REVIEW OF EXPLORATION FOR DIAMONDS

in the

PASPALEY EXPLORATION LICENCE AND APPLICATION AREAS

of the

BATTEN TROUGH, NT.

Prepared for Namakwa Diamonds Limited

by

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REVIEW OF EXPLORATION FOR DIAMONDS IN THE PASPALEY EXPLORATION LICENCE AND APPLICATION AREAS OF THE BATTEN TROUGH, NT.

1. Introduction

Namakwa Diamonds Limited has a Joint Venture agreement with N. T. J. Paspaley covering a number of Exploration Licences and application areas to the west of the Gulf of Carpentaria within the Batten region of the Northern Territory (Figure 1 and Table 1).

EL NUMBER	AREA (1' GRAT. BLOCKS)	DATE OF APPLICN.	GRANTED	YEAR 1 EXPEND. COVENANT	1ST ANNIV.
24349	371	5/07/2004	10/04/2005	$200,000	10/04/2006
24373	45	26/08/2004	10/04/2005	$24,000	10/04/2006
24374	79	26/08/2004	10/04/2005	$40,000	10/04/2006
24714	18	3/05/2005	01/12/2005	$7,500	01/12/2006
24945	161	19/09/2005	Refused	$30,000	
24946	70	19/09/2005		$16,000	
24996	39	20/10/2005		$11,000	
24997	106	20/10/2005		$21,000	
25070	481	25/11/2005		$75,000	
25130	119	28/12/2005		$30,000	

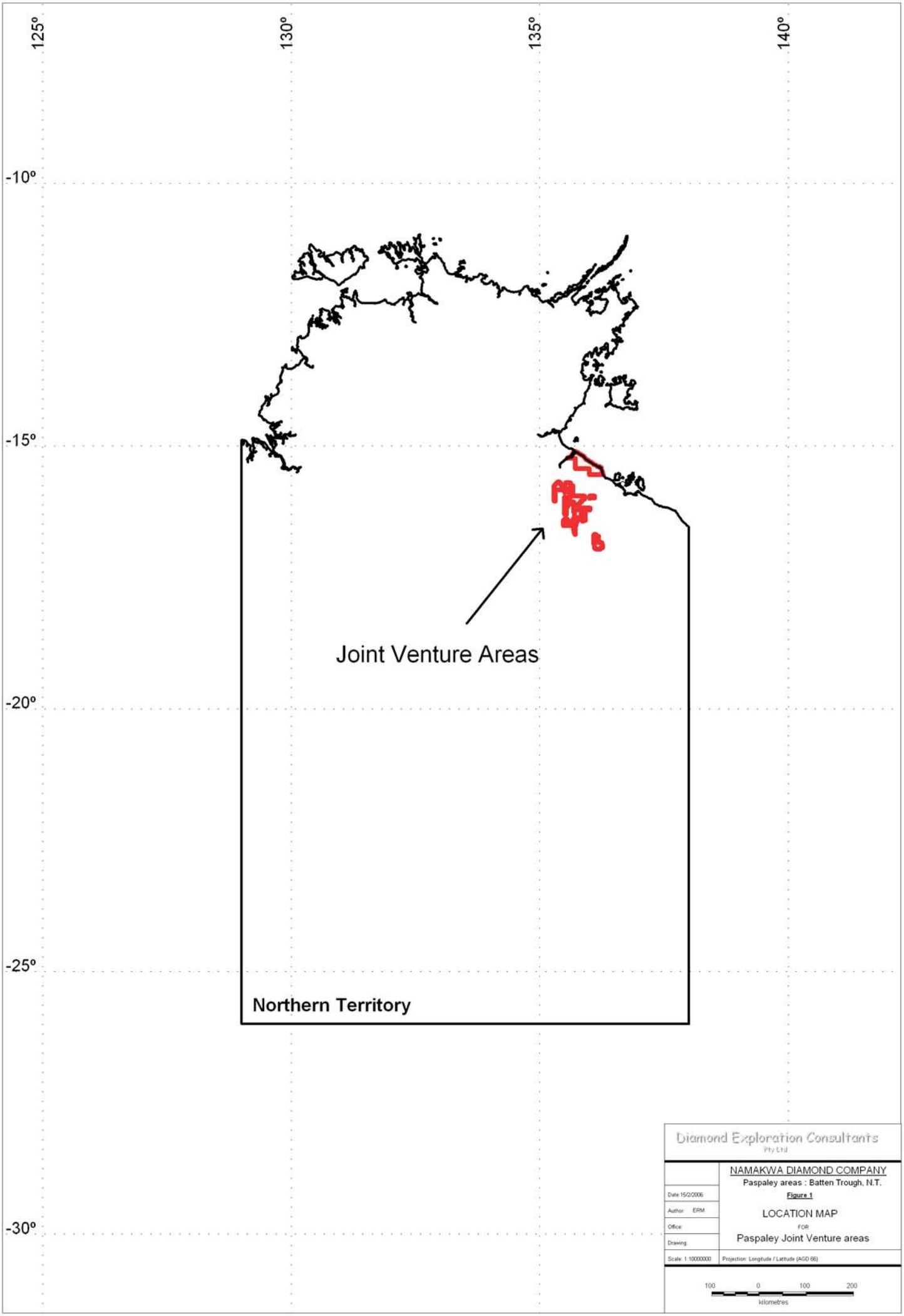
Table 1: Paspaley Exploration Licences & applications.

This report provides a review of previous exploration for diamonds within these areas together with proposals for further exploration.

2. Geological setting

The areas covered by this report lie in the Batten region of the McArthur Basin, on the Mount Young and Bauhinia Downs 1:250,000 map sheets (Figure 2). The geology of the Batten region is dominated by the northerly trending Batten Trough, which has been described as a NNW trending syndepositional half graben bounded to the east by the Emu Fault Zone (*Jackson et al, 1987*).

Within the trough the oldest rocks exposed are the Palaeoproterozoic Scrutton Volcanics which occur as largely fault bounded inliers of felsic volcanics and interbedded sedimentary rocks (*Haines et.al., 1993*). These are unconformably overlain by the Palaeo to Mesoproterozoic McArthur Basin sequence, which is divided into four groups separated by unconformities. The oldest of these is the Tawallah Group, comprised largely of sandstones with some minor carbonates and



Diamond Exploration Consultants Pty Ltd

NAMAKWA DIAMOND COMPANY

Paspaley areas : Batten Trough, N.T.

Figure 1

LOCATION MAP

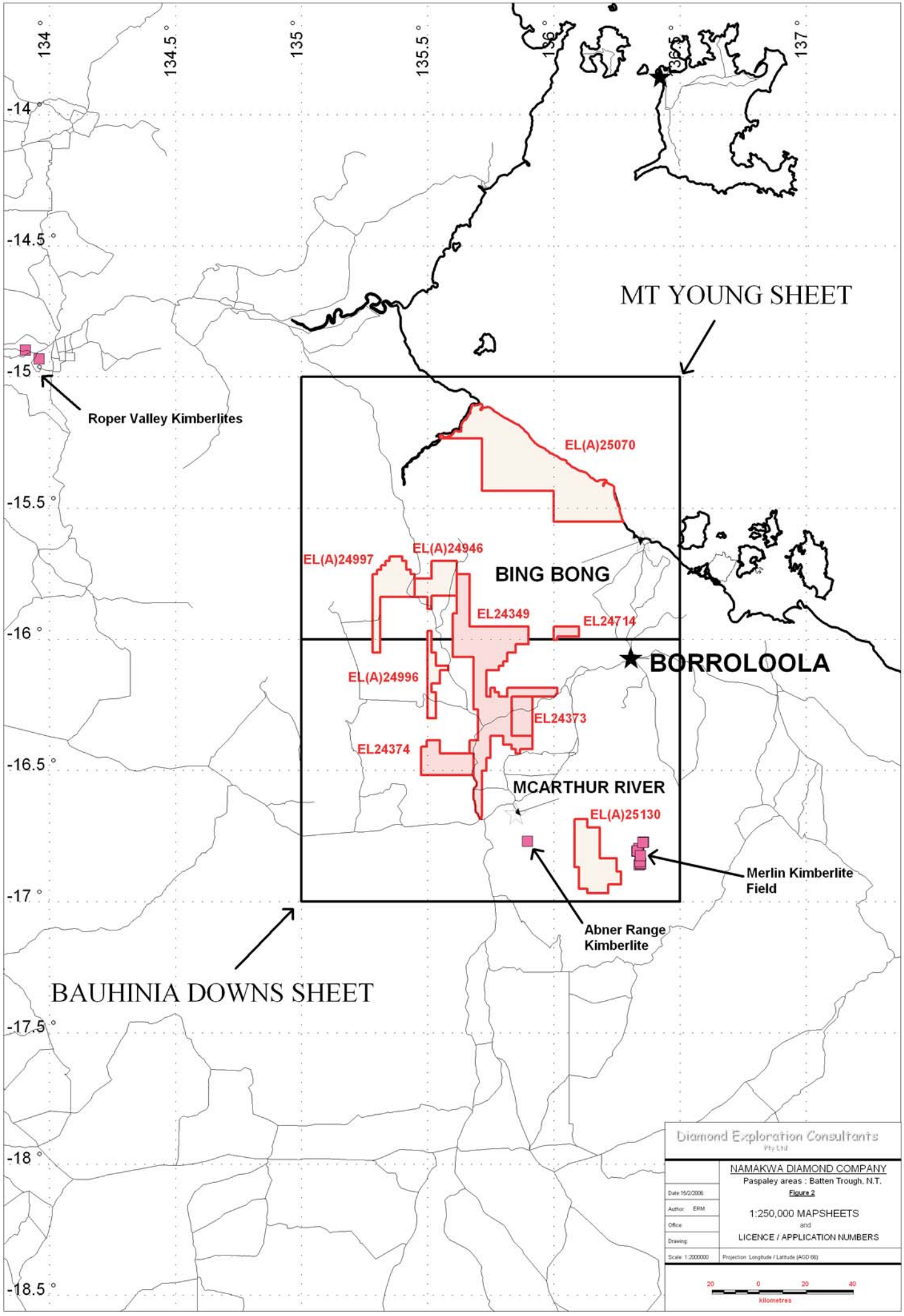
FOR

Paspaley Joint Venture areas

Date: 15/2/2006	
Author: ERM	
Office:	
Drawing:	
Scale: 1:10000000	Projection: Longitude / Latitude (AGD 66)

100 0 100 200

kilometres


134 °
134.5 °
135 °
135.5 °
136 °
136.5 °
137 °
-14 °
-14.5 °
-15 °
-15.5 °
-16 °
-16.5 °
-17 °
-17.5 °
-18 °
-18.5 °
MT YOUNG SHEET
Roper Valley Kimberlites
EL(A)25070
EL(A)24997
EL(A)24946
BING BONG
EL24349
EL24714
BORROLOOLA
EL(A)24996
EL24373
EL24374
MCARTHUR RIVER
EL(A)25130
Merlin Kimberlite Field
Abner Range Kimberlite
BAUHINIA DOWNS SHEET
Diamond Exploration Consultants Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 2
1:250,000 MAPSHEETS
and
LICENCE / APPLICATION NUMBERS
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:2000000
Projection: Longitude / Latitude (AGD 66)
20 0 20 40
kilometres

volcanics or intrusives. The overlying McArthur Group is dominated by carbonates together with some fine grained siliciclastics, as is the Nathan Group above it; these two groups have been the target of base metals exploration since the discovery in 1959 of the HYC Pb-Zn-Ag deposit on McArthur River Station. The Roper Group rests unconformably on the older sequences and represents the last phase of sedimentation in the McArthur basin, consisting of coarsening upward regressive cycles of marine sandstones and mudstones.

The Bukalara sandstone, which is of Cambrian age, overlies the McArthur Basin sequence in the southern part of the Batten Trough. Thin deposits of fossiliferous Cretaceous sediments occur throughout the area and a veneer of Cainozoic sediments and soils is common, particularly along active drainages and the Gulf of Carpentaria coastline.

Most of the Paspaley areas lie within the highly faulted Batten Trough (Figure 3) with EL(A)25070 straddling the inferred northern extension of the Emu Fault boundary and EL(A)24997 lying on the western edge of the trough. The small EL24714 lies entirely to the east of the trough on the less intensely faulted Wearyan Shelf. The southernmost application area, EL(A)25130, appears to overlie a southern extension of the Emu Fault but is largely covered by Cambrian sandstones, resting unconformably on the underlying McArthur Basin sequence.

3. Background to Australian diamond exploration

Although several ancient cratonic areas within Australia have the theoretical potential to host economic "primary" deposits of diamond, only the large crustal mega-element known as the North Australian Craton has, to date, realised this potential.

Diamonds had been known to exist within the North Australian Craton for more than 100 years, several stones having been recovered by gold diggers from the Cullen River near Pine Creek in the Northern Territory (NT) towards the end of the19th century, sparking a short lived "diamond rush". It was not until many years later, however, that the first economic hard-rock discovery was made near Kununurra in Western Australia (WA): the Argyle Diamond Mine.

The North Australian Craton is now also host to hard-rock diamond mines at Ellendale in the Kimberley District of WA and at the Merlin Diamond Mine in the Batten region of the NT. A number of sub-economic or un-economic kimberlitic or lamproitic bodies are also known in the Kimberley region as well as at Timber Creek, Roper Valley and Abner Range in the NT: the most recently discovered diamond-bearing kimberlite at Abner Range has yet to be evaluated.


525000 mE
550000 mE
573000 mE
600000 mE
625000 mE
650000 mE
8325000 mN
8300000 mN
8275000 mN
8250000 mN
8225000 mN
8200000 mN
8175000 mN
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 3
GEOLOGICAL SETTING
(From Mount Young & Bauhinia Downs 1:250,000 sheets)
Date: 31/1/2006
Author: ERM
Office:
Drawing:
Scale: 1:800000
Projection: AMG Zone 53 (AGD 66)
5 0 5 10
kilometres

4. Diamond exploration in the Batten region

This review of previous exploration for diamonds in the JV areas of the Batten region has been essentially confined to the period since the discovery of the Argyle Diamond Mine. Exploration prior to this discovery was generally un-reported but would nevertheless be considered inconclusive since the importance of chromite as a kimberlitic indicator was not well appreciated at the time and the finer fractions of heavy mineral concentrates were often not examined.

The discovery of the Argyle lamproite in 1979 led to a dramatic increase in exploration across much of northern Australia. During the 1980s major explorers such as CRAE, Ashton Mining and Stockdale Prospecting Limited (SPL) carried out extensive "open range" reconnaissance exploration for kimberlitic indicator minerals and diamonds, using helicopters to enable rapid coverage of vast areas by drainage sampling. Most of this work was not reported to the relevant government departments, although Exploration Licences with accompanying reporting obligations were presumably subsequently applied for over any interesting results.

CRAE during the 1980s and Ashton in the 1990s were particularly active in the Batten region, as well as other companies to a lesser extent. Following the discovery in the 1990s of the Merlin kimberlite field and two small breccia pipes at Abner Range, Ashton held extensive Exploration Licences within the Gulf region and collected large numbers of heavy mineral samples from drainages. Their reports indicate that their standard drainage sample during much of this time comprised 25 to 30 kg of -4mm material, which was concentrated by Wilfley table and examined down to 0.425mm, with finer material being examined only for micro-diamonds.

Ashton also acquired Northern Territory Geological Survey (NTGS) airborne magnetic data and followed up any targets identified from these surveys, but survey specifications were rather broad by today's standards with line spacings ranging from 400 to 500 m.

BHP Minerals were mainly involved in exploration for base metals in this area but also explored for diamonds, either in their own rights or through a Joint Venture with Ashton. They flew a Geotem survey over much of their tenement areas but once again the specifications were too broad to be very useful for diamond exploration, with a flight line spacing of 1 km.

As a result of these exploration programmes single diamonds and micro-diamonds have been regularly reported, scattered throughout the Gulf area, but have no great significance as far as exploration is concerned because of the low numbers recovered and the absence of any associated indicator minerals. Various chromite trails have been followed up at times, often without locating their source but with explorers eventually deciding that they were likely to be of non-kimberlitic origin, probably deriving from mafic volcanics or intrusives within the Proterozoic.

5. Kimberlite discoveries in the Batten region

The first confirmed kimberlites to be discovered in the NT were the Emu kimberlites, some 80 km south of Boroloola (Figure 2), discovered in 1986 by CRAE. These two pipes yielded an indicator trail downstream in Matheson Creek: 52 chromite grains (+0.4mm) were recovered from a reconnaissance sample some 3 km downstream from the pipes. Whilst such a result appears at first glance to provide a reasonably strong trail this is only by virtue of the fact that both of these pipes are cut by Matheson Creek and that the sample was within 3 km of the source. Had the pipes not been cut by an active drainage (or had the sample been a little further away) the trail might be expected to be very feeble indeed. Drainage sampling was nevertheless the key that led to the discovery of the Emu pipes and also (eventually) to the discovery of the Merlin Field.

The strength of indicator trails in this area is affected by the rapid dilution of concentrates in sandy drainages, the scarcity of good heavy mineral trap-sites in sandstone terrain and the destructive effect on indicator minerals of deep weathering. The chances of discovery can be enhanced by improving the effective sample size and sampling density, and by examining the finer fractions of heavy mineral sample concentrates (for example down to 0.3mm rather than 0.4 or 0.425mm).

The Emu pipes were found to be associated with distinctive topographic and airborne magnetic features but the failure to locate similar features in the vicinity combined with the low diamond content of these intrusions eventually proved a disincentive for CRAE to continue exploration in this area, despite the fact that no source had been found for indicator minerals recovered from Boomerang Creek, some 9 km to the south-west of the Emu pipes.

Ashton subsequently showed a great deal of persistence in following up these un-sourced indicators, encouraged by significant diamond recoveries from bulk samples in nearby drainages, leading to the discovery some 7 years later of the 12 additional pipes collectively known as the Merlin field. Not only were these pipes all very small, with a maximum size of 1.2 ha and an aggregate of only 4.43 ha., but they also lacked the distinctive magnetic signature and topographic expression of the Emu pipes, remaining well concealed beneath sandy cover on a poorly drained remnant land surface (*Lee et. al., 1998*).

The history of exploration leading to the discovery of the Merlin field (*Reddicliffe, 1999*) illustrates the painstaking approach required to locate such small, albeit diamond-rich, sources which, in the harsh weathering environment of northern Australia, may have only subtle indicator mineral and geophysical signatures. The dispersal of indicator minerals away from the Merlin pipes appears to have been severely restricted by this weathering environment combined with long residence periods on old land surfaces, further compounded by the pipes having been plugged by up to 42 metres of Cretaceous or younger sediments that are devoid of indicator minerals.

Age dating has suggested a Middle Devonian emplacement age for the kimberlites of the Merlin Field (*Hell et. al, 2003*) which are the only kimberlitic (as opposed to lamproitic) pipes to have been mined in Australia. The grades of these pipes range up to 130 cpht and they have yielded by far the largest diamond ever recovered in this

country, the 104.73 carat *Jungili Bunagina* Diamond, with the previous largest being a mere 42 carat stone from the Argyle mine. These intrusions thus provide conclusive evidence of the fertility of the earth's mantle beneath this part of the North Australian Craton, and the recent discovery of a diamond-bearing kimberlite pipe in the Abner Range (a little under 50 km to the west of the Merlin field) confirms the prospectivity remaining in surrounding areas.

The Abner Range kimberlite pipe was discovered by Gravity Diamonds towards the end of 2004 in the vicinity of 2 small kimberlitic breccia pipes previously located by Ashton. As with the Merlin kimberlites, Ashton originally went into this area to follow up an indicator mineral trail identified by CRAE from drainage sampling, for which no source had been found. The recent discovery has only a very subtle surface expression and was made as a direct result of an airborne gravity survey.

Although many of the kimberlite discoveries in the Batten area can be identified by geophysical survey the variable responses of kimberlite to different geophysical methods means that no single technique is suitable as a reconnaissance tool. Costs generally prohibit the use of several combined techniques unless previous encouragement has been obtained from heavy mineral sampling: both the Merlin and Abner areas were only targeted with geophysical surveys because of unexplained positive results from the original sampling programmes, and drainage sampling remains the best tool for initial exploration in most areas. Geophysics may, however, be the most effective way to pinpoint kimberlitic intrusions once a target area has been delineated and may be the only way to explore in areas that are under younger cover.

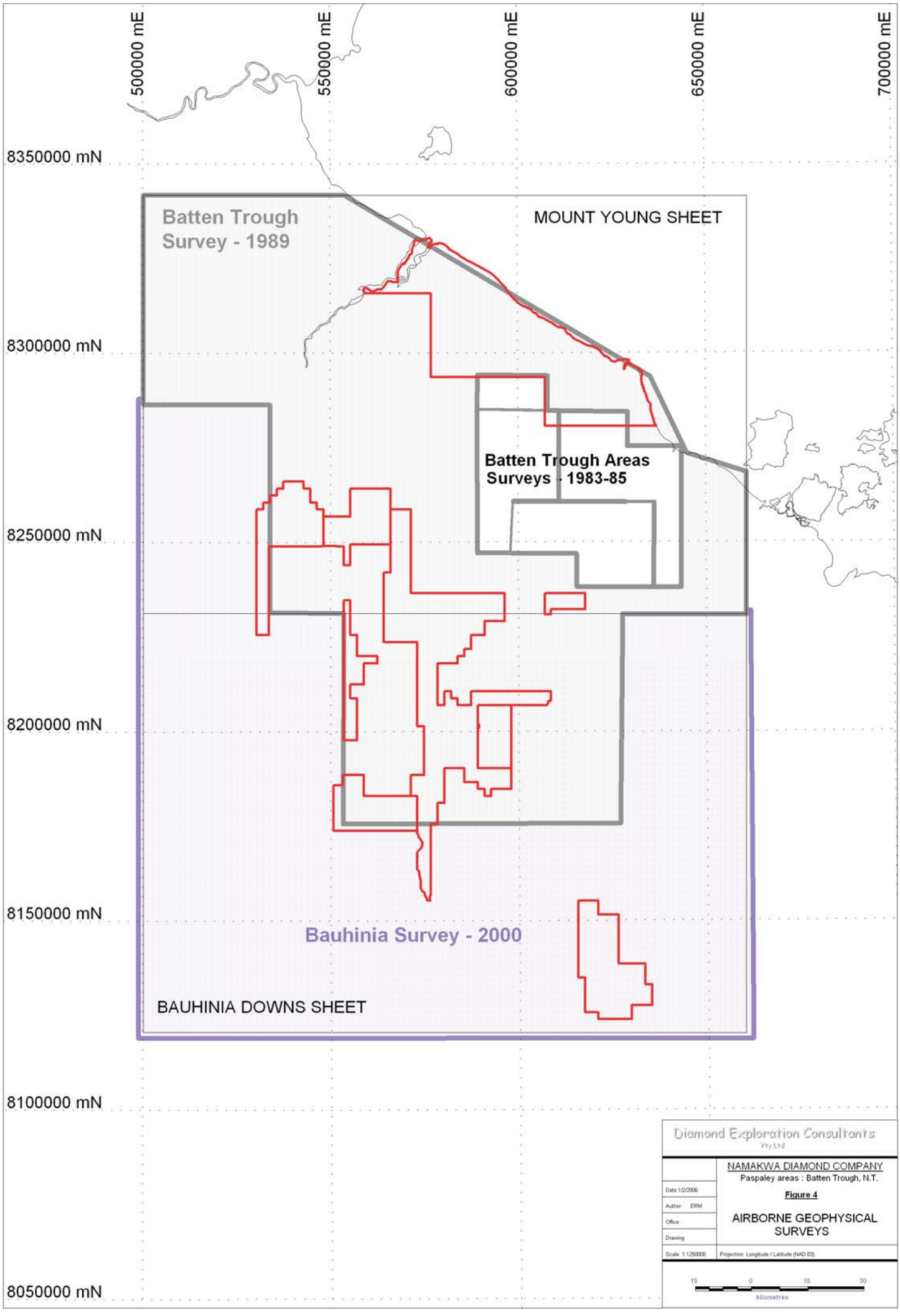
6. Airborne geophysical surveys

Most of the Paspaley areas are covered by the "Batten Trough Survey" flown by Aerodata in 1989 (Figure 4), which collected TMI and radiometric data. The flight lines were E-W with a spacing of 500m and a terrain clearance of 100m.

The southern part of the area was covered by a later survey, the "Bauhinia Survey" flown by Tesla Airborne Geoscience in 2000, which collected TMI, Radiometrics and DTM data. The flight lines were again E-W with a spacing of 400m and a terrain clearance of 80m.

Geoterrex also flew TMI / radiometric surveys over part of the Mount Young 1:250,000 sheet for BHP Minerals in 1985-85 but these only overlap with the extreme southern portion of EL(A)25070. Flight lines were N-S with a 300m spacing and a terrain clearance of 80m. The Geotem survey flown for BHP was even more broadly spaced with flight lines 1 km apart.

Airborne magnetic data available through the NTGS is therefore far from adequate to locate kimberlites with the restricted dimensions of those in the Merlin field (and also of some of the economic kimberlite pipes in Canada). More detailed airborne surveys would be required both to follow up any encouraging results from drainage sampling and for reconnaissance surveys in areas with extensive cover sequences.


500000 mE
550000 mE
600000 mE
650000 mE
700000 mE
8350000 mN
8300000 mN
8250000 mN
8200000 mN
8150000 mN
8100000 mN
8050000 mN
Batten Trough
Survey - 1989
MOUNT YOUNG SHEET
Batten Trough Areas
Surveys - 1983-85
Bauhinia Survey - 2000
BAUHINIA DOWNS SHEET
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 4
AIRBORNE GEOPHYSICAL SURVEYS
Date: 1/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:1250000
Projection: Longitude / Latitude (NAD 83)
15 0 15 30
kilometres

7. Exploration potential for diamonds

The Timber Creek kimberlites in the western part of the NT were found as a result of 2 chromite grains being recovered from a drainage sample that was only 2 km from the source, and the history of other kimberlite discoveries in the north of Australia also demonstrates that, because of the harsh weathering environment, indicator minerals may only survive for short distances in drainages. Indicator mineral dispersal can be further hindered if kimberlite pipes are plugged with barren material, as is the case in the Merlin Field.

Despite these limitations, heavy mineral drainage sampling remains the most effective exploration tool for determining specific areas of interest, to be followed up at a later stage by a variety of other techniques.

That opportunities remain for diamond exploration in the Batten area, even in areas that have been explored relatively recently by major companies, is demonstrated by the following points:

- Sampling in the Batten area has often been relatively broad-spaced (Ashton mention some initial programmes designed to sample every 10 km) and could well have missed anomalous drainages as a result.

- Samples collected by Ashton (the main explorer in this region) were apparently only examined down to 0.425 mm in the laboratory and, as a consequence, finer indicator minerals may have been missed. A more common cut-off these days would be 0.3 mm which offers a significant improvement in recovery of indicator minerals.

- Since the majority of kimberlitic indicator minerals are finer that 0.8mm the effectiveness of sample collection can be substantially improved by using a finer sieve in the field, for instance mesh with a 1.2mm or 1.6mm aperture, rather than the 4mm mesh size used by Ashton

- Improvements in laboratory techniques (such as the use of a MicroDMS plant for heavy media separation, and a "Rotating Magnetic Field Separator" to remove unwanted heavy minerals such as fine ilmenite etc) may also be a factor that will assist in the recovery of fine indicators and hence improve the effectiveness of sampling as an exploration tool.

The importance of selecting suitable heavy mineral trap-site for sampling may mean that gaps in previous sampling exist simply because of the absence of such suitable sites. Where no suitable sites can be found, bulk sampling the drainage further downstream (for diamonds only) may be an option worth considering, assuming that suitable bulk sample sites can be found.

Areas with Cretaceous or younger cover may have served to preserve (and conceal) kimberlite pipes; in view of the Merlin experience such areas may warrant special attention.

8. Strategies for further exploration

On the basis of previous discovery histories drainage sampling (where appropriate drainages exist) is considered to be the essential first step towards locating areas of interest for more detailed and diverse follow-up in the form of further sampling or geophysics. Only where no suitable drainages exist should geophysics be considered for use as a reconnaissance tool.

In the Paspaley areas there appears to be a choice between three possible strategies for further work, which are

h) to accept the results of previous sampling as they stand and only follow up those results that are interpreted as being of possible further interest,

i) to accept the previous results as they stand and carry out further sampling in areas that have not been adequately covered (possibly using geophysical surveys over areas that are unsuitable for sampling), or

j) to consider that previous sampling may not have been sufficiently effective for some or all of the reasons itemised in section **7.** above, and to resample all areas more effectively with closer sample spacing, a finer sieve mesh (and an effectively larger sample size) utilising refined laboratory techniques. Airborne magnetic surveys would be required over areas that do not have adequate drainages with suitable heavy mineral trapsites.

Costs are likely to determine which of the above alternatives is adopted. The best option initially is perhaps to combine a) and b), following up areas of particular interest and ensuring that all gaps in previous sample cover have been filled as far as possible. Should this programme prove effective in locating new kimberlite intrusions then funding would no doubt become available for option c) to ensure that nothing had been missed.

All options would benefit from orientation sampling over areas with mapped volcanics / intrusives as well as in those areas with reported but unsourced chromite trails (including those classified as non-kimberlitic). Any chromite grains recovered from such areas should then be probed to determine their chemical characteristics.

Ashton certainly examined NTGS airborne geophysical data and publicly available aerial photography over these areas; should any more recent aerial photography be available this should be purchased and examined for any features that might be due to kimberlite pipes.

9. Open file research

Relevant Open File Company Reports have been examined for the various Paspaley areas and are discussed below, with summaries appended at the back of this report (Appendix 1). Whilst extensive use has been made of the NTGS Diamond Indicator Mineral (DIM) and Industry Reports Management System (IRMS) databases, they have been found to contain both inaccuracies and omissions (see Appendix 4) necessitating thorough research of the original exploration reports.

9.1. EL24349

Location and access

EL24349 covers some 1,199 sq. km over the Mallapunyah, Batten and Tawallah Range 1,100,000 map sheets. It has a highly irregular shape that extends for over 100 km in a north-south direction, as a result of which the licence area outline is shown over 3 figures (Figures 5, 6 & 7), in combination with those of ELs 24373 and 24374.

Dry season road access exists to the southern part of the area via the Nathan River Road from Cape Crawford but this exits the licence area about 45 km due north of Cape Crawford and the only access track into the northern part of the area appears to be one from the Nathan River road into the upper reaches of Tawallah Creek.

Geology

The licence area lies entirely within the Batten Trough and is largely comprised of extensively faulted sediments from the McArthur Basin sequence (Figures 8, 9 & 10). Also mapped within the area are various igneous rocks such as the Scrutton Volcanics, Seigal or Settlement Creek Volcanics (Tawallah Group), and some meso-Proterozoic dolerites in northernmost upper reaches of Tawallah Creek, all of which have the potential to complicate the exploration picture by shedding chromite into drainages and by producing magnetic anomalies similar to those that can be associated with kimberlitic intrusions.

Areas of Cretaceous and Tertiary or Quaternary cover exist within the EL which could mask older kimberlite intrusions. These can be quite extensive, such as an area of about 30 sq. km at the Tawallah Pocket, an area of about 20 sq. km some 15 km SSE of the Pocket and extensive areas along Batten Creek which are mapped mainly as Quaternary. Many patches of Cretaceous sediments are shown scattered throughout the licence area, particularly the north-eastern portion.

Previous exploration for diamonds

Previous heavy mineral sample locations and results within the area covered by EL24349 (derived from the NTGS DIM database) are shown in Figures 5, 6 & 7. Two diamonds and two micro-diamonds were reported by Ashton from within the licence area, all occurring as single grains in separate samples. The absence of supporting indicator minerals in these samples makes it difficult to assign any great significance to these results.

