

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE 7658

PARTIAL RELINQUISHMENT REPORT

FOR THE PERIOD ENDING 22/7/94

AMANBIDJI AREA

ANNUAL REPORT FOR THE PERIOD ENDING

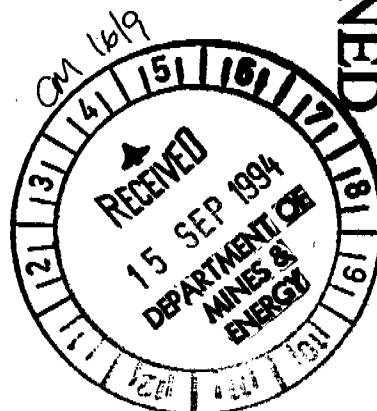
22nd JULY 1994

H.A. HELLEWELL
GEOLOGIST
SEPTEMBER, 1994

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PROSPECTING
LIMITED**

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Project Name: SOUTH VICTORIA RIVER BASIN

Title: Exploration Licence 7658
Amanbidji Area
Partial Relinquishment Report for
the period ending 22nd July 1994

Author: H.A. Hellewell **Edited/Approved:** A.K. Berryman

Date: September, 1994 **Place:** Darwin

1:250,000 Sheet Name & No: Waterloo SE 52-03

Text Page Nos: 3 **Table Nos:** 1 **Map Nos:** 2

Keywords: South Victoria River Basin Project (SVRB), Stream Sediment
Sampling, Victoria River Basin

Abstract: A total of 77 heavy mineral samples were collected over the
relinquished portion of EL 7658. Nine of the samples contained
chromites all of which were deemed to be of basaltic origin. The
absence of kimberlitic indicator minerals has downgraded the potential
of the area to host an economic kimberlite body.

Copy to: NTDME, Darwin, IC

Ref: EL7658.PAR

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SUMMARY

Exploration Licences: 7658

Date Granted: 22nd July 1992

Area:	Original	Retained	Relinquished
	343 blocks (1104 sq km)	171 blocks	172 blocks

Occupant: Stockdale Prospecting Limited

Operator: Stockdale Prospecting Limited

Commodities sought: Diamonds

Exploration: A total of 77 heavy mineral samples were collected over the relinquished portion of EL 7658. Nine of the samples contained chromites all of which were deemed to be of basaltic origin. The absence of kimberlitic indicator minerals has downgraded the potential of the area to host an economic kimberlite body.

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STOCKDALE PROSPECTING LIMITED
EXPLORATION LICENCE 7658
PARTIAL RELINQUISHMENT REPORT FOR THE PERIOD ENDING 22 JULY 1994

1. **INTRODUCTION**

Exploration Licence 7658 is part of the South Victoria River Project and lies some 50km south of Kildurk Station homestead, on the Kimon 4864 1:100,000 and Waterloo SE 52-03 1:250,000 mapsheets (Map 1).

Exploration within the relinquished portion of EL 7658 involved the collection of 77 regional reconnaissance samples. This report details this work carried out over the relinquished area.

2. **TENURE**

Tenure details for EL 7658 are as follows:

EL 7658	
Application Date	20/11/90
Date Granted	22/7/91
Original Area	343 sq km (1104 sq km)
Retained area (after reduction 22/06/94)	171 blocks (551 sq km)

Stockdale Prospecting Limited is both the occupant and operator of EL 7658.

3. **ACCESS**

Access to EL 7658 is relatively poor. The nearest significant track links the Amanbidji/Kildurk community with the Victoria River Highway. All work within the licence was carried out with the use of a helicopter.

4. **PHYSIOGRAPHY**

EL 7658 falls within the Victoria River Plateau physiographic unit. This unit is comprised of mesas and structural plateaus. Drainages are often deeply incised into the flat lying Proterozoic sediments. Leichardt Creek is the main drainage within the licence. This creek drains directly into the West Baines River to the north.

5. **REGIONAL GEOLOGY**

The licence sits in the Sturt Block which has been relatively stable since the early Proterozoic. The Sturt Block is separated from the Kimberley Block to the northwest by the Halls Creek Mobile Zone. The exploration licence is positioned over a 'Proterozoic Window' in Antrim Plateau Volcanics (Cambrian).

