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NORTHERN TERRITORY GEOLOGICAL SURVEY - G.S. 75/12

THE MOYLE DAM COAL PROSPECT

MINING RESERVE NO. 216

Alice Springs 1:250,000 sheet area, SF 53-14

Northern Territory

by

David Clarke

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Appendix I Brief report on Moyle Dam DDH 1 by I.G. Faulks

Appendix II Geological Log, Moyle Dam DDH 2.

Plate 1 Location Diagram

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1. INTRODUCTION

In 1962 a reconnaissance seismic survey was undertaken in the Todd River area south of Alice Springs by Namco International Inc., on behalf of Flamingo Petroleum Pty. Ltd. The geophysicist in charge reported that coal was intersected at depths of less than 30 m (100 feet) in shot holes drilled on the southern end of seismic reflection line "C". (T. Quinlan, internal Mines Branch memo, November 1962)

However, Woolley (1963) referred to this occurrence as having been intersected in Namco Shot Point 22 of reflection line "B". He recommended that three diamond core holes be drilled in the immediate vicinity in order to assess the potential of coal in the area.

Mining Reserve No. 216 was created in June 1963 to reserve an area around Shot Point B22 from occupation under the Mining Ordinance.

2. GEOLOGICAL and DRILLING INVESTIGATIONS

Moyle Dam DDH 1 was sited adjacent to Shot Point B22, and drilled vertically to a total depth of 42.6 m (140') in May and June 1966. The whereabouts of the core recovered, or any geological log made of it, is unknown.

However, in February 1968 Faulks attached a note to the file in which the following result was quoted :- "The black "carbonaceous" material of the original report is a 5 cm (2") band of manganese mineral within the Tertiary sequence at about 18 m (60') below the surface". (Appendix I)

The status of the reserve was reviewed by the Chief Geologist in October 1973, and Moyle Dam DDH 2 was sited adjacent to Shot Point B22 and Moyle Dam DDH 1 by D. Howland in November 1974. This hole was completed to a total depth of 39.60 m in February 1975, and the core was logged by the writer in August 1975.

No coal or other carbonaceous material was recovered. Traces of black pyrolusite were found in (?) Palaeozoic calcilutite near the bottom of the hole. Sections of highly gypsiferous clay, and pure pale grey clay, probably of Tertiary age, were intersected higher in the hole. (Appendix II)

Bottom Hole cuttings were examined from nearby Shot Points 2, 4, 6, 8, and 9 on Line 3 - .02, and 1, 2 and 9 on Line 3 - G drilled by Geophysical Associates International on behalf of Magellan Petroleum (NT) Pty. Ltd. in 1966 and 1967. No traces of lignite or other carbonaceous material were found.

3. CONCLUSIONS

The negative results of diamond drilling for coal in the vicinity of Namco Shot Point B22 are thought to indicate that Woolley's 1963 report was mistaken, and that the reported intersection of carbonaceous material was probably found near the southern end of seismic line "C", as recorded by Quinlan in 1962. This area (approximate grid reference 17502016) is presently held under Exploration Licence No. 996.

4. RECOMMENDATIONS

There appears to be no reason why Mining Reservation No. 216 should not be lifted, and the area concerned made subject to the normal provisions of the Mining Ordinance.

5. REFERENCE

Woolley, D.R.	1963	The Occurrence of Coal in the Alice Springs Farm Area. Unpublished Mines Branch report held at Resident Geologist's Office, Alice Springs.
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A P P E N D I X _ I

Brief report on Moyle Dam DDH 1. I.G. Faulks 1/2/68.

Location: About 1 mile NW of Alice No. 1.

Photo location : Alice Springs Run 15

Photo 5170 2.45"E and 7.3"N of SW corner and near
Namco shot point B22.

Date

Drilled: May - June 1966.

Results: Vertical hole drilled to T.D. 140 feet.

The black "carbonaceous" material of the original report is a 2" band of a manganese mineral within the Tertiary sequence at about 60 feet below the surface.

A P P E N D I X _ II _

Geological Log Moyle Dam DDH 2.

D.B. Clarke August 1975.

GEOLOGICAL LOG OF DRILL HOLE

PROJECT MOYIE DAM CCAL - LR 216 REMARKS Datum mean Sea Level
HOLE N° DDH 2 CO-ORDINATES 17052022 RL GROUND 1750' approx.
LOCATION 1 mile NW "Alice No.1" ANGLE FROM HORIZONTAL 90° DIRECTION Vertical

DESCRIPTION OF CORE	Depth in Metres	LOG	CORE RE COVERY %	SAMPLES
Drilled 0 - .6m Recovered -	0		-	
Drilled .6 - 3.6m Recovered .05m Silt, red brown, argillaceous.	1		2	
	2			
	3			
Drilled 3.6 - 7.0m Recovered .10m Silt, red brown, argillaceous.	4		3	
	5			
	6			
Drilled 7.0 - 10.0m Recovered .75m Silt, red brown, argillaceous, with minor sandy interbeds.	7		25	
	8			
	9			
	10			
REFERENCES		LOGGED BY <u>David Clarke</u>		
		SHEET <u>1</u> OF <u>4</u>		DRAWING N°

