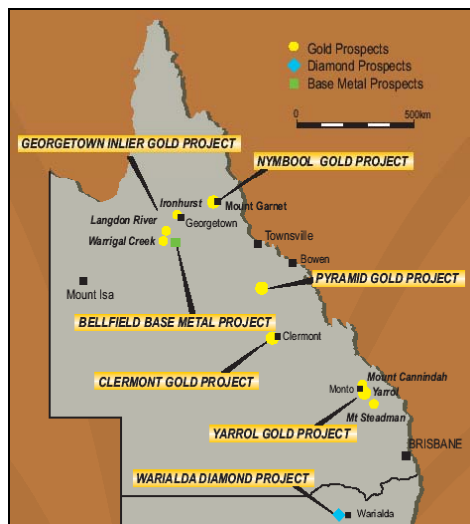


## Gold, diamond and base metals

## Diatreme Resources Ltd A\$0.10 (IPO)



Source: DRL

**IPO to fund a 24-month exploration programme over advanced gold projects in under-explored regions near to world class mineral deposits.**

## Initial public offering

NSX code	DRL
Existing shares	25,033,394
Existing options	6,687,791
Existing shareholders	1,224
IPO shares	25.0m
Share issue price	A10¢
Shares on issue post-IPO	50,033,394
Options on issue post-IPO	6.6m
Capital raising	A\$2.5m
Market cap. post-IPO*	A\$5.0m

\* fully subscribed and undiluted

## Directors &amp; management

Executive Chairman & CEO	A. J. Fawdon
Non-Exec. & Corp. Sec.	L. J. Litzow
Exec. & Expl. Administrator	D. H. Hall
Exploration Manager	K. J. Harvey

## Top shareholders (pre-IPO)

Anthony John Fawdon	12.25%
Select-Tel Ltd	7.72%
Australian Rural Group Ltd	5.99%
Expl. and Prosp. Finance Ltd	5.98%
Cardinal Financial Sec. Ltd	5.98%

Source: DRL

## Registered office

Level 3, Travel House, 243 Edward Street,  
Brisbane, QLD 4000 PO Box 295, Brisbane  
Albert Street BC, QLD 4002

Tel: 07 3229 9927

Website: [www.diatreme.com.au](http://www.diatreme.com.au)

## Analyst

Duncan Hay

Tel: (61 2) 9222 9111

Email: [djhay@whisecurities.com.au](mailto:djhay@whisecurities.com.au)

## KEY POINTS

- **Diatreme Resources is a Brisbane-based mineral explorer, with gold, diamond and base metal projects in Queensland and northern-NSW.**
- **The company is looking to raise A\$2.5m in an IPO to fund a 24-month exploration programme over its 7 wholly owned exploration projects.**
- **Diatreme plans to apply new exploration techniques and geological understanding to project areas that, although near to world class mineral deposits (e.g. Kidston, Mount Leyshon, Vera Nancy and Ravenswood), remain under-explored, typically due to the lack of outcrop and extent of transported cover.**
- **The focus will be Diatreme's advanced gold tenements, which include resources of nearly 150,000oz gold.**
- **Four targets are available for immediate drilling.**
- **Nearly all DRL's projects are new to the investment community having been privately held in the past.**
- **The Diatreme team has extensive industry experience, both in the field and in the boardroom, and significant value-adding for shareholders seems likely.**
- **Diatreme's existing project resources:**

Project	Prospect	Total resources
Nymbool	Nymbool	54,000oz gold
Yarrol	Yarrol North	45,000oz gold
Yarrol	Central Ridge	13,000oz gold
Yarrol	Mt Steadman	35,000oz gold
Clermont	Peak Downs	32,000t copper

Source: DRL

22<sup>nd</sup> August 2003

## 1.0 DETAILS OF IPO

### The offer:

• Number of shares offered to the public in the IPO	25,000,000
• Share price	A10¢
• Existing shares on issue	25,033,394
• Existing options on issue (30 <sup>th</sup> May 2007 at A20¢)	6,687,791
• Total number of shares on issue following the IPO	50,033,394
• Total number of options on issue following the IPO (as above)	6,687,791
• Amount to be raised in the IPO before costs	A\$2,500,000
• Market capitalisation at the offer price of A10¢	A\$5,033,339

### Key dates:

• Prospectus lodged with ASIC	1 <sup>st</sup> August 2003
• Opening date of offer	9am (Brisbane time) 26 <sup>th</sup> August 2003
• Closing date of offer	5pm (Brisbane time) 26 <sup>th</sup> September 2003
• NSX listing	2 <sup>nd</sup> October 2003

### Utilisation of funds (fully subscribed):

• Total funds raised	A\$2,500,000
• Two year exploration programme	A\$1,953,000
• Two year administration & corporate	A\$336,000
• Fund balance of expenses of IPO prospectus	A\$211,000
• Estimated total expenditure	A\$2,500,000

## 2.0 COMPANY PROFILE

Diatreme Resources Ltd was incorporated as Minstrike Mining Pty Ltd in August 1993 and in May 1994 changed its name to Strike Exploration Pty Ltd. In November 2000, the company changed its name to Minstrike Ltd, an unlisted public company, and finally to Diatreme Resources Ltd in March 2001.

In March 2001, the company expanded its exploration portfolio through the acquisition of the assets of Regional Exploration Management Pty Ltd, and its wholly owned subsidiary Chalcopyrite Resources Pty Ltd and Diatreme now holds approximately 2,765km<sup>2</sup> of tenements in Queensland and New South Wales.

## 2.1 Directors and management

### Executive Chairman & CEO – Anthony John Fawdon (59)

Over 30 years experience in Australian mining and exploration industry. Founder and director of several listed explorers, and former MD/CEO of ASX-listed Strike Mining NL. Chair of the Queensland Mining Council's Junior Resources Committee, Chairman of the Queensland Geoscience Improvement Forum, a member of the Queensland Minister for Mines Exploration Committee and Chairman of Opal Horizon Ltd. **F.Aus.I.M.M and F.A.I.C.D.**

### Non-Executive Director & Corporate Secretary – Lawrence James Litzow (68)

Chartered Accountant. Currently a corporate secretary and director with a number of public and private companies. Former Managing Partner of Douglas Heck & Burrell, member of the Small Business Council, Chairman of the Small Business Taxation Group (Canberra), State Chairman of the Taxation Institution of Australia. **F.C.A., A.A.U.Q. and A.C.I.S.**

### Executive Director & Exploration Administrator – David Hugh Hall (49)

Geologist with more than 20 years industry experience and a specialist in project maintenance, tenement administration, government agency, landholder and native title liaison. Member of the Queensland Mining Council Exploration Committee. **B.App.Sc. (Geol) and G.Dip.E.Sc.**

### Exploration manager – Kenneth James Harvey (57)

More than 30 years experience in mineral exploration, management and resource evaluation. Previously a member of MIM's exploration team and has operated his own consulting company. Member of the Queensland Geoscience Improvement Forum and a member of the Queensland Minister for Mines Exploration Committee. **M.Sc., Dip. Ed., M.Aus.I.M.M., M.A.I.G., M.S.E.G. and M.G.S.A.**

## 2.2 Resources

Project	Deposit	Total Resources
Nymbool	Nymbool <i>includes</i>	2.4Mt at 0.7g/t gold for 54,000oz 1.0Mt at 1.0g/t gold for 32,000oz
Yarrol	Yarrol North	0.87Mt at 1.6g/t gold for 45,000oz
Yarrol	Central Ridge	0.27Mt at 1.5gt gold for 13,000oz
Yarrol	Mt Steadman	1.20Mt at 0.9g/t gold for 35,000oz
<b>Total</b>		<b>147,000oz</b>
Clermont	Peak Downs	5.3Mt at 0.6% copper for 32,000t

Source: DRL

## 2.3 Top 5 shareholders (pre-IPO)

Shareholder	Millions	%
Anthony John Fawdon	3.07	12.25%
Select-Tel Ltd	1.93	7.72%
Australian Rural Group Ltd	1.50	5.99%
Explorers and Prospectors Finance Ltd	1.50	5.98%
Cardinal Financial Securities Ltd	1.50	5.98%
<b>Top 20 shareholders</b>	<b>19.4</b>	<b>77.68%</b>

Source: DRL

## 2.4 Financials

	As at 31st Mat 2003	Minimum pro-forma <sup>1</sup>	Maximum pro-forma <sup>2</sup>
Total assets	2,771,774	3,244,774	5,118,774
Cash	50,040	523,040	2,397,040
Debt	-	-	-
Contributed equity	3,118,858	3,591,858	5,465,858
Accumulated profits/(losses)	(539,935)	(539,935)	(539,935)
<b>Total equity</b>	<b>2,578,923</b>	<b>3,051,923</b>	<b>4,925,923</b>

Assumes 1.8m seed capital shares issued subsequent to 31st May 2003, 1.0m shares at A1¢ and 1m free options issued to DRL's corporate financial advisers (or their nominees) for preparation of prospectus and raising seed capital. Source: DRL

<sup>1</sup>5m shares issued, estimated expenses A\$154,000, <sup>2</sup>25m shares issued, estimated expenses A\$280,000.