BHP also explored within this area and reported one pyrope and one chromite from separate samples in the central part of the area. They went on to state, however, that "no significant indicators were observed" having discounted these results after probing the grains. (Sample contamination is also suspected as these samples were processed through a commercial laboratory that is known to have had some problems with contamination by samples from other countries, where pyrope is a more common indicator.)

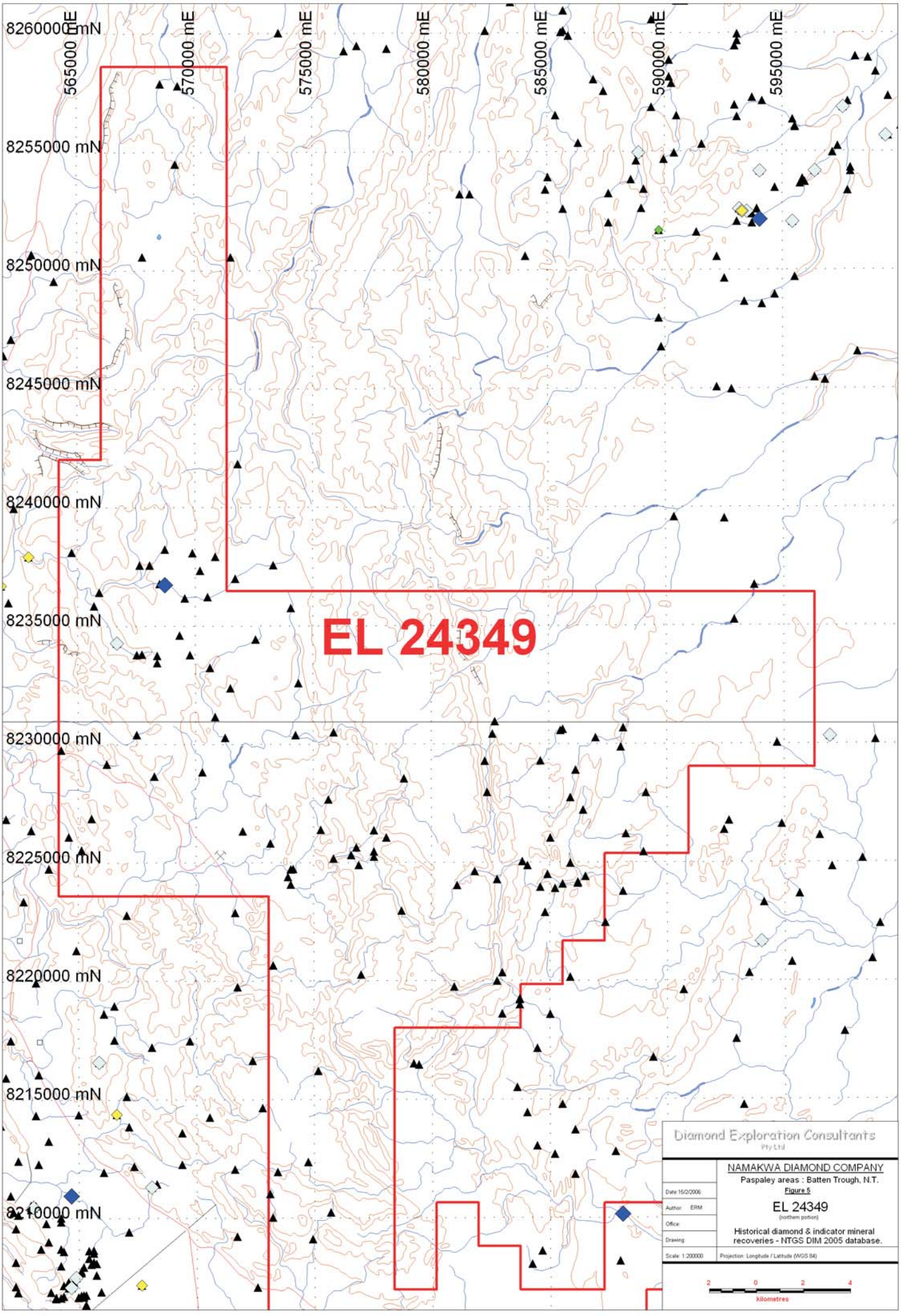
Sample cover within EL24349 as a whole has been rather sparse in most areas, with the exception of an area in the Tawallah Range explored by SPL in 1996/97 (under EL9511), and the headwaters of Pocket Creek which were sampled by Ashton in the period 1994-96 (under EL7973). In these areas the average sample densities achieved were 1 sample to 3.5 sq. km by SPL and 1 sample to 4.3 sq. km by Ashton. SPL decided that the chromites they were following up were probably sourced from underlying Scrutton Volcanics, although the published geological map suggests the Seigal Volcanics to be a more likely source. Ashton were following up a single chromite and a diamond recovered from different samples in the same drainage (the chromite from outside EL24349), together with a nearby micro-diamond, but failed to delineate a source area.

Proposals for further exploration

Substantial areas within this EL appear not to have been tested by sampling. Although in some cases this may have been due to a lack of suitable sites further sampling is certainly warranted in order to fully examine the kimberlite potential of this area. The first phase of any future work in the licence area would require a helicopter supported heavy mineral drainage sampling programme to

h) close up the sample spacing where necessary and, if possible, sample those drainages that have not been previously sampled, and
i) sample over mapped outcrop of various volcanic and intrusive rock types for orientation purposes.

It is envisaged that this would initially require in the region of 80 to 100 drainage samples, with any positive results being followed up by further sampling and / or airborne geophysical survey, depending on the amount of cover.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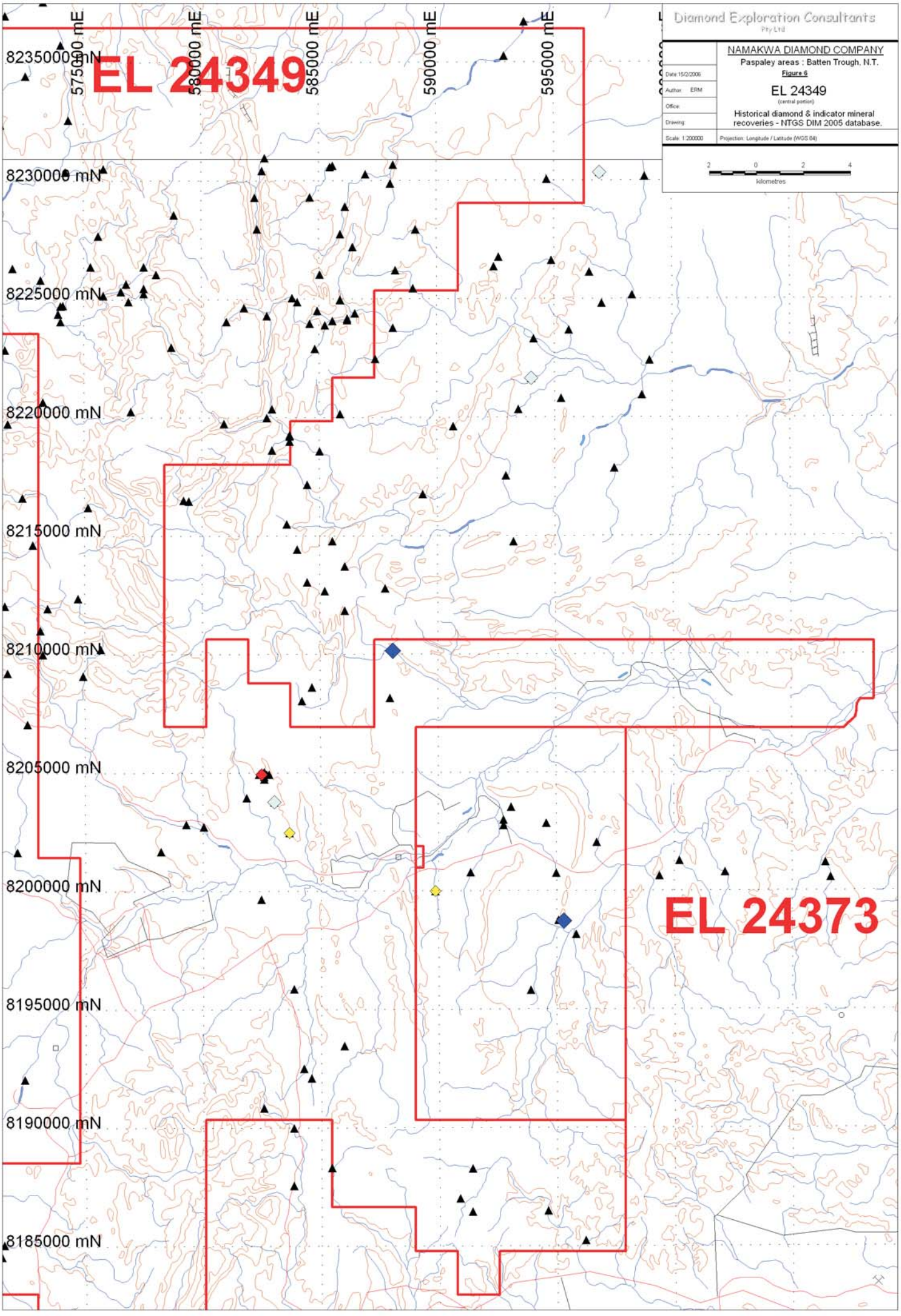
590000 mE
595000 mE
EL 24349
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 5
EL 24349
(northern portion)
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
2 0 2 4
kilometres


EL 24349
EL 24373
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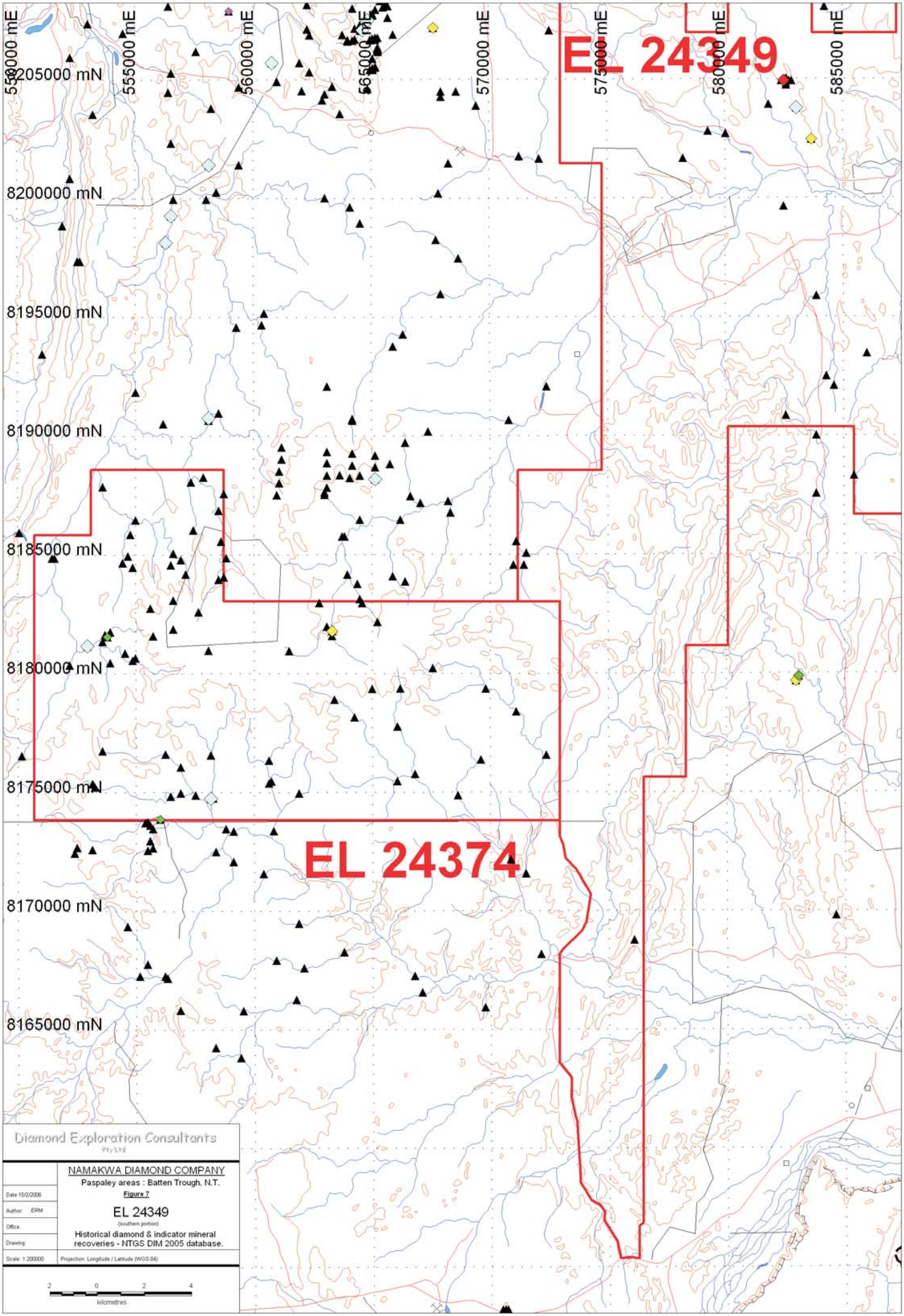
8215000 mN
8210000 mN
8205000 mN
8200000 mN
8195000 mN
8190000 mN
8185000 mN
Diamond Exploration Consultants Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas ; Batten Trough, N.T.
Figure 6
EL 24349
(central portion)
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
2 0 2 4
Kilometres


EL 24349
EL 24374
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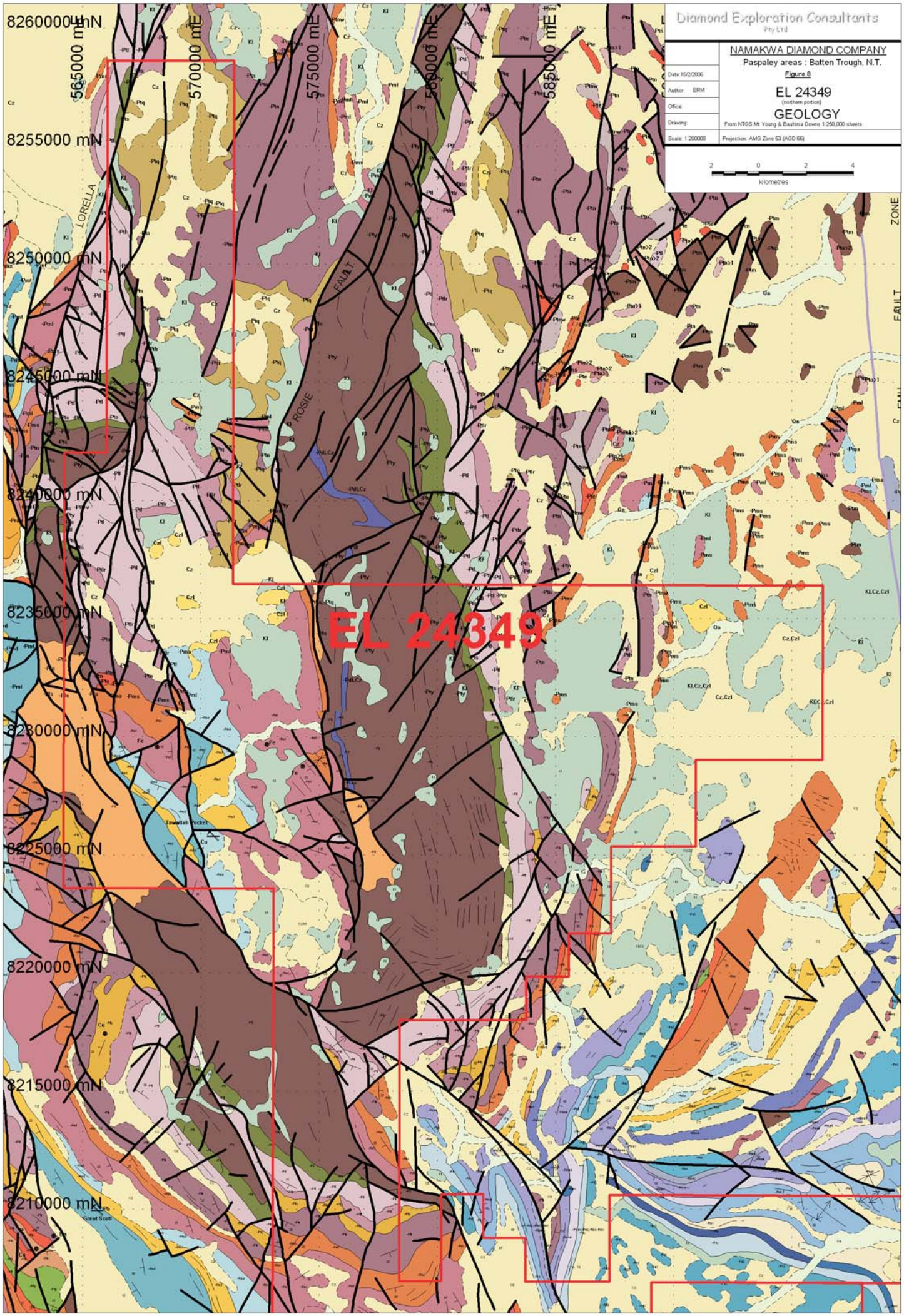
570000 mE
575000 mE
580000 mE
585000 mE
8205000 mN
8200000 mN
8195000 mN
8190000 mN
8185000 mN
8180000 mN
8175000 mN
8170000 mN
8165000 mN
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 7
EL 24349
(southern portion)
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
2 0 2 4
kilometres


Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 8
EL 24349
(northern portion)
GEOLOGY
From NTGS Mt Young & Bauhinia Downs 1:250,000 sheets
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
2 0 2 4
kilometres
EL 24349
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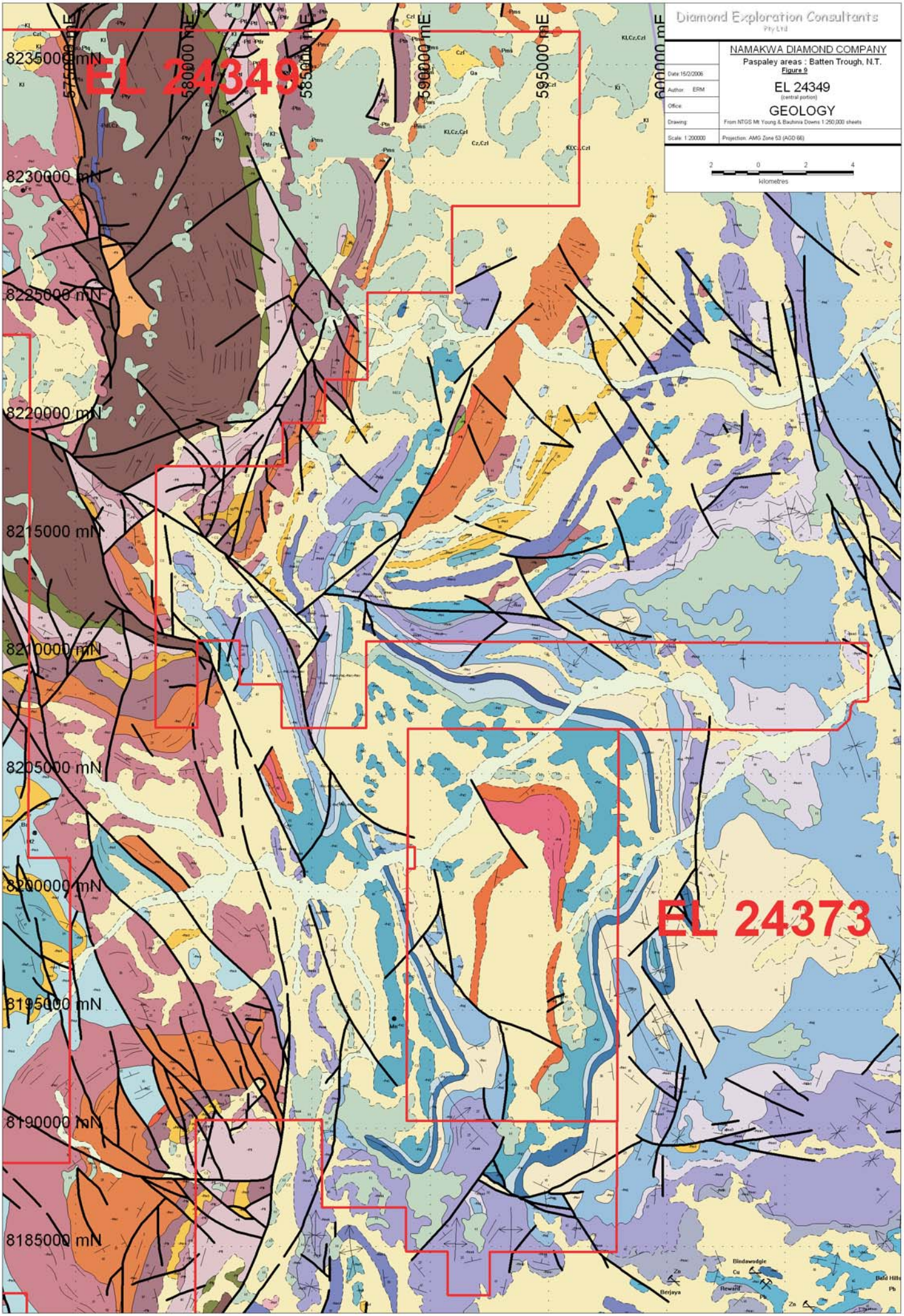
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 9
EL 24349
(central portion)
GEOLOGY
Date: 15/2/2006
Author: ERM
Office:
Drawing:
From NTGS Mt Young & Bauhinia Downs 1:250,000 sheets
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
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EL 24374
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 10
EL 24349
(southern portion)
GEOLOGY
From NTGS Mt Young & Bauhinia Downs 1:250,000 sheets
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
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9.2. EL24373

Location and access

This relatively small licence area lies adjacent to the central portion of EL24349 (Figure 6), covering some 148 sq. km on the Batten 1,100,000 map sheet. It is centred about 88 km NNE of Cape Crawford and traversed by the gravel road between Cape Crawford and Borroloola (running past Cow Lagoon).

Geology

Published geological maps show the area to lie within the Batten Trough, covering a faulted synclinal structure in which Roper Group sediments are preserved, unconformably overlying Nathan River Group and McArthur River Group sequences (Figure 9).

Previous exploration for diamonds

The only previous diamond exploration reported within EL24373 was by Ashton during the period 1991-96 under EL7302. Two samples yielded positive results (Figure 6), one with a diamond (mis-plotted as a micro-diamond in the NTGS DIM database) and one with a single chromite. Several samples appear to have been omitted from the NTGS DIM database although these all gave negative results (see Appendix 4); even taking these samples into account there still appear to have been gaps in the sample cover.

Proposals for further exploration

Since there are no mapped volcanic or intrusive rocks in the area the chromite grain is potentially of interest and does not appear to have been followed up. A repeat of this sample together with an estimated 20 additional samples will be warranted to adequately test this area.

9.3. EL24374

Location and access

This licence area lies adjacent to the southern part of EL 24349 on the Bauhinia Downs, Batten, O T Downs and Mallapunya 1:100,000 map sheets. It is centred approximately 48 km NNE of Cape Crawford, covering an area of some 244 sq. km (Figure 7).

Topographic maps show a track running in an east-north easterly direction through the area from the Cape Crawford - Nathan River road towards Billengarrah Creek.

Geology

EL24374 covers an area mapped as McArthur Group sediments cut by a number of WNW to NNW trending faults (Figure 10) and capped in the western half of the area by Cretaceous sediments that cover an area of some 15 sq. km.

Previous exploration for diamonds

Previous exploration within the area was mainly carried out by CRAE and Ashton Mining. (BHP also completed some diamond exploration in the area from 1992 to 1994, under EL7578, but without any encouragement.)

In 1983-84 CRAE recovered 2 micro-diamonds from separate samples, one within EL24373 and the other just outside the licence area but in a drainage flowing out of it towards the north (Figure 7). Interestingly, Ashton later recovered 2D and 2mD just a few kilometres downstream in the same drainage (the 2D being from a bulk sample).

Ashton explored within the licence area during the period 1991-96, mainly under EL7300, and also to a lesser extent under ELs 8914 and 9374. They recovered a number of chromites, both from within EL24374 and from surrounding areas, particular to the north of the Paspaley EL near the headwaters of Batten Creek. After following up the trail they eventually arrived at the conclusion that the chromites were of a non-kimberlitic origin, although no source had been identified.

As a result of this work by CRAE and Ashton quite a large number of samples have been collected from EL24374, giving an overall sample density close to 4 samples per sq. km. The chromites within this licence area remain enigmatic, however, not only because no source has been located but also because they were recovered from creeks that drain sediments of the McArthur Group which is not known to contain any volcanic or intrusive rocks in this area that might be a likely source.

Further investigation is therefore warranted, particularly of the 40 chromites reported in the western part of the licence area (Bauhinia Downs 1:100,000 sheet) since a reasonably large diamond (1.4x1.1x1.0mm) was also recovered from a bulk sample collected some 4 km downstream. The headwaters of this drainage

derive from the 15 sq. km Cretaceous plateau mentioned previously, as do the headwaters of the drainage to the north of the licence area from which 2 diamonds and 3 micro-diamonds have been reported by earlier explorers, hinting at the possibility of a source concealed beneath the Cretaceous cover.

Proposals for further exploration

A drainage sampling programme is envisaged for this area, firstly to collect headwater samples surrounding the plateau area for clues of a possible source beneath a Cretaceous capping, and secondly to recover chromites and evaluate their chemistries.

Although a substantial number of samples have previously been collected from around the Cretaceous plateau there is a possibility that fine indicators (perhaps the only remnants of intensive weathering) may have been missed by only examining samples down to 0.425mm.

The chromite chemistries may not be conclusive, however, as kimberlitic indicator minerals can be more rapidly destroyed than other minerals that have derived from shallower depths and been caught up in the intrusion. The absence of known possible sources in these sediments thus renders any such minerals of potential interest despite their apparent non-kimberlitic origin.

Up to 25 heavy mineral drainage samples may be warranted for the initial part of this programme, to be followed by geophysical survey(s) over the Cretaceous plateau should results confirm this to be a likely source area

9.4. EL24714

Location and access

This small Exploration Licence covers an area of some 47 sq. km (Figure 11) on the Bing Bong 1:100,000 map sheet, centred approximately 30 km NW of Cape Crawford. There appear to be no tracks into the area: the Nathan River road lies nearly 50 km to the west and the road to Bing Bong is 20 km to the east.

Geology

The area lies to the east of the Emu fault and hence outside the Batten Trough on the Wearyan Shelf (Figure 12). It is mapped as covering a synclinal structure in McArthur Group sediments in which lower sequences from the overlying Roper Group have been preserved. Two sinkholes in the area are marked on the geological map including the Nhumby Nhumby sinkhole, which is reported as forming a permanent waterhole with sandstone cliffs some 20-30m high.

There is a substantial portion of the area under Cainozoic cover in the central part of the EL. Two small areas of Cretaceous cover are mapped in the central part of the EL as well as a larger area on its western boundary.

Previous exploration for diamonds

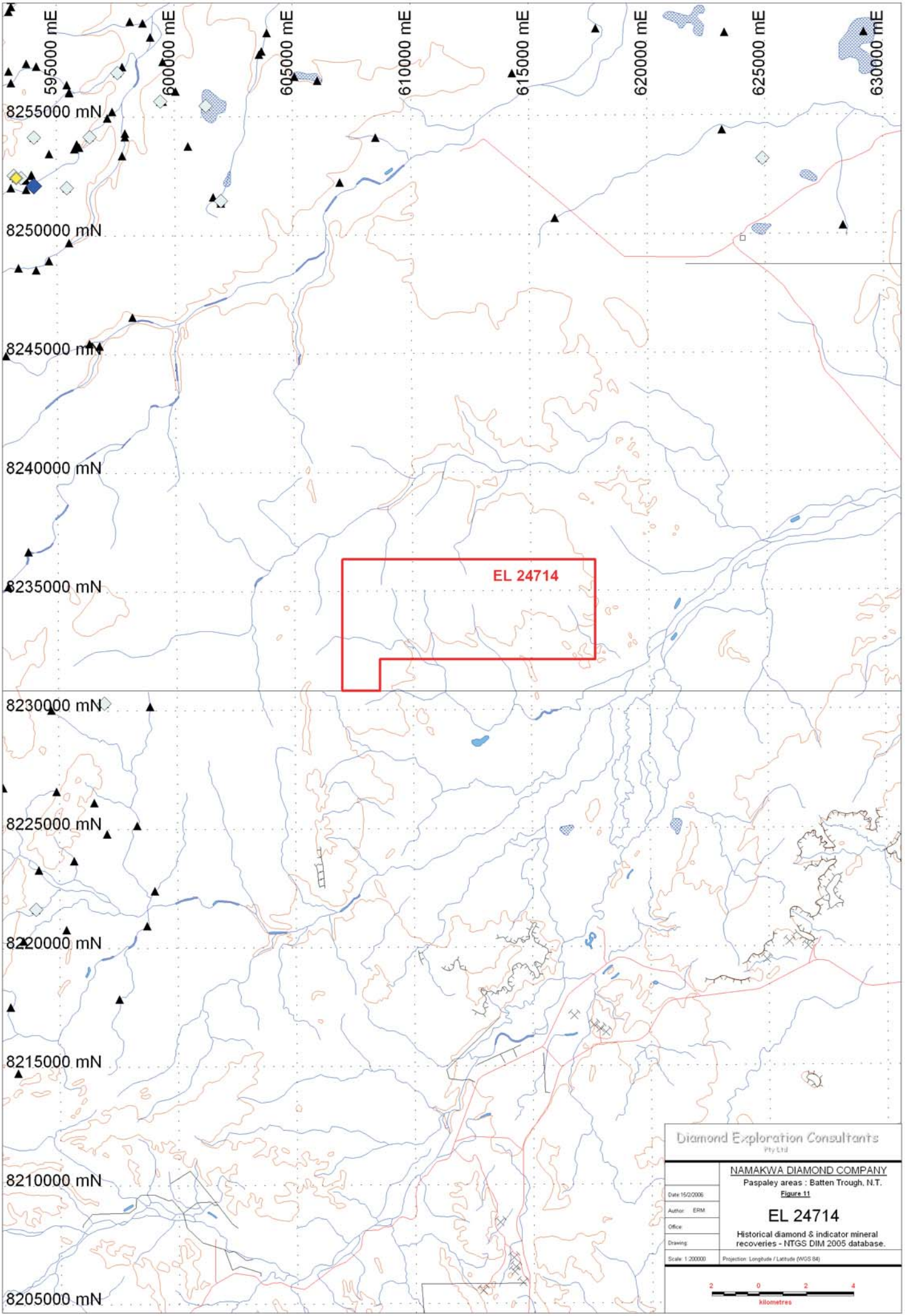
The only reported diamond exploration in the general area was by Ashton during the period 1993-1997 under EL 8097, but there do not appear to have been any samples collected from within EL24714 which remains effectively un-tested.

Proposals for further exploration

A programme involving the collection of up to 10 heavy mineral drainage samples is envisaged to test the diamond potential of this licence area.

