

APPENDIX IA

DRILLING SUMMARY DETAILS



ALEXANDER-1 (cont)

DATE	SHIFT	DEPTH	HOLE SIZE	BIT NO.	SERIAL NO.	BIT TYPE	RPM	W.O.B. kg.	REMARKS
10/8	D	89.9	101	6	L98246	S 2			F.I.T @ 75.1m Bit ch @ 88.9
	N	119.8							
11/8	D	150.8					700	3500	Trip Dropped core
	N	171.0							POH, Rod rattle Lost core
12/8	D	188.8					700		3 attempts to pick up core
	N	209.6				S 2	700	3500	
13/8	D	215.8		7	123-1	3 SF	350	5500	Bit ch. @ 210.0 New Barrel
	N	232.0							Drop core in bbl
14/8	D	252.2					500	4500	Drop core Ream over
	N	269.6							
15/8	D	279.4	101	7	123-1	Aus S/F			Bit change @ 279.4m Cem Cas
	N	280.7		8	L98248	S 8			Bit & R/S burnt
16/8	D&N								Wait on bit & R/S etc
17/8	D&N			9	L98249				Bit & R/S burnt. Rod split
18/8	D&N								Wait
19/8	D&N								Jaw Downs rods
20/8	D			10	L98248				Drill out bit
	N								Sharpen bit. No spare
21/8	D	287.8		10	L98248				Core matrix & steel. Shale
	N	311.8		11	L99496	S 8			Bit change @ 287.8
22/8	D	329.8		11	L99496		800	4000	Shale Mud W8.7,V50
	N	344.7							Bit bogging in
23/8	D	348.8		12	L99488	8 S/F			Bit change at 344.7
	N	360.8							- burnt fishing
24/8	D	377.8					500	2500	Shale Mud W ? V52
	N	401.8					650	2500	Shale & Siltstone 8.9,V 54



APPENDIX IB

DRILLING SUMMARY

ALEXANDER - 1

DATE HOUR

31 July	0600	Setting up and maintenance
	1500	Mud Mixing
	1700	Drill
1 August	0600	Shift Rig
	0800	Reaming to straighten hole
	1030	Drill 5.00m to 10.90
	1230	Mix cement and displace
	1430	W.O.C.
	1800	W.O.C.
	0030	Drill out cement plug & float collar
	0045	Cement not set W.O.C.
	0130	Cement not set W.O.C.
	0300	Cement not set W.O.C.
	0400	Drill out Float Collar
	0500	Assemble B.H.A.
2 August	0600	Drill out float
	0615	POOH measure and reassemble BHA
	0645	Clean mud pit and mix mud
	0930	R.I.H. Drill out float, casing turning, cement green
	1030	POOH pull out casing, replace float shoe and Baker-lock float collar
	1300	Run casing and cement
	1500	W.O.C.
	1800	W.O.C.Slow pump rate 28 (5pm)
	2315	Drill cement plug
	2400	Drill out float collar
	0045	Drill 10.70 to 17.00 mtrs
	0315	Pull Roller bit and change to strata-pak
	0430	Drill 17 mtr to 20 mtrs
3 August	0600	Drill 20 metres to 27 metres
	0930	POOH change bit RIH.
	1100	Ream 14m to bottom
	1230	Drill 90cm, casing dropped 5.6m
	1330	POOH
	1400	Fishing for casing
	1530	Waiting on casing. Casing dropped at Airstrip due to poor access