The oldest unit mapped in the SVRB project area is an undivided unit of dolomitic siltstone of possibly Lower Adelaidean age. This unit crops out in the north east (Limbunya Group). Five other units are mapped to the north of EL 7658 from the Wattie Group and include: the Hughie Sandstone, Mount Sanford Formation, Neave Sandstone, Gibbie Formation, and Seale Sandstone. The Wattie Group is a predominantly clastic sequence of Adelaidean Age. The rocks are strongly faulted in this area with breccias developed. Plunging anticlines and synclines are also mapped and coincide with two predominant fault directions; north west and east-

northeast (120-130°, 70-80°).

One unit representing the Bullita Group also crops out in this northern licence. It is a dolomitic siltstone with interbeds of fine grained sandstone called the Timber Creek Formation, also of Adelaidean age. Sedimentary structures indicate shallow water and subaerial deposition under evaporitic conditions.

The next units in stratigraphic succession are from the Auvergne Group and are the dominant geological sequences of the project area. Firstly the Jasper Gorge Sandstone marks a widespread marine transgression which inundated much of the Victoria River District. The unit consists of medium quartz sandstone and crops out extensively in the licence. Conformably overlying Jasper Gorge Sandstone is the Angalarri Siltstone which consists of khaki and green siltstone with interbeds of fine sandstone and shale. The predominance of siltstone indicates deeper water conditions.

Moonlight Valley Tillite crops out to the north west of EL 7658. The unit is part of the Duerdin Group of Adelaidean age. It is recognised by laminated dolomite at the top with cobbles of quartzite, dolomite, granite etc. In the project area it generally appears as bouldery slopes.

The Kinevans Sandstone overlies the Auvergne Group to the north west of EL 7658 with angular unconformity. This unit is of Lower Cambrian or Upper Adelaidean Age. It is a thin, subaerially deposited sandstone, apparently the product of fluvial and aeolian processes.

Overlying the Kinevans Sandstone is Lower Cambrian Antrim Plateau Volcanics. It consists of a massive, fine to coarse grained flow basalt and generally caps sandstone hills and mesas. It is commonly vesicular and amygdaloidal with jasper, agate and occasional geodes associated with creek gravels. Numerous unmapped outliers occur throughout the area. Two sandstone units are also incorporated in the unit. These are reddish brown with some chert interbeds though fairly rare in the project area.

Tertiary laterite and lateritic soils are developed on sandstone and basalt plateaus in the licence.

Quaternary sand, soil, gravels and colluvium are also mapped throughout the licences. These are particularly associated with the West Baines River and its tributaries in the north-western corner of the project area.

6. EXPLORATION

A total of 77 samples were collected in the relinquished portion of EL 7658 (Map 2). Due to the problems associated with access to the southern parts of EL 7658 a large area in the south of the relinquished area was not sampled. Samples generally consisted of 100 litres of material, screened to -2.0mm in the field.

Of the 77 samples taken 9 samples returned positive results. Positive sample numbers are:

BD 7452	1 non-kimberlitic chromite
BD 8564	1 non-kimberlitic chromite
BD 8888	2 non-kimberlitic chromites
BD 8890	1 non-kimberlitic chromite
BD 8899	1 non-kimberlitic chromite
BD 8971	1 non-kimberlitic chromite
BD 8974	2 non-kimberlitic chromites
BD 8979	1 non-kimberlitic chromite
BL 1005	1 non-kimberlitic chromite

All the chromites recovered were directly attributable to nearby Antrim Plateau Volcanics.

7. **EXPENDITURES**

Expenditure for the relinquished area of EL 7658 totalled \$12,623 as allocated in Table 1.

