RELINQUISHED AREA REPORT.
for
EXPLORATION LICENCE 4934
ELSEY CEMETERY
N.T.

by
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CONTENTS

ATTACHMENTS.

MAP No	TITLE	SCALE
FIG 1	PLAN OF AREA of EL 4934	1:250,000
FIG 2	EL 4934 PHOTOGEOLOGICAL MAP	1:84,000

LOCAL GEOLOGY.

The oldest sediments in the licence area are middle Cambrian limestone equated with the Tindall Limestone. These sediments are fossiliferous and represent a shallow marine shelf deposit. Fossils identified in the samples collected include phosphatised spicules of Chancelloria, calcaleous remains of ecocystids, biconulities, hyolithids with triangular cross sections and rare fragments of phosphatic shelled brachiopods.

The outcrops of Cambrian limestone is poor and usually in the bed or along the banks of Elsey Reach. Where seen the rock was either laminated limonitic brown and grey or massive pale brown and grey. The magnesia content of the limestones on the northern side of Elsey Reach was very high ranging from 12.66% to 18.86% MgO and unsuitable for use in lime or cement manufacture. On the southern side of Elsey Reach a white chalky limestone of unknown age is exposed alongside the track. Samples from this rock type which showed a high grade limestone low in magnesia and suitable for use in cement and lime manufacture. Cretaceous sediments occur in the south western corner of the licence area. These are sandstones of no interest to the company.

Lateritic gravels of Tertiary age cover a large part of the licence and mask the underlying sediments. In the south eastern portion of the licence unconsolidated, white, structureless calcareous sediments of unknown age have been seen.

ECONOMIC GEOLOGY.

The only material of economic interest is the high grade limestone sampled along the southern bank of Elsey Reach. So far as the present writer is aware no other rocks or minerals of economic significance occur in the licence area.

CONCLUSIONS.

High grade limestone of unknown age outcrops along the southern side of Elsey Reach.

The extent of the limestone is unknown at this stage. It has been identified along a few kilometres of bush track between the old highway via Elsey Cemetary and Stuart Highway. It probably extends into the area to be surrendered.

Further geological mapping and exploratory drilling is necessary to evaluate the potential of this deposit.

SUMMARY.

High grade low magnesia limestone has been found along the southern bank of Elsey Reach in the vicinity of Warlock Ponds east of the Stuart Highway.

The limestone is mainly white, chalky, friable and apparently structureless. Its extent is unknown but is known to extend for a few kilometres at least along Elsey Reach.

Elsewhere, such as along the northern bank of Elsey Reach the limestone of obvious Cambrian age is varicoloured ranging from laminated grey and khaki brown to pale grey. The magnesia content of the limestones is usually too high for use in lime manufacture, and are relinquished.

INTRODUCTION.

During 1986/87 both ground reconnaissance and an aerial survey using a Bell helicopter were carried out over the licence area. Samples were collected from a number of sites in the licence area, mainly along Elsey Reach.

REGIONAL GEOLOGY.

The regional geology is outlined on the 1:250,000 sheet of the Geological Atlas series. The oldest rocks in the licence area are flatly dipping Tindall Limestone of Middle Cambrian age. These outcrop sporadically along the banks and their immediate environs but rarely in the plains away from the creek. Sediments of Cretaceous age identified as the Mullaman Beds unconformably overly the Tindall Limestone. The Mullaman Beds consist of quartz sandstone, siltstone and claystone. Their outcrops were invariably composed of dark brown ferrugineous sandstones usually exposed in creek beds and banks. A high grade chalky limestone is exposed along the southern bank of Elsey Reach at Warlock Ponds. This is a massive structureless deposit of unknown age. Lateritic soil and gravel is widespread masking the older sediments. The river bed and adjoining area is covered by alluvium, sandy soil and gravel.

RECOMMENDATIONS.