### 3.0 INVESTMENT REVIEW

- ❑ **After the IPO and NSX listing is completed (October 2003), Diatreme proposes to immediately commence exploration on its advanced gold projects in Queensland, which have nearly 150,000oz of gold resources.**
- ❑ **Despite the proximity of Diatreme's tenements to world-class ore bodies, relatively little drilling exploration has taken place, primarily due to the lack of outcrop and the extent of transported cover.**
- ❑ **This is the first time that the company's projects (with the exception of Yarrol) have been made available to the public investment community as most have been held privately.**
- ❑ **The company also has access to an extensive airborne geophysical database and will be looking to apply this, along with an improving geological understanding, to identify additional drilling targets.**

Four of Diatreme's advanced projects are in granted tenements and therefore drilling can proceed immediately.

**1. Nymbool Gold Project – northern Queensland**

The 54,000oz resource may be the halo of an underlying ore body, coincident with a large geophysical anomaly.

**2. Clermont Gold Project – eastern Queensland**

Looking for source of regional alluvial gold. Includes a 32,000t copper resource

**3. Yarrol Gold Project – southeastern Queensland**

Existing 93,000oz gold resource, however, high-grade intersections including 6m at 39.8g/t need investigating.

**4. Warialda Diamond Project – northern New South Wales**

Applying new understanding in search for source of alluvial diamonds in the region.

- ❑ **Diatreme aims to use around 60-80% of the IPO funds to explore its gold, base metal and diamond projects.**

The programme undertaken will depend on the final amount raised. If it is not fully subscribed (i.e. less than A\$2.5m raised) then the minimum programme will be undertaken in year 1 and follow up drilling carried out accordingly.

**Table 1: Proposed allocation of funds**

Project	FS* year 1	FS year 2	FS total	Minimum**
<b>Gold projects – drill ready</b>	<b>A\$467,000</b>	<b>A\$518,000</b>	<b>A\$985,000</b>	<b>A\$209,000</b>
Nymbool	A\$201,000	A\$224,000	A\$425,000	A\$101,000
Clermont	A\$118,000	A\$124,000	A\$242,000	A\$82,000
Yarrol	A\$148,000	A\$170,000	A\$318,000	A\$26,000
<b>Gold projects – new</b>	<b>A\$133,000</b>	<b>A\$259,000</b>	<b>A\$392,000</b>	<b>A\$37,000</b>
Georgetown Inlier	A\$109,000	A\$174,000	A\$283,000	A\$17,000
Pyramid	A\$24,000	A\$85,000	A\$109,000	A\$20,000
<b>Diamond and base metal projects</b>	<b>A\$260,000</b>	<b>A\$199,000</b>	<b>A\$459,000</b>	<b>A\$23,000</b>
Warialda – drill ready	A\$123,000	A\$16,000	A\$139,000	A\$13,000
Bellfield	A\$137,000	A\$183,000	A\$320,000	A\$10,000
<b>New project generation</b>	<b>A\$79,000</b>	<b>A\$38,000</b>	<b>A\$117,000</b>	<b>A\$41,000</b>
<b>TOTAL</b>	<b>A\$939,000</b>	<b>A\$1,014,000</b>	<b>A\$1,953,000</b>	<b>A\$310,000</b>

\*Fully subscribed, \*\*Allocation from minimum subscription of A\$500,000 over 1 year.

Source: DRL

**Table 2: Drilling schedule if IPO fully subscribed**

Prospect	DQ03*	MQ04	JQ04	SQ04	DQ04	MQ05	JQ05	SQ05
<b>Gold projects – drill ready</b>								
Nymbool	■							
Clermont		■						
Yarrol			■					
Mount Steadman				■				
Mount Cannindah					■			
<b>Gold projects – new</b>								
Warrigal Creek					■			
Munitions Creek						■		
Ironhurst							■	
Pyramid								■
<b>Diamond prospect</b>								
Warialda		■						
<b>Base metal prospect</b>								
Bellfield					■			

\*December quarter 2003.

Source: After DRL

## 4.0 PROJECT REVIEW

Diatreme is targeting gold mineralisation that has formed as a result of near-surface magmatism and these are the most common types of gold deposits encountered along the east coast of Australia.

The company is also looking for base metals in an underexplored Proterozoic inlier near to Mount Isa as well as a source of alluvial diamonds in NSW.

## 4.1 Nymbool Gold Project (NGP)

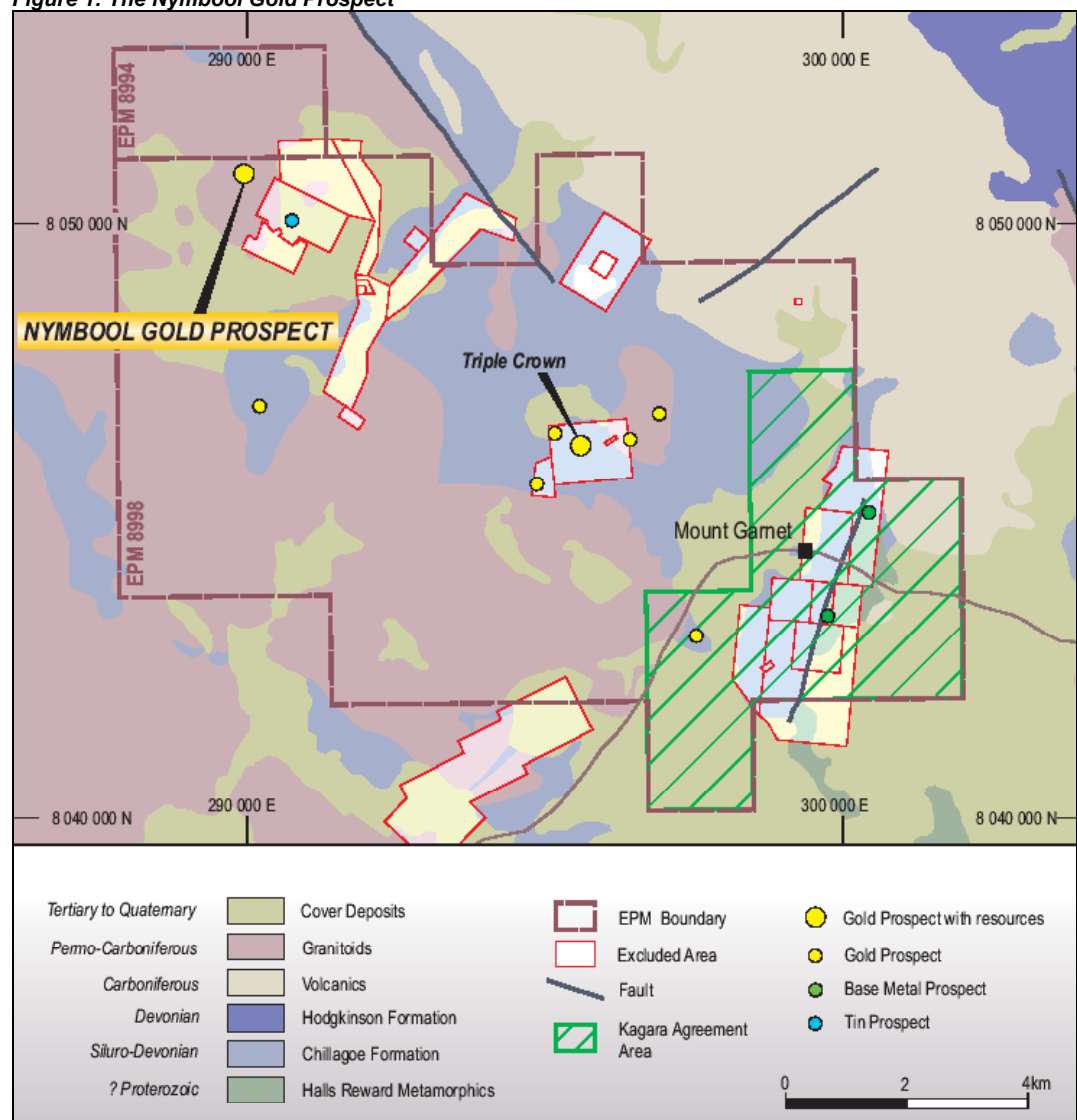
The NGP is located in near Mount Garnet in far north Queensland, a region that has enjoyed a long history of gold mining.