TABLE 1: EXPENDITURE, EL 7658

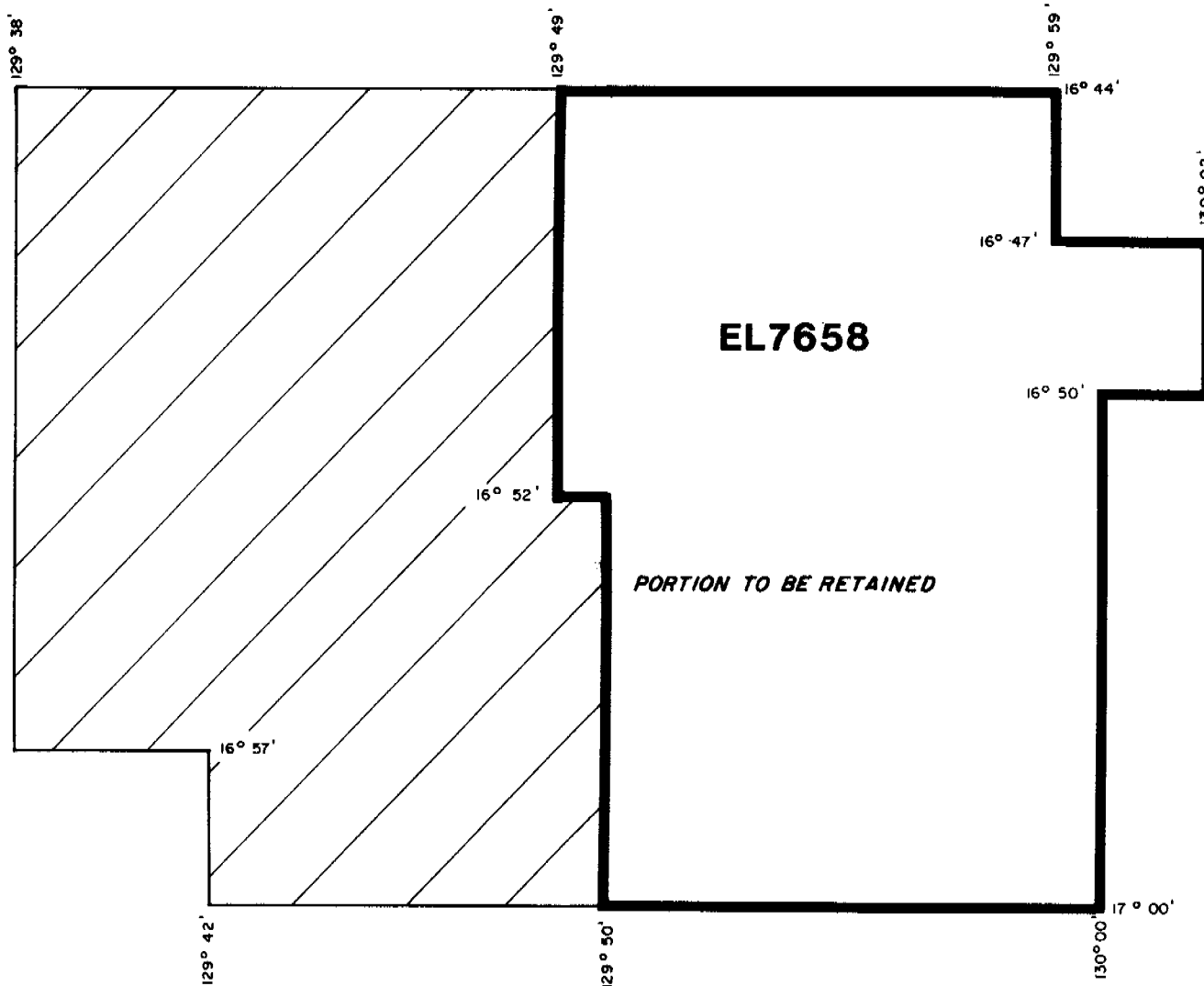
Operational Staff Costs	2,040
General Operation Expenses	456
Transport & Travel	5,280
Tenement Costs	141
Central Treatment Plant	1,259
Lab Treatment	95
Lab Examination	133
Remote Sensing	517
Geophysics	24
Drafting	36
Computer Services	104
Regional Administration	1,107
Head Office Administration	959
Capital Expenses	472
Total:	<u>\$12,623</u>

8. **SUMMARY**

A total of 77 heavy mineral samples were collected over the relinquished portion of EL 7658. Nine of the samples contained chromites all of which were deemed to be of basaltic origin and directly attributable to nearby Antrim Plateau Volcanics. The absence of kimberlitic indicator minerals has downgraded the potential of the area to host an economic kimberlite body.



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PORTION TO BE RELINQUISHED

E52-03		E52-04	
NEWRY	KILDURK	BAINES	HUMBERT
WATER- LOO	KIMON RIVER	WICKHAM RIVER	MOUNT SANFORD
E52-07		E52-08	
NEGRI	LIMBUNYA	GREGORY'S DEPOT	WAVE HILL

