

221001

U.S.M.	A.S.	G.S.	E.S.	S.S.
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FINAL REPORT ON EXPLORATION
 OF EL 19/84 (MT DROMEDARY)
 NOVEMBER 1984 TO JANUARY 1985

MICROFILMED

OPEN FILE

REPORT PREPARED FOR
 AUSTRALIAN NEWSPRINT MILLS
 BY
 McELROY BRYAN & ASSOCIATES PTY LIMITED

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221003

SECTION 1. SUMMARY AND INTRODUCTION

The Exploration licence 19/84 is located in the area of Mt Dromedary, Elderslie, and Hollow Tree, approximately 30 to 40 km north-west of Hobart (Figure 1). Exploration for coal, since the licence was granted on 31st October 1984, has been concentrated around Mt Dromedary. The Triassic coal measures (Upper Parmeener Super-Group) occur over only a small part of the 490 sq km exploration area. Coal occurrences are of limited extent in the vicinity of Mt Dromedary - Tanina Bluff. Coal was not found in the holes drilled by Australian Newsprint Mills, but a thin weathered coaly outcrop was found north of Tanina Bluff at an elevation of 650 m. Thin coal seams (less than 0.9m) have been intersected in Triassic sediments as a result of previous exploration programmes near Elderslie and Wetheron and it is considered that the potential for the presence of economically viable reserves of coal in this area is very limited. Further exploration for coal in EL 19/84 is not considered to be warranted on the basis of the available geological data.

221005

SECTION 2. PREVIOUS EXPLORATION

The area of the present exploration licence is within a much larger exploration area of 12,9000 km² that was granted to B.H.P. on 15.4.81. From that date until April 1984, when it was relinquished, drilling was undertaken for Triassic coal. From April 1983 until April 1984 exploration for Permian coal was undertaken by Mobil Energy Minerals Australia (MEMA) (Williams 1984), as part of a joint venture with B.H.P.

The B.H.P. exploration programme covered a very large area and the drilling was very much of a reconnaissance nature. No effort was made to construct access roads to a better drill site. The holes were drilled at a convenient location in the general vicinity of some upper Triassic sediments. It is unlikely that an exploration programme of that type would be successful considering the complex geology and the topography of the area.

Within the present EL 19/84 there are six drill holes which were completed by B.H.P. and they are T7, T7A, T8, T9, T13, and T16 (shown in Figure 2). Of these holes, coal seams were intersected in T7, T7A and T13. However, none of the seams had a thickness greater than 1.0m. (Report by B.H.P. for the six months ended 15th April 1983). Core was taken from T7A and the analytical results are included below in Table 1. It should be noted that the three coal intersections are each less than 0.90m.

Table 2 lists the coal seams intersected in the open holes T7 and T13.

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During 1983 investigations undertaken by MEMA were directed towards the possible occurrence of coal in the Permian strata which underlie the Triassic sequences in southern Tasmania. Coal was not encountered in any of the 5 holes drilled and MEMA have concluded that there is no potential for finding Permian coal in the area north of Hobart, (Williams 1984).

TASMANIA

EL 19/84

Wetheron Area

T8
T7,7A
Llanberis Area

T16
T13
Elderslie Area

SEE FIGURE 3

Maydena

New Norfolk

HOBART

Geeveston

STORM

BAY

NORTH
BRUNY
ISLAND

TASMAN PENINSULA

FORESTIER
PENINSULA

MARIA
ISLAND

TASMAN
SEA

LEGEND

- T8 BHP drill hole, no coal intersections
- T7 BHP drill hole, with coal intersections

5 cm

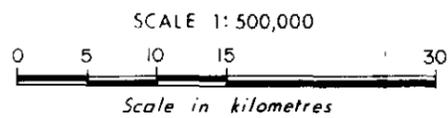


Figure 2

**DRILL HOLE LOCATIONS OF
B.H.P. EXPLORATION
WITHIN PRESENT EL 19/84**

TABLE 1
 COAL ANALYSES RESULTS*
 (from B.H.P. Six Monthly Report 15 April 1983)

