



**SEL 22767 LANCEWOOD
MCARTHUR RIVER REGION, NT
BAUHINIA DOWNS SD53-03**

ANNUAL REPORT

**ON EXPLORATION ACTIVITIES
YEAR ONE OF TENURE
17 SEPTEMBER 2003 – 16 SEPTEMBER 2004**

Submitted by

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**On behalf of
Diamond Mines Australia Pty Ltd
And
BHP Billiton Minerals Pty Ltd
And
Ashton Mining Limited
(A wholly owned subsidiary of Rio Tinto Exploration Pty Ltd)**

SUMMARY

SEL 22767 “Lancewood” forms part of a farm in agreement between Rio Tinto Exploration Pty Ltd (“Rio Tinto”) and Diamond Mines Australia Pty Ltd (“DMA”) covering numerous Rio Tinto-controlled tenements and applications in the Northern Territory. Under this agreement, DMA were to conduct predominantly diamond exploration over the tenements and would utilize the newly-developed Falcon™ airborne gravity gradiometer system, which has been shown to be very effective in detecting kimberlite pipes. SEL 22767 Lancewood which encompasses the Lancelot diamond prospect is subject to a JV agreement with BHP with RTE as operator. The agreement involves a commodity split with RTE holding 80% for diamonds (BHP Minerals 20%) and BHPM holding 80% for base metals (RTE 20%).

Gravity Capital Ltd (“Gravity”) is managing the farm in arrangement for Diamond Mines Australia and owns 40% of DMA. These companies also have a diamond exploration arrangement with BHP Billiton covering a large number of BHP Billiton-controlled tenements in the Northern Territory.

A review of available geophysical and sample data was carried out by Gravity during the current reporting period and this confirmed the potential for diamondiferous kimberlites to be located within the McArthur River tenement block. On this basis, a Falcon™ survey was planned to cover was flown over the Mt Lynott tenement.

The survey was conducted in October, 2003 and acquired approximately a total of 5136 linear kilometres of gravity gradiometer, magnetics, and laser scanner data. Approximately 28% of this survey was contained within SEL 22767.

Data was processed by BHP Billiton’s Falcon Operations Group and delivered to Gravity in February 2004.

BHP Billiton’s Falcon Operations Group has identified a number of gravity gradient and magnetic anomalies that may indicate the presence of kimberlite pipes. The majority of the anomalies are gravity gradient lows. No coincident magnetic and gravity gradient anomalies have been identified

Detailed interpretation, anomaly ranking and exploration targeting from the Falcon™ data by Gravity Capital is nearing completion, with several target areas already identified for follow-up work. Statutory requirements for field access and approvals for work programs are currently being finalised and it is envisaged that testing of these targets will commence during the current field season.

Year 1 expenditure on the tenement was \$90,062.

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INTRODUCTION

Substitute Exploration Licence 22767 was granted to BHP Billiton Minerals Pty Ltd on the 17th September 2003 for a period of four years. The SEL replaced BHP Minerals Pty Ltd's previously explored EL's 7201 and 7816. In 1985, BHP and Ashton Mining Limited entered into the McArthur River Joint Venture. The McArthur River (Non-metals) Joint Venture enabled Ashton to carry out its search for diamond bearing intrusives within selected BHP tenements while BHP carried out base metal exploration. BHP concluded base metal exploration programmes within the license areas in 1996. However Ashton continued to explore the areas for diamonds.

Ashton was acquired by Rio Tinto Ltd in late 2000. As a consequence of the takeover Rio Tinto Exploration Pty Ltd (RTE) acquired control of all of Ashton's granted tenements and tenement applications around Australia.

During 2002, Rio Tinto entered into negotiation with Gravity Capital Limited ("Gravity") concerning the deployment of the FalconTM airborne gravity gradiometer system over Rio Tinto's diamond tenements in northern Australia. The FalconTM system is a unique exploration tool developed by BHP Billiton and it has particular application in diamond exploration.

BHP Billiton and Gravity concluded an arrangement on FalconTM deployment in Australia during the year (ASX announcement 01/07/2003) and then Gravity formed a farm in joint venture, through its 40%-owned associated company, Diamond Mines Australia Pty Ltd ("DMA") with Rio Tinto Exploration, concerning the diamond and base metal exploration over a large number of Rio Tinto-controlled tenements in the Northern Territory (ASX announcement 25/07/2003). SEL 22767 formed part of the DMA - Rio Tinto joint venture. In essence, the agreements provide for DMA to deploy the FalconTM system and earn an interest in any discovery. BHP Billiton retains a right to buy into DMA's interest in any discovery. Gravity is managing all exploration for DMA. On the basis of these agreements, Gravity (on behalf of DMA) commenced diamond exploration in the Northern Territory during July 2003.

The flying program which covers all of SEL 22767 also included coverage of Exploration licenses controlled by Rio Tinto (and included in the Rio Tinto – Gravity Capital – DMA joint venture).

The principal target in the area is diamonds with some interest also directed toward base metal deposits.

LOCATION AND ACCESS

SEL 22767 is located 80 km south of Borroloola and 700 km south east of Darwin, Northern Territory, Australia. The SEL comprises part of Rio Tinto's McArthur Diamonds Project located approximately 40km south southwest of the Merlin Diamond Mine.

Land use within SEL 22767 is predominantly pastoral leasehold, mainly for cattle grazing. Access is provided by the sealed Carpentaria Highway, which connects the Stuart Highway to the HYC (McArthur) mine and station tracks. The Tablelands Highway intersects the Carpentaria Highway next to Abner Range at Cape Crawford (Figure 1).

