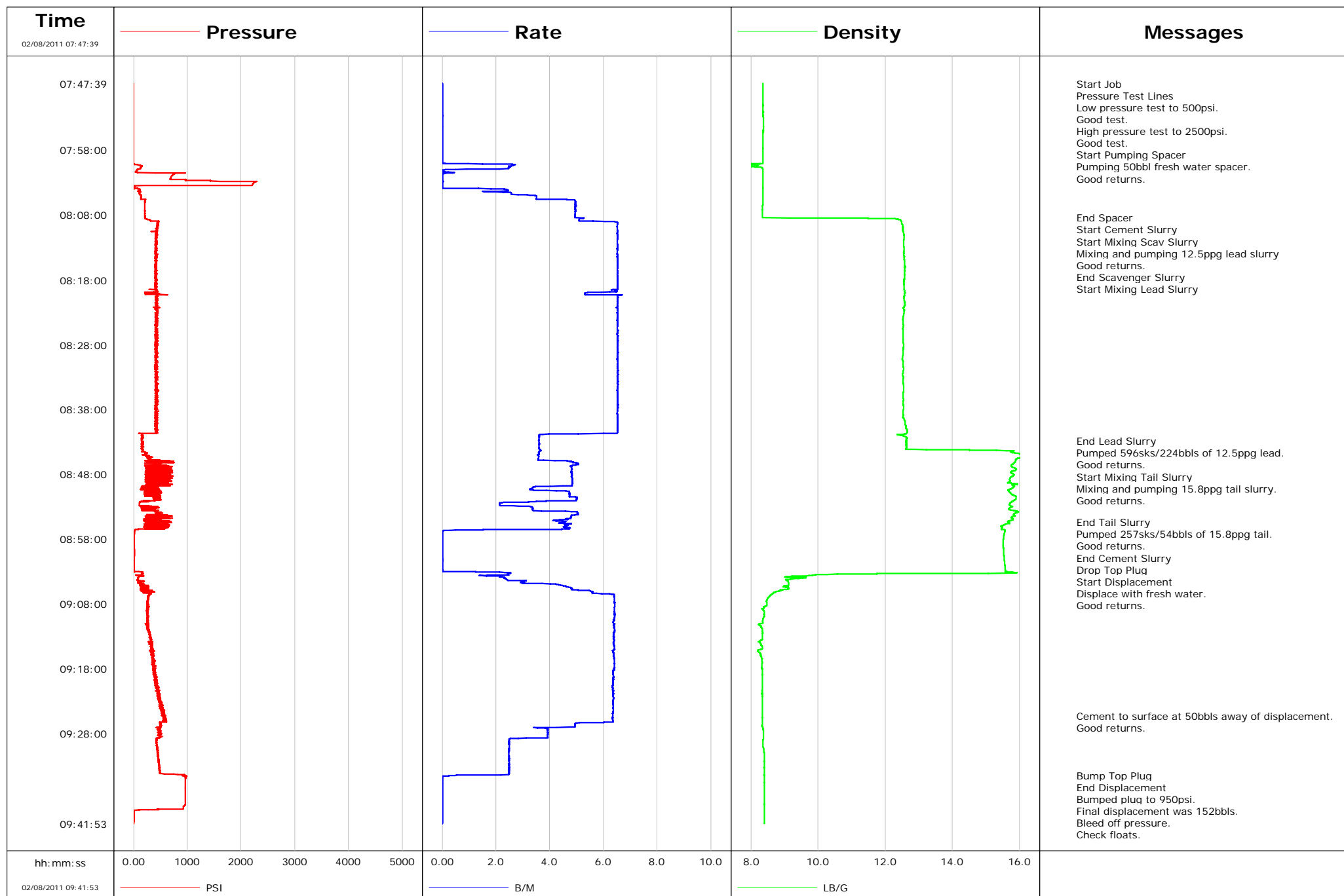


Well ORCHARD UNIT 18-9HM
Field ORCHARD UNIT
Engineer JEFF PATTERSON
Country United States

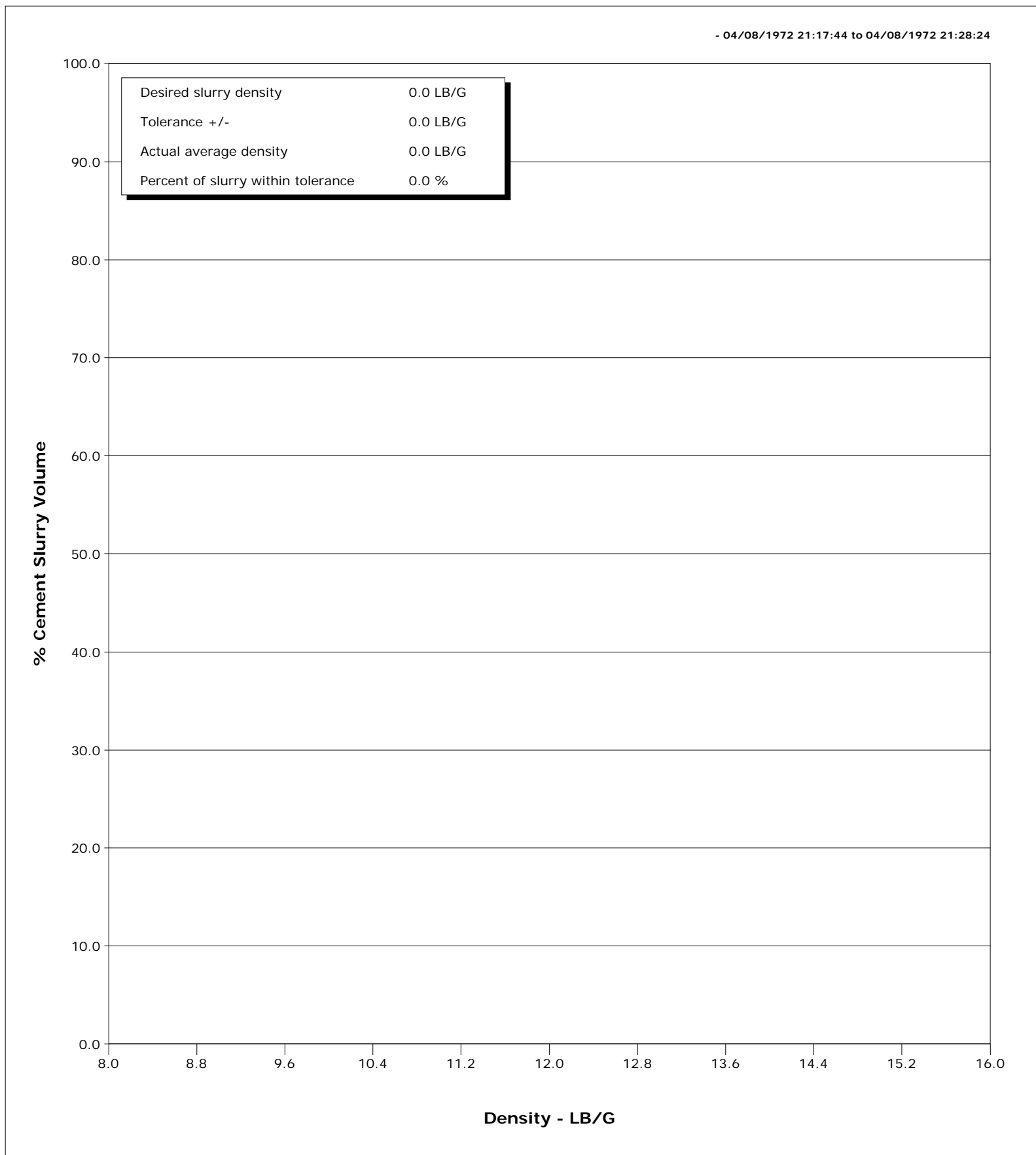
Client ENCANA
SIR No. BAD4-00303
Job Type 10 3/4" SURFACE
Job Date 02-08-2011





Cementing Qa/Qc Density Report

Well	ORCHARD UNIT 18-9HM	Client	ENCANA
Field	ORCHARD UNIT	SIR No.	BAD4-00303
Engineer	JEFF PATTERSON	Job Type	10 3/4" SURFACE
Country	United States	Job Date	02-08-2011



				Customer ENCANA			Job Number BAD4-00303				
Well ORCHARD UNIT 18-9HM ORCHARD UNIT 18-9HM			Location (legal) K200U			Schlumberger Location GRAND JUNCTION, COLORADO			Job Start Feb/08/2011		
Field ORCHARD UNIT		Formation Name/Type SHALE		Deviation 0 deg		Bit Size 14.8 in		Well MD 1591.0 ft		Well TVD 1591.0 ft	
County GARFIELD		State/Province Colorado		BHP psi		BHST 100 degF		BHCT 85 degF		Pore Press. Gradient lb/gal	
Well Master 0631225414		API/UWI									
Rig Name ENSIGN 119		Drilled For Gas		Service Via Land		Casing/Liner					
						Depth, ft		Size, in		Weight, lb/ft	
										Grade	
										Thread	
Offshore Zone		Well Class New		Well Type Development		1591.0		10.8		40.5	
						0.0		0.0		0.0	
Drilling Fluid Type		Max. Density lb/gal		Plastic Viscosity cP		Tubing/Drill Pipe					
						T/D		Depth, ft		Size, in	
										Weight, lb/ft	
										Grade	
										Thread	
Service Line Cementing		Job Type 10 3/4" SURFACE									
Max. Allowed Tub. Press 2500 psi		Max. Allowed Ann. Press psi		WH Connection 10 3/4" CEMENTHEAD		Perforations/Open Hole					
						Top, ft		Bottom, ft		shot/ft	
										No. of Shots	
										Total Interval ft	
										Diameter in	
						Treat Down Casing		Displacement 152.0 bbl		Packer Type	
										Packer Depth ft	
						Tubing Vol. bbl		Casing Vol. 156.0 bbl		Annular Vol. 163.0 bbl	
										Openhole Vol. 325.0 bbl	
Casing/Tubing Secured <input checked="" type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>		Casing Tools				Squeeze Job			
Lift Pressure 710 psi				Shoe Type Guide				Squeeze Type			
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 1591.0 ft				Tool Type			
No. Centralizers		Top Plugs 1		Bottom Plugs		Stage Tool Type				Tool Depth ft	
Cement Head Type Single						Stage Tool Depth ft				Tail Pipe Size in	
Job Scheduled For Feb/08/2011		Arrived on Location Feb/08/2011		Leave Location Feb/08/2011		Collar Type Float				Tail Pipe Depth ft	
						Collar Depth 1550.0 ft				Sqz. Total Vol. bbl	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message					
02/08/2011	07:47:39	-3	0.0	8.37	0.0	Started Acquisition					
02/08/2011	07:47:40	-3	0.0	8.37	0.0	Start Job					
02/08/2011	07:47:42	-3	0.0	8.37	0.0	Pressure Test Lines					
02/08/2011	07:47:43	-3	0.0	8.37	0.0	Low pressure test to 500psi.					
02/08/2011	07:47:44	-3	0.0	8.37	0.0	Good test.					
02/08/2011	07:47:46	-3	0.0	8.37	0.0	Start Pumping Spacer					
02/08/2011	07:47:47	-3	0.0	8.37	0.0	Pumping 50bbl fresh water spacer.					
02/08/2011	07:49:19	-8	0.0	8.37	0.0						
02/08/2011	07:50:59	-9	0.0	8.37	0.0						
02/08/2011	07:52:39	-9	0.0	8.37	0.0						
02/08/2011	07:54:19	-5	0.0	8.37	0.0						
02/08/2011	07:55:59	-5	0.0	8.37	0.0						
02/08/2011	07:57:39	-6	0.0	8.37	0.0						
02/08/2011	07:59:19	-5	0.0	8.37	0.0						
02/08/2011	08:00:59	74	0.3	8.36	2.1						
02/08/2011	08:02:39	971	0.0	8.36	2.1						
02/08/2011	08:04:19	84	2.1	8.36	3.1						
02/08/2011	08:05:59	209	5.0	8.36	8.9						
02/08/2011	08:07:39	211	5.0	8.35	17.1						
02/08/2011	08:08:26	205	5.0	8.46	21.0	End Spacer					
02/08/2011	08:08:30	208	5.2	11.49	21.3	Start Cement Slurry					

Well ORCHARD UNIT 18-9HM ORCHARD UNIT 18-9HM			Field ORCHARD UNIT		Job Start Feb/08/2011	Customer ENCANA	Job Number BAD4-00303
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
02/08/2011	08:08:42	278	5.1	12.42	0.7	Mixing and pumping 12.5ppg lead slurry	
02/08/2011	08:08:46	311	5.1	12.44	1.0	Good returns.	
02/08/2011	08:09:19	444	6.5	12.49	4.3		
02/08/2011	08:10:59	428	6.5	12.55	15.2		
02/08/2011	08:11:06	417	6.5	12.55	15.9	End Scavenger Slurry	
02/08/2011	08:11:07	411	6.5	12.55	16.0	Start Mixing Lead Slurry	
02/08/2011	08:12:39	415	6.5	12.54	26.0		
02/08/2011	08:14:19	429	6.5	12.56	36.9		
02/08/2011	08:15:59	432	6.5	12.58	47.7		
02/08/2011	08:17:39	395	6.5	12.58	58.6		
02/08/2011	08:19:19	413	6.5	12.56	69.5		
02/08/2011	08:20:59	408	6.5	12.56	79.8		
02/08/2011	08:22:39	429	6.5	12.57	90.7		
02/08/2011	08:24:19	412	6.5	12.53	101.6		
02/08/2011	08:25:59	396	6.5	12.53	112.4		
02/08/2011	08:27:39	401	6.5	12.53	123.3		
02/08/2011	08:29:19	460	6.5	12.53	134.1		
02/08/2011	08:30:59	427	6.5	12.54	145.0		
02/08/2011	08:32:39	441	6.5	12.51	155.9		
02/08/2011	08:34:19	415	6.5	12.54	166.7		
02/08/2011	08:35:59	416	6.5	12.53	177.6		
02/08/2011	08:37:39	431	6.5	12.54	188.5		
02/08/2011	08:39:19	399	6.5	12.54	199.3		
02/08/2011	08:40:59	394	6.5	12.62	210.2		
02/08/2011	08:42:39	159	3.6	12.62	218.5		
02/08/2011	08:42:52	147	3.6	12.63	219.3	End Lead Slurry	
02/08/2011	08:42:54	157	3.6	12.63	219.4	Pumped 596sks/224bbls of 12.5ppg lead.	
02/08/2011	08:44:19	169	3.7	15.30	224.5		
02/08/2011	08:44:40	213	3.6	15.78	225.7	Start Mixing Tail Slurry	
02/08/2011	08:44:43	249	3.6	15.84	225.9	Mixing and pumping 15.8ppg tail slurry.	
02/08/2011	08:45:59	692	4.7	15.87	230.6		
02/08/2011	08:47:39	330	4.8	15.73	238.7		
02/08/2011	08:49:19	643	4.8	15.64	246.7		
02/08/2011	08:50:59	214	4.7	15.74	253.7		
02/08/2011	08:52:39	104	2.1	15.68	260.6		
02/08/2011	08:54:19	628	4.9	15.83	266.9		
02/08/2011	08:55:22	218	4.6	15.65	271.8	End Tail Slurry	
02/08/2011	08:55:23	218	4.5	15.66	271.9	Pumped 257sks/54bbls of 15.8ppg tail.	
02/08/2011	08:55:25	491	4.5	15.67	272.0	End Cement Slurry	
02/08/2011	08:55:28	307	4.5	15.69	272.2	Drop Top Plug	
02/08/2011	08:55:29	307	4.5	15.70	272.3	Start Displacement	
02/08/2011	08:55:30	701	4.5	15.70	272.4	Displace with fresh water.	
02/08/2011	08:55:59	198	4.6	15.45	274.6		
02/08/2011	08:57:39	8	0.0	15.53	277.3		
02/08/2011	08:59:19	7	0.0	15.51	277.3		
02/08/2011	09:00:59	8	0.0	15.53	277.3		
02/08/2011	09:02:39	8	0.0	15.57	277.3		
02/08/2011	09:04:19	74	2.4	9.03	280.1		
02/08/2011	09:05:59	177	5.5	8.88	286.9		
02/08/2011	09:07:39	253	6.4	8.47	297.2		
02/08/2011	09:09:19	256	6.4	8.41	307.9		
02/08/2011	09:10:59	257	6.4	8.36	318.5		
02/08/2011	09:12:39	296	6.4	8.35	329.2		
02/08/2011	09:14:19	330	6.4	8.31	339.8		

Well			Field	Job Start	Customer	Job Number
ORCHARD UNIT 18-9HM ORCHARD UNIT 18-9HM			ORCHARD UNIT	Feb/08/2011	ENCANA	BAD4-00303
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/08/2011	09:17:39	352	6.4	8.33	361.1	
02/08/2011	09:19:19	410	6.4	8.34	371.7	
02/08/2011	09:20:59	414	6.4	8.34	382.3	
02/08/2011	09:22:39	490	6.4	8.35	392.9	
02/08/2011	09:24:19	516	6.4	8.35	403.5	
02/08/2011	09:25:14	589	6.3	8.35	409.3	Cement to surface at 50bbls away of displacement.
02/08/2011	09:25:16	575	6.3	8.35	409.5	Good returns.
02/08/2011	09:25:59	568	6.3	8.35	414.1	
02/08/2011	09:27:39	469	3.9	8.37	422.1	
02/08/2011	09:29:19	419	2.5	8.37	427.9	
02/08/2011	09:30:59	440	2.5	8.40	432.0	
02/08/2011	09:32:39	461	2.5	8.40	436.2	
02/08/2011	09:34:19	743	2.5	8.40	440.3	
02/08/2011	09:34:26	930	1.0	8.40	440.6	Bump Top Plug
02/08/2011	09:34:27	940	1.0	8.40	440.6	End Displacement
02/08/2011	09:34:28	940	0.5	8.40	440.6	Bumped plug to 950psi.
02/08/2011	09:34:29	971	0.5	8.40	440.6	Bleed off pressure.
02/08/2011	09:34:30	944	0.5	8.40	440.6	Total cement to surface was 100bbls.
02/08/2011	09:35:59	963	0.0	8.41	440.6	
02/08/2011	09:37:39	962	0.0	8.41	440.6	
02/08/2011	09:39:19	926	0.0	8.41	440.6	
02/08/2011	09:40:59	1	0.0	8.40	440.6	

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl							
Slurry 5.3	N2	Mud	Maximum Rate 6.7	Total Slurry 440.6	Mud 0.0	Spacer 0.0	N2					
Treating Pressure Summary, psi					Breakdown Fluid							
Maximum 2285	Final -0	Average 385	Bump Plug to 950	Breakdown	Type	Volume bbl	Density lb/gal					
Avg. N2 Percent %	Designed Slurry Volume 0.0 bbl	Displacement 168.4 bbl	Mix Water Temp 70 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>		Volume 100.0 bbl						
				Washed Thru Perfs <input type="checkbox"/>		To ft						
Customer or Authorized Representative DAVID WALL			Schlumberger Supervisor JEFF PATTERSON			Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>					
						-	-					