BRANCH CREEK HARTZ JV PROJECT

EL22579
ANNUAL REPORT
AUGUST 2003

DE BEERS

A DIAMOND IS FOREVER

PROJECT: BRANCH CREEK HARTZ JV PROJECT

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ABSTRACT:

The Branch Creek Hartz JV Project was initiated following an approach in mid 2000 by Hartz Range Mines (HRM) for an expression of interest in two exploration licence applications covering the Branch Creek area of the McArthur Basin. Both licence applications cover prospective ground for kimberlite emplacement due to previous explorers recovering unresolved macro and micro-diamonds. The project consists of three tenements, one of which is EL22579, held by Hartz Range Mines. The report details exploration conducted during the period 29th July 2002 to 28th July 2003 on EL22579. The field programme involved the collection of 70 reconnaissance stream samples, and 3 deflation loam samples. An airborne magnetic survey was flown over the magnetically quite section of the tenement, approximately 215km^2. The survey data was processed and examined however no priority intrusive type signatures were identified. One non-priority magnetic anomaly and two remote sensing anomalies were deflation loam sampled. All results are awaited.

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1. INTRODUCTION

Hartz Range Mines (HRM) approached De Beers Australia Exploration Limited (DBAE) in mid 2000 for an expression of interest in two exploration licence applications covering the Branch Creek area on the Calvert Hills 1:250,000 map sheet in the NT.

The area has reported a number of unexplained macro and micro diamonds from the Branch and Settlement Creek catchments, however a source has not been located. It is DBAE's opinion that the source of the diamonds may lie elsewhere within the HRM tenements. A letter agreement was signed with HRM on the 5 April 2001 and covers two HRM tenement applications, ELA10335 and ELA22579 held in the NT. An exploration license application, EL23138, was lodged in April 2001 by DBAE to cover the headwaters of Settlement Creek. This was also added to the Exploration Area letter agreement. The location of the EL22579 is displayed as Map 2.

Exploration in EL22579 during the reporting period included reconnaissance stream sampling, an airborne magnetic survey and ground investigation of magnetic and remote sensing anomalies. A summary of tenement activities is shown on the index map, Map 1.

2. TENURE

Hartz Range Mining lodged its initial licence application, ELA10335, in January 1999 and an additional exploration licence application was lodged in May 2000. After signing the letter of agreement DBAE reviewed the open file exploration data and lodged a tenement in April 2001 covering the headwaters of the Settlement Creek drainage catchment. The tenements cover pastoral leasehold, which is subject to native title claims. Table 1 summarises the project tenement details.

TABLE 1: TENURE DETAILS

LICENSE	HOLDER	APPLICATION	GRANTED	BLOCKS	AREA
EL10335	HRM	4 January 1999	15 August 200	473	1519 km^2
EL22579	**HRM**	**4 May 2000**	**29 July 2002**	**144**	**472 km^2**
ELA23138	DBAE	17 April 200	Application	70	229 km^2
TOTAL	**3**			**687**	**2220 km^2**

3. DESCRIPTION OF PROJECT AREA

3.1 Infrastructure

The Branch Creek Hartz JV project area covers an area of 2220 km^2 and is situated in the SE McArthur Basin approximately 300 kms southeast of Borroloola, adjacent to the NT-QLD border. Wollogorang Homestead is located in the northern part of the project area. Vehicle access is restricted to the main Borroloola-Wollogorang road in the north of the project area and local station tracks.

3.2 Physiography

Topography is dominated by escarpment country, with a maximum elevation of 266m AMSL in the southern parts of the project area. The well-developed dendritic drainage network is dominated by Settlement and Branch Creek, which today drain to the northeast into the Gulf of Carpentaria. Permanent and semi-permanent waterholes are common along these creeks.

