REPORT EEE 93/11

ANNUAL REPORT FOR YEAR THREE
EXPLORATION LICENCE 6973
FOG BAY AREA NT

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FOR
K.F. EUPENE & J.J. SULLIVAN

FOG BAY SD52-3
FOG BAY 4972

DARWIN NT
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DIRECTORS: Geoffrey Samuel Eupene
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SUMMARY

Peat deposits within the licence area were located and tested. Market entry for the product has been gained and continued development seems assured.

1. INTRODUCTION

Exploration Licence 6973 is located 70 kilometres south-west of Darwin (Figure 1) on the Fog Bay (4972-11) 1:50,000 sheet. It is accessed via the Stuart Highway, Mandorah Road and Finniss River Road. It is situated immediately to the south of Coal Leases 3 and 4 held by Messrs K. Eupene & J. Sullivan.

The licence was taken out in order to evaluate extensions of high quality peat within peaty soils located in swampy country on the western boundary and to protect access into Coal Leases 3 and 4.

This report details the work conducted in the third year of tenure, and proposes a work programme and estimated budget for year four.
2. TENURE

Exploration Licence 6973 is comprised of 6 blocks (19 square kilometres) and was granted to Messrs K.F. Eupene (50%) and J.J. Sullivan (50%) on the 11th of October, 1990 for a period of four years. It was reduced to 3 blocks in October 1992.

3. CONCLUSIONS

(i) Peat deposits are present within the licence area.
(ii) The quality of the peat is suitable for local markets
(iii) Peat regeneration has progressed within EL6973.

4. PREVIOUS EXPLORATION

There has been very little systematic exploration conducted within the vicinity of EL6973, mainly because the prospective Proterozoic bedrock is obscured by a well developed lateritic regolith and younger sediments.

Hickey (1985) reported that numerous geophysical surveys (magnetics, radiometric, IP, gravity) and reconnaissance geological mapping were undertaken by the BMR during the period from 1963 to 1982. Some of these surveys included the area covered by EL6973. Esso Exploration Australia Pty Ltd carried out grid based auger drilling and geochemical sampling over the northern half of the Fog Bay 1:100 000 sheet in an attempt to locate uranium in Early Proterozoic subcrop.

Idemitsu Uranium Exploration Australia Pty Ltd carried out an intensive exploration programme east of EL6973 searching primarily for uranium of the Alligator Rivers type during the period 1980 to 1984. Some stratigraphic drilling was conducted as part of this programme close to the northern boundary of EL6973.

Messrs. K.F. Eupene, J.J. Sullivan and R.J. Stone carried out exploration for gold, base metals, shell grit and peat on EL4733 immediately to the east of EL6973 from 1985 to 1991. No significant base metal or gold geochemical anomalies were defined and no deposits of shell grit were located. Areas of suitable high grade peat were recognised and these areas are now covered by coal leases (CL3 and CL4).

During the first two years of tenure, the holders conducted orientation laterite geochemical investigations and reconnaissance prospecting for peat.
5. GEOLOGY

The Fog Bay 1:100 000 sheet covers the north western edge of the Litchfield Province which in turn marks the western margin of the Pine Creek Geosyncline. The oldest rocks are of Early Proterozoic age. Following deposition, the rocks were folded, metamorphosed and intruded by late tectonic and post tectonic Early Proterozoic granites. Shallow marine sediments of Permian and Cretaceous ages cover much of the area. Surficial Cainozoic sediments and a lateritic duricrust form a complex regolith which obscures virtually all of the area.

The surface geology of EL6973 is dominantly comprised of a Tertiary lateritic regolith which includes a cemented pisolithic/nodular duricrust with associated ferruginous clayey sand and soils. There are small areas of black soil plain on the western and southern boundaries of the licence. The regolith is developed on Early Cretaceous sediments comprising poorly sorted gritty sandy claystone, clayey sandstone and basal conglomerate of the Bathurst Island Formation.

6. WORK CARRIED OUT AND RESULTS

6.1 Peat Evaluation

Auger holes were hand-drilled by the title-holders at 50 metre centres on lines 100 metres apart over an area of approximately 20 hectares in the south-western block of EL6973, to the south of coal lease CL3. This was to determine peat resources in the area and to assess the extent of regeneration of peat in areas which had been burnt out in previous years.

This work established that a significant accumulation of peat is present in the area tested and a Mineral Lease has subsequently been applied for over the area.

6.2 Reconnaissance

Reconnaissance of the northern blocks of the licence did not identify any additional targets for peat.

6.3 Market Development

Commercial studies and assessment of trial samples of peat from EL6973 and CL3 and CL4 have established peat from this area as the preferred ingredient for potting
mixtures distributed by most retail outlets in the Darwin area. Future sales of the product now seem assured and commercial extraction from the coal and mineral (when granted) tenements will proceed on a long-term basis.

7. EXPENDITURE YEAR THREE

Overall expenditure on the licence for Year Three is as follows:

- Geological Consultants: $832
- Wages (K. Eupene, J. Sullivan - fieldwork): $2,180
- Drafting: $90
- Vehicle: $648
- Travel and accommodation: $269
- Administration (includes tenure costs, 15%): 580

Total expenditure: $4,589

The expenditure covenant for Year Three of tenure was $4,000.

8. PROPOSED PROGRAMME AND EXPENDITURE FOR YEAR FOUR

The proposed work programme for Year Four of EL6973 is to upgrade the track through EL6973 to maintain access to the peat deposits held under other tenure;

The estimated expenditure for this programme of work is $2,500.

9. REFERENCES


Hickey, S.H., 1985. Fog Bay Northern Territory 4972 1:100,000 Geological Series NTGS Explanatory Notes
