

E.L. 1240 - FLAPPER HILL

ANNUAL REPORT FOR THE YEAR ENDED 26TH JULY 1977

INCLUDES PROGRESS FOR QUARTER TO 26TH JULY 1977

Prepared For

MIMETS EXPLORATION PTY. LIMITED

OPEN FILE

By: R.P. Cambrell

AQUITAINE AUSTRALIA MINERALS PTY. LTD.

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REPORT BY GES PTY. LTD.

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1.0 SUMMARY

E.L. 1240, situated on the eastern margin of the Bonaparte Gulf Basin, was granted on 27th July 1976. Reconnaissance, rock chip sampling, seismic refraction and IP surveying were completed in the initial year of tenure, and interpretation of results for definition of the subsequent program is in progress.

2.0 INTRODUCTION

E.L. 1240 of 151.8 sq. kms, situated near Legune Homestead in the north-west of the Northern Territory, was granted to Mimets Exploration Pty. Ltd. for a period of twelve months from 27th July 1976. An application for renewal of the same surface was submitted on 20th June 1977.

Geologically, the E.L. covers a portion of the eastern margin of the Bonaparte Gulf Basin where the Lower Carboniferous clastic/carbonate sequence is in fault contact with Precambrian basement.

3.0 PREVIOUS EXPLORATION

The area covers in part, portion of E.L. 675 held by Aquitaine Australia Minerals Pty. Ltd. which was relinquished at the end of 1975. Prior to this relinquishment, Aquitaine had constructed a baseline extending NE through the area from Wicklow Trig., passing $\frac{1}{2}$ km to the east of Flapper Hill. NW-SE lines were pegged at approximately 1 km intervals along this baseline and, of these, lines 4 to 20 occur within E.L. 1240 or extend just outside the NW boundary of the area.

Rotary drilling was carried out in 14 holes at close-spaced intervals on two lines in 1974 and a further 80 shallow rotary holes (numbered NBF 4001 to 4080) were drilled to penetrate 2 - 5 metres into bedrock at 200 m centres on the remaining lines the following year. Sampling and analysis of the lower 2 - 6 m of alluvium and bedrock provided Pb-Zn geochemistry and bedrock geology.

4.0 EXPLORATION DURING 1976/1977

Initial reconnaissance of the area was carried out in 1976. Outcrop in the area is restricted to Flapper Hill itself where

Lower Carboniferous Burt Range Formation occurs. The thickness of surrounding black soil ranges from 4 to 52 metres based on previous bedrock drilling, and averages about 25 metres.

Ten rock chip samples were submitted for analysis of Cu, Pb, Zn, Ag, Mn, Co and As. Higher than normal values for Zn, Pb, Mn and As resulted in six of these, although it is not yet known whether these are anomalous for the area in general. A program of geochemical drilling using a rig operating on tenements to the south was proposed to commence late in the season. However, early rains prevented a start and the rig was taken out of the area for the wet season.

Field work in 1977 commenced in July with surveying and clearing of lines in preparation for seismic refraction geophysics. Shallow shot-holes were auger-drilled by Foraco with a Techno SM-70 rig to an average depth of 5 m. The survey was carried out by GES Pty. Ltd. and relevant sections of their operational report are appended (Appendix I). Lines completed were (see Figure 2):

		<u>Kms</u>
SNBL-2	1500SW - 4500SW	3
SNBL-3	L20, 800NW - 2800NW	2
SNBL-4	L18, 800NW - 1800NW	1
SNBL-5	L16, 700NW - 1700NW	1
SNBL-6	L14, 00 - 3000NW	3
SNBL-7	L12, 400SE - 1600NW	2
	Total:	12 kms

Interpretation of the data had not commenced as at the end of the period.

Profiles of dipole-dipole IP were carried out on the following lines in an effort to test the application of the method in the area (see Figure 2):

		<u>Kms</u>
L14	100NW - 1500NW	1.4
L16	850NW - 1550NW	0.7
L18	400NW - 1200NW	<u>0.8</u>
	Total:	<u>2.9 kms</u>

The survey took four days in all owing to extreme difficulty in obtaining meaningful readings. Both overburden and formational conductivities (? saline groundwater) resulted in very low resistivity contrasts except in the vicinity of Flapper Hill itself, and chargeabilities were similarly lacking in contrast. Results are still in preliminary form and are not included here.