The project consists of Exploration Permit for Minerals (EPM) 8994 and 8998 and covers an area of approximately 112km<sup>2</sup>.

*Diatreme considers the NGP to be highly prospective for gold mineralisation because:*

- *The prospect displays the general characteristics of other bulk-tonnage gold deposits in northeast Queensland such as Kidston, Mt Leyshon, Mt Wright and Red Dome.*
- *The existing resource has been outlined following shallow drilling only.*
- *An IP anomaly seems to indicate the presence of sulphide mineralisation at depth, which may be related to the existing gold resource. This suggests that only part of the mineralised system has been outlined so far.*

Figure 1: The Nymbool Gold Prospect



Source: DRL

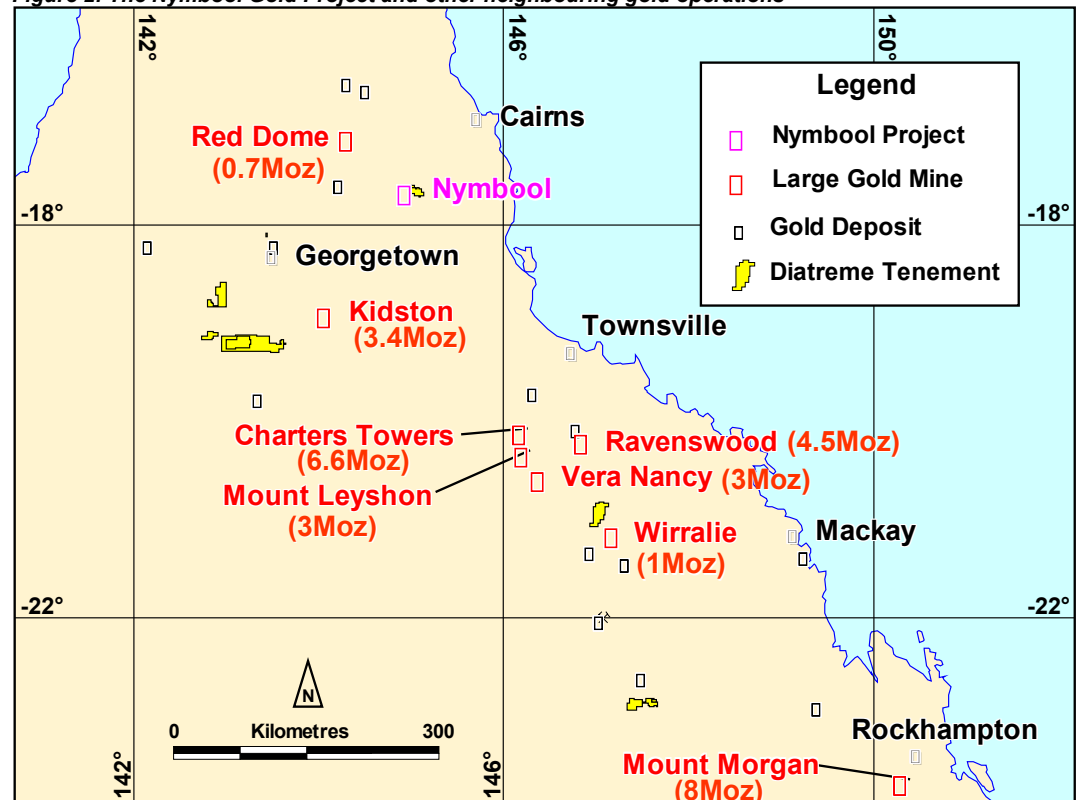
4.1.1 Background

Previous exploration at Nymbool has been carried out by WMC, Minexco Associates, Auralia Resources and Normandy Mining and since 1994, by Diatreme.

Diatreme initially explored for gold and base metals under a farm in agreement with Normandy, however, in mid-2002 purchased the EPMs outright.

In this time Diatreme has carried out stream sediment and soil sampling, geological mapping, geophysical surveying, shallow RC drilling, resource estimation and preliminary metallurgical studies at an estimated expenditure of around A\$600,000.

Figure 2: The Nymbool Gold Project and other neighbouring gold operations



Source: DRL

The geology of northern Queensland consists of sediments (typically sandstones, shales and conglomerates) that have been intruded by a number of granitoid (igneous) bodies.

On a regional scale these bodies often host extensive gold, base metal, tin, tungsten and molybdenum mineralisation, while vein gold mineralisation is common in the surrounding sediments.

The mineralisation at Nymbool exhibits a number of similarities to nearby world class deposits.

Table 3: Historical production from the gold mines of northern Queensland

Project	Moz gold	Project	Moz gold
Kidston	3.4	Ravenswood (incl. Mount Wright)	4.5
Mount Leyshon	3.3	Mount Morgan	8.0
Vera Nancy (incl. Pajingo)	3.0	Yandan	0.6
Wirralie	1.0	Mount Coolon	0.3
Red Dome	0.7	Twin Hills / Lone Sister	0.6
Charters Towers	6.6	<b>Total</b>	<b>32.0</b>

Source: DRL

Gold mineralisation at Nymbool is associated with a porphyry that has been intruded along the contact of two granitoids.

Large intervals of low grade gold (and some copper) mineralisation have been encountered (e.g. 100m at 0.66g/t) and an oxide resource of 2.4Mt at 0.7 g/t for 54,000oz gold has been outlined.

The resource covers an area of around 40,000m<sup>2</sup>, is shallow and open pittable (overburden ratio ~2.2:1) and preliminary metallurgical testing favours heap leaching.

#### 4.1.2 The Nymbool IP anomaly

Induced polarisation or 'IP' is a geophysical technique which measures the changes in magnetic and electrical fields induced in the earth by the application of an electrical current to the ground.

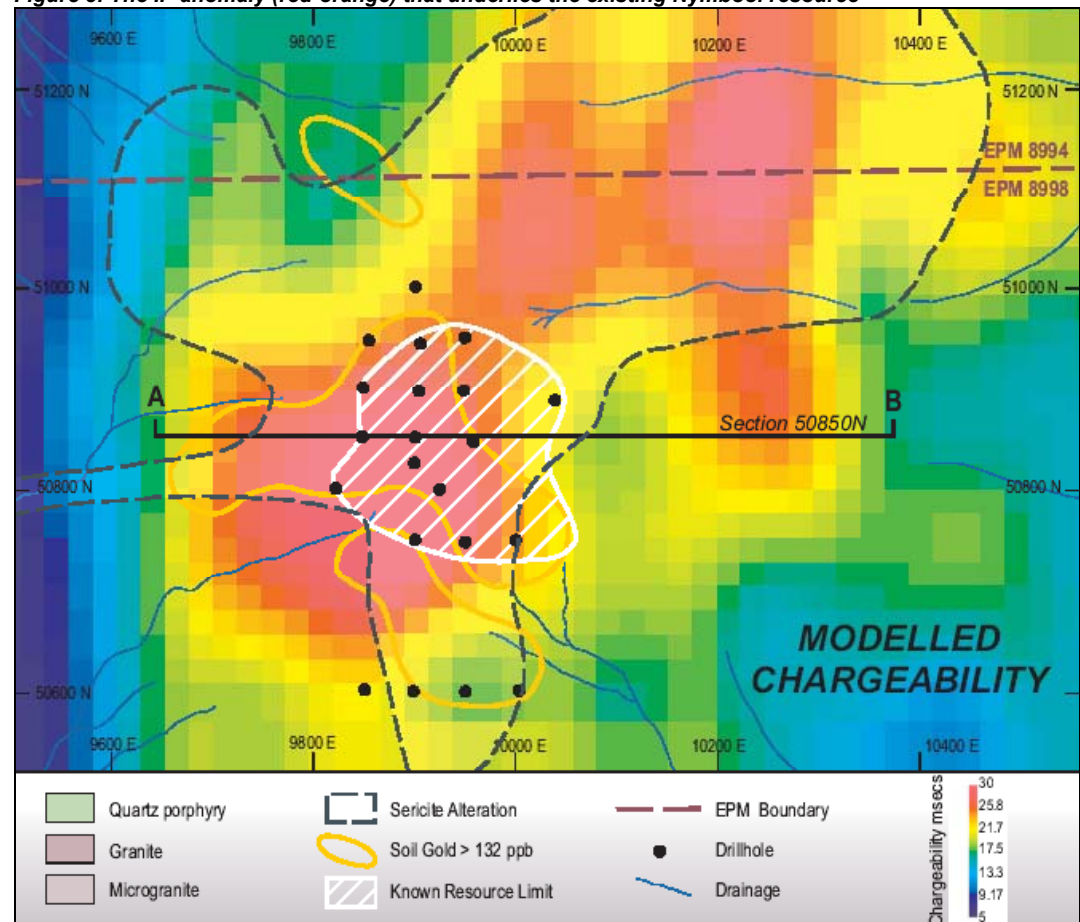
An initial IP survey carried out by WMC at Nymbool in the late 1980s highlighted a positive chargeable zone that is coincident with the existing Nymbool gold resource.