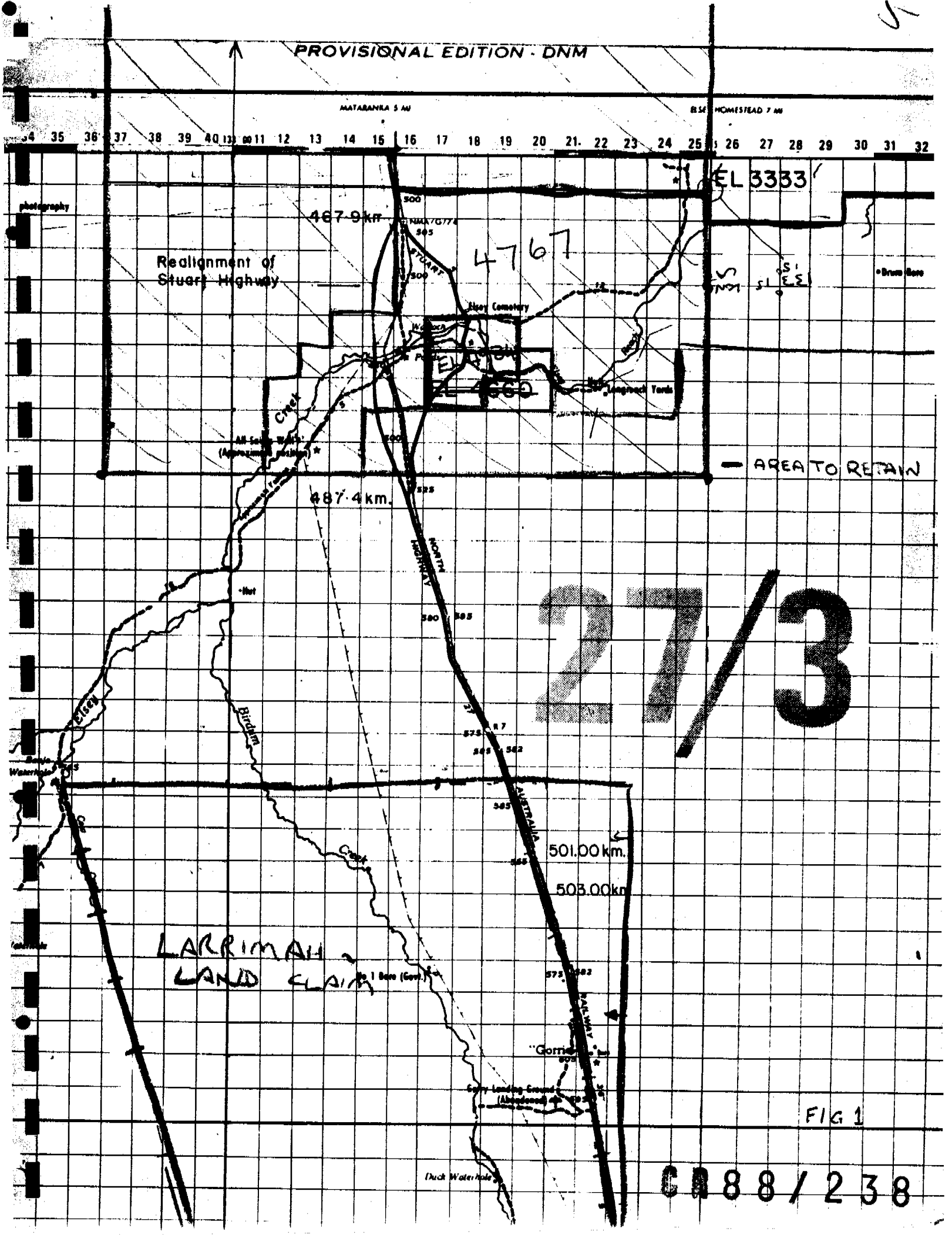
Carry out further reconnaissance geological mapping and exploratory drilling along the southern bank of Elsey Reach east of the Stuart Highway.