GEOLOGICAL LOG OF DRILL HOLE

PROJECT NOYIE DAM COAL - MR 216 REMARKS Datum mean Sea Level
 HOLE N° 50H 2 CO-ORDINATES 17052022 RL GROUND 1750' approx.
 LOCATION 1 mile NW "Alice No. 1" ANGLE FROM HORIZONTAL 90° DIRECTION Vertical

DESCRIPTION OF CORE	Depth in Metres	LOG	CORE RE COVERY %	SAMPLES
Drilled 10 - 11.5m Recovered Surface Rubble.	10		-	
	11			
Drilled 11.5 - 11.8m Recovered Surface Rubble.			-	
Drilled 11.8 - 12.8m Recovered Surface Rubble.	12		-	
Drilled 12.8 - 14.6m Recovered 1.60m. From 12.8-13.35m. Clay pale grey mottled white, rarely orange and purple ferrug staining, cohesive, rare trace gypsum. From 13.35-14.40m. Gypsiferous clay, pale grey as above with 50-100% white-clear gypsum crystals up to 1.0 cm length.	13		89	
	14			
Drilled 14.6 - 15.8m Recovered 1.10m Clay, pale grey rare orange ferrug staining, good trace gypsum, locally to 20%.	15		92	
Drilled 15.8 - 16.4m Recovered .25m Clay, with gypsum as above.	16		42	
Drilled 16.4 - 17.7m Recovered 1.3m Clay pale grey, good trace clear gypsum crystals.	17		100	
Drilled 17.7 - 18.6m Recovered 1.5m Clay, pale grey, rare white, yellow, purple mottles, cohesive.	18		167	
Drilled 18.6 - 19.8m Recovered 1.20m As above.	19		100	
Drilled 19.8 - 20.8m Recovered 1.20m As above.	20			
REFERENCES		LOGGED BY <u>David Clarke</u>		
		SHEET <u>2</u> OF <u>4</u>		DRAWING N°

GEOLOGICAL LOG OF DRILL HOLE

PROJECT MOYLE DAM COAL - MR 216 REMARKS Datum mean Sea Level
 HOLE N° DDE 2 CO-ORDINATES 17052022 R.L. GROUND 1750' approx.
 LOCATION 1 mile NW "Alice No. 1" ANGLE FROM HORIZONTAL 90° DIRECTION Vertical

DESCRIPTION OF CORE	Depth in Metres	LOG	CORE RE COVERY %	SAMPLES
Drilled 20.8 - 21.6m Recovered .80m Clay, pale grey, minor orange, purple, white, cohesive, very rare trace rounded sand grains.	20		120	
	21		100	
Drilled 21.6 - 22.9m Recovered 1.20m Clay as above.	22		92	
	23		90	
Drilled 22.9 - 23.9m Recovered .90m Clay as above.	24		122	
	25		100	
Drilled 24.80 - 25.6m Recovered .80m Clay as above.	26		100	
	27			
Drilled 25.6 - 27.5m Recovered 1.90m Clay as above.	28		61	
	29			
Drilled 27.5 - 30.8m Recovered 2.0m Clay as above, rare trace black pyrolusite and very weakly calcareous in bottom 10cm.	30			