A more detailed survey was carried out by Diatreme in 2002 and indicates a strengthening of the anomaly beyond the limits of the previous drilling, both along strike and at depth (figure 3).

The main cause of the 'chargeability' (i.e. IP anomaly) is expected to be sulphide mineralisation and the mineralogy of the existing oxide resource suggests a sulphide origin at depth.

The area covered by the IP anomaly is around 7.5 x greater than the area of the existing resource.

**Figure 3: The IP anomaly (red-orange) that underlies the existing Nymbool resource**



Source: DRL

#### 4.1.3 Outlook

- *Diatreme believes that the current resource may represent the low-grade halo of a larger, as yet unidentified, higher-grade body of gold mineralisation (i.e. the IP anomaly).*
- *As such, drill testing of the IP anomaly is considered a priority.*
- *Diatreme proposes to undertake RC drilling of the deeper IP target in year 1 (cost ~A\$0.2m) and if results justify it, will proceed to resource definition drilling (A\$0.5-1.0m).*

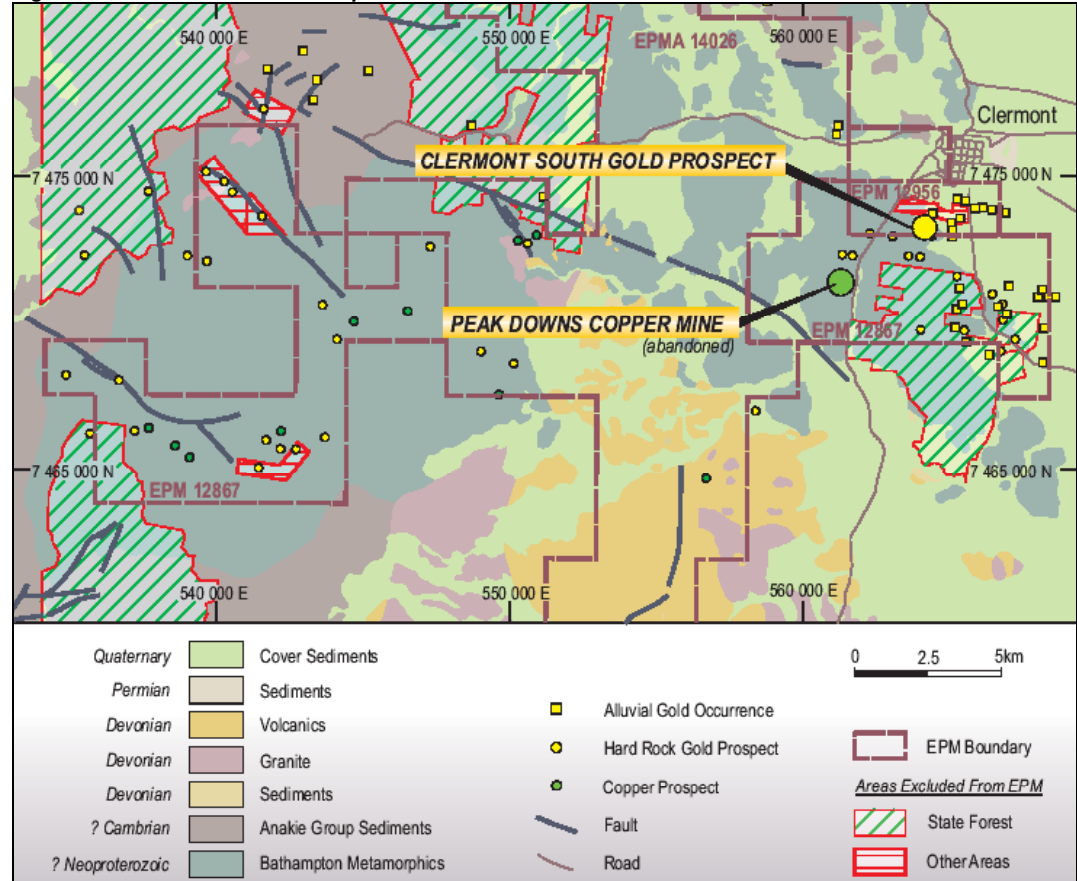
## 4.2 Clermont Gold Project (CGP)

The Clermont South Gold Prospect is the focus of Diatreme’s CGP, where the company is exploring for stratabound bulk tonnage targets in a region with a long history of alluvial gold mining.

The project comprises EPMS 12687, 12956 and 14026, which cover an area of around 457km<sup>2</sup>.

- ***Diatreme plans to drill the inferred down dip extension of a gold-bearing banded siliceous ironstone horizon, which may be the source of local alluvial gold deposits.***

Figure 4: The Clermont Gold Prospect



Source: DRL

### 4.2.1 Background

Gold was first discovered in the Clermont Goldfield in the 1860s and between 1862 and 1901 it produced around 260,000oz. Between 1877 and 1901 production was recorded at 175,000oz from alluvial sources and importantly, just 10,000oz from quartz lodes (i.e. the main source of alluvial gold may not have been discovered).

By the 1920s mining had almost ceased, although a discovery of a new alluvial deposit revived production through to the mid-1950s. Small scale alluvial mining was also carried out during the 1980s and 1990s. Total gold production to 1993 has been estimated at nearly half a million ounces.

The Peak Downs Copper Mine operated between 1863 and 1877 and produced 17,000t of copper (100,000t at 17% copper). Mount Morgan Ltd investigated the mine during the 1920s and identified a sulphide horizon grading 3.9% copper with an average width of 0.7m over a 366m strike length.

Recent gold and base metal exploration has been carried out by Mines Administration Pty Ltd, Newmont Pty Ltd, Uranium Consolidated NL, Utah Development Company, Electrolytic Zinc Company of Australia Ltd, BHP Minerals Pty Ltd, Pennzoil of Australia Ltd, Ladnote Pty Ltd, Plutonic Operations Ltd and Straits Mining Pty Ltd.

Diatreme’s Clermont South prospect was discovered in the early 1970s and although diamond drilling was completed, it was not assayed for gold and the core is no longer available.