5.0 CONCLUSIONS AND RECOMMENDATIONS

With such poor outcrop in an area of expected structural complexity, the program on E.L. 1240 is still in its infancy. Interpretation of the geophysics, and correlation with the bedrock geology from previous drilling, will enable siting of stratigraphic holes to test the potential of the sequence. This work will be carried out in conjunction with exploration on other areas held with Aquitaine and Conex further to the south.

6.0 EXPENDITURE

Total expenditure on E.L. 1240 recorded for the period ended 27th July 1977 was as follows:

Rent and Maintenance - Vehicles	\$ 253.65
Travelling Expenses	9.58
Transport and Freight	380.00
Geophysical Surveys	4,907.00
Consultant and Outside Services	1,888.65
Minerals Salaries	1,535.00
Administration and Base Expenses	2,240.00
	<u>\$11,213.88</u>

An additional \$3,816.00 recorded for the period to 10th August 1977 was incurred in exploration of E.L. 1240 prior to 27th July 1977. This amount will be included in expenditure details for the next quarter.

APPENDIX I

KUNUNURRA SEISMIC REFRACTION SURVEY

OPERATIONAL REPORT

BY: GES PTY. LTD.

**KUNUNURRA
SEISMIC REFRACTION SURVEY**

FOR

AQUITAINE AUSTRALIA MINERALS PTY. LTD.

by

GES Pty. Ltd.

June-July, 1977

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INTRODUCTION

Seismic Refraction Survey was carried out during June and July, 1977 for Aquitaine Australia Minerals Pty. Ltd. by GES Pty. Ltd.

The survey area is located about 50 to 100 Kms north and northeast of Kununurra in Western Australia and Northern Territory and was divided into the following prospects: Sorby Hills North, Sorby Hills South, Jeremiah, Sandy Creek, Ocher Mine and Flapper Hill.

The camp for the survey was located at Aquitaine's Base Camp about 50 Kms from Kununurra, W.A. The recording crew also camped in Sandy Creek, Ocher Mine and Flapper Hills areas, in order to select optimum times for recording during windy conditions in wooded areas and also to reduce travel time to the prospects.

Surveying, drilling and dozing was carried out by Aquitaine.

The topography of the areas is flat to undulating with some steep outcrops in Sandy Creek, Ocher Mine and Flapper Hills areas. The surface consists mainly of black soils, grading into sandy soils at and near outcrop areas.

A total of 124 Km coverage was obtained during the forty three, 10 hour days.

The weather has been fine throughout the survey period, only occasional windy days hampered the operations in wooded areas.

RECORDING

One 24 channel SIE PT-100 recording system was used complete with filter, AGC, variable gain functions and SIE PRO 11-6 oscillograph. Three FM 25 watt two-way radios for communication and time break transmission. Geophone layout consisted of two HS-1, 4.5 Hertz geophones per trace planted side by side. The use of up-hole geophone was not practical, because of shallow holes.

The following recording parameters were used:

Filter	Out - 1/47
AGC	Fast
Gain	Variable
No. geophones per trace	2
No. of shots into spread	5-6
Shot depth	Surface - 5m
Charge size	1Kg - 12Kg
Shot point interval	500m
Spread length	1,025, 1,050m
Geophone trace interval	25m, 50m
Off-set shots	500m, 1,000m

(See Shot Point and Geophone Layout Diagram on Page 4)

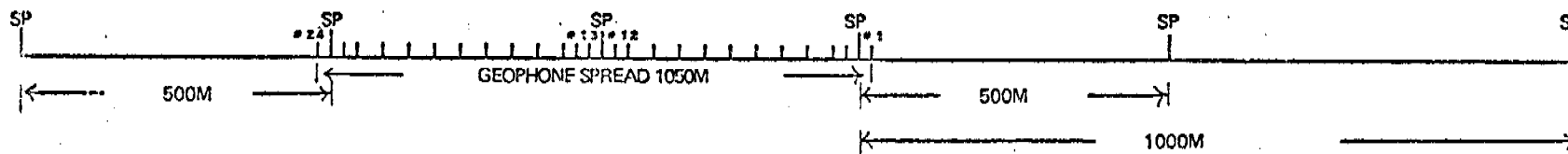
COMPUTING

Refraction events were picked to .001 sec. accuracy and corrected to the datum (surface) by adding the estimated up-hole time to the event times from time break. The corrected times were plotted on Time-Distance graphs using the following symbols:

- ⊙ From shot points to the east of the spread
- ⊠ From shot points to the west of the spread
- △ Peaks shot from either side
- ▽ Troughs shot from either side

Reciprocal time ties were generally good except some data obtained from complex fault zones.