9.5. EL(A)24945

The review of previous exploration for this application area was terminated when the application was rejected in December 2005.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EL 24714
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 11
EL 24714
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
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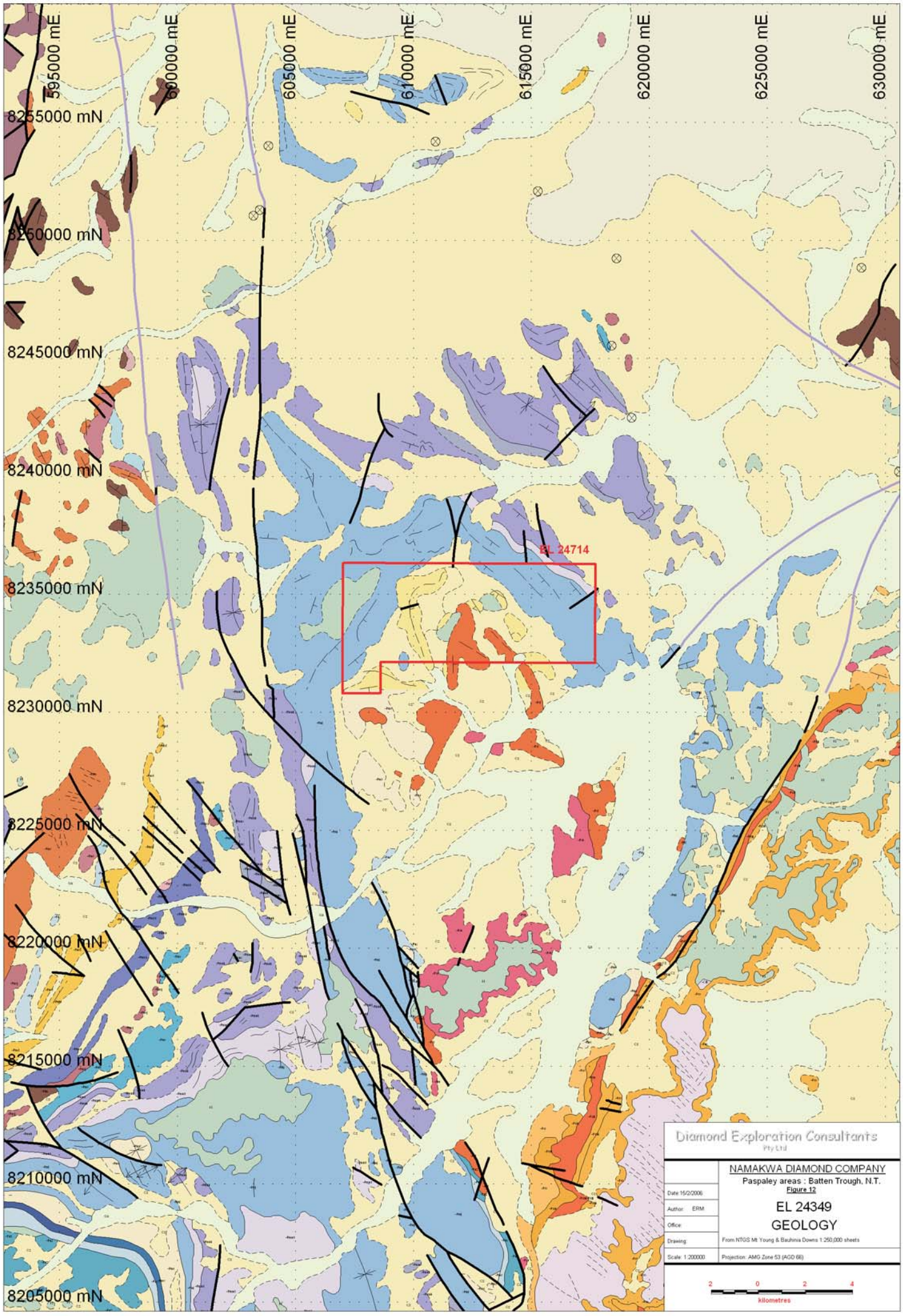
kilometres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EL 24714
Diamond Exploration Consultants Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 12
EL 24349
GEOLOGY
Date: 15/2/2006
Author: ERM
Office:
Drawing:
From NTGS Mt Young & Bauhinia Downs 1:250,000 sheets
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
2 0 2 4
kilometres

9.6. EL(A)24946

Location and access

This application area covers an area of some 224 sq. km (Figure 13) on the Mantungulah and Tawallah 1:100,000 map sheets. It is centred approximately 103 km NNE of Cape Crawford and some 25 km south-east of Nathan River. The Cape Crawford to Nathan River road just clips the southern extremity of the area.

Geology

The central-western part of this area is mapped as a wedge of faulted Tawallah Group sediments and volcanics (Figure 14). To the west of this wedge and separated by the Four Archers Fault are folded sediments of the Roper Group, whilst to the east the Roper Group re-appears as a narrow north-west trending syncline. The second major structure in the area is the Lorella Fault, which just clips the south-eastern corner of the application area.

Seigal Volcanics and Settlement Creek Volcanics have been mapped in the western portion of the licence area (within the Tawallah Group wedge), both of which have the potential to complicate exploration by the release of chromites into drainages.

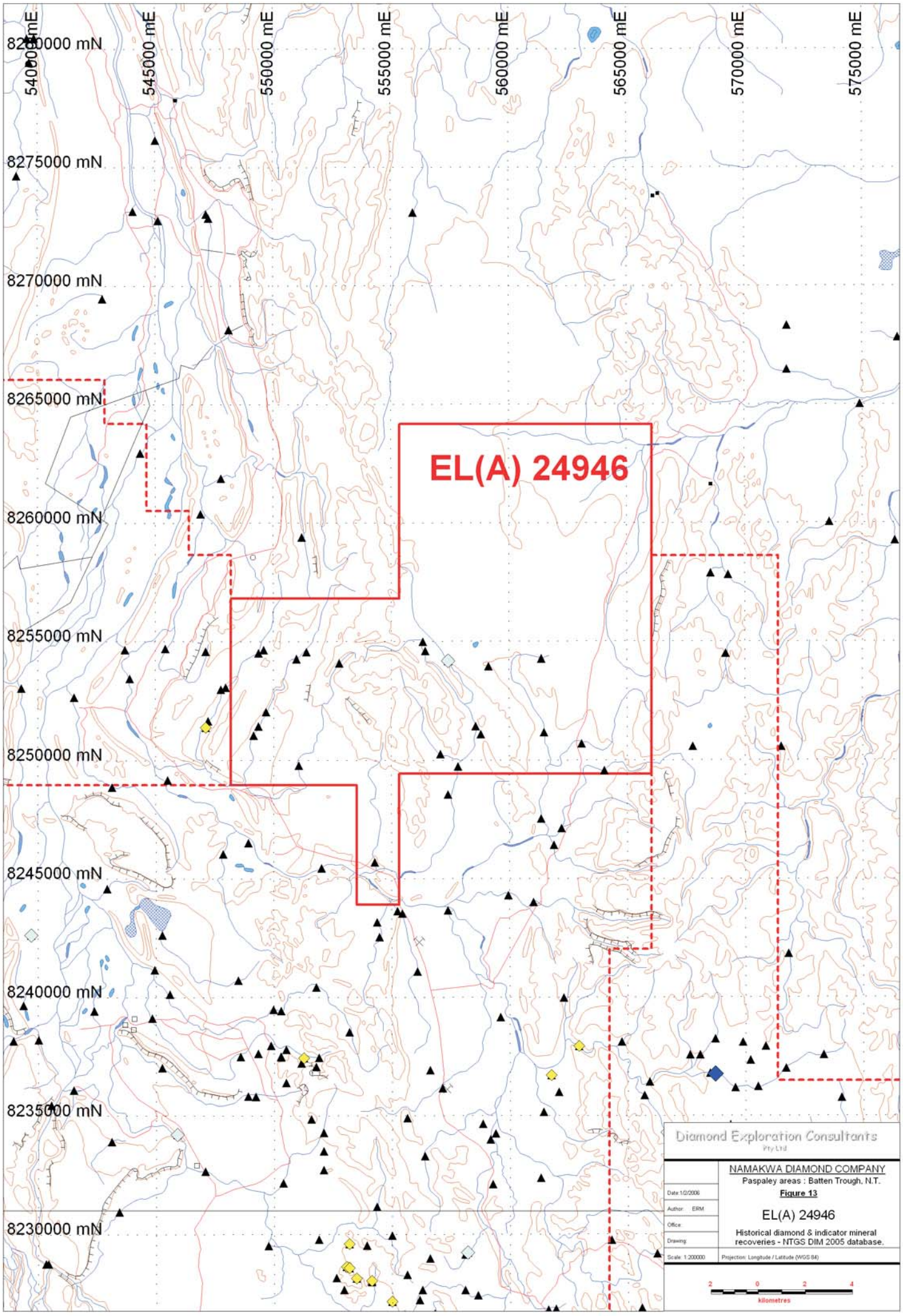
A broad, poorly drained plateau area occupying over 100 sq. km in the northern and eastern portions of the area has been mapped as mostly "Quaternary and Older Cainozoic", in parts overlying Cretaceous sediments. Cretaceous sediments have also been mapped over restricted areas in the south-east of the licence area. These cover sequences may not be very thick, however, as rocks of the McArthur group are exposed along a drainage in the north-east of the area.

Previous exploration for diamonds

Previous exploration over the licence area has been reported by Ashton during the period 1991 to 1997 under ELs 8009 and 7264, and by Negri River Corporation in 1982-83 under EL3499. No sampling has been reported in the poorly drained north-eastern half of the area and the only positive result from the remainder of the area was a solitary micro-diamond.

Proposals for further exploration

A helicopter-supported sampling programme is proposed to test the diamond potential of the previously un-sampled plateau area as well as to infill elsewhere, involving the collection of 20 to 30 drainage samples depending on the availability of suitable sites. A detailed airborne magnetic survey over the plateau area is seen as a likely follow-up to any encouraging results rather than an initial reconnaissance tool.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EL(A) 24946
Diamond Exploration Consultants Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 13
EL(A) 24946
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 1/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
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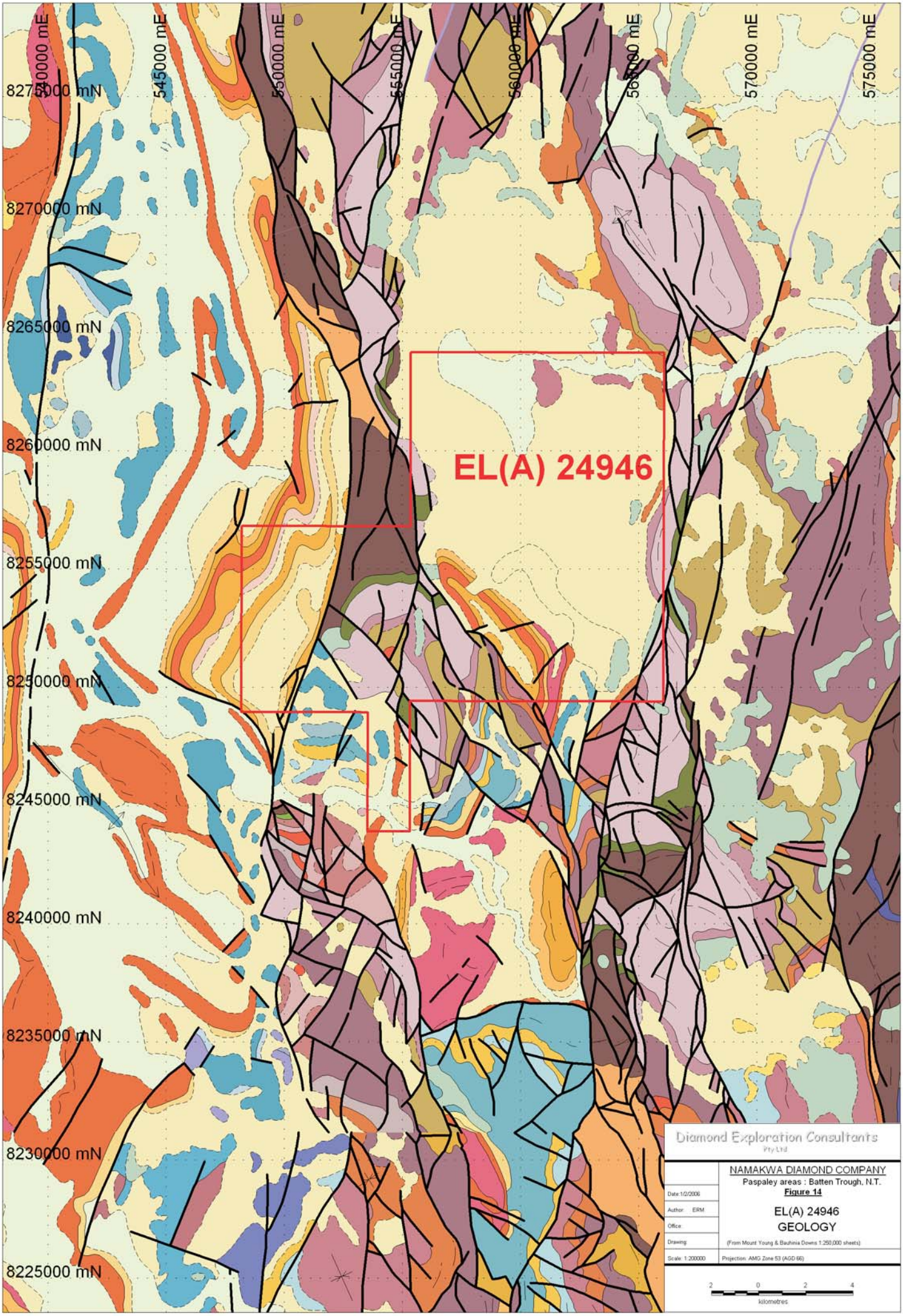
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EL(A) 24946
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 14
EL(A) 24946
GEOLOGY
Date: 1/2/2006
Author: ERM
Office:
Drawing:
(From Mount Young & Bauhinia Downs 1:250,000 sheets)
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
2 0 2 4
kilometres

9.7. EL(A)24996

Location and access

Exploration Licence application 24996 covers an area of 129 sq. km over a narrow north-south zone (Figure 15): it is some 37 km long (N-S) with a maximum width (E-W) of just under 9 km, although it is very largely less than 5.5 km wide. It lies mostly on the Batten 1:100,000 map sheet, extending northwards a few kilometres onto the Tawallah Range sheet, and is centred approximately 66 km NNW of Cape Crawford.

The road from Cape Crawford to Bauhinia Downs station runs through the southern part of the application area, and a track is shown on the topographic sheet running from the station into the centre of the area and along Ten Mile Creek.

Geology

The area lies close to the western margin of the Batten Trough and is comprised largely of faulted McArthur group sediments, with a lesser representation from the underlying Tawallah Group and only a very restricted presence of the overlying Roper Group (Figure 16).

A small area of Settlement Creek Volcanics (Tawallah Group) that has been mapped in the central portion of the application area may have the potential to complicate diamond exploration in the area. There are also substantial areas mapped as Cainozoic cover, mainly along drainages and particularly in the southern part of the area.

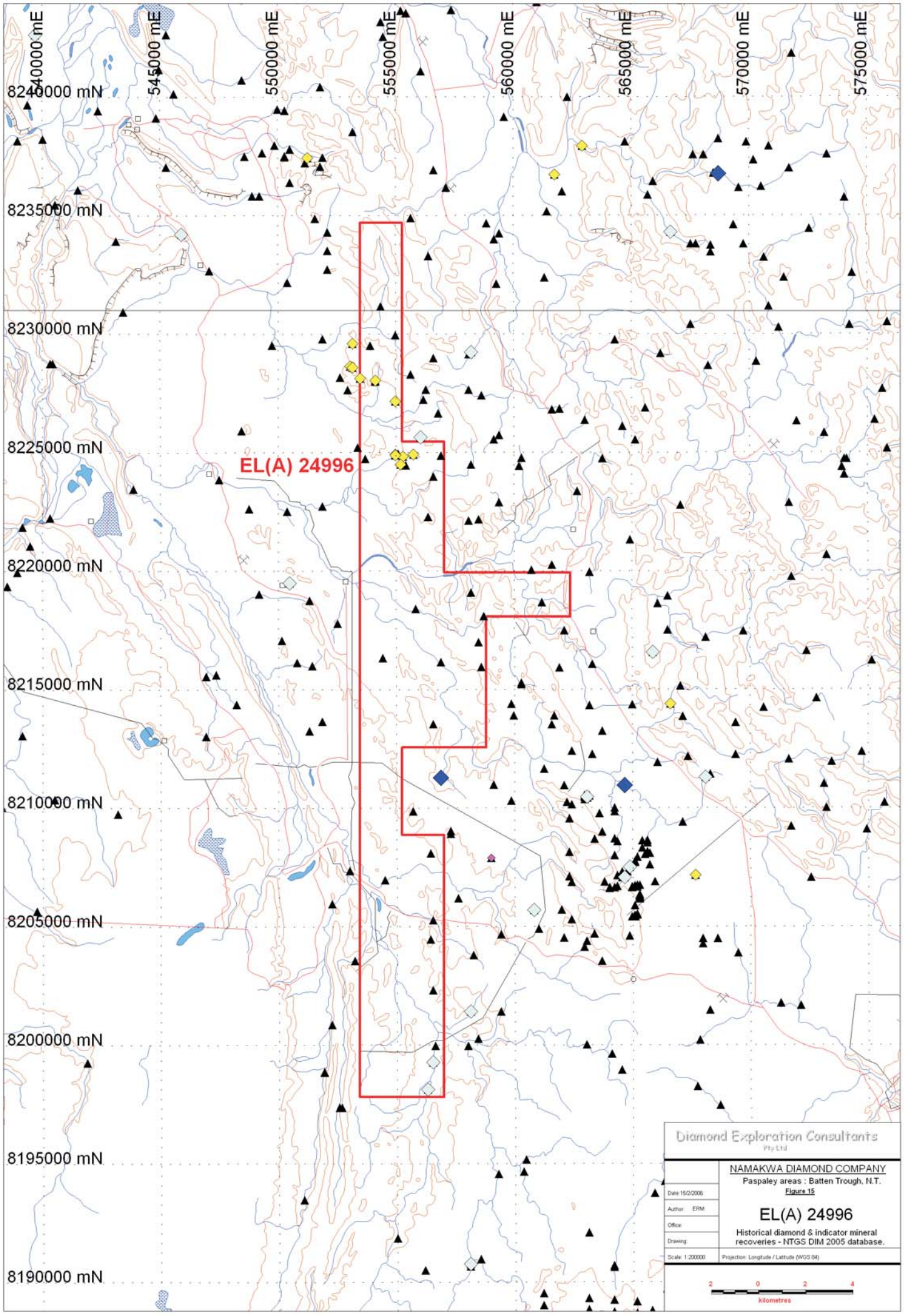
Previous exploration for diamonds

Once again, previous exploration for diamonds within the application area has been mainly carried out by Ashton (later taken over by Rio Tinto), with BHP Minerals, Moonstone Mines and CRAE also contributing. Ashton /Rio were active between 1994 and 2001 through Exploration Licences 9207 and 8380, and were responsible for the only positive results reported within the area.

Two micro-diamonds were recovered from separate samples in the same drainage, which is in the far south and flows into the application area from further south, but in the absence of any associated indicator minerals these were of little interest. Chromite recoveries in the northern part of the area attracted greater attention, however, the chromite source being eventually interpreted as non-kimberlitic (mafic volcanic or sedimentary) on the basis of their distribution pattern and low concentrations, although no source was actually located. Chromites from outside the application area (in former EL8380) were suggested as possibly being sourced from a conglomeratic unit in the Cretaceous, but this was not proven and Rio, following their take over of Ashton, decided that the chromite chemistries were probably non-kimberlitic anyway.

Proposals for further exploration

There is scope for some additional sampling within the application area to reduce the gaps in sample coverage: approximately 18 heavy mineral samples should suffice. The chromite area also warrants some further investigation to assess the chemistries of the chromite grains and evaluate the probability of a kimberlitic source.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EL(A) 24996
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 15
EL(A) 24996
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
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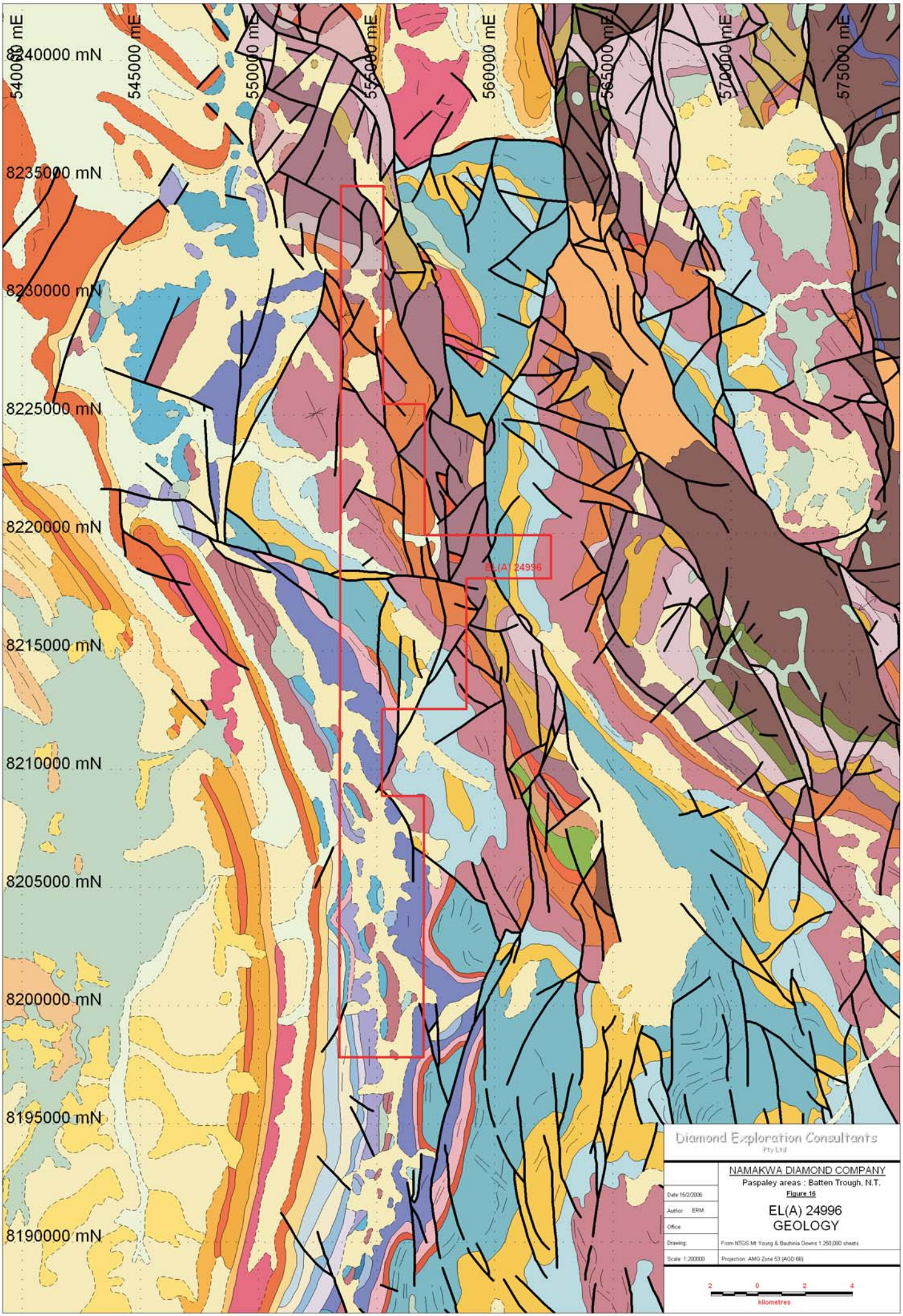
kilometres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EL(A) 24996
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 16
EL(A) 24996
GEOLOGY
Date: 15/2/2006
Author: ERM
Office:
Drawing:
From NTGS Mt Young & Bauhinia Downs 1:250,000 sheets
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
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kilometres

9.8. EL(A)24997

Location and access

This application area covers some 323 sq. km (Figure 17), lying mainly on the Mantungula 1:100,000 map sheet but also extending a few kilometres to the south onto the Bauhinia Downs sheet. It is centred about 23 km SSW of Nathan River and 105 km NNW of Cape Crawford, the road between these two places running through the eastern part of the area.

Geology

The published geological map shows that this application area straddles the Limmen Fault along the western margin of the Batten Trough (Figure 18).

The area to the west of the Limmen Fault has been mapped mainly as sediments of the Roper Group, in places covered by Quarternary or Older Cainozoic sediments and ferricrete. The only mapped Cretaceous is a small patch straddling the boundary in the extreme south.

The Limmen Bight River runs through the central portion of the area: it's broad drainage system together with the Tyangkultu Creek tributary are flanked by extensive areas of Quaternary, gravel, sand, and silt alluvium.

To the east of the Limmen Fault is a north-south zone of Nathan Group sediments, overlain once again along the eastern margin of the area by sediments of the Roper Group.

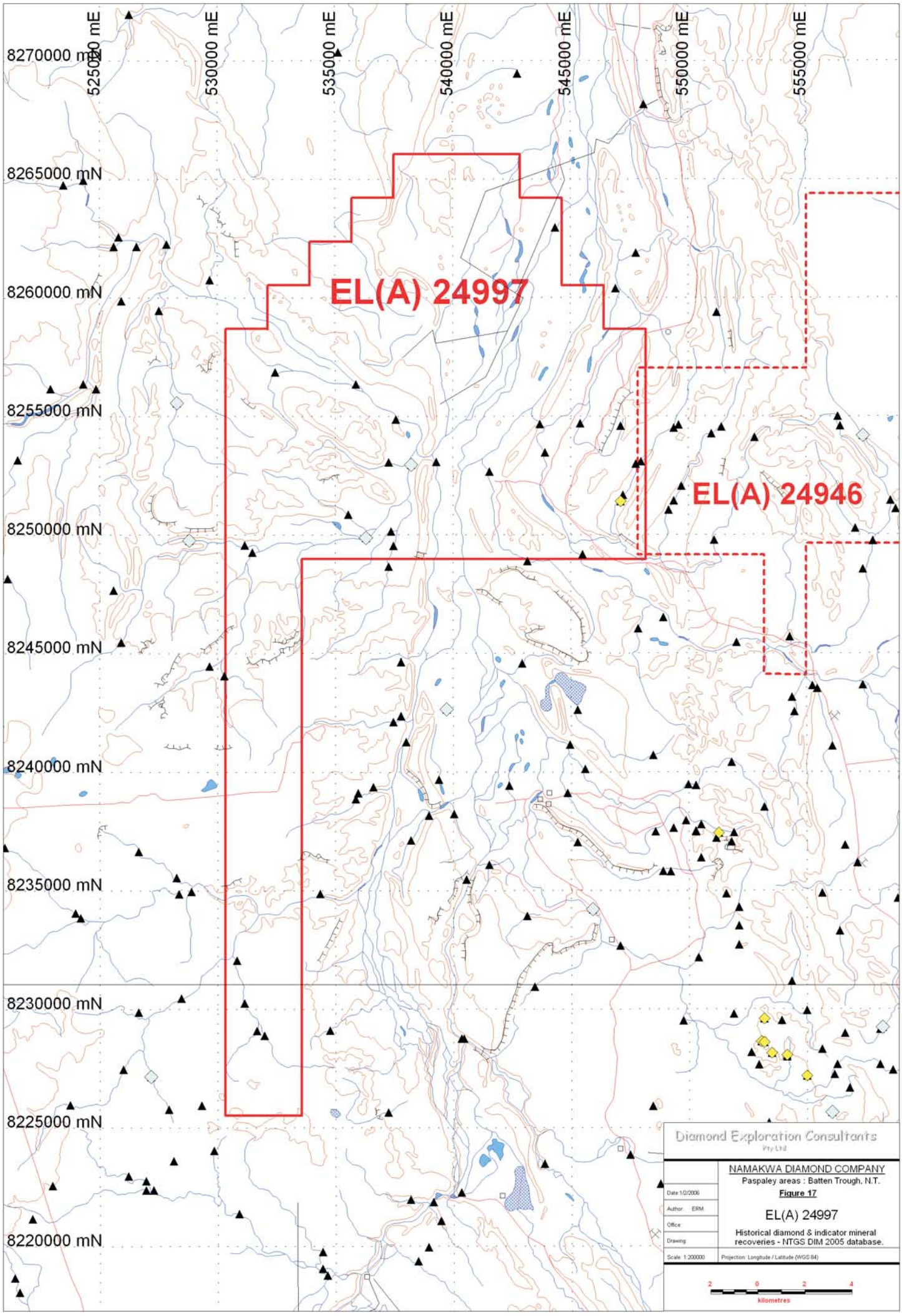
Previous exploration for diamonds

CRAE explored this area for diamonds in the mid-1980s under ELs 4547 and 4551 but the only positive result from within the application area was a single micro-diamond in a south-bank tributary to Tyangkultu Creek.

Subsequent exploration by Ashton during the period 1991-1997 (under ELs 7264, 7266, and 7301) recovered another solitary micro-diamond some 4 km upstream from the CRAE micro-diamond, but the absence of any associated indicator minerals detracts from these results. A single chromite was also reported from the south eastern corner of the area but not repeated in follow up sampling.

Proposals for further exploration

Approximately 30 further drainage samples are proposed to fill in the gaps left by previous sampling programmes.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EL(A) 24997
EL(A) 24946
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 17
EL(A) 24997
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 1/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
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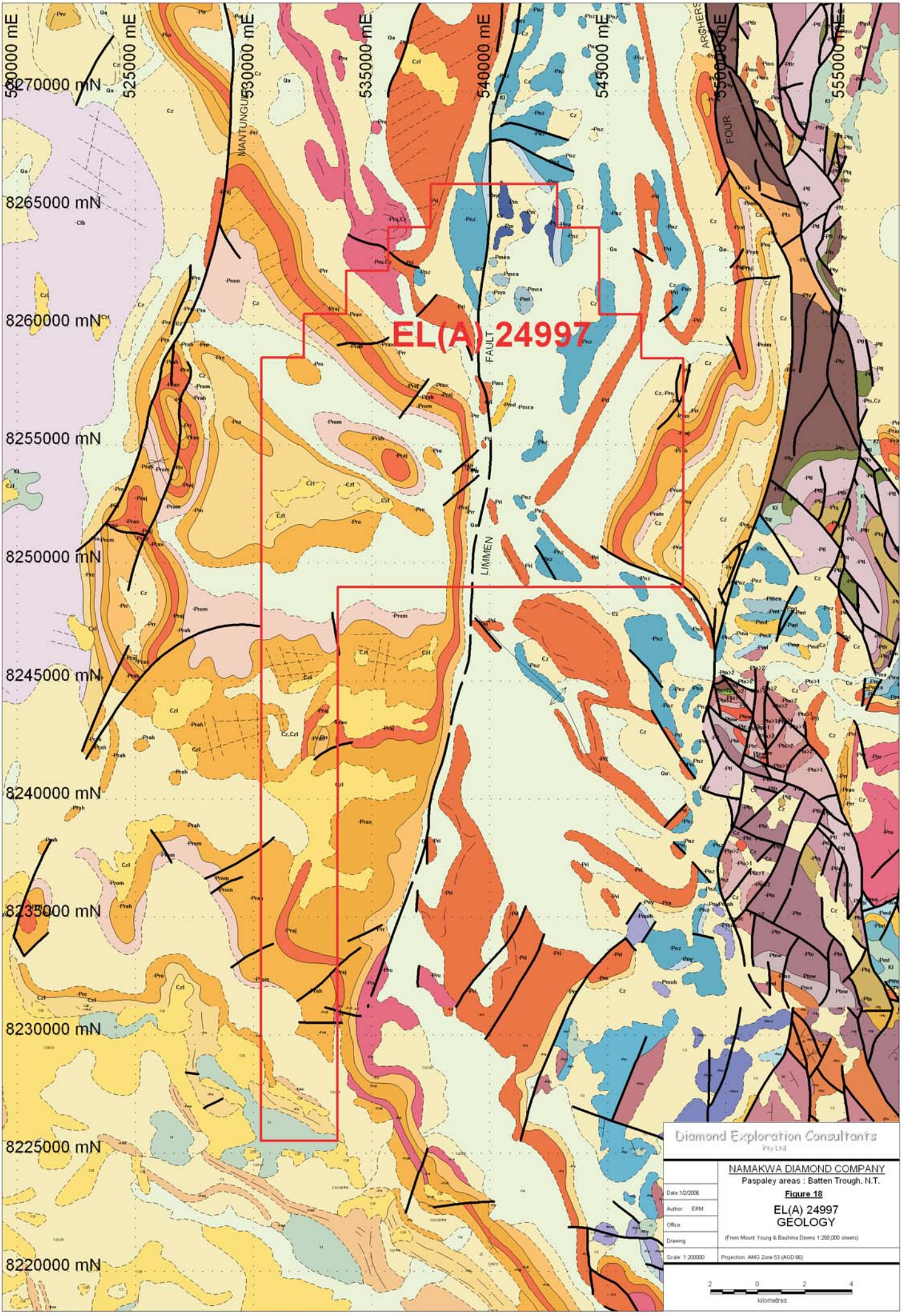
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EL(A) 24997
MANTUNGUL
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LIMMEN
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FOUR
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 18
EL(A) 24997
GEOLOGY
(From Mount Young & Bauhinia Downs 1:250,000 sheets)
Date: 1/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
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kilometres

9.9. EL(A)25070

Location and access

This large application area covers 1,498 sq. km along the coast of the Gulf of Carpentaria (shown in two portions in Figures 19 & 20), on the Mount Young, Rosie Creek and Bing Bong 1:100,000 map sheets. It is centred some 150 km NNE of Cape Crawford and a little over 50 km NE of Nathan River. The Limmen Bight River forms the north-western boundary of the area.