SAMPLE NUMBER:	BL5011	5012	5013
DRILL HOLE:	T 7A	T 7A	T 7A
SAMPLE INTERVAL:	1.93-2.82m	6.30-6.88m	17.04-17.93m
Thickness of coal (m)	0.89	0.58	0.89
Interburden (m)	3.48	10.16	
Total Moisture (as received) %:	11.6	4.9	3.4
Moisture (ad) %:	7.3	4.2	2.5
Specific Energy (d) MJ/Kg:	20.26	21.98	20.82
Total Sulphur (d) %:	0.36	0.47	0.34
<u>Proximate Analysis</u>			
Moisture (ad) %:	10.3	4.3	2.2
Ash (d) %:	27.3	35.1	38.3
Volatile Matt. (d) %:	21.1	14.5	13.0
Fixed C. (d) %:	51.6	50.4	48.7

* Results are based on split core: Float/sink tests were carried out on the remaining half core.

TABLE 2
 SUMMARY OF COAL SEAM INTERSECTIONS
 IN B.H.P. OPEN HOLES DRILLED 1983

Drill Hole No.	Area Drilled	Coal Seam		Estimated Thickness Coal (m)	Interburden (m)
		Top (m)	Base (m)		
T7	Wetheron	1.9	2.8	0.9	3.5
		6.3	6.9	0.6	
		17.0	17.6	0.6	
		39.9	40.9	1.0	
		51.1	51.5	0.4	
		58.2	59.0	0.8	
T13	Elderslie	55.4	56.1	0.7	0.8
		56.9	57.5	0.6	
		89.6	90.3	0.7	
		90.8	91.2	0.4	
		92.4	93.1	0.7	
		99.8	100.8	1.0	
		101.4	102.0	0.6	

SECTION 3. EXPLORATION OF SOUTHERN PORTION OF EL 19/84

Upper Triassic coal bearing lithic arkoses and lutites are known to exist in the area of Tanina Bluff and Mt Dromedary. The sediments are overlain or intruded by Jurassic dolerite and Cainozoic dolerite scree or talus. A limited open hole drilling programme was designed to test the suspected presence of coal in these Upper Triassic sediments.

In December 1984 and January 1985 six (6) holes, totalling 510.40 metres (see Table 3), were drilled at selected sites in the vicinity of Tanina Bluff and Abels Marsh (see Figure 3). The holes were planned to intersect a small thickness of dolerite and/or dolerite scree then intersect a considerable thickness of Upper Triassic sediments. Drilling through dolerite scree presented many difficulties and some holes were relocated so that they were collared in areas of known Triassic sediments to avoid having to drill through the dolerite scree. Despite not being able to complete drill holes in their initially planned locations, Mt Dromedary RDHS 03, 04 and 06 indicate that there are no coal seams of any consequence in the Upper Triassic sediments in this area (see Figure 3). Mt Dromedary RDH 05 was located to test the theory that the Triassic sediments continue westward from Abels Marsh and are covered by a sill, however, the results show that between Gittus Marsh and Abels Marsh there is a substantial dolerite sill or dyke feeder which has displaced the Upper Triassic sediments at least 120m. It is suspected that the sediments intersected in Mt Dromedary RDH 06 are the basal portion of the Upper Triassic sediments.