0 5 10 15 km

Map 1

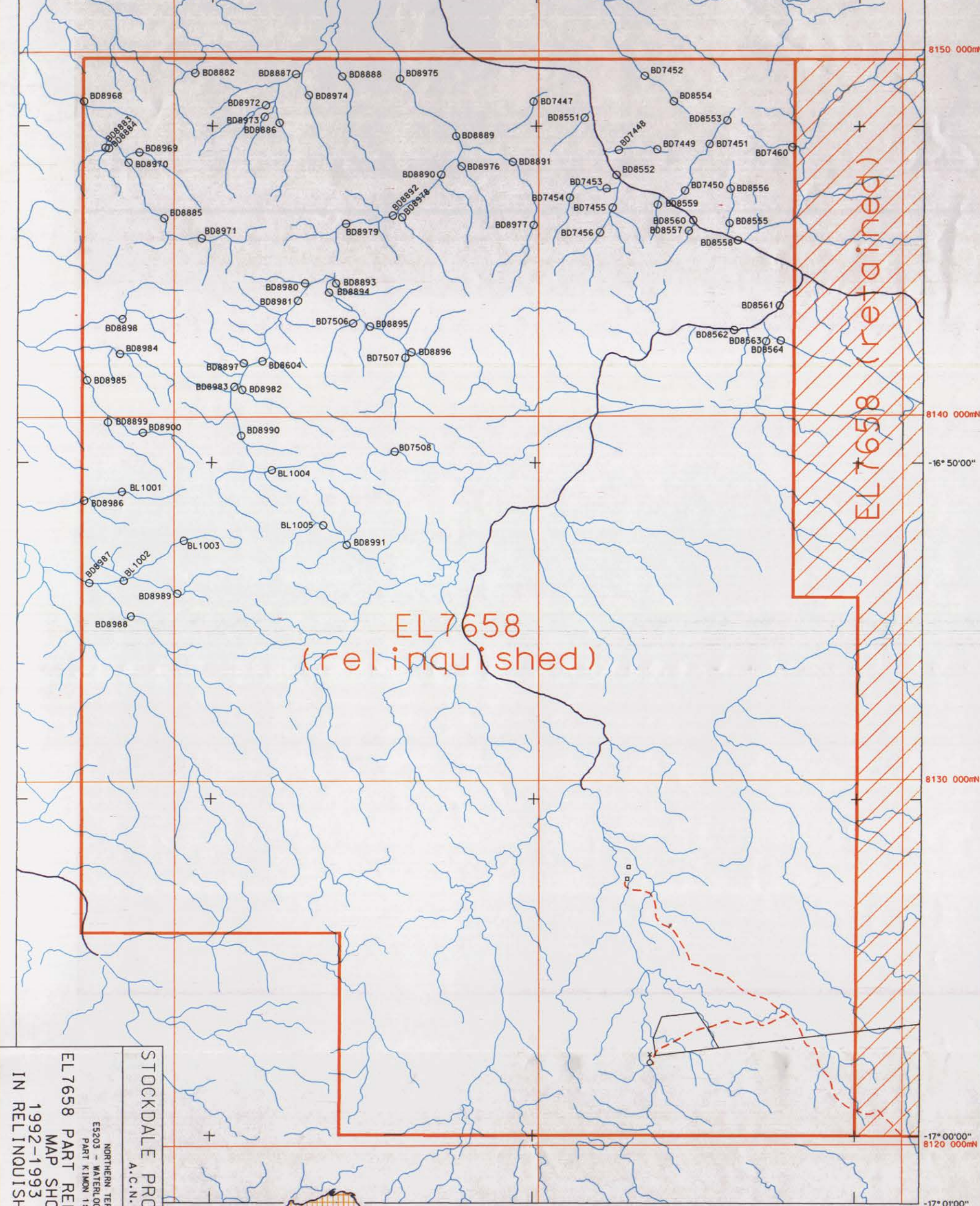
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A.C.N. 004 912 172

**NORTHERN TERRITORY
E52-03 WATERLOO
KIMON & WICKHAM RIVER 1:100,000**

EL7658 PARTIAL RELINQUISHMENT LOCATION MAP

Compiled	BMcC
Drawn	KJW
Date	JULY, 1994
Scale	1 : 250,000
Revised	
SEL N 376	



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EL7658 PART RELINQUISHMENT
1992-1993 SAMPLES
IN RELINQUISHED PORTION

MAP 2

Files:
D:/REPORT94/NTM094/
SVBR001.BAS, BND,
CLL, DRN, SAM

Compiled: HAH
Drawn: HMR
Date: 9/94
Scale: 1:100,000
Revised:
SEL SVBR001

0 2 4 6 8 10KM

○ STREAM SAMPLE

AREA RELINQUISHED
See Map 1 for location in
relation to whole of
retained portion

AREA RETAINED

NORTHERN TERRITORY
ES203 - WATERLOO 1:250,000
PART KIMON 1:100,000

WATERLOO
KIMON
WICKHAM RIVER

NEWRY
KILDURK
BAINES