GEOLOGICAL SETTING

SEL 22767 Lancewood Project overlies a small portion of the Batten Trough of the Mesoproterozoic (1800-1400Ma) McArthur Basin. The project is located proximal to the contact between the Proterozoic McArthur Basin in the north and the unconformably overlying Cambrian Georgina Basin in the south. The 1800-1400Ma stratigraphy and mineralisation of the Batten Trough, from youngest to oldest, can be summarized as follows:

- Roper Group.
- Nathan Group (or Mt Rigg Group).
- McArthur Group.
- Tawallah Group.

SEL 22767 overlies the Abner Range syncline that forms a prominent plateau in the surrounding landscape. In the Batten Trough, the older Tawallah and McArthur Groups dominate in outcrop; however, in the Abner Range syncline the younger Nathan Group and lower Roper Group are exposed. The Tawallah and Hot Springs Faults, that trend approximately N-S, lie on the western and eastern margins of the Abner Range syncline, respectively. These two major faults are parallel to, and probably broadly sympathetic to, and coeval with, the Emu Fault that defines the eastern margin of the Batten Trough. The lower Devonian diamond pipes of the Merlin field lie proximal to the Emu Fault.

Remnant outliers of Cambrian sediments are widespread and unconformably overlie the Batten Trough's Proterozoic sequences. In the Abner Range syncline there are remnant outliers of Cambrian Bukalara Sandstone lying on top of the plateau. Two small, probably lower Devonian, kimberlitic sandstone breccia pipes have intruded Bukalara Sandstone in the Abner Range.

Lateritised, thin, flat-lying Cretaceous sediments (Mullamen Beds) belonging to the Dunmarra Basin form outliers on the Abner Range. In the McArthur and Georgina Basins the Cretaceous sediments fill and are locally preserved within karstic sinkholes. They are also known to fill "karst-like" sinkhole depressions overlying kimberlite diatremes. The Cretaceous sediments are also a potential source of secondary kimberlite indicator minerals.

Cenozoic laterite and transported sediments are widespread over the Abner Range plateau. Lateritisation during the Cenozoic-Quaternary was widespread in the region but mainly affected the flat-lying blanket of Cretaceous sediments.

PREVIOUS EXPLORATION

Exploration by Ashton Mining and CRA Exploration during the last two decades for diamondiferous kimberlitic diatremes in the Batten Trough region resulted in the discovery of the Merlin kimberlite field and the production of commercial-sized gem-quality diamonds by Ashton in 1999.

CRA Exploration originally defined the substantial kimberlitic chromite anomaly that was tracked to a large, fracture-controlled ravine in the Abner Range Plateau.

More detailed evaluation by Ashton Mining of the Abner Range kimberlitic chromite anomaly revealed a small, circular fracture/breccia geomorphic feature located on the Abner Range Plateau. Additional sampling and then drilling (four RAB holes and one diamond hole) confirmed the feature was a sandstone breccia pipe, 80m in diameter, with an ultramafic component and containing abundant kimberlitic chromite and micro-diamonds. The pipe is associated with a 020° trending fracture system throughout the Abner Range. A second, similar, small sandstone breccia diatreme was later discovered about 1.5 km to the NE.

Subsequently, Ashton carried out detailed exploration over the Abner Range area that identified the Lancelot prospects within SEL 22767. The Lancelot Prospects overlies Top Springs Limestone and lies along the interpreted southern strike extension of the regional, N-S trending Hot Spring Fault. Surface sampling has recovered abundant chromite and lesser numbers of diamonds (micros and macros). The diamonds and chromite cluster into two main areas, Lancelot South and Lancelot North, respectively.

Ashton completed infill gravel and loam sampling, soil geochemical surveys, bulk sampling, geophysical surveys (detailed airborne magnetics, heli-borne EM, ground magnetics, EM-34, gravity, trial RAP surveying) and drilling. A regional helicopter-borne EM survey resulted in the identification of 26 anomalies, of which, 8 were drilled but none intersected kimberlite.

Lancelot South was identified first and was the initial focus of exploration. Micro-diamonds, chromite and rare pyrope were retrieved from loam samples. Soil geochemical and ground geophysical surveys have not revealed kimberlitic source rocks. A Geotem survey produced 13 anomalies, of which, 11 anomalies were drill tested without intersecting kimberlite. Outliers of Cretaceous sediments were suggested as a possible source of the indicator minerals. Ashton postponed work on the southern area pending the results of work at Lancelot North.

Lancelot North was identified from reconnaissance and infill loam sampling that identified a 3km by 0.7km, NW-SE trending diamond and chromite anomaly. Contoured chromite grain counts produced a pronounced bullseye target, 500m in diameter, central to the large indicator mineral anomaly. A pit was dug into the peak of the chromite bullseye through Cretaceous-Cambrian overburden down to Top Springs calcrete/ limestone. A 206kg sample of the overburden produced 20 chromite grains. Five trial RAB lines over the chromite anomaly failed to reveal any pipe-like structures. Soil samples (367) collected on a 100m by 25m grid over the chromite bullseye anomaly produced five geochemical anomalies that were tested with 7 drill holes but kimberlite was not intersected. Ground EM-34 surveying produced 6 targets that were tested with drilling without intersecting kimberlite. A gravity survey produced 6 targets that were drill tested and all proved to be sinkholes. Lancelot North indicator mineral anomaly is associated with a broad, elongate, NW-SE trending sand dune. A 50 tonne bulk sample of the sand dune was processed (HMS) but no diamonds were recovered. The causative source of the indicator mineral anomalies was not identified.

