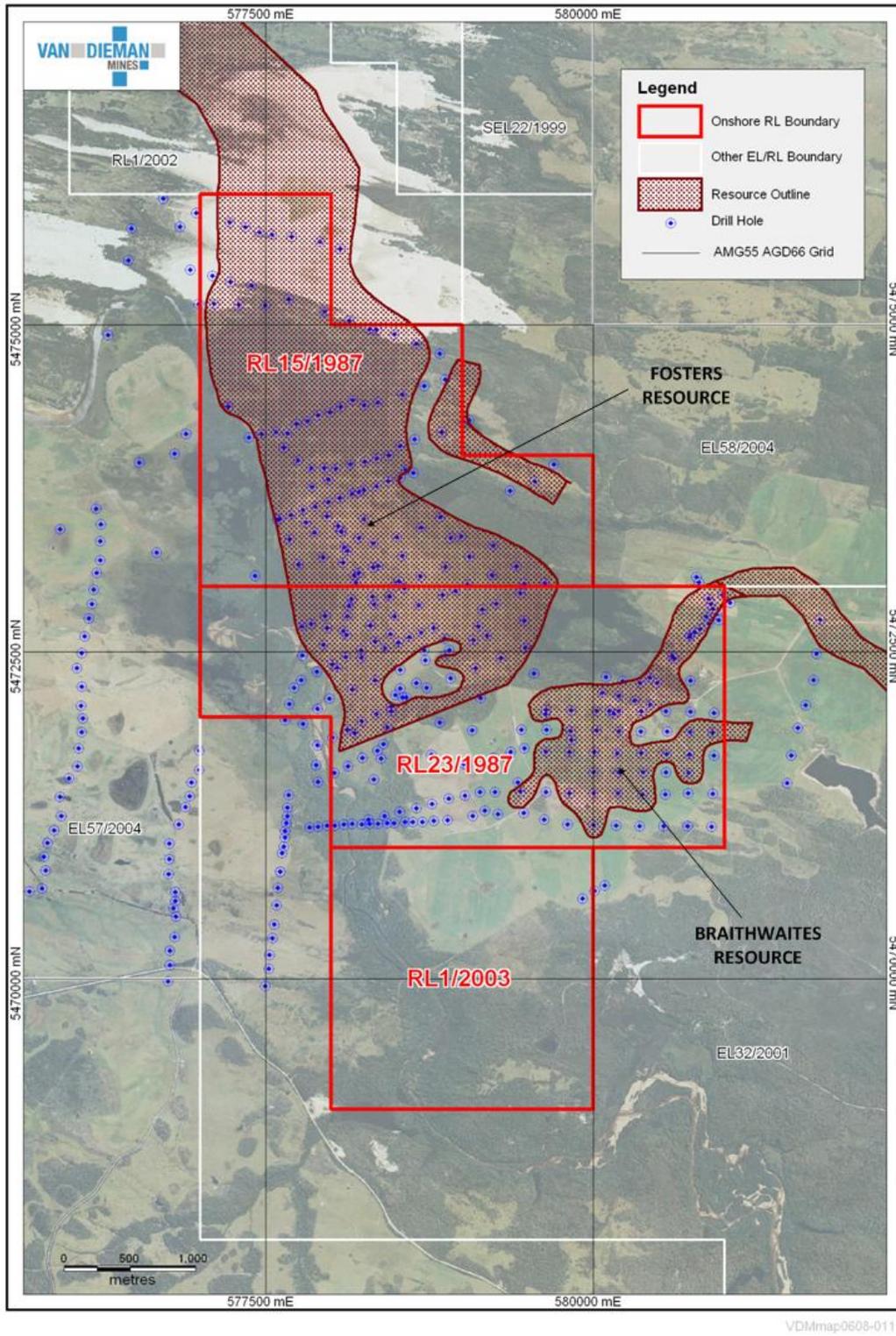


FIGURE 6 - GREAT NORTHERN PLAINS DRILLING

The current shoreline at Ringarooma Bay hosts major aeolian and marine sand beds, their deposition caused by dominant westerly winds. It is most likely that a similar climatic environment existed during the Tertiary with sand build-up at Aberfoyle, deep inside the embayment being driven by both tidal and climatic factors and also by alternating periods of transgression and regression.