TABLE 3

SUMMARY DRILL HOLE INFORMATION

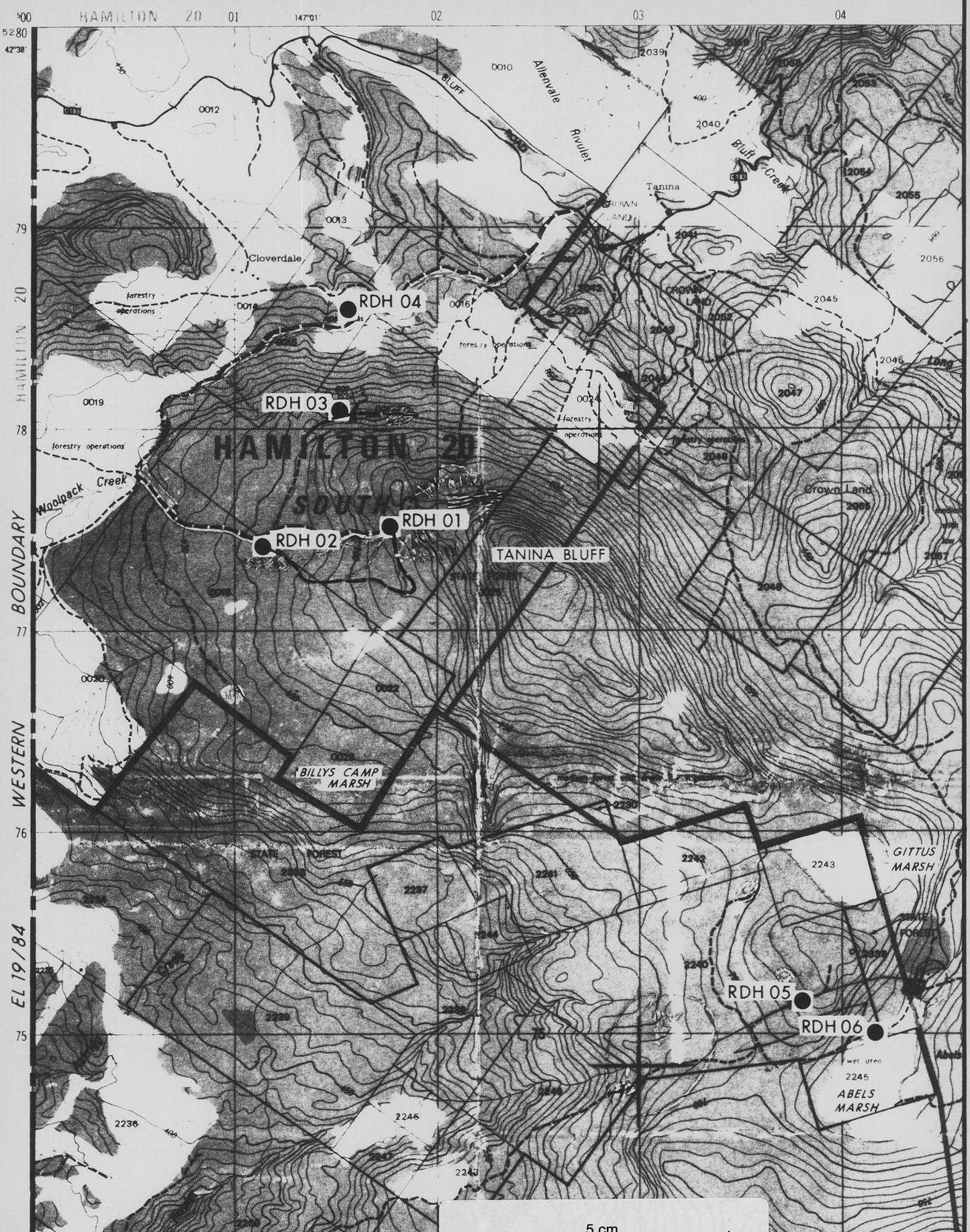
DECEMBER 1984 - JANUARY 1985

DRILLING PROGRAMME MT DROMEDARY

Drill Hole Mt Dromedary	Collar RL (m) (approx)	Total Depth (m)	Base of Dolerite scree (m)	RL Base Dolerite Scree (m)	Thickness of Triassic Sediment (m)	RL Top Triassic Sediment (m)	Presence of Coal or Coaly Material >0.5m
RDH 01	740	20.50	>20.5	719.5	?	?	No
RDH 02	660	37.50	>37.5	622.5	?	?	No
RDH 03	650	171.00	Not present	-	171.0	650	No
RDH 04	500m	63.10	13.0	487	50.1	487	No
RDH 05	720m	120.0	In situ dolerite (>120m)		0	?	No
RDH 06	660	98.30	3.0	657	95.3	657	No

221011

010



**EL 19/84
DRILL HOLE PLAN
November '84 - January '85
Drilling**

Scale 1:25,000



PLATFORM PEAK
STATE
Figure 3

A small amount of reconnaissance mapping was completed during the drilling programme and the following points are made:

- (a) There is appreciably more dolerite scree than has been shown on the Brighton 1:50000 Geological Map. This is indicated by the amount of dolerite scree intersected in the drill holes and field observations.
- (b) Big Marsh, Little Marsh, Gittus Marsh and Murderers Marsh are associated with dolerite sills of unknown thicknesses.
- (c) Abels Marsh is associated with outcropping Triassic sediments.