A proposed work programme by Ashton was postponed until a more detailed review of Ashton's historical exploration data could be completed by Rio Tinto Exploration.

Rio Tinto reviewed the exploration data for the McArthur Diamond Project that includes SEL 22767. RTE decided to divest the whole project following the review. All relevant exploration data was packaged and presented to various interested resource companies. Gravity Capital was chosen as the joint venture partner because it had the financial and geotechnical capacity to explore the area effectively. Finalisation of the divestment agreement was delayed pending government regulatory approvals to Gravity's corporate structure.

WORK COMPLETED IN YEAR 1

As mentioned above, an agreement covering much of the Rio Tinto-controlled diamond exploration tenements in northern Australia was finalised in July 2003 between Rio Tinto and DMA. A review of available geophysical and sample data was carried out by Gravity (managing the project on behalf of DMA) during the current reporting period and this confirmed the potential for diamondiferous kimberlites to be located within the McArthur River tenement block.

The survey was undertaken in October, 2003 and acquired approximately a total of 5136 linear kilometres of gravity gradiometer, magnetics, and laser scanner data. Falcon™ coverage was obtained over all of SEL 22767 approximating to 28% of the survey. (Figure 3)

The Falcon™ system was developed by BHP Billiton in the late 1990s and is considered to have the ability to detect kimberlite pipes. The Falcon™ system records gravity gradient data via a system of accelerometers. This gradient data is transformed to produce the vertical gravity gradient ('Gdd') which approximates the first vertical derivative of the vertical component of the gravity field. An integral transformation on 'Gdd' is applied to generate 'Gd', which approximates the vertical component of the gravity field itself. Conventional total magnetic intensity is also acquired as is laser scanner data, which is used to construct a very accurate (1m vertical resolution) digital elevation model.

Field survey work was done by Fugro Airborne Surveys under a contract with BHP Billiton, with whom Gravity Capital has the Falcon™ deployment agreement. The survey was flown on east-west oriented lines, 100m apart at a height of 80m above ground level.

Data was processed by BHP Billiton's Falcon Operations Group and delivered to Gravity Capital in February 2004.

The Lancewood survey interpretation has identified thirty-five (35) anomalies that may be the result of kimberlites; one (1) Rank One, twelve (12) Rank Two and twenty-two (22) Rank Three anomalies. The anomalies range in amplitude from -21 to -80 Eö and in half-wavelength (along line) from 170 to 385 m (an approximation of source width).

While every endeavour was taken to filter these anomalies, there is a high risk that those anomalies hosted by the Top Springs Limestone may be associated with carbonate weathering. Field follow-up of the anomalies, including the mapping of local geology, is required prior to any detailed testing.

Detailed interpretation, anomaly ranking and exploration targeting from the Falcon™ data by Gravity Capital is nearing completion, with several target areas already identified for follow-up work. Statutory requirements for field access and approvals for work programs are currently being finalised and it is envisaged that testing of these targets will commence during the current field season.

The digital data and acquisition/processing report will be lodged with DBIRD in due course.

ENVIRONMENT AND REHABILITATION

No on-ground work was carried out during the reporting period. The airborne survey involved no impact on the environment and hence no requirement for rehabilitation.

CONCLUSIONS AND RECOMMENDATIONS

Substitute Exploration License 22767 covers an area that is considered prospective for commercial sources of diamonds as anomalous kimberlitic indicator mineral results, including both macro and micro-diamonds have previously been recovered.

On this basis, a Falcon™ survey was planned to cover the SEL 22767. The survey was conducted in October 2003 and results were received by Gravity Capital in February 2004.

Detailed interpretation, anomaly ranking and exploration targeting from the Falcon™ data is nearing completion, with a number of target areas defined for follow-up work. Testing of these targets will commence during the current field season, subject to successful completion of statutory requirements for approval of field programs.