The topographic maps show no roads or tracks within the area, the closest road access being at Bing Bong which is 12 km south-east of the south-eastern corner of the application area.

Geology

The area is in an interesting structural position, straddling the northerly extension of the Emu Fault as inferred from airborne magnetics (Figures 21 & 22). Most of the area is under Cainozoic cover but older sandstones of the Tawallah Group outcrop to the west of the Emu Fault.

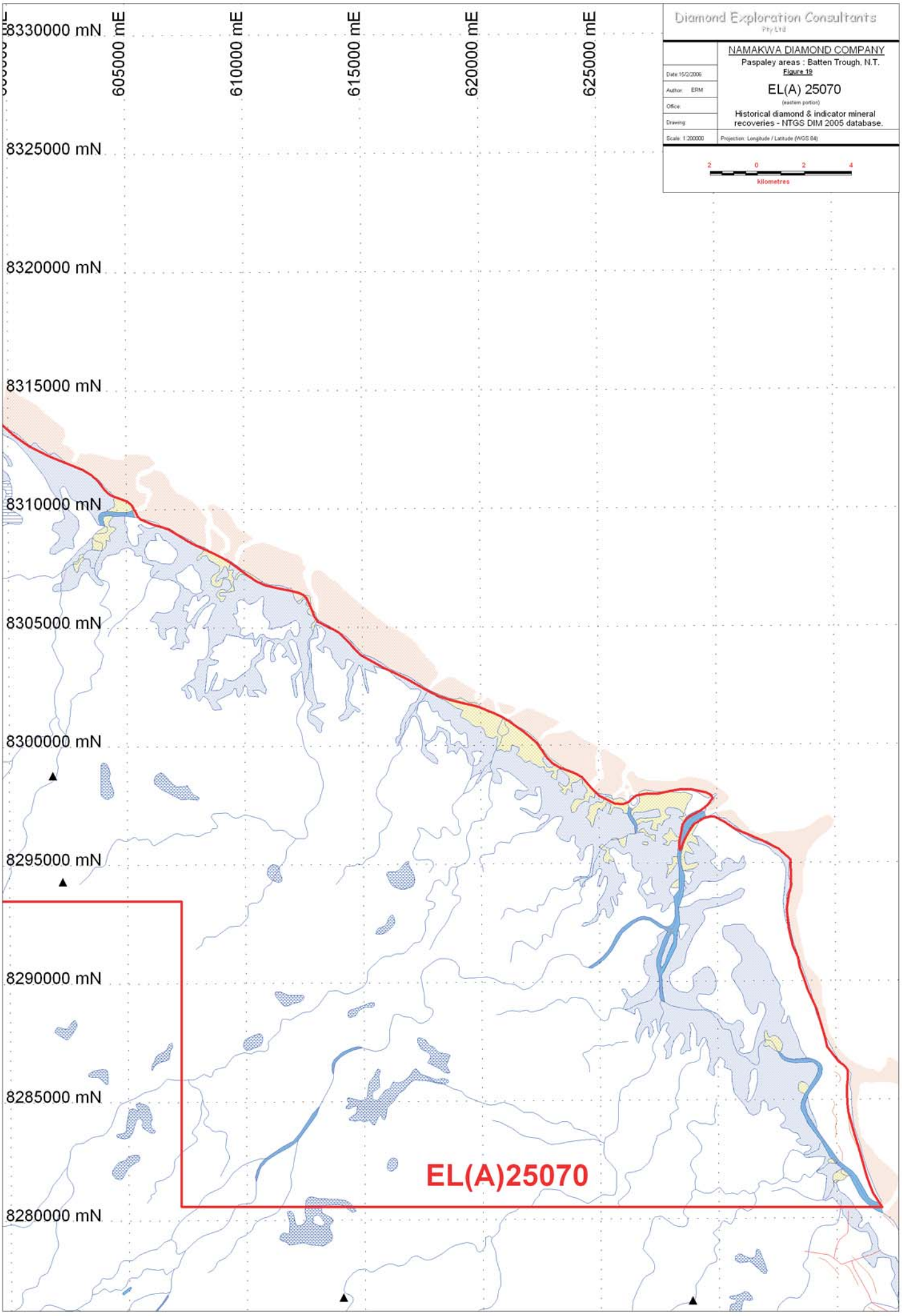
Previous exploration for diamonds

Most of the previous exploration for diamonds over this area has been carried out by Ashton but no positive results have been reported. A drill target was identified from the NTGS airborne magnetic survey just outside the Paspaley application area (to the west): drilling reached 34 metres encountering 4m of non-kimberlitic 'altered mafic material' but no geochemical or petrological details were provided.

Whilst exploring primarily for base metals BHP flew an airborne magnetic survey (N-S lines 300m apart) over an area lying mainly to the south of the Paspaley application area, and noted two bullseye magnetic targets as possible kimberlites. These were modelled as 1.0 / 0.8 ha pipes at a depth of 40 /45 m but were not drilled.

Proposals for further exploration

The effectiveness of drainage sampling within EL(A)25070 is likely to be severely restricted by the Cainozoic cover and scarcity of suitable sample sites. Whilst it may be possible to improve on the previous, rather sparse, sample density with an additional 20 samples or so, the chances of finding good sample sites in such flat terrain are low and the cover is likely to render this technique ineffective, to the extent that a detailed airborne magnetic survey may be the best option for exploring this area, particularly to the east of the Emu Fault. To the west of this fault non-kimberlitic magnetic targets may be present in the form of the various volcanics and intrusives of the Tawallah Group.


Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 19
EL(A) 25070
(eastern portion)
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
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Drawing:
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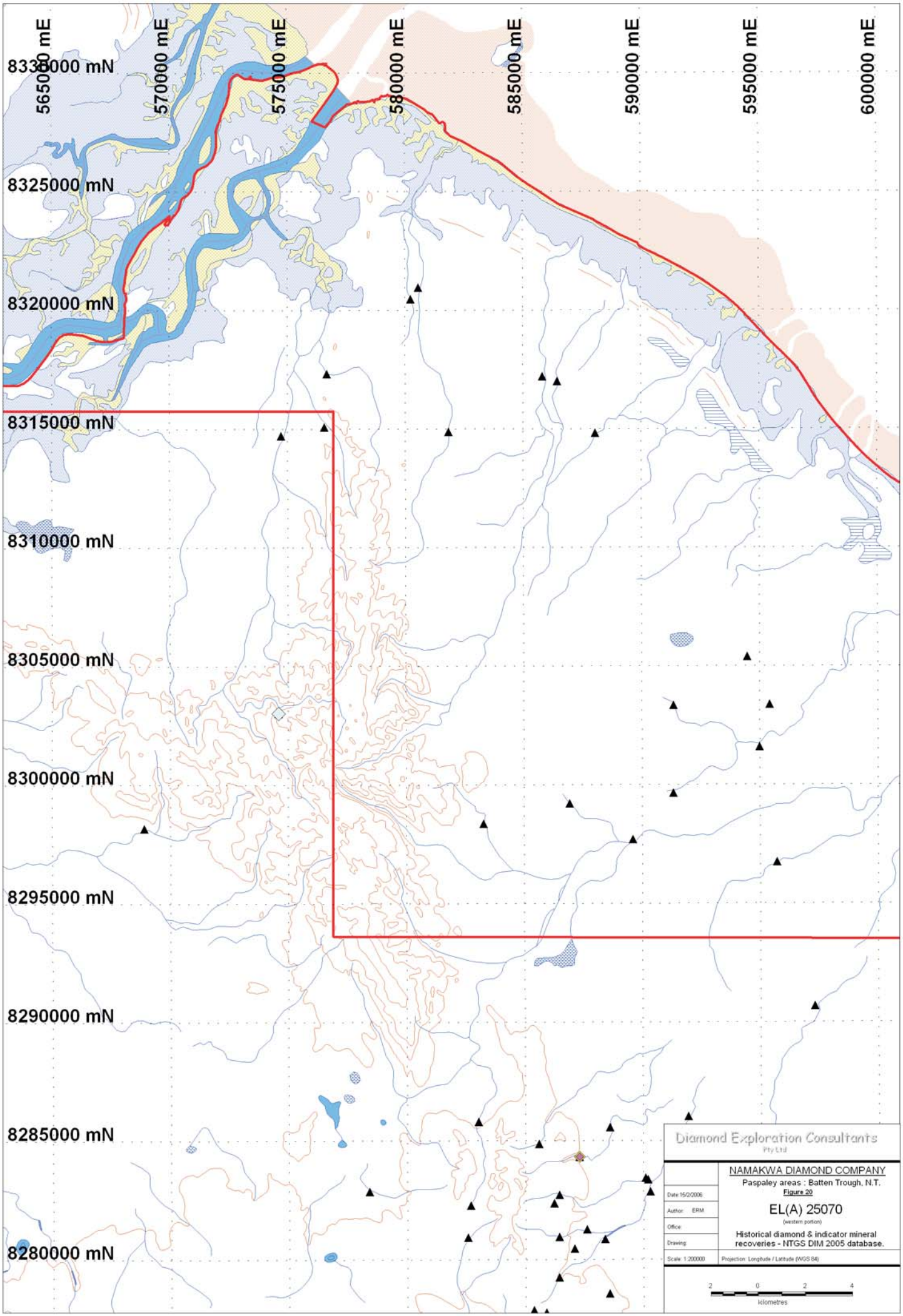
EL(A)25070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595000 mE
600000 mE
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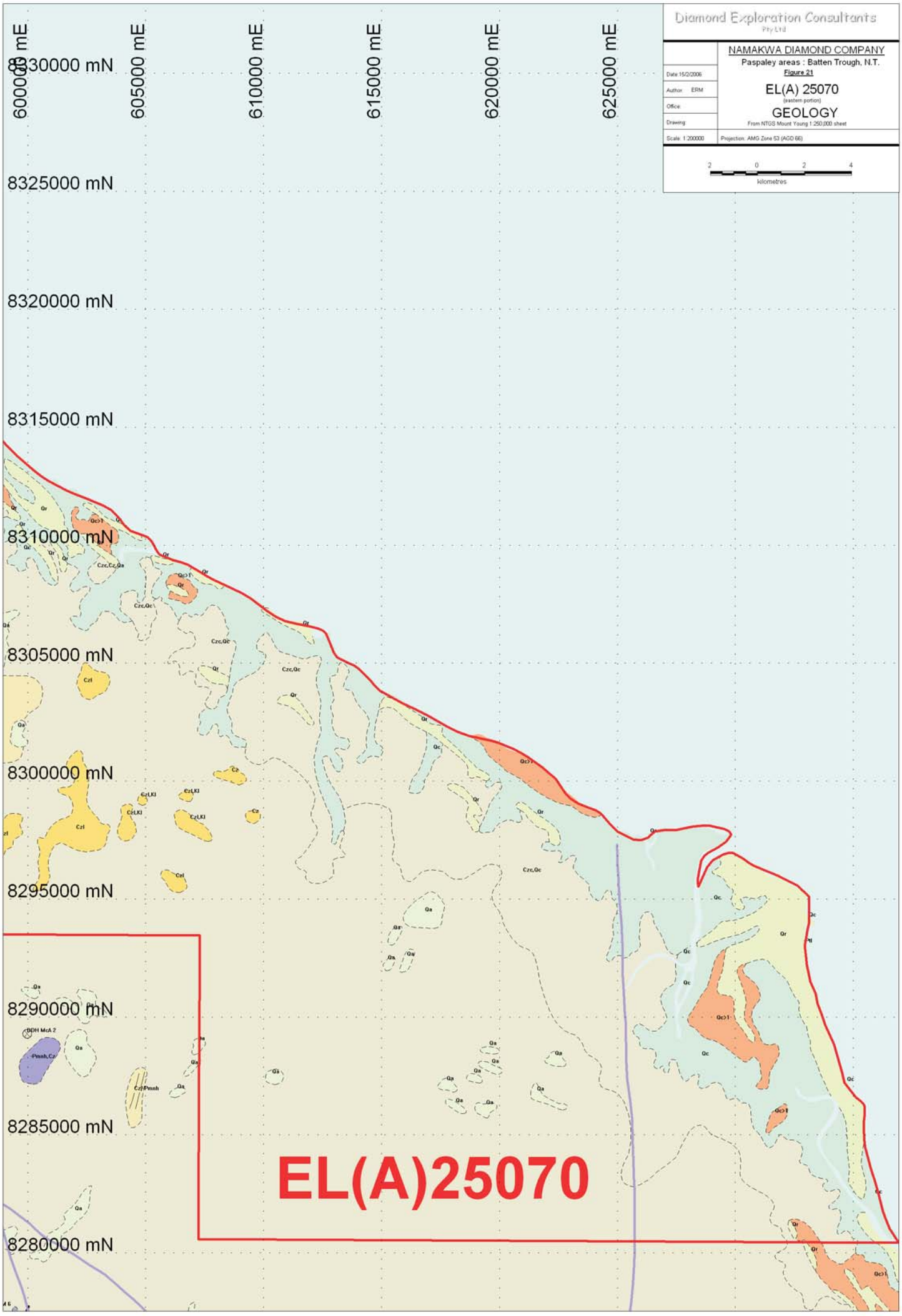
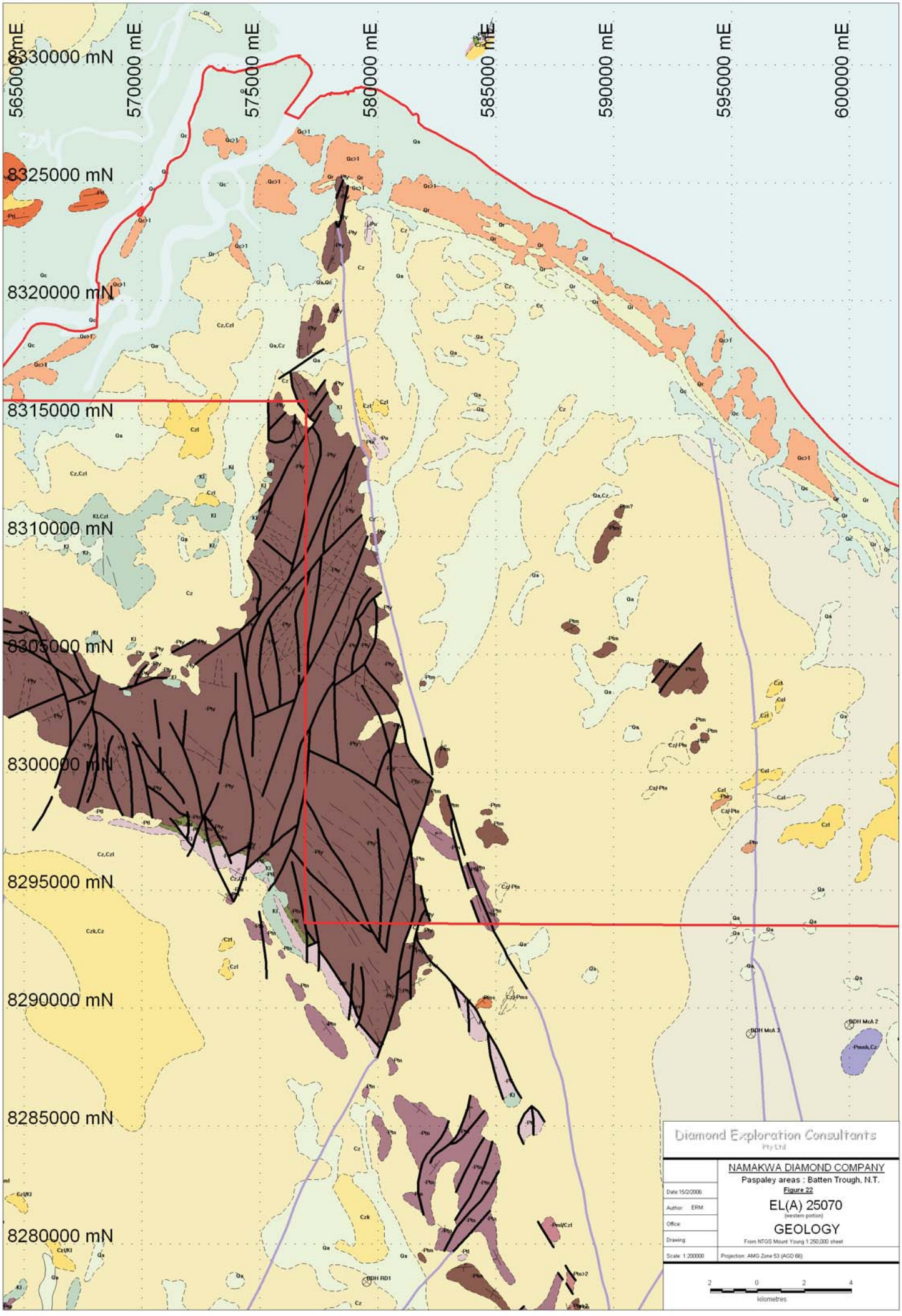
8320000 mN
8315000 mN
8310000 mN
8305000 mN
8300000 mN
8295000 mN
8290000 mN
8285000 mN
8280000 mN
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 20
EL(A) 25070
(western portion)
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
2 0 2 4
kilometres


Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 21
EL(A) 25070
(eastern portion)
GEOLOGY
From NTGS Mount Young 1:250,000 sheet
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
2 0 2 4
kilometres
600000 mE
605000 mE
610000 mE
615000 mE
620000 mE
625000 mE
8330000 mN
8325000 mN
8320000 mN
8315000 mN
8310000 mN
8305000 mN
8300000 mN
8295000 mN
8290000 mN
8285000 mN
8280000 mN
EL(A)25070
DDH McA 2


565000 mE
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575000 mE
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595000 mE
600000 mE
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8325000 mN
8320000 mN
8315000 mN
8310000 mN
8305000 mN
8300000 mN
8295000 mN
8290000 mN
8285000 mN
8280000 mN
BDH McA 2
BDH McA 3
BDH RD1
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 22
EL(A) 25070
(western portion)
GEOLOGY
From NTGS Mount Young 1:250,000 sheet
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
2 0 2 4
kilometres

9.10. EL(A)25130

Location and access

This application covers an area of some 391 sq. km (Figure 23) on the Glyde 1:100,000 mapsheet. The closest road access is the road to the Merlin Mine, which passes within a few kilometres of the north-eastern part of the area. The topographic map also shows a track to William Yard in the south-western corner of the area, which leads off a track from McArthur River Station along the Kilgour River.

Geology

The area occupies a strategic position between the Merlin Kimberlite Field some 9 km to the east and the Abner Range kimberlites about 20 km to the west. It is comprised very largely of Cambrian Bukalara Sandstone, with Middle Proterozoic sediments of the McArthur Group only occasionally exposed beneath the Bukalara (Figure 24). A southerly extension of the Emu Fault may run through the eastern part of the application area and a possible extension of the Calvert Fault runs through the northern part, running ENE into the area from the Merlin Kimberlite Field.

There is no Cretaceous cover mapped in the area and the only significant area of Cainozoic cover lies on the southern boundary of the area, covering approximately 15 sq. km.

Previous exploration for diamonds

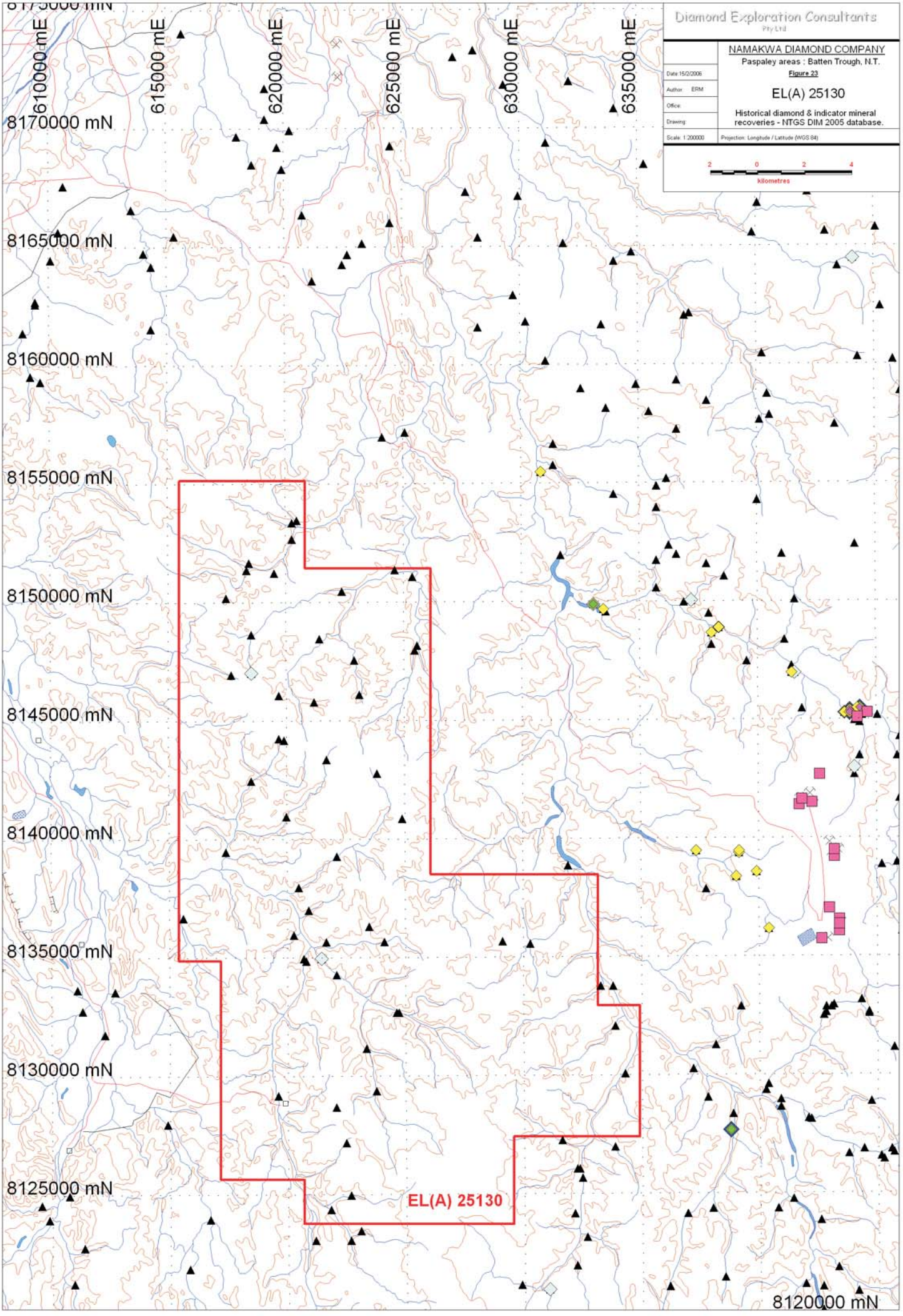
Previous exploration for diamonds has been carried out by CRAE during the period 1983-87 (under ELs 4327 & 4692) and by Ashton between 1993 and 2001 (under ELs 8133 & 7217).

The only positive results reported from within the area are 4 micro-diamonds, all recovered from separate samples (only 2 of these micro-diamonds feature in the NTGS DIM database). No indicator minerals have been reported.

Proposals for further exploration

The plotted sample locations suggest that an aggregate of about 23% of the area covered by this application (~90 sq.km) has not been adequately sampled.

In view of the favourable structural position and proximity to known kimberlite occurrences an additional 50 samples are warranted and would serve to fill in any gaps left by previous explorers.


Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 23
EL(A) 25130
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 15/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:200000
Projection: Longitude / Latitude (WGS 84)
2 0 2 4
kilometres
610000 mE
615000 mE
620000 mE
625000 mE
630000 mE
635000 mE
8170000 mN
8165000 mN
8160000 mN
8155000 mN
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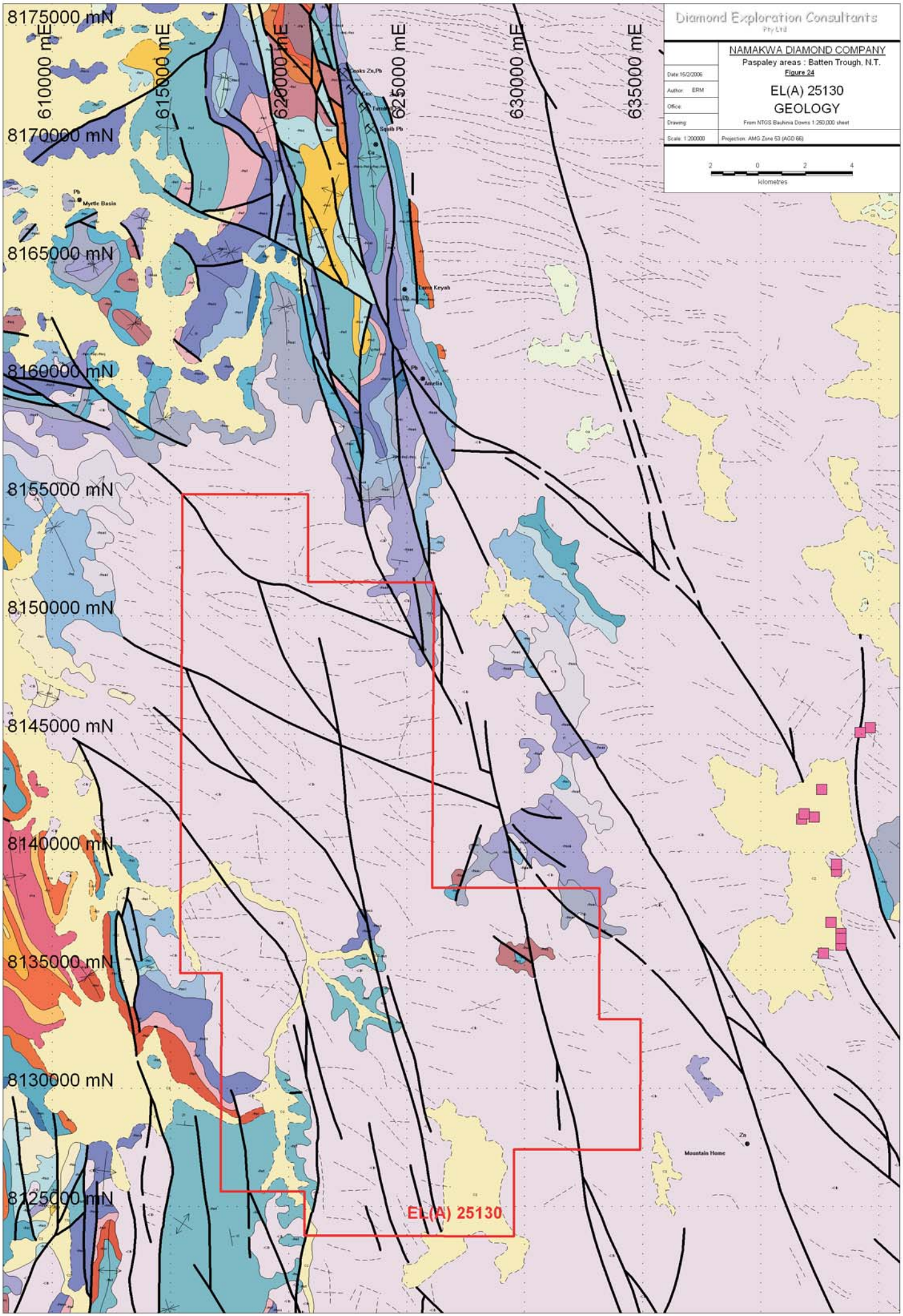
8145000 mN
8140000 mN
8135000 mN
8130000 mN
8125000 mN
8120000 mN
EL(A) 25130


Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
Figure 24
EL(A) 25130
GEOLOGY
Date: 15/2/2006
Author: ERM
Office:
Drawing:
From NTGS Bauhinia Downs 1:250,000 sheet
Scale: 1:200000
Projection: AMG Zone 53 (AGD 66)
2 0 2 4
kilometres
610000 mE
615000 mE
620000 mE
625000 mE
630000 mE
635000 mE
8175000 mN
8170000 mN
8165000 mN
8160000 mN
8155000 mN
8150000 mN
8145000 mN
8140000 mN
8135000 mN
8130000 mN
8125000 mN
Pb
Myrtle Basin
Cooks Zn,Pb
Cox
Turnbull
Squib Pb
Cu
Tarra Keyah
Pb
Amelia
Zn
Mountain Home
EL(A) 25130

10. Conclusion

Diamond recoveries from the Merlin kimberlite field have confirmed the fertility of the earth's mantle beneath this part of the NT and the prospectivity of surrounding areas.

The history of kimberlite discoveries in northern Australia suggests that heavy mineral drainage sampling remains the best reconnaissance tool for locating specific areas with potential to host kimberlite intrusions. The variability in geophysical response of kimberlite pipes renders these techniques generally unsuitable for initial reconnaissance except in those areas where drainages are poorly developed or where there is a cover of younger sediments that is likely to inhibit the release of indicator minerals into drainages.

A review of Open File company reports covering the Paspaley Exploration Licence and application areas in the Batten region of the NT has revealed that significant gaps remain in previous sample cover, with some areas apparently remaining completely untested. Infill sampling is warranted to fully evaluate the potential of these areas for diamond-bearing kimberlite intrusions, bearing in mind that indicator mineral travel distances can be very limited in such deeply weathered environments.

In view of the Merlin experience, areas with a Cretaceous or younger capping will warrant special attention, particularly if indicator minerals are recorded from adjacent drainages. Whilst these could be sourced from conglomeratic horizons near the base of the Cretaceous they may also be indicative of a primary source beneath the cover, probably requiring geophysical surveys to generate drill targets.

Non-kimberlitic volcanic and intrusive rocks may be releasing chromites into drainages in the area, complicating the exploration picture, but a number of chromite trails remain unsourced. In areas with no mapped volcanics or intrusives these unsourced chromites will warrant further investigation even if their chemistries are not suggestive of a kimberlitic origin, since there can be a tendency for kimberlitic grains to weather more rapidly than those of a non-kimberlitic origin that have been caught up in the same intrusion.

Helicopter supported programmes are recommended using a JetRanger or equivalent, as this gives rapid cover and enables the best sample sites to be selected. Making use of the available roads to establish fuel and sample dumps as close as possible to the areas of operation will help to keep costs down, as will co-ordination with any base-metals programmes over these areas. (The collection of additional samples for gold may be warranted, not only over areas of mapped volcanics but also in areas of unsourced chromite trails.)