3 August	1800	Wait on casing	
	1945	Casing locked in hole, free and RIH, losing mud into hole under pressure	
	2045	Mix mud	
	2230	Make up B.H.A., R.I.H. Ream 14 mtr to bottom	
	0145	Drill 27.90 - 32.70	
	0330	POOH to check bit ok. Very hard shale 7,000 kg on bit	
	0430	Drill to 34.00 mtrs	
4 August	0600	Drill from 34 to 36m	
	0730	Chuck repair due to excessive weight on bit	
	1000	POOH change bit RIH & add two 101 collars	
	1130	Drill from 36 to 42m	
	1800	Mix mud	
	1830	Drill to 44 metres	
5 August	0600	Drill to 45m	
	0800	Breakdown (Clutch on Rig)	
	1330	Drill to 46m	
	1600	P.O.O.H. Check Bit	
	1700	Drill to 47m	
		1800	P.O.O.H. make up diamond core barrel (101)
		1845	Core 46.70 to 50.20m, very hard
		2330	P.O.O.H. Change to roller bit
		2400	RIH & Open hole to 50.20
		0330	Drill 50.20 to 51.10
	0430	P.O.O.H. Change to core (101)	
	0500	Core to 52.20	
6 August	0600	Drill to 53.80 lost circulation	
	0800	Treat hole for lost cir. (unsuccessful)	
	0930	Drill to 56.80	
	1230	Treat hole for lost cir. (unsuccessful)	
	1500	Drill to 60.80	
		1800	Drill to 71.80
		0130	P.O.O.H. & change to roller to ream out to 5 5/8" R.I.H.
		0315	Reaming from 51.10 57.00
7 August	0600	Ream from 57.00 to 71.80	
	1200	Circulate and condition	
	1230	P.O.O.H., L.D.P.	
	1330	Run in casing to 69.70 weld each joint	
	1530	Cement Casing	
	1700	W.O.C.	
		1800	W.O.C.

8 August	0600	Nipple up B.O.P.
	1500	Test BOP, unsuccessful test
	1600	Prepare to cement
	1800	Mix cement and pump into hole and displace.
	1900	Wait on cement
9 August	2230	Squeeze Cement into hole and hold at 550 P.S.I.
	2345	Test B.O.P. TO 550 PSI
	0030	R.I.H. Drill out top cement plug, cement and float shoe
	0330	Drill out cement from float collar to 70.80m.
	0600	B.O.P. Test unsuccessfull
	0630	Run in hole tag cement at 50m - 10m above float valve
	0700	Wait on decision from client and tool pusher
	0930	Drill out 3m cement
	1030	Circulate dye to determine depth of fracture in casing
	1130	Prepare to cement
	1230	Mix cement and pump into hole
	1330	W.O.C.
	1800	W.O.C.
	2130	Test B.O.P. Choke line blocked with cement fracture cement at 1,200 PSI Clean out line
10 August	0600	Core from 70.80m to 75.10m
	0830	Formation integrity test
	0900	Core from 75.10m to 88.90m
	1530	Bit change
	1600	Trip out and in broke wire line sludge in hole
	1700	Core 88.90 to 89.90m
	1800	Core 89. 90m - 119.80m
11 August	0600	Core 119.80 - 150.80m
	1730	Trip out - Dropped core
	1800	P.O.O.H. No core in Barrel
	1830	R.I.H.
	0930	Drill 150.80 - 163.80m
	0130	Condition & circulate rod rattle
	0200	Drill 163.80 - 171.00m



12 August	0600	Core 171.00 - 173.10m
	0700	3 attempts to pickup core
	0800	Coring
	1200	P.O.O.H. remove 30m 101 collars
	1330	Core to 188.80.
	1800	188.80 - 203.80m
	0130	B.O.P. Drill
	0145	203.80 - 209.60m coring ahead.
13 August	0600	Free Rod
	0700	P.O.O.H. Makeup new barrel, free inner tube from barrel. Pressure test rods while R.I.H.
	1430	Core 210.00 - 215.80m
	1730	Survey
	1800	Drill 215.80 to 218.80
	2015	218.80 - 220.10m
	2100	220.10 - 221.80m
	2230	221.80 - 224.80m
	0015	224.80 - 227.80 dropped core in barrel
	0230	Try to get core out of Barrel.
	0400	Drill 227.80 - 230.00m
	0515	Drill 230.00 - 232.00m
14 August	0600	Core from 232.00 - 252.20m
	1800	252.20 - 265.70 could not pick up core
	0300	Ream over core and retrieve
	0400	265.70 - 269.60m
15 August	0600	Core 269.60 - 279.40m
	1300	Trip Out
	1330	Cement Casing
	1530	W.O.C.
	1800	W.O.C.
	2130	Drill out cement plug
	2145	R.I.H.
	2245	Circulate
	2300	Drill to 280.70m
	2330	Rod stuck in hole
	0030	P.O.O.H.
	0130	Reamer and bit burnt in hole U/S No reamer in stock
	0200	Run in hole and pressure each joint to 100 P.S.I.
16 August	1800	Service & Maintenance Wait on Reamer Shell
	0800	Pressure test rods (no leaking rods)
	0900	Service & Maintenance

17 August	0600	Wait on Reamer Shell
	1800	Pickup reamer shell off plane
	2030	R.I.H.
	2230	Condition and circulate
	2300	Started to drill, would not penetrate
	2400	Pull out of hole, rod split in middle of body at 63m from bottom
	0130	Advise client
18 August	0600	Wait on Barrel
	1800	Wait on Barrel
19 August	0600	Wait on barrels
	1800	Wait on Barrel
	0200	R.I.H. & tape each joint
	0330	Pre torque. Jaw fallen down rods, try to retrieve jaw with magnet with no success. Drill on bottom at 200 P.S.I. Sudden drop in Drill String pressure to 80 P.S.I.
	0500	P.O.O.H. & breakdown to 6 mtr lengths
20 August	0600	Weigh complete Drillstring & run in rods over 75kg. Pressure test every 50m @ 1,100 PSI
	1230	Drill out bit left in hole - bit not cutting
	1330	POOH
	1400	wait on decision
	1500	Sharpen bit and run in hole
	1630	Drill out bit - 16cm
	1800	P.O.O.H. Bit polished (sharpened)
	1915	R I.H. & tape every joint
	2000	Drill 14cm
	2100	Pull tube steel and rock in tube (10cm)
	2120	Try to drill, bit polished
	2200	P.O.O.H. and sharpen bit
	2315	R.I.H. & tape every joint
	0015	Drill bit will not penetrate matrix
	0100	Drill - try various methods (20cms)
	0300	P.O.O.H.

21st August

0600 P.O.O.H., Matrix and Steel jammed in face  
of bit. Bit ringed inside gauge.  
0700 Wait on decision to re run bit no. 10  
0830 Run in hole, pressure test rod string  
0930 C & C.  
1000 Core 280.80 to 287.80m  
1630 Repair Hyd. Hose  
  
1800 Wait on plane with drill bit (11)  
2000 P.O.O.H. Change Bit  
2130 R.I.H.  
2200 Condition & circulate  
2230 Drill

22 August

0600 Drill to 318.80m  
0930 Pressure test to 1,000 PSI (ok)  
1000 Drill to 327.80m  
1630 Pressure test rods to 1,000 PSI ok  
1700 Drill to 329.80m  
  
1800 Rebuild 435 Beam pump (Ball & Seats) &  
Buckets  
1945 Drill 329.80 - 341.80  
0115 Circulate bottoms up  
0145 Drill 341.80 - 343.80m pressure test 1000 PSI  
0245 Hydraulic Chuck slipping pull apart & repair  
(will not hold rod weight)  
0500 Drill

23 August

0600 Try to drill - drill 15cm, bit dogging in due  
to balling at bit and back rod rattle.  
0700 Pressure test to 1,000 psi (o.k.)  
0730 POOH to check bit, Bit burnt inside gauge  
and outside.  
0830 Wait on bit to arrive, aircraft not on time.  
1230 RIH with 8 step.  
1330 Core from 344.70 to 347.80m.  
1500 Core from 347.80 to 348.80m.  
1630 Fishing broken rod at 73m.  
  
1800 Drill 348.80 - 350.80m, water pressure  
erratic.  
0130 Pressure test 1,000 psi.  
0200 Drill 350.80 - 360.80m.

21st August

0600 P.O.O.H., Matrix and Steel jammed in face  
of bit. Bit ringed inside gauge.  
0700 Wait on decision to re run bit no. 10  
0830 Run in hole, pressure test rod string  
0930 C & C.  
1000 Core 280.80 to 287.80m  
1630 Repair Hyd. Hose  
  
1800 Wait on plane with drill bit (11)  
2000 P.O.O.H. Change Bit  
2130 R.I.H.  
2200 Condition & circulate  
2230 Drill

22 August

0600 Drill to 318.80m  
0930 Pressure test to 1,000 PSI (ok)  
1000 Drill to 327.80m  
1630 Pressure test rods to 1,000 PSI ok  
1700 Drill to 329.80m  
  
1800 Rebuild 435 Beam pump (Ball & Seats) &  
Buckets  
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(will not hold rod weight)  
0500 Drill

23 August

0600 Try to drill - drill 15cm, bit dogging in due  
to balling at bit and back rod rattle.  
0700 Pressure test to 1,000 psi (o.k.)  
0730 POOH to check bit, Bit burnt inside gauge  
and outside.  
0830 Wait on bit to arrive, aircraft not on time.  
1230 RIH with 8 step.  
1330 Core from 344.70 to 347.80m.  
1500 Core from 347.80 to 348.80m.  
1630 Fishing broken rod at 73m.  
  
1800 Drill 348.80 - 350.80m, water pressure  
erratic.  
0130 Pressure test 1,000 psi.  
0200 Drill 350.80 - 360.80m.

24 August	0600	Drill	
	0700	Pressure test 1,000 psi.	
	0730	Drill	
	1800	Drill	
	0300	C. M. & C.	
25 August	0330	Drill, pressure test o.k. 1,100 psi.	
	0600	Drill	
	0830	B.O.P. Drill	
	0700	Drill	
	1730	Dropped core (core in barrel) trip out.	
	1800	P.O.O.H. & change bit.	
	1845	R.I.H. Make up, machine playing up.	
	2030	Drill over dropped core.	
	2130	Drill 422.80 - 432.80m, dropped core, try to retrieve with no luck.	
	0400	P.O.O.H. Make up, machine playing up.	
	0530	R.I.H.	
26 August	0600	Trip in.	
	0830	Drill	
	1300	Back up rig and fix chuck.	
	1400	Drill.	
	1800	Core in hole, drill over, but tube not seated, jammed in hole @ 30m, sludge in rods, change mud.	
	2000	Mix mud and pump down hole bottoms up.	
	2130	Try to get core from barrel.	
	2200	P.O.O.H. Dropped rods @ 24 stands out.	
	2300	R.I.H. Pick up rods.	
	0030	P.O.O.H.	
	0500	Drill over core and rill to 450.30m.	
	27 August	0600	Circulate and condition.
		0630	Six attempts to pick up core & face of bit.
0930		P.O.O.H. RIH with tricone bit.	
1130		Drill out face of bit.	
1230		C. & C.	
1300		P.O.O.H. and run in barrell.	
1630		Drill 2m - pull tube three times, no core.	
1800		Core	
0430		C. M. & C.	
0515		Core.	

28 August	0600	Remove makeup and replace water swivel.
	0800	Drill
	1500	Water swivel and winch rope repair.
	1600	Drill.
	1800	Drill
	0330	C. M. & C.
29 August	0400	Drill (Drilling slow r.p.m. to stop water swivel from seizing no parts).
	0600	C. M. & C.
	0700	Drill
	1330	Survey
	1400	C. M. & C. (Bad rod rattle).
	1430	Drill.
	1800	Drill
	0400	C. M. & C.
	0430	Repair Rig.
	30 August	0600
0730		Drill
1700		P.O.O.H. Stuck inner tube.
1800		P.O.O.H.
1900		Pull inner tube out of barrel, bearings collapsed.
2000		R.I.H.
2130		Circulate bottoms up.
2215		Drill 536.70 - 542.00m.
0300		Condition mud (rod rattle).
0330		Drill to 545.80m.
31 August	0600	Drill (Four hours of this time was spent trying to recover dropped core).
	1800	Pull out of hole and change to step bit.
	2000	Run in hole.
	2200	Circulate bot-up.
	2230	Drill
	0300	Mud work.
	0330	Drill, rod rattle in hole, slow drilling.

1 September	0600	Circulate and condition hole.
	0830	Drill - slow drilling, rod rattle in hole.
	1000	Fishing - broken drill rod at 500m.
	1400	Drill - slow drilling, rod rattle in hole.
	1645	Pull rods out of hole - core catcher, broken off core tube.
	1800	P.O.O.H. Reamer broken in hole.
	1900	R.I.H. Find two r/s rods @ 108-100mtrs.
	2130	Circulate on bottom.
	2230	Pressure test drill string to 950 p.s.i.
	2330	Drill out bit (pick up lifter) case half reamer stuck in wall of hole.
	0115	Drill
	0245	Rod jammed on reamer in wall (free).
	0330	Drill.
2 September	0600	C. & C. hole.
	0700	Drill.
	0800	Drop in water pressure, pressure test drill string to 1,000 p.s.i. o.k.
	0945	Drill, slow drilling revs - rod rattle in hole.
	1800	Drill.
3 September	0330	P.O.O.H.
	0600	Run in hole with new bit.
	0800	Pressure test drill string 1,000 p.s.i. o.k.
	0900	C. & C. mud in hole.
	1000	Drill.
4 September	1800	Drill.
	0600	Drill.
	0700	Adjust rig engine clutch, and throttle.
	0730	Drill.
	1000	C. & C. mud in hole.
	1130	P.O.O.H. change drill bit, R.I.H.
	1630	C. & C. hole.
	1700	Drill.
5 September	1800	Drill
	0600	Drill.
	0930	Rods silted - tube jammed in rods - run fresh water - condition & circulate.
	1630	Pull out of hole.
	1800	P.O.O.H., End of hole T.D. 689.30 mtrs.
1900	Standby while logging in process.	

6 September	0600	Standby while logging.
	1230	R.I.H.
	1430	Circulate.
	1530	P.O.O.H. to 620 mtrs.
	1600	Mix cement.
	1630	Pump cement and displace plug @ 630 mtrs.
	1700	P.O.O.H., in 6m and lay down.
7 September	0600	P.O.O.H. and lay down.
	0930	Dismantle B.O.P.
	1130	Mast down and shift.
8 September	0600	Repair rig and set up site.
	1600	Mix mud.



APPENDIX II

Mud/Consumable Summaries

ALEXANDER-1

DATE	SHIFT	DEPTH	HOLE SIZE	BIT NO.	SERIAL NO.	BIT TYPE	RPM	W.O.B. kg.	REMARKS
31/7	N	5.0				Tm C			
1/8	D	10.9							6 <sup>5</sup> / <sub>8</sub> " U2FL4S Atlas Brad. Csg WOC, Drill cem, notsat
	N	-							
2/8	D								Recem. WOC
	N	20.0		1		S'Pax			S'Pax from 17.0m-27m
3/8	D	27.9	5 <sup>5</sup> / <sub>8</sub>	2	22537	Tric		3000	Casing dropped. Fish
	N	34.0	5 <sup>5</sup> / <sub>8</sub>	3	64850	Claw		7000	Wait casing Shale
4/8	D	42.0	5 <sup>9</sup> / <sub>16</sub>	4			120	2500	Bit change at 36m
	N	44.0	"	4					11½ hr drilling 2x101 Collars
5/8	D	46.6	101	5	123/2	Aus SS	120	2500	5½ hr drilling
	N	52.2	5 <sup>3</sup> / <sub>8</sub>	6	71124	Tric	120	2000	Coring 46.6-50.2, 51.1
6/8	D	60.8	101	5	123/2	SS	200	3500	LC2
	N	71.8	101	5					Ream 51.1-57.0 (5 <sup>5</sup> / <sub>8</sub> ")
7/8	D	-							Ream to 71.8 Case 5" Cement
	N								WOC Cement 14.6lb
8/8	D								BOP Test, unsuccessful
	N								Cement, WOC (11hr)
9/8	D								BOP Test, unsucc. Tag @ 50m
	N								squeeze cem. @ 550psi. Test
									BOP Drill cement

ALEXANDER-1 (cont)

DATE	SHIFT	DEPTH	HOLE SIZE	BIT NO.	SERIAL NO.	BIT TYPE	RPM	W.O.B. kg.	RAPID GEL 25KG	RAPID TROL IKG	SODA ASH	POLYMER 20 LTR	POLYVIC (CUP)
10/8	D	89.9	101	6	L98246	S 2							
	N	119.8											
11/8	D	150.8					700	3500		6			
	N	171.0								6			
12/8	D	188.8					700			4			2
	N	209.6								2			
13/8	D	215.8		7	123-1	3 SF	350	5500					
	N	232.0											
14/8	D	252.2					500	4500		2			30
	N	269.6								11			
15/8	D	279.4	101	7	123-1	Aus S/F				14			
	N	280.7								8			
16/8	D&N												
17/8	D&N												
18/8	D&N												
19/8	D&N												
20/8	D												
	N												
21/8	D	287.8											
	N	311.8											
22/8	D	329.8					800	4000		2			
	N	344.7								5			
23/8	D	348.8								6		1	
	N	360.8								12		L99488	
24/8	D	377.8					500	2500			25kg		
	N	401.8											

ALEXANDER-1 (cont)

DATE	SHIFT	DEPTH	HOLE SIZE	BIT NO.	SERIAL NO.	BIT TYPE	RPM	W.O.B. kg.	RAPID TROL	POLYMER 20 LITRE	SODA ASH 25KG	TORQ TRIM LITRE
25/8	D	422.8					650	2500				
	N	432.8		13	L99487	S 6						
26/8	D	449.8					800	2000				
	N	450.3		11	L99496							
27/8	D	451.9										
	N	464.2							6		1	
28/8	D	479.3					650	3500	12	25		
	N	496.8					450	3500	6			
29/8	D	512.8							22		1	
	N	525.5					300	2500	9		1	
30/8	D	536.7					600	2500	20			
	N	545.8		14	L99486	S 2	600	2500	20			
31/8	D	563.8							7			
	N	575.7		15	138-1	AUS S/F	300	300	9		1	
1/9	D	583.8								25		205
	N	590.8		14	L99486	S 2			8			
2/9	D	605.8		14	L99486	S 2	400	2500	3			
	N	618.3							8	25		
3/9	D	637.8			L99489	8 S/F			3	25		
	N	665.8			L99489				10			
4/9	D	670.9			L11127	8 S/F			8			
	N	686.4			L11127							
5/9	D	689.3										
	N								8			

APPENDIX III

GEOCHEMICAL ANALYSES

by

AMDEL

DEPTH (m)	SAMPLE	T MAX	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
102	201	436	0.33	1.40	0.11	1.73	0.19	12.72	0.14	0.78	179	14
112	202	428	1.56	3.40	0.29	4.96	0.31	11.72	0.41	1.44	236	20
142	205	435	0.42	1.43	0.32	1.85	0.23	4.46	0.15	0.78	183	41
152	206	431	0.53	1.33	0.25	1.86	0.28	5.32	0.15	0.72	185	35
162	207	436	0.48	1.33	0.27	1.81	0.27	4.92	0.15	0.70	190	39
173	208	430	0.61	2.16	0.26	2.77	0.22	8.30	0.23	0.99	218	26
183	209	439	1.01	3.24	0.34	4.25	0.24	9.52	0.35	1.50	216	23
193	210	434	2.16	5.76	0.57	7.92	0.27	10.10	0.66	2.10	274	27
203	211	433	0.58	0.97	0.43	1.55	0.38	2.25	0.12	0.68	143	63
213	212	432	2.48	6.03	0.47	8.51	0.29	12.82	0.70	2.15	280	22
223	213	404	3.43	3.65	0.45	7.08	0.48	8.11	0.59	1.39	263	32
253	216	421	2.65	2.97	0.57	5.62	0.41	5.21	0.62	1.54	192	37
263	217	384	1.33	0.98	0.50	2.31	0.58	1.95	0.38	0.61	160	82
273	218	433	2.87	3.03	0.50	5.90	0.49	6.07	0.98	1.69	179	27
283	219	434	3.96	12.07	0.77	16.03	0.25	15.67	1.33	4.35	277	18
293	220	435	2.87	13.84	1.03	16.71	0.17	13.48	1.04	5.75	240	17
303	221	435	2.78	16.50	0.96	19.28	0.14	17.31	1.29	6.90	240	14
313	222	440	4.37	12.04	0.69	16.41	0.27	17.44	1.36	5.45	221	13
323	223	437	2.75	7.46	0.66	10.21	0.27	11.30	0.85	3.25	230	20
333	224	439	4.35	11.45	0.69	15.80	0.28	16.59	1.31	4.90	234	14
333	225	447	4.17	17.48	0.38	21.65	0.19	46.00	1.80	4.25	411	9
343	226	446	3.77	12.82	0.56	16.59	0.23	22.89	1.38	5.10	251	11
353	227	446	3.92	11.48	0.48	15.40	0.25	23.91	1.28	4.65	247	10
363	228	452	4.30	6.32	1.38	10.62	0.40	4.57	0.88	3.10	204	45
373	229	443	5.34	7.34	1.16	12.68	0.42	6.32	1.05	3.85	191	30
383	230	445	6.42	10.72	0.49	17.14	0.37	21.87	1.42	4.90	219	10
393	231	437	2.63	3.17	0.55	5.80	0.45	5.76	0.48	1.66	191	33
403	232	452	3.22	3.98	0.85	7.20	0.45	4.68	0.60	2.35	169	36
413	233	399	1.57	1.88	0.35	3.45	0.46	5.37	0.28	1.03	183	34
423	234	437	3.40	7.49	0.77	10.89	0.31	9.72	0.90	4.35	172	18

DEPTH (m)	SAMPLE	T MAX	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
433	235	446	3.18	6.12	0.59	9.30	0.34	10.37	0.77	3.60	170	16
443	236	450	3.12	3.67	0.51	6.79	0.46	7.19	0.56	2.50	147	20
453	237	430	0.25	0.32	1.70	0.57	0.45	0.18	0.04	0.16	200	1063
463	238	390	0.12	0.28	0.80	0.40	0.30	0.35	0.03	0.24	116	333
473	239	351	0.05	0.17	0.54	0.22	0.23	0.31	0.01	0.13	130	415
483	240	279	0.05	0.25	0.08	0.30	0.17	3.12	0.02	0.13	192	62
493	241	316	0.04	0.21	0.07	0.25	0.17	3.00	0.02	0.13	162	54
503	242	279	0.03	0.11	0.08	0.14	0.21	1.37	0.01	0.10	110	80
513	243	279	0.05	0.21	0.14	0.26	0.19	1.50	0.02	0.08	262	175
523	244	279	0.05	0.16	0.05	0.21	0.25	3.20	0.01	0.07	200	63
533	245	366	0.34	1.05	2.42	1.39	0.25	0.43	0.11	0.28	375	864
543	246	257	0.04	0.17	0.04	0.21	0.20	4.25	0.01	0.08	213	50
553	247	279	0.04	0.06	0.07	0.10	0.40	0.85	0.00	0.20	30	35
563	248	381	0.13	0.17	0.05	0.30	0.43	3.40	0.02	0.22	77	23
573	249	429	0.26	0.30	0.38	0.56	0.46	0.78	0.04	0.60	50	63
583	250	274	0.10	0.00	0.09	0.10	1.00	0.00	0.00	0.13	0	69
593	251	451	0.32	0.55	0.09	0.87	0.37	6.11	0.07	0.89	62	10
603	252	464	0.54	0.97	0.20	1.51	0.36	4.85	0.12	1.79	54	11
613	253	477	0.11	0.11	0.09	0.22	0.50	1.22	0.01	0.46	24	20
	500	457	1.53	7.59	0.51	9.12	0.17	14.88	0.25	5.90	126	9

APPENDIX IV

Reservoir Analyses

Andel



Depth	Eom ppm	Sats %	Arom %	Rest Asp	TMID/Pr	NP/Pr	Pr/ph	Pr/n-C17	Ph/n-C18	Alkine ratios
619	153	33.5	6.8	59.7	0.27	0.63	0.72	0.41	0.45	
627	113	49.10	2.40	48.50	0.13	0.47	0.73	0.47	0.51	
633	182	39.80	4.42	55.78	0.14	0.65	1.89	0.81	0.79	
639	141	39.32	4.85	55.83	0.37	0.62	1.20	0.75	0.59	
644	340	33.38	6.43	60.19	0.20	0.78	1.13	0.93	0.86	
645	183	34.87	4.28	60.85	0.36	0.76	1.00	0.87	0.70	
660	149	52.8	5.5	41.7	0.44	0.81	0.99	0.59	0.41	