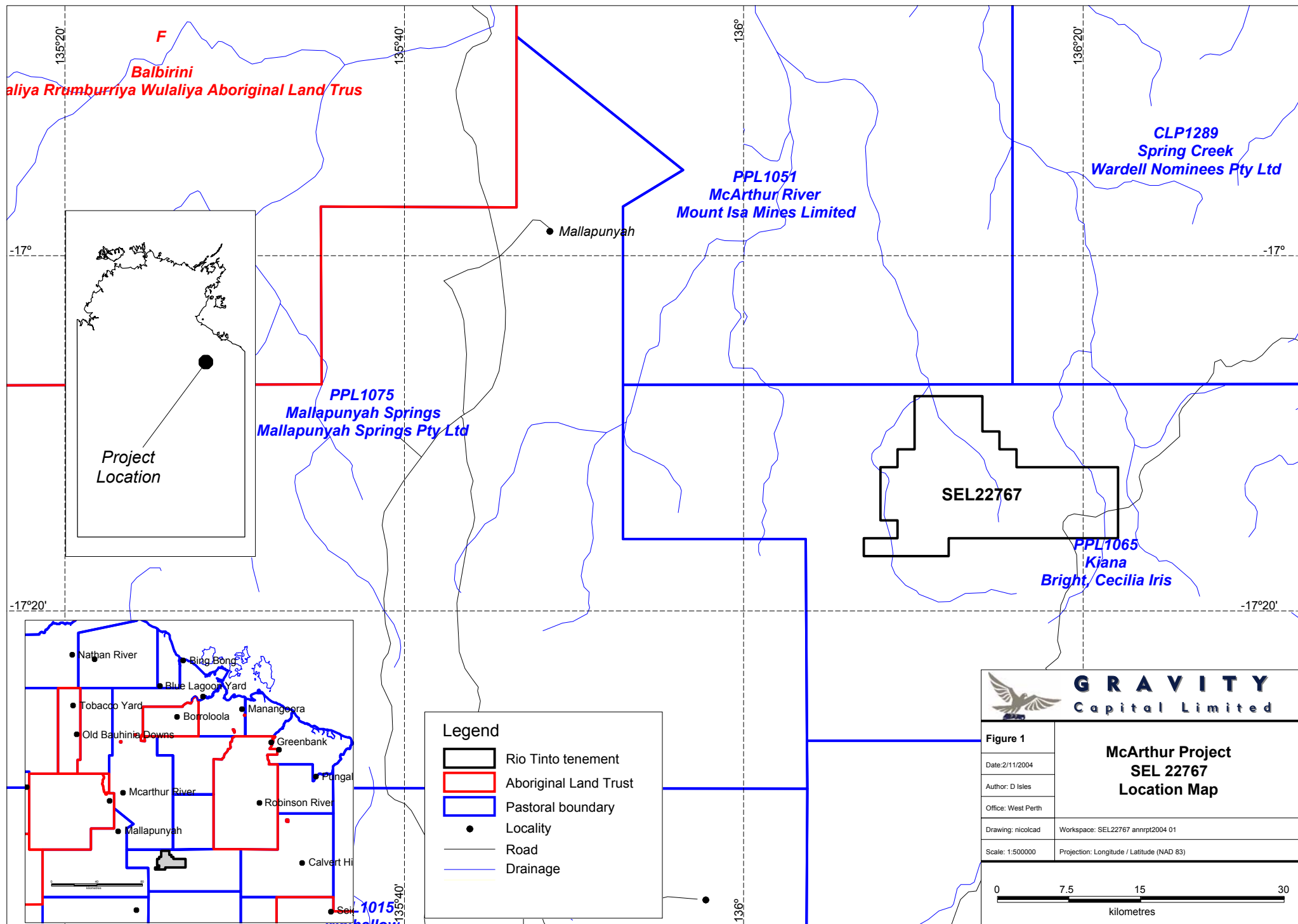
Further work programs in the near future will concentrate on the follow-up of anomalies evident in the Falcon data which may be representative of a concealed kimberlite intrusive.

