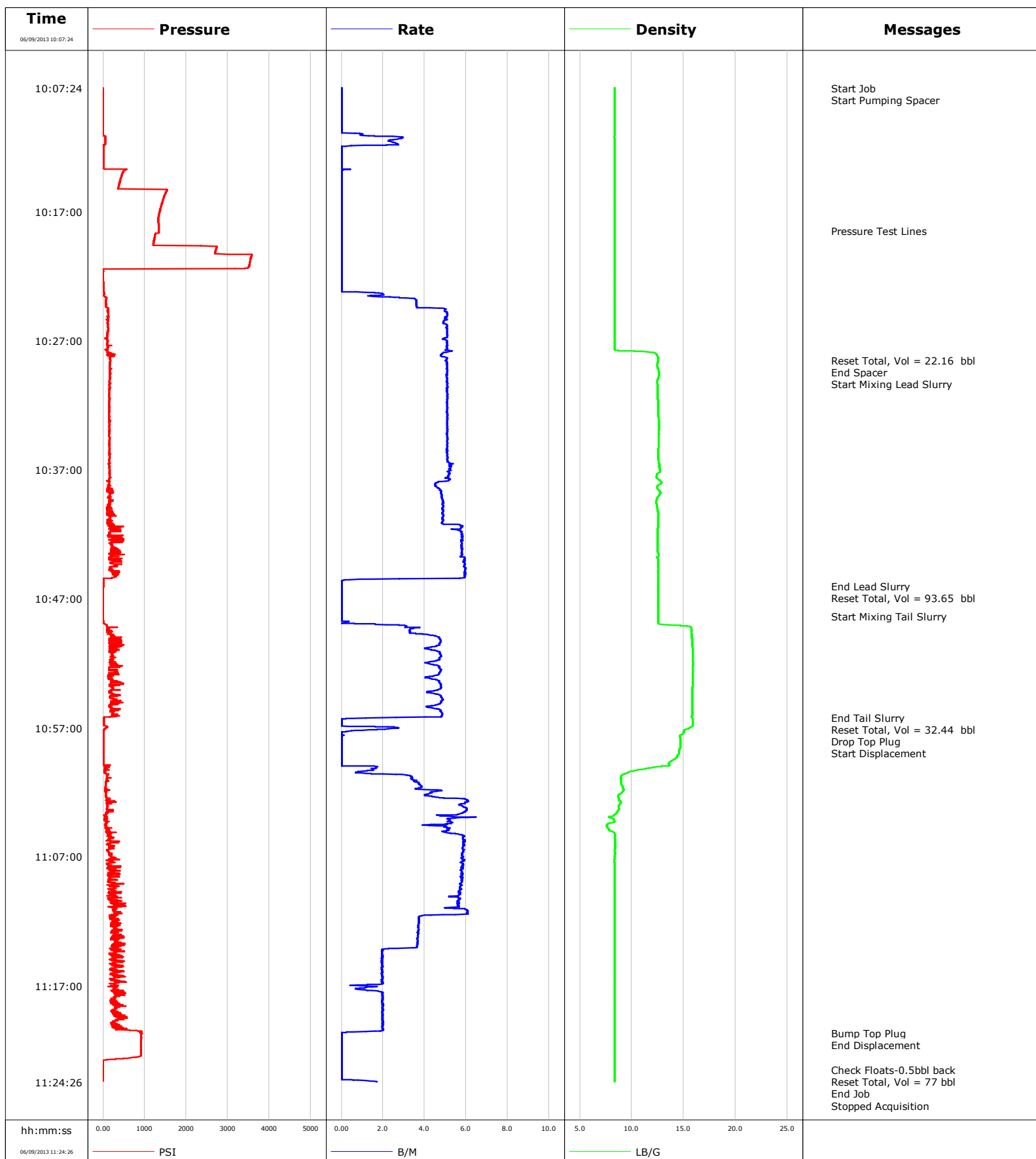


**Well** Hagen Federal 22-5A  
**Field** Parachute  
**Engineer** Michael Simon  
**Country** United States

**Client** Encana  
**SIR No.** C459-01489  
**Job Type** Surface  
**Job Date** 06-09-2013

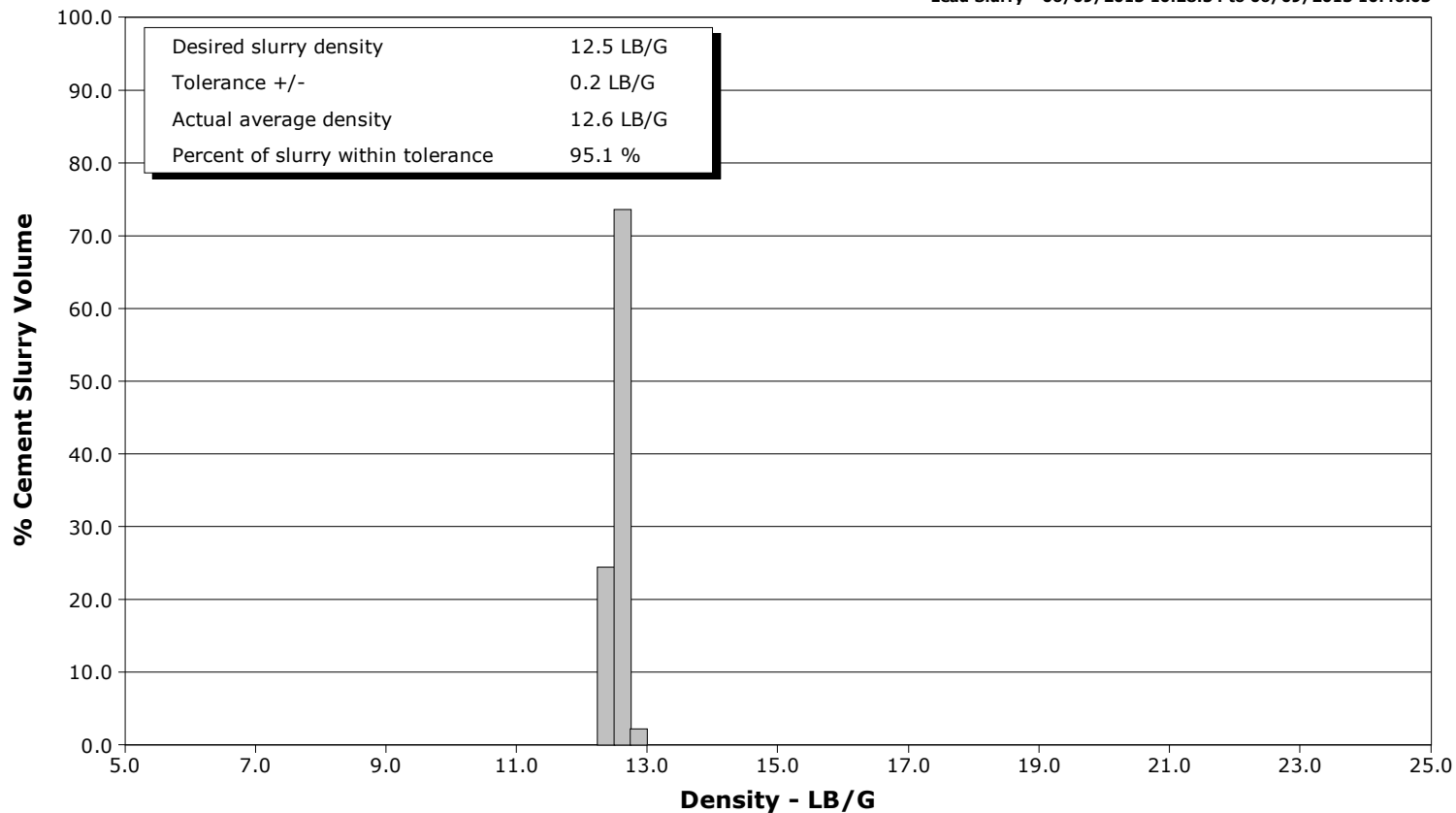