#### 4.2 RECENT EXPLORATION:

The results obtained as a result of ongoing DGPS survey activities have enabled the company to correct the X.Y and Z coordinates of many of the old drill holes located within the tenements. The resulting basement topographic map produced using that data appears here as Figures 7 and 8.

The 2007 topography defines a number of basement features that control location of the tin mineralization, specifically and by location:

- A. Basement High: A small basement high, probably a dolerite outcrop appears to split the northwards trending channel into two sections;
- B. Basement High: probably a dolerite related feature that bounds the embayment and separates the northern section of the Scoloch Sub-basin from the main embayment;
- C. Basement High: more of an island like feature lying between the main embayment and the Scoloch Sub-Basin with a possible sub channel between the Scoloch Sub-Basin and Braithwaite's Resource;
- D. Braithwaite's: a shallow section of Braithwaite's Resource that appears to consist of a number of northward trending channels, Figure 8. The channels appear to plunge over a very abrupt falloff into the main embayment. These channels shed from the area of McGregor's, Beltz's, Taylor's and Aberfoyle workings and are interpreted to be steep drainage channels of terrestrial association probably most active during periods of marine regression. Marine sediments observed in McGregor's, Beltz's, Taylor's and Aberfoyle workings were probably deposited during transgressive phases.
- E. Deep Basin: part of Braithwaite's Resource, marine deposit derived from outwash from high granitic basemen, location "D".

- F. Western Embayment: an area of shallow basement over which are draped the Tertiary marine sequences. This zone forms a low ridge separating the marine Ringarooma embayment from the Boobyalla Sub-Basin.

The recent mapping has also better defined the relationship between the main embayment and the Scoloch Sub-Basin to the east. Basement topography indicates that this small eastern sub-basin is connected to the main embayment through two openings, one between "B" and "C" and the other just south of "C".

Ongoing DGP{S surveying is concentrating on the accurate location of old drill holes around the southern workings and on picking up "Z" coordinates of basement outcrop within the old workings. These data will be added to the GIS database as they come to hand.