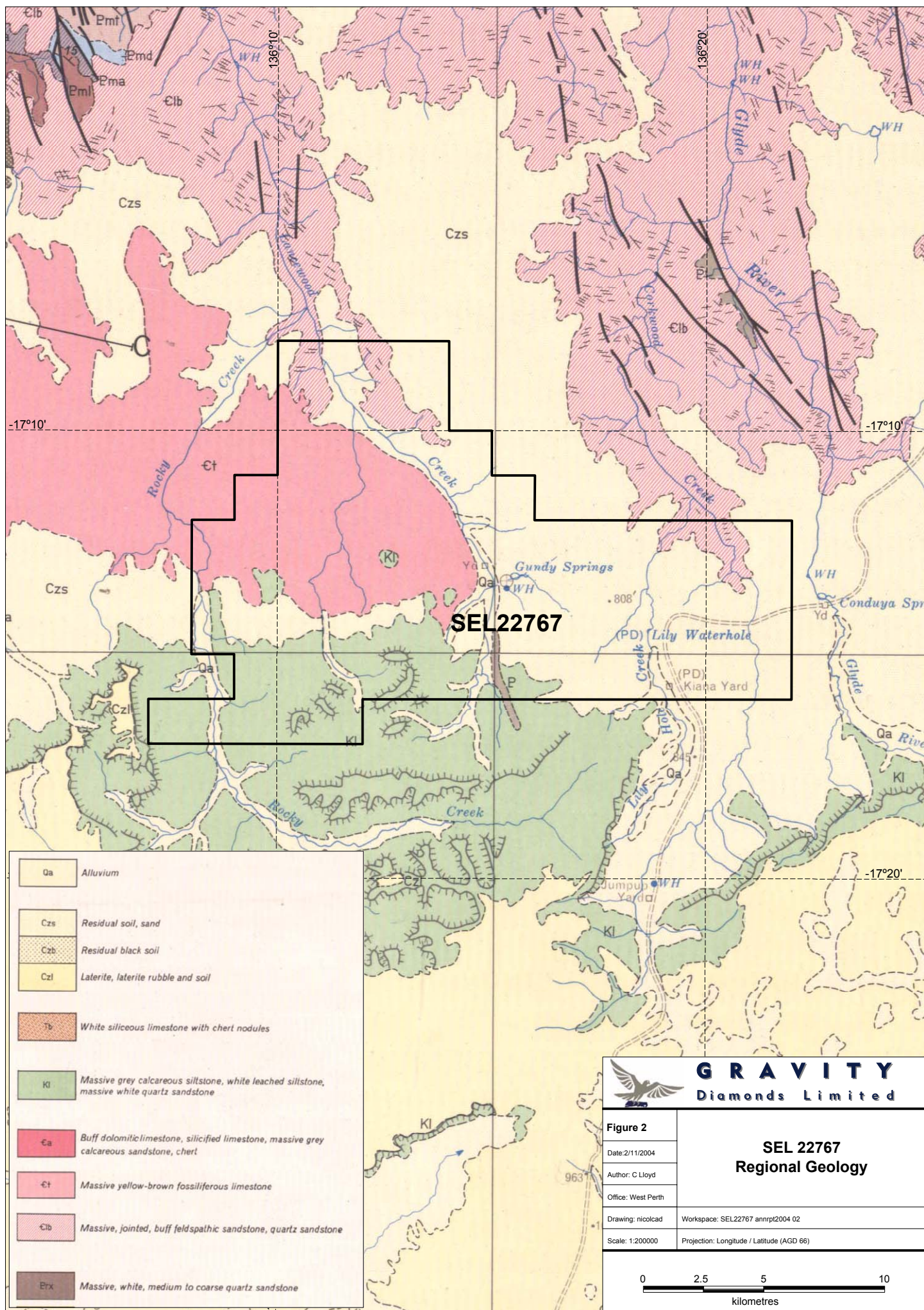
EXPENDITURE STATEMENT

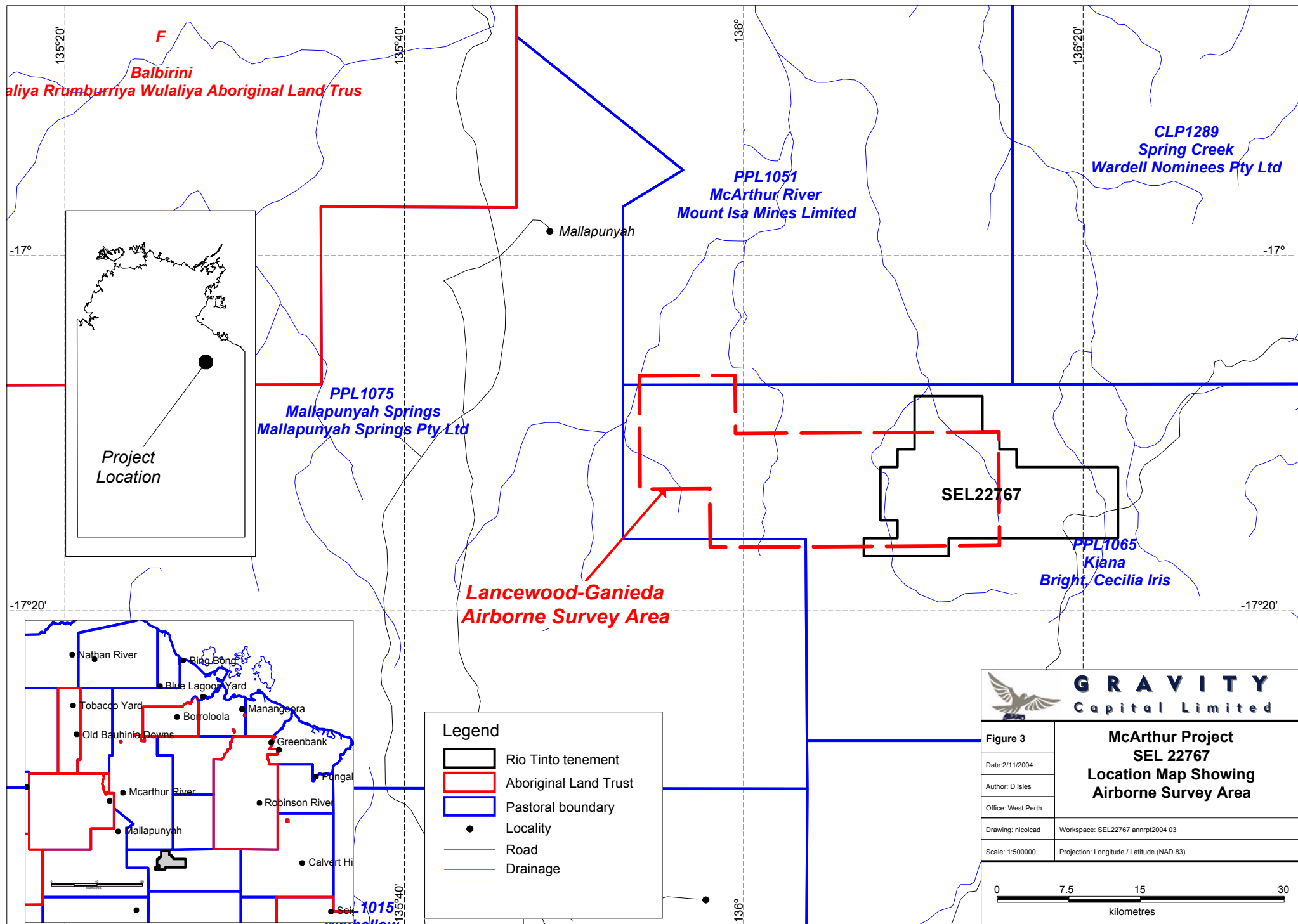
Legal/Tenement administration costs	\$ 1,816
Professional personnel costs	\$ 3,700
Falcon™ survey costs	\$ 80,122
Data processing / computing costs	\$ 254
Cartography	\$ 310
Travel and accommodation costs	\$ 1,320
Administration/overhead	<u>\$ 2,540</u>
Total	<u>\$ 90,062</u>