3.3 Geology

(from Jackson *et al*, 1987 and Ahmad & Wygralak, 1989)

The project area is located within the Wearyan Shelf tectonic domain of the southeastern parts of the Palaeoproterozoic McArthur Basin. The McArthur Basin is a succession of essentially unmetamorphosed sedimentary and lesser volcanic rocks, deposited largely in shallow marginal marine and lacustrine settings.

The tenements cover a sequence of sediments and volcanics of the mid-Proterozoic Tawallah Group which flank the northern margin of the Lower Proterozoic Murphy Metamorphic Inlier. The Murphy Metamorphics are a sequence of isoclinally folded greenschist facies metasediments which are unconformably overlain by a felsic volcanic/pyroclastic sequence (Cliffdale Volcanics), intruded by granite/adamellite of the Nicholson Granite Complex.

The Tawallah Group overlies the igneous and metamorphic complexes of the Murphy Inlier with angular unconformity and disconformity. The Tawallah Group is the oldest group of the McArthur Basin sequence. The Westmoreland Conglomerate is the oldest unit of the Tawallah Group and consists of a thick sequence (up to 1800m) of fluvial arkosic conglomerate and quartz arenite.

The Seigal Volcanics conformably overlie the Westmoreland Conglomerate and occurs as a series of tholeiitic basaltic lavas and minor tuffaceous interbeds along the southern margin of the project area. The McDermott Formation conformably overlies the Seigal Volcanics along the southern margin and forms a narrow, poorly outcropping unit characterised by alternating beds of shallow-water marine arenites, shale and dolostone.

The carbonate rocks of the McDermott Formation are conformable overlain by the Sly Creek Sandstone sequence which grades upwards into glauconitic sandstone termed the Aquarium Formation. The conformable units encompass the majority of the project area and are characterised by a series of open folds with north east oriented axes. The continental Settlement Creek Volcanics conformably overlie the Aquarium Formation and consist of a series of basaltic lava flows, sills and siltstone interbeds. Exposure of the volcanics is limited and is obscured by Recent alluvium denoting the Settlement Creek valley.

Minor siltstone and sandstone of the Early Cretaceous Mullaman Beds overlie the Tawallah Group sediments. Soils, alluvium and lateritic deposits of Tertiary and Quaternary age mask the underlying Proterozoic lithologies along the major watercourses.

4. EXPLORATION PROGRAMME

4.1 Reconnaissance Stream Sediment Sampling

A total of 70 heavy mineral stream samples were collected, see Map 3. Each sample consisted of 100lt of gravels hand excavated from a heavy mineral trapsite and hand screened to –2mm. Stream sampling was conducted with the aid of a helicopter.

All samples were freighted to DBAE's Perth primary treatment facility for sizing and concentrating. Acidised concentrates were forwarded to the De Beers Melbourne Laboratory for secondary concentration and preparation prior to being examined.

Table 2: Reconnaissance Stream Samples

SAMPLE	LON_X	LAT_Y	DATUM	MAP	TYPE
BV5801	137.613118	-17.298839	GDA94	E5308	STREAM
BV5802	137.616358	-17.311696	GDA94	E5308	STREAM
BV5803	137.631062	-17.310500	GDA94	E5308	STREAM
BV5804	137.652463	-17.328633	GDA94	E5308	STREAM
BV5805	137.640693	-17.294397	GDA94	E5308	STREAM
BV5806	137.668019	-17.318758	GDA94	E5308	STREAM
BV5807	137.650335	-17.328100	GDA94	E5308	STREAM
BV5809	137.685297	-17.317027	GDA94	E5308	STREAM
BV5810	137.703358	-17.317687	GDA94	E5308	STREAM
BV5854	137.790544	-17.385450	GDA94	E5308	STREAM
BV5956	137.669012	-17.493967	GDA94	E5308	STREAM
BV5957	137.722693	-17.496983	GDA94	E5308	STREAM
BV7369	137.777293	-17.488000	GDA94	E5308	STREAM
BV7417	137.792699	-17.441310	GDA94	E5308	STREAM
BV7419	137.799028	-17.461526	GDA94	E5308	STREAM
BV7420	137.782294	-17.459446	GDA94	E5308	STREAM
BV7421	137.779057	-17.463942	GDA94	E5308	STREAM

