

**TOTAL Mining Australia Pty. Limited**

EXPLORATION RETENTION LEASE 84  
ALLAMBER, N.T.

ANNUAL REPORT TO THE  
DEPARTMENT OF MINES AND ENERGY  
1990

R/90-5-U

D. W. HARROP  
NOVEMBER, 1990

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# TOTAL Mining Australia Pty. Limited

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# TOTAL Mining Australia Pty. Limited

1.

## I. REGIONAL GEOGRAPHIC SETTING OF E.R.L. 84

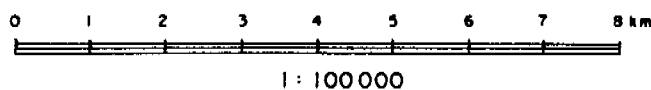
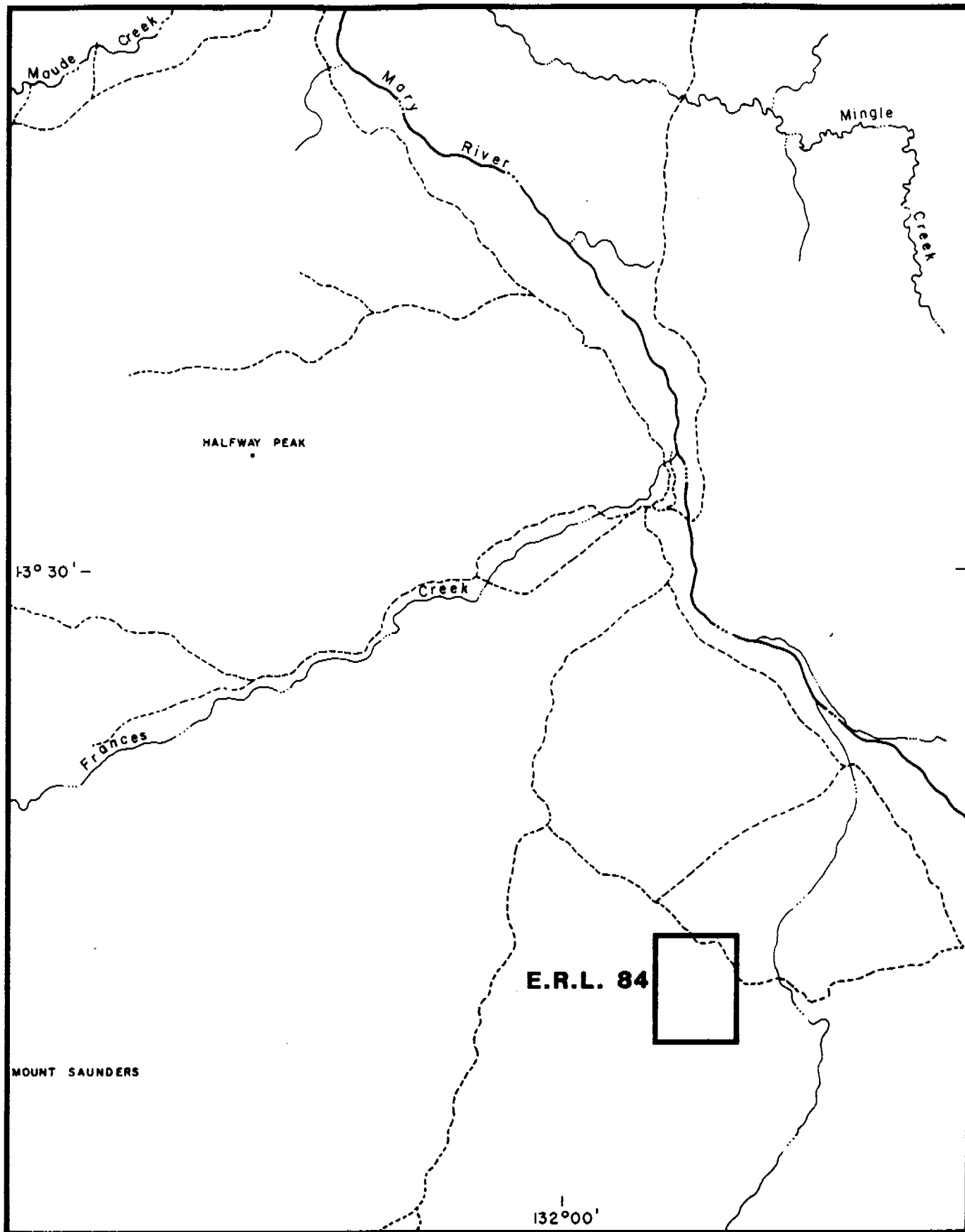
The E.R.L. area is located 175 air kilometres southeast of Darwin, or 285 kilometres by road. Road access is via the Stuart Highway to Pine Creek, thence 25 kms northeast along the Jabiru road, thence 23 kms north into Mary River Station.

The E.R.L. is centred at 13° 35'S, 132° 03'E and consists of 300 hectares.