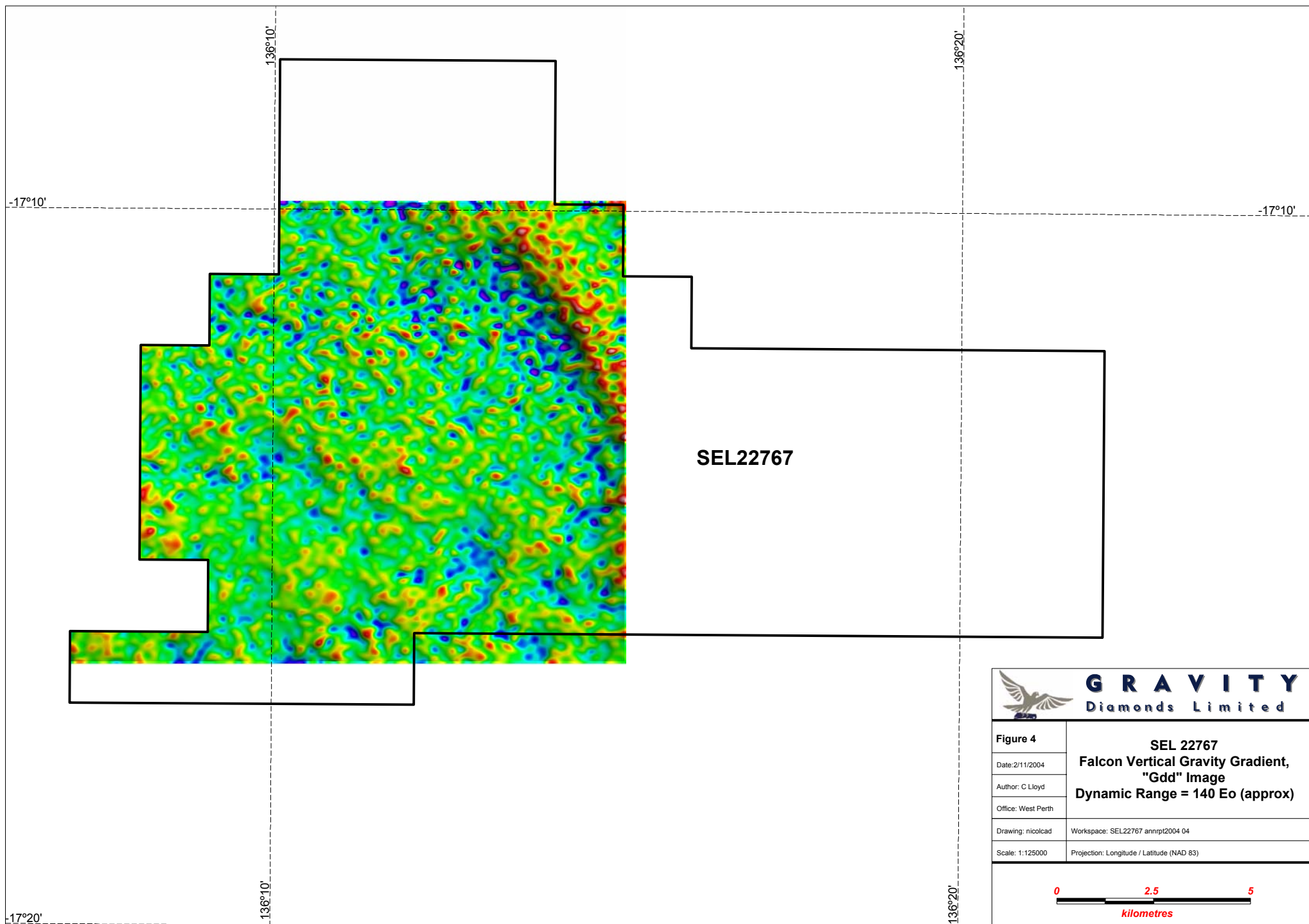
PROPOSED EXPLORATION BUDGET

Drilling	\$ 15,000
Field support & logistics	\$ 15,000
Sampling and sample analysis costs	\$ 10,000
Personnel costs	\$ 15,000
Tenement maintenance, access, clearances	\$ 10,000
Office support, computing, cartography	\$ 5,000
Administration, legal, overhead	<u>\$ 5,000</u>
Total	<u>\$ 75,000</u>