BV7422	137.769553	-17.469614	GDA94	E5308	STREAM
BV7423	137.770742	-17.491310	GDA94	E5308	STREAM
BV7424	137.749708	-17.473609	GDA94	E5308	STREAM
BV7425	137.723910	-17.433897	GDA94	E5308	STREAM
BV7426	137.732738	-17.483272	GDA94	E5308	STREAM
BV7427	137.720513	-17.456031	GDA94	E5308	STREAM
BV7429	137.736336	-17.460631	GDA94	E5308	STREAM
BV7430	137.696296	-17.496413	GDA94	E5308	STREAM
BV7431	137.697722	-17.487755	GDA94	E5308	STREAM
BV7432	137.689706	-17.487977	GDA94	E5308	STREAM
BV7433	137.630655	-17.485164	GDA94	E5308	STREAM
BV7434	137.639489	-17.474861	GDA94	E5308	STREAM
BV7435	137.637270	-17.472556	GDA94	E5308	STREAM
BV7436	137.632975	-17.462819	GDA94	E5308	STREAM
BV7437	137.639857	-17.456712	GDA94	E5308	STREAM
BV7438	137.636606	-17.457035	GDA94	E5308	STREAM
BV7439	137.660698	-17.447543	GDA94	E5308	STREAM
BV7440	137.653664	-17.445705	GDA94	E5308	STREAM
BV7441	137.649588	-17.442427	GDA94	E5308	STREAM
BV7442	137.666099	-17.441386	GDA94	E5308	STREAM
BV7443	137.669823	-17.431113	GDA94	E5308	STREAM
BV7444	137.663098	-17.423327	GDA94	E5308	STREAM
BV7445	137.674892	-17.424154	GDA94	E5308	STREAM
BV7446	137.684123	-17.414156	GDA94	E5308	STREAM
BV7447	137.678940	-17.421984	GDA94	E5308	STREAM
BV7448	137.703725	-17.399966	GDA94	E5308	STREAM
BV7449	137.680873	-17.394619	GDA94	E5308	STREAM
BV7450	137.689142	-17.402833	GDA94	E5308	STREAM
BV7451	137.717619	-17.397201	GDA94	E5308	STREAM
BV7453	137.613161	-17.402495	GDA94	E5308	STREAM
BV7454	137.611935	-17.391503	GDA94	E5308	STREAM
BV7455	137.618912	-17.396913	GDA94	E5308	STREAM
BV7456	137.640851	-17.409306	GDA94	E5308	STREAM
BV7457	137.659826	-17.384814	GDA94	E5308	STREAM
BV7459	137.682055	-17.383703	GDA94	E5308	STREAM
BV7460	137.660641	-17.382376	GDA94	E5308	STREAM
BV7461	137.631134	-17.347238	GDA94	E5308	STREAM
BV7462	137.694255	-17.384623	GDA94	E5308	STREAM
BV7463	137.702703	-17.368185	GDA94	E5308	STREAM
BV7464	137.634731	-17.349296	GDA94	E5308	STREAM
BV7465	137.715722	-17.340098	GDA94	E5308	STREAM
BV7466	137.654133	-17.340865	GDA94	E5308	STREAM
BV7467	137.709923	-17.372429	GDA94	E5308	STREAM
BV7468	137.658420	-17.340632	GDA94	E5308	STREAM
BV7469	137.756743	-17.341955	GDA94	E5308	STREAM
BV7470	137.755706	-17.372248	GDA94	E5308	STREAM
BV7471	137.706928	-17.364076	GDA94	E5308	STREAM
BV7472	137.756070	-17.333714	GDA94	E5308	STREAM
BV7473	137.754659	-17.348134	GDA94	E5308	STREAM
BV7474	137.732739	-17.365073	GDA94	E5308	STREAM
BV7495	137.783284	-17.333065	GDA94	E5308	STREAM

BV7496	137.773136	-17.355437	GDA94	E5308	STREAM
BV7500	137.607285	-17.289339	GDA94	E5308	STREAM

4.2 Geophysics

DBAE contracted UTS Geophysics to fly the Fletcher airborne magnetic system over the quiet magnetic area in the Project area. The quiet areas were delineated from the available regional magnetics including the NTGS 400m Barkley Survey. The survey was flown north-south at 100m line spacing and 25m flying height. In tenement EL22579, an area of some 215.5km^2 or 2,370 line kilometres was flown, see Map 4. Only one magnetic anomaly was selected in EL22579, SET001, however it was given a non-priority rating. Anomaly details are summarised in Table 3 and its location is shown on Map 3.

Table 3 : Magnetic Anomaly

ANOMALY	EASTING	NORTHING	ZONE/DATUM	COMMENT
SET001	788627	8065889	53 (GDA94)	NON-PRIORITY

The SET001 magnetic anomaly was ground investigated and sampled. No magnetic source rocks were found on surface, however the anomaly is possibly caused by a remnant Cretaceous outlier. The anomaly was loam sampled which consisted of 50 litres of surface deflation screened to -2.0mm. The loam sample was freighted to DBAE's Perth primary treatment facility for sizing and concentrating. Acidised concentrates were forwarded to the De Beers Melbourne Laboratory for secondary concentration and preparation prior to being examined. Details of the loam sampling are summarised in Table 4.

Table 4 : Magnetic Anomaly Sampling

SAMPLE	LONGITUDE	LATITUDE	DATUM	COMMENT
BV5958	137.717653	-17.47456	GDA94	SET001 - LOAM

4.3 Remote Sensing

Aster satellite imagery was purchased over the project area and inspected for anomalous spectral signatures. In addition B+W 1973 aerial photography was examined for anomalous features. Two anomalous remote sensing features were loam sampled which consisted of 50 litres of surface deflation screened to -2.0mm. The loam samples were freighted to DBAE's Perth primary treatment facility for sizing and concentrating. Acidised concentrates were forwarded to the De Beers Melbourne Laboratory for secondary concentration and preparation prior to being examined. Details are summarised in Table 5 and location shown on Map 3.

Table 5 : Remote Sensing Anomaly Sampling

SAMPLE	LONGITUDE	LATITUDE	DATUM	COMMENT
BV5959	137.717816	-17.476552	GDA94	AN34
BV5974	137.770072	-17.394581	GDA94	AN33

5. RESULTS

All results from the stream and loam sampling are awaited. Samples have undergone preliminary treatment and are awaiting final treatment prior to examination.

6. CONCLUSION

A total of 73 samples were collected in tenement EL22579, of which 70 were reconnaissance stream samples and three were deflation loam samples collected over one magnetic and two remote sensing anomalies. All results are awaited. Detailed aeromagnetics were flown over the quieter defined magnetic areas. No anomalous dipole signatures typical of intrusive rock were located. One low priority anomaly was selected but it is likely to represent a remanent Cretaceous outlier.

7. PROPOSED FORWARD WORK PROGRAMME

The forward work programme is dependant upon the results which are currently outstanding. Any kimberlitic indicators will be followed up, including diamonds that appear not to have travelled or released from a secondary source. Assuming that favourable results are received the follow-up programme would involve close interval stream and possible deflation loam grid sampling. If a kimberlitic heavy mineral target was delineated the next step would be a drilling programme. Table 6 outlines a proposed expenditure of $49,000 for the proposed forward work programme which is dependant upon results from the 2003 work programme.

8. EXPENDITURE

Total costs for the reporting period of 29/7/2003 to 28/7/2004 is $93,087, see Table 6 for an expenditure breakdown.

Table 6: Expenditure Details

ITEM	2002/3 ACTUAL EXPENDITURE	2003/4 PROPOSED EXPENDITURE*
ABORIGINAL LIAISION	$ 2,808	$ 1,000
CONSULTANTS	$ 170	$ 500
FIELD EXPENSES	$ 4,041	$ 2,500
MELBOURNE LABORATORY	$ 402	$10,000
TENEMENT MANAGEMENT	$12,103	$ 5,000
PERTH TREATMENT	$ 2,116	$15,000
SPECIALIST SERVICES	$19,460	$ 5,000
TRANSPORT AND TRAVEL	$25,694	$ 5,000
SALARIES & WAGES	$26,293	$10,000
Total	**$93,087**	**$49,000**

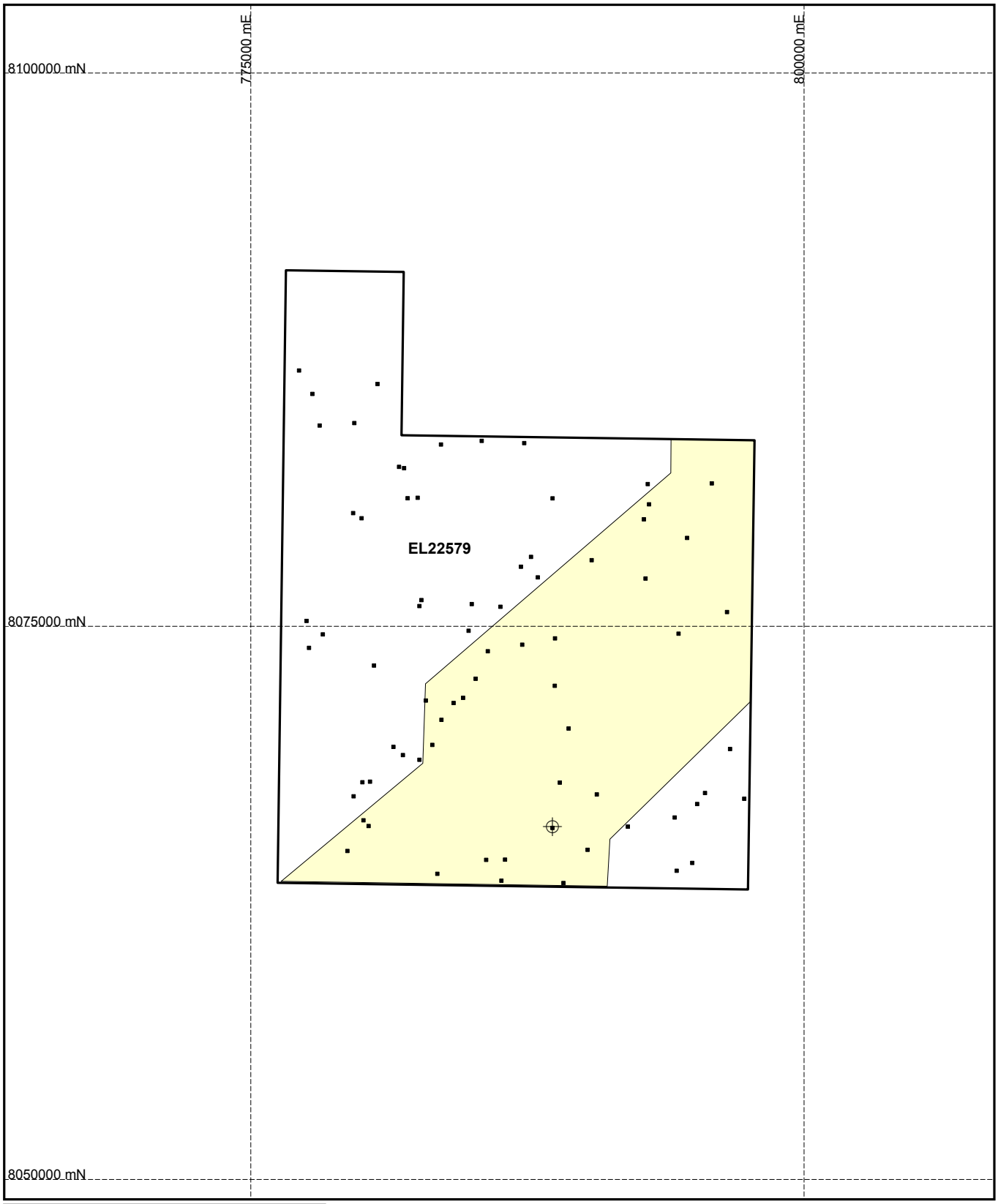
* based on encouraging results from the sampling outlined in this report.

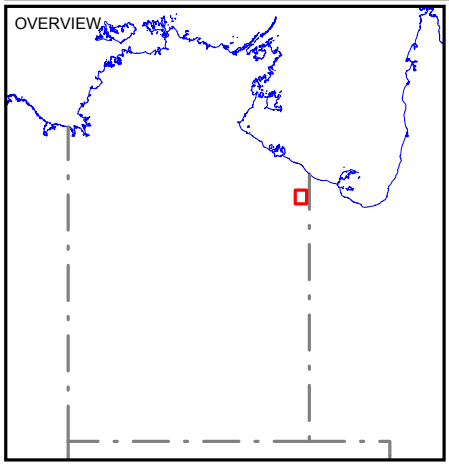
9. REFERENCES

Ahmad, M & Wygralak, AS, 1989, **1:250,000 Metallogenic Map Series. Explanatory Notes and Mineral Deposit Data Sheets, Calvert Hills SE53-08**.

Jackson, MJ, Muir, MD & Plumb, KA, 1987, **Geology of the Southern McArthur Basin, Northern Territory (BMR Bulletin 220).**

Michael Millikan
Senior Geologist





Area of Airborne Magnetic Survey

Heavy Mineral Sample

Magnetic Anomaly (Airborne Magnetics)

Magnetic Anomaly (Detailed Airmag Followup)

0 1:250,000 10KM

MAP 1

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BRANCH CREEK JV PROJECT

EL22579

EXPLORATION INDEX MAP

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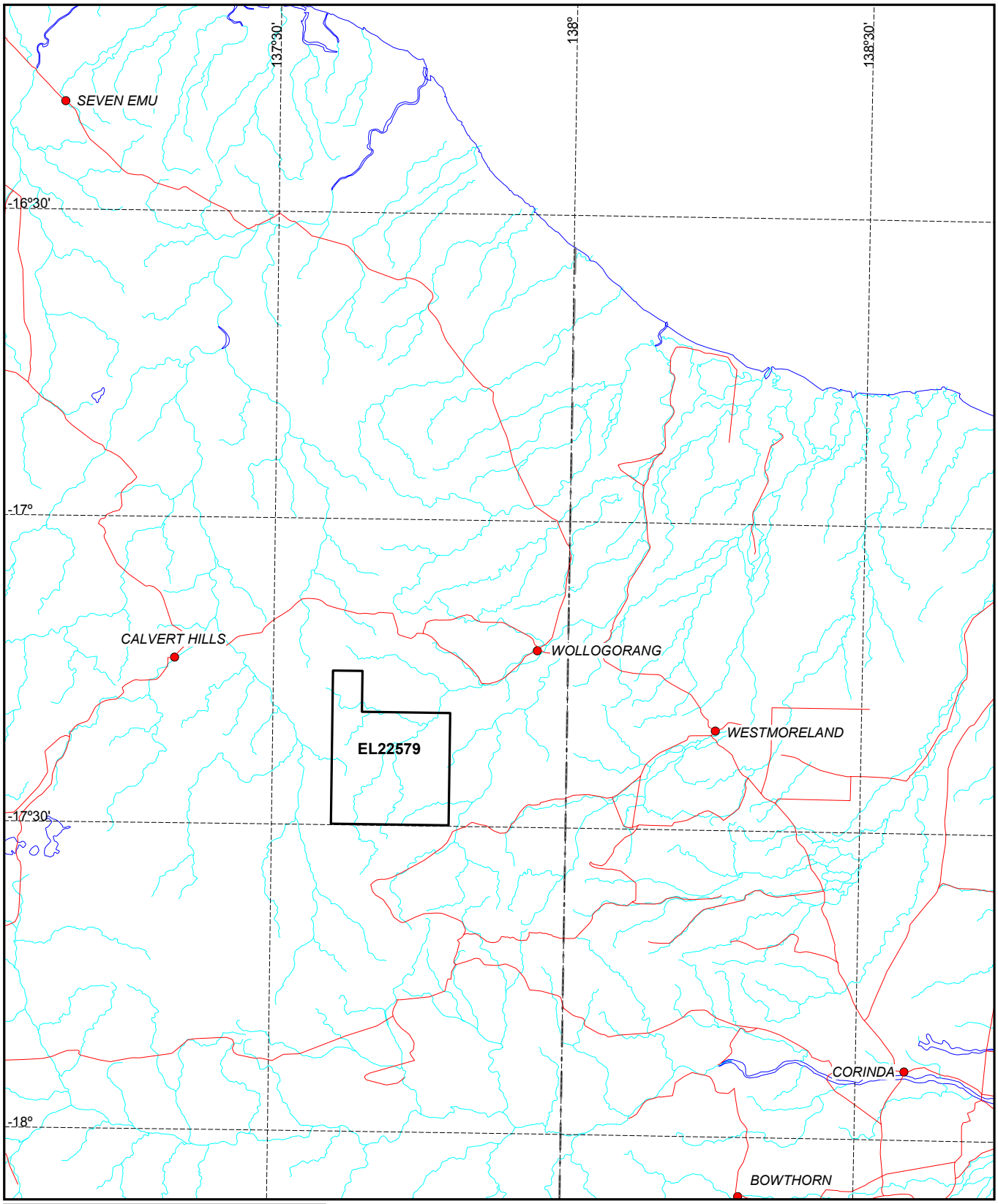

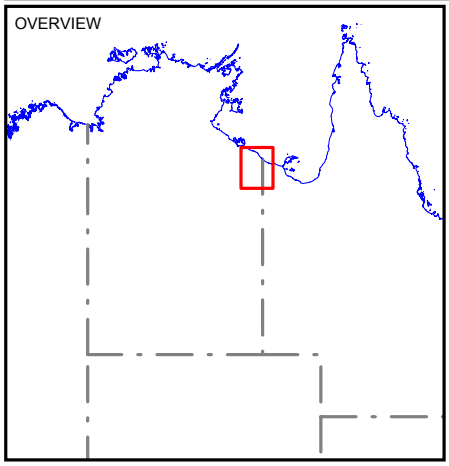

0 1:1,000,000 40KM

MAP 2

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BRANCH CREEK JV PROJECT

EL22579

LOCATION MAP

../ntmda/2003/branch creek/el22579/LOC.WOR

780000 mE
790000 mE
800000 mE
8090000 mN
8080000 mN
8070000 mN
8060000 mN

EL22579

BV7500
BV5805
BV5801
BV5802
BV5803
BV5806
BV5809
BV5810
BV5807
BV5804
BV7466
BV7468
BV7465
BV7472
BV7495
BV7469
BV7461
BV7464
BV7473
BV7496
BV7471
BV7474
BV7463
BV7467
BV7470
BV7460
BV7457
BV7459
BV7462
BV5854
BV7454
BV7455
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BV5974
BV7451
BV7453
BV7448
BV7450
BV7456
BV7446
BV5959
BV7444
BV7447
BV7445
BV7443
BV7425
BV7441
BV7442
BV7417
BV7440
BV7439
BV7438
BV7437
BV7427
BV7436
BV7429
BV7420
BV7419
BV7421
BV7435
BV7434
BV7422
SET001
BV5958
BV7424
BV7433
BV7426
BV7432
BV7431
BV7369
BV7423
BV5956
BV7430
BV5957

OVERVIEW

SAMPLE LEGEND

- Stream
- Loam
- Rock
- Drill
- Bulk
- Geophysics Anomaly
- Remote Sensing Anomaly

LOAM
BV5958-5959
BV5974
Total 3

STREAM
BV5801-5807
BV5809-5810
BV5854
BV5956-5957
BV7369
BV7417
BV7419-7427
BV7429-7451
BV7453-7457
BV7459-7474
BV7495-7496
BV7500
Total 70

N

De Beers Australia Exploration Limited

BRANCH CREEK JV
EL22579
SAMPLE LOCATION MAP

Date:27/8/2003
Author: GGM
Office: Perth
Drawing: MAP 3
Scale: 1:100000
Projection: MGA Zone 53 (GDA 94)

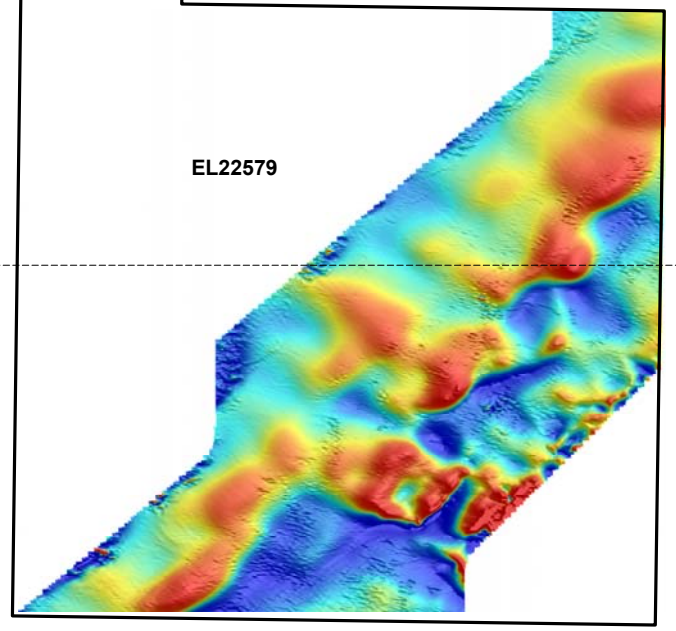
0 1 2 4
kilometres

8100000 mN

775000 mE

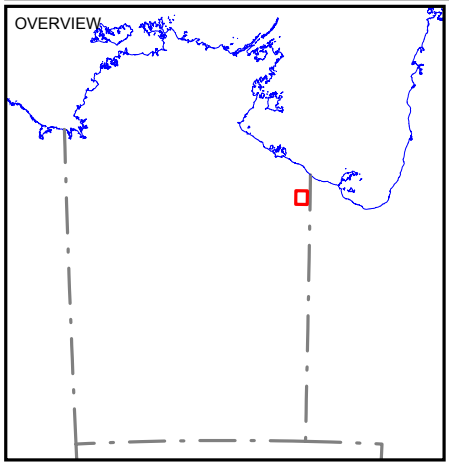
800000 mE

Settlement Creek Survey
Contractor: UTS Geophysics
Date Flown: June 2003
Line Spacing: 100m
Flight Direction: 0-180
Survey Height: 25m



8075000 mN

8050000 mN



0 1:250,000 10KM

MAP 4

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BRANCH CREEK JV PROJECT

EL22579

SETTLEMENT CREEK SURVEY

TMI

../ntmda/2003/branch creek/el22579/mag.WOR