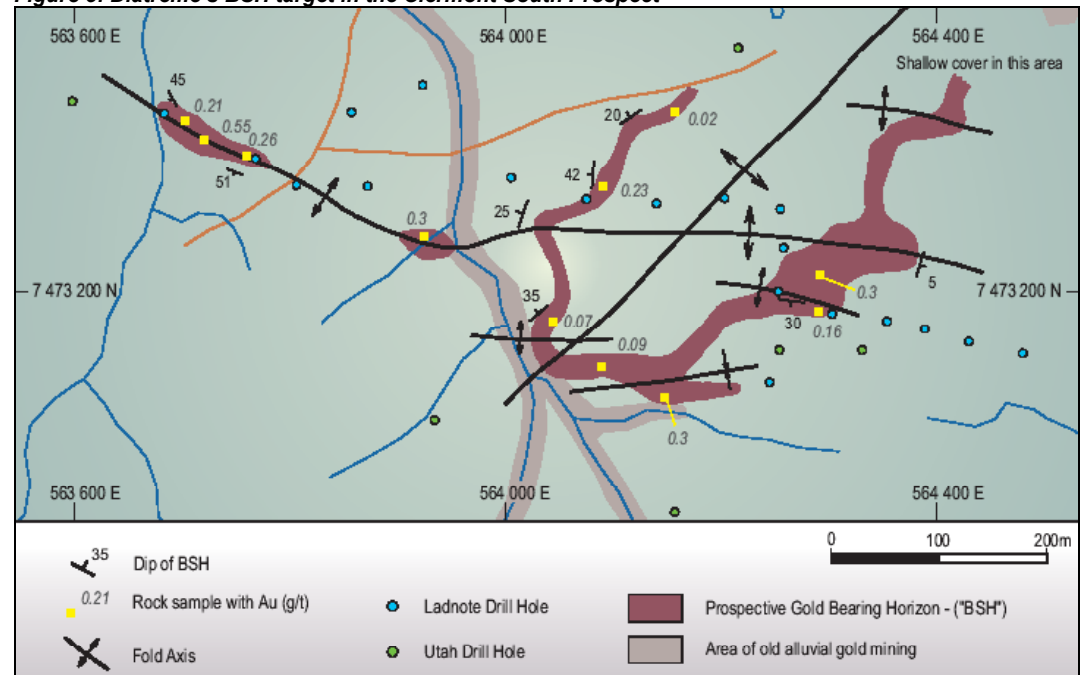
#### 4.2.2 Diatreme's strategy

The Clermont Project lies in an elongate belt of metamorphic rocks and granitoids. In addition to gold in the local alluvial deposits, gold mineralisation in the area is known to be associated with quartz veins in the metamorphic rocks and stratiform copper mineralisation.

However, previous exploration has only encountered small gold bearing quartz vein systems and Diatreme thinks these are unlikely to be the only source for the area's alluvial gold.

The company believes that a gold-bearing banded siliceous [ironstone] horizon (BSH) may be the source of much of the area's alluvial gold deposits.

**Figure 5: Diatreme's BSH target in the Clermont South Prospect**



Source: DRL

- **DRL believes that the Clermont BSH is similar to other gold bearing examples such as the 20Moz Hemlo deposit in Canada and Queensland's Tick Hill (0.5Moz at ~22g/t gold).**
- **Although exploration has been carried out at or near the Clermont BSH, records are incomplete and it is unclear whether the BSH itself was ever actually intersected by previous drilling. Samples were also not always assayed for gold.**
- **Diatreme plans to complete a comprehensive RC drilling programme in year 1 (initial 8 holes for 800m and A\$118,000) over the inferred down dip extension of the BSH in order to identify higher-grade areas for a more extensive follow-up drilling programme.**

### 4.3 Yarrol Gold Project (YGP)

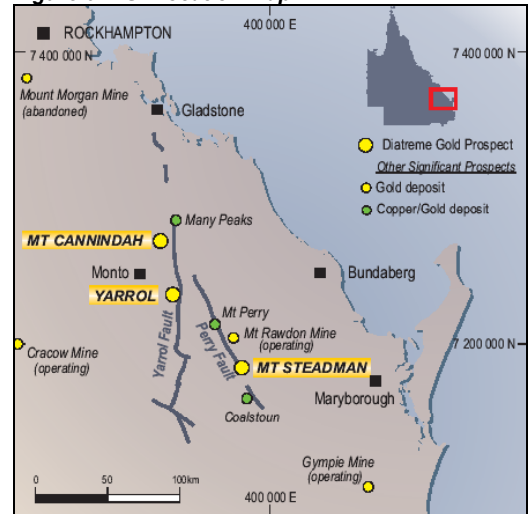
The YGP of southeast Queensland consists of three separate tenements (EPMs 8402, 12834 and 12903) covering an area of 58km<sup>2</sup> and includes the **Yarrol**, **Mount Steadman** and **Mount Cannindah** prospect areas.

The YGP lies within the New England Fold Belt, a subduction-related volcanic arc complex, which has had granitic bodies emplaced mainly during extensional periods.

- **DRL is targeting gold mineralisation in association with large igneous intrusives (porphyries) that may have been emplaced along regional faults.**

Other significant non-Diatreme deposits in the area include Metallica Minerals' **Coalstoun** (85Mt at 0.3% copper) and Equigold's **Mount Rawdon** (22Mt at 1.2 g/t gold and 4.2 g/t silver).

Figure 6: YGP location map



#### 4.3.1 Yarrol Gold Prospect

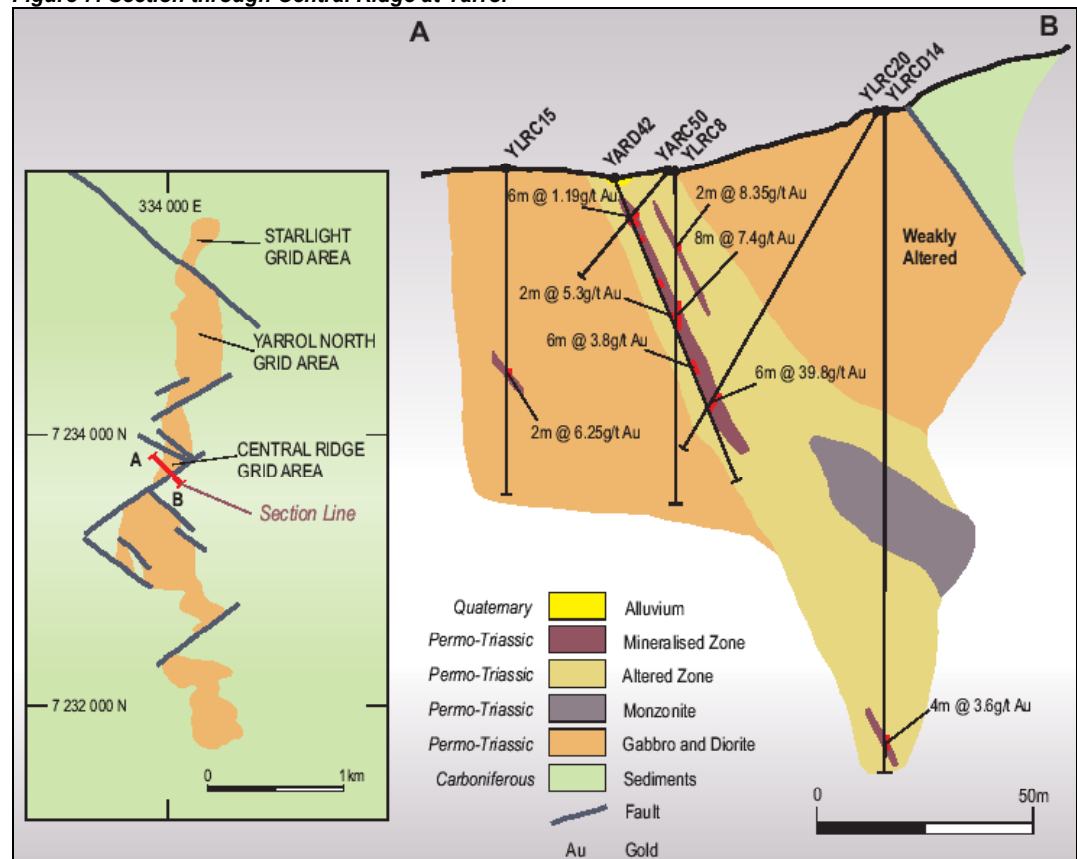
Small scale mining was carried out in the Yarrol prospect from the late 1800s to late 1930s producing around 10,000oz of gold at an average grade of approximately 10 g/t.

Results from more recent drilling of high grade gold mineralisation have included 6m at 39.8g/t, 8m at 7.4g/t, 6m at 3.8g/t and 2m at 8.35g/t (see figure 7).

DRL will be exploring for porphyry-related ore bodies, and already has the following gold resources:

- **Yarrol North** – 0.87Mt at ~1.6 g/t gold (~45,000oz)
- **Central Ridge** – 0.27Mt at ~1.5 g/t gold (~13,000oz)

Figure 7: Section through Central Ridge at Yarrol



Source: DRL

Since the 1970s, exploration has been carried out by Amoco Minerals Australia Company, Augold NL, the Geopeko-Fawdon/Skett JV, Cyprus Gold Australia Corporation and Diatreme (then Strike Exploration Pty Ltd). This has included the drilling of 141 RC and diamond holes (14,516m).

Gold mineralisation at Yarrol is contained within a number of igneous bodies that have been intruded along major north-south faults. There are a several of different styles of mineralisation and the earlier workings are centred on steeply-dipping high grade fault structures.

