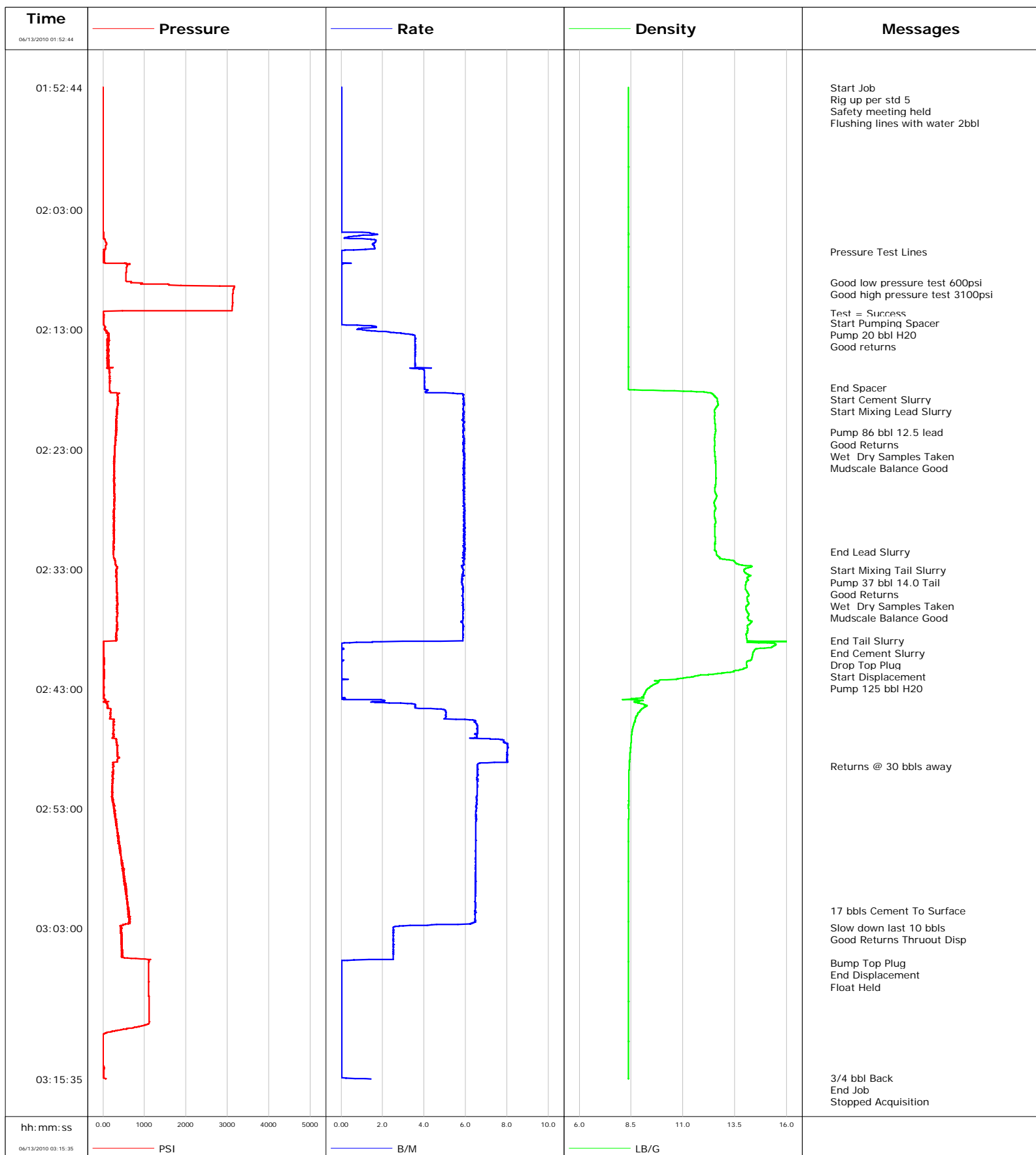


**Well** WF05D-22 K22 596  
**Field** N. Parachute  
**Engineer** Dustin C Krueger  
**Country** United States

**Client** Encana  
**SIR No.** 347450  
**Job Type** 9 5/8" Surface  
**Job Date** 6/12/2010

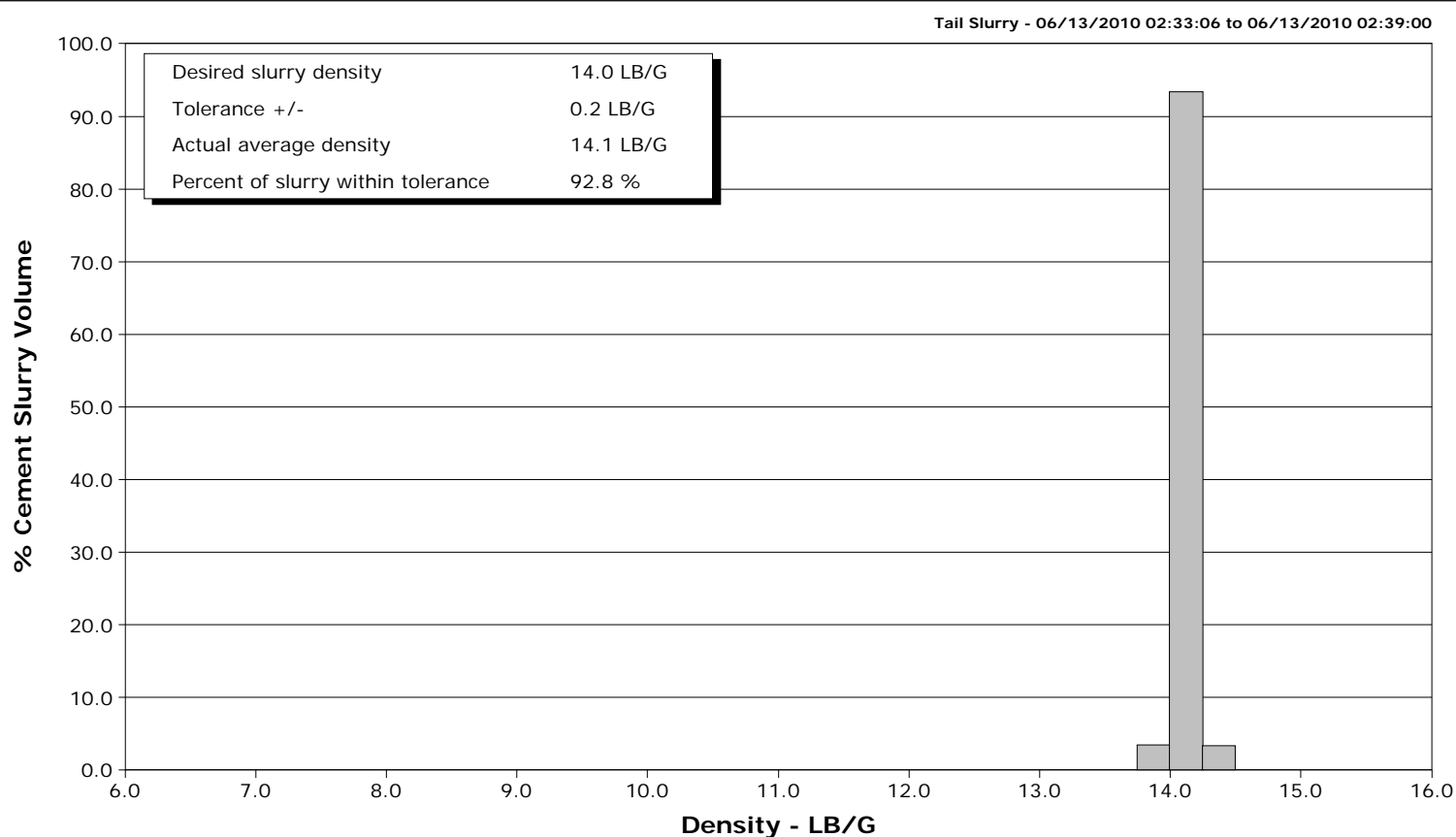
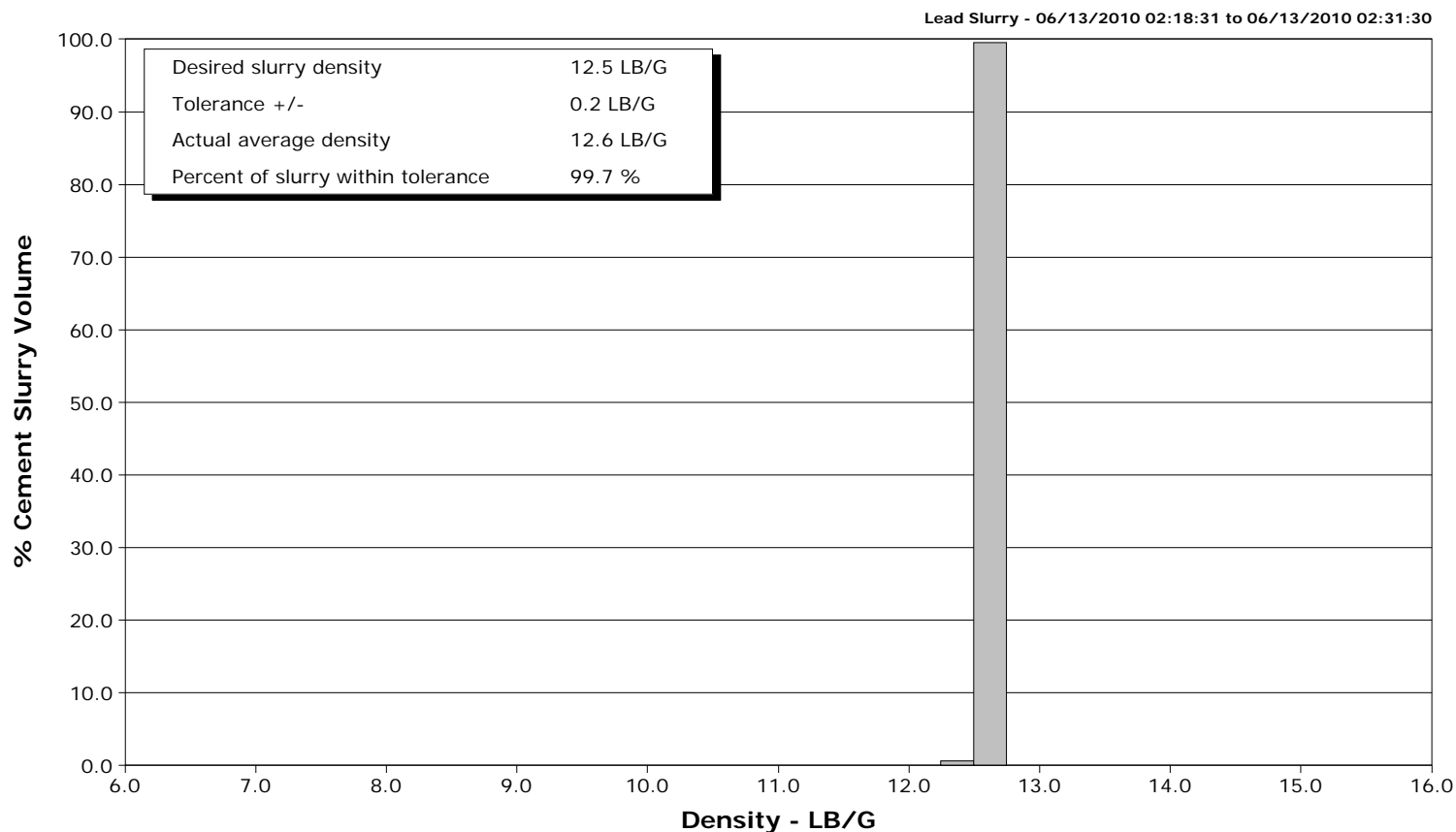


# Schlumberger

## Cementing Qa/Qc Density Report

**Well** WF05D-22 K22 596  
**Field** N. Parachute  
**Engineer** Dustin C Krueger  
**Country** United States

**Client** Encana  
**SIR No.** 347450  
**Job Type** 9 5/8" Surface  
**Job Date** 6/12/2010





# Cementing Service Report

				Customer Encana		Job Number 347450		
Well WF05D-22 K22 596 WF05D-22 K22 596			Location (legal) Patterson 303		Schlumberger Location Grand Junction		Job Start Jun/12/2010	
Field N. Parachute		Formation Name/Type shale		Deviation 15 deg	Bit Size 12.3 in	Well MD 1652.0 ft		Well TVD 0.0 ft
County Garfield		State/Province Colorado		BHP	BHST 120 degF	BHCT 97 degF	Pore Press. Gradient	
Well Master 0631185819		API/UWI						
Rig Name patterson 303	Drilled For Gas	Service Via Land	Casing/Liner					
			Depth, ft	Size, in	Weight, lb/ft	Grade	Thread	
Offshore Zone	Well Class New	Well Type New Well Completion	120.0	16.000	84.0			
			1657.0	9.630	36.0	J55	8rd	
Drilling Fluid Type Bentonite		Max. Density 8.90 lb/gal	Plastic Viscosity 18.000 cP	Tubing/Drill Pipe				
				Depth,	Size,	Weight,	Grade	Thread
Service Line Cementing	Job Type 9 5/8" Surface							
Max. Allowed Tub. Press 2500 psi	Max. Allowed Ann. Press 1500 psi	WH Connection Single Cement head	Perforations/Open Hole					
			Top,	Bottom,		No. of Shots	Total Interval	
							Diameter	
Treat Down Casing		Displacement 124.6 bbl		Packer Type		Packer Depth		