The eastern boundary is the Mary River which flows all year; intermittently flowing tributaries are Nellie Creek and various unnamed creeks.

Numerous roads and tracks and fences make vehicle access to the key points of the E.R.L. relatively easy.

Topographic relief within the E.R.L. is mainly gently undulating in granite country to steep with moderate relief in the few areas of sedimentary stratigraphy.



## ALLAMBER Tenement Situation

II. REGIONAL GEOLOGICAL AND GEOPHYSICAL SETTING OF E.R.L. 84

2.1 GEOLOGICAL

E.R.L. 84 covers mainly a portion of the Cullen Granite, the largest of the (Carpentarian) Early Proterozoic post-orogenic granitoids (B.M.R. 1984 1:500,000 Pine Creek Geosyncline map). In the area of the E.R.L. the following phases of the Cullen Granite have been named by the B.M.R.:

Pgc <sub>i</sub> Minglo Granite	Coarse pink-green porphyritic hornblende-biotite granite
Pgc <sub>r</sub> Frances Creek Leucogranite	Fine equigranular leucogranite
Pgc <sub>z</sub> Bludells Monzonite	Medium grey-green biotite-hornblende-quartz monzonite, quartz syenite, minor quartz monzodiorite and dolerite.

Within the granites numerous "quartz veins" have been mapped.

More specifically, the E.R.L. straddles the entire width of the Cullen Granite from the northwest trending sediments at the Evelyn Mine to the east-west trending sediments at the TOTAL Mining named Allamber Embayment.

To the west and south of the E.R.L. the intruded sediments are clearly discordant; to the north and in the vicinity of the Allamber Embayment they are mainly concordant. One exception is the Masson Formation, limestones and shales, south of the Allamber Embayment.

2.2 AIR MAGNETICS

Low relief on the granite with no apparent trend. The flanking sediments, with very high relief, especially along the northern contact, show little trend either west or east of E.R.L. 84.

2.3 GRAVITY-BOUGUER ANOMALY

The E.R.L. is within a regional area of high Bouguer relief. There is a +60 low to the northwest which is centred over granite and the north to northeast trend in the centre of the E.L. parallels the granite contact.

2.4 AIRBORNE RADIOMETRICS

The E.R.L. is underlain by a level of high radiometrics.

III. 1990 PROGRAMME

No field work was carried out in 1990 on the Allamber Project area. A resource of around 600 tonnes of uranium metal has been outlined at the prospect which is uneconomic under the current economic climate. Due to the Federal Government's policy on the sale and export of uranium, the Joint Venture has decided not to continue with the exploration at Allamber until such time as there is a change in this policy.

The geological model developed from the exploration at Allamber is being used by the Joint Venture to explore elsewhere in the Pine Creek Geosyncline with the hope that, if another orebody is found, Allamber could be mined in conjunction and hence some of the capital costs which at present make this deposit uneconomic, will be shared.

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## IV. EXPENDITURE ON ALLAMBER E.R.L. 84

Second year of occupancy.

	\$
Personnel - Drafting, etc.	2,640
Taxes	1,500
Overheads	621
	<hr/>
	4,761
	<hr/>

V. PROPOSED PROGRAMME FOR 1991

No exploration is planned for the 1991 period unless there is a change in the Federal Government's policy on the export and sale of uranium.

The 1991 proposed budget is related to care and maintenance of the licence. Exploration is planned for other areas within the Pine Creek Geosyncline to advance the definition of uranium intersections to that of the Allamber Project. It is thought that a number of pods of uranium mineralization may be mined contemporaneously with Allamber to form an economic orebody.



# NORTHERN TERRITORY GEOLOGICAL SURVEY - GEOSYSTEM DATA SHEET

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Accompaniments

Drill Core?

Licence No E.R.L. 84

Project Year(s) Second

Licensee(s) TOTAL Mining Australia Pty. Limited

Joint Venture(s) PNC Exploration (Australia) Pty. Ltd.

Operator(s) TOTAL Mining Australia Pty. Limited

1:1 000 000

1: 250 000

1: 100 000 Ranford Hill

1: 50 000

Prospect Name Allamber

Site Location Lat: 13°40' Long: 132°05'

East: North:

Tectonic Unit Petroleum Geol Metalliferous minerals

Nonmetalliferous minerals

??? Terms

## Drilling

### Geophysics

### Geochemistry

### General

#### Aerial Surveys

#### Sampling

Diamond	Magnetic	Stream sediment	Geol mapping
Percussion	Radioactivity	Soil	Photogeology
Auger	EM Surveys	Rock chip	Gridding
Rotary	<u>Ground</u>	Water	Methods
	EM Survey method	<u>Geochemistry</u>	Regional geol
	IP Survey method	Drainage testing	Local geology
	Seismic surveys	Drill core analysis	Stratigraphy
	Resistivity svvs	Assaying	Reconnaissance
	Geophysical anom	Geochemical anom	Logging
	Gravity		

Notes

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