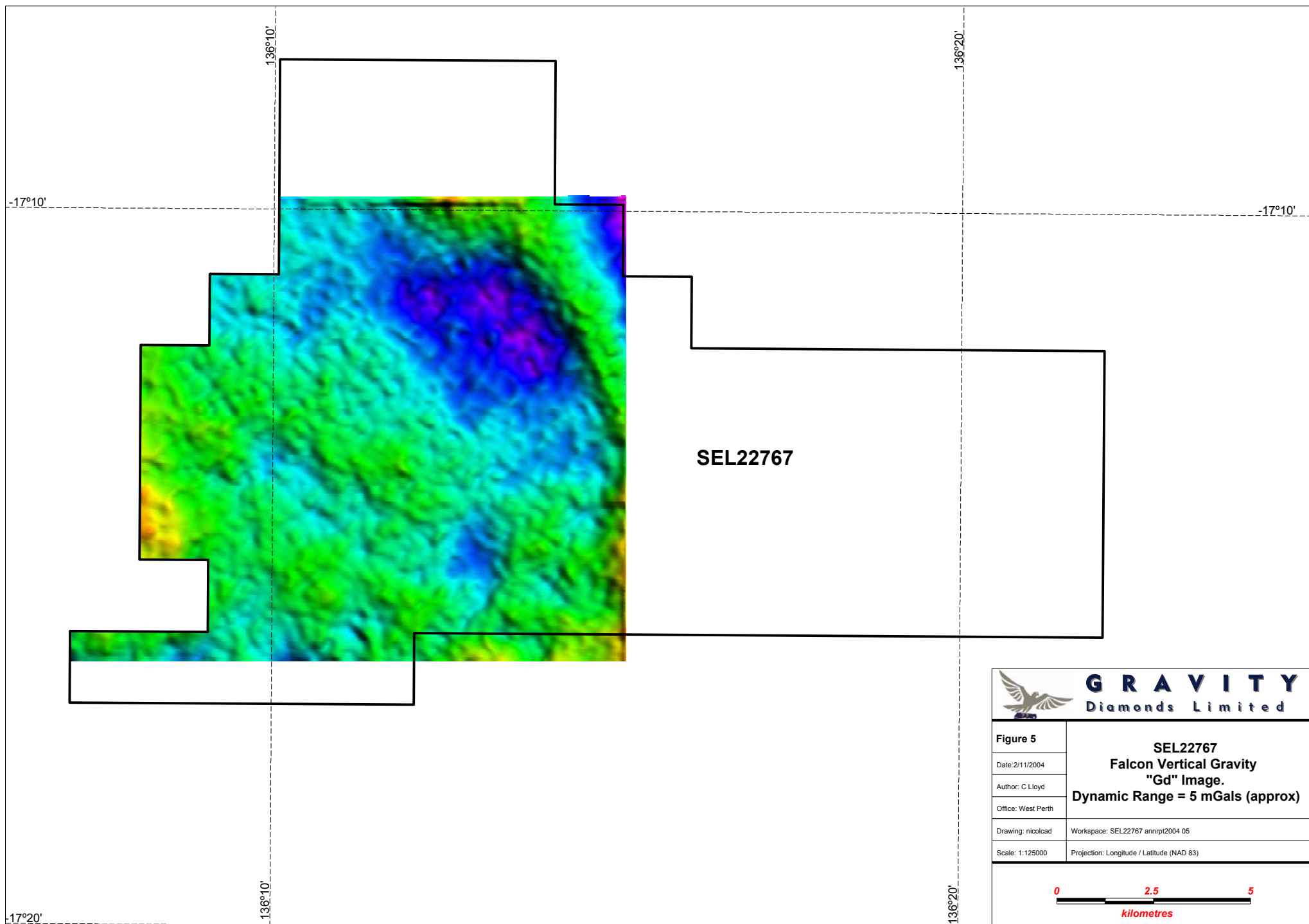

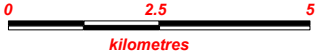
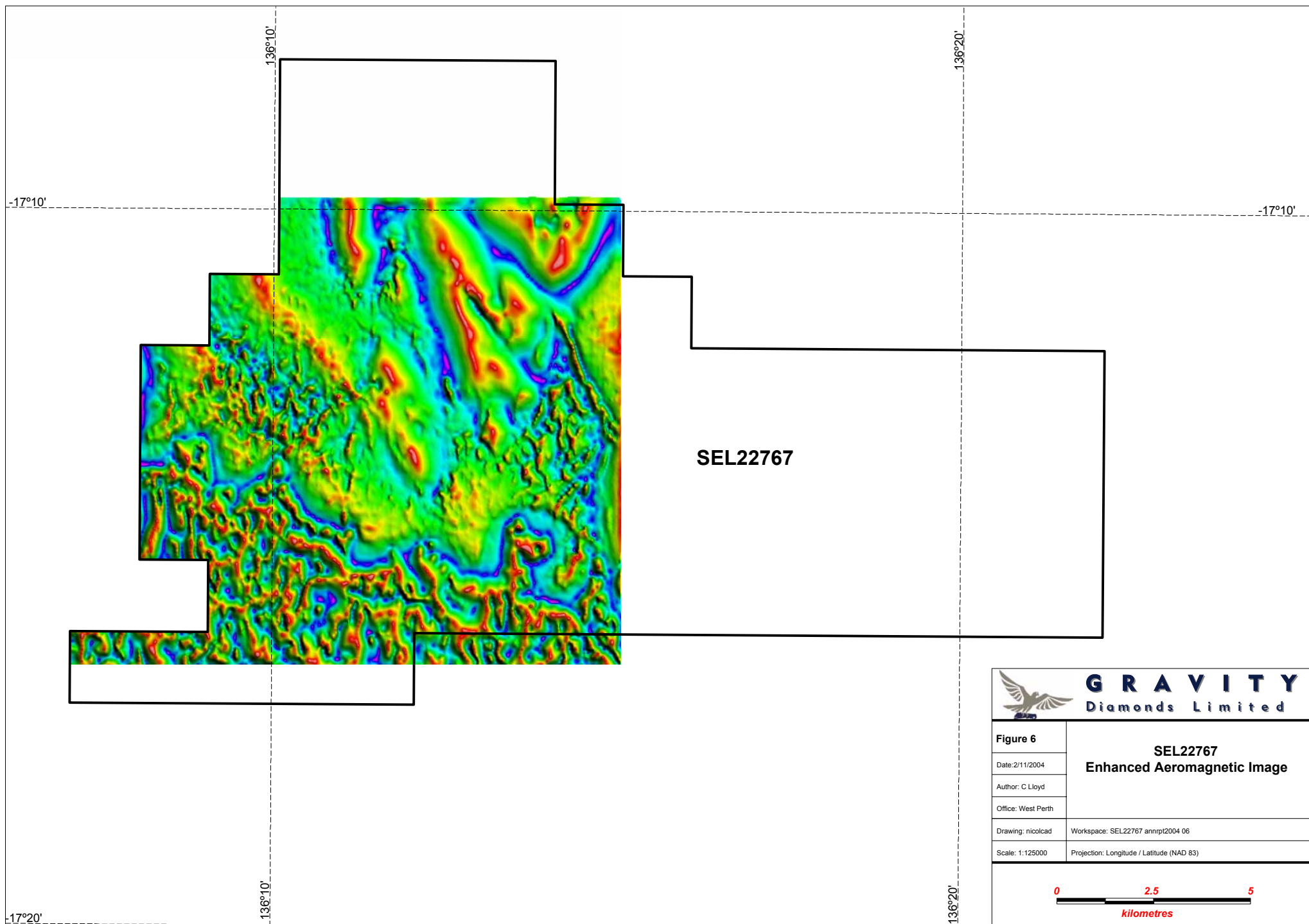
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Diamonds Limited