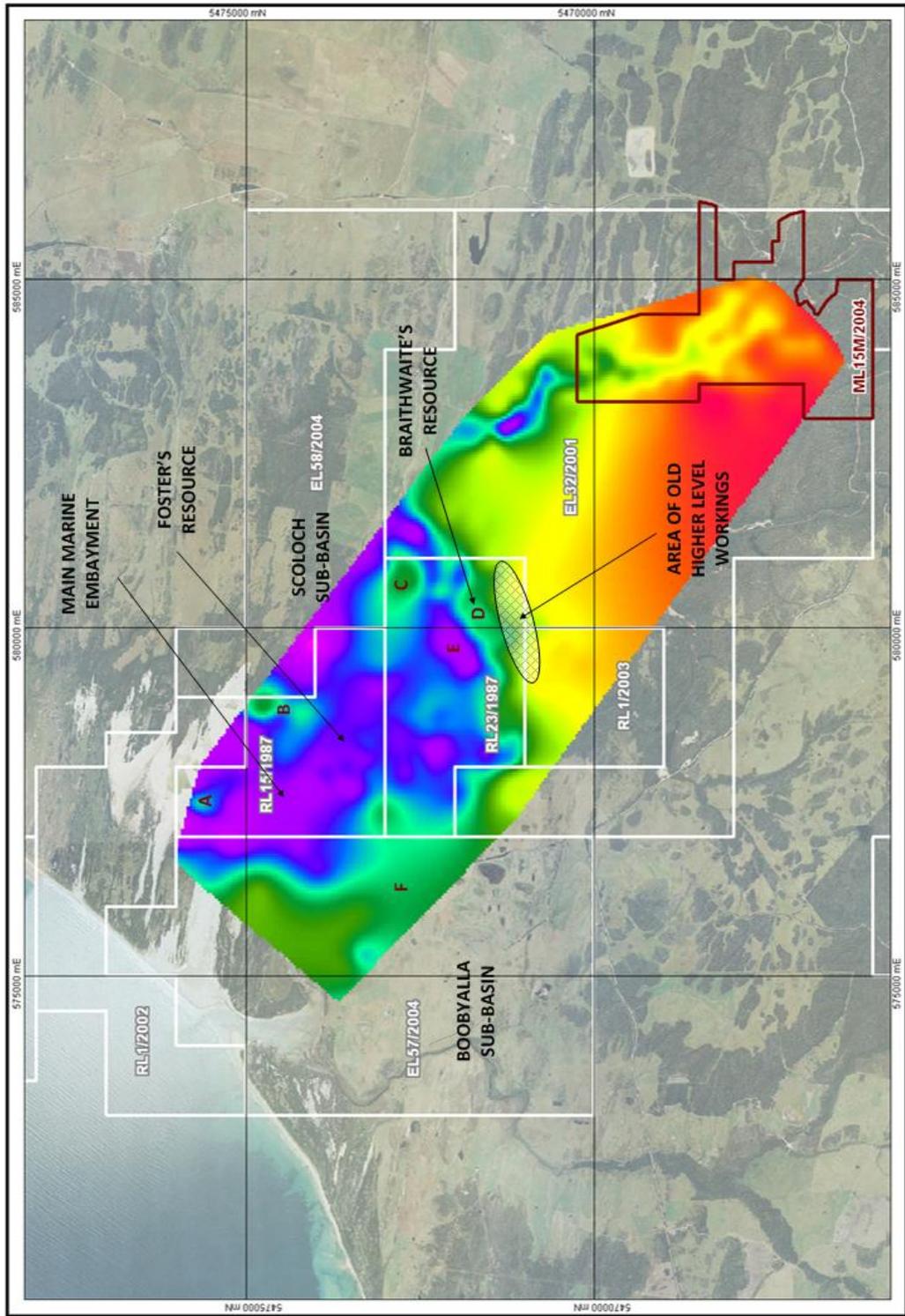


FIGURE 7 - BASEMENT TOPOGRAPHIC MAP, 2007