Tubing Vol.		Casing Vol. 124.6 bbl		Annular Vol. 101.0 bbl		Openhole Vol. 237.0 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 820 psi				Shoe Type Guide		Squeeze Type		
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 1652.0 ft		Tool Type		
No. Centralizers 0		Top Plugs 1	Bottom Plugs 0	Stage Tool Type		Tool Depth		
Cement Head Type Single			Stage Tool Depth		Tail Pipe Size			
Job Scheduled For Jun/12/2010 23:00		Arrived on Location Jun/12/2010 23:00	Leave Location Jun/13/2010 05:00	Collar Type Float		Tail Pipe Depth		
				Collar Depth 45.0 ft		Sqz. Total Vol.		
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
06/13/2010	01:10:28					Started Acquisition		
06/13/2010	01:52:44	-1	0.0	8.38	0.0			
06/13/2010	01:52:45					Start Job		
06/13/2010	01:52:45	-1	0.0	8.38	0.0			
06/13/2010	01:52:48					Rig up per std 5		
06/13/2010	01:52:48					Safety meeting held		
06/13/2010	01:52:48	-1	0.0	8.38	0.0			
06/13/2010	01:52:49					Flushing lines with water 2bbl		
06/13/2010	01:52:49	-1	0.0	8.38	0.0			
06/13/2010	01:52:58	-1	0.0	8.38	0.0			
06/13/2010	01:53:28	-1	0.0	8.38	0.0			
06/13/2010	01:53:58	-1	0.0	8.38	0.0			
06/13/2010	01:54:28	-1	0.0	8.38	0.0			
06/13/2010	01:54:58	-1	0.0	8.38	0.0			
06/13/2010	01:55:28	-1	0.0	8.38	0.0			
06/13/2010	01:55:58	-1	0.0	8.38	0.0			
06/13/2010	01:56:28	-1	0.0	8.38	0.0			
06/13/2010	01:56:58	-1	0.0	8.38	0.0			
06/13/2010	01:57:28	-1	0.0	8.38	0.0			
06/13/2010	01:57:58	-1	0.0	8.38	0.0			
06/13/2010	01:58:28	-1	0.0	8.38	0.0			

Well WF05D-22 K22 596 WF05D-22 K22 596			Field N. Parachute		Job Start Jun/12/2010		Customer Encana		Job Number 347450	
Date	Time 24-hr clock	Treating Pressure PSI		Flow Rate B/M	Density LB/G		Volume BBL		Message	
06/13/2010	01:59:28	-1		0.0	8.38		0.0			
06/13/2010	01:59:58	-1		0.0	8.38		0.0			
06/13/2010	02:00:28	-1		0.0	8.38		0.0			
06/13/2010	02:00:58	-1		0.0	8.38		0.0			
06/13/2010	02:01:28	-1		0.0	8.38		0.0			
06/13/2010	02:01:58	-2		0.0	8.38		0.0			
06/13/2010	02:02:28	-3		0.0	8.38		0.0			
06/13/2010	02:02:58	-2		0.0	8.38		0.0			
06/13/2010	02:03:28	-2		0.0	8.38		0.0			
06/13/2010	02:03:58	-2		0.0	8.38		0.0			
06/13/2010	02:04:28	-2		0.0	8.38		0.0			
06/13/2010	02:04:58	7		1.5	8.38		0.1			
06/13/2010	02:05:28	45		1.5	8.37		0.6			
06/13/2010	02:05:58	69		1.6	8.37		1.4			
06/13/2010	02:06:28								Pressure Test Lines	
06/13/2010	02:06:28	27		0.0	8.37		2.0			
06/13/2010	02:06:58	19		0.0	8.37		2.0			
06/13/2010	02:07:28	512		0.2	8.37		2.0			
06/13/2010	02:07:58	565		0.0	8.37		2.0			
06/13/2010	02:08:28	557		0.0	8.37		2.0			
06/13/2010	02:08:58	576		0.0	8.37		2.0			
06/13/2010	02:09:02								Good low pressure test 600psi	
06/13/2010	02:09:02	679		0.0	8.37		2.0			
06/13/2010	02:09:03								Good high pressure test 3100psi	
06/13/2010	02:09:03	678		0.0	8.37		2.0			
06/13/2010	02:09:28	3158		0.0	8.37		2.0			
06/13/2010	02:09:58	3131		0.0	8.37		2.0			
06/13/2010	02:10:28	3124		0.0	8.37		2.0			
06/13/2010	02:10:58	3120		0.0	8.37		2.0			
06/13/2010	02:11:28	34		0.0	8.37		2.0			
06/13/2010	02:11:34								Test = Success	
06/13/2010	02:11:34	-2		0.0	8.37		2.0			
06/13/2010	02:11:58	11		0.0	8.37		2.0			
06/13/2010	02:12:23								Start Pumping Spacer	
06/13/2010	02:12:23	11		0.0	8.37		2.0			
06/13/2010	02:12:26								Pump 20 bbl H2O	
06/13/2010	02:12:26	11		0.0	8.37		2.0			
06/13/2010	02:12:28	11		0.0	8.37		2.0			
06/13/2010	02:12:58	45		0.8	8.37		2.5			
06/13/2010	02:13:28	108		3.5	8.37		3.6			
06/13/2010	02:13:58	133		3.6	8.37		5.4			
06/13/2010	02:14:00								Good returns	
06/13/2010	02:14:00	148		3.6	8.37		5.5			
06/13/2010	02:14:28	98		3.6	8.37		7.2			
06/13/2010	02:14:58	131		3.6	8.37		9.0			
06/13/2010	02:15:28	118		3.6	8.37		10.8			
06/13/2010	02:15:58	144		3.6	8.37		12.5			
06/13/2010	02:16:28	161		4.0	8.37		14.4			
06/13/2010	02:16:58	166		4.0	8.37		16.4			
06/13/2010	02:17:28	164		4.0	8.37		18.4			
06/13/2010	02:17:49								End Spacer	
06/13/2010	02:17:49	164		4.0	8.37		19.8			
06/13/2010	02:17:52								Start Cement Slurry	
06/13/2010	02:17:52	164		4.0	8.37		20.0			

Well WF05D-22 K22 596 WF05D-22 K22 596			Field N. Parachute		Job Start Jun/12/2010		Customer Encana		Job Number 347450	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
06/13/2010	02:18:28	348	5.9	12.48	22.8					
06/13/2010	02:18:31					Start Mixing Lead Slurry				
06/13/2010	02:18:31	354	5.9	12.51	23.1					
06/13/2010	02:18:58	361	5.9	12.66	25.8					
06/13/2010	02:19:28	342	5.9	12.61	28.7					
06/13/2010	02:19:58	331	5.9	12.53	31.7					
06/13/2010	02:20:28	332	5.9	12.53	34.6					
06/13/2010	02:20:58	315	5.9	12.56	37.5					
06/13/2010	02:21:28	322	5.9	12.57	40.5					
06/13/2010	02:21:35					Pump 86 bbl 12.5 lead				
06/13/2010	02:21:35					Good Returns				
06/13/2010	02:21:35	316	5.9	12.56	41.2					
06/13/2010	02:21:36					Wet Dry Samples Taken				
06/13/2010	02:21:36	316	5.9	12.56	41.3					
06/13/2010	02:21:37					Mudscale Balance Good				
06/13/2010	02:21:37	314	5.9	12.56	41.4					
06/13/2010	02:21:58	303	5.9	12.53	43.4					
06/13/2010	02:22:28	296	5.9	12.54	46.4					
06/13/2010	02:22:58	286	5.9	12.51	49.4					
06/13/2010	02:23:28	280	5.9	12.54	52.3					
06/13/2010	02:23:58	282	5.9	12.57	55.3					
06/13/2010	02:24:28	267	5.9	12.58	58.2					
06/13/2010	02:24:58	272	5.9	12.59	61.2					
06/13/2010	02:25:28	264	5.9	12.59	64.1					
06/13/2010	02:25:58	265	5.9	12.57	67.1					
06/13/2010	02:26:28	278	5.9	12.53	70.1					
06/13/2010	02:26:58	276	5.9	12.61	73.0					
06/13/2010	02:27:28	269	5.9	12.50	76.0					
06/13/2010	02:27:58	271	5.9	12.58	78.9					
06/13/2010	02:28:28	256	5.9	12.51	81.9					
06/13/2010	02:28:58	274	5.9	12.56	84.9					
06/13/2010	02:29:28	258	5.9	12.53	87.8					
06/13/2010	02:29:58	269	5.9	12.54	90.8					
06/13/2010	02:30:28	270	6.0	12.56	93.8					
06/13/2010	02:30:58	246	6.0	12.54	96.7					
06/13/2010	02:31:28	259	6.0	12.56	99.7					
06/13/2010	02:31:30					End Lead Slurry				
06/13/2010	02:31:30	252	6.0	12.59	99.9					
06/13/2010	02:31:58	251	5.9	12.73	102.7					
06/13/2010	02:32:28	305	5.9	13.52	105.6					
06/13/2010	02:32:58	323	5.9	14.00	108.6					
06/13/2010	02:33:06					Start Mixing Tail Slurry				
06/13/2010	02:33:06	329	5.9	13.94	109.3					
06/13/2010	02:33:28	342	5.8	14.15	111.5					
06/13/2010	02:33:50					Pump 37 bbl 14.0 Tail				
06/13/2010	02:33:50					Good Returns				
06/13/2010	02:33:50	334	5.8	14.11	113.6					
06/13/2010	02:33:51					Wet Dry Samples Taken				
06/13/2010	02:33:51					Mudscale Balance Good				
06/13/2010	02:33:51	334	5.8	14.14	113.7					
06/13/2010	02:33:58	334	5.8	14.11	114.4					
06/13/2010	02:34:28	327	5.9	14.02	117.3					
06/13/2010	02:34:58	338	5.9	14.12	120.3					
06/13/2010	02:35:28	331	5.9	14.09	123.2					

Well WF05D-22 K22 596 WF05D-22 K22 596			Field N. Parachute		Job Start Jun/12/2010		Customer Encana		Job Number 347450	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
06/13/2010	02:36:28	341	5.9	14.07	129.1					
06/13/2010	02:36:58	331	5.9	14.13	132.0					
06/13/2010	02:37:28	352	5.8	14.27	134.9					
06/13/2010	02:37:58	331	5.9	14.12	137.9					
06/13/2010	02:38:28	316	5.9	14.04	140.8					
06/13/2010	02:38:58	329	5.9	14.09	143.8					
06/13/2010	02:39:00					End Tail Slurry				
06/13/2010	02:39:00	321	5.9	14.09	144.0					