- ***The existing resource has been outlined through shallow drilling only and in order to locate possible extensions, Diatreme plans to drill four holes for a total of 400m at a cost of around A\$85,000 in year 1 after listing.***

#### 4.3.2 Mount Steadman

The Mount Steadman gold prospect is located within EPM 12834.

The old Mount Steadman Mines (Mount Steadman, Venus and London) were worked mainly between 1891 and 1902, although some production did continue until the late 1940s.

Previous exploration in the area has been carried out by Eagle Mining, Penzoi, Transit Mining, Metana Minerals, MF Davidson, Homestake Australia Ltd, Probe, CRA Exploration Pty Ltd and Diatreme (then Strike Exploration Pty Ltd) and this included 41 holes for approximately 2,750m.

Gold mineralisation in the area is hosted by granites and most has been encountered so far at the Fitzroy Prospect, where intersections include 26m at 1g/t gold, 22m at 1g/t gold, 25m at 1.1g/t gold and 29m at 0.9g/t gold.

- ***Diatreme has estimated a resource of 1.2Mt at 0.9g/t gold for 35,000oz and further mineralisation has been outlined below this.***
- ***However, DRL believes that adjacent ground magnetic anomalies are better targets and plans to initially drill two RC holes in year 2 for a total of 400m (cost around A\$50,000).***

#### 4.3.3 Mount Cannindah

The Mount Cannindah prospect is situated within EPM 12903, which itself surrounds a group of mining leases (MLs) held by other parties, which contain the Mount Cannindah Mine (4.4Mt at 0.93% copper, 20g/t silver and 0.4g/t gold) and Cannindah East (250,000t at 2.8g/t gold).

Diatreme has identified a high priority magnetic target to the north of these MLs.

Mineralisation in the area is again related to intrusive bodies, and Diatreme already has identified a high priority target related to a prominent geophysical anomaly.

- ***Diatreme proposes to drill two RC holes to test this blind target (it is located beneath volcanic rocks) at the end of year 1 at a cost around A\$46,000.***

#### 4.4 Georgetown Inlier Gold Project (GIGP)

Diatreme's GIGP comprises three separate tenements (EPMA 12976, 11849 and 13126), which cover an area of 426km<sup>2</sup> of the Georgetown region of north Queensland.

The tenements cover the **Ironhurst**, **Munitions Creek** and **Warrigal Creek** gold prospects.

##### 4.4.1 Ironhurst Gold Prospect

This consists of a volcanic pipe intruding metasediments and has similar geological characteristics to other economically significant deposits in the region, such as **Kidston**, **Mount Leyshon**, **Red Dome** and **Mount Wright**.

Previous exploration has been carried out by CRA Exploration Pty Ltd and Seltrust Mining Corporation. The latter tested both the volcanic pipe and the surrounding country rocks and drilled 22 RC holes for 2,618m to a depth of around 150m and better intersections included 20m at 10.7% zinc and 13 g/t silver and 4m at 162 g/t silver and 3.7% zinc.

Similar deposits in the region exhibit base metal mineralisation such as this above

Diatreme proposes to drill two RC drill holes for 500m.

##### 4.4.2 Munitions Creek Gold Prospect

The Munitions Creek Gold Prospect, where previous exploration by the likes of BP, CRA, MIM and Battle Mountain (Australia) Inc. has identified a quartz and quartz-breccia vein swarm over a zone measuring 600m by 200m.

Composite rock chip samples returned assays of up to 22.5 g/t gold while other quartz vein sampling produced assays up to 20.8g/t gold and 10.7g/t gold.

This prospect is located in the Langdon River area, lies within EPMA 11849 and covers an area of 315km<sup>2</sup>. Once the prospect has been granted, Diatreme will be subject to the 'Georgetown Exploration database Agreement' whereby BHP Billiton may either participate in the exploration of the EPM and obtain a 75% by reimbursing DRL with three times the incurred expenditure or BHP Billiton may claim a 5% net profit interest in the EPM.

- ***Previous gold exploration, carried out by BP Minerals Australia, CRA Exploration Pty Ltd, MIM Exploration Pty Ltd and Battle Mountain (Australia) Inc, has outlined a 600m by 200m swarm of quartz veins which has yielded gold in rock chips of up to 22.5g/t.***
- ***DRL proposes to drill test the extent of the high-grade mineralisation with four RC holes at a cost of around A\$60,000 early in year 2 of its programme.***

#### 4.4.3 Warrigal Creek Gold Prospect

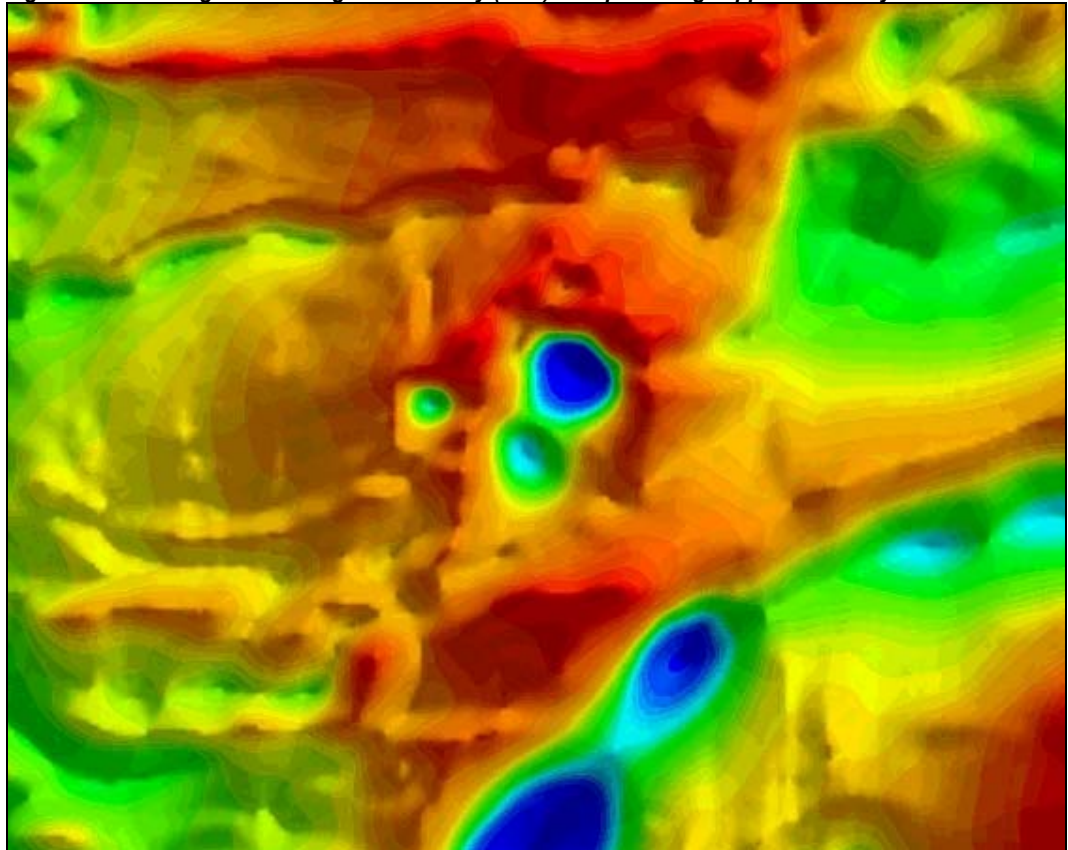
This prospect lies within EPMA 13126 and consists of a complex of magnetic-low features identified in an airborne magnetic survey completed by MIM in 1992.

Diatreme believes that this magnetic feature may represent an igneous intrusive and has highlighted the similarities with the anomaly over the nearby Mount Leyshon deposit.

A number of companies have explored for base metal, gold, uranium and tin mineralisation in the area, however, none have tested Diatreme's magnetic target. ACM Gold Operations Pty Ltd did however report gold in stream sediments that may have at one time drained from the vicinity of Diatreme's magnetic anomaly.

- ***Diatreme proposes to drill test the magnetic anomaly, which lies beneath transported cover, with three RC holes for a total of 300m at an estimated cost of A\$55,000.***

**Figure 8: The Warrigal Creek magnetic anomaly (blue) – map coverage approx. 10km by 8km**



Source: DRL

## 4.5 Pyramid Gold Project (PGP)

The 320km<sup>2</sup> PGP is located in an area of central Queensland that hosts many significant gold deposits, including **Pajingo, Vera-Nancy, Wirralie, Yandan, Mount Coolon** and **Twin Hills**.