The number of samples suggested (see Appendix 5) may be increased to provide more detailed cover depending on the available budget, and their locations are likely to require some fine tuning.

More effective sampling to improve the chances of making a discovery can be achieved by

- closing down the sample spacing
- collecting, say, 30kg of -1.2mm material (rather than -4mm)
- examining sample concentrates down to 0.3mm (rather than 0.425mm)
- improved laboratory techniques (such as the use of a DMS with it's more accurate cut-point for sample concentration, rather than Wilfley table, resulting in reduced concentrate sizes and improved mineral observation efficiency, as well as reducing the risk of contamination and of floating off diamond or pyrope)

In the case of the large coastal application area (EL(A)25070), which is mainly under Cainozoic cover, an airborne magnetic survey with 100 m line spacing may be the best way to carry out initial exploration. Similar surveys may be required as a second stage of exploration in other areas, depending on the results of the initial sampling programmes.

11. References

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APPENDIX 1

Summary of previous exploration: EL24349

EL No	Company	CR No	Commodity	Comments
9617	BHP Minerals	CR1997-0782	Base metals	**Geotem survey: EW lines with 1km spacing** located several conductors but none drilled.
		CR1996-0926	Base metals	Geotem survey data release: little overlap with EL24349 & survey scale probably too broad to detect kimberlites
9925	Rio	CR2003-0505	No work	No report
9511	SPL	CR1998-0322	Diamonds	52 drainage samples. Sample density of 1 to 1.1 sq. km. Samples were 100litres, sieved to -2mm or -12mm. Up to 16 chr
				reported; non-kimb; distn said to correspond to inferred distribution of Scrutton Volcanics but appears closer to Siegal Volcanics.
				Best recovery was **16 chromites from BN6724 at 582789E 8224284N (AGD66) within EL24349**.
9199	Ashton Mining	CR1997-0368	Diamonds	14 drainage samples by vehicle: 4 or 5 in EL24349. 40 kg samples (25-30 after sieving to -4mm) - examined to 0.425mm.
	Ashton Mining	CR1998-0428		1mD reported from previous samples - not in Paspaley licence areas
	Ashton Mining	CR1998-0550		Partial relinquishment report: no additional work
	Ashton Mining	CR1999-0268		No pos. results within Paspaley areas.
9197	Ashton Mining	CR1997-0601		First & Final - no work
9181	Ashton Mining	CR1996-0612	Diamonds	15 drainage samples but very little overlap with Paspaley areas (1sample only?)
	Ashton Mining	CR1998-0323		**2 samples with1mD - one well outside Paspaley area, the other close to eastern boundary**
8917	Ashton Mining	CR1996-0338	Diamonds	4 drainage samples, all neg. Limited cover of *ELA 24945* by "Festing" mag survey - (N-S; 150m line spacing)
8916	Ashton Mining	CR1996-0246	Diamonds	SE corner of ELA24945: 2 drainage samples draining out of EL24349, both neg
8908	Ashton Mining	CR1997-0566	Diamonds	1 loam, 10 drainage, & 1 50T bulk sample (**only 2 samples in EL24349, including the bulk sample**)
	Ashton Mining	CR1998-0706		**1D from bulk sample** - rest neg.
8834	MIM Expln.	CR1996-0103	Base metals	First & Final - orientation rock chip sampling only.
8657	Ashton Mining	CR1997-0567	Diamonds	2 loam, 11 drainage samples
	Ashton Mining	CR1998-0703		**2 mD in one sample: sample no. 97035-007 at approx. 573700E 8206300N** - *not in NTGS DIM database (nor are negative*
				samples), only in IRMS
8632	Normandy Expln.	CR1995-0580	Base metals	First & Final. **Helimag covers part of narrow easterly extension of EL24349**
8009	Ashton Mining	CR1994-0628	Diamonds	39 samples collected
	Ashton Mining	CR1995-0334		9 additional samples: 1mD within Paspaley EL(A)24946 (not followed up) & 1 chromite within EL(A)24997 (follow-up negative)
	Ashton Mining	CR1995-0434		Partial Relinquishment - no positive results
	Ashton Mining	CR1996-0370		5 additional samples: all negative. No further diamond work planned
	Ashton Mining	CR1996-0509		Partial Relinquishment - 1mD (reported previously)
	Ashton Mining	CR1996-0926	Base metals	GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	Ashton Mining	CR1997-0406		Final
7973	Ashton Mining	CR1994-0630	Diamonds	16 drainage samples
	Ashton Mining	CR1995-0335		**1D & 1mD within EL24349, also 1 chromite to west in creek draining out of EL24349 (Pocket Creek - Tawallah Pocket area)**
	Ashton Mining	CR1996-0372		2 additional samples, both negative. No further diamond work.
	Ashton Mining	CR1997-0312	Base metals	Airborne TEM survey: E-W lines 1 km apart
	Ashton Mining	CR1995-0436		Partial Relinquishment
	Ashton Mining	CR1996-0517		Partial Relinquishment
	Ashton Mining	CR1997-0436		Partial Relinquishment
	Ashton Mining	CR1996-0926		GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	Ashton Mining	CR1998-0337		Final Report
7946	Auralia Resources	CR1995-0654		Mag./ topo. low at fault intersection - **possible kimberlite** or plug of Seigal Volcs.? On inferred extension of structure from Merlin:
				feature is **just outside EL24349.**
7944	BHP Minerals	CR1994-0139	Diamonds	Diamonds: mag. follow up with ground mags/loam sampling/drilling. Drainage sampling to follow up previous(?) positives....Mags used
				were Geoterrex, N-S, 300m line spacing, 1993. Loam samples were 2 sq. m.; drainage samples were 20kg of -4mm material.
				[5 samples to N of EL(A)24374 - samples DZ1821-DZ1825. - not in NTGS database (perhaps because not processed)] **5 mag targets**
				within EL24349: 4/11 & 4/15 drilled, 2/3, 2/4 & 4/14 only loamed, 1 chr. from 2/4 at 583550E 8202300N (other co-ords in report).

	BHP Minerals	CR1995-0181		Gravel samples not processed. **Indicator grains from drillholes (pyrope & picroilmenites) not considered significant (?contam.**
				Includes probes for previous samples: non-kimberlitic.
	BHP Minerals	CR1995-0365		Partial Relinquishment. Gravel samples still not processed...
	BHP / Ashton	CR1996-0107	BM / Diamonds	Mainly base metals. Ashton JV for diamonds: 14 samples from EL7944 - 2 chromites in one but outside Paspaley areas.Samples
				were 30kg of -2mm (1995).
	BHP / Ashton	CR1996-0548		Partial Relinquishment - negative for diamonds.
	BHP Minerals	CR1996-0926	Base metals	GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	BHP Minerals	CR1997-0047	Base metals	Covers base metals only
	BHP / Ashton	CR1997-0068	Diamonds	1 loam, 7 drainage, 2 bulk etc. Ground mags. All well away from Paspaley tenements(4mm sieve used)
	BHP / Ashton	CR1998-0119		2D from one previous bulk sample & 5D from a 50T bulk sample, none within Paspaley areas *(all mis-reported as mD in NTGS IRMS)*
	BHP / Ashton	CR1998-0354		Partial Relinquishment: negative results.
	BHP Minerals	CR1999-0123		Final report.
7577	BHP Minerals	CR1993-0205	Base metals	Stream sediment sampling for base metals + airborne TEM & mags (E-W lines, 1km line spacing
	BHP Minerals	CR1994-0139	Diamonds	Diamonds: mag. follow up with ground mags/loam sampling/drilling. Drainage sampling to follow up previous(?) positives....Mags used
				were Geoterrex, N-S, 300m line spacing, 1993. Loam samples were 2 sq. m.; drainage samples were 20kg of -4mm material.
				[5 samples to N of EL(A)24374 - samples DZ1821-DZ1825. - not in NTGS database (perhaps because not processed)] **5 mag targets**
				within EL24349: 4/11 & 4/15 drilled, 2/3, 2/4 & 4/14 only loamed, 1 chr. from 2/4 at 583550E 8202300N (other co-ords in report).
	BHP Minerals	CR1994-0248		Partial relinquishment. 4 samples (not processsed); no magnetic anomalies in area.
	BHP Minerals	CR1995-0181		Gravel samples not processed. **Indicator grains from drillholes (pyrope & picroilmenites) not considered significant (?contam.**
				Includes probes for previous samples: non-kimberlitic.
	BHP Minerals	CR1995-0365		Partial Relinquishment. Gravel samples still not processed...
	BHP / Ashton	CR1996-0107		Mainly base metals. Ashton JV for diamonds: 14 samples from EL7944 - 2 chromites in one but outside Paspaley areas.Samples
				were 30kg of -2mm (1995).
	BHP / Ashton	CR1996-0442		Partial Relinquishment. **Sample 14245 had 1mD & is within EL24349** *(Not mentioned in IRMS).*
	BHP Minerals	CR1997-0047	Base metals	Covers base metals only
	BHP / Ashton	CR1997-0068	Diamonds	1 loam, 7 drainage, 2 bulk etc. Ground mags. All well away from Paspaley tenements (4mm sieve used)
	BHP / Ashton	CR1997-0213		Partial Relinquishment. 3 gravel samples - all negative
	BHP / Ashton	CR1998-0312		One mD (reported previously) was the only positive result within EL7577
7576	BHP Minerals	CR1993-0205	Base metals	Stream sediment sampling for base metals + airborne TEM & mags (E-W lines, 1km line spacing
	BHP / Ashton	CR1994-0139	Diamonds	Diamonds: mag. follow up with ground mags/loam sampling/drilling. Drainage sampling to follow up previous(?) positives....Mags used
				were Geoterrex, N-S, 300m line spacing, 1993. Loam samples were 2 sq. m.; drainage samples were 20kg of -4mm material.
				[5 samples to N of EL(A)24374 - samples DZ1821-DZ1825. - not in NTGS database (perhaps because not processed)] **5 mag targets**
				within EL24349: 4/11 & 4/15 drilled, 2/3, 2/4 & 4/14 only loamed, 1 chr. from 2/4 at 583550E 8202300N (other co-ords in report).
	BHP / Ashton	CR1994-0248		Partial relinquishment. 4 samples (not processsed); no magnetic anomalies in area.
	BHP / Ashton	CR1995-0181		Gravel samples not processed. **Indicator grains from drillholes (pyrope & picroilmenites) not considered significant (?contam.**
				Includes probes for previous samples: non-kimberlitic.
	BHP / Ashton	CR1995-0365		Partial Relinquishment. Gravel samples still not processed...
	BHP Minerals	CR1995-0810	Base metals	Final - no reference to diamonds
7575	BHP Minerals	CR1993-0205	Base metals	Stream sed sampling for BM + a/b TEM & mags (E-W,.1km line spacing)
	BHP / Ashton	CR1994-0139	Diamonds	Diamonds: mag. follow up with ground mags/loam sampling/drilling. Drainage sampling to follow up previous(?) positives....Mags used
				were Geoterrex, N-S, 300m line spacing, 1993. Loam samples were 2 sq. m.; drainage samples were 20kg of -4mm material.
				[5 samples to N of EL(A)24374 - samples DZ1821-DZ1825. - not in NTGS database (perhaps because not processed)] **5 mag targets**
				within EL24349: 4/11 & 4/15 drilled, 2/3, 2/4 & 4/14 only loamed, 1 chr. from 2/4 at 583550E 8202300N (other co-ords in report).
	BHP / Ashton	CR1994-0248		Partial relinquishment. 4 samples (not processsed); no magnetic anomalies in area.
	BHP / Ashton	CR1995-0181		Gravel samples not processed. **Indicator grains from drillholes (pyrope & picroilmenites) not considered significant (?contam.**
				Includes probes for previous samples: non-kimberlitic.
	BHP / Ashton	CR1995-0365		Partial Relinquishment. Gravel samples still not processed...
	BHP / Ashton	CR1996-0107		Mainly base metals. Ashton JV for diamonds: 14 samples from EL7944 - 2 chromites in one but outside Paspaley areas.Samples

				were 30kg of -2mm (1995).
	BHP / Ashton	CR1996-0442		Partial Relinquishment. **Sample 14245 had 1mD & is within EL24349** *(Not mentioned in IRMS).*
	BHP Minerals	CR1996-0906		Geotem over Glyde sheet: partial data release (covers "Pending Applicn.") E-W flight lines at 1km spacing
	BHP Minerals	CR1997-0047	Base metals	Covers base metals only
	BHP Minerals	CR1997-0289		Geotem over Glyde sheet: phase 2 of partial data release (covers "Pending Applicn.") E-W flight lines at 1km spacing
7302	Ashton Mining	CR1992-0389	BM / Diamonds	BHP JV for base metals. Ashton targeted poorly drained areas with previously inadequate sample coverage, & planned sample
				sites 10km apart. Air-photography & NTGS air-mags studied - no mag. targets.
	Ashton Mining	CR1993-0417		Aiiborne EM & mags for base metals (broad spaced). **Mag profiles show possible targets.** Diamond sampling mainly overlaps with
				EL24373 & only a little with EL24349: no results - *some sample sites missing from NTGS database.*
	Ashton Mining	CR1994-0425		BAU 4633 has 1D in EL24373 *(mis-reported as 1mD in NTGS database & not mentioned at all in IRMS).* No additional
				sampling. Samples only examined down to 0.425mm.
	Ashton Mining	CR1994-0643		Partial Relinquishment: only negative results for diamonds.
	Ashton Mining	CR1995-0501		BHP base metals report
	Ashton Mining	CR1995-0645		Partial Relinquishment: only one sample for diamonds (negative)
	Ashton Mining	CR1996-0723		Final Report. One chromite reported in EL24373 (not followed up?) [Sampling: 40kg samples sieved to -4mm leaving ~25-30kg
7300	Ashton Mining	CR1992-0398	Diamonds	Report not seen: IRMS database reports 2 phases of sampling with chromite in 8 out of 16 second phase samples
	Ashton Mining	CR1993-0482		Non-kimberlitic (?) chromite in EL 7300 (mainly to N of EL24374). Other positive results all outside Paspaley areas.
	Ashton Mining	CR1993-0606		Partial Relinquishment - All samples negative
	Ashton Mining	CR1994-0434		No more positive drainage samples. 4 bulk samples were positive for diamonds. 2D from bulk sample to N of Paspaley EL24374 &
				1 commercial sized D from bulk sample within EL24374 near western edge (40 chr 5 km upstream later considered non-kimberlitic).
				Not in NTGS database.
	Ashton Mining	CR1994-0594		No positive drainage results. 1D from bulk sample (previously reported).
	Ashton Mining	CR1995-0623		Relinquishment report. A further 2mD from same site as 2D to N of Paspaley EL24374. *Several mD & D not in NTGS database.*
	Ashton Mining	CR1996-0741		Final report. Single chromite in BAU4547 (not repeated) & 2mD in BAU14157, both within Paspaley EL 24374. Chromites in
				CR1993-0482 (to N of EL24374) now considered non-kimberlitic (but no source found?)
7266	Ashton Mining	CR1992-0388	Diamonds	5mD from drainage sampling, 4 magnetic anomalies from NTGS data. Samples 40kg then sieved -4mm to 25-30kg. No positive results
				within Paspaley areas. Non-kimberlitic (?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0482		Non-kimb. (?) chromite in ELs 7300 & 7827 + 2D (one 1.15 cts) from EL7301. No positive results from Paspaley areas.
	Ashton Mining	CR1994-0115		All negative
	Ashton Mining	CR1994-0434		No more pos drainage samples. 4 bulk samples were positive for diamonds. 2 D from bulk sample to N of Paspaley EL24374 &
				1 commercial sized D from bulk sample within EL24374 near western edge (40 chr 5 km upstream later considered non-kimberlitic).
				Not in NTGS database.
	Ashton Mining	CR1994-0594		No positive drainage results. 1 D from bulk (previously reported).
	Ashton Mining	CR1995-0442		1mD from Paspaley EL(A)24997
	Ashton Mining	CR1995-0623		Relinquishment Report. A further 2mD from same site as 2D to N of Paspaley EL24374. *Several mD & D not in NTGS database.*
	Ashton Mining	CR1996-0494		1mD, not relevant to Paspaley areas.
	Ashton Mining	CR1996-0630		Relinq. report - all samples negative
	Ashton Mining	CR1997-0492		No positive drainage results within Paspaley areas
7264	Ashton Mining	CR1992-0388	Diamonds	5mD from drainage sampling, 4 magnetic anomalies from NTGS data. Samples 40kg then sieved -4mm to 25-30kg. No positive results
				within Paspaley areas. Non-kimberlitic (?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. **Loams with chromite over Scrutton volcanics 5km E of Nathan River**
	BHP Minerals	CR1993-0633		Partial Relinquishment - base metals only
	Ashton Mining	CR1993-0634		Partial Relinquishment - no new pos results.
	Ashton Mining	CR1994-0607		Partial Relinquishment : 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*
	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map - chromite in EL7263 (to N of Paspaley areas)
	Ashton Mining	CR1995-0507		5mDs recovered but none in Paspaley areas.
	Ashton Mining	CR1995-0664		Partial Relinquishment. - no results of relevance to Paspaley areas
	Ashton Mining	CR1996-0596		Base metals and manganese only
	Ashton Mining	CR1996-0620		Map incomplete (no sample location for MYO0478 (BG) - 1D but found in other report. No positive results in Paspaley areas

Summary of previous exploration: EL24373

EL No	Company	CR No	Commodity	Comments
9925	Rio Tinto	CR2003-0505		No work, no report.
8834	MIM Exploration	CR1996-0103	Base metals	Orientation rock-chip geochemistry for HYC type deposits
7302	Ashton Mining	CR1992-0389	BM / Diamonds	BHP JV for base metals. Ashton targeted poorly drained areas with previously inadequate sample coverage, & planned sample
				sites 10km apart. Air-photography & NTGS air-mags studied - no mag. targets.
	Ashton Mining	CR1993-0417		Aiiborne EM & mags for base metals (broad spaced). Mag profiles show possible targets. Diamond sampling mainly overlaps with
				EL24373 & only a little with EL24349: no results - *some sample sites missing from NTGS database.*
	Ashton Mining	CR1994-0425		**BAU 4633 has 1D in EL24373** *(mis-reported as 1mD in NTGS database & not mentioned at all in IRMS).* No additional
				sampling. Samples only examined down to 0.425mm.
	Ashton Mining	CR1994-0643		Partial Relinquishment: only negative results for diamonds.
	Ashton Mining	CR1995-0501		BHP base metals report
	Ashton Mining	CR1995-0645		Partial Relinquishment: only one sample for diamonds (negative)
	Ashton Mining	CR1996-0723		Final Report. **One chromite reported in EL24373 (not followed up?)** [Sampling: 40kg samples sieved to -4mm leaving ~25-30kg]

Summary of previous exploration: EL24374

EL No	Company	CR No	Commodity	Comments
9374	Ashton Mining	CR1997-0234	Diamonds	No field work
8914	Ashton Mining	CR1996-0792	Diamonds	2 samples, both negative ..... no other work
7578	BHP Minerals	CR1993-0205	Base metals	Stream sed sampling for Base metals + airborne TEM & mags (E-W,.1km line spacing)
	BHP Minerals	CR1994-0139	Diamonds	Diamonds: magnetic survey followed up with ground magnetics/loam sampling. Drainage sampling to follow up previous(?)
				positives....Magnetic survey by Geoterrex, N-S, 300m line spacing, 1993, covers N part of ELA. Loams 2 sq. m.; drainage 20kg
				of -4mm. 5 samples to N of EL(A)24374 - *(samples DZ1821-DZ1825. NOT on NTGS database, probably because not processed).*
				5 mag targets within EL24349: 4/11 & 4/15 drilled, 2/3, 2/4 & 4/14 only loamed, 1 chromite from 2/4 at 583550E 8202300N (other
				co-ords in report).
	BHP Minerals	CR1994-0248		Partial relinquishment. 4 samples (not processsed); no magnetic anomalies in area.
	BHP Minerals	CR1995-0181		Gravel samples not processed. **Indicator grains from drillholes (pyrope & picroilmenites) not considered significant (?contam.)**
				Includes probes for previous samples: non-kimberlitic.
	BHP Minerals	CR1995-0365		Partial Relinquishment. Gravel samples still not processed...
	BHP Minerals	CR1995-0682	Base metals	No diamond work.
7300	Ashton Mining	CR1992-0398		Report not seen: IRMS database reports 2 phases of sampling with chromite in 8 out of 16 second phase samples
	Ashton Mining	CR1993-0482		Non-kimberlitic (?) chromite in EL 7300 (mainly to N of EL24374). Other positive results all outside Paspaley areas.
	Ashton Mining	CR1993-0606		Partial Relinquishment - All samples negative
	Ashton Mining	CR1994-0434		No more positive drainage samples. 4 bulk samples were positive for diamonds. **2D from bulk sample to N of Paspaley EL24374 &**
				1 commercial sized D from bulk sample within EL24374 near western edge (40 chr 5 km upstream later considered
				non-kimberlitic). *Not in NTGS database.*
	Ashton Mining	CR1994-0594		No positive drainage results. 1D from bulk sample (previously reported).
	Ashton Mining	CR1995-0623		Relinquishment report. **A further 2mD from same site as 2D to N of Paspaley EL24374**. *Several mD & D not in NTGS database* .
	Ashton Mining	CR1996-0741		Final report. **Single chromite in BAU4547 (not repeated) & 2mD in BAU14157, both within Paspaley EL 24374.** Chromites in
				CR1993-0482 (to N of EL24374) now considered non-kimberlitic (but no source found?)
4553	CRAE	CR1985-0210	Diamonds	Only 1 mD, far from any Paspaley areas.
4210	CRAE	CR1984-0136	Diamonds	**Sampling yielded 2 mD in separate samples (1 in EL24349 second just to N of EL), follow-up 2 picro-ilmenites in separate**
				samples. Airmags flown at 300m line spacing, 80m MTC.
	CRAE	CR1985-0159		Final Report. **Mag follow-up (quiet mags), 1 target related to sinkhole, second had extensive dolomitic o/c.**

Summary of previous exploration: EL24714

EL No	Company	CR No	Commodity	Comments
8097	Ashton Mining	CR1994-0766	Diamonds	1D *(mis-reported in NTGS IRMS as micro diamond)*. Far from EL24714.
		CR1995-0759	Diamonds	Air-mag survey: 150m line spacing N-S. No details provided of area covered!
		CR1996-0803	B/m & diamonds	1000T bulk sample (Neg) - 2 small dipoles assessed as not worth further work. **Mags & bulk samples do not cover EL(A)24714**.
		CR1996-0907	B/m & diamonds	Partial relinquishment: not relevant to EL(A)24714
		CR1997-0755	B/m & diamonds	Final: **no diamond exploration completed within EL(A)24714**

Summary of previous exploration: EL(A)24945 (INCOMPLETE - APPLICATION REJECTED)

EL No	Company	CR No	Commodity	Comments
9617	BHP Minerals	CR1996-0926	Base metals	Geotem survey: little overlap with Paspaley areas.
		CR1997-0782		
9181	Ashton Mining	CR1996-0612	Diamonds	15 drainage samples but very little overlap with Paspaley areas (1sample only?)
		CR1998-0323		2 samples with1mD - one outside Paspaley area, the other close to eastern edge.
9091	BHP Minerals	CR1996-0423	Base metals	
8917	Ashton Mining	CR1996-0338	Diamonds	4 drainage samples, all neg. **Limited cover of ELA 24945 by "Festing" mag survey - (N-S; 150m line spacing)**
8916	Ashton Mining	CR1996-0246	Diamonds	SE corner of ELA24945: 2 drainage samples draining out of EL24349, both neg.
7973	Ashton Mining	CR1994-0630	Diamonds	16 drainage samples: one with 1 chr one with 1 D
	Ashton Mining	CR1995-0335		1mD in follow up samples
	Ashton Mining	CR1996-0372		2 additional samples, both neg.No further diamond work.
	Ashton Mining	CR1997-0312	Base metals	Airborne EM
	Ashton Mining	CR1995-0436		Partl. Relinq.
	Ashton Mining	CR1996-0517		Partl. Relinq.
	Ashton Mining	CR1997-0436		Partl. Relinq.
	Ashton Mining	CR1996-0926		GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	Ashton Mining	CR1998-0337		Final Report
7961	Ashton Mining	CR1994-0629		1 mD
		CR1995-0336		9mD in one sample from prev. year
		CR1995-0435		All neg
		CR1996-0495		??
7736	MIM	CR1993-0491		Geophysics?
		CR1994-0579		
		CR1994-0759		
		CR1995-0505		
7266	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 mag anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No pos. res. within
				Paspaley areas. **Non-kimb. (?) chr in ELs 7266 & 7301**
	Ashton Mining	CR1993-0482		**Non-kimb. (?) chr in ELs 7300 & 7827** + 2 D (one 1.15 cts) from EL7301. No Pos. results from Paspaley areas.
	Ashton Mining	CR1994-0115		All negative
	Ashton Mining	CR1994-0434		No more pos drainage samples. 4 bulk samples were pos for diamonds. 2 D from bulk s. to N of Paspaley EL24374 &
				1 commercial sized D from bulk s. within EL near western edge (40 chr 5 km upstream). *Not in NTGS database.*
	Ashton Mining	CR1994-0594		No positive drainage results. 1 D from bulk (previously reported).
	Ashton Mining	CR1995-0442		1mD from Paspaley EL(A)24994
	Ashton Mining	CR1995-0623		Relinq. report. ***A further 2mD from same site as 2D to N of Paspaley EL24374.*** *Several mD & D not in NTGS database.*
	Ashton Mining	CR1996-0494		1mD, not relevant to Paspaley areas.
	Ashton Mining	CR1996-0630		Relinq. report - all samples negative
	Ashton Mining	CR1997-0492		No positive drainage results within Paspaley areas
7264	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 mag anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No pos. res. within
				Paspaley areas. **Non-kimb. (?) chr in ELs 7266 & 7301**

	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. **Loams with chromite over Scrutton volcanics 5km E of Nathan River.**
	BHP Minerals	CR1993-0633		Partial relinq. - base metals only
	Ashton Mining	CR1993-0634		Partl. relinq. - no new pos results.
	Ashton Mining	CR1994-0607		Partl. relinq. : 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*
	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map.
	Ashton Mining	CR1995-0507		5mDs recovered but no sample location map
	Ashton Mining	CR1995-0664		Partl. relinq. - no results of relevance to paspaley areas
	Ashton Mining	CR1996-0596		Base metals and manganese only
	Ashton Mining	CR1996-0620		Map incomplete (no sample location for MYO0478 (BG) - 1D but found in other report. All pos away from paspaley areas.
5768	SPL	CR1989-0169		
	SPL	CR1990-0415		SPL: neg. for diamonds
	SPL	CR1991-0236		
4083	CRAE	CR1984-0024		2 mD
	CRAE	CR1985-0054		KIM results awaited
	CRAE	CR1986-0049		1 mD only....
4081	CRAE	CR1984-0153		
	CRAE	CR1985-0087		

Summary of previous exploration: EL(A)24946

EL No	Company	CR No	Commodity	Comments
8009	Ashton Mining	CR1994-0628	Diamonds	39 samples collected
	Ashton Mining	CR1995-0334		9 additional samples: **1mD within Paspaley EL(A)24946 (not followed up)** & 1 chromite within EL(A)24997 (follow-up negative)
	Ashton Mining	CR1995-0434		Partial Relinquishment - no positive results
	Ashton Mining	CR1996-0370		5 additional samples: all negative. No further diamond work planned
	Ashton Mining	CR1996-0509		Partial Relinquishment - 1mD (reported previously)
	Ashton Mining	CR1996-0926	Base metals	GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	Ashton Mining	CR1997-0406		Final
7264	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 magnetic anomalies from NTGS data. Samples 40kg then sieved -4mm to 25-30kg. No positive results
				within Paspaley areas. Non-kimberlitic (?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. **Loams with chromite over Scrutton volcanics 5km E of Nathan River.**
	Ashton Mining	CR1993-0633		Partial Relinquishment - base metals only
	Ashton Mining	CR1993-0634		Partial Relinquishment - no new pos results.
	Ashton Mining	CR1994-0607		Partial Relinquishment : 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*
	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map - chromite in EL7263 (to N of Paspaley areas)
	Ashton Mining	CR1995-0507		5mDs recovered but none in Paspaley areas.
	Ashton Mining	CR1995-0664		Partial Relinquishment. - no results of relevance to Paspaley areas
	Ashton Mining	CR1996-0596		Base metals and manganese only
	Ashton Mining	CR1996-0620		Map incomplete (no sample location for MYO0478 (BG) - 1D but found in other report. No positive results in Paspaley areas.
3499	Negri River Exp.	CR1983-0198	Diamonds	HM sampling for diamonds (only tribs.!): ~20Kg of -2.4mm from each site - parts not sampled as poorly drained.
		CR1984-0031		60 out of 71 samples examined by DLS in Sydney (Neg) to +16, +25, +44, +60 mesh sizes. Covers part of EL(A)24997. All neg.