06/13/2010	02:39:01					End Cement Slurry				
06/13/2010	02:39:01	92	4.8	14.59	144.0					
06/13/2010	02:39:06					Drop Top Plug				
06/13/2010	02:39:06	7	1.5	14.29	144.3					
06/13/2010	02:39:07					Start Displacement				
06/13/2010	02:39:07	7	0.8	14.09	144.3					
06/13/2010	02:39:09					Pump 125 bbl H2O				
06/13/2010	02:39:09	7	0.2	15.06	144.3					
06/13/2010	02:39:28	5	0.0	15.32	144.3					
06/13/2010	02:39:58	5	0.0	14.38	144.3					
06/13/2010	02:40:28	18	0.0	14.32	144.3					
06/13/2010	02:40:58	19	0.0	14.07	144.3					
06/13/2010	02:41:28	17	0.0	13.60	144.3					
06/13/2010	02:41:58	22	0.0	11.53	144.3					
06/13/2010	02:42:28	4	0.0	9.81	144.3					
06/13/2010	02:42:58	11	0.0	9.31	144.3					
06/13/2010	02:43:28	14	0.0	9.13	144.3					
06/13/2010	02:43:58	46	2.0	9.02	144.5					
06/13/2010	02:44:28	111	3.6	9.22	145.8					
06/13/2010	02:44:58	182	5.0	8.87	148.1					
06/13/2010	02:45:28	185	5.0	8.71	150.6					
06/13/2010	02:45:58	251	6.5	8.63	153.7					
06/13/2010	02:46:28	258	6.6	8.56	157.0					
06/13/2010	02:46:58	255	6.5	8.52	160.3					
06/13/2010	02:47:28	334	7.9	8.50	163.9					
06/13/2010	02:47:58	346	8.0	8.47	167.9					
06/13/2010	02:48:28	345	8.0	8.45	171.9					
06/13/2010	02:48:58	346	8.0	8.43	175.9					
06/13/2010	02:49:27					Returns @ 30 bbls away				
06/13/2010	02:49:27	239	6.6	8.41	179.4					
06/13/2010	02:49:28	254	6.6	8.41	179.5					
06/13/2010	02:49:58	223	6.6	8.39	182.7					
06/13/2010	02:50:28	233	6.5	8.39	186.0					
06/13/2010	02:50:58	227	6.6	8.39	189.3					
06/13/2010	02:51:28	222	6.6	8.39	192.6					
06/13/2010	02:51:58	227	6.5	8.38	195.9					
06/13/2010	02:52:28	233	6.5	8.38	199.1					
06/13/2010	02:52:58	255	6.5	8.37	202.4					
06/13/2010	02:53:28	282	6.5	8.39	205.6					
06/13/2010	02:53:58	317	6.5	8.37	208.9					
06/13/2010	02:54:28	326	6.5	8.38	212.1					
06/13/2010	02:54:58	351	6.5	8.38	215.4					
06/13/2010	02:55:28	361	6.5	8.38	218.6					
06/13/2010	02:55:58	389	6.5	8.38	221.9					
06/13/2010	02:56:28	403	6.5	8.38	225.1					
06/13/2010	02:56:58	429	6.5	8.38	228.4					

Well WF05D-22 K22 596 WF05D-22 K22 596			Field N. Parachute		Job Start Jun/12/2010		Customer Encana		Job Number 347450	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
06/13/2010	02:57:58	471	6.5	8.38	234.8					
06/13/2010	02:58:28	496	6.5	8.38	238.1					
06/13/2010	02:58:58	514	6.5	8.38	241.3					
06/13/2010	02:59:28	555	6.5	8.38	244.6					
06/13/2010	02:59:58	572	6.5	8.37	247.8					
06/13/2010	03:00:28	582	6.5	8.37	251.0					
06/13/2010	03:00:58	602	6.5	8.37	254.3					
06/13/2010	03:01:28	619	6.5	8.38	257.5					
06/13/2010	03:01:31					17 bbls Cement To Surface				
06/13/2010	03:01:31	609	6.5	8.37	257.8					
06/13/2010	03:01:58	643	6.5	8.38	260.7					
06/13/2010	03:02:28	660	6.5	8.37	264.0					
06/13/2010	03:02:55					Slow down last 10 bbls				
06/13/2010	03:02:55	423	2.5	8.38	266.1					
06/13/2010	03:02:58	443	2.5	8.38	266.2					
06/13/2010	03:03:28	448	2.5	8.38	267.5					
06/13/2010	03:03:42					Good Returns Thruout Disp				
06/13/2010	03:03:42	461	2.5	8.38	268.1					
06/13/2010	03:03:58	454	2.5	8.38	268.8					
06/13/2010	03:04:28	446	2.5	8.38	270.0					
06/13/2010	03:04:58	446	2.5	8.38	271.3					
06/13/2010	03:05:28	492	2.5	8.38	272.5					
06/13/2010	03:05:54					Bump Top Plug				
06/13/2010	03:05:54	1106	0.0	8.38	273.0					
06/13/2010	03:05:55					End Displacement				
06/13/2010	03:05:55	1105	0.0	8.38	273.0					
06/13/2010	03:05:57					Float Held				
06/13/2010	03:05:57	1106	0.0	8.38	273.0					
06/13/2010	03:05:58	1106	0.0	8.38	273.0					
06/13/2010	03:06:28	1104	0.0	8.38	273.0					
06/13/2010	03:06:58	1105	0.0	8.38	273.0					
06/13/2010	03:07:28	1105	0.0	8.38	273.0					
06/13/2010	03:07:58	1106	0.0	8.38	273.0					
06/13/2010	03:08:28	1106	0.0	8.38	273.0					
06/13/2010	03:08:58	1108	0.0	8.38	273.0					
06/13/2010	03:09:28	1108	0.0	8.38	273.0					
06/13/2010	03:09:58	1109	0.0	8.38	273.0					
06/13/2010	03:10:28	1109	0.0	8.38	273.0					
06/13/2010	03:10:58	1110	0.0	8.38	273.0					
06/13/2010	03:11:28	463	0.0	8.38	273.0					
06/13/2010	03:11:58	-3	0.0	8.38	273.0					
06/13/2010	03:12:28	-1	0.0	8.38	273.0					
06/13/2010	03:12:58	-1	0.0	8.38	273.0					
06/13/2010	03:13:28	-1	0.0	8.38	273.0					
06/13/2010	03:13:58	-1	0.0	8.38	273.0					
06/13/2010	03:14:28	-1	0.0	8.38	273.0					
06/13/2010	03:14:58	11	0.0	8.38	273.0					
06/13/2010	03:15:28	6	0.0	8.38	273.0					
06/13/2010	03:15:29					3/4 bbl Back				
06/13/2010	03:15:29	9	0.0	8.38	273.0					
06/13/2010	03:15:31					End Job				
06/13/2010	03:15:31	12	0.2	8.38	273.0					

Well WF05D-22 K22 596 WF05D-22 K22 596	Field N. Parachute	Job Start Jun/12/2010	Customer Encana	Job Number 347450
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Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 5.0	N2	Mud 0.0	Maximum Rate 8.0		Total Slurry 123.0	Mud 0.0	Spacer 20.0	N2
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 3000	Final 1100	Average 0	Bump Plug to 1100	Breakdown	Type FreshWater	Volume 315.0 bbl		Density 8.34 lb/gal
Avg. N2 Percent	Designed Slurry Volume 123.0 bbl		Displacement 125.0 bbl		Mix Water Temp 70 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>	Volume 17.0 bbl	
Customer or Authorized Representative Steve Record			Schlumberger Supervisor Bryan Farnham			Washed Thru Perfs <input type="checkbox"/>	To	
						Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>	
						-		-