SECTION 1 - ENGINEERING DATA

1.1 Engineering Summary

Lady Penrhyn No. 1 is located in EP5 (Exploration Permit 5), McArthur Basin, N.T., 110km. due east of Mataranka (Figure 1). The hole was drilled to test the hydrocarbon prospectivity of the Roper Group in the McArthur Basin. The hole was drilled by Pacific Oil and Gas Pty Limited, the permit holder and operator, using ROCKDRIL Contractors Pty. Limited's modified MINDRILL 55 (Longyear 550 - Rig 18).

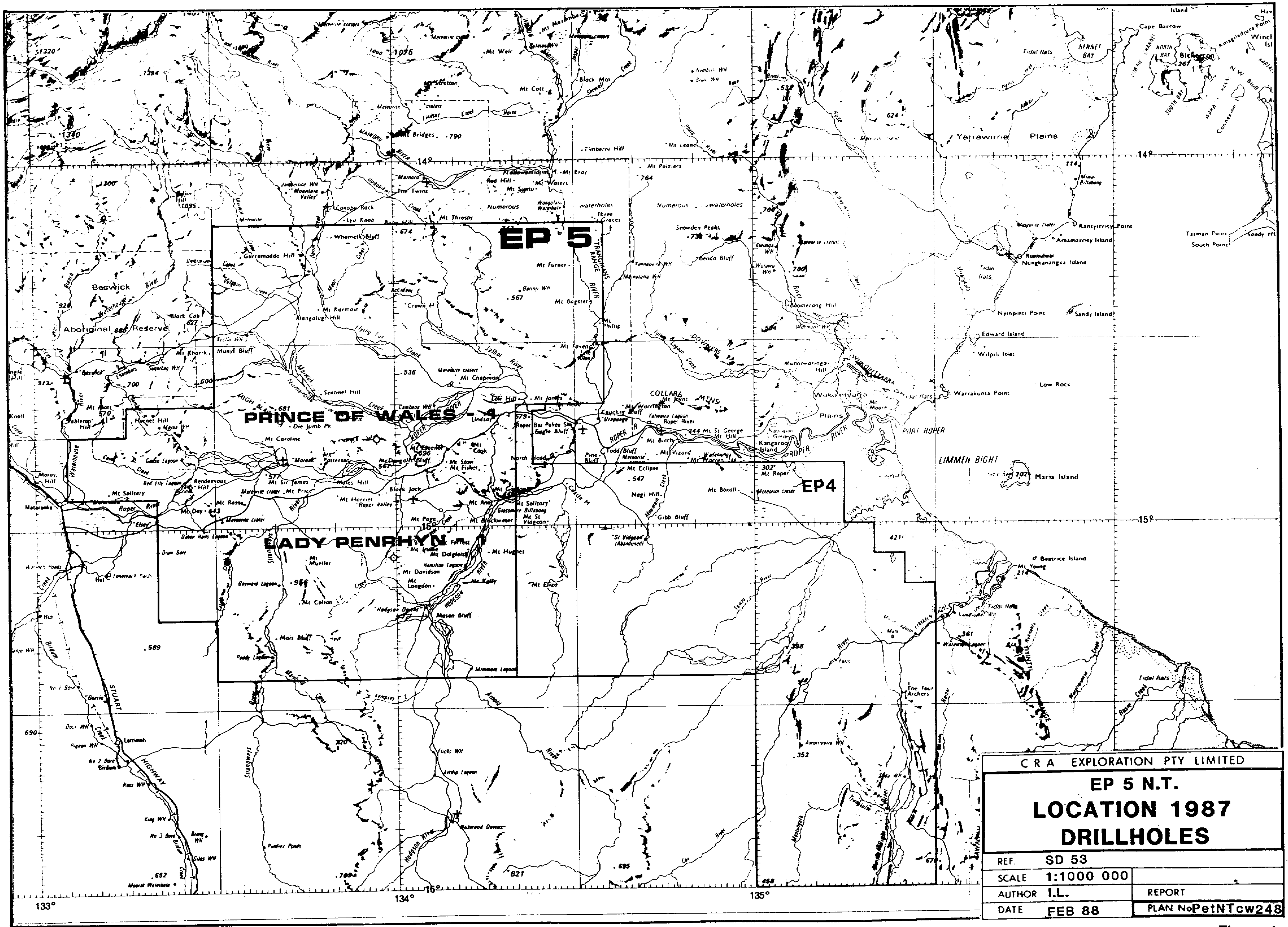
Access preparation involved upgrading of existing pastoral roads while drill pad preparation required bulldozing of scrub over an area 50m x 50m. Water for drilling was supplied from a bore 2km. from the drillsite, potable water was also carted from the bore.