The field records are compiled into spread groups and filed in line sequence into folders. The time-distance graphs and records have been retained by Aquitaine's staff at the Sorby Hills Base Camp.



SHOT POINT AND GEOPHONE LAYOUT

NOTE: From 7th to 18th of June
 trace # 1 was located at trace
 # 2 position and traces 12 & 13
 at trace # 13 of this diagram

G.E.S. PTY. LTD.
 August, 1977

FLAPPER HILL AREA

Seismic coverage was obtained on the following lines:

LINE No.	CO-ORDINATES	Km
SNBL-2	4,500 SW – 1500 SW	3.0
SNBL-3	2800 NW – 800 NW	2.0
SNBL-4	1800 NW – 800 NW	1.0
SNBL-5	1700 NW – 700 NW	1.0
SNBL-6	3000 NW – 00	3.0
SNBL-7	1600 NW – 400 SE	<u>2.0</u>
	Total Coverage	12.0 Km

Total explosives used	173 Kg
Explosives per Km	14.42 Kg
Total detonators used	68
Detonators per Km	5.76

The shot holes in this area were from 0.5 m to 3.0 m in depth and limited the amount of charge being used, especially for the offset shots and generally for SNBL-2 which was probably along the strike of the Flapper Hill structure. Due to dozer break down line SNBL-6 was not cleared. Also some of the 1000 m offset shots could not be taken due to hole conditions.

The following charge sizes are recommended for future surveys.

Split	2 Kg
On end	3-4 Kg
500 m off	6-7 Kg
1000 m off	8-12 Kg

Holes should be drilled to about 5 metres.

FIELD STATISTICS

Kilometers Shot	124
Profiles Shot	689
Total Shots	712
Recording	43 days
Average Production/Day	2.884 Km

Surveying and Dozing by Aquitaine

Drilling by Aquitaine

Shot Hole Depth Surface-5m

Explosives:

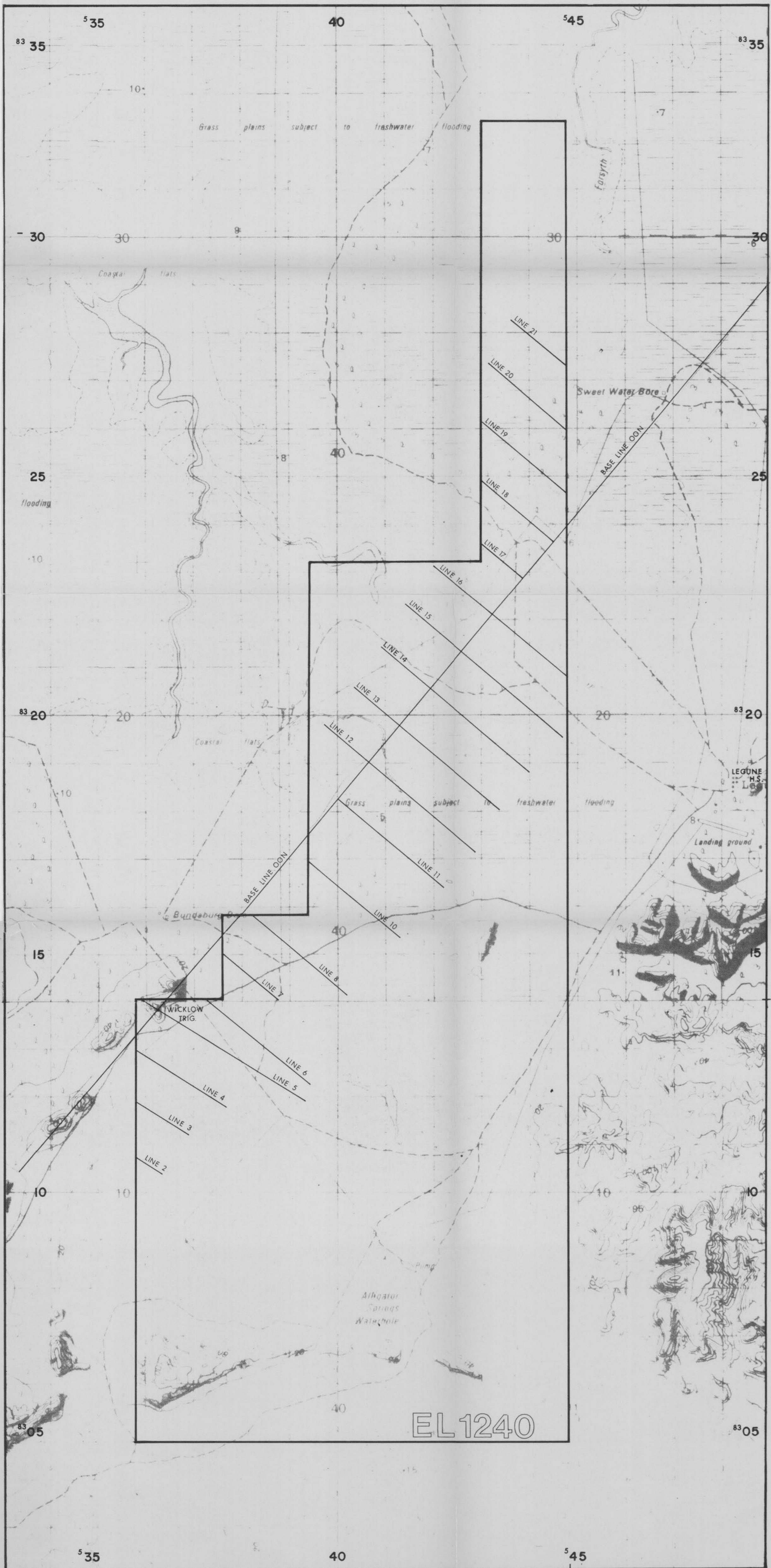
Molanite	(2,835 sticks)	2,952.6 Kg
8" Gelnite	(228 sticks)	52 Kg
Gelnite 60	(4 sticks)	6.4 Kg
	Total	3,011 Kg

Average explosives/Km 24.28 Kg

PERSONNEL:

Party Chief	-	M.B. Widiger
Observer	-	R. Brown
Shooter	-	R. Ambrose
Field Assistants	-	1

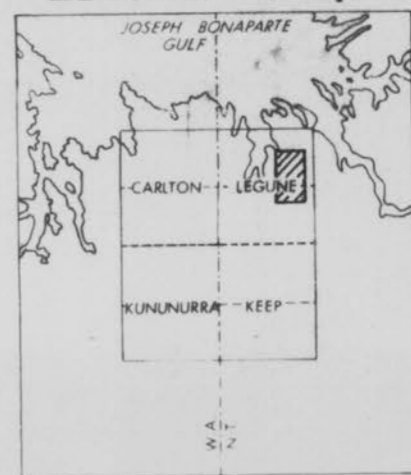
M.B. Widiger
G.E.S. Pty. Ltd.
August 4th, 1977



