



BASIN OIL N.L.

PPL 1 - Onshore Otway Basin - VICTORIA  
IRREWARRA-1 Well Completion Report  
Drilling

Vol.2

DEPT. NAT. RES & ENV



PE907386



BASIN OIL N.L.

PPL 1

Onshore Otway Basin  
VICTORIA

IRREWARRA-1

Well Completion Report

Volume 2

Drilling

PETROLEUM DIVISION

18 JAN 1999



**BASIN OIL N.L.**

**PPL 1**

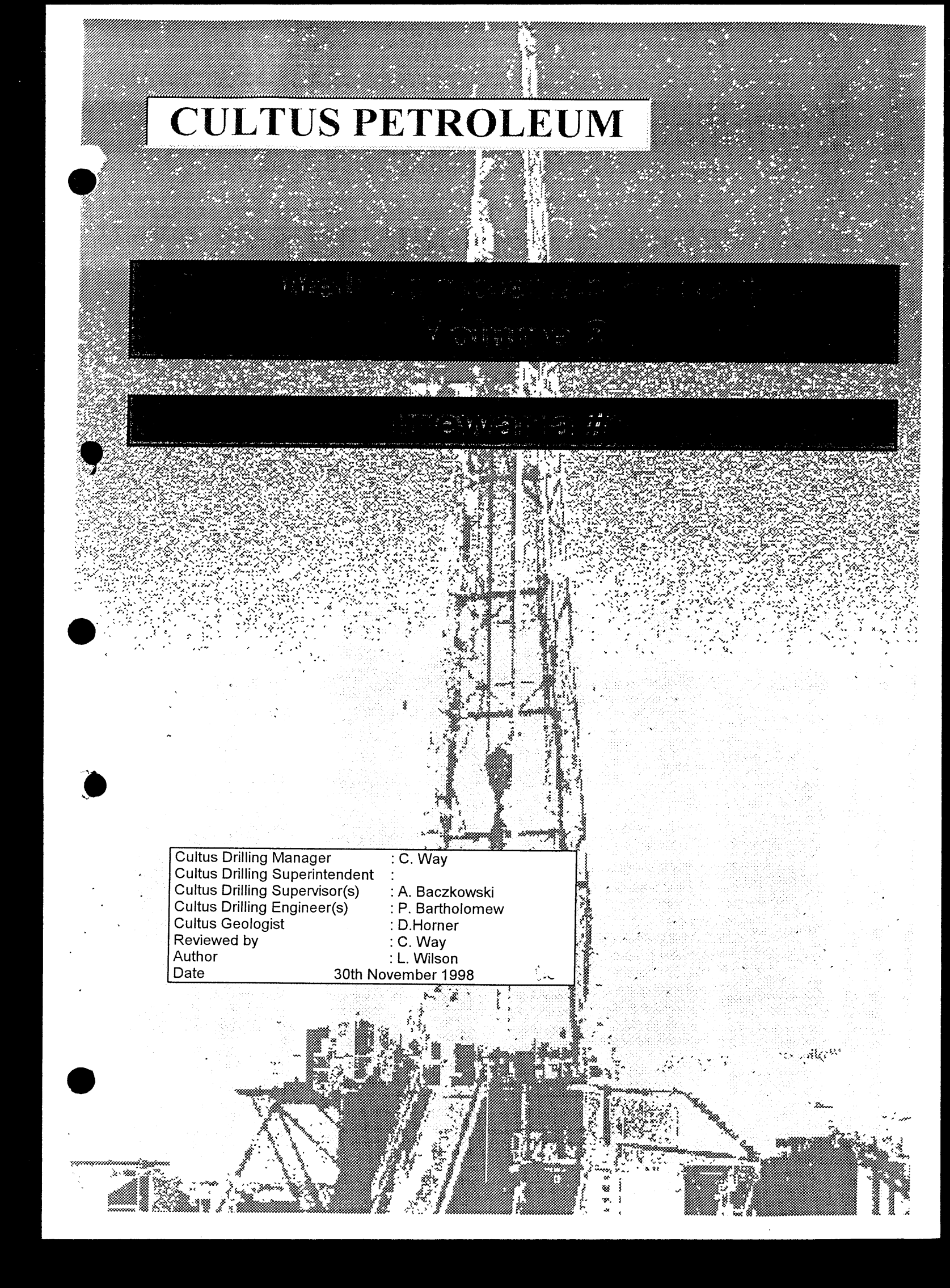
**Onshore Otway Basin  
VICTORIA**

**IRREWARRA-1**

**Well Completion Report**

**Volume 2  
Drilling**

# CULTUS PETROLEUM



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Cultus Drilling Superintendent :  
Cultus Drilling Supervisor(s) : A. Baczkowski  
Cultus Drilling Engineer(s) : P. Bartholomew  
Cultus Geologist : D. Horner  
Reviewed by : C. Way  
Author : L. Wilson  
Date : 30th November 1998

# CULTUS PETROLEUM NL

## IRREWARRA - 1 - WELL COMPLETION REPORT VOLUME 2

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# CULTUS PETROLEUM NL

## IRREWARRA #1

The location of the well is X: 734 344.47 E, Y: 5 757 501.53 N in Block PEP 133B, Onshore Otway Basin, Victoria. Irrewarra #1 was an exploration well, spudded at 20:30 hours on 29th April 1998 by Slimdrill's Rig HTA 3000. RT was 4.3m.

8-1/2" hole was drilled into the Heytesbury Formation to 202m RT using fresh water gel mud. Equipment repairs accounted for 6 hours delay. Ran a wiper trip with the hole in good condition. Prior to running 7" casing the hole was circulated and conditioned and the pipe strapped out of the hole. One survey was run over the interval with the deviation of 0.0° at 154m RT.

Ran 7" casing with the shoe set at 200.0m RT. 160sx Class A cement at 15.8ppg was displaced and pumped to surface. The plug was bumped, the casing tested to 3000psi and the float held when pressure was released. WOC and slacked off 7" casing. Attempted to install Bradenhead but the weld twice failed the pressure test. Removed Bradenhead, redressed casing and waited for replacement Bradenhead. Re-installed Bradenhead and nipped up BOP's and Choke manifold. Pressure tested BOP's, choke manifold, inside BOP, HCR, casing, Kelly cocks and standpipe to 200/2100psi. Tested annular to 200/1500psi.

Made up 6" BHA, RIH and tagged cement at 179m RT. Drilled out cement, shoe and 2m of open hole to 204m RT. Displaced hole with a Gel / Polymer mud at 8.5ppg. Ran FIT to 150psi with 8.5ppg mud equating to 13.0 ppg EMW. Leak off at 261psi was seen on the chart recorder.

6" hole was drilled from 204m RT out of the Heytesbury Formation, through the Nirranda and Wangerrip Formations and into the Eumeralla Formation where poorly sorted sands caused large mud losses over the shakers due to sand blinding. TD at 552m RT was reached on day 8 at 06:00 hours on 6th May 1998. Circulated hole clean, ran a wiper trip to the shoe with no excessive drag or tight spots. Conditioned well and strapped out of hole. Two surveys were run over the interval with the deviation of 0.0° at 400m RT.

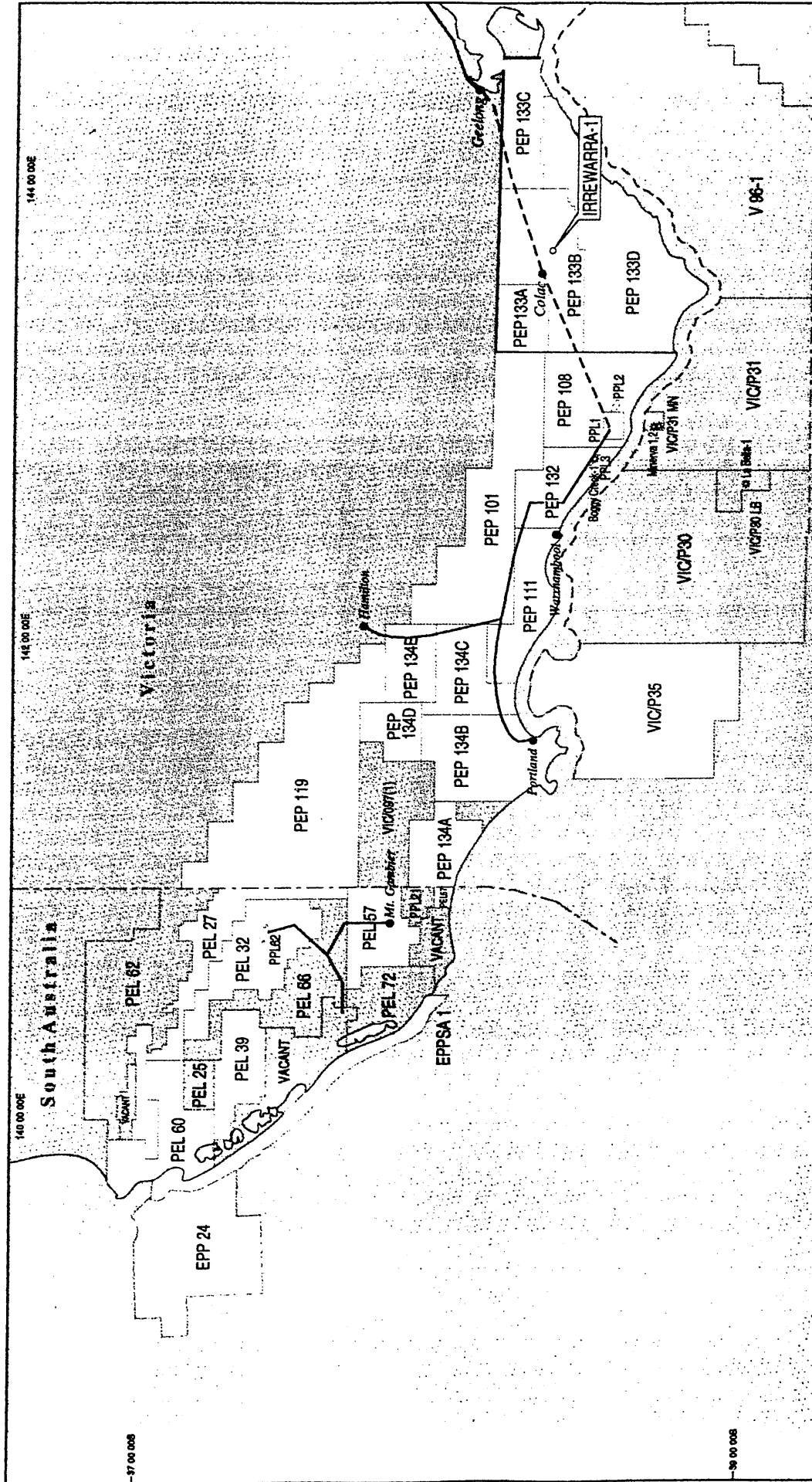
Ran electric log#1                    LLD\_LLS\_MSFL\_SDT\_SP\_LDT\_CNL\_CAL\_GR  
Slimhole Tool Description HLLD\_HLLS\_MCFL\_SDT\_SP\_RHOZ\_TNPH\_CAL\_GR

Ran open ended drillpipe to 232m RT. Set abandonment plug #1 from 232m to 170m RT with 75sx Class A cement at 15.6ppg with 2% CaCl<sub>2</sub>. Pulled 9 stands and circulated pipe clean. POH and layed out excess pipe. RIH and tagged plug #1 at 165m RT with 10K. Layed down remaining drillpipe. Recovered wellhead and set abandonment plug #2 used 20sx Class A cement. Installed plate and erected well marker post. The rig was released at 12:00 hours on 7th May 1998.

The well was completed in 7.65 days at an estimated cost of \$0.643 mm at an average cost of \$1164/m plugged and abandoned.

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**CULTUS PETROLEUM N.L.**

# OTWAY BASIN PEP 133 LOCATION MAP

**LEGEND**

-  Cultus tenement
-  Pipeline
-  Proposed Pipeline

0 ————— 100  
km

AGD66

Days Vs Depth

Handwritten marks along the left margin, including several curved lines and a vertical line.

# Well: Irrewarra -1



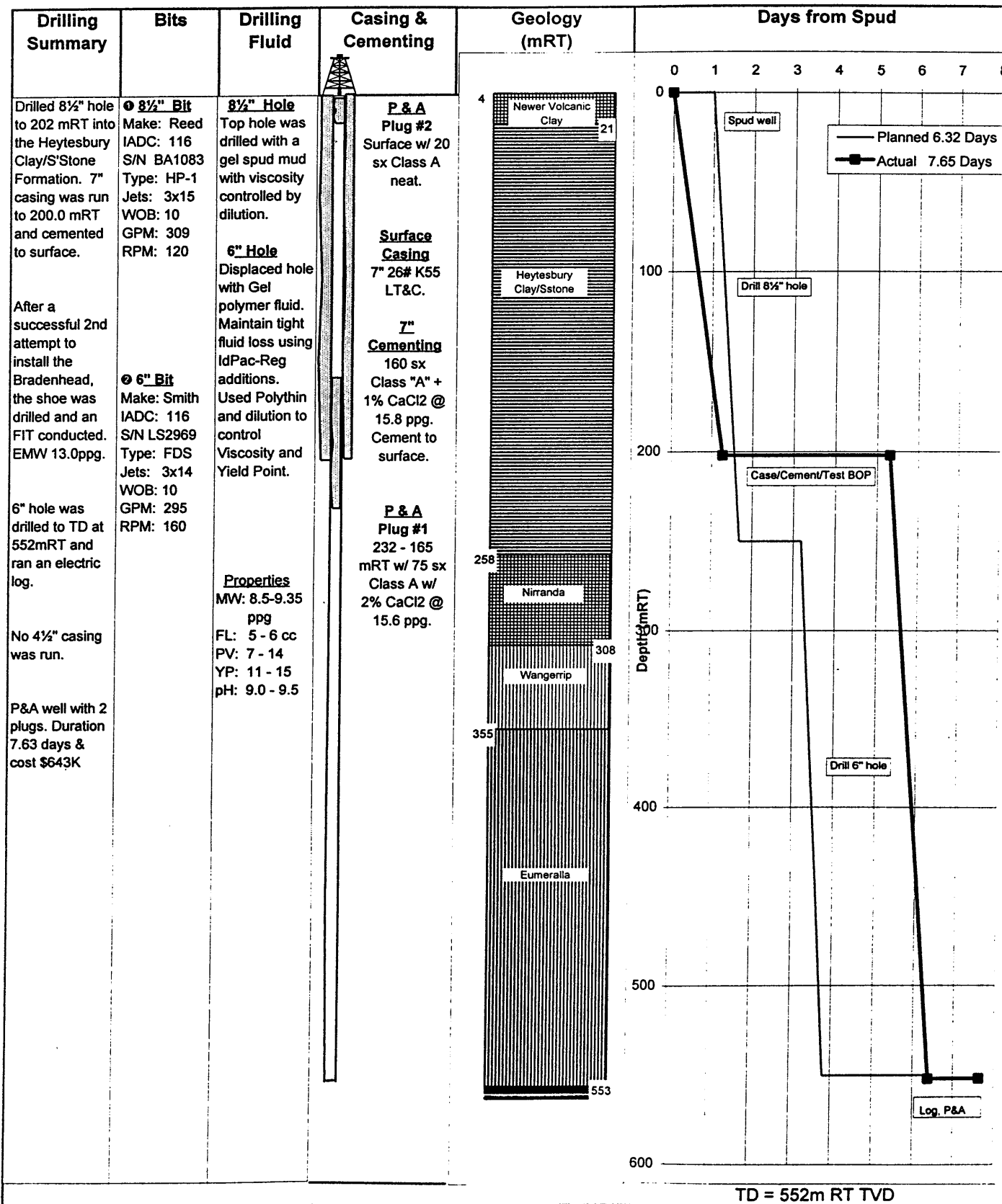
Cultus Petroleum NL

Surface Location X: 734 344.47 E Y:5 757 501.53 N

Seismic Reference IR96-04, SP 330

GL (m): 124 m TBC RT (m): 4.3

## Actual Depth vs. Time Curve



Imw IRW\_TDA.XLS Planned TD Curve 7/12/98



## WELL: IRREWARRA - 1

### Cost Variance Analysis

Irrewarra - 1 was budgeted for 5.0 days and actually took 7.65 days (2.65 days over budget).

The total well cost was 5.74% over the Dry Hole AFE cost estimate of \$607.9 K AUD. Actual well cost was \$642.8 K AUD with no major cost variances. The minimal cost overrun is mainly attributable to the extra time and cost associated with the re-installation of the Bradenhead.

Individual accounts were not kept for the cost centres associated with this AFE.



**WELL COST AFE VS ACTUAL**

Well: Irrewarra #1  
 Area: Onshore Otway Basin, S.A.  
 Permit: PEP 133  
 Country: Australia  
 AFE No:

AFE Days: 5.0  
 Actual Days: 7.6  
 AFE TD m RT: 550  
 Actual TD m RT: 552

Account Code	Tender / Contract	Category	AFE Total Dry Hole	ACTUAL Total Dry Hole	VARIANCE AFE vs Actual \$A	VARIANCE AFE vs Actual Percent
<b>INTANGIBLE COSTS</b>						
100		<b>ADMINISTRATION</b>				
101		Salaries, Wages and Oncosts	\$14,000			
102		Drilling Superintendent & Supervisors	\$7,600			
103		Drilling Engineers	\$0			
104		Materials Superintendent	\$6,000			
105		Geology & Geophysical	\$14,300			
106		Wellsite Geologist	\$6,800			
107		Well Control Insurance	\$5,000			
108		Travel / Accomodation	\$10,000			
109		Draft. / Printing consumables	\$5,000			
200		<b>SHORE BASE / LOGISTICS</b>				
201		Site Office				
202		Contract Vehicles	\$2,500			
203		Staff Safety Clothing	\$500			
204		Warehousing & Storage	\$4,000			
205		Purchasing Agent's Fees	\$10,000			
206		Load Fees (wharfage & stevedoring)				
207		Communications	\$4,900			
208		Weather Forecasting				
300		<b>TECHNICAL</b>				
301		Geological Supplies				
302		Electric Log Analysis	\$1,500			
303		Core & Fluid Analysis	\$2,000			
304		Onshore Prep/Test comp. Assy.				
400		<b>TRANSPORTATION</b>				
401		Air Freight				
402		Fixed Wing				
403		Helicopters				
404		Land Freight	\$7,000			
405		Work Boats				
500		<b>THIRD PARTY SERVICES</b>				
501		Site Survey / Preparation & Clean Up	\$62,500			
502		Drilling Rig & Assoc. Services	\$82,800			
503		Drilling Rig - Additional Equipment	\$5,100			
504		Rig Mob / Demob / Move	\$150,000			
505		Rig Positioning				
506		Electric Line Logging	\$24,000			
507		Coring Services	\$0			
508		Mud Logging	\$15,000			
509		Mud Engineering	\$5,600			
510		Cement Services	\$29,700			
511		Directional Drilling	\$0			
		Mobilisation: Equipment & Personnel				
512		Wellbore Survey	\$1,500			
513		Drilling Tools	\$23,900			
514		Diving / ROV	\$0			
515		Inspection	\$0			
516		Well Testing	\$0			
517		Wellhead Services - Welding	\$1,000			
518		Casing Handling				
519		Fishing/Casing Cutting				
520		Miscellaneous	\$0			
		<b>TOTAL INTANGIBLES</b>	<b>\$502,200</b>			
<b>TANGIBLE COSTS</b>						
601		Fuel & Lubricants	\$1,000			
602		Tubulars	\$15,000			
603		Equipment Lost in Hole				
604		Tubular Accessories	\$4,800			
605		Wellhead Equipment	\$14,200			
606		Drill Bits, nozzles, etc	\$11,700			
607		Coreheads	\$0			
608		Cement	\$4,000			
609		Cementing Additives	\$800			
610		Drilling Fluid	\$25,000			
611		Water	\$2,400			
612		Liner Equipment				
613		Completion Equipment	\$25,000			
614		Misc. Drilling Equipment	\$1,800			
		<b>TOTAL TANGIBLES</b>	<b>\$105,700</b>			
<b>Well Completion Report</b>			<b>5</b>	<b>\$607,900</b>	<b>\$642,801</b>	<b>\$34,901 Irrewarra #574%</b>

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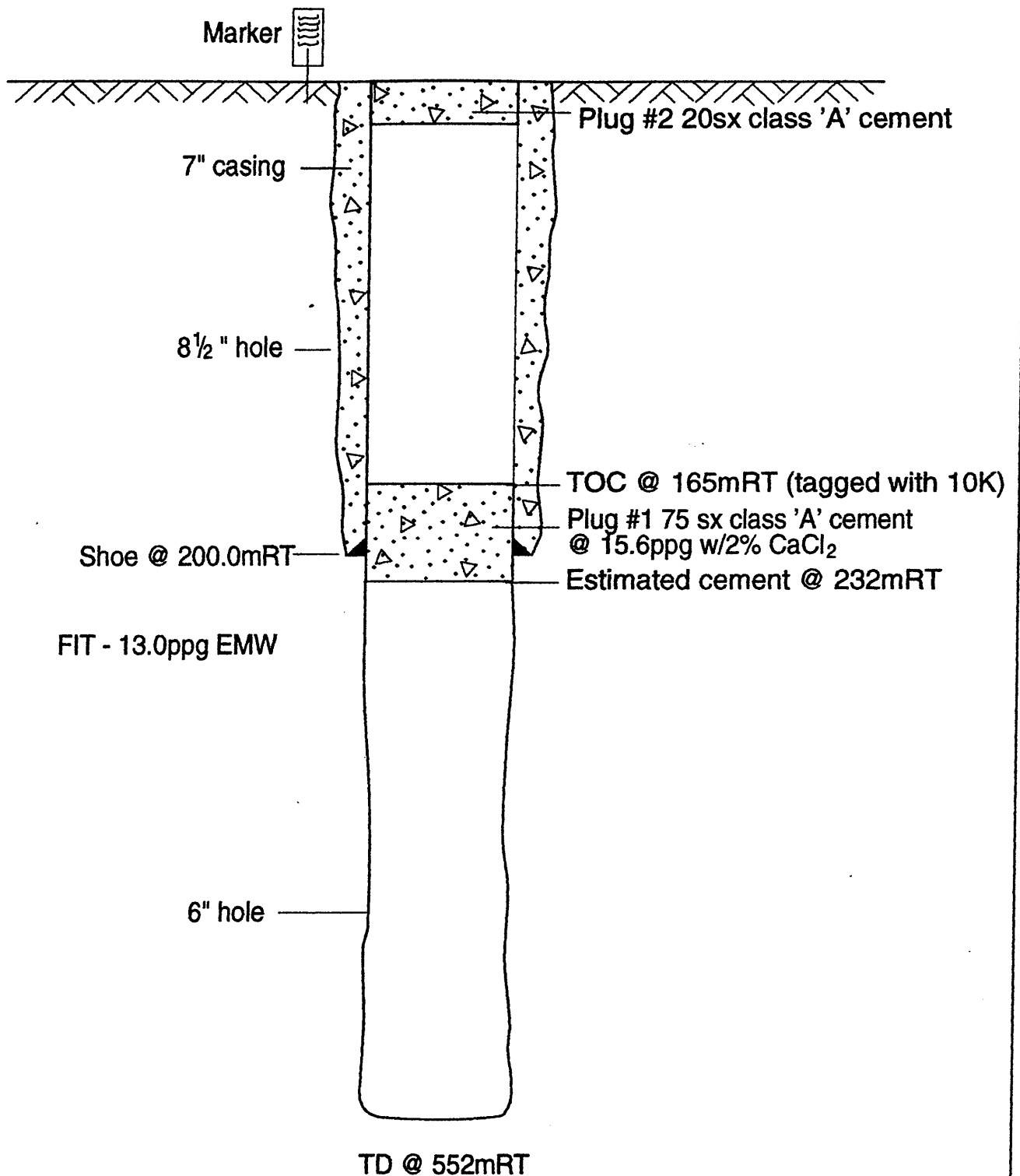
## GENERAL INFORMATION

Well Name	Irrewarra -1	
Block	PEP 133B, Onshore Otway Basin, Victoria	
Seismic Line	IR96-04 SP330	
Surface Location	X: 734 344.47 E	38° 17' 59.47" S
	Y: 5 757 501.53 N	143° 40' 47.49" E
Block Equity Percentage	Cultus Group (Operator)	100%
Type of Well	Exploration	
Spud Date	2030 hrs 29 April 1998	
Release Date	1200 hrs 7 April 1998	
Time to Drill, Plug and Abandon	7.65 days	
Total Depth	552m RT MD	
RT	4.3m	
GL a.m.s.l.	124.36m	
Rig	Slimdrill HTA 3000	
Drilling Contractor	Slimdrill Contracting Pty Ltd	
Cultus Personnel on Site	Drilling Supervisor	A. Baczkowski
	Drilling Engineer	P. Bartholomew
	Wellsite Geologist	D. Horner
Well Objectives	Primary:	Wangerrip Group Sandstone.
	Secondary:	Nirranda Group Sandstone.
		Heytesbury Group Sandstone.
Well Cost AFE 98-39-01	642.8 A\$K	

a.m.s.l. - above mean sea level



**Plug & Suspension  
Schematic**



CULTUS PETROLEUM (AUSTRALIA) N.L.

ONSHORE OTWAY BASIN - VICTORIA

PEP 133B

IRREWARRA 1

PLUG & ABANDONMENT  
SCHEMATIC

AUTHOR: LEON WILSON

DATE: NOVEMBER 1998

FILE: otway/pep133/irresch.dgn

SCALE: NTS



Total Times

## TIME BREAKDOWN DATABASE

Well : IRREWARRA 1  
Drilling Co : SLIMDRILL CONTRACTING P/L  
Rig : HTA 3000  
Spud Date : 29.04.98  
TD Depth : 202.0

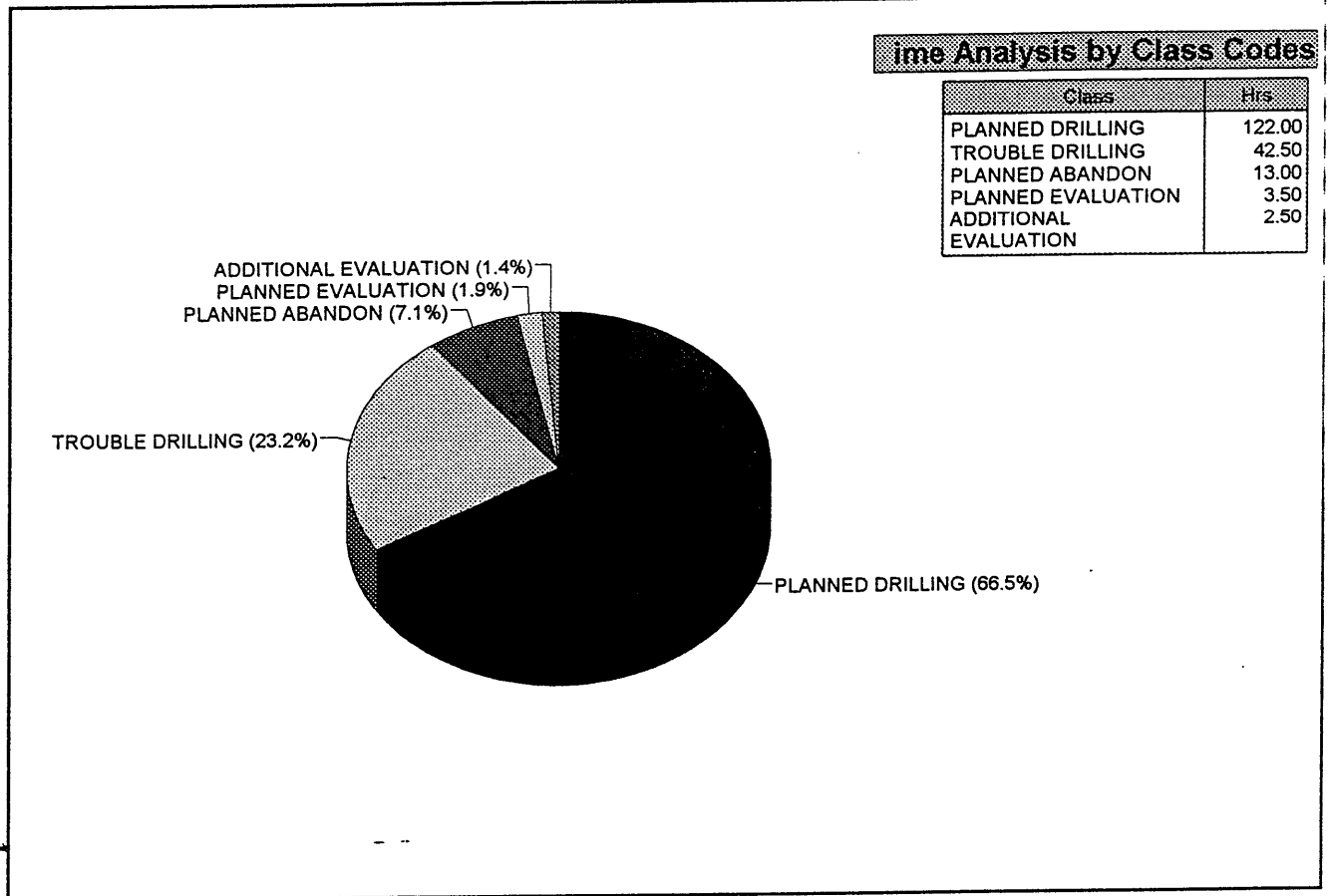
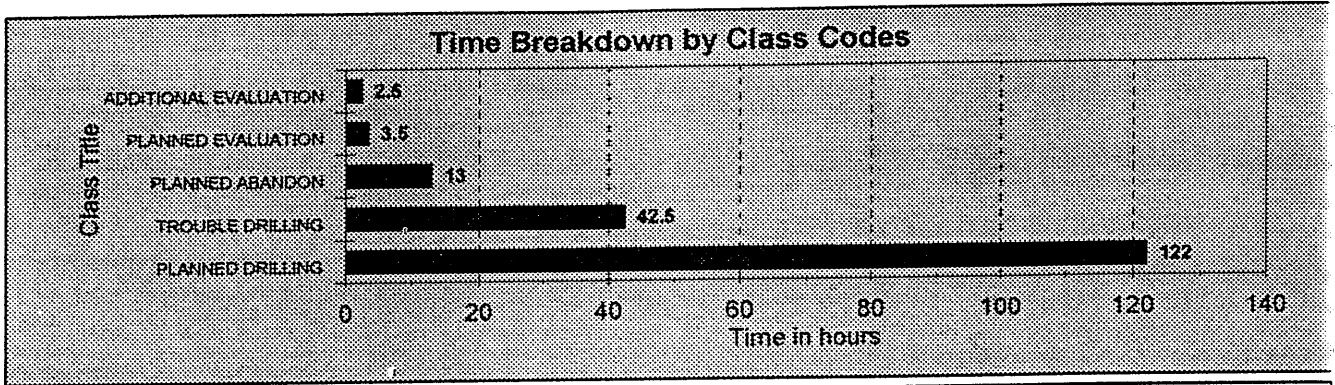
Total Time (hrs) - Spud/Release : 183.50  
Total Time (hrs) - Rig Move ; 0.00  
Total NPT (hrs) : 42.50

### Time-Breakdown : Times by Class and Operation

Class	Hrs	Operation	Hrs
PLANNED DRILLING	122.00	DRILLING	49.00
TROUBLE DRILLING	42.50	WELL-HEAD	31.00
PLANNED ABANDON	13.00	TOT. CSG/CMT	21.50
PLANNED EVALUATION	3.50	WAIT ON	20.00
ADDITIONAL EVALUATION	2.50	TOT. TRIPPING	19.50
		WIPER TRIP	9.00
		RIG REPAIR	6.00
		BOP's	6.00
		LAY DOWN PIPE	5.50
		CIRCULATE	4.50
		RIG DOWN	4.00
		LOGGING	3.50
		RIG UP	1.50
		SURVEY	1.50
		LEAK-OFF TEST	0.50
		OTHER ACTIVITY	0.50

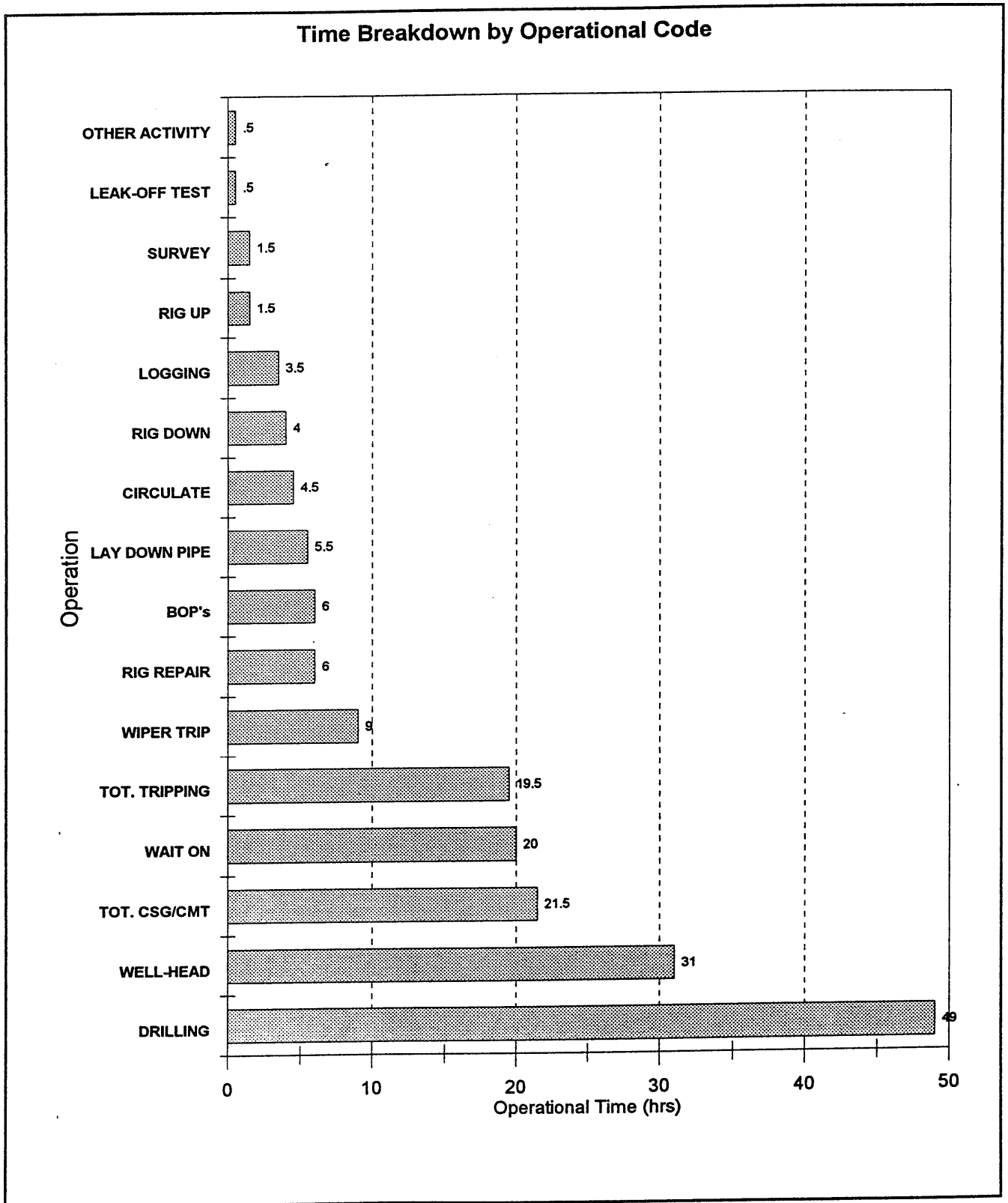
# TIME BREAKDOWN DATABASE

WELL : IRREWARRA 1



# TIME BREAKDOWN DATABASE

WELL : IRREWARRA 1



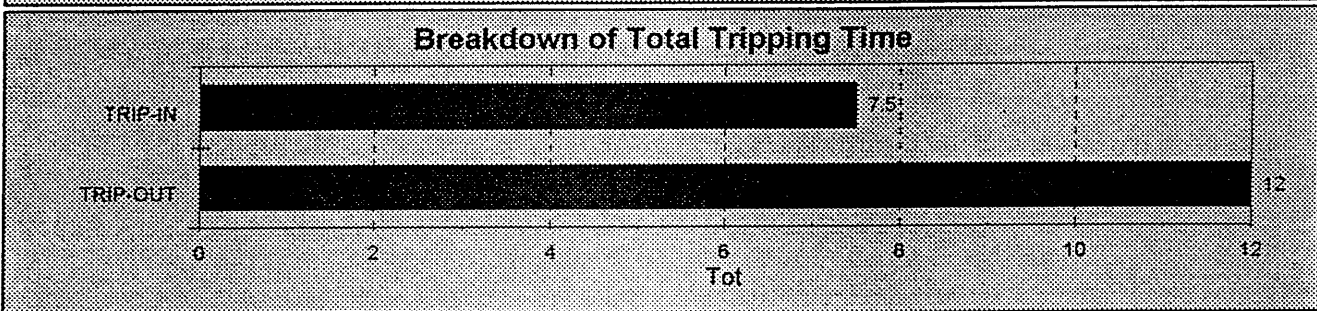
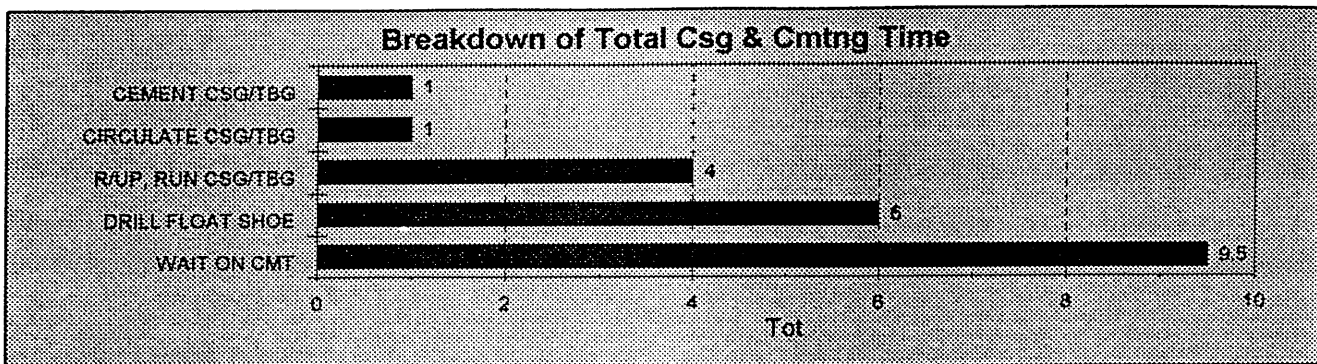
Time Analysis

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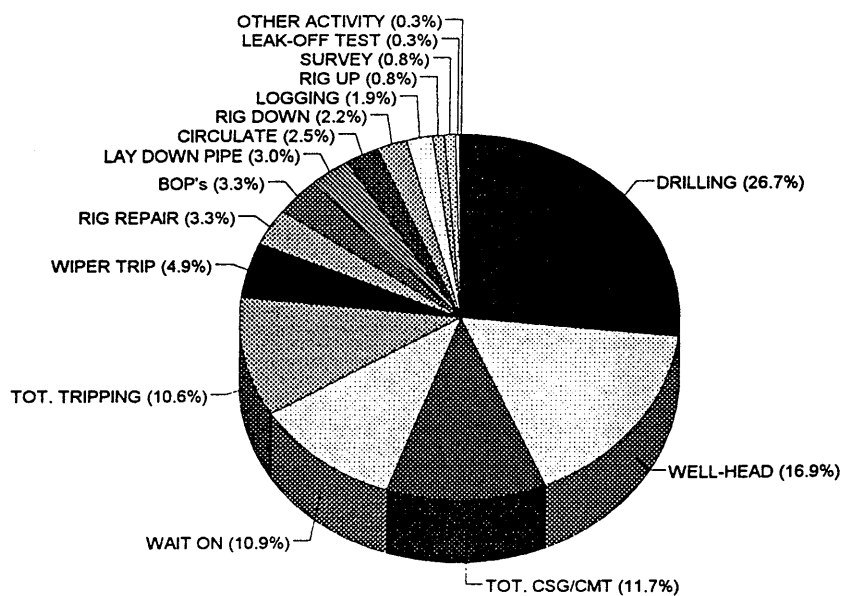


# TIME BREAKDOWN DATABASE

WELL : IRREWARRA 1



### Time Analysis by Operational Codes



Operation	hrs
DRILLING	49.00
WELL-HEAD	31.00
TOT. CSG/CMT	21.50
WAIT ON	20.00
TOT. TRIPPING	19.50
WIPER TRIP	9.00
RIG REPAIR	6.00
BOP's	6.00
LAY DOWN PIPE	5.50
CIRCULATE	4.50
RIG DOWN	4.00
LOGGING	3.50
RIG UP	1.50
SURVEY	1.50
LEAK-OFF TEST	0.50
OTHER ACTIVITY	0.50

Time Breakdowns

# Time breakdown by Phase

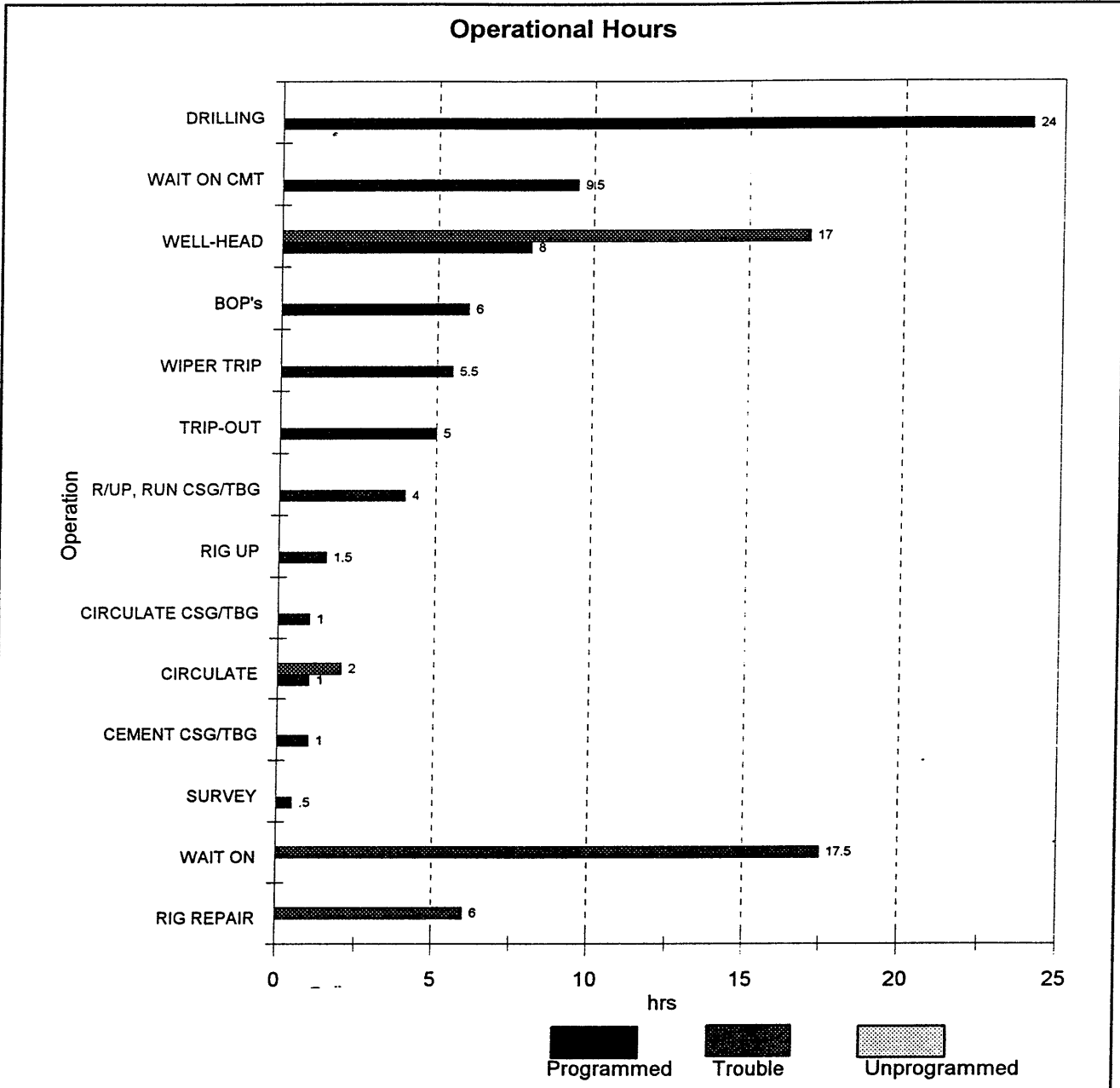
## IRREWARRA 1

PHASE : S1

PROGRAMMED HRS: 67.0

TROUBLE HRS : 42.5

UNPROGRAMMED HRS : 0.00



# Time breakdown by Phase

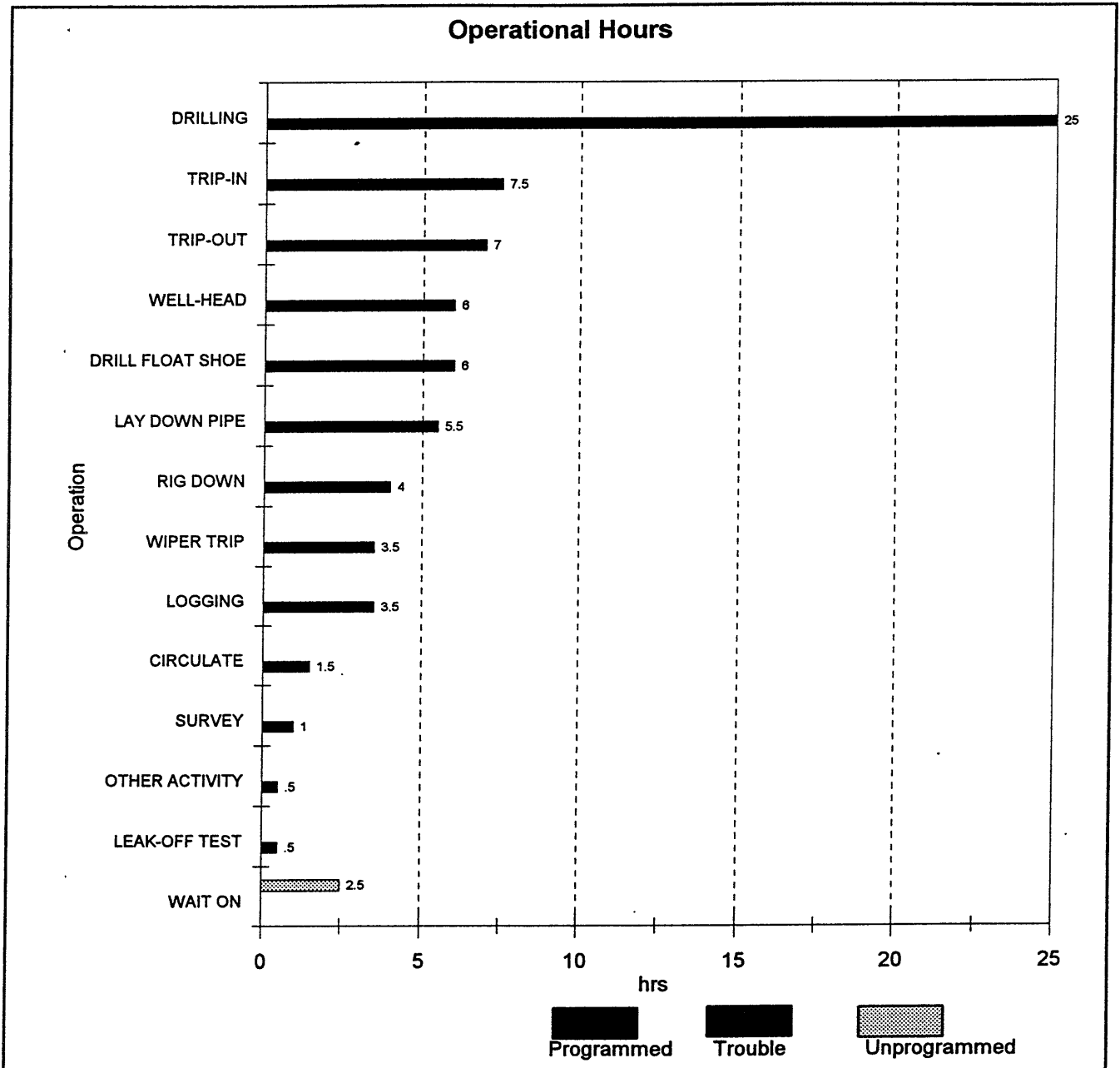
## IRREWARRA 1

PHASE : S2

PROGRAMMED HRS: 71.5

TROUBLE HRS : 0.0

UNPROGRAMMED HRS : 2.50



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# TIME BREAKDOWN DATABASE - ACTIVITY REPORT

WELL : IRREWARRA 1  
 Drilling Co : SLIMDRILL CONTRACTING P/L  
 Rig : HTA 3000

Page Number : 1 of 2

DATE	PHS	CLS	OPERATION	HRS	DEPTH	DESCRIPTION
29.04.98	S1	PD	DRILLING	3.50	30	Spud Irrewarra-1 2030hrs 29/4/98 Drill 8.5"hole F/9 to 30m
30.04.98	S1	PD	DRILLING	2.00	41	Continue drill 8 1/2" hole f/30 to 41m.
30.04.98	S1	TD	RIG REPAIR	2.00	41	Hydraulics to rotary and to hoist failing, repairing same.
30.04.98	S1	PD	DRILLING	2.00	65	Continue drill 8 1/2" hole f/41 to 65m.
30.04.98	S1	TD	RIG REPAIR	4.00	65	Repair fluid inlet valve to Power swivel.
30.04.98	S1	PD	DRILLING	11.00	154	Drill 8 1/2" hole f/65m to 154m.
30.04.98	S1	PD	SURVEY	0.50	154	Run wireline survey @ 154m. BI.
30.04.98	S1	PD	DRILLING	2.50	178	Continue drill 8 1/2" hole f/154m to 178m.
01.05.98	S1	PD	DRILLING	3.00	202	Continue drill 8 1/2" hole f/178m to 202m.csg point.
01.05.98	S1	PD	CIRCULATE	0.50	202	Circ btms up (carbide)for wiper trip.Hole in gauge.
01.05.98	S1	PD	WIPER TRIP	5.50	202	Wiper trip for csg.
01.05.98	S1	PD	CIRCULATE	0.50	202	Circ btms up,prior to POH f/7" csg.
01.05.98	S1	PD	TRIP-OUT	5.00	202	POH to run 7" csg, L/out 6 1/4" DC's.
01.05.98	S1	PD	RIG UP	0.50	202	Rig to run 7" csg.
01.05.98	S1	TD	WAIT ON	4.00	202	Wait on float equipment.
01.05.98	S1	PD	R/UP, RUN CSG/TBG	4.00	202	Run 16jnts 26#/ft k55 8rnd LT&C csg.
01.05.98	S1	PD	CIRCULATE CSG/TBG	1.00	202	Install circ swedge & circ 7" csg.
02.05.98	S1	TD	WAIT ON	13.50	202	Wait on cmt unit, circ csg.
02.05.98	S1	PD	RIG UP	1.00	202	Cmt unit onsite, no operator,rig up pump truck and load cmt head.
02.05.98	S1	TD	CIRCULATE	2.00	202	Continue circ & wait on operator.
02.05.98	S1	PD	CEMENT CSG/TBG	1.00	202	Press test lines t/3000psi.Pump spacer ahead, Mix & pump 160sx Class"A" @15.8#/gal.Drop plug& displace& bump,press tst csg t/3000psi, Flt held,cmt to surface.
02.05.98	S1	PD	WAIT ON CMT	6.50	202	WOC sample soft, unable to slack off 7".
03.05.98	S1	PD	WAIT ON CMT	3.00	202	WOC. Slack off 7" csg.
03.05.98	S1	PD	WELL-HEAD	8.00	202	Rough cut 7",remove stub,final cut& bevel, Preheat & weld on B/head.Press test weld failed,reweld & allow to cool,press test failed two attempts.
03.05.98	S1	TD	WELL-HEAD	13.00	202	Cut & remove Bradenhead,machine & remove csg stub & restore to as new.
04.05.98	S1	TD	WELL-HEAD	1.00	202	Continue machine & restore Bradenhead to as new condition.
04.05.98	S1	TD	WELL-HEAD	3.00	202	Install Bradenhead,preheat & weld,cool & pressure test to 1500psi. OK.
04.05.98	S1	PD	BOP's	6.00	202	N/up BOP's.
04.05.98	S2	PD	WELL-HEAD	6.00	202	Pressure test BOP & choke manifold,ISBOP,U. K/cock,HCR,200L,2100H.Hydril 200L,1500H. Run up Koomey unit 13 1/2min.
04.05.98	S2	PD	TRIP-IN	5.50	202	M/up new Bit & BHA & RIH. TOC @ 179m.
04.05.98	S2	PD	DRILL FLOAT SHOE	2.50	202	Drilling cmt & flt shoe.
05.05.98	S2	PD	DRILL FLOAT SHOE	3.50	202	Continue drill cmt ,flt cll & shoe.
05.05.98	S2	PD	LEAK-OFF TEST	0.50	202	Perform FIT to EMW 13#/gal. (150psi)
05.05.98	S2	PD	DRILLING	8.00	300	Drilling 6" hole WWireline surveys.F/202m to 300m
05.05.98	S2	PD	SURVEY	0.50	300	Circ & survey @ 300m. 1Deg.
05.05.98	S2	PD	DRILLING	8.00	400	Drill 6" hole F/300m to 400m

# TIME BREAKDOWN DATABASE - ACTIVITY REPORT

WELL : IRREWARRA 1  
 Drilling Co : SLIMDRILL CONTRACTING P/L  
 Rig : HTA 3000

Page Number : 2 of 2

DATE	PHS	CLS	OPERATION	HRS	DEPTH	DESCRIPTION
05.05.98	S2	PD	SURVEY	0.50	400	Circ & survey @ 400m. Bl.
05.05.98	S2	PD	DRILLING	3.00	470	Drill 6" hole F/400m to 470m.
06.05.98	S2	PD	DRILLING	6.00	552	Continue drill 6" hole F/470m to 552m. TD.
06.05.98	S2	PD	CIRCULATE	0.50	552	Circ bttms up for wiper trip.
06.05.98	S2	PD	WIPER TRIP	3.50	552	Wiper trip to shoe.(No excess drag/lite spots.)
06.05.98	S2	PD	CIRCULATE	0.50	552	Circ & condition prior to POH to Log.
06.05.98	S2	PD	TRIP-OUT	5.50	552	POOH to log. (strap out,D551m, Slmber D549m) No correction.
06.05.98	S2	PE	LOGGING	3.50	552	Slmber log run #1 - PEX (AITH) BHT.38c.
06.05.98	S2	AE	WAIT ON	2.50	552	Wait on Geology ops for P&A order.
06.05.98	S2	PD	TRIP-IN	1.00	552	RIH open ended for P&A @ 232m to 170m.
06.05.98	S2	PA	OTHER ACTIVITY	0.50	552	Mix & pump Plug #1 F/232m to 170m,total 75sx"A" cmt @15.6#/gal w/2%CaCl2.
06.05.98	S2	PA	TRIP-OUT	0.50	552	Pull 9 singles & circ.
07.05.98	S2	PA	CIRCULATE	0.50	202	Circ out after cmt job.
07.05.98	S2	PA	TRIP-OUT	1.00	202	POOH.
07.05.98	S2	PA	LAY DOWN PIPE	3.50	202	Lay out excess Dp & Dc`s.
07.05.98	S2	PA	TRIP-IN	1.00	202	RIH to tag top of Plug #1 @ 165m. W/10K.
07.05.98	S2	PA	LAY DOWN PIPE	2.00	202	POH sideways.
07.05.98	S2	PA	RIG DOWN	4.00	202	Nipple down BOP, cut & remove Bradenhead, mix & spot 20sx "A" cmt on surface. Install sign RELEASE RIG @ 1200HRS 7TH MAY 1998.

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# Multi well cost analysis

## Cost per mtr / mtr per day

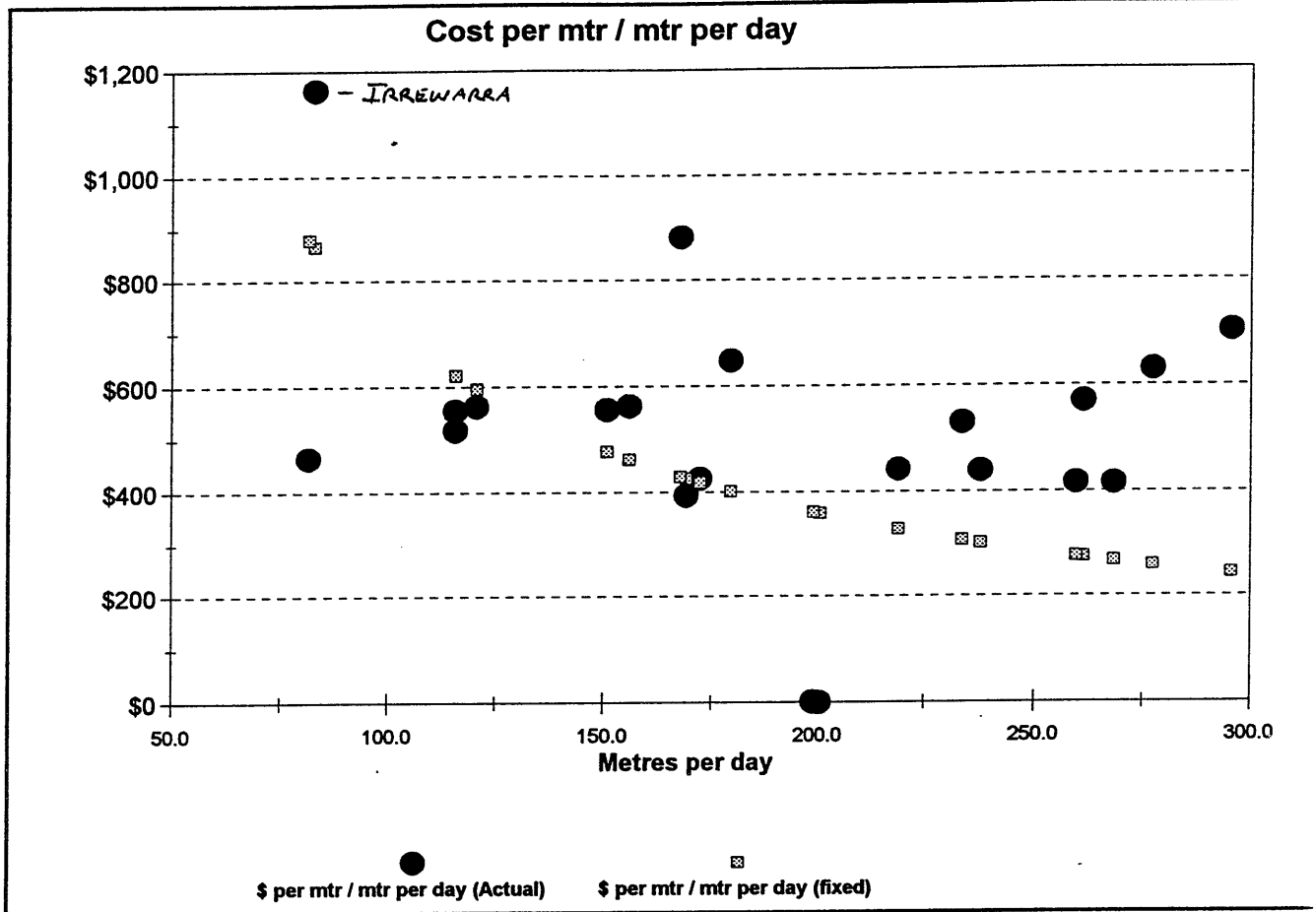
Comparative cost per hour value: \$3000.00

Well	Total Well Cost \$	Max Depth	Days to TD	ft/m per day	\$ per ft/m (@ \$1000/hr)	\$ per ft/m (real well cost)
BLACKWOOD #1	\$1,127,273	2,650.00	15.38	172.36	\$417.74	\$425.39
BOGGY CREEK #1	\$1,230,000	1,900.00	10.58	179.53	\$401.05	\$647.37
DIGBY #1	\$1,082,000	2,088.00	18.02	115.87	\$621.41	\$518.20
DUNBAR #1	\$933,000	1,758.00	7.52	233.75	\$308.02	\$530.72
DUNBAR EAST #1	\$1,328,921	2,361.00	19.56	120.69	\$596.57	\$562.86
EAST AVENUE # 1	\$1,275,850	2,900.00	12.19	237.95	\$302.59	\$439.95
Fenton Creek #1	\$1,050,000	1,840.00	7.04	261.30	\$275.54	\$570.65
Gordon #1	\$1,106,054	2,505.00	11.44	219.02	\$328.74	\$441.54
HOWMAINS #1	\$847,000	2,150.00	12.71	169.18	\$425.58	\$393.95
HUNGERFORD #1	\$915,000	2,196.00	8.46	259.63	\$277.32	\$416.67
IONA #2	\$1,458,000	1,650.00	9.83	167.80	\$429.09	\$883.64
IRREWARRA 1	\$642,801	552.00	6.65	83.06	\$866.85	\$1,164.49
LANGLEY #1	\$1,114,000	2,006.00	17.31	115.87	\$621.39	\$555.33
NAMGIB #1	\$577,000	1,387.00	5.17	268.45	\$268.20	\$416.01
PINE LODGE #1	\$1,000,000	2,150.00	26.28	81.81	\$880.12	\$465.12
SKULL CREEK #1	\$1,194,889	1,700.00	5.75	295.65	\$243.53	\$702.88
SKULL CREEK WEST # 1	\$1,261,100	2,000.00	7.21	277.46	\$259.50	\$630.55
Skull Creek North #1	\$1,020,000	1,810.00	11.60	155.98	\$461.60	\$563.54
Taralea #1	\$1,557,118	2,800.00	18.56	150.84	\$477.32	\$556.11
VAUGHAN #1	\$1,812	2,030.00	10.13	200.49	\$359.11	\$0.89
WALLABY CREEK #1	\$2,188	1,745.00	8.77	198.95	\$361.89	\$1.25

# Multi well cost analysis

## Cost per mtr / mtr per day

Comparative cost per hour value: \$ 3000.00



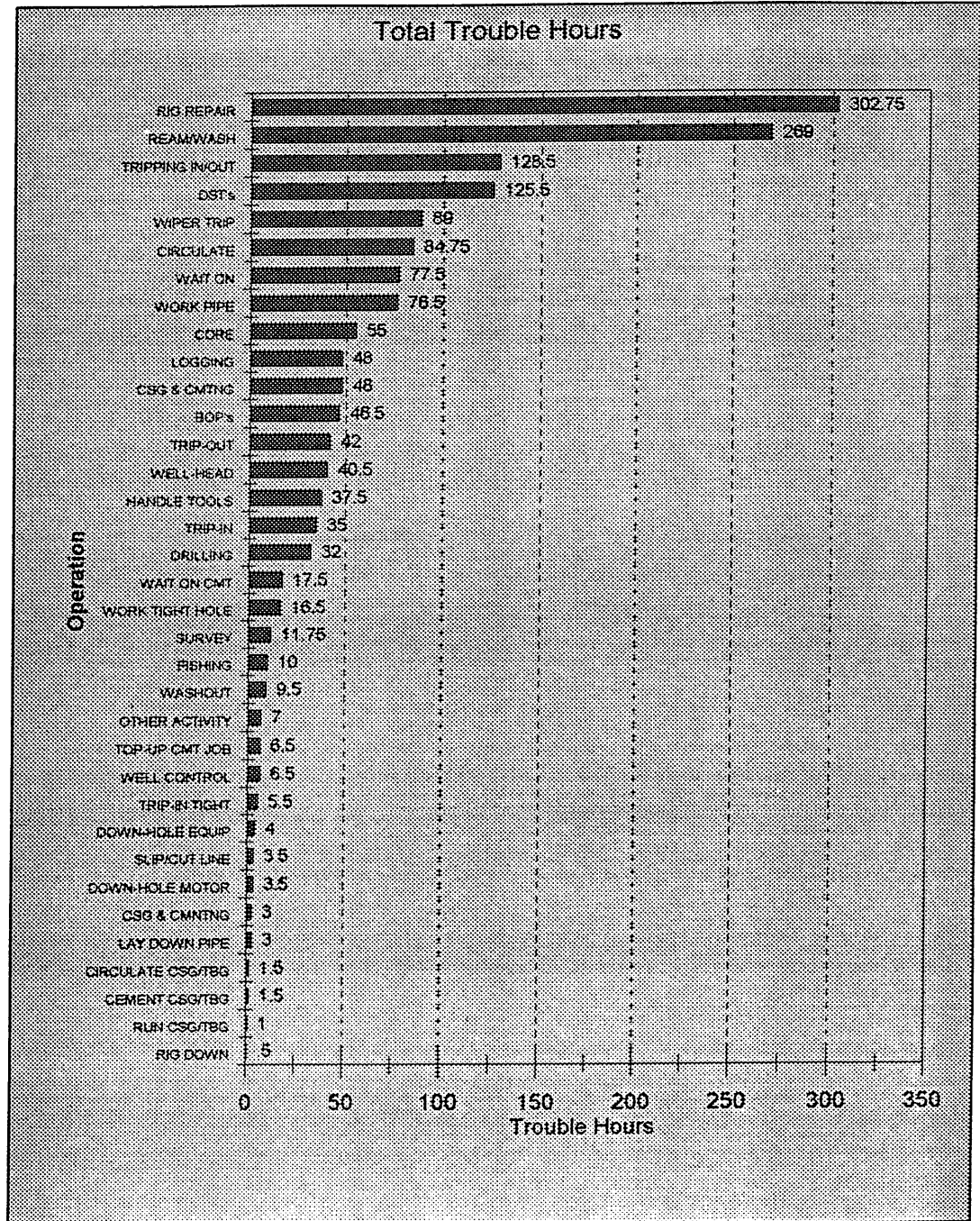
**TIME BREAKDOWN DATABASE**  
**Multi-well trouble analysis (by operation)**

Tuesday, 8 December 1998

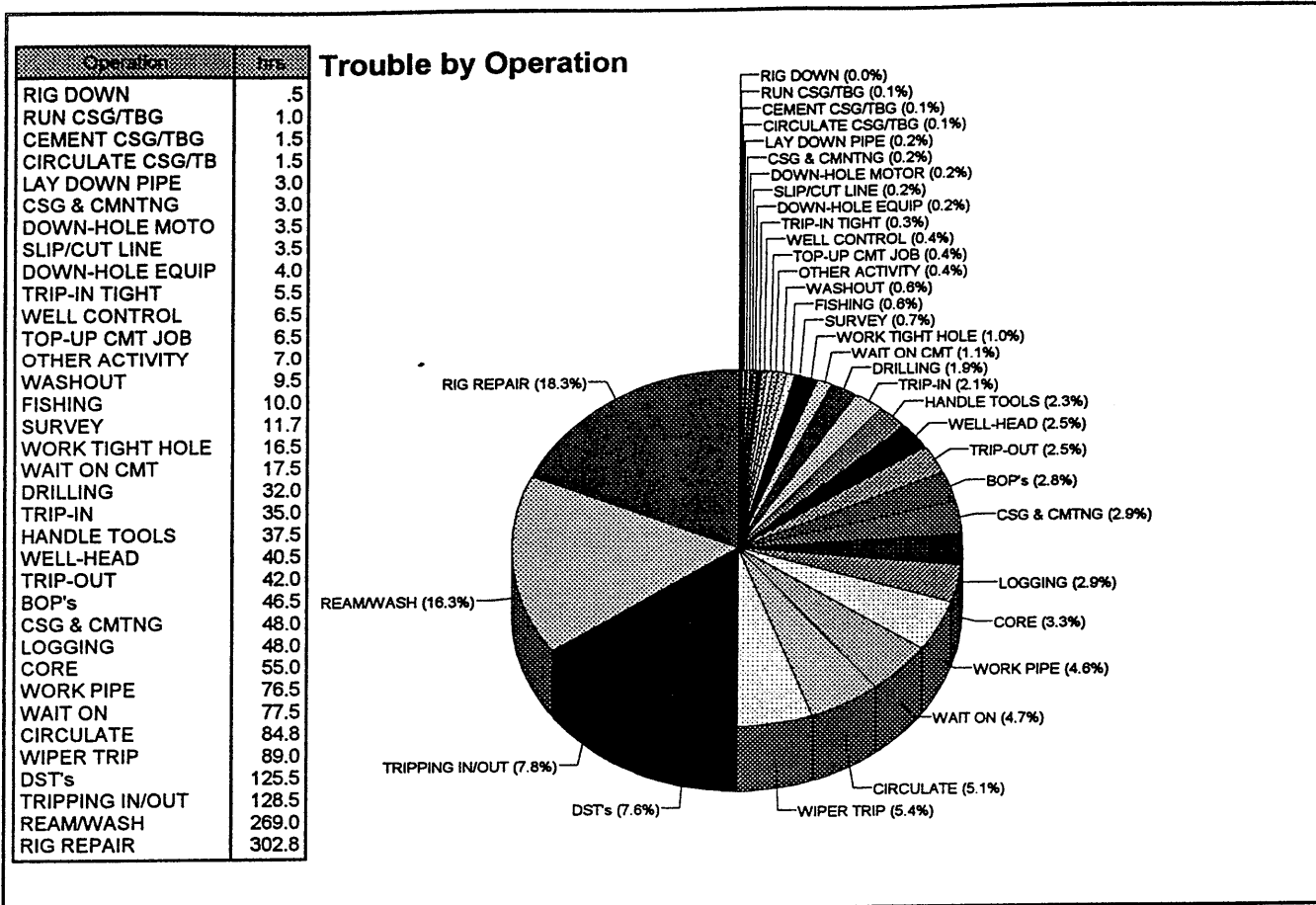
Drilling Co : ALL  
 Rig : ALL  
 Well Type : ALL

Number of Wells selected : 21  
 Total Trouble time (hrs) : 1,650.2  
 Ave Trouble time/ well (hrs) : 78.6  
 Total Trouble time (days) : 68.8

Well Name
BLACKWOOD #1
BOGGY CREEK #1
DIGBY #1
DUNBAR #1
DUNBAR EAST #1
EAST AVENUE #1
Fenton Creek #1
Gordon #1
HOWMAINS #1
HUNGERFORD #1
IONA #2
IRREWARRA 1
LANGLEY #1
NANGIB #1
PINE LODGE #1
SKULL CREEK #1
SKULL CREEK WEST #1
Skull Creek North #1
Taralea #1
VAUGHAN #1
WALLABY CREEK #1



Copyright IDS, Aug 97



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# WELL: IRREWARRA - 1

## Problem Time Summary

A total of 42.5 hours of problem time occurred on Irrewarra - 1 representing 23.16% of total time on the well. The problem time primarily occurred due to rig repairs requiring the restoration of hydraulic pressure to the rotary and hoist systems, plus a failed weld on the top casing collar requiring the wellhead to be removed and re-installed.

Primary problems (exceeding 2 hrs per individual event) were:

1. **Wellhead** - Failure of the weld between the Bradenhead and casing meant the removal of the Bradenhead. This comprised of waiting for restoration of the Bradenhead, redressing of the casing stub, re-installation of the Bradenhead and re-testing to 1500 psi. **17.0 hrs Lost.**
2. **Rig Repairs** - Equipment repairs comprised of rectifying hydraulic pressure loss to both the rotary and hoist systems. (2 hr). Also the repair of the fluid inlet valve to the Power swivel. (4 hrs). **6.0 hrs Lost.**
3. **Waiting Time** Due to sharing of cement unit with Boral (ODE Rig 30) waiting time was incurred while cementing operations on Rig 30 were completed. **17.5 hrs Lost.**

## Rig Performance

This well was the first by Cultus utilising the slimdrill HTA 3000 rig. Due to well commitment timing, this rig was selected primarily on the basis of availability after bidding. The rig was mobilised from WA exclusively for this job.

In general the rig performed satisfactorily. Rig up time was slow, but once drilling the mud pump could deliver the hydraulic power necessary to keep the hole clean and optimise ROP for this well depth. The HSE management of the rig was excellent and there were no LTI's on this programme.

### **To improve future operations:**

1. The rig needs both mud pumps manifolded together via a common header to accommodate pump changes.
2. Trip time is slow, but this was resolved by the use of a lower rig rate for tripping.
3. Drill floor ergonomics need to be reviewed and redesigned to accommodate 8-1/2" drilling assemblies and 7" casing sizes.

## TIME BREAKDOWN DATABASE Trouble Time Analysis

Well Name : IRREWARRA 1  
 Drilling Co : SLIMDRILL CONTRACTING P/L  
 Rig : HTA 3000  
 Spud Date : 29.04.98

Total Time on Well 183.50  
 Total Trouble Time 42.50  
 % Trouble Time 23.16

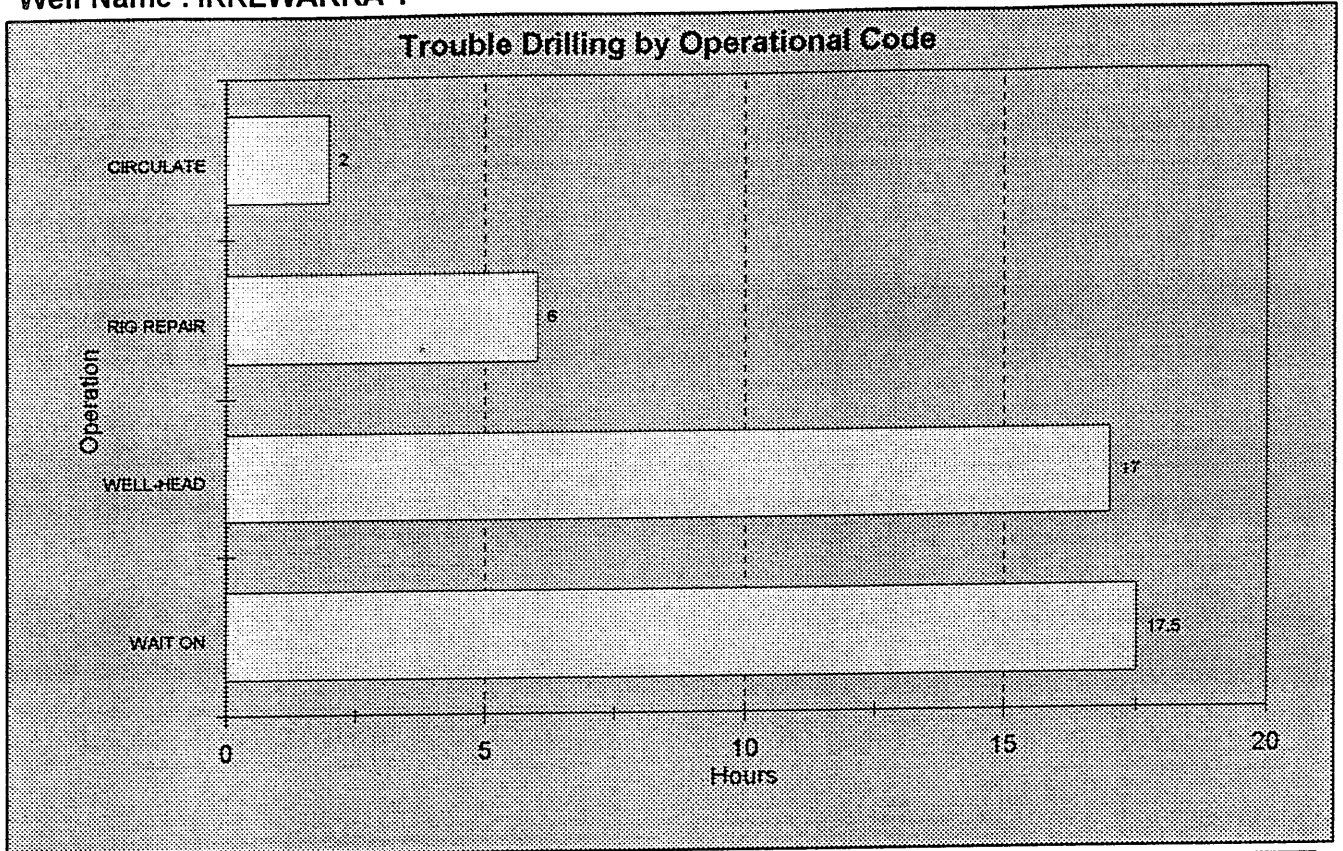
### Total NPT Hours per Phase

PHASE	NPT HOURS
S1	42.50

### NPT On Well

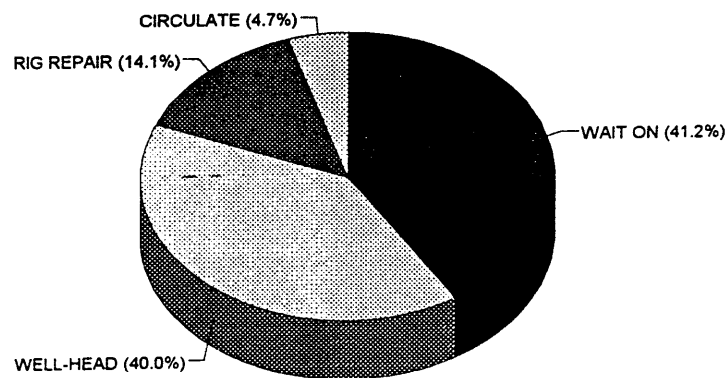
PHASE	OPERATION	NPT Hrs	DEPTH	DESCRIPTION OF TROUBLE TIME
S1	RIG REPAIR	2.00	41.0	Hydraulics to rotary and to hoist failing, repairing same.
S1	RIG REPAIR	4.00	65.0	Repair fluid inlet valve to Power swivel.
S1	WAIT ON	4.00	202.0	Wait on float equipment.
S1	WAIT ON	13.50	202.0	Wait on cmt unit, circ csg.
S1	CIRCULATE	2.00	202.0	Continue circ & wait on operator.
S1	WELL-HEAD	13.00	202.0	Cut & remove Bradenhead, machine & remove csg stub & restore to as new.
S1	WELL-HEAD	1.00	202.0	Continue machine & restore Bradenhead to as new condition.
S1	WELL-HEAD	3.00	202.0	Install Bradenhead, preheat & weld, cool & pressure test to 1500psi. OK.

Well Name : IRREWARRA 1



Trouble Drilling by Operational Code

OPERATION	NPT
WAIT ON	17.50
WELL-HEAD	17.00
RIG REPAIR	6.00
CIRCULATE	2.00





DRILLING DATA

Casing & Cement

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CASING RUNNING LIST

WELL : IRREWARRA #1 PERMIT: PEP133 DATE: 01.05.98 Rig:  
 Casing size (in) 7" Wt(ppf) 26.00 Grade: K55 Connection: 8-ROUND  
 Supervisor: A.Baczkov Measured by: Supervisor Page: 1 of Pages:

Order	Jt No:	Length	Total	Depth	Comment	Order	Jt No:	Length	Total	Depth
				202.00	Bottom of Shoe					
1	Shoe A	13.05	13.05	188.95	C 3 m above shoe					
2	F/CII	12.97	26.02	175.98	C			0.00	566.82	-357.82
3		12.57	38.59	163.41	C	53	53	12.57	572.39	-370.39
4	4	12.57	51.16	150.84	C	54	54	12.58	584.97	-382.97
5	5	12.57	63.73	138.27		55	55	12.57	597.54	-395.54
6	6	12.57	76.30	125.70	13.05 L/shoetrack	56	56	12.59	610.13	-408.13
7	7	12.57	88.87	113.13		57	57	12.57	622.70	-420.70
8	8	12.57	101.44	100.56		58	58	12.59	635.29	-433.29
9	9	12.57	114.01	87.99		59	59	12.58	647.87	-445.87
10	10	12.57	126.58	75.42		60	60	12.58	660.45	-458.45
11	11	12.57	139.15	62.85		61	61	12.08	672.53	-470.53
12	12	12.57	151.72	50.28		62	62	12.58	685.11	-483.11
Total		151.72				Total		125.29		
13	13	12.57	164.29	37.71		63	63	12.58	697.69	-495.69
14	14	12.57	176.86	25.14		64	64	12.58	710.27	-508.27
15	15	11.72	188.58	13.42		65	65	12.58	722.85	-520.85
16	16	11.70	200.28	1.72		66	66	12.59	735.44	-533.44
17	17		200.28	1.72		67	67	11.84	747.28	-545.28
18	18		200.28	1.72		68	68	11.84	759.12	-557.12
19	19		200.28	1.72		69	69	12.58	771.70	-569.70
20	20		200.28	1.72		70	70	11.83	783.53	-581.53
21	21		200.28	1.72		71	71	11.83	795.36	-593.36
22	22		200.28	1.72		72	72	11.84	807.20	-605.20
Total						Total		122.09		
23	23	11.83	212.11	-10.11		73		11.84	819.04	-617.04
24	24	11.83	223.94	-21.94		74		11.84	830.88	-628.88
25	25	11.83	235.77	-33.77		75		11.84	842.72	-640.72
26	26	11.57	247.34	-45.34		76		11.84	854.56	-652.56
27	27	11.58	258.92	-56.92		77		11.83	866.39	-664.39
28	28	11.84	270.76	-68.76		78		11.84	878.23	-676.23
29	29	11.83	282.59	-80.59		79		11.84	890.07	-688.07
30	30	11.84	294.43	-92.43		80		11.84	901.91	-699.91
31	31	11.84	306.27	-104.27		81		11.84	913.75	-711.75
32	32	11.84	318.11	-116.11		82		11.84	925.59	-723.59
Total		117.83				Total		118.39		
33	33	11.83	329.94	-127.94		83		11.84	937.43	-735.43
34	34	11.83	341.77	-139.77		84		11.83	949.26	-747.26
35	35	11.83	353.60	-151.60		85		11.84	961.10	-759.10
36	36	11.84	365.44	-163.44		86		11.84	972.94	-770.94
37	37	11.83	377.27	-175.27		87		11.84	984.78	-782.78
38	38	11.84	389.11	-187.11		88	26 Ppf	11.83	996.61	-794.61
39	39	11.83	400.94	-198.94		89		11.84	1008.45	-806.45
40	40	11.83	412.77	-210.77		90		11.84	1020.29	-818.29
41	41	11.83	424.60	-222.60		91		11.83	1032.12	-830.12
42	42	11.83	436.43	-234.43		92		11.83	1043.95	-841.95
Total		118.32				Total		118.36		
43	43	11.84	448.27	-246.27		93		11.83	1055.78	-853.78
44	44	11.83	460.10	-258.10		94		11.83	1067.61	-865.61
45	45	12.59	472.69	-270.69		95		11.84	1079.45	-877.45
46	46	12.57	485.26	-283.26		96		11.83	1091.28	-889.28
47	47	12.59	497.85	-295.85		97		11.83	1103.11	-901.11
48	48	12.57	510.42	-308.42		98		11.84	1114.95	-912.95
49	49	12.57	522.99	-320.99		99		11.83	1126.78	-924.78
50	50	12.58	535.57	-333.57		100		11.83	1138.61	-936.61
51	51	11.66	547.23	-345.23		101		11.84	1150.45	-948.45
52	52	12.59	559.82	-357.82		102		11.84	1162.29	-960.29
Total		123.39				Total		118.34		

Total Casing:	26 Jts	Remarks:
Casing Used:	16 Jts	
Casing Left:	9 Jts	

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Cultus Group

**CEMENTING REPORT**

Well Name : Irrewarra #1  
Rig Name : Slimdrill HTC2000  
Engineer : A.Baczkowski.

Date : 02.May.98  
Casing Size : 7"  
Casing MD/TVD : 200m.

Hole Geometry		Mud Properties		Gas Reading	
Hole Size :	8 1/2"	Mud Wt :	8.7	Max Gas :	0
Hole MD :	202m.	Vis :	40	Btms Up :	0
Hole TVD :	202m.	PV :	8	Final BG :	0
Hole Angle :	Bl.	YP :	12		
Last Csg Size :	9 5/8" Conductor	WL :	24		
Last Csg MD :	5.3	BHCT :			
Last Csg TVD :	5.3	BHST :			

**Casing Summary**

Description	Wt (lb/ft)	Grade	Conn	Length	Depth, mRT
1 x Shoe jnt	26	K55	8Rnd	13.05	200.00
1 x Flt jnt	26	K55	8Rnd	12.97	188.95
14 x jnts csg	26	K55	8Rnd	174.26	1.72

**Centralizers**

Manufacturer	Type	Quantity	Remark / Placement
Howco	Bowstring	4	3m/sh/jnt. 3m/ft/jnt. 3rd & 4th cl's.

**Lead Cement Slurry Details**

Weight (ppg)	Vol (bbl)	Mixwater (bbl)	# Sacks	S. Vol(ft3/sk)	Additives
15.8	33	18.5	160sx "A"	1.15	CaCl2 1%

**Tail Cement Slurry Details**

Weight (ppg)	Vol (bbl)	Mixwater (bbl)	# Sacks	S. Vol(ft3/sk)	Additives

**Top Up Cement Slurry Details**

Weight (ppg)	Vol (bbl)	Mixwater (bbl)	# Sacks	S. Vol(ft3/sk)	Additives

**Operation Description**

	Circulation	Pre-Flush	Lead	Tail	Displacement
Volume (bbl)	1000bbl's	10bbl's		33bbl's	24bbl's
Time (min)	1546(720)	1553(6)		1625(33)	1643(18)

**Job Evaluation**

Reciprocate : N  
Full Returns : Y  
Cmt to Surface : Y  
Bump Plug : Y 330psi  
Pressure Test: Y 3000psi  
ECP : 200psi

**Remarks**

Full returns thruout job, cmt to surface.  
Bumped plug, floats held.  
Pressure test csg t/3000psi  
Top job by hand 10sx



Bit & Hydraulic Records

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BIT RECORD																																			
Company:		Cultus Petroleum NL																																	
Well:		Irewarra #1																																	
Run #	Size	Make	Type	S/N	IADC	Jets			Depth		IADC		Rotating		Metres/		WOB		RPM	Pump		Flow		Date		IADC DULL BIT GRADING									
						1	2	3	4	Out	Meters	Hours	Hours	Hours	Hours	Hour	Hour	10	10		Press		Flow	In	Out	I	O1	D	L	B	G	O2	R		
1	8 1/2	Reed	HP-1	BA1083	116	15	15	15		202	193	24	14.5	13.3	10	120	600	309	29/04/98	1/05/98	3	2	NO	NO	E	IN	NO	NO	TD						
2	6	Smith	FDS	LS2969	116	14	14	14		552	268	25	21.5	12.5	10	160	1100	295	6/05/98	6/05/98	2	2	NO	NO	E	IN	NO	NO	TD						

**Bottom Hole Assemblies**

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**Bottom Hole Assembly Summary      IRREWARRA - 1**

Bit #	1	2
BHA Type	Pendulum	Stabilised
Bit / Hole Size	8 1/2"	6"
BHA Components	HP-11 Bit Sub 3 x 6 1/4" DC 10 x 4 1/8" DC 10 x 4 1/8" RSK6 DC	FDS Bit Sub 2 x 4 1/8" Spir DC Crossover Roller Reamer Crossover 8 x 4 1/8" Spir DC 13 x 4 1/8" Slim DC

Drilling Fluid Reports

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Drilling  
Fluid  
Services Pty. Ltd  
A.C.N. 009 267 314



## **DRILLING FLUID SUMMARY**

**FOR**

**CULTUS PETROLEUM N.L.**

**WELL : IRRAWARRA # 1**

**OTWAY BASIN**

**VICTORIA**

Prepared by : Neil Kyberd  
Andre Skujins

Date : May 1998

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Adelaide SA 5000  
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Perth Office: 27 Pitt Way  
Myaree WA 6154  
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P.O. Box 192, Glen Osmond S.A. 5064

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1. Summary of Operations
2. Observations, Recommendations and Well Analysis
3. Material Costs and Consumption Analysis
4. Mud Materials Reconciliation
5. Fluid Properties Summary
6. Mud Volume Reconciliation
7. Graphs
8. Bit Record
9. Hydraulics Record
10. Daily Mud Reports

Operator : Cultus Petroleum N.L.  
Well : Irrawarra # 1  
Rig : Slimdrill # 1  
Spud : 29<sup>th</sup> April 1998



## 1. SUMMARY OF OPERATIONS

HOLE SIZE : 216 mm (8½")  
MUD TYPE : Gel Spud Mud  
INTERVAL : Surface - 202 m  
CASING : 9-5/8" @ 199 m

Make up water supplied from a local bore was tested on location and found to have the following properties :

pH : 7.2  
Pf / Mf : 0.0/0.4  
Salinity : 800 mg/l  
Hardness : 100 mg/l

120 bbls of spud mud was prepared using 20 ppb of Highgel and allowed to yield for several hours before extending the viscosity with small Lime additions. The Brandt type shakers were dressed with S40 / S80 screens.

An 8½" bit was made up and the well was spudded at 20:00 hours on the 29th April, with a spud mud viscosity of 50 sec/qt. After drilling down the 6½" collars, the pump rate was increased and the viscosity controlled between 40 and 43 sec/qt with water additions. As volume allowed, the sand trap was dumped when required to remove solids and the Desilter / Mud Cleaner run continually.

Drilling continued to casing point (202 m) where a 4 stand wiper trip was pulled to check on hole conditions (no fill). The hole was circulated clean while further water additions maintained the viscosity.

With the hole in good condition the bit was pulled out of the hole. 7" casing was run in the hole without problems and the hole circulated clean. The mud was diluted back with water additions to a viscosity of 38 sec/qt and 10 min gels to 12 lbs/100ft<sup>2</sup>, while circulating the casing. The cement job was conducted and the slurry displaced with mud. Good returns were maintained throughout with cement returned to surface.

Operator : Cultus Petroleum N.L.  
Well : Irrawarra # 1  
Rig : Slimdrill # 1  
Spud : 29<sup>th</sup> April 1998



**HOLE SIZE** : 152.4 mm (6") Production Hole  
**MUD TYPE** : Gel - Polymer - Lignosulphonate  
**INTERVAL** : 202 m - 552 m

While waiting on cement and nipping up the BOPs, the tanks were dumped and cleaned, and then filled with water. 70 bbls of new fluid was prepared with 25 ppb Idgel, 0.8 ppb IdPac-Reg and 1 ppb Lignospense. The fluid was then treated with Soda Ash for expected cement contamination. The desilter was run to agitate the tank and attempt to mix the fluid and chemicals. No shearing could be done, so limiting the amount of polymer initially added. The shaker screens were left with S40 / S80 size fitted to cope with the unsheared polymer and prevent excessive mud loss due to screen blinding.

A 6" bit was run into the hole and tagged cement at 179 m. The shoe track was drilled with mud, incorporating the spud mud left in the hole from the cement displacement into the new system. The pH quickly rose to 11 as cement was drilled. At 204 m, an F.I.T. was performed before drilling resumed.

Drilling continued and once the polymer began shearing through the bit, further IdPac-Reg additions were made to reduce the fluid loss. The shaker screens were upgraded to S80 / S120.

From 345 m poorly sorted sands were encountered, causing massive mud losses at the shakers and mud cleaner due to sand blinding. The top shaker screen was downgraded to S60 to help reduce mud loss over the shakers. New premix was mixed and added to maintain volume.

A rapid mud weight gain to 9.3 ppg occurred while drilling the Eumeralla Fm as the desilter / mud cleaner was down for repairs and the sand trap could not be dumped. By-passing the shakers direct to the sump was the only way to dump & dilute leaving the settling tank full of solids. If the sand trap had been dumped the whole surface system would have been lost before the dump gate could be closed.

Polythin and water were added to control the rapidly rising viscosity and Yield Point due to the increasing solids content.

Drilling continued to a total depth of 552 m. The hole was circulated clean and the bit pulled out for a wiper trip to the casing shoe, working tight hole. The hole was then circulated clean and the bit pulled out to log.

Logging tools were made up and run into the hole and logging commenced.

As soon as it was clear that no DST's were to be run the IDFS engineer was released.

Operator : Cultus Petroleum N.L.  
Well : Irrawarra # 1  
Rig : Slimdrill # 1  
Spud : 29<sup>th</sup> April 1998



## 2. OBSERVATIONS, RECOMMENDATIONS AND WELL ANALYSIS

Irrawarra # 1 was drilled for a mud cost of \$2925.17 or \$5.30 per metre. No DST's were conducted after TD and no further mud costs incurred. The well was generally trouble free from a Drilling / Drilling Fluid viewpoint and mud costs appeared reasonable given the depth of well and the hole sizes.

### 8½" Surface Hole

This section of hole was drilled with a Gel Caustic spud mud for a mud cost of \$575.00 or \$2.85 per metre. Mud making clays were encountered throughout and water was added to maintain the viscosity in the 40 - 45 sec/qt range.

### 6" Production Hole

This section of hole was drilled for a mud cost of \$2,371.17 or \$6.77 per metre. It was designated to be drilled with a Gel Polymer Lignosulphonate system to TD. IdGel and IdPac-Reg were used for primary yield point and water loss control with Lignospense (Calcium Lignosulphonate) for rheology stability and improved filter cake quality.

Some tight hole was experienced during initial trips through new hole but posed no further problem after being wiped with the bit.

### Mud Properties

The mud in general responded poorly to chemical treatment due to the poor and / or inadequate mixing facilities provided and the layout of the tank system.

### Solids Control Equipment

The Desilter / Mud Cleaner worked adequately but frequently broke down with electrical problems. When drilling sands the 200 mesh screen continually blinded and threw most of the mud into the sump.

### Mud Volume

Downhole losses throughout were masked by the frequent / continual mud loss over the shaker screens and mud cleaner screen due to sand blinding. Losses over the shale shakers accounted for approximately 35% of all mud lost / disposed.

### 3. INTERVAL COSTS

Product	Interval :		8-1/2" Surface Hole			6" Production Hole			Total Well Consumption		
	Cost	Unit Size	0 m - 202 m			202 m - 552 m (TD)			0 m - 552 m (TD)		
			Used	Cost	%Cost	Used	Cost	%Cost	Used	Cost	%Cost
Caustic Soda	\$ 42.50	25 kg	1	\$42.50	7.4%	1	\$42.50	1.8%	2	\$85.00	2.9%
Defoam L	\$ 95.00	25 lt				1	\$95.00	4.0%	1	\$95.00	3.2%
Highgel	\$ 12.50	25 kg	42	\$525.00	91.3%	3	\$37.50	1.6%	45	\$562.50	19.2%
Idgel	\$ 9.50	25 kg				92	\$874.00	37.2%	92	\$874.00	29.9%
IdPac Reg	\$ 136.00	25 kg				4	\$544.00	23.1%	4	\$544.00	18.6%
Lignospense	\$ 37.89	25 kg				3	\$113.67	4.8%	3	\$113.67	3.9%
Lime	\$ 7.50	20 kg	1	\$7.50	1.3%				1	\$7.50	0.3%
Polythin	\$ 108.00	25 kg				5	\$540.00	23.0%	5	\$540.00	18.5%
Soda Ash	\$ 15.00	25 kg				2	\$30.00	1.3%	2	\$30.00	1.0%
Sodium Sulphite	\$ 24.50	25 kg				3	\$73.50	3.1%	3	\$73.50	2.5%
<b>Totals :</b>				<b>\$575.00</b>	<b>100.0%</b>		<b>\$2,350.17</b>	<b>100.0%</b>		<b>\$2,925.17</b>	<b>100.0%</b>
<b>Cost per Metre :</b>				<b>\$2.85</b>			<b>\$6.71</b>			<b>\$5.30</b>	



## 4. MATERIALS RECONCILIATION

Previous Well : -  
 Well : Irrawarra # 1  
 Transferred to : Stores

PRODUCT	UNIT	TOTAL RECEIVED	TOTAL USED	TRANSFER BALANCE
Barytes	25 kg	560		560
CaCl <sub>2</sub>	25 kg	22	1	21
Caustic Soda	25 kg	28	2	26
Defoam L	25 kg	2	1	1
Highgel	25 kg	120	45	75
ID-Gel	25 kg	120	92	28
ID-Pac Reg	25 kg	20	4	16
Lignosperse	25 kg	20	3	17
Lime	20 lt	59	1	58
Polythin	25 kg	16	5	11
Soda Ash	25 kg	20	2	18
Sodium Sulphite	25 kg	20	3	17

## 5. FLUID PROPERTIES SUMMARY

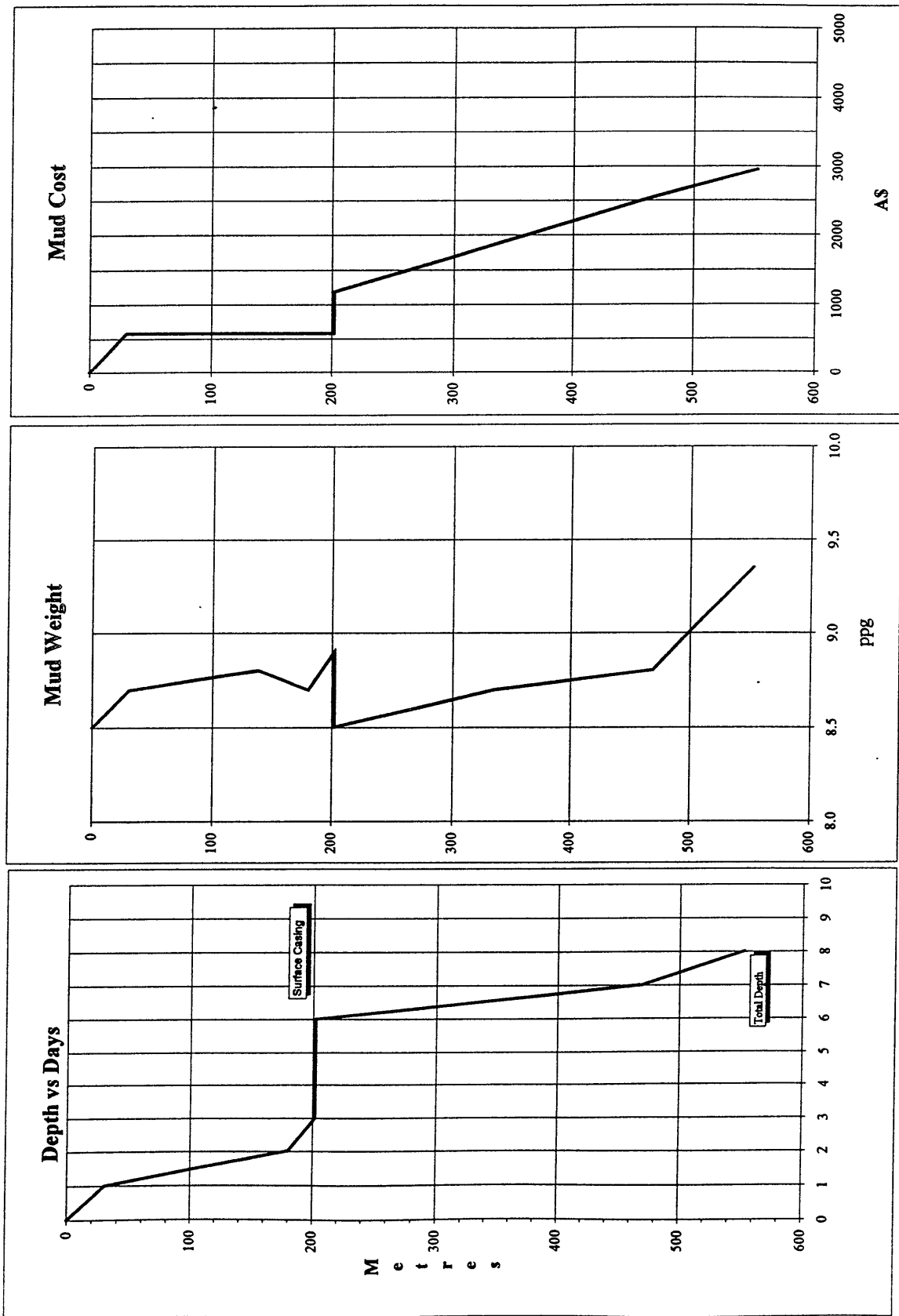
Date	Mud Type	Depth	Weight	Vis	PV	YP	Gels			Filtrate		Solids				pH	PF	MF	Cl-	Ca++	SO <sub>3</sub> <sup>-</sup>
							10 sec	10 min	API	Cake	Solids	Water	Sand	MBT							
29-Apr-98	Gel Spud Mud	0	8.50	39	9	12	9	13	25.0	4	1.1	98.9	Tr	20.0	9.0	0.20	0.30	800	40		
30-Apr-98	Gel Spud Mud	30	8.70	44	10	18	9	16	25.0	4	2.5	97.5	Tr	20.0	9.0	0.20	0.30	800	120		
	Gel Spud Mud	138	8.80	43	7	12	4	9	22.0	4	3.2	96.8	Tr	18.5	8.5	0.10	0.25	1,200	120		
1-May-98	Gel Spud Mud	180	8.70	40	9	11	4	8	22.0	4	2.5	97.5	Tr	18.5	8.5	0.10	0.25	1,050	120		
	Gel Spud Mud	202	8.90	45	8	13	6	11	20.0	4	3.9	96.1	Tr	20.0	8.5	0.10	0.25	1,000	120		
2-May-98	Gel Spud Mud	202	8.80	47	8	12	5	9	22.0	4	3.2	96.8	Tr	18.5	8.5	0.10	0.25	900	100		
	Gel Spud Mud	202	8.80	45	8	12	5	8	22.0	4	3.2	96.8	Tr	18.5	8.5	0.10	0.25	900	100		
3-May-98	Gel Polymer Lignosulphonate																				
	Gel Polymer Lignosulphonate	202	8.60	45	7	11	8	13	12.5	2	1.8	98.2	T	25.0	9.0	0.20	0.95	800	40		
4-May-98	Gel Polymer Lignosulphonate																				
	Gel Polymer Lignosulphonate	202	8.50	42	9	11	9	22	11.5	2	1.1	98.9	Tr	25.0	11.0	0.35	1.80	800	400		
5-May-98	Gel Polymer Lignosulphonate	335	8.70	40	7	10	8	12	12.0	2	2.5	97.5	1/4	20.0	9.5	0.20	0.70	800	280	80	
	Gel Polymer Lignosulphonate	469	8.80	41	9	11	9	19	11.0	2	3.2	96.8	1/4	20.0	9.0	0.20	0.60	800	180	120	
6-May-98	Gel Polymer Lignosulphonate																				
	Gel Polymer Lignosulphonate	552	9.35	44	14	15	9	28	9.2	2	7.1	92.9	1/4	20.0	9.5	0.25	1.40	600	160	120	

## 6. Mud Volume Analysis

Date	Hole Size	Interval		Mud Type	Fluid Built & Received						Fluid Disposed					Summary					
		From	To		Fresh Premix	Sump Premix	Direct Recirc	Water	Other	De-sander	De-sitter	Down-hole	Dumped	Shakers	Initial	Received	Disposed	Final			
29-Apr-98	8.5"	0 m	30 m	Spud Mud	120												0	120	16	104	
30-Apr-98	8.5"	30 m	178 m	Spud Mud				65									104	65	25	109	
1-May-98	8.5"	178 m	202 m	Spud Mud				25									109	25	10	114	
2-May-98	8.5"	202 m	202 m	Spud Mud				10									114	10	0	124	
<b>Sub Total</b>					<b>120</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-220</b>	<b>45</b>	<b>0</b>	<b>96</b>
3-May-98	6"	202 m	202 m	Gel Lignosulphonate	89												0	89		89	
4-May-98	6"	202 m	202 m	Gel Lignosulphonate													89	0		89	
5-May-98	6"	202 m	469 m	Gel Lignosulphonate	280												89	280	120	241	
6-May-98	6"	469 m	552 m	Gel Lignosulphonate	70												128	70	20	137	
<b>Sub Total</b>					<b>439</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>439</b>	<b>0</b>	<b>140</b>	<b>302</b>
<b>Well Total</b>					<b>559</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>659</b>	<b>45</b>	<b>140</b>	<b>398</b>

	Dilution Factors		
	Interval Length	Dilution Vol	Dilution Factor
8½" Surface Hole	202 m	100 bbls	0.5 bbls/m
6" Main Hole	350 m	350 bbls	1.0 bbls/m

# 7. Graphs



## 8. Bit Record

Operator : Cultus		Well : Irrewarra #1		Contractor : Slimdrill		Supervisors : Andy Baczkowski											
Spud Date : 29-Apr-98		TD Date : 6-May-98		Surface Csg : 7" @ 199 m		Production Csg : P&A											
Bit #	Size	Make	Type	Jets		Depth Out	Depth Drilled	Hours	Cumm Hours	WOB	RPM	GPM	Pump Pressure	Mud Wt	Jet Vel	HHPb	Impact Force
1	8.5"	Reed	HP-1	15	15	202 m	202 m	14.5 hrs	14.5 hrs	10	120	309	600	8.9	191	53	272
2	6"	Smith	FDS	14	14	552 m	350 m	21.5 hrs	36.0 hrs	10	160	295	1100	9.4	209	63	299

## 9. HYDRAULICS

BIT RUN	SIZE	TYPE	JETS	DEPTH OUT	GPM	MUD WT	n	$\theta_{300}$	DP	Q <sub>CRIT</sub>	FLOW REGIME <sub>1</sub>	DC	Q <sub>CRIT</sub>	FLOW REGIME <sub>2</sub>	JET VEL	IMPACT FORCE	HSI	BIT PRESS LOSS
1	8.5"	HP-1	15 15 15	202 m	309	8.9	0.49	20	4.5"	713	Laminar	8.0"	574	Laminar	191	271	0.45	285
2	6"	FDS	14 14 14	552 m	295	9.4	0.57	29	4.5"	405	Laminar	6.5"	308	Laminar	209	298	1.11	360



# Independent Drilling Fluid Services

Pty. Ltd

## Drilling Fluid Report

A.C.N. 009267314

Report #	1	Date	29-April-98
Rig No	1	Spud Date	29-April-98
Depth	0	To	30 Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slmndrill
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philips
WELL NAME AND No	IRREWARRA -1	FIELD	Permit PEP 133
		LOCATION	Otway Basin
		STATE	Victoria

DRILLING ASSEMBLY		JET SIZE			CASING		MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE	TYPE	15	15	15	SURFACE SET @	0	HOLE	FTS	PUMP SIZE		CIRCULATION PRESS (PSI)	
8.50	HP-11				0.0	M	4	100	6	X	8	200
DRILL PIPE SIZE	TYPE	Length			INT. SET @		TOTAL CIRCULATING VOL.		PUMP MODEL	ASSUMED EFF		BOTTOMS UP (min)
4.1	16.6 #	1			Mtrs		104		GD PZ-S	97		0
DRILL PIPE SIZE	TYPE	Length			PROD. or LNR Set @		IN STORAGE		BBL/STK	STK / MIN		TOTAL CIRC. TIME (min)
0	HW						0		0.0700	80		19
DRILL COLLAR SIZE (")		Length			MUD TYPE				BBL/MIN	GAL / MIN		ANN VEL. (ft/min)
4.13	7	0			Gel Spud Mud				5.43	228		101

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS			
SAMPLE FROM	Pit	FL		Mud Weight	Minimum	API Filtrate	N/C
TIME SAMPLE TAKEN	15:00	24:00		Plastic Vis	Min	Yield Point	>10
FLOWLINE TEMPERATURE	°C			KCl		PHPA excess	Sulphites

DEPTH (ft) - (m)	Metres		30
WEIGHT	PPB / SG	8.50	1.020
FUNNEL VISCOSITY (sec/qt) API @	°C	39	44
PLASTIC VISCOSITY cP @	120 °C	9	10
YIELD POINT (lb/100FT2)		12	18
GEL STRENGTH (lb/100FT2) 10 sec/10 min.		9 13	9 16
FILTRATE API (cm3/30 min.)		25	25.0
API HPHT FILTRATE (cm3/30 min.) @	°F		
CAKE THICKNESS API : HPHT (32nd in)		4	4
SOLIDS CONTENT		1.1	2.5
LIQUID CONTENT (%by Vol.) OIL/WATER		98.9	0.0
SAND CONTENT (% by Vol.)		Tr	Tr
METHYLENE BLUE CAPACITY (ppb equiv.)		20.0	20.0
PH		9.0	9.0

**OBSERVATIONS**  
 Make up water trucked in was tested on location to find Chlorides : 800 Hardness : 100 Pf / Mf : 0.0 / 0.4 pH : 7.4  
 Mixed 120 bbls of Gel - Caustic spud mud with 20 ppb Highgel. and allowed to hydrate in the tanks for 8 hours prior to use.  
 Flocculated system with lime to extend the viscosity for spud. Running Desilter / Mud Cleaner  
 Rheology: 600:38 300:28 200:23 100:17 6:11 3:7

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT			
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY		Type	Hrs
Premix (drill water)	120	Desander	0	INITIAL VOLUME	0	Centrifuge	0
Premix (recirc from sump)	0	Desilter	0			Degasser	0
Drill Water	0	Downhole	16	+ FLUID RECEIVED	120	Desander	0
Direct Recirc Sump	0	Dumped	0	- FLUID LOST	16	Desilter	8
Other (eg Diesel)	0	Shakers	0	+ FLUID IN STORAGE			4
TOTAL RECEIVED	120	TOTAL LOST	16	FINAL VOLUME	104	Overflow (ppg)	0.0
						Underflow (ppg)	0
						Output (Gal/Min.)	0.00

MUD ACCOUNTING (BBLs)							SOLIDS ANALYSIS			BIT HYD. PRESS. DATA	
Product	Price	Start	Received	Used	Close	Cost	PPB	%	Jet Velocity	141	
Caustic Soda	\$ 42.50	28		1	27	\$ 42.50	0.0	0.00	Impact force	145	
Highgel	\$ 12.50	120		42	78	\$ 525.00	2.2	23.12	HHP	21	
Lime	\$ 7.50	59		1	58	\$ 7.50	20.0	3.12	HSI	0.4	
							0.3	0.00	Bit Press Loss	156	
									CSG Seat Frac Press		
							n @ 24:00 Hrs	0.44	Equiv. Mud Wt.		
							K @ 24:00 Hrs	1.80	ECD		

DAILY COST							CUMULATIVE COST				
\$575.00							\$575.00				

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# Independent Drilling Fluid Services

Pty. Ltd

## Drilling Fluid Report

A.C.N. 009267314

Report #	2	Date	30-April-98
Rig No	1	Spud Date	29-April-98
Depth	30	To	178 Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slimdrill
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philps
WELL NAME AND No	IRREWARRA -1	FIELD	Permit PEP 133
		LOCATION	Otway Basin
		STATE	Victoria

DRILLING ASSEMBLY		JET SIZE		CASING		MUD VOLUME (BBL)		CIRCULATION DATA								
BIT SIZE	8.50	TYPE	HP-11	15	15	15	SURFACE SET @	0	HOLE FITS	34	75	PUMP SIZE	6 X 8	Inches	CIRCULATION PRESS (PSI)	600
DRILL PIPE SIZE	4.1	TYPE	16.6 #	Length	Mtrs	INT. SET @	0	TOTAL CIRCULATING VOL.	109	PUMP MODEL	GD PZ-8	ASSUMED EFF	97	BOTTOMS UP (min)	4	
DRILL PIPE SIZE	0	TYPE	HW	Length	Mtrs	PROD. or LNR Set @	0	IN STORAGE	0	BBL/STK	0.0700	STK / MIN	100	TOTAL CIRC. TIME (min)	16	
DRILL COLLAR SIZE (")	4.13	7	Length	149	29	Mtrs	MUD TYPE	Gel Spud Mud	BBL/MIN	6.79	GAL / MIN	285	ANN VEL. (ft/min)	DCs	126	233

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM	FL	FL		Mud Weight	Minimum	API Filtrate	N/C	HPHT Filtrate	N
TIME SAMPLE TAKEN	16:00	24:00		Plastic Vis	Min	Yield Point	>10	pH	8.5-
FLOWLINE TEMPERATURE	°C			KCI	PHPA excess		Sulphites		

OBSERVATIONS					
DEPTH (ft) - (m)	Metres	138	180		
WEIGHT	PPB / SG	8.80	1.056	8.70	1.044
FUNNEL VISCOSITY (sec/qt) API @	°C	43	40	No chemical treatment required.	
PLASTIC VISCOSITY cP @	120 °C	7	9	Maintained viscosity at 40 - 43 Sec/qt with water additions.	
YIELD POINT (lb/100FT <sup>2</sup> )		12	11	Dump sand trap as required.	
GEL STRENGTH (lb/100FT <sup>2</sup> ) 10 sec/10 min.		4.9	4.8	Running Desilter / Mud Cleaner.	
FILTRATE API (cm <sup>3</sup> /30 min.)		22	22.0		
API HPHT FILTRATE (cm <sup>3</sup> /30 min.) @	°F				
CAKE THICKNESS API : HPHT (32nd in)		4	4		
SOLIDS CONTENT		3.2	2.5		
LIQUID CONTENT (%by Vol.) OIL/WATER		96.8	0.0	97.5	
SAND CONTENT (% by Vol.)		Tr	Tr		
METHYLENE BLUE CAPACITY (ppb equiv.)		18.5	18.5		
PH		8.5	8.5		
ALKALINITY MUD (Pm)					
ALKALINITY FILTRATE (Pf/Md)		0.10	0.25	0.10	0.25
CHLORIDE (mg/L)		1,200	1,050		
TOTAL HARDNESS AS CALCIUM (mg/L)		120	120		
SULPHITE (mg/L)					
K+ (mg/L)					
KCL (% by Wt)					
PHPA (Calc ppb / Excess ppb)					

OPERATIONS SUMMARY			
CONTROL DRILL WITH SLOW PUMP RATE & MUD VIS 50 SEC/QT UNTIL 6.5" COLLARS WERE BURIED.			
CONTINUE DRILLING WITH INCREASED CIRCULATION RATE (100 SPM) AND REDUCED VISCOSITY			
CONTINUED DRILLING TO 178M			

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT									
FLUID BUILT & RECEIVED	FLUID DISPOSED	SUMMARY		Type	Hrs	Cones	Hrs	Shc	Hr				
Premix (drill water)	0	Desander	0	INITIAL VOLUME	104	Centrifuge	0	Desander	0	0	Shaker #1	S40/S80	2-
Premix (recirc from sump)	0	Desilter	0			Degasser	0	Desilter	8	24	Shaker #2	0	0
Drill Water	65	Downhole	25	+ FLUID RECEIVED	65								
Direct Recirc Sump	0	Dumped	35	-FLUID LOST	60								
Other (eg Diesel)	0	Shakers	0	+FLUID IN STORAGE									
TOTAL RECEIVED	65	TOTAL LOST	60	FINAL VOLUME	109	Desander	0.0	Underflow (ppg)	0	Output (Gal/Min.)	0.00		
						Desilter	0.0		0		0.00		

SOLIDS ANALYSIS							BIT HYD. PRESS. DATA			
Product	Price	Start	Received	Used	Close	Cost	PPB	%	Jet Velocity	176
							High Grav solids	0.0	Impact force	227
							Total LGS	2.0	HHP	40
							Bentonite	18.5	HSI	0.7
							Drilled Solids	0.5	Bit Press Loss	243
							Salt	0.1	CSG Seat Frac Press	
							a @ 24:00 Hrs	0.54	Equiv. Mud Wt.	
							K @ 24:00 Hrs	0.71	ECD	

DAILY COST		CUMULATIVE COST	
\$0.00		\$575.00	

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# Independent Drilling Fluid Services

Pty. Ltd

## Drilling Fluid Report

A.C.N. 009267314

Report #	3	Date	1-May-98
Rig No	1	Spud Date	29-April-98
Depth	178	To	202 Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slmrdill
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philips
WELL NAME AND No	IRREWARRA -1	FIELD	Permit PEP 133
		LOCATION	Otway Basin
		STATE	Victoria

DRILLING ASSEMBLY		JET SIZE		CASING		MUD VOLUME (BBL)		CIRCULATION DATA													
BIT SIZE	8.50	TYPE	HP-11	15	15	15	SURFACE SET @	0.0	HOLE	39	FTS	75	PUMP SIZE	6 X 8	INCHES	CIRCULATION PRESS (PSI)	600	Yd			
DRILL PIPE SIZE	4.1	TYPE	16.6 #	Length	24	Mtrs	INT. SET @		TOTAL CIRCULATING VOL.	114			PUMP MODEL	GD PZ-8	ASSUMED LFT	97	BOTTOMS UP (min)	5	min		
DRILL PIPE SIZE	0	TYPE	HW	Length		Mtrs	PROD. or LNR Set @		IN STORAGE	0			BBL/STK	0.0700	STK / MIN	100	TOTAL CIRC. TIME (min)	17	min		
DRILL COLLAR SIZE (")	4.13		7	Length	149	29	Mtrs	MUD TYPE	Gel Spud Mud				BBL/MIN	6.79	GAL / MIN	285	ANN VEL. (ft/min)	DP	126	DCs	233

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM	FL	FL		Mud Weight	Minimum	API Filtrate	N/C	HPHT Filtrate	N/C
TIME SAMPLE TAKEN	04:00	24:00		Plastic Vis	Min	Yield Point	>10	pH	8.5 - 9.5
FLOWLINE TEMPERATURE	°C			KCI	PHPA excess			Sulphites	N/A

OBSERVATIONS					
DEPTH (ft) - (m)	Metres	202	202		
WEIGHT	PPB / SG	8.90	1.068	8.80	1.056
FUNNEL VISCOSITY (sec/qt) API @	°C	45	47	No chemical treatment required.	
PLASTIC VISCOSITY cP @	120 °C	8	8	Maintained viscosity at 40 - 43 Sec/qt with water additions.	
YIELD POINT (lb/100FT <sup>2</sup> )		13	12	Dump sand trap as required.	
GEL STRENGTH (lb/100ft <sup>2</sup> ) 10 sec/10 min.		6 11	5 9	Running Desilter / Mud Cleaner.	
FILTRATE API (cm <sup>3</sup> /30 min.)		20	22.0		
API HPHT FILTRATE (cm <sup>3</sup> /30 min.) @	°F				
CAKE THICKNESS API: HPHT (32nd in)		4	4		
SOLIDS CONTENT		3.9	3.2		
LIQUID CONTENT (%by Vol.) OIL/WATER		96.1	0.0	96.8	

OPERATIONS SUMMARY					
SAND CONTENT (% by Vol.)	Tr	Tr		Drill ahead from 178m - 202m	
METHYLENE BLUE CAPACITY (ppb equiv.)	20.0	18.5		Circulate hole clean	
PH	8.5	8.5		Pull 4 stand wiper trip, hole good, no fill.	
ALKALINITY MUD (Pm)				Circulate hole clean	
ALKALINITY FILTRATE (Pf/Mf)	0.10	0.25	0.10	0.25	POOH
CHLORIDE (mg/L)	1,000	900			Rig up and run 7" casing.
TOTAL HARDNESS AS CALCIUM (mg/L)	120	100			Circulate casing
SULPHITE (mg/L)					
K+ (mg/L)					
KCL (% by Wt)					
PHPA (Calc ppb / Excess ppb)					

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT							
FLUID BUILT & RECIEVED	FLUID DISPOSED	SUMMARY		Type	Hrs	Concs	Hrs	Size	Hrs		
Premix (drill water)	0	Desander	0	Centrifuge	0	Desander	0	0	Shaker #1	S40/S80	6
Premix (recirc from sump)	0	Desilter	0	Degasser	0	Desilter	8	4	Shaker #2	0	0
Drill Water	25	Dowhole	10	+ FLUID RECEIVED	25						
Direct Recirc Sump	0	Dumped	10	-FLUID LOST	20						
Other (eg Diesel)	0	Shakers	0	+FLUID IN STORAGE							
TOTAL RECEIVED	25	TOTAL LOST	20	FINAL VOLUME	114						
Product	Price	Start	Received	Used	Close	Cost	SOLIDS ANALYSIS		BIT HYD. PRESS.DATA		
							PPB	%	Jet Velocity	176	
							High Grav solids	0.0	Impact force	229	
							Total LCS	2.0	HHP	41	
							Benstonite	18.5	HSI	0.7	
							Drilled Solids	1.2	Bit Press Loss	246	
							Salt	0.1	CSG Seat Frac Press		
							a @ 24:00 Hrs	0.49	Equiv. Mud Wt.		
							K @ 24:00 Hrs	0.97	ECD		

DAILY COST		CUMULATIVE COST	
\$0.00	\$575.00		

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# Independent Drilling Fluid Services

Pty. Ltd

## Drilling Fluid Report

A.C.N. 009267314

Report #	4	Date	2-May-98	
Rig No	1	Spud Date	29-April-98	
Depth	202	To	202	Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slimdrill	
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philps	
WELL NAME AND No	IRREWARRA -1	FIELD	LOCATION	STATE
		Permit PEP 133	Otway Basin	Victoria

DRILLING ASSEMBLY			JET SIZE		CASING		MUD VOLUME (BBL)		CIRCULATION DATA									
BIT SIZE	8.50	TYPE	HP-11	15	15	15	SURFACE SET @	0	HOLE	39	PITS	85	PUMP SIZE	6 X 8	Inches	CIRCULATION PRESS (PSI)	0	PSI
DRILL PIPE SIZE	4.1	TYPE	16.6 #	Length		24	Mtrs	INT. SET @		TOTAL CIRCULATING VOL.	124	PUMP MODEL	GD PZ-8	ASSUMED EFF	97	BOTTOMS UP (min)	0	min
DRILL PIPE SIZE	0	TYPE	HW	Length			Mtrs	PROD. or LNR Set @		IN STORAGE	0	BBL/STK	0.0700	STK / MIN	0	TOTAL CIRC. TIME (min)	0	min
DRILL COLLAR SIZE (")	4.13	Length	7	149	29	Mtrs	MUD TYPE	Gel Spud Mud				BBL/MIN	0.00	GAL / MIN	0	ANN VEL. (ft/min)	DP	0

MUD PROPERTIES					MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM		FL		FL	Mud Weight	Minimum	API Filtrate	N/C	HPHT Filtrate	N
TIME SAMPLE TAKEN		13:00			Plastic Vis	Min	Yield Point	>10	pH	8.5 -
FLOWLINE TEMPERATURE		°C			KCl		PHPA excess		Sulphites	N
DEPTH (ft) - (m)		Metres	202		<b>OBSERVATIONS</b>					
WEIGHT		PPB / SG	8.80	1.056	No chemical treatment required.					
FUNNEL VISCOSITY (sec/qt) API @		°C	45		Dump and clean active tank and prepare to mix new mud for next section.					
PLASTIC VISCOSITY cP @		°C	8							
YIELD POINT (lb/100FT <sup>2</sup> )			12							
GEL STRENGTH (lb/100FT <sup>2</sup> ) 10 sec/10 min.			5 8	0 0						
FILTRATE API (cm <sup>3</sup> /30 min.)			22							
API HPHT FILTRATE (cm <sup>3</sup> /30 min.) @		°F								
CAKE THICKNESS API : HPHT (32nd in)			4							
SOLIDS CONTENT			3.2							
LIQUID CONTENT (%by Vol.) OIL/WATER			96.8	0.0	0.0					
SAND CONTENT (% by Vol.)			Tr	0.00						
METHYLENE BLUE CAPACITY (ppb equiv.)			18.5		<b>OPERATIONS SUMMARY</b>					
PH			8.5		Circulate casing and wait on Halliburton.					
ALKALINITY MUD (Pm)					Cement casing with cement returned to surface.					
ALKALINITY FILTRATE (Pt/Ml)			0.10	0.25	Calcium Chloride used in cement job.					
CHLORIDE (mg/L)			900							
TOTAL HARDNESS AS CALCIUM (mg/L)			100							
SULPHITE (mg/L)										
K+ (mg/L)										
KCL (% by Wt)										
PHPA (Calc ppb / Excess ppb)										

MUD ACCOUNTING (BBLs)					SOLIDS CONTROL EQUIPMENT							
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY		Type	Hrs	Concs	Hrs	Size	Hrs	
Premix (drill water)	0	Desander	0	INITIAL VOLUME	114	Centrifuge	0	Desander	0	Shaker #1	S40/S80	15
Premix (recirc from sump)	0	Desilter	0			Degasser	0	Desilter	8	Shaker #2	0	0
Drill Water	10	Downdrop	0	+ FLUID RECEIVED	10							
Direct Recirc Sump	0	Dumped	0	-FLUID LOST	0							
Other (eg Diesel)	0	Shakers	0	+FLUID IN STORAGE								
TOTAL RECEIVED	10	TOTAL LOST	0	FINAL VOLUME	124							
					Overflow (ppg)		Underflow (ppg)		Output (Gal/Min.)			
					Desander		0.0		0			
					Desilter		0.0		0			

MUD ACCOUNTING (BBLs)							SOLIDS ANALYSIS			BIT HYD. PRESS. DATA		
Product	Price	Start	Received	Used	Close	Cost	High Grav solids	ppb	%	Jet Velocity		
CaCl <sub>2</sub>	\$ 21.00	22		1	21	\$ 21.00	Total LGS	0.0	0.00	Impact force		
							Bentonite	0.0	0.00	HHP		
							Drilled Solids	0.0	0.00	HSI		
							Salt			Bit Press Loss		
							a @ Hrs			CSG Seat Frac Press		
							K @ Hrs			Equiv. Mud Wt.		
										ECD		
							<b>DAILY COST</b>			<b>CUMULATIVE COST</b>		
							\$21.00			\$596.00		

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# Independent Drilling Fluid Services

Pty. Ltd

## Drilling Fluid Report

A.C.N. 009267314

Report #	5	Date	3-May-98	
Rig No	1	Spud Date	29-April-98	
Depth	202	To	202	Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slimdrill	
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philips	
WELL NAME AND No	IRREWARRA -1	FIELD	LOCATION	STATE
		Permit PEP 133	Otway Basin	Victoria

DRILLING ASSEMBLY		JET SIZE		CASING		MUD VOLUME (BBL)		CIRCULATION DATA								
BIT SIZE	6.00	TYPE	FDS4	14	14	SURFACE SET @	0.0	HOLE	19	PUMP SIZE	6 X 8	CIRCULATION PRESS (PSI)		0		
DRILL PIPE SIZE	4.1	TYPE	16.6 #	Length	53	INT. SET @		TOTAL CIRCULATING VOL.	89	PUMP MODEL	GD PZ-8	ASSUMED EFF	97	BOTTOMS UP (mins)	0	
DRILL PIPE SIZE	0	TYPE	HW	Length		PROD. or LNR Set @		IN STORAGE	0	BBL/STK	0.0700	STK / MIN	0	TOTAL CIRC. TIME (mins)	0	
DRILL COLLAR SIZE (")	4.13		7	Length	149	MUD TYPE	Gel Polymer Lignosulphonate				BBL/MIN	0.00	GAL / MIN	0	ANN VEL (ft/min)	0

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM		Pit	Pit	Mud Weight	8.6 - 9.2	API Filtrate	6 - 10	HPHT Filtrate	
TIME SAMPLE TAKEN			07:00	Plastic Vis	<15	Yield Point	8 - 15	pH	8.5
FLOWLINE TEMPERATURE		°C		KCl		PHPA excess		Sulphites	80

OBSERVATIONS			
DEPTH (ft) - (m)		Metres	202
WEIGHT	PPB / SG		8.60 1.032
FUNNEL VISCOSITY (sec/qt) API @	°C		45
PLASTIC VISCOSITY cP @	120 °C		7
YIELD POINT (lb/100FT <sup>2</sup> )			11
GEL STRENGTH (lb/100R <sup>2</sup> ) 10 sec/10 min.			8   13
FILTRATE API (cm <sup>3</sup> /30 min.)			12.5
API HPHT FILTRATE (cm <sup>3</sup> /30 min.) @	°F		
CAKE THICKNESS API : HPHT (32nd in)			2
SOLIDS CONTENT			1.8
LIQUID CONTENT (%by Vol.) OIL/WATER			0.0 98.2
SAND CONTENT (% by Vol.)			T
METHYLENE BLUE CAPACITY (ppb equiv.)			25.0
PH			9.0

OPERATIONS SUMMARY			
ALCALINITY MUD (Pm)			
ALCALINITY FILTRATE (Pt/M)			0.20 0.95
CHLORIDE (mg/L)			800
TOTAL HARDNESS AS CALCIUM (mg/L)			40
SULPHITE (mg/L)			
K+ (mg/L)			
KCL (% by Wt.)			
PHPA (Calc ppb / Excess ppb)			

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT							
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY		Type	Hrs	Concs	Hrs	Size	
Premix (drill water)	89	Desander	0	INITIAL VOLUME	0	Centrifuge	0	Desander	0	Shaker #1	\$40/\$60
Premix (recirc from sump)	0	Desilter	0	+ FLUID RECEIVED	89	Degasser	0	Desilter	8	Shaker #2	0
Drill Water	0	Downdrop	0	-FLUID LOST	0						
Direct Recirc Sump	0	Dumped	0	+FLUID IN STORAGE							
Other (eg Diesel)	0	Shakers	0								
TOTAL RECEIVED	89	TOTAL LOST	0	FINAL VOLUME	89	Desander	0.0		0		0.00
						Desilter	0.0		0		0.00

MUD ACCOUNTING (BBLs)							SOLIDS ANALYSIS			BIT HYD. PRESS.DATA	
Product	Price	Start	Received	Used	Close	Cost	PPB	"	Jet Velocity		
ID-Gel	\$ 9.50	120		32	88	\$ 304.00	High Grav solids	0.0	0.00	Impact force	
ID-Pac Reg	\$ 136.00	20		1	19	\$ 136.00	Total LGS	2.7	16.69	HHP	
Lignosperse	\$ 37.89	20		3	17	\$ 113.67	Bentonite	25.0	-8.31	HSI	
Soda Ash	\$ 15.00	20		2	18	\$ 30.00	Drilled Solids	-0.9	0.00	Bit Press Loss	
							Salt		0.1	CSG Seat Frac Press	
							n @ 07:00 Hrs	0.47		Equiv. Mud Wt.	
							K @ 07:00 Hrs	0.94		ECD	

DAILY COST							CUMULATIVE COST				
\$583.67							\$1,179.67				

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# Independent Drilling Fluid Services

Pty. Ltd

A.C.N. 009267314

## Drilling Fluid Report

Report #	6	Date	4-May-98	
Rig No	1	Spud Date	29-April-98	
Depth	202	To	202	Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slimdrill	
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philips	
WELL NAME AND No	IRREWARRA -1	FIELD	Permit PEP 133	LOCATION
			Otway Basin	STATE
				Victoria

DRILLING ASSEMBLY				JET SIZE		CASING			MUD VOLUME (BBL)			CIRCULATION DATA													
BIT SIZE	6.00	TYPE	FDS4	14	14	7"	SURFACE SET @	653	M	HOLE	20	PITS	69	PUMP SIZE	6 X 8 inches		CIRCULATION PRESS (PSI)	500							
DRILL PIPE SIZE	4.1	TYPE	16.6 #	Length		Mtrs	INT. SET @		M	TOTAL CIRCULATING VOL.	89	PUMP MODEL	GD PZ-8		ASSUMED EFF	97	BOTTOMS UP (min)	3							
DRILL PIPE SIZE	4.125	TYPE	HW	Length	106	Mtrs	PROD. or LNR Set @		M	IN STORAGE	0	BBL/TK	0.0700		STK MIN	80	TOTAL CIRC. TIME (mins)	16							
DRILL COLLAR SIZE (")	4.13		4	Length	96	Mtrs	MUD TYPE	Gel Polymer Lignosulphonate						BBL/MIN	5.43		GAL. MIN	228		ANN VEL (F/min)	DP	294	DCs	294	294

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM		Pit	Pit	Mud Weight	8.6 - 9.2	API Filtrate	6 - 10	HPHT Filtrate	N
TIME SAMPLE TAKEN			24:00	Plastic Vis	<15	Yield Point	8 - 15	pH	8.5 -
FLOWLINE TEMPERATURE		°C		KCl		PHPA excess		Sulphites	80 - 1

OBSERVATIONS			
DEPTH (ft) - (m)	Metres	202	Used surface equipment to agitate tanks.
WEIGHT	PPB / SG	8.50 1.020	High pH due to cement contamination.
FUNNEL VISCOSITY (sec/qt) API @	°C	42	Pre treated new fluid with Soda Ash for cement contamination.
PLASTIC VISCOSITY cP @	120 °C	9	Further additions of Pac-R required to reduce Fluid Loss, once polymer has sheared.
YIELD POINT (lb/100FT <sup>2</sup> )		11	Upgrading shaker screens as soon as sheared fluid allows.
GEL STRENGTH (lb/100ft <sup>2</sup> ) 10 sec/10 min.		9/22	
FILTRATE API (cm <sup>3</sup> /30 min.)		11.5	
API HPHT FILTRATE (cm <sup>3</sup> /30 min.) @	°F		No Chemicals used today.
CAKE THICKNESS API: HPHT (32nd in)		2	
SOLIDS CONTENT		1.1	
LIQUID CONTENT (%by Vol.) OIL/WATER		0.0 98.9	

OPERATIONS SUMMARY			
METHYLENE BLUE CAPACITY (ppb equiv.)		25.0	Nipple up BOP's and pressure test.
PH		11.0	Make up BHA and run in hole.
ALKALINITY MUD (Pm)			Tag cement at 179m.
ALKALINITY FILTRATE (Pf/Mf)		0.35 1.80	Drill shoe track with mud.
CHLORIDE (mg/L)		800	
TOTAL HARDNESS AS CALCIUM (mg/L)		400	
SULPHITE (mg/L)			
K+ (mg/L)			
KCL (% by Wt)			
PHPA (Calc ppb / Excess ppb)			

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT									
FLUID BUILT & RECIEVED		FLUID DISPOSED		SUMMARY		Type	Hrs	Cones	Hrs	Star	Hrs		
Premix (drill water)	0	Desander	0	INITIAL VOLUME	89	Centrifuge	0	0	Desander	0	0	Shaker #1	540/580
Premix (recirc from sump)	0	Desilter	0			Degasser	0	0	Desilter	8	4	Shaker #2	0
Drill Water	0	Downhole	0	+ FLUID RECEIVED	0								
Direct Recirc Sump	0	Dumped	0	-FLUID LOST	0								
Other (eg Diesel)	0	Shakers	0	+FLUID IN STORAGE									

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT							
TOTAL RECEIVED	0	TOTAL LOST	0	FINAL VOLUME	89						
						Desander	0.0		0		0.00
						Desilter	0.0		0		0.00

MUD ACCOUNTING (BBLs)							SOLIDS ANALYSIS			BIT HYD. PRESS. DATA	
Product	Price	Start	Received	Used	Close	Cost	PPB	%	Jet Velocity	162	
							High Grav solids	0.0	0.00	Impact force	163
							Total LGS	2.7	10.26	HHP	27
							Beaumont	25.0	-14.74	HSI	0.9
							Drilled Solids	-1.6	0.00	Bit Press Loss	200
							Salt		0.1	CSG Seat Frac Press	
							n @ 24:00 Hrs	0.54		Equiv. Mud Wt.	
							K @ 24:00 Hrs	0.71		ECD	

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT	
DAILY COST					CUMULATIVE COST
\$0.00					\$1,179.67

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# Independent Drilling Fluid Services

Pty. Ltd

A.C.N. 009267314

## Drilling Fluid Report

Report #	7	Date	5-May-98
Rig No	1	Spud Date	29-April-98
Depth	202 To 469		Metres

<b>OPERATOR</b> BASIN OIL N.L.				<b>CONTRACTOR</b> Slimdrill					
<b>REPORT FOR</b> Andy Baczkowski				<b>REPORT FOR</b> Brian Philips					
<b>WELL NAME AND No</b> IRREWARRA -1				<b>FIELD</b> Permit PEP 133		<b>LOCATION</b> Otway Basin		<b>STATE</b> Victoria	

DRILLING ASSEMBLY			JET SIZE			CASING			MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE 6.00	TYPE FDS4		14	14	14	7" SURFACE SET @ 199.0	R M	HOLE 48	FITS 80	PUMP SIZE 6 X 8	CIRCULATION PRESS (PSI) 750			
DRILL PIPE SIZE 4.1	TYPE 16.6 #	Length 267				INT. SET @	R M	TOTAL CIRCULATING VOL. 128		PUMP MODEL GD FZ-8	ASSUMED EFF 97	BOTTOMS UP (min) 6		
DRILL PIPE SIZE 4.125	TYPE HW	Length 106				PROD. or LNR Set @	R M	IN STORAGE 0		BBL/STK 0.0700	STK/MIN 100	TOTAL CIRC. TIME (min) 19		
DRILL COLLAR SIZE (") 4.13		Length 96				MUD TYPE Gel Polymer Lignosulphonate				BBL/MIN 6.79	GAL/MIN 285	ANN VEL (ft/min)	DP DCs	368 368

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM	FL	FL		Mud Weight	8.6 - 9.2	API Filtrate	6 - 10	HPHT Filtrate	
TIME SAMPLE TAKEN	13:00	24:00		Plastic Vis	<15	Yield Point	8 - 15	pH	8.5
FLOWLINE TEMPERATURE	°C			KCl	PHPA excess			Sulphites	80
DEPTH (ft) - (m)	Metres			<b>OBSERVATIONS</b>					
WEIGHT	PPB / SG	8.70 1.044	8.80 1.056	Upgraded shaker screens to S80 over S120.					
FUNNEL VISCOSITY (sec/qt) API @	°C	40	41	Began reducing Water loss with Pac-R additions.					
PLASTIC VISCOSITY cP @	120 °C	7	9	Poorly sorted Sands encountered from 345m - 410m causing massive mud loss at shakers and Mud Cleaner, due to sand blinding.					
YIELD POINT (lb/100FT2)		10	11	Down grade top shaker screen to S60 mesh to reduce losses to sump.					
GEL STRENGTH (lb/100R2) 10 sec/10 min.		8   12	9   19	Rebuild lost volume with fresh premix additions.					
FILTRATE API (cm3/30 min.)		12	11.0	Sodium Sulphite for corrosion control.					
APIHPHT FILTRATE (cm3/30 min.) @	°F			Downhole losses masked by mud loss at shaker.					
CAKE THICKNESS API : HPHT (32nd in)		2	2						
SOLIDS CONTENT		2.5	3.2	<b>OPERATIONS SUMMARY</b>					
LIQUID CONTENT (%by Vol.) OIL/WATER		97.5	0.0 96.8	Continue drilling shoe track and new hole to 204m					
SAND CONTENT (% by Vol.)		0.25	0.25	Perform F.I.T					
METHYLENE BLUE CAPACITY (ppb equiv.)		20.0	20.0	Drill ahead to 469m. with surveys.					
PH		9.5	9.0						
ALKALINITY MUD (Pm)									
ALKALINITY FILTRATE (Pf/MO)		0.20	0.70 0.20 0.60						
CHLORIDE (mg/L)		800	800						
TOTAL HARDNESS AS CALCIUM (mg/L)		280	180						
SULPHITE (mg/L)		80	120						
K+ (mg/L)									
KCL (% by Wt.)									
PHPA (Calc ppb / Excess ppb)									

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT										
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY			Type	Hrs	Concs	Hrs	Size			
Premix (drill water)	280	Desander	0	INITIAL VOLUME	89	Centrifuge	0	0	Desander	0	0	Shaker #1	S60/S120	
Premix (recirc from sump)	0	Desilter	0	+ FLUID RECEIVED	280	Degasser	0	0	Desilter	8	24	Shaker #2	0	
Drill Water	0	Downhole	120	-FLUID LOST	240									
Direct Recirc Sump	0	Dumped	0	+FLUID IN STORAGE										
Other (eg Diesel)	0	Shakers	120											
TOTAL RECEIVED	280	TOTAL LOST	240	FINAL VOLUME	128									
Product	Price	Start	Received	Used	Close	Cost	SOLIDS ANALYSIS			BIT HYD. PRESS. DATA				
ID-Gel	\$ 9.50	88		60	28	\$ 570.00	PPB	%	Jet Velocity		202			
ID-Pac Reg	\$ 136.00	19		3	16	\$ 408.00	High Grav solids	0.0	0.00	Impact force		263		
Polythin	\$ 108.00	16		3	13	\$ 324.00	Total LGS	2.2	29.54	HHP		54		
Sodium Sulphite	\$ 24.50	20		3	17	\$ 73.50	Bentonite	20.0	9.54	HSI		1.9		
							Drilled Solids	1.0	0.00	Bit Press Loss		324		
							Salt		0.1	CSG Seat Frac Press				
							n @ 24:00 Hrs	0.54		Equiv. Mud Wt.				
							K @ 24:00 Hrs	0.71		ECD				
							<b>DAILY COST</b>		<b>CUMULATIVE COST</b>					
							<b>\$1,375.50</b>		<b>\$2,555.17</b>					
LD.F.S. ENGINEER N. KYBERD			CITY Adelaide Office			TELEPHONE 088 232 6771								

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# Independent Drilling Fluid Services

Pty. Ltd

## Drilling Fluid Report

A.C.N. 009267314

Report #	8	Date	6-May-98
Rig No	1	Spud Date	29-April-98
Depth	469	To	552 Metres

OPERATOR	BASIN OIL N.L.	CONTRACTOR	Slimdrill
REPORT FOR	Andy Baczkowski	REPORT FOR	Brian Philips
WELL NAME AND No	IRREWARRA -1	FIELD	Permit PEP 133
		LOCATION	Otway Basin
		STATE	Victoria

DRILLING ASSEMBLY		JET SIZE			CASING			MUD VOLUME (BBL)		CIRCULATION DATA									
BIT SIZE	6.00	TYPE	FDS4	14	14	14	7" SURFACE SET @	653	ft	HOLE	57	PITS	80	PUMP SIZE	6 X 8	INches	CIRCULATION PRESS (PSI)	900	
DRILL PIPE SIZE	4.1	TYPE	16.6 #	Length	350	Mtrs	INT. SET @		ft	TOTAL CIRCULATING VOL.	137			PUMP MODEL	GD PZ-8	ASSUMED EFF	97	BOTTOMS UP (min)	7
DRILL PIPE SIZE	4.125	TYPE	HW	Length	106	Mtrs	PROD. or LNR Set @		ft	IN STORAGE	0			BBL/STK	0.0700	STK / MIN	100	TOTAL CIRC. TIME (min)	20
DRILL COLLAR SIZE (")	4.13		4	Length	96	Mtrs	MUD TYPE	Gel Polymer Lignosulphonate				BBL/MIN	6.79	GAL / MIN	285	ANN VEL. (ft/min)		DP	368

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS					
SAMPLE FROM		FL	FL	Mud Weight	8.6 - 9.2	API Filtrate	6 - 10	HPHT Filtrate	
TIME SAMPLE TAKEN			10:00	Plastic Vls	<15	Yield Point	8 - 15	pH	8.5 -
FLOWLINE TEMPERATURE		°C		KCl		PHPA excess		Sulphites	80 -

OBSERVATIONS			
DEPTH (ft) - (m)	Metres		552
WEIGHT	PPB / SG		9.35 1.122
FUNNEL VISCOSITY (sec/qt) API @	°C		44
PLASTIC VISCOSITY cP @	120 °C		14
YIELD POINT (lb/100FT <sup>2</sup> )			15
GEL STRENGTH (lb/100ft <sup>2</sup> ) 10 sec/10 min.			9/28
FILTRATE API (cm <sup>3</sup> /30 min.)			9.2
API HPHT FILTRATE (cm <sup>3</sup> /30 min.) @	°F		
CAKE THICKNESS API : HPHT (32nd in)			2
SOLIDS CONTENT			7.1
LIQUID CONTENT (%by Vol.) OIL/WATER			0.0 92.9
SAND CONTENT (% by Vol.)			0.25
METHYLENE BLUE CAPACITY (ppb equiv.)			20.0
PH			9.5

OPERATIONS SUMMARY			
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf/Mf)		0.25	1.40
CHLORIDE (mg/L)			600
TOTAL HARDNESS AS CALCIUM (mg/L)			160
SULPHITE (mg/L)			120
K+ (mg/L)			
KCL (% by Wt.)			
PHPA (Calc ppb / Excess ppb)			

Drill Ahead from 469m - 552m  
 Circulate hole clean, POOH wiper trip to shoe.  
 TH  
 run to bottom and circulate hole clean.  
 Pull out to log.  
 Run Schlumberger logs.

MUD ACCOUNTING (BBLs)				SOLIDS CONTROL EQUIPMENT			
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY			
Premix (drill water)	70	Desander	0	INITIAL VOLUME	128	Centrifuge	0
Premix (recirc from sump)	0	Desilter	0			Degasser	0
Drill Water	0	Downhole	41	+ FLUID RECEIVED	70		
Direct Recirc Sump	0	Dumped	0	-FLUID LOST	61		
Other (eg Diesel)	0	Shakers	20	+FLUID IN STORAGE			
TOTAL RECEIVED	70	TOTAL LOST	61	FINAL VOLUME	137	Desander	0.0
						Desilter	0.0
						Overflow (ppg)	0
						Underflow (ppg)	0
						Output (Gal/Min.)	0.00

MUD ACCOUNTING (BBLs)							SOLIDS ANALYSIS			BIT HYD. PRESS. DATA	
Product	Price	Start	Received	Used	Close	Cost	PPB	%	Jet Velocity	202	
Caustic Soda	\$ 42.50	27		1	26	\$ 42.50	High Grav solids	0.0	Impact force	280	
Defoam L	\$ 95.00	2		1	1	\$ 95.00	Total LGS	2.2	HHP	57	
Highgel	\$ 12.50	78		3	75	\$ 37.50	Bentonite	20.0	HSI	2.0	
Polythin	\$ 108.00	13		2	11	\$ 216.00	Drilled Solids	4.9	Bit Press Loss	344	
							Salt	0.0	CSG Seat Frac Press		
							n @ 10:00 Hrs	0.57	Equiv. Mud Wt.		
							K @ 10:00 Hrs	0.84	ECD		

DAILY COST	\$391.00	CUMULATIVE COST	\$2,946.17
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LD.F.S. ENGINEER N. KYBERD CITY Adelaide Office TELEPHONE 088 232 6771

Any opinion and/or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation or warranty is made by ourselves or our agents as to its correctness or completeness, and no liability is assumed for any damages resulting from the use of same.



Report Date: 07.05.98

IRREWARRA 1

FROM : A.Beczowski

TO : Chris Way

<b>Well Data</b>		DEPTH (m RT) : 552	HOLE SIZE (") : 8.00	DAILY COST \$ :
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) :	CSG OD (") : 7.00	CUM COST \$ 545,000.00
RIG : HTA 3000		DAYS FROM SPUD : 8.17	SHOE DEPTH(m RT) : 200	AFE COST \$ 594,100.00
MUD CO. : IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 13.00	AFE BASIS :
RT TO GL (m) : 4.0		STATUS @ 0600 : Rig released @ 1200hrs 7th May 1998.		
GL ABOVE MSL (m) : 0.0		WEATHER : Cloudy with showers,cold.		

<b>Gas Data</b>	Trip Gas : 0.0 @ m.	<b>Formation</b>	FORMATION (RT)	TOP(m)
BGG : 0.0	Max Gas : 0.0 @ m.	Tops (this report only)		

<b>BHA #3</b>	Length (m) :		D.C. (1) ANN. VELOCITY (mpm) :	0.00
HRS ON JARS :		TRQE MAX (ft-lbs) :	D.C. (2) ANN VELOCITY (mpm) :	0.00
WT BLW JAR(k-lbs) :	STRING WT(k-lbs) :	TRQE ON (ft-lbs) :	H.W.D.P. ANN VELOCITY (mpm) :	0.00
BHA WT(k-lbs) :	PICK UP WT(k-lbs) :	TRQE OFF (ft-lbs) :	D.P. ANN VELOCITY m/ftpm) :	0.00
	SLK OFF WT(k-lbs) :			
BHA DESCRIPTION :				

<b>MUD DATA - CHECK #</b>		<b>MUD DAILY COST :\$</b>		<b>MUD CUM COST :\$ 2,947</b>	
WEIGHT (ppg) :	VISCOCITY (cps) :	SOLIDS (% vol) :	MBT :		
SAMPLE FROM :	PV (cps) :	H2O (% vol) :	PH :		
TIME :	YP (lbs / 100 ft2) :	OIL (% vol) :	CL :		
DEPTH (m) :	GEL10S & 10m :	SAND (% vol) :	K+C*1000 :		
TEMP (Deg C) :	3RPM :	FL (cc/30min) :	HARD/CA :		
	6RPM :	FILTER CAKE (32") :			

<b>Pump and SCR Data</b>										
Pump Data - last 24 hrs					Slow Pump Data					
#	TYPE	LNR (")	SPM	EFF (%)	Flow (gpm)	SPP (psi)	SPM	SPP (psi)	DEPTH (m RT)	MW (SG)
1	Partek	6.00		97						
2	G.Denver	4.50								

<b>Survey (last 8 points only)</b>						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	V SECT (m)	N/S (m)	E/W (m)
0.0	400.0	0.0				
154.0	154.0	0.0				
300.0	300.0	1.0				

<b>Casing</b>					
CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD		
7.00		200			
TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/ft)	GRD	THRD
Shoe	.4				
Int cag	12.7	6.3	26.0	K55	8rnd
FR cil.	.4				
Int cag	186.6				

Last Tool Type : totco

<b>Personnel : on Site =7</b>			
JOB TITLE	NAME	CO. NAME	#
		SLIMDRILL	6
		CULTUS	1
		HIGGINS	0
		IDFS	0
		Howco	0
		Schlumberger	0

<b>Drills, Permits &amp; inspections</b>	DRILL TYPE	DATE	INSPECTIONS	DATE	SAFETY	DETAILS
	TRIP DRILL	6/5/98	LAST CSG PRESS TEST	3/5/98		
	PIT DRILL	6/5/98	DAYS SINCE LAST LTA	9		
	FIRE		SAFETY MEETING	7/5/98		
	BOP DRILL	5/5/98	SAFETY INSPECTION	4/5/98		
			DAYS SINCE LAST BOP TE			
			LAST BOP TEST	4/5/98		

<b>Bulk Stocks</b>	DRILL WATER (MT) :	0.0	FUEL ( MT) :	0	GEL (ax) :	0.0	
HELI -FUEL (ltr) :	0.0	POT WATER (MT) :	0	BARITE (ax) :	0.0	CEMENT (ax) :	0



# CULTUS PETROLEUM

DAILY DRILLING REPORT # 9

Report Date: 07.05.98

IRREWARRA 1

**Summary of period 00:00 to 24:00 hrs:**

**Planned Operations :**

Circ out cmt, POH & WOC, Lout excess dp/dc. RIH. TOC @ 165m. POH sideways. N/Down BOP, Cut & remove Bradenhead, install marker plate. RELEASE RIG @ 1200HRS 7/5/1998

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 07.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S2	PA	CIR	00:00	00:30	.50	202	Circ out after cmt job.
S2	PA	TO	00:30	01:30	1.00	202	POOH.
S2	PA	LDP	01:30	05:00	3.50	202	Lay out excess Dp & Dc's.
S2	PA	TI	05:00	06:00	1.00	202	RIH to tag top of Plug #1 @ 165m. W/10K.
S2	PA	LDP	06:00	08:00	2.00	202	POH sideways.
S2	PA	BOP	08:00	12:00	4.00	202	Nipple down BOP, cut & remove Bradenhead, mix & spot 20x "A" cmt on surface. Install sign RELEASE RIG @ 1200HRS 7TH MAY 1998.

**ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON 08.05.98**

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 8

Report Date: 06.05.98

IRREWARRA 1

FROM : A.Baczkowski

TO : Chris Way

<b>Well Data</b>		DEPTH (m RT) : 552	HOLE SIZE (") : 6.00	DAILY COST \$ :	
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) : 82	CSG OD (") : 7.00	CUM COST \$ :	\$0
RIG : HTA 3000		DAYS FROM SPUD : 7.17	SHOE DEPTH(m RT) : 200	AFE COST \$ :	\$0
MUD CO : IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 0.00	AFE BASIS :	
RT TO GL (m) : 4.0		STATUS @ 0600 : RIH to tag top of Plug #1 @ 165m.			
GL ABOVE MSL (m) : 0.0		WEATHER : Clear,cold.			

<b>Gas Data</b>	Trip Gas : 0.0 @ m.	<b>Formation</b>	FORMATION (RT)	TOP(m)
BGG : 0.0	Max Gas : 0.0 @ m.	<b>Tops (this report only)</b>		

<b>Bit Data for Bit # 2</b>	IADC #	<b>Wear</b>	I	O1	D	L	B	G	O2	R
SIZE (") : 6.00		NOZZLE	2	2	Nil	Nil	E	In	Nil	TD
MANUFACTURER : SM	AVE WOB (k-lbs) : 2	3 X 14	Drilled over the last 24 hrs				Calculated over the bit run			
TYPE : FDS	AVE RPM : 150	X	FOOTAGE (m) : 268				CUM.FOOTAGE (m) : 268			
SERIAL # : LS2969	FLOW (gpm) : 295	X	ON BOTTOM HRS : 6.0				CUM. ON BOT. HRS : 25.0			
DEPTH IN (m RT) : 202	PUMP PRESS. (psi) : 1,100	X	IADC ROT. HRS : 4.5				CUM.IADC.HRS : 21.5			
DEPTH OUT (m RT) : 592	HSI (hp/sq) : 3	X	ROP (m/hr) : 59.6				ROP (m/hr) : 12.5			

<b>BHA #2</b>	Length (m) : 264.0	HRS ON JARS :	STRING WT(k-lbs) : 38	TRQE MAX (ft-lbs) : 0	D.C. (1) ANN. VELOCITY (mpm) : 120.03
WT BLW JAR(k-lbs) : 0	PICK UP WT(k-lbs) : 33	TRQE ON (ft-lbs) : 0	H.W.D.P. ANN VELOCITY (mpm) : 0.00		
BHA WT(k-lbs) : 26	SLK OFF WT(k-lbs) : 33	TRQE OFF (ft-lbs) : 0	D.P. ANN VELOCITY mfpm) : 97.18		
BHA DESCRIPTION : Bit, Bit sub (flt & crows ft) x 0, 2x4 1/8" Spir DC, x 0, R Reamer, x 0, 8x4 1/8" Spir DC's, 21x4 1/8" Slim DC's, 36 x 3.65" DP					

<b>MUD DATA - CHECK # 6</b>	MUD DAILY COST : \$ 391	MUD CUM COST : \$ 2,947	
WEIGHT (ppg) : 8.80	VISCOCITY (cps) : 44	SOLIDS (% vol) : 7.1	MBT : 20.0
SAMPLE FROM : Pit	PV (cps) : 14	H2O (% vol) : 93	PH : 9.5
TIME : 2400	YP (lbs / 100 ft2) : 15	OIL (% vol) : 0	CL : 600
DEPTH (m) : 470	GEL10S & 10m : 9 28	SAND (% vol) : Tr	K+C*1000 : 160
TEMP (Deg C) :	3RPM :	FL (cc/30min) : 9.2	HARD/CA :
	6RPM :	FILTER CAKE (32") : 2	

Pump Data - last 24 hrs							Slow Pump Data			
#	TYPE	LNR (")	SPM	EFF (%)	Flow (gpm)	SPP (psi)	SPM	SPP (psi)	DEPTH (m RT)	MW (SG)
1	Partek	6.00	100	97	295	1100				
2	G.Denver	4.50								

Survey (last 8 points only)						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	V SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				

Last Tool Type : totco

Personnel : on Site =20			
JOB TITLE	NAME	CO. NAME	#
		SLIMDRILL	10
		CULTUS	3
		HIGGINS	1
		IDFS	1
		Howco	2
		Schlumberger	3

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 8

Report Date: 06.05.98

IRREWARRA 1

Casing	CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD
	7.00		200	

TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD
Shoe	.4				
jnt csg	12.7	6.3	26.0	k55	8rnd
Fit cll.	.4				
jnt csg	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	11.7				
	11.7				

Drills, Permits & Inspections	DRILL TYPE	DATE	INSPECTIONS	DATE	SAFETY	DETAILS
	TRIP DRILL	6/5/98	LAST CSG PRESS TEST	3/5/98		
	PIT DRILL	6/5/98	DAYS SINCE LAST LTA	8		
	FIRE		SAFETY MEETING	6/5/98		
	BOP DRILL	5/5/98	SAFETY INSPECTION	4/5/98		
			DAYS SINCE LAST BOP TE			
			LAST BOP TEST	4/5/98		

Bulk Stocks	DRILL WATER (MT):	0.	FUEL (MT):	0	GEL (sx):	28.0	
HELI-FUEL (ltr):	0.0	POT WATER (MT):	0	BARITE (sx):	560.0	CEMENT (sx):	0

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 8

Report Date: 06.05.98

IRREWARRA 1

**Summary of period 00:00 to 24:00 hrs:**

Drill 6" hole to 552m TD,W/trip,POH & Log<Wait on P&A orders,RIH open ended,Mix &pump Plug #1 & circ.

**Planned Operations :**

Continue N/down BOP & Release rig.Mix & spot plug #2.

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 06.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S2	PD	D	00:00	06:00	6.00	552	Continue drill 6" hole F/470m to 552m. TD.
S2	PD	CIR	06:00	06:30	.50	552	Circ bttms up for wiper trip.
S2	PD	WT	06:30	10:00	3.50	552	Wiper trip to shoe.(No excess drag/tite spots.)
S2	PD	CIR	10:00	10:30	.50	552	Circ & condition prior to POH to Log.
S2	PD	TO	10:30	16:00	5.50	552	POOH to log. (strap out,D551m, Slimber D549m) No correction.
S2	PE	LOG	16:00	19:30	3.50	552	Slimber log run #1 - PEX (AITH) BHT.38c.
S2	AE	WO	19:30	22:00	2.50	552	Wait on Geology ops for P&A order.
S2	PD	TI	22:00	23:00	1.00	552	RIH open ended for P&A @ 232m to 170m.
S2	PA	O	23:00	23:30	.50	552	Mix & pump Plug #1 F/232m to 170m,total 75sx'A" cmt @15.6#/gal w/2%CaCl2.
S2	PA	TO	23:30	24:00	.50	552	Pull 9 singles & circ.

**ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON 07.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S2	PA	CIR	00:00	00:30	.50	202	Circ out after cmt job.
S2	PA	TO	00:30	01:30	1.00	202	POOH.
S2	PA	LDP	01:30	05:00	3.50	202	Lay out excess Dp & Dc's.
S2	PA	TI	05:00	06:00	1.00	202	RIH to tag top of Plug #1 @ 165m. W/10K.
S2	PA	LDP	06:00	08:00	2.00	202	POH sideways.

# CULTUS PETROLEUM

DAILY DRILLING REPORT #

Report Date: 05.05.98

IRREWARRA

FROM : A. Baczkowski.

TO : Chris Way.

<b>Well Data</b>		DEPTH (m RT) :	470	HOLE SIZE (") :	6.00	DAILY COST \$ :	\$
DRILL CO. :	RILL CONTRACTING P/L	PROGRESS (m) :	268	CSG OD (") :	7.00	CUM COST \$ :	\$
RIG :	HTA 3000	DAYS FROM SPUD :	6.17	SHOE DEPTH(m RT) :	200	AFE COST \$ :	\$
MUD CO. :	IDFS	DAYS +/- CURVE :		LEAK-OFF EMW(SG) :	0.00	AFE BASIS :	P&
RT TO GL (m) :	4.0	STATUS @ 0600 : Circ btms up @ 552m. TD.					
GL ABOVE MSL (m) :	0.0	WEATHER : Clear & cold, foggy.					

<b>Gas Data</b>		Trip Gas : 0.0 @ m.	<b>Formation Tops (this report only)</b>	FORMATION (RT)		TOP(m)
BGG :	0.0	Max Gas : 0.0 @ m.		Eumeralla Fmt.		367
			TD		552	

<b>Bit Data for Bit # 2</b>		IADC #	<b>Wear</b>		I	O1	D	L	B	G	O2	R
SIZE (") :	6.00		NOZZLE									
MANUFACTURER :	SM	AVE WOB (k-lbs) :	2	3 X 14	Drilled over the last 24 hrs				Calculated over the bit run			
TYPE :	FDS	AVE RPM :	150	X	FOOTAGE (m) :				268			
SERIAL # :	LS2969	FLOW (gpm) :	295	X	ON BOTTOM HRS :				19.0			
DEPTH IN (m RT) :	202	PUMP PRESS. (psi) :	1,100	X	IADC ROT. HRS :				17.0			
DEPTH OUT (m RT) :		HSI (hp/sq) :	3	X	ROP (m/hr)				15.8			

<b>BHA #2</b>		Length (m) :264.0		D.C. (1) ANN. VELOCITY (mpm) :		120.03	
HRS ON JARS :		STRING WT(k-lbs) :	38	TRQE MAX (ft-lbs) :	0	D.C. (2) ANN VELOCITY (mpm) :	
WT BLW JAR(k-lbs) :	0	PICK UP WT(k-lbs) :	33	TRQE ON (ft-lbs) :	0	H.W.D.P. ANN VELOCITY (mpm) :	
BHA WT(k-lbs) :	26	SLK OFF WT(k-lbs) :	33	TRQE OFF (ft-lbs) :	0	D.P. ANN VELOCITY (mpm) :	
BHA DESCRIPTION :		Bit, Bit sub(ft&crows ft)x/o, 2x4 1/8" Spir DC, x/o, RReamer, x/o, 8x4 1/8" Spir DC's, 21x4 1/8" Slim DC's. 36 x 3.65" DP					

<b>MUD DATA - CHECK # 6</b>		MUD DAILY COST :\$ 1,376		MUD CUM COST :\$ 2,556			
WEIGHT (ppg) :	8.80	VISCOCITY (cps) :	41	SOLIDS (% vol) :	3.2	MBT :	20.0
SAMPLE FROM :	Pit	PV (cps) :	9	H2O (% vol) :	97	PH :	9.0
TIME :	2400	YP (lbs / 100 ft2) :	11	OIL (% vol) :	0	CL :	500
DEPTH (m) :	470	GEL10S & 10m :	9 19	SAND (% vol) :	Tr	K+C*1000 :	
TEMP (Deg C) :		3RPM :		FL (cc/30min) :	11.0	HARD/CA :	180
		6RPM :		FILTER CAKE (/32") :	2		

<b>Casing</b>	CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD		
	7.00		200			
	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD
	Shoe	.4				
	jnt csg	12.7	6.3	26.0	k55	8rnd
	Fit cl.	.4				
	jnt csg	12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		11.7				
		11.7				

<b>Survey (last 8 points only)</b>						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	'V' SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				
Last Tool Type : totco						

<b>Bulk Stocks</b>		FUEL (MT) :	0
DRILL WATER (MT) :	0.0	BARITE (sx) :	560.0
POT WATER (MT) :	0	GEL (sx) :	28.
HELI -FUEL (ltr) :	0.0	CEMENT (sx) :	0

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 7

Report Date: 05.05.98

IRREWARRA

**Summary of period 00:00 to 24:00 hrs:**

Drill out cmt, fit cll & shoe, perform FIT. Drill 6" hole WLS.

**Planned Operations :**

Wiper trip to shoe, trip out to Electric log.

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 05.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S2	PD	DFS	00:00	03:30	3.50	202	Continue drill cmt ,fit cll & shoe.
S2	PD	LOT	03:30	04:00	.50	202	Perform FIT to EMW 13#/gal. (150psi)
S2	PD	D	04:00	12:00	8.00	300	Drilling 6" hole W/Wireline surveys.F/202m to 300m
S2	PD	S	12:00	12:30	.50	300	Circ & survey @ 300m. 1Deg.
S2	PD	D	12:30	20:30	8.00	400	Drill 6" hole F/300m to 400m
S2	PD	S	20:30	21:00	.50	400	Circ & survey @ 400m. Bl.
S2	PD	D	21:00	24:00	3.00	470	Drill 6" hole F/400m to 470m.

# CULTUS PETROLEUM

DAILY DRILLING REPORT #

Report Date: 04.05.98

IRREWARRA

FROM : A. Baczkowski.

TO : Chris Way.

<b>Well Data</b>		DEPTH (m RT) : 202	HOLE SIZE (") : 7.00	DAILY COST \$ :	\$0
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) : 0	CSG OD (") : 7.00	CUM COST \$ :	\$0
RIG : HTA 3000		DAYS FROM SPUD : 5.17	SHOE DEPTH(m RT) : 200	AFE COST \$ :	\$0
MUD CO : IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 0.00	AFE BASIS :	
RT TO GL (m) : 4.0		STATUS @ 0600 : Drilling 6" hole @ 232m.			
GL ABOVE MSL (m) : 0.0		WEATHER : Clear & cold, foggy.			

<b>Gas Data</b>	Trip Gas : 0.0 @ m.	<b>Formation</b>	FORMATION (RT)	TOP(m)
BGG : 0.0	Max Gas : 0.0 @ m.	Tops (this report only)		

<b>Bit Data for Bit # 2</b>	IADC #	<b>Wear</b>	I	O1	D	L	B	G	O2	R
SIZE (") : 6.00		<b>NOZZLE</b>								
MANUFACTURER : SM	AVE WOB (k-lbs) : 2	3 X 14	Drilled over the last 24 hrs				Calculated over the bit run			
TYPE : FDS	AVE RPM : 45	X	FOOTAGE (m) : 0				CUM.FOOTAGE (m) : 0			
SERIAL # : LS2969	FLOW (gpm) : 220	X	ON BOTTOM HRS : 0.0				CUM. ON BOT. HRS : 0.0			
DEPTH IN (m RT) : 202	PUMP PRESS. (psi) : 550	X	IADC ROT. HRS : 0.0				CUM.IADC.HRS : 0.0			
DEPTH OUT (m RT) :	HSI (hp/sq) :	X	ROP (m/hr)				ROP (m/hr)			

<b>BHA #2</b>	Length (m) : 202.0	HRS ON JARS :	STRING WT(k-lbs) : 20	TRQE MAX (ft-lbs) :	0	D.C. (1) ANN. VELOCITY (mpm) :	52.65
WT BLW JAR(k-lbs) : 0	PICK UP WT(k-lbs) : 20		TRQE ON (ft-lbs) :	0	D.C. (2) ANN VELOCITY (mpm) :	52.65	
BHA WT(k-lbs) : 20	SLK OFF WT(k-lbs) : 20		TRQE OFF (ft-lbs) :	0	H.W.D.P. ANN VELOCITY (mpm) :	0.00	
					D.P. ANN VELOCITY mfpm) :	0.00	
BHA DESCRIPTION : Bit, Bit sub(ft&crows ft)x/o, 2x4 1/8" Spir DC, x/o, RReamer, x/o, 8x4 1/8" Spir DC's, 13x4 18" Slim DC's.							

<b>MUD DATA - CHECK # 6</b>	<b>MUD DAILY COST :\$ 605</b>	<b>MUD CUM COST :\$ 1,180</b>	
WEIGHT (ppg) : 8.50	VISCOCITY (cps) : 42	SOLIDS (% vol) : 1.1	MBT : 25.0
SAMPLE FROM : pit	PV (cps) : 9	H2O (% vol) : 99	PH : 11.0
TIME : 2400	YP (lbs / 100 ft2) : 11	OIL (% vol) : 0	CL : 500
DEPTH (m) : 202	GEL10S & 10m : 9 22	SAND (% vol) : Tr	K+C*1000 : 400
TEMP (Deg C) :	3RPM :	FL (cc/30min) : 11.5	HARD/CA :
	6RPM :	FILTER CAKE (/32") : 2	

<b>Casing</b>	CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD		
	7.00		200			
	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD
	Shoe	.4				
	jnt csg	12.7	6.3	26.0	k55	8rnd
	Fit cil.	.4				
	jnt csg	12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		12.6				
		11.7				
		11.7				

<b>Survey (last 8 points only)</b>						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	'V' SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				
Last Tool Type : totco						

<b>Bulk Stocks</b>	FUEL (MT) :	0
DRILL WATER (MT) :	0.0	BARITE (sx) : 560.0
POT WATER (MT) :	0	GEL (sx) : 88.
HELI -FUEL (ltr) :	0.0	CEMENT (sx) : 0

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 6

Report Date: 04.05.98

IRREWARRA 1

<b>Summary of period 00:00 to 24:00 hrs:</b>	<b>Planned Operations :</b>
Installed B/head& tested same,N/up BOP & tested same,Drilled out cmt& fit cl.	Drill 6" hole WLS.

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 04.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S1	TD	WH	00:00	01:00	1.00	202	Continue machine & restore Bradenhead to as new condition.
S1	TD	WH	01:00	04:00	3.00	202	Install Bradenhead,preheat & weld,cool & pressure test to 1500psi. OK.
S1	PD	BOP	04:00	10:00	6.00	202	N/up BOP's.
S2	PD	WH	10:00	16:00	6.00	202	Pressure test BOP & choke manifold,ISBOP,U.K/cock,HCR,200L,2100H.Hydriil 200L,1500H. Run up Koomey unit 13 1/2min.
S2	PD	TI	16:00	21:30	5.50	202	M/up new Bit & BHA & RIH. TOC @ 179m.
S2	PD	DFS	21:30	24:00	2.50	202	Drilling cmt & fit shoe.

<b>ANNOTATIONS FOR PERIOD</b>		<b>00:00 HRS TO 24:00 HRS ON 04.05.98</b>
REMARK / OBSERVATION		SOLUTION / RECOMMENDATION
Due to driller error the shoe was drilled out,unable to obtain csg pressure line. So we actually had an injection rate established @ 200psi.		Supervision of green hands.



# CULTUS PETROLEUM

DAILY DRILLING REPORT # 5

IRREWARRA 1

Report Date: 03.05.98

FROM : A. Baczowski.

TO : Chris Way.

<b>Well Data</b>		DEPTH (m RT) : 202	HOLE SIZE (") : 7.00	DAILY COST \$ :	
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) : 0	CSG OD (") : 7.00	CUM COST \$ :	\$0
RIG : HTA 3000		DAYS FROM SPUD : 4.17	SHOE DEPTH(m RT) : 200	AFE COST \$ :	\$0
MUD CO: IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 0.00	AFE BASIS :	
RT TO GL (m) : 4.0		STATUS @ 0600 : N/up BOP.			
GL ABOVE MSL (m) : 0.0		WEATHER : Clear & cold, foggy.			

<b>Gas Data</b>	Trip Gas : 0.0 @ m.	<b>Formation Tops (this report only)</b>	FORMATION (RT)	TOP(m)
BGG : 0.0	Max Gas : 0.0 @ m.			

<b>MUD DATA - CHECK #</b>		<b>MUD DAILY COST :\$</b>		<b>MUD CUM COST :\$ 575</b>	
WEIGHT (ppg) : 8.70	VISCOCITY (cps): 40	SOLIDS (% vol):	MBT :		
SAMPLE FROM : Pit	PV (cps):	H2O (% vol) :	PH :		
TIME :	YP (lbs / 100 ft2):	OIL (% vol) :	CL :		
DEPTH (m): 202	GEL10S & 10m :	SAND (% vol) :	K+C*1000 :		
TEMP (Deg C) :	3RPM :	FL (cc/30min) :	HARD/CA :		
	6RPM :	FILTER CAKE (/32") :			

Casing		CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD
		7.00		200	
TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD
Shoe	.4				
jnt csg	12.7	6.3	26.0	k55	8rnd
Fit cil.	.4				
jnt csg	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	11.7				
	11.7				

Survey (last 8 points only)						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	'V' SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				
Last Tool Type : totco						

<b>Bulk Stocks</b>		FUEL (MT) :	0
DRILL WATER (MT) :	0.0	BARITE (sx) :	560.0
POT WATER (MT) :	0	GEL (sx) :	90.
HELI -FUEL (ltr) :	0.0	CEMENT (sx) :	0

Personnel : on Site =57			
JOB TITLE	NAME	CO. NAME	#
Drig Supervisors	Flink/Jackson	RBT	2
Drig Manager	C.Way	Cultus	1
OIM / Towmaster	Reese / Rodrigu	Santa Fe	2
Toolpushers	Brown / Wilkie	Santa Fe	2
Mud Engineer		Baroid	
Cementer		Hlbtn	
Mud Loggers		HML	
Electric Line		Schlum	
Rig Crews		Santa Fe	30
Sub Contractors		Santa Fe	
Catering		P&O	7
ROV Operator		Contract Diving	2
Insurance Surveyor	K. Brederman	Noble Denton	1
Seaman		Tide Water	7
Surveyors		Racal	2
QC Surveyor	Halls		1
Welders		G & S	0

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 5

Report Date: 03.05.98

IRREWARRA 1

<b>Summary of period 00:00 to 24:00 hrs:</b> Slack off 7" csg, install & weld & attempt pressure test Bradenhead, failed, remove Bradenhead & restore to as new condition.	<b>Planned Operations:</b> Press test BOP. Drill out cmt, fit & shoe, perform FIT, Drill 6" hole.
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**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 03.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S1	PD	WO	00:00	03:00	3.00	202	WOC. Slack off 7" csg.
S1	PD	WH	03:00	11:00	8.00	202	Rough cut 7", remove stub, final cut & bevel, Preheat & weld on B/head. Press test weld failed, reweld & allow to cool, press test failed two attempts.
S1	TD	WH	11:00	24:00	13.00	202	Cut & remove Bradenhead, machine & remove csg stub & restore to as new.

<b>ANNOTATIONS FOR PERIOD</b>	<b>00:00 HRS TO 24:00 HRS ON 03.05.98</b>
REMARK / OBSERVATION	SOLUTION / RECOMMENDATION
Weld on topside of Bradenhead leaking, repeated attempts to seal failed.	Removed from 7" and remachined to remove 7" stub and clean out welding dags.

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 4

Report Date: 02.05.98

IRREWARRA 1

**Summary of period 00:00 to 24:00 hrs:**

Wait on cmt unit & pump hand, Mix & pump 160sx Class"A" cmt @ 15.8#/gal. Displace & bump, press test t/3000psi. WOC.

**Planned Operations :**

Complete welding & cooldown as per procedure. N/up & press test same to Cultus spec's.

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 02.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S1	TD	WO	00:00	13:30	13.50	202	Wait on cmt unit, circ csg.
S1	PD	RU	13:30	14:30	1.00	202	Cmt unit onsite, no operator, rig up pump truck and load cmt head.
S1	TD	CIR	14:30	16:30	2.00	202	Continue circ & wait on operator.
S1	PD	CM	16:30	17:30	1.00	202	Press test lines t/3000psi. Pump spacer ahead, Mix & pump 160sx Class"A" @ 15.8#/gal. Drop plug & displace & bump, press tst csg t/3000psi, Fit held, cmt to surface.
S1	PD	WO	17:30	24:00	6.50	202	WOC sample soft, unable to slack off 7".

ANNOTATIONS FOR PERIOD		00:00 HRS TO 24:00 HRS ON 02.05.98
REMARK / OBSERVATION		SOLUTION / RECOMMENDATION
Attempt slack off 7", csg attempting to slide, WOC & cont trying each hour.		Increase in the % of CaCl2 for next surface job due to ambient temperature.

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 4

IRREWARRA 1

Report Date: 02.05.98

FROM : A. Baczkowski

TO : Chris Way

<b>Well Data</b>		DEPTH (m RT) :	202	HOLE SIZE (") :	7.00	DAILY COST \$ :	
DRILL CO. :	RILL CONTRACTING P/L	PROGRESS (m) :	0	CSG OD (") :	7.00	CUM COST \$ :	\$0
RIG :	HTA 3000	DAYS FROM SPUD :	3.17	SHOE DEPTH(m RT) :	200	AFE COST \$ :	\$0
MUD CO. :	IDFS	DAYS +/- CURVE :		LEAK-OFF EMW(SG) :	0.00	AFE BASIS :	
RT TO GL (m) :	4.0	STATUS @ 0600 : Welding on Bradenhead.					
GL ABOVE MSL (m) :	0.0	WEATHER : Clear & cold, frosty.					

<b>Gas Data</b>		Trip Gas : 0.0 @ m.	<b>Formation Tops (this report only)</b>	FORMATION (RT)	TOP(m)
BGG :	0.0	Max Gas : 0.0 @ m.			

<b>BHA #2</b>		<b>Length (m) :</b>		D.C. (1) ANN. VELOCITY (mpm) :	0.00
HRS ON JARS :		STRING WT(k-lbs) :		D.C. (2) ANN VELOCITY (mpm) :	0.00
WT BLW JAR(k-lbs) :		PICK UP WT(k-lbs) :		H.W.D.P. ANN VELOCITY (mpm) :	0.00
BHA WT(k-lbs) :		SLK OFF WT(k-lbs) :		D.P. ANN VELOCITY (mfpm) :	0.00
BHA DESCRIPTION :					

<b>MUD DATA - CHECK #</b>		<b>MUD DAILY COST :\$</b>		<b>MUD CUM COST :\$ 575</b>	
WEIGHT (ppg) :		VISCOCITY (cps) :		SOLIDS (% vol) :	
SAMPLE FROM :		PV (cps) :		H2O (% vol) :	
TIME :		YP (lbs / 100 ft2) :		OIL (% vol) :	
DEPTH (m) :		GEL10S & 10m :		SAND (% vol) :	
TEMP (Deg C) :		3RPM :		FL (cc/30min) :	
		6RPM :		FILTER CAKE (/32") :	
				MBT :	
				PH :	
				CL :	
				K+C*1000 :	
				HARD/CA :	

Casing		CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD
		7.00		200	
TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD
Shoe	.4				
jnt csg	12.7	6.3	26.0	k55	8rnd
Flt cil.	.4				
jnt csg	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	11.7				
	11.7				

Survey (last 8 points only)						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	'V' SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				

Last Tool Type : totco

Personnel : on Site =57			
JOB TITLE	NAME	CO. NAME	#
Drig Supervisors	Flink/Jackson	RBT	2
Drig Manager	C.Way	Cultus	1
OIM / Towmaster	Reese / Rodrigu	Santa Fe	2
Toolpushers	Brown / Wilkie	Santa Fe	2
Mud Engineer		Baroid	
Cementer		Hibtn	
Mud Loggers		HML	
Electric Line		Schlum	
Rig Crews		Santa Fe	30
Sub Contractors		Santa Fe	
Catering		P&O	7
ROV Operator		Contract Diving	2
Insurance Surveyor	K. Brederman	Noble Denton	1
Seaman		Tide Water	7
Surveyors		Racal	2
QC Surveyor	Halls		1
Welders		G & S	0

<b>Bulk Stocks</b>		FUEL (MT) :	0
DRILL WATER (MT) :	0.0	BARITE (sx) :	0.0
POT WATER (MT) :	0	GEL (sx) :	0.
HELI -FUEL (ltr) :	0.0	CEMENT (sx) :	0

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 3

Report Date: 01.05.98

IRREWARRA 1

FROM : A.baczkowski.

TO : Chris way.

<b>Well Data</b>		DEPTH (m RT) : 202	HOLE SIZE (") : 8.50	DAILY COST \$ :
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) : 24	CSG OD (") : 7.00	CUM COST \$ : \$0
RIG : HTA 3000		DAYS FROM SPUD : 2.17	SHOE DEPTH(m RT): 200	AFE COST \$ : \$0
MUD CO: IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 0.00	AFE BASIS : UNKNOWN
RT TO GL (m) : 4.0		STATUS @ 0600 : Circ 7" csg W.O.Cmt pump truck.		
GL ABOVE MSL (m) : 0.0		WEATHER : Clear,cold & frosty.		

<b>Gas Data</b>	Trip Gas : 0.0 @ m.	<b>Formation Tops (this report only)</b>	FORMATION (RT)	TOP(m)
BGG : 0.0	Max Gas : 0.0 @ m.			

<b>Bit Data for Bit # 1</b>		IADC #	<b>Wear</b>		I	O1	D	L	B	G	O2	R
SIZE (") :	8.50		NOZZLE		2	2	NO	NO	E	IN	Nil	TD.
MANUFACTURER :	RE	AVE WOB (k-lbs) : 2	3 X 15		Drilled over the last 24 hrs				Calculated over the bit run			
TYPE :	HP11	AVE RPM : 120	X		FOOTAGE (m) : 24				CUM.FOOTAGE (m) : 193			
SERIAL # :	BA1083	FLOW (gpm) : 309	X		ON BOTTOM HRS : 3.0				CUM. ON BOT. HRS : 24.0			
DEPTH IN (m RT) :	9	PUMP PRESS. (psi): 600	X		IADC ROT. HRS : 2.0				CUM.IADC.HRS : 14.5			
DEPTH OUT (m RT) :	202	HSI (hp/sq) : 1	X		ROP (m/hr) : 12.0				ROP (m/hr) : 13.3			

<b>BHA #1</b>	<b>Length (m) :202.0</b>		D.C. (1) ANN. VELOCITY (mpm): 69.56	
HRS ON JARS :		STRING WT(k-lbs) : 28	TRQE MAX (ft-lbs): 0	D.C. (2) ANN VELOCITY (mpm): 41.79
WT BLW JAR(k-lbs): 0		PICK UP WT(k-lbs) : 29	TRQE ON (ft-lbs): 0	H.W.D.P. ANN VELOCITY (mpm): 41.79
BHA WT(k-lbs) : 28		SLK OFF WT(k-lbs) : 27	TRQE OFF (ft-lbs): 0	D.P. ANN VELOCITY mfpm) : 0.00
BHA DESCRIPTION : Bit,bit sub,3 x 6 1/4" DC.10x 4 1/8" DC, 10x 4 1/8"RSK6 DC's.				

<b>MUD DATA - CHECK # 1</b>		<b>MUD DAILY COST :\$ 0</b>		<b>MUD CUM COST :\$ 575</b>	
WEIGHT (ppg) :	8.70	VISCOCITY (cps):	40	SOLIDS (% vol):	2.5
SAMPLE FROM :	F/L	PV (cps):	9	H2O (% vol) :	98
TIME :	2400hr	YP (lbs / 100 ft2):	11	OIL (% vol) :	0
DEPTH (m):	178	GEL10S & 10m :	4 8	SAND (% vol) :	tr
TEMP (Deg C) :		3RPM :		FL (cc/30min) :	22.0
		6RPM :		FILTER CAKE (/32") :	3
				MBT :	18.5
				PH :	8.5
				CL :	1,050
				K+C*1000 :	
				HARD/CA :	120

Casing		CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD
		7.00		200	
TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD
Shoe	.4				
jnt csg	12.7	6.3	26.0	k55	8md
Fit cfl.	.4				
jnt csg	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	12.6				
	11.7				
	11.7				

Survey (last 8 points only)						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	V SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				
Last Tool Type : totco						

<b>Bulk Stocks</b>		FUEL (MT) :	0
DRILL WATER (MT) :	0.0	BARITE (sx) :	500.0
POT WATER (MT) :	0	GEL (sx) :	120.
HELI -FUEL (ltr) :	0.0	CEMENT (sx) :	0

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 3

Report Date: 01.05.98

IRREWARRA 1

**Summary of period 00:00 to 24:00 hrs:**

Drill to csg point, circ & wiper trip. POH. L/out 6 1/4" DC, Rig & run 7" csg.

**Planned Operations :**

Cmt 7" csg, WOC. Cut & remove stub, install B/head & weld same, N/up BOP's & test same.

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 01.05.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S1	PD	D	00:00	03:00	3.00	202	Continue drill 8 1/2" hole f/178m to 202m. csg point.
S1	PD	CIR	03:00	03:30	.50	202	Circ bttms up (carbide) for wiper trip. Hole in gauge.
S1	PD	WT	03:30	09:00	5.50	202	Wiper trip for csg.
S1	PD	CIR	09:00	09:30	.50	202	Circ bttms up, prior to POH f/7" csg.
S1	PD	TO	09:30	14:30	5.00	202	POH to run 7" csg, L/out 6 1/4" DC's.
S1	PD	RU	14:30	15:00	.50	202	Rig to run 7" csg.
S1	PD	WO	15:00	19:00	4.00	202	Wait on float equipment.
S1	PD	RRC	19:00	23:00	4.00	202	Run 16jnts 26#/ft k55 8rnd LT&C csg.
S1	PD	CIC	23:00	24:00	1.00	202	Install circ swedge & circ 7" csg.

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 2

Report Date: 30.04.98

IRREWARRA 1

FROM : A.Baczkowski

TO : Chris Way

<b>Well Data</b>		DEPTH (m RT) : 178	HOLE SIZE (") : 8.50	DAILY COST \$ :
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) : 148	CSG OD (") : 0.00	CUM COST \$ : \$0.
RIG : HTA 3000		DAYS FROM SPUD : 1.17	SHOE DEPTH(m RT) : 0	AFE COST \$ : \$0.
MUD CO. : IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 0.00	AFE BASIS :
RT TO GL (m) : 4.0		STATUS @ 0600 : Wiper trip to top of 6 1/4" DC's.		
GL ABOVE MSL (m) : 0.0		WEATHER : Clear sky ,cold & frosty.		

<b>Gas Data</b>	Trip Gas : 0.0 @ m.	<b>Formation Tops (this report only)</b>	FORMATION (RT)	TOP(m)
BGG : 0.0	Max Gas : 0.0 @ m.			

<b>Bit Data for Bit # 1</b>	IADC #	<b>Wear</b>	I	O1	D	L	B	G	O2	R
SIZE (") : 8.50		<b>NOZZLE</b>								
MANUFACTURER : RE	AVE WOB (k-lbs) : 2	3 x 15	Drilled over the last 24 hrs				Calculated over the bit run			
TYPE : HP11	AVE RPM : 120	X	FOOTAGE (m) :	148	CUM.FOOTAGE (m) :	169				
SERIAL # : BA1083	FLOW (gpm) : 309	X	ON BOTTOM HRS :	17.5	CUM. ON BOT. HRS :	21.0				
DEPTH IN (m RT) : 9	PUMP PRESS. (psi) : 600	X	IADC ROT. HRS :	10.0	CUM.IADC.HRS :	12.5				
DEPTH OUT (m RT) :	HSI (hp/sqf) : 1	X	ROP (m/hr)	14.8	ROP (m/hr)	13.5				

<b>BHA #1</b>	<b>Length (m) :202.0</b>					D.C. (1) ANN. VELOCITY (mpm) : 69.56
HRS ON JARS :	STRING WT(k-lbs) : 28	TRQE MAX (ft-lbs) : 0			D.C. (2) ANN VELOCITY (mpm) : 41.79	
WT BLW JAR(k-lbs) : 0	PICK UP WT(k-lbs) : 29	TRQE ON (ft-lbs) : 0			H.W.D.P. ANN VELOCITY (mpm) : 41.79	
BHA WT(k-lbs) : 28	SLK OFF WT(k-lbs) : 27	TRQE OFF (ft-lbs) : 0			D.P. ANN VELOCITY (mpm) : 0.00	
BHA DESCRIPTION : Bit,bit sub,3 x 6 1/4" DC.10x 4 1/8" DC, 10x 4 1/8"RSK6 DC's.						

<b>MUD DATA - CHECK # 1</b>	<b>MUD DAILY COST :\$ 0</b>	<b>MUD CUM COST :\$ 575</b>	
WEIGHT (ppg) : 8.70	VISCOCITY (cps) : 40	SOLIDS (% vol) : 2.5	MBT : 18.5
SAMPLE FROM : F/L	PV (cps) : 9	H2O (% vol) : 98	PH : 8.5
TIME : 2400hr	YP (lbs / 100 ft2) : 11	OIL (% vol) : 0	CL : 1,050
DEPTH (m) : 178	GEL10S & 10m : 4 8	SAND (% vol) : tr	K+C*1000 : 120
TEMP (Deg C) :	3RPM :	FL (cc/30min) : 22.0	HARD/CA : 120
	6RPM :	FILTER CAKE (/32") : 3	

<b>Casing</b>	CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD	
TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD

<b>Survey (last 8 points only)</b>						
MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	V SECT (m)	N/S (m)	E/W (m)
154.0	154.0	0.0				
300.0	300.0	1.0				
400.0	400.0	0.0				

<b>Bulk Stocks</b>	FUEL ( MT) : 0
DRILL WATER (MT) : 0.0	BARITE (sx) : 0.0
POT WATER (MT) : 0	GEL (sx) : 0.
HELI -FUEL (ltr) : 0.0	CEMENT (sx) : 0

Last Tool Type : totco

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 2

Report Date: 30.04.98

IRREWARRA 1

**Summary of period 00:00 to 24:00 hrs:**

Drilled 8 1/2" hole to 202m. Csg point. With rig repairs.

**Planned Operations :**

Complete wiper trip, circ btms up, POH to run 7" csg, Run & cmt 7" csg.

**ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 30.04.98**

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S1	PD	D	00:00	02:00	2.00	41	Continue drill 8 1/2" hole f/30 to 41m.
S1	TD	RR	02:00	04:00	2.00	41	Hydraulics to rotary and to hoist failing, repairing same.
S1	PD	D	04:00	06:00	2.00	65	Continue drill 8 1/2" hole f/41 to 65m.
S1	TD	RR	06:00	10:00	4.00	65	Repair fluid inlet valve to Power swivel.
S1	PD	D	10:00	21:00	11.00	154	Drill 8 1/2" hole f/65m to 154m.
S1	PD	S	21:00	21:30	.50	154	Run wireline survey @ 154m. Bl.
S1	PD	D	21:30	24:00	2.50	178	Continue drill 8 1/2" hole f/154m to 178m.

ANNOTATIONS FOR PERIOD		00:00 HRS TO 24:00 HRS ON 30.04.98
REMARK / OBSERVATION	SOLUTION / RECOMMENDATION	
repair rig hydraulics, repair power sivel fluid packing.		



# CULTUS PETROLEUM

DAILY DRILLING REPORT # 1

Report Date: 29.04.98

IRREWARRA 1

FROM : A.Baczkowski

TO : Chris Way.

<b>Well Data</b>		DEPTH (m RT) : 30	HOLE SIZE (") : 8.50	DAILY COST \$ :
DRILL CO. : RILL CONTRACTING P/L		PROGRESS (m) : 30	CSG OD (") : 0.00	CUM COST \$ : \$0
RIG : HTA 3000		DAYS FROM SPUD : 0.17	SHOE DEPTH(m RT): 0	AFE COST \$ :
MUD CO: IDFS		DAYS +/- CURVE :	LEAK-OFF EMW(SG) 0.00	AFE BASIS :
RT TO GL (m) : 4.0		STATUS @ 0600 : Drill 8 1/2" hole @ 65m.		
GL ABOVE MSL (m) : 0.0		WEATHER : Cloudy, cold, showers (heavy)		

<b>Gas Data</b>		<b>Formation</b>	
Trip Gas : @ m.		FORMATION (RT)	
BGG : 0.0	Max Gas : @ m.	TOP(m)	
		Newer Volcanics	4
		Heytesbury Group	21

<b>Bit Data for Bit # 1</b>		IADC #	<b>Wear</b>								
SIZE (") : 8.50			I	O1	D	L	B	G	O2	R	
MANUFACTURER : RE		AVE WOB (k-lbs) : 1	<b>NOZZLE</b>								
TYPE : HP11		AVE RPM : 120	3 X 15	Drilled over the last 24 hrs				Calculated over the bit run			
SERIAL # : BA1083		FLOW (gpm) : 236	X	FOOTAGE (m) : 21				CUM.FOOTAGE (m) : 21			
DEPTH IN (m RT) : 9		PUMP PRESS. (psi) : 250	X	ON BOTTOM HRS : 3.5				CUM. ON BOT. HRS : 3.5			
DEPTH OUT (m RT) :		HSI (hp/sq) :	X	IADC ROT. HRS : 2.5				CUM.IADC.HRS : 2.5			
			X	ROP (m/hr) : 8.4				ROP (m/hr) : 8.4			

<b>BHA #1</b>		<b>Length (m) : 27.0</b>		D.C. (1) ANN. VELOCITY (mpm): 53.12	
HRS ON JARS :		STRING WT(k-lbs) : 9	TRQE MAX (ft-lbs):	D.C. (2) ANN VELOCITY (mpm): 31.92	
WT BLW JAR(k-lbs): 0		PICK UP WT(k-lbs) : 9	TRQE ON (ft-lbs):	H.W.D.P. ANN VELOCITY (mpm): 31.92	
BHA WT(k-lbs) : 9		SLK OFF WT(k-lbs) : 9	TRQE OFF (ft-lbs):	D.P. ANN VELOCITY mfpm) : 0.00	
BHA DESCRIPTION : Bit,bit sub,3 x 6 1/4" DC.					

<b>MUD DATA - CHECK # 1</b>		<b>MUD DAILY COST :\$ 575</b>		<b>MUD CUM COST :\$ 575</b>	
WEIGHT (ppg) : 8.70	VISCOCITY (cps): 44	SOLIDS (% vol): 2.5	MBT : 20.0		
SAMPLE FROM : F/L	PV (cps): 10	H2O (% vol) : 98	PH : 9.0		
TIME : 2300hr	YP (lbs / 100 ft2): 18	OIL (% vol) : 0	CL : 900		
DEPTH (m): 30	GEL10S & 10m : 9 16	SAND (% vol) : tr	K+C*1000 :		
TEMP (Deg C) :	3RPM :	FL (cc/30min) : 25.0	HARD/CA : 40		
	6RPM :	FILTER CAKE (/32") :			

<b>Casing</b>						<b>Survey (last 8 points only)</b>						
CSG OD	PHASE	CSG SHOE MD	CSG SHOE TVD			MD (m RT)	TVD (m RT)	INCL DEG	AZ. (deg)	V SECT (m)	N/S (m)	E/W (m)
TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lbs/Ft)	GRD	THRD	154.0	154.0	0.0				
						300.0	300.0	1.0				
						400.0	400.0	0.0				
<b>Bulk Stocks</b>						<b>Last Tool Type : totco</b>						
			FUEL (MT) :	0								
DRILL WATER (MT) :	0.0	BARITE (sx) :	500.0									
POT WATER (MT) :	0	GEL (sx) :	120.									
HELI -FUEL (ltr) :	0.0	CEMENT (sx) :	0									

# CULTUS PETROLEUM

DAILY DRILLING REPORT # 1

Report Date: 29.04.98

IRREWARRA 1

<p><b>Summary of period 00:00 to 24:00 hrs:</b> Delete this line and enter a brief (240 chars max) summary of the last 24 hrs here</p>	<p><b>Planned Operations :</b> Continue drill 8 1/2" hole to csg point. WLS.</p>
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ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 29.04.98

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
S1	PD	D	20:30	24:00	3.50	30	Spud Irrewarra-1 2030hrs 29/4/98 Drill 8.5"hole F/9 to 30m

ANNOTATIONS FOR PERIOD		00:00 HRS TO 24:00 HRS ON 29.04.98
REMARK / OBSERVATION		SOLUTION / RECOMMENDATION
Spud Irrewarra # 1 @ 2030hrs 29th April 1998.		