Summary of previous exploration: EL(A)24996

EL No	Company	CR No	Commodity	Comments
9207	Ashton Mining	CR1996-0930	Diamonds	Sampling results awaited (3 negative)
		CR1998-0053		**Chromite in several samples in northern part of EL(A)** - small numbers (up to 9) - need more to assess population chemistries.
		CR1998-0206		Partial relinquishment: 6 samples, all negative.
		CR1998-0781		No field work. Samples processed & 2 contained "possibly kimberlitic"chromite (4 in one & 2 in the other), both within EL(A)
		CR1999-0085		Partial relinquishment: 5 out of 11 samples contained chromite - one within the EL(A) & the rest possibly draining from source in the
				northern part of EL(A) - Possibly from similar source to chromites in EL8380 some 12 km to SE.
		CR1999-0520		Final: **chromite source interpreted as non-kimberlitic** (mafic volcanic or sedimentary - from distribution & low concentrations)
8380	Ashton Mining	CR1995-0355	Diamonds	45 drainage samples & 1 loam: 1D in one & 4 chromite in another so far (not all processed) Positives are well outside EL(A)
		CR1996-0367		4 positive (1 with D, another with 13 chr) Diamond is to W of EL(A) & chromites are to E.
		CR1996-0482		Partial relinquishment - includes most of overlap with application area.
	BHP / Ashton	CR1996-0926	Base metals	GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	BHP / Ashton	CR1997-0284	Base metals	BHP final report
	Ashton Mining	CR1997-0285		One 50T bulk sample repeated previous D. 2 Mag targets drilled (inconclusively). None of direct relevance to Paspaley areas.
		CR1997-0435		Partial relinquishment: all negative. No magnetic targets within NTGS data
		CR1998-0396		Positive results & follow up with ground mags and EM34 carried out. Outside Paspaley areas: ?non-kimberlitic source?
		CR1998-0501		Partial relinquishment - all results negative.
		CR1999-0200		Over 100 chromites in one sample to west of EL(A). Thin mafic dykes - possible source? Airborne magnetic survey, 50m line spacing.
		CR1999-0290		Partial Relinquishment: 1Chromite + 1 mD from separate drainage samples. 1D from a bulk sample (reported previously). All outside
				Paspaley areas.
		CR1999-0521		Setion 29A Application for Renewal: Summary 1994-1999.
		CR2000-0180		Elusive source: conglomeratic unit of ? Cretaceous source sampled (50T) as possible source, but not processed yet....
	Rio Tinto	CR2001-0172		Rio says chromite chemistries are "probably" non-kimberlitic anyway
7947	BHP Minerals	CR1994-0139	BM / Diamonds	Diamonds: magnetic survey followed up with ground magnetics/loam sampling. Drainage sampling to follow up previous(?)
				positives....Magnetic survey by Geoterrex, N-S, 300m line spacing, 1993, covers N part of ELA. Loams 2 sq. m.; drainage 20kg
				of -4mm. 5 samples to N of EL(A)24374 - *(samples DZ1821-DZ1825. NOT on NTGS database, probably because not processed).*
				5 mag targets within EL24349: 4/11 & 4/15 drilled, 2/3, 2/4 & 4/14 only loamed, 1 chromite from 2/4 at 583550E 8202300N (other
				co-ords in report).
	BHP Minerals	CR1995-0181		Gravel samples not processed. Indicator grains from drillholes (pyrope & picroilmenites) not considered significant (?contam.)
				Includes probes for previous samples: non-kimberlitic.
	BHP Minerals	CR1995-0365		Partial relinquishment. Gravel samples still not processed...
		CR1995-0756		1 magnetic target drilled after limited ground mags.(possibly off target?) - outside ELA. Magnetic anomaly not explained.
7730	Biddlecombe	CR1993-0487	Cu / Co	Cobalt in assoc with Cu -more consistent distn.& economic down to 0.1%. V.lap with ELA
		CR1994-0760		Mt Carrington Mines JV + Moonstone: 10 HM samples - none in ELA area, (1Chr - poss K: lab contamination reported)
		CR1995-0732		BHP JV
		CR1995-0737		Partial Relinquishment. - Diamond exploration negative.
		CR1995-0875		Moonstone report: Laboratory contamination of samples.
		CR1996-0601		BHP: regional Geotem: no conductors
		CR1996-0789		Partial Relinquishment.
		CR1997-0561		Final report
4553	CRAE	CR1985-0210		1mD only - far from Paspaley areas.
4181	Carpentaria	CR1984-0245	Base metals	BHP JV - no encouragement

Summary of previous exploration: EL(A)24997

EL No	Company	CR No	Commodity	Comments
8975	BHP Minerals	CR1996-0242		First & final report. No diamond exploration.
8009	Ashton Mining	CR1994-0628	Diamonds	39 samples collected
	Ashton Mining	CR1995-0334		9 additional samples: 1mD within Paspaley EL(A)24946 (not followed up) & **1 chromite within EL(A)24997 (follow-up negative)**
	Ashton Mining	CR1995-0434		Partial Relinquishment - no positive results
	Ashton Mining	CR1996-0370		5 additional samples: all negative. No further diamond work planned
	Ashton Mining	CR1996-0509		Partial Relinquishment - 1mD (reported previously)
	Ashton Mining	CR1996-0926	Base metals	GEOTEM survey: E-W a/b EM @ 1 km line spacing - no conductors within EL
	Ashton Mining	CR1997-0406		Final
7301	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 mag anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No pos. res. within
				Paspaley areas. Non-kimberlitic(?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0482		Non-kimberlitic(?) chromite in ELs 7300 & 7827 + 2 D (one 1.15 cts) from EL7301. No Pos. results from Paspaley areas.
	Ashton Mining	CR1993-0606		Partial Relinquishment. - All samples negative
	Ashton Mining	CR1994-0434		No more positive drainage samples. 4 bulk samples were positive for diamonds. 2 D from bulk s. to N of Paspaley EL24374 &
				1 commercial sized D from bulk sample within EL24374 near western edge (40 chr 5 km upstream). *Not in NTGS database.*
	Ashton Mining	CR1994-0594		No positive drainage results. 1 D from bulk sample (previously reported).
	Ashton Mining	CR1995-0442		1mD from Paspaley EL(A)24997
	Ashton Mining	CR1995-0623		Relinquishment report. A further 2mD from same site as 2D to N of Paspaley EL24374. *Several mD & D not in NTGS database.*
		CR1996-0624		1mD (drainage) & 1 mD (bulk) reported previoiusly - no sample location map
7266	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 mag anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No positive results within
				Paspaley areas. Non-kimberlitic(?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0482		Non-kimberlitic(?) chromite in ELs 7300 & 7827 + 2 D (one 1.15 cts) from EL7301. No positive results from Paspaley areas.
	Ashton Mining	CR1994-0115		All negative
	Ashton Mining	CR1994-0434		No more pos drainage samples. 4 bulk samples were pos for diamonds. 2 D from bulk sample to N of Paspaley EL24374 &
				1 commercial sized D from bulk sample within EL24374 near western edge (40 chr 5 km upstream later considered
				non-kimberlitic). *Not in NTGS database.*
	Ashton Mining	CR1994-0594		No positive drainage results. 1 D from bulk (previously reported).
	Ashton Mining	CR1995-0442		**1mD from Paspaley EL(A)24997**
	Ashton Mining	CR1995-0623		Relinquishment report. A further 2mD from same site as 2D to N of Paspaley EL24374. *Several mD & D not in NTGS database.*
	Ashton Mining	CR1996-0494		1mD, not relevant to Paspaley areas.
	Ashton Mining	CR1996-0630		Relinquishment report - all samples negative
	Ashton Mining	CR1997-0492		No positive drainage results within Paspaley areas.
7264	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 mag anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No positive results within
				Paspaley areas. Non-kimberlitic(?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. **Loams with chromite over Scrutton volcanics, 5km E of Nathan River.**
	BHP Minerals	CR1993-0633		Partial relinquishment - base metals only
	Ashton Mining	CR1993-0634		Partlial relinquishment - no new positive results.
	Ashton Mining	CR1994-0607		Partlial relinquishment : 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*
	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map.
	Ashton Mining	CR1995-0507		5mDs recovered but no sample location map
	Ashton Mining	CR1995-0664		Partial relinquishment - no results of relevance to Paspaley areas
	Ashton Mining	CR1996-0596		Base metals and manganese only
	Ashton Mining	CR1996-0620		Map incomplete (no sample location for MYO0478 (BG) - 1D but found in other report. All positives well away from Paspaley areas.
5785	Homestake	CR1989-0793		Base metals - no field work
4551	CRAE	CR1985-0182		1mD from 2 drainage & 1 loam - none in Paspaley areas
4547	CRAE	CR1985-0184		1mD within Paspaley application area, two others to west.

Summary of previous exploration: EL(A)25070

EL No	Company	CR No	Commodity	Comments
8692	North Mining	CR1995-0731		Final report: no exploration.
8541	BHP Minerals	CR1995-0343	Base metals	Airborne EM & 1 hole to 184m but no drill log. Reported doloclaystone beneath **?Cretaceous (to 55m)** with Cainozoic
				Quarternary sand cover.
		CR1995-0581	Base metals	Cover thickness means little point in sampling & must rely on geophysical exploration. Previous geophysics byMIM.
8048	North Mining	CR1994-0817	Base metals	Drilling. **High groundwater salinity reducing effectiveness of EM.**
7824	Ashton Mining	CR1993-0632	BM & diamonds	No positive diamond results from this EL (no diamond samples in EL7824)
	Ashton Mining	CR1994-0608		9 samples from 7824 - all negative.
		CR1995-0693		Final report - **9 negative samples (8 relevant to northern part of EL(A)25070**)
7262	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 mag anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No positive results within
				Paspaley areas. Non-kimberlitic(?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. Loams with chromite over Scrutton volcanics 5km E of Nathan River.
	BHP Minerals	CR1993-0633		Partial Relinquishment - base metals only
	Ashton Mining	CR1993-0634		Partial Relinquishment - no new positive results.
	Ashton Mining	CR1994-0607		Partial Relinquishment: 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*
	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map.
	Ashton Mining	CR1995-0507		5mDs recovered but no sample location map
	Ashton Mining	CR1995-0664		Partial Relinquishment - no results of relevance to Paspaley areas
	Ashton Mining	CR1996-0596		Base metals and manganese only
		CR1996-0684		Final report: all samples negative
7261	Ashton Mining	CR1992-0388		5mD from drainage sampling, 4 magnetic anomalies from NTGS data. Samples 40kg then -4mm to 25-30kg. No positive results
				from within Paspaley areas. Non-kimberlitic(?) chromite in ELs 7266 & 7301
	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. Loams with chromite over Scrutton volcanics 5km E of Nathan River.
	BHP Minerals	CR1993-0633		Partial Relinquishment - base metals only
	Ashton Mining	CR1993-0634		Partial Relinquishment - no new positive results.
	Ashton Mining	CR1994-0607		Partial Relinquishment: 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*
	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map.
	Ashton Mining	CR1995-0507		5mDs recovered but no sample location map
	Ashton Mining	CR1995-0664		Partial Relinquishment - no results of relevance to Paspaley areas
		CR1996-0489		Sampling negative. **Drill target identified from NTGS magnetics just west of Paspaley area -** base metal target.
	Ashton Mining	CR1996-0596		Base metals and manganese only
		CR1996-0653		Partial Relinquishment - negative results
		CR1998-0219		Ashton to follow up mag (base metal) target.
		CR1998-0453		Detailed air-mags over base metals target.
		CR1999-0122		Drilled to 34m: 20m silty clay then 10m iron rich material, then **"non-kimberlitic" altered mafic material** (heavy mineral
				samples collected but no petrology reported.
7260	Ashton Mining	CR1992-0396		Air-mags due to w'd dolerite (Seigal Volcanics nearby). Non kimb. chr. from dol. Targets far to west of Paspeley area.
	Ashton Mining	CR1993-0632		Positive results all to N & NW of Paspaley areas. Loams with chromite over Scrutton volcanics 5km E of Nathan River.
	BHP Minerals	CR1993-0633		Partial Relinquishment - base metals only
	Ashton Mining	CR1993-0634		Partial Relinquishment - no new positive results.
	Ashton Mining	CR1994-0607		Partial Relinquishment: 1D (0.05cts) but not in Paspaley areas *(mis-reported in NTGS IRMS as micro diamond).*

	Ashton Mining	CR1994-0608		Some positive results for ELs 7263, 7264 & 7341 but no sample location map.
	Ashton Mining	CR1995-0507		5mDs recovered but no sample location map
	Ashton Mining	CR1995-0664		Partial Relinquishment - no results of relevance to Paspaley areas
		CR1996-0622		Final report : never any overlap with Papspaley area??
6808	MIM	CR1992-0092	Base metals	Very little overlap with Paspaley area
	MIM / SPL	CR1992-0643	BM & diamonds	SPL follow-up on 3 magnetic targets: noisy ground mags from 2, deep source for 3rd. - also sampling (results awaited)
	MIM	CR1993-0001		Base metals: report not seen.(Special report on lead study)
		CR1993-0049		Partial Relinquishment - base metals only
		CR1993-0758		Partial Relinquishment - base metals only
		CR1994-0001		SPL withdrew from farm-in agreement in April 1993: no report on sample results awaited from 1992
		CR1994-0868		Base metals - annual report.
		CR1995-0084		Partial Relinquishment - base metals only.
		CR1995-0844		Annual report: base metals
		CR1996-0208		Partial Relinquishment - base metals only
		CR1996-0894		Final Report - base metals
5785	Homestake	CR1989-0793		No field work
4678	BHP Minerals	CR1986-0009		Air-mag survey (300m line spacing, 80m MTC) - 2 bulls-eye anomalies identified as possible kimberlite targets.
		CR1987-0028		**Ground-mags confirmed targets 0.8/1.0 hectares at 45/40m depth but not drilled!! To south of EL(A)25070**
4362	BHP Minerals	CR1984-0240		Airmags & EM37 for base metals
		CR1986-0003		Final Report: base metals only.

Summary of previous exploration: EL(A)25130

EL No	Company	CR No	Commodity	Comments
9503	BHP Minerals	CR1996-0906	Base metals	Geotem survey covering all of application area: 1996, E-W flight lines, 1000m spacing.
		CR1997-0109		BHP report: airborne EM detected no significant conductors (base metals exploration) - Report not sighted.
		CR19970289		Geotem data release
9120	BHP Minerals	CR1996-0906	Base metals	Geotem survey a/a, covering all of application area: 1996, E-W flight lines, 1000m spacing.
		CR1997-0109		BHP report: airborne EM detected no significant conductors (base metals exploration) - Report not sighted.
		CR19970289		Geotem data release
8629	BHP Minerals	CR1995-0286	Base metals	No work for diamonds (Not sighted)
		CR1996-0906		Geotem survey covering all of application area: 1996, E-W flight lines, 1000m spacing.
		CR1996-0918		BHP report: airborne EM detected no significant conductors (base metals exploration)
8133	Ashton Mining	CR1994-0808	Diamonds	27 drainage samples collected - results awaited (next report: all negative)
		CR1995-0766		6 drainage samples & 1 loam: 4 unprocessed, 3 negative. Review of airborne magnetics (from data interchange): no anomalies.
		CR1996-0361		Partial Relinquishment: 3 positives: 2 mD in EL(A) & 1 chromite outside *(None in NTGS DIM database: 20 samples not plotted)*
		CR1996-0804		Partial Relinquishment: 3 samples (negative). BHP flew Geotem for base metals (E-W lines, 1km apart)
		CR1996-0906		Geotem data release
		CR1996-0923		Partial Relinquishment: 1 additional mD from within EL(A)
		CR1997-0289		Geotem data release
		CR1997-0756		Final Report1993-97: no additonal diamond work.
7217	MIM Expln.	CR1992-0101	Base metals	Base metals exploration. (Not sighted)
		CR1993-0139		Partial Relinquishment - base metals only.
		CR1993-0140		Annual Report: 1991 airborne Questem & magnetic survey at 500m line spacing (E-W) - base metals only
		CR1994-0135		Base metals only
		CR1994-0189		Partial relinquishment: base metals only
	MIM / Ashton	CR1995-0177	BM / Diamonds	Ashton JV: 25 drainage samples, none from within application area - results pending
		CR1995-0278		Partial Relinquishment:negative for diamonds (6 samples)
		CR1995-0279		Partial Relinquishment: base metals
		CR1996-0142		Ashton reported 1mD from BAU8020 - well outside application area (to SE)
		CR1996-0336		Partial Relinquishment: 2 drainage samples, results negative. (Not sighted)
		CR1997-0144	Diamonds	Annual report: 12 drainage samples for 1mD outside EL(A), rest negative. *(Positive result & negative samples not on NTGS DIM database)*
		CR1997-0261		Partial Relinquishment - all negative for diamonds.
		CR1998-0217		No fieldwork
		CR1999-0071		Annual Report: 5 drainage samples, 1 (low priority) chromite from east of the Glyde River & outside the application area.
		CR2000-0050		Annual report: 8 airborne EM anomalies, no relevance to application area.
	Rio	CR2001-0170		Final Report 1991-2001. 50T Bulk sample to SE of application area returned 75 diamonds & 144 chromite from Wilkinson Creek
4692	CRAE	CR1985-0288	Diamonds	Drainage sampling led to discovery of Emu pipes. Only 1mD from within Paspaley application area. Samples were -2mm. Air-mags 300m
				spacing. *Sample 1081977 had 52 chromites 3km downstream from Emu pipes; misreported in NTGS DIM database as 52 mD.*
				Sample 1081976 is negative but mis-reported in NTGS DIM data base as 52 chromites in tributary to Matheson Creek!
		CR1986-0299		Mainly on Emu pipes; some followup in application area but all negative.
		CR1987-0296		Final Report relating to MCNs - no relevance to application areas.
		CR1987-0297		Final report, EL4692
		CR1994-0699		Special SPL report on petrography, chemistry and heavy minerals of the Emu pipes - includes indicator mineral probe data
4327	CRAE	CR1984-0192	Diamonds	Air-mags at 300m line spacing. Drainage sampling: 1md from within Paspaley application area.
		CR1985-0255		Follow-up of positive results to S/SE of Paspaley application area.

		CR1986-0255		Follow-up of positive results to S/SE of Paspaley application area.
		CR1987-0212		Final Report: no additional exploration within Paspaley application area

APPENDIX 2

Legend for DIM


Chrome diopside


Picro-ilmenite


Chromite


Pyrope


Micro-diamond

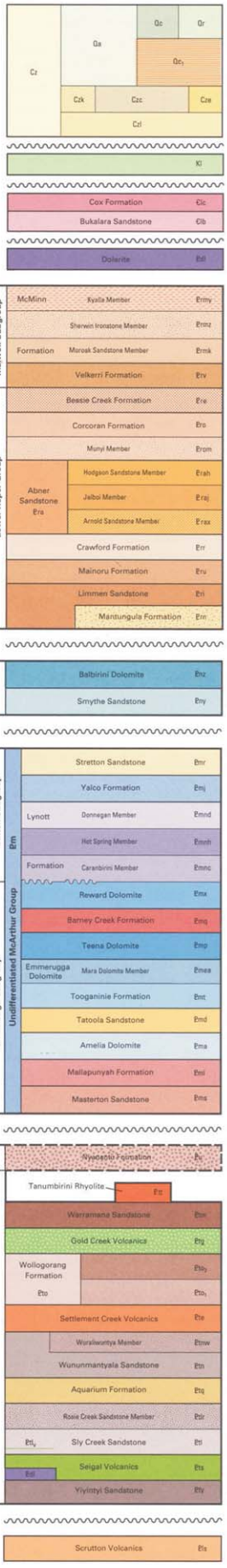

Macro-diamond


DIM sample site


Kimberlite

APPENDIX 3

Mount Young Legend



Qr *Sand, shelly sand: beach ridges*

Qc *Sand, silt, clay: active coastal alluvium*

Qc_1 *Shelly silt and clay: incised vegetated coastal alluvium*

Qa *Gravel, sand, silt: alluvium*

Cz *Undifferentiated alluvial, colluvial and eluvial deposits: unconsolidated gravel, sand, silt, clay, ferruginous cemented detritus, minor calcrete, silcrete and ferricrete*

Cze *Massive oolitic fossiliferous limestone: Beatrice Island limestone*

Czc *Sand deposits with distinct linear elements*

Czk *Calcrete*

Czl *Ferricrete*

Kl *Lithic sandstone, quartzarenite, muddy sandstone, conglomerate, sandy mudstone, commonly ferruginised and silicified; mudstone contains bivalve and brachiopod shell impressions, ammonite and belemnite casts; sandstone commonly contains plant debris casts and leaf imprints; rare airfall tuff*

Clc *Fine-grained, usually micaceous sandstone, siltstone and shale; laminated siltstone, and red and green shale*

Clb *Fine- to very coarse-grained friable sandstone; thin to-very thick-bedded, low-angle cross-stratification; trace fossils*

Edl *Dolerite sills*

Ermy *Fine-grained, thin-bedded to flaggy, in places ferruginous, micaceous sandstone with mudstone interbeds; minor sedimentary ironstone beds*

Ermz *Ferruginous sandstone, sandy ironstone and hematitic shale interbedded with micaceous sandstone and mudstone, and beds of silicified and ferruginous ooids*

Ermk *Mainly fine-grained sandstone, in places ferruginous; thin-bedded to flaggy with some interbedded coarse-grained sandstone and minor conglomerate*

Erv *Flaggy, fine-grained sandstone and siltstone, commonly micaceous*

Ere *Quartzarenite, ferruginous in places, medium grained with some thin quartz granule beds; medium-bedded; common trough cross-beds and lesser tabular and herring bone cross-beds; ripples, desiccation cracks and mud clasts in places; karstically weathered, strongly jointed*

Ero *Fine grained sandstone, medium- to coarse-grained ferruginous sandstone, ferruginous and in places micaceous mudstone, silicified and partly ferruginous oolitic beds; mudstone intraclasts, syneresis cracks, trough and hummocky cross-beds and symmetrical ripples*

Erom *Fine- to coarse-grained sandstone and mudstone; Basal and near basal thin granule conglomerate beds*

Era *Undifferentiated Abner Sandstone, Symbols indicate members present where unit cannot be divided at map scale.*

Erah *Quartzarenite, medium-grained, well sorted, rare thin quartz granule beds; medium- to very thick-bedded, planar and trough cross-bedded, karstically weathered, strongly jointed*

Eraj *Quartzarenite and sublitharenite, very fine- to medium-grained with thinly interbedded, commonly micaceous siltstone and mudstone; common mudstone intraclasts and cross-beds*

Erax *Quartzarenite, medium-grained, well sorted, occasional quartz pebble chains; medium- to very thick-bedded, trough and planar cross-bedded, karstically weathered, strongly jointed*

Err *Fine- to medium-grained glauconitic and micaceous sandstone; siltstone and mudstone, commonly ferruginous and in places micaceous; thin- to medium-bedded, planar and trough cross-beds and hummocky cross-stratification, mudstone/siltstone intraclasts, wave ripples, toolmarks and convolute beds*

Eru *Interbedded red-brown to purple mudstone and very fine- to fine-grained sandstone both commonly micaceous and glauconitic, minor dololutite and dolomitic mudstone; ubiquitously laminated, low angle and hummocky cross-beds, flaser-linsen bedded, soft sediment deformation features*

Eri *Predominantly fine- to medium-grained, thin- to medium-bedded quartzarenite with thin interbeds of micaceous mudstone; minor poorly sorted, coarse-grained pebbly (quartz) sandstone; basal sandstone conglomerate in places; trough and hummocky cross-beds, abundant bedding parallel mudclasts, current ripples, tool marks and load casts*

Ern *Red-brown micaceous and rarely glauconitic mudstone and fine-grained sandstone; thin-bedded laminated and cross-laminated, convolute bedding, load casts and toolmarks; occasional basal conglomerate/breccia*

Enz *Dololutite, stromatolitic and cross-bedded; dolomitic, lithic and feldspathic sandstone; dolarenite; dolomitic mudstone and muddy dololutite frequently containing evaporite pseudomorphs; conical, large columnar, stratiform and domal stromatolites; diagnostic silicified ooid beds; common pink ?tuffaceous mudstone*

Eny *Massive, coarse polymict conglomerate, pebbly lithic sandstone, dolomitic sandstone and dolarenite; typically poorly sorted and trough cross-bedded with frequent ripples*

Em *Undifferentiated McArthur Group*

Emr *Very fine- to medium-grained, thin- to medium-bedded quartzarenite, in places micaceous or glauconitic; distinctive wavy bedding, small ripples and toolmarks, mud clast casts, desiccation cracks, convolute bedding, and hummocky cross-stratification*

Emj *Thinly interbedded chertified stromatolitic dolostone, dololutite, dolarenite and minor sandstone with abundant chert nodules and laminae and intraclast chert breccia; common diagnostic small domal stromatolites, desiccation cracks, tepee structures, gypsum pseudomorphs; minor botryoidal quartz nodules (enterolithic chert)*

Emnd *Dolomitic mudstone, fine- to coarse-grained dolomitic sandstone and lesser sandy dolarenite; thin-bedded, cross-bedded, common ripples, polygonal shrinkage cracks small botryoidal quartz nodules (cauliflower and enterolithic chert)*

Emnh *Thin-bedded dolomitic mudstone, dololutite and muddy dololutite with interbeds of fine- to coarse-grained sandstone, dolarenite, sandy dolarenite and dolomitic sandstone, and chertified stromatolitic dolostone, minor silicified pink ?tuffaceous mudstone; mudstone and dololutite commonly contain chert pods and pseudomorphs after sulphate evaporites and halite; sandstones are rippled and cross-bedded; stromatolites are mainly stratiform conical and domal; common desiccation cracks, tepee structures, and some botryoidal quartz nodules (enterolithic chert)*

Emnc *Thin-bedded mudstone and dolomitic mudstone, partly carbonaceous and pyritic; dololutite and ?tuffaceous mudstone and minor fine-grained dolarenite; common intraformational and slump breccia;*

Emx *Dololutite, algal laminated dololutite, muddy dololutite and dolarenite with lesser mudstone, and pelletal dolarenite; laminated to massive, and brecciated; small silica spheroids*

Emq *Siltstone and mudstone, thin-bedded to laminated, variously dolomitic, carbonaceous and pyritic; dololutite, pink and green ?tuffaceous mudstone, rare breccia and sandstone*

Emp *Light grey recrystallised dolostone. Dololutite and crystalline dolostone, light grey, massive to thin-bedded with radiating needle-like gypsum crystal pseudomorphs normal to bedding; minor dark grey mudstone; rare dolarenite; common thin interbeds of pink silicified and green ?tuffaceous mudstone. Does not outcrop*

Emea *Dololutite, stromatolitic dololutite, dolomitic mudstone, dolarenite and dolomitic breccia; domal and conical stromatolites, common halite casts and saccharoidal chert after evaporites*

Emt *Dololutite, stromatolitic dololutite (stratiform, domal, columnar and conical forms), red-brown dolomitic mudstone, ripple marked and cross-bedded dolarenite, sandy dolarenite and sandstone; common desiccation cracks and pseudomorphs after gypsum and halite; breccia beds and ooids in dolarenites*

Emd *Dominantly white flaggy fine-grained sandstone and lesser mudstone, in places dolomitic; common tool marks, syneresis cracks, runzel marks, low angle cross-beds and some mud clasts; lesser dolostone, in places silicified and stromatolitic with interbedded medium- to coarse-grained, medium-bedded dolomitic sandstone, typically vuggy, cross-bedded and ripple marked*

Ema *Stromatolitic dololutite (stratiform, domal, conical and columnar forms) and muddy dololutite with interbeds of dolarenite, mudstone and rare fine-grained sandstone; ooidal, brecciated and conglomeratic intervals common; often chertified; localised development of sidenitic 'marble' after sulphate evaporite*

Emi *Interbedded red to purple dolomitic mudstone and variably dolomitic cross-bedded sandstone; stromatolitic dolostone, flat-pebble breccia and rare carbonaceous shale and pink tuffite; common botryoidal quartz nodules (cauliflower chert), ripples, slumping, desiccation cracks, and gypsum and halite casts and moulds*

Ems *Quartzarenite, white to pink, locally red-purple, fine- to medium-grained, well-sorted, thin- to medium-bedded, cross-bedded, extensively rippled with common mud clast impressions; minor intervals of very fine-grained flaggy sandstone and mudstone, distinctly ferruginous mottled sandstone with halite and gypsum casts and pseudomorphs occurs mainly in uppermost beds; common basal sandstone conglomerate*

Ey *Coarse-grained pebbly sandstone and cobble-boulder conglomerate; immature, poorly sorted, lithic with abundant angular to rounded pink spherulitic rhyolite clasts; minor red aphanitic rhyolite lava, flow banded*

Ety *Porphyritic rhyolite lava with phenocrysts of quartz and feldspar set in a spherulitic groundmass. Does not outcrop*

Etm *Lower red hematitic medium- to thick-bedded litharenite, separated from upper white thin- to medium-bedded sublitharenite and minor litharenite by a thin ferruginous interval, or rarely by pisolitic and massive ironstone; abundant trough cross-beds, mudstone-dolostone intraclasts, ripple marks, discoidal gypsum pseudomorphs, liesegang banding; pseudo-karstic weathering pattern*

Etg *Amygdaloidal basalt lava; dolerite dykes and sills; minor intercalated medium-grained sandstone; hyaloclastic breccia (pépérite) with basalt blocks in a sandy matrix*

Etto *Undivided Wollogorang Formation (cross-section only)*

$Etto_2$ *Interbedded fine-grained flaggy sandstone and red-brown mudstone, micaceous and dolomitic; abundant soft sediment deformation features, flaser bedding, evaporite casts and mud clasts. White, fine- to coarse-grained, thin- to medium-bedded, lithic and feldspathic sandstone; trough cross-beds, ripple marks and mud clasts; rare basal polymict conglomerate*

$Etto_1$ *Mainly dololutite, dark grey-weathered, thin-bedded with characteristic ovoid nodules, sometimes pyritic or stromatolitic; flat pebble breccia; mudstone, partly tuffaceous, sometimes carbonaceous and pyritic, rare evaporite mineral casts and sulphides; rare coarse-grained dolomitic sandstone; rare red aphanitic, flow banded or vesicular, rhyolite lava; localised ferruginised felsic pyroclastic flow, fall and surge deposits*

Ets *Basaltic-doleritic lavas, reddish-brown to dark grey spheroidally-weathering, massive to amygdaloidal, generally potassium metasomatised; rhyolite lava and autobreccia, red, flow banded and aphanitic*

Etnw *Fine-grained and rarely medium-grained sandstone and mudstone; mottled brown to fawn, very thin- to medium-bedded, typically flaggy; variably glauconitic, feldspathic, lithic and micaceous; soft sediment deformation features, ripple and tool marks, runzel marks, flute casts*

Etn *Quartzarenite and sublitharenite, red-brown to purple, hematitic, mainly medium-grained, moderately- to well-sorted and thin- to medium-bedded with bedding laminations, planar and trough cross-beds, abundant ripples and mud clasts, syneresis cracks; thin, red-brown mudstone interbeds*

Etq *Upper part: dolostone, red-purple and grey, sometimes stromatolitic, in places recrystallised, ooidal or chertified; thin-bedded dololutite, muddy dololutite and fine- to medium-grained dolarenite, subordinate flat pebble breccia and coarse-grained dolomitic sandstone; thin- to medium-bedded, in places wavy and cross-bedded; mudstone. Lower part: interbedded red and green mudstone and fine-grained sandstone; variably dolomitic, ripples, planar cross-beds, hummocky cross-stratification, flaser bedding, soft sediment deformation features, tool and runzel marks; sandstone contains shale clasts, minor glauconite and is micaceous in places, rare halite casts; rare red aphanitic rhyolite lava*

Etr *Sandstone, very fine- to very coarse-grained and rarely conglomeratic; generally moderately- to poorly-sorted, sometimes bimodally-sorted, in places feldspathic, ferruginous, micaceous or glauconitic; mud clast impressions, ripples, planar and trough cross-beds, rare syneresis cracks, botryoidal quartz nodules (cauliflower chert), gypsum and halite pseudomorphs; mudstone, red, ferruginous and micaceous, commonly laminated*

Etl *Quartzarenite, white to pale pink, mainly fine- to medium-grained and thin- to very thick-bedded with rare quartz pebble beds, medium- to large-scale trough cross-beds and channels, channels lag deposits, ripples, mud clasts, rare desiccation cracks and herringbone cross-stratification; minor thin-bedded mudstone, commonly micaceous; minor basalt lavas. Etl_2: Massive and foliated basaltic lavas, partly amygdaloidal; pillow structures*

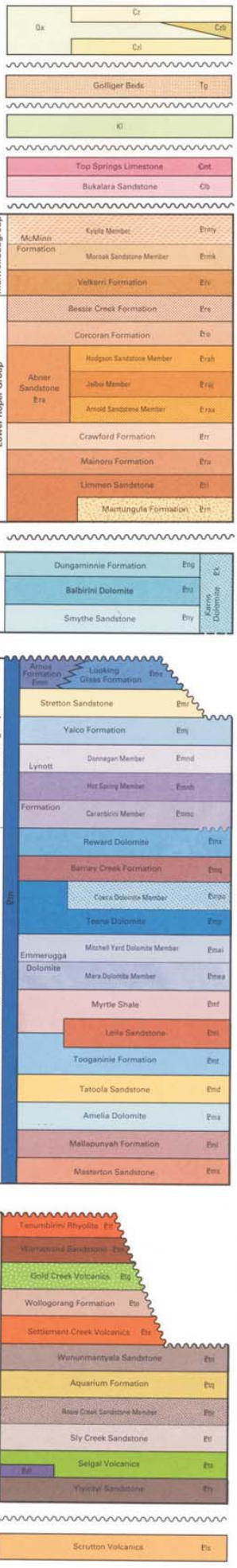
Ets *Basalt lava, amygdaloidal and massive, in part hyaloclastic. Edl: Dolerite and gabbro sills and dykes*

Ety *Quartzarenite and lesser sublitharenite and litharenite; fine- to coarse-grained, moderately- to poorly-sorted with scattered quartz pebbles and minor conglomerate; thin- to very thick-bedded with medium- to very large-scale trough cross-beds and large channels, rippled in place*