Reference



Location Map

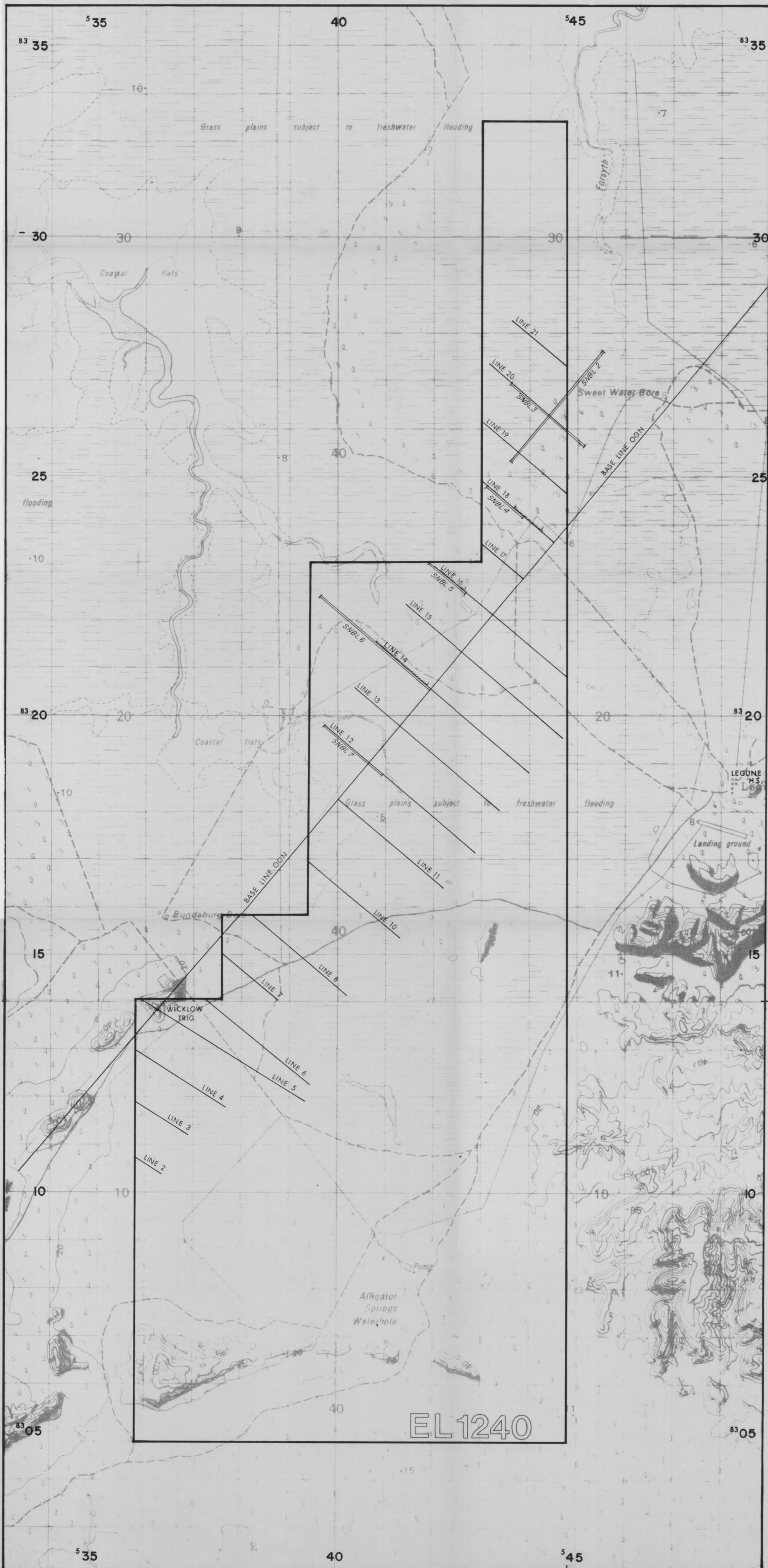


— MIMETS —

**Bonaparte Gulf Basin
LEGUNE
BASE PLAN
SHOWING
E.L. 1240**



Scale - 1:50,000



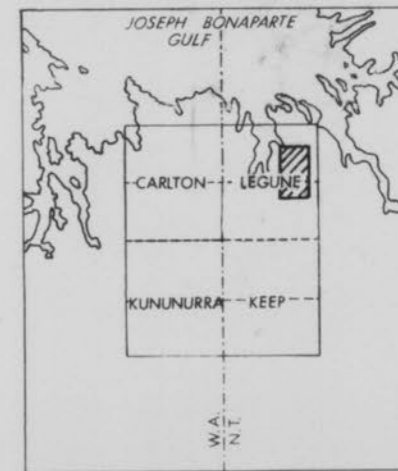
EL1240

Reference

- Base Line
- == Seismic Line
- I.P. Line

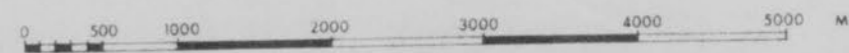


Location Map



— MIMETS —

Bonaparte Gulf Basin
LEGUNE
BASE PLAN
SHOWING
GEOPHYSICAL SURVEYS



Scale - 1:50,000