RESERVOIR ANALYSIS

Depth	POROSITY		HORIZ PERMEABILITY		VERT PERMEABILITY		BULK VOL		BULK DRY DENSITY		APPARENT GRAIN	
	Ambient	Ovebuden	Amb	O/B	Amb	O/B	Amb	O/B	Amb	O/B	Amb	O/B
619	11.0	10.8	285	279	268		18.41	18.37	2.38	2.38	2.67	2.67
627	9.9		243		183		22.50		2.39		2.65	
633	9.5		80.9		66.4		19.65		2.40		2.65	
639	5.8		3.73		0.990		21.32	20.09	2.50	2.65	2.65	2.65
644	4.8		0.086		0.029		19.21	18.28	2.52	2.65	2.65	2.65
645	4.0		0.048		0.020		19.13	18.36	2.56	2.66	2.66	2.66
660	4.8	4.7	0.103	0.072	1.66		21.14	21.11	2.55	2.55	2.68	2.68

FORMATION RESISTIVITY INDEX

Company: Pacific Oil and Gas  
 Well:  
 Field:

Formation:  
 Location:

Saturant: 700ppm  
 Rw @25°C 7.042 ohm.m  
 Overburden Pressure: 1150 psig

Depth (m)	Permeability to Air, millidarcys	Porosity (%)	Formation Resistivity Factor	Brine Sat % Pore Space	Formation Resistivity Index
619	279	10.8	32.0	100.0	1.00
				87.4	1.18
				75.3	1.41
				68.7	1.61
				55.6	2.03
627	206	9.6	32.6	100.0	1.00
				64.2	1.59
				48.9	2.17
				34.4	3.29
				25.0	4.45
633	72.3	9.2	12.9	100.0	1.00
				73.2	1.14
				61.5	1.23
				53.5	1.34
				38.8	1.56
660	0.073	4.7	119.5	100.0	1.00
				83.8	1.21
				73.4	1.40
				68.7	1.52

SAMPLE NO.	DEPTH	WELL NAME	ANALYSIS	CRAE DPO NO.	AMDEL REPORT NO
1367697	619.5	Alexander-1	- - 1. Routine core analysis of 0 and horiz/vert K. 2. Special above at over- burden pressure (700m) 3. T. Section 4. H/C	48209	F7081/88
1369141	627	Alexander-1	- - 1. Routine core analysis of 0 horiz/vert k. 2. T. Section 3. H/C 4. Calc. of a, m and n's on samples to be selected.	48210	F7081/88 F7122/88
140	633	Alexander-1	- - 1. Routine core analysis of 0 horiz/vert k. 2. T. Section 3. H/C 4. Calc. of a, m and n's on samples to be selected.	48210	F7081/88 F7122/88
690	640	Alexander-1	- -48210 1. Routine core analysis of 0 and horiz/vert K. 2. T Section 3. H/C 4. Calc of a, m, and n's on samples to be selected.	F7081/88	F7122/88
691	644	Alexander-1	- -48210 1. Routine core analysis of 0 and horiz/vert K. 2. T Section 3. H/C 4. Calc of a, m, and n's on samples to be selected.	F7081/88	F7122/88
686	644.6	Alexander-1	- - 1. Routine core analysis of 0 and horiz/vert K. 2. T Section 3. H/C 4. Calc of a, m, and n's on samples to be selected.	48210	F7081/88 & F7122/88
				48210	F7081/88 &

1369698	660.0	Alexander-1	-	-	48209	F7081/88

TAR-SAND ANALYSIS

1367498	42.0	Alexander-1	-	-	48201	
499	42.0	Alexander-1	-	-	48201	
500	42.0	Alexander-1	-	-	48201	