The project also lies just 120km southeast south of the Charters Towers area, which contains the **Charters Towers, Ravenswood** and **Mount Leyshon** deposits.

The project comprises EPMA 12887 which covers an area of around 320km<sup>2</sup> and although yet to be granted due to native title considerations, Diatreme expects to have access to the prospect by the end of the first year after listing.

Since the late 1970s a number of mining companies have explored in the area, primarily for epithermal gold mineralisation, and this has provided Diatreme with a number of drill targets.

- ***Diatreme will be targeting these high-grade epithermal gold deposits, which are similar to the nearby high-grade Vera-Nancy/Pajingo deposit.***
- ***The company has been particularly encouraged by previous drill results from the Gettysburg prospect, although Sellheim and Pradesh are also to be focussed upon.***
- ***Better drilling results to date have included 8m at 18.1g/t, 24m at 5g/t and 40m at 1g/t.***

**Table 6: Gettysburg drill results**

Drill Hole	Interval (m)	Length (m)	Grade (g/t Au)
MDRC31	0-8	8	18.1
MDRC33	52-76	24	5.0
MDRC34	28-44	16	2.5
MDD01	40-80	40	1.0
MDD02	25-51	26	2.8
MDRC39	8-72	64	0.5
MDRC42	8-72	64	0.4
MDRC37	28-64	36	0.7

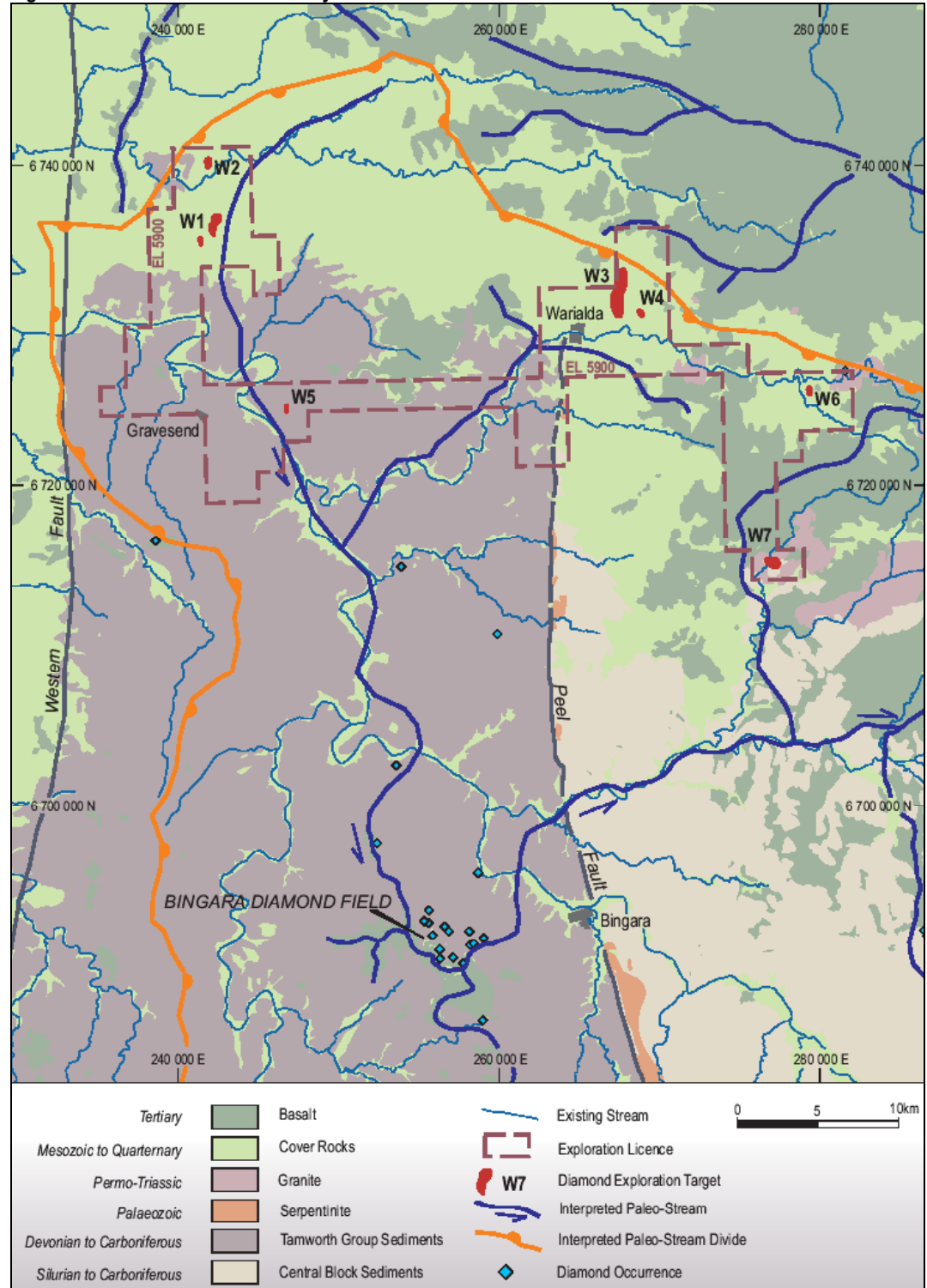
Source: DRL

- ***Diatreme expects to have access granted by the end of year 1 and has a preliminary exploration programme planned for year 2.***

4.6 Warialda Diamond Project (WDP)

- *Diatreme is looking for the source for the Bingara Diamond Field in northeastern NSW, which, with an historical production of 34,000 carats, is eastern Australia's second largest diamond producing region behind Copeton, 50km to the east (167,000 carats).*
- *The company has reinterpreted palaeo-drainage data and believes the source of alluvial diamonds to be some distance from previous targets.*

Figure 9: The Warialda Diamond Project



Source: DRL

#### 4.6.1 Background

Diamonds were first discovered at Bingara in 1872 and were worked from alluvial deposits until 1939. The clustered nature of the deposits suggests a local source, however, despite a great deal of conventional prospecting by experienced diamond explorers such as Baxter Brown Exploration, Diamond Ventures, Stockdale Exploration and WMC, the sources of the Bingara (and Copeton) diamond fields remain unknown.

- ***DRL believes that sediment/soil cover over any diamond bearing pipe (i.e. hardrock source) may explain why traditional exploration, using heavy mineral sampling of streams for instance, has not been successful.***
- ***Furthermore, significant changes in the area's drainage system may have taken place since the alluvial diamonds were deposited. The region seems to have been tilted to the north, and therefore DRL is targeting a northerly source for the alluvial diamonds (i.e. eroded prior to the northerly tilting of the area).***
- ***Diatreme is using newly interpreted palaeo-drainage data along with high resolution airborne geophysics to identify diamond targets.***
- ***Diatreme has seven high priority geophysical targets which it proposes to drill in the first year of exploration. The company has allocated A\$123,000 for eight 100m RC holes.***