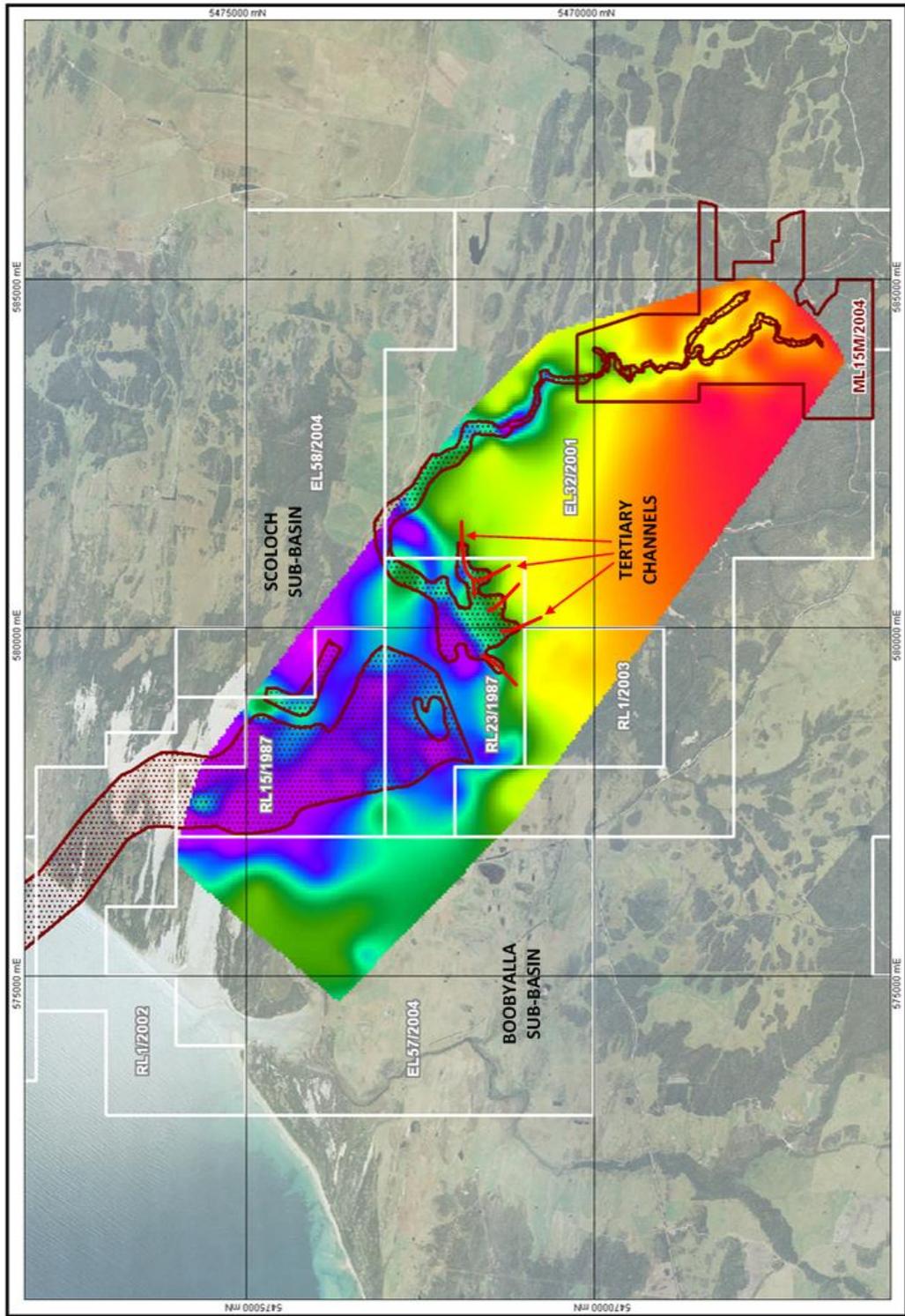
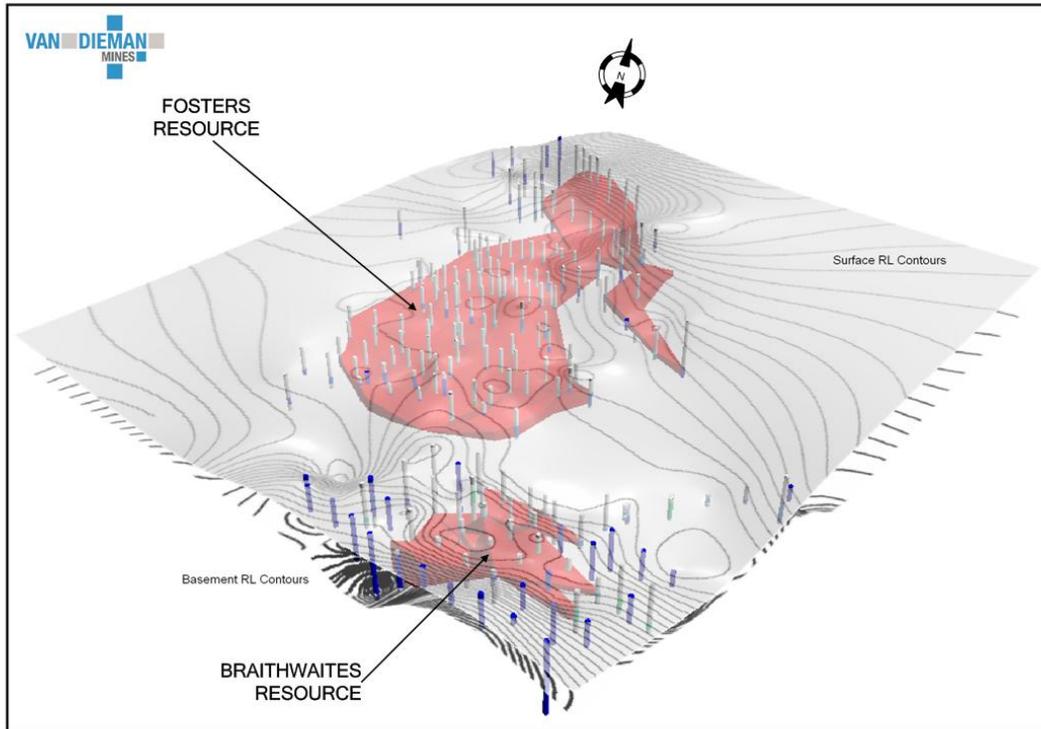