221014

SECTION 4. CONCLUSIONS AND RECOMMENDATIONS

Triassic sediments which might contain coal are now known to be very limited in extent in EL 19/84 and may be confined to small areas near Elderslie and Wetheron. Significant outcrops or drill hole intersections of coal seams were not found in the Tanina Bluff - Mt Dromedary area. The drill hole data clearly indicates that the potential for mineable coal is extremely limited in the Tanina Bluff - Mt Dromedary area. Based on the recent drilling programme completed by ANM and previous exploration work by B.H.P. and MEMA it is recommended that further work in the EL 19/84 is not warranted and that the area be relinquished.

221015

SECTION 5. EXPENDITURE

The following is a summary of expenditure on exploration in EL 19/84 for the period November 1984 to February 1985.

	\$
(i) Drilling	33,000
(ii) Geological Consulting Services, Travel, Accommodation, drilling supervision, telephone	16,000
(iii) Bulldozing, road works	900
(iv) Lease rent fee, bank guarantee	12,630
TOTAL	<u>62,530</u>

221016

SECTION 6. REFERENCES

B.H.P., 1983, Exploration Licence 30/80 South East Tasmania
Report for the Six Months Ended 15 April, 1983. Unpubl.

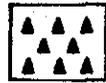
Williams, A. 1983, Final Report on EL 30/80. Mobil Energy
Minerals Australia Inc. unpubl.

APPENDIX 1

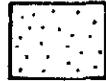
DRILL HOLE LOGS AND GRAPHICS
ANM MT DROMEDARY RDHS 01 - 06



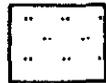
CONGLOMERATE, pebble to granule



BRECCIA



SANDSTONE



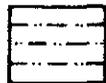
SILTSTONE



CLAYSTONE



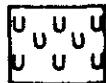
STONE, COALY OR CARBONACEOUS



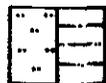
MUDSTONE



SHALE, SILTSHALE, CLAYSHALE



WEATHERED and UNCONSOLIDATED MATERIAL



INTERBEDDED



UNKNOWN



COAL, UNDIFFERENTIATED
(in sections of scale less than 1:50)



COAL, BRIGHT

COAL, BRIGHT with DULL BANDS

COAL, DULL and BRIGHT

COAL, MAINLY DULL with NUMEROUS BRIGHT BANDS

COAL, DULL to DULL with MINOR BRIGHT BANDS

COAL INTERLAYED with NON-COAL

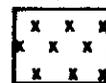
NON-COAL INTERLAYED with COAL

COAL, STONY

STONE, COALY

COAL, WEATHERED

COAL, HEAT ALTERED



IGNEOUS, acid and intermediate



IGNEOUS, basic



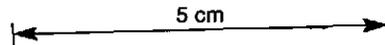
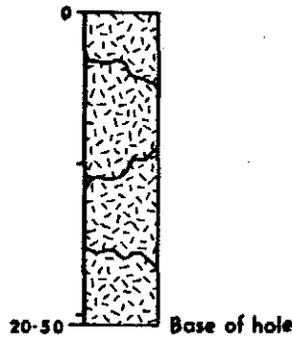
SCREE, igneous-basic and clay

LEGEND FOR GRAPHIC LOGS & COAL SECTIONS

A.N.M. Mt Dromedary

RDH 01

221019



221020

A.N.M. MT DROMEDARY R.D.H. 01Location: Tanina BluffMap: 1:25 000 BroadmarshAMG Co-ordinates: E 501 850 m
(approx) N 5278 450 mDrilled by: Stacpoole DrillingLogged by: C.F.R. ParburyCollar R.L.: 740 m approx.Commenced: 11.12.84Total Depth: 20.5 mCompleted: 12.12.84