REFERENCES







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SHEET 3 OF 4

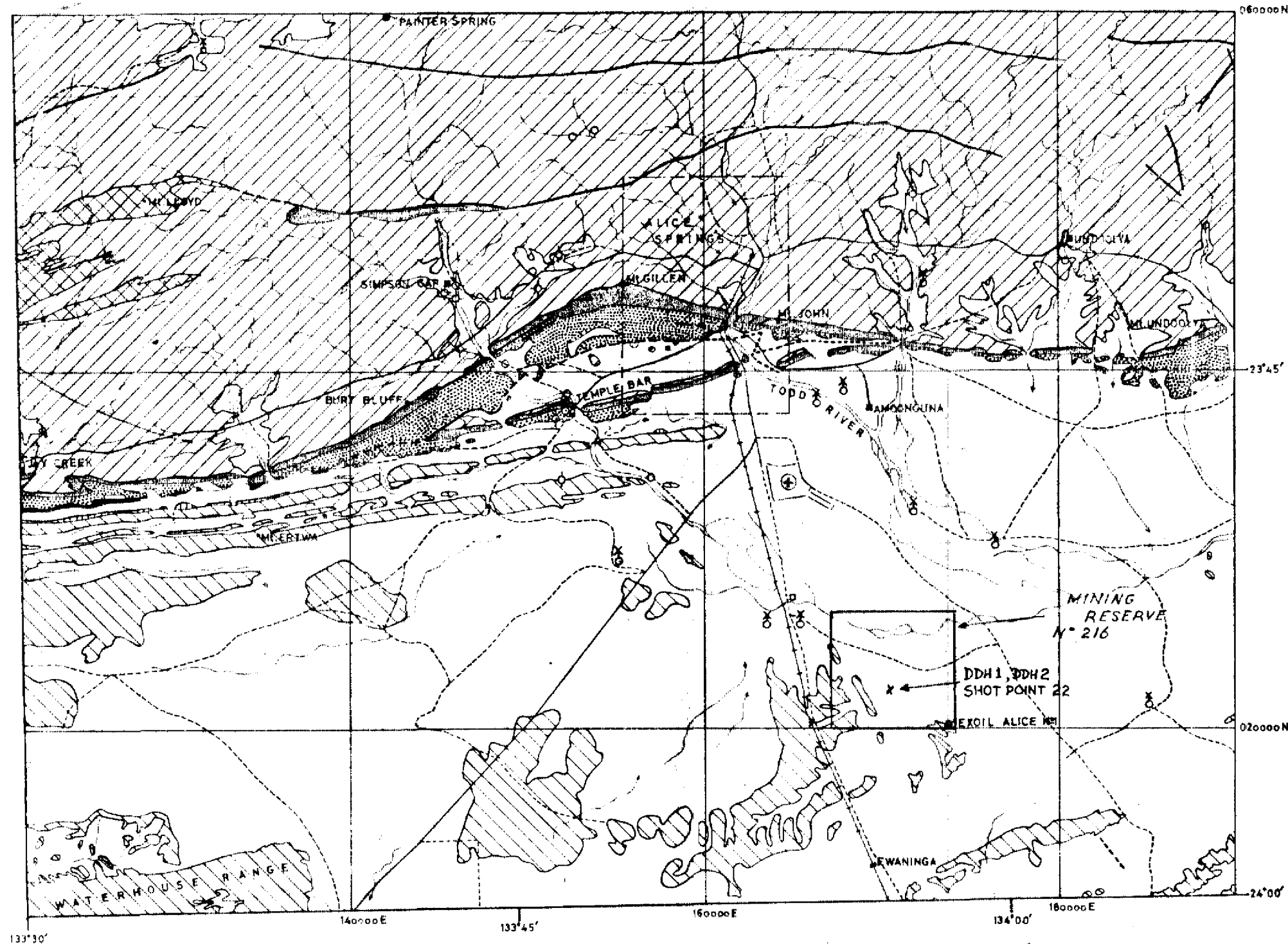
DRAWING N°

GEOLOGICAL LOG OF DRILL HOLE

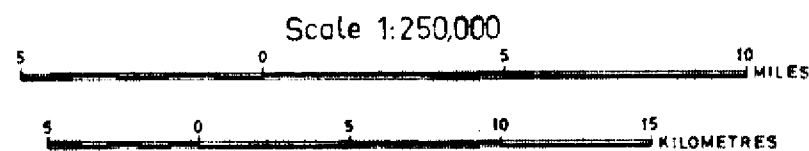
PROJECT MOYLE DAM CCM - MR 216 REMARKS Datum mean Sea Level
 HOLE N° EE 2 CO-ORDINATES 17052022 RL GROUND 1750' approx.
 LOCATION 1 mile NW "Alice No. 1" ANGLE FROM HORIZONTAL 90° DIRECTION Vertical

DESCRIPTION OF CORE	Depth in Metres	LOG	CORE RE COVERY %	SAMPLES
Drilled 30.8 - 32.1m Recovered 1.10m From 30.8-31.30m. Clay, green, weakly to highly calcareous, with up to 10% black irregular blebs pyrolusite to 1cm long, cohesive.	30			
From 31.30-31.90m Calcilutite, white, generally argillaceous, soft, locally mechanically strong, traces of black pyrolusite in blebs and thin bands.	31		85	
Drilled 32.1 - 32.6m Recovered .50m Calcilutite as above.	32		100	
Drilled 32.6 - 34.1m Recovered .20m Calcilutite as above.	33		15	
Drilled 34.1 - 36.1m Recovered .30m Calcilutite as above.	34		15	
Drilled 36.1 - 39.2m Recovered .45m Calcilutite as above.	35		15	
Drilled 39.2 - 39.60m Recovered .30m. Calcilutite as above.	36		75	
	37			
	38			
	39			
	40			
Total Depth 39.60 metres.				
REFERENCES		LOGGED BY <u>David Clarke</u>		
		SHEET <u>4</u> OF <u>4</u>		DRAWING N°

LOCATION DIAGRAM



Reference	
CAINOZOIC	Undifferentiated
PALAEOZOIC	Undifferentiated
PROTEROZOIC	PERTATATAKA FORMATION
	AREYONGA FORMATION
	BITTER SPRINGS FORMATION
	HEAVITREE QUARTZITE
	ARUNTA COMPLEX Meta-quartzite, quartz-sericite schist.
	ARUNTA COMPLEX Undifferentiated metamorphics.



Abandoned oil well
Bore, with wind pump, abandoned
Well, with wind pump
Road
Track
Railway station, siding
Town boundary
Homestead
Aerodrome
Drainage channel, floodout
FAULT, approximate, concealed

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