Lady Penrhyn-1 was spudded at 1415 hours on the 16th October, 1987. A 7-7/8" hole was rotary drilled to 10.1m and 6-5/8" AB casing set as conductor at this point. A 101mm hole was cored to 81.5m, and then reamed to 5-5/8". Casing (5") was set at 80.4m and blow out preventors were nippled up and tested at this level prior to drilling out cement with a 3-7/8" bit. A formation integrity test was conducted 3m below the casing shoe.

Fully cored drilling continued to 745.0m (TD) with a 101mm bit.

Electric logs were run on 8th November, 1987 at the total depth of 745.0m. These logs consisted of gamma, density, caliper and porosity from 1m to 742m, self potential and dual spaced focussed electric log from 81m to 743m and gamma, caliper and sonic log from 1m to 741m.

The well was plugged (with a 40m plug at 690m and a 40m casing shoe plug) and abandoned on 7th September, 1987. Total time from spud to rig release was 25 days.



CRA EXPLORATION PTY LIMITED
EP 5 N.T.
LOCATION 1987
DRILLHOLES
REF. SD 53
SCALE 1:1000 000
AUTHOR I.L.
DATE FEB 88
REPORT
PLAN No PetNTcw248
EP 5
EP4
PRINCE OF WALES - 4
LADY PENRHYN - 1
133°
134°
135°
14°
15°
16°
Beswick
Aboriginal Reserve
Mataranka
Larrimah
Birdum
STUART HIGHWAY
ROPER RIVER
HODGSON RIVER
Roper Bar Police Stn
Mt Mueller
Mt Davidson
Mt Longdon
Hodgson Downs
Mason Bluff
Nutwood Downs
COLLARA MTNS
DOWNERS RA
Yarrawirrie Plains
Wukolntvarra Plains
PORT ROPER
LIMMEN BIGHT
Maria Island
Numbulwar
Nungkanangka Island
Edward Island
Sandy Island
Beatrice Island
Bickerton
Cape Barrow
BENNET BAY
Tidal flats
Mt Young
Mt Roper
Mt Boxall
Mt Eclipse
Nagi Hill
Gibb Bluff
Mt Furner
Mt Bagster
Mt Phillip
Mt Favenc
Mt Chapman
Low Hill
Mt James
Mt Caroline
Die Jumb Pk
Mt Patterson
McDougalls Bluff
Mt Eleanor
Mt Sir James
Mt Price
Mt Harriet
Roper Valley
Black Jack
Mt Page
Mt Blackwater
Mt Hughes
Mt Kelly
Mt Eliza
Snowden Peak
Bendo Bluff
Boomerang Hill
Mt Birch
Mt Vizard
Kangaroo Island
Mt St George
Mt Hill
Numerous waterholes

Figure 1

1.2 General Data

Well Name and number	Lady Penrhyn-1
Operator	Pacific Oil & Gas Pty Limited
Interest Holders	Pacific Oil & Gas Pty Limited 100%
Petroleum Title	EP5, Northern Territory
Location:	
1:250,000 sheet	Hodgson Downs SD5314
1:100,000 sheet	Mais 5667
Latitude	15°04'42"
Longitude	133°59'39"
Metric grid reference	391690E 833280N
Ground Elevation Drill Datum	102.90m AMSL 102.90m AMSL
Total Depth	745.0m (Driller) 743.0m (Logger)
Commencement date	16/10/87
Total depth reached	7/11/87
Completion date	9/11/87
Drilled by	ROCKDRIL Contractors P/L
Drilling rig	RIG 18
Hole size	101mm
Plugging Details	40m plug at 690m 40m plug at casing shoe
Logs	Spontaneous Potential Dual Focussed Resistivity Gamma, Dual Density, Caliper Gamma, Dual Spaced Neutron Multichannel Sonic

1.3 Drilling Rig

ROCKDRIL RIG 18 - RIG AND EQUIPMENT DESCRIPTION

DRILLING RIG:	Longyear-Model 550
1. Drawworks:	Longyear single drum operation 3/4" line up to 4 parts with lockhead disc breaking system.
2. Power:	One Caterpillar type 3304T diesel engine, mechanically driving rotation and drawworks (5 speeds) and hydraulically driving holdback rams, breakout and spinning tools and chuck.
	One Perkins 4.354 diesel engine hydraulically driving two (2) triplex pumps and wireline winch assembly.
3. Mast:	Box section angle type mast
	Working height above sub structure-50 ft.
	Static hook load capacity (4 lines) 85,000 lbs.
	Racking Capacity-9,600 ft of CHD 76 drill pipe.
4. Substructure:	Allison low loader with box type drill floor and support racking capacity up to 40 tons.
5. Rig Machinery:	Longyear pipe breakout and spinning tool to handle drill pipe and casing up to 3.7".
6. Rig Pumps:	Two (2) Bean 435 triplex pumps hydraulically driven. Capacity 37 gallons/minute Rating 1200 psi.
7. Mud Systems:	Two (2) steel tanks with a capacity of 40 barrels each operating on a settling basis.
	One (1) only 40 barrel mixing tank.
	One (1) CD62 mono pump for mixing and desilting.
	One (1) only two cone desilter bank.

	Two (2) only Honda centrifugal pumps for transfer, recirculating and mixing.
8. Kill mud/cement mixing:	One (1) 40 barrel tank utilizing mono pump and hoppers for mixing kill mud and cement as required.
9. B.O.P. Equipment	One (1) Regan Torus annular type blow out preventor with a 7-1/16 bore and having a working pressure of 3,000 psi.
	One A.P.I. threaded wellhead and drilling spool to suit 5" A.P.I. casing.
	One (1) twin choke manifold with adjustable Cameron chokes and three (3) outlets rated at 3000 psi and two inch (2") 3000 psi valves.
	One (1) Hydril K80 accumulator with a storage capacity of eighty (80) gallons at 1500 psi pressure.
	One (1) Oilwell D 323 triplex plunger with a rating of 3000 psi for use as a kill pump.
	One (1) Guiberson type H wireline B.O.P. and oilsaver rated at 3000 psi with a type C releasing attachment.
	One (1) lower kelly cock (2.75") with a rating of 3000 psi.
10. Tubular Equipment:	CHD 101 drill pipe (800 metres) and barrels 4-3/4" Collars and Stabilizers.
11. Utility and Auxilary Equipment:	One (1) Caterpillar power generating unit (output 135 k.v.a.).
	One (1) fully equipped workshop container carrying tools and spare parts.
	Two (2) Toyota Landcruiser utilities.

1.4 Hole Sizes and Depths

5-5/8" to 89.9m., reaming to this depth from 101.
101 to 689.3m (TD).

1.5 Casing and Cementing Record

6-5/8" Conductor:	Grade:	U2FL4S AB
	Depth:	10.1m
5" Surface Casing	Weight:	13ppf
	Grade:	K55 AB
	Thread:	FL4S
	No. of Joints:	7
	Shoedepth:	71.8
	Cement Used:	Class A x 12
	Additives:	Nil
	Accessories:	Casing shoe and packer.
	Cemented by:	ROCKDRIL CONTRACTORS P/L
	Remarks:	None

1.6 Mud Record

See Appendix I for full details.

1.7 Water Supply

The water supply for drilling and drinking was a bore located 2km. south of the site.

1.8 Bit and Deviation Record

Bits:
A total of seven bits were used in the drilling of Lady Penrhyn-1.

Full details are given in Appendix II.

Deviation
A summary of the deviation surveys recorded is given in Table 1.

1.9 Fishing Operations

Nil

1.10 Sidetracked Hole

Nil

1.11 Formation Testing

Nil

TABLE 1

DEVIATION SURVEY SUMMARY

WELL: LADY PENRHYN-1
LOCATION: EP5, NORTHERN TERRITORY

DEPTH (metres)	DEVIATION (degrees)
142.7	1.0°
199.8	0°
254.2	¼°
439.2	0°
479.6	4°
499.3	4°
592.0	2°

Using Eastman Camera supplied by Eastman Christiansen - Sale Victoria.

1.12 Time Analysis

An account of the time spent on the well from spud to rig release is given in Table 2 (and detailed in Appendix I), and the time/depth curve for Lady Penrhyn-1 is included as Figure 2.

1.13 Costs

An account of costs is compiled below:

Operation/Item		Cost $A	Total $A
Rotary Drilling Costs		$80/metre	
Coring Costs		0 - 99m $90/m 100-199m $95/m 200-299m $100/m 300-399m $105/m 400-499m $110/m 500-599m $115/m 600-699m $120/m	
Work Rate		$140/hr	
Standby		$105/hr	
Camp		$37.50/man/day	Average $650/day
Earthworks		average $120/day	
Fuel		average $200/day	
Others	- Vehicles	$220/day	
	- Site manager	$150/day	
	- Staff	$900/day	
	- Genset	$ 45/day	
	- Eastman camera	$ 45/day	
	- Caravan	$200/week	
	ATCO	$180/week	
	Watertank	$150/week	
Total Cost Lady Penrhyn-1			$256,651

Extra costs for entire drill programme
Mobe/Demobe $18,000.

TABLE 2

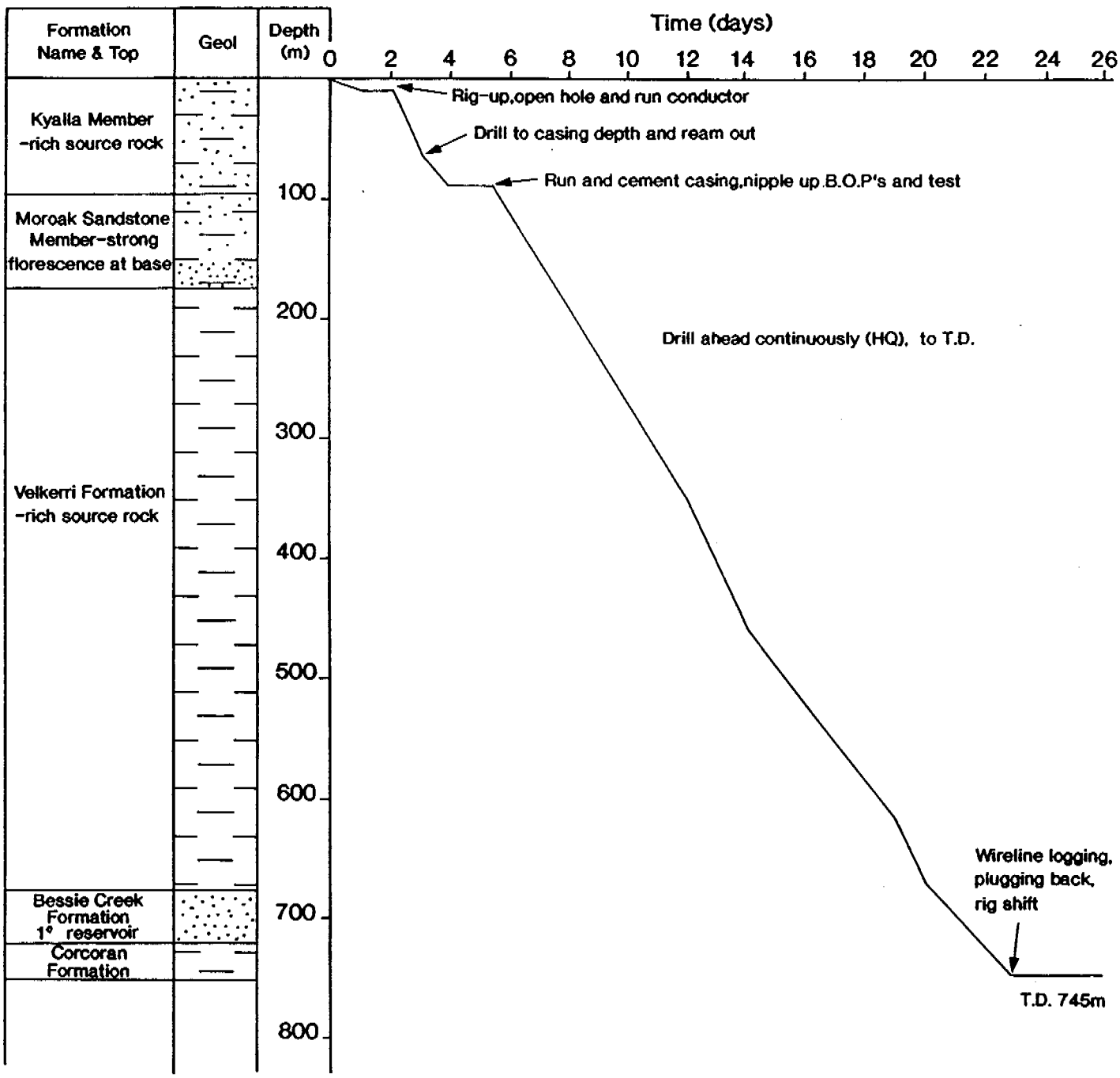
(APPROXIMATE)
TIME ANALYSIS

WELL: LADY PENRHYN-1
PERMIT: EP5, NORTHERN TERRITORY

O P E R A T I O N	T I M E	PERCENTAGE %
Rig up/down	17.0	3.0
Drill	3.8	0.7
Core	416.7	73.9
Trips	27.1	4.8
Condition/Circulate	3.9	0.7
Ream	11.5	2.0
Run casing & cement	4.5	0.8
Cement plugs	4.2	0.7
Wait on cement	24.2	4.3
Drill cement	5.5	1.0
Nipple up BOP, Test	9.0	1.6
Deviation survey	4.3	0.8
Wireline Logs	12.3	2.2
Mudwork	3.2	0.6
Repairs & service Rig	6.5	1.1
Standby and Miscellaneous	10.3	1.8
	564.0	100

TIME – DEPTH CURVE

LADY PENRHYN – 1



CRA

I.Ledlie
Nov 88

PetNTcw 780

Figure 2