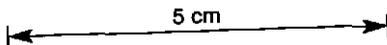
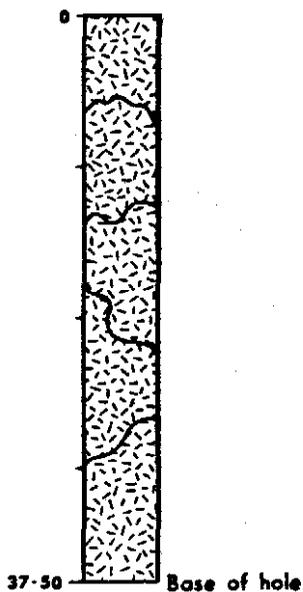
	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SCREE, CLAY AND DOLERITE INTERMIXED	1.40	1.40	Hammer 0 - T.D.
SCREE, as for 1.40 m unit above	19.10	20.50	Minor water at 6.8 m

BASE OF HOLE
(Abandoned due
to caving in)

A.N.M. Mt Dromedary

RDH 02

221021



221022

A.N.M. MT DROMEDARY R.D.H. 02

<u>Location:</u>	Tanina Bluff	<u>Map:</u>	1:25 000 Broadmarsh
<u>AMG Co-ordinates:</u>	E 501 150 m	<u>Drilled by:</u>	Stacpoole Drilling
(approx.)	N 5277 400 m	<u>Logged by:</u>	C.F.R. Parbury
<u>Collar R.L.:</u>	660 m approx.	<u>Commenced:</u>	13.12.84
<u>Total Depth:</u>	37.50 m	<u>Completed:</u>	13.12.84

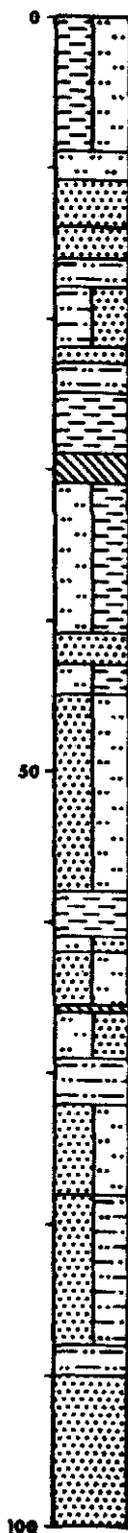
	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
DOLERITE SCREE	37.50	37.50	

BASE OF HOLE

A.N.M. Mt Dromedary

RDH 03

221023

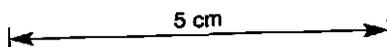
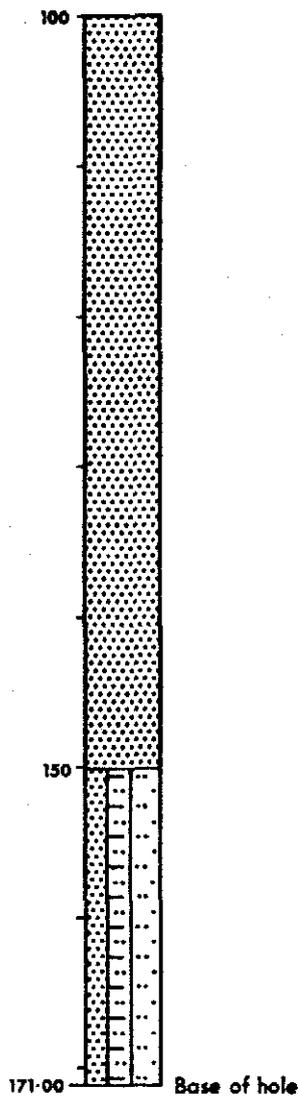


5 cm

A.N.M. Mt Dromedary

RDH 03

221024



221025

A.N.M. MT DROMEDARY R.D.H. 03

<u>Location:</u>	Tanina Bluff	<u>Map:</u>	1:25 000 Broadmarsh
<u>AMG Co-ordinates:</u>	E 501 500 m	<u>Drilled by:</u>	Stacpoole Drilling
(approx.)	N 5278 050 m	<u>Logged by:</u>	C.F.R. Parbury
<u>Collar R.L.:</u>	650 m approx.	<u>Commenced:</u>	17.12.84
<u>Total Depth:</u>	171.0 m	<u>Completed:</u>	18.12.84

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
CLAYSTONE AND SILTSTONE, mid brown yellow, weathered, iron-stained, lithic	9.00	9.00	Hammer 0 - 171.0 m
SILTSTONE, brown grey, slightly carbonaceous, lithic, weathered	2.00	11.00	
SANDSTONE, light grey, fine, slightly weathered, lithic, poorly cemented, friable	3.00	14.00	
SANDSTONE, light yellow, moderately weathered, fine to medium, poorly cemented, claystone towards base	2.00	16.00	
MUDSTONE, dark grey, carbonaceous, unweathered	2.00	18.00	
MUDSTONE AND SILTSTONE INTERMIXED, brown, slightly weathered	4.00	22.00	
SANDSTONE, yellow, oxidised, weathered, fine to medium, poorly cemented, friable	1.00	23.00	

A.N.M. MT DROMEDARY R.D.H. 03

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
MUDSTONE, mid grey, slightly carbonaceous, slightly weathered in part	2.00	25.00	
CLAYSTONE, mid grey, slightly to moderately carbonaceous	4.00	29.00	
CLAYSTONE, dark grey, moderately carbonaceous coaly phases in part	2.00	31.00	Water level - damp @ 30.0m Base of Weathering 30.0 m
SILTSTONE AND CLAYSTONE INTERMIXED, dark grey to light grey, carbonaceous in part	10.00	41.00	
SANDSTONE, light grey, fine to medium, lithic, moderately sorted, moderately well cemented	2.00	43.00	
SILTSTONE AND CLAYSTONE INTERMIXED, mid grey, slightly carbonaceous, minor sandstone phases	2.00	45.00	
SANDSTONE AND SILTSTONE INTERMIXED, light to mid grey, siltstone slightly carbonaceous, sandstone fine, moderately well sorted, lithic	13.00	58.00	
MUDSTONE, dark brown grey, carbonaceous in part	3.00	61.00	
SILTSTONE AND MUDSTONE INTERMIXED, light to mid grey, minor fine sandstone phases, slightly carbonaceous	1.00	62.00	

A.N.M. MT DROMEDARY R.D.H. 03

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE AND SILTSTONE INTERMIXED, light grey, fine to medium, lithic, well sorted	3.50	65.50	
CLAYSTONE, black, coaly in part, carbonaceous	0.50	66.00	
SILTSTONE AND SANDSTONE INTERMIXED, light to mid grey, sandstone medium to fine, lithic	3.00	69.00	
MUDSTONE, mid grey, carbonaceous in part, minor siltstone bands	3.00	72.00	
SANDSTONE AND SILTSTONE INTERMIXED, light to mid grey, sandstone fine, lithic; siltstone, minor carbonaceous phases, siltstone micaceous	6.00	78.00	
SANDSTONE AND CLAYSTONE INTERMIXED. Sandstone, light grey green, medium, poorly sorted, lithic; claystone, dark grey, carbonaceous	10.00	88.00	
MUDSTONE, dark grey, minor sandstone phases	2.00	90.00	
SANDSTONE, mid green grey, medium, lithic to quartz-lithic, numerous claystone phases; claystone, dark green to black (carbonaceous), sandstone poorly sorted, subangular, moderately to poorly cemented, claystone phase from 105 m to 106 m	60.00	150.00	

A.N.M. MT DROMEDARY R.D.H. 03

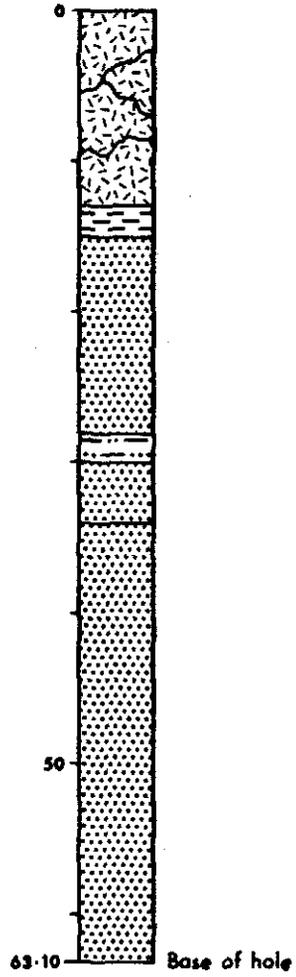
	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE, MUDSTONE AND SILTSTONE INTERMIXED, ratio 50:30:20. Sandstone, light grey to dark grey, lithic, micaceous in part; mudstone, light grey, green, dark grey to black, carbonaceous in part; siltstone, light grey to cream	21.00	171.00	

BASE OF HOLE

A.N.M. Mt Dromedary

RDH 04

221029



5 cm

A.N.M. MT DROMEDARY R.D.H. 04

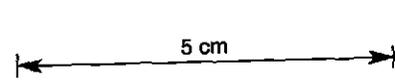
<u>Location:</u>	Tanina Bluff	<u>Map:</u>	1:25 000 Broadmarsh
<u>AMG Co-ordinates:</u>	E 501 580	<u>Drilled by:</u>	Stacpoole
(approx.)	N 5278 600	<u>Logged by:</u>	C.F.R. Parbury
<u>Collar R.L.:</u>	500 m approx.	<u>Commenced:</u>	2.1.85
<u>Total Depth:</u>	63.10 m	<u>Completed:</u>	2.1.85

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SCREE, DOLERITE AND CLAY INTERMIXED, brown orange, weathered, ironstained dolerite, medium with very fine phases; clay, brown red	13.00	13.00	
CLAYSTONE, brown yellow, weathered, ironstained, carbonaceous in part, platy chips, micaceous in part	2.00	15.00	
SANDSTONE, yellow when weathered, green grey unweathered, medium to fine, quartz-lithic	13.00	28.00	Base of Weathering 21.0 m
MUDSTONE, purple, micaceous in part, platy, carbonaceous in part	2.00	30.00	
SANDSTONE, green grey, fine, crystalline, sugar appearance	4.00	34.00	
SANDSTONE, cream green grey, fine to medium quartzose, poorly cemented, friable, angular, minor carbonaceous phase at 37 m, purple ironstaining at 50 m for 0.75 m, coarse phases ironstained, highly sugared in texture	29.10	63.10	Water level 50.0 m
			BASE OF HOLE

A.N.M. Mt Dromedary

RDH 05

221031



120.00 Base of hole

221032

A.N.M. MT DROMEDARY R.D.H. 05

Location: Abels Marsh Area
AMG Co-ordinates: E 503 750
 (approx.) N 5275 150
Collar R.L.: 720 m approx.
Total Depth: 120.0 m

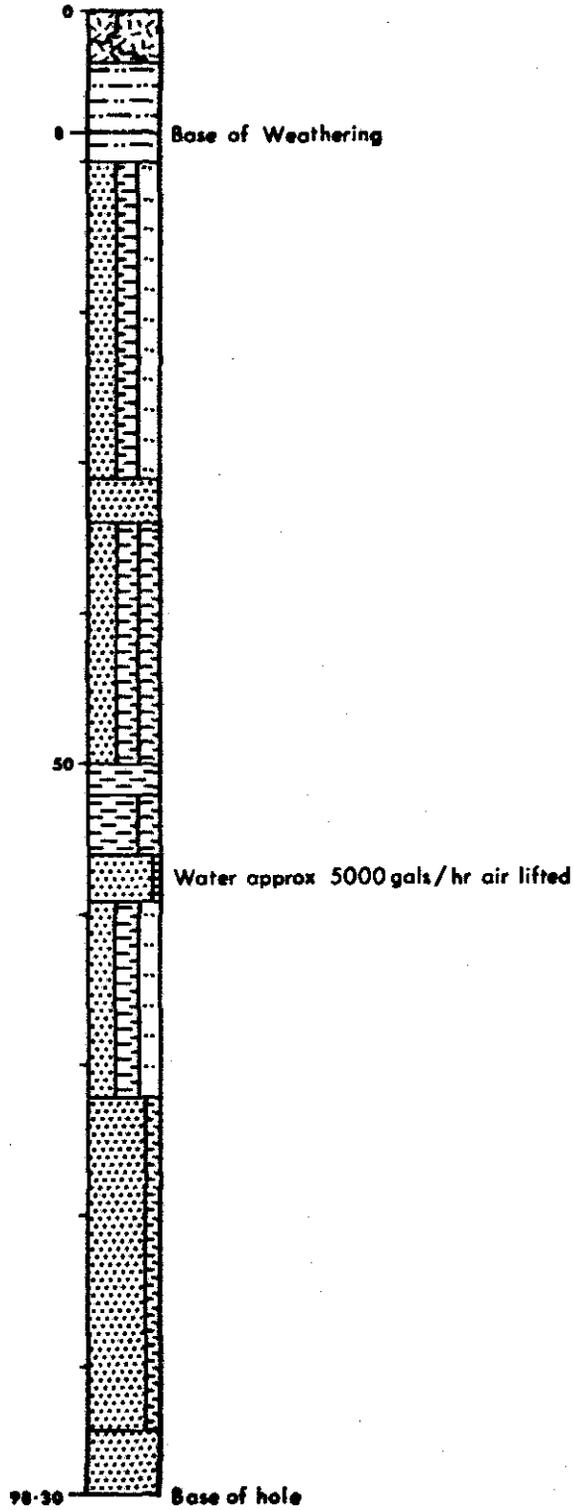
Map: 1:25 000 Broadmarsh
Drilled by: Stacpoole Drilling
Logged by: C.F.R. Parbury
Commenced: 14.1.85
Completed: 15.1.85

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
DOLERITE, green grey, fine to medium, crystalline	120.00	120.00	Hammer 0 - 120.0, Base of Weathering 1.0 m

BASE OF HOLE

A.N.M. Mt Dromedary RDH 06

221033



5 cm

221034

A.N.M. MT DROMEDARY R.D.H. 06

<u>Location:</u> Abels Marsh	<u>Map:</u> 1:25 000 Broadmarsh
<u>AMG Co-ordinates:</u> E 504 150 m (approx.) N 5275 000 m	<u>Drilled by:</u> Stacpoole Drilling
<u>Collar R.L.:</u> 665 m RL approx.	<u>Logged by:</u> C.F.R. Parbury
<u>Total Depth:</u> 98.30 m	<u>Commenced:</u> 16.1.85
	<u>Completed:</u> 17.1.85

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SCREE AND COLLUVIUM, yellow clayey iron stained, weathered	3.30	3.30	
MUDSTONE, brown yellow, weathered, iron stained, soft in part, clayey sandstone phase at 7.0 m 0.5 m thick	4.70	8.00	
MUDSTONE, grey to mid grey, carbonaceous in part, some soft layers, moist, very sporadic coaly chips	2.00	10.00	
SANDSTONE, MUDSTONE, SILTSTONE intermixed 40:30:30. Sandstone mid to light grey with mid green grey phases, medium to fine, lithic, poorly sorted, angular to sub-angular micaceous: Mudstone, mid to dark grey, carbonaceous in part, coaly band 0.3 m thick at 23 m. Siltstone mid grey, some chips show laminations	21.00	31.00	

A.N.M. MT DROMEDARY R.D.H. 06

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE, light grey to cream, medium, lithic, moderately well sorted, sub-angular, cement weak, friable	3.00	34.00	
SANDSTONE MUDSTONE, MUDSTONE intermixed 40:30:30. Sandstone light grey medium, lithic, friable poorly cemented; Mudstone mid to dark grey, carbonaceous in part; Mudstone turquoise green	16.00	50.00	
MUDSTONE, green, waxy	2.00	52.00	
MUDSTONE AND MUDSTONE intermixed 70:30. Mudstone mid grey, carbonaceous in part; Mudstone green buff	4.00	56.00	
SANDSTONE, MUDSTONE intermixed 90:10. Sandstone mid to dark green, blue green quartz lithic to quartz rich, poorly cemented, friable, moderately sorted, moderately well rounded, porous; mudstone mid grey to brown	3.00	59.00	Approx- mately 5,000 galls/hr air lifted
SANDSTONE, MUDSTONE AND SILTSTONE intermixed 40:30:30. Sandstone buff grey green quartz lithic, fine; Mudstone blue grey; Siltstone brown buff, minor quartz bands infilling cavities?	13.00	72.00	

A.N.M. MT DROMEDARY R.D.H. 06

	<u>Estimated Thickness (m)</u>	<u>Estimated Depth to Base of Stratum (m)</u>	<u>Remarks</u>
SANDSTONE MUDSTONE intermixed 80:20 Sandstone light brown tan, fine quartz lithic to quartz; Mudstone dark grey, sporadic gritty phases	22.00	94.00	
SANDSTONE, mid brown red mottled, fine red iron staining, numerous quartz grains, quartz lithic, friable, subrounded	4.30	98.30	