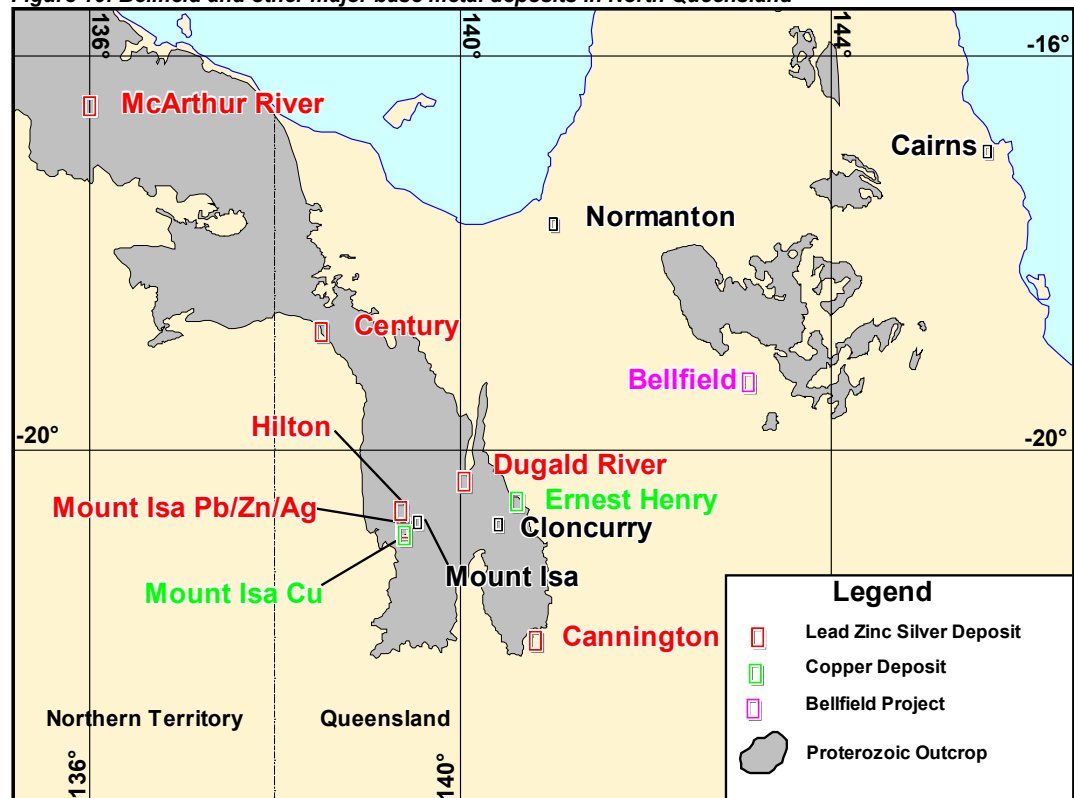
## 4.7 Bellfield Base Metal Project (BBMP)

- *Diatreme is targeting a large, shallow buried base metal deposit at Bellfield.*
- *The company believes that the Georgetown Inlier may represent the easterly extension of the highly prospective Mount Isa Inlier.*

The Bellfield project comprises EPMA 12868 and 12888 and covers an area of around 1100km<sup>2</sup> of northern Queensland. DRL has negotiated access with one of the owners of native title and the outstanding agreements for the rest of the project area are expected to be finalised in year 1.

The BBMP lies within the Georgetown Inlier, one of a number of isolated Proterozoic sedimentary sequences of northwest Queensland and the neighbouring Northern Territory. These are considered highly prospective for large base metal deposits and contain world class lead-zinc deposits such as Mount Isa, Hilton (George Fisher), Century and Macarthur River as well as the major Mount Isa copper deposit.

Figure 10: Bellfield and other major base metal deposits in North Queensland



Source: DRL

### 4.7.1 Background

Gold has been mined from the Gilberton Goldfield, which is just to the east of the Bellfield project area (around 13,000oz from alluvials and 30,000oz from hard rock).

Although extensive exploration of the **outcropping** Proterozoic sequences of the Mount Isa Inlier has already been carried out, and led to the discovery of a number of medium sized deposits to the west of the Bellfield Base Metal Project (e.g. Cannington and Ernest Henry), a major deposit under cover is yet to be discovered.

Bellfield has been explored for base metals, gold, uranium, tin and tungsten mineralisation by numerous companies, including Queensland Metals Corporation NL and MIM Exploration Pty Ltd.

- *Diatreme has been able to use the data from previous exploration, including airborne magnetics, to interpret geology under the shallow cover of the project area and is targeting major fault structures (e.g. Clara River Fault), which are similar to those occurring adjacent to a number of the region's large base metal deposits.*

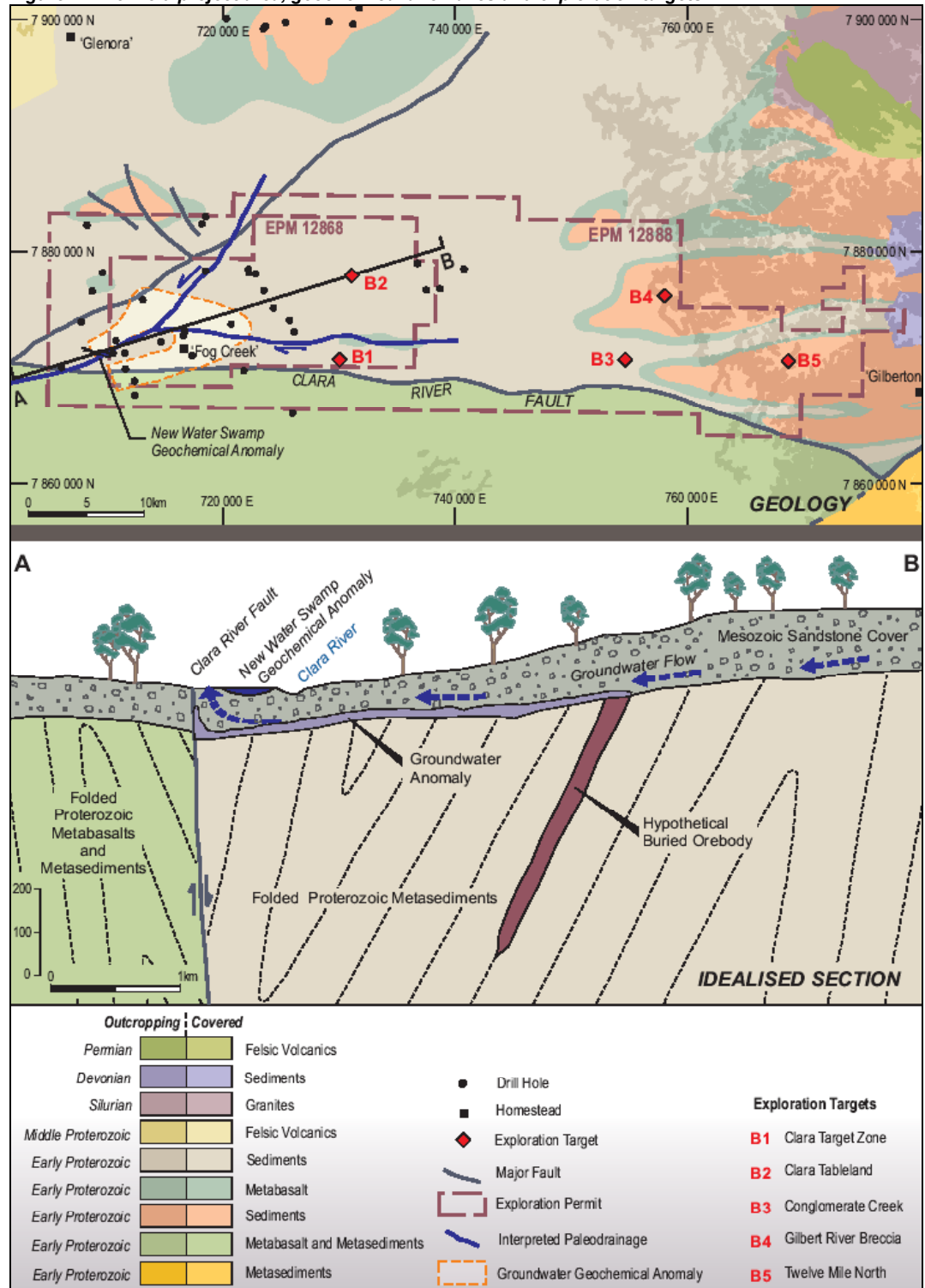
#### 4.7.2 Strategy

***Diatreme considers the Bellfield project to be prospective for a number of important reasons:***

- *The Georgetown Inlier contains similar sedimentary rocks to the Mount Isa Inlier.*
- *Both inliers are similar in age and only appear to be separated by thin cover.*
- *A large base metal discovery is yet to be made in the Georgetown Inlier, however, base metal mineralisation has been encountered.*
- *Clara River Fault is similar to those that occur adjacent to the region's large base metal deposits (Mt Isa Fault, Emu Fault at MacArthur River & Termite Range Fault at Century).*
- *A swamp close to the Clara River Fault contains both zinc and copper mineralisation and Diatreme believes that groundwaters may have remobilised mineralisation from an as yet unidentified sulphide resource.*
- *Lead mineralisation to the east of the Clara River Fault is similar to that seen at Mt Isa.*
- *Evaporitic rocks are encountered in the project area and are commonly associated with large Proterozoic base metal deposits.*

***Diatreme has five target areas (see figure 11) and proposes to drill ten RC holes at a cost of around A\$320,000. Once the EPM has been granted, the company will commence by drilling two 400m holes in year 1 at a cost of around A\$137,000.***

Figure 11: Bellfield project area, geochemical anomalies and exploration targets



Source: DRL

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