Figure 4	SEL 22767 Falcon Vertical Gravity Gradient, "Gdd" Image Dynamic Range = 140 Eo (approx)
Date: 2/11/2004	
Author: C Lloyd	
Office: West Perth	
Drawing: nicolcad	Workspace: SEL22767 annrpt2004 04
Scale: 1:125000	Projection: Longitude / Latitude (NAD 83)



 GRAVITY Diamonds Limited	
Figure 5	SEL22767 Falcon Vertical Gravity "Gd" Image. Dynamic Range = 5 mGals (approx)
Date: 2/11/2004	
Author: C Lloyd	
Office: West Perth	
Drawing: nicolcad	Workspace: SEL22767 annrpt2004 05
Scale: 1:125000	Projection: Longitude / Latitude (NAD 83)
	





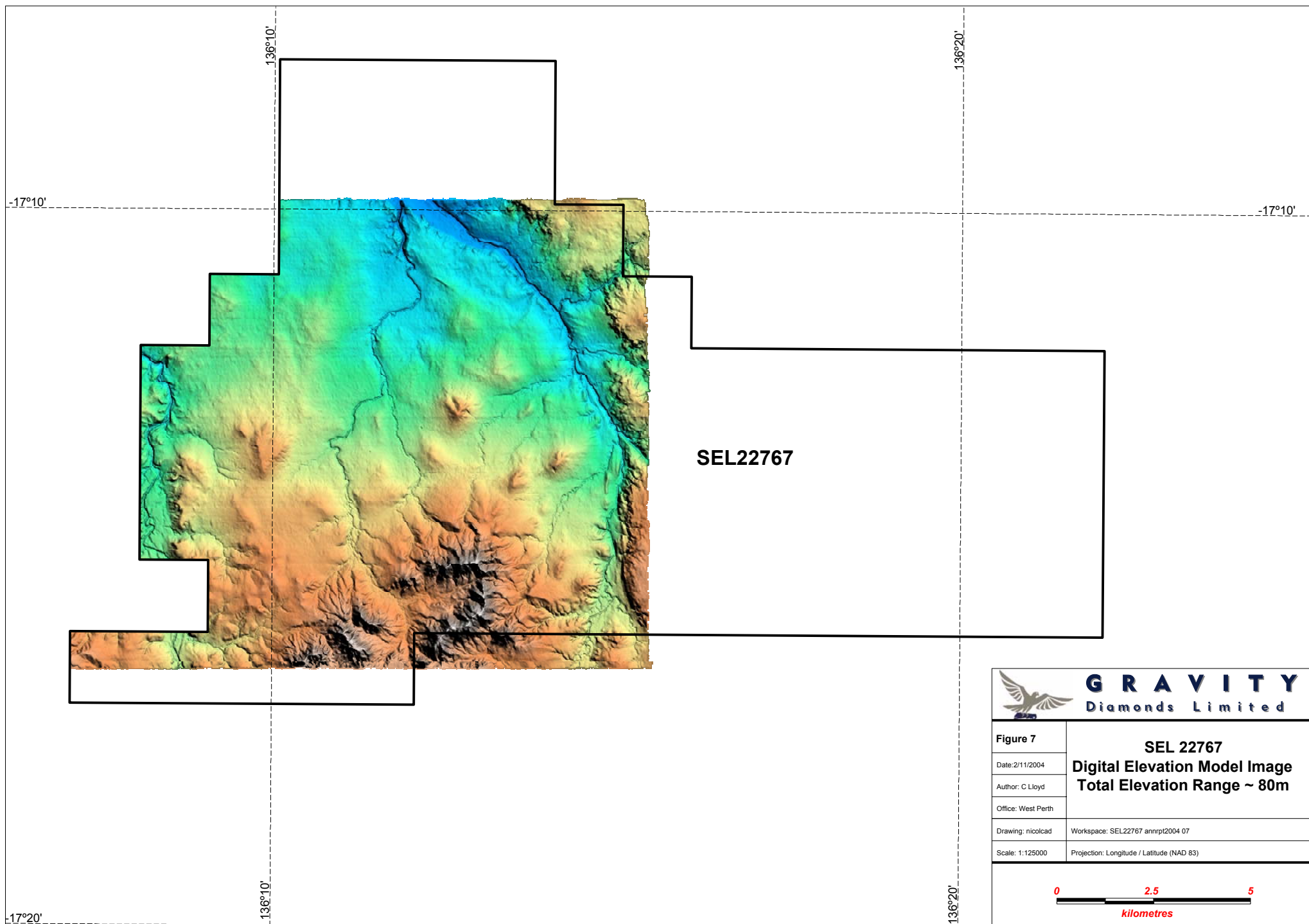
**GRAVITY**
Diamonds Limited

Figure 6	SEL22767 Enhanced Aeromagnetic Image
Date: 2/11/2004	
Author: C Lloyd	
Office: West Perth	
Drawing: nicolcad	Workspace: SEL22767 annrpt2004 06
Scale: 1:125000	Projection: Longitude / Latitude (NAD 83)



0 2.5 5
kilometres




 **GRAVITY**
Diamonds Limited

Figure 7	SEL 22767
Date: 2/11/2004	Digital Elevation Model Image
Author: C Lloyd	Total Elevation Range ~ 80m
Office: West Perth	
Drawing: nicolcad	Workspace: SEL22767 annrpt2004 07
Scale: 1:125000	Projection: Longitude / Latitude (NAD 83)

0 2.5 5
kilometres