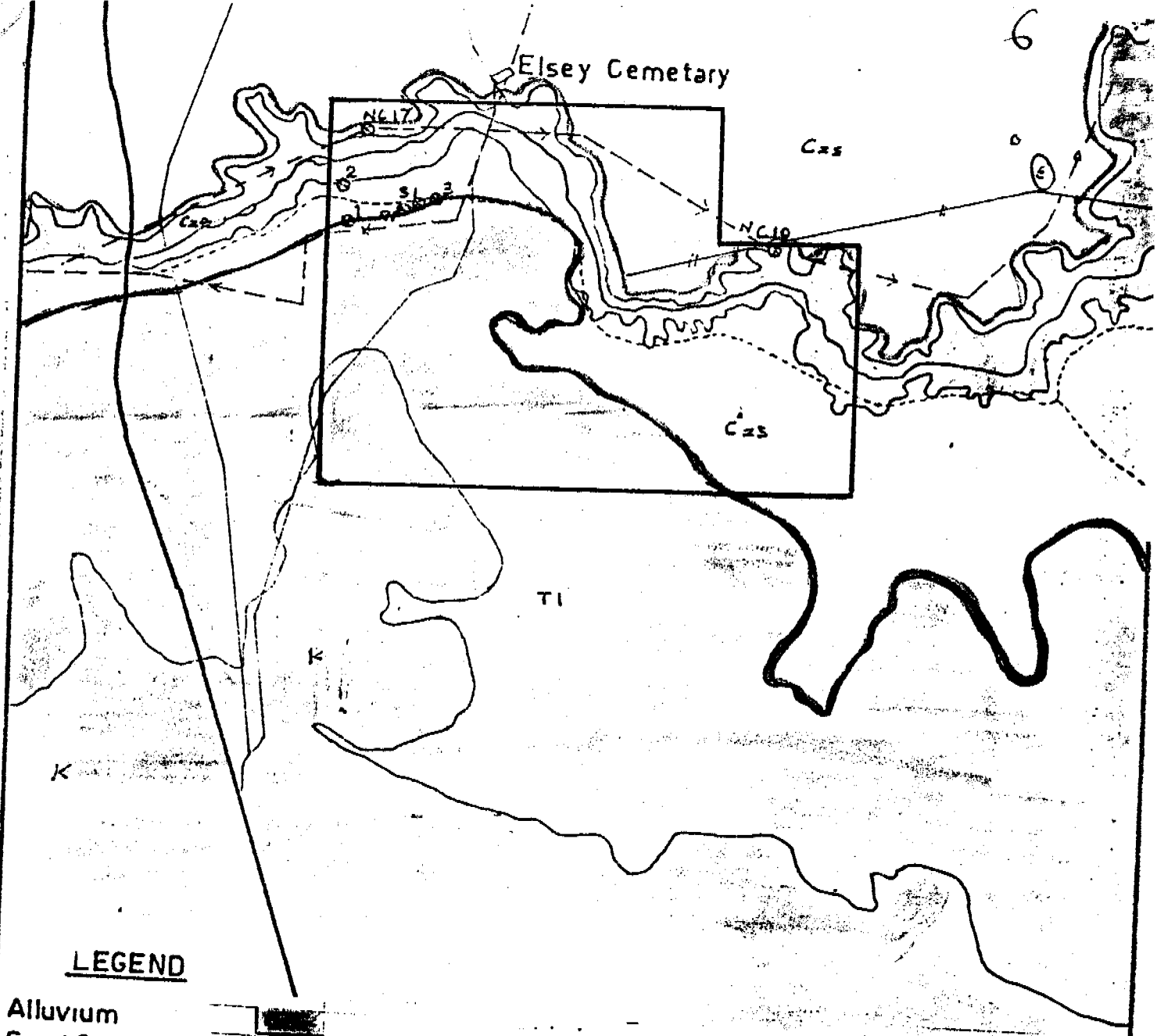
ESTIMATED EXPENDITURES.

Consultants field charges	$3400.00
Consultants office charges	$3400.00
Air fares	$1120.00
Taxis	$40.00
Field assistants wages	$560.00
Helicopter hire	$1680.00
Acommodation and meals	$431.80
Field living allowance	$700.00
Air photographs	$2045.00
Legal fees	$350.00
Chemical analyses	$630.00
Miscellaneous purchases	$137.75
Communications	$120.00
J.Sickerts costs & charges	$2219.65
Management & overheads 20%	$3366.68
TOTAL	$20,200.08

Signed.....

L.G.Nixon.
27/4/1988


PROVISIONAL EDITION · DNM
MATARANKA 5 MI
B.S.H. HOMESTEAD 7 MI
EL 3333
467·9km
Realignment of
Stuart Highway
4767
EL 4660
AREA TO RETAIN
487·4km.
NORTH HIGHWAY
AUSTRALIA
501.00 km.
503.00km
LARRIMAH
LAND CLAIM
Duck Waterhole
273
FIG 1
CA88/238



LEGEND

- Alluvium
- Sand & gravel (Czs)
- Lateritic soils
- Chalky limestone
- Mullaman Beds (K)
- Tindall Limestone (€)
- Sample site (x)
- EL Boundary
- Stuart Highway
- Old highway
- Track
- Fence
- Helicopter track

Scale 1:84000

NORTHERN CEMENT PTY. LTD.

Drawn L.G.N	EL 4934
Traced	PHOTOGEOLOGICAL MAP showing SAMPLE LOCATION SITES and HELICOPTER TRAVERSES MATARANKA N.T.
Checked	
Revised	
Date 2/6/1987	LGB Nixon & Associates

FIG 2.