Ets *Rhyolitic to rhyodacitic ignimbrite and accretionary lapilli-bearing airfall tuff; dacitic pyroclastics, lavas, sills and dykes; basalt lavas; rare dolerite intrusions; intercalated immature, feldspathic, fine- to medium-grained volcaniclastic sandstone*

QUATERNARY		CAINOZOIC
QUATERNARY AND OLDER CAINOZOIC		
EARLY CRETACEOUS		MESOZOIC
EARLY CAMBRIAN		PALAEOZOIC
? ECTASIAN - CALYMMIAN	MESOPROTEROZOIC	PROTEROZOIC
CALYMMIAN		
1640 ±7 Ma (Emq)	PALAEOPROTEROZOIC	
STATHERIAN		
1713 ± 6 Ma (Ety)		
OROSIRIAN 1851 ± 7 Ma (Ets)		

Bauhinia Downs Legend



Qa *Gravel, sand, silt: alluvium*

Cz *Undifferentiated alluvial, colluvial and eluvial deposits: unconsolidated gravel, sand, silt, clay, ferruginous cemented detritus, minor calcrete, silcrete and ferricrete*

Czb *Grey-black, earthy, clay-rich soil: black soil plain*

Czl *Ferricrete*

Tg *Massive limestone*

Kl *Sandstone, lithic sandstone, clayey sandstone, conglomerate, sandy claystone and siltstone, commonly ferruginised and silicified; claystone may contain bivalve and brachiopod shell impressions and possible belemnite casts; sandstone commonly contains plant debris casts and leaf imprints*

Cmt *Pale grey micritic limestone, karstic-weathering; commonly vuggy also oncolitic, pisolitic textures; surface commonly potholed; rare large domal stromatolites*

Clb *Fine- to very coarse-grained friable sandstone; thin- to very thick-bedded, low-angle cross-stratified; trace fossils*

Emmy *Recessive; siltstone, claystone and mudstone with thin sandstone interbeds; schematic section only*

Emmk *Ridge-forming: pseudo-karstically weathered quartzarenite: medium-grained, thin- to thick-bedded with thick cross-bed sets, convolute beds, mud clast imprints and mud cracks*

Emv *Recessive: red-purple shale, slightly silty mudstone and ferruginous red-brown micaceous siltstone, minor very fine-grained sandstone; thin-bedded, fissile*

Emre *Ridge-forming: pseudo-karstically weathered, strongly jointed quartzarenite; feldspathic and ferruginous in places; predominant planar cross-beds, ripple marks*

Emo *Recessive: interbedded pale purple and pale green mudstone, siltstone and fine-grained sandstone; mudstone intraclasts and clast imprints, mudcracks, convolute sandstone beds*

Era *Undivided - Abner Sandstone*

Erah *Ridge-forming: pseudo-karstically weathered, strongly jointed quartzarenite, medium-grained, well sorted, rare thin quartz granule beds; planar and trough cross-beds*

Eraj *Recessive: interbedded red mudstone, ferruginous quartz sandstone, granule matrix-supported conglomerate, clean medium-grained quartz arenite, very fine-grained micaceous quartzarenite with synaeresis cracks and hummocky cross-beds*

Erax *Ridge-forming: pseudo-karstically weathered, strongly jointed quartzarenite; medium-grained, well sorted, predominantly 10-30 cm thick cross-bed sets*

Err *Ridge-forming: red-brown, fine-grained, micaceous sandstone and siltstone with minor mudstone beds, glauconitic sandstone, feldspathic sandstone; planar, trough and hummocky cross-beds, mudstone intraclasts and clast imprints, mudcracks, convolute beds*

Emu *Recessive: red-brown micaceous siltstone to very fine-grained sandstone, minor thin beds of dolomitic siltstone and light purple mudstone, uniform laminated light green to light purple micaceous siltstone to muddy siltstone, minor glauconitic fine-grained sandstone and siltstone*

Eml *Ridge-forming: fine-grained, structureless quartzarenite with clay clast imprints and minor ripples and cross-beds, interbedded with grey micaceous siltstone; very fine-grained sandstone and iron-stained, poorly sorted pebbly sandstone; planar and trough cross-beds, tool marks, flame and lode structures; basal regolith breccia in places*

Emm *Recessive: basal conglomerate/breccia, commonly brecciated mudstone and siltstone, glauconitic sandstone; red-brown micaceous mudstone and siltstone; thin bedded and laminated*

Emg *Upper: laminated sandy dolarenite and dololutite; stratiform and leaning conical stromatolites; erosional contacts, channels, slumped intervals, interclasts, ooids, ripples*
Lower: thin bedded fine sandstone and siltstone with rare conglomeratic lenses

Emz *Generally recessive: dololutite, stromatolitic dololutite, commonly cross-stratified and rippled dolarenite; dolomitic siltstone and shale, silty dololutite, more common in the lower part of the unit and frequently containing evaporite pseudomorphs and in places cauliflower cherts; conical, large columnar, stratiform and domal stromatolites; diagnostic silicified ooid beds; pink tuff*

Emy *Ridge-forming: massive, coarse polymict conglomerate, pebbly lithic sandstone, sandstone; typically poorly sorted and cross-bedded with frequent ripples*

Ek *Recessive: quartzarenite and dolarenite with cross-beds and ripples; gypsum and halite casts, cauliflower chert, pebble beds and chert clasts common. Stromatolitic dololutite with thin interbeds of quartzarenite and dolarenite (with ooids and intraclast breccia).*

Em *McArthur Group: undivided at map scale; symbols indicate formations present*

Emm *Upper: massive karstic-weathering dark-grey to yellow-grey, pseudobrecciated stylolitic, recrystallised dolostone, oncolitic and pisolitic textures common*
Lower: red siltstone, fine sandstone, sandy dolarenite and dololutite with pink K-rich beds

Emo *Recessive: silicified, commonly stromatolitic dolostone; dolarenite and sandy dolarenite*

Emr *Ridge-forming: fine- to medium-grained, thin- to medium-bedded quartzarenite; distinctive wavy bedding, small ripples and toolmarks, mud clast casts, desiccation cracks, and convolute bedding*

Emj *Ridge-forming: thinly interbedded stromatolitic dololutite, silty dololutite, dolarenite and minor sandstone with abundant chert nodules and laminae; abundant small domal stromatolites and common desiccation cracks, tepee structures and gypsum pseudomorphs*

Emnd *Recessive: dolomitic siltstone, fine- to coarse-grained dolomitic sandstone and sandy dolarenite; thin-bedded, commonly rippled and cross-bedded; small botryoidal quartz nodules (cauliflower chert and enterolithic chert)*

Emnh *Ridge-forming: thin-bedded dolomitic siltstone and silty dololutite with interbeds of fine-grained sandstone, chertified stromatolitic dolostone, dolarenite, sandy dolarenite and dolomitic sandstone; siltstone and dololutite commonly contain chert pods; sandstones are rippled and cross-bedded; stromatolites are mainly stratiform and domal; common desiccation cracks, tepee structures and pseudomorphs after sulphate evaporites and halite*

Emnc *Recessive: thin-bedded dolomitic siltstone and shale (in part carbonaceous and pyritic), silty dololutite, dololutite; minor fine-grained dolarenite and lenses of slump breccia; uncommon ripples and evaporite mineral casts*

Emx *Ridge-forming and recessive: dololutite, stromatolitic dololutite, silty dololutite and dolarenite with lesser sandy dolarenite, dolorudite and sandstone; laminated, thin- to massive-bedded, cross-bedded, brecciated and slumped; pseudomorphs after sulphate evaporites; oncolites, ooids, small silica spheroids*

Emq *Recessive: thin-bedded to laminated, dolomitic, carbonaceous and pyritic shale and siltstone; dololutite, rare breccia and sandstone; gypsum casts; talus slope breccia adjacent to Emu Fault*

Empc *Recessive: grey crystalline dololutite with radiating, needle-like gypsum crystal pseudomorphs normal to bedding; rare conical stromatolites; uncommon thin interbeds of dolomitic shale and siltstone*

Emp *Recessive: thin-bedded to laminated dololutite, silicified in places; dolomitic shale, sandstone; intraclast breccia, conglomerate and dolarenite*

Emai *Generally recessive: massive, dark grey, karstic-weathering, crystalline dololutite; lacks obvious internal sedimentary structures*

Emea *Ridge-forming: dololutite, stromatolitic dololutite, dolomitic siltstone, dolarenite and dolomitic breccia; columnar, domal and conical stromatolites, often forming bioherm series; common halite casts and quartz nodules after evaporites*

Emf *Recessive: thin-bedded to laminated, commonly dolomitic siltstone, shale, dololutite (in places stromatolitic) and fine-grained sandstone; halite casts common*

Emi *Recessive and ridge-forming: dark grey weathering dolomitic sandstone; fine- to coarse-grained, poorly-sorted, thin- to medium-bedded, commonly cross-bedded and rippled. Thin interbeds of sandy dolostone*

Emt *Generally recessive: dololutite, stromatolitic dololutite (stratiform, domal, columnar and conical forms), dolomitic shale and siltstone, ripple marked and cross-bedded dolarenite, sandy dolarenite and sandstone; common desiccation cracks and pseudomorphs after gypsum and halite; breccia beds and ooids in dolarenites*

Emd *Upper: ridge forming: mainly medium-grained, thin- to medium-bedded, vuggy sandstone, commonly dolomitic and lithic, cross-bedded and rippled with shale clasts and evaporite mineral casts and moulds*
Lower: ridge-forming: flaggy, thin-bedded, usually fine-grained white quartz sandstone; thin-bedded shale and siltstone (dolomitic in places) and very fine-grained sandstone at the base of the formation; abundant small-scale cross-beds, pinch and swell, tool marks, ripples and mud clast impressions. Several recessive dolomitic units consisting of dololutite, dolomitic siltstone, stromatolitic dololutite and dolarenite

Ema *Recessive: stromatolitic dololutite (stratiform, domal, conical and columnar forms) and silty dololutite with interbeds of dolarenite and shale and rare fine-grained sandstone; ooidal, brecciated and conglomeratic intervals common; localised development of sideritic 'marble' after sulphate evaporites*

Emi *Mainly recessive: red to purple dolomitic shale and siltstone; dolomitic cross-bedded sandstone interbeds; stromatolitic dolostone more prevalent in the upper part of the formation; common botryoidal quartz nodules (cauliflower chert), ripples, desiccation cracks, and gypsum and halite casts and moulds*

Ems *Ridge-forming: pink, brown and buff, fine- to medium-grained, moderately sorted quartzarenite; thin- to thick-bedded, cross-bedded (planar and trough) and extensively rippled; very fine-grained sandstone and siltstone forms generally recessive minor units; distinctly ferruginous mottled sandstone with halite and gypsum casts and pseudomorphs occurs mainly in uppermost beds; basal sandstone conglomerate common*

Ett *Recessive: deeply weathered, porphyritic rhyolite lava with phenocrysts of quartz and feldspar*

Etm *Ridge-forming: medium- to coarse-grained, cross-bedded and rippled, lithic and feldspathic sandstone, in places conglomeratic; thin shale beds and clasts common*

Etg *Recessive: amygdaloidal vesicular basaltic lavas; basaltic-doleritic sills and dykes; very fine- to medium-grained, poorly-sorted, cross-bedded, feldspathic-micaceous sandstone; hyaloclastic breccia (peperite) with basalt blocks in fine sandy matrix; autoclastic, flow-banded rhyolitic lavas*

Eto *Recessive: mainly dark grey-weathering, thinly bedded dololutite with rare columnar stromatolites; dololutite is commonly pyritic and contains characteristic ovoid nodules; coarse dololutite breccia or shale with evaporite mineral casts may occur near base of formation; upper unit of ferruginous, cross-bedded sandstone and white quartzarenite, dolomitic in places*

Ets *Recessive: reddish-brown to dark grey spheroidally-weathering, fine- to medium-grained basaltic-doleritic lavas; autoclastic, flow-banded rhyolitic lavas; intercalated hornfelsed sediments; basal part of sequence: dololutite, dololutite breccia; potash-metasomatised high-level dolerite intrusives and basaltic lavas throughout sequence*

Etn *Ridge-forming: red to mauve-grey, locally feldspathic sandstone, mainly medium-grained, moderately- to well-sorted, and thin- to medium-bedded with bedding laminations, planar cross-beds, ripples and abundant shale clasts; thin, red, generally recessive shale interbeds*

Etq *Recessive: red-purple and grey dolostones, in places recrystallised; thinly bedded dololutite, silty dololutite and fine- to medium-grained dolarenite, in places wavy and cross-bedded; thin- to medium-bedded, interbedded red and green shale and fine-grained sandstone; ripples, planar cross-beds, hummocky cross-stratification; sandstone contains shale clasts, minor glauconite and is micaceous in places*

Etr *Ridge-forming: sandstone, very fine- to very coarse-grained and conglomeratic; in places feldspathic, arkosic, ferruginous or glauconitic; shale clast impressions, ripples, planar and trough cross-beds; siltstone and shale, ferruginous, commonly laminated*

Etl *Ridge-forming: quartzarenite, mainly fine- to medium-grained and medium-bedded with medium- to very coarse-grained quartz pebble beds common in the upper part of unit, medium- to large-scale planar and trough cross-beds, channel lag deposits, ripples, minor graded bedding, infrequent shale and siltstone clast impressions, rare desiccation cracks; minor thinly bedded siltstone and shale, commonly micaceous*

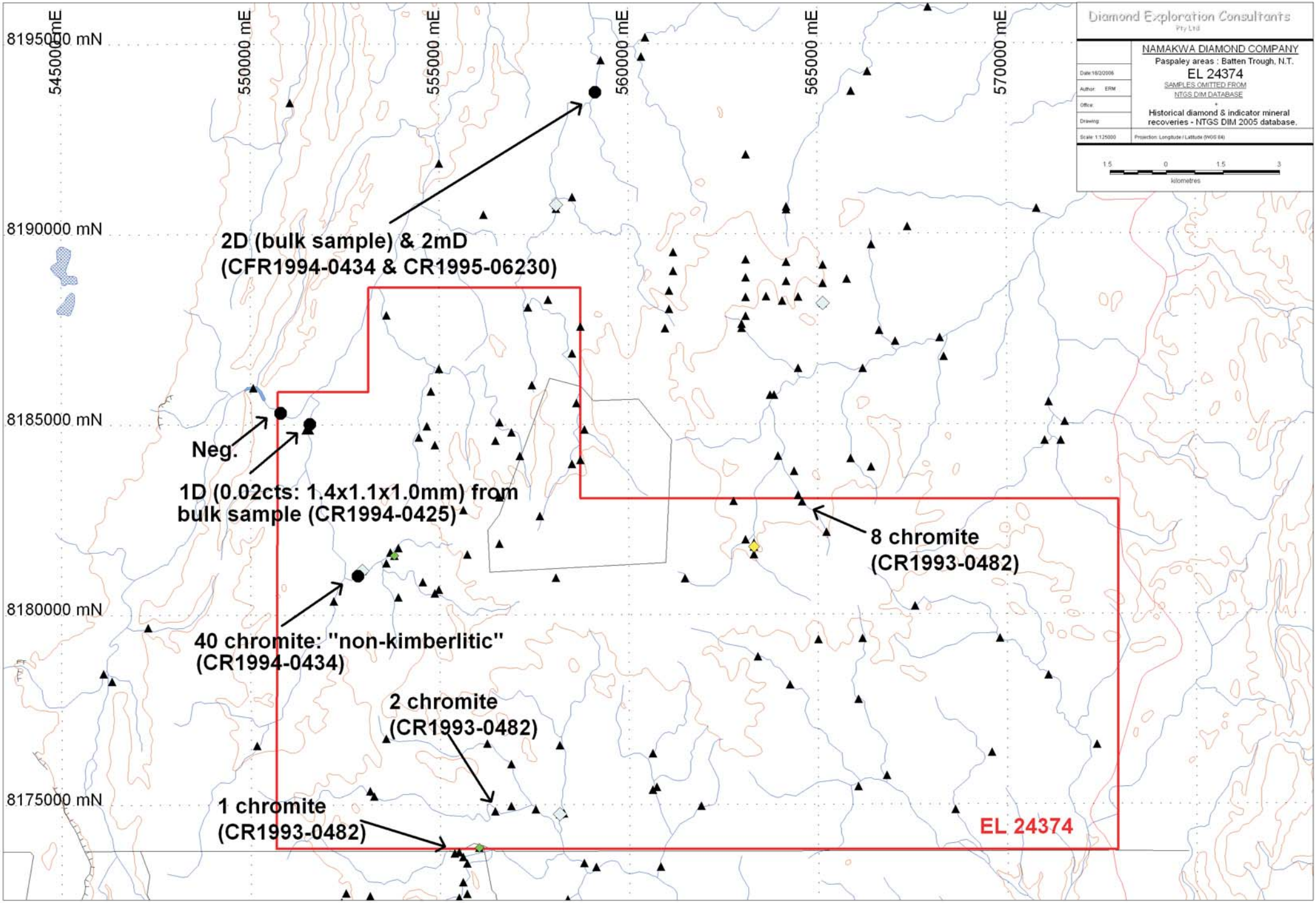
Eta *Recessive: amygdaloidal basalt lava.* Edl: *dolerite sills*

Ety *Ridge-forming: quartz sandstone, in places feldspathic; mainly medium-bedded and medium- to coarse-grained, moderately- to poorly-sorted with scattered quartz pebbles in coarser units; medium- to large-scale planar and trough cross-beds, rippled in places*

Ets *Recessive: dacitic to rhyolitic pyroclastics and lavas; rare basaltic-doleritic lavas, sills and dykes*
Ridge-forming: sandstone; tuffaceous, very feldspathic, fine- to medium-grained, poorly-sorted

QUATERNARY TO TERTIARY		CAINOZOIC
TERTIARY		
CRETACEOUS		MESOZOIC
MIDDLE CAMBRIAN		PALAEOZOIC
EARLY CAMBRIAN		
	1690 +29 −25 Ma (tuff in Emq ; Page, 1981)	PROTEROZOIC
	MIDDLE PROTEROZOIC	
	1725 ± 40 Ma	
	1857 ± 30 Ma EARLY PROTEROZOIC	

APPENDIX 4


Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24374
SAMPLES OMITTED FROM
NTGS DIM DATABASE
+
Historical diamond & indicator mineral
recoveries - NTGS DIM 2005 database.
Date:16/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:125000
Projection: Longitude / Latitude (WGS 84)
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555000 mE
560000 mE
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570000 mE
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8190000 mN
8185000 mN
8180000 mN
8175000 mN
2D (bulk sample) & 2mD
(CFR1994-0434 & CR1995-06230)
Neg.
1D (0.02cts: 1.4x1.1x1.0mm) from
bulk sample (CR1994-0425)
8 chromite
(CR1993-0482)
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(CR1994-0434)
2 chromite
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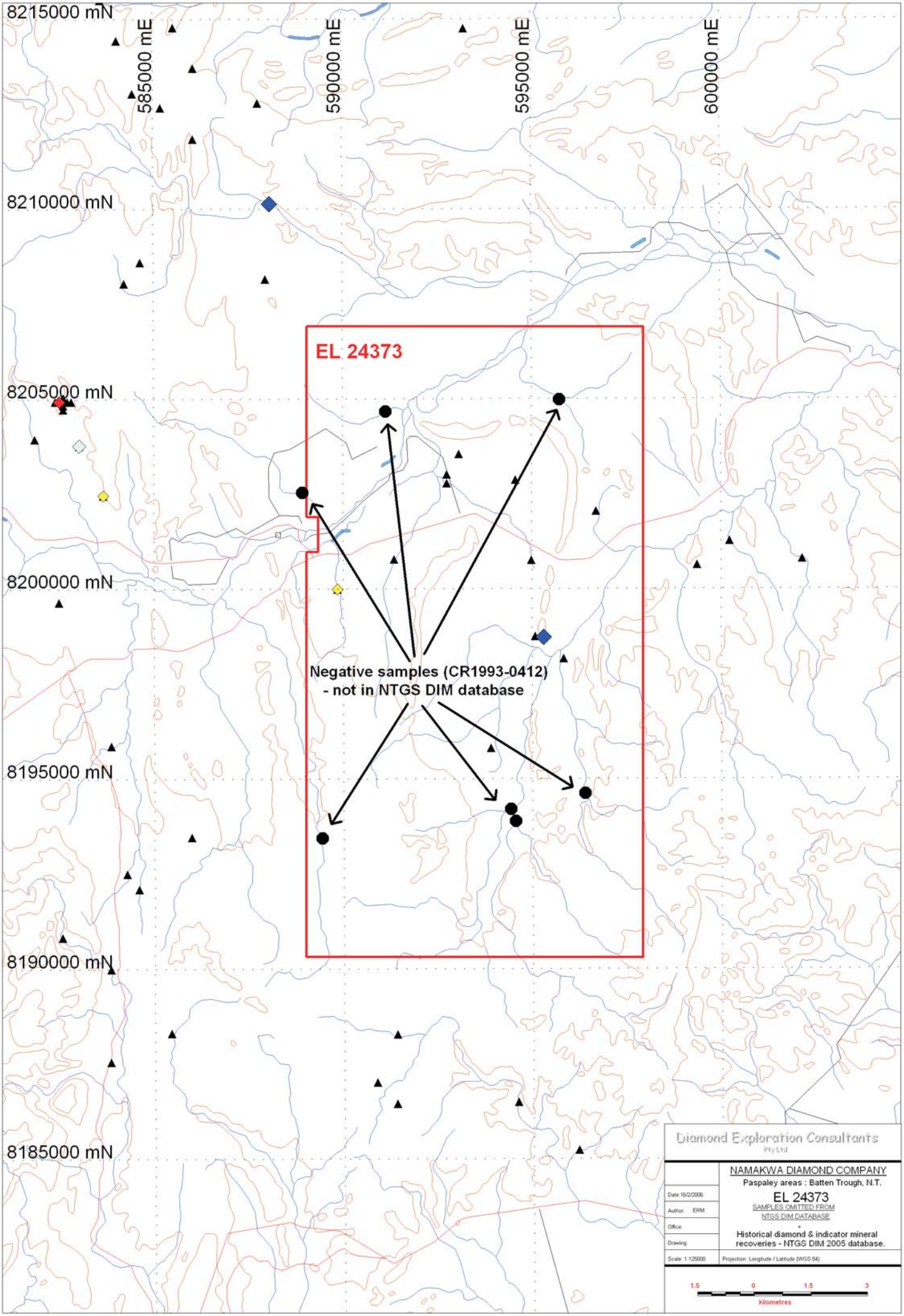
EL 24374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EL 24373
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- not in NTGS DIM database
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8190000 mN
8185000 mN
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24373
SAMPLES OMITTED FROM
NTGS DIM DATABASE
Historical diamond & indicator mineral
recoveries - NTGS DIM 2005 database.
Date: 16/2/2006
Author: ERM
Office:
Drawing:
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Projection: Longitude / Latitude (WGS 84)
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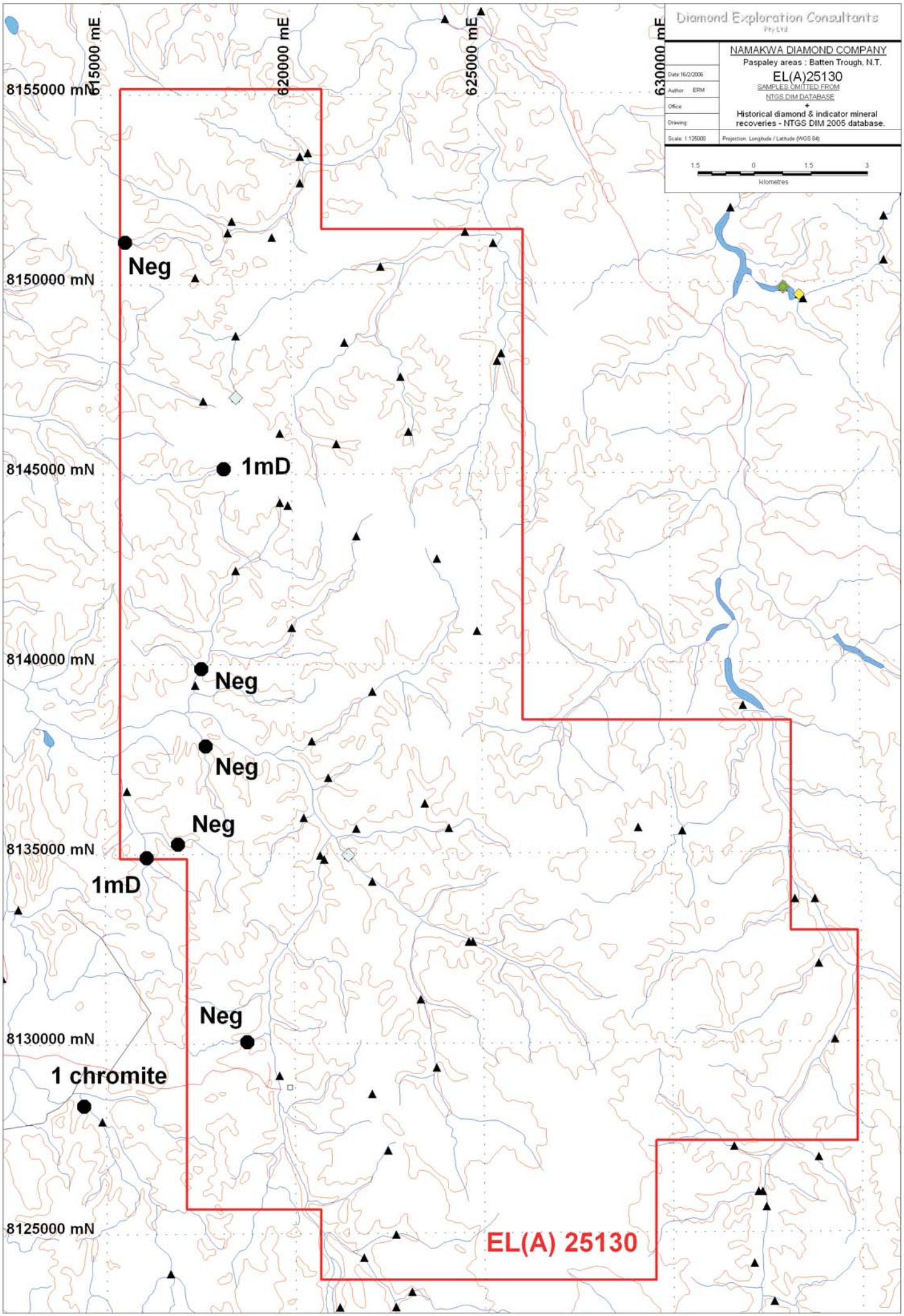
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL(A)25130
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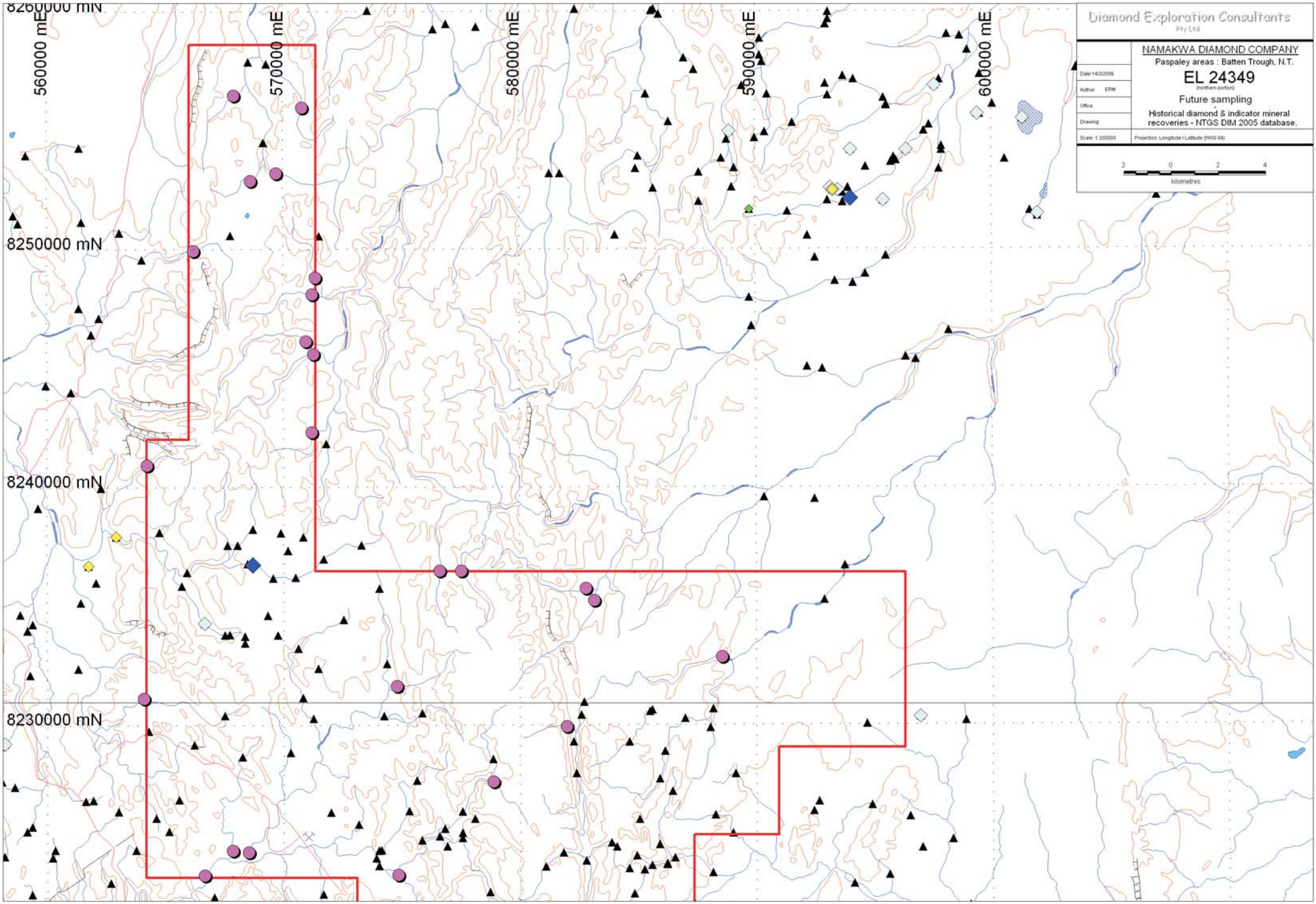
EL(A) 25130