FIGURE 8 - BASEMENT TOPOGRAPHIC MAP AND RESOURCE OUTLINE, 2007

### 4.3 THE RESOURCE:

Since the recalculation of the resource VDM has upgraded its data base and is now able to present the data in various GIS formats.

Figure 9 and 10 are 3D representations of the orebody, they depict basement and surface contours, drill holes and the resource mass in red.

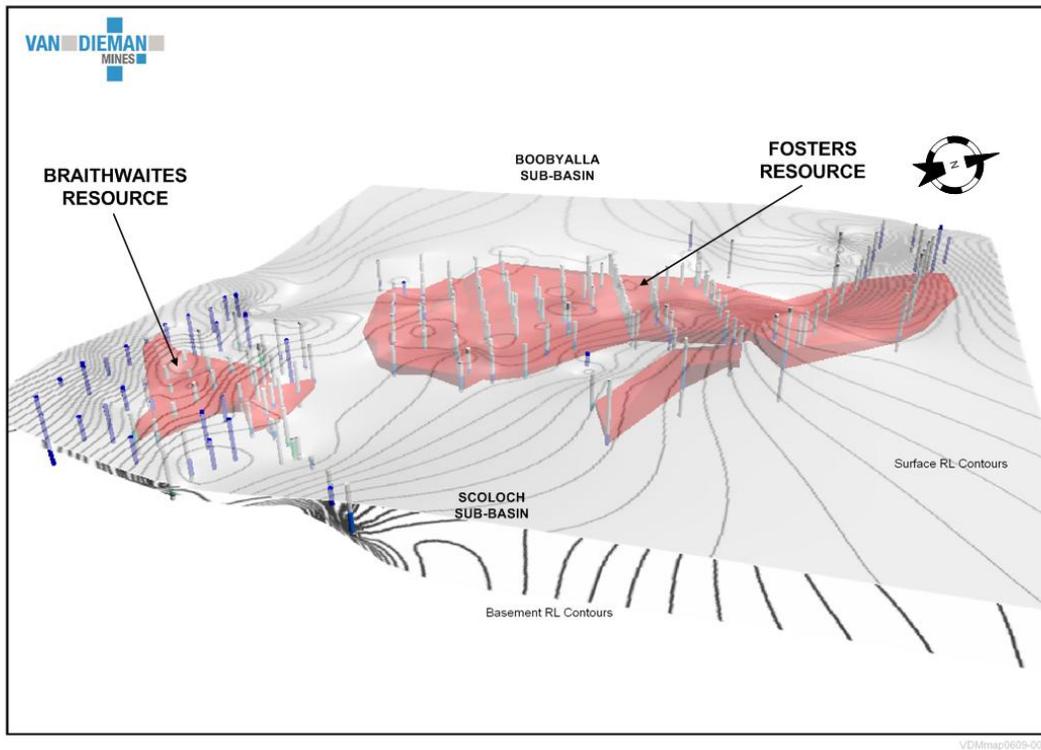


**FIGURE 9 - 3D REPRESENTATION OF THE RESOURCES  
LOOKING NORTH WEST**

Several significant features are depicted in these presentations, specifically:

- The Braithwaite's Resource is clearly developed on the flank of the southern basement high at the edge of the marine embayment zone and may represent a reworked shoreline deposit as immediately to the north basement drops off into the main Fosters Zone;
- Braithwaite's Resource may not be the outfall of the Scotia lead. That lead may in fact flow into the embayment north of Braithwaite's;
- A lack of drilling may account for the break between the Fosters and Braithwaite's Resources; and

- The basement rises very slightly to the west of the Fosters Resource, this area has not been adequately drilled and the edge of this resource in this area may not represent the actual western edge of the embayment. The Boobyalla River may have deposited a similar Tertiary sedimentary sequence to the west of the Ringarooma River section of the basin. Plotting of further drilling in the Boobyalla River section is underway.



**FIGURE 10 - 3D REPRESENTATION OF THE RESOURCE LOOKING WEST**

The 3D visualization appearing as Figure 10 more clearly depicts the basement contours, the channel through which it is postulated the Scotia Lead enters the embayment and the postulated position of the Boobyalla Sub-Basin. VDM is currently looking at ways to extend data into areas of little or no drilling, several techniques are being reviewed including shallow refraction seismic and Ground Penetrating radar using very low antenna frequencies.

## 5.0 DISCUSSION:

One of the major difficulties in preparing the database has been the lack of accuracy in digitizing features from old archival paper maps. The last period of drilling was the Hellyer operation conducted between 1980 and 1983. Most of these holes have become obscured due to farming activity or by thick vegetation re-growth. The company has embarked on an active drill hole location program using the DGPS to "back locate" holes in the field. This has met with some success however it appears that many old locations are map plots rather than accurate field survey pick-ups. On more than one occasion holes have been located after considerable search time in locations 50 m or more out of plotted position. This new information is being progressively added to the database as is more archival data derived from MRT files.

Using recent accurate DGPS drill hole locations VDM has begun to correct old data and once reasonable confidence levels have been achieved the resource volumes will be recalculated using Minescape and Rockworks software. While it is possible to correct the "X" and "Y" coordinates of most holes with some degree of accuracy the same cannot be said for the "Z" coordinate. Within any one of the old drill programs there appear to have been several different datum points used, none of the "Z" coordinates appear to have been related to State survey points. VDM has managed to correct most information however this has been a time consuming exercise and until +90% of the holes are considered accurately located any advance of the orebody from a resource to a reserve will be difficult.

## 6.0 PROPOSED EXPLORATION PROGRAM:

VDM plans to continue its data acquisition during the coming year (2007 - 2008) and in broad terms proposes, using the revised GIS database, to commence work to elevate the ore resource to a reserve status. Field work will continue on data acquisition in relation to cultural and Aboriginal heritage, flora and fauna, and water sampling.

Specifically the exploration program will involve:

➤ **Field Activities:**

Location of old drill holes will continue, this work will be supported by DGPS survey pick-up. Data will be transferred to the VDM database and used to adjust old survey data.

➤ **Feasibility and Resource Issues:**

VDM propose to commence pre-feasibility works including cultural and Aboriginal heritage studies, flora and fauna surveys and baseline water monitoring. The dredging study will be expanded now that more accurate orebody location is available.

➤ **Ramsar Site:**

The company is mindful of the presence of the RAMSAR site over the GNP however there are issues related to the clearing and use of that site by Rushy Lagoon that have to be addressed. The company is currently investigating the provisions of RAMSAR legislation as they relate to development and land use.

It is difficult to determine at this time how much will be expended on these activities, best estimates are:

•	Field Surveying			\$20,000.00
•	Geophysics			\$7,500.00
•	Feasibility	-	Cultural Heritage	\$3,000.00
			Aboriginal	\$6,000.00
			Flora & Fauna	\$15,500.00
			Water Sampling	\$15,000.00
				\$39,500.00
•	Travel			\$7,500.00
•	Administration			\$10,000.00
			<b>TOTAL</b>	<b>\$84,500.00</b>

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8.0 APPENDICES:

8.1 DRILL HOLE LOCATION DATA SHEETS: