

Cultus Drilling Manager
Cultus Drilling Superintendent
Cultus Drilling Supervisor(s)
Cultus Drilling Engineer(s)
Cultus Geologist
Cultus Drilling Manager
Cultus Cul : A. Bradley, H. Flink
: B. Richardson, K.Kelly
: D.Horner
: C. Way
: L. Wilson

condigration

Date 31st July 1998

CULTUS PETROLEUM NL

TARALEA - 1 WELL COMPLETION REPORT PART 2

TABLE OF CONTENTS

				Page No.
1.	SU	MMARY		
	1.1	Well Summary		1.
	1.2	Location Map		3.
	1.3	Days Vs Depth Plot		5.
	1.4	Cost Summary		6.
	1.5	General Information		9.
	1.6	Plug/Abandonment Schematic		10.
2.	TIN	ME BREAKDOWNS		
	2.1	Total Time Breakdown		
		Total Times by Class / Operational Codes		11.
		Graph by Class / Operational Codes		12.
	2.2	Time Analysis		
		Time Analysis by Operational Codes	(Pie Chart)	14.
	2.3	Time Breakdowns		
		Time Breakdown by Phase		15.
	2.4			17.
	2.5			24.
	2.6	Non-Productive Time		
		Problem Time Summary		26.
		Trouble Time Analysis Report		27.
		Trouble Drilling by Operational Codes	(Bar / Pie Charts)	28.
		Trouble Drilling by Class Codes	(Bar / Pie Charts)	29.
		Trouble Analysis during Formation Evaluation		31.
3.	DR	ILLING DATA		
	3.1	Casing and Cement		
		Casing Tally		32.
		Cementing Report		33.
		Formation Integrity Test		34.
	3.2	Bit and Hydraulic Records		37.
	3.3	Bottom Hole Assemblies		38.
	3.4	Drilling Fluid Reports		39.
4.	DAI	LY DRILLING REPORTS		73.

SUMMARY

WELL SUMMARY

CULTUS PETROLEUM NL

TARALEA #1

The location of the well is X: 605 732.04 E, Y: 5 768 096.01 N in Block PEP 101, Onshore Otway Basin, Victoria. Taralea #1 was an exploration well, spudded at 20:30 hours on 18th January 1997 by O.D.&E. Rig #30. RT was 4.3 m.

12-1/4" hole was drilled using water with SAPP and Alum. Lost returns to the rathole. Remedied by cementing the rathole and re-installing the rathole sleeve. Difficulty was experienced drilling through the Newer Volcanic basalt. Used a downhole motor to drill an 8-1/2" pilot hole to 48m RT. Penetrated through basalt at 40m RT. Opened hole to 12-1/4" and drilled through the Port Campbell Limestone, Gellibrand Marl, Clifton and Dilwyn Formation, and into the Pember Mudstone at 495m RT. As the Gellibrand Marl was encountered the viscosity was dropped, the pH lowered with SAPP. However at 363m RT difficulty was experienced where large soft clay clumps blocked the flowline and created mud rings in the conductor. A KCL sweep between 363m and 366m RT flocculated and caused a second group of mud rings. Pulled the bit at 471m RT due to slow ROP and strapped out of the hole. Picked up new bit, RIH and washed to bottom. Drilled to 495m RT. Prior to running 9-5/8" casing the hole was circulated and conditioned. Ran 3 surveys over the interval with an average deviation of 0.25°

Ran 9-5/8" casing with the shoe set at 492.8m RT. 287sx Class G cement with 3% PHG at 12.5 ppg and 124sx Class G cement plus 1% CaCl2 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. Installed Bradenhead and nippled up BOP's and Choke manifold. Pressure tested BOP's, choke manifold and valves, casing, kelly cocks and standpipe to 300/3000psi. Annular tested to 300/1500psi.

Made up 8-1/2" BHA, RIH and tagged cement at 479m RT. Drilled out cement, shoe and 3m of open hole to 498m RT. Displaced hole with a KCL/PHPA Polymer mud at 8.5ppg. Ran FIT to 370psi with 8.5ppg mud equating to 12.9 ppg EMW. No leak off was seen on the chart recorder.

8-1/2" hole was drilled from 498m RT through the Pember, Pebble Point, Paaratte, Skull Creek, Nullawarre, Belfast, Upper Eumeralla, Heathfield Formations and into the Lower Eumeralla Formation to 1462m RT. Pulled bit due to slow ROP. Circulated bottoms up and dropped survey. Tight hole experienced at intermittent intervals from 1392m to 960m RT, through the Heathfield Member and Upper Eumeralla Formations with 25K overpull. Ran 4 surveys over the interval 498m to 1462m RT with the last deviation at 2.0°. Picked up re-run bit, motor and junk basket. Changed out under gauge reamers for stabilisers. RIH to 886m RT. Washed and reamed through the Upper and Lower Eumeralla Formation from 886m to 917m, 1161m to 1183m and 1423 to 1462m RT. Worked junk basket and drilled 8-1/2" hole from 1462m to 1468m RT. ROP dropped to zero, circulated, dropped survey and POOH. Tight hole experienced in the Heathfield and Upper Eumeralla Formations. Picked up new bit, washed and reamed from 1454m to 1468m RT with 3m fill. Drilled 8-1/2" hole to the Original TD at 1500m RT and reached on day 10 at 07:00 hours on 27th January 1997.

Continued drilling 8-1/2" hole through the Lower Eumeralla Formation from 1500m to 1704m RT. Ran 10 stand wiper trip and experienced tight hole at intermittent intervals from 1551m to 1410m RT through the Heathfield Member and Upper Eumeralla Formations with 20-30K overpull. Continued drilling through the Lower Eumeralla Formation from 1904m RT. Ran 10 stand wiper trip with no drag. Continued drilling through the Lower Eumeralla Formation from 1904m to 1951m RT, circulated bottoms up and POH. Tight hole experienced at intermittent intervals from 1421m to 1369m RT, through the Heathfield Member Formations with 15-20K overpull. Picked up new bit, RIH and, washed and reamed from 1919m to 1951m RT. Continued drilling 8-1/2" hole from 1951m to 2101m RT, dropped kelly on connection, dropped survey and POH. Layed out motor, picked up new bit and BHA. RIH and washed and reamed from 2098m to 2101m RT. Drilled from 2101m to 2126m RT, dropped survey and POH. Picked up motor, RIH and washed last 54m. Continued drilling from 2126m to 2368m RT through the Lower Eumeralla Formation with 10-15K drag on connections. Ran 10 stand wiper trip with 10-15k drag. Drilled 8-1/2" hole from 2368m to 2615m RT and into the Killara Coals. Circulated bottoms up and POH. Picked up new bit and RIH to 2543m RT and worked tight spot. Washed and reamed from 2593m to 2615m RT. Continued drilling from 2615m RT

through the Killara Coals and into the Windermere Member Formation to TD at 2800m RT reached on day 19 at 17:30 hours on 5th February 1997.

Ran 7 surveys over the interval 1462m to 2800m RT with the last deviation at 7.5°. Lost on average 3 bbl/hr while drilling through the Killara Coals. Circulated bottoms up, checked for flow and ran a 10 stand wiper trip. Conditioned well, dropped survey, checked for flow and strapped out of the hole.

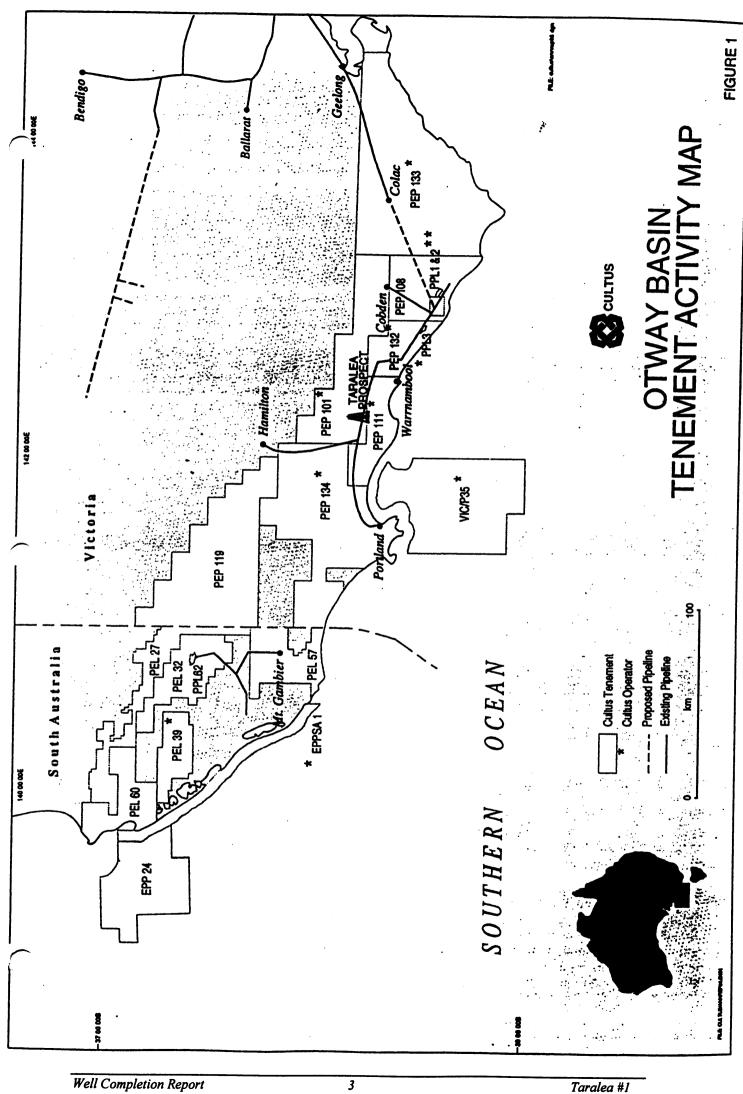
Rigged up and ran the following:

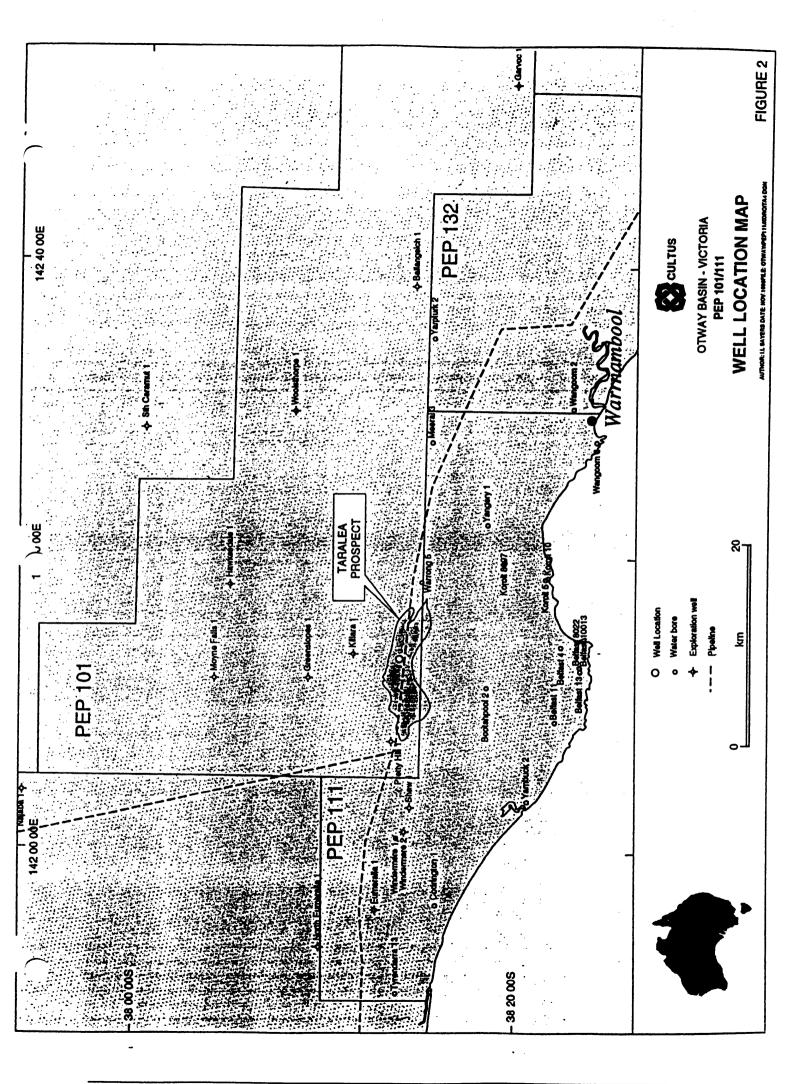
- (1) Velocity data survey, 21 levels.
- (2) Electric log#1 DLL-MSFL-GR-SP-CAL-SONIC-MSFL
- (3) Electric log#2 Dipmeter

Ran open ended drillpipe to 725m RT and conditioned hole. Set abandonment plug #1 from 725m to 665m RT with 74sx Class G cement. Slowly POH to 523m RT and circulated pipe clean. Set abandonment plug #2 from 523m to 463m RT with 72sx Class G cement. Pulled 2 stands and circulated pipe clean. RIH and tagged plug #2 at 468m RT with 10K. Circulated casing with 9.2 ppg inhibitive mud from 465m RT. Layed down remaining drillpipe. Recovered wellhead and welded on top plate. Set abandonment plug #3 on the plate, used 5 sx Class G cement. Erected well marker post. The rig was released at 09:00 hours on 8th February 1997.

The well was completed in 20.52 days at an estimated cost of \$1.56 mm at an average cost of \$557/m plugged and abandoned.

LOCATION MAP





DAYS VS. DEPTH

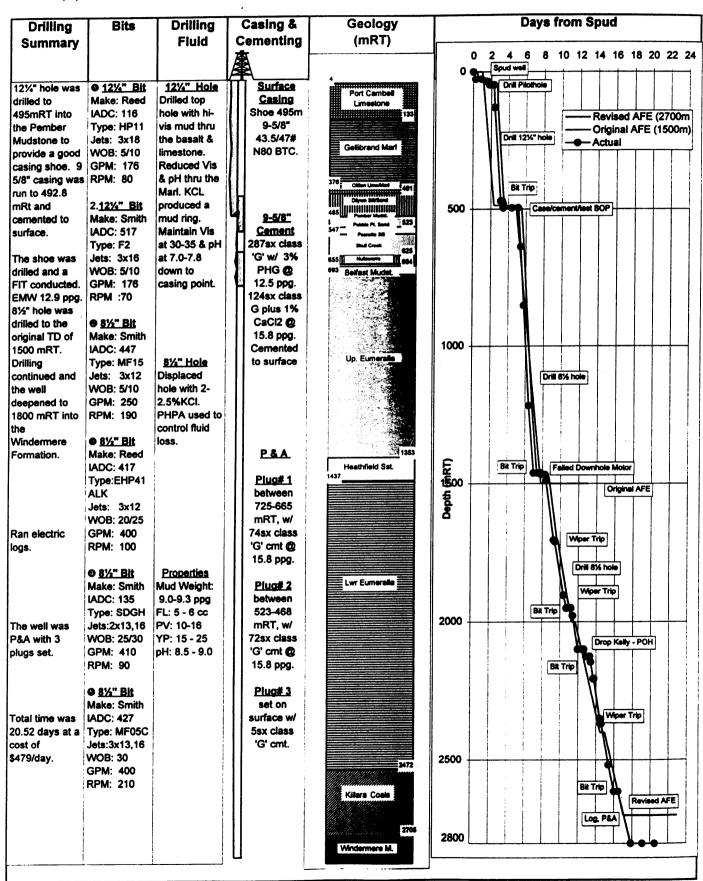
Well: Taralea-1



Surface Location X: 605 732 E Y:5 768 096 N Siesmic Reference OPX90A-71, SP 350

Actual Depth vs. Time Curve

GL (m): 49 m TBC RT (m): 4.3



COST SUMMARY

WELL: TARALEA - 1

Cost Variance Analysis

Taralea - 1 was budgeted for 22.0 Dry Hole Days and actually took 20.5 days (1.5 days, 6.8% under planned).

The total well cost was 16.15% over the Dry Hole AFE cost estimate of \$1,340.6 mm AUD. Actual well cost was \$1,557.1 mm AUD. The main reason for the overrun was due to the reduced drilling activity in the Otway Basin, resulting in additional costs being allocated to Taralea #1. This accounts for the Tubular increase of \$172.6K and the additional Land Freight charges of \$30.9K.

The use of mud motors in the 8-1/2" hole section improved drilling performance resulting less days to drill the well than originally planned. The extra cost of these mud motors is reflected under cost centre 513, Drilling Tools where \$89.2K was spent against \$21.7K planned.



TOTAL WELL COST AFE VS ACTUAL

Well: Taralea-1

Area: Onshore Otway Basin, Victoria

Permit: PEP 101
Country: Australia

AFE No: 97-101-44

AFE Days: 22.0 Actual Days: 20.5

AFE TD mRT: 2700
Actual TD mRT: 2800

Account	Tender /		AFE	ACTUAL	VARIANCE	VARIANCE
		Category	Total	Total	AFE vs Actual	AFE vs Actu
Code	Contract	<u> </u>	Well	Well	\$A	Percent
INTANGIE 100	BLE COSTS	ADMINISTRATION			ł	
101		Salaries, Wages and Oncosts	\$32,900	\$32,148	(\$752)	-2.28
102		Drilling SuperIntendent & Supervisors	\$63,700	\$82,525	\$18,825	29.55
103		Drilling Engineers	\$18,200	\$26,940	\$8,740	48.02
104		Materials Superintendant	\$12,800	\$12,325	(\$475)	-3.71
105		Geology & Geophysical	\$21,000	\$29,241	\$8,241	39.24
106 107		Wellsite Geologist	\$19,300	\$13,000	(\$6,300)	-32.64
107		Well Control Insurance Travel / Accomodation	\$0 \$10,000	\$0 \$15,208	\$6.200	52.08
109		Draft. / Printing consumables	\$2,000	\$2,335	\$5,208 \$335	16.73
		•	42,000	42,000	3333	10.70
200 201		SHORE BASE / LOGISTICS Site Office	1			
202		Contract Vehicles	\$8,700	\$5,690	(\$3,010)	-34.60
203		Staff Safety Clothing	\$500	\$0,0\$0	(\$500)	-100.00
204	SEA.002	• •	\$2,000	\$20,931	\$18,931	946.54
205	MGMT.017	Purchasing Agent's Fees	\$19,400	\$28,543	\$9,143	47.13
206		Load Fees (wharfage & stevedoring)			,	
207		Communications	\$15,900	\$2,148	(\$13,752)	-86.49
208		Weather Forecasting				
300		TECHNICAL				
301		Geological Supplies	\$0	\$935	\$935	100.00
302	SEA.006	Electric Log Analysis	\$3,000	\$0	(\$3,000)	-100.00
303		Core & Fluid Analysis	\$3,000	\$0	(\$3,000)	-100.00
304		Onshore Prep/Test comp. Assy.	1			
400		TRANSPORTATION				
401		Air Freight	1	ĺ		
402		Fixed Wing	1		j	
403		Helicopters			1	
404	SEA.002	Land Freight	\$7,000	\$37,915	\$30,915	441.64
405		Work Boats	1		1	
500		THIRD PARTY SERVICES	1 1			
501		Site Survey / Preparation & Clean Up	\$93,000	\$112,094	\$19,094	20.53
502	SEA.001	Drilling Rig & Assoc. Services	\$329,000	\$299,476	(\$29,524)	-8.97
503	SEA.001	Drilling Rig - Additional Equipment	\$3,200	\$0	(\$3,200)	-100.00
504	SEA.001	Rig Mob / Demob / Move	\$144,900	\$145,210	\$310	0.21
505 506	SEA.006	Rig Positioning				
507	SEA.010	Electric Line Logging Coring Services	\$116,600 \$0	\$87,746	(\$28,854)	-24.75
508	SEA.007	Mud Logging	\$39,600	\$11,525 \$28,776	\$11,525	100.00
509	SEA.004	Mud Engineering	\$12,400	\$20,776	(\$10,824)	-27.33° -100.00°
510	SEA.005	Cement Services	\$33,500	\$51.365	(\$12,400) \$17,865	53.33
511	SEA.008	Directional Drilling	\$8,500	\$891	(\$7,609)	-89.51°
512		Wellbore Survey	\$0	\$355	\$355	100.00
513	SEA.011	Drilling Tools	\$21,700	\$89,267	\$67,567	311.37
514		Diving / ROV	\$0	\$0	,	
515		Inspection	\$1,700	\$3,864	\$2,164	127.28
516	SEA.015	Well Testing	\$22,600	\$5,400	(\$17,200)	-76.119
517		Wellhead Services		Ì		
518 519		Casing Handling Fishing/Casing Cutting				
520		Miscellaneous	\$44,800	\$380	(\$44,420)	-99.159
020		This court is constant in the court is constant in the court in the court is constant in the court in the cou	411,000	*300	(344,420)	-99.13
		TOTAL INTANGIBLES	\$1,110,900	\$1,146,233	\$35,333	3.189
ANGIBLE	E COSTO					
601		Fuel & Lubricants	\$26,400	\$55,336		400 644
602	GFE Inv.	Tubulars	\$30,100	\$202,695	\$28,936 \$172,595	109.619 573.419
603		Equipment Lost in Hole	***.!**	4505,080	\$174,393	5/3.41
604	SEA.005	Tubular Accessories	\$2,900	\$9,101	\$6,201	213.829
605	GFE Inv.	Wellhead Equipment	\$9,400	\$8,621	(\$779)	-8.295
606		Drill Bits, nozzles, etc	\$72,000	\$80,011	\$8,011	11.139
607		Coreheads	\$0	\$0	1	
608		Cement	\$8,300	\$6,657	(\$1,643)	-19.79
609		Cementing Additives	\$1,700	\$0	(\$1,700)	-100.009
610		Drilling Fluid	\$57,000	\$32,579	(\$24,421)	-42.849
611		Water	\$20,500	\$2,630	(\$17,870)	-87.179
612 613		Liner Equipment			1	
614		Completion Equipment		***		
- I	_	Misc. Drilling Equipment	\$1,400	\$13,256	\$11,856	846.839
		TOTAL TANGIBLES	\$229,700	\$410,884	\$181,184	78.889
	ŀ	TOTAL WELL COST		44 887 440		····
		IOIAL WELL COST	\$1,340,600	\$1,557,118	\$216,518	16.159



WELL COST AFE VS ACTUAL

Weil: Taralea-1

Area: Onshore Otway Basin, Victoria

Permit: PEP 101 Country: Australia AFE No: 97-101-44 AFE Days: 13.0
Actual Days: 8.4
AFE TD m RT: 1500

AFE TD m RT: 1500 Actual TD mRT: 1500

Account	Tender /	Category	AFE Total	ACTUAL Total	VARIANCE AFE vs Actual	VARIANCE AFE vs Actu
Code	Contract	Category	Dry Hole	Dry Hole	\$A	Percent
INTANGIE	SLE COSTS					
100		ADMINISTRATION	1			
101		Salaries, Wages and Oncosts	\$22,100	\$22,100		
102		Drilling Superintendent & Supervisors	\$45,900	\$45,900		
103		Drilling Engineers	\$12,800	\$12,800		
104		Materials Superintendant	\$10,400	\$10,400		
105 106		Geology & Geophysical Wellsite Geologist	\$18,900 \$13,000	\$18,900 \$13,000		
107		Well Control Insurance	\$13,000	\$13,000		
108		Travel / Accomodation	\$8,000	\$8,000		
109		Draft. / Printing consumables	\$2,000	\$2,335	\$335	16.73
200		SHORE BASE / LOGISTICS				
201		Site Office	1			
202		Contract Vehicles	\$6,000	\$4,000	(\$2,000)	-33.33
203		Staff Safety Clothing	\$500	\$0	(\$500)	-100.00
204	SEA.002	Warehousing & Storage	\$2,000	\$2,000	, (3237)	
205	MGMT.017	Purchasing Agent's Fees	\$19,400	\$26,282	\$6,882	35.47
206		Load Fees (wharfage & stevedoring)				
207		Communications	\$13,200	\$2,148	(\$11,052)	-83.73
208		Weather Forecasting				
300		TECHNICAL				
301		Geological Supplies		\$935	\$935	100.00
302	SEA.006	Electric Log Analysis	\$3,000	\$0	(\$3,000)	-100.00
303		Core & Fluid Analysis	\$3,000	\$0	(\$3,000)	-100.00
304		Onshore Prep/Test comp. Assy.	1			
400		TRANSPORTATION]			
401		Air Freight	1			
402		Fixed Wing				
403		Helicopters				
404 405	SEA.002	Land Freight Work Boats	\$7,000	\$37,606	\$30,606	437.23
		Work Boats	l i			
500		THIRD PARTY SERVICES				
501		Site Survey / Preparation & Clean Up	\$88,000	\$88,000		
502	SEA.001		\$194,400	\$194,400		•
503 504	SEA.001		\$3,200	\$0	(\$3,200)	-100.00
505	SEA.001	Rig Mob / Demob / Move Rig Positioning	\$144,900	\$ 310	(\$144,590)	-9 9 .79
506	SEA 006	Electric Line Logging	\$83,800	\$83,441	(\$359)	-0.43
507	SEA.010		\$0	\$11,433	\$11,433	100.00
508	SEA.007	——————————————————————————————————————	\$25,600	\$25,600	011,433	100.00
509	SEA.004	Mud Engineering	\$8,100	\$0	(\$8,100)	-100.00
510	SEA.005	Cement Services	\$33,500	\$33,500	```	
511	SEA.008	Directional Drilling	\$5,000	\$891	(\$4,109)	-82.18
512		Wellbore Survey	\$0	\$355	\$355	100.00
513	SEA.011	Drilling Tools	\$14,500	\$14,500		
514		Diving / ROV	\$0		1	
515	054.045	Inspection	\$1,700	\$3,864	\$2,164	127.28
516 517	SEA.015	Well Testing	\$22,600	\$5,400	(\$17,200)	-76.11
518		Wellhead Services Casing Handling				
519		Fishing/Casing Cutting		1		
520		Miscellaneous	\$10,000	\$380	(\$9,620)	-96.20
	1				(35,020)	
		TOTAL INTANGIBLES	\$822,500	\$668,479	(\$154,021)	-18.73
FANGIBLI	E COSTS		1			
601		Fuel & Lubricants	\$15,600	\$12,762	(\$2,838)	-18.209
602	GFE Inv.	Tubulars	\$30,100	\$30,100		
603		Equipment Lost in Hole		ľ		
604		Tubular Accessories	\$2,900	\$9,101	\$6,201	213.829
605		Wellhead Equipment	\$9,400	\$8,621	(\$779)	-8.29
606 607	SEA.010	Drill Bits, nozzies, etc	\$34,700	\$35,179	\$479	1.389
608	SEA.005		\$0	\$0 \$6.657	(2	40 704
609		Cementing Additives	\$8,300 \$1,700	\$6,657 \$0	(\$1,643)	-19.799
610		Drilling Fluid	\$30,000	\$4,284	(\$1,700)	-100.009 -85.729
611		Water	\$13,300	\$2,630	(\$25,716) (\$10,670)	-85.727 -80.239
612		Liner Equipment	\$10,000	42,000	(\$10,670)	-00.237
613		Completion Equipment	ŀ	•	ŀ	
614		Misc. Drilling Equipment	\$1,400	\$1,400	- 1	
	r					
		TOTAL TANGIBLES	\$147,400	\$110,733	. (\$36,667)	-24.889
	1	TOTAL WELL COST	\$969,900	\$779,211	(\$190,689)	-19.669

GENERAL INFORMATION

GENERAL INFORMATION

Well Name

Taralea -1

Block

PEP 101, Onshore Otway Basin, Victoria

Seismic Line

OPX9OA - 71 **SP 350**

Surface Location

X: 605 732.04 E 38° 13' 43.62" S

Y: 5 768 096.01 N

142° 12' 28.84" E

Block Equity Percentage

Cultus Petroleum (Australia) NL

75.00%

Gulf (Australia) Resources NL

25.00%

Type of Well

Exploration

Spud Date

2030 hrs 18 January 1997

Release Date

0900 hrs 8 February 1997

Time to Drill, Plug and Abandon

20.52 days

Total Depth

2800.0m RT MD

RT

4.3m

GL a.m.s.l.

49m

Rig

Rig #30

Drilling Contractor

Oil Drilling and Exploration Pty Ltd (O.D.&E.)

Cultus Personnel on Site

Drilling Supervisor

A. Bradley,

H. Flink

Engineer/Night Supervisor B. Richardson,

K. Kelly

Wellsite Geologist

D. Horner

Well Objectives

Pebble Point

Upper Eumeralla

Well Cost

AFE 97-101-44

969.9 A\$K

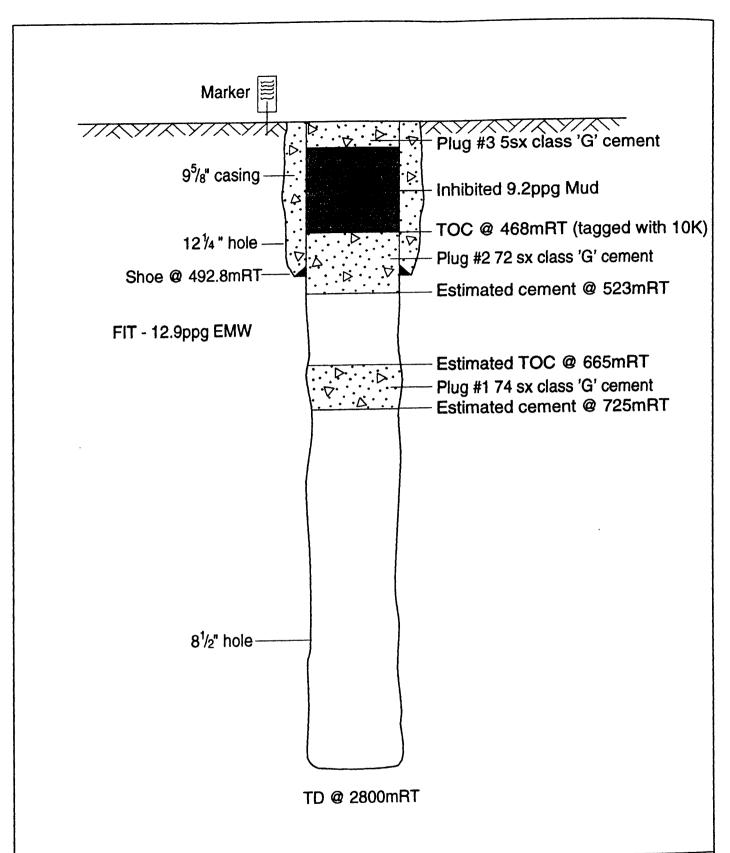
AFE 97-101-46

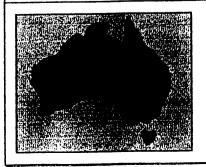
370.7 A\$K

1,340.6 A\$K

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

PLUG & ABANDONMENT SCHEMATIC







CULTUS PETROLEUM (AUSTRALIA) N.L.

ONSHORE OTWAY BASIN - VICTORIA

PEP 101

TARALEA 1

PLUG & ABANDONMENT SCHEMATIC

AUTHOR: LEON WILSON

DATE: AUGUST 1998

FILE: otway/pep101/tarasch.dgn

SCALE: NTS

TIME BREAKDOWNS

TOTAL TIMES

Well: Taralea #1

Drilling Co: O.D.E.

Rig: 30

Spud Date : 18.01.97 TD Depth : 2,800.0

Total Time (hrs) - Spud/Release : 512.00 Total Time (hrs) - Rig Move : 0.00

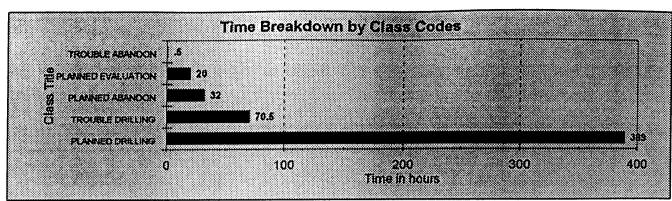
Total NPT (hrs): 71.00

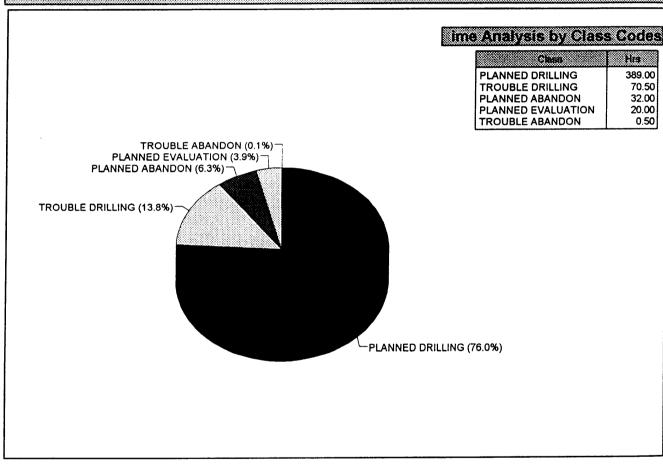
Time-Breakdown: Times by Class and Operation

5.44	37
PLANNED DRILLING	389.00
TROUBLE DRILLING	70.50
PLANNED ABANDON	32.00
PLANNED EVALUATION	20.00
TROUBLE ABANDON	0.50

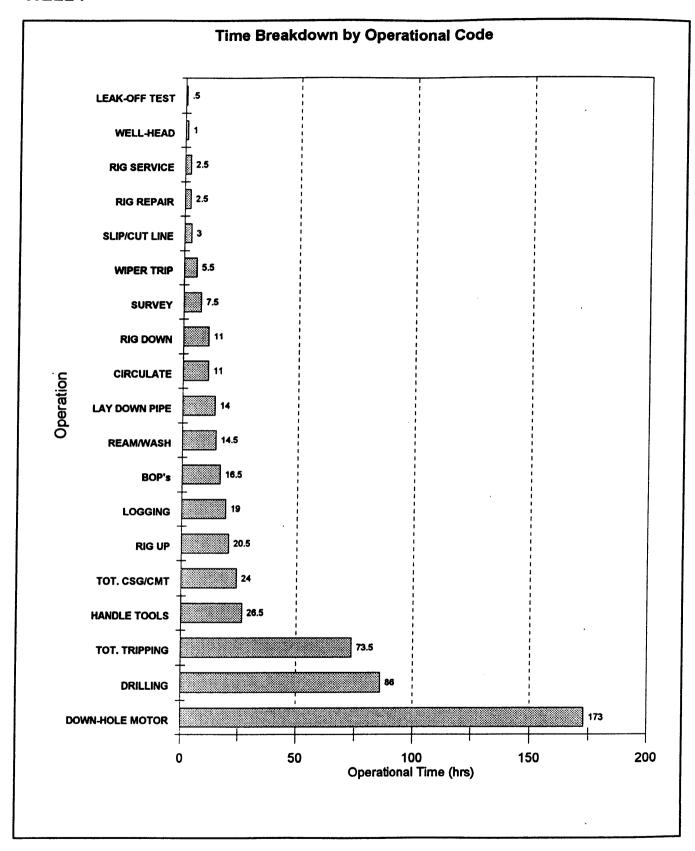
DOWN HOLE MOTOR	173.00
DOWN-HOLE MOTOR	
DRILLING	86.00
TOT. TRIPPING	73.50
HANDLE TOOLS	26.50
TOT. CSG/CMT	24.00
RIG UP	20.50
LOGGING	19.00
BOP's	16.50
REAMWASH	14.50
LAY DOWN PIPE	14.00
CIRCULATE	11.00
RIG DOWN	11.00
SURVEY	7.50
WIPER TRIP	5.50
SLIP/CUT LINE	3.00
RIG REPAIR	2.50
RIG SERVICE	2.50
WELL-HEAD	1.00
LEAK-OFF TEST	0.50

WELL: Taralea #1



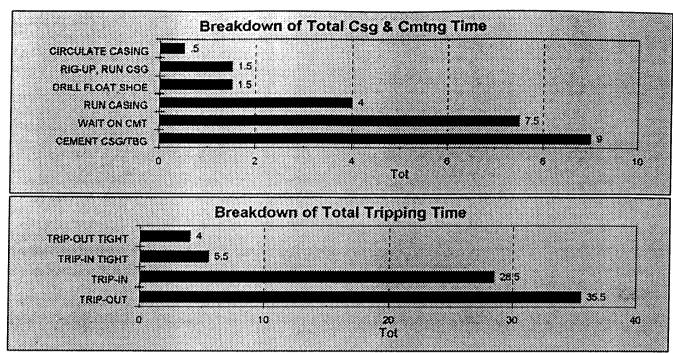


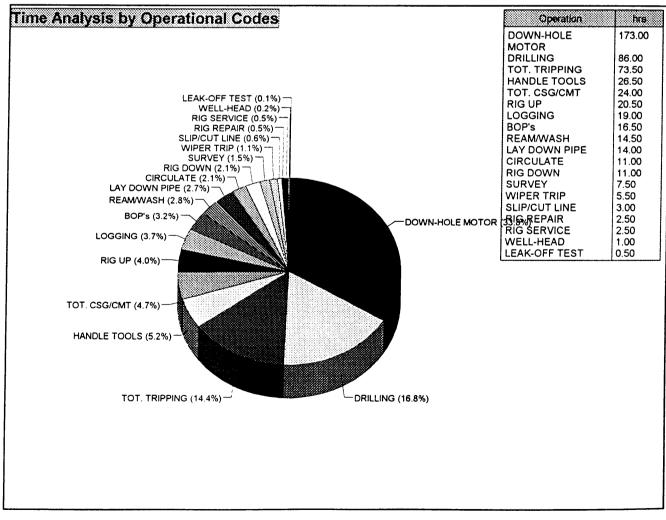
WELL: Taralea #1



TIME ANALYSIS

WELL: Taralea #1





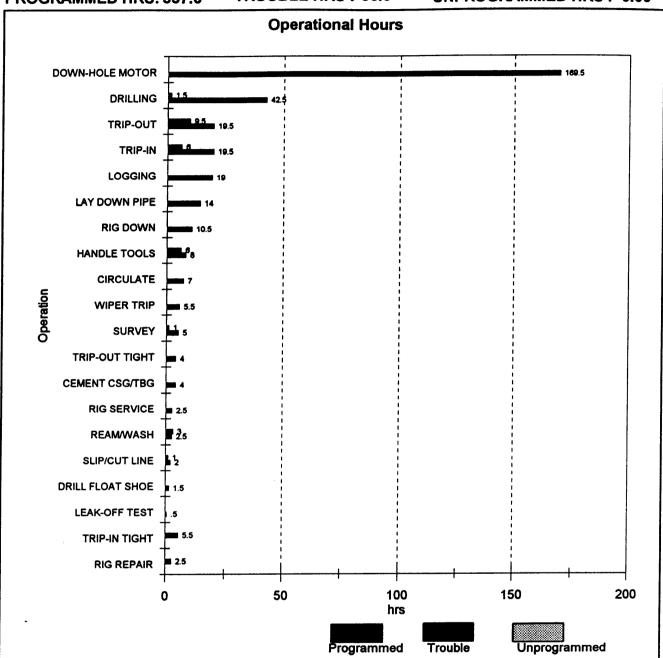
TIME BREAKDOWNS

Time breakdown by Phase

Taralea #1

PHASE: 11

PROGRAMMED HRS: 337.0 TROUBLE HRS: 36.0 UNPROGRAMMED HRS: 0.00



Time breakdown by Phase

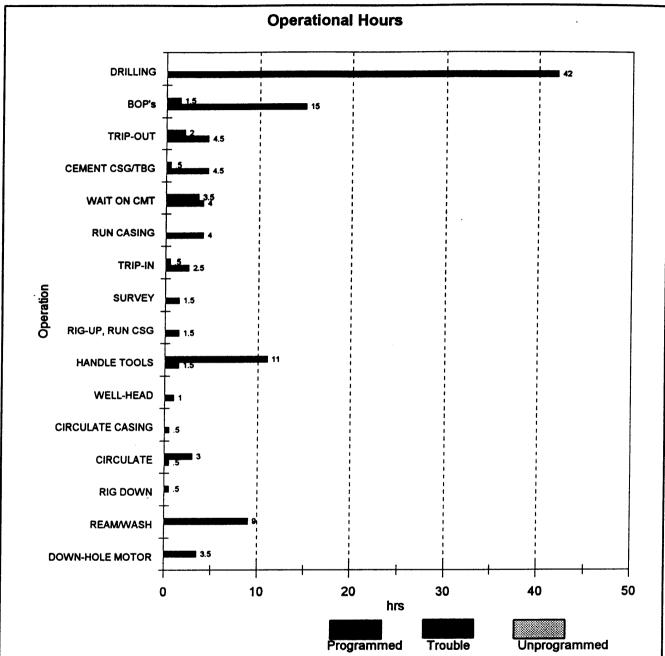
Taralea #1

PHASE: S1

PROGRAMMED HRS: 83.0

TROUBLE HRS: 35.0

UNPROGRAMMED HRS: 0.00



ACTIVITY REPORTS

WELL: Taralea #1 Drilling Co: O.D.E.

Rig:

30

Page Number: 1 of 7

18.01.97 OT PD RIG UP 7.50 O Install bell nipple and flowline. Pressure test pumps and kelly to 2000psl.				*		::		AF FACIONES.
18.01.97 OT PD RIG UP 4.00 O Dill am of rathole.	******	*****	·					
18.01.97 OT PD RIG UP 1.50 0 POOH. Pick up new bit.	18.	01.97	ОТ	PD	RIG UP	7.50		pumps and kelly to 2000psi.
18.01.97 OT PD RIG UP 1.50 O Drill rathole 4m to 5m.	18.0	01.97	ОТ	PD	RIG UP	:		\$ "
18.01.97 OT PD RIG UP 1.00 O POOH. Pick up motor.	18.	01.97	ОТ	PD	RIG UP	i	I .	· ·
18.01.97 OT PD RIG UP 3.00 Dill rathole 6m to 13m. Install sock.	18.0	01.97	ОТ	PD	RIG UP	:	1	i
18.01.97 OT PD RIG UP 1.00	18.6	01.97	ОТ	PD	RIG UP	1.00		•
18.01.97 OT PD RIG UP 1.00 Tag bottom of conductor at 12m. Lay down motor and flush out. Make up bit to spud. 18.01.97 S1 PD DRILLING 3.50 27 DIII 12 1/4" hole 19m to 27m. Hole washing out to mousehole - no circulation up conductor. 19.01.97 S1 TD CIRCULATE 1.00 27 Pull mousehole. Attempt to plug communication with sacks - no success. 19.01.97 S1 TD TRIP-OUT 0.50 27 PODH and stand back DC's. 19.01.97 S1 TD TRIP-OUT 0.50 27 PODH and stand back DC's. 19.01.97 S1 TD CEMENT CSG/TBG 0.50 27 PODH and stand back DC's. 19.01.97 S1 TD CEMENT CSG/TBG 0.50 27 PUmp SBB. water. Mix and pump 44sx "G" cement at 15.8pg (8BB. slurry). Displace with 0.58BL water and flush lines. CIP 0.755hrs. 170 17	18.0	01.97	ОТ	PD	RIG UP	3.00		Drill rathole 6m to 13m. Install sock.
18.01.97 S1 PD DRILLING 3.50 19 Spud Well. Drill 12 1/4" hole 12m to 19m 19.01.97 S1 TD CIRCULATE 1.00 27 Spot hivis mud and LCM. Hole still washing out to mousehole - no circulation up conductor. 19.01.97 S1 TD CIRCULATE 1.00 27 Spot hivis mud and LCM. Hole still washing out to mousehole - no circulation up conductor. 19.01.97 S1 TD TRIP-OUT 0.50 27 PODH and stand back DC's. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Clean out mousehole. RIH rwi-2/ts DP to 18m. Rig up Halliburton. PODH wi-drill pipe. 19.01.97 S1 TD CEMENT CSG/TBG 0.50 27 Rig down Halliburton. POOH wi-drill pipe. 19.01.97 S1 TD WAIT ON CMT 3.50 27 Rig down Halliburton. POOH wi-drill pipe. Pull kelly and rathole and hang in derrick. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Rig down Halliburton. POOH wi-drill pipe. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Rig down Halliburton. POOH wi-drill pipe. Pull kelly and rathole and hang in derrick. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Rig down Halliburton. POOH wi-drill pipe. Pull kelly and rathole and hang in derrick. 27 Rig down Halliburton. POOH wi-drill pipe. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Rig down Halliburton. POOH wi-drill pipe. 27 Rig down Halliburton. POOH wi-drill pipe. 28 Right and tag cement at 12.1m. Break out 8" 27 Right and tag cement at 12.1m. Break out 8" 28 Right and tag cement at 12.1m. Break out 8" 28 Right and tag cement at 12.1m. Break out 8" 28 Right and tag cement at 12.1m. Break out 8" 28 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cement at 12.1m. Break out 8" 29 Right and tag cem	18.0	01.97	ОТ	PD	RIG UP	2.00		
19.01.97 S1 PD DRILLING 3.00 27 Drill 12 1/4" hole 19m to 27m. Hole washing out to mousehole - no circulation up conductor.	18.0	01.97	ОТ	PD	RIG UP	1.00	C	
19.01.97 S1 TD CIRCULATE 1.00 27 Spot hivs mud and LCM. Hole still washing out. 19.01.97 S1 TD CIRCULATE 1.00 27 Pull mousehole. Attempt to plug communication with sacks - no success. 19.01.97 S1 TD HANDLE TOOLS 1.50 TO Pull mousehole. Attempt to plug communication with sacks - no success. 19.01.97 S1 TD HANDLE TOOLS 1.50 TO HANDLE TOOLS 1.50 TO HANDLE TOOLS 1.50 TO HANDLE TOOLS 1.50 TO Pull Halliburton. POOH w/- drill pipe. Pull kelly and rathole and hang in derrick. 19.01.97 S1 TD HANDLE TOOLS 1.50 TO Reject and flush flines. Pull kelly and rathole and hang in derrick. 19.01.97 S1 TD HANDLE TOOLS 1.50 TO Reject and flush flines. TO TO Reject and flush flines. TO TO TO TO TO TO TO T	18.0	01.97	S1	PD	DRILLING	3.50	1	, •
19.01.97 S1 TD CIRCULATE 1.00 27 Pull mousehole. Attempt to plug communication with sacks - no success. 27 27 27 27 27 27 27 2	19.0	01.97	S1	PD	DRILLING	3.00	27	out to mousehole - no circulation up
19.01.97 S1 TD	19.0	01.97	S1	TD	CIRCULATE	1.00	27	_ ·
19.01.97 S1 TD HANDLE TOOLS 1.50 27 Clean out mousehole. RIH w/- 2jts DP to 18m. Rig up Halliburton. Pump 5BBL water. Mix and pump 44sx "G" cement at 15.8ppg (BBBL slurry). Displace with 0.5BBL water and flush lines. CIP 0.755hrs. Pump 5BBL water and flush lines. CIP 0.755hrs. Pull kelly and rathole and hang in derrick. Wait ON CMT 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Rig down Halliburton. POOH w/- drill pipe. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Wait on cement. Pull kelly and rathole and hang in derrick. Pull kelly an	19.0	01.97	S1	TD	CIRCULATE	1.00	27	
19.01.97	19.0	1.97	S1	TD	TRIP-OUT	0.50	27	POOH and stand back DC's.
19.01.97 S1	19.0	1.97	S1	TD	HANDLE TOOLS	0.50	27	Clean out mousehole.
19.01.97 S1 TD RIG DOWN 0.50 27 Rig down Halliburton. POOH w/- drill pipe. Pull kelly and rathole and hang in derrick. Wait on cement. Simple cement. Wait on cement. Wait on cement. Simple cement. Wait on cement. Wait on cement. Wait on cement. Wait on cement. Simple cement. Wait on cement. Wait on cement. Simple cement. Wait on cement. Simple cement. Wait on cement. Simple cement. Simple cement. Simple cement. Simple cement. Wait on cement. Simple cement.	19.0	1.97	S1	TD	HANDLE TOOLS	1.50	27	
19.01.97 S1 TD WAIT ON CMT 3.50 27 Wait on cement. Wait on cement. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 Re-install rathole. Clean out mousehole and re-install sock. RiH and tag cement at 12.1m. Break out 8" DC and lay down same. DC and	19.0)1.97	S1	TD	CEMENT CSG/TBG	0.50	27	cement at 15.8ppg (8BBL slurry). Displace with 0.5BBL water and flush lines. CIP
19.01.97 S1 TD HANDLE TOOLS 3.50 27 Re-install rathole. Clean out mousehole and re-install sock. 19.01.97 S1 TD HANDLE TOOLS 1.50 27 RIH and tag cement at 12.1m. Break out 8" DC and lay down same. 19.01.97 S1 PD DRILLING 5.00 30 Drill 12 1/4" hole 27m to 30m. 20.01.97 S1 PD DRILLING 5.00 34 Drill 12 1/4" hole 30m to 34m 20.01.97 S1 PD DRILLING 4.00 36 Drill 12 1/4" hole 30m to 34m POOH to change bit. RIH w/- insert bit. Drill 12 1/4" hole 34m to 36m. 20.01.97 S1 TD TRIP-OUT 0.50 36 POOH. Stand back 8" DC's. 20.01.97 S1 TD HANDLE TOOLS 1.00 36 PICk up 6 1/2" downhole motor. Unable to set angle to 0deg. 20.01.97 S1 TD DOWN-HOLE MOTOR 3.50 48 Drill 8 1/2" hole 36m to 48m. Broke out of basalt at 40m 20.01.97 S1 TD TRIP-OUT 1.00 48 Make up 12 1/4" BHA. Unable to go below 13m. Lay down motor. 20.01.97 S1 TD REAMWASH 3.50 48 Ream 12 1/4" hole to 36m 20.01.97 S1 TD REAMWASH 3.50 48 Open hole to 12 1/4" 39m to 44m 21.01.97 S1 TD REAMWASH 2.00 48 Survey at 31m 0.25deg	19.0	1.97	S1	TD	RIG DOWN	0.50	27	
19.01.97 S1 TD	19.0	1.97	S1	TD	WAIT ON CMT			
19.01.97 S1 TD HANDLE TOOLS 1.00 27 Drill cement 12m to 27m.	19.0	1.97	S1	TD	HANDLE TOOLS	3.50	27	
19.01.97 S1 PD DRILLING 6.00 30 Drill 12 1/4" hole 27m to 30m. 20.01.97 S1 PD DRILLING 5.00 34 Drill 12 1/4" hole 30m to 34m 20.01.97 S1 TD TRIP-IN 0.50 34 POOH to change bit. RIH w/- insert bit. 20.01.97 S1 TD DRILLING 4.00 36 Drill 12 1/4" hole 34m to 36m. 20.01.97 S1 TD TRIP-OUT 0.50 36 POOH. Stand back 8" DC's. 20.01.97 S1 TD HANDLE TOOLS 1.00 36 Pick up 2nd downhole motor. Unable to set angle to 0deg. 20.01.97 S1 TD DOWN-HOLE MOTOR 3.50 48 Drill 8 1/2" hole 36m to 48m. Broke out of basalt at 40m 20.01.97 S1 TD TRIP-OUT 1.00 48 POOH. Lay down motor. 20.01.97 S1 TD TRIP-OUT 1.00 48 Ream 12 1/4" BHA. Unable to go below 13m. Lay down 2 x 8" DC's. 20.01.97 S1 TD REAMWASH 3.50 48	19.0	1.97	S1	TD	HANDLE TOOLS	1.50	27	
20.01.97 S1	19.0	1.97	S1	TD	HANDLE TOOLS	1.00		1
20.01.97 S1 TD TRIP-IN 0.50 34 POOH to change bit. RIH w/- insert bit. 20.01.97 S1 PD DRILLING 4.00 36 Drill 12 1/4" hole 34m to 36m. 20.01.97 S1 TD TRIP-OUT 0.50 36 POOH. Stand back 8" DC's. 20.01.97 S1 TD HANDLE TOOLS 1.00 36 Pick up 6 1/2" downhole motor. Unable to set angle to 0deg. 20.01.97 S1 TD DOWN-HOLE MOTOR 3.50 48 Drill 8 1/2" hole 36m to 48m. Broke out of basalt at 40m 20.01.97 S1 TD TRIP-OUT 1.00 48 POOH. Lay down motor. 20.01.97 S1 TD TRIP-OUT 1.00 48 POOH. Lay down motor. 20.01.97 S1 TD REAMWASH 3.00 48 Ream 12 1/4" BHA. Unable to go below 13m. Lay down 2 x 8" DC's. 20.01.97 S1 TD REAMWASH 3.50 48 Open 8 1/2" pilot hole to 12 1/4" 36m to 39m 21.01.97 S1 TD REAMWASH 2.00 48	19.0	1.97	S1	PD	DRILLING	6.00	30	Drill 12 1/4" hole 27m to 30m.
20.01.97 S1 PD DRILLING TRIP-OUT 0.50 36 Drill 12 1/4" hole 34m to 36m.	20.0	1.97	S1	PD	DRILLING	5.00	34	Drill 12 1/4" hole 30m to 34m
20.01.97 S1 TD TRIP-OUT 1.00 36 POOH. Stand back 8" DC's.	20.0	1.97	S1	TD	TRIP-IN	0.50	34	POOH to change bit. RIH w/- insert bit.
20.01.97 S1 TD	20.0	1.97	S1	PD	DRILLING	4.00	36	Drill 12 1/4" hole 34m to 36m.
20.01.97 S1 TD HANDLE TOOLS 1.00 36 Pick up 2nd downhole motor. Make up 8 1/2" BHA	20.0	1.97	S1	TD	TRIP-OUT	0.50	36	POOH. Stand back 8" DC's.
20.01.97 S1 TD DOWN-HOLE MOTOR 3.50 48 Drill 8 1/2" hole 36m to 48m. Broke out of basalt at 40m POOH. Lay down motor. Make up 12 1/4" BHA. Unable to go below 13m. Lay down 2 x 8" DC's. ReamWash 3.50 48 Ream 12 1/4" hole to 36m Open 8 1/2" pilot hole to 12 1/4" 36m to 39m Open hole to 12 1/4" 39m to 44m 21.01.97 S1 PD SURVEY 0.50 48 Survey at 31m 0.25deg	20.0	1.97	S1	TD	HANDLE TOOLS	1.00	36	
20.01.97 S1 TD TRIP-OUT 1.00 48 POOH. Lay down motor.	20.0	1.97	S1	TD	HANDLE TOOLS	1.00	36	•
20.01.97 S1 TD	20.0	1.97	S1	TD	DOWN-HOLE MOTOR	3.50	48	l l
20.01.97 S1 TD	20.0	1.97	S1	TD	TRIP-OUT	1.00	48	POOH. Lay down motor.
20.01.97 S1 TD REAM/WASH 3.00 48 Ream 12 1/4" hole to 36m 20.01.97 S1 TD REAM/WASH 3.50 48 Open 8 1/2" pilot hole to 12 1/4" 36m to 39m 21.01.97 S1 TD REAM/WASH 2.00 48 Open hole to 12 1/4" 39m to 44m 21.01.97 S1 PD SURVEY 0.50 48 Survey at 31m 0.25deg	1		1	i .		: 1		Make up 12 1/4" BHA. Unable to go below
20.01.97 S1 TD REAM/WASH 3.50 48 Open 8 1/2" pilot hole to 12 1/4" 36m to 39m 21.01.97 S1 TD REAM/WASH 2.00 48 Open hole to 12 1/4" 39m to 44m 21.01.97 S1 PD SURVEY 0.50 48 Survey at 31m 0.25deg	20 n	1 97	S1	TD	REAMWASH	3.00	48	
21.01.97 S1 TD REAM/WASH 2.00 48 Open hole to 12 1/4" 39m to 44m 21.01.97 S1 PD SURVEY 0.50 48 Survey at 31m 0.25deg	1							1
21.01.97 S1 PD SURVEY 0.50 48 Survey at 31m 0.25deg	l .		1		i		1	•
	1				:			•
21.01.97 S1 TD REAM/WASH 0.50 48 Open hole to 12 1/4" 44m to 48m			S1	TD	REAMWASH	0.50		Open hole to 12 1/4" 44m to 48m

WELL: Taralea #1 Drilling Co: O.D.E.

Rig: 30 Page Number: 2 of 7

				N. TOO	BEST :	DESCRIPTION
DATE	<u>~~~~~~</u>	CLS	•			
21.01.97	S1	PD	DRILLING	3.00	1	Drill 12 1/4" hole 48m to 130m.
21.01.97	S1	PD	DRILLING	4.50 0.50		Drill 12 1/4" hole 130m to 243m
21.01.97	S1	PD	SURVEY	5.00	1	Survey at 231m 0.25deg Drill 12 1/4" hole 243m to 363m
21.01.97	S1 S1	PD TD	DRILLING CIRCULATE	0.50		Clean out mud rings in flow line.
21.01.97	S1	PD	DRILLING	0.50		Drill 12 1/4" hole 363m to 366m while pumping
21.01.97						KCL slug.
21.01.97	S1	TD	CIRCULATE	0.50		Clean out mud rings in flow line.
21.01.97	S1	PD	DRILLING	4.50		Drill 12 1/4" hole 366m to 459m
21.01.97	S1	PD	SURVEY	0.50 0.50		Survey at 445m 0.25deg. Drill 12 1/4" hole 459m to 471m. ROP down
21.01.97	S1	PD	DRILLING			from 30m/hr to 10 m/hr.
21.01.97	S1	PD	TRIP-OUT	1.00		POOH. Strap pipe.
22.01.97	S1	PD	TRIP-OUT	1.00		Continue POOH. Strap pipe - no correction (0. 21m difference)
22.01.97	S1	PD	TRIP-IN	2.50		Change bit. RIH. Wash to bottom at 471m.
22.01.97	S1	PD	DRILLING	2.50		Drill 12 1/4" hole 471m to 495m
22.01.97	S1	PD	CIRCULATE	0.50		Pump hivis sweep. Circulate hole clean.
22.01.97	S1	PD	TRIP-OUT	2.50		POOH - no drag.
22.01.97	S1	PD	RIG-UP, RUN CSG	1.50		Rig up to run 9 5/8" casing. Hold pre-job safety meeting.
22.01.97	S1	PD	RUN CASING	4.00	495	Run 9 5/8" casing - total of 41jts. Shoe at 492. 8m. Float collar at 479.9m
22.01.97	S1	PD	CIRCULATE CASING	0.50	495	Circulate 150bbl at 456gpm and 200psi.
22.01.97	S1	PD	CEMENT CSG/TBG	0.50	495	Rig up Halliburton. Hold pre-job safety
						meeting. Pump 20bbl water ahead. Pressure test lines to 3000psi.
22.01.97	S1	PD	CEMENT CSG/TBG	0.50	495	Mix and pump 287sx "G" cement w/- 83.5bbl of 3% PHG at 12.5ppg followed by 124sx "G" w/- 15bbl of water + 1% CaCl2. Drop top plug. Pump 5bbl water.
22.01.97	S1	PD	CEMENT CSG/TBG	0.50	495	Displace w/- rig pumps 112bbl mud at 8bpm (total 117bbl). Bump plug to 900psi. Halliburton pressure test casing to 3000psi. Release pressure - floats held OK.
22.01.97	S1	PD	WAIT ON CMT	2.00	495	Clean out cellar. Drain and flush conductor. Remove flowline. Cut conductor. Cement static at cellar floor.
22.01.97	S1	PD	WAIT ON CMT	2.00		Wait on cement.
22.01.97	S1	PD	CEMENT CSG/TBG	2.00	495	Land casing w/- string weight of 55000lbs. Lay out cement head and lines. Break out landing joint and lay out. Lay out conductor cutoff.
22.01.97	S1	PD	CEMENT CSG/TBG	1.00	495	Rig down casing gear. Lay out mousehole.
22.01.97	S1	PD	WELL-HEAD	0.50		Install Section "A" wellhead.
23.01.97	S1	PD	WELL-HEAD	0.50	495	Install Section "A" wellhead.
23.01.97	S1	PD	BOP's	7.00	495	Nipple up BOP's. Install kill and choke lines.
23.01.97	S1	PD	BOP's	1.00		Install bell nipple and flowline. Install mousehole.
23.01.97	S1	PD	BOP's	1.00	495	Function test BOP's.
23.01.97	S1	PD	BOP's	1.00	495	Rig up to test surface equipment
23.01.97	S1	PD	BOP's	2.00		Pressure test kelly cocks, standpipe and full opening safety valve 300/3000psi.
23.01.97	S1	TD	BOP's	1.50	495	Rig up to test BOP's. Change rubber on cup tester.

WELL: Taralea #1 Drilling Co: O.D.E.

Rig: 30

Page Number: 3 of 7

DATE	OLI	S CLS	OPERATION	HRS	рееті	DESCRIPTION
23.01.97		PD	BOP's	3.00		
23.01.97		PU	BOPS	3.00	49	5 Pressure test BOP's. Inner and outer kill line and choke line valves, choke line, choke manifold and pipe rams to 300/3000psi. Hydril to 300/1500psi. Blind rams to 1000psi. Outer kill valve leaking.
23.01.97	S1	PD	HANDLE TOOLS	1.50	49	5 Lay down 8" DC's.
23.01.97	11	PD	HANDLE TOOLS	2.00		5 Make up 8 1/2" BHA
23.01.97	11	PD	TRIP-IN	1.50		5 RIH. Tag top of cement at 479m
23.01.97	l1	PD	DRILL FLOAT SHOE	1.50		Drill out cement and float equipment. Shoe at 492.8m
23.01.97	l1	PD	DRILLING	0.50	498	Clean out to 495m. Drill 8 1/2" hole 495m to 498m.
24.01.97	11	PD	LEAK-OFF TEST	0.50	498	Pull back into casing. Conduct FIT to 370psi w/- 8.5ppg mud - EMW 12.9ppg
24.01.97	11	PD	DRILLING	5.50		Drill 8 1/2" hole 498m to 637m
24.01.97	11	PD	DRILLING	3.50		Drill 8 1/2" hole 637m to 708m
24.01.97	11	PD	SURVEY	0.50		Circulate and survey at 694m 1 deg
24.01.97	11	PD	DRILLING	11.00		Drill 8 1/2" hole 708m to 1013m
24.01.97	11	PD	SURVEY	0.50		Circulate and survey at 998m 0.5deg
24.01.97	11	PD	DRILLING	2.50		Drill 8 1/2" hole 1013m to 1076m
25.01.97	11	PD	DRILLING	6.00		Drill 8 1/2" hole 1076m to 1215m
25.01.97 25.01.97	11 1	PD PD	DRILLING	5.00		Drill 8 1/2" hole 1215m to1315m
25.01.97	11	PD	SURVEY DRILLING	0.50 8.50		Circulate and survey 1.25deg at 1300m. Drill 8 1/2" hole 1315m to 1462m. ROP
25.01.91	''	רט	DRILLING	0.50	1402	dropped from 15-20mph to 5mph.
25.01.97	11	PD	CIRCULATE	1.00	1462	Circulate bottoms up. Pump slug and drop
		. –				survey.
25.01.97	11	PD	TRIP-OUT TIGHT	3.00	1462	POOH. Up to 25K drag at 1392m, 1374m, 1316-1313m, 1264m,1214-1058m. Work through tight spots to stop hole swabbing.
26.01.97	11	PD	TRIP-OUT TIGHT	1.00	1462	Continue to POOH to shoe. Up to 25K drag at 1049-1044m, 1018-1011m, 1005m, 998-983m, 970-960m. Work through tight spots to stop hole swabbing.
26.01.97	11	PD	RIG SERVICE	0.50	1462	Rig service.
26.01.97	11	PD	TRIP-OUT	1.00		РООН
26.01.97	11	PD	HANDLE TOOLS	1.00	1462	Lay out NB Reamer and 1st String Reamer (1/4" under gauge). Top String Reamer in gauge. Recover survey - misrun. Lay out short DC and prepare to pick up motor.
26.01.97	l1	TD	HANDLE TOOLS	2.00	1462	Lay out motor. Pick up stabilizers to replace undergauge reamers. Make up new BHA.
26.01.97	11		TRIP-IN	0.50	1462	1
26.01.97			TRIP-IN	1.00	•	Continue RIH to shoe.
26.01.97	:		SLIP/CUT LINE	1.00		Slip and cut drilling line
26.01.97	11		TRIP-IN TIGHT	2.50		RIH to 886m
26.01.97	11		REAM/WASH	0.50		Fill pipe and break circulation. Wash and ream 886m to 917m.
			TRIP-IN TIGHT	1.50		RIH to 1161m
	•		REAMWASH	0.50		Ream 1161m to 1183m
			TRIP-IN TIGHT	1.50		RIH to 1430m
		,	REAMWASH	1.00		Wash and ream 1423m to 1462m
26.01.97	l1	TD	DRILLING	1.50		Drill 8 1/2" hole 1462m to 1468m. ROP dropped to zero.

WELL: Taralea #1 Drilling Co: O.D.E.

Rig: 30 Page Number: 4 of 7

30.01.97 I1 PD REAMWASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1979m to 2101m 30.01.97 I1 DOWN-HOLE MOTOR 1.00 1979 Drill 8 1/2" hole with motor 1979m to 2101m 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.	DATE	PHS	CLS	OPERATION	HRS	DEPTH	DESCRIPTION
1105m. 1	26.01.97	11	TD	SURVEY	0.50	1468	Circulate. Drop survey.
26.01.97 11 PD	26.01.97	11	TD	TRIP-OUT	3.00	1468	
26.01.97	26.01.97	l1	TD	HANDLE TOOLS	1.00	1468	under gauge, NB stabilizer and Reamer in gauge. Recover survey - 2deg. Lay out short
26.01.97 11 PD TRIP-IN TRI	26.01.97	11	PD	HANDLE TOOLS	1.00	1468	Make up new BHA. Pick up motor and
27.01.97 11 PD TRIP-IN 2.50 1468 Continue to RIII with BHA. Pick up 6 x HWDP. 27.01.97 11 PD TRIP-IN 2.50 1468 Wash and ream 1454m to 1468m. 3m of fill. 27.01.97 11 PD DOWN-HOLE MOTOR 2.50 1468 Wash and ream 1454m to 1468m. 3m of fill. 27.01.97 11 PD DOWN-HOLE MOTOR 3.00 1524 Drill 8 1/2" hole with motor 1490m to 1500m to 1524m 27.01.97 11 PD DOWN-HOLE MOTOR 3.00 1524 Drill 8 1/2" hole with motor 1500m to 1524m to 1677m 28.01.97 11 PD DOWN-HOLE MOTOR 3.00 1704 Drill 8 1/2" hole with motor 1524m to 1677m 28.01.97 11 PD DOWN-HOLE MOTOR 0.50 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1704m 170	26.01.97	11	PD	TRIP-IN	1.50	1468	RIH with BHA. Pick up 6 x HWDP.
27.01.97 11 PD REAMWASH DOWN-HOLE MOTOR 2.50 1468 RIIH to 1454m. 27.01.97 11 PD DOWN-HOLE MOTOR 2.50 1490 Drill 8 1/2" hole with motor 1468m to 1490m 1520m 1520 1700 1700 Drill 8 1/2" hole with motor 1400m to 1520m 1520 Rig service. 1524	27.01.97	11	PD	TRIP-IN	0.50		
27.01.97 11 PD DOWN-HOLE MOTOR 2.50 1490 Drill 8 1/2" hole with motor 1488m to 1490m 1500 Drill 8 1/2" hole with motor 1490m to 1500m 1500 Drill 8 1/2" hole with motor 1590m to 1524m 1500 Drill 8 1/2" hole with motor 1590m to 1524m 1500 Drill 8 1/2" hole with motor 1500m to 1524m 1500 Drill 8 1/2" hole with motor 1500m to 1524m 1500 Drill 8 1/2" hole with motor 1500m to 1524m 1500 Drill 8 1/2" hole with motor 1524m to 1677m 1500 DoWN-HOLE MOTOR 3.00 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1500m to 1704 Drill 8 1/2" hole with motor 1500m to 1524m Drill 8 1/2" hole with motor 1524m to 1677m 1704 Drill 8 1/2" hole with motor 1704m to 1709m Drill 8 1/2" hole with motor 1704m to 1709m Drill 8 1/2" hole with motor 1704m to 1709m Drill 8 1/2" hole with motor 1704m to 1709m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1709m to 1740m Drill 8 1/2" hole with motor 1740m to 1780m Drill 8 1/2" hole with motor 1740m to 1780m Drill 8 1/2" hole with motor 1740m to 1780m Drill 8 1/2" hole with motor 1740m to 1780m Drill 8 1/2" hole with motor 1740m to 1780m Drill 8 1/2" hole with motor 1780m to 1858m Drill 8 1/2" hole with motor 1858m Drill 8 1/2" hole with motor 1858m Drill 8 1/2" hole with motor 1951m Drill 8 1/2" hole with moto	27.01.97	11	PD	TRIP-IN	2.50		I .
27.01.97 11 PD DOWN-HOLE MOTOR 1.00 1524 Drill 8 1/2" hole with motor 1490m to 1500m to 1524m 27.01.97 11 PD DOWN-HOLE MOTOR 3.00 1524 Rig service. 0.50 Drill 8 1/2" hole with motor 1524m to 1524m to 1524m 27.01.97 11 PD DOWN-HOLE MOTOR 3.00 1704 Drill 8 1/2" hole with motor 1524m to 1677m 28.01.97 11 PD CIRCULATE 0.50 1704 Circulate bottoms up. PO UNIPER TRIP 0.50 1704 Circulate bottoms up. POOM Hole MOTOR 1.00 POOM Hole M	27.01.97	11	PD	REAMWASH	0.50	1468	Wash and ream 1454m to 1468m. 3m of fill.
27.01.97	27.01.97	11	PD	DOWN-HOLE MOTOR	2.50	1490	Drill 8 1/2" hole with motor 1468m to 1490m
27.01.97	27.01.97	11	PD	DOWN-HOLE MOTOR	1.00	1500	Drill 8 1/2" hole with motor 1490m to 1500m
27.01.97 11 PD DOWN-HOLE MOTOR 13.50 1677 Drill 8 1/2" hole with motor 1524m to 1677m to 1704m 1704 Drill 8 1/2" hole with motor 1524m to 1677m to 1704m 1704 Drill 8 1/2" hole with motor 1677m to 1704m 1704 Drill 8 1/2" hole with motor 1677m to 1704m 1704 Drill 8 1/2" hole with motor 1677m to 1704m 1704 Drill 8 1/2" hole with motor 1677m to 1704m 1704 Drill 8 1/2" hole with motor 1704m 1709m 1704 Drill 8 1/2" hole with motor 1704m 1709m 1704 Drill 8 1/2" hole with motor 1704m 1709m 1709m Drill 8 1/2" hole with motor 1709m 1709m 1709m Drill 8 1/2" hole with motor 1709m 170	27.01.97	11	PD	DOWN-HOLE MOTOR	3.00	1524	Drill 8 1/2" hole with motor 1500m to 1524m
28.01.97 11 PD DOWN-HOLE MOTOR 0.50 1704 Drill 8 1/2" hole with motor 1677m to 1704m 1704m Drill 8 1/2" hole with motor 1677m to 1704m 1704m Drill 8 1/2" hole with motor 1677m to 1704m 1704m Drill 8 1/2" hole with motor 1677m to 1704m 1704m Drill 8 1/2" hole with motor 1677m to 1704m 1704m Drill 8 1/2" hole with motor 1677m to 1704m 1704m Drill 8 1/2" hole with motor 1004m Dr	27.01.97	11	PD	RIG SERVICE	0.50	1524	Rig service.
28.01.97	27.01.97	11	PD	DOWN-HOLE MOTOR	13.50	1677	Drill 8 1/2" hole with motor 1524m to 1677m
28.01.97 11	28.01.97	11	PD	DOWN-HOLE MOTOR	3.00	1704	Drill 8 1/2" hole with motor 1677m to 1704m
1	28.01.97	11	PD	CIRCULATE	0.50	1704	Circulate bottoms up.
28.01.97	28.01.97	11	PD	WIPER TRIP	0.50	1704	tight spots at 1551-1545(20K), 1523- 1520(20K), 1494-1487(20K), 1438-1429(25K),
28.01.97	28 01 97	11	PD	WIPER TRIP	1.00	1704	
28.01.97	1	•				•	•
28.01.97		1			1	I	•
28.01.97	ì	1	: [•			
28.01.97 I1 PD SURVEY 0.50 1780 Circulate and survey. 2.75deg at 1759m. 28.01.97 I1 PD DOWN-HOLE MOTOR 8.50 1858 Drill 8 1/2" hole with motor 1780m to 1858m 29.01.97 I1 PD CIRCULATE 0.50 1904 Drill 8 1/2" hole with motor 1858m to 1904m 29.01.97 I1 PD WIPER TRIP 1.00 1904 Make 10 stand wiper trip - no drag. 29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD DOWN-HOLE MOTOR 1.00 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 POOH. Tight from 1421m to 1369m (15-20K). 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 I1 PD TRIP-IN 1.00 <td></td> <td>11</td> <td></td> <td>DOWN-HOLE MOTOR</td> <td></td> <td></td> <td>Blew pop-off valves on pumps. Drill with 360gpm 1740m to 1742m.</td>		11		DOWN-HOLE MOTOR			Blew pop-off valves on pumps. Drill with 360gpm 1740m to 1742m.
28.01.97 I1 PD DOWN-HOLE MOTOR 8.50 1858 Drill 8 1/2" hole with motor 1780m to 1858m 29.01.97 I1 PD DOWN-HOLE MOTOR 6.00 1904 Drill 8 1/2" hole with motor 1858m to 1904m 29.01.97 I1 PD CIRCULATE 0.50 1904 Circulate bottoms up. 29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD CIRCULATE 1.00 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 Gauge R/Reamers 1/16" under gauge. 29.01.97 I1 PD TRIP-IN 3.50 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD TRIP-IN 1.00 1979 Dril		11		DOWN-HOLE MOTOR			•
29.01.97 I1 PD DOWN-HOLE MOTOR 6.00 1904 Drill 8 1/2" hole with motor 1858m to 1904m 29.01.97 I1 PD CIRCULATE 0.50 1904 Circulate bottoms up. 29.01.97 I1 PD WIPER TRIP 1.00 1904 Make 10 stand wiper trip - no drag. 29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD CIRCULATE 1.00 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 Gauge R/Reamers 1/16" under gauge. 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 I1 PD REAM/WASH 1.00 1979 Drill 8 1/2" hole with motor 1951m to 1979m 30.01.97 I1 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/					1		
29.01.97 I1 PD CIRCULATE 0.50 1904 Circulate bottoms up. 29.01.97 I1 PD WIPER TRIP 1.00 1904 Make 10 stand wiper trip - no drag. 29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD TRIP-OUT 4.50 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 POOH. Tight from 1421m to 1369m (15-20K). 29.01.97 I1 PD TRIP-IN 3.50 1951 Gauge R/Reamers 1/16" under gauge. Change bit. Test motor. 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 I1 PD REAMWASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD DOWN-HOLE MOTOR 5.00 1979 Drill 8 1/2" hole with motor 1979m to 2101m 30.01.97 I1 TD RIG REPAIR 1.00 2101		:					
29.01.97 I1 PD WIPER TRIP 1.00 1904 Make 10 stand wiper trip - no drag. 29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD TRIP-OUT 4.50 1951 Circulate bottoms up. 29.01.97 I1 PD HANDLE TOOLS 1951 POOH. Tight from 1421m to 1369m (15-20K). 29.01.97 I1 PD TRIP-IN 3.50 1951 Gauge R/Reamers 1/16" under gauge. 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 I1 PD REAMWASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1979m to 2101m 30.01.97 I1 TD RIG REPAIR 1.00 2101 Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1		•			1		1
29.01.97 I1 PD DOWN-HOLE MOTOR 6.50 1951 Drill 8 1/2" hole with motor 1904m to 1951m 29.01.97 I1 PD CIRCULATE 1.00 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 POOH. Tight from 1421m to 1369m (15-20K). 29.01.97 I1 PD HANDLE TOOLS 1.00 1951 Gauge R/Reamers 1/16" under gauge. 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 I1 PD REAMWASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1979m to 2101m 30.01.97 I1 TD RIG REPAIR 1.00 2101 Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.		:			1		
29.01.97 I1 PD CIRCULATE 1.00 1951 Circulate bottoms up. 29.01.97 I1 PD TRIP-OUT 4.50 1951 Circulate bottoms up. 29.01.97 I1 PD HANDLE TOOLS 1.00 1951 Gauge R/Reamers 1/16" under gauge. Change bit. Test motor. 29.01.97 I1 PD TRIP-IN 3.50 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD DOWN-HOLE MOTOR 5.00 1979 Drill 8 1/2" hole with motor 1951m to 1979m 30.01.97 I1 TD RIG REPAIR 1.00 2101 Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.		· .		í	1		• • •
29.01.97 I1 PD TRIP-OUT 4.50 1951 POOH. Tight from 1421m to 1369m (15-20K). 29.01.97 I1 PD HANDLE TOOLS 1.00 1951 Gauge R/Reamers 1/16" under gauge. Change bit. Test motor. 29.01.97 I1 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 I1 PD REAMWASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 I1 PD DOWN-HOLE MOTOR 5.00 1979 Drill 8 1/2" hole with motor 1979m to 2101m 30.01.97 I1 TD RIG REPAIR 1.00 2101 Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.		:		i i	1	1	
29.01.97 II PD HANDLE TOOLS 1.00 1951 Gauge R/Reamers 1/16" under gauge. Change bit. Test motor. 29.01.97 II PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 II PD DOWN-HOLE MOTOR 5.00 1979 Drill 8 1/2" hole with motor 1951m to 1979m 0.01.97 II PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1979m to 2101m Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 II TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.		:		1			
Change bit. Test motor. 29.01.97 11 PD TRIP-IN 3.50 1951 RIH to 1919m - 20k drag at 1919m. 30.01.97 11 PD REAM/WASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 11 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1951m to 1979m Drill 8 1/2" hole with motor 1979m to 2101m Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 11 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.					1		
30.01.97 11 PD REAM/WASH 1.00 1951 Wash and ream 1919m to 1951m. 30.01.97 11 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1951m to 1979m 30.01.97 11 TD REAM/WASH 1.00 1979 Drill 8 1/2" hole with motor 1979m to 2101m Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 11 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.		į					Change bit. Test motor.
30.01.97 I1 PD DOWN-HOLE MOTOR 5.00 1979 Drill 8 1/2" hole with motor 1951m to 1979m 13.50 2101 Drill 8 1/2" hole with motor 1979m to 2101m Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.	1			ı	1		
30.01.97 I1 PD DOWN-HOLE MOTOR 13.50 2101 Drill 8 1/2" hole with motor 1979m to 2101m Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.	1			1			
30.01.97 I1 TD RIG REPAIR 1.00 2101 Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.		:				•	
into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight. 30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.	1	•	•	1	1		
30.01.97 I1 TD SLIP/CUT LINE 1.00 2101 Slip and cut drilling line.	30.01.97	11	TD	RIG REPAIR	1.00		into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and
	30 01 97	11	TD	SUP/CUT LINE	1.00	•	- 1
	1	:]	- 1		

WELL: Taralea #1 Drilling Co: O.D.E.

Rig:

30

Page Number: 5 of 7

,,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
DATE	PH	S CLS	OPERATION	HRS	DEPTH	DESCRIPTION
30.01.97	11	TD	TRIP-OUT	2.00	2101	POOH. Check drill string for bent pipe or swelled boxes.
31.01.97	11	TD	TRIP-OUT	2.00	2101	POOH. Check drill string for bent pipe or swelled boxes.
31.01.97	11	TD	TRIP-OUT	2.50	2101	POOH with BHA. Break and service all connections.
31.01.97	11	TD	HANDLE TOOLS	0.50	2101	Break out and lay down motor. Unable to rotate motor at surface.
31.01.97	11	TD	HANDLE TOOLS	0.50	2101	Pick up kelly and check rollers.
31.01.97	11	TD	HANDLE TOOLS	0.50		Make up new BHA. Pick up Monel DC and HTC ATMGT18OD bit.
31.01.97	111	TD	TRIP-IN	1.50	2101	RIH with BHA.
31.01.97	11	TD	HANDLE TOOLS	1.50		Break and service upper kelly connections.
31.01.97	11	TD	TRIP-IN	3.00		RIH to 2098m. Wash and ream 2098m to 2101m.
31.01.97	11	PD	DOWN-HOLE MOTOR	5.50	2126	Drill 8 1/2" hole 2101m to 2126m.
31.01.97	11	PD	SURVEY	0.50	2126	Drop survey. Pump slug.
31.01.97	11	PD	TRIP-OUT	3.50		POOH.
31.01.97	11	PD	HANDLE TOOLS	1.00	2126	Make up new BHA. Test motor.
31.01.97	11	PD	TRIP-IN	1.50	2126	RIH.
01.02.97	11	PD	TRIP-IN	2.50	2126	RIH.
01.02.97	11	TD	REAMWASH	1.00	2126	Wash and ream 2062m to 2126m.
01.02.97	11	PD	DOWN-HOLE MOTOR	2.50	2146	Drill 8 1/2" hole with motor 2126m to 2146m.
01.02.97	11	PD	DOWN-HOLE MOTOR	7.00	2206	Drill 8 1/2" hole with motor 2146m to 2206m.
01.02.97	11	PD	SURVEY	1.50	2206	Circulate. Run single shot survey on wireline - misrun. Rerun single shot survey - 6.5deg N26E.
01.02.97	11	PD	DOWN-HOLE MOTOR	9.50	2291	Drill 8 1/2" hole with motor 2206m to 2291m.
02.02.97	11	PD	DOWN-HOLE MOTOR	1.50	2311	Drill 8 1/2" hole with motor 2291m to 2311m.
02.02.97	11	PD	RIG SERVICE	0.50	2311	Rig service.
02.02.97	11	PD	DOWN-HOLE MOTOR	4.00	2349	Drill 8 1/2" hole with motor 2311m to 2349m.
02.02.97	11	PD	DOWN-HOLE MOTOR	2.00	2368	Drill 8 1/2" hole with motor 2349m to 2368m. 10-15k drag on connections.
02.02.97	11	PD	SURVEY	0.50	2368	Circulate and survey 6deg at 2346m.
02.02.97	11	PD	WIPER TRIP	1.50	2368	Make 10 stand wiper trip 10-15K drag.
02.02.97	11	PD	REAMWASH	0.50	2368	Wash and ream 2355m to 2368m.
02.02.97	11	PD	DOWN-HOLE MOTOR	13.50	2471	Drill 8 1/2" hole with motor 2368m to 2471m.
03.02.97	11	PD	DOWN-HOLE MOTOR	6.00		Drill 8 1/2" hole with motor 2471m to 2518m.
03.02.97	11	PD	DOWN-HOLE MOTOR	1.50	2529	Drill 8 1/2" hole with motor 2518m to 2529m.
03.02.97	11	PD	RIG SERVICE	0.50		Rig Service.
03.02.97	11	PD	DOWN-HOLE MOTOR	11.50	•	Drill 8 1/2" hole with motor 2529m to 2615m.
03.02.97	11	PD	CIRCULATE	1.00	I	Circulate bottoms up.
03.02.97	11	PD	TRIP-OUT	3.50	2615	Drop single shot survey. POOH.
04.02.97	11	PD	TRIP-OUT	1.00		POOH.
04.02.97	11	PD	HANDLE TOOLS	1.00	2615	Gauge reamers - 1/16" under. Change bit. Function test motor.
04.02.97	11	PD	TRIP-IN	4.00	2615	RIH.
04.02.97	11	PD	TRIP-IN	1.00	2615	RIH. Work through tight spot at 2543m.
04.02.97	11	PD	REAM/WASH	0.50	2615	Wash and ream 2593m to 2615m.
04.02.97	11	PD	DOWN-HOLE MOTOR	16.50		Drill 8 1/2" hole with motor 2615m to 2705m. lost 40 bbl @2675m.Avg 3bbl/hr 2615 to 2640
05.02.97	11	PD	DOWN-HOLE MOTOR	12.50		Drill 8 1/2" hole with motor 2705m to 2740m.

WELL: Taralea #1 Drilling Co: O.D.E.

Rig:

30

Page Number: 6 of 7

DATE	DH	CLS	OPERATION	HRS	DEPTH	DESCRIPTION
05.02.97		TD	RIG REPAIR	1.00	*****	
						Lost 1200 psi pump pressure. Check surface equipment, rectify fault in SCR unit.
05.02.97	1	PD	DOWN-HOLE MOTOR	4.00	2800	Drill 8 1/2" hole with motor 2779m to 2800m.
05.02.97	1	PD	CIRCULATE	1.00	2800	Circulate hole clean, flow check well
05.02.97	11	PD	WIPER TRIP	1.50	2800	Conduct 10 stand wiper trip, 10k O/P
1						maximum. RIH to 2800m
05.02.97	11	PD	CIRCULATE	1.00		Circulate hole clean
05.02.97	11	PD	SURVEY	0.50		Drop single shot survey, flow check well
05.02.97	11	PD	TRIP-OUT	2.50		Pump slug, POH SLM
06.02.97	11	PD	TRIP-OUT	3.50		POH SLM
06.02.97	11	PE	HANDLE TOOLS	1.00	2800	Lay down monel, roller reamers, flush motor, recover survey - missrun
06.02.97	11	PE	LOGGING	1.00	2800	Clean floor, held safety meeting with BPB/VEL. Data.R/U to log
06.02.97	11	PE	LOGGING	6.50	2800	RIH with vel. data tool.Took check shot at 21 levels.R/D Data log.HUD 2798m
06.02.97	11	PE	LOGGING	6.50	2800	Prepare and rig up DDL-GR-SP-CAL-SONIC- MSFL.Run log nr 2 HUD 2797m RD nr 2 loggingtool
06.02.97	11	PE	LOGGING	5.00	2800	R/U and run log nr 3 Dipmeter.Hud 2797mBHT 117 Deg C. Dev. 9.0 Deg at 2785
06.02.97	11	TA	RIG REPAIR	0.50	2800	Changed out brake band on draw work - drillers side
07.02.97	11	PA	TRIP-IN	1.00	2800	RIH with OE drillpipe to 725m
07.02.97	11	PA	CEMENT CSG/TBG	1.00	2800	R/U surface equipment - Held pre job safety meeting
07.02.97	11	PA	CEMENT CSG/TBG	1.50	2800	Pump 5 bbl of DW -P/test lines to 1000 psi- set cmt plug no 1 F/ 725 to 665m with 74 sxs class G of 15.8 ppg.Displaced w/1.4 bbl dw and 28 bbl mud-p/b to 523m - circ.clean
07.02.97	11	PA	CEMENT CSG/TBG	1.50	2800	Set cmt plug no 2 with 72 sxs F/523 to 463 class G of 15.8 ppg.Lost .5 hr due to blocked bulk line.displaced and pulled 2 std circulating clean
07.02.97		PA	CIRCULATE	0.50	2800	Circulate clean after plug no 2
07.02.97	11	PA	LAY DOWN PIPE	7.50	2800	Lay down drillpipe- Break kelly - Lay down BHA/drill collar
07.02.97	11	PA	LAY DOWN PIPE	0.50	2800	RIH and tag toc plug at 468m. weight tested with 10,000 Lbs.
07.02.97	11	PA	CIRCULATE	0.50	2800	Circulate pipe clean
07.02.97	11	PA	LAY DOWN PIPE	3.50	2800	Continued laying down drill pipe
07.02.97	11	PA	SLIP/CUT LINE	1.00	2800	Slip and Cut drilling line
07.02.97	11	PA	LAY DOWN PIPE	2.00	2800	Cont. laying down drillpipe
07.02.97	11	PA	CIRCULATE	0.50		Displace to inhibited mud from 465m to surface
07.02.97	11	PA	LAY DOWN PIPE	0.50		Cont. laying down drillpipe
07.02.97			RIG DOWN	1.50	2800	Flush standpie,kelly,bop,choke mfd,mud pumps,poorboy and all associated equipment, Dump mud tanks , lay out mouse hole
08.02.97	l1	PA I	RIG DOWN	6.00	2800	Lay out kelly n/down and remove bop,clean mud tanks
08.02.97	I1	PA I	RIG DOWN	3.00	١	Recover well head- Set plug no 3 at surface with 5 sxs of clss G cement Weld on top plateand install well sign post.

TIME BREAKDOWN DATABASE - ACTIVITY REPORT

WELL: Taralea #1 Drilling Co: O.D.E.

Rig:

30

Page Number: 7 of 7

8/A1F	938	(V.C.)	(9):13:2(9)(9)			DECORPTION
08.02.97	11	PA	RIG DOWN	0.00		RELEASE RIG AT 0900 HOURS ON THE 8TH of FEBRUARY 1997
	l	!		L	L	

Copyright IDS Pty Ltd Feb, 1998

MULTI-WELL ANALYSIS

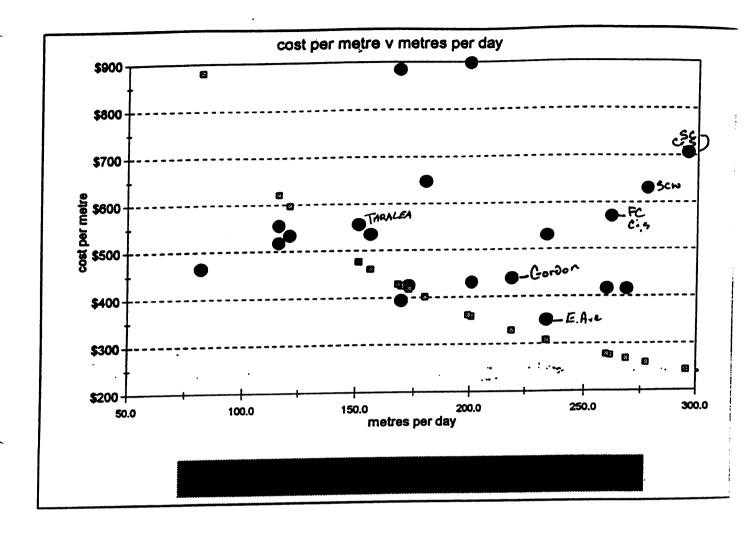
Multi well cost analysis Cost per metre / metres per day

Comparative cost per hour value: \$3000.00

				HEROTES,		
			15.00	470.00	\$417.74	
BLACKWOOD #1	\$1,130,000	2,650.00	15.38	1	·	\$426.42
BOGGY CREEK #1	\$1,230,000	1,900.00	10.58		\$401.05	\$647.37
DIGBY #1	\$1,082,000	2,088.00	18.02	115.87		\$518.20
DUNBAR #1	\$933,000	1,758.00	7.52	233.75	\$308.02	\$ 530.72
DUNBAR EAST #1	\$1,260,000	2,361.00	19.56	120.69	\$596.57	\$ 533.67
EAST AVENUE # 1	\$1,015,779	2,900.00	12.40	233.95	\$307.76	\$350.27
Fenton Creek #1	\$1,050,000	1,840.00	7.04	261.30	\$275.54	\$570.65
Gordon #1	\$1,100,000	2,505.00	11.44	219.02	\$328.74	\$439.12
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
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	\$1,200,000	1,700.00	5.75	295.65	\$243.53	\$705.88
SKULL CREEK WEST # 1	\$1,261,075	2,000.00	7.21	277.46	\$259.50	\$630.54
Skull Creek North #1	\$969,311	1,810.00	11.60	155.98	\$461.60	\$535.53
	\$1,557,118	2,800.00	18.56	150.84	\$477.32	\$556.11
Taralea #1	\$877,000	2,030.00	10.13	200.49	\$359.11	\$432.02
VAUGHAN #1	\$1,568,000	1,745.00	8.77	198.95	\$361.89	\$898.57
WALLABY CREEK #1	\$1,500,000	1,743.00		,00.00	*******	

Multi well cost analysis Cost per metre / metres per day

Comparative cost per hour value: \$3000.00



NPT ANALYSIS

TARALEA - 1 WELL:

Problem Time Summary

A total of 71.0 hours of problem time occurred on Taralea - 1 representing 13.87% of total time on the well. The problem time primarily occurred due to communication with the mousehole, downhole tool failure, tight hole conditions and Drawwork's brake failure.

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

4	7	•	•	
1.	11	nn	pin	ıσ
			~	

- Several unscheduled trips were required. An 8-1/2" pilot hole was required to penetrate surface basalt. (2-1/2 hrs) A downhole motor failed and was pulled with tight hole experienced during the trip in. (7 hrs) The Kelly was dropped into the bushings and the drillstring pulled to check for bent pipe and swelled boxes. (14.0 hrs)

23.5 hrs Lost.

2. Tool Handling

- Re-install rathole and mousehole after washout from surface hole. Drilled out cement 12m to 27m. Layed out two downhole motors, one after failed attempt to set angle to 0 deg and the other motor failed downhole.. Also layed down undergauge reamers and stabilisers. Serviced upper Kelly connections. 17.0 hrs Lost.

3. Wash/Ream

- Reamed tight surface hole to 36 mRT and opened the 8-1/2" pilot hole to 12-1/4" from 36m to 48 mRT. Wash and reaming was required while tripping through the Heathfield Sandstone Formation.

12.0 hrs Lost.

4. Down Hole Motor

- Time required to drill the 8-1/2" pilot hole using a down hole motor. 3.5 hrs Lost.

5. Wait on Cement - Required for the remedial cement job on the washed out surface hole at 27m RT. 3.5 hrs Lost.

6. Circulation

- Failed attempt to prevent surface hole washout using Hi-Vis mud and LCM. Also, cleaned out mud rings in the flowline caused by soft clay cuttings from the Gellibrand Marl Formation. 3.0 hrs Lost.

7. Rig Repairs

- Drawworks brake failure, resulted in dropped Kelly. 2.5 hrs Lost.

TIME BREAKDOWN DATABASE Trouble Time Analysis

Well Name : Taralea #1
Drilling Co : O.D.E.
Rig : 30

Spud Date : 18.01.97

Total Time on Well512.00Total Trouble Time71.00% Trouble Time13.87

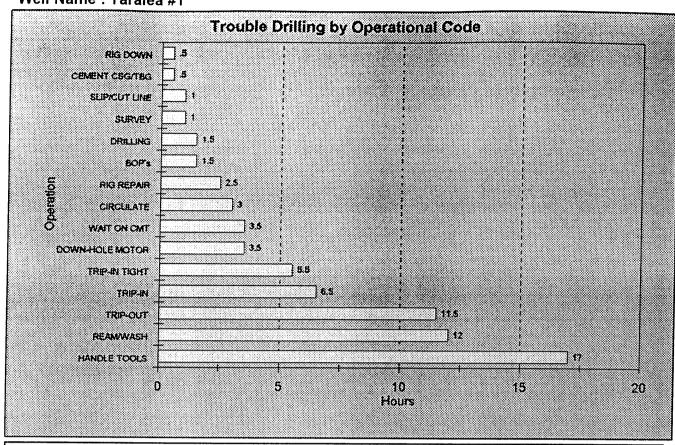
Total NPT Hours per Phase

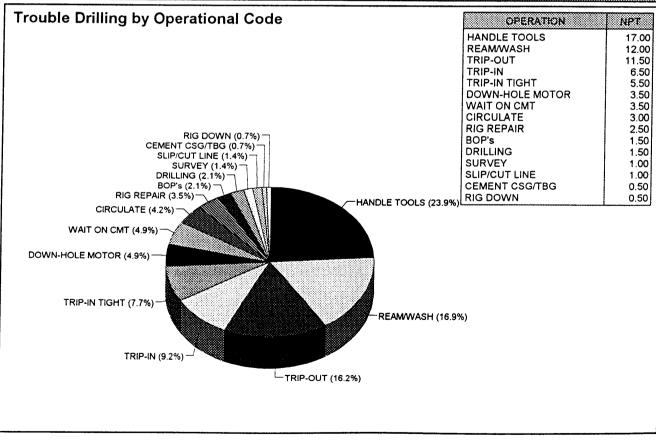
PHASE	NPT HOURS
11	36.00
S1	35.00

NPT On Well

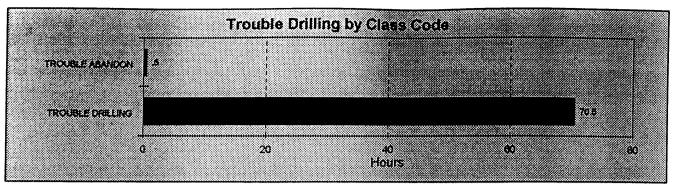
	PHASE	OPERATION	NPT	DEPTH	DESCRIPTION OF TROUBLE TIME
			Hts		
	S1	CIRCULATE	1.00		Spot hivis mud and LCM. Hole still washing out.
	S1	CIRCULATE	1.00	27.0	Pull mousehole. Attempt to plug communication with sacks - no success.
	S1	TRIP-OUT	0.50		POOH and stand back DC's.
-	S1	HANDLE TOOLS	0.50		Clean out mousehole.
	S1	HANDLE TOOLS	1.50	27.0	Lay out mousehole. RIH w/- 2jts DP to 18m. Rig up Halliburton.
ı	S1	CEMENT CSG/TBG	0.50	27.0	Pump 5BBL water. Mix and pump 44sx "G" cement at 15.8ppg (8BBL slurry).
	S1	RIG DOWN	0.50	27.0	Displace with 0.5BBL water and flush lines. CIP 0755hrs. Rig down Halliburton. POOH w/- drill pipe. Pull kelly and rathole and hang in
I					derrick.
- 1	S1	WAIT ON CMT	3.50		Wait on cement.
	S1 S1	HANDLE TOOLS	3.50		Re-install rathole. Clean out mousehole and re-install sock.
-	S1	HANDLE TOOLS HANDLE TOOLS	1.50		RIH and tag cement at 12.1m. Break out 8" DC and lay down same.
	S1	TRIP-IN	1.00 0.50		Drill cement 12m to 27m.
	S1	TRIP-OUT	0.50		POOH to change bit. RIH w/- insert bit.
	S1	HANDLE TOOLS	1.00		POOH. Stand back 8" DC's.
	S1	HANDLE TOOLS	1.00		Pick up 6 1/2" downhole motor. Unable to set angle to 0deg. Pick up 2nd downhole motor. Make up 8 1/2" BHA
	S1	DOWN-HOLE MOTOR	3.50		Drill 8 1/2" hole 36m to 48m. Broke out of basalt at 40m
	S1	TRIP-OUT	1.00		POOH. Lay down motor.
	S1	HANDLE TOOLS	1.00		Make up 12 1/4" BHA. Unable to go below 13m. Lay down 2 x 8" DC's.
	S1	REAM/WASH	3.00		Ream 12 1/4" hole to 36m
	S1	REAM/WASH	3.50		Open 8 1/2" pilot hole to 12 1/4" 36m to 39m
1	S1	REAM/WASH	2.00		Open hole to 12 1/4" 39m to 44m
	S1	REAM/WASH	0.50		Open hole to 12 1/4" 44m to 48m
	S1	CIRCULATE	0.50		Clean out mud rings in flow line.
ı	S1	CIRCULATE	0.50		Clean out mud rings in flow line.
	S1	BOP's	1.50		Rig up to test BOP's. Change rubber on cup tester.
-	11	HANDLE TOOLS	2.00		Lay out motor. Pick up stabilizers to replace undergauge reamers. Make up new BHA.
- [1	TRIP-IN	0.50	1,462.0	
	1	TRIP-IN	1.00		Continue RIH to shoe.
- 17	1	TRIP-IN TIGHT	2.50		RIH to 886m
- 1	1	REAM/WASH	0.50		Fill pipe and break circulation. Wash and ream 886m to 917m.
- 1	1	TRIP-IN TIGHT	1.50	1.462.0	RIH to 1161m
	1	REAM/WASH	0.50		Ream 1161m to 1183m
	1	TRIP-IN TIGHT	1.50	1,462.0	RIH to 1430m
	1	REAM/WASH	1.00	1,462.0	Wash and ream 1423m to 1462m
	1	DRILLING	1.50	1,468.0	Drill 8 1/2" hole 1462m to 1468m. ROP dropped to zero.
- 1	1	SURVEY	0.50	1,468.0	Circulate. Drop survey.
- 1	1	TRIP-OUT	3.00	1,468.0	POOH. Up to 20K drag at 1388m, 1351m and 1105m.
1	1	HANDLE TOOLS	1.00		Lay down stabilizers. Top stabilizer 1/16" under gauge, NB stabilizer and Reamer in gauge. Recover survey - 2deg. Lay out short DC.
ŀ	1	RIG REPAIR	1.00	2,101.0	Brakes failed on connection. Kelly dropped into bushings and hook unlatched. Latch kelly and pick up string weight with zero drag and full weight.
- 1	1	SLIP/CUT LINE	1.00		Slip and cut drilling line.
- [1	1	SURVEY	0.50	2,101.0	Drop survey. Pump slug.
- 1	1	TRIP-OUT	2.00	2,101.0	POOH. Check drill string for bent pipe or swelled boxes.
1	1	TRIP-OUT	2.00	2,101.0	POOH. Check drill string for bent pipe or swelled boxes.
1	ı	TRIP-OUT	2.50	2,101.0	POOH with BHA. Break and service all connections.
11	ı	HANDLE TOOLS	0.50	2,101.0	Break out and lay down motor. Unable to rotate motor at surface.
11		HANDLE TOOLS	0.50	2,101.0	Pick up kelly and check rollers.
		HANDLE TOOLS	0.50	2,101.0	Make up new BHA. Pick up Monel DC and HTC ATMGT18OD bit.
		TRIP-IN	1.50	2,101.0	RIH with BHA.
11		HANDLE TOOLS	1.50	2,101.0	Break and service upper kelly connections.
11		TRIP-IN	3.00	2,101.0	RIH to 2098m. Wash and ream 2098m to 2101m.

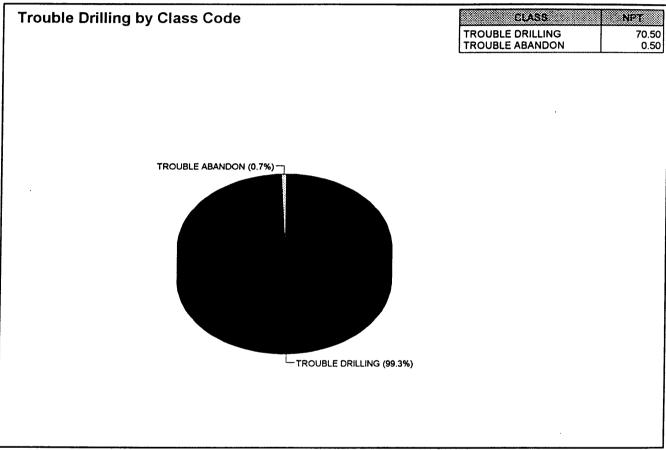
Well Name: Taralea #1





Well Name: Taralea #1





Well Name : Taralea #1

PHASE	OPERATION	NP7 HTB	рертн	DESCRIPTION OF TROUBLE TIME
11	REAMWASH	1.00		Wash and ream 2062m to 2126m.
11	RIG REPAIR	1.00		Lost 1200 psi pump pressure. Check surface equipment, rectify fault in SCR unit.
11	RIG REPAIR	0.50	2,800.0	Changed out brake band on draw work - drillers side

Well Name: Taralea #1

Trouble During Formation Evaluation - Total Time (hrs): 0.00 Copyright IDS, Dec 1997

DRILLING DATA

CASING & CEMENT



Cultus

CASING TALLY

Casing Size: Total Depth:

9 5/8 in.

Total Casing Tally:

mtr RT (driller) 495.00

Shoe off bottom: Stick up: 493.62 mtr 2.23 mtr

0.85 mtr 4 99

BOW SPRING CENTRALIZER

RT to Brad		4.99	mtr			1		DED-: :	1000	1 51105	
JOINT	LENGTH	DEPTH	JOINT	LENGTH	DEPTH	JOINT	LENGTH	DEPTH	JOINT	LENGTH	DEPTH
Shoe	0.52	492.77	41	11.85	17.44						
1	11.97	492.25	Land Jt	6.44	5.59						
Collar	0.38	480.28				1					
2	11.95	479.90									
3	11.92	467.95									
4	11.97	456.03									
5	11.90	444.06									
6	12.03	432.16	1			ŀ					
7	12.01	420.13			•						
8	11.97	408.12									
9	12.00	396.15									
10	12.06	384.15									
11	12.02	372.09				Note: Les	e out Joint	n #20 #4	 #AA #AE		
12	12.00	360.07				NOTE: LEAV	e out Joint	3 #45, #46 	, 444 , #45		
13	12.02	348.07									
14	11.97	336.05									
15	12.10	324.08									
16	11.97	311.98				!					
17	12.08	300.01				lointo #1 to	#19 are 47	nnf remai	nder are 41	8 5nnf	
18	12.10	287.93	l			3011115 #1 10) #13 a16 41	ppi, ieiliai İ	iluci ale 4	o.oppi	
19	11.97	275.83									
23	11.73	263.86									
22	11.84	252.13 240.29									
21	11.81										
20	11.70	228.48 216.78									
27	11.86 11.70	204.92									
26 25	11.75	193.22									
24	11.80	181.37	l								
31	11.77	169.57	1			=					
30	10.77	157.80	l								
28	11.72	147.03									
35	11.86	135.31									
34	11.84	123.45									
33	11.85	111.61						i			
32	11.67	99.76						ļ			
39	11.62	88.09									
38	11.70	76.47									
37	11.86	64.77									
36	11.85	52.91									
43	11.85	41.06						Ì			
43	11.77	29.21]			
<u> </u>	11.77	23.21	<u> </u>					1			

TAL_TAR1.XLS

27/08/98

Cultus Group

CEMENTING REPORT

Rig Name:

Taralea #1

ODE Rig #30

Engineer:

Date: 22-Jan-97

Casing Size: 9 5/8" Casing MD/TVD: 492.77

Alex Bradley

Hole Geometry

Gas Reading **Mud Properties**

Hole Size : Hole MD:

12 1/4" 495m

Mud Wt: 8.9 Vis: 31

Max Gas: Bttms Up:

Hole TVD: Hole Angle: 495m 0.25deg PV: 3 YP: 3 WL: 15 Final BG:

Last Csg Size: Last Csg MD : Last Csg TVD : 16" 12m 12m

BHCT:

BHST:

Casing Summary

Pascalition	Wi Alexand	Çie (+(:	Chapters	देशकु(कि	भित्रमध्य वाहरि
		N80	Butt	0.52	492.25
Float Shoe	47		<u> </u>		
1 x Joint	47	N80	Butt	11.97	480.28
Float Collar	47	N80	Butt	0.38	479.90
18 x joints	47	N80	Butt	216.04	263.86
22 x joints	43.5	N80	Butt	258.27	5.59
					·

Centralizers

र्वित्वस्तित्तिः		Elektrilis'	ર્જાભાઈ ચિક્ષુકાલાન
Davis-Lynch	Spring-Bow	4	490, 477, 456, 444

Lead Cement Slurry Details

Melejiedere	Y(0) (0) 0)	Minuma (00)	25 H	ই প্রা রি ধন্ত	Avillances.
12.5	107.8	83.5	287	2.11	3% PHG

Tail Cement Slurry Details

Werelt (1929)	पदा क्रिया	विश्वकान विभिन्न	ু ুর্বিজ্ঞানর	ङ् श्लाहरू ।	อะเหมีที่ที่สะ
15.8	25.4	15	124	1.15	1% CaCl2

Top Up Cement Slurry Details

प्रकारित (वस्त	(6) (-10)	Steerage (block)	ં ઉત્સાદ	ङ्क्ष्मा । इ.स.च्या	ેલ્લામિલ્લા <u>ક</u>

Operation Description

	-flamat titara	1565-1510-141	1 500	Salt .	dispersion de l'éconie
Volume (bbl)	150	20	110	25	112
Time (min)	15	7	17	7	16

Remarks

Job Evaluation

Reciprocate: No Full Returns : Yes Cmt to Surface : Yes - 2bbi

Bump Plug: Yes - 900psi (final circulating pressure 400psi)

Pressure Test: Yes - 3000psi for 10mins

ECP: CIP 1620hrs

27/08/98 CMT9_TA1.XLS

Well Name:		Tarale	a #1						Date:	24/01	/97	
lole Size:		8.5							Rig:	ODE		
VD, m:		498				•			Pumps:	† 		
asing Size):	9 5/8"							Circ. Rate:	 		
asing Dep		492.8				•	•	-	Mud Wt:	8.5		
Raw		102.0							1	10.0		
Volume	Pressure	1										
gal.	psi.	1 1				Form	ation l	ntegri	ty Test			
0	0]							•			
0.1	150]	600									
0.2	280	1	000									
0.3	400	1										
0.4	530	 			1		İ					
me (mins)	440	{			Ĭ						İ	
1 2	410	1	500	T								
3	390	1										
4	375	1										
5	370											
		1	400	├	+	•						
						•						
		_										
		8										
		Pressure (psi)	300									
		3		•						-		
					ļ							
			200 -		ļ							
-												
				*								
			100 -									
			100									
							İ					
							ŀ					
			0 1		+	10	15					
		İ	C	,	5	10		20	25	30	35	4
							Vol	ume Pun	nped			
								(gal)				
							♦ psi.					
		L										
omments:												

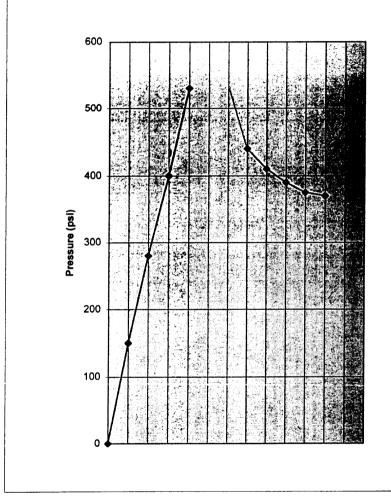


Formation Integrity Test

Well Name:	Taralea #1	Date:	24/01/97
Hole Size:	8 1/2"	Rig:	ODE #30
TVD, m:	498m	Pumps:	
Casing Size:	9 5/8"	Circ. Rate:	
Casing Depth:	492.8m	Mud Wt:	8.5

Casing Depth	•
Raw	Data
Volume	Pressure
bbl	psi.
0	0
0.1	150
0.2	280
0.3	400
0.4	530
Time (mins)	
1	440
2	410
3	390
4	375
5	370

Formation Integrity Test



ell Name:	TARALEM #1	Date:	24-1-97
ole Size:	81/2"	Rig:	000 43
/D, m:	498 m	Pumps:	
asing Size:	95/8.	Circ. Rate:	
ising Depth:	492.8 m	Mud Wt:	8.5
Raw Data			
Volume Pressure			
gat 86c psi.	Forma	ntion Integrity Test	
0 0		• •	
0./ 150	1 ~~~~	•	
0.2 280			
0.3 400			!
0.4 230	0.9		
TNAE (MMS)			
1 440	0.8		
2 410			"
3 390		i	!
4 375	0.7		
5 370			·
	0.6		
	i		:
	0.5	\$	
	5 0.5	/	
	g /	X	
	0.4		
			manufacture st.
	0.3		1
	0.3		
- 			
	0.2		
			:
	0.1		

		!	
	0 \$	<u> </u>	
		0.4 0.6	0.8 1
		· Volume Pumped	
		(gai)	
		♦ psi.	

nents: No LEAK	OFF OBSERVED WHILE	F PRESSURING	UP TO COM
	OFF TO 370 PSI =		. , , , ====;

BIT & HYDRAULIC RECORDS

											ã	Dia Rit Decord	Park.													
BIT RECORD	CORE	6					<u> </u>	_													-	-	L	L		L
Company:		Cuttus Pe	Cultus Petroleum NL															-		T	-	-	:			
≡		Taralea #1	-																		+	+	<u>.</u>	-		 -
		4					Н				!								-		-	: -	<u>.</u>	!		
Run #	Size	Make	Type	Serial	IADC		Jets	2	Depth Out	# Meterage	L	Rotating	ROP	WOB	RPM	RPM Pressure	FIGW	Date	3		Ž	ADC DULL BIT GRADING	Leit	RADI	2	
				Number			i				E S	Hours									!	!	i i)	
		- 1			Bit Code	1	2	3 4	ğ	ε	(hours)	(hours)	Ę.	KB)		(pisq)	(man)	_	9	-	6		60	U	0	α
=======================================	12 1/4"	* REED HP11		D74265	116	18	18	18	ğ	22	17.5		1.3	5/10	8	8	╁	18/01/97	20/01/97	-	-	╆	╀	╁	_	L
2	12 1/4"	SMITH F2	F2	LG4836	517	18	16	16	ဗ္တ	7	4		0.5	5/10	2	8	+-	20/01/97	20/01/97	0	0	+	╀	<u> </u> -	Ş	-
33RR	3/3RR 8 1/2"	SMITH MF15	MF15	LC2089	447	12	12	12	84	12	3.5		3.4	5/10	190	200	250	20/01/97	20/01/97	7	2	Z S	¥	-	2	-
4/1RR	1/1RR 12 1/4"	- 1	<u> </u>	DJ4265	116	6	9	18	471	435	24		18.1	12/20	110	1250	670	20/01/97	21/01/97	-	8	+	\perp	-	S	-
SZRR	5/2RR 12 1/4"	SMITH F2	F2	LG4836	517	9	16	16	495	24	က		8.0	12/20	5 8	1650	670	21/01/97	21/01/97	-	-	+-	A	<u> </u> -	2	-
3		_	¥	D4141	417	12	2	12	1462	296	42.5		22.8	20/25	1 8	1950	8	23/01/97	25/01/97	80	8	ـ	Z	7	5	A
7/5RR		_	SMITH SDGH	000 000 000 000 000 000 000 000 000 00	135	138	13e 13e	16	1468	မွ	1.5		4.0	25/30	8	1050	410	26/01/97	26/01/97	7	3	BU	A	-	9	A.
8	8 1/2"	_ !	SMITH MF05C	LF3389	427	136	13e 13e 16	16	1951	483	53.5		9.0	30	210	1820	\$	27/01/97	29/01/97	2	4	F	╀	-	180	Ĩ
ઢ	+	"	MF150D	LG1850	447	- 4 e	146 146 146	146	2101	55	18.5		8.1	35	200	1650	370	29/01/97	30/01/97	7	2	+-	Z	1	12	
\$	8 1/2			101CF	447	13	13 13	13	2126		5.5		4.5	35	5	1580	417	31/01/97	31/01/97	-	2	+-	-	<u> </u> -	ប	₩ ¥
11/8RR		-	ATMGT180D L01CF	1915F	47	=	4 4 4	7	2615		28		8.3	35/37	225	1900	370	31/01/97	3/02/97	4	9	BT /	A	-	Ä	¥
12/9	8 1/2		SMITH MF15	LF0271	‡	-	14e 14e 16	9	2800 -	185	33		5.6	35	235	1950	907	3/02/97	6/02/97	64	~	╁	ı	-	٤	۴

BOTTOM HOLE ASSEMBLIES

Bottom Hole Assembly Summary

) **TARALEA - 1**

_	_			-,											
7	0	Motor	81%"	MF05C	F2000S PIN	Crossover	Dollor Domor	Notice realities	6½" DC	Roller Reamer	15 x 61/2" DC	Drilling Jars	2 x 61/2" DC	10 x 41/2" HWDP	
4	J. Meter	IOIOIAI		SDGH	F2000S PDM	crossover	Roller Reamer	TOTICI TACATIICI	6½" DC	Roller Reamer	15 x 61/2" DC	Drilling Jars	2 x 6½" DC	10 x 41/2" HWDP	
P	Dachad	1 ached	81/2"	EHP41HLK	N/B Roller	Reamer	61%" nony DC	or Four To	Roller Reamer	6½" DC	Roller Reamer	15 x 61/2" DC	Drilling Jars	2 x 6½" DC	4 x 41/2" HWDP
38	Stabilised	positionic	121/7"	HP-11	NB Stabiliser	8" DC	121/2" Stabiliser		S, DC	121/7" Stabiliser	crossover	9 x 61/2, DC	Drilling Jars	2 x 61/2" DC	4 x 41/2" HWDP
3	Stabilised		121/4"	F-2	NB Stabiliser	8"DC	121/7" Stabiliser	04.80	7x 8 DC	crossover					
2	Pendulum		121/4"	HP-11	Bit Sub	3 x 8" DC	Crossover								
1	Stabilised	401/33	%71	HP-11	NB Stabiliser	%, DC	121/2" Stabiliser	74 "%	ے د	crossover					
Bit #	BHA Type	D:4 / II-1-0:	DIL/ HOIC SIZE					RHA	לווס	Components					

6	Motor	81/2"	ATMGT180D	FS000S PDM	crossover	Roller Reamer	crossover	Monel DC	crossover	Roller Reamer	16 x 61/2" DC	Drilling Jars	2 x 61/2" DC	10 x 41/2" HWDP
80	Packed	81/2"	ATMGT180D	NB Roller Reamer	crossover	Monel DC	crossover	Roller Reamer	6½" DC	Roller Reamer	15 x 61/2" DC	Drilling Jars	2 x 61/2" DC	10 x 41/2" HWDP
7	Motor	%8	MF050D	F2000S PDM	crossover	Roller Reamer	9%", DC	Roller Reamer	15 x 61/2" DC	Drilling Jars	2 x 61/2" DC	10 x 41/2" HWDP		
Bit#	BHA Type	Bit / Hole Size					BHA	Components						

DRILLING FLUID REPORTS

Independent
Drilling
Fluid
Services Pty. Ltd



DRILLING FLUID SUMMARY

FOR: CULTUS LTD

WELL: TARALEA #1

OTWAY BASIN

VICTORIA

Prepared by : Edd Perkins

Andre Skujins

Date: February 1997

Head Office: 248 Pirie Street

Adelaide S.A. 5000 Tel: (618) 8232 6771 Fax: (618) 8232 6764 Perth Office: 2/7 Pitt Way

Myaree W.A. 6154 Tel: (619) 330 8284 Fax: (619) 330 8283

P.O. Box 192, Glen Osmond S.A. 5064



CONTENTS

- 1. SUMMARY OF OPERATIONS
- 2. WELL ANALYSIS
- 3. MATERIAL COSTS AND CONSUMPTION ANALYSIS
- 4. MUD MATERIALS RECONCILIATION
- 5. FLUID PROPERTIES SUMMARY
- 6. MUD VOLUME RECONCILIATION
- 7. GRAPHICAL INTERPRETATIONS
- 8. BIT & HYDRAULICS
- 9. DAILY MUD REPORTS



WELL:

TARALEA # 1

RIG:

ODE #30

SPUD:

18th JANUARY 1997

1. SUMMARY OF OPERATIONS

HOLE SIZE:

12-1/4"

MUD TYPE:

SPUD MUD - WATER

INTERVAL:

0 m - 495 m

CASING

9-5/8" @ 492.8 m

Taralea # 1 was spudded by O.D. & E. Rig #30 on 18 January 1997. The water was predominantly from a nearby quarry and was tested to show the following results:

Chlorides

410 mg/l

Total Hardness

160 mg/l

Pf/Mf

0.25 /0.46

pН

7.5

Initially, 180 bbls of IdGel based spud mud was built, containing 20 ppb bentonite and caustic soda for a pH of approximately 9.0 - 9.5. Untreated water was added into the remainder of the tanks. Shale shakers were dressed with 3 x S84 and S100/2 x S84 screens.

The initial drilling was with water, but the high viscosity mud was introduced once the pump strokes were reduced, due to the hard and slow drilling basalt encountered. Although hole cleaning was a concern at the lower annular velocity and was therefore the reason for introducing higher viscosity mud, it was also feared that extended circulating in essentially the same area may lead to washing out of the formation directly above the basalt.

While drilling the basalt, mud began to communicate with the surface through the Mouse Hole. Although a Gel - lost circulation material pill was pumped to rectify the situation, a cement plug had to be spotted prior to drilling ahead.

At 36 m, the bit was pulled and an $8\frac{1}{2}$ " bit was run in and drilled a pilot hole to 48 m. The $12\frac{1}{2}$ " bit was run back in and reamed out the pilot hole and drilling continued.

The basalt took some time to drill through and porous limestone was underneath, so the high viscosity mud assisted to stem the minor losses.

As the Gellibrand Marl was encountered the viscosity was dropped and the pH was lowered to below 7.0 with SAPP and Alum and this was maintained throughout this section.



At 363 metres, a mud ring was encountered, although at that stage, the level of SAPP had been maintained at 2 pound per barrel. After it had been cleared, a potassium chloride (KCl) pill, which was suggested in the programme for mud ring problems, was pumped downhole. As this returned, with the accompanied high viscosity due to the flocculation the salt caused the spud mud, another mud ring had to be cleared away. Drilling then continued and revealed that the bottom of the Gellibrand Marl had been reached.

Due to the above mentioned problem, the viscosity was not raised in preparation for T.D, so leaving the pH at 6.0 - 6.5. There was a bit change at 471 metres and drilling resumed to 495 metres where a high viscosity sweep was used to ensure a clean hole. (The carbide showed a 12% excess hole gauge.)

The 9-5/8" casing was run to bottom with no problems and after circulating 150 barrels, the cement operation followed.

HOLE SIZE: 8½"

MUD TYPE: KCI PHPA POLYMER

INTERVAL: 495 m - 2800 m

CASING: P&A

The pits were dumped and cleaned, although 80 barrels of the previous section's mud was retained.

A new KCl PHPA fluid was built and extensively sheared so as to be sufficient for the shale shakers to cope at mud up. JK-261 was mixed at 0.7 ppb and KCl at 8 ppb or just over 2%.

An 8½" bit and BHA were run in the hole and the cement and shoe were drilled out with mud left from the previous interval, diluted back with water. Once on the shoe, the hole was displaced to the previously prepared KCl PHPA system.

Fine screens had been installed (S175) in two stages and these aided with keeping the mud weight down until the first trip 1462 m.

Fluid loss levels initially dropped simply with the addition of JK-261 (PHPA). However, as gel strengths rose and the fluid loss required further lowering to below 6 cc's, additions of Drispac were made. The low viscosity version (Drispac Plus Super Lo) also helped defloculate the mud, thereby reducing gel strengths (and the yield point.) The high viscosity version (Drispac Plus Regular) helped prop up the yield point. Additions of Flowzan (Xanthum Gum) were not required for further building yield point at this stage of the well. The yield point was built up and maintained in the region of 15 - 25 lb/100ft² for this interval.

From the top of the Eumeralla formation, down hole seepage losses were noted. The seepage peaked at 20 bbl/hour but by 928 m, the seepage had healed over. However, losses were again noted at 1197 m.



All volume at this time was built from recycled sump water, which had already been pretreated with Alum to drop out colloidal solids. Higher PHPA usage was noted while drilling through out the Eumeralla formation. KCl was also depleting, but with the upper limit on chlorides, the lowered potassium count had to be accepted.

During the period prior to the first trip at 1462 m, the chloride ratio to potassium ion content forced the input of KCl down (due to ceiling of the chloride content being 10000 mg/l) but due to this the trip out, proved difficult and so the parameters were changed to a minimum of greater than 2% potassium chloride (and maximum of 2.5%).

A further trip was initiated at 1468 metres. At this stage, the mud weight had crept up to 9.3 ppg, due to the pills used for both trips and the steady influx of solids as the trips dislodged filter cake also. With these two trips in close succession, the solids build-up in conjunction with low volume instigated a dilution and volume building exercise to control the mud weight. This not only had the desired effect of reducing the mud weight, but the lowered concentration of low gravity solids helped in reducing both gel strengths and the yield point.

Drilling continued, with the mud weight being maintained at around 9.1 ppg. The yield point was maintained around 20 - 22 lb/100ft² and the fluid loss around 6 cc's. A wiper trip was initiated at 1704 metres with no hole problems. At 1858 metres a further wiper trip was conducted and the bit was pulled out at 1951 metres (this bit was pulled out again at 2101 metres, due to a problem with the brakes, so the drill string needed to be checked).

It was requested at this time that the PHPA concentration be reduced to 1.0 ppb. However, as it was also aiding in maintaining the yield point as well as its encapsulating effect, a gradual drop in yield point was noted. Consequently, Flowzan (Xanthum Gum) was added to increase the yield point to above 15 lb/100ft². Drispac Regular was also helping in maintaining the yield point as well as keeping the fluid loss at 6 - 7 cc's. Decreasing the PHPA concentration proved to be uneconomical and the JK - 261 level was raised once again.

The bit was pulled out at 2126 metres with a wiper trip conducted at 2368 metres. All trips were essentially uneventful, although significant downhole losses were noted while running in the hole. For four following days, there was a trip a day and dilution premixes were the only way to minimise the weight increases.

A bit trip was initiated at 2615 metres. Drilling resumed, with slightly increased treatment rates required, due in part to the increasing temperature. To regain the desired yield point, higher additions of polymers were required and bentonite was also used. This caused an increase in the low gravity solids and incorporated with the tripping (and barytes used to trip with) the mud weight rose slowly with dilution premixes being used to slow the increase.



Down-hole losses were noticed and gel additions stemmed the losses for about three circulation's, but the polyacrylamide levels lowered the clay content and seepage recommenced. A polymer / polyacrylamide premix was tried, as was a high PHPA premix tried (a form of plastic coating) with the combination stopping the seepage for a period.

At 2674 metres, a possible fractured coal section was penetrated and 36 barrels were immediately lost - minor losses were noted after this time (from 1.0 to 1.5 barrels per hour).

As the T.D. approached, volume was built and properties were reinforced. The potassium ion and the polyacrylamide content were both increased. The sulphite level was boosted and biocide was introduced to ensure that there was a minimum degradation while logging.

Total depth of 2800 meters was reached. A wiper trip found the hole in good condition. No problems were noted while conducting the logging operation. Static down hole losses were 9.5 bbls while logging.

The Plug and Abandonment procedures took place on the 7th of February 1997.



2. WELL ANALYSIS

Taralea # 1 was drilled to a total depth of 2800 m for a mud cost \$55078.60 or \$19.76 per metre. A further \$2394.46 was spent during post logging operations.

121/4" Surface Hole

This section of hole was drilled for a mud cost of \$5464.91 or \$11.04 per metre. Despite considerable effort being put into preventing the formation of mud rings, these still caused some lost time. The second mud ring was probably caused by the anticipated remedial action of adding KCl. It was expected that the addition of KCl would prevent the marl cuttings from sticking together. This was, and still is, sound logic. However, KCl must be added to a basically circulating water system to prevent flocculation and a general thickening of mud. The flocculation the KCl caused had an identical effect to pumping a very high viscosity pill. All cuttings in the hole were brought up at the same time with the high viscosity mud and caused the second mud ring. Consequently, due to the high likelihood of causing flocculation and therefore high viscosity, this practice in the Gellibrand Marl is not recommended in the future unless the flocculating effects can be prevented by pumping a water spacer first.

The SAPP based mud proved to be reasonable and the conserving of this product (as the pH was low enough at 6.0 to 6.5) could well have been the cause of the first mud ring. The assumption was that the Gellibrand Marl was almost finished (which proved to be the case) and that to conserve the SAPP additions, would have been prudent. But in future, it is suggested that the pH is maintained at a maximum of 6.0 until the marl has been completely drilled through.

The 9-5/8" casing was run without any problems and this also suggests that the method adopted, was the right one.

8½" Production Hole

This section of hole was drilled for a mud cost of \$49613.69 or \$21.52 per metre, and was drilled essentially problem free. Minor tight hole on some trips was not cause for concern as the problem areas did not re-occur.

The assessment of the KCl/PHPA mud was that it performed best with over 1.0 ppb active polyacrylamide and 2.0 to 2.5% KCl. This was gleaned from using less KCl and finding that some problems occurred (especially during the wiper trips). With the higher levels being used, as was supported during the logging operations, no problems were encountered. Also, dropping the active PHPA concentration led to an increase in usage of polymers controlling the yield point and fluid loss.



One problem that will be on-going is the control of the mud weight. This is being assisted by the purchase of S210 Pyramid shale shaker screens (hopefully arrive prior to the next hole) but the amount of fluid dilution that was required, was the main reason that the chemical costs were climbing.

The cleaning of solids laden mud from the surface tanks, was systematically done to ensure that there was a minimum rise in weight, but then due to concerns that the daily cost were higher than preferred, less dilution was done while circulating down-hole losses were evident (static losses were minimal).

Solids Control

Given the equipment on the rig, solids control was as good as could have been expected. The desander and desilter were kept in good operating condition and the Linear Motion Shale Shakers performed well, to the degree that all screens were S175 for the entire interval. As mentioned, S210 screens will be a worthwhile trial on this rig.

Mud Program and Costs

Costs appeared higher than usual on this well. However, a number of factors influenced the cost in an upward direction.

- Tight control was required on the API Fluid Loss (5 6 cc's) from just under the 9-5/8" shoe. On previous wells, fluid loss control has been brought under control slowly, thus saving considerably on chemical costs. The tight control on fluid loss was done mainly for the prevention of formation damage, but also may have had the added benefit of reducing the extent of tight hole that may have been otherwise experienced.
- Yield point specifications were higher than normal. Based on the very poor gauge experienced on an offset well (Windermere # 2), it was believed that the higher yield point would be beneficial. (A long section of the 8½" hole at Windermere 2 was drilled with water / low yield point mud and gauge appeared to suffer accordingly.)
- An upper limit of 10000 mg/l was placed on the chloride concentration. This limited the amount of KCl to be added, and so extra JK-261 was required to maintain inhibition. Later in the well, the chlorides, and consequently the over all KCl concentration, were allowed to increase.
- Extremely tight mud weight specifications of maintaining the weight at or under 9.0 ppg were followed for as long as possible. Although the weight was not kept within these specifications, it was still kept as low as possible, with a total of around 750 bbls being dumped throughout the interval. A further 900 bbls of mud were lost to the hole (seepage losses to sands) and these losses were deliberately not treated with lost circulation material because the new volume required helped control the mud weight.



3. INTERVAL COSTS

			12	2-1/4" Surface Hole	e Hole	~	8-1/2" Mudded un Hole	in Hole	ľ	Post TD Operations	ations	É	1 Well C.	
		Interval:		0 - 495 m			495 m - 2800 m	E		200 000		3	Total Well Consumption	nondun
Product	Joet	Ilmit Cine	Tlead			-							M - 2800 III	
Alum	24.00	26 11	Osca	Cost	%C0St	Osed	Cost	%Cost	Used	Cost	%Cost	Used	Cost	%Cost
DSAV	2 24.00	25 108				စ္တ	\$1,920.00	3.9%	8	\$1,920.00	80.2%	091	\$3,840.00	6.7%
٠.٠٠٠ ناب	\$ 207.75	25 Kg				4	\$831.00	1.7%	7	\$415.50	17.4%	9	\$1,246.50	2.2%
Dante	\$ 6.20	25 kg				193	\$1,196.60	2.4%				193	\$1 196 60	2 1%
Calcium Carbonate	\$ 4.52	20 kg				89	\$307.36	%9.0				8	4307 36	2.17
Calcium Chloride	\$ 19.28	25 kg				7	\$38.56	0.1%	,_	\$19.28	%8 0	3 ~	\$507.30	0.5%
Caustic Potash	\$ 39.68	20 kg				23	\$912.64	1.8%		\$39.68	7%	2 ر	£07.04	0. I.%
Caustic Soda	\$ 37.00	25 kg	3	\$111.00	2.0%				•		?	, ·	3952.32	1.7%
Floplex	\$ 85.00	25 kg				7	190	7 46				α ;	3111.00	%7.0
Drispac Plus	\$ 152.28	73 lhs				: 5	21,170.00	6.4%				4	\$1,190.00	2.1%
Drisnac Dlue I V	9 157 20	SOI C7				3 ;	33,045.60	<u>%</u>				2	\$3,045.60	5.3%
Floring	37.751	sal 57				8	\$10,050.48	20.3%				%	\$10,050.48	17.5%
r IOW ZZIII	\$ 423.50	8x <7				12	\$5,082.00	10.2%				12	\$5.082.00	%
lacel	\$ 8.13	25 kg	762	\$2,130.06	39.0%	31	\$252.03	0.5%				293	\$2 382 00	4 19%
JK-261	\$ 137.25	25 kg				113	\$15,509.25	31.3%				113	\$15,500.35	32.06
KCI	\$ 25.70	50 kg				187	\$4.805.90	% 6				107	2.505,515	67.0%
KCI	\$ 12.85	25 kg	9	\$514.00	9.4%	200	\$2,570.00	\$ 2%				10,0	4,007.90	0.4%
Kwikseal F	\$ 18.25	18 kg	7	\$127.75	2.3%	4	\$73.00	%! 0				?;	\$5,084.00 \$200.75	0.4%
Lime	\$ 7.25	25 kg				~	\$14.50	%00				= <	3200.75	0.3%
SAPP	\$ 67.95	25 kg	38	\$2.582.10	47 2%)						7 (314.50	%0.0
Soda Ash	\$ 15.75	25 kg			?	7	36 766	,65 (38	\$2,582.10	4.5%
Sodium Sulphite	32.55	94 75				2 (3730.73	0.5%				15	\$236.25	0.4%
Dominii Daipiiic	3 23.30	23 Kg				62	\$1,578.52	3.2%				29	\$1,578.52	2.7%
		Totals:	I	\$5,464.91	100.0%		\$49,613.69	100.0%		\$2,394.46	100.0%		\$57.473.06	100.0%
	Cost	Cost per metre:		\$11.04			\$21.52						53053	



4. MATERIALS RECONCILIATION

Previous Well:

Well:

Taralea # 1

Transferred to:

Skull Creek West # 1

		TOTAL	TRANSFER	TOTAL	TRANSFER
PRODUCT	UNIT	RECEIVED	TO COBDEN	USED	BALANCE
Alum	25 kg	160		160	
Aquagel	25 kg	35		20	15
B54X	25 kg	8		6	2
Barite	25 kg	1243		193	1050
Bicarb Soda	25 kg	59	32		27
Calcium Carbonate	25 kg	68		68	
Calcium Chloride	25 kg	51	42	3	6
Caustic Potash	20 kg	24		24	
Caustic Soda	25 kg	29		3	26
Floplex	25 kg	60		14	46
Defoam L	25 kg	8			8
Drispac Plus	22.7 kg	64		20	44
Drispac Plus LV	22.7 kg	66		66	
Flowzan	25 kg	125	40	12	73
Idgel	25 kg	622	319	293	10
JK-261	25 kg	135		113	
KCI	50 kg	240		187	53
KCI	25 kg	240		240	
Kwikseal F	18.2 kg	79		11	68
Kwikseal M	18.2 kg	40			40
Lime	25 kg	94	54	2	38
Mica f	25 kg	40	40		
Pipe Free	205 kg	2			2
SAPP	25 kg	40		38	2
Soda Ash	25 kg	15		15	
Sodium Sulphite	25 kg	84		67	17



5. FLUID PROPERTIES SUMMARY

								Gels	ls	Filtrate	Solids	Į,									Γ	į	
Date Mud Tyme		Temp	Penth	Weight	3		5	П		1	-		Γ	ſ								E	AHL
F	1	1	-		-	-		3	IO III	Ž	<u>, 1</u>	N N N	핊	E		¥	с і .	Co+	so,	K	KCI	Calc	Ex
	n p	; 6	> -	8.33	1	•	77	==	2	21.4	4.	18.0	9.7	0.42	0.38	0.63	430	08					1
	Pny	. 42	. 22	6 6	72										- 5	-	;	;					
19-Jan-97 Spud Mud	Mud	23	8	8.55	2		20	3	77	26.4	7 7	2,	7.0		9.6	1.34	500	S :					
20-Jan-97 Spud Mud	Mud	35	36	8.60	4	9	24	4	2	3,5			2 : 2		70.0	7	5 6	3 3					
20-Jan-97 Spud Mud	Mud	33	8	8.60	47		26		6	33.5	: :		11.0		2 7	* :	3 5	3 (
21-Jan-97 Spud Mud	Pny	24	253	8.40	27				:	•	:				8	3	000	₹					
21-Jan-97 Spud Mud	Mud	28	456	8.90	31				2	150	4	0	7 6			,	450	3					
22-Jan-97 Spud Mud	Mud	S	495	8.95	35	~	. 4		٠,	2 2	; ;	? ?	2 6				3,6	9					
23-Jan-97 KCI PHPA	HPA	22	498	8 20	3	, ,	, ,	• •	٠, ١	9 5	2 3	200	9. 9	_			2,800	9					
_	HPA	4	200	270	2 %		` :	٠.	۷ (4.0.4	0 1	7.0	O.	0.36			10,600		T Z	9,800	2.0	1.48	0.89
_			2 8	6 6	۶ :	• :	= ;	-	7	10.4	1.7	2.0	9.0		0.12	<u>98.0</u>	11,200	280	140	11,000	2.3	1.38	96.0
	¥ 4	; ;	770	× ×	£ :		74			7.2		7.0	9.0				10,000	360	120	7,300	1.5	1.50	
	L A	4 ;	1054	8. 06. 06.	8	<u>``</u>	56	4	6	6.3	3.6	6.0	9.0	0.24	0.18		11,000		150	2 700	1	2	1 15
	- A-	4	1305	8.	8		91	9	6	5.9	4.4	8.0	8.7			8	9.800		120	200		7 6	1.14
	HA	41	1353	9.03	9	4	71			5.8			6.8				10 400		2 5	3 5	: :	0.1	1.24
	HPA	N. O.	1462	9.05	28	4	8	s	91	5.4	8.	6.0	8	0.22	0 18	77	0 40		3 5	3 6	0 ;	<u>, , , , , , , , , , , , , , , , , , , </u>	
_	IPA	41	1468	9.30	63	9	24	6	71	0.9	6.5	100	×				15.50		3 5	30,	? ;	4.13	5 :
	HPA	48	1524	9.20	65	15	33	91	23	5.6	5.7	12.0	0 6				2,5		2 5	3 8	0.7	2.30	1.52
	HPA	48	1569	9.20	2	2	24			5.2		100	0			_	2,5		9 5	36,0	0.7	2.19	1.38
_	HPA	49	1663	9.08	27	4	20	~	13	5.3	46	2 0		0 22	22		3,00			006,		2.11	
28-Jan-97 KCI PHPA	HPA	6	1742	9.10	25		23	7	20	× ×	2 0	9 6				0 0	200,51		_	11,300		2.15	1.48
28-Jan-97 KCI PHPA	HPA	49	1771	9.10	8		22		 }	2 6	?	?		_			2,100	02/	S	9,900	6:	2.19	1.43
28-Jan-97 KCI PHPA	HPA	25	1850	9.10	55		21	,	4	3 4	70	,	0 0		- 6		008,11			000,		2.12	
	HPA	\$	1850	9.10	22		: 2	. =	. 5	† Y	, <u>,</u>) (9 0		0.22	0.76	14,300	•		11,800		2.15	1.48
_	HPA	. \$2	1951	9.10	53	_	2	2	3	9 6	-	O.	, o	<u></u>	0.20		16,400	8		12,200	2.5	2.10	1.40
29-Jan-97 KCI PHPA	HPA	Ü	1951	9.10	2 2		2	=	9	7 0	•	,	0.0				16,000	i		11,400		2.13	
30-Jan-97 KCI PHPA	HPA	\$	2010	01.6	47		1 4	: -	. :	0.0	ė (0. 6	× 0		0.20		15,700	8		11,900		2.13	1.30
_	HPA	*	2051	01.6	*		2 0	•	3	? 0) ()	× ×	0.5		9.0	17,300	8		12,700	2.6	2.08	1.36
	IPA	υ	2101	9.10	4		17.0	·	=	9.0	•	0.0	0.6				16,000	8		12,300		2.04	
_	IPA	53	2105	9.15	: 4		. 4	٠ ٧	: :	3 5	6 6	9 :	2.5				15,300	8		00,11		2.07	1.42
31-Jan-97 KCI PHPA	HPA	55	2126	9.15	. 4				: =	: %	7 5	2 5		77.0	0 6		15,200	8	\$	000,6	<u>~</u> :	2.06	1.32
_	HPA	24	2178	9.15	42		15	9	12	2.6		14.0	0 0			\$ 200	000, 3	3 8		9,900	2.0	5.09	1.18
_	HPA	54	2206	9.15	43	9	8			7.3	!	?			_		3,40	3 8		10,500	2.2	2.02	1.23
_	HPA	8	2206	9.20	45	4	16	4	∞	9.9	5.5	10.0	0 6	0	81.0	0.47	30,71	3 8	3 8	000, 5	5.3	26.1	
	HPA	24	2371	9.20	7	16	18	9	·	6.3	5.5		8.5				200	3 8		30,71	7 ;	207	1.28
	HPA	27	2400	9.20	24	<u>2</u>	17			5.6		8.0	8.5	_			16,400	%		12,000	; ;	200	
2-rep-9/ KCI PHPA	L A	× (2463	9.20	23		<u>~</u>	е	2	6.2	9.6	10.0	8.5	91.0	0.14	0.55	15,400	280		000	3	2,2	1 53
_	A :	79	2548	9.25	8		 20	د	7	9.6	0.9	13.0	9.0	0.7			15,000	260	-	000	23	2 24	2
2 Each 07 NCI PHPA	Y S	;	2576	9.35	55		77			5.3			9.0	0.02			14,800	280	-	11.000	23	2 20	
_	Y 4	; °	507	S. 5	2 :		61	7	2	5.6	6.4		9.0			0.48	14,200	200		11,000	2.3	2 22	1.34
	V 4	۹ ۶	\$607	25.5	2 5		2 8	m	=	5.7	8.9		9.0	0.15	0.10	0.38	14,400	8	8	9,300	1.9	2.17	1.20
_	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	٠ <u>د</u>	1607	5 6	2 :	2 !	7 7			5.5			0.6				14,100	200	8	9,800	2.0	2.16	
_	HPA	3 8	2765	0.00	4 4		3 8	7 (2:	6.2	6.3		8.				16,200	8		11,900	2.4	231	1.38
	HPA	3 3	2784	9 6	3 %		7 7	7	<u></u>	× (6.2		× 6	0. 4.	0.12	0.52	16,800			10,500	2.2	2.29	1.15
_	HPA	49	2800	9.30	2 2		23	۰,	12	7 .	- () S	0.0		3		14,600	-	_	008'6	2.0	2.28	
_	HPA	Ü	2800	930	\$ \$		7 7	۸ ۸	2	. r	7.0				0.10 0.55	0.55	17,600			12,000	2.5	2.30	1.30
ł									<u>;</u>		7.0	2	3	0.22	0.14	0.58	17,800	8	8	11,600	2.4	2.38	1.10



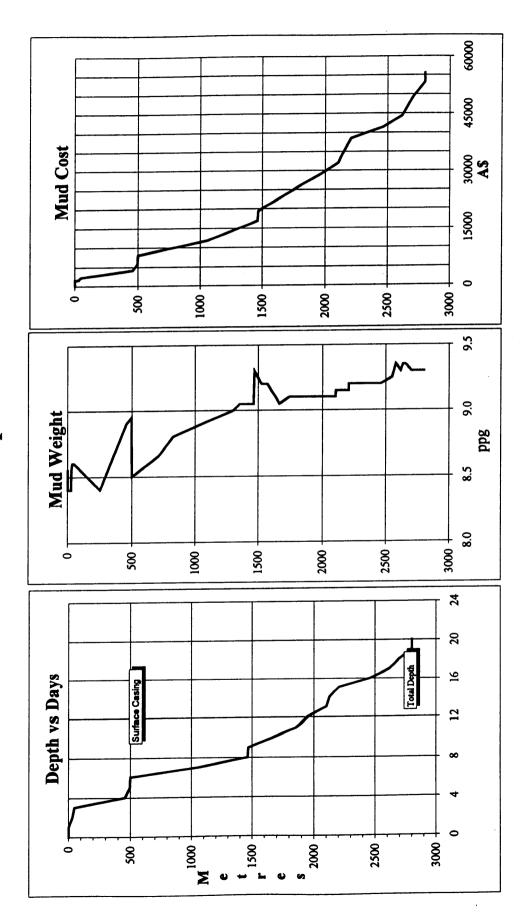
6. Mud Volume Analysis

		Interval	val			Fluid Bu	Fluid Built & Received	eived			F	Fluid Disposed	Ē			Summary	narv	
	Hole				Fresh	dwnS	Direct			占	ž	Down-						
Date	Size	From	To	Mud Type	Premix		Recirc	Water	Other	sander		hole	Dumped	Other	Initial	Received	Disposed	Final
18-Jan-97	12.25"	E 0	12 m	Spud Mud	167							12		01	0	167	22	145
19-Jan-97 12.25"	12.25"	12 m	31 m	Spud Mud	8		2			\$		18		34	145	130	57	218
20-Jan-97 12.25"	12.25"	31 m	48 m	Spud Mud	d 50					01		23		29	218	S	62	206
21-Jan-97 12.25"		48 m	471 m	Spud Mud	732					49	47	73	280	43	206	732	492	446
22-Jan-97 12.25"	-	471 m	495 m	Spud Mud						9	11	78	257	16	446	0	318	128
Sub Total					1009	0	70	0	0	70	58	154	537	132		1079	951	
23-Jan-97	8.5"	495 m	498 m	KCI PHPA	559								142	=	128	529	153	534
24-Jan-97	8.5	498 m	1076 m	1076 m KCI PHPA		292				33	17	112	8	18	534	292	366	980
25-Jan-97	8 .5	1076 m	1462 m	1076 m 1462 m KCI PHPA	&	280		35		38	72	116	75	4	999	395	294	199
26-Jan-97	8.5	1462 m	1468 m	1462 m 1468 m KCI PHPA		120		35		=	9	95	21		<u>199</u>	155	133	683
27-Jan-97	8.5	1468 m	1677 m	1468 m 1677 m KCI PHPA	8	220				17	14	75	%	71	683	300	213	770
28-Jan-97		1677 m	1858 m	1677 m 1858 m KCI PHPA		220				33	7	39	122	28	0//	275	220	825
29-Jan-97	8.5"	1858 m	1951 m	1858 m 1951 m KCI PHPA		120				8	7	18	*	74	825	120	86	847
30-Jan-97	*5.8	1951 m	2101 m	1951 m 2101 m KCI PHPA		195				51	7	17	89	32	847	195	170	872
31-Jan-97	8.5"	2101 m	2126 m	2101 m 2126 m KCI PHPA		110				61	-	41	5 6	34	872	110	121	861
1-Feb-97	8.5"	2126 m	2291 m	2126 m 2291 m KCI PHPA		170				77	7	57	18	4	861	170	142	889
2-Feb-97	8.5	2291 m	2471 m	2291 m 2471 m KCI PHPA		120				9	7	20	0	35	688	120	122	887
3-Feb-97	8.5	2471 m	2615 m	2471 m 2615 m KCI PHPA	30	220				2	7	26	8	27	887	250	171	996
4-Feb-97	8.5	2615 m	2615 m 2705 m	KCI PHPA		260				16	7	87	108	27	996	260	240	986
5-Feb-97	8 .5	2705 m	2705 m 2800 m			223				9	7	9/	55	23	986	223	162	1047
6-Feb-97	8.5"	2800 m	2800 m	KCI PHPA								21		7	1047	0	78	1019
Sub Total					804	2550	0	20	0	287	84	606	897	362		3424	2533	
Well														L				
Total					1813	2550	70	70	0	357	136	1063	1434	494		4503	3484	

Inter	nterval Length	Dilution Vol	Dilution Factor
12.25" Surface Hole	495 m	912 bbls	1.84 bbls/m
8.5" Main Hole	2305 m	2865 bbls	1.24 bbls/m

IDES

7. Graphs





8. BIT & HYDRAULICS

BIT	SIZE	TYPE	JETS	S	DEPTH	GPM	MUD	a	θ300	DP	Quant de	FLOW REGIME	ο	Ocert &	FLOW REGIME ₄	JET	IMPACT	HSI	BIT PRESS LOSS
	12.24	711	<u>.</u>	2	9,00	Ę	š	9			,			,	·	8			
			9	9		ξ		ŝ		7	3	i aroulent); (*)	95	Impricati	302	186	9; 7	81/
	8.5	4.1.7	12 12	12	1462 m	397	9.05	0.5	35	4.5	203	Laminar	6.5	365	Turbulent	383	710	4.87	1169
	\$.5	13.5	13 13	91	1468 m	419	9.3	0.49	9	4.5"	3	Laminar	6.5	393	Turbulent	294	291	3.11	708
	8.5*	1.3.6	13 13	16	1951 m	391	9.1	0.46	34	4.5*	808	Laminar	6.5	361	Turbulent	274	\$04	2.48	603
	8.5"	4.4.7	14 14	4	2101 m	363	9.1	0.5	53	4.5	44	Laminar	6.5	321	Turbulent	257	43 8	2.02	531
	8.5"	4.4.7	13 13	13	2126 m	419	9.15	0.51	31	4.5	456	Laminar	6.5	334	Turbulent	345	189	420	926
	8.5"	4.4.7	14 14	4	2615 m	363	9.3	0.54	35	* .	476	Laminar	6.5	385	Turbulent	257	448	2.07	542
	8.5	4.4.7	14 14 16	16	2800 m	391	9.3	0.5	39	4.5	531	Laminar	6.5	386	Turbulent	252	472	2.13	518

CULTUS PETROLEUM N.L.

Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report

Oate 18√anı Spud Date Depth 18 Jan 1996 (M)To 12

	Tra r	7 4 F	A		Uepth (M)To
ELL NAME and No :		RALE			CONTRACTOR O. D. & E.
UCH NO PEP 101	Location	Otway Ba		ate . Victoria	RIG No. 30
PERATOR'S REPRESE			RADLEY		REPORT FOR Paul
	.1.4 Jets 3		sing		Mud Volume Bbls. Circulation Data
ļ ••• ·	G Length 1		-	tres Hole	6 Pits: 106 Pump size: [2"] 6.0" 8.0
**	1.84 Length	1		tres Drill String Ca	PZ.8 PERC
6.5 Length	Other 1			tres in Storage :	180 Weight: 8.6 MakeModel 2: G D PZ 8 % Effic
	~	32 MOD 11P			% OAG: 10.0 Annular Velocity Bbl/stk 0 071 Stl/min 100 Bbl/M
MPLE From			F/Line	F/Line	DP size 4.5 57 (FtM) 88888 Bbustk 0.071 Stulmin ~ GPM
4E Sample Taken			09.00	22.00	DC air. 9 PRESSURE:
wline TEMPERATURE		deg	C 21	19	MUD PROPERTY SPECIFICATIONS
PTH Metres				1	Weight: Min Filtrate: NC Other: NC
IGHT ppg.			8.55	8.40	Viscosity: NC Plastic Viscosity: NC Yield Point: NC
nnel VISCOSITY (secial) API @ 18	deg. C	41	27	By Authority : ~ Operator's written ~ Drilling Contractor
ASTIC VISCOSITY CP @	33	deg. C	6		yes Operator's Representative - Other
LO POINT (Ib/100f2)			22		FLUID SUMMARY AND RECOMMENDATIONS
STRENGTH (IM100m2			11 1	5	The make-up water was found to be
TRATE API (cm3 / 30 mi			21.4		Chlondes - 4,100 ppm
HTHP Filtrate (cm3/3		~ deg. C			Total Hardness 160 ppm
LIDS Content (% by Vol		/ Date	5 ~		PI/MI - 0.25/0.46
UID Content (% by Vol.)		. / Reto	ort 1.4 ~	- 	DH - 75
D Content (% by Vol.)			Tr.	.6 ~ 99.8	 (
HYLENE BLUE CAPAC	птү х юльь	i cm3/			After the pits were checked, they were filled with water, with 3 holding
Strip	*****	18 deg.			prehydrated Gel - Spud mud These were peptised with Caustic Soda [to 20 ppb_Bentonite]
ALINITY Mud (Pm)			0.42		
ALINITY Filtrate (Pff	AT)		0.38/0.63	0.28/0.5	-
ORIDE (mg/L)			4,300	4,200	
HARDNESS (mort)			80	160	•
PHITE (mg/L)			-		OPERATIONS SUMMARY
(mg/L)	_		7		•
(% by Wt)			_	-	After the Rat and Mouse holes were diffied using Spud mud, the Conductor section was tagged and the Basait section drilled out using water
A (Calc. Ib/bbl)			. -	-	Spud time was 20 30 hours
A (Excess ib/bbi)			_	~	
OLOGY - 600 / 300 / 6 (re	adings)		34/28/13		-
OLOGY - 200 / 100 / 3 (re			26/22/11	 	
		NTING (BBLS.)	1		20172
d Built & Received	Fluid Lost		Summary		SOLIDS CONTROL EQUIPMENT
ix	Desander	0	Initial Volume	0	Type Man. Hr. Cones Hr. Sheker# Screen Size Hr.
wifresh water 167	Desilter	0	The volume		Centrifuge - 0 Drand 2 0 1 S110/S84/S84
recycled " 0	Downhole	12	Fluid Received	167	Degasser Dnico 0 Drainer 12 0 2 S84/S84/S84
Orill Water 0	Dumped			167_	
Other 0	Other	.0 10			SOLIDS EQUIPMENT EFFICIENCY
	1	įo	Fluid Lost		Overflow (ppg.) Underflow (ppg.) Output (gal/s
	i		. . .		Desander 0
	1		Final Total	145	Desilter ~ 0
167					
eceived 167	Total Lost	22	(Circulating Vol	.)	
		22	(Circulating Vol	.)	SOLIDS ANALYSIS (ppb / %) BIT (HYDRAULICS DATA
roduct inver	ntory Rec'd.	22 Used Bala		.) Cost \$	High Court Court
roduct inver		· ·			High Gravity Solids 0.0 0.0 Jet Velocity 129 FT
roduct Inver	tory Rec'd.	Used Bala	nce Unit \$		High Gravity Solids 0.0 0.0 Jet Velocity 129 FT / Bentonite -0.3 0.0 Impact Force 168
roduct inver	1tory Rec'd. 400 622	Used Bala 0 400 162 460	nce Unit \$		High Gravity Solids
roduct inver	tory Rec'd.	Used Bala 0 400	nce Unit \$	Cost \$	High Gravity Solids
roduct Inver	1tory Rec'd. 400 622	Used Bala 0 400 162 460	nce Unit \$ 6 20	Cost \$	High Gravity Solids
roduct Inver	1tory Rec'd. 400 622	Used Bala 0 400 162 460 3 26	nce Unit \$ 6 20	Cost \$ 1,317.06 111.00	High Gravity Solids
	1tory Rec'd. 400 622	Used Bala 0 400 162 460 3 26 0	nce Unit \$ 6 20	Cost \$ 1,317.06 111.00	High Gravity Solids
roduct Inver	1tory Rec'd. 400 622	0 400 162 460 3 26 0	nce Unit \$ 6 20	Cost \$ 1,317.06 111.00	High Gravity Solids
roduct inver	1tory Rec'd. 400 622	0 400 162 460 3 26 0 0	nce Unit \$ 6 20	Cost \$ 1,317.06 111.00	High Gravity Solids
roduct inver	1tory Rec'd. 400 622	0 400 162 460 3 26 0 0	nce Unit \$ 6 20	Cost \$ 1,317.06 111.00	High Gravity Solids
roduct Inver	622 29	0 400 162 460 3 26 0 0	nce Unit \$ 6 20	Cost \$ 1,317.06 111.00	High Gravity Solids
S Soda	622 29	0 400 162 460 3 26 0 0 0 0	8 13 37 00	1,317.06 111.00	High Gravity Solids



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report

2 Reports Date : 19-Jan Spud Date: 18 Jan 1997 Depth: 12 (M.)To: 31

ELL NAME and N		TA	\R/	ALI	EA	# 1			CONTE	RACTO	R	0.	D.	&	E.				
lock No.: PEP		Locati			Basin		ate :	Victoria		RIG N	lo.	30)						
PERATOR'S REPR					BRAD	LEY			REPOR	T FOR	<u> </u>	Pau	CO	OPER					
Orilling	Assem			T	Casing			Mi	ud Volu							Circui	ation Dat		
it size 12.3 Type			ts : 3 * 18	16	inch @	12 14	etre:	Hole :	12	Pits:		205		Pum	size :	[2']	6.0*	8.0	ins.
р 4.5 Туре	G	Lengt	h 12.27	I	inch Q	M	etres	Orill String Cap. :	1	Total \	/olum	•:	218	Make	/Model 1	I: G.D.	PZ - 8	% Em	c 0.9
wt" 4.5 Type	54.84	Lengti	h	~	inch @	~ M	etres	in Storage :	82	Weight	<u>t:</u>	8.6		Make	Model 2	2: G.D.	PZ-8	% Em	c 0.9
C 6.5 Lengt	h	Other	3 56	MUD	TYPE:	Gel - Spu	d		% O/G:	10.0	Ann	ular Ve	locity	_Bb#s	tk 00	7 Sti Umi	in 60	Вым	4.19
C " 8 Lengt	h 18.73					Mo	ud P	roperties	DP size	4.5	33	(FVM)	Lam	BbVs	b k 0.0	7 Stk/m	in ~	GPM:	176
AMPLE From						F/Line		F/Line	DC size		40	(FVM)			ms up :	-	PRESS	URE :	80
ME Sample Taken						15.00		22.30	DC size	8	<u>:~</u>	(FUM)			Circ. :	52	Type st	effsys.	3
lowline TEMPERATE					deg. C	24		30	Weight		Min.	Filtrat		ERTY S	N.C.	Other			
EPTH Metre	B					8.40		8.55	Viscosi				e . c Visco	elly:	N.C.	Yield F		N.C.	
EIGHT ppg.			23	deg. C		27		72	By Aut				tor's w			~		Contract	tor
unnel VISCOSITY (s		19				- - '		10	,,,,,,,			- '		preser	dadiva	_	Other		
LASTIC VISCOSITY			60	deg. C		ļ		50	 							ENDATIO			
EL STRENGTH (Ib/		N = = = 11	IO min			 		15 27	1		TEU	IL JOR		AND IN	- COMM		<i>71</i> 4 9		
LTRATE API (cm3/			y mark					26.4	Ania	h visco:	sity or	emix w	as built	and use	d to mai	ntain suf	ficient volu	me and	
PI HTHP Filtrate (ci			~	deg. C		~		~	· 1								drilling the		
AKE Thickness (32							~	5 ~]										
OLIDS Content (% L			Calc.	1	Retort	 	-	1.4 ~	1										
QUID Content (% b	y Vol.)	OilWat	ter				9.8	~ 98.6	1										
AND Content (% by						Tr		Tr	1										
ETHYLENE BLUE C		<u> </u>	Ib/bbl		cm3/cm3			27.0	l										
Н	Strip			23	deg. C	12.0		11.0 N.C.	ł										
	(Pm)					N.C.		0.62/1.27	ł										
LKALINITY Filtrate	(PIMI)					0.66/1.34 4.500		4,300	ł										
HLORIDE (mg/L)						80		40	i										
otal HARDNESS (mg	J L1					-		~	ĺ			OPER	ATIONS	: S	UMMAR	Y			
ULPHITE (mg/L)									1 .	While d	trillina					_	an to the s	urface	
.+ (mg/L)						~		ļ	1		_						oumped av		
HPA (Calc. Mah)						~		~									as drilled o		
HPA (Excess Meb)						~		~	1 '								hrough the		
								70/60/18				,							
:HEOLOGY - 600 / 300								55/50/15											
HEOLOGY - 200 / 100	//3 (read		CCO! P	TTNC 45	B1 6 1			000010				SOLID	s co	NTROL	FOUI	PMENT			
			CCOUN						7		Man.			Cones		Shaker#	Screen	Size	Hr.
Fluid Built & Receiv	ved	Desand	Lost o	r UISDO	5	Summary Initial Volun		145	Type Centrifu	ge.	~		D'sand	2		1	S110/S8		14.5
remix	60	 			0	ITIIGE VOICII	-	145	Degass		Onko		D'silter	12	+	2	S84/S84		14.5
wifresh water " recycled "	60 0	Desilte			18	Fluid Receiv		130	Jogaso		JC 0		5 5111.51	1	 	† <u> </u>			
					0	, marketan						SOI IO	S FOI	PMEN	T EFFK	HENCY			
Officer	70 0	Other	<u> </u>		34	Fluid Lost		57					w (ppg			flow (pp	g.)	Output	(gal/m)
Other		Culei				, idia cost			Desando	er		8.6				11.2		0.6	
						Final Total		218	Desilter			~				~		0	
									DV3										
otal Received	130	Total L	ost		57	(Circulating	VOI.	<u>'</u>								07711	/DBA: " :-		·
	r			· · · · ·		1		0		S ANA) (P	pb /	1	Jet Vel		MRAULIC		FT./ SEC.
Product	Invent		Rec'd.	Used	Baland		k \$	Cost \$	High Gri Bentonii		nds		0.0 34.0	3.7	Jet Vel			59	LBS.
arytes		1003		_0	1003		5 20		Drilled S				-21.6	 	HHP/			0.0	
					440		_	400.00			Hd-		12.5	1.4	HHP			4	
: Gel austic Soda		460 26		20	440 26		8.13 7.00	162.60	Low Gra Average		-145		2.60	Solids		ss. Loss		44	PSI
สนรแบ วบนิส		20			20	1-3		****	Med. "n		#1cb	# 2 ck	****	0.222	····	eat Frac		0	PSI
				0							# (CR.	<u></u>	****	***	 	guiv. Mu		****	PPG
				0				THE RESERVE THE PERSON NAMED IN	Med. "K Low "n					0.301	EC			####	PPG
				0					Low "K				****				P - GPM	2293	2619
		-		0								l		70.01		ative Co]	
				0					Daily Ch	STINC M	-USC :		163		Cuindi	\$			
	!														<u> </u>				
NGINEER EDD	PERKIN	8			ADDRES	s So	uth	Australia				لبيا	TELEP	HONE	08 - 3	38 3027	7 la a-r -		
Any opinion and / muselves or our agents	or recomm	endation.	or comple	ed erally o	r written h nd ne Habi	erin, has been lity is assumed	for a	ared carefully and ma my damages resulting	gov used it from the u	- me user	1 50 Gil 110.	rcm, hev	rever, ne	10 p1000 1					
						-													



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report AGN. 000 201 314

Reports 3 Date: 20-Jan Spud Date : 18 Jan 1997
Depth : 31 (M.)To : 48 Depth:

										T							Depur		11 (ML) 1 G	9: 48
WELL NAME and No) . :	TA	AR A	AL	EA	# 1				CONTR	LACTOR	1	0.	D.	&]	E.				
Block No.: PEP 1		Locati	ion :	Otway	Basin		State :	Victoria			RIG No). 	30							
PERATOR'S REPRI	ESENTA	INE:		Alex	BRAD	LEY				REPOR	T FOR		Paul	COC	PER					
Drittina	Assemi			T	Casing			ſ	M	ud Volu		ls.			T		Circui	tion Dat	2	
Bit size 12.3 Type:			ets : 3 ° 11	16	inch (12.	2 Metres	Hole:		20	Pits:		185		Pump	size :	[21]	6.0°	• 8.0	ins.
DP " 4.5 Type:		Lengt	h 29.19		inch (Drill Stri	ng Cap.	: 1	Total V	olume):	206	Make	Model 1	G D	PZ - 8	% Em	c 0.
	54.84	Lengti	h	•	inch @	~	Metres	in Store	ge :	20	Weight	:	8.6		Make	Model 2	G.D.	PZ-8	% Em	c 0.
DC " 6.5 Lengt	h	Other	3.58	MUD	TYPE:	Gel -	Spud			% O/G:	10.0	Annu	ıtar Vel	ocity	BbVst	k 00	Sticimi	n 91	Вым	6.35
DC " 8 Lengti	18.81						Mud P	roperties		DP size	4.5	50	(FUM)	Lam	BbVst	k 00	Stk/mi	n ~	GPM:	267
SAMPLE From						F/Lin	e	F/Line		DC size	i	61	(FUM)	Lam	Botto	ns up :	3	PRESS	URE:	550
TIME Sample Taken						09.3		22.00		DC size	8 ;	_	(FUM)	Lam	Total (32	Type si	utisys.	3
Flowline TEMPERATL					deg. C		15 16	33 48		Weight		Min.	Filtrate		RIY S	PECIFI N.C.	Other			
DEPTH Metres	<u> </u>					8.6		8.60	- -	Viscosi			Plastic	•	elle -	N.C.	Yield F		N.C.	
WEIGHT ppg.			22	don 6		+	2	47		By Auth	-		Operat			11.0.	~		Contract	tor.
Funnel VISCOSITY (s		18		deg. C			6	7		10,700			•		present			_ Other	00010	
PLASTIC VISCOSITY	T		36	deg. C		+	4	26									NOATIC			
MELD POINT (IB/100f		0.000 11	10 ===			14	17	17	19	1							NDATIC	<u>inia</u> nge the bi	tland furt	ther
GEL STRENGTH (16/1 FILTRATE API (cm3/			IO MINT.			36.		33.2		1								s desirabl		
API HTHP Filtrate (cr			~	deg. C	;		~	~		1	f this sec					· -/-			_	
CAKE Thickness (32)						5	-	5	~	4		-		ough su	rtace e	quipmen	and on	ce the lim	estone	
SOLIDS Content (% b			Calc.		Retort	1.7		1.7	~	was pan	etrated,	minor	loss w	as note	d from t	his time.				
LIQUID Content (% by	/ Vol.)	Oll/Wall	ter			-	98.3	-	98.3	Į										
SAND Content (% by	Vol.)					+	<u>`r</u>	Tr		1						-		out) and	an	
METHYLENE BLUE C		<u> </u>	ID/Dbi		cm3/cm			23.0		4	was no							•		
PH	Strip			27	deg. C	12.		11.5		ins the	n slowly	dimini	isnec a	s rurtine	rvolume	Was Du	IK.			
	Pm)					N.C		N.C.		ł										
ALKALINITY Filtrate	(PDM)					0.7/1.		0.66/1.0 5.500	UO	7700 1500	maal E	a	artad a	ff in Maid	norina	w ac 1100	d in the	Report #	2 neried	
CHLORIDE (mg/L)						4,90	0	3,300		I'DE NWI	KSear-F	ine co	osieu o	11 171 10 413	periou	7705 USG	CHILLIE	Report #	z periou.	
Total HARDNESS (mg	/L)					+	-	-		1			OPER/	TIONS	qı	JMMAR	,			
SULPHITE (mg/L)						 	<u>-</u>			ł.	Deiffee e							anged and	t drilling	
K+ (mg/L)						 	~	-		1	-							to 8.5"] a		
KCL (% by WL)					•		~	_		1				-				o 12.25" i		
PHPA (Calc. lb/bbl)						1		_		depth of						.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. goc			
PHPA (Excess lb/bbl)										COPU. OI	J3 1110U			•						
RHEOLOGY - 600 / 300						36/30/1		40/33/27 32/29/25		ł										
RHEOLOGY - 200 / 100	/3 (read					28/25/	/	32/29/20					SOLID		NTROL	EO! III	MENT			
		T	ACCOUN			Т.				L			T	,				8	Cina	Hr.
Fluid Built & Receiv			Lost o	r Dispo		$\overline{}$	mary		218	Туре		Man.	Hr.	D'sand	Cones 2		Shaker#	Screen S110/S8		17
Premix		Desand			10	inital	/olume		218	Centrifu					12		2	S84/S84		17
wi fresh water		Desilte			0					Degasse	or D	qico	-	D'sitter	12		-	304/304	7304	
" recycled "	0	Downh	nole ,		23	Fluid	Received		50_											
Drill Water		Dumpe	<u>d</u>		0	<u> </u>				 -						EFFIC			0.4.4	(aalba)
Other	0	Other			29	Fluid L	ost		62	<u> </u>			Overflo	w (ppg	· <u>·</u>	Unden	10.8	1.)	Output 0.4	(gazm)
		ļ. <u>. </u>								Desande	er -		8.6							
						Final T	otal		206	Desilter	-+						~		0	
Total Received	50	Total L	ost		62	(Circul	ating Vol.	<u> </u>		<u> </u>									<u></u>	
										SOLID	S ANAL	YSIS	(P)	b / !	6)	, —	BITIH	/DRAULI		
Product	Invent	tery	Rec'd.	Used	Bajan	c•	Unit \$	Cost	\$	High Gra		ids		0.0	0.0	Jet Vel				FT / SEC
Barytes	<u> </u>	1003	240		1243		6 20			Bentonit	39			28.4	3.1	Impact			136	LBS
	L						L			Drilled S	olids			-13.2	-1.5	HHP/	n2		0.1	
d Gel		440		40	400		8.13	325	.20	Low Gra	vity Soli	ds		15.2	1.7	HHP			16	
Caustic Soda		26			26		37.00			Average	S. G.			2.60	Solids	Bit Pre	ss. Loss		101	PSI
(wikseal - Fine		39	40	7	72_		37.50	262	.60	Med. "n	* #	1ck	# 2 ck.	0.263	0.277	Csg. S	et Frac	Pres	0	PSI
							<u> </u>			Med. "K	•	•	<u> </u>	5.823	29 905	. E	quiv. Mu	d Wt.	0	PPG
			T	[Low "n	-	• [0.165	0.144	EC	D		####	PPG
	ľ	1								Low "K	•		•	10 638	68.68	Crit.Flo	@ DC/C	P - GPM	1832	2156
		,	1	:	i i					Daily Ch	emical C	Cost :				Cumul	ntive Co	et :		
	i		!																	
		Ì											\$	588		<u> </u>	\$	2,178		
NGINEER EDD I	PERKIN				ADDRES			Austra	lia.						HUNE	02 - 21	\$ 3027		· · · · · ·	

CULTUS PETROLEUM N.L.

Independent Drilling Fluid Services Pty. Ltd. A.G.N 000 207 314 Drilling Fluid Report

21-Jan Spud Date : 18 Jan. 1997 Depth : 48 (M.)Te : 471

		- 4 -		II	A -	4 1				CONTR	ACTOR		O.	1) 2	& E	•				
ELL NAME and No. :	7	[A]	KA	LL	A 1	# 1								<u> </u>						
ock No.: PEP 101	L.	cation	. 0	Xway B	asin		State: \	/letoria			RIG N		30							
PERATOR'S REPRESE	ENTATIVE	:		Nex E	RADI	LEY				REPOR	T FOR		<u>Paul</u>	COOL	EK		-			
	Assembly				asing				M	ud Velu		ls.						en Data 6.0°	• 8.0	
t size 12.3 Type:		Jets :	3 - 18	16 k	nch 🛊	12.2	Metres	Hole:			Pits :		185		Pump siz		127		% Effic	
p " 4.5 Type:		ngth 3	387 4	ie	nch Q				ng Cap. :		Tetal V				Mak oM o			PZ - 8 PZ - 8	% Effic	
	54.84 Le	ngth	37.1	~ 1	nch 🕏	_~_	Metres	n Sterag	<u>• :</u>	1	Weight		8.6					120	BNM	16.7
	18.75 0	her	16	MUD T	YPE:	Gel - 5				% O/G:		Annul	Fum		BbVstk		Strain	120	GPM:	704
	27.8						Mud Pro			DP size		, ,			Bettems		13	PRESS		1,350
AMPLE From						F/Line		F/Line		DC size	6.5 8	160	(FVM)		Total Cir	•		Type su		3
IME Sample Taken						11.00		22.30		DC size	•			PROPER				177		
owline TEMPERATURE	E				eg. C	253		456		Weight	:		Filtrate				Other:	N.C.		
EPTH Metres						8,40		8.90		Viscosik		N.C.	Plastic	Viscosig	<u>/:</u>	N.C.	Yield Pe	int:	N.C.	
EIGHT PPS						27		31		By Auth		~	Operat	or's writi	en .		-	Drilling	Centract	O F
unnei VISCOSITY (sec	Jet.) API @			ieg. C				3		1	-	yes	Operat	er's Rep	resentat	ive	-	Other		
LASTIC VISCOSITY of	<u>, 6</u>	3	6 4	deg. C				3				FLUN	D SUM	WARY AN	D RECO	MMEN	IDATION	5		
ELD POINT (MICORZ)						 	r	1	2	1	The V	scosit	y of th	e mud v	ves low	ered o	once the	pump	strokes '	Mete
EL STRENGTH (M/100		e. / 10	mw.					15.0		increas	sed so	that b	y the i	ime the	Gelffbr	and M	ari was	penetr	sted, the	pH had
LTRATE API (cm3/30				dog. C		_		~		been k	OWE TEX	and t	the vis	cosity a	t a mini	mum.				
PI HTHP Filtrate (cm3 AKE Thickness (32nd							~	2	~	AK	CL 20	bbl. p	aw Bic	built a	nd plac	ed on	standby	/. 		
OLIDS Content (% by			Çale.	1 1	Retert	0.5	~	4.1	~	This s	ection	was d	rilled v	vith a m	nimum	weigh		rici ille i	cuttings '	₩ .
IQUID Content (% by V		Wate				~	99.5		95.8	monito	red to	mainta	ain hol	e clean	ing and		imum oi	.usily. 12 nnh	althour	h It was
AND Content (% by V						Tr		0.75		- The	SAPP	conte	NE WE	s mainta		a nwi Mari	MIRAII U	. z ppo.	. al thoug	
ETHYLENE BLUE CA		x f	6/66		em3/em3	L		9.0		increa	sed on	ce ine	mua	ring bec	anne ev Marian	ruein. recime	wae e	becom	and the	svstem
	Strip			20	deg. C	6.2		7.0		Once	ne Ma	Ma2	passi	ig, ule t	ination i	na of t	he fluid	-loss. w	Ath no F	/Loss
	'm)					N.C.		N.C.		_was bu	nar nb	COS el	ncoun	iged un	ibe les	a comul	ity solid	-1000, ei		
LKALINITY Filtrate	(PffMf)					ļ		0.1/0.6	7	addin	es, in	ougn 11	NO WICE	4624 N	ure rot water (Thiorid	e readic	oj. Na W as	Incorrec	t, due to
										P4			ure iii	THE UP						
HLORIDE (mg/L)						450		2,000		Plea	ese no	etion a	of the !	eetina s	ment - I	he aci	tual Chi	orides a	are :- 41	u ppm.
	-)							200		the co	ncentr	stion o	of the i	esting a	igent - 1	the act	tual Chi	orides a	are :- 41	ıv ppm.
etal HARDNESS (mg/L	-)					450		200	,	the co	ncentr	etion o	of the i	esting a	igent - 1 SUI	the act	tual Chi (orides (
CHLORIDE (mg/L) Fetal MARDNESS (mg/L SULPHITE (mg/L) <	-)							200		the co	ncentr	ation o	of the toper. OPER. 5" hole	esting a ATIONS to 363	igent - 1 SUI metres	the aci VIMARY where	tual Chi (• a mud	orides : I ring ca	me to th	e surfæ
retal HARDNESS (mg/L SULPHITE (mg/L) (+ (mg/L)	-)							200		the co	ncentr Drilled	ation o	of the income of	esting a LTIONS to 363 higher c	gent - 1 <u>SUI</u> metres oncentr	the act VIMARY where ation o	tual Chi (e a mud of SAPF	orides : ! ring ca ? was a	ime to th	e surfa the folic
Total HARDNESS (mg/L) SULPHITE (mg/L) SULPHITE (mg/L) SULPHITE (mg/L) SULPHITE (mg/L) SULPHITE (mg/L)	-)					-		200		the co	Drilled	ation of d 12.29 ared a sx. ha	of the income of	esting a LTIONS to 363 higher con rused p	sur sur metres oncentr orier to	the act WMARY where ation of this].	tual Chi (e a mud of SAPF The K	orides a ring ca was a CL pill v	nme to th dded to i was pum	e surfa the folio ped, bu
Total HARDNESS (mg/L SULPHITE (mg/L)	-)				•	~		200		This w	Drilled /23 cle rs [25 the Vi	ation of d 12.29 ared a sx. ha scosity	of the income of	esting a ATIONS to 363 higher con used ; aused :	sur sur metres oncentr orior to another	the act WMARY where ation c this].	tual Chi (e a mud of SAPF The K ring. Ti	ring ca was a CL pill v	ame to the dded to i was pum cleared	e surfa the folic ped, bu and
Fotal HARDNESS (mg/L SULPHITE (mg/L) <		115)			•	~		200 ~ ~ ~ ~ ~		This w	Drilled /23 cle rs [25 the Vi	ation of d 12.29 ared a sx. ha scosity	of the income of	esting a ATIONS to 363 higher con used ; aused :	sur sur metres oncentr orior to another	the act WMARY where ation c this].	tual Chi (e a mud of SAPF The K ring. Ti	ring ca was a CL pill v	nme to th dded to i was pum	e surfa the folic ped, bu and
Fotal HARDNESS (mgA.) SULPHITE (mgA.) (+ (mgA.) CCL (% by Wt.) PHPA (Calc. linbbi) PHPA (Excess linbbi)	/6 (readin				•	~		200		This w	Drilled /23 cle rs [25 the Vi	ation of d 12.29 ared a sx. ha scosity	of the topperson of the	esting a ATIONS to 363 higher con used p saused a metres,	SUI metres oncentr orior to another where	the act where ation of this]. mud i a trip t	tuel Chi e a mud of SAPF The K ring. The	ring ca was a CL pill v	ame to the dded to i was pum cleared	e surfa the folic ped, bu and
Fotal HARDNESS (mg/L) SULPHITE (mg/L) (+ (mg/L) KCL (% by Wt) PHPA (Calc. lishbil) PHPA (Excess lishbil) RHEOLOGY - 800 / 300	/6 (readin	gs)	CCOUN	TING (B	DLS.)	~		200 ~ ~ ~ ~ ~		This w	Drilled /23 cle rs [25 the Vi	ation of d 12.29 ared a sx. ha scosity	of the income of	esting a ATIONS to 363 higher con used p saused a metres,	SUI SUI SUI SUI SUI SUI SUI SUI SUI SUI	where where ation of this]. mud i a trip t	tual Chi	orides a i ring ca was a CL pill v nis was ge the b	ame to the	ne surfa the folic ped, bu and place.
FORM HARDNESS (mgA.) KULPHITE (mgA.) KCL (% by WL.) PHPA (Calc. linkbil) PHPA (Excess linkbil) RHEOLOGY - 900 / 300 RHEOLOGY - 200 / 100	/6 (readin	gs) MUD AC				~		200 ~ ~ ~ ~ ~		This w	Drilled /23 cle rs [25 the Vi	ation of d 12.29 ared a sx. ha scosity	of the I OPER 5" hold and a l id been y and (o 471 SOLID Hr.	esting a ATIONS to 363 higher con used p caused i metres,	SUI metres oncentr orior to another where	where where ation of this]. r mud if a trip the equition of t	tual Chi a a mud of SAPF The K ring. The charg	ring ca ring ca was a CL pill v nis was ge the b	ame to the dded to the was pum cleared bit took p	ne surfa- the folio ped, bu and lace.
Total HARDNESS (mgA.) (** (mgA.) (** (mgA.) (** (Calc. Ibibbl) PHPA (Calc. Ibibbl) PHPA (Excess Ibibbl) PHPA (Excess Ibibbl) RHEOLOGY - 900 / 300 Field Bulk & Receiv	/6 (readin /3 (readin h	gs) NUD AC Fluid	Lost or	TING (8		~		200 ~ ~ ~ ~ ~		This will distribute the control of	Drille vas cle ns [25 the vi	ation of 12.25 ared a sx. ha scosity nued to	of the I OPER 5" holdered a I od beek y and 4 od 471 SOLID Hr. 0	esting a ATIONS to 363 higher con used p caused contests S CON	SUI metres concentration to the superior to th	where ation of this]. r mud if a trip to Equit	tual Chi a a mud of SAPF The K ring. Ti o chang	ring ca ring ca was a CL pill vals was ge the b	ame to the dded to	the surfathe foliceped, but and blace.
otal HARDNESS (mgA.) (** (mgA.) (** (mgA.) (** (mgA.) (** (M.) WY.) PHPA (Calc. lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi)	/6 (readin /3 (readin h	gs) NUD AC Fluid Desando	Lost or er		49	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		200 ~ ~ ~ ~ ~		This will distribute the control of	Driller vas cle ns [25 the vi: contin	ation of 12.25 ared a sx. ha scosity nued to	of the 1 OPER 5" holdered a h d beek y and 4 o 471 SOLID Hr.	esting a ATIONS to 363 higher con used p caused i metres,	SUI metres oncentr orior to another where	where where ation of this]. r mud if a trip the equition of t	tual Chi a a mud of SAPF The K ring. The charg	ring ca ring ca was a CL pill v nis was ge the b	ame to the dded to	the surfathe foliceped, but and blace.
otal HARDNESS (mgA.) (** (mgA.) (** (mgA.) (** (mgA.) (** (M.) WY.) PHPA (Calc. lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi) PHPA (Excess lishbi)	/6 (readin /3 (readin // /4	MUD AC Fluid Desando	Lost or		ed	Summi initial V		200 ~ ~ ~ ~ ~		This will distribute the control of	Driller vas cle ns [25 the vi: contin	ation of 12.23 ared a sx. ha scosity nued to Man.	of the inoperation of the inoper	esting a ATIONS to 363 higher con used processed metres, S CON Drand Drand	metres oncentrorior to another where 12 2 12	where ation of this]. r mud if a trip to Equilibria. 24	tual Chi a mud of SAPF The K ring. The K ring. The Contains on Charge PMENT Shekerif 1 2	ring ca ring ca was a CL pill vals was ge the b	ame to the dded to	the surfathe foliceped, but and blace.
otal HARDNESS (mgA.) (* (mgA.) (* (mgA.) (* (MgA.)	/6 (readin /3 (readin h /ed	ful AC Fluid Desando Desilter Dewnho	Lost or		49 47 73	Summi initial V	mary	200 ~ ~ ~ ~ ~	206	This will distribute the control of	Driller vas cle ns [25 the vi: contin	ation of 12.23 ared a sx. ha scosity nued to Man.	of the inoperation of the inoper	esting a ATIONS to 363 higher con used p caused contests S CON	metres oncentrorior to another where 12 2 12	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tual Chi a a mud of SAPF The K ring. The K or chang PMENT Shakeri 1 2	ring ca ring ca was a CL pill v nis was ge the b	was pum cleared bit took p	the surfathe foliciped, but and elace.
otal MARDNESS (mgA GULPHITE (mgAL) (* (mgAL) (* (mgAL) CCL (% by Wt.) HHPA (Calc. Ibhbbl) HHPA (Excess Ibhbbl) CHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Bulk & Receiv Premix w/ fresh water "recycled" Drill Water	/6 (readin // // // // // // // // // // // // //	(gs) #UD AC Fluid Desand Desilter Dewnhee	Lost or		49 47	Summi initial V	nary	200 ~ ~ ~ ~ ~	206	This will distribute the control of	Driller vas cle ns [25 the vi: contin	ation of 12.23 ared a sx. ha scosity nued to Man.	of the income of	esting a ATIONS to 363 higher con used processed metres, S CON Drand Drand	metres oncentr orior to another where ITROL Cones 2 12	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tual Chi a a mud of SAPF The K ring. The K ring. The Contact shakers 1 2 CIENCY flow (pp	ring ca ring ca was a CL pill v nis was ge the b	was pum cleared bit took p en Size 84/S84 Outpu	the surfathe folice ped, but and stace. Hr. 24
otal HARDNESS (mgA.) (* (mgA.) (* (mgA.) (* (MgA.)	/6 (readin // // // // // // // // // // // // //	ful AC Fluid Desando Desilter Dewnho	Lost or		49 47 73 280	Sunstinitial V	nary	200 ~ ~ ~ ~ ~	206	This will distribute the control of	Drilled vas cle ns [25 the Vigo continues cont	ation of 12.23 ared a sx. ha scosity nued to Man.	of the income of	esting a ATIONS to 363 higher con used p caused contents S CON D'sand D'sand D'sand D'sand D'sand	metres oncentr orior to another where ITROL Cones 2 12	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tual Chi a a mud of SAPF The K ring. The to charg PMENT Sheker# 1 2 CIENCY 9.7	ring ca ring ca was a CL pill v nis was ge the b	en Size B4/S84 Outpu 1.4	the surfathe foliciped, but and slace. Hr. 24
otal MARDNESS (mgA GULPHITE (mgAL) (* (mgAL) (* (mgAL) CCL (% by Wt.) HHPA (Calc. Ibhbbl) HHPA (Excess Ibhbbl) CHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Bulk & Receiv Premix w/ fresh water "recycled" Drill Water	/6 (readin // // // // // // // // // // // // //	(gs) #UD AC Fluid Desand Desilter Dewnhee	Lost or		49 47 73 280	Sunstinitial V	mary Polume	200 ~ ~ ~ ~ ~	206	This will distribute the control of	Driller vas cle ns [25 the Vi g contin	ation of 12.23 ared a sx. ha scosity nued to Man.	of the income of	esting a ATIONS to 363 aigher con used properties, so con Disand Disand Disand SEQUIDON (PPE	metres oncentr orior to another where ITROL Cones 2 12	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tual Chi a a mud of SAPF The K ring. The K ring. The Contact shakers 1 2 CIENCY flow (pp	ring ca ring ca was a CL pill v nis was ge the b	was pum cleared bit took p en Size 84/S84 Outpu	the surfathe folice ped, but and stace. Hr. 24
otal MARDNESS (mgA GULPHITE (mgAL) (* (mgAL) (* (mgAL) CCL (% by Wt.) HHPA (Calc. Ibhbbl) HHPA (Excess Ibhbbl) CHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Bulk & Receiv Premix w/ fresh water "recycled" Drill Water	/6 (readin	MUD AC Fluid Desand Desilter Dewnher	Lost or		49 47 73 280 43	Symeterial V Fluid R Fluid L Final T	mary Johnma Jeceived	200 	206	This will distribute the control of	Driller vas cle ns [25 the Vi g contin	ation of 12.23 ared a sx. ha scosity nued to Man.	of the I OPERU 5" hold and a I d beer d beer 10 0 471 SOLID Hr. 0 SOLIC SOLIC 8.9	esting a ATIONS to 363 aigher con used properties, so con Disand Disand Disand SEQUIDON (PPE	metres oncentr orior to another where ITROL Cones 2 12	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tual Chi a a mud of SAPF The K ring. The to charg PMENT Sheker# 1 2 CIENCY 9.7	ring ca ring ca was a CL pill v nis was ge the b	en Size B4/S84 Outpu 1.4	the surfathe foliciped, but and slace. Hr. 24
otal HARDNESS (mgA GULPHITE (mg/L) (* (mg/L) (*) (mg/L) CCL (*k by Wt.) HHPA (Calc. lishbil) HHPA (Excess lishbil) CHEOLOGY - 200 / 100 Pluid Bulk & Receiv Premix w/ fresh water " recycled " Drill Water Other	/6 (readin // // // // // // // // // // // // //	MUD AC Fluid Desand Desilter Dewnher	Lost or		49 47 73 280	Symeterial V Fluid R Fluid L Final T	mary Polume	200 	206	This will distribute the control of	Driller PS cle P	ation of 12.2: ared a sx. ha scosily nued to	of the 1 OPERA OPE	esting a ATIONS to 363 aigher con used present con used present con used present con used present con used present con used con u	sur metres on central metres on central reference o	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tuel Chi e a mud of SAPF The K ring. The Control of charge PMENT Stellar 1 2 SIENCY 7 9.7 9.3	ring ca was a CL pill v nis was ge the t	en Size B4/S84 Outpu 1.4	the surfathe foliciped, but and blace. Hr. 24 24
otal HARDNESS (mgA GULPHITE (mg/L) (* (mg/L) (*) (mg/L) CCL (*k by Wt.) HHPA (Calc. lishbil) HHPA (Excess lishbil) CHEOLOGY - 200 / 100 Pluid Bulk & Receiv Premix w/ fresh water " recycled " Drill Water Other	/6 (readin	MUD AC Fluid Desand Desilter Dewnher	Lost or	Dispet	49 47 73 280 43	Summer tention of the second s	mary folume focatived out	200 	206 732 493	This will distribute the control of	Driller Driller	di 12.2: ared a sx. ha scosily nued to Man.	of the 1 OPERA OPE	esting a ATIONS to 363 aigher con used present to 363 aigher c	sur metres on central metres on central reference o	where ation of this]. r mud if a trip to the trip trip to the trip to the trip trip to the trip trip to the trip	tual Chi a mud of SAPF The K ring. The K ring. The chang because the chang PMENT Shelcare 1 2 CIENCY flow (pp) 9.7 9.3	ring ca was a CL pill v nis was ge the t	outpu	the surfathe folk ped, but and place. Hr. 24 24 24
otal HARDNESS (mgA GULPHITE (mg/L) (* (mg/L) (*) (mg/L) CCL (*k by Wt.) HHPA (Calc. lishbil) HHPA (Excess lishbil) CHEOLOGY - 200 / 100 Pluid Bulk & Receiv Premix w/ fresh water " recycled " Drill Water Other	/6 (readin	fluid AC Fluid Desando Desilter Desynhe Dumped Dither	Lost or	Used	49 47 73 280 43	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary /elume /eceived ost otal Unit \$	200 ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~	206	This will distribute the control of	Driller Pas cle Pas cl	di 12.2: ared a sx. ha scosily nued to Man.	of the 1 OPERA OPE	esting a ATIONS to 363 aigher con used present con used present con used present con used present con used present con used con u	metres on central metres on ce	MMARY where ation of this]. r mud if a trip the trip trip the trip	tual Chi a mud of SAPF The K ring. The K ring. The chang because the chang PMENT Shelcare 1 2 CIENCY flow (pp) 9.7 9.3	ring ca was a CL pill v nis was ge the t	outpu	the folice ped, but and blace. Hr. 24 24 24 3 FT/S
otal HARDNESS (mgA SULPHITE (mgR) (+ (mgA) CCL (% by Wt) PHPA (Calc. lahbbi) PHPA (Excess lahbbi) PHPA (Excess lahbbi) PHEOLOGY - 200 / 100 RHEOLOGY - 200 / 100 Fluid Sulk & Receiv Premix wi fresh water "recycled" Drill Water Other	/6 (reading / / / / / / / / / / / / / / / / / / /	gs) #UD AG Fluid Desando Desilter Deswither Dumped Other	Lost or	Dispet	49 47 73 280 43	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary folume focatived out	200 ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~	206 732 493	This will distribute the control of	Drille- ras cle ras cle ras cle ras (25 the Vi ras cle ras (25 the Vi ras cle	Man. Drico	of the 1 OPERA OPE	esting a ATIONS to 363 aigher con used properties. S CON Drand Draiter S EQUIDED 1 9 0.0	metres concentration of the co	MMARY where ation of this]. r mud if a trip the trip trip the trip	tuel Chi e a mud of SAPF The K ring. The K ring. The chang pMENT States 1 2 SIENCY flow (pp: 9.7 9.3 BIT / H slecky c Force	ring ca was a CL pill v nis was ge the t	output Lics DA ame to the deded to leaves purm cleared oit took p en Size 84/S84	the folioped, but and blace. Hr. 24 24 24 25 26 27 28 28 28 28
etal HARDNESS (mgA GULPHITE (mg/L) (* (mg/L) (*CL (% by Wt.) PHPA (Calc. lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) PHPA (Excess lishbil) Preduct	/6 (reading // // // // // // // // // // // // //	MUD AC Fluid Desand- Desilter	Lost or	Used	49 47 73 280 43 493	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary /elume //eceived ost otal Unit \$ 6.20	200	206 732 493	This we distributed fritting Type Centrif Degase Desirite SOLI High G Benter	Drille- ras cle ras cle ras (25 the Vi ras cle ras (25 the Vi ras cle ras (25 the Vi ras cle r	Man. Drico	of the 1 OPERA OPE	esting a ATIONS to 363 algher con used processed construction of the construction of t	metres concentration of the co	where acid was a man and a man	tuel Chi e a mud of SAPF The K ring. The K ring. The Chang pMENT States 1 2 CIENCY flow (pp: 9.7 9.3 BIT / H clocky c Ferce / in2	ring ca was a CL pill v nis was ge the t	output LICS DA James to the deded to to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the deded to the ded	the foliciped, but and blace. Hr. 24 24 24 24 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
otal HARDNESS (mgA. ULPHITE (mgA.) + (mgA.)	/6 (reading // // // // // // // // // // // // //	MUD AC Fluid Pluid Desilter Dewnhe Dumped Dither Fetal Le	Lost or	Used	49 47 73 280 43 493	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary Volume Leceived out out Unit \$ 6.20	200	206 732 493	This will district the color of	Driller Pas cle Pas cl	ation of 12.23 ared a sx. ha scosily nued to Man. — Drico	of the 1 OPERA OPE	esting a ATIONS to 363 algher con used processed and the contraction of the contraction o	metres concentration of the co	where acid was a man and a man	tuel Chi e a mud of SAPF The K ring. The K ring. The Chang pMENT States 1 2 CIENCY flow (pp: 9.7 9.3 BIT / H clocky c Ferce / in2	siring call ring	output Lics DA 300 981	Hr. 24 24 24 24 25 2 LBS 5 9
otal HARDNESS (mgA ULPHITE (mgA) + (mgA) - (mg	/6 (reading // // // // // // // // // // // // //	MUD AC Fluid Desand- Desilter	Lost or	Used	49 47 73 280 43 493 1243 400 40	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume ecceived ost otal unit \$ 6.20 8.13	200 	206 732 493 445	This will distribute the control of	Driller ras cle ras [25 the Vi- g contin durant der pr DS Ah pravity 5 ravity 5 selids Selids	Man. Drico MALYSI Solids Gelids	of the topper of	esting a ATIONS to 363 algher con used processed and the second position of the second posi	metres concentration of the co	where acid was a man and a man	tuel Chi e a mud of SAPF The K ring. The K ring. The Chang pMENT States 1 2 CIENCY flow (pp: 9.7 9.3 BIT / H clocity t Ferce / in2 ess. Les	ring call ring c	output Lics DA 30 98 2. 29	the foliceped, but and blace. Hr. 24 24 24 25 26 (gal/m) 27 28 PS
otal HARDNESS (mgA. ULPHITE (mgA.) + (mgA.)	/6 (reading // // // // // // // // // // // // //	MUD AC Fluid Pluid Desilter Dewnhe Dumped Dither Fetal Le	Lost or	Used	49 47 73 280 43 493	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume eceived est otal ading Vel. Unit \$ 6 20 8 13 7 25 35 40	200 	206 732 493 445	This will distribute the control of	Driller ras cle ras [25 the Vi- g contin tuge ser DS Ah pravity 5 ravity 5 ravity 5 ge 5. G	Man. Drico MALYSI Solids Gelids	of the 1 OPER, 5" hole and a h d beel y and 4 o 471 BOLID Hr. 0 0 SOLIC Overf 8.9 8.85	esting a ATIONS to 363 algher con used processed and the second contract of the second cont	metres concentration of the co	where acid make a cid	tuel Chi a mud of SAPF The K ring. The K ring. The Chang pMENT States 1 2 CIENCY flow (pp: 9.7 9.3 BIT / H clocky c Force / in2 case. Les Geat Frac	siring call ring	output LiCS DA 30 98 2.1 29 72	the folice ped, but and blace. Hr. 24 24 24 25 26 (gal/m) 27 28 PS
etal HARDNESS (mgA ULPHITE (mgA) (** (mgA) (*	/6 (reading // // // // // // // // // // // // //	MUD AC Pluid Desand- D	Lost or	Used	49 47 73 280 43 493 1243 400 40	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume ecceived ost otal unit \$ 6.20 8.13	200 	206 732 493 445	This will distribute the color raised driffing the contribute the	Driller ras cle ras [25 the Vi- g contin tuge ser DS Ah Pravity 5 ravity 5 ge 5. G	Man. Drico MALYSI Solids Gelids	of the 1 OPER/ 5" hole and a h d beel / and 4 O 471 SOLID Hr. 0 O SOLIC Overf 8.9 8.85	esting a ATIONS to 363 algher con used granted ametres, sometimes, sometimes are sometimes and sometimes are sometimes.	metres concentration of the co	WHARY Where ation of this]. Fruid in a trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip to the trip trip trip trip trip trip trip trip	tuel Chi a mud of SAPF The K ring. The K ring. The Chang pMENT shekerif 1 2 SIENCY flow (pp) 9.7 9.3 BIT / H slecky c Force / in2 beas. Les Seat Frac Equiv. M	siring call ring	output LiCS DA 30 98 2.1 2.1 0 0 0 0 0 0 0 0 0 0 0 0 0	the folice ped, but and blace. Hr. 24 24 24 25 25 3 FT/S 2 LB: 5 9
etal HARDNESS (mgA ULPHITE (mgA) (** (mgA) (*	/6 (reading // // // // // // // // // // // // //	MUD AC Pluid Desand- D	Lost or	Used ~	49 47 73 280 43 493 1243 400 40	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume eceived est otal ading Vel. Unit \$ 6 20 8 13 7 25 35 40	200 	206 732 493 445	This will district the control of th	Driller Dri	Man. Drico MALYSI Solids Gelids	of the 1 OPERU 5" hole and a 1 d beel of 471 SOLID Hr. 0 SOLIC Overf 8.9 8.85	esting a ATIONS to 363 algher con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted	SUIT Market Mar	He acide Aci	be a mud of SAPF The K ring. The K ring. The charm of charm shakers 1 2 CIENGY flow (pp) 9.7 9.3 BIT / H cleby c Force / in2	sing call ring c	output Lics DA 2.1 Lics DA 30 98 2. 29 72 0 0 ###	Hr. 24 24 24 24 25 5 9 8 PS
otal HARDNESS (mgA ULPHITE (mgAL) + (mgAL)	/6 (reading // // // // // // // // // // // // //	MUD AC Pluid Desand- D	Lost or	Used ~	49 47 73 280 43 493 1243 400 40	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume eceived est otal ading Vel. Unit \$ 6 20 8 13 7 25 35 40	200 	206 732 493 445	This will distribute the color raised driffing the contribute the	Drillering Continues of the Victoria Continu	d 12.2: ared a sx. ha scosity nued to the control of the control o	of the topper of	esting a ATIONS to 363 algher con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted	SUIT Market Mar	Jet Ve Impact HHP / HHP / Ceg. S	BIT / Holocity Equiv. M CD CD CD CD CD CD CD CD CD C	ypresud Wt.	output Lics DA 2.1 Lics DA 30 98 2. 29 72 0 0 ###	Hr. 24 24 24 24 25 5 9 8 PS
etal HARDNESS (mgA ULPHITE (mgA) (** (mgA) (*	/6 (reading // // // // // // // // // // // // //	MUD AC Pluid Desand- D	Lost or	Used ~	49 47 73 280 43 493 1243 400 40	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume eceived est otal ading Vel. Unit \$ 6 20 8 13 7 25 35 40	200 	206 732 493 445	This will distribute the color raised driffing the contribute the	Driller Dri	d 12.2: ared a sx. ha scosity nued to the control of the control o	of the 1 OPER, 5" hole and a l d beel / and 4 O 471 SOLID Hr. 0 O SOLIC Overf 8.9 8.85	esting a ATIONS to 363 algher con used graused a metres, so con used printer of the control of t	Sum Market Mark	Jet Ve Impact HHP / HHP / Ceg. S	BIT / Holocity Equiv. M C D C D C D C D C D C D C D C	ypraulumpe set:	outpu Cles DA Outpu 1.4 2.1 Cles DA 30 98 2. 29 72 0 0 ### M 496	Hr. 24 24 24 24 25 5 9 8 PS
otal HARDNESS (mgA SULPHITE (mgR) (+ (mgA) CCL (% by Wt) PHPA (Calc. lahbbi) PHPA (Excess lahbbi) PHPA (Excess lahbbi) PHEOLOGY - 200 / 100 RHEOLOGY - 200 / 100 Fluid Sulk & Receiv Premix wi fresh water " recycled " Drill Water Other	/6 (reading // // // // // // // // // // // // //	MUD AC Pluid Desand- D	Lost or	Used ~	49 47 73 280 43 493 1243 400 40	Sunse Initial V Fluid R Fluid L Final T (Circulations	mary felume eceived est otal ading Vel. Unit \$ 6 20 8 13 7 25 35 40	200 	206 732 493 445	This will distribute the color raised driffing the contribute the	Drillering Continues of the Victoria Continu	d 12.2: ared a sx. ha scosity nued to the control of the control o	of the 1 OPER, 5" hole and a l d beel / and 4 O 471 SOLID Hr. 0 O SOLIC Overf 8.9 8.85	esting a ATIONS to 363 algher con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted ametres, so con used granted	Sum Market Mark	Jet Ve Impact HHP / HHP / Ceg. S	BIT / Holocity Equiv. M C D C D C D C D C D C D C D C	ypresud Wt.	outpu Cles DA Outpu 1.4 2.1 Cles DA 30 98 2. 29 72 0 0 ### M 496	Hr. 24 24 24 25 3 FT/S 2 LBS 5 9 8 PS
otal HARDNESS (mgA SULPHITE (mgA) (** (mgA)	/6 (readin//3 (readin/	rgs) AUD AUD AUD AUD AUD AUD AUD AUD AUD AUD	Lest of	Used ~	49 47 73 280 43 493 1243 400 40 2	Summinitial V Fluid R Fluid L Final T (Circulations)	mary olume eccived ost tunk \$ 20 8 13 7 25 3 5 41 12 85	200	206 732 493 445 st \$	This will distribute the control of	Drillevies cleans [25 the vistor of the vist	Man. Drico MALYSI Solids SICK Al Cost	of the 1 OPER/ 5" hole and a 1 d beer / and 4 o 471 SOLID Hr. 0 SOLIC Overf 8.9 8.85	esting a ATPONS to 363 sigher con used graused ametres, so con used graused ametres, so con used graused ametres, so con used graused ametres, so con used graused ametres, so con used graused graused ametres, so con used graused g	SUI Metres SUI	HHP Cag. S	BIT / Helecity Equiv. M C D C D C D C D C D C D C D C	ring ca ring ca rwas a CL pill v nis was ge the b Sere- S110/S S84/S8 L) YDRAUL PP - GP pest: \$ 4,0	outpu Cles DA Outpu 1.4 2.1 Cles DA 30 98 2. 29 72 0 0 ### M 496	the foliciped, but and blace. Hr. 24 24 24 24 25 5 9 8 PS PP



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report

5 Reports 22-Jan . Oate Spud Date 18 Jan 1997 Depth 471 (M.)To 49

WELL NAME and No.		ΙA	IRA	LE	EA :	# 1			CONTR	ACTOR		О.	ν.	& I	€.				
Block No. PEP 10		Locatio		Otway I			State :	Victoria		RIG No.		30							
PERATOR'S REPRE		NE.		Alex	BRADI	LEY			REPOR	T FOR	1	Paul	COC	PER					
	Assemb				Casing			м	ud Volu	me Bbit	J					Circulat	don Data		
	1.1.4	7	s . 3 * 18		inch @	12.2	Metres	Hole:	87	Pits:		20		Pump	size :	[2.]	6.0"	8.0	ins.
Bit size 12.3 Type:		Length			Inch Q			Drill String Cap	: 21	Total Vo	lume		128	Make/I	Model 1	GD	PZ - 8	% Effic	.0
op 4.5 Type:	54.84	Length			inch Q	~		in Storage :		Weight:		8.95		Make/	Model 2	G D	PZ-8	% Effic	. 0
			16	MUD T		Gel - S	bud		% O/G:	~ /	Annul	ar Vek	city	BbVst	00	Stlumin	120	вым	16.7
	18.75	Other	16	MOU !	ITPE.	1		roperties	DP size			FUM)	Turb	Bbvst	000	Stlumin	120	GPM:	704
C " 8 Length	27.8	L				 		Pit	DC size	6.5	160 (FUM)	Turb	Botton	ns up :	5	PRESSU	JRE :	1,350
SAMPLE From								21.00	DC size		200 (FUM)	Turb	Total C	irc. :	8	Type su	riisys.	3
TIME Sample Taken					deg. C	†		N.C.	<u> </u>			MUD	PROPE	RTY S	PECIFIC	ATIONS			
Flowline TEMPERATUI	<u></u>	-						495	Weight	: 1	Min F	iltrate	:		NC	Other:	NC		
WEIGHT PPG			-					8.95	Viscosi	ty:	NC F	lastic	Viscos	ity:	NC	Yield Po	oint:	NC	
	alad \ AD		22	deg. C				35	By Aut	nority:	~ (Operat	or's wr	itten		~	Driffing (Contracto	or
Funnel VISCOSITY (se		•				· · · ·		3	1	-	ves (Doerat	ors Re	present	ative	-	Other		
PLASTIC VISCOSITY			36	deg. C		 		6	 							NDATIO	vs		
MELD POINT (IN1001C						 		1 2	-1	The 12-	14	sactic	on cart	ide che	ock rev	ealed a	12% gau	IGO OXC	ess.
CEL STRENGTH (IN)	10ft2) 10) sec. / 10) min.				L										point, a		
FILTRATE API (cm3/3								13.8	below.	,, ,,sco	-uy P	178				9	, 		
API HTHP Filtrate (cm				deg. C		 	-	2 -		resimer	nt to H	he sv	stem t	ook ola	ce in th	is period	đ.		
CAKE Thickness (32n					Date of	-62.5		4.5 ~	- '*''	101		• ;							
SOLIDS Content (% b)			Calc.	.!	Retort	-02.3	162.5	~ 95.5	A+ 14.	e end o	f the	ceme	nt one	ration.	the sur	face sys	tem was	dumpe	d and
LIQUID Content (% by		OilWate	M.				.02.3	Tr		re clear		J J. 114	-p-						
SAND Content (% by						.		16.0				AĮO118	sectio	n was r	etaine	i to be u	sed for t	the 8-1/2	2*
METHYLENE BLUE CA		X	IP/PPI		cm3/cm3	}		7.8	section		~ p. •			== •					
рН	Strip			20	deg. C			N.C.			s war	ماء ۾	aned I	HPA .	vas ad	ded and	shearing	began.	
	²m)					<u> </u>				- ore bit								٠٠	
ALKALINITY Filtrate	(PffMf)					1		0.15/0.7	100-	ina Gal :	was .	ن احمد	n the ^	ament	ODerst	on and s	so it's co	st was n	ot add
CHLORIDE (mg/L)	_					}	. }	2,800	•	ing Gei v Krilling fli					-perat	w. ru		J	
Total HARDNESS (mg	L)					 		140	- In me (жингу п					184644				
SULPHITE (mg/L)									-				TIONS		JMMAR		10 25"	nole to 4	مد مد
K+ (mg/L)										Comple	eted t	he bit	gub su	d resur	nea an	wing the	12.25"	1018 10 4	90 mi
KCL (% by WL)									Circula	ted a hig	gh vis	cosit	/ SW08	p [20b	DIS.] 10	surrace	and pull	ed out to	o run u
PHPA (Calc. lb/bbl)							<u> </u>		9-5/8	Casing.	This						and the		
PHPA (Excess Ib/bbl)						~		~	1	ed clea							with no	bropleu	ns and
RHEOLOGY - 600 / 300	i 6 Iread	linos)	•			I		12/9/2	the pre	paration	of th	e 8.5	" secti	on took	place	there - a	fter.		
RHEOLOGY - 200 / 100			•					6/6/2	I										
KHE0L0G1 - 2007 100	10 (1000		CCOLIN	ITING (B							9	SOLID	s co	NTROL	EQUI	PMENT			
		1							Туре		Man.	Hr.		Cones	Hr.	Shaker#	Screen	Size	Hr.
Fluid Built & Receiv	ed		Lost of	r Dispos		Sumr		445					D's and	2	1	1	S110/S8	4594	5
Premix							-1		Cantrib	100	~							41304 [5
		Desand	•		6	V	olume		Centrift	Z				 	3.5				
wi fresh water	0		•		11			· · · · · · · · · · · · · · · · · · ·	Centrift. Degass	Z	rico		D'silter	12	3.5	2	S84/S84/		,
wi fresh water " recycled "	0	Desand	•		11 28	Fluid R		<u>.</u> 0		Z		0	D'silter	12		2			,
**	_	Desand Desilter	r ole		11			· · · · · · · · · · · · · · · · · · ·		Z		O	D'silter S EQU	12	EFFR	2 CIENCY	S84/S84/	S84	
" recycled "	0	Desand Desilter Downho	r ole		11 28		eceived	· · · · · · · · · · · · · · · · · · ·		Z		O SOLID	D'silter	12	EFFR	2 CIENCY flow (ppg	S84/S84/	S84 Output	
" recycled " Drill Water	0	Desand Desilter Downho	r ole		11 28 256	Fluid R	eceived	0		er D		O	D'silter S EQU	12	EFFR	2 CIENCY flow (ppg 10.4	S84/S84/	Output	
" recycled " Drill Water	0	Desand Desilter Downho	r ole		11 28 256	Fluid R	eceived	0	Degass	er D		O SOLID	D'silter S EQU	12	EFFR	2 CIENCY flow (ppg	S84/S84/	S84 Output	
" recycled " Drill Water Other	0 0	Desand Desilter Downhi Dumped Other	r ole d		11 28 256 16	Fluid Ro	eceived ost	0 317 128	Degass	er D		O SOLID Overflo	D'silter S EQU	12	EFFR	2 CIENCY flow (ppg 10.4	S84/S84/	Output	
" recycled " Drill Water	0 0	Desand Desilter Downho	r ole d		11 28 256	Fluid Ro	eceived	0 317 128	Degass Desand Desilter	er D		O SOLID Overflo 9.0	D'siker S EQU	12 IPMENT	EFFR	2 Row (ppg 10.4 9.8	S84/S84,	Output 1.3 2.2	(gal/m)
" recycled " Drill Water Other	0 0	Desand Desilter Downhi Dumped Other	r oole d		11 28 256 16	Fluid Ro	eceived ost otal ating Vol.	0 317 128	Degass Desand Desilter	er D	YSIS	O SOLID Overflo 9.0	D'siker S EQU	12 1PMENT	r EFFK Under	2 Flow (ppg 10.4 9.8	S84/S84/	Output (1.3 2.2 S DAT	(gal/m)
" recycled " Drill Water Other	0 0	Desard Desilter Downhi Dumped Other	r ole d	Used	11 28 256 16	Fluid Ro	eceived ost otal otal Unik \$	0 317 128	Desand Desilter SOLID	er D	YSIS	O SOLID Overflo 9.0	S EQU bw (ppg	12 ************************************	T EFFK Under	2 Flow (ppg 10.4 9.8 BIT / HY	S84/S84,	Output 1.3 2.2 S DAT. 303	(gal/m) A
" recycled " Drill Water Other Fotal Received	0 0	Desard Desilter Downhi Dumped Other	r oole d	Used	11 28 256 16	Fluid Ro	eceived ost otal ating Vol.	0 317 128	Degass Desand Desilter	er D	YSIS	O SOLID Overflo 9.0	S EQUIPM (ppg	12 **) 0.0 1.7	Jet Ve	2 ROW (ppg 10.4 9.8 BIT / HY	S84/S84,	Output 1.3 2.2 S DAT 303 988	(gal/m) A
" recycled " Drill Water Other Total Received Product Barytes	0 0	Desard Desilter Downho Dumped Other	r oole d		11 28 256 16 317	Fluid Ro	eceived ost otal otal Unik \$	0 317 128	Desand Desilter SOLID	er D	YSIS	O SOLID Overflo 9.0	B EQU bw (ppg	12 PMENT .) 0.0 1.7 2.7	Jet Ve	2 ROW (ppg 10.4 9.8 BIT / HY	S84/S84,	Output 1.3 2.2 S OAT 303 988 2.6	(gal/m) A
" recycled " Drill Water Other Fotal Received Product Barytes Caustic Potash	0 0	Desand Desilter Downhi Dumped Other Total Lo	r oole d	-	11 28 256 16 317 Balant 1243	Fluid Ro	eceived ost otal ating Vol. Unit \$ 620	0 317 128	Degass Desand Desilter SOLIC High Gr Benton	er D	YSIS	O SOLID Overflo 9.0	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 PMENT) 0.0 1.7 2.7 4.5	Jet Ve Impact	2 CIENCY flow (ppg 10.4 9.8 BIT / HY locity Force in2	\$84/\$84,	Output 1.3 2.2 S OAT 303 988 2.6 301	(gallm) A FT / SE LBS
" recycled " Drill Water Other Total Received Product Barytes Caustic Potash d Gel	0 0	Desand Desilter Downhi Dumper Other Total Lo	r oole d	1	11 28 256 16 317 Balan 1243 23	Fluid Ro	eceived ost otal ting Vol. Unit \$ 6,20 39,68	0 317 128) Cost \$	Degass Desand Desilter SOLIC High Gr Benton	er D S ANAL avity Solids savity Solids	YSIS	O SOLID Overflo 9.0	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 PMENT) 0.0 1.7 2.7 4.5	Jet Ve Impact	2 ROW (ppg 10.4 9.8 BIT / HY	\$84/\$84,	Output 1.3 2.2 S OAT 303 988 2.6	(gallm) A FT / SE
" recycled " Drill Water Other Fotal Received Product Barytes Caustic Potash d Gel Myoming Gel	0 0	Desard Desilter Downho Dumped Other Total Lo tory 1243 24 400 35	r oole d	1 40	11 28 256 16 317 Balan 1243 23 360 15	Fluid Ro	oceived ost otal ating Vol. Unit \$ 6,20 39,68 8,13	0 317 128) Cost 5 39.69 325.20	Degass Desand Desilter SOLIC High Gr Benton Dritted 1 Low Gri	er D S ANAL avity Solids avity Solids avity Solids	YSIS	9.00	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 **) 0.0 1.7 2.7 4.5 Solids	Jet Ve Impact HHP / Bit Pre	2 CIENCY flow (ppg 10.4 9.8 BIT / HY locity Force in2	\$84/\$84.	Output 1.3 2.2 S OAT 303 988 2.6 301	A FT/SE LBS
" recycled " Drill Water Other Fotal Received Product Barytes Caustic Potash d Gel Myoming Gel iK - 261	0 0	Desard Desilter Downho Dumper Other Total Lo tory 1243 24 400 35 105	r oole d	1 40 20	11 28 256 16 317 Balan 1243 23 360 15 99	Fluid Ro	ost otal ating Vol. Unit \$ 6,20 39,68 x 13	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Dritted 1 Low Gr Average Med. "r	er D S ANAL avity Solids avity Solids avity Solids	YSIS	9.00	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 **) 0.0 1.7 2.7 4.5 Solids	Jet Ve Impact HHP / Bit Pro	2 RENCY Row (ppg 10.4 9.8 BIT / HY locity Force in2	S84/S84/	Output 1.3 2.2 S OAT 303 988 2.6 301	A FT / SE LBS
Product Barytes Caustic Potash Id Gel Wyoming Gel UK - 261 KCL - Tech.	0 0	Desand Desilter Downho Other Total Lo tory 1243 24 400 35 105 200	ole d	1 40 20	11 28 256 16 317 Balan 1243 23 360 15 99 200	Fluid Ro	oceived ost otal ating Vol. Unit \$ 6,20 39,68 8,13	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Drilled 1 Low Gr Average Med. "r	er D S ANAL avity Solids avity Solids avity Solids	YSIS	9.00	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 **) 0.0 1.7 2.7 4.5 Solids 0.415 3.462	Jet ve Impact HHP / Bit Pro	Post Force in 2 seat Frac I quiv. Much	S84/S84/	Output 1.3 2.2 S OAT 303 988 2.6 301	A FT / SI LBS
Product Barytes Caustic Potash d Gel Myoming Gel iK - 261 KCL - Tech. Biocide - B54X	0 0	Desard Desilter Downh Other Total Lo tory 1243 24 400 35 105 200 2	r oole d	1 40 20 6	11 28 256 16 317 Balan 1243 360 15 99 200 5	Fluid Ro	ost	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Drilled S Low Gn Average Med. "r Med. "l'	er D S ANAL avRy Solids avRy Solids avRy Solids avRy Solids avRy Solids avRy Solids avRy Solids	YSIS	9.00	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 *) 0.0 1.7 2.7 4.5 Solids 0.415 3.462 0.477	Jet Ve Impac HHP / Bit Pro Csg. 9	Post Force in 2 ceat Frac iquiv. Much	S84/S84,	Output 1.3 2.2 S OAT 303 988 2.6 301 732 - 9.05	A FT / SI LBS
Product Barytes Caustic Potash d Gel Myoming Gel iK - 261 KCL - Tech. Biocide - B54X	0 0	Desand Desilter Downho Other Total Lo tory 1243 24 400 35 105 200	ole d	1 40 20	11 28 256 16 317 Balan 1243 23 360 15 99 200	Fluid Ro	ost otal ating Vol. Unit \$ 6,20 39,68 x 13	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Drilled : Low Gn Average Med. "r Low "r Low "r Low "r	er D S ANAL avky Soli Re Bolids avky Soli , S. G.	ySiS lids	9.00	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 *) 0.0 1.7 2.7 4.5 Solids 0.415 3.462 0.477	Jet Ve Impaci HHP / Bit Pro Csg. 9	DIENCY Row (ppg 10.4 9.8 BIT / HY locity Force in2 iss. Loss eat Frac I quiv. Muc	S84/S84, DRAULIC	Output 1.3 2.2 S OAT 303 988 2.6 301 732	A FT / St LBS PS:
Product Barytes Caustic Potash d Gel Wyoming Gel UK - 261 KCL - Tech. Biocide - B54X	0 0	Desard Desilter Downh Other Total Lo tory 1243 24 400 35 105 200 2	ole d	1 40 20 6	11 28 256 16 317 Balan 1243 360 15 99 200 5	Fluid Ro	ost	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Drilled : Low Gn Average Med. "r Low "r Low "r Low "r	er D S ANAL avRy Solids avRy Solids avRy Solids avRy Solids avRy Solids avRy Solids avRy Solids	ySiS lids	0 SOLID Overflic 9.0 (p	D'silter S EQU W (ppg 0.0 15.8 24.9 40.7 2.60	12 *) 0.0 1.7 2.7 4.5 Solids 0.415 3.462 0.477	Jet Ve Impaci HHP / Bit Pro Csg. 9	DIENCY Row (ppg 10.4 9.8 BIT / HY locity Force in2 ss. Loss eat Frac I quiv Muc	S84/S84/S84/S84/S84/S84/S84/S84/S84/S84/	Output (A FT / SE LBS PS: PP:0 PP:0
" recycled " Drill Water Other Total Received	0 0	Desard Desilter Downh Other Total Lo tory 1243 24 400 35 105 200 2	ole d	1 40 20 6	11 28 256 16 317 Balan 1243 360 15 99 200 5	Fluid Ro	ost	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Drilled : Low Gn Average Med. "r Low "r Low "r Low "r	er D S ANAL avky Soli Re Bolids avky Soli , S. G.	ySiS lids	0 SOLID Overflic 9.0 (p	D'silter S EQU DW (ppg 0.0 15.8 24.9 40.7	12 *) 0.0 1.7 2.7 4.5 Solids 0.415 3.462 0.477	Jet Ve Impaci HHP / Bit Pro Csg. 9	DIENCY Row (ppg 10.4 9.8 BIT / HY locity Force in2 iss. Loss eat Frac I quiv. Muc	S84/S84, DRAULIC	Output ((gal/m)
Product Barytes Caustic Potash d Gel Nyoming Gel K - 261 CCL - Tech. Biocide - B54X	0 0	Desand Desilter Downhold Dumped Other Total Lot tony 1243 24 400 35 105 200 2 45	ole d	1 40 20 6	11 28 256 16 317 Balan 1243 360 15 99 200 5	Fluid Ro	ost ost otal uting Vol. 0 20 39 68 8 13 147 25 12 85	0 317 128) Cost \$ 39.68 325.20	Degass Desand Desilter SOLIC High Gr Benton Drilled : Low Gn Average Med. "r Low "r Low "r Low "r	er D S ANAL avky Soli Re Bolids avky Soli , S. G.	ySiS lids	0 SOLID Overflic 9.0 (p	D'silter S EQU W (ppg 0.0 15.8 24.9 40.7 2.60	12 **) 0.0 1.7 2.7 4.5 Solids 0.415 3.462 0.477 2.35	Jet Ve Impac HHP Bit Pre Csg. 9 EC Crit.Fi Cumul	DIENCY Row (ppg 10.4 9.8 BIT / HY locity Force in2 ss. Loss eat Frac I quiv Muc	DRAULIC Pres d Wt. P-GPM it: 5,649	Output (A FT / St LBS PS:

Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report AC.N. 000 287 314

Reports 6 Date: 23-Jan Spud Date: 18 Jan. 1997 Depth: 495 (M.)Te: 498

										•											
WELL NAME and No.	:	TA	AR/	AL)	EA	# 1				CONTR	ACTOR	t	0.	D.	&	E.					
Neck Ne.: PEP 10		Locatio	en :	Otway	Basin		State :	Victoria			RIG N	9 .	30								
OPERATOR'S REPRE	SENTATI	VE:		Alex	BRAI	DLEY				REPOR	T FOR		Paul	COC	PER	l					
Drilling	Assemb				Casing				N	fud Velu	me Bb	is.						Circulz	tion Dat	a	
Bit size 8.5 Type:	4.1.7	Jet	s : 3 x 12	16	inch @	12.2	Metre	Hele:		76	Pits :		392		Pump	size	:	27_	6.0"	* 8.0	Ins.
ор <u>" 4.5 Туре:</u>	G_	Lengt	287.1	9.675	inch d	492.8	Metre	Drill Stri	ng Cap.		Total V			534	Make			G.D.	PZ-8	% Em	
nwe 4.5 Type:	37.1	Length	37.1	1-	inch (In Stera	<u> </u>	7	Weight		8.8		Make			G.D.	PZ - 8	% EM	
DC " 6.5 Length		Other	15 21	MUD	TYPE:	KCL	PHPA			% O/G:	~		lar Vek		-			9th/min	75	BHM	
DC " ~ Length	_ ~					+	Mud P	F/Line		DP size		197 342	(FVM)	Turb				Stit/min 8	75 PRESS	GPM:	1,50
SAMPLE From TIME Sample Taken								23.30		DC size		•	(FUM)	~	Total	•	•	54	Type st		1,50
Flowline TEMPERATU	RE				deg. C	 		22					· · · · · · ·	PROPE	RTY :				.,,,		
DEPTH Metres								498		Weight	:	< 9.2	Filtrate	:	decre	ase t	o 6.0 C	Other:	Chloride	s max @	10,000
WEIGHT PPS.						<u> </u>		8.50		Viscosit	<u> </u>	N.C.	Plastic	Viscos	lty:	N.C	<u> </u>	field P	oint :	15 - 30	<u> </u>
unnel VISCOSITY (se	ciqt.) API	e	22	dog. C	<u> </u>			33		_By Auth	erity :	<u>~</u>	Opera	or's wr	itten		2		-	Contract	ter
PLASTIC VISCOSITY	Pe		36	deg. C	<u> </u>	<u> </u>		5							presen				Other		
YIELD POINT (IL/100FC	2)					<u> </u>		5		-{		FLUI	D SUM	MARY /	NO RE	COM	MENC	ACITAC	<u>15</u>		
GEL STRENGTH (MAC			0 min.			+		2 22 4	2		ad th		DUE	AIVC	4	AM 4	ves c	omole	lad and	shearin	a tool
FILTRATE API (cm3/3 API HTHP Filtrate (cm				deg. C		+-:	<u> </u>	23.4		place fi	-				ysi	W			anu		.y .oo
CAKE Thickness (32n						1	—	1	~	-4°			-		revious	5 5 6 C	tion,	was p	olymer	encapsu	ulated
SOLIDS Content (% by			Cale.	1	Retert	-62.5	~	0.6	~	PHPA				_							
IQUID Content (% by	Vel.)	Oll/Wat	ter			<u> -</u>	162.5	~_	99.4	-[
SAND Content (% by V								Tr		-{											
METHYLENE BLUE CA		X	PVPI		em3/em	3		9.0		1											
H ·	Strip			20	deg. C	+		0.36		1											
<u>LKALINITY Mud <i>(</i>)</u> LKALINITY Filtrate	Pm) (PffMf)					1		0.32/0.9)5	1											
CHLORIDE (mg/L)	(Prime)					 		10,600	<u> </u>	1											
otal HARDNESS (mg/	<u></u>					+				1											
								120		_I											
SULPHITE (mg/L)	-					17.		Tr]			OPER/	TIONS	3	UMM	WRY				
						ļ , .					On cor							3-1 <i>1</i> 2°.	a new l	BHA wa	s mad
(+ (mg/L)							•	Tr 9,800 2.02		and run	in the	npieti hole	on of t	he pre	paratio	on of	the 8				
(+ (mg/L) (CL (% by WL)						1	•	Tr 9,800 2.02 1.49		and run	in the ment a	npieti hole ind st	on of t noe wa	he pre s drille	paration	on of	the 8	reviou	s sectio	n's mud	with s
(+ (mg/L) (CL (% by WL) PHPA (Cale, lib/bbl)						1	•	Tr 9,800 2.02 1.49 0.89		and run The cer water to	in the ment a dilute	mpleti hole and st	on of I noe wa	he pre s drille e the s	paration out whose we	on of with 1	the 8	reviou: ntered,	s sectio , the ce		with s
(+ (mg/L) (CL (% by WL) PHPA (Cale, lb/bbl) PHPA (Excess lb/bbl)		ings)				1	•	Tr 9,800 2.02 1.49 0.89		and run	in the ment a dilute	mpleti hole and st	on of I noe wa	he pre s drille e the s	paration od out v	on of with 1	the 8	reviou: ntered,	s sectio , the ce	n's mud	with s
SULPHITE (mg/L) K* (mg/L) KCL (% by WL) PHPA (Cale. lib/libbi) PHPA (Excess lib/libbi) RHEOLOGY - 800 / 300 RHEOLOGY - 200 / 100	/6 (read	ngs)				1	•	Tr 9,800 2.02 1.49 0.89		and run The cer water to	in the ment a dilute	npieti hole ind st it. ped a	on of t noe wa Onc and the	he pressing drillers the s	paration doubt hoe wo PHPA	on of with i as er A sys	the 8 the pi ncour tem p	reviou: ntered, out on	s sectio , the ce	n's mud	with s
K+ (mg/L) KCL (% by WL) PHPA (Cale, lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 800 / 300	/6 (read	ngs)	CCOUN	TING (I	BBLS.)			Tr 9,800 2.02 1.49 0.89		and run The ce water to fluid wa	In the ment a dilute s dum	npieti hole and st it. ped a	on of t	he pressing drillers the s	paratic ed out v hoe w PHPA	on of with i as er A sys	the 8 the pr ncour stem p	revious ntered, out on MENT	s sectio , the ce line.	n's mud ment co	with a
(* (mg/L) (CL (% by WL) PHPA (Cale. lb/bbl) PHPA (Excess lb/bbl) PHPA (Excess lb/bbl) PHEOLOGY - 900 / 300 RHEOLOGY - 200 / 100 Fluid Built & Receiv	/6 (read	ngs) MUD A Fluid	Lost o		504	Sum	wary	Tr 9,800 2.02 1.49 0.89	120	and run The ce water to fluid wa	in the ment a dilute s dum	npieti hole ind st it. ped a	on of I	s drille the s KCL	paration of out those we proper out to the prope	with i	the fincour stem p	revious ntered out on	s sectio , the ce line.	n's mud ment co	with sontamir
K* (mg/L) KCL (% by WL) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 800 / 300 RHEOLOGY - 200 / 100 Fluid Built & Receiv Premix	/8 (read	ngs) MUD A Fluid Desand	Lost o		0		wary	Tr 9,800 2.02 1.49 0.89	128	and run The ce water to fluid wa Type Centrifu	in the ment a dilute s dum	npieti hole nd st it. ped a	on of I	s driffe the second KCL	paratic ed out v hoe we PHPA NTROL	with i	the state of the property of the state of th	revious ntered out on MENT haters	s sectio , the ce line. Scree S175/S1	n's mud ment co n Size 75/S175	Hr. 2
(+ (mg/L) (CL (% by WL) HPA (Calc. lb/bbl) HPA (Excess lb/bbl) HEOLOGY - 800 / 300 HEOLOGY - 200 / 100 Fluid Built & Receiv remix w/ fresh water	/6 (read) /3 (read) /ed 559	MUD A Fluid Desand Desilte	Lost or		0	Sumi Inidal V	mary	Tr 9,800 2.02 1.49 0.89		and run The ce water to fluid wa	in the ment a dilute s dum	npieti hole and st it. ped a	on of I	s drille the s KCL	paration of out those we proper out to the prope	with i	the fincour stem p	revious ntered out on MENT haters	s sectio , the ce line.	n's mud ment co n Size 75/S175	with sontamir
(+ (mg/L) (CL (% by Wt.) HHPA (Cale. lb/bbl) HHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Receiv Fremix w/ fresh water "recycled"	/6 (read	ngs) MUD A Fluid Desand Desilte	Lest e		0 0	Sumi Inidal V	wary	Tr 9,800 2.02 1.49 0.89	128	and run The ce water to fluid wa Type Centrifu	in the ment a dilute s dum	mpleti hole and st it. ped a Man.	One of the SOLIDS	s drille the s KCL /	paratic od out v hoe w / PHP/ NTROL Cone 12	on of with 1 es er A sys	the 8 the pincourstem pulper stem evious ntered out on MENT hatests 1	s sectio , the ce line. Scree S175/S1	n's mud ment co n Size 75/S175	Hr. 2	
(* (mg/L) (CL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) PHEOLOGY - 800 / 300 RHEOLOGY - 200 / 100 Fiuld Built & Receiv Premix w/ fresh water " recycled " Drill Water	/6 (read	MUD A Fluid Desand Desilte	Lest e		0	Sumi Inidal V	mary	Tr 9,800 2.02 1.49 0.89		and run The ce water to fluid wa Type Centrifu	in the ment a dilute s dum	mpleti hole and st it. ped a Man.	on of to	s drille the s KCL /	paratk id out v hoe w PHPA NTROL Cone 12	with I	the state of the property of the state of th	revious ntered out on MENT hatests 1	s section, the certifier. Screen S175/S1 S175/S8	n's mud ment co n Size 75/5175 4/584	Hr. 2
(* (mg/L) (CL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Receiv Premix w/ fresh water "recycled"	/6 (read	ngs) MUD A Fluid Desand Desike Downho	Lest e		0 0 0 0	Summinidal V	mary	Tr 9,800 2.02 1.49 0.89	559	and run The ce water to fluid wa Type Centrifu	in the ment a dilute s dum	mpleti hole and st it. ped a Man.	on of to	s driffe the s KCL / CO D'sand	paratk id out v hoe w PHPA NTROL Cone 12	with I	the state of the property of the state of th	ntered out on MENT helens 1 2	s section, the certifier. Screen S175/S1 S175/S8	n's mud ment co n Size 75/5175 4/584	Hr.
(+ (mg/L) (CL (% by WL) HPA (Cale. lb/bbl) HPA (Excess lb/bbl) HEOLOGY - 800 / 300 tHEOLOGY - 200 / 100 Fluid Built & Receiv remix w/ fresh water "recycled" Drill Water	/6 (read	ngs) MUD A Fluid Desand Desike Downho	Lest e		0 0 0 0	Summinidal V	mary elume eccived	Tr 9,800 2.02 1.49 0.89	559	and rur The cei water to fluid wa Type Centrifu Degasse	in the ment a dilute s dum	mpleti hole and st it. ped a Man.	on of to	s driffe the s KCL / CO D'sand	paratk id out v hoe w PHPA NTROL Cone 12	with I	the state of the property of the state of th	ntered out on MENT helens 1 2	s section, the certifier. Screen S175/S1 S175/S8	n Size	Hr.
(* (mg/L) (CL (% by WL) PHPA (Cale. la/bbf) PHPA (Excess la/bbf) PHPA (Excess la/bbf) PHEOLOGY - 800 / 300 PHEOLOGY - 200 / 100 Fluid Built & Receiv Premix w/ fresh water "recycled" Drill Water Other	/6 (read /3 (read ed 559 0	MUD A Fluid Desand Desilte Downho Dumpe Other	Lost of		0 0 0 0	Sumi Initial V Fluid R	mary olume	Tr 9,800 2.02 1.49 0.89 15/10/2 8/8/2	559 153	and rur The ce water to fluid wa Type Centrifu Degasse Desande	in the ment a dilute s dum	mpleti hole and st it. ped a Man.	on of to	s driffe the s KCL / CO D'sand	paratk id out v hoe w PHPA NTROL Cone 12	with I	the state of the property of the state of th	ntered out on MENT helens 1 2	s section, the certifier. Screen S175/S1 S175/S8	n's mud ment co n Size 75/5175 4/584	Hr.
(+ (mg/L) (CL (% by WL) HHPA (Cale, la/bbf) HHPA (Excess la/bbf) HHEOLOGY - 800 / 300 HHEOLOGY - 200 / 100 Fluid Built & Receiv Fremix w/ fresh water "recycled" Drill Water Other	/6 (read /3 (read ed 559 0	ngs) MUD A Fluid Desand Desike Downho	Lost of		0 0 0 0 142 11	Sumi Initial V Fluid R	mary elume eccived	Tr 9,800 2.02 1.49 0.89 15/10/2 8/8/2	559 153	and rur The ce water it fluid wa Type Contrifu Degasee Desande	in the ment a control of the control	mpleti hole and sh it. pped a	on of the one was one of the one	s drille s drille s the s co Drand Draiter	paratik d out v hoe www. PHPA NTROL 2 12 12 PMENT 13	with I	The 8 the procure of	revious ritered, but on MENT 1 2 NCY W (PPS.	s section, the certifier. Screen S175/S1 S175/S8	n Size 75/S175 4/S84 Output 0	Hr. 2
(+ (mg/L) (CL (% by WL) HHPA (Cale. (b/bbf) HHPA (Excess (b/bbf) HHEOLOGY - 800 / 300 HHEOLOGY - 200 / 100 Fluid Built & Receiv Tremix wf fresh water "recycled " Drill Water Other	/6 (read /3 (read ed 559 0	MUD A Fluid Desand Desilte Downh Dumpe Other	Lost of lor of l	r Dispe	0 0 0 0 142 11	Sumi Initial V Fluid R Fluid L Final T	mary olume	Tr 9,800 2.02 1.49 0.89 15/10/2 8/8/2	559 153 534	and rur The ce water to fluid wa Type Centrifu Degasse Desande	in the ment a o dilute s dum	mpleti hole hole ond sh oft. ped a	on of the one was one of the one	s driffe the s KCL / CO D'sand	paratik d out v hoe www. PHPA NTROL 2 12 12 PMENT 13	es er	The 8 the procure of	revious mitered, but on MENT 1 2 NCY W (PPS.	s section, the certifier. Screen \$175/\$1 \$175/\$8	n Size 75/S175 4/S84 Output 0	Hr. 2
(+ (mg/L) (CL (% by WL) HHPA (Cale, lb/bbf) HHPA (Excess lb/bbf) HHEOLOGY - 800 / 300 HHEOLOGY - 200 / 100 Fluid Built & Receiv remix w/ fresh water "recycled" Drill Water Other otal Received	/6 (read//3 (read//9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MUD A Fluid Desand Desilte Downh Dumpe Other	Lost of	r Dispe	0 0 0 0 142 11	Sumi Initial V Fluid R Fluid L Final T	mary olume accived bat	Tr 9,800 2.02 1.49 0.89 16/10/2 8/8/2	559 153 534	and rur The ce water it fluid wa Type Centrifu Degasse Desands Desilter SOLID:	in the ment a continue of dilute s dum	mpleti hole hole ond sh oft. ped a	on of the one was one of the one	he pre s drille s the s KCL / CODSand Disand Disiliter s EQU w (ppg	paratic doubt whose we person of the person	on of with the series of the s	The 8 the procure of	revious transfered out on MENT helicary 1 2 NCY W (ppg.	s section, the certifier. Screen \$175/\$1 \$175/\$8	n Size 75/S175 4/S84 Output 0	Hr. 2
(+ (mg/L) (CL (% by WL) HHPA (Cale, lb/bbf) HHPA (Excess lb/bbf) HHEOLOGY - 800 / 300 HHEOLOGY - 200 / 100 Fluid Built & Receiv remix w/ fresh water "recycled" Drill Water Other otal Received	/6 (read//3 (read//9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MUD A Fluid Desand Desilte Downh Dumpe Other	Lost of lor of l	Used	0 0 0 142 11	Sumi Initial V Fluid R Fluid L Final T	mary olume occived ost	Tr 9,800 2.02 1.49 0.89 16/10/2 8/8/2	559 153 534	and rur The ce water it fluid wa Type Contrifu Degasee Desinter SOLID:	in the ment a continue of dilutes and dilu	mpleti hole hole ond sh oft. ped a	on of the one was one of the one	the press drille stress drille stress KCL / Stress COD	paratic doubt whose with the paratic p	on of with 1 as er a sys	the 8 the pincour recourse process of the state of the st	revious put on MENT 1 2 NCY W (ppg	s section, the certifier. Screen \$175/\$1 \$175/\$8	n Size 75/S175 4/S84 Output 0 0 1 0 1 7486 7486 5.4	Hr. 2 2 2 2 4 (galim
(+ (mg/L) (CL (* by WL) HPA (Cale: lb/bbf) HPA (Excess lb/bbf) HEOLOGY - 800 / 300 HEOLOGY - 200 / 100 Fluid Built & Receiv remix w/ fresh water "recycled " Drill Water Other etal Received Product larytes	/6 (read//3 (read//9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MUD A Fluid Desand Desilte Downh Dumpe Other	Lost of lor of l	Used	0 0 0 142 11	Sumi Initial V Fluid R Fluid L Final T	mary olume occived ost	Tr 9,800 2.02 1.49 0.89 16/10/2 8/8/2	559 153 534	and rur The ce water it fluid wa Type Centrifu Degasse Desande Desilter SOLID: High Gra Bentenk	in the ment a comment a co	mpleti hole hold sh it. ped a	on of the one was one of the one	the press driller street of the street of th	paratic doubt whose with PHPA Ceneral 12 12 12 10.0 0.0 0.2 0.4 0.6	on of with 1 as er A sys EG C C C C C C C C C C C C C C C C C C	the 8 the pi	revious ntered, but on the term of the ter	s section, the certifier. Screen \$175/\$1 \$175/\$8	Output O 0 O 305 O 406 748 5.4 305	Hr. 2 2 2 2 4 (gallim
(+ (mg/L) (CL (% by WL) HPA (Cale, lb/bbf) HPA (Excess lb/bbf) HEOLOGY - 800 / 300 HEOLOGY - 200 / 100 Fluid Built & Receiver	/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	MUD A Fluid Desand Desilte Devenh Dumpe Other Total La	Lost of lor of l	Used	0 0 0 142 11 153	Sumi Initial V Fluid R Fluid L Final T	mary olume eccived est sting Vol.	Tr 9,800 2.02 1.49 0.89 15/10/2 8/6/2	559 153 534	and rur The ce water it fluid wa Type Contrifu Degasse Desinter SOLID: High Gra Bentonk Drilled S	ln the ment a comment a co	mpleti hole hold sh it. ped a	on of the one was one of the one	the press driller street of the street of th	paratic doubt whose with PHPA Ceneral 12 12 12 0.0 0.2 0.4 0.6 Solids	on of with 1 as er of series of seri	the 8 the process of	revious ntered, but on tent on	s section, the certification of the certification o	Output Output 0 134584	Hr. 2 2 2 2 2 4 (gal/m
(+ (mg/L) (CL (* by WL) HPA (Cale: lb/bbf) HPA (Excess lb/bbf) HEOLOGY - 800 / 300 HEOLOGY - 200 / 100 Fluid Built & Receiv remix w/ fresh water "recycled " Drill Water Other etal Received Product laryles I Gel austic Polash	/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	MUD A Fluid Desand Desilte Devemb Dumpe Other Tetal Le	Lost of lor of l	Used	0 0 0 142 11 153 Balan 1243	Sumi Initial V Fluid R Fluid L Final To	mary clume eccived est Unit \$ 8 20	Tr 9,800 2.02 1.49 0.89 15/10/2 8/6/2	559 153 534 \$	and rur The cei water it fluid wa Type Centrifu Degasse Desande Desilter SOLID: High Gra Bentenk Drilled S Lew Gra	in the ment a comment a co	mpleti hole hold sh it. ped a	on of the control of	the press driller street of the street of th	paratic doubt whose with PHPA Ceneral 12 12 12 0.0 0.2 0.4 0.6 Solids	on of with 1 as er of series of seri	the 8 the process of	revious ntered, out on tent on	s section, the certification of the certification o	Output 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hr. 2 2 2 2 2 4 (gal/m
(* (mg/L) (*CL (* by Wt.) PHPA (Cale. lb/bbf) PHPA (Excess lb/bbf) PHPA	/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	ngs) MUD A Fluid Desand Desilte Downh Dumpe Other Total L 23	Lost of lor of l	Used	0 0 0 142 11 153 Balan 1243 40 23	Sumi Initial V Fluid R Fluid L Final To	mary olume eccived eccived thing Vol.	Tr 9,800 2.02 1.49 0.89 15/10/2 8/6/2	559 153 534 \$	and rur The cei water it fluid wa Type Centrifu Degasse Desande Desilter SOLID: High Gra Bentonk Drilled S Lew Gra Average Med. "h"	e in the ment a comment a	mpletii hole hole hole hole hole hole hole hole	on of the control of	the press driller street of the street of th	paratic doubt whose with the work of the w	Jet: Imp. Hith	the 8 the process of	revious ntered, out on tent on	s section, the certification of the certification o	Output 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hr. 2 2 2 2 C gal/m C PS PS PS PS PS PS PS
C (mg/L) CL (% by WL) PHPA (Cale. lb/bbf) PHPA (Excess lb/bbf) PHPA (Excess lb/bbf) PHPA (Excess lb/bbf) PHPA (Excess lb/bbf) PHEOLOGY - 200 / 100 PHEOLOGY - 200 / 100 Pluid Built & Receiv Premix wf fresh water "recycled " Drill Water Other Other Other Otal Received Product Paryles d Gel austic Polash K - 261 CL - Tech.	/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	ngs) MUD A Fluid Desand Desilte Downhi Dumpe Other Total L 23 99	Lost of lor of l	Used 1	0 0 0 142 11 153 Balan 1243 40 23 92	Sumi Initial V Fluid R Fluid L Final To	mary olume eccived eccived bat 8 13 39 68 137 25	Tr 9,800 2.02 1.49 0.89 15/10/2 8/6/2	559 153 534 \$	and rur The cei water it fluid wa Type Centrifu Degasse Desande Desilter SOLID: High Gra Bentonk Drilled S Lew Gra Average Med. "h"	lin thement a bit thement a bi	mpletii hole hole hole hole hild hole LYSIS	on of the control of	the press driller street of the street of th	paratic doubt whose with the wind out whose with the wind period of the wind period out with the	Jet Imp. Hill Hill Bit i	the 8 the procure them procure the procure them procure them procure them procure them procure them procure them procure them procure them procure them procure them procure them procure them procure them procure them procure t	revious ntered, out on tent on	Screen S175/S1 S175/S8	Output Output 0 125 DAT 406 748 5.4 305 1247 370 12.90 8.74	Hr. 2 2 R (galim
CL (Mg/L) CL (% by WL) HPA (Cale. Ib/bbf) HPA (Excess Ib/bbf) HEOLOGY - 800 / 300 HEOLOGY - 200 / 100 Fluid Built & Receiv Fremix wf fresh water "recycled " Drill Water Other Ctal Received Product Paryles 1 Gel austic Polash K - 261 CL - Tech. Nocide - B54X	/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	ngs) MUD A Fluid Desand Desand Deswith Downho Dumpe Other Tetal L 23 99 200	Lost of lor of l	Used 1	0 0 142 11 153 Balan 1243 40 23 92 120	Sumi Initial V Fluid R Fluid L Final To	mary olume eccived eccived bat 8 13 39 68 137 25	Tr 9,800 2.02 1.49 0.89 15/10/2 8/6/2	559 153 534 \$	and rur The ce water it fluid wa Type Centrifu Degasee Desande Desilter SOLID: High Gra Bentonit Drilled S Lew Gra Average Med. "h" Med. "K"	lin thement a comment	mpletii hole ind st it file ind st it ind st i	on of the control of	the press driller street of the street of th	paratic doubt whose with the wind out whose with the wind period of the wind period out with the	Jet Und	the 8 the process of	ntered, out on MENT 1 2 NCY NCY NY (PPS. 2 Less Frac Piv. Much No. 2 DC/DD/DD/DD/DD/DD/DD/DD/DD/DD/DD/DD/DD/D	Screen S175/S8 S175/S8 DRAULK	Output 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hr. 2 2 2 2 C gal/m C PS PS PS PS PS PS PS
K* (mg/L) KCL (% by Wt.) PHPA (Cale. lb/bbf) PHPA (Excess lb/bbf) PHPA (/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	ngs) MUD A Fluid Desand Desand Deswith Downho Dumpe Other Tetal L 23 99 200	Lost of lor of l	Used ~ 1 7 88	0 0 142 11 153 Balan 1243 40 23 92 120 8 144 34	Sumi Initial V Fluid R Fluid L Final To	mary olume eccived ecc	Cost 8.1	559 153 534 \$ \$	and rur The cei water it fluid wa Type Centrifu Degasse Desande Desilter SOLID: High Gra Bentonk Drilled S Lew Gra Average Med. "h"	lin thement a comment	mpletii hole ind st it file ind st it ind st i	on of the control of	the press driller street of the press of the street of the street of the street of the press of	paratic doubt whose with the wind out whose with the wind period of the wind period out with the	Jet Und	the 8 the process of	revious refered out on the second out on the second out on the second out on the second out on the second out on the second out of the sec	S section, the certification, the certification, the certification, the certification of the	Output Output Output A 305 1247 370 12.90 8.74	Hr. 2 2 R (galim
CCL (% by Wt.) CCL (% by Wt.) CHPA (Cale. lb/bbf) CHPA (Excess lb/bbf) CHEOLOGY - 500 / 300 CHEOLOGY - 200 / 100 C	/6 (read//3 (read//04//05/05/05/05/05/05/05/05/05/05/05/05/05	ngs) MUD A Fluid Desand Desilter Devenh Dumpe Other Total L 23 99 200 5	Lost of lor of l	Used ~ 7 88	0 0 0 142 11 153 Balan 1243 40 23 92 120 8	Sumi Initial V Fluid R Fluid L Final To	mary olume eccived eccived thing Vol.	Cost 8.4	559 153 534 \$ \$	and rur The ce water it fluid wa Type Centrifu Degasee Desande Desilter SOLID: High Gra Bentonit Drilled S Lew Gra Average Med. "h" Med. "K"	lin thement a comment	mpletii hole ind st it file ind st it ind st i	on of the control of	the press driller street of the street of th	paratic doubt whose with the wind out whose with the wind period of the wind period out with the	Jet Und	the 8 the process of	revious refered out on the second out on the second out on the second out on the second out on the second out on the second out of the sec	Screen S175/S8 S175/S8 DRAULK	Output Output Output A 305 1247 370 12.90 8.74	Hr. 2 2 R (galim



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report

Reports 7 Date 24-Jan ate 18 Jan 1997 498 (M.)To 1,075 Spud Date Depth

WELL NAME and N	lo. :	T	AR	AL	EA	# 1			CONTI	RACTO	R	0	. D	&	E.				
Block No. PEP		Loca	tion :	Otwa	ry Basin		State	: Victoria		RIG N	lo.	3(0						
OPERATOR'S REPR	RESENTA	TIVE:		Ale	x BRAD	DLEY			REPOR	RT FOR	.	Pau	I CO	OPER	₹				
Drilling	Assen			T	Casing			M	ud Volu	ume Bi	bis.					Circu	lation Dat		
Bit size 8.5 Type	: 4.1.7	, J	ets : J x						197	Pits :		335	5	Pum	p size	[21]	6.0*	9 .0	ins.
DP 4.5 Type	: Ģ	Leng	th 865	1 9.67	5 inch	492	8 Metre	Drill String Cap.	46	Total \	/olum	<u>•</u> :	560	Make	Model	1: G D	PZ · 8	% Em	c 0.9
HWt" 4.5 Type	: 37.1	Leng	th 37 1	<u> </u>	inch (s in Storage :	60	Weigh	<u>(:</u>	8.6		Make	Model:	2: G D	PZ-8	% Em	c 0.9
DC " 6.5 Leng	th 173.	Other	152	1 MU	TYPE:	KCL	- PHPA		% O/G:		Ann	ular Ve				7 Sticlm		Вым	9.71
DC " ~ Leng	th ~							Properties	DP size		192					7 Stium		GPM:	408
SAMPLE From						F/Lir		F/Line	DC size		333	(FUM)		1	oms up :		PRESS		1,950
TIME Sample Taken						09.3	0 13.30		DC size	<u> </u>	138				Circ. :	58 CATION	Type st	ulisys.	3
Flowline TEMPERAT DEPTH Metre					deg. C	70			Weight		<92	Filtral				_,	: Chloride	e may @	12,000
WEIGHT PPG		• •		-		8.6			Viscos				c Visco		N.C	Yleid F		15 - 30	
Funnel VISCOSITY (seciqt.) A	PI Q	34	deg.	c	3	6 45	60	By Aut	hority:	-	Opera	tor's w	ritten		-	Drilling	Contrac	
PLASTIC VISCOSITY			60	deg.			8 13	13	1		yes	Opera	itor's R	epreser	ntative	-	Other		
YIELD POINT (Ib/100						1	1 24	26								ENDATIO	ONS		
GEL STRENGTH (IN		0 sec. /	10 min.			1	2	4 9	1										
FILTRATE API (cm3	30 min.)	9				10.	4 7.2	6.3	Thre	ough th	e she	aring	action	and en	nulsifica	ition, the	e fluid los	s dropp	ed,
API HTHP Filtrate (c				deg.	<u>c</u>	_}	-	<u> </u>	-1 -	•							polymer		
CAKE Thickness (32		PI/HTT			0.4.	1 1.7	+=	3.6 ~	·				•	•	•		eded late		•
SOLIDS Content (% b		Oll/W	Calc.	!	Retort	1./	98.3	3.6 ~	ed to the					OI IOIT	Destauli	rnra,	the Yield	POINT IF	icreas-
SAND Content (% b)		CIDWI				0.2		0.13	-1	•				d from	the too	of the f	Eumeralli	format	ion and
METHYLENE BLUE		′ X	lb/bbl	-	cm3/cm	+		6.0	1								olumetric		
рН	Strip			1:	9 deg. C	9.	0 9.0	9.0	1				•				es, the s		
ALKALINITY Mud	(Pm)						-	0.24	healed	over.					-			•	
ALKALINITY Filtrate	(Primir)					0.12/0).86	0.18/0.7	Alum	ı was u	sed t	o trea	t the s	ump wi	ater and	l in-turn,	this was	used to	ı
CHLORIDE (mg/L)						11,20	0 10,000	11,000	build vo	olume.									
Total HARDNESS (m	g/L)					28		 	l										
SULPHITE (mg/L)						14]				ATIONS		UMMAR	-			
K+ (mg/L)						11,00		 	•								e through		
KCL (% by WL)					- · - · · · · · · · · · · · · · · · · ·	2.2		1.16	sand-si		_		•						
PHPA (Calc. lb/bbl)				·		1.3		1.81	•		-		_				Pyramid]		
PHPA (Excess lb/bbl)				· · · · · · · · · · · · · · · · · · ·		0.9		1.12	1				•			eruci met	was du	npea w	nen
RHEOLOGY - 600 / 300							8 50/37/7 3 31/23/6	52/39/6 32/26/6	ever the	ere was	s oun	a-up ir	1 SOIIC	s (COIIe	ctea).				
RHEOLOGY - 200 / 100	113 (read		ACCOU	TO N.C.	(DD) (C)	14/104	31/23/6	32206	 			SOLID		NTROL	50111	PMENT			
51-14 D. W. 6 D		T							.				S CU			Τ		0:	
Fluid Built & Recei Premix	V • 0	Desan	d Lost	or UISD	33	Initial V	mary /olume	534	Type Centrifu		Man.	Hr.	D'sand	Cones		Shaker#	Screen S175/S1		Hr. 24
w/ fresh water	0	Desilte			17	muzi v	Oldine		Degasse		riico		D'silter	12			S175/S17		24
" recycled "	292	Down			112	Fluid R	eceived	292	Degasse	4	,,,,,		USIRE	'-	10		31/3/31	3/3//3	
•	0	f			86			200				601 ID	e EOI	IDMEN	T EFFIC	IENCY			
Other	0	Dumpo	•0			Fluid L	net	266					w (ppg			low (ppg		Output	(ael/m)
	•							200	Desande	or i		8.9		1		12.3	<u> </u>	1.0	
		i				Final T	otal	560	Desilter			8.85				10.8		1.2	
Total Received	202	Tabell			266		iting Vol.												
OLAI NACEIVAG	292	Total L	.081			Circuit	urig voi.		201.121							D.T. (1.0)			
Product	lance	en:	Paris	Used	Betan		Unit \$	Cost \$		S ANAI		(P)	0 1 °	0.0	les Mai		DRAULIC		
Barytes	Inven	1243	Rec'd.	US#4	Balan 1243		6 20		High Gra Bentonit				0.1 3.6	0.4	Jet Vel			742	FT / SEC LBS
Soda Ash		15		2	13		15 75	• • • • • • • • • • • • • • • • • • • •	Drilled S			ŀ	28.8	3.2	HHP/			5.2	
N. Sulphate	<u> </u>	80		30	50		24 00	720.00	Low Gra		ds.	+	32.4	3.6	ННР			294	
Caustic Potash		23	-	2	21		39 68		Average				2.60	Solids	†	s. Loss	·	1237	PSi .
K - 261	 	92	1	9	83		137 25		Med. "n"		 #1¢k #	2 ck				at Frac I	•••	370	PSI
(CL - Tech.	ľ	120		35	85		12.35		Med. "K"					15 001	1	juiv. Mu		12.90	PPG
Prispac - L.V.		66		6	60		156 28		Low "n'		. †			0.495				9.41	PPG
CL - Agri.		144	į.		144	i		1	Low "K"		. !	-			7.		P GPM	547	755
God Sulphite	! !	34	:	7	27		23 56	7	Daily Ch		Cost :					tive Cos			
nspac - Reg.		63	!	1	62		156 28	156.28				\$	3,775		1		11,719		
	DEDVIN		·											101:5	00 21				
	PERKIN		. expres	ad grath	ADDRES			Australia red carefully and may	be used if	the user	se ele					8 3027			
ourselves or our agents																			



Independent Drilling Fluid Services Pty. Ltd.

8 Date Spud Date 18 Jan 1997
Depth 1,076 (M)To 1,462

ILL NAME and No	9 .	TARA	АLJ	LA	# 1			CONTRAC	TOR	U.	D. &	Ľ.				
ock No. PEP		Location :	Otway			State :	Victoria	Ric	G No	30						
ERATOR'S REPR	ESENTAT	TVE .	Alex	BRAD	LEY			REPORT	FOR	Paul (COOPE	R				
Drilling	Assemi			Casing			M	lud Volume						ation Da	ta	
size 8.5 Type		Jets : 3 x 12	1	inch @		Metres	1	271 Pit		328		np size	[5.]	6.0"	8.0	ins.
4.5 Type	G	Length 1251	9.675	inch @			Drill String Cap.	64 To	tal Volum	e: 6 8.4	t	e/Model	-	PZ 3	% Effic	
vt." 4.5 Type:		Length 37 1	100	inch @			In Storage :	7				e/Model			% EMc	
	h 173.8	Other 15 21	MUD	TYPE :	KCL - F		roperties		15.0 Anni 1.5 137				67 Stk/mi 67 Stk/mi		Bb/M GPM	9.44 397
MPLE From	· ·	<u> </u>			F/Line	mad P	Pit	- {	5.5 324			toms up		PRES		1,950
MPLE From ME Sample Taken						13.30			~ 134	(FUM)	ı	d Circ. :	70		urffsys.	3
wine TEMPERATE	JRE			deg. C	46	47	N.C.			MUD PI	ROPERTY	SPECIF	ICATION	3		
PTH Metres	•				1,305		1,462	Weight:		Filtrate :			i		es max 🥡	12,000
EIGHT ppg.					9.00	9.05		Viscosity:				NC	Yield F		15 - 30	
nnel VISCOSITY (8	ecial) AP	1 Q 40	deg. C	;	60	61	58	By Authori	ity :	Operator	's written		-	_ Orilling	Contracto	or
ASTIC VISCOSITY	cP 👰	50	deg. C	:	14	14	14	<u></u>			's Represe		-	Other		
LO POINT (IM100f					16	21	20	1	FLU	ID SUMM	ARY AND I	RECOMM	ENDATIO	NS		
L STRENGTH (16/1					6	9	5 16	1		dare fr-	. 1 107 -	are e	nd	abria	amivas	ara
TRATE API (cm3 /		 -	^		5.9	5.8	5.4	to maintair							emixes w 10bbls/h	
'I HTHP Filtrate (ci			deg. C		1	-	1 -	1	063	u pit l			,	9		.,.
LIDS Content (% b		Calc.	1	Retort	4.4	~	4.8 ~	Biocide	was intro	oduced t	o the sys	tem in th	nis period	i, in pre	paration o	f the
JUID Content (% b)		Oil/Water			- '	95.6	- 95.2	approachi	ing T.D. a	and Logg	ing opera	tion.	•			
ND Content (% by					0.13	0.25	Tr	Clay wa	s more e	vident in	this sect	ion, with	a higher	up-take	of PHPA	8.
THYLENE BLUE C	APACITY	x lb/bbl		cm3/cm3		N.C.	6.0	KCL (whic					rid e s, co	uld not l	oe mainta	ined
1	Strip		22	deg. C	8.7	8.9	8.8	at the pref	ferred 2%	6, or abo	ve, levels].				
	(Pm)				0.18		0.22	l								
KALINITY Filtrate	(PfMf)				0.12/0.9		0.18/0.64	4		•			•		h 4 sx. we	
ILORIDE (mg/L)					9,600		9,400	used in the	•				•			
tal HARDNESS (mg	VL)				420	340	560	shakers ar	HU IU ACT					Loggin	A hinces:	> .
JLPHITE (mg/L)			-		120	150	5 300		llad 0 1	OPERAT		SUMMA!	_	that to	ded to c	ich tha
· (mg/L)					8,700	7,900	5,300 1.08	mud weigh			_				ided to pu lution was	
IL (% by WL)		**		• •	1.78	1.94	2.13	only other	•				-			
IPA (Calc. Ib/bbi)		•	•		1.24	~	1.46	1			-	-			a CaCO3	
IPA (Excess Ib/bbl)					1			1		-			•			•
HEOLOGY - 600 / 300	-				44/30/8	1	48/34/7	weighted s	sind to cl	Q SID ISE	ine suo b	u# ⊌ 0 00	ı.			
EOLOGY - 200 / 100	is (read		- C14C	20161	25/18/7	Jyrz4/7	21113122	 		SOLIDS	CONTRO	l FO	IPMENT			
		MUD ACCOUN						<u>t</u>					T		- Ci	
luid Built & Receiv	ved	Fluid Lost o	r Dispo		Summa	ary			Man.	Hr.	Con	es Hr.	Shaker#	Scree	n Size	Hr. 21
emix				20	1-44-11/-1		560	Type	_;	0 00		2 21		\$ 175.5	125/5175	
WILLIAM MARKE	90	Desander Desilter		38	Initial Vol	lume	560	Centrifuge	-	;	and I	2 21	1	1	175/9 175 18/5/175	21
wi fresh water		Desilter		24				Centrifuge Degasser	Come :	0 01	ilter 1	2 19	2	3 175-5	175/9 175 25/3 175	21
" recycled "	280	Desilter Downhole		24 116	Initial Vol		395	Centrifuge Degasser		0 01	inter 1	2 19	2	3 175-5	i	21
" recycled " Onll Water	280 0	Desilter Downhole Dumped		24 116 75	Fluid Rec	eived	395	Centrifuge Degasser		0 on	EQUIPME	12 19	2 CIENCY	3175-8	25/3125	
" recycled "	280 0	Desilter Downhole		24 116 75		eived		Centrifuge Degasser		0 01	EQUIPME	12 19	2	3175-8	i	
" recycled " Orill Water	280 0	Desilter Downhole Dumped		24 116 75 41	Fluid Red	ceived	395 294	Centrifuge Degasser Desander		0 03 SOLIDS Overflow 9.1	EQUIPME	12 19	CIENCY rflow (pps	3175-8	Output (
" recycled " Onii Water Other	280 0 35	Desilter Downhole Dumped Other		24 116 75 41	Fluid Red Fluid Los Final Tob	ceived at	395 294 661	Centrifuge Degasser		0 03 SOLIDS Overflow	EQUIPME	12 19	CIENCY	3175-8	Output (
" recycled " Orill Water	280 0 35	Desilter Downhole Dumped		24 116 75 41	Fluid Red	ceived at	395 294 661	Centrifuge Degasser Desander Desilter		SOLIDS Overflow 9.1 9.05	EQUIPME	12 19	2 CIENCY rflow (pps 11.6 12.8	3 17545	Output (1.3 0.9	gal/m)
" recycled " Drill Water Other tal Received	280 0 35 395	Desilter Downhole Dumped Other Total Lost		24 116 75 41 294	Fluid Red Fluid Los Final Tota (Circulati	eived	395 294 661	Centrifuge Degasser Desander Desilter SOLIDS	ANALYSIS	SOLIDS Overflow 9.1 9.05	EQUIPMEI (PPG.)	2 19 NT EFFI Unde	2 CIENCY rflow (pps 11.6 12.8	3 17545	Output (1.3 0.9	gaVm)
" recycled " Orill Water Other al Received	280 0 35	Desilter Downhole Dumped Other Total Lost	!	24 116 75 41 294	Fluid Red Fluid Los Final Tota (Circulati	reived	395 294 661	Centrifuge Degasser Desander Desilter SOLIDS /	ANALYSIS	SOLIDS Overflow 9.1 9.05	EQUIPME! (PP9.) / %)	2 19 NT EFFI Unde	CIENCY rflow (pps 11.6 12.8 BIT / HY	3 17545	Output (1.3 0.9 CS DATA 384	gal/m)
" recycled " Drill Water Other al Received Product Tytes	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243	-	24 116 75 41 294	Fluid Red Fluid Los Final Tota (Circulati	ng Vol.)	395 294 661	Centrifuge Degasser Desander Desilter SOLIDS /- High Gravity Bentonite	ANALYSIS y Solids	SOLIDS Overflow 9.1 9.05	EQUIPME! (PP9.) / %) 0.2 0.0	2 19 NT EFFI Unde	CIENCY Mow (pps 11.6 12.8 BIT J HY	3 17545	Output (1.3 0.9 CS DATA 384 713	gaVm)
" recycled " Drill Water Other al Received Product rytes da Ash	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13	3	24 116 75 41 294 Balance 1243 10	Fluid Red Fluid Los Final Tota (Circulati	ng Vol.) Unit \$ 6 20 15 75	395 294 661 Cost \$	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid	ANALYSIS y Soilds	SOLIDS Overflow 9.1 9.05	inter 1 EQUIPMEI (PPG) / %) 1.2 0.0 2.2 0.2 1.5 4.6	2 19 NT EFFI Unde	CIENCY rflow (pps 11.6 12.8 BIT / HY blocity ct Force	3 17545	Output (1.3 0.9 CS DATA 384 713 4.9	gal/m)
" recycled " Drill Water Other al Received Product rytes da Ash Sulphate	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50	- 3 10	24 116 75 41 294 Balance 1243 10 40	Fluid Red Fluid Los Final Tota (Circulati	ng Vol.) Unit \$ 6 20 15 75 24 00	395 294 661 Cost \$ 47.25 240.00	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity	ANALYSIS y Solids ds y Solids	SOLIOS Overflow 9.1 9.05	EQUIPMEI (PPG) / %) 0.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8	2 19 NT EFFI Unde	CIENCY rflow (pps 11.6 12.8 BIT / H) elocity at Force / in2	S 175.5	Output (1.3 0.9 CS DATA 713 4.9 275	gal/m)
" recycled " Drill Water Other al Received Product rytes da Ash Sulphate ustic Potash	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50 21	- 3 10 1	24 116 75 41 294 Balance 1243 10 40 20	Fluid Rec	Unit \$ 6 20 15 75 24 00 39 68	395 294 661 Cost \$ 47.25 240.00 39.68	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S.	ANALYSIS y Solids ds y Solids G.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	######################################	2 19 NT EFFI Unde	CIENCY rflow (pps) 11.6 12.8 BIT / HY elocity t Force //in2	S 175-8	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190	gal/m)
Drill Water Other Cal Received Product rytes da Ash Sulphate ustic Potash 261	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50 21 83	3 10 1 20	24 116 75 41 294 Balanc 1243 10 40 20 63	Fluid Rec	unit \$ 6 20 15 75 24 90 39 68 137 25	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n"	ANALYSIS y Solids ds y Solids G.	0 09 SOLIOS Overflow 9.1 9.05 (ppb 4 4 4 2	inter 1 EQUIPME((PP9.) 1 %) 0.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 solar 5552 0.49	2 19 NT EFFI Unde	CIENCY Mow (pps 11.6 12.8 BIT / HY Plocity It Force / in2 ess. Loss Seat Frac	ORAULI	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370	gal/m) Finds Education
Product Product Sulphate ustic Potash 261 - Tech	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50 21 83 85	3 10 1 20 5	24 116 75 41 294 Balanc 1243 10 40 20 63 80	Fluid Rec	ng Vol.) Unit \$ 6 20 15 75 24 00 39 68 13 7 25 12 86	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00 64.25	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n" Med. "K"	ANALYSIS y Solids ds y Solids G.	0 09 SOLIOS Overflow 9.1 9.05 (ppb 4 4 4 2 0 0	EQUIPME((PP9.) 1 %) 0.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 3040 5552 0.49 958 5	2 19 NT EFFI Unde	CIENCY Mow (pps 11.6 12.8 BIT / HY blocity It Force / in2 Seat Frac Equiv Mu	ORAULI	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370 12.90	gal/m) Finds Education Educati
Product Produc	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50 21 83 85 60	3 10 1 20	24 116 75 41 294 Balance 1243 10 40 20 63 80 49	Fluid Rec	unit \$ 6 20 15 75 24 90 39 68 137 25	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n" Med. "K" Low "n"	ANALYSIS y Solids ds y Solids G.	0 09 SOLIOS Overflow 9.1 9.05 (ppb 4 4 4 2 0 0	EQUIPME((PP9.) 1 %) 0.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 5040 5552 0.49 958 5.3 349 0.41	2 19 NT EFFI Unde	2 CIENCY Mow (pps 11.6 12.8 BIT / HY Blocity It Force / in2 ess. Loss Seat Frac Equiv Mu	Pres d Wt.	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370 12.90 9 50	gal/m) Finds Education Educati
Orill Water Other tal Received Product rytes da Ash Sulphate ustic Potash - 261 - Tech spac - L V - Agri	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50 21 83 85 60 144	3 10 1 20 5	24 116 75 41 294 Balance 1243 10 40 20 63 80 49 144	Fluid Rec	ng Vol.) Unit \$ 6 20 15 75 24 90 39 68 137 25 12 65 15 6 28	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00 64.25 1,719.08	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n" Med. "K" Low "n"	ANALYSIS y Solids ds y Solids G.	0 09 SOLIOS Overflow 9.1 9.05 (ppb 4 4 4 2 0 0	EQUIPME((PP9.) 1 %) 0.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 3040 5552 0.49 958 5	2 19 NT EFF Unde Jet Vo. Impac HHP Bit Pr 7 Csg. 9	DIENCY Afflow (ppg 11.6 12.8 BIT/H) Biocity It Force / in2 Seat Frace Equiv Mu C D O 2 DC/D	Pres d Wt.	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370 12.90	gal/m) Finasi Box Box Box
Product Produc	280 0 35 395	Desilter Downhole Dumped Other Total Lost 1243 13 50 21 83 85 60 144 27	3 10 1 20 5 11	24 116 75 41 294 1243 10 40 20 63 80 49 144 21	Fluid Rec	ng Vol.) 15 75 24 90 39 68 137 25 12 65 28 28 28 28 28 28 28 28 28 28 28 28 28	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00 64.25 1,719.08	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n" Med. "K" Low "n"	ANALYSIS y Solids ds y Solids G.	0 09 SOLIDS Overflow 9.1 9.05 (ppb 4 4 2 0 0	EQUIPMEI (PP9.) 1 %) 1.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 5060 5552 0.49 958 52 349 0.41	2 19 NT EFF Unde Jet Vo. Impac HHP Bit Pr 7 Csg. 9	DIENCY Afflow (ppg 11.6 12.8 BIT / H) Bit city It Force Jin2 Seat Frace Equiv Mu C D O DC/D lative Cori	Pres d Wt.	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370 12.90 9.50 512	gal/m) Finds Education Educati
Product Produc	280 0 35 395	Desilter Downhole Dumped Other Total Lost ory Rec'd. 1243 13 50 21 83 85 60 144	3 10 1 20 5	24 116 75 41 294 Balance 1243 10 40 20 63 80 49 144	Fluid Rec	ng Vol.) Unit \$ 6 20 15 75 24 90 39 68 137 25 12 65 15 6 28	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00 64.25 1,719.08	Centrifuge Degasser Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n" Med. "K" Low "n"	ANALYSIS y Solids ds y Solids G.	0 09 SOLIOS Overflow 9.1 9.05 (ppb 4 4 4 2 0 0	EQUIPMEI (PP9.) 1 %) 1.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 5060 5552 0.49 958 52 349 0.41	2 19 NT EFF Unde Jet Vo. Impac HHP Bit Pr 7 Csg. 9	DIENCY Afflow (ppg 11.6 12.8 BIT / H) Bit city It Force Jin2 Seat Frace Equiv Mu C D O DC/D lative Cori	Pres d Wt.	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370 12.90 9.50 512	gal/m) Finds Education Educati
Product Vies Da Ash Sulphate Ustro Potash - 261 - Tech Spac - L V - Agri - Guiphite - 03	280 0 35 395	Desilter Downhole Dumped Other Total Lost 1243 13 50 21 83 85 60 144 27 68	3 10 1 20 5 11	24 116 75 41 294 Balance 1243 10 40 20 63 80 49 144 21 38	Fluid Rec	eived at a series of the serie	395 294 661 Cost \$ 47.25 240.00 39.68 2,745.00 64.25 1,719.08	Desander Desilter SOLIDS // High Gravity Bentonite Drilled Solid Low Gravity Average S. Med. "n" Med. "K" Low "n" Low "K"	ANALYSIS y Solids ds y Solids G. #10k	0 0% SOLIDS Overflow 9.1 9.05 (ppb (2 4 4 2 0 0 0 TE	EQUIPMEI (PP9.) / %) 1.2 0.0 2.2 0.2 1.5 4.6 3.7 4.8 60 5040 552 0.49 958 52 349 0.41 12.9	2 19 NT EFF Unde Jet Vol. Impac HHP HHF Bit Pr 7 Csg. \$ 6 E 6 Crit.Fl Curru	BIT / H) slocity t Force // in 2 Seat Frac Equiv Mu C D lo 3 DC/C	Pres d Wt. OP - GPM st 16.82-	Output (1.3 0.9 CS DATA 384 713 4.9 275 1190 370 12.90 9.50 512	gal/m)



Independent Drilling Fluid Services Pty. Ltd.

Reports 9 Date 26-Jar Spud Date 18 Jan 1997 Depth 1,462 (M)To 1,468

WELL NAME and No		TA	RA	LE	EA :	# 1				CONTR	RACTO	R	O.	D.	& F	Ξ.				
BIOCK NO PEP 10	1	Location		Otway			State	Victoria			RIG N	lo.	30							
PERATOR'S REPRES	SENTAT	VE .		Alex	BRADI	LEY				REPOR	T FOF	<u> </u>	Paul	coo	PER					
Drilling	Assemb	ν			Casing				Mu	d Volu	1	bis.			<u> </u>			tion Dat		
Bit size 8.5 Type:	1.3.5	Jets : 13	,16,13	16	inch B		Wetais	Hole	_	272	Pits:		364	002	Pump		[5.]	6.0"		ins.
ор " 4.5 Тур∙ ∷	Ġ	Length		1	inch 🙎	492.8		Drill String				/olume	9.6 8.6	683		Aodel 1: Aodel 2:		PZ 8 PZ 8	% Effic	
HWt" 4.5 Type:	37.1	Length	37 1	<u> </u>	inch 🙋			in Storage	<u>) : </u>	1	Weigh				1				-	
oc " 6.5 Length	173.8	Other	14 5	MUD .	TYPE :	KCL .				% O/G:		Annu			4		Stlumin		Bb/M GPM:	9.98 419
C " ~ Length		<u></u>				<u> </u>	Mud P	operties		DP size			(FtM)	Lam	Botton		Stk/mir 27	PRESS		1,520
SAMPLE From						-		F/Line 17.30		DC size		342	(FVM)	Lam	Total C		68	Type si		3
TIME Sample Taken						j .	- 1	47	-	DC SIZE				PROPE	RTY S				ui 175 y 5.	
lowline TEMPERATUR	₹E				deg. C	ł		1,468	•	Weight	:	< 92	Filtrate					K+ > 29	*	
DEPTH Metres						Ì		9.30		Viscos		NC	Plastic	Viscos	ity:	NC	Yield P	oint :	15 - 30	
			^	deg. C		İ		63		By Aut	hority :	~	Operal	or's wri	itten			Orilling	Contracto	DL
unnel VISCOSITY (se		-	-			İ		16			-		Operat	or's Re	present	ative		 Other		
PLASTIC VISCOSITY C		54	Ų	deg. C		1		24							AND RE		NOATIO			
MELD POINT (IN10070						1	1	9	21	l		rco	U JUM	mryx i z	AITO ILE	COMMIC	TO ATTO			
SEL STRENGTH (IN10		• • • • •	mın.			! _	1	6.0	21	The	diffici	ith du	rina tris	opina. v	was ho	oefully	over-co	me by r	aising the	KCL
ILTRATE API (cm3/3		•	_	4 6		-		0,0		level to	2 25	% but	to hol	d this k	evel of	potass	ium, the	chlorid	es will co	ntinue
API HTHP Filtrete (cm	•		_	deg. C			i ~	1	-						peen b					
AKE Thickness (32n			alc.	. ,	Retort	-62.5	~	6.5	~	Witt	the h	igher l	KCL le	vel, the	PHPA	conte	nt will b	e lowere	d, althou	igh
SOLIDS Content (% by IQUID Content (% by		OllWater		· •		-	162.5		93.5						e shale					
SAND Content (% by		J e. e.				1		0.25	•									cake, the	e solids c	conten
METHYLENE BLUE CA		x It	Мом		cm3/cm3		•	10.0	•	increa	sed an	d the	mud w	eight w	vas driv	en up a	aiso.			
	Strip				deg. C	1		8.8		This c	an be i	owere	d with	the co	mbinati	on of s	olids co	ontrol ed	quipment	usage
	Pm)		•		٠.	-	•	0.24	•	and dil	lution.									
ALKALINITY Filtrate	(PfMf)					1		0.2/0.68		Dow	vnhole	losse	s were	most	evident	while t	ripping	and furt	her volum	ne was
CHLORIDE (mg/L)	(, ,,,,,,,,					T		12,600										nmence		
Total HARDNESS (mg/	 A)					1		620		Ì										
SULPHITE (mg/L)	-,					T -		120	-	1			OPER	ATIONS	SL	MMAR'	Y			
						T -		11,000			Pulled	d out o	f the h	ole wit	h an ex	tended	- wall-ca	ke build	lup, caus	sing
K+ (mg/L)						· ~		2.25		difficul										
KCL (% by Wt.)						-		2.30		•		ther B	SHA an	d ran ii	n to cle	an the i	hole.			
PHPA (Calc. Ib/bbl)				•		-		1.52	•									mped a	CaCO3	
PHPA (Excess lb/bbi)					•					l					ange ti					
RHEOLOGY - 600 / 300	i6 (read	ings)						56/40/15		weight	. 9 0 510	y, 10 p	oli out	and ci	iai iye u	10 01 0	٠.			
RHEOLOGY - 200 / 100	13 (read					<u> </u>		34/26/23					201.10		NTTDOI	50111	DMENT			
		MUD AC	COUN	ITING (E	BBLS.)					ļ			SOLID	S CO	NTROL		PMENT	Τ		
Fluid Built & Receiv	ed	Fluid L	ost o	r Dispo		Sumr				Туре		Man.	;		Cones	:	Shaker#		n Size	¦ Hr. 5.5
Premix		Desande	r		11	Initial V	olume		661	Centrifi	•	`	!	D'sand	2	:	1	1	175/5175	1
wi fresh water	0	Desilter			6	_				Degasi	Ber	Cinico	0	D'silter	12	5.5	2	311212	175/5175	5.5
" recycled "	120	Downhol	ė		95	Fluid R	eceived		155				<u> </u>		-	<u> </u>		:	· · · · · · · · · · · · · · · · · · ·	
Drill Water	0	Dumped			0	İ				L			SOLID	S EQU	IPMENT	EFFK	CIENCY			
Other	35	Other			21	Fluid Lo	ost		133	L			Overfi	w (ppg	IJ	Under	now (pp	g.)	Output	(gal/m)
		!				1				Desand	der		9.3				10.7		1.4	
		:				Final To	otal		683	Desilte	r		9.30		:		13.5		0.8	
	166				133	Circula	iting Vol.			[İ					
otal Received	193	Total Los	п		133	Hencon	TOI.	!		801.4	DS A11	ALYSIS	. ,-	pb / '	%)		BIT : L	YDRAUL	ICS DAT	A
					Γ					 			- (F		 -	100 140		. 5.500		<u></u> - F775€
Product	Inven		Rec'd.		Balan	c•	Unit \$	Cost	<u> </u>	High G		SDING		0.3	1	Jet Ve	•		595	LFI:
Barytes		1243		-	1243		6 20	<u>.</u>		Benton				5.4 53.5		Impact HHP /			3.1	C11.5
oda Ash		10		2	8	i	15 75	31.5	W	Drilled				•	į.	:			176	
V. Sulphate		40		!	40		24 00			Low Gr	•			58.9	6.5	HHP		_	722	
austic Potash		20		1	19		39 68	39.6	8	Averag	je S.G.			2.60	Solids	=				
K - 261		63		4	59		137 25	549.0	00	Med. "	n"	#1ck	#24k	~	0.485		eat Frac		370	2.4
(CL - Tech	•	80		40	40		12.85	514.0	00	Med. "	K"		·	-	3.94		quiv. Mi	ud Wt	12.90	غد
Orispac - L V	•	49		8	41		156.28	1,250	.24	Low "	n"			-	0.324	. E	D		, 9.91	
		144			144					Low "	K"				27 11	Crit.Fle	. DC	DP - GPN	574	87
CCL - Agri				_	•		•	70 6	8	Daily C	hemica	I Cost				Cumu	ative Co	st		
(CL - Agri God, Sulphite		21		3	1 H															
Cod Sulphite		21		3 38	. 18			137 5	56				S	2,593	1		:	19,41	7	
•		21 38		. 38	. 18		362	137.							HONE				7	

CULTUS PETROLEUM N.L.

Independent Drilling Fluid Services Pty. Ltd. ACN 000 2017 314

Reports | Date 27-Jan Spud Date 18-Jan 1997 Depth 1,468 (M.)To 1,677

WELL NAME and N	lo. ;	T	AR	AI	EA	# 1				CONTR	ACTOR	C). D). &	E.				
Block No PEP	101	Loc	ation :	Otw	ay Basin		Stat	: Victoria			RIG No.		30						
OPERATOR'S REPR	ESENT	ATIVE :		Ale	X BRA	DLEY				REPOR	T FOR	Pa	ul C	OOPE	R				
Dritting	Asset				Casin					Mud Volum	ne Bbis.					Circ	ulation D	eta	
Bit size 8.5 Type					§ inch		• • • • • •	es Hole :		314	Pits :	. 3	83	Pu	mp size	[2.]	6.0°	· B.0) ins.
ор 45 Тур∙			g t h _141	5 9.6	75 Inch	Q 492.	8 Metr	es Driff Stri	ng Cap	73	Total Volu	ıme :	770	O Ma	ke/Mode	[1: G [PZ - 8	% E1	Mc (
нwt" 4.5 Тур <u>е</u>	54.8	4 Leng	pth 92 7	78 ~	inch	<u> </u>	Met	es in Store	90:	120	Weight:	8.	6	Ma	ke/Mode	12: G (PZ 8	7	-
) — 	th 169.	1 Othe	r 20 3	35 MU	O TYPE:	KCL	- PHP/			% O/G:	15.0 A	nnular \	/elocity	/Вы	Vstk 00	67 Stiur	nin 70	Выл	4 9.3
DC " ~ Lengt	<u> </u>							Properties		DP size	4.5 18	4 (Ft/l	VI) La	m Bbi	Vstk ú C	67 Stu r	nin 70	GPM	: 39
SAMPLE From						F/Lin		F/Line		DC size	6.5 (31	9 (Ft/l	vi) Le	m Bot	toms up	: 34	PRES	SURE :	1,780
TIME Sample Taken							0 14.0		<u>.</u>	DC size		- (Ft1			al Circ. :			surffsys.	3
Flowline TEMPERATI DEPTH Metre					deg. C		8 4			- 						FICATION			
DEPTH Metre WEIGHT ppg.	-					1,52				Weight :		2 Filtr				- i	r: K+ >2		
Funnel VISCOSITY (s	eclat) A	PIO	44	deg.	С.	6				By Auth				cosity:	NC.	Yield	Point :	15 - 3	
PLASTIC VISCOSITY		".'.♥.	60	deg.		1		5 14		- 00	-			written		-		g Contra	ctor
YIELD POINT (IN/100)		• • •		deg.		3								Repres			Other		
GEL STRENGTH ON		10 200	10 min			16	23	5	13	-	FL	.UID ŞL	MMAR	YAND	RECOM	MENDAT	<u>ions</u>		
FILTRATE API (cm3 /			10 (1861)	<u>-</u>		5.				- Wash	he biaba	e than	da = i==	d la		-11-1- 4-		4	
API HTHP Filtrate (ci				~ deg.	c		~			settling	oit were	dumo-	d and	u ww g claana	d (the Is	nius, in ther had	sand tr	epano:! oento f≅	ne mud
CAKE Thickness (32					·	1	T =	11	~		out befo				- [a 18		ישטי ביני	P=. U. U	
SOLIDS Content (% t	y Vol.)		Calc.	,	Retort	5.7	-	4.6	~					strengt	hs were	driven	down (wi	th the 14	4.00 hr.
LIQUID Content (% by		OilW	ater			~	94.3	-	95.4								un to fall i		
SAND Content (% by			. =			0.1		Tr		By the	final ch	ock, the	weig	ht had I	been re	duced t	o accept	able lev	
METHYLENE BLUE C	APACIT	Y X	IPOPI		cm3/cm					although	Plastic \	√iscos	ity was	higher	than de	esired, t	he rheok	ogy was	back
рН	Strip				3 deg. C	9.0			·	on track.									
• · · · · · · · · · · · · · · · · · · ·	Pm)						N.C.	0.27									reinforc		
ALKALINITY Filtrate	(PITMI)	<u>.</u>				0.2/0.		0/23/0.8	5	the previ	ously wit	nesse	d clay	- solids	that wil	l be dis	placed fr	om the	wall of
CHLORIDE (mg/L)							13,800		··	the hole.									
Total HARDNESS (mg	JL)					620													
SULPHITE (mg/L)						120	140	130				OPE	AOITAS	(\$	SUMMAF	<u> YY</u>			
(+ (mg/L)						9,800		- 		R	un in the	hole w	ithout	arry pro	emeldo	and rea	m the fin	ai 14 me	tres - 3r
(CL (% by Wt)					·· ···	2				fill.									
PHPA (Calc. ib/bbl)		 .				2.19		2.15		Drilling re	comme	nced w	ith a d	own-ho	le moto	r.			
PHPA (Excess lb/bbl)						1.38		1.48		1									
RHEOLOGY - 600 / 300						63/48/19	64/30/12	48/34/7		l									
RHEOLOGY - 200 / 100	/3 @ 30	mins.	reading	s)		42/36/26	33/25/10	28/20/13		Biocid	e used i	n Repo	nt #8	was co	sted ou	t in this	period.		
		MUD /	ACCOU	NTING	(BBLS.)							SOLIC	s c	ONTRO	L EQU	PMENT			
Fluid Bulk & Receiv	•d		Lost	or Disp	osed	Summ	nary			Туре	Man	. Hr.	<u> </u>	Cone	8 Hr.	Shaker#	Scree	n Size	Hr.
remix		Desan			17	Initial V	olume		683	Centrifuge		0	Dame	Ц	2 14	1	S175/S1	75/5175	21
wifresh water	80	Desilte)r		14					Degasser	Onica	0	D'sitte	1	2 21	2	\$175/\$1	75/5175	21
recycled "	220	Down	nole		75	Fluid Re	ceived		300			<u>i </u>							
Drill Water	0	Dump	ed .		86	ļ						SOLIC	S EQ	UIPMEN	IT EFFI	CIENCY			
Other	0	Other			21	Fluid Lo	st		213			Overfi	ow (pp	g.)	Under	flow (pp	a .)	Output	(gal/m)
										Desander	1	9.2				11.8		0.8	
						Final To	tei		770	Desilter	*	9.10				12.5		0.5	
otal Received	300	Total L	ost		213	(Circulat	ing Vol.)					-						
			,			LF.	. •	(- ·	• • •	SOLIDS	ANAI VSI	S 10	ob (*4)		DIT (LIX	DRAULIC		•
Product	Invent	orv	Rec'd.	Used	Balanc		Unit \$	Cost \$		High Gravit		- 0	0.2		les Ve-		DRAULIC		
arytes		1243		~	1243	-	6 20				y			0.0	Jet Vel	•.		1	FT / SEC
uda Ash		8		2	6	· [15.75	31.60		Bentonite			5.0 36.7	0.6	Impact			504	res
Sulphate		40			40	•	24 00	31.00	·	Drilled Soli Low Gravit					HHP/	in2		2.5	
austic Potash		19		2	17		39 68	79.36		Average S.			41.8	4.6	HHP Bit Pre			140	.,
C - 261		59		5	54	1	137 25	696.29	•						-			612	P31
CL - Tech		40	İ		5		T t		. 1	Med. "n"	#ICK	# 2 ck		,		eat Frac		370	PS.
rispac - L.V.		40		35 13			12 85	449.75		Med. "K"	"			7 822		quiv. Mu	d Wt.	12.90	PPI.
SL - Agn		144	ļ	13	28		156 28	2,031.6		Low "n"				0.416	j			9 4 9	≥ ₽:5
od Sulphite		1			144					ow "K"		- 1	10.842	12.96			P - GPM	512	739
		18	į	3	15	Ì	3 56	70.69		Daily Chemi	ical Cost	:			Cumula	itive Cos	t.		
ocide - B54X		8	1	2	6		207 00	414.00	<u> </u>			<u> </u>	3,763		!	\$	23,190		
Any opinion and / or				1	ADDRESS		South	Australia				i	TELEPI	HONE	08 - 33	8 3027	,		



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report A.G.N. 000 287 314

Reports 11 Date: 28-Jan Spud Date : 18 Jan 1987 Depth : 1,677 (M.)To : 1,858

WELL NAME and No.		TA	RA	L	EA	# 1			CONTR	ACTOR	R	0.	D.	&]	₹.				
Block No.: PEP 10		Location		Otway		 -	State :	Victoria	<u> </u>	RIG N	o.	30							
OPERATOR'S REPRE		TVE ·			BRAD	LEY			REPOR	TFOR	 }	Paul	COC	PER					
Orilling	Assemi			1	Casing			м	ud Volu							Circuis	tion Dat	t.	
Bit size 8.5 Type:		T	13,16,13	16	inch @	12.2	Metres	Hole :	348	Pits :		395		Pump	size :	[2']	6.0"	8.0	ins.
	<u> </u>	Length			inch (2	~		Drill String Cap.	: 81	Total V	/olum	• :	825	Maked	Aodel 1	: G D	PZ - 8	% Emc	: 0.
	54.84			2.07.0	inch Q			in Storage :		Weight		8.6		Makef	dodel 2	: G.D.	PZ-8	% Emc	
				45	TYPE:	KCL -			% OIG:		_	ular Ve	ocity	BbVett	0.06	7 Stlumir	70	вым	9.31
	169.1	Other	20.35	MUU	ITPE:	NCE.		roperties	DP stze		184	(FtM)	Lam	4		7 Stickmir		GPM:	391
DC " ~ Length	<u> </u>	1				F/Line		F/Line	DC stz		319		Lam	Botton		37	PRESS		1,800
SAMPLE From							14.00		DC size	~	1	(FUM)		Total C	•	89	Type su	rflevs.	3
TIME Sample Taken					deg. C	49			100 0.0.		٠		PROPE			EMOITA			
Flowline TEMPERATU	POE:				deg. C	1.742		1,850	Weight	:	< 9.2	Filtret					K+ > 29	<u> </u>	
						9.10		 	Viscosit		N.C.	Plasti	: Viscos	ity:	N.C.	Yold P	oint :	15 - 30	
	-4-41.45		45	deg. C		52			By Auth		~	Opera	tor's wr	liten		~	Drilling	Contract	or
Funnel VISCOSITY (se		10	46			15		14	10,,,,,,,,	••••			tor's Re				Other		
PLASTIC VISCOSITY	PQ		60	deg. C					 							NOATIO			
YIELD POINT (IN/1007)						23		21	-		FLU	IO SU	MAKT/	NU KE	CUMM	NOATIO	143		
GEL STRENGTH (BM)	00f2) 10) sec. / 1	0 min.			7	20	7 14	┥,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					ك خلد:	Laine v			nd the s	ellina
FILTRATE API (cm3/3						5.8		5.4									p of soil		own 19
API HTHP Filtrate (cm				deg. C		1		1 -										us. 0 cc's or	less
CAKE Thickness (32)		7/HTH		,	Retort	5.0	-	4.9 ~	┨ ""┛		-se pi			y					
SOLIDS Content (% by		A	Calc.		Newn	5.0	95.0	~ 95.1	The	act of	the k	(CI - 1	ach n	rade w	s con	sumed i	n this pe	riod an d	the
LIQUID Content (% by		OWWat	er			Tr		Tr	Aricula	vi	de (:0% ~	taceks	n by w	piaht) v	vas stari	led, but i	initialiv.	
SAND Content (% by						1		7.0										2 - 2.5%	
METHYLENE BLUE CA		<u> </u>	Poppi		em3/cm3	8.7		8.8	level w										
pH	Strip			23	deg. C		N.C.	0.2	-	_			de inch	cad by	the He	ene of t	he ceme	nt conta	insted
ALKALINITY Mud (Pm)									•				-		_			
ALKALINITY Filtrate	(PIMI)					0.18/0.		0.22/0.76	-							rade KC		solomi s	
CHLORIDE (mg/L)							11,800											eology a	3 a
Total HARDNESS (mg	AL)					720		760	_pnmery	runcu	ion, ir						oss conf	J (J).	
SULPHITE (mg/L)						80	100	110	4				ATIONS			_			
K+ (mg/L)						9,900	9,000	11,800									a wiper t		
KCL (% by WL)						2.04	1.85	2.42	Once b	ack or	n bott	om dri	lling co	ntinued	عنبطاني	CIDSON	l pump (ontbrit.	
PHPA (Calc. lb/bbl)				•		2.19	2.12	2.15	1										
PHPA (Excess ib/bbl)						1.43	~	1.48	1										
RHEOLOGY - 600 / 300	16 (200)	#mas)				53/39/10		49/36/9	1										
						32/24/20		29/22/16	1										
RHEOLOGY - 200 / 100	/3 @ X					- Carrage						SOLIC	s co	NTROL	EOL	PMENT			
			CCOUN			Ι			<u> </u>				<u> </u>		Hr.	Shaker#	Screen	Cina	Hr.
Fluid Built & Receiv	ed	Fluid	Lost o	Dispo		Sumn		770	Туре		Man.	Hr.		Cones 2	14	Snatter#		75/S175	21.5
Premix		Desand	der		39	Initial V	olume	770	Centifu				D'sand			+			
w/ fresh water	55	Desilte	r		2				Degasse	er l	Driko	0	D'silter	12	18	2	S175/S1	/5/51/5	21.5
" recycled "	220	Downh	ole		39	Fluid Re	ceived	275									<u>L</u>		
Orill Water	0	Dumpe			122				<u> </u>			SOLID	S EQU	PMENT	EFFK	CIENCY			
Other	0	Other			18	Fluid La	et	220				Overfi	w (ppg	.)	Under	flow (ppg	<u>.</u>	Output	(gal/m)
	-	1 - 1 - 1							Desande	ır	L	9.1	_			9.5		1.9	
		 				Final To		825	Desilter			9.10		T		12.4		0.1	
		 							1		 	J. 1.						1	
Total Received	275	Total L	ost		220	(Circula	ting Vol)	 		<u> </u>								
									SOLID	S AN	ALYSI	S (r	pb / 9		1		DRAULK	CS DAT	
Product	Inven	tory	Rec'd.	Used	Balan	ce	Unit \$	Cost \$	High Gra		olids		0.3	0.0	Jet Ve				FT/SEC
Barytes		1243		~	1243		6.20	l	Bentonii				3.4	0.4	Impaci	Force		507	LBS
Soda Ash		6		5	1		15.75	78.76	Drilled S	olids			40.8	4.5	HHP !	in2		2.5	
Al. Sulphate		40		15	25		24.00	360,00	Low Gra	vity So	olids		44.2	4.9	HHP			140	
7. JUILITIES	 	17		1	16		39.68	39.68	Average					Solids	Bit Pre	ss, Loss		615	PSI
·								696.26	Med. "n		#100	# 2 ck			Cao S	eat Frac	Pres	370	PSI
Caustic Potash		54		5	49		137.25				c.			8 682		quiy. Mu		12.90	PPG
Caustic Potash JK - 261	_	5		5			12.85	64,26	Med. "K								- 172	9.59	PPG
Caustic Potash JK - 261 KCL - Tech.					18		156 28	1,562.90	Low "n					0.349		: D		532	797
Caustic Potash JK - 261 KCL - Tech.		28		10					Low "K	**	-	,	2045	ı 20 23	Crit Flo				191
Caustic Potash UK - 261 KCL - Tech. Drispac - L.V.				35	109	1	25.70	899.50	LOW Y				3 043	10.00		@ DCJL	P - GPM	1 332	
Caustic Potash UK - 261 KCL - Tech. Drispac - L.V. KCL - Agri.		28					25.70 23.56	899.50 94.24	Daily Ch		Cost	:	3 043			ative Co		1 332	
Caustic Potash JK - 261 KCL - Tech. Drispac - L.V. KCL - Agri. Sod. Sulphite		28 144 15		35	109						Cost		3,796			ative Co			
Caustic Potash UK - 261 KCL - Tech. Drispac - L.V. KCL - Agri. Sod. Sulphite Biocide - B54X	PERKIN	28 144 15 6		35	109		23 56 207 00				Cost		3,796		Cumul	ative Co	it : 26,966		



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report ACN. 000 287 314

Reports 12 Oute: 29-Jan-Spud Oute: 18 Jan 1987 Depth: 1,858 (M.)To: 1,951

AND I PERSON SERVICE	. :	TAF	CAL	EA	# 1			CONTI	LACTOF	t	O.	D.	&]	<u>.</u>				
WELL NAME and No.		Location :		y Basin		State :	Victoria		RIG N	0,	30							
PERATOR'S REPRE	SENTAT	ME :	Ale	BRAD	LEY			REPO	T FOR		Paul	COO	PER					
Drilling	Assemb			Casing				Mud Volu	me Bb	ds.						ition Data		
Bit size 8.5 Type:	1.3.5	Jets : 13,1	3,16 16	inch @	12.2	Metres		366	Pita:		395		Pump		127	6.0"	T	
OP " 4.5 Type:	G	Length 10	9.67	5 Inch Q	492.8		Ortil String Ca		Total V			847		Aodel 1:		PZ-8	% Effic	
HWt" 4.5 Type:		Length 92		inch Q			in Storage :		Weight		8.6			dodel 2:		PZ-8	% Emc	
DC " 6.5 Length	169.1	Other 20	.35 MU	TYPE:	KCL -			% O/G:	15.0 4.5	-			4		9th/mir		GPM:	9.31
DC " ~ Length	_ ~				-	Mud P	Pit	OC size		184 319	(FVM)	Lam	Botton		Stic/mir 39	PRESSL	<u> </u>	1,800
SAMPLE From					F/Line	14.30		DC siz		1313	(FUM)	~	Total C	•	91	Type sur		3
TIME Sample Taken Flowline TEMPERATU	DE			deg. C	54	55	N.C.	1							ATIONS		,	
DEPTH Metres						1,951	1,951	Weight	:	< 9.2	Filtrati	:		< 8.0	Other:	K+ > 2%)	
WEIGHT ppg.					9.10	9.10	9.10	Viscos	ty:	N.C.	Plastic	Viscos	ity:	N.C.	Yield P		15 - 30	
Funnel VISCOSITY (se	rciqt.) API	Q 49	deg.	С	52	53	57	By Aut	nority :		Opera	tor's wr	tten			_ Driffing (Contract	or .
PLASTIC VISCOSITY	P @	60	deg.	С	13	12	13			-			present			Other		
YIELD POINT (Ib/100/C	2)				24	22	22	4		FLUI	D SUM	MARY /	IND RE	COMME	NOATIO	<u>N3</u>		
GEL STRENGTH (DA	00ft2) 10	sec. / 10 m	in.		10	20	11 19	-		1.		 - 8	. Mar. Ac.	ملطم اسا		-44 14	محمامت	d in
FILTRATE API (cm3/3					6.6	7.2	6.8	this pe	-	HUM K	on aus	рентку и	une w	ORD CUHO	nde coi	ntent had	WICHTH	u ni
API HTHP Filtrate (cm			~ deg.	<u>. </u>	1	~	1 -	_ '		e pre	mixez	only at	this tin	10.				
CAKE Thickness (32) SOLIDS Content (% by		1/HTMP) Ca	le. 1	Retort	4.7	~	4.8 ~					-, -	. =•					
LIQUID Content (% by		Oll/Water	<u></u>		-	95.2	~ 95.											
SAND Content (% by					Tr	Tr	Tr	_										
METHYLENE BLUE CA	PACITY	х М	bbl	cm3/cm3		~	7.0	_										
рН	Strip			3 deg. C	8.7	8.5	8.8	_										
ALKALINITY Mud (Pm)				0.15		N.C.											
ALKALINITY Filtrate	(PIMI)				0.2/0.7		0.2/0.65	-										
CHLORIDE (mg/L)						16,000	15,700 760	-										
Total HARDNESS (mg	AL)				120	100	120	┪			OPER	ATIONS	Si	MMARY	,			
SULPHITE (mg/L)					1	11,400		┪	Oritlad						•	a wiper tr	io.	
K+ (mg/L)					2.5	2.33	2.45	Once								es, circul		d
KCL (% by WL)					2.10	2.13	2.13									change t		
PHPA (Calc. lb/bbl)					1.4	~	1.3	-1		•	•	•						
PHPA (Excess lb/bbl)	16 5					46442	48/36/12	7										
RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100			loce)		1		31/24/12	7										
KHEULUGT - 2007 100	73 65 30	MUD ACC		(BBLS)	10						SOLID	s co	NTROL	EQUIF	MENT			
			et or Dis		Summ			Туре		Man.	Hr.		Cones	Hr.	Shaker#	Screen	Size	Hr.
Fiuld Bulk & Receiv		Desander	St Of Use	20	initial Vo		829		ige	~	0	D'sand	2	10	1	S175/S17	75/5175	11
		Desilter		2				Degasi		0-10-	0	D'silter	12	11	2	S175/S17		11
und fire also supplies	•								10	Dnico							75/S175	
w/ fresh water " recycled "	120	Downhole		18	Fluid Re	ceived	120		er i	Onico	-						75/S175	
" recycled "		Downhole Dumped			Fluid Re	ceived	120		er	Unico		S EQU	PMENT	EFFIC	ENCY		75/S175	
" recycled " Drill Water	0	Dumped		18 34 24	Fluid Re		120		:01	Unico	SOLID	S EQU			low (pp	2.)	Output	(gal/m)
" recycled "	0			34						Driko	SOLID	w (ppg				2.)	Output 1.4	(gal/m)
" recycled " Drill Water	0	Dumped		34		et		Desand	ler	Onico	SOLID	w (ppg			low (pp	2.)	Output	(gal/m)
" recycled " Drill Water Other	0	Dumped Other		34	Fluid Lo	st tai	98	Desand	ler	DIIKO	SOLID Overfic 9.1	w (ppg			9.8	2.)	Output 1.4	(gal/m)
" recycled " Drill Water	0	Dumped		34 24	Fluid Lo	st tai	98	Desand Desilte	ler		SOLID Overfle 9.1 9.05	w (ppg)		9.8 13.0	yDRAULK	Output 1.4 0.1	
" recycled " Drill Water Other Total Received	0 0	Other Total Lost	c'd Use	34 24 98	Fluid Lo	st tai	98	Desand Desilte	ler	ALYSIS	SOLID Overfle 9.1 9.05	pad) wo)		9.8 13.0		Output 1.4 0.1 2.5 DAT 2.75	<u> </u>
" recycled " Drill Water Other Total Received Product	0	Other Total Lost	c'd. Use	34 24 98	Fluid Lo	st tal ting Vol.	98 847) Cost \$	Desarro Desilte	ler	ALYSIS	SOLID Overfle 9.1 9.05	pb / 0.3) %)	Underf	9.8 13.0 BIT / H		Output 1.4 0.1 cs DAT 275 507	<u> </u>
" recycled " Drill Water Other Total Received Product Barytes	0 0	Other Total Lost ory Re 1243		34 24 98 d Baian	Fluid Lo	st tal ting Vol. Unit \$	98 847) Cost \$	Desinte Desitte SOLII	ier OS ANA avity Se	ALYSIS	SOLID Overfle 9.1 9.05	pb / 0.3) %) 0.0	Underf	9.8 13.0 BIT / H'		Output 1.4 0.1 cs DAT 275 507 2.5	A FT/SEC
" recycled " Drill Water Other Total Received Product Barytes Soda Ash	0 0	Other Total Lost	~	34 24 98 d Baian	Fluid Lo	st tal ting Vol. Unit \$ 6.20	98 847) Cost \$	Desine Desite SOLIG	ier OS ANA avity Se	ALYSIS	SOLID Overfle 9.1 9.05	ow (ppg 0.3 3.5 39.9 43.4	%) 0.0 0.4 4.4 4.8	Jet Velimpact HHP /I	9.8 13.0 BIT / H'	YDRAULK	Output 1.4 0.1 2.5 DAT 2.75 507 2.5 140	FT./ SEC
" recycled " Drill Water Other Total Received Product Barytes Soda Ash Al. Sulphate	0 0	Other Total Lost ory Re 1243	~	98 d Baien 1243	Fluid Lo	st tal ting Vol. Unit \$ 6.20	98 847) Cost \$	Desine Desite SOLIG	os ANZ avity Selite Bolids	ALYSIS	SOLID Overfle 9.1 9.05	pb 1 0.3 3.5 39.9 43.4	0.0	Jet Velimpact HHP /I	9.8 13.0 BIT / H'	YDRAULK	Output 1.4 0.1 2.5 DAT 2.75 507 2.5 140 615	A FT/SEC LBS.
" recycled " Drill Water Other Total Received Product Barytes Soda Ash Al. Sulphate Caustic Potash	0 0	Other Total Lost ory Re 1243 1 25	~	98 d Baian 1243	Fluid Lo	tal ting Vol. Unik \$ 6.20 15.75 24.00	98 84) Cost \$	Desine SOLI High G Bentor Drilled Low Ge	os ANA avity Se ke Solids avity Se a S. G.	ALYSIS plids	SOLID Overfle 9.1 9.05	pb / 0.3 3.5 39.9 43.4 2.61	0.0 0.4 4.4 4.8 Solids	Jet Veil impact HHP /I HHP	9.8 13.0 BIT / H'	YDRAULK	Output 1.4 0.1 275 507 2.5 140 615 370	FT/SEC LBS PSI PSI
" recycled " Drill Water Other Cother Fotal Received Product Barytes Soda Ash Al. Sulphate Caustic Potash JK - 261	0 0	Dumped Other Total Lost Total Lost 1 243 1 25 16	1	98 d Balan 1243 25 18	Fluid Lo	tal ting Vol. Unit \$ 6.20 15.75 24.00 39.68	98 847) Cost \$ 15.75	Desine SOLIE High G Bentor Drilled Low G Average	ier 20 AN/ 20 Ry Selle Bolids 20 Selles 20 Sel	ALYSIS plids	SOLID Overfik 9.1 9.05	0.3 3.5 39.9 43.4 2.61 0.434 2.468	0.0 0.4 4.4 4.8 Solids 0.455	Jet Velimpact HHP II HHP Cag. Sc	9.8 13.0 BIT / HY bookly Force 172	YDRAULK	Output 1.4 0.1 275 507 2.5 140 615 370 12.90	FT./SEC LBS. PSI PSI PPG
" recycled " Drill Water Other Total Received Product Barytes Soda Ash Al. Sulphate Caustic Potash IK - 261 Biocide - B54X	0 0	Other Total Lost Total Lost 1 243 1 25 16 49	1	98 98 1243 25 18 44	Fluid Lo	tal ding Vol. Unik \$ 6.20 15.75 24.00 39.68 137.25	98 847) Cost \$ 15.75	Desilte SOLIC High G Bentor Drilled Low G Averag	ier S ANA avity 34 ite Boilds avity Sc s S. G.	ALYSIS plids	SOLID Overfik 9.1 9.05	0.3 3.5 39.9 43.4 2.81 0.434 2.468	0.0 0.4 4.4 4.8 Solids 0.455 10.450	Jet Velimpact HHP // HHP Est Pre- Csg. Se E C	9.8 13.0 BIT / H' ockly Force ff2 ss. Loss eat Frac quiv. Mu	YDRAULIC	Output 1.4 0.1 275 507 2.5 140 615 370 12.90 9.65	FT / SEC LBS. PSI PSI PPG PPG
" recycled " Drill Water Other Cother Fotal Received Product Barytes Soda Ash Al. Sulphate Caustic Potash JK - 261 Biocide - B54X Drispac - L.V.	0 0	Other Total Lost Total Lost 1 243 1 25 16 49 6	1 5	98 98 d Baian 1243 25 16 44 6	Fluid Lo	tal ting Vol. Unit \$ 6.20 15.75 24.00 39.68 137.25 207.00	98 847) Cost \$ 15.75 696.25	Desand Desite SOLII High G Bentor Drilled Low Gr Averag Med. "	ier S ANA avity 94 ite Boilds avity Sc 9 S. G.	ALYSIS plids	SOLID Overfik 9.1 9.05	0.3 3.5 39.9 43.4 2.81 0.434 2.468	0.0 0.4 4.4 4.8 Solids 0.455 10.450	Jet Velimpact HHP // HHP Est Pre- Csg. Se E C	9.8 13.0 BIT / H' ockly Force ff2 ss. Loss eat Frac quiv. Mu	YDRAULK	Output 1.4 0.1 275 507 2.5 140 615 370 12.90	FT/SEC LBS. PSI PSI
" recycled " Drill Water Other Total Received Product	0 0	Dumped	5	98 d Baian 1243 25 16 44 6 14	Fluid Lo	tal ting Vol. Unit \$ 6.20 15.75 24.00 39.68 137.25 207.00 156.28	98 847) Cost \$ 15.75 696.25	Desand Desilte SOLII High G Bentor Drilled Low G Averag Med. " Low "	ier S ANA avity 94 ite Boilds avity Sc 9 S. G.	ALYSIS Dilds #1ck.	*2 ck	0.3 3.5 39.9 43.4 2.81 0.434 2.468	0.0 0.4 4.4 4.8 Solids 0.455 10.450	Jet Velimpact HHP II HHP ER Pre- Csg. Sc. E C	9.8 13.0 BIT / Hr ocity Force 12 ss. Loss sat Frac quiv. Mu D 2 DCA	YDRAULK B Pres Id Wt. DP - GPM	Output 1.4 0.1 275 507 2.5 140 615 370 12.90 9.65	PSI PPG PPG
" recycled " Drill Water Other Total Received Product Barytes Soda Ash AI. Sulphate Caustic Potash JK - 261 Biocide - B54X Drispac - L.V. KCL - Agri.	0 0	Dumped	5 4 15	98 98 1243 25 16 44 6 14 94	Fluid Lo	tal ting Vol. 5 6.20 15.75 24.00 39.68 137.25 207.00 156.28 25.70	98 847) Cost \$ 15.75 696.26 625.12 386.50	Desand Desilte SOLII High G Bentor Drilled Low G Averag Med. " Low "	ler Solids Bolids Bolids With Science Solids With Science With Science Solids With Science W	ALYSIS Dilds #1ck.	9.05 8 (p	0.3 3.5 39.9 43.4 2.81 0.434 2.468	0.0 0.4 4.4 4.8 Solids 0.455 10.450	Jet Velimpact HHP II HHP ER Pre- Csg. Sc. E C	9.8 13.0 BIT / Hr ocity Force 12 ss. Loss sat Frac quiv. Mu D 2 DCA	YDRAULK B Pres Id Wt.	Output 1.4 0.1 275 507 2.5 140 615 370 12.90 9.65	PSI PSG PPG
" recycled " Drill Water Other Cotal Received Product Barytes Sode Ash Al. Sulphete Caustic Potesh UK - 261 Biocide - B54X Drispac - L.V. KCL - Agri. Sod. Sulphite	120	Dumped	5 4 15 3	98 98 1243 25 16 44 6 14 94 8	Fluid Lo Final To (Circular	st tal ting Vol. Unit \$ 6.20 15.75 24.00 39.68 137.25 207.00 156.28 25.70 23.56	98 847) Cost \$ 15.75 696.26 625.12 386.50	Desilite SOLIT High G Benton Drilled Low G Averag Med. " Low " Low " Duily C	ler Solids S	ALYSIS Dilde #1ck.	\$0LID Overfile 9.1 9.05 \$ (p	0.3 3.5 39.9 43.4 2.61 0.434 2.468 0.284 6.291	0.0 0.4 4.4 4.8 Solds 0.455 10.450 0.251 37.30	Jet Velimpact HHP /i HHP Cag. 9: ECCrit.Flo	9.8 13.0 BIT / HT Decity Force In2 BEL Loss BEL	YDRAULK B Pres Id Wt. DP - GPM st: 28,749	Output 1.4 0.1 275 507 2.5 140 615 370 12.90 9.65	PSI PPG PPG



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report A.G.N. 000 287 314

Drilling Fluid Report

Reports 13 Date: 30-Jan Spud Date: 18 Jan 1997 Depth: 1,951 (M.)To: 2,101

WELL NAME and No.		I A	RA		A = i	# 1			CONTRACTO				& E					
lock No.: PEP 10		Location	1: (Otway E	Basin		State :	Victoria	RIG !	ło.	30							
PERATOR'S REPRE	SENTATI	VE:		Alex E	BRADI	.EY			REPORT FO	R	Paul	COO	PER					
Drilling	Assemb		- T		Casing			Mu	d Volume B	bis.						ton Data		
it size 8.5 Type:			4,14,14	16 1	nch Q		Metres	Hole:	395 Pits:		385		Pump s		127	6.0"	T	
P 4.5 Type:	G	Length	1839	9.675	nch Q	492.8	Metres	Drill String Cap. :		Volume			Make/M		G D	PZ-8	% Effic	
	54.84	Length	92.78	~	nch Q			In Storage :	0 Welgi				MakeM			PZ-8	% Effic	
	169.1	Other	20.35	MUD T	YPE:	KCL -	PHPA				ilar Vek				Stiumin		ВЫМ	8.65
C " ~ Length							Mud Pr	operties	DP size 4.5	1	(FUM)				Stidmin		GPM:	363
AMPLE From						F/Line		Pit	DC size 6.5		(FVM)		Bottom	•		PRESSU		1, 500
TME Sample Taken							14.00	21.30	DC stzı ~	<u> - ن</u>	(FUM)		Total Ci			Type su	rosys.	
lowline TEMPERATU	RE				deg. C	3040	2,051	N.C. 2,101	Weight:	<92	Filtrate		(11 G)			K+ > 2%)	
DEPTH Metres						9.10		9.10	Viscosky:			Viscosii	ty:	N.C.	Yield Po	olmt :	15 - 30	
WEIGHT PPS			••	d		47	45	44	By Authority			or's writ			-	Drilling (Contracto	or .
Funnel VISCOSITY (se				deg. C		12		12			Operat	or's Rep	resent	dve .	~	Other		
LASTIC VISCOSITY			50	deg. C		18		17	 						NDATIO	NS		
MELD POINT (Ib/100R			·			7	15	5 11								_		
CEL STRENGTH (M)			men.			8.7	6.8	6,5	1									
ILTRATE API (cm3/				deg. C		~		~	1									
API HTHP Filtrate (cn						1	-	1 ~	Maintenar	nce pre	mixes	only at	this tim	●.				
BOLIDS Content (% b			Calc.	1 1	Retort	4.7	-	4.8 ~	l									
LIQUID Content (% b)		OllWate	M.			~	95.3	~ 95.2	ļ									
SAND Content (% by						Tr		Tr	1									
METHYLENE BLUE C		×	IDADDI		cm3/cm3	+		6.0	i									
pH	Strip			23	deg. C	8.8		8.5	Lime was				- 64		eme (C	ama & i	Direitel	
ALKALINITY Mud	Pm)						N.C.	0.15									rig-site).	•
ALKALINITY Filtrate	(P0940)					0.16/0.		0.15/0.7	Kwikseal	- Fine	was us	red to u	uob nb	# CIA2	ы зрж.			
CHLORIDE (mg/L)				,			16,000	16,300	1									
Total HARDNESS (mg	yL)					760		720	ł				6 1 II	MMARY	,			
SULPHITE (mg/L)						80		80	1		OPER/					uari with	a down	hole
						12,700	12,300	11,000			on bot	tom, the	8-1/2			ued with	a down-	-hole
K+ (mg/L)						12,700	12,300 2.52	11,000 2.25	motor aiding	the p	on bot	iom, the	8-1/2°	drilling	g contin			
K+ (mg/L) KCL (% by WL)						12,700 2.6 2.08	12,300 2.52 2.04	11,000 2.25 2.07	motor aiding A mechai	g the po nical po	on bot enetrat oblem	tom, the ion rate arose,	8-1/2° so a ba	drilling	g contin			
K+ (mg/L) KCL (% by WL) PHPA (Calc. lb/bbl)						12,700 2.6 2.08 1.36	12,300 2.52 2.04	11,000 2.25 2.07 1.42	motor aiding	g the po nical po	on bot enetrat oblem	tom, the ion rate arose,	8-1/2° so a ba	drilling	g contin			
K+ (mg/L) KCL (% by WL) PHPA (Calc. (b/bbl) PHPA (Excess (b/bbl)		lings)		•		12,700 2.6 2.08 1.36 40/28/10	12,300 2.52 2.04 	11,000 2.25 2.07 1.42 41/29/7	motor aiding A mechai	g the po nical po	on bot enetrat oblem	tom, the ion rate arose,	8-1/2° so a ba	drilling	g contin			
SULPHITE (mg/L) K+ (mg/L) KCL (% by WL) PHPA (Calc. lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100) 6 (read		eadings			12,700 2.6 2.08 1.36 40/28/10	12,300 2.52 2.04 	11,000 2.25 2.07 1.42	motor aiding A mechai	g the po nical po	on bot enetrat oblem out to c	tom, the ion rate arose, hange t	8-1/2° so a ba	drilling trytes p A.	g continu			
K+ (mg/L) KCL (% by WL) PHPA (Calc. (b/bbl) PHPA (Excess (b/bbl) RHEOLOGY - 800 / 300) 6 (read	mins. (n) TING (B	BL\$.)	12,700 2.6 2.08 1.36 40/28/10	12,300 2.52 2.04 	11,000 2.25 2.07 1.42 41/29/7	motor aiding A mechai	the police provided of	on bottenetrations on bottenetration on bottenet	tom, the ion rate arose,	so a bathe BHA	drilling trytes p A. EQUIT	oil was	used to	clear the	pipe
K+ (mg/L) KCL (% by Wt.) PHPA (Calc. lib/bbl) PHPA (Excess lib/bbl) RHEOLOGY - 800 / 300 RHEOLOGY - 200 / 100) 6 (read) 3 Q 30	mins. (n MUD A	CCOUN			12,700 2.6 2.08 1.36 40/28/10	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/18/12	motor aiding A mechai and the bit ;	g the po nical po	on bottenetrate oblem out to co	torn, the ion rate arose, hange t	8-1/2° so a bathe BHA	drilling trytes p A. EQUII Hr.	continuity was I	sed to	clear the	pipe Hr.
K+ (mg/L) KCL (% by WL) PHPA (Calc. (b/bbl) PHPA (Excess (b/bbl) RHEOLOGY - 800 / 300) 6 (read) 3 Q 30	mins. (n MUD A	CCOUN	TING (B		12,700 2.6 2.08 1.36 40/28/10 25/20/16	12,300 2.52 2.04 2.04 40/29/8 5 24/17/14	11,000 2.25 2.07 1.42 41/29/7	motor aiding A mechai and the bit p	the prical probable of the pulled of the pul	on bottenerate oblem out to constitute of the co	tom, the ion rate arose, hange to S COM	so a bathe BHA	drilling arytes p A. Equil Hr. 20.5	continuity was in the second s	Screen S175/S1	n Size	Pipe Hr. 20.5
K+ (mg/L) KCL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei) 6 (read) 3 Q 30	mins. (n MUD A Fluid	CCOUN Lost or ler	TING (B	ed	12,700 2.6 2.08 1.36 40/28/10 26/20/16	12,300 2.52 2.04 2.04 40/29/8 5 24/17/14	11,000 2.25 2.07 1.42 41/29/7 24/19/12	motor aiding A mechai and the bit ;	the police provided of	on bottenerate oblem out to constitute of the co	torn, the ion rate arose, hange t	8-1/2° so a bathe BHA	drilling trytes p A. EQUII Hr.	continuity was I	sed to	n Size	Pipe Hr. 20.5
K+ (mg/L) KCL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei) 6 (read) 3 Q 30 yed	MUD A	CCOUN Lost of	TING (B	51	12,700 2.6 2.08 1.36 40/28/10 26/20/16	12,300 2.52 2.04 2.04 24/17/14 nary	11,000 2.25 2.07 1.42 41/29/7 24/18/12	motor aiding A mechai and the bit p	the prical probable of the pulled of the pul	south to compare the south to	tom, the ion rate arose, hange i S CON D'sand	so a bathe BHV VIROL Cones 2 12	erytes p A. Equil Hr. 20.5	CONTINUES IN WAS	Screen S175/S1	n Size	pipe Hr.
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/ fresh water " recycled ") / 6 (read) / 3 @ 30 ved	mins. (n MUD A Fluid Desand Desitter	Lost of	TING (B	51 2	12,700 2.6 2.08 1.36 40/28/10 25/20/16 Summ	12,300 2.52 2.04 2.04 24/17/14 nary	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847	motor aiding A mechai and the bit p	the prical probable of the pulled of the pul	on bottenetration on bottenetration of the court to constitute to constitute the court to constitute the constitut	com, the con rate arose, hange t S CON D'sand D'sitter	8-1/2" so a bathe BH/ VTROL Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	PMENT Shakerif 1 2	Screen S175/S1	n Size 75/S175	Hr. 20.5
K+ (mg/L) KCL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/fresh water	0/6 (read 0/3 @ 30 yed 0 196	MUD A Fluid Desand Desilter	Lost of	TING (B	51 2 17	12,700 2.6 2.08 1.36 40/28/10 25/20/16 Summ	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/19/12	motor aiding A mechai and the bit p Type Centrifuge Degasser	the prical probable of the pulled of the pul	solid	tom, the ion rate arose, hange i S COP Draine Drainer S EQUI DW (ppg.	8-1/2" so a bathe BH/ VTROL Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	PMENT Shater# 1 2 EENCY Tow (ppg	Screen S175/S1	n Size 75/S175 Output	Pipe Hr. 20.5
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/ fresh water Drill Water	0/6 (resc 0/3 Q 30 yed 0 195	MUD A Fluid Desand Desilter Downh	Lost of	TING (B	51 2 17 68	12,700 2.6 2.08 1.36 40/28/10 26/20/16 Summ Initial Vi	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847	motor aiding A mechai and the bit p	the prical probable of the pulled of the pul	SOLID SOLID Overfit 9.1	tom, the ion rate arose, hange i S COP Draine Drainer S EQUI DW (ppg.	8-1/2" so a bathe BH/ VTROL Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	CEENCY 9.6	Screen S175/S1	7 Size 75/S175 75/S175 Output	Hr. 20.4
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/ fresh water Drill Water	0/6 (resc 0/3 Q 30 yed 0 195	MUD A Fluid Desand Desilter Downh	Lost of	TING (B	51 2 17 68	12,700 2.6 2.08 1.36 40/28/10 26/20/16 Summ Initial Vi	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847	motor aiding A mechai and the bit p Type Centrifuge Degasser	the prical probable of the pulled of the pul	solid	tom, the ion rate arose, hange i S COP Draine Drainer S EQUI DW (ppg.	8-1/2" so a bathe BH/ VTROL Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	PMENT Shater# 1 2 EENCY Tow (ppg	Screen S175/S1	n Size 75/S175 Output	Hr. 20.5
K+ (mg/L) KCL (% by Wt.) PHPA (Calc. tb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fhuld Bulk & Recei Premix w// fresh water " recycled " Drill Water Other	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other	CCOUN Lost of ler ole	TING (B	51 2 17 68	12,700 2.6 2.08 1.36 40/28/10 26/20/18 Summ Initial V	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847 195	motor aiding A mechai and the bit p Type Centrifuge Degasser	the prical probable of the pulled of the pul	SOLID SOLID Overfit 9.1	tom, the ion rate arose, hange i S COP Draine Drainer S EQUI DW (ppg.	8-1/2" so a bathe BH/ VTROL Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	CEENCY 9.6	Screen S175/S1	7 Size 75/S175 75/S175 Output	Hr. 20.5
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/ fresh water Drill Water	0/6 (read 0/3 Q 30 yed 0 195 0	MUD A Fluid Desand Desilter Downh	CCOUN Lost of ler ole	TING (B	51 2 17 68 32	12,700 2.6 2.08 1.36 40/28/10 25/20/16 Summithat Vo	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847 195	motor aiding A mechai and the bit p Type Centrifuge Degasser	the prical propuled coulled co	solio Solio Solio Solio Overfit 9.10	tom, the ion rate arose, hange i S COP Draine Drainer S EQUI DW (ppg.	SO a base BHANNER Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	continuity was in the continuity was in the	Screen 5175/51 5175/51	7 Size 75/S175 75/S175 Output	Hr. 20.5 20.5 (gallm)
K+ (mg/L) KCL (% by Wt.) PHPA (Caic lib/bbl) PHPA (Excess lib/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/ fresh water Other Total Received	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other	CCOUN Lost or ler ole d	TING (B	51 2 17 68 32	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847 195	motor aiding A mechas and the bit s Type Centrifuge Degasser Desander Desilter	Man. Dnico	solio Solio Solio Solio Overfit 9.10	orn, the ion rate arose, hange t S COM D'sand D'sixter S EQUI	SO a base BHANNER Cones 2 12	erytes p A. Equir Hr. 20.5 20.5	CONTINUES IN CONTI	Screen 5175/51 5175/51	75/S175 75/S175 0utput 1.7 0.1 CS DAT 258	Hr. 20.1 20.1 (gal/m)
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lib/bbl) PHPA (Excess lib/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix w/f fresh water " recycled " Driff Water Other Total Received	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Le	CCOUN Lost of ler ole	TING (B	51 2 17 68 32	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 2,04 2,04 2,04 2,04 2,04 2,04 2,0	11,000 2.25 2.07 1.42 41/29/7 24/18/12 847 195 170 872	motor aiding A mechat and the bit p Type Centrituge Degasser Desander Desitter	Man. Dnico	solio Solio Solio Solio Overfit 9.10	orn, the ion rate arose, hange t S CON D'sand D'sixter S EQUI D'spb / 5	SO a bathe BHA	drilling rytes p Equil Hr. 20.5 20.5	continues in the second	Screen 5175/51 5175/51	75/S175 75/S175 0utput 1.7 0.1 258 442	Hr. 20.: 20.: (gal/m)
K+ (mg/L) KCL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Drill Water Other Total Received Product Barytes	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilber Downh Dumpe Other Total Le tory 1243	CCOUN Lost or ler ole d	TING (B	51 2 17 68 32 170 Balar 1243	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 2,04 2,04 2,04 2,04 2,04 2,04 2,0	11,000 2.25 2.07 1.42 41/29/7 24/18/12 847 195 170 872	motor aiding A mechat and the bit p Type Centrituge Degasser Desander Desitter SOLIDS A High Gravity	Man. Dnico NALYS	solio Solio Solio Solio Overfit 9.10	orn, the ion rate arose, hange to see the second or see the second or see the second or see the second or	SO a bathe BHA	drilling rytes p Equilibrium Hr. 20.5 20.5 EFFIC Underf	continues in the second	Screen 5175/51 5175/51	75/S175 75/S175 0utput 1.7 0.1 258 442 2.0	Hr. 20.4 20.4 (gal/m)
K+ (mg/L) KCL (% by Wt.) PHPA (Caic lib/bbl) PHPA (Excess lib/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Drill Water Other Total Received Product Barytes Lime	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Lo tory 1243	CCOUN Lost or ler ole d	Used	51 2 17 68 32 170 Balar 1243 38	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 2,04 2,04 2,04 2,04 2,04 2,04 2,0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847 195 170 872	motor aiding A mechas and the bit s Type Centrifuge Degasser Desander Desitter SOLIDS A High Gravity Bentonite	Man. Dnico NALYS Solids	solio Solio Solio Solio Overfit 9.10	born, the lon rate arose, hange to see the second balker s	SO a bathe BHANTROL Cones 2 12 PMENT) 0.0 0.2	drilling rytes p Equilibrium Hr. 20.5 20.5 EFFIC Underf	continues in the second	Screen 5175/51 5175/51	0 Size 75/S175 75/S175 0utput 1.7 0.1 258 442 2.0 115	Hr. 20.1 20.1 (gal/m)
(* (mg/L) (*CL (% by Wt.) PHPA (Calc. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wif fresh water " recycled " Drill Water Other Total Received Product Barytes Lime Al. Sulphate	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downth Dumpe Other Total Lo tory 1243 40 25	CCOUN Lost or ler ole d	Used ~ 2	51 2 17 68 32 170 Balar 1243 38 20	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 2,04 2,04 2,04 2,04 2,04 2,04 2,0	11,000 2.25 2.07 1.42 41/29/7 24/19/12 847 195 170 872	motor aiding A mechai and the bit p Type Centrifuge Degasser Desander Desilter SOLIDS A High Gravity Bentonite Drilled Solidi	Man. Dnico NALYS Solids	solio Solio Solio Solio Overfit 9.10	born, the lon rate arose, hange to second brand	8-1/2* so a bathe BH/ NTROL Cones 2 12 PMENT) 0.0 0.2 4.6 4.8	drilling rytes p EQUIT Hr. 20.5 20.5 EFFIC Underf	continues in the second	Screen S175/S1 S175/S1	75/S175 75/S175 0utput 1.7 0.1 258 442 2.0	Hr. 20.4 20.5 (gal/m)
(* (mg/L) (*CL (% by Wt.) PHPA (Caic lib/bbl) PHPA (Excess lib/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water Other Total Received Product Barytes Lime Al. Sulphate Caustic Potash	0/6 (read 0/3 Q 30 yed 0 195 0	mirrs. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Le tory 1243 40 25 16	CCOUN Lost or ler ole d	Used ~ 2 5 2	51 2 17 68 32 170 Balar 1243 38 20 14	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 2,04 2,04 2,04 2,04 2,04 2,04 2,0	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 847 195 170 872) Cost \$ 120.00 79.36	motor aiding A mechai and the bit p Type Centrifuge Degasser Desander Desilter SOLIDS A High Gravity Bentonite Drilled Solidi Low Gravity	Men. Dinko NALYS Solids Solids Solids Solids	solio Solio Solio Solio Overfit 9.10	born, the lon rate arose, hange to second brand	8-1/2° so a bathe BH/ VITROL Cones 2 12 PMENT) 0.0 0.2 4.6 4.8 Solds	drilling rytes p EQUII Hr. 20.5 20.5 EFFIC Underf	PMENT Shater# 1 2 EIENCY 100 (ppg 9.6 12.6 BIT / HO ocity Force	Screen S175/S1 S175/S1	0 Size 75/S175 75/S175 0utput 1.7 0.1 258 442 2.0 115	Hr. 20.4 20.4 (gal/m)
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Orlil Water Other Total Received Product Barytes Lirne Al. Sulphate Caustic Potash JK - 281	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Lo tory 1243 40 25 16 44	CCOUN Lost or ler ole d	Used ~ 2	51 2 17 68 32 170 Balar 1243 38 20 14	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 204 204 204 204 204 204 204 204 204 2	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 847 195 170 872) Cost \$ 120.00 79.36 960.76	motor aiding A mechai and the bit p Type Centrifuge Degasser Desander Desiter SOLIDS A High Gravity Bentonite Drilled Solidi Low Gravity Average S. (Men. Dinko NALYS Solids Solids Solids Solids	on both enetrative solio solio Hr. 0 Solio Overfit 9.10	born, the lon rate arose, hange to second brisher by the low (ppg. 1.5 and 1.5	8-1/2° so a bathe BH/ VITROL Cones 2 12 PMENT) 0.0 0.2 4.6 4.8 Solds	drilling rytes p EQUII Hr. 20.5 20.5 EFFIC Underf	PMENT Shaker 1 2 EENCY Bow (pps 9.6 12.6 BIT / H) ocity Force in2	Screen S175/S1 S175/S1	Output 1.7 0.1 258 442 2.0 115 541	Hr. 20.5 20.5 (gal/m) FT/SE LBS
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Orlil Water Other Total Received Product Barytes Lirne Al. Sulphate Caustic Potash JK - 281 Biocide - B54X	0/6 (read 0/3 Q 30 yed 0 195 0	mirrs. (n MUD A Fluid Desand Desilter Downth Dumpe Other Total Lo tory 1243 40 25 16 44	CCOUN Lost or ler ole d	Used ~ 2 5 2 7	51 2 17 68 32 170 Balar 1243 38 20 14 37 6	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 2,04 2,04 2,04 2,04 2,04 2,04 2,0	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 847 195 170 872) Cost \$ 120.00 79.36 980.76	motor aiding A mechas and the bit p Type Centrifuge Degasser Desander Desilter SOLIDS A High Gravity Bentonite Dvilled Solid: Low Gravity Average S. (Med. "n" Med. "K"	Men. Dinko NALYS Solids Solids Solids Solids	on both enetrative solio solio Hr. 0 Solio Overfit 9.10	born, the corn,	8-1/2* so a ba the BH/ Cones 2 12 12 PMENT) 0.0 0.2 4.6 4.8 Solds 0.499	drilling Inytes p EQUIF Hr. 20.5 20.5 EFFIC Underf	Shakerif 1 2 SEENCY Sow (ppg 9.6 12.6 BIT I HN ocity Force in2 est Frac	Screen S175/S1 S175/S1	Output 1.7 0.1 258 442 2.0 115 541 370	Hr. 20.5 (gal/m) FT/SE LBS PSI PSI PPG
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Orlil Water Other Total Received Product Barytes Lirne Al. Sulphate Caustic Potash JK - 281 Biocide - B54X Drispac - L.V.	0/6 (read 0/3 Q 30 yed 0 195 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Lo tory 1243 40 25 16 44 6 14	CCOUN Lost or ler ole d	Used ~ 2 5 2 7	51 2 17 68 32 170 Balar 1243 38 20 14 37 6	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2.52 2.04 2.04 3 40/29/8 5 24/17/14 10/29/8 6 24/17/14 10/29/8	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 847 195 170 872) Cost \$ 120.00 79.36 980.76	motor aiding A mechai and the bit p Type Centrifuge Degasser Desander Desilter SOLIDS A High Gravity Bentonite Drilled Solid: Low Gravity Average S. (Med. "n" Med. "K" Low "n"	Men. Dnko NALYS Solids *1cc. "	on both enetrative solio solio Hr. 0 0 Solio Overfit 9.10 SS (g	born, the four rate arose, hange to serve the present	8-1/2* so a bathe BH/ TROL Cones 2 12 PMENT) 0.0 0.2 4.6 4.8 Solds 0.498 6.586 0.392	drilling rytes p EQUII Hr. 20.5 20.5 EFFIC Underf	PMENT Shaker 1 2 EENCY Now (pps 9.6 12.6 BIT / H) ocity Force in2 est Frac quiv. Mu	Screen S175/S1 S175/S1	Output 1.7 0.1 258 442 2.0 115 541 370 12.90 9.47	PSI PSG PPG PPG
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Orlil Water Other Total Received Product Barytes Lirne Al. Sulphate Caustic Potash JK - 281 Biocide - B54X	0/6 (read 0/3 Q 30 yed 0 195 0	mirrs. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Lo tory 1243 40 25 16 44 6 14 94	CCOUN Lost or ler ole d	Used 2 5 2 7 9 20	51 2 17 68 32 170 Balar 1243 38 20 14 37 6 5 74	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2,52 2,04 3 40/29/8 5 24/17/4 0 sting Vol Unit \$ 6 20 24,00 39,68 137 25 207 00 156 28 25 70	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 947 195 170 872) Cost \$ 120.00 79.36 960.76	motor aiding A mechai and the bit p Type Centrifuge Degasser Desiter Desiter SOLIDS A High Gravity Bentonite Drilled Solidi Low Gravity Aveage 3.0 Med. "h" Low "n" Low "K"	Man. Dnico NALYS Solids #1ck	solio solio solio solio but to c solio but to c solio	born, the four rate arose, hange to serve the present	8-1/2* so a bathe BH/ TROL Cones 2 12 PMENT) 0.0 0.2 4.6 4.8 Solds 0.498 6.586 0.392	drilling Inytes p EQUII Hr. 20.5 20.5 EFFIC Underlimpact HHP I HRP BR Pre Cag S E C Critfic	Shakerif Shakerif 1 2 SENCY Now (pps 9.6 12.6 BIT I HN locity Force in2 est Frace quiv. Mu	Screen S175/S1 S175/S1 S175/S1	Output 1.7 0.1 258 442 2.0 115 541 370 12.90 9.47	Hr. 20.1 20.1 (gal/m) FT/SE LBS PSI PSI PPG
K+ (mg/L) KCL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Orill Water Other Total Received Product Barytes Lirne Al. Sulphate Caustic Potash JK - 281 Biocide - B54X Drispac - L.V.	0/6 (read 0/3 Q 30 yed 0 195 0	mirrs. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Lo tory 1243 40 25 16 44 6 14 94	CCOUN Lost of ler ole d	Used ~ 2 5 2 7 9 20 5	51 2 17 68 32 170 Balar 1243 38 20 14 37 6 5 74	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2.52 2.04 2.04 3 40/29/8 5 24/17/14 10/29/8 6 24/17/14 10/29/8	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 947 195 170 872) Cost \$ 120.00 79.36 960.76	motor aiding A mechai and the bit p Type Centrifuge Degasser Desander Desilter SOLIDS A High Gravity Bentonite Drilled Solid: Low Gravity Average S. (Med. "n" Med. "K" Low "n"	Man. Dnico NALYS Solids #1ck	solio solio solio but to c solio hr. 0 solio solio y.1 9.10 solio solio y.1 y.10 solio sol	S COM D'sand D'sand D'sand D'sand D'sand D'sand 1.133 0.301 4.284	8-1/2* so a bathe BH/ Cones 2 12 PMENT) 0.0 0.2 4.6 4.8 Solds 0.499 6.586 0.392	drilling Inytes p EQUII Hr. 20.5 20.5 EFFIC Underlimpact HHP I HRP BR Pre Cag S E C Critfic	Shaharif 1 2 IENCY Tow (ppg 9.6 12.6 BIT / Hn ocity Force in/2 est Frace quiv. Mu c D	Screen S175/S1 S175/S1 S175/S1	Output 1.7 0.1 258 442 2.0 115 541 370 12.90 9.47	Hr. 20.1 20.1 (gal/m) FT/SE LBS PSI PSI PPG
(* (mg/L) (*CL (% by Wt.) PHPA (Caic. lb/bbl) PHPA (Excess lb/bbl) PHPA	0/6 (read 0/3 Q 30 yed 0 195 0	mirrs. (n MUD A Fluid Desand Desilter Downh Dumpe Other Total Lo tory 1243 40 25 16 44 6 14 94	CCOUN Lost of ler ole d	Used 2 5 2 7 9 20	51 2 17 68 32 170 Balar 1243 38 20 14 37 6 5 74	12,700 2.6 2.08 1.36 4072810 25/2016 Summinitial Vo	12,300 2.52 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	11,000 2.25 2.07 1.42 41/29/7 24/18/12 847 195 170 872) Cost \$ 120.00 79.36 960.76 1,406.52 514.00 117.80	motor aiding A mechai and the bit p Type Centrifuge Degasser Desiter Desiter SOLIDS A High Gravity Bentonite Drilled Solidi Low Gravity Aveage 3.0 Med. "h" Low "n" Low "K"	Man. Dnico NALYS Solids #1ck	solio solio solio but to c solio hr. 0 solio solio y.1 9.10 solio solio y.1 y.10 solio sol	S COM D'sand D'sand D'sinter S EQUIDOW (ppg. 41.5 43.6 2.61 0.301 4.284	8-1/2* so a bathe BH/ TROL Cones 2 12 PMENT) 0.0 0.2 4.6 4.8 Solds 0.499 6.586 0.382 13.71	drilling Inytes p EQUIP Hr. 20.5 20.5 EFFIC Underfi HHP / HHP Bit Pre Cag. 9 Cont.Fic	Continue of the continue of th	Screen S175/S1	Output 1.7 0.1 258 442 2.0 115 541 370 12.90 9.47	Hr. 20.5 20.5 (gal/m) FT/SE LBS
K+ (mg/L) KCL (% by Wt.) PHPA (Excess lb/bbl) PHPA (Excess lb/bbl) RHEOLOGY - 600 / 300 RHEOLOGY - 200 / 100 Fluid Built & Recei Premix wi fresh water " recycled " Drill Water Other Total Received Product Barytes Lime Al. Sulphate Caustic Potash JK - 261 Biocide - B54X Drispac - L.V. KCL - Agri. Sod. Sulphite Kwikseal - Fine	0/6 (read 0/3 @ 30 yed 0 195 0 0	mins. (n MUD A Fluid Desand Desilter Downh Dumpe Other 1243 40 25 16 44 6 14 94 8 72	CCOUN Lost of ler ole d	Used ~ 2 5 2 7 9 20 5 4	51 2 17 68 32 170 Balar 1243 38 20 14 37 6 5 74 3 68	12,700 2.6 2.08 1.36 40/28/10 25/20/16 Summ Initial Vi	12,300 2.52 2.04 0 40/28/8 5 24/17/4 0 seceived 0 set 0 10/18/8 6 20 24 00 39.68 137.25 207.00 156.28 25.70 23.56	11,000 2.25 2.07 1.A2 41/29/7 24/19/12 947 195 170 872) Cost \$ 120.00 79.36 960.76	motor aiding A mechas and the bit p Type Centrifuge Degasser Desander Desiter SOLIDS A High Gravity Bentonite Drilled Solid: Low Gravity Average S. (Med. "n" Med. "K" Low "n" Low "K" Daily Chemic	Men. Dnko NALYS Solids **1ck " " " " " " " " " " " " " " " " " "	on both enetrative solio solio Hr. 0 0 SOLIO Overfit 9.10 SS (g	S COP S COP D'sand D'sinter S EQUI	8-1/2* so a bathe BH/ Cones 2 12 12 PMENT) 0.0 0.2 4.6 4.8 Solids 0.499 6.586 0.382 13.71	drilling Inytes p EQUII Hr. 20.5 20.5 EFFIC Underline HH/P HR/P BR/P Cong. 3 - EC Crit.Fic Cumul	Shaharif 1 2 IENCY Tow (ppg 9.6 12.6 BIT / Hn ocity Force in/2 as. Loss out Frace quiv. Mu c D o @ DC/I attive Co	Screen S175/S1	Output 1.7 0.1 258 442 2.0 115 541 370 12.90 9.47	Hr. 20.3 20.1 (gallm) PSI PSI PPO PPO

CULTUS PETROLEUM N.L.

Independent Drilling Fluid Services Pty. Ltd.

Reports 14 Date 31-Jan Spud Date 18 Jan 1997 Depth 2,101-(M)To 2,126 31-Jan

	7		R A	IE	A	<u># 1</u>			CONTRACTOR O. D). & E.
VELL NAME and No.		cation		Otway			nto :	Victoria	RIG No. 30	
					BRADI				REPORT FOR Paul C	OOPER
PERATOR'S REPRESE						<u>. E I</u>		Me	Volume Bbis.	Circulation Data
	sembly				Casing inch @	12.2 M	etres.	Hole :	100 Pita: 366	Pump size : [2"] 6.0" 8.0 ins.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 '	٠.	3,13,13					Drift String Cap.	94 Total Volume: 86	Make/Model 1: G D PZ-8 % Effic
		ngth			inch Q			in Storage :	45 Weight: 8.6	Make/Model 2: G D PZ - 8 % Emc
	4.84 Le	Ŧ- · ·	- ·- F			KCL - PH	_		6 O/G: 15.0 Annular Velocity	W Bbl/stk 0 067 Stk/min 75 Bbl/M 9.5
C " 6.5 Length 15	59.2 Ou	ner	16 77	MUD 1	YPE:			operties		am Bbl/stk 0.067 Stk/min 75 GPM: 41
C " ~ Length						F/Line		F/Line		am Bottoms up : 40 PRESSURE : 1,90
AMPLE From						14.00		18.00	OC size - (FtM)	~ Total Circ. : 86 Type surffsys. 3
IME Sample Taken						53		55		OPERTY SPECIFICATIONS
lowline TEMPERATURE					deg. C	2,105		2,126	Weight: < 9.2 Filtrate:	< 8.0 Other : K+ → 2%
DEPTH Metres						9.15		9.15	Ascosity: NC Plastic Vis	scosity: NC Yield Point: 18 21
VEIGHT PPG		_						46	By Authority : ~ Operator's	
unnel VISCOSITY (seciq	at) API Q	• •		deg, C		44	İ			s Representative - Other
LASTIC VISCOSITY OF	8	5	50	deg. C		11		13		
1ELD POINT (16/100f2)						16		18	FLUID SUMMA	RY AND RECOMMENDATIONS
EL STRENGTH (IN1007	2) 10 50	c./10	min.				11	6 13	D. 4 -1 4 01104	and the second of the second of the second
ILTRATE API (cm3 / 30 n	min.) g					7.1		6.8	Keducing the PHPA exce	ess level to 1.0 ppb. in stages as requested. e product JK - 281 is the ability to enhance the
PI HTHP Filtrate (cm3/	30 min.)	g	 . ~ .	deg. C			}			
AKE Thickness (32nd.	in API/I					1 -	<u>-</u>	5.2 ~	rield Point and this was why nore economical alternative	it was being kept at higher levels (being the
OLIDS Content (% by V			Calc.	!	Retort	5.2	~			pl. had increased, dilution premixes were used to
IQUID Content (% by Vo	ol.) Oil	Wate	ŗ	• *			4.8	~ 94.8 Tr	aduce the solids content, or	
AND Content (% by Vol						Tr			ACIDCA DIA 20002 COURANT O	
METHYLENE BLUE CAPA	ACITY	X I	ib/bbi		cm3/cm3	11.0		10.0		
oHSt	trip			26	deg. C	8.5		8.8		
LKALINITY Mud (Pm	1)					0.22		0.2		
LKALINITY FIRE	P(7Mf)					0.16/0.62		0.2/0.64		
HLORIDE (mg/L)			•			15,200		15,600		
otal HARDNESS (mg/L)	ı		_			700		780		
SULPHITE (mg/L)				•	•	40		110	OPERATION	ONS SUMMARY
						9,000		9,900	Once back on bottom	n, the 8-1/2" drilling continued to 2126 metres.
(+ (mg/L)						1.84		2.03		-
KCL (% by WL)						2.06		2.09	A barvies pill was pumped	to clear the pipe and the bit was pulled out to
PHPA (Calc. Ib/bbl)								1.18	change the BHA.	,,
PHPA (Excess Ib/bbl)						1.32	- +		change the or sa.	
RHEOLOGY - 600 / 300 / 6	(reading)S)				38/27/7	1	44/318		
RHEOLOGY - 200 / 100 / 3	@ 30 mi	ns. (re	adings)		20/15/12		26/17/13		
	M	UD AC	CCOUN	TING (E	BLS.)				SOLIDS	CONTROL EQUIPMENT
Fluid Bullt & Received		Fluid	Lost of	r Dispo	sed	Summar	Υ		Type Man Hr.	Cones Hr. Shakers Screen Size Hr.
Premix	-	sand			19	initial Volu	me	872	Centrifuge - 0 D's	and 2 6 1 \$175/\$175/\$175
wi fresh water		silter	-		1	1			Degasser Drilco 0 Disi	inter 12 6 2 517551755175
•			-		41	Fluid Rece	ived	110		
" recycled "	:	ownho				1000.000			201103	EOI UPMENT EFFICIENCY
Orill Water	0 İpr	umped	á		28			400	Overflow	(ppg.) Underflow (ppg.) Output (galln
Other	0 ;01	ther			34	Fluid Lost		122		9.4 2.2
									Desander 9.2	•
	i					Final Total		860	Desilter 9.15	12.3
Total Received	110 To	otal Lo	.et	_	122	(Circulatin	a Vol.	1		
Offin Meceland	1.0				:	D			SOLIDS ANALYSIS (ppb	1%) BIT / HYDRAULICS DATA
										
	Inventor		Rec'd.	Used	Balan	co U	nk \$	Cost \$		0.3 0.0 Jet Velocity 346 FT 7.0 0.8 Impact Force 686
Barytes	1	243		60	1183		6 20	372.00		
:		ļ				ļ.,	!			
N. Sulphate		20	80	10	90		24 00	240.00		6.9 5.2 HHP 236
Caustic Potash		14	!	2	12		39 68	79.36	Average S.G. 2	.61 Souds :Bit Press Loss 975
IK - 261		37	30	3	64	١,	37 25	411.75	Med, "n" #10F #20F O	493 0.505 Csg. Seat Frac Pres 370
•		:		•	6	•	07 00	••	Med. "K"	.250 5 fer " Equiv Mud Wt 12 90
Biocide - B54X		6			3	1	56 28	312.56		327 0.357 ECD 9.57 ··
S		5	,	, 2	!	!				252217.14 CHEFIO @ DC/DP - GPM 492 7
•		74		12	62	•	25 70	308.40		. S.C. TT 114 Cherio ag Ociot Co. III
•					44		23.50	70.68	Daily Chemical Cost	Cumulative Cost
Orispec - L V (CL - Agri God Sulphite		3	44	3	, —	1				
(CL - Agri		3	44 50	3 .	50	!			<u> </u>	1,796 \$ 33,742
CCL - Agri Sod Sulphite Toplex		i	50		50		Outh	Australia	.πε	1.796 \$ 33 / 42 ELEPHONE 08 - 338 3027 Pol. on representation or warranty is made



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report

Reports 15 Date 1-Feb Spud Date 18 Jan 1997 Depth 2,126 (M.)To 2,291 1-Feb

										T			_	_		TC				
WELL NAME and No		TA	RA	\L]	$\mathbf{E}\mathbf{A}$	# 1				CONT	PACTO	R			&	<u>L.</u>				
Block No PEP 1		Locatio		Otway			State	Victoria			RIG N	o .	30				· - -			
OPERATOR'S REPRE		rive .		Alex	BRAD	LEY				REPOR	RT FOR	1	Paul	COC	PER					
Drilling	Assemi				Casing				Mu	id Volu	ıme Bi	ols.			<u> </u>			tion Date		
Bit size 8.5 Type	4.47		14,14,14	16	inch Q	12.2	Metres	Hole:	· •	432	Pits:		354		1	BIZO .	[3,]	6.0°	8.0	ins.
DP 4.5 Type	G.	Length	2030	9.675	iuch 6			Ortil String	g Cap. :		Total \			888		Model 1		PZ 6	% Emo	
HW1" 4.5 Type:	54.84	Length	92.78		inch @		Metres	In Storage	<u>:</u>	60	Weigh	_	8.6			Model 2		PZ · 8	% Emo	
	168.6	Other	31 24	MUD	TYPE:	KCL -	PHPA			% O/G:		4	Jar Vel		⊣ ` ` `		7 Stk/mli		Вым	8.65
DC ~ Length	~							roperties		OP size		171	(FVM)				? Stlumin		GPM:	363
SAMPLE From						F/Line		F/Line		OC size		297	(FUM)	Lam	1	ms up : Circ. :		PRESS		1,800 3
TIME Sample Taken							14.00	23.00		DC size		تـنـ	(FVM)				103	Type su	итвуз.	
Flowline TEMPERATU					deg. C	2.178		2,126		Weight		<92	Filtrat		ers ()			K+ > 29		
DEPTH Metres	-					9.15				Viscos			l	c Visco	sity :	NC	Yield P		18 - 21	
WEIGHT PPG.		Pl 🗪	 50	deg. C		42		 		By Aut		-		tor's w			-	Orilling	Contract	or
Funnel VISCOSITY (se	•	. G				10				1	,				preser	stative	-	Other		i
PLASTIC VISCOSITY		,	60	deg. C		15		16		 							ENDATIC			
YIELD POINT (IB/100/			0 min	-		6	13	4	8	i			<u></u>			- 2 July		-12		
GEL STRENGTH (Ib/1			V IIIIII.	. .		7.6		6.6	_ - _	Aga	in dow	n-hole	losse	s wer	e witne	ssed, d	turing th	e trip (as	listed].	
FILTRATE API (cm3/				deg. C	··			-		1							_			
CAKE Thickness (32)			 >)			1	_ -	1	~	Due	to the	drop	ping Y	ield Po	int, hig	gher add	ditions o	f polyme	r were n	eeded
SOLIDS Content (% b			Calc.	1	Retort	5.2		5.5		in this	period									
LIQUID Content (% by		Oil/Wat				-	94.8	- 1	94.5											L
SAND Content (% by						T.	<u> </u>	Tr		•				dings	were b	ecomir	ng mask	ed and n	nore diff	icult to
METHYLENE BLUE C	APACITY	' <u>X</u>	ib/bbi		cm3/cm3			10.0		to acc	urately	interp	oret.							
рН	Strip			25	deg. C	8.7				1										
ALKALINITY Mud (Pm)					0.18	<u> </u>	0.2		l										
ALKALINITY FIRE	(PffMf)					0.2/0.6		0.18/0.47	<u></u>											
CHLORIDE (mg/L)						·	15,800	17,200		1										
Total HARDNESS (mg	ir)					700		680		l					_					
SULPHITE (mg/L)						80		80	<u></u>	ł	_			ATIONS		UMMAF	_			
K+ (mg/L)						ļ- :	11,000	 		1	Once	back	on bot	tom, th	10 8-1/	∠- drillir	ng contin	nued.		
KCL (% by WL)						2.16		2.46		ł										
PHPA (Calc. lb/bbl)						2.02		2.02		1										į
PHPA (Active lb/bbl)						1.23		1.28		ł										
RHEOLOGY -600 1300	16 (read	dings)					38/28/9	T												į
RHEOLOGY - 200 / 100	13 @ 30) mins. (i	eadings	s)		21/17/1	7 22/16/10	26/20/8		 										
		MUD A	CCOUN	TING (BBLS.)	1				 			SOLID	s co	NTROL		IPMENT	T		
Fluid Bult & Receiv	red	Fluid	Lost o	r Dispo	sed	Sumi	mary			Туре		Man.	Hr.	ļ	Cone	- 1	Shekera			Hr.
Premix		Desand	der		21	Initial V	olume		860	Centriff	nge		0	Drand		2 8	1.		75/5175	
wifesh water	0	Desilte	r		2					Degas	ıe <u>r</u>	Drace	0	D'silter	1 1	2 21.5	. 2	5175/5!	75/3175	21.5
" recycled "	170	Downh	ole		57	Fluid R	eceived		170				<u> </u>	<u>i</u>		ــــــــــــــــــــــــــــــــــــــ	!			
Onli Water	0	Dumpe	d		18	1.				<u></u>			SOLIO	S EQL	JIPMEN	T EFF	CIENCY			
Other	0	Other			44	Fluid L	ost		142	<u> </u>			Overfl	ow (pp	2.)	Unde	rflow (pp	g.)	Output	(Ganw)
		:							.	Desand	der	į	9.2				9.6		1.8	
						Final To	otal	•	888	Desilte	r	İ	9.15			į	13.2		0.1	
Tatal Bossins	470	Tearle	 	-	142	1	iting Vol	1		[Ī				:			!	
Total Received	170	Total L	USI		194	I.c. cui		·		SUI IL	OS AN	ALYSI	S /-	pb /	%1		ВПІН	YDRAULI	CS DAT	A
			T_ :	T	1		11	C						0.4	0.0	Jet Ve			258	
Product	Inven		Rec'd.	Used	Balan	C •	Unit \$	Cost 1		High G		žiidž		6.7	0.7		t Force		447	-
Barytes	İ	1183	1	30	1153		6 20	· · · · · · · · · · · · · · · · · · ·		·				42.7	· · ·				20	·
Caustic Soda		26		3	_ 23	-	37 00	111.0		Drilled				49.4	.,				116	İ
Al Sulphate	İ	90		10	80	• • • • • • • • • • • • • • • • • • • •	24 00	240.0		Low Gr		31102				. + .	ess. Loss		547	47
Caustic Potash		12	į	1	11		39 68	39.6		Averag			2 ···			-	Seat Frac		370	27.
JK - 261	1	64	1	6	58		137.25	823.6		Med. "		#1Ck	# Z CK	T	7				• -	35
Flozan	:	4	i	2	2		423 50			Med. "		•			4 898	•	Equiv. Mu	JO W.	12.90 9.54	
Drispac - Reg.	!	62	:	8	54		156.28			Low "				•	0.43	•	C D	ne co:-		90°
KCL - Agri.		62	•	26	36		25.70			Low "				3519	10.0			OP GPM	. 403	
Sod. Sulphite	i	44		6	38		23.56			Daily C	hemicai	Cost				Cumu	lative Co			
Floplex		50	:	4	46		35,00	340.0	00	<u> </u>			5	4,647				38,389		
ENGINEER EDD	PERKI	VR			ADORES	35	South	Australi	a					TELEF	HONE	08 - 3	338 302	7		
			. expres	ed orally	ar weitten	herin has	been wer	ared carefull	y and ma	rybe used	if the us	er so si	ects, ho	wever, n	0 189188	entation o	i wall enty	is made		
by ourselves or our agents	as to Ir's c	ell v clinese	of comp	leteness;	and no liab	ility is see	umed for	any demages	regulting	from the	use of sa	me.								



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report AGN. 000 287 314

Reports 16 Date : 2-Feb Spud Date : 18 Jan 1997 Depth : 2,291 (M.)To : 2,471

		TA	RA	LF	A	# 1				CONTRA	ACTOR	t	0.	D.	& F] .				
VELL NAME and No.		Location		Otwey E			State :	Victoria			N DE		30							
lock No.: PEP 10					BRADL					REPORT	FOR		Paul	COO	PER					
PERATOR'S REPRES										d Volum							Circulat	ion Data		
2.2	Assembl				Casing Inch (2	12.2	Metres	Hole :			Pits :		310		Pump s	ize :	[27]	6.0"	8.0	ins.
in size 8.5 Type:	4.4.7	Jets : 1 Length						Ortil Strin	g Cap. :	110 1	Total V	olume	:	887	Make/M	lodel 1:	G.D.	PZ-8	% Effic	0.
op " 4.5 Type:	G 54.84				nch Q	~		In Storage		0 1	Velght	:	~		Make/M	odel 2:	G.D.	PZ-8	% Effic	0.
	169.6			MUD T		KCL - F				% O/G:	15.0	Annu	lar Vek	city	BbVstk	0.067	Stic/min	65	BHM	8.65
	168.6	Other	31 24 1	MUU I	IFE.	KOL - I		roperties		DP size	4.5	171	(FVM)	Lam	BbVstk	0.067	Stichnin	65	GPM:	363
C " ~ Length						F/Line		F/Line		DC stz:	6.5	297	(FUM)	Lam	Bottom	s up :	54	PRESSU	RE:	1,800
AMPLE From							14.00	22.30		DC stz:	~	-	(FVM)	-	Total C	irc. :	103	Type sur	ffsys.	3
TME Sample Taken					deg. C	54	57	58					MUD	PROPE	TTY SF	ECIFIC	ATIONS			
lowline TEMPERATU	Œ			<u>_</u>	oey. C	2,371	2,400	2,463		Weight:	:	< 9.2	Filtrate	:		< 8.0	Other:	K+ > 2%		
DEPTH Motres						9.20	9.20	9.20		Viscosit	y:	N.C.	Plastic	Viscosi	ty:	N.C.	Yield Po	oint :	18 - 21	
VEIGHT PPS	-4-43.004		EA	deg. C		54	54	53		By Auth	ority:	~	Operat	or's writ	ten		~	Drilling (ontracto	r
unnel VISCOSITY (se						16	15	14				V03	Operat	or's Res	present	dive.	~	Other		
LASTIC VISCOSITY	₽ Q		50	deg. C		18	17	18									NDATIO	NS		
MELD POINT (IN/10072						3	8	3	10			1,600	7 77	- 11 C		23				
CEL STRENGTH (B/10			min.			· 5.3		6.2		The \	Yield !	Point .	wes str	bilised	in this	period				
ILTRATE API (cm3/3				4:- 4		• 6.3	3.0	0.2												
API HTHP Filtrate (cm				deg. C		1	~	1		Down	-hole	10334	s wer	up to	5 bbls.	per ho	ur, this i	included	the volu	metric
CAKE Thickness (32n					Retort	5.5	-	5.6		loss (as						•				
BOLIDS Content (% b)			Calc.		Ketort	J.J ~	94.5	~		Volume				_						
LIQUID Content (% by		OWWate	er			Tr		Tr												
SAND Content (% by	_					10.0		10.0		High	er ann	ounts	of Cau	stic Po	tash w	ere bei	ng cons	umed a	was the	•
METHYLENE BLUE CA		X	IP/PPI		cm3/cm3	8.5				auentii\	of Se	odium	Sulph	te (the	se two	chemic	als tend	to com	pete aga	ninst
pH	Strip			23	deg. C			0.16		each ot										
ALKALINITY Mud (Pm)					0.15			_	- C	.									
ALKALINITY FIITE	(PIMI)					0.16/0.		0.14/0.5	-											
CHLORIDE (mg/L)							16,400			l										
Total HARDNESS (mg	AL)					600		580								n.44 - 54	,			
SULPHITE (mg/L)						40								TIONS		MMAR'	-		a wia 4	trir-
K+ (mg/L)						12,300	12,000			l '	Drilling	g the 1	B 1/2"	note to	2,368	meres	and co	nducted	a wher	uip. . haal
KCL (% by WL)						2.53	2.47	2.25				e witt	out an	y probl	ems ar	nd no fi	i MES e.	vident, o	u demna	DIACK
PHPA (Calc. Ib/bbl)						2.02	2.08	2.25		on bott	om.									
PHPA (Active lb/bbl)						1,44	~	1.53		Drilling	then c	ontine	ued.							
						50/34/3	47/32/4	46/32/4		ł										
RHEOLOGY - 600 / 300								25/18/10												
RHEOLOGY - 200 / 100	/3 @ 30					2771800	2071111	1					SOLID	s col	NTROL	EQUI	MENT			
		MUD A	CCOUN	TING (B	BERS'	τ				L		Man.			Cones	Hr.	Shaker#	Screen	Size	Hr.
Fluid Built & Receiv	red	Fluid	Lost o	r Dispo		Summ				Туре		Man.		D'sand	2	_	1	S175/S1		21.
Premix		Desand	ler		6	Initial V	olume		888	Centrifu						 	2	S175/S1		21.
w/ fresh water	0	Desilter			2	ļ				Degass	er	Drilco	0	D'silter	12	41.0	 	3,733		
" recycled "	120	Downh	ole		79	Fluid R	celved		120				<u></u>					<u></u>		
Drill Water	0	Dumpe	d		0	<u> </u>							SOLID	S EQU	PMENT					
Other	0	Other			35	Fluid La	ost		121				Overfi	w (ppg	1	Under	low (pp	- -	Output	(gal/m
	 _									Desand	er	1	9.3				9.4		1.9	
						Final To	atal .		887	Desitter			9.25				13.8		0.1	
						1						1							1	
Total Received	120	Total L	ost		121	(Circula	rang Vol	L.)									BIT (LA	/DRAULK	CS DAT	A
										SOLID			2 (t	pb / dq		10434-				FT/S
Product	Inven	tory	Rec'd.	Used	Balan	ice	Unit \$	Cost	\$	High Gr		olids		0.3	0.0	Jet Ve			447	
Barytes		1153		~	1153		6.20			Bentoni	tte			6.5	0.7	+	Force			
J.00	 		 							Orilled S	Bollds			43.9	4.8	HHP	in2		2.0	
Al Culabata	 	80	 		80		24 00			Low Gr	evity S	olids		50.4	5.5	HHP			116	
Al. Sulphate	+	11	 -	2	9		39 68		.36	Average	3. G.			2.61	Solids	BR Pr	ss. Los	<u> </u>	547	P5
Caucha Bak-k	 				48		137.25	1	7.00	Med. "r			# 2 ck	0.556	0.523	Ceg. S	est Frac	Pres	370	PS
Caustic Potash	1	58	ļ	12	40			1		Med. 7		-	-	1.060	—	_	guiv. Mu		12.90	pp
Caustic Potash JK - 261		2		2	ļ		423 50		7.00				 . 		0.514		D		9.52	PP
					54		156 28			Low "r								DP - GPM		63
JK - 261		54		ļ .	54				1.30	Low "	Κ"	•	1 -	1 1 2/0	0.03	I CHECK			1 747	
JK - 261 Flozen				9	27		25 70	231								_				
JK - 261 Flozan Drispac - Reg. KCL - Agri.		54		9			25 70 23 56		.36	Daily Cl		l Cost	:			_	ative Co	st:		
JK - 261 Flozen Drispac - Reg.		54 36			27							N Cost		2,946		_	ative Co			
JK - 261 Flozan Drispac - Reg. KCL - Agri.		54 36 38		6	27 32		23 56	141	1.36	Daily Cl	hemici		\$	TE1 CB	HOME	Cumu	ative Co	st : 6 41,356 7 :		

CULTUS PETROLEUM N.L.

Independent Drilling Fluid Services Pty. Ltd.

Reports 17 Dete Spud Date 18 Jan 1997 Depth 2,471 (M.)To 2,615

VELL NAME and No.		TAI		tway B			State	Victoria		RN	G No.		30							
PERATOR'S REPRES					RADL	EY			F	REPORT	FOR	F	aul	COOF	PER					
	Assembly		- 		Casing				Mud	Volume	Bbls							on Data		
0.5	4.4.7	Jets : 14,	14.14		nch Q	12.2	Metres	Hole:	4	194 PH	3 :		360		Pump s		[2.]	6.0"	8.0	
e 4.5 Type:	1	Length 3	2354 9	.875 i	nch Q	492.8	Metres	Dilli Spius (Cap :		tal Vol				Mak e/M		•• •• • •	PZ · 8	% Emc	0.9
wt 4.5 Type:		Length 9			nch @	•		In Storage :		45 W	ight:		8.6		Make/M			PZ-8	% Effic	0.9
				MUD T		KCL .	PHPA			% O/G:	5.0 A	lunula	r Velo	city	BbVstk	0 067	Stlumin	65	Вым	8.65
		70.0.						roperties		OP size 4	1.5	71 (1	FUM)	Lem	BbVstk	0 067	Stiumin	65	GPM:	363
C " ~ [Length AMPLE From						F/Line		F/Line		OC size	3.5 2	97 (1	FtM)		Bottom	•		PRESSU		1,900
IME Sample Taken						10.30	14.00	20.00		OC size	<u>- i</u>		FUM)		Total CI			Type sur	fisys.	3_
Iowine TEMPERATUR	E			•	deg. C	62	61	61							TY SP		ATIONS			
EPTH Metres						2,548		2,615		Weight :			Iltrate				Yield Po	K+ > 2% .ime ·	18 - 21	
VEIGHT PPG.						9.25	9.35	9.30		Viscosity				Viscosi		IV C	THE	Drilling C		
unnel VISCOSITY (sec	iqt) API	Q 50	0 d	eg. C		56	55	53	[6	By Author	-		•	or's writ					0114 2010	•
LASTIC VISCOSITY 6		64	0 d	leg. C		17	16	16							resents			Other		
ELD POINT (Ib/100/12						20	24	19			1	FLUID	SUMA	AARY A	NO REC	OMME	NDATIO	<u>45</u>		
EL STRENGTH (M)10		sec. / 10 /	min.			3	14	2	10										*	
ILTRATE API (cm3/3						5.6	5.3	5.6		Losse	s were	sur	Y0586	ed while	new D	entoni	CO WES I	dded to	me syst	0 113,
PI HTHP Filtrate (cm			~ d	leg. C			·	~		but within	free	CIFCU	Negon	s, me s	eepag	e neio	reconsti	MILEG.		
CAKE Thickness (32m						1	-	1-1-	<u>-</u> -	1884 14			مما ام	شييس ب	v salide	the 4	veicht ri	rept up a	nd dilutio	on
SOLIDS Content (% by			elc.	.1.	Retort	6.0	1	6.4		u narv was requ	iond f		oi ioi	nnina a	f the s	and-tra	no to as	sist in the	lowerin	g of
IQUID Content (% by	Vol.)	OllWater					94.0	0.13		was requ solids].	mad (s			y u						-
SAND Content (% by	/ol.)		,			<u>T</u> I				sowusj.										
METHYLENE BLUE CA	PACITY	X II	МЫ	. - .	cm3/cm3	13.0		9.0												
pΗ	Strip			26	deg. C	9.0		9.0	- 1											
ALKALINITY MUD (P	m)					0.2		4000												
ALKALINITY FINTER	(PMM)					0.14/0		0.12/0.48												
CHLORIDE (mg/L)							14,500	14,200												
Total HARDNESS (mg/	L)					560						,	SOEDA	TIONS	SI	MMARY	,			
SULPHITE (mg/L)						100				_							_	ed the h	ole pum	ped a
K+ (mg/L)					-	11,000				ں weighted									, <i>p</i>	
KCL (% by WL)						2.2			[Meigurec	Dary	es hi		pulle .	001 10 1	90	0.0 2. 0.			
PHPA (Calc. lb/bbl)						2.24														
PHPA (Active Ib/bbl)						1.:		1.34												
RHEOLOGY - 600 / 300	i 6 (read	ings)				54/37/	68/40/3	61/36/3												
RHEOLOGY - 200 / 100	13 @ 30	mins. (re	adings)			31/20/1	6 32/22/1	27H7H1								50.11	204507			
		MUD AC			BLS.)								SOLIDS	s cor	TROL		PMENT		- Cina	
Fluid Suilt & Receiv	ed	Fluid	Lost or	Dispo	sed	Sum	mery			Туре		Man.	Hr.		Cones 2	Hr.	Sheker#	Screen S175/S1		<u>Hr.</u> 21
Premix		Desande) r		10	Initial \	/olume		887	Centifug	<u> </u>			D'sand			+			21
	30	Desilter		•	2					Degasser	C	nico	0	D'silter	12	21	. 2	S175/S1	1545-115	21
wi fresh water	220	Downho	de		76	Fluid F	Received		250											
wifresh water		Dumped	1		56								SOLID	S EQU	PMENT	EFFK	CIENCY			
" recycled "	Λ	Other			27	Fluid L	ost		171				Overfic	w (ppg	بـــــــــــــــــــــــــــــــــــــ	Under	flow (pp	3.)		(gaVm)
" recycled " Orlii Water		,00.0				i				Desande	·		9.4		į		9.6		1.7	
" recycled "	0	•				Final T	otal		966	Desilter			9.30				13.5		0.1	
" recycled " Orlii Water						i													:	
" recycled " Drill Water Other	0				171	Clean	etina Vo	4.3											CS DAT	Α
" recycled " Orlil Water	0	Total Lo	st		171	(Circul	ating Vo	ir)		SUI IDS	ANA	l YSIS	ín	i da	% I		BITIH	YUKAULI		rt/se
" recycled " Drill Water Other	0	Total Lo	st		,		, 	· 1		SOLIDS			(p	pb / 9		Jet Va		YURAULI	258	
" recycled " Drill Water Other	0	· · ·	st Rec'd.	Used	Balar		Unit 1	Cost \$		High Gra	vity So		(p	0.3	0.0	Jet Ve	locity	YURAULI	258 451	. (*)
" recycled " Drill Water Other Total Received	0 250	· · ·		Used 33	,		, 	Cost \$		High Gra Bentoniti	vity So		(p	0.3 8.2	0.0 0.9	1	locity t Force	YURAULI	•	.e:
" recycled " Orli Water Other Total Received Product	0 250	tory			Balar 1120		Unit 1	Cost \$		High Gra Bentonite Drilled Sc	vity So	lide	(p	0.3 8.2 49.8	0.0 0.9 5.5	Impac HHP	locity t Force l in2	YDRAULI	451	je:
Total Received Product Barytes Al. Sulphate	0 250	tory		33	1120 80		Unit 1 6 20	Cost \$	0	High Gra Bentonite Drilled So Low Grav	vity So blids vity So	lide	(p	0.3 8.2 49.8 58.0	0.0 0.9 5.5 6.4	IMPAC HHP I HHP	locity t Force l in2		451 2.1	.e:
" recycled " Drill Water Other Total Received Product Barytes Al. Sulphate	0 250	1153			80 6		Unit 1 6 20 24 00 39 6	Cost \$ 0 204.6	×0	High Gra Bentonite Drilled Sc Low Grav Average	vity So blids vity So S. G.	lids		0.3 8.2 49.8 58.0 2.61	0.0 0.9 5.5 6.4 Solids	Impac HHP I HHP Bit Pn	t Force I in2		451 2.1 117 553	
" recycled " Drill Water Other Total Received Product Barytes	0 250	1153 80		33	1120 80		Unit 1 6 20	Cost \$ 0 204.6	×0	High Gra Bentonite Drilled Se Low Grav Average Med. "n"	vity So blids vity So S. G.	lids		0.3 8.2 49.8 58.0 2.61 0.545	0.0 0.9 5.5 6.4 Solids 0.543	IMPAC HHP HHP Bit Pn Csg. 5	t Force in2 ess. Loss Seat Frac	Pres	451 2.1 117 553 370	41
Product Barytes Al. Sulphate Caustic Potash	0 250	1153 80 9		33	80 6		Unit 1 6 20 24 00 39 6	Cost \$ 0 204.6 0 119.0 5 960.7	6 14 '6	High Gra Bentoniti Drilled Sc Low Grav Average Med. "n"	olids ty So S. G.	lids		0.3 8.2 49.8 58.0 2.61 0.545	0.0 0.9 5.5 6.4 Solids 0.543 6.059	Impac HHP HHP Bit Pn Csg. \$	t Force I in2 ess. Loss Seat Frac Equiv. Mi	Pres	451 2.1 117 553 370 12.90	81 93
Product Barytes Al. Sulphate Caustic Potash JK - 261 Flozan	0 250	1153 80 9		33	80 6		24 00 39 6 137 2	Cost \$ 0 204.6	6 14 '6	High Gra Bentonite Drilled Sc Low Grav Average Med. "n" Med. "K"	vity So blids vity So S. G.	lids	#2ck	0.3 8.2 49.8 58.0 2.61 0.545 1.236	0.0 0.9 5.5 6.4 Solids 0.543 8 059	Impac HHP HHP Bit Pn Csg. \$	t Force I in2 ess. Loss Seat Frac Equiv. Mi	Pres Jd WL	451 2.1 117 553 370 12.90 9.60	43 43 92 94
Total Received Product Barytes Al. Sulphate Caustic Potash JK - 261 Flozan Dnspac - Reg.	0 250	1153 80 9 46		33 3 7	80 6 39		24 00 39 60 137 2 423 5	Cost \$ 0 204.6 0 8 119.0 5 960.7 0 8 937.6	60 14 16	High Gra Bentoniti Drilled Sc Low Grav Average Med. "n"	vity So blids vity So S. G.	lids	#2ck	0.3 8.2 49.8 58.0 2.61 0.545 1.236	0.0 0.9 5.5 6.4 Solids 0.543 8 059	Impac HHP I HHP Bit Pn Csp. \$	t Force in2 ses. Lose Seat Frac Equiv. Mi	Pres ud Wt.	451 2.1 117 553 370 12.90 9.60	43 43 92 94
Product Barytes Al. Sulphate Caustic Potash JK - 261 Flozan Drispac - Reg. KCL - Agri	0 250	80 9 46 54 27		33 3 7	80 6 39		Unit 1 6 24 24 00 39 6 137 2 423 5 156 2	Cost 8 0 204.5 0 119.0 5 960.7 0 257.6	60 14 16 16 18	High Gra Bentonite Drilled Sc Low Grav Average Med. "n" Med. "K"	vity So blids vity So 3. G.	lids #1ck	#2ck	0.3 8.2 49.8 58.0 2.61 0.545 1.236	0.0 0.9 5.5 6.4 Solids 0.543 8 059	Impac HHP I HHP Bit Pn Csp. \$	t Force In2 In2 Institute the seast Frace Equiv. Mi C D In @ DCJ Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Inte	Pres ud Wt. DP - GPM	451 2.1 117 553 370 12.90 9.60 459	2 (42 95
"recycled " Drill Water Other Total Received Product Barytes Al. Sulphate Caustic Potash JK - 261 Flozan Drispac - Reg. KCL - Agri Sod. Sulphite	0 250	1153 80 9 46 54 27 32		33 7 6 10	80 6 39 48 17		24 00 39 6 137 2 423 5 156 2 25 7	Cost 8 0 204.5 0 119.0 5 960.7 0 257.6 6 164.5	60 14 75 58 50 72	High Gra Bentonite Drilled Sc Low Grav Average Med. "n" Med. "K' Low "n'	vity So blids vity So 3. G.	lids #1ck	# 2 ck	0.3 8.2 49.8 58.0 2.61 0.545 1.236	0.0 0.9 5.5 6.4 Solids 0.543 6.059 0.822 3.71	Impac HHP I HHP Bit Pn Csp. \$	t Force In2 In2 Institute the seast Frace Equiv. Mi C D In @ DCJ Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Collegence Intelligence Inte	Pres ud Wt.	451 2.1 117 553 370 12.90 9.60 459	ag gar gar
Product Barytes Al. Sulphate Caustic Potash JK - 261 Flozan Drispac - Reg. KCL - Agri	250	1153 80 9 46 54 27 32 40	Rec'd.	33 7 6 10 7 30	80 6 39 48 17 25 10	nce	24 00 39 6 137 2 423 5 156 2 25 7 23 5 9 3	Cost \$ 0 204.6 0 8 119.0 5 960.7 0 8 937.6 0 257.0 6 164.5 2 294.6	66 14 16 16 18 18 18 18 18 18 18 18 18 18 18 18 18	High Gra Bentonit Drilled Sc Low Gra Average Med. "n" Med. "K" Low "n' Low "K Daily Ch	vity So bilds vity So 3. G.	lids #1ck	#2ck	0.3 8.2 49.8 58.0 2.61 0.545 1.236 0.546	0.0 0.9 5.5 6.4 Solids 0.543 8.059 0.622 3.71	Impac HHP HHP Bit Pn Csg. \$ E Cnt_Fl	t Force t Force tin2 Sest Frac Equiv Mt C D lo @ DC/	Pres DP - GPM sst:	451 2.1 117 553 370 12.90 9.60 459	er er pe



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report Ac.N. 000 287 314

Reports 18 Date 4-Feb Spud Date: 18 Jan 1997 Depth: 2,615 (M.)To 2,705

			D 4	T TO		1; 4			ł		$\mathbf{\Omega}$	D	& I					
WELL NAME and No.	:	IA	KA	LLE	A	# <u>l</u>	,		CONTRACTO			<u>v.</u>	$\frac{\alpha}{\alpha}$	١.				
Block No. : PEP 101	1	Locatio	n:	Otway I	Basin		State :	Victoria	RiG		30							
PERATOR'S REPRES	ENTAT	VE:		Alex	BRADI	.EY			REPORT FO		Paul	<u>coo</u>	PER		<u> </u>			
	Assemb				Casing				d Volume (355		Pump		[21]	tion Data 6.0°°		ins.
Bit size 8.5 Type:			14,16,14		inch Q		Metres	Hole:	511 Pits:	Volum		986		lodel 1:		PZ - 8	% Effic	
P 4.5 Type:	<u> </u>	Length			inch 🙆	492.8		Drill String Cap. : in Storage :	70 Welg		8.6	000		lodel 2:		PZ-8	% Effic	
rwr 4.5 Type:		Length			inch Q	×01		in storage.	% O/G: 15			acity	-		Stumir		Вым	9.31
	168.6	Other	31.24	MUD 1	YPE:	KCL -		roperties	DP eize 4.5	_	(FUM)				Stichmin		GPM:	391
C " ~ Length		L				F/Line		F/Line	DC size 6.5		(FVM)	Lam	Botton		55	PRESSU		1.900
SAMPLE From							14.00	22.30	OC size ~	1 -	(FVM)	-	Total C	•	106	Type su	riisys.	3
TIME Sample Taken					deg. C	58		62	 			PROPE			ATIONS			
Flowline TEMPERATUR DEPTH Metres	<u> </u>				org. C		2,651	2,698	Weight:	< 9.2	Filtret) :		< 8.0	Other:	K+ > 2%	,	
WEIGHT PPS						9.35		9.30	Viscosity:	NC	Plastic	Viscos	ity:	NC	Yield P	olinit :	18 - 21	
Funnel VISCOSITY (see	clat.) API	0	50	deg. C		55	50	54	By Authority	: <u>~</u>	Opera	tor's wri	tten			Dritting (Contracto	or
PLASTIC VISCOSITY of				deg. C		18	17	17]	yes	Opera	tor's Re	present	etive	-	Other		
MELD POINT (Ib/10072			<u> </u>			23	22	20		FLU	NO SUM	MARY/	NO RE	COMME	NDATIO	NS		
GEL STRENGTH (MINO)		zec. / 10	O min.			3	11	2 15]									
FILTRATE API (cm3/3						5.7	5.5	6.2	Volume v	ves bui	it to re	place t	ipping I	losses,	then e	fforts we	re to rec	luce
NPI HTHP Filtrate (cm			-	deg. C		~	~	~	the mud we	ight by	dumpi	ing and	cleanir	ng both	the sar	nd-trap a	nd first	فست
CAKE Thickness (32nd		1/111111				1	-	1 ~	settling pit.	Vol	ume / c		orembu	19W ZE	Dezu t	o replac	uns mu	ru.
SOLIDS Content (% by	Vol.)		Cale.	_!	Retort	6.8	-	6.3 ~	The other					or eto	n the de	wo.hole	SAADAG	_
LIQUID Content (% by		ONWat	er			Tr	93.2	~ 93.7 Tr	A polmer / i	DINING 1	oy amii orambi	was w	ed as v	vas a hi	iah con	entratio	n of PH	PA
SANO Content (% by \								10.0	to "plastic c	onte th	e bole	Thi	: 8008	ared to	work ur	ntiat 2.6	74 metr	es .
METHYLENE BLUE CA		×	IP/PPI		em3/em3	9.0		9.0	a possible	hacture	ed coal	section	was D	enetra	ted and	36 bbls.	was	•
	Strip			20	deg. C	0.15		0.2	immediatel									s t
	m)					0.1/0.3		0.18/0.46	the seepag						•	• • •		
	(POM)						14,100	16.200	l sochas									
CHLORIDE (mg/L)						480		500	1									
Total HARDNESS (mg/	<u>., </u>					100		110 -	1		OPER	ATIONS	SL	MMAR	ľ			
SULPHITE (mg/L)						9,300		11,900	With	the ne				tom an	d contir	nued drill	ing the 8	3 1/2"
K+ (mg/L)						1.9		2.44	section.									
KCL (% by WL)						2.17		2.31	1									
PHPA (Calc. Ib/bbl)						1.2		1,38	1									
PHPA (Active Ib/bbil)								64/37/4	1									
RHEOLOGY - 600 / 300 /								29/19/16	1									
RHEOLOGY - 200 / 100 /	13 @ 30				DI 61	3 11221 13	3011011				SOLID	s co	NTROL	EQUI	PMENT			
				TING (E					Туре	Man			Cones	Hr.	Shaker#	Screen	Size	Hr.
Fluid Built & Receive	ed			r Dispo		Sumr Initial V		966	Centrifuge	- M7 GB 1	0	Drand	2		1	S175/S1		17
Premix		Desand			16	HINGS V	OICHIT		Degasser	Dnico	1	D'allter	12		2	S175/S1	75/5175	17
wi fresh water	0	Desitte			2 87	Fluid R		260	Degasser		-	-		1	1			
" recycled "	260	Downh				Fluid R	COIVEG				901.10	9 501	PMEN	FFFK	HENCY			
Orill Water	0_	Dumpe	<u>d</u>		109			240				ow (ppg			flow (pp	g.)	Output	(gal/m)
Other	0	Other			27	Fluid Lo) BT	240	Desander	\top	9.3		<u>" </u>	<u> </u>	10.1		0.6	
										_	9.30				14.0		0.1	
		ļ				Final To)tal	986	Desitter	+	9.50				17.0		+	
			ost		240	(Circula	ting Vol.)										
Total Received	260	Total L							SOLIDS A		1 3 (1	opb /		T		YDRAULI		
Total Received	250	Total L	,				Unit \$	Cost \$	High Gravity	Solids		0.4	0.0	Jet Ve				FT / SE
Total Received	250		Rec'd.	Used	Balan	C.	Oim v	COST									475	LBS
Product			Rec'd.	Used 28	Balan 1092	Ç.	6 20	173.80	Bentonite			5.7	0.6	impac				
		bory	Rec'd.			C •				<u> </u>		51.1	5.6	HHP/	in2		2.1	
Product Barytes		bory	Rec'd.				6 20 24 00	173.60	Bentonite Drilled Solid Low Gravity	Solids		51.1 56.8	5.6 8.2	HHP/	in2		121	
Product Barytes AJ. Sulphate		1120	Rec'd.		1092		6 20		Bentonite Drilled Solids	Solids		51.1 56.8 2.61	5.6 6.2 Solids	HHP/ HHP Bk Pre	in2 ess. Loss		121 528	PS
Product Barytes Al. Sulphate Caustic Potash		1120 80	Rec'd.	28	1092	G	6 20 24 00	173.60	Bentonite Drilled Solid Low Gravity	Solids 3.	# 2 ck	51.1 56.8 2.61 0.525	5.6 6.2 Solids 0.545	HHP/ HHP Bk Pre Csg. S	in2 ess. Loss leat Frac	Pres	121 528 370	PSI
Product Barytes Al. Sulphate Caustic Potash UK - 261		1120 80 6	Rec'd.	28	1092 80 4	G•	6 20 24 00 39 68	79.36 1,372.50	Bentonite Drilled Solids Low Gravity Average 3. (Solids 3.	# 2 ck	51.1 56.8 2.61 0.525 1.554	5.6 8.2 Solids 0.545 6 314	HHP/ HHP Bk Pre Csg. S	in2 ess. Loss leat Frac quiv. Mu	Pres	121 528 370 12.90	PSI PSI
Product Barytes Al. Sulphate Caustic Potash JK - 261 Flozan		1120 80 6		28	1092 80 4 29		6 20 24 00 39 68 137 25	79.36 1,372.50	Bentonite Drilled Soild: Low Gravity Average S. (Med. "n"	Solids 3.	# 2 ck	51.1 56.8 2.61 0.525 1.554 0.568	5.6 6.2 Solids 0.545 6.314 0.634	HHP/ HHP Bk Pro Csg. S E	in2 ess. Loss lest Frac quiv. Mu	Pres	121 528 370 12.90 9.62	PSI PSI PPG
Product Barytes Al. Sulphate Caustic Potash UK - 261 Flozan Drispac - Reg.		80 6 39		28 2 10 5	80 4 29 75		6 20 24 00 39 68 137 25 423 50	173.80 79.36 1,372.50 2,117.50	Bentonite Drilled Solids Low Gravity Average S. (Med. "n" Med. "K"	Solids 3.	* # 2 ck	51.1 56.8 2.61 0.525 1.554 0.568	5.6 6.2 Solids 0.545 6.314 0.634	HHP/ HHP Bk Pro Csg. 9 " E Crlt.Fl	in2 lest Frac quiv. Mu C D	Pres ud Wt. DP - GPM	121 528 370 12.90 9.62	PSI PSI PPG PPG
Product Barytes AI. Sulphate Caustic Potash UK - 261 Flozan Drispac - Reg. KCL - Agri.		80 6 39 48 17	80	2 10 5	80 4 29 75 47		6 20 24 00 39 68 137 25 423 50 156 28	79.36 1,372.50 2,117.50 168.28 771.00	Bentonite Drilled Solid: Low Gravity Average S. (Med. "n" Med. "K" Low "n"	Solids 3. #1ck	-	51.1 56.8 2.61 0.525 1.554 0.568	5.6 6.2 Solids 0.545 6.314 0.634	HHP/ HHP Bk Pro Csg. 9 " E Crlt.Fl	in2 ess. Loss lest Frac quiv. Mu	Pres ud Wt. DP - GPM	121 528 370 12.90 9.62	PSI PSI PPG PPG
Product Barytes Al. Sulphate Caustic Potash UK - 261 Flozan Drispac - Reg.		90 6 39	80	28 2 10 5 1 30	80 4 29 75 47 83		6 20 24 00 39 68 137 25 423 50 156 28 25 70	79.36 1,372.50 2,117.50 168.28 771.00	Bentonite Drilled Solid: Low Gravity Average S. (Med. "n" Med. "K" Low "n"	Solids 3. #1ck	-	51.1 56.8 2.61 0.525 1.554 0.568	5.6 6.2 Solids 0.545 6.314 0.634 3.64	HHP/ HHP Bk Pro Csg. 9 " E Crlt.Fl	in2 lest Frac quiv. Mi C D o @ DC/I	Pres ud Wt. DP - GPM	121 528 370 12.90 9.62 475	PSI PSI PPG PPG
Product Barytes Al. Sulphate Caustic Potash UK - 261 Flozan Drispac - Reg. KCL - Agri. Sod. Sulphite	Inven	80 6 39 48 17 25	80	28 10 5 1 30 4	1092 80 4 29 75 47 83 21		24 00 39 68 137 25 423 50 156 28 25 70 23 56	79.36 1,372.50 2,117.50 168.28 771.00	Bentonite Drilled Solids Low Gravity Average 3. (Med. "n" Med. "K" Low "n" Low "K" Daily Chemic	Solids 5. #1ck	- - - - -	51.1 56.8 2.61 0.525 1.554 0.568 1.188	5.6 6.2 Solids 0.545 6 314 0.634 3.64	HHP/ HHP Bit Pro Csg. \$ " E Crit.Fi Cumu	in2 iss. Loss leat Frac iquiv. Mi C D o @ DC/i lative Co	Pres ud Wt. DP - GPM set: 5 49,030	121 528 370 12.90 9.62 475	PSI PSI PPG PPG



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report ACN. 000 287 314

Reports 19 Date: 5-Feb Spud Date: 18 Jan 1997 Depth: 2,705 (M.)To: 2,800

WELL NAME and No		TA	DA	T		# 1						Ω	D	& 1	7				
		_===				# 1	State :	Victoria	CONTR	RIG No		30	<i>D</i> .	<u> </u>	<u> </u>				
Block No.: PEP 1		Locatio	<u> </u>	Otway			Sum :	VICTORIA	REPOR				COO	PER					
PERATOR'S REPRE				Henry	FLINI Casing	`		T 14	ud Volum		<u> </u>	raci	000	I		Circula	tion Data		
Orilling 3st size 8.5 Type:	Assemb 4.4.7		14,16,14	16	Inch @	12.2	Metres			Pits :	· · ·	392		Pump	size :	[2"]	6.0° °		ins.
3/t size 8.5 Type:		Length			Inch Q			Drill String Cap.	: 126	Total V	olume):	1047	Makel	Model 1:	G.D.	PZ - 8	% Effic	0.9
-wr" 4.5 Type:		Length			Inch Q	~		In Storage :		Weight	:	8.6		Makel	Hodel 2:	G.D.	PZ-8	% Effic	0.9
	168.6			MUD 1		KCL -	PHPA		% O/G:	15.0	Annı	ılar Vel	ocity	BbVst	0.067	Stlumin	70	BHM	9.31
DC " ~ Length		<u> </u>	<u> </u>			Ī		roperties	DP size	4.5	184	(FVM)	Lam	BbVst	0.067	Stidmir	70	GPM:	391
SAMPLE From						F/Line		F/Line	DC stz:	6.5	319	(FUM)	Lam	Botton	ns up :	57	PRESSU	RE:	1,950
TIME Sample Taken						10.00	14.00	20.30	DC size		~	(FVM)	~	Total (112		ffsys.	3
Flowline TEMPERATU	RE				deg. C	62	65	84	ļ					RTY \$		ATIONS			
DEPTH Metres							2,784	2,800	Weight			Filtrate			< 8.0 N.C.	Yield P	K+ > 2%	18 - 21	
VEIGHT ppg.						9.30	9.30	9.30	Viscosit				Viscos		N.C.	THIRD	Driffing C		
unnel VISCOSITY (se	eciqil) API	10	50	deg. C		56	55	50	By Auth		<u>~</u>							, Of Ita BCU	or
PLASTIC VISCOSITY	cP Q		60	deg. C		16	15	16	 					present			Other		
IELD POINT (Ib/100R						24	24	3 17		A+ 2						NOATIO	<u>ns:</u> parent, o	nce so	nio.
GEL STRENGTH (Ib/			0 min.			2	7.2	6.3	Then				•			•	increase	_	
FILTRATE API (cm3 /				do- C		6.8	7.2	- - -									or Loggin		
API HTHP Filtrate (CR				deg. C		1	~	1 -	As th	• T.D.	of thi	s sect	on was	appro	ached,	the K+	(pot assi u	rn ion) v	wes.
SOLIDS Content (% b			Calc.	1	Retort	8.2	~	6.2 ~	strengti	nened	to en	sure a	minim	um of t	ripping	probler	ns (as w	as the P	HPA,
LIQUID Content (% by		Oil/Wate	er			-	93.7	- 93.8	which h										
SAND Content (% by						Tr	Tr	Tr									ging pro		_
METHYLENE BLUE C	APACITY	X	IDADDI		cm3/cm3	12.0	8,0	10.0									of 3 drun	ns of Ca	austic
рН	Strtp			29	deg. C	8.8	9.0	8.8	Soda =										
ALKALINITY Mud (Pm)					0.14	~	0.2	Asse	ssmor	t of t	he Sw	ab/Su			_	84 metre		
ALKALINITY Filtrate	(PIMI)					0.12/0.		0.1/0.55	1				D :-				9.75 ppg).	
CHLORIDE (mg/L)							14,600	17,600	-				•	•) ft/mir o e /mir			
Total HARDNESS (mg	p(L)					n.c.	460	420	-						•	9 ft/mi ,	14.		
SULPHITE (mg/L)						80	60	120	┨ .	.			ATIONS		MMARY	-	ha bala s	d	ah saka al s
X+ (mg/L)						10,500		12,000	1		8 1/2	" hole	to 2,60	JU Med	res, car		the hole a	and con	aucura i
KCL (% by WL)						2.16	2.02	2.46	wiper tri		.					ha hala	was folio	ائيد امميد	.
PHPA (Calc. lb/bbf)						2.29	2.28	2.30											
PHPA (Active lb/bbl)						1.15		1.3	Darytes	sing a) CIES	n me t	npe an	ם שאים בי	ir mais t		ut (for Lo	39m3/.	
RHEOLOGY - 600 / 300	f5 (read	ings)				56/40/5		55/39/4	-[
RHEOLOGY - 200 / 100	/3 @ 30	mins. (r	eadings	}		33/24/24		31/20/22	<u> </u>										
		MUD A	CCOUN	TING (B								SOLID	s co	NTROL	EQUI	MENT			
Fluid Built & Recen	ved			1840 (6	BLS.)				 							i		-	
Premix		Fluid	Lost of			Summ	nary		Тур•		Man.	Hr.		Сопев		Shaker#	Screen		Hr.
I Olima		Fluid Desand				Summ Initial Vo		986	Contrifu	90	-	Hr.	D'sand	2	18.5	1	S175/S17	75/5175	18.5
w/ fresh water	0		der		6 2	initial Vo	olume			90	Man. ~ Oriko	Hr. O	D'sand D'silter		18.5			75/5175	
1		Desand	der r		eed 6		olume	986	Contrifu	90	-	Hr. 0 0	D'silter	12	18.5 18.5	2	S175/S17	75/5175	18.5
w/ fresh water	223	Desand Desilter	der r note		6 2 76 56	initial Vo	ceived	223	Contrifu	90	-	Hr. 0 0 SOLID	D'silter S EQU	12 PMEN	18.5 18.5 EFFIC	1 2 JENCY	S175/S17 S175/S17	75/S175 75/S175	18.5 18.5
w/ fresh water " recycled "	223	Desand Desilter Downh	der r note		6 2 76	initial Vo	ceived		Contrifu	ge or C	-	Hr. 0 0 SOLID	D'silter	12 PMEN	18.5 18.5 EFFIC	1 2 JENCY low (pps	S175/S17 S175/S17	75/S175 75/S175 Output	18.5 18.5
w/ fresh water " recycled " Drill Water	223	Desand Desitor Downho	der r note		6 2 76 56	initial Vo	ceived	223	Centrifu Degasse Desande	ge or C	-	Hr. 0 0 SOLID Overfice 9.3	D'silter S EQU	12 PMEN	18.5 18.5 EFFIC	1 2 SENCY Now (pps	S175/S17 S175/S17	75/S175 75/S175 Output 0.2	18.5 18.5
w/ fresh water " recycled " Drill Water	223	Desand Desitor Downho	der r note		6 2 76 56	initial Vo	ceived	223	Contrifu	ge or C	-	Hr. 0 0 SOLID	D'silter S EQU	12 PMEN	18.5 18.5 EFFIC	1 2 JENCY low (pps	S175/S17 S175/S17	75/S175 75/S175 Output	18.5 18.5
w/ fresh water " recycled " Drill Water	223 0 0	Desand Desitor Downho	der r role		6 2 76 56 23	Fluid Re	olume ceived st	223 162 1047	Centrifu Degasse Desande	ge or C	-	Hr. 0 0 SOLID Overfice 9.3	D'silter S EQU	12 PMEN	18.5 18.5 EFFIC	1 2 Now (pps 11.4 13.7	\$175/\$17 \$175/\$17	75/S175 75/S175 Output 0.2 0.1	18.5 18.5 (gal/m)
w/ fresh water " recycled " Driff Water Other	223 0 0	Desand Desilter Downhi Dumper Other	der r role		6 2 76 56 23	Fluid Re	olume ceived st	223 162 1047	Centrifus Degasse Desande Desilter	ge or C	~ Oriko	Hr. 0 0 SOLID Overfic 9.3	D'silter S EQU	2 12 IPMENT	18.5 18.5 EFFIC	1 2 Now (pps 11.4 13.7	S175/S17 S175/S17	75/S175 75/S175 Output 0.2 0.1	18.5 18.5 (gal/m)
w/ fresh water " recycled " Driff Water Other	223 0 0 223	Desard Desilter Downho Other Total Lo	der r role		6 2 76 56 23	Fluid Re Fluid Lo Fluid To (Circular	olume ceived st	223 162 1047	Centrifus Degasse Desande Desilter	ge or C	Driko	Hr. 0 0 SOLID Overfic 9.3	D'silter S EQU ow (ppg	2 12 IPMENT	18.5 18.5 EFFIC	1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$175/\$17 \$175/\$17	75/S175 75/S175 Output 0.2 0.1	18.5 18.5 (gal/m)
wi fresh water " recycled " Drill Water Other	223 0 0	Desard Desilter Downho Other Total Lo	der r iole id	r Dispos	6 2 76 56 23 162	Fluid Re Fluid Lo Fluid To (Circular	olume sceived st tal	223 162 1047	Degasse Desande Desilter SOLID:	ge Hr C	Driko	Hr. 0 0 SOLID Overfic 9.3	S EQU bw (ppg pb / 5 0.4 5.8	2 12 IPMENT) () () () () () () () () () () () () (18.5 18.5 EFFIC Underf	1 2 2 EIENCY Now (pps 11.4 13.7 BIT / H) ocity Force	\$175/\$17 \$175/\$17	75/S175 75/S175 Output 0.2 0.1 :S DAT 252 475	18.5 18.5 (gel/m)
wi fresh water " recycled " Drill Water Other Total Received Product	223 0 0 223	Desard Desilter Downho Dumper Other Total Le	der r iole id	r Dispor	6 2 76 56 23 162 Balance	Fluid Re Fluid Lo Fluid To (Circular	ceived st tal	223 162 1047	Centrifu Degasse Desande Desilter SOLID: High Gra Bentonit	B ANA	LYSIS	Hr. 0 0 SOLID Overfic 9.3	Painter S EQU DW (ppg pb / 5 0.4 5.8 50.2	2 12 IPMENT) (%) 0.0 0.8 5.5	18.5 18.5 Underf	1 2 2 EIENCY Now (pps 11.4 13.7 BIT / H) ocity Force	\$175/\$17 \$175/\$17	75/S175 75/S175 Output 0.2 0.1 252 475 2.1	18.5 18.5 (gal/m)
w fresh water " recycled " Drill Water Other Total Received Product Barytes	223 0 0 223	Desilter Downlin Dumper Other Total Le	der r iole id	Used 42	6 2 76 56 23 162 Balant 1050 4 80	Fluid Re Fluid Lo Fluid To (Circular	st tal ting Vol. Unit \$ 6 20	223 162 1047) Cost \$ 280.40 414.00	Desando Desilter SOLID: Bentonit Drilled S Low Gra	S ANA S ANA	LYSIS	Hr. 0 0 SOLID Overfic 9.3	Pailter S EQU DW (ppg pb / 5 0.4 5.8 50.2 56.0	2 12 12 PMENT) 0.0 0.8 5.5 6.2	Jet Vel Impact HHP	1 2 2 New (pps 11.4 13.7 BIT / H) octty Force in 2	\$175/\$17 \$175/\$17	Output 0.2 0.1 252 475 2.1 121	18.5 18.5 (gal/m)
w fresh water " recycled " Drill Water Other Total Received Product Barytes Biocide - 854X	223 0 0 223	Desilter Downho Dumper Other Total Le	der r iole id	Used 42	6 2 76 56 23 162 Balance 1050 4	Fluid Re Fluid Lo Fluid To (Circular	ceived st tal ting Vol. Unit \$ 6 20 207.00	223 162 1047) Cost \$	Centrifu Degasse Desande Desilter SOLID: High Gra Bentonit	S ANA S ANA	LYSIS	Hr. 0 0 SOLID: Overflor 9.3 9.30	D'silter S EQU ww (ppg D 1 5 0.4 5.8 50.2 56.0 2.61	2 12 12 PMENT) 0.0 0.8 5.5 6.2 Solids	Jet Vel Impact HHP / HHP Bit Pre	1 2 RENCY Row (pp) 11.4 13.7 BIT / H) ocity Force In 2	\$175/\$17 \$175/\$17	Output 0.2 0.1 252 475 2.1 121 528	18.5 18.5 (gal/m) A FT/SEC. LBS
w fresh water " recycled " Driff Water Other Total Received Product Barytes Biocide - 854X Al. Sulphate	223 0 0 223	Desard Desilber Downho Cumpe- Other Total Le Rory 1092 6 80	der r iole id	Used 42 2	6 2 76 56 23 162 Balant 1050 4 80	Fluid Re Fluid Lo Fluid To (Circular	ceived st tal ting Vol. Unit \$ 6 20 207.00 24 00	223 162 1047) Cost \$ 280.40 414.00	Desando Desilter SOLID: Bentonit Drilled S Low Gra	S ANA Wity So olids Vity Sol 3. G.	~ Driko	Hr. 0 0 SOLID: Overflor 9.3 9.30	D'silter S EQU ww (ppg D 1 5 0.4 5.8 50.2 56.0 2.61	2 12 12 PMENT) 0.0 0.8 5.5 6.2 Solids	Jet Vel Impact HHP / HHP Bit Pre	1 2 2 New (pps 11.4 13.7 BIT / H) octty Force in 2	\$175/\$17 \$175/\$17	Output 0.2 0.1 252 475 2.1 121 528 370	18.5 18.5 (gall/m) A FT/SEC LBS PSI
wi fresh water " recycled " Drill Water Other Total Received Product Barytes Biocide - B54X Al. Sulphate Caustic Potash	223 0 0 223	Desard Desilber Downho Dumpe- Other Total Lo ory 1092 6 80 4	der r iole id	Used 42 2 3	9ed 6 2 76 56 23 162 Balance 1050 4 80 1	Fluid Re Fluid Lo Fluid To (Circular	st tal ting Vol. Unit \$ 6 20 207.00 24 00 39 bb	223 162 1047) Cost \$ 280.40 414.00	Centrifu Degasse Desande Desilter SOLID: High Gra Bentonil Drilled S Low Gra Average	S ANA svity So olids vity So;	~ Driko	Hr. 0 0 SOLID Overflor 9.3 9.30	D'silter S EQU DW (ppg D.4 5.8 50.2 56.0 2.61 0.485 1.942	2 12 12 PMENT) 0.0 0.6 5.5 6.2 Solids 9.059	Jet Vel Impact HHP / HHP BR Pre Cag. S	1 2 RENCY Row (pp) 11.4 13.7 BIT / H) ocity Force In 2	S175/S17 S175/S17	Output 0.2 0.1 252 475 2.1 121 528 370 12.90	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG
wifresh water " recycled " Drill Water Other Total Received Product Barytes Biocide - 854X Al. Sulphate Caustic Potash JK - 261 Flozan	223 0 0 223	Desard Desilter Downh Dumpe Other Total Lo	der r iole id	Used 42 2 3 7	80 1 22 76 56 23 162 Balance 1050 4 80 1	Fluid Re Fluid Lo Fluid To (Circular	tal ting Vol. Unit \$ 6 20 207.00 24 00 39 6e 137.25	223 162 1047) Cost \$ 280.40 414.00 119.04 960.75	Desando Desilter SOLID: High Gra Bentonit Duilled S Low Gra Average	S ANA S ANA	~ Driko	Hr. 0 0 SOLID Overflor 9.3 9.30	pb / 1 0.4 5.8 50.2 56.0 2.61 0.485 1.942 0.651	2 12 12 PMENT)) 0.0 0.8 5.5 6.2 Solids 0.498 9.059 0.557	Jet Vel Impact HHP / HHP Bit Pre Cag. S	1 2 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2	S175/S17 S175/S17 DRAULIO	Output O.2 O.1 S DAT 252 475 2.1 121 528 370 12.90 9.68	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG PPG
wifresh water " recycled " Drill Water Other Total Received Product Barytes Biocide - 854X Al. Sulphate Caustic Potash JK - 261 Flozan Orispac - Reg.	223 0 0 223	Desard Desilter Downh Dumpe Other Total Lo ory 1092 6 80 4 29 75	der r iole id	Used 42 2 3 7 2	80 1 22 73	Fluid Re Fluid Lo Fluid To (Circular	tal ting Vol. 24 00 39 6e 137 25 423 50	223 162 1047) Cost \$ 280.40 414.00 119.04 960.75 847.00	Desando Desilter SOLID: High Gra Bentonil Drilled S Low Gra Average Med. "n' Med. "K	George Sana Sana Sana Sana Sana Sana Sana San	~ Driko	Hr. 0 0 SOLID Overflor 9.3 9.30	pb / 1 0.4 5.8 50.2 56.0 2.61 0.485 1.942 0.651	2 12 12 PMENT)) 0.0 0.8 5.5 6.2 Solids 0.498 9.059 0.557	Jet Vel Impact HHP / HHP Bit Pre Cag. S	1 2 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2	S175/S17 S175/S17	Output 0.2 0.1 252 475 2.1 121 528 370 12.90	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG
wifresh water " recycled " Drill Water Other Total Received Product Banytes Biocide - 854X AI, Sulphate Caustic Potash JK - 261 Flozan Orispac - Reg. KCL - Agri.	223 0 0 223	Desard Desilter Downh Dumpe Other Total Le ory 1092 6 80 4 29 75 47 83	der r iole id	Used 42 2 3 7 2 3 3	80 1 22 73 44	Fluid Re Fluid Lo Fluid To (Circular	tal ting Vol. 24 00 39 60 137 25 423 50 156 28	223 162 1047) Cost \$ 280.40 414.00 119.04 980.75 847.00 468.94	Desando Desilter SOLID: High Gra Bentonil Drilled S Low Gra Average Med. "n' Med. "K Low "n	ge or C ANA S ANA S ANA S OS OS OS OS OS OS OS OS OS O	LYSIS	Hr. 0 0 0 SOLID Overflee 9.3 9.30 Up # 2 ck	pb / 1 0.4 5.8 50.2 56.0 2.61 0.485 1.942 0.651	2 12 12 PMENT)) 0.0 0.8 5.5 6.2 Solids 0.498 9.059 0.557	Jet Vel Impact HHP / Bit Pre Cag. S E C	1 2 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2	S175/S17 S175/S17 S175/S17 DRAULIC	Output O.2 O.1 S DAT 252 475 2.1 121 528 370 12.90 9.68	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG PPG
w/ fresh water " recycled " Drill Water Other Total Received Product Banytes Biocide - B54X Al. Sulphate Caustic Potash K - 261 -lozan Orispac - Reg. KCL - Agri. Sod Sulphate	223 0 0 223	Desard Desilter Downh Dumpe Other Total Le ory 1092 6 80 4 29 75 47 83 21	der r iole id	Used 42 2 3 7 2 3 30 4	80 1 22 73 44 53	Fluid Re Fluid Lo Fluid To (Circular	tal ting Vol. 24 00 29 00 24 00 39 60 137 25 423 50 156 28 25 70	223 162 1047) Cost \$ 260.40 414.00 119.04 980.75 847.00 468.84 771.00	Desando Desilter SOLID: High Gra Bentonil Drilled S Low Gra Average Med. "n' Med. "K Low "n Low "K	ge or C ANA S ANA S ANA S OS OS OS OS OS OS OS OS OS O	LYSIS	Hr. 0 0 0 SOLED Overflee 9.3 9.30 Up # 2 ck	pb / 1 0.4 5.8 50.2 56.0 2.61 0.485 1.942 0.651	2 12 12 PMENT)) 0.0 0.8 5.5 6.2 Solids 0.498 9.059 0.557	Jet Vel Impact HHP / Bit Pre Cag. S E C	1 2 2 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 1	S175/S17 S175/S17 S175/S17 DRAULIC	Output 0.2 0.1 252 475 2.1 121 528 370 12.90 9.68 515	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG PPG
w/ fresh water " recycled " Drill Water Other Total Received Product Barytes Biocide - B54X Al. Sulphate Caustic Potash JK - 261 Flozan Orispac - Reg. KCL - Agri. Jod Sulphite Orispac - Low Vis.	223 0 0 223	Desard Desilter Downh Dumpe Other Total Le tory 1092 6 80 4 29 75 47 83 21 2	der r iole id	Used 42 2 3 7 2 3 3 30	Balant 1050 4 80 1 22 73 44 53	Fluid Re Fluid Lo Final To (Circular	tal ting Vol. Unit \$ 6 20 207.00 24 00 137.25 423.50 156.28 25 70 23 56 156.28	223 162 1047) Cost \$ 280.40 414.00 119.04 960.75 847.00 468.94 771.00 94.24 312.56	Desando Desilter SOLID: High Gra Bentonil Drilled S Low Gra Average Med. "n' Med. "K Low "n Low "K	ge or C ANA S ANA S ANA S OS OS OS OS OS OS OS OS OS O	LYSIS	Hr. 0 0 0 SOLED Overflee 9.3 9.30 Up # 2 ck	Daliter S EQU w (ppg 0.4 5.8 50.2 56.0 2.61 0.485 1.942 0.651 0.692	2 12 12 PMENT) 0.0 0.6 5.5 6.2 Solids 0.496 9.059 0.557 6.18	Jet Vel Impact HHP / HHP BR Pre Cag. S " E Cont.Fic	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	S175/S17 S175/S17 S175/S17 E) OPAULIO Prea d Wt. OP-GPM et: 63,169	Output 0.2 0.1 252 475 2.1 121 528 370 12.90 9.68 515	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG PPG
wifresh water " recycled " Drill Water Other Total Received Product Barytes Biocide - B54X Al. Sulphate Caustic Potash JK - 261 Flozan Orispac - Reg. KCL - Agri. Jod. Sulphate Orispac - Low Vis.	223 0 0 223 invent	Desard Desilter Downh Dumpe Other Total Lo tory 1092 6 80 4 29 75 47 83 21 2	der r r role d oet Rec'd.	Used 42 2 3 7 2 3 30 4 2 2	Balan- 1050 4 80 1 22 73 44 53 17	Fluid Re Fluid Lo Fluid To (Circular	tal ting Vol. Unit \$ 6 20 207.00 24 00 39 6e 137.25 423.50 156.28 25 70 23 56 156.28	223 162 1047 1047 1047 1049 280,40 414,00 119,04 980,75 847,00 468,84 771,00 94,24 312,55 Australia	Desando Desilter SOLID: High Gra Bentonil Drilled S Low Gra Average Med. "n' Med. "K Low "n Low "K Dailly Ch	ge or C	LYSII ilds #1ck.	Hr. 0 0 0 SOLID Overflow 9.3 9.30 %	Daliter S EQU w (ppg 0.4 5.8 50.2 56.0 2.61 0.485 1.942 0.651 0.992	2 12 12 12 12 12 12 12 12 12 12 12 12 12	Jet Vel Impact HHP Cag. S " E Crit.Fic Cumul	I 2 IENCY Iow (pps 11.4 13.7 BIT / Hn ocity Force In2 ss. Loss est Frac quiv. Mu c 0 6 @ DC/C stve Co.	S175/S17 S175/S17 S175/S17 Pros d Wt. DP - GPM st: 63,169	Output 0.2 0.1 252 475 2.1 121 528 370 12.90 9.68 515	18.5 18.5 (gall/m) A FT/SEC LBS PSI PSG PPG



Independent Drilling Fluid Services Pty. Ltd. Drilling Fluid Report ACN 000 287 314

Reports 20 Date: Spud Date: 18 Jan 1987 Depth: 2,800 (M.)To 2,800

WELL NAME and No	D . :	T	AR	AL	EA	# 1				CONTRA	CTOR	0). D	. &	E.				
Block No.: PEP	101	Loca	don :	Otwa	y Basin		State	Victoria		F	IG No.	3	0						
OPERATOR'S REPR	ESENTA	TIVE :		Hen	ry FLIN	K				REPORT	FOR	Pa	ul CO	OPER	₹				
Oriting	Assen	ıbly			Casing				М	ud Volum	e Bbis.					Circu	lation Da	ta	
Bit size 8.5 Type	:			16	inch C	12.	2 Metre	Hole :		526 P	lts:	36	9	Pum	p size :	[27	6.0*	9.0	ins.
DP 4.5 Type	<u>G</u>	Leng	th 2539	9.67	5 inch @	492	8 Metre	Drill St	ing Cap.	: 125 T	otal Volu	me :	101	9 Make	e/Model	1: G D	PZ - 8	% Eff	fic .
HWt" 4.5 Type:	54.84	Leng	ch 92 7	8 ~	Inch @	-	Metre	in Store	ige :	O_v	/eight:	~		Make	Model	2: G D	PZ - 8	% Eff	
	h 168.6		· r	MUE	TYPE:	KCL	- PHPA			% O/G:	15.0 A	mular V	/elocity	Вы	rtk 0.0	67 Stic/m	in ~	Вым	
DC " ~ Lengt	h ~					T	Mud F	roperties	· · · · · · · · · · · · · · · · · · ·	OP size	4.5	(FVI)	4) 8886	Bbu	etk 0.0	57 Stk/m	In ~	GPM	
SAMPLE From								Pit		DC size	6.5	(Fth	9 8886	# Botte	ome up	****	# PRES	SURE:	
TIME Sample Taken								21.00)	DC size	~ ; -	· (Fth	4) -	Total	Circ. :		# Type s		:
Flowline TEMPERATL	JRE				deg. C	1		N.C.				MUC	PROF	ERTY	SPECIF	CATION			
DEPTH Metres								2,800		Weight:	< 9	2 Filter	ste :		< 8	0 Other	: K+ > 2	%	
WEIGHT ppg.								9.30		Viscosity	: N	C. Plas	de Visc	osity:	N.C	Yield	Point :	18 - 21	1
Funnel VISCOSITY (s	ec/qL) A	PIQ		deg.	С			55		By Autho	rity: _~	_ Оре	rator's v	ritten		-	Drilling	Contrac	tor
PLASTIC VISCOSITY	cP Q		60	deg.	C			16		1	ye	S Oper	rator's R	leprese	ntative	-	Other		
YIELD POINT (16/100f						†		24								ENDATI			
GEL STRENGTH (Ib/1		0 sec. /	10 min.			 	Τ	4	19	1									
FILTRATE API (cm3/							~	5.7		Toas	sist the s	ettina	of the	sumo o	it a Alı	ıminium	Sulphat	a based	mix
API HTHP Filtrate (cr				- deg.	C		~ ~	-		was spra		_							
CAKE Thickness (32)	nd. in A	PIIHTH	(P)				-	1	-	Anoth	er prem	òx w as	prepar	ed (to b	e adde	d to the	mud in	he surfa	BC 0
SOLIOS Content (% b	y Vol)		Calc.	1	Retort	-62.5	· ~	6.2	~	system a	fter the	final cir	rculatio	n) cons	isting o	f the ab	ove mer	tioned ;	produ
LIQUID Content (% by	/ Vol.)	OilWa	ter				162.5	-	93.8										
SAND Content (% by	Vol.)					<u> </u>		Tr		The bi	ocide co	sted in	n this p	eriod, is	on sta	indby, to	be use	d on the	final
METHYLENE BLUE C	APACIT	/ X	Ib/bbl		cm3/cm3			11.0		displace	nent.		•	•					
pH	Strip			2	deg. C			9.0]									
ALKALINITY Mud (Pm)						-	0.22		The C	alcium C	hloride	not cl	harged	to the	nud cos	ting] was	s for the	ceme
ALKALINITY Filtrate	(PfMf)							0.14/0.	58	operation).			-					
CHLORIDE (mg/L)						1		17,900		•									
Total HARDNESS (mg	ML)					1		400		1									
SULPHITE (mg/L)						T .	-	100		Ì		OPER	RATION	3 9	UMMAF	~			
						† <u>-</u>		11,600		ے ا	molete					_	ina follo		
K+ (mg/L)						 -	- 	2.38) (I present	a hann	y out u	MA CHIM :	suny a	na Logg	jing follo	wed.	
KCL (% by Wt)						 							•						
PHPA (Calc. Ib/bbl)						ļ		2.30			npiedon	or me	iogging	, une pi	iug and	abango	nment p	rogramr	ne wa
PHPA (Active Ib/bbi)							-	1.1		initiated.									
RHEOLOGY - 600 / 300	16 (rese	ilngs)				ļ		56/40/4		Static o	lown-hol	le loss	92 MB L	9.5 bl	ols. for	the logg	jing perio	od.	
RHEOLOGY - 200 / 100	13 @ 30	mins. (reading	8)		İ		33/21/20											
		MUD /	ACCOU	NTING (BBLS.)							SOLIC	os co	NTROL	EQU	PMENT			
Fluid Built & Receiv	•d	Fluid	d Lost (or Oispo	beed	Sum	mary			Туре	Mar	ı. Hr.	1	Cones	Hr.	Shaker#	Screen	Size	Hr.
Premix		Desan			0	initial V			1047	Centrifuge	-	- 0	D'sand		7	1		75/S175	0
w/ fresh water	0	Desite	······		0					Degasser	Dnice	0	D'sitter	12		2		75/S175	0
" recycled "	0	Downt			21	Fluid R	ecelyed		0					† -	 -	╁╌┋╌	3.733.	733113	
		i			0	FILLIO A											<u></u>		
Orlii Water	0	Dumpe	d											JIPMEN		CIENCY			
Othjer	0	Other			7	Fluid L	ost		28			Overfi	low (ppg	<u>.) </u>	Under	flow (pp	<u>1.) </u>	Output	
		1								Desander		.						. 0	
		_				Final To	otal		1019	Desiter						-		0	
otal Received	0	Total L	ost		28	(Circula	iting Vol.)		ı		- 1			- 1				1	
						L'				SOLIDS	ANAI VS	18 /	ppb /	%)		BITTLEN	/DRAULK	S DAT	·A
Product	Invent	~~	Rec'd.	Used	Balanc		Unit \$	Cost	, 	High Gravil		. <u>.</u> .	0.4	0.0	Jet Ve		J. WOLK	****	
arytes	11.14.11	1050		~	1050	-	6.20			Bentonite	,		7.1	0.8	1			####	
iocide - B54X		4	 - · ·	} -	2		207 00			Benkonite Drilled Soll			48.8		Impac			 	LBS
I. Sulphate				2				414.					+	5.4	HHP/	#14		****	
austic Potash		_80 1		80	<u> </u>		24.00	1,920		Low Gravit			55.9	6.1	HHP			****	
· · · · · · · · · · · · · · · · · · ·							39 68	39.6		Average S.			2.61	Solids		ss. Loss		****	25
K - 261		22			22		137.25			Med. "n"	#1ck	# 2 ck		0.485	Ceg. S	eat Frac	Pres	370	PS
lozan		73	,		73		423.50			Med. "K"		1	-	9 922	E	quiv. Mu	d Wt.	12.90	PPC
nspac - Reg.		44			44		156 28			Low "n"			<u> -</u>	0.500	E	D		****	PPG
CL - Agri		53			53	[25 70			Low "K"		-	-	9.04	Crit.Fic	Ø DC/D	P - GPM	539	74
- 1		17			17		23 56			Daily Chem	ical Cost	:			·	tive Co			
od Sulphite		,	1			*** * *				-			2,374				55,542		
od Sulphite aCl2		7		, ,	6														
aCI2				1				A											
• •		B		1	ADDRESS			Australi		ha .== 2 18 2			TELEPI	HONE	08 - 3	38 3027	 		

DAILY DRILLING REPORTS

DAILY DRILLING REPORT

Taralea #1

REPORT#:22

GL ABOVE MSL (m): ELEV RT AGL (m): Report Date: 8/02/97

Issue Date: 10/02/97

Page Number:

Basic Data
DRILLING CO.:

RIG

O.D.E. 30 49.0

4.6

Well Data

DEPTH m: 2,800.0 PROGRESS m: 0.0 DAYS FROM SPUD: 20.52 DAYS +/- CURVE: HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 TOT PERS ON SITE : AFE COST \$: DAILY COST \$:

CUM COST \$:

1,526,700 169,491 1,273,559

Gas and General Data

MAX GAS %: B/G GAS %: 0.0 V

NOZZ n/32"

HHSI (hp/sq in):

Calculated over the bit run

CUM. METRAGE (m):

CUM, ON BOT, HRS:

CUM.ROT. HRS:

WEATHER: STATUS @ 0600: Cloudy and light rain

Rig down rigfloor/cleaning mud tanks

Bit Data for Bit #0

BIT SIZE ("):

MANUFACTURER:

TYPE:

SERIAL #:

PUMP PRESS. (psi):

SERIAL # : DEPTH IN (m RT) : DEPTH OUT (m RT) :

Calculated over last 24 hrs METRAGE (m): ON BOTTOM HRS: ROTATING HRS: ROP m/h

Bit

Wear

Mud Data DAILY COST: 2,374 CUM COST: 107,214
Chk #:36 / TYPE: KCI-PHPA Chk #:0 / TYPE:

Property Property Chk 36 Chk361 Chk 0 Chk 0 SAMPLE FROM: TEMP (Deg C) SOLIDS (%vol) TIME : 00 0.0 H2O (%vol): 0.0 WEIGHT(ppg): 9.3 0.0 DEPTH m 2800 0 OIL (%vol)): 0 0 SAND(%vol): VIS. (sec/qt): 0 0 PV (cp): 0 MBT (ppb eq.) 0 0 YP (lb/100sf): 0 PH: 0.00 0 0.0 GEL10s(lb/100sf): ō 0 CI- (ppm): 0 0 GEL10m(lb/100sf): 0 0 K+ (ppm): 0 ٥ HRD/CA (ppm) Fann 3RPM: O Ω n Fann 6RPM: 0 API F. loss : 0.0 0.0

BHA Data: BHA#

BHA LENGTH (m): HRS ON JARS: BHA DESCRIPTION: WT BLW JAR(k-lbs): BHA WT(k-lbs): STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs): TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

Bulk Stocks

On site

DRILL WATER (MT): 0
POT WATER (MT): 0

FUEL (ltr): 29300 BARITE (sx): 1050

OR

CEMENT (sx): 0
GEL (sx): 10

Drills. Permits & Inspections

Survey (last 4 points) Tool Type :DIPMETER INCL SECT deg (m RT) (m RT) deg (m) (m) 2,346 2,589 2,785 2,786 6.00 7.50 N5W 112.0 9.00 N

l	U	irrent Pu	mp D	ala a	nu Si	ow c	ii Cuic	ung	Rate	Dala
li		Pi	ımp D	ata - la	st 24 1	nrs			SCR D	ita
	#	TYPE	LNR (")	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT
	1 2	GD-PZ-8 GD-PZ-8	6.00 6.00		97.0 97.0					

Current Dump Data and Slow Circulating Data Data

 Personnel on Site = 24

 NAME
 JOB TITLE
 COMPANY NAME
 #

 Henry Flink
 Drilling Supervisor
 Cultus ODE 21 Halliburton
 1 21 Halliburton

DRILL TYPE	TIMING	INSPECTIONS	TIMING
TRIP DRILL FIRE PIT DRILL INCIDENT	1/2/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	4/2/97 2/2/97

Γ	೮	ទៅកម្ម						
	#	TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD	
١								l

Formation Tops		
FORMATION	TOP m	BIT#
		1RR
		1RR 1RR
		1RR
Pember	485.00	
Pebble Point	523.00	
Paratte	543.00	4
Skull Creek/Belfast	625.00	4
Eumeralla	695.00	4
Inter Eumeralia Sand	1,351.00	4
Lower Eumeralla	1,435.00	BKK

DAILY DRILLING REPORT

Taralea #1

REPORT# :22

Page Number :

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON8/02/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11	PA PA			06:00 09:00 09:00	6.0 3.0 0.0	2,800	Lay out kelly n/down and remove bop,clean mud tanks Recover well head- Set plug no 3 at surface with 5 sxs of clss G cement Weld on top plateand install well sign post. RELAESE RIG AT 0900 HOURS ON THE 8TH of FEBRUARY 1997

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON0/00/0000

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY

DAILY DRILLING REPORT

Taralea #1

24

REPORT#:21

Report Date: 7/02/97

Issue Date: 10/02/97

Page Number:

Basic Data DRILLING CO.: ODE RIG 30 GL ABOVE MSL (m) 49.0 ELEV RT AGL (m): 4.6

Well Data 2,800.0 DEPTH m: PROGRESS m: 0.0 DAYS FROM SPUD :20.15 DAYS +/- CURVE :

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 TOT PERS ON SITE: AFE COST \$: DAILY COST \$: 1,526,700 31,211

CUM COST \$:

Gas and General Data

MAX GAS %: B/G GAS %:

0.0

WEATHER: STATUS @ 0600 : Cloudy and light rain

Rig down rigfloor/cleaning mud tanks

Bit Data for Bit #0 IADC # BIT SIZE ("): AVE WOB (k-lbs): MANUFACTURER: AVE RPM: TYPE: FLOW (gpm): SERIAL # : PUMP PRESS. (psi): NOZZ n/32" DEPTH IN (m RT): DEPTH OUT (m RT): HHSI (hp/sq in): Calculated over last 24 hrs Calculated over the bit run METRAGE (m): CUM. METRAGE (m): ON BOTTOM HRS: CUM. ON BOT. HRS: **ROTATING HRS:** CUM.ROT. HRS: ROP m/h ROP m/h

1

Mud Data DAILY COST: 2,374 Chk #:36 / TYPE: KCI-PHPA Chk #:0 / TYPE: Property Chk36 Chk 0 Chk 36 Chk 0 SAMPLE FROM: TEMP (Deg C) 0 TIME : 00 SOLIDS (%vol) 0 WEIGHT(ppg): 0.0 H2O (%vol) : 9.3 0.0 0.0 DEPTH m : 2800 OIL (%voi)) : 0 0 VIS. (sec/qt): 0 0 SAND(%voi): 0 PV (cp): MBT (ppb eq.) 0 0 0 n YP (lb/100sf): 0 0 PH: 0.0 0.00 GEL10s(lb/100sf): ō 0 CI- (ppm): O 0 GEL10m(lb/100sf) 0 0 K+ (ppm): 0 0 HRD/CA (ppm) Fann 3RPM: 0 ٥ 0 Fann 6RPM : 0 API F. loss: 0.0 0.0

BHA Data : BHA #

#

0

MTGE HRS

BHA LENGTH (m) : HRS ON JARS : **BHA DESCRIPTION:** WT BLW JAR(k-lbs): BHA WT(k-lbs):

L

В

G $\overline{\circ}$

OD

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK OFF WT(k-lbs):

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps) :

Bulk Stocks on site

Bit

Wear

DRILL WATER (MT): 0 POT WATER (MT): 0

FUEL (Itr): 29300 **BARITE** (sx): 1050

R

CEMENT (sx): 0 GEL (sx):

Survey (last 4 points) Tool Type :DIPMETER MD TVD INCL deg SECT (m RT) (mRT) deg (m) (m) (m) 2,346 2,589 2,785 6.00 7.50 N5W 112.0 2,786 9.00 N

FORMATION	TOP m	BIT#
		1RR
		1RR
		1RR 1RR
Pember	485.00	
Pebble Point	523.00	4
Paratte	543.00	4
kull Creek/Belfast	625.00	4
Eumeralia	695.00	4
Inter Eumeralia Sand	1,351.00	4
ower Eumeralia	1,435.00	8KK

C:	រខាប់ពិ					
#	TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD

Cultus Petroleum NL DAILY DRILLING REPORT

Taralea #1

REPORT#:21

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON7/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	TA	RR	00:00	01:00	1.0	2,800	Cont change brake band on draw work
11	PA	TRP	01:00	02:00	1.0	2,800	RIH with OE drillpipe to 725m
11	PA	СМ	02:00	03:00	1.0	2.800	R/U surface equipment - Held pre job safety meeting
11	PA	CM	03:00	04:30	1.5	2,800	Pump 5 bbl of DW -P/test lines to 1000 psi- set cmt plug no 1 F/
1						·	725 to 665m with 74 sxs class G of 15.8 ppg.Displaced w/1.4
							bbl dw and 28 bbl mud-p/b to 523m - circ.clean
11	PA	СМ	04:30	06:00	1.5	2,800	Set cmt plug no 2 with 72 sxs F/523 to 463 class G of 15.8
							ppg.Lost .5 hr due to blocked bulk line.displaced and pulled 2
							std circulating clean
	PA		06:00	06:30	.5 7.5	2,800	Circulate clean after plug no 2
11			06:30	14:00	7.5	2,800	Lay down drillpipe- Break kelly - Lay down BHA/drill collar
11			14:00	14:30	.5	2,800	RIH and tag toc plug at 468m, weight tested with 10,000 Lbs.
11	PA		14:30	15:00	.5	2,800	Circulate pipe clean
11			15:00	18:30	.5 .5 3.5	2,800	Continued laying down drill pipe
11	PA		18:30	19:30	1.0	2,800	Slip and Cut drilling line
11	PA			21:30	2.0	2,800	Cont. laying down drillpipe
11	PA			22:00	.5	2,800	Displace to inhibited mud from 465m to surface
11				22:30	.5 1.5	2,800	Cont. laying down drillpipe
11	PA	RD	22:30	24:00	1.5	2,800	Flush standpie,kelly,bop,choke mfd,mud pumps,poorboy and
		١					all associated equipment, Dump mud tanks, lay out mouse hole



DAILY DRILLING REPORT

Taralea #1

REPORT#:20

Report Date: 6/02/97

Issue Date : 7/02/97

Page Number:

Basic Data **DRILLING CO.:**

O.D.E. 30 RIG: GL ABOVE MSL (m): 49.0 46 ELEV RT AGL (m):

Well Data

2,800.0 DEPTH m : 0.0 PROGRESS m DAYS FROM SPUD :19.15 DAYS +/- CURVE :

8.50 HOLE SIZE("): AST CSG SIZE("): 9.625 492.80 SHOE DEPTH m LEAK-OFF SG: 1.55 **TOT PERS ON SITE:** 34 AFE COST \$: DAILY COST \$: 1,526,700 31,211 CUM COST \$: 1.072,857

Gas and General Data

MAX GAS %: B/G GAS %:

WEATHER .

Cloudy

Circulate clean after plug no 2. STATUS @ 0600 :

> Mud Data DAILY COST: 2,374 CUM COST: 102,466 Chk #:36 / TYPE: KCI-PHPA Chk #:0 / TYPE:

Bit Data for Bit #0 IADC # BIT SIZE ("): AVE WOB (k-lbs): MANUFACTURER : AVE RPM: TYPE: FLOW (gpm): SERIAL #: PUMP PRESS. (psi): DEPTH IN (m RT): NOZZ n/32" DEPTH OUT (m RT): HHSI (hp/sq in): Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): METRAGE (m): CUM. ON BOT. HRS: ON BOTTOM HRS : CUM.ROT. HRS: ROTATING HRS : ROP m/h ROP m/h MTGE HRS В G 0 R T 0 D L Wear 0

0.0

Ргорепу Property Chk36 Chk 0 Chk 36 TEMP (Deg C) SAMPLE FROM: 2100 SOLIDS (%vol) TIME . 0.0 93.8 0.0 H2O (%vol) : WEIGHT(ppg): 9.3 DEPTH m: 2800 0 OIL (%vol)): n 0 SAND(%vol): Tr VIS. (sec/qt): 55 MBT (ppb eq.) ٥ 0 16 11 PV (cp): YP (lb/100sf): 0 PH: 9.0 0.00 24 CI- (ppm): 17800 0 GEL10s(lb/100sf): 4 0 11600 0 GEL10m(lb/100sf) 19 0 K+ (ppm): HRD/CA (ppm) 0 0 Fann 3RPM: 20 **4**00 Fann 6RPM : O API F. loss: 0.0 5.7

BHA Data: BHA#

BHA LENGTH (m): HRS ON JARS:

WT BLW JAR(k-lbs): BHA WT(k-lbs):

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

BHA DESCRIPTION:

Bulk Stocks on site

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (ltr): **BARITE** (sx): 1050

30850

CEMENT (sx): 185 GEL (sx):

Drille Permits & Inspections

Tool Type :DIPMETER Survey (last 4 points) EW TVD INCL AZ. MD (m RT) deg SECT (m) (m) (m RT) deq (m) 2,346 2,589 2,785 N5W 7.50 2.786 9.00 N

Г	Pi	ımp Da	1	CR Da	ita				
#	TYPE	LNR ()	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT
1 2	GD-PZ-8 GD-PZ-8	6.00 6.00		97.0 97.0					

Current Pump Data and Slow Circulating Rate Data

Personnel on Site = 34 COMPANY NAME # NAME JOB TITLE Cultus ODE 3 22 4 1 1 3 Henry Flink **Drilling Supervisor** Geologist Drilling Engineer Dave Homer Halliburton IDFS Bruce Richardson Aust DST BPB +VEL.DATA

DRILL TYPE			TIMING
TRIP DRILL	3/2/97	LAST CSG PRESS TEST SAFETY MEETING	23/1/97 4/2/97
PIT DRILL INCIDENT		SAFETY INSPECTION DAYS SINCE LAST BOP TES	2/2/97 15
		LAST BOP TEST	23/1/97

Casing						
#	TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD

FORMATION	TOP m	BIT#
	- 	1RR
		1RR
	1	1RR 1RR
Pember	485.00	
Pebble Point	523.00	
Paratte	543.00	4
Skull Creek/Belfast	625.00	4
Eumeralla	695.00	4
Inter Eumeralia Sand	1,351.00	4
Lower Eumeralia	1,435.00	8RR

DAILY DRILLING REPORT

Taralea #1

REPORT#:20

Report Date: 6/02/97

Issue Date : 7/02/97

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON6/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11			00:00 03:30	03:30 04:30	3.5 1.0	2,800	POH SLM Lay down monel, roller reamers, flush motor,recover survey -
	-					·	missrun
11 11		ro ro	04:30 05:30	05:30 12:00	1.0 6.5	2,800 2,800	Clean floor, held safety meeting with BPB/VEL.Data.R/U to log RIH with vel. data tool.Took check shot at 21 levels.R/D Data
11	PE	LO	12:00	18:30	6.5	2,800	log.HUD 2798m Prepare and rig up DDL-GR-SP-CAL-SONIC-MSFL.Run log nr
11	PE	LO	18:30	23:30	5.0	2,800	2 HUD 2797m RD nr 2 loggingtool R/U and run log nr 3 Dipmeter.Hud 2797mBHT 117 Deg C.
11	ТА	RR	23:30	24:00	.5		Dev. 9.0 Deg at 2785 Changed out brake band on draw work - drillers side

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON7/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11 11 11		TRP CM CM	02:00 03:00	01:00 02:00 03:00 04:30 06:00	1.0 1.0 1.0 1.5	2,800 2,800 2,800	Cont change brake band on draw work RIH with OE drillpipe to 725m R/U surface equipment - Held pre job safety meeting Pump 5 bbl of DW -P/test lines to 1000 psi- set cmt plug no 1 F/ 725 to 665m with 74 sxs class G of 15.8 ppg.Displaced w/1. 4 bbl dw and 28 bbl mud-p/b to 523m - circ.clean Set cmt plug no 2 F/523 to 463 72 sxs class G of 15.8 ppg.Lost .5 hr due to blocked bulk line.displaced and pulled 2 std circulating clean

DAILY DRILLING REPORT

Taralea #1

REPORT#:19

GL ABOVE MSL (m):

Bit Data for Bit #9

ELEV RT AGL (m):

Report Date: 5/02/97

AVE WOB (k-lbs):

PUMP PRESS. (psi):

CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS:

ī

BT H

AVE RPM:

NOZZ n/32"

ROP m/h

D

FLOW (gpm):

HHSI (hp/sq in):

Issue Date : 6/02/97

Page Number:

Basic Data DRILLING CO.: RIG:

O.D.E. 49.0 4.6

8.50

MF15

2615

2800

95

5.8

ī o

HRS

33.0 3

16.5

LF0271

SM

Well Data

DEPTH m : 2,800.0 PROGRESS m 95.0 DAYS FROM SPUD :18.15 DAYS +/- CURVE :

HOLE SIZE("): LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 492.80 LEAK-OFF SG: 1.55

TOT PERS ON SITE: AFE COST \$: DAILY COST \$:

CUM COST \$:

1,526,700 39,488 1,041,646

Gas and General Data

MAX GAS % : B/G GAS % :

BIT SIZE ("):

TYPE:

SERIAL #:

MANUFACTURER:

DEPTH IN (m RT):

METRAGE (m):

ROP m/h

Bit

Wear

ON BOTTOM HRS : ROTATING HRS :

DEPTH OUT (m RT):

Calculated over last 24 hrs

MTGE

185

WEATHER: STATUS @ 0600: Fine and clear.

Conducting checkshot survey at TD

IADC #4 4 7 35 235

400

1.950

1.90

33.0

5.6

CT TD

16 14 14

Mud Data DAILY COST: 4,248 CUM COST: 100,092 Chk #:34 / TYPE: KCI-PHPA Chk #:35 / TYPE : KCI-PHPA

Property	Chk34	Chk 35	Property	Chk 34	Chk 35
SAMPLE FROM:	FL	FL	TEMP (Deg C):	65	64
TIME :	14:00		SOLIDS (%voi)	6.2	6.2
WEIGHT(ppg):	9.3		H2O (%vol):	93.7	93.7
DEPTH m :	2784	2800	OIL (%vol)) :	0	0
VIS. (sec/qt):	55	50	SAND(%vol) :	Tr	Tr
PV (cp):	15	16	MBT (ppb eq.) :	8	10
YP (lb/100sf):	24	23	PH:	9.0	8.80
GEL10s(lb/100sf):	2	3	CI- (ppm) :	14600	17600
GEL10m(lb/100sf):	15	17	K+ (ppm):	9800	12000
Fann 3RPM:	24	22	HRD/CA (ppm)	460	420
Fann 6RPM :	6	4	API F. loss :	7.2	6.3

BHA Data: BHA #9

BHA LENGTH (m): HRS ON JARS :

9

292.6 222

3

WT BLW JAR(k-lbs): 43 61 BHA WT(k-lbs):

Calculated over the bit run

В G 0 R

1

E

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

155

TRQE MAX (amps) : TRQE ON (amps) : 140 140 TRQE OFF (amps):

Bit #9, Motor, X/O, 8 1/2" R/Rmr, X/O, Monel DC, X/O, 8 1/2" R/Rmr, 16 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP **BHA DESCRIPTION:**

Bulk Stocks on site

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (ltr): BARITE (sx):

32950 1050

CEMENT (sx): 185 GEL (sx):

Drills, Permits & Inspections

ļ	Survey (iast 4 po	oints)		Tool Type :Misrun					
	MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	N/S (m)	E/W (m)			
	2,180 2,346		6.50 6.00	14E	69.0					
1	2,589 2,785		7.50	N5W	112.0					

Current Pump Data and Slow Circulating Rate Data Pump Data - last 24 hrs SCR Data SPP DEPTH LNR SPM EFF Flow SPP SPM TYPE (") (%) gpm psi psi m RT GD-PZ-8 400 1950 45 55 2767 70 GD-PZ-8 6.00 2 97.0 510 2767

Personnel on Site = 38								
NAME	JOB TITLE	COMPANY NAME	#					
Henry Flink Dave Horner Bruce Richardson	Drilling Supervisor Geologist Drilling Engineer	Cultus ODE Halliburton IDFS Aust DST BPB +VEL.DATA	3 23 5 1 1 5					

		•	
DRILL TYPE	TIMING	INSPECTIONS	TIMING
TRIP DRILL FIRE PIT DRILL INCIDENT	4/2/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 4/2/97 2/2/97 14 23/1/97

Ü	ısirıg					
#	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lb/ft)	GRADE	THREAD

Formation Tops		
FORMATION	TOP m	BIT#
Pember Pebble Point Paratte Skull Creek/Belfast Eumeralla Inter Eumeralla Sand Lower Eumeralla	485.00 523.00 543.00 625.00 695.00 1,351.00 1,435.00	4 4 4 4

DAILY DRILLING REPORT

Taralea #1

REPORT#:19

Report Date: 5/02/97

Issue Date : 6/02/97

Page Number:

rage Number.

ACTIV	ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON5/02/97										
PHSE	PHSE CLS OF FROM TO HRS DEPTH DESCRIPTION-ACTIVITY										
11	PD	DM	00:00	12:30	12.5	2,779	Drill 8 1/2" hole with motor 2705m to 2740m.				
11	TD	RR	12:30	13:30	1.0	2,779	Lost 1200 psi pump pressure. Check surface equipment, rectify fault in SCR unit.				
11	PD	DM	13:30	17:30	4.0	2,800	Drill 8 1/2" hole with motor 2779m to 2800m.				
11	PD	CIR	17:30	18:30	1.0	2,800	Circulate hole clean, flow check well				
11	PD	WT	18:30	20:00	1.5	2,800	Conduct 10 stand wiper trip, 10k O/P maximum. RIH to 2800m				
11	PD	CIR	20:00	21:00	1.0		Circulate hole clean				
11	PD		21:00	21:30	.5	2,800	Drop single shot survey, flow check well				
11	PD	TRP	21:30	24:00	2.5	2,800	Pump slug, POH SLM				

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON6/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	HT	00:00 03:30	04:00	.5	2,800	POH SLM Lay down monel, roller reamers, flush motor
11	PE	LO	04:00	06:00	2.0	2,800	Hold safety meeting with BPB. Rig up to log

1

Cultus Petroleum NL

DAILY DRILLING REPORT

Taralea #1

REPORT#:18

Report Date: 4/02/97

Issue Date : 5/02/97

Page Number:

Basic Data Well Data DRILLING CO. : O.D.E. DEPTH m . 2,705.0 HOLE SIZE("): **TOT PERS ON SITE:** 32 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 30 PROGRESS m: 90.0 1,526,700 53,668 RIG AFE COST \$: DAILY COST \$: GL ABOVE MSL (m) : 49.0 DAYS FROM SPUD: 17.15 DAYS +/- CURVE : LEAK-OFF SG : 1.55 CUM COST \$: ELEV RT AGL (m): 46 1,002,158

Gas and General Data

MAX GAS %: B/G GAS % :

WEATHER:

Fine and clear

STATUS @ 0600 :

Drilling 8.5" hole@ 2740m

Bit Data for Bit #9 IADC #4 4 7 BIT SIZE ("): 8.50 AVE WOB (k-lbs): 35 MANUFACTURER: SM AVE RPM: 235 TYPE: MF15 FLOW (gpm): 400 SERIAL #: LF0271 PUMP PRESS. (psi): NOZZ n/32" 1,950 DEPTH IN (m RT) : 2615 16 14 14 DEPTH OUT (m RT): HHSI (hp/sq in): 1.90 Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 90 ON BOTTOM HRS : ROTATING HRS : 16.5 16.5 ROP m/h 5.5 5.5 ROP m/h Bit MTGE HRS 0 D В G ō R Wear 9 90 16.5

2.0

Mud Data DAIL	Y COS	Γ: 4,764	CUM C	OST:	91,596					
Chk #:32 / TYPE: K	Chk #:32 / TYPE: KCI-PHPA Chk #:33 / TYPE: KCI-PHPA									
Property	Chk32	Chk 33	Ргорепту	Chk 32	Chk 33					
SAMPLE FROM:	FL	FL	TEMP (Deg C)	59	62					
TIME :	1400	22.30	SOLIDS (%vol)	6.3	6.3					
WEIGHT(ppg):	9.4	9.3	H2O (%vol) :	93.7	93.7					
DEPTH m :	2651	2698	OIL (%vol)) :	0	0					
VIS. (sec/qt):	50	54	SAND(%vol):	Tr	Tr					
PV (cp):	17	17	MBT (ppb eq.):	10	10					
YP (lb/100sf):	22		PH:	9.0	9.00					
GEL10s(lb/100sf):	3	2	CI- (ppm):	14100	16200					
GEL10m(lb/100sf) :	11		K+ (ppm) :	9900	11900					
Fann 3RPM :	17		HRD/CA (ppm)	500	500					
Fann 6RPM :	4	4	API F. loss :	5.5	6.2					

BHA Data: BHA #9

BHA LENGTH (m): HRS ON JARS:

222

WT BLW JAR(k-lbs): BHA WT(k-lbs): 61 STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs): 155

GEL (sx):

Drille Parmite & Inenections

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps): 140 140 90

BHA DESCRIPTION:

Bulk Stocks

on site

Bit #9, Motor, X/O, 8 1/2" R/Rmr, X/O, Monel DC, X/O, 8 1/2" R/Rmr, 16 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP DRILL WATER (MT): 0 FUEL (ltr): 11650 **CEMENT (sx): 185 BARITE** (sx): 1092

Survey (last 4 points) Tool Type :S/Shot

MD	TVD	INCL	AZ.	SECT	N/S	E/W
(m RT)	(m RT)	deg	deg	(m)	(m)	(m)
2,080 2,180 2,346 2,589		5.50 6.50 6.00 7.50	14E N5W			

POT WATER (MT): 0

Cı	urrent Pu	mp D	ata a	nd S	low C	ircula	iting	Rate	Data					
Г	Pump Data - last 24 hrs SCR Data													
#	TYPE	LNR (")	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT					
1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	70 70	97.0 97.0	400	1950	45 55	370 470	2644 2644					

Personnel on Site = 32 NAME JOB TITLE COMPANY NAME # Henry Flink **Drilling Supervisor** Cultus Dave Homer Geologist ODE 23 3 1 1 Halliburton IDFS Aust DST

DRILL TYPE	TIMING	INSPECTIONS	TIMING
FIRE PIT DRILL		LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 4/2/97 2/2/97 12 23/1/97

Casing TYPE LENGTH CSG ID WEIGHT | GRADE | THREAD (m) (lb/ft) (")

Formation Tops		
FORMATION	TOP m	BIT#
Pember Pebble Point Paratte Skull Creek/Belfast Eumeralla Inter Eumeralla Sand Lower Eumeralla	485.00 523.00 543.00 625.00 695.00 1,351.00 1,435.00	4 4 4 4

DAILY DRILLING REPORT

Taralea #1

REPORT#:18

Report Date: 4/02/97

Issue Date : 5/02/97

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON4/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11	PD PD	TO HT	1	01:00 02:00	1.0 1.0	2,615 2,615	POOH. Gauge reamers - 1/16" under. Change bit. Function test motor.
11 11 11	PD PD PD PD			06:00 07:00 07:30 24:00	4.0 1.0 .5 16.5	2,615 2,705	***= ****

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON5/02/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	06:00	6.0	2,740	Drill 8 1/2" hole with motor 2705m to 2740m.



5.6

Cultus Petroleum NL

DAILY DRILLING REPORT

Taralea #1

REPORT#:17

Report Date: 3/02/97

Issue Date : 4/02/97

Page Number:

Basic Data

GL ABOVE MSL (m) :

ELEV RT AGL (m):

DRILLING CO.:

RIG:

O.D.E. 30 49.0

4.6

Well Data DEPTH m: 2,615.0 PROGRESS m DAYS FROM SPUD :16.15 DAYS +/- CURVE :

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 **TOT PERS ON SITE:** 31 AFE COST \$: DAILY COST \$: 1,526,700 39,119 CUM COST \$: 948,490

Gas and General Data

MAX GAS % : B/G GAS % :

.8 .1

WEATHER: STATUS @ 0600 : Fine and clear. RIH with new bit.

Bit Data for Bit #8RR IADC#4 4 7 BIT SIZE ("): 8.50 35 AVE WOB (k-lbs): MANUFACTURER: HU 225 AVE RPM: TYPE: ATMGT18OD FLOW (gpm): 370 SERIAL # . L01CF PUMP PRESS. (psi): 1,900 DEPTH IN (m RT): 2126 14 14 14 NOZZ n/32" DEPTH OUT (m RT) : 2615 HHSI (hp/sq in): 2.16 Calculated over the bit run Calculated over last 24 hrs CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 144 489 59.0 19.0 ON BOTTOM HRS:

ROTATING HRS: ROP m/h ROP m/h 7.6 Bit G 0 HRS 0 DIL В MTGE 1 Wear

59.0 4

206

6 BT Mud Data DAILY COST: 2,939 CUM COST: 82.068 Chk #:30 / TYPE: KCI-PHPA Chk #:31 / TYPE : KCI-PHPA Property Property Chk30 | Chk 31 Chk 301 Chk 31 TEMP (Deg C) SAMPLE FROM: 62 61 FL 2000 SOLIDS (%vol) TIME: 1030 6.0 6.4 WEIGHT(ppg): 9.3 H2O (%voi): 93.6 9.3 94.0 2548 2615 0 DEPTH m OIL (%voi)): 0 VIS. (sec/qt): 56 53 SAND(%vol): Tr 0.1 PV (cp): 16 MBT (ppb eq.) 13 12 17 YP (lb/100sf): 20 19 PH: 9.0 9.00 2 14200 GEL10s(lb/100sf): 3 CI- (ppm) : 15000 10 K+ (ppm): 11000 11000 GEL10m(lb/100sf) 14 HRD/CA (ppm) 500 Fann 3RPM: 3 560

API F. loss:

BHA Data: BHA #9

489

BHA LENGTH (m): 292.6 HRS ON JARS :

8RR

WT BLW JAR(k-lbs): BHA WT(k-lbs):

Ē

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs): Bit #8RR, Motor, X/O, 8 1/2" R/Rmr, X/O, Monel DC, X/O, 8 1/2" R/Rmr, 16 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C,

Fann 6RPM:

TRQE MAX (amps) : TRQE ON (amps) : 140 120 TRQE OFF (amps) 80

5.6

BHA DESCRIPTION:

Bulk Stocks

on site

10 x HWDP 15600 CEMENT (sx): 185 FUEL (Itr): DRILL WATER (MT): 0 **BARITE** (sx): 1120

46.0

8.3

R

HR

61

Survey (last 4 points) **Tool Type :S/Shot**

MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	3 (E)	¥e)
2,080 2,180 2,346		5.50 6.50 6.00	14E	69.0		
2,589		7.50	N5W	112.0		

POT WATER (MT): 0

Current Pump Data and Slow Circulating Rate Data Pump Data - last 24 hrs SCR Data

160 165

155

GEL (sx):

Drills. Permits & Inspections

LNR Flow SPP SPP DEPTH SPM EFF (%) psi psi m RT apm (") 1900 1 GD-PZ-8 6.00 65 97.0 GD-PZ-8 65 97.0 55 480 2482

Personnel on Site = 31 COMPANY NAME NAME JOB TITLE 3 Alex Bradley **Drilling Supervisor** Cultus 23 Dave Homer Geologist ODE 3 1 1 Halliburton IDES

DRILL TYPE TIMING **INSPECTIONS** TIMING TRIP DRILL LAST CSG PRESS TEST 23/1/97 3/2/97 LAST CSG PRESS TEST
SAFETY MEETING
SAFETY INSPECTION
DAYS SINCE LAST BOP TES
LAST BOP TEST 3/2/97 FIRE PIT DRILL 2/2/97 2/2/97 INCIDENT 1/2/97 23/1/97

Casing CSG ID | WEIGHT | GRADE | THREAD TYPE LENGTH (m) (") (Ib/ft)

Aust DST

Formation Tops		
FORMATION	TOP m	BIT#
Pember Pebble Point Paratte Skull Creek/Belfast Eumeralla Inter Eumeralla Sand Lower Eumeralla	485.00 523.00 543.00 625.00 695.00 1,351.00 1,435.00	4 4 4 4

DAILY DRILLING REPORT

Taralea #1

REPORT#:17

Report Date: 3/02/97

Issue Date : 4/02/97

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON3/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11 11 11 11		DM RS DM CIR	06:00 07:30 08:00 19:30	06:00 07:30 08:00 19:30 20:30 24:00	6.0 1.5 .5 11.5 1.0 3.5	2,529 2,529 2,615 2,615	Drill 8 1/2" hole with motor 2471m to 2518m. Drill 8 1/2" hole with motor 2518m to 2529m. Rig Service. Drill 8 1/2" hole with motor 2529m to 2615m. Circulate bottoms up. Drop single shot survey. POOH.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON4/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
1 1	PD PD	TO HT	00:00 01:00	01:00 02:00	1.0 1.0	•	POOH. Gauge reamers - 1/16" under. Change bit. Function test motor.
i 1	PD	TI	02:00	06:00	4.0	2,615	RIH.



DAILY DRILLING REPORT

Taralea #1

REPORT#:16

Report Date: 2/02/97

Issue Date : 3/02/97

Page Number:

Basic Data

DRILLING CO.: O.D.E. RIG: GL ABOVE MSL (m): 30 49.0 ELEV RT AGL (m): 4.6 Well Data

2,471.0 DEPTH m : PROGRESS m: 180.0 DAYS FROM SPUD: 15.15 180.0 DAYS +/- CURVE :

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 TOT PERS ON SITE: 32 AFE COST \$: DAILY COST \$: 1,076,300 39,448 CUM COST \$: 909,371

Gas and General Data

MAX GAS % : B/G GAS % :

WEATHER: STATUS @ 0600 : Cool and overcast.

Drill 8 1/2" hole with motor at 2518m.

Bit Data for Bit #8RR IADC #4 4 7 BIT SIZE ("): 8.50 AVE WOB (k-lbs): 35 MANUFACTURER : HU 225 AVE RPM: TYPE: ATMGT18OD FLOW (gpm): 370 SERIAL #: L01CF PUMP PRESS. (psi): 1.820 DEPTH IN (m RT) : 2126 NOZZ n/32" 14 14 14 DEPTH OUT (m RT) : 2471 HHSI (hp/sq in): 2.16 Calculated over the bit run Calculated over last 24 hrs CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 180 345 40.0 ON BOTTOM HRS : 21.0 31.6 ROTATING HRS: 16.0 ROP m/h 8.6 ROP m/h 8.6

> ī 0 D L В

7	Mud Data DAIL	Y COS	T: 2,946	CUM C	OST:	76,190						
ı	Chk #:28 / TYPE: KCI-PHPA											
ı	Property	Chk28	Chk 29	Property	Chk 28	Chk 29						
1	SAMPLE FROM:	FL	FL	TEMP (Deg C) :	54	58						
ı	TIME :	1030	2230	SOLIDS (%vol)	5.5	5.6						
ı	WEIGHT(ppg):	9.2	9.2	H2O (%vol) :	94.5	94.4						
ı	DEPTH m :	2371	2463	OIL (%voi)):	0	. 0						
ı	VIS. (sec/qt):	54	53	SAND(%voi):	Tr	Tr						
١	PV (cp):	16	14	MBT (ppb eq.):	10	10						
١	YP (lb/100sf):	18	18	PH:	8.5	8.50						
ł	GEL10s(lb/100sf):	3	3	CI- (ppm) :	16900	16400						
I	GEL10m(lb/100sf) :	8		K+ (ppm) :	12300	11000						
ı	Fann 3RPM :	3		HRD/CA (ppm)	600	580						
ı	Fann 6RPM:	3		API F. loss :	6.3	6.2						
П												

BHA Data: BHA #9

#

8RR

BHA LENGTH (m): 292.6 HRS ON JARS : 185

WT BLW JAR(k-lbs): 43 BHA WT(k-lbs): 61 Bit #8RR, Motor, X/O, 8 1/2" R/Rmr, X/O, Monel DC, X/O, 8 1/2" R/Rmr, 16 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C,

STRING WT(k-lbs) : PICK UP WT(k-lbs) : SLK 0FF WT(k-lbs) : 160 165 155 TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps): 90 80 60

BHA DESCRIPTION:

10 x HWDP

R

40.0

MTGE HRS

345

Bulk Stocks on site

Bit

Wear

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (ltr): 21000 **BARITE** (sx): 1153

CEMENT (sx): 185 GEL (sx):

F	Survey (last 4 po	oints)		Tool T	ype :Totco)	C	urrent Pu	mp D	ata a	nd S	low C	ircula	ting	Rate	Data
١	MD	TVD	INCL	AZ.	· V	N/S	EW		P	ump D	ata - la	st 24	hrs			SCR D	ata
l	(m RT)	(m RT)	deg	deg	SECT (m)	(m)	(m)	#	TYPE	LNR (°)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPT m R
	1,929 2,080 2,180		5.00 5.50 6.50					1 2	GD-PZ-8 GD-PZ-8	6.00 6.00				1820	45 55	350 400	21 21
	2,180 2,346		6.00						Drille	Pen	nite /	lns:	pectic	ns			

	Pump Data - last 24 hrs SCR Data													
#	TYPE	SPM	SPP psi	DEPTH m RT										
1 2	GD-PZ-8 GD-PZ-8	6.00 6.00		97.0 97.0	370	1820	45 55	350 400	2187 2187					

Personnel on	Site = 32		
NAME	JOB TITLE	COMPANY NAME	#
Alex Bradley Dave Homer	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS Aust DST	3 24 3 1

DRILL TYPE	TIMING	INSPECTIONS	TIMING
TRIP DRILL FIRE PIT DRILL INCIDENT	2/2/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 28/1/97 26/1/97 10 23/1/97

Casing	9					
#	TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD

FORMATION	TOP m	BIT#
		1RR
		1RR 1RR
		1RR
Pember	485.00	
Pebble Point	523.00	
Paratte	543.00	4
Skull Creek/Belfast	625.00	4
Eumeraila	695.00	4
Inter Eumeralia Sand	1,351.00	
Lower Eumeralla	1,435.00	8

DAILY DRILLING REPORT

Taralea #1

REPORT#:16

Report Date: 2/02/97

Issue Date : 3/02/97

Page Number:

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON2/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	01:30	1.5	2,311	Drill 8 1/2" hole with motor 2291m to 2311m.
11	PD	RS	01:30	02:00	.5	2,311	Rig service.
11	PD	DM	02:00	06:00	4.0	2.349	Drill 8 1/2" hole with motor 2311m to 2349m.
11	PD	DM	06:00	08:00	2.0	2,368	Drill 8 1/2" hole with motor 2349m to 2368m. 10-15k drag on
1 1					1 1		connections.
11	PD	S	08:00	08:30	.5	2,368	Circulate and survey 6deg at 2346m.
111	PD	WT	08:30	10:00	.5 1.5	2.368	Make 10 stand wiper trip 10-15K drag.
	PD	RW	10:00	10:3Ò	.5	2,368	Wash and ream 2355m to 2368m.
11	PD	DM	10:30	24:00	13.5		Drill 8 1/2" hole with motor 2368m to 2471m.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON3/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	06:00	6.0	2,518	Drill 8 1/2" hole with motor 2471m to 2518m.



DAILY DRILLING REPORT

Taralea #1

REPORT#:15

ELEV RT AGL (m):

Report Date: 1/02/97

Issue Date: 2/02/97

Page Number:

Basic Data

DRILLING CO. : O.D.E. RIG: 30 GL ABOVE MSL (m): 49.0 Well Data

2,291.0 DEPTH m : PROGRESS m : 165.0 DAYS FROM SPUD: 14.15 DAYS +/- CURVE :

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 8.50 SHOE DEPTH m: 492.80 LEAK-OFF SG . 1.55 TOT PERS ON SITE : AFE COST S: DAILY COST S:

CUM COST \$:

32 1,076,300 46.411 869,923

680

6.6

Gas and General Data

MAX GAS %: B/G GAS %:

WEATHER:

4.6

Cool and windy.

Fann 3RPM:

Fann 6RPM:

STATUS @ 0600:

35

200

370

IADC # 4 4 7

Drill 8 1/2" hole with motor at 2349m.

Bit Data for Bit # 8RR

BIT SIZE ("): 8.50 HU MANUFACTURER: TYPE: ATMGT180D SERIAL #: L01CF DEPTH IN (m RT) : 2126

AVE WOB (k-lbs) : AVE RPM: FLOW (gpm): PUMP PRESS. (psi): 1.700 NOZZ n/32" 14 14 14 HHSI (hp/sq in): 2.16

Calculated over last 24 hrs METRAGE (m): ON BOTTOM HRS: ROTATING HRS: ROP m/h

DEPTH OUT (m RT):

Calculated over the bit run 165 CUM, METRAGE (m): 165 CUM. ON BOT. HRS: 19.0 190 15.6 CUM.ROT. HRS: 156 ROP m/h 8.7 8.7

MTGE HRS 0 DL В G 0 R 165 19.0

Mud Data DAILY COST: 4,647 **CUM COST:** Chk #: 26 / TYPE: KCI-PHPA Chk #: 27 / TYPE: KCI-PHPA

Property Property Chk26 Chk 27 Chk 26 Chk 27 SAMPLE FROM: TEMP (Deg C) 54 FL FL 55 2300 SOLIDS (%vol) TIME: 5.2 0915 5.5 9.2 H2O (%voi): WEIGHT(ppg): 9.2 94.8 94.5 DEPTH m: 2178 2126 0 OIL (%vol)): n VIS. (sec/qt): 45 SAND(%vol): Tr 42 Tr 14 MBT (ppb eq.) : PV (cp) : 10 14 10 16 PH: YP (lb/100sf): 15 8.7 9.00 GEL10s(lb/100sf): 6 4 CI- (ppm): 15400 17200 GEL10m(lb/100sf) 8 13 K+ (ppm): 10500 12000

HRD/CA (ppm)

API F. loss :

Rit # Wear 8RR

2291

BHA Data: BHA#9

BHA LENGTH (m): 292.6 HRS ON JARS:

WT BLW JAR(k-lbs): BHA WT(k-lbs):

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK OFF WT(k-lbs):

160 165 155

6

8

TRQE MAX (amps): TRQE ON (amps): 90 80 TRQE OFF (amps): 60

700

7.6

BHA DESCRIPTION: Bit #8RR, Motor, X/O, 8 1/2" R/Rmr, X/O, Monel DC, X/O, 8 1/2" R/Rmr, 16 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10

Bulk Stocks DRILL WATER (MT): 0 POT WATER (MT): 0 on site

FUEL (ltr): 24800 BARITE (sx): 1153

61

CEMENT (sx): 185 GEL (sx): 359

Survey (last 4 points) **Tool Type:S/Shot**

164

ı	· · ·	•					
	MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	'V' SECT (m)	N/S (m)	E/W (m)
	1,759 1,929 2,080		2.75 5.00 5.50				
	2,180		6.50				

Current Pump Data and Slow Circulating Rate Data

	Pu	ımp Da	SCR Data						
#	TYPE	LNR (°)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT
1	GD-PZ-8	6.00	65	97.0	370	1700	45	350	2187
2	GD-PZ-8	6.00	65	97.0			55	400	2187

Personnel on Site = 32

NAME	JOB TITLE	COMPANY NAME	#
Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE	3 24
		Halliburton IDFS Aust DST	3 1 1

Drills, Permits & Inspections

DRILL TYPE	TIMING	INSPECTIONS	TIMING
TRIP DRILL FIRE PIT DRILL		LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION	23/1/97 28/1/97 26/1/97
INCIDENT	30/1/97	DAYS SINCE LAST BOP TES LAST BOP TEST	9 23/1/97

Casing

TYPE LENGTH CSG ID WEIGHT GRADE THREAD (lb/ft) (m) (")

Formation Tops **FORMATION** TOP m BIT# 1RR 1RR 1RR 1RR Pember 485.00 2RR Pebble Point 523.00 **Paratte** 543.00 4 625.00 4 Skull Creek/Belfast 695.00 4 Fumeralla Inter Fumeralla Sand 1,351.00 4 Lower Eumeralia 1,435.00 8

DAILY DRILLING REPORT

Taralea #1

REPORT#:15

Report Date: 1/02/97

Issue Date : 2/02/97

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 1/02/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	TI	00:00	02:30	2.5	2,126	RIH.
i 1	TD	RW	02:30	03:30	1.0	2,126	Wash and ream 2062m to 2126m.
11	PD	DM	03:30	06:00	2.5	2,146	Drill 8 1/2" hole with motor 2126m to 2146m.
11	PD	DM	06:00	13:00	7.0	2,206	Drill 8 1/2" hole with motor 2146m to 2206m.
11	PD	S	13:00	14:30	1.5		Circulate. Run single shot survey on wireline - misrun. Rerun single shot survey - 6.5deg N26E.
11	PD	DM	14:30	24:00	9.5		Drill 8 1/2" hole with motor 2206m to 2291m.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON 2/02/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	01:30	1.5	2,311	Drill 8 1/2" hole with motor 2291m to 2311m.
11	PD	RS	01:30	02:00	.5	2,311	Rig service.
11	PD	DM	02:00	06:00	4.0	2,349	Drill 8 1/2" hole with motor 2311m to 2349m.



DAILY DRILLING REPORT

Taralea #1

REPORT#:14

GL ABOVE MSL (m):

ELEV RT AGL (m):

Report Date: 31/01/97

Issue Date : 1/02/97

Page Number:

Basic Data
DRILLING CO.:

RIG:

O.D.E. 30 49.0 4.6 Well Data

DEPTH m: 2,126.0 PROGRESS m: 25.0 DAYS FROM SPUD: 13.15

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 TOT PERS ON SITE : AFE COST \$: DAILY COST \$:

CUM COST 5:

31 1,076,300 44,444 823,512

Gas and General Data

MAX GAS %: B/G GAS %: .1

WEATHER: STATUS @ 0600:

DAYS +/- CURVE :

Cool and overcast with misty rain.

Drill 8 1/2" hole with motor at 2146m.

Mud Data DAILY COST: 1,795 CUM COST: 61,004

Bit Data for Bit # 8 IADC#4 4 7 BIT SIZE ("): 8.50 AVE WOB (k-lbs): 35 MANUFACTURER: HU AVE RPM: 100 ATMGT180D TYPE: FLOW (gpm): 417 SERIAL #: L01CF PUMP PRESS. (psi): NOZZ n/32" 1.580 DEPTH IN (m RT): 2101 13 13 13 DEPTH OUT (m RT): 2126 HHSI (hp/sq in): 2.16 Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): METRAGE (m): 25 25 ON BOTTOM HRS: CUM. ON BOT. HRS: 5.5 5.5 5.2 4.5 CUM.ROT. HRS: **ROTATING HRS:** ROP m/h ROP m/h 4.5 Bit MTGE HRS 1 ODL В G 0 R Wear 8 5.5 1 BT H1 E CT **BHA**

Chk#:24/ TYPE: K	Chk #: 24 / TYPE: KCFPHPA Chk #: 25 / TYPE: KCFPHPA									
Property	Chk24	Chk 25	Property	Chk 24	Chk 25					
SAMPLE FROM:	FL	FL	TEMP (Deg C):	53	55					
TIME :	1400	1800	SOLIDS (%vol)	5.2	5.2					
WEIGHT(ppg):	9.2	9.2	H2O (%vol):	94.8	94.8					
DEPTH m :	2105	2126	OIL (%vol)):	0	. 0					
VIS. (sec/qt):	44	46	SAND(%vol):	Tr	Tr					
PV (cp):	11	13	MBT (ppb eq.):	11	10					
YP (fb/100sf):	16		PH:	8.5	8.80					
GEL10s(fb/100sf):	6	6	CI- (ppm):	15200	15600					
GEL10m(fb/100sf):	11	13	K+ (ppm) :	9000	9900					
Fann 3RPM:	6	6	HRD/CA (ppm)	700	780					
Fann 6RPM :	7		API F. loss :	7.1	6.8					

BHA Data: BHA # 8

BHA LENGTH (m): 2 HRS ON JARS:

287.5 145 WT BLW JAR(k-lbs): 42 BHA WT(k-lbs): 60 STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs): 155 TRQ 157 TRQ 150 TRQ

TRQE MAX (amps): 180
TRQE ON (amps): 160
TRQE OFF (amps): 80

BHA DESCRIPTION:

Bulk Stocks

on site

Bit #8, NB R/Rmr, X/O, Monel DC, X/O, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP

DRILL WATER (MT): 0 FI

FUEL (itr): 28850 BARITE (sx): 1183 CEMENT (sx): 185 GEL (sx): 359

Drille Dermite & Increations

ŀ	Survey (I	ast 4 pc	ints)		Tool Type :Totco					
	MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	N/S (m)	E/W (m)			
	1,759 1,929 2,080 2,110		2.75 5.00 5.50 8.00							

POT WATER (MT): 0

C	Current Pump Data and Slow Circulating Rate Data										
Г		ımp Da	SCR Data								
*	TYPE	LNR (°)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT		
1 2	GD-PZ-8 GD-PZ-8	6.00 6.00			417	1580	45 55	320 400	2036 2036		

Personnel on	Site = 31		
NAME	JOB TITLE	COMPANY NAME	#
Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS Aust DST	3 23 3 1

Uniis, Permits & inspections								
DRILL TYPE	TIMING	INSPECTIONS	TIMING					
TRIP DRILL FIRE PIT DRILL INCIDENT	28/1 <i>/</i> 97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 28/1/97 26/1/97 8 23/1/97					

y					
TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD
		TYPE LENGTH	TYPE LENGTH CSG ID	TYPE LENGTH CSG ID WEIGHT	TYPE LENGTH CSG ID WEIGHT GRADE

Formation Tops							
FORMATION	TOP m	BIT#					
		1RR 1RR 1RR					
Pember Pebble Point	485.00 523.00						
Paratte Skuil Creek/Belfast	543.00 625.00						
Eumeralia Inter Eumeralia Sand	695.00 1,351.00	4					
Lower Eumeralia	1,435.0						

DAILY DRILLING REPORT

Taralea #1

REPORT#:14

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 31/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	TD	ТО	00:00	02:00	2.0	2,101	POOH. Check drill string for bent pipe or swelled boxes.
11	TD	TO	02:00	04:30	2.5	2,101	POOH with BHA. Break and service all connections.
11	TD	HT	04:30	05:00	.5	2,101	Break out and lay down motor. Unable to rotate motor at surface.
11	TD	нт	05:00	05:30	.5	2,101	Pick up kelly and check rollers.
11	TD	HT	05:30	06:00	.5		Make up new BHA. Pick up Monel DC and HTC ATMGT18OD
					i i		bit.
11	TD	TI	06:00	07:30	1.5	2,101	RIH with BHA.
1	TD	HT	07:30	09:00	1.5	2,101	Break and service upper kelly connections.
11	TD	TI	09:00	12:00	3.0	2,101	RIH to 2098m. Wash and ream 2098m to 2101m.
11	PD	DM	12:00	17:30	5.5		Drill 8 1/2" hole 2101m to 2126m.
11	PD	S	17:30	18:00	.5		Drop survey. Pump slug.
11	PD	TO	18:00	21:30	3.5		POOH.
11	PD	HT	21:30	22:30	1.0	2,126	Make up new BHA. Test motor.
11	PD	TI	22:30	24:00	1.5	2,126	

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON 1/02/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	TI	00:00	02:30	2.5	2,126	RIH.
11	TD	RW	02:30	03:30	1.0	2,126	Wash and ream 2062m to 2126m.
11	PD	DM	03:30	06:00	2.5	2,146	Drill 8 1/2" hole with motor 2126m to 2146m.



DAILY DRILLING REPORT

Taralea #1

REPORT#:13

ELEV RT AGL (m):

Report Date: 30/01/97

Issue Date : 31/01/97

Page Number:

Basic Data

RIG

DRILLING CO.: O.D.E. 30 49.0 GL ABOVE MSL (m):

Well Data

DEPTH m : 2,101.0 PROGRESS m 150.0 DAYS FROM SPUD :12.15

DAYS +/- CURVE :

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 TOT PERS ON SITE : AFE COST \$: DAILY COST \$:

CUM COST \$:

1,076,300 43,452 779.068

1

32

Gas and General Data

MAX GAS %: B/G GAS %:

WEATHER:

4.6

Cool and misty.

STATUS @ 0600 : Make up new BHA and RIH.

Bit Data for Bit #7 IADC #4 4 7 BIT SIZE ("): 8.50 AVE WOB (k-lbs): 35 MANUFACTURER: SM AVE RPM: 200 TYPE: MF150D FLOW (gpm): 370 SERIAL #: LG1850 PUMP PRESS. (psi): NOZZ n/32" 1 650 DEPTH IN (m RT): 1951 14 14 14 DEPTH OUT (m RT): 2101 HHSI (hp/sq in): 2.16 Calculated over last 24 hrs. Calculated over the bit run 150

CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 150 ON BOTTOM HRS : ROTATING HRS : 18.5 ROP m/h ROP m/h 8.1

MTGE # HRS I ODLBG R Wear 150 18.5 2 E A N JD DSF 2 11

Mud Data DAILY COST: 3,198 CUM COST: Chk #:22 / TYPE: KCI-PHPA Chk #:23 / TYPE : KCI-PHPA

L					
Property	Chk22	Chk 23	Property	Chk 22	Chk 23
SAMPLE FROM:	F/L	Pit	TEMP (Deg C):	54	0
TIME :	0930		SOLIDS (%vol)	4.7	4.8
WEIGHT(ppg):	9.1	9.1	H2O (%vol) :	95.3	95.2
DEPTH m :	2010	2101	OIL (%vol)):	0	. 0
VIS. (sec/qt):	47	44	SAND(%vol):	Tr	Tr
PV (cp):	12		MBT (ppb eq.):	8	6
YP (lb/100sf):	16		PH:	8.8	8.50
GEL10s(fb/100sf):	7	5	Cl- (ppm):	17300	15300
GEL10m(lb/100sf):	15		K+ (ppm) :	12700	11000
Fann 3RPM :	7		HRD/CA (ppm)	760	720
Fann 6RPM :	10	7	API F. loss :	6.7	6.5
<u></u>					

BHA Data: BHA #7

BHA LENGTH (m): HRS ON JARS :

281.8 139

WT BLW JAR(k-lbs): BHA WT(k-lbs):

39 50

STRING WT(k-lbs): PICK UP WT(k-lbs): 150 152 SLK OFF WT(k-lbs): 145 Bit #7, 6 1/2" Motor, X/O, 8 1/2" R/Rmr, 1 x 6 1/2" D/C, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps): 60

BHA DESCRIPTION:

Bulk Stocks DRILL WATER (MT): 0 on site POT WATER (MT): 0

FUEL (ltr): 32300 **BARITE** (sx): 1243

18.5

8.1

CEMENT (sx): 185 GEL (sx):

Drills, Permits & Inspections

Survey (last 4 po	oints)		Tool Type :Totco					
MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	N/S (m)	E/W (m)			
1,460 1,759 1,929 2,080		2.00 2.75 5.00 5.50							

Г	Pi	imp D			SCR Da				
#	TYPE	LNR (")	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT
1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	70 70		370	1650	45 55	320 400	2036 2036

Current Pump Data and Slow Circulating Rate Data

Personnel on Site = 32								
NAME	JOB TITLE	COMPANY NAME	#					
Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS Aust DST	3 24 3 1					

DRILL TYPE	TIMING	INSPECTIONS	TIMING
TRIP DRILL FIRE PIT DRILL INCIDENT	25/1/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 28/1/97 26/1/97 7 23/1/97

ıy					
TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD
		TYPE LENGTH	TYPE LENGTH CSG ID	TYPE LENGTH CSG ID WEIGHT	TYPE LENGTH CSG ID WEIGHT GRADE

Formation Tops		
FORMATION	TOP m	BIT#
Pember Pebble Point Paratte Skull Creek/Belfast Eumeralla Inter Eumeralla Sand Lower Eumeralla	485.00 523.00 543.00 625.00 695.00 1,351.00	

DAILY DRILLING REPORT

Taralea #1

REPORT#:13

Report Date: 30/01/97

Issue Date : 31/01/97

Page Number:

3

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON30/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	RW	00:00	01:00	1.0	1,951	Wash and ream 1919m to 1951m.
11	PD	DM	01:00	06:00	5.0	1,979	Drill 8 1/2" hole with motor 1951m to 1979m
11	PD	DM	06:00	19:30	13.5		Drill 8 1/2" hole with motor 1979m to 2101m
11	TD	RR	19:30	20:30	1.0	2,101	Brakes failed on connection. Kelly dropped into bushings and
							hook unlatched. Latch kelly and pick up string weight with zero
1				i	l l		drag and full weight.
11	TD	SC		21:30	1.0		Slip and cut drilling line.
11	TD	S	21:30	22:00	.5	2,101	Drop survey. Pump slug.
11	TD	TO	22:00	24:00	2.0	2,101	POOH. Check drill string for bent pipe or swelled boxes.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON31/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11	TD TD	TO	02:00	02:00 04:30	2.0 2.5	2,101	POOH. Check drill string for bent pipe or swelled boxes. POOH with BHA. Break and service all connections.
17	TD			05:00	.5	·	Break out and lay down motor. Unable to rotate motor at surface.
11				05:30 06:00	.5 .5	2,101	Pick up kelly and check rollers. Make up new BHA. Pick up Monel DC and HTC ATMGT18OD bit.

DAILY DRILLING REPORT

Taralea #1

REPORT#:12

Report Date: 29/01/97

Issue Date : 30/01/97

Page Number:

Basic Data

DRILLING CO.: O.D.E. RIG 49.0 GL ABOVE MSL (m) : ELEV RT AGL (m): 4.6 Well Data

1,951.0 DEPTH m: PROGRESS m 93.0 DAYS FROM SPUD :11.15 DAYS +/- CURVE :

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG : 1.55 **TOT PERS ON SITE:** 30 AFE COST \$: DAILY COST \$: 1,076,300 49,303 CUM COST S: 735,616

Gas and General Data

MAX GAS %: B/G GAS % :

WEATHER: STATUS @ 0600 : Cool and overcast.

Fann 6RPM:

Drill 8 1/2" hole with motor at 1979m.

Bit Data for Bit #7 IADC #4 4 7

BIT SIZE ("): MANUFACTURER: TYPE:

DEPTH IN (m RT):

DEPTH OUT (m RT):

SERIAL # :

8.50 SM MF150D LG1850

1951

AVE WOB (k-lbs): AVE RPM: FLOW (gpm):

Ò

PUMP PRESS. (psi): NOZZ n/32" 14 14 14

HHSI (hp/sq in):

Calculated over the bit run Calculated over last 24 hrs CUM. METRAGE (m): METRAGE (m): ON BOTTOM HRS: CUM, ON BOT, HRS: **ROTATING HRS: CUM.ROT. HRS:** ROP m/h ROP m/h

120

Bit Wear	#	MTGE	HRS	T	0	D	L	В	G	0	R
Wear	6 7	483	53.5	2	4	С	СЗ	F	1	ВТ	HR

Mud Data DAILY COST: 1,783 CUM COST: 51.018 Chk #:20 / TYPE: KCI-PHPA Chk #:21 / TYPE : KCI-PHPA Property Property Chk201 Chk 21 Chk 201 Chk 21 TEMP (Deg C) SAMPLE FROM: 54 57 TIME : 1000 2230 SOLIDS (%vol) 4.7 4.8 9.1 H2O (%vol): 95.2 95.2 WEIGHT(ppg): 9.1 1951 OIL (%vol)): DEPTH m: 1951 0 0 57 SAND(%vol): Τr 52 Tr VIS. (sec/qt): PV (cp): 13 13 MBT (ppb eq.) 8 7 YP (lb/100sf): 22 PH: 8.7 8.80 24 11 Cl- (ppm): GEL10s(lb/100sf): 10 16400 15700 GEL10m(lb/100sf): 20 19 K+ (ppm): 12200 11900 760 Fann 3RPM: 10 11 HRD/CA (ppm) 800

12

API F. loss :

BHA Data: BHA #7

BHA LENGTH (m): 281.8 HRS ON JARS :

WT BLW JAR(k-lbs): 39 BHA WT(k-lbs) :-50 STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs): 140

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps): 90 90 60 Bit #7, 6 1/2" Motor, X/O, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP

6.6

6.8

BHA DESCRIPTION:

Bulk Stocks DRILL WATER (MT): 0 on site POT WATER (MT): 0

FUEL (Itr): 11150 **BARITE** (sx): 1243

CEMENT (sx): 185 GEL (sx): 359

Buille Bounda & Inconcidence

12

Survey (last 4 points) Tool Type :Totco EW MD TVD INCL AZ. N/S SECT (m RT) (m RT) deg deg (m) (m) (m) 1 300 1 25 2.00 2.75 1,460 1,759 1.929 5.00

C	Current Pump Data and Slow Circulating Rate Data												
Г	Pump Data - last 24 hrs SCR Data												
#	TYPE	LNR (°)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT				
12	GD-PZ-8 GD-PZ-8	6.00 6.00	70 70	97.0 97.0	400	1820	45 55	380 480	1827 1827				

Personnel on Site = 30 COMPANY NAME NAME JOB TITLE # Dave Horner ODE 22 Geologist Halliburton 3 1 1 IDFS Aust DST Cultus 3 Alex Bradley Drilling Supervisor

DRILL TYPE	TIMING	INSPECTIONS	TIMING
FIRE PIT DRILL	25/1/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 28/1/97 26/1/97 6 23/1/97

Casia	ឫ					
#	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lb/ft)	GRADE	THREAD

FORMATION	TOP m	BIT#
		1RR
		1RR
		1RR
		1RR
Pember	485.00	2RR
Pebble Point	523.00	4
Paratte	543.00	4
Skuil Creek/Belfast	625.00	4
Eumeraila	695.00	4
Inter Eumeralia Sand	1,351.00	4
Lower Eumeralia	1,435.00	7

DAILY DRILLING REPORT

Taralea #1

REPORT#:12

Report Date: 29/01/97

Issue Date : 30/01/97

Page Number:

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON29/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	06:00	6.0		Drill 8 1/2" hole with motor 1858m to 1904m
11			06:00	06:30	.5	1.904	Circulate bottoms up.
111	PD	WT	06:30	07:30	1.0	1,904	Make 10 stand wiper trip - no drag.
11	PD	DM	07:30	14:00	6.5	1.951	Drill 8 1/2" hole with motor 1904m to 1951m
111	PD	CIR	14:00	15:00	1.0	1.951	Circulate bottoms up.
	PD	TO	15:00	19:30	4.5	1.951	POOH. Tight from 1421m to 1369m (15-20K).
11	PD	HT	19:30	20:30	1.0	1,951	Gauge R/Řeamers 1/16" under gauge. Change bit. Test
						·	motor.
11	PD	TI	20:30	24:00	3.5	1,951	RIH to 1919m - 20k drag at 1919m.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON30/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11 11			00:00 01:00			1,951 1,979	Wash and ream 1919m to 1951m. Drill 8 1/2" hole with motor 1951m to 1979m



DAILY DRILLING REPORT

Taralea #1

REPORT#:11

Report Date: 28/01/97

Issue Date : 29/01/97

Page Number:

Basic Data DRILLING CO.: O.D.E. RIG: GL ABOVE MSL (m): 30 49.0 ELEV RT AGL (m): 4.6

Well Data 1,858.0 DEPTH m: PROGRESS m: 181 0 DAYS FROM SPUD :10.15 DAYS +/- CURVE:

HOLE SIZE(") 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55

TOT PERS ON SITE: AFE COST S: DAILY COST S 1,076,300 39,764 CUM COST \$: 686,313

Gas and General Data

MAX GAS % : B/G GAS % :

WEATHER:

Cool and misty rain.

STATUS @ 0600: Circulate bottoms up for wiper trip at 1904m.

Bit Data for Bit #6 IADC#4 2 7 BIT SIZE ("): 8.50 AVE WOB (k-lbs): 28 MANUFACTURER : SM AVE RPM: 210 TYPE: MF05C FLOW (gpm): 400 SERIAL #: LF3389 PUMP PRESS. (psi): 1,820 DEPTH IN (m RT): 1468 16 13 13 NOZZ n/32" DEPTH OUT (m RT): 1858 HHSI (hp/sq in): 2.70 Calculated over last 24 hrs. Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: 390 METRAGE (m): 181 41.0 ON BOTTOM HRS: 21.0 **ROTATING HRS:** ROP m/h 9.5 ROP m/h MTGE HRS 0 D В G 0 R

Ö.

Mud Data DAIL	Y COS	T: 3,785	CUM C	OST:	47,452
Chk #:18 / TYPE: K	CI-PHP/	Α (Chk #:19 / TYPE	: KCI-PH	PA
Property	Chk18	Chk 19	Property	Chk 18	Chk 19
SAMPLE FROM:	FL	FL	TEMP (Deg C)	49	52
TIME :	1030	2230	SOLIDS (%vol)	5.0	4.9
WEIGHT(ppg):	9.1		H2O (%vol) :	95.0	95.1
DEPTH m :	1742	1850	OIL (%vol)) :	0	. 0
VIS. (sec/qt):	52	55	SAND(%vol):	Tr	Tr
PV (cp):	15	14	MBT (ppb eq.) :	9	7
YP (lb/100sf):	23	21	PH:	8.7	8.80
GEL10s(lb/100sf):	7	7	CI- (ppm):	12100	14300
GEL10m(lb/100sf) :	20	14	K+ (ppm) :	9900	11800
Fann 3RPM:	7		HRD/CA (ppm)	720	760
Fann 6RPM :	6	9	API F. loss :	5.8	6.4

BHA Data: BHA #6

6

BHA LENGTH (m): 281.8 HRS ON JARS : 105

390

41.0

WT BLW JAR(k-lbs): BHA WT(k-lbs):

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK OFF WT(k-lbs):

135

GEL (sx):

Drills, Permits & Inspections

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

90 80

BHA DESCRIPTION:

Bulk Stocks

on site

1.759

Bit #6, 6 1/2" Motor, X/O, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP DRILL WATER (MT): 0 FUEL (Itr): 16000 CEMENT (sx): 185

1243

39

50

BARITE (sx):

Survey (last 4 points) Tool Type :Totco MD TVD E/W INCL AZ N/S (m RT) SECT deg (mRT) deg (m) (m) (m) 998 0.50 1.25 2.00 2.75 1,300 1,460

POT WATER (MT):

Cı	Current Pump Data and Slow Circulating Rate Data											
	Pt	SCR Data										
#	TYPE	LNR (*)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT			
1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	70 70	97.0 97.0	400	1820	45 55	380 480	1827 1827			

359

Personnel on Site = 30								
NAME	JOB TITLE	COMPANY NAME	#					
Alex Bradley Dave Homer	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS Aust DST	3 22 3 1					

DRILL TYPE	TIMING	INSPECTIONS	TIMING
I PIT DRILL	25/1/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 28/1/97 26/1/97 5 23/1/97

Ü	ısing					
#	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lb/ft)	GRADE	THREAD

FORMATION	TOP m	BIT#
Port Campbell Limestone	40.00	1RR
Gellibrand Marl	133.00	1RR
Clifton	376.00	1RR
Dilwyn	401.00	1RR
Pember	485.00	2RR
Pebble Point	523.00	4
Paratte	543.00	4
Skull Creek/Belfast	625.00	4
Eumeralia	695.00	4
Inter Eumeralia Sand	1,351.00	4
Lower Eumeralla		6

DAILY DRILLING REPORT

Taralea #1

REPORT#:11

Report Date: 28/01/97

Issue Date : 29/01/97

Page Number:

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON28/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	03:00	3.0		Drill 8 1/2" hole with motor 1677m to 1704m
11	PD	CIR	03:00	03:30	.5	1,704	Circulate bottoms up.
11	PD	WT	03:30	04:00	.5 .5	1,704	POOH for 10 stand wiper trip. Drag 5-10K with tight spots at
1							1551-1545(20K), 1523-1520(20K), 1494-1487(20K), 1438-
1							1429(25K), 1410-1412(30K).
11	PD		04:00	05:00	1.0		RIH with 5K drag.
1	PD	RS	05:00	05:30	.5	1.704	Rig service.
11	PD		05:30	06:00	.5 .5 4.0		Drill 8 1/2" hole with motor 1704m to 1709m
11	PD	DM	06:00	10:00	4.0	1.740	Drill 8 1/2" hole with motor 1709m to 1740m
11	PD		10:00	10:30	.5		Attempt to increase circulation rate to 450gpm. Blew pop-off
						-	valves on pumps. Drill with 360gpm 1740m to 1742m.
11	PD	DM	10:30	15:00	4.5		Drill 8 1/2" hole with motor 1742m to 1780m
11	PD	S	15:00	15:30	.5 8.5	1,780	Circulate and survey. 2.75deg at 1759m.
11	PD	DM	15:30	24:00	8.5	1,858	Drill 8 1/2" hole with motor 1780m to 1858m

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON29/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	DM	00:00	06:00	6.0	1,904	Drill 8 1/2" hole with motor 1858m to 1904m

DAILY DRILLING REPORT

Taralea #1

REPORT#:10

RIG : GL ABOVE MSL (m) :

ELEV RT AGL (m):

Report Date: 27/01/97

Issue Date : 28/01/97

Page Number:

Basic Data DRILLING CO. :

O.D.E. 30 49.0 Well Data

1,677.0 DEPTH m : 209.0 PROGRESS m DAYS FROM SPUD: 9.15 DAYS +/- CURVE:

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG: 1.55 TOT PERS ON SITE: AFE COST \$: DAILY COST \$:

CUM COST \$:

49.313 646,549

29

Gas and General Data

B/G GAS %:

.1 .0

4.6

WEATHER . STATUS @ 0600 : Cool and overcast

Drill 8 1/2" hole with motor at 1709m

Bit Data for Bit #6 IADC#4 1 7 BIT SIZE ("): 8.50 AVE WOB (k-lbs): 25 MANUFACTURER : SM AVE RPM: 210 TYPE: MF05C FLOW (gpm): 400 SERIAL #: LF3389 PUMP PRESS. (psi): NOZZ n/32" 1.770 DEPTH IN (m RT) : 1468 16 13 13 DEPTH OUT (m RT): 1677 HHSI (hp/sq in): 2.70 Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 209 ON BOTTOM HRS : ROTATING HRS : 20.0 20.0 ROP m/h 10.4 ROP m/h 10.4 Bit MTGE HRS

ō D L В

MUD Data DAILY COST: 3,763 CUM COST: 39,882								
Chk #:16 / TYPE: KCI-PHPA								
Property	Chk16	Chk 17	Ргорепту	Chk 16	Chk 17			
SAMPLE FROM:	FL	FL	TEMP (Deg C)	48	49			
TIME :	1030	2230	SOLIDS (%vol)	5.7	4.6			
WEIGHT(ppg):	9.2	9.1	H2O (%vol) :	94.3	95.4			
DEPTH m :	1524	1663	OIL (%vol)) :	0	. 0			
VIS. (sec/qt):	65	57	SAND(%vol):	.13	Tr			
PV (cp):	15	14	MBT (ppb eq.):	12	8			
YP (lb/100sf):	33		PH:	9.0	8.80			
GEL10s(lb/100sf):	16	5	CI- (ppm) :	13600	12600			
GEL10m(lb/100sf) :	23	13	K+ (ppm) :	9800	11300			
Fann 3RPM :	19		HRD/CA (ppm)	620	700			
Fann 6RPM :	28		API F. loss :	5.6	5.3			

BHA Data: BHA #6

BHA LENGTH (m): HRS ON JARS:

Bulk Stocks

on site

6

Wear

84

20.0

209

WT BLW JAR(k-lbs): 39 BHA WT(k-lbs): 50 Bit #6, 6 1/2" Motor, X/O, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x HWDP

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

120 125 115

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps): 80 80 80

BHA DESCRIPTION:

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (ltr): 20850 **BARITE** (sx): 1243

ु R

> **CEMENT** (sx): 185 GEL (sx): 359

Drills, Permits & Inspections

Suivey (i	ast 4 pt	Jilita)	100113	Aba : Lord	.0	
MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	N/S (m)	E/W (m)
694 998 1,300 1,460		1.00 0.50 1.25 2.00				

1	С	Current Pump Data and Slow Circulating Rate Data										
1	Г	Pump Data - last 24 hrs SCR Data										
	#	TYPE	LNR (")	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT		
	1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	70 70	97.0 97.0	400	1770	45 55	360 460	1561 1561		
и												

Personnel on Site =29							
NAME	JOB TITLE	COMPANY NAME	#				
Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS Aust DST	3 21 3 1				

DRILL TYPE	TIMING	INSPECTIONS	TIMING
FIRE PIT DRILL	25/1/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 26/1/97 26/1/97 4 23/1/97

Ű,	สรเกษ					
#	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lb/ft)	GRADE	THREAD

Formation Tops							
FORMATION	TOP m	BIT#					
Port Campbell Limestone Gellibrand Marl Clifton Dilwyn Pember Pebble Point Paratte Skull Creek/Belfast Eumeralla Inter Eumeralla Sand Lower Eumeralla	40.00 133.00 376.00 401.00 485.00 523.00 543.00 695.00 1,351.00	1RR 1RR 1RR 2RR 4 4 4 4					

Cultus Petroleum NL DAILY DRILLING REPORT

Taralea #1

REPORT#:10

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON27/01/97

F	PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
	1]	PD PD PD	RW DM DM	00:30 03:00 03:30 06:00 07:00 10:00	00:30 03:00 03:30 06:00 07:00 10:00 10:30 24:00	.5 2.5 .5 2.5 1.0 3.0 .5	1,468 1,468 1,490 1,500 1,524 1,524	Continue to RIH with BHA. Pick up 6 x HWDP. RIIH to 1454m. Wash and ream 1454m to 1468m. 3m of fill. Drill 8 1/2" hole with motor 1468m to 1490m Drill 8 1/2" hole with motor 1490m to 1500m Drill 8 1/2" hole with motor 1500m to 1524m Rig service. Drill 8 1/2" hole with motor 1524m to 1677m

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON28/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD PD		00:00	03:00	3.0	1,704	Drill 8 1/2" hole with motor 1677m to 1704m
lii l	PD		03:00 03:30	03:30 04:00	.5 .5	1,704 1,704	Circulate bottoms up. POOH for 10 stand wiper trip. Drag 5-10K with tight spots at
							1551-1545(20K), 1523-1520(20K), 1494-1487(20K), 1438-
111	PD	wt	04:00	05:00	1.0	1.704	1429(25K), 1410-1412(30K). RIH with 5K drag.
11	PD			05:30	.5	1,704	Rig service.
17	PD	DM	05:30	06:00	.5	1,709	Drill 8 1/2" hole with motor 1704m to 1709m

DAILY DRILLING REPORT

Taralea #1

REPORT#:9

Report Date: 26/01/97

Issue Date : 28/01/97

Page Number:

Basic Data DRILLING CO. : O.D.E. RIG: 30 GL ABOVE MSL (m): 49.0 ELEV RT AGL (m): 4.6

Well Data DEPTH m : 1,468.0 PROGRESS m 6.0 DAYS FROM SPUD: 8.15

2.60

1.5

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m : 492.80 LEAK-OFF SG : 1.55 TOT PERS ON SITE : AFE COST \$: DAILY COST \$:

CUM COST S:

38.458 646.549

29

Gas and General Data

MAX GAS %: B/G GAS %

WEATHER: STATUS @ 0600 :

DAYS +/- CURVE :

Wet and windy

Drill 8 1/2" hole with motor at 1490m

Bit Data for Bit #5RR IADC #1 3 5 BIT SIZE ("): AVE WOB (k-lbs): 25 MANUFACTURER: SM AVE RPM: 90 TYPE: SDGH FLOW (gpm): 410 SERIAL # . LC5030 PUMP PRESS. (psi): 1.050 DEPTH IN (m RT) : 1462 16 13 13

.i

NOZZ n/32" DEPTH OUT (m RT): 1468 HHSI (hp/sq in): Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 6 ON BOTTOM HRS : ROTATING HRS : 1.5

ROP m/h 4.0 ROP m/h 4.0 Bit MTGE HRS Т Ō ۵ L В G 0 R Wear LT 8 2 1,353 6 62.0 8 BT 2 PR **ŠRR** 1.5 3 В PR Α

Mud Data DAILY COST: 2,593 Chk #:15/TYPE: KCI-PHPA Chk #:0 / TYPE: Property Ргорепу Chk15 Chk 0 Chk 15 Chk 0 SAMPLE FROM: TEMP (Deg C) TIME: 1730 SOLIDS (%vol) WEIGHT(ppg): 9.3 0.0 H2O (%vol) : 93.5 0.0 DEPTH m: 1468 ٥ OIL (%voi)) : 0 VIS. (sec/qt): 63 0 SAND(%vol): .25 0 MBT (ppb eq.): PV (cp): 16 10 YP (lb/100sf): 24 0 PH: 8.8 0.00 GEL10s(lb/100sf): 9 0 CI- (ppm): 12600 ٥ GEL10m(lb/100sf) 21 0 0 K+ (ppm) : 11000 Fann 3RPM: 0 HRD/CA (ppm) 15 n 620 Fann 6RPM: 0 23 API F. loss 6.0 0.0

BHA Data : BHA #65-

BHA LENGTH (m): 281.8 HRS ON JARS : 64 WT BLW JAR(k-lbs): 39 BHA WT(k-lbs): 50 STRING WT(k-lbs): PICK UP WT(k-lbs): 125 SLK OFF WT(k-lbs): 115

TRQE MAX (amps):
TRQE ON (amps):
TRQE OFF (amps): 80 80 80 Bit #6, 6 1/2" Motor, X/O, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 10 x

BHA DESCRIPTION:

Bulk Stocks DRILL WATER (MT): 0 on site POT WATER (MT):

FUEL (Itr): 24500 BARITE (sx): 1243

CEMENT (sx): 185 GEL (sx):

Survey (last 4 points) Tool Type :Totco MD TVD INCL EW SECT (m RT) (mRT) deg deg (m)(m) (m) 694 1 00 998 0.50 1.300 1.25 2.00 1 460

Formation Tops FORMATION TOP m BIT# Port Campbell Limestone 40.00 1RR Gellibrand Marl Clifton 133.00 1RR 376.00 1RR 401.00 1RR 485.00 2RR Dilwyn Pember 523.00 543.00 625.00 695.00 Pebble Point
Paratte
Skuil Creek/Belfast Eumeralla Inter Eumeralla Sand 1,351.00 1.435.00 Lower Eumeraila

ſ	Ci	រក្សបសិ	· · · · · · · · · · · · · · · · · · ·				**
	#	TYPE	LENGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD
ı							

DAILY DRILLING REPORT

Taralea #1

REPORT#:9

Report Date: 26/01/97

Issue Date : 28/01/97

Page Number:

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON26/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	тот	00:00	01:00	1.0	1,462	Continue to POOH to shoe. Up to 25K drag at 1049-1044m, 1018-1011m, 1005m, 998-983m, 970-960m. Work through
11 11 1	PD PD PD	RS TO HT	01:00 01:30 02:30	01:30 02:30 03:30	.5 1.0 1.0	1,462 1,462 1,462	tight spots to stop hole swabbing. Rig service. POOH Lay out NB Reamer and 1st String Reamer (1/4" under gauge).
11	TD	HT	03:30	05:30	2.0		Top String Reamer in gauge. Recover survey - misrun. Lay out short DC and prepare to pick up motor. Lay out motor. Pick up stabilizers to replace undergauge reamers. Make up new BHA.
1 1 1 1	무무무무	TI	06:00 07:00	06:00 07:00 08:00 10:30	.5 1.0 1.0 2.5	1,462 1,462	Continue RIH to shoe. Slip and cut drilling line RIH to 886m
11 11 11	9999	RW TIT RW	10:30 11:00 12:30	11:00 12:30 13:00	.5 1.5 .5 1.5	1,462 1,462 1,462	Fill pipe and break circulation. Wash and ream 886m to 917m. RIH to 1161m Ream 1161m to 1183m
1 1 1 1		RW D	13:00 14:30 15:30 17:00	14:30 15:30 17:00 17:30	1.0 1.5	1,462 1,468	RIH to 1430m Wash and ream 1423m to 1462m Drill 8 1/2" hole 1462m to 1468m. ROP dropped to zero. Circulate. Drop survey.
1 11	TD TD		17:30 20:30	20:30 21:30	.5 3.0 1.0	1.468	POOH. Up to 20K drag at 1388m, 1351m and 1105m. Lay down stabilizers. Top stabilizer 1/16" under gauge, NB stabilizer and Reamer in gauge. Recover survey - 2deg. Lay
11 ·	PD PD	HT TI	21:30 22:30	22:30 24:00	1.0 1.5	1,468 1,468	out short DC. Make up new BHA. Pick up motor and function test. RIH with BHA. Pick up 6 x HWDP.

DAILY DRILLING REPORT

Taralea #1

REPORT#:8

Report Date: 25/01/97

AVE WOB (k-lbs):

PUMP PRESS. (psi): NOZZ n/32"

CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS:

AVE RPM:

FLOW (gpm):

HHSI (hp/sq in):

Issue Date: 28/01/97

LEAK-OFF SG :

Page Number:

Basic Data

DRILLING CO. : O.D.E. 30 RIG: GL ABOVE MSL (m) : 49.0 ELEV RT AGL (m): 4.6 Well Data

1,462.0 DEPTH m : PROGRESS m : 386.0 DAYS FROM SPUD : 7.15 DAYS +/- CURVE :

8.50 HOLE SIZE("): LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80

TOT PERS ON SITE: AFE COST \$: DAILY COST \$:

CUM COST S:

35,303 646.549

1

29

Gas and General Data

MAX GAS %: B/G GAS %

WEATHER: STATUS @ 0600 :

IADC #4 1 7

Fine and clear.

RIH

20

100

400

1 950

4.89

967

42.5

22.8

R

12 12 12

Bit Data for Bit #4

BIT SIZE ("): 8.50 MANUFACTURER: RE TYPE: EHP41HLK

SERIAL #: DJ4141 DEPTH IN (m RT) : 495 DEPTH OUT (m RT): 1462

Calculated over last 24 hrs METRAGE (m): 386 ON BOTTOM HRS : ROTATING HRS : 19.5

ROP m/h 19.8 Rit

MTGE HRS ī

ō D L В G 0 967 42.5 8 8 BT A N 2 LT PR

ROP m/h

Mud Data DAILY COST: 5,105

Chk #:13 / TYPE: KCI-PHPA

Chk #:14 / TYPE : KCI-PHPA

Property Property Chk13 Chk 14 Chk 13 | Chk 14 Pit ITEMP (Deg C) SAMPLE FROM: 2200 | SOLIDS (%vol) TIME . 1030 4.8 WEIGHT(ppg): 9.0 9.1 H2O (%vol) : 95.6 95.2 1462 OIL (%voi)) : DEPTH m: 1305 ٥ 0 58 SAND(%vol) : VIS. (sec/qt): 60 .13 Tr 14 MBT (ppb eq.) PV (cp): 14 8 6 20 PH: YP (lb/100sf): 16 8.7 8.80 5 GEL10s(lb/100sf): 6 CI- (ppm): 9600 9400 16 K+ (ppm): 5300 GEL10m(lb/100sf) 9 8700 Fann 3RPM: 7 2 HRD/CA (ppm) 420 560 Fann 6RPM: 8 API F. loss: 5.9 5.4

BHA Data: BHA #4

BHA LENGTH (m): HRS ON JARS:

62

BHA WT(k-lbs):

WT BLW JAR(k-lbs): 43

Calculated over the bit run

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK OFF WT(k-lbs) :

TRQE MAX (amps): TRQE ON (amps):

110 100 TRQE OFF (amps): 70

Bit, 8 1/2" NB R/Rmr, 6 1/2" pony DC, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 4 x HWDP **BHA DESCRIPTION:**

Bulk Stocks on site

Wear

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (Itr): 27750 **BARITE** (sx): 1243

CEMENT (sx): 185 GEL (sx):

110

Survey (last 4 points) **Tool Type: Totco**

ł			-				
	MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	N/S (m)	E/W (m)
	694 998 1,300 1,460		1.00 0.50 1.25 2.00				

Formation Tops

FORMATION	TOP m	BIT#
Port Campbell Limestone Gellibrand Marl Clifton Dilwyn Pember Pebble Point Paratte Skull Creek/Belfast Eumeralla Inter Eumeralla Lower Eumeralla	40.00 133.00 376.00 401.00 485.00 523.00 625.00 695.00 1.351.00 1,435.00	1RR 1RR 1RR 2RR 4 4 4

Car	ស្នាប់ពី			······································		
#	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lb/ft)	GRADE	THREAD

DAILY DRILLING REPORT

Taralea #1

REPORT#:8

Report Date: 25/01/97

Issue Date : 28/01/97

Page Number :

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON25/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	D	00:00	06:00	6.0		Drill 8 1/2" hole 1076m to 1215m
		D S	06:00 11:00	11:00 11:30	5.0 .5		Drill 8 1/2" hole 1215m to1315m Circulate and survey 1.25deg at 1300m.
11	PD	D	11:30	20:00	.5 8.5	1,462	Drill 8 1/2" hole 1315m to 1462m. ROP dropped from 15- 20mph to 5mph.
11 11	PD PD			21:00 24:00	1.0 3.0	1,462 1,462	Circulate bottoms up. Pump slug and drop survey. POOH. Up to 25K drag at 1392m, 1374m, 1316-1313m,
			21.00	2 1.00	0.0	,, ,,	1264m,1214-1058m. Work through tight spots to stop hole swabbing.

DAILY DRILLING REPORT

Taralea #1

REPORT#:7

Report Date: 24/01/97

Issue Date : 28/01/97

Page Number:

29

60

Basic Data DRILLING CO.: O.D.E. RIG: 30 GL ABOVE MSL (m) : 49.0 ELEV RT AGL (m): 4.6

Well Data 1,076.0 DEPTH m . PROGRESS m : 578.0 DAYS FROM SPUD : 6.15 DAYS +/- CURVE :

HOLE SIZE(") LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 LEAK-OFF SG : 1.55

TOT PERS ON SITE: AFE COST \$: DAILY COST \$: 32,773 CUM COST \$: 646,549

Gas and General Data

MAX GAS %: B/G GAS %:

WEATHER: STATUS @ 0600: Cool and overcast Drill 8 1/2" hole at 1215m

Bit Data for Bit #4 IADC #4 1 7 BIT SIZE ("): 8.50 20 AVE WOB (k-lbs): MANUFACTURER: RE AVE RPM: 100 EHP41HLK TYPE: FLOW (gpm): 410 DJ4141 SERIAL #: PUMP PRESS. (psi): 1,950 DEPTH IN (m RT) : 495 12 12 12 NOZZ n/32" DEPTH OUT (m RT): 1076 5.32

HHSI (hp/sq in) : Calculated over the bit run Calculated over last 24 hrs CUM. METRAGE (m): CUM. ON BOT. HRS: METRAGE (m): 578 581 23.0 ON BOTTOM HRS : ROTATING HRS : 22.5 CUM.ROT. HRS: ROP m/h 25.3 ROP m/h 25.7

MTGE HRS 0 ٥ В G 0 R L Wear 23.0 581

Mud Data DAILY COST: 3,775

Chk #:11 / TYPE: KCI-PHPA Chk #:12 / TYPE : KCI-PHPA

Property Property Chk11 | Chk 12 Chk 111 Chk 12 SAMPLE FROM: FL TEMP (Deg C) 40 44 2300 SOLIDS (%vol) 3.6 TIME: 0930 1.7 WEIGHT(ppg): 8.9 H2O (%vol) : 8.7 98.3 96.4 1054 OIL (%vol)): ٥ DEPTH m: 708 0 36 60 | SAND(%vol) : .25 .13 VIS. (sec/qt): 13 MBT (ppb eq.) : 6 5 PV (cp): R 26 PH: YP (lb/100sf): 9.0 9.00 GEL10s(lb/100sf): CI- (ppm): 11200 11000 K+ (ppm): 9 5700 GEL10m(lb/100sf) 2 11000 3 6 HRD/CA (ppm) 400 Fann 3RPM: 280 Fann 6RPM: 6 API F. loss : 10.4 6.3

BHA Data: BHA #4

BHA LENGTH (m): 224.0 HRS ON JARS:

WT BLW JAR(k-lbs): 39 BHA WT(k-lbs): 43 STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

Bit, 8 1/2" NB R/Rmr, 6 1/2" pony DC, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 4 x HWDP 97 **BHA DESCRIPTION:**

Bulk Stocks on site

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (Itr): 33000 **BARITE** (sx): 1243

CEMENT (sx): 185 359 GEL (sx):

100 105

Survey (last 4 points) Tool Type :Totco EW MD TVD INCL SECT (mRT) (m RT) deg deg (m) (m) (m) 694 1.00 0.50 1.25 2.00 998 1,300 1 460

TOP m	BIT#
133.00 376.00 401.00 485.00 523.00 543.00	1RR 1RR 1RR
695.00	4 4 4
	40.00 133.00 376.00 401.00 485.00 523.00 543.00 625.00 695.00 1,351.00

Ca	ខ្យុបសិ		,			
#	TYPE	LENGTH (m)	CSG ID (")	WEIGHT (lb/ft)	GRADE	THREAD

DAILY DRILLING REPORT

Taralea #1

REPORT#:7

Report Date: 24/01/97

Issue Date : 28/01/97

Page Number :

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON24/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	LOT	00:00	00:30	.5	498	Pull back into casing. Conduct FIT to 370psi w/- 8.5ppg mud - EMW 12.9ppg
11		D	00:30	06:00	5.5		Drill 8 1/2" hole 498m to 637m
1	PD	D	06:00	09:30	3.5	708	Drill 8 1/2" hole 637m to 708m
11	PD	S	09:30	10:00	.5	708	Circulate and survey at 694m 1 deg
11	PD	D	10:00	21:00	11.0	1,013	Drill 8 1/2" hole 708m to 1013m
1	PD	S	21:00	21:30	.5	1,013	Circulate and survey at 998m 0.5deg
11	PD	D	21:30	24:00	2.5	1,076	Drill 8 1/2" hole 1013m to 1076m

DAILY DRILLING REPORT

Taralea #1

30

REPORT#:6

Report Date: 23/01/97

Issue Date: 24/01/97

Page Number:

Basic Data DRILLING CO.:

RIG

Well Data

GL ABOVE MSL (m):

ELEV RT AGL (m): Gas and General Data

498.0 DEPTH m: PROGRESS m DAYS FROM SPUD: 5.15 DAYS +/- CURVE :

12 12 12

6.08

.Š

6.0

HOLE SIZE("): 8.50 LAST CSG SIZE("): 9.625 SHOE DEPTH m: 492.80 **LEAK-OFF SG:**

TOT PERS ON SITE: AFE COST \$: DAILY COST \$: 1,076,300 56,503 **CUM COST \$:** 490,702

MAX GAS % : B/G GAS % :

WEATHER: STATUS @ 0600 : Cold and overcast Drill 8 1/2" hole at 637m

Bit Data for Bit #4 IADC #4 1 7 BIT SIZE ("): 8.50 15 AVE WOB (k-lbs): MANUFACTURER: RE AVE RPM: 100 EHP41HLK TYPF . FLOW (gpm): 428 1 550

O.D.E.

30

49.0

4.6

0.0

SERIAL # : PUMP PRESS. (psi): NOZZ n/32" DEPTH IN (m RT): 495 DEPTH OUT (m RT): HHSI (hp/sq in):

Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): ON BOTTOM HRS : ROTATING HRS : .5 ROP m/h ROP m/h 6.0

Mud Data DAI	LY COS	T \$:0	CUM COST \$.0									
Chk #:10 / TYPE: K	Chk #:10 / TYPE: KCI-PHPA											
Property	Chk10	Chk 0	Ргорепу	Chk 10	Chk 0							
SAMPLE FROM:	FL		TEMP (Deg C)	22	0							
TIME :	2320		SOLIDS (%vol)	0.6								
WEIGHT(ppg):	8.5	0.0	H2O (%vol) :	99.4	0.0							
DEPTH m :	498	0	OIL (%vol)):	0	0							
VIS. (sec/qt):	33	0	SAND(%vol):	Tr								
PV (cp) :	5	0	MBT (ppb eq.):	2	0							
YP (lb/100sf) :	5	0	PH:	9.0	0.00							
GEL10s(lb/100sf):	2	0	CI- (ppm):	10600	0							
GEL10m(lb/100sf) :	2	0	K+ (ppm) :	9800	0							
Fann 3RPM :	2	0	HRD/CA (ppm)	120	0							
Fann 6RPM :	2	0	API F. loss :	23.4	0.0							

Bit Wear MTGE R HRS Ö В G 0 a 0.5

BHA Data: BHA #4

BHA LENGTH (m): 224.0 HRS ON JARS : 19

WT BLW JAR(k-lbs): BHA WT(k-lbs):

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

BHA DESCRIPTION:

Bit, 8 1/2" NB R/Rmr, 6 1/2" pony DC, 8 1/2" R/Rmr, 1 x 6 1/2" DC, 8 1/2" R/Rmr, 15 x 6 1/2" D/C, Jars, 2 x 6 1/2" D/C, 4 x HWDP

Bulk Stocks on site

DRILL WATER (MT): 0 POT WATER (MT):

FUEL (Itr): 24050 BARITE (sx): 1243

43

CEMENT (sx): 185 GEL (sx):

Survey (last 4 points) **Tool Type: Totco** MD TVD INCL E/W SECT deg (mRT) (m RT) deg (m) (m) (m) 0.25 31 0.25 445

Ľ	Current Pump Data and Slow Circulating Rate Data										
IΓ	Pump Data - last 24 hrs SCR Data										
	#	TYPE	LNR (")	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT	
	1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	75 75		428	1550				

Personnel on Site = 30 COMPANY NAME NAME JOB TITLE # 3 22 Alex Bradlev **Drilling Supervisor** Cultus ODE Dave Horner Geologist Halliburton 4 **IDFS**

Drills, Permits & Inspections									
DRILL TYPE	TIMING	INSPECTIONS	TIMING						
TRIP DRILL FIRE PIT DRILL INCIDENT	22/1/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	23/1/97 22/1/97 18/1/97 0 23/1/97						

Γ	C:	រចារាថ្ម						
l		CSG OD	PHASE	CSG S	SHOE MD	CSG SHC	DE TVD	
	#	TYPE	LE	NGTH	CSG ID	WEIGHT	GRADE	THREAD
l				(111)	- ((10/11)		<u> </u>

Formation Tops							
FORMATION	TOP m	BIT#					
Port Campbell Limestone	40.00	1RR					
Gellibrand Marl	133.00						
Clifton	376.00	1RR					
Dilwyn	401.00	1RR					
Pember	485.00	2RR					
Pebble Point	523.00						
Paratte	543.00	4					

DAILY DRILLING REPORT

Taralea #1

REPORT#:6

Report Date: 23/01/97

Issue Date : 24/01/97

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON 23/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
S1	PD	WH	00:00	00:30	.5	495	Install Section "A" wellhead.
S1	PD	ВО	00:30	07:30	7.0	495	Nipple up BOP's. Install kill and choke lines.
S1	PD	ВО	07:30	08:30	1.0		Install bell nipple and flowline. Install mousehole.
S1	PD	ВО	08:30	09:30	1.0	495	Function test BOP's.
S1	PD	ВО	09:30	10:30	1.0	495	Rig up to test surface equipment
S1	PD	во	10:30	12:30	2.0	495	Pressure test kelly cocks, standpipe and full opening safety
							valve 300/3000psi.
S1 S1	TD	BO	12:30	14:00	1.5	495	Rig up to test BOP's. Change rubber on cup tester.
S1	PD	BO	14:00	17:00	3.0	495	Pressure test BOP's. Inner and outer kill line and choke line
							valves, choke line, choke manifold and pipe rams to
l			i				300/3000psi. Hydril to 300/1500psi. Blind rams to 1000psi.
ĺ					j		Outer kill valve leaking.
S1	PD	HT	17:00	18:30	1.5	495	Lay down 8" DC's.
l1		HT		20:30	2.0		Make up 8 1/2" BHA
l1	PD	TI	20:30	22:00	1.5	495	RIH. Tag top of cement at 479m
11	PD	DFS	22:00	23:30	1.5	495	Drill out cement and float equipment. Shoe at 492.8m
1	PD	D	23:30	24:00	.5	498	Clean out to 495m. Drill 8 1/2" hole 495m to 498m.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON24/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
11	PD	LOT	00:00	00:30	.5		Pull back into casing. Conduct FIT to 370psi w/- 8.5ppg mud -
11	PD	D	00:30	06:00	5.5	637	EMW 12.9ppg Drill 8 1/2" hole 498m to 637m

31

Cultus Petroleum NL

DAILY DRILLING REPORT

Taralea #1

REPORT#:5

ELEV RT AGL (m):

Report Date: 22/01/97

Issue Date : 23/01/97

LEAK-OFF SG :

Page Number:

Basic Data

DRILLING CO.: O.D.E. RIG : GL ABOVE MSL (m) : 30 49.0 Well Data

DEPTH m: 495.0 PROGRESS m: 24.0 DAYS FROM SPUD: 4.15

HOLE SIZE("): LAST CSG ŠÍZE("): 9.625 SHOE DEPTH m: 492.80

TOT PERS ON SITE: AFE COST \$: DAILY COST \$: **CUM COST \$:**

1,076,300 76,927 434,199

Gas and General Data

MAX GAS %: B/G GAS %:

WEATHER: STATUS @ 0600 :

DAYS +/- CURVE :

Cold and overcast

Torque tighten all bolts on BOP's

Bit Data for Bit #2RR IADC #5 1 7 BIT SIZE ("): 12.25 AVE WOB (k-ibs):

4.6

MANUFACTURER: SM TYPE: F2 SERIAL # : LG4836 DEPTH IN (m RT) : 471 DEPTH OUT (m RT): 495

12 AVE RPM: 100 FLOW (gpm): 670 PUMP PRESS. (psi): 1,650 NOZZ n/32" 16 16 16 HHSI (hp/sq in): 3.52 Calculated over the bit run

Calculated over last 24 hrs METRAGE (m): 24 ON BOTTOM HRS : ROTATING HRS : 3.0 ROP m/h 8.0

MTGE HRS # 0 DL В G 0 R 2RR 24 3.0 1 N N TD Α Ε Ħ

ROP m/h

	Mud Data DAII	LY COS	T \$:0	CUM C	OST \$.0	
	Chk #:9 / TYPE: 0	Sel - Spu	d (Chk #:0 / TYPE	:	
ĺ	Property	Chk9	Chk 0	Ргорепу	Chk 9	Chk 0
ı	SAMPLE FROM:	Pit		TEMP (Deg C)	0	0
1	TIME :	2100		SOLIDS (%vol)	4.5	
l	WEIGHT(ppg):	9.0	0.0	H2O (%vol) :	95.5	0.0
	DEPTH m :	495	0	OłL (%vol)) :	0	0
1	VIS. (sec/qt):	35	0	SAND(%vol):	Tr	•
	PV (cp) :	3	0	MBT (ppb eq.) :	16	0
	YP (ib/100sf):	6	0	PH:	7.8	0.00
	GEL10s(lb/100sf):	1	0	CI- (ppm):	2800	0
Ì	GEL10m(lb/100sf):	2	0	K+ (ppm) :	0	0
	Fann 3RPM:	2	0	HRD/CA (ppm)	140	0
1	Fann 6RPM :	2	0	API F. loss :	13.8	0.0

BHA Data: BHA#

BHA LENGTH (m): HRS ON JARS: **BHA DESCRIPTION:**

Bit

Wear

WT BLW JAR(k-lbs): BHA WT(k-lbs):

CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS:

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

Bulk Stocks

on site

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (Itr): 26700 BARITE (sx): 1243

24 3.0

8.0

CEMENT (sx): 185 GEL (sx): 360

Survey (I	ast 4 po	oints)		Tool T	ype :Toto	:0	Ci	urrent Pu	mp D	ata a	nd S	low C	ircula	ting	Rate	Data
MD	TVD	INCL	AZ.	\ \footnote{\chi_{\text{\chi}}}	N/S	EW		Р	ump D	ata - Ia	st 24	nrs			SCR D	ata
(m RT)	(m RT)	deg	deg	SECT (m)	(m)	(m)	#	TYPE	LNR (°)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPT m R
31 231 445		0.25 0.25 0.25					1 2	GD-PZ-8 GD-PZ-8	6.00 6.00				1650			

ľ		Pi	SCR Data							
	#	TYPE	LNR ()	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT
	1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	120 120	95.0 95.0	670	1650			

Ī	Personnel on	Site = 31		
	NAME	JOB TITLE	COMPANY NAME	#
	Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS	3 22 5 1

Drills, Permits & Inspections										
DRILL TYPE	TIMING	INSPECTIONS	TIMING							
TRIP DRILL FIRE PIT DRILL INCIDENT	22/1/97	LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	22/1/97 18/1/97							

	រនារព្រ						
	CSG OD	PHASE	PHASE CSG SHOE MD C		CSG SHC	E TVD	
	9.63					493	
#	TYPE	LE	NGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD
1	Float Shoe		.5		47.0	N80	Butt
2	1 x 9 5/8" Casing	i	12.0		47.0	N80	Butt
3	Float Collar		.4		47.0	N80	Butt
4	18 x 9 5/8" Casing	a	216.0		47.0	N80	Butt

258.3

Formation Tops								
FORMATION	TOP m	BIT#						
Port Campbell Limestone	40.00	1RR						
Gellibrand Marl	133.00	1RR						
Clifton	376.00	1RR						
Dilwyn	401.00							
Pember	485.00	2RR						

Cultonb / Copyright IDS, Jan 97

22 x 9 5/8" Casing

43.5

N80

Butt

DAILY DRILLING REPORT

Taralea #1

REPORT#:5

Report Date: 22/01/97

Issue Date : 23/01/97

Page Number:

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON22/01/97

PHSE	CLS	OP	FROM	ТО	HRS	DEPTH	DESCRIPTION-ACTIVITY
S1	PD	TO	00:00	01:00	1.0	471	Continue POOH. Strap pipe - no correction (0.21m difference)
S1	PD		01:00	03:30	2.5	471	Change bit. RIH. Wash to bottom at 471m.
IS1	PD		03:30	06:00	2.5		Drill 12 1/4" hole 471m to 495m
S1 S1 S1	PD		06:00	06:30	.5 2.5		Pump hivis sweep. Circulate hole clean.
S1	PD		06:30	09:00	2.5	495	POOH - no drag.
S1	PD	RR	09:00	10:30	1.5	495	Rig up to run 9 5/8" casing. Hold pre-job safety meeting.
S1	PD	RC	10:30	14:30	4.0	495	Run 9 5/8" casing - total of 41jts. Shoe at 492.8m. Float collar
							at 479.9m
S1	PD	CIC	14:30	15:00	.5 .5	495	Circulate 150bbl at 456gpm and 200psi.
IS1	PD	CM	15:00	15:30	.5	495	Rig up Halliburton. Hold pre-job safety meeting. Pump 20bbl
							water ahead. Pressure test lines to 3000psi.
S1	PD	CM	15:30	16:00	.5	495	Mix and pump 287sx "G" cement w/- 83.5bbl of 3% PHG at 12.
							5ppg followed by 124sx "G" w/- 15bbl of water + 1% CaCl2.
1 1							Drop top plug. Pump 5bbl water.
S1	PD	CM	16:00	16:30	.5	495	Displace w/- rig pumps 112bbl mud at 8bpm (total 117bbl).
1 1							Bump plug to 900psi. Halliburton pressure test casing to
1							3000nsi Release pressure - floats held OK.
S1	PD	WO	16:30	18:30	2.0	495	Clean out cellar. Drain and flush conductor. Remove flowline.
					l		Cut conductor. Cement static at cellar floor.
S1	PD	WO	18:30	20:30	2.0		Wait on cement.
S1	PD	RD	20:30	22:30	2.0	495	Land casing w/- string weight of 55000lbs. Lay out cement
							head and lines. Break out landing joint and lay out. Lay out
							conductor cutoff.
S1	PD			23:30	1.0	495	Rig down casing gear. Lay out mousehole.
S1	PD	WH	23:30	24:00	.5	495	Install Section "A" wellhead.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON23/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
			00:00 00:30				Install Section "A" wellhead. Nipple up BOP's. Install kill and choke lines.

DAILY DRILLING REPORT

Taralea #1

REPORT#:4

DRILLING CO. :

GL ABOVE MSL (m) :

ELEV RT AGL (m):

Report Date: 21/01/97

Issue Date: 22/01/97

Page Number:

Basic Data

RIG:

O.D.E. 30

49.0

46

471.0 DEPTH m : PROGRESS m : DAYS FROM SPUD: 3.15 DAYS +/- CURVE :

HOLE SIZE("): 12.25 LAST CSG SIZE("): 16 SHOE DEPTH m: 12.00 LEAK-OFF SG:

TOT PERS ON SITE: 33 1,076,300 32,540 AFE COST \$: DAILY COST \$: CUM COST S: 357,272

Gas and General Data

MAX GAS % : B/G GAS % :

WEATHER:

Well Data

Cold, wet and overcast.

STATUS @ 0600 :

Circulate bottoms up at casing point - 495m.

Bit Data for Bit #1RR IADC#1 1 6 12.25 BIT SIZE ("): AVE WOB (k-lbs): 12 MANUFACTURER : RE AVE RPM: 110 TYPE: HP11 FLOW (gpm): 670 SERIAL #: DJ4265 PUMP PRESS. (psi): 1.250 DEPTH IN (m RT) : 36 18 18 18 NOZZ n/32" DEPTH OUT (m RT): 471 HHSI (hp/sq in): Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: 435 24.0 432 METRAGE (m): ON BOTTOM HRS : ROTATING HRS : 20.5 CUM.ROT. HRS: 18.1 ROP m/h ROP m/h 21 1 Bit # MTGE HRS ODL В G 0 R 1 Wear

Mud Data DAIL	Y COS	T \$:1,859	CUM C	OST \$:4,	038						
Chk #:7 / TYPE: G	Chk #:7 / TYPE: Gel - Spud Chk #:8 / TYPE: Gel - Spud										
Property	Chk7	Chk 8	Property	Chk 7	Chk 8						
SAMPLE FROM:	FL	FL	TEMP (Deg C)	24	28						
TIME :	1100	2230	SOLIDS (%voi)	.5	4.1						
WEIGHT(ppg):	8.4	8.9	H2O (%vol) :	99.5	95.8						
DEPTH m :	253	456	OIL (%vol)) :	0	. 0						
VIS. (sec/qt):	27	31	SAND(%vol):	Tr	.75						
PV (cp):	0	3	MBT (ppb eq.):	0	9						
YP (lb/100sf):	0	3	PH:	6.2	7.00						
GEL10s(lb/100sf):	0	1	CI- (ppm):	450	2000						
GEL10m(lb/100sf) :	0	2	K+ (ppm):	0	0						
Fann 3RPM :	0		HRD/CA (ppm)	0	200						
Fann 6RPM :	0	1	API F. loss :	0.0	15.0						
L			<u> </u>								

BHA Data: BHA #3

1RR

BHA LENGTH (m): 183.9 HRS ON JARS:

WT BLW JAR(k-lbs): 39 BHA WT(k-lbs):

W

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK OFF WT(k-lbs): 60 60

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps): Bit, NB Stab, 1 x 8" DC, 12 1/4" Stab, 1 x 8" DC, 12 1/4" Stab, X/O, 9 x 6 1/2' DC, Jars, 2 x 6 1/2" DC, 4 x

BHA DESCRIPTION: Bulk Stocks

on site

DRILL WATER (MT): 0 POT WATER (MT): 0

24.0

29750 FUEL (ltr): **BARITE** (sx): 1243

PR

R

CEMENT (sx): 596 GEL (sx):

F	Survey (ast 4 po	oints)		Tool Type :Totco				
	MD (m RT)	TVD (m RT)	INCL deg	AZ. deg	SECT (m)	N/S (m)	E/W (m)		
	31 231 445		0.25 0.25 0.25						

Current Pump Data and Slow Circulating Rate Data Pump Data - last 24 hrs SCR Data											
	#	TYPE	LNR (")	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT	
	1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	120 120	95.0 95.0	670	1250				

7, 4, ----

Personnel on	Site = 33		
NAME	JOB TITLE	COMPANY NAME	#
Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS	3 24 5 1

DRILL TYPE	TIMING	INSPECTIONS	TIMING
TRIP DRILL FIRE PIT DRILL INCIDENT		LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	18/1/97 18/1/97

ារប	រុបជ						
	CSG OD	PHASE	CSG S	HOE MD	CSG SHO	E TVD	
#	TYPE	LE	NGTH (m)	CSG ID	WEIGHT (lb/ft)	GRADE	THREAD

Formation Tops		
FORMATION	TOP m	BIT#
Port Campbell Limestone Gellibrand Marl Clifton Dilwyn	40.00 133.00 376.00 401.00	1RR 1RR

DAILY DRILLING REPORT

Taralea #1

REPORT#:4

Report Date: 21/01/97

Issue Date : 22/01/97

Page Number :

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON21/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
S1	TD	RW	00:00	02:00	2.0	48	Open hole to 12 1/4" 39m to 44m
	PD	S	02:00	02:30	.5	48	Survey at 31m 0.25deg
S1	TD	RW	02:30	03:00	.5	48	Open hole to 12 1/4" 44m to 48m
51 55 55 55 55 55 55 55 55 55 55 55 55 5	PD	D	03:00	06:00	3.0	130	Drill 12 1/4" hole 48m to 130m.
S1	PD		06:00	10:30	4.5		Drill 12 1/4" hole 130m to 243m
S1	PD	S	10:30	11:00	.5	243	Survey at 231m 0.25deg
IS1	PD	D	11:00	16:00	5.0	363	Drill 12 1/4" hole 243m to 363m
S1	TD	CIR	16:00	16:30	.5		Clean out mud rings in flow line.
S1	PD	D	16:30	17:00	.5 .5		Drill 12 1/4" hole 363m to 366m while pumping KCL slug.
S1	TD	CIR	17:00	17:30	.5	366	Clean out mud rings in flow line.
S1	PD	D	17:30	22:00	4.5	459	Drill 12 1/4" hole 366m to 459m
S1	PD	S	22:00	22:30	.5	459	Survey at 445m 0.25deg.
S1	PD	D	22:30	23:00	.5	471	Drill 12 1/4" hole 459m to 471m. ROP down from 30m/hr to 10
1							m/hr.
S1	PD	TO	23:00	24:00	1.0	471	POOH. Strap pipe.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON22/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
S1 S1 S1	PD PD PD	TI	00:00 01:00 03:30	03:30	1.0 2.5 2.5	471	Continue POOH. Strap pipe - no correction (0.21m difference) Change bit. RIH. Wash to bottom at 471m. Drill 12 1/4" hole 471m to 495m

DAILY DRILLING REPORT

Taralea #1

REPORT#:3

ELEV RT AGL (m):

Report Date: 20/01/97

Issue Date : 21/01/97

Page Number:

Basic Data DRILLING CO.: O.D.E. RIG : GL ABOVE MSL (m) : 30 49.0 Well Data

DEPTH m: 48.0 PROGRESS m 18.0 DAYS FROM SPUD: 2.15 DAYS +/- CURVE :

12.25 HOLE SIZE("): LAST CSG SIZE("): SHOE DEPTH m: 12.00 **LEAK-OFF SG:**

TOT PERS ON SITE: AFE COST \$: DAILY COST \$:

1,076,300 45,580 **CUM COST \$:** 324,732

Gas and General Data

MAX GAS % : B/G GAS % :

WEATHER: STATUS @ 0600 : Fine and clear

Drill 12 1/4" hole at 130m.

Bit Data for Bit #1RR IADC #1 1 6 BIT SIZE ("): 12.25 AVE WOB (k-lbs) : MANUFACTURER: RF AVE RPM: 80 TYPE: HP11 FLOW (gpm): 218 DJ4265 SERIAL #: PUMP PRESS. (psi): NOZZ n/32" 150 DEPTH IN (m RT): 36 18 18 18 DEPTH OUT (m RT) : 39 HHSI (hp/sq in): 0.30 Calculated over last 24 hrs Calculated over the bit run METRAGE (m):

4.3

CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: 3.5 ON BOTTOM HRS: 3.5 ROTATING HRS : ROP m/h .9 ROP m/h 0.9 Bit MTGE HRS ī Ö D В G ō R Wear 17.5 22 PR

02 02

4.0

3.5 3.5

Mud Data DAILY COST \$:598 CUM COST \$ 2,178									
Chk #:5 / TYPE: 0	Sel - Spu	d (Chk #:6 / TYPE	: Gel - S	bud				
Property	Chk5	Chk 6	Property	Chk 5	Chk 6				
SAMPLE FROM:	FL	FL	TEMP (Deg C)	35	33				
TIME :	0930	2200	SOLIDS (%vol)	1.7	1.7				
WEIGHT(ppg):	8.6	8.6	H2O (%vol) :	98.3	98.3				
DEPTH m :	36	48	OIL (%vol)) :	0	. 0				
VIS. (sec/qt):	42	47	SAND(%vol):	Tr	Tr				
PV (cp) :	6		MBT (ppb eq.) :	17	23				
YP (lb/100sf):	24	26	PH:	12.0	11.50				
GEL10s(ib/100sf):	14	17	Cl- (ppm):	4900	5500				
GEL10m(lb/100sf) :	17	19	K+ (ppm):	0	0				
Fann 3RPM :	17	25	HRD/CA (ppm)	40	40				
Fann 6RPM :	19		API F. loss :	36.8	33.2				

BHA Data: BHA #3

BHA LENGTH (m): HRS ON JARS :

2 3RR 1RR

32.2

12

WT BLW JAR(k-lbs): BHA WT(k-lbs): 12

Ē

A

w

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

TRQE MAX (amps): TRQE ON (amps): TRQE OFF (amps):

BHA DESCRIPTION:

Bit, NB Stab, 1 x 8" DC, 12 1/4" Stab, 2 x 8" DC, X/O

Bulk Stocks on site

DRILL WATER (MT): 0 POT WATER (MT): 0 FUEL (ltr): **BARITE** (sx): 1243

ВН

BH

33039

CEMENT (sx): 596 GEL (sx):

Survey (last 4 points) **Tool Type: Totco** INCL EW deg SECT (mRT) (m RT) deg (m) (m) (m) 31 0.25

	Current Pump Data and Slow Circulating Rate Data											
Pump Data - last 24 hrs SCR Data												
	#	TYPE	LNR (*)	SPM	EFF (%)	Flow gpm	SPP psi	SPM	SPP psi	DEPTH m RT		
	1 2	GD-PZ-8 GD-PZ-8	6.00 6.00	110 110	95.0 95.0	600	870					

Personnel on Site = 34

NAME	JOB TITLE	COMPANY NAME	#
Alex Bradley Dave Horner	Drilling Supervisor Geologist	Cultus ODE Halliburton IDFS	3 24 6 1

Drills, Permits & Inspections										
DRILL TYPE	TIMING	INSPECTIONS	TIMING							
TRIP DRILL FIRE PIT DRILL INCIDENT		LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	18/1/97 18/1/97							

ារប	ાંલ						
	CSG OD	PHASE	CSG S	HOE MD	CSG SHC	DE TVD	
#	TYPE	LE	NGTH (m)	CSG ID	WEIGHT	GRADE	THREA
			(,	- ' '	(10.11)		

Formation Tops		
FORMATION	TOP m	BIT#
Port Campbell Limestone	40.00	1RR

DAILY DRILLING REPORT

Taralea #1

REPORT#:3

Report Date: 20/01/97

Issue Date : 21/01/97

Page Number:

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON20/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY
S1	PD	D	00:00	05:00	5.0		Drill 12 1/4" hole 30m to 34m
S1	TD	TRP	05:00	05:30		34	POOH to change bit. RIH w/- insert bit.
51 51 51 51 51 51	PD		05:30	09:30	.5 4.0		Drill 12 1/4" hole 34m to 36m.
S1	TD	TO	09:30	10:00	.5	36	POOH. Stand back 8" DC's.
S1	TD	HT	10:00	11:00	1.0		Pick up 6 1/2" downhole motor. Unable to set angle to 0deg.
S1	TD	HT	11:00	12:00	1.0		Pick up 2nd downhole motor. Make up 8 1/2" BHA
S1	TD	DM .	12:00	15:30	3.5	48	Drill 8 1/2" hole 36m to 48m. Broke out of basalt at 40m
S1	TD	TO	15:30	16:30	1.0		POOH. Lay down motor.
S1	TD	HT	16:30	17:30	1.0		Make up 12 1/4" BHA. Unable to go below 13m. Lay down 2 x 8" DC's.
S1	TD	RW	17:30	20:30	3.0	48	Ream 12 1/4" hole to 36m
S1 S1	TD	RW	20:30	24:00	3.5	48	Open 8 1/2" pilot hole to 12 1/4" 36m to 39m

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON21/01/97

PHSE	CLS	OP	FROM	TO	HRS	DEPTH	DESCRIPTION-ACTIVITY	
S1 S1 S1 S1		S	02:00 02:30	02:00 02:30 03:00 06:00	2.0 .5 .5 3.0	48 48	Open hole to 12 1/4" 39m to 44m Survey at 31m 0.25deg Open hole to 12 1/4" 44m to 48m Drill 12 1/4" hole 48m to 130m.	

DAILY DRILLING REPORT

Taralea #1

REPORT#:2

Report Date: 19/01/97

Issue Date : 20/01/9

Page Number:

Basic Data

 DRILLING CO.:
 OD&E

 RIG:
 Rig 30

 GL ABOVE MSL (m):
 49.0

 ELEV RT AGL (m):
 4.3

DEPTH m: 30.0 PROGRESS m: 11.0 DAYS FROM SPUD: 1.15 DAYS +/- CURVE:

HOLE SIZE("): 12.25
LAST CSG SIZE("): 16
SHOE DEPTH m: 12.00
LEAK-OFF SG:

TOT PERS ON SITE:
AFE COST \$: 1,0
DAILY COST \$:

CUM COST \$:

1,076,300 36,325 279,152

34

Gas and General Data

MAX GAS %: B/G GAS %: WEATHER:

Fine and clear

STATUS @ 0600 : Drill 12 1/4" hole at 34m.

Mud Data DAILY COST \$:163 CUM COST \$:1,591
Chk #:3 / TYPE: Gel - Spud Chk #:4 / TYPE: Gel - Spud

Bit Data for Bit #1 IADC #1 1 6 BIT SIZE ("): 12.25 AVE WOB (k-lbs): MANUFACTURER: RE AVE RPM: 80 HP11 TYPE: FLOW (gpm): 176 SERIAL # : DJ4265 PUMP PRESS. (psi): 80 DEPTH IN (m RT): NOZZ n/32" 18 18 18 DEPTH OUT (m RT): HHSI (psi): 0 Calculated over last 24 hrs Calculated over the bit run CUM. METRAGE (m): CUM. ON BOT. HRS: CUM.ROT. HRS: METRAGE (m): 11 12.5 ON BOTTOM HRS: 9.0 **ROTATING HRS:** ROP m/h 1.4 ROP m/h 1.2 (O) 25 FIE EN LUICE THRS: (F

Property	Chk3	Chk 4	Property	Chk 3	Chk 4
SAMPLE FROM:	FL.	FL	TEMP (Deg C):	24	23
TIME :	1500	2230	SOLIDS (%vol)	0.2	1.4
WEIGHT(ppg):	8.4	8.6	H2O (%vol) :	99.8	98.6
DEPTH m :	27	30	OIL (%vol)):	0	. 0
VIS. (sec/qt):	27	72	SAND(%vol):	Tr	Tr
PV (cp):	0	10	MBT (ppb eq.):	0	27
YP (lb/100sf) :	0		PH:	12.0	11.00
GEL10s(lb/100sf):	0	15	CI- (ppm) :	4500	4300
GEL10m(lb/100sf) :	0		K+C (ppm):	ol	0
Fann 3RPM :	0		HRD/CA (ppm)	80	40
Fann 6RPM :	0		API F. loss :	0.0	0.0

BHA Data : BHA ## 2_

BHA LENGTH (m): HRS ON JARS: BHA DESCRIPTION:

1

30.7 WT BLW JAR(k-lbs): BHA WT(k-lbs):

Bit, Bit sub, 3 x 8" DC, X/O

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs): TROE MAX (ft-lbs): TROE ON (ft-lbs): TROE OFF (ft-lbs):

Bulk Stocks on site

DRILL WATER (MT): 0
POT WATER (IMT): 0

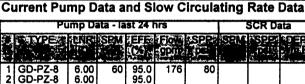
12.5

18

FUEL (IMT): 29 BARITE (MT): 24 CEMENT (MT):25 GEL (MT): 0

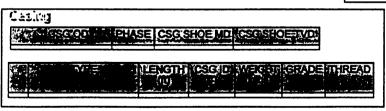
Survey (last 4 points) Tool Type :

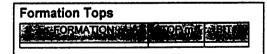
Curr



| Alex Bradley | Drilling Supervisor | Geologist | DDE | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company | Company |

Drills, Permits & Inspections								
DRILLTYPE	TIMING	NSPECTIONS:	TIMING					
TRIP DRILL FIRE PIT DRILL INCIDENT		LAST CSG PRESS TEST SAFETY MEETING SAFETY INSPECTION DAYS SINCE LAST BOP TES LAST BOP TEST	18/1/97 18/1/97					





DAILY DRILLING REPORT

Taralea #1

REPORT#:2

Report Date: 19/01/97 Issue Date: 20/01/9

Page Number:

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON19/01/97

PHSE	CLS	IOP.	FROM	3105	HRS	DEPTH	DESORIEU ONEA OUVINY
S1	PD	D	00:00	03:00	3.0	27	
	1			1			- no circulation up conductor.
S1	TD	CIR	03:00	04:00	1.0	27	Spot hivis mud and LCM. Hole still washing out.
S1	TD	CIR	04:00	05:00	1.0	27	Pull mousehole. Attempt to plug communication with sacks -
	ļ			ł .			no success.
S1	TD	TO	05:00	05:30	.5	27	POOH and stand back DC's.
S1	TD	HT	05:30	06:00	.5	27	Clean out mousehole.
S1	TD	HT	06:00	07:30	1.5	27	Lay out mousehole. RIH w/- 2jts DP to 18m. Rig up
	1						Halliburton.
S1	TD	СМ	07:30	08:00	.5	27	Pump 5BBL water. Mix and pump 44sx "G" cement at 15.8ppg
							(8BBL slurry). Displace with 0.5BBL water and flush lines. CIP
1.							0755hrs.
S1	TD	RD	08:00	08:30	.5	27	Rig down Halliburton. POOH w/- drill pipe. Pull kelly and
							rathole and hang in derrick.
S1 S1 S1	TD		08:30	12:00	3.5		
S1	TD		12:00	15:30	3.5	27	Re-install rathole. Clean out mousehole and re-install sock.
S1	TD	HT	15:30	17:00	1.5	27	RIH and tag cement at 12.1m. Break out 8" DC and lay down
							same.
S1	TD	D	17:00	18:00	1.0		Drill cement 12m to 27m.
S1	PD	D	18:00	24:00	6.0	30	Drill 12 1/4" hole 27m to 30m.

ACTIVITY FOR PERIOD 00:00 HRS TO 06:00 HRS ON20/01/97

I	PHS	Е	ાજ	P	तम्भू (179	ERS.	ទៅដ្ឋារ	्रिक्त विद्यासम्मात्त्रः स्टान्सन्यः इ.स.च्यासम्बद्धाः
	S1 S1		PD PD		00:00 05:00		5.0 1.0		Drill 12 1/4" hole 30m to 34m POOH to pick up insert bit - F2.

DAILY DRILLING REPORT

Taralea #1

1

34

REPORT#:1

ELEV RT AGL (m):

Report Date: 18/01/97

Issue Date: 20/01/9

Page Number:

Basic Data

DRILLING CO.: RIG GL ABOVE MSL (m) :

OD&E Rig 30 49.0 PROGRESS m DAYS FROM SPUD : 0.15 DAYS +/- CURVE : 4.3

12.25 HOLE SIZE("): LAST CSG SIZE("): SHOE DEPTH m: 16 12.00 LEAK-OFF SG:

TOT PERS ON SITE :

1,076,300 242,827 AFE COST \$: DAILY COST \$:

Gas and General Data

MAX GAS % : B/G GAS % :

WEATHER:

19.0

7.0

STATUS @ 0600 :

Rig up Halliburton for remedial cementing of washout.

Bit Data for Bit #1 IADC #1 1 6 BIT SIZE ("): 12.25 AVE WOB (k-lbs) : MANUFACTURER : RE AVE RPM: 80 TYPE: HP11 FLOW (gpm): 299 DJ4265 SERIAL #: PUMP PRESS. (psi): NOZZ n/32" 250 DEPTH IN (m RT) : 12 18 18 18 DEPTH OUT (m RT): 0 HHSI (psi): Calculated over the bit run Calculated over last 24 hrs CUM. METRAGE (m): CUM. ON BOT. HRS: METRAGE (m) : 3.5 ON BOTTOM HRS: 3.5 CUM.ROT. HRS : ROTATING HRS: 20 ROP m/h 2.0 ROP m/h MANUAL ARSAN CONTRACTOR OF TO Bit

٦	Mud Data DAIL	Y COS	T \$:1,428	CUM C	OST \$:1,	428						
l	Chk #:1 / TYPE: Gel - Spud Chk #:2 / TYPE : Gel - Spud											
١	Property	Chk1	Chk 2	Property	Chk 1	Chk 2						
ı	SAMPLE FROM:	FL	FL	TEMP (Deg C):	21	19						
١	TIME :	0900	2200	SOLIDS (%vol)	1.4	0.2						
ı	WEIGHT(ppg):	8.6	8.4	H2O (%vol) :	98.6	99.8						
١	DEPTH m :	0	13	OIL (%vol)):	0	. 0						
١	VIS. (sec/qt):	41	27	SAND(%vol):	Tr							
١	PV (cp) :	6	0	MBT (ppb eq.):	18	0						
ı	YP (lb/100sf):	22	0	PH:	9.7	0.00						
ı	GEL10s(lb/100sf):	11	0	CI- (ppm) :	4300	4200						
ı	GEL10m(lb/100sf) :	15	0	K+C (ppm):	0	0						
ı	Fann 3RPM:	11	0	HRD/CA (ppm)	80	160						
ıl	Fann 6RPM :	13	0	API F. loss :	0.0	0.0						

BHA Data: BHA #1

BHA LENGTH (m): HRS ON JARS

WT BLW JAR(k-lbs): BHA WT(k-lbs):

STRING WT(k-lbs): PICK UP WT(k-lbs): SLK 0FF WT(k-lbs):

TROE MAX (ft-lbs): TROE ON (ft-lbs): TROE OFF (ft-lbs):

BHA DESCRIPTION:

Bit, NB Stab, 8" DC, String Stab, 8" DC, X/O

Bulk Stocks on site

Wear

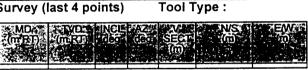
DRILL WATER (MT): 0 POT WATER (IMT): 0

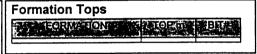
3.5

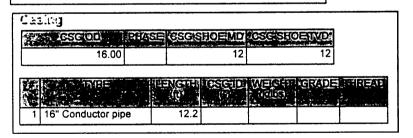
21.5

FUEL (IMT): BARITE (MT): 24 CEMENT (MT): 27 GEL (MT):

Survey (last 4 points)







DAILY DRILLING REPORT

Taralea #1

REPORT#:1

Report Date: 18/01/97

Issue Date : 20/01/9

Page Number :

2

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON18/01/97

PHSE	CLS	(OP.	EROM	10	HRS	DEPTH	DESORIPTION ACTIVITY
ОТН				07:30	7.5	0	Install bell nipple and flowline. Pressure test pumps and kelly to 2000psi.
OTH OTH OTH OTH OTH OTH OTH			07:30 11:30 12:00 13:30 14:30 17:30 19:30	11:30 12:00 13:30 14:30 17:30 19:30 20:30	4.0 1.5 1.0 3.0 2.0 1.0	000000	Drill 4m of rathole. POOH. Pick up new bit. Drill rathole 4m to 6m. POOH. Pick up motor. Drill rathole 6m to 13m. Install sock. Drill mousehole and install sock. Tag bottom of conductor at 12m. Lay down motor and flush out. Make up bit to spud. Spud Well. Drill 12 1/4" hole 12m to 19m