APPENDIX 5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Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24349
(northern portion)
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date:14/2/2006
Author: ERM
Office:
Drawing:
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Projection: Longitude / Latitude (WGS 84)
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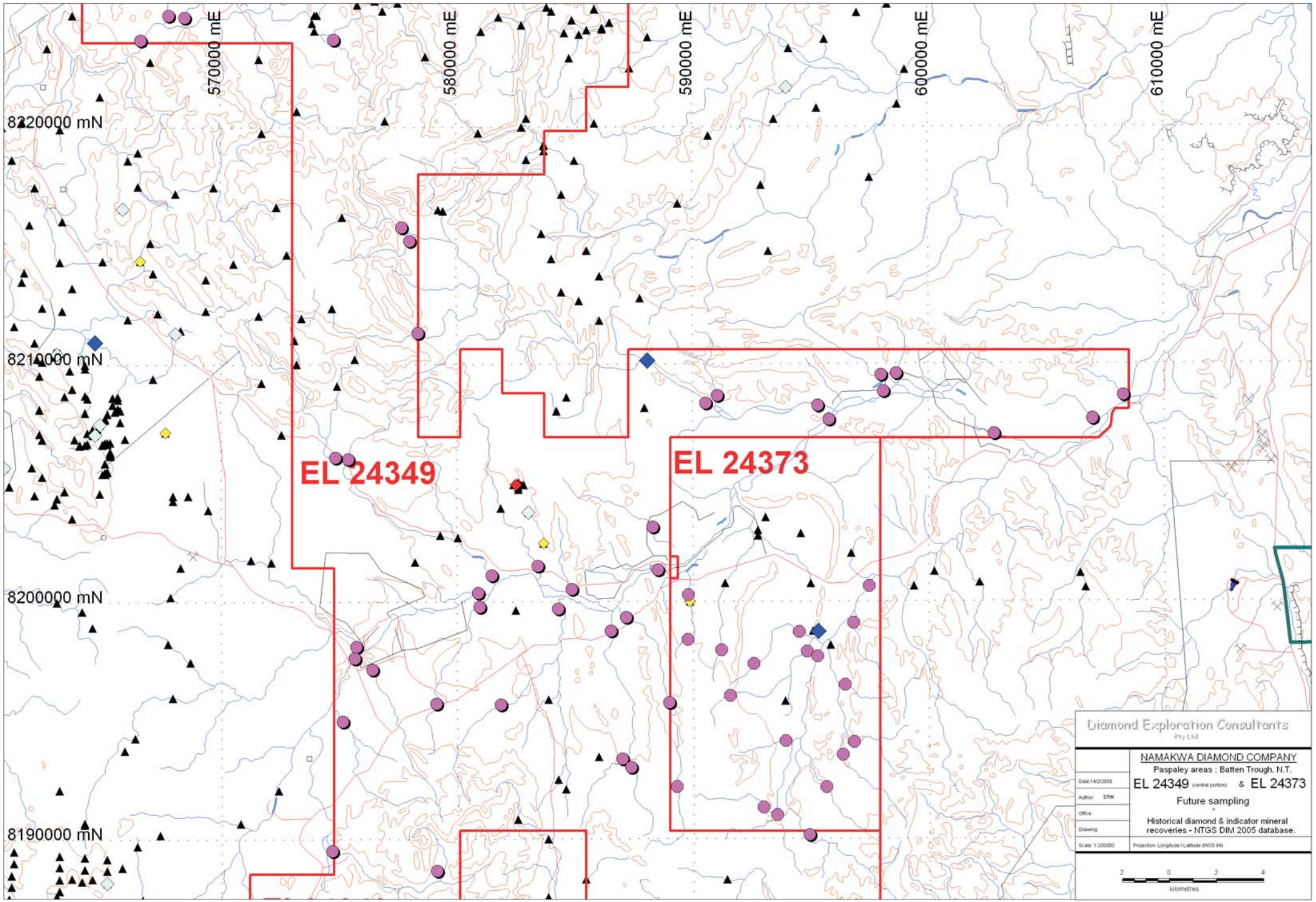
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EL 24349
EL 24373
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24349 (central portion) & EL 24373
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 14/2/2006
Author: ERM
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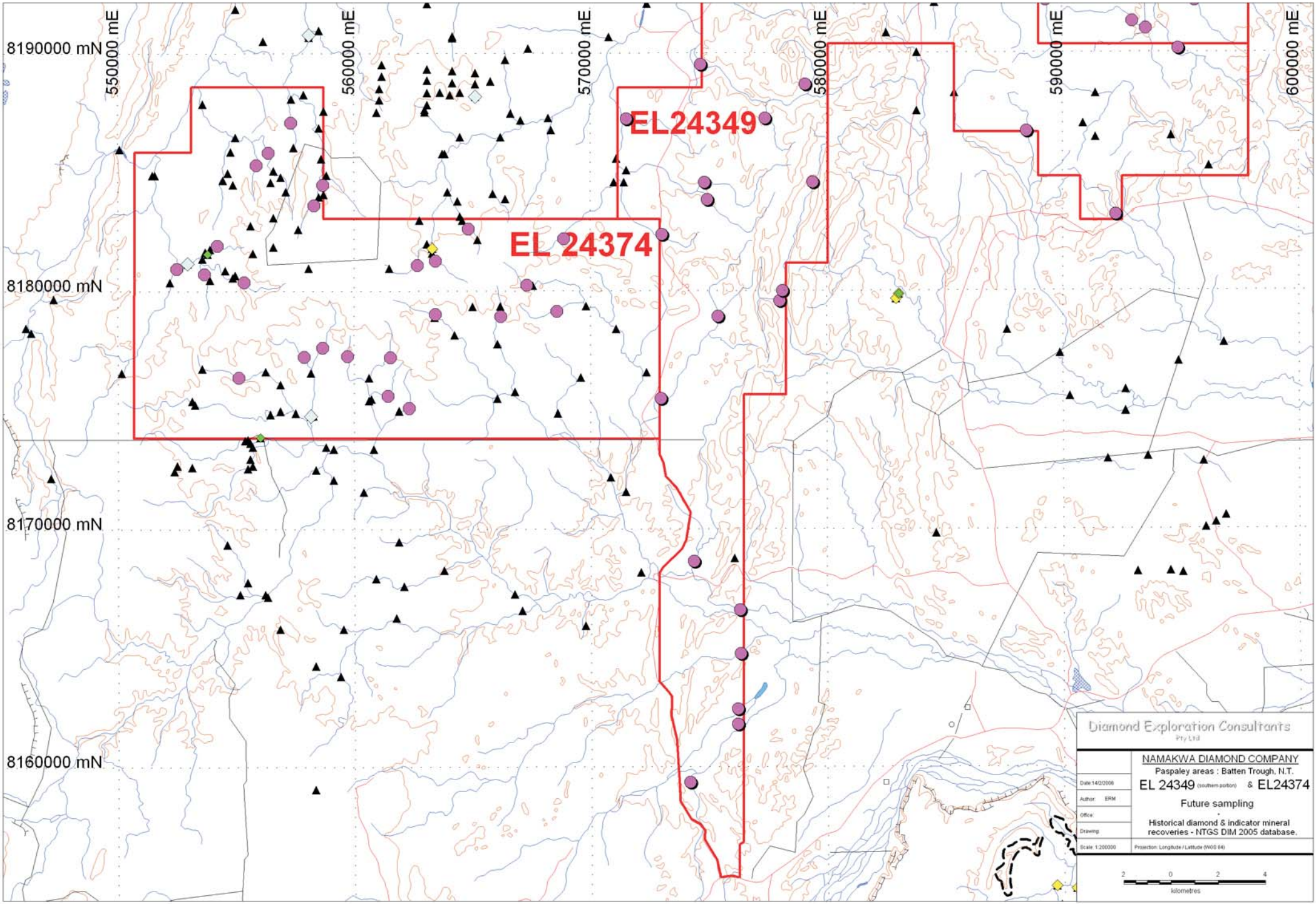
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EL24349
EL 24374
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24349 (southern portion) & EL24374
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
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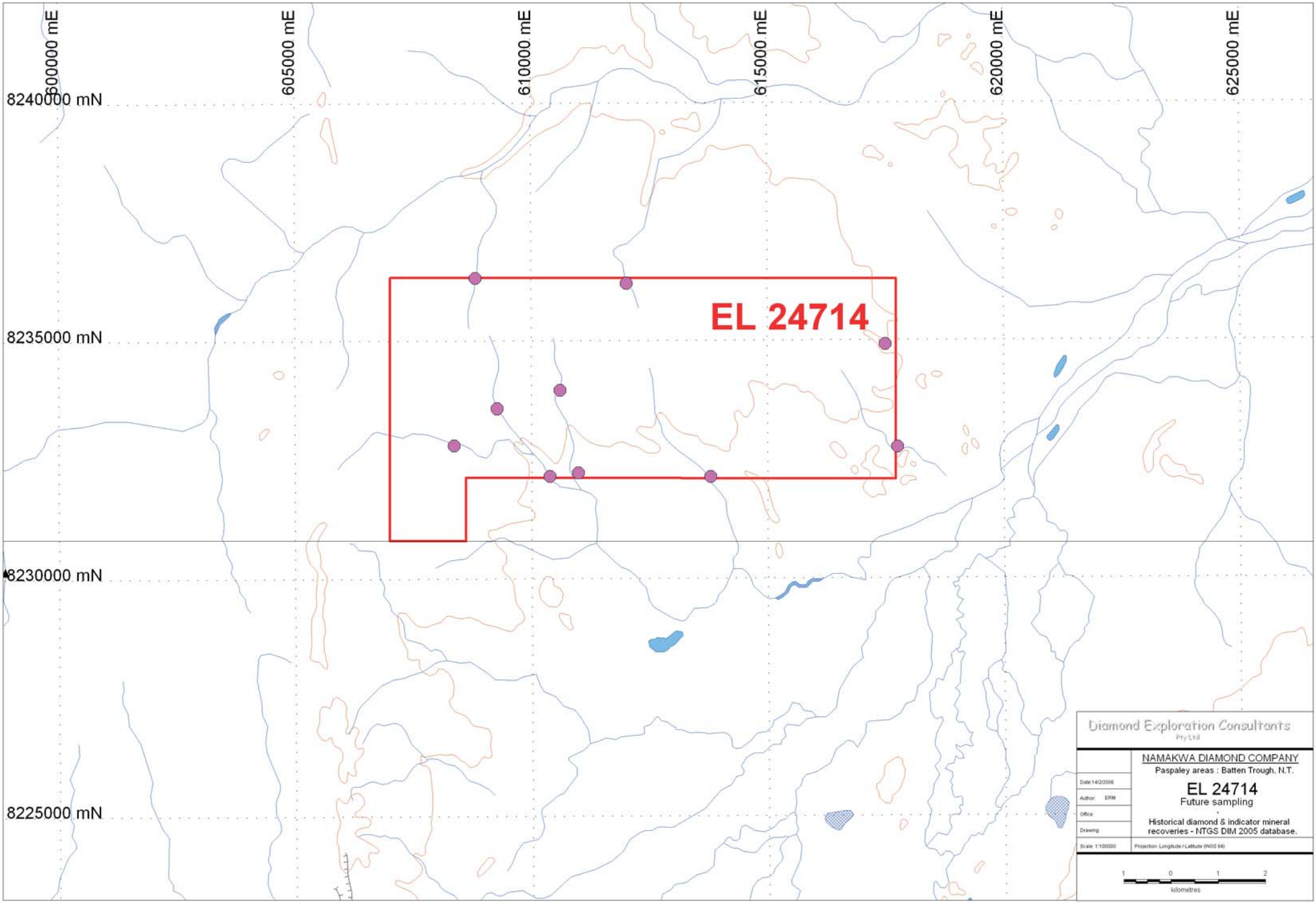
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EL 24714
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24714
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date:14/2/2006
Author: ERM
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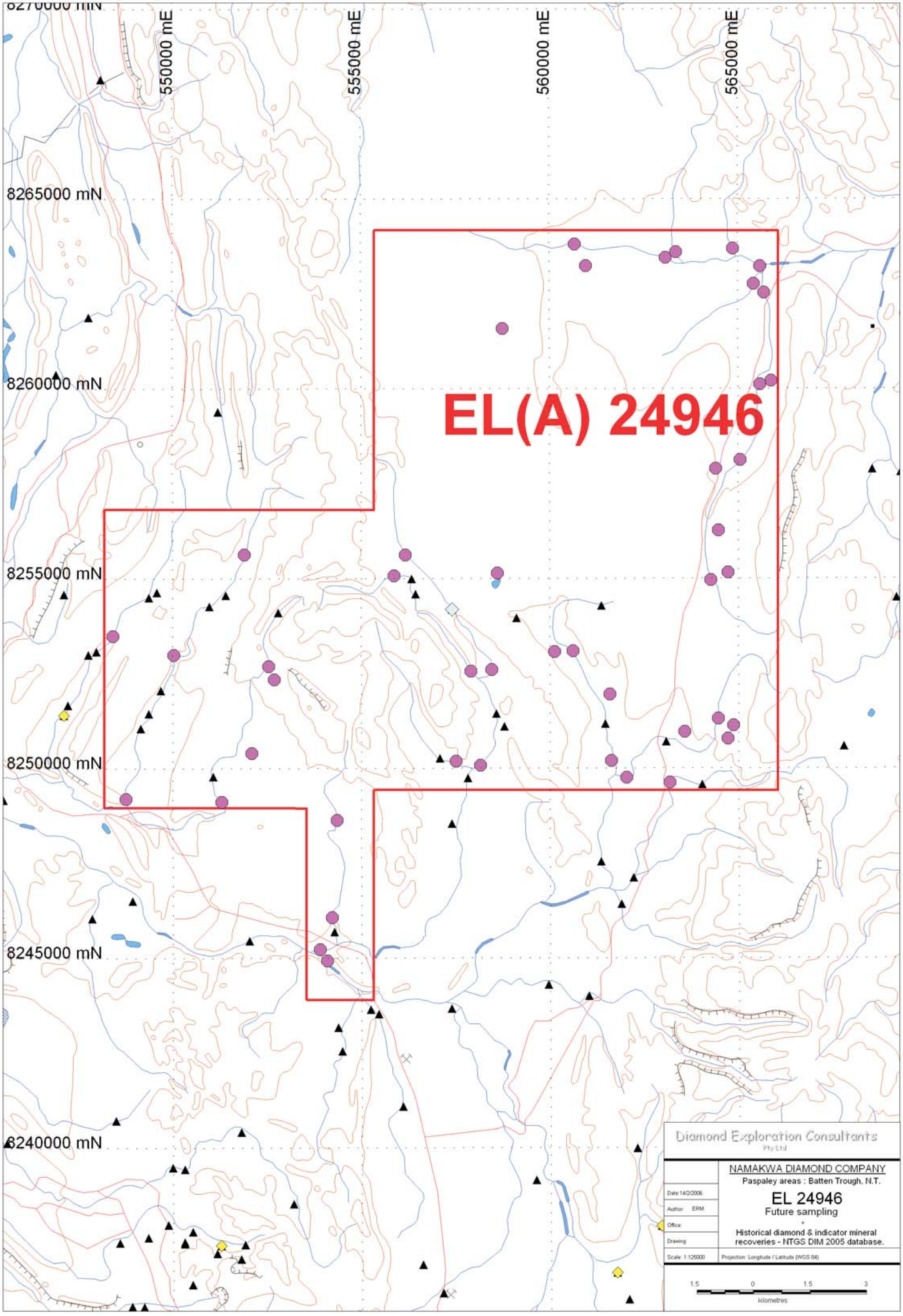
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EL(A) 24946
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24946
Future sampling
+
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 14/2/2006
Author: ERM
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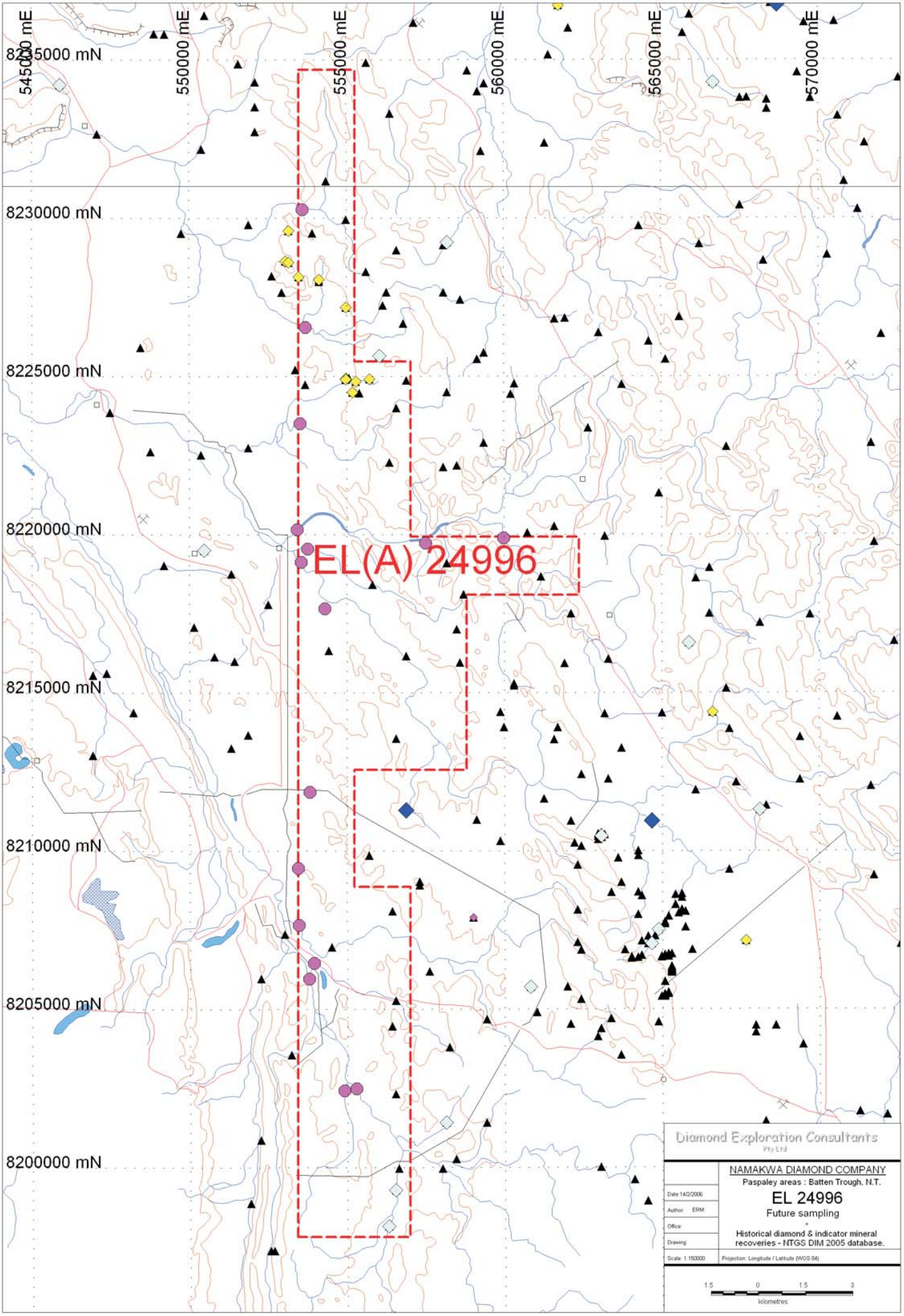
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EL(A) 24996
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24996
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
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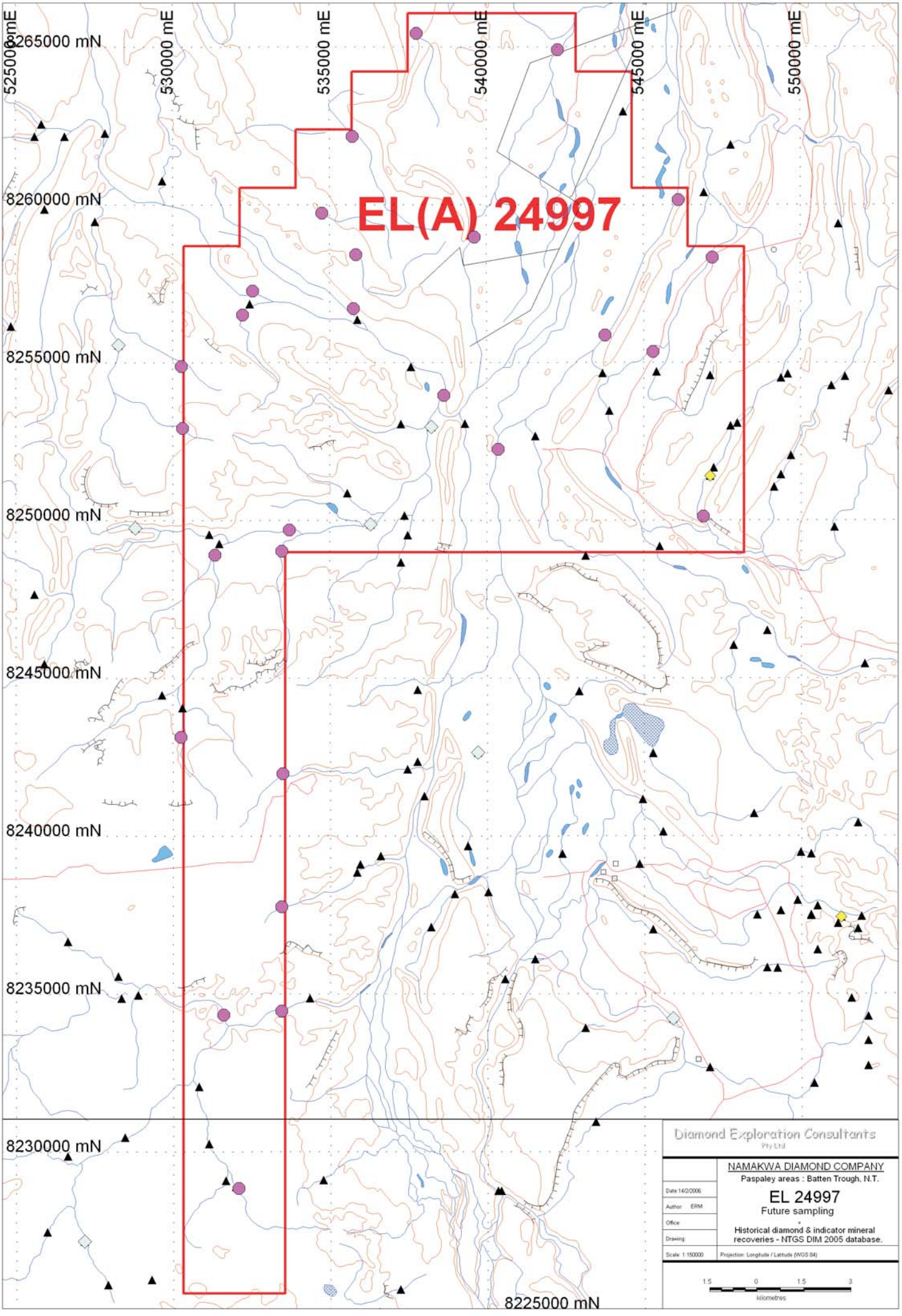
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EL(A) 24997
Diamond Exploration Consultants Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL 24997
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
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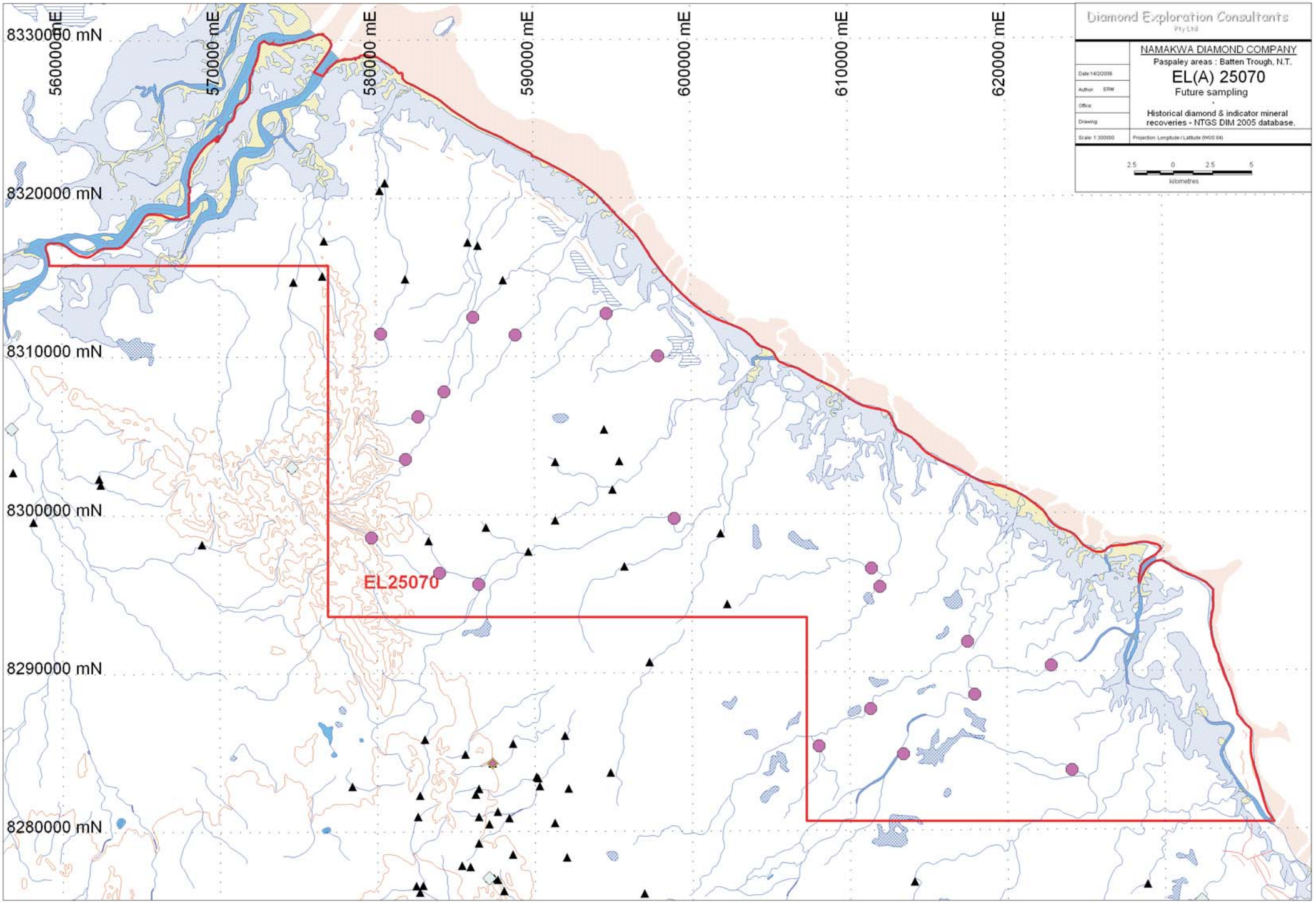
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EL25070
Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL(A) 25070
Future sampling
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
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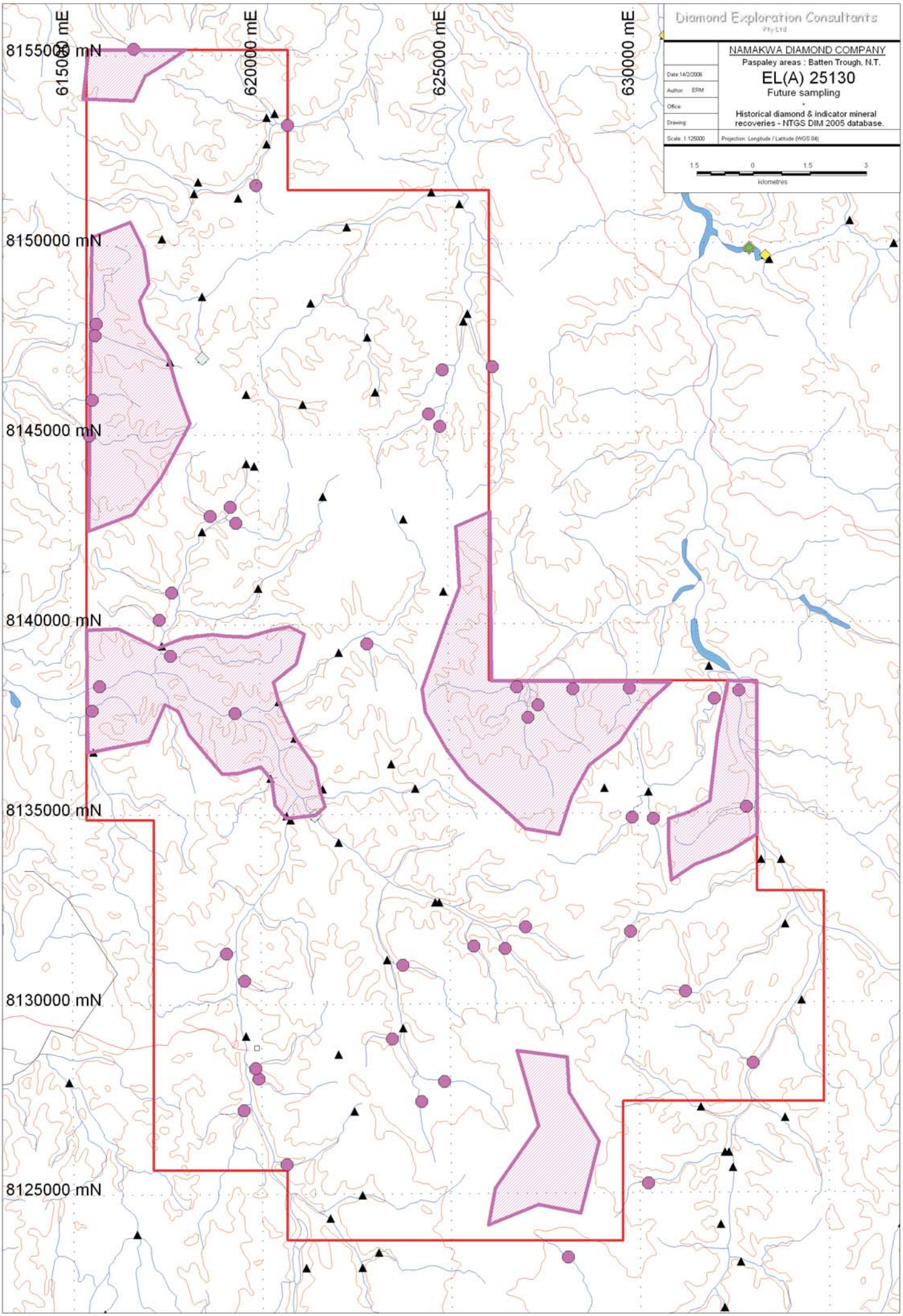
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Diamond Exploration Consultants
Pty Ltd
NAMAKWA DIAMOND COMPANY
Paspaley areas : Batten Trough, N.T.
EL(A) 25130
Future sampling
+
Historical diamond & indicator mineral recoveries - NTGS DIM 2005 database.
Date: 14/2/2006
Author: ERM
Office:
Drawing:
Scale: 1:125000
Projection: Longitude / Latitude (WGS 84)
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1.5
3
kilometres

APPENDIX 6

Sampling costs

The implications of this report are that further sampling is warranted within the Paspaley JV areas and should be carried out in all of the areas except EL(A)25070 prior to employing any other techniques, such as airborne geophysics.

An estimate for sampling costs has been made to assist with budget preparations. These have assumed sampling programmes based out of the Heartbreak Hotel at Cape Crawford using a JetRanger helicopter, two geologists and two field assistants.

If all areas are granted and can be sampled during the same programme this will require an estimated period of 3.5 to 4 weeks. Assuming 2 teams, each collecting 7 samples per day the collection costs per sample are estimated at $650, including helicopter hire, staff wages, accommodation, meals and support vehicle hire. For a total of, say, 300 samples the sample collection costs are thus likely to total **$195,000**.

Additional costs include mobilisation & demobilisation for the helicopter (from Darwin?) and for Namakwa staff (from Perth?), sample transport (cape Crawford to Katherine, and Katherine to Perth), 4WD fuel, and consumables such as sample bags and equipment. These are estimated at **$33,000** in total.

Finally, the laboratory costs if samples are processed through a commercial laboratory in Perth are estimated at $750 per sample, or **$225,000** for 300 samples.

Thus the total budget require to finance the initial sampling programme for all 7 areas (excluding EL(A)25070) is likely to total in the vicinity of **$453,000**. Since this is approximately $100,000 or 30% above the Year 1 expenditure covenant for these areas (which is $349,500), the laboratory processing of some samples could be withheld until Year 2 if need be.

Additional funding would be required to finance an airborne magnetic survey over EL(A)25070 - a quote would need to be obtained from contractors for this work.

Savings may be incurred by co-ordinating metals exploration with the diamond programme. For instance, BLEG samples could be collected for gold in areas of Scrutton Volcanics (and possibly other volcanics) at the same time as diamond samples. Base metal sampling could also perhaps be carried out in any areas where carbonaceous units are noted in the McArthur Group and in particular in the vicinity of the Barney Creek Formation. Other possibilities would be to test for mineralisation that is structurally controlled, or related to the base of Roper Group unconformity.