# Schlumberger Cementing Qa/Qc Density Report

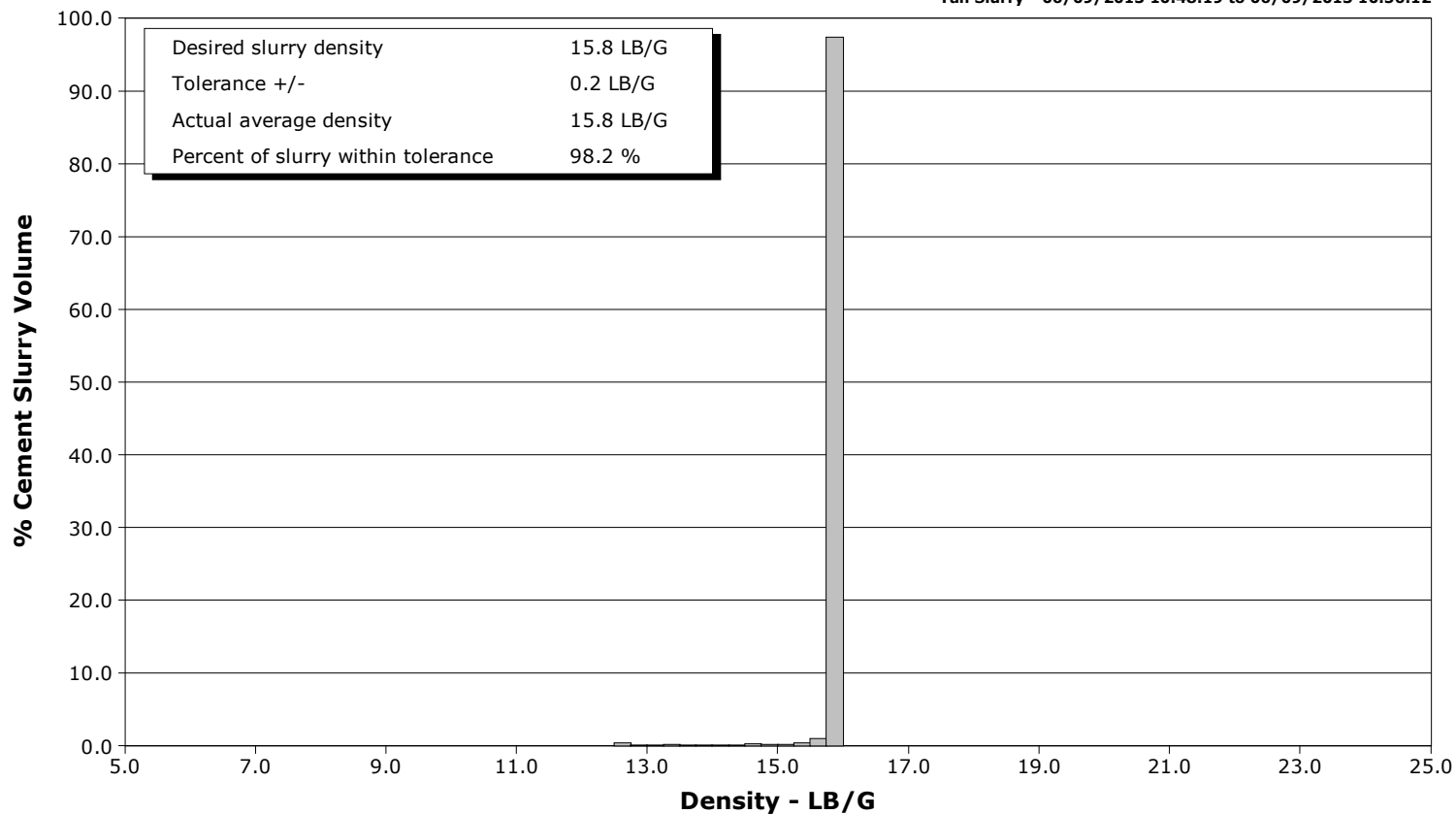
**Well** Hagen Federal 22-5A  
**Field** Parachute  
**Engineer** Michael Simon  
**Country** United States

**Client** Encana  
**SIR No.** C459-01489  
**Job Type** Surface  
**Job Date** 06-09-2013

Lead Slurry - 06/09/2013 10:28:34 to 06/09/2013 10:46:03



Tail Slurry - 06/09/2013 10:48:19 to 06/09/2013 10:56:12





# Cementing Service Report

					Customer Encana			Job Number C459-01489							
Well Hagen Federal 22-5a 22-5A(PC22)				Location (legal) Grand Junction			Schlumberger Location Rock Springs			Job Start Jun/09/2013					
Field Parachute		Formation Name/Type Shale			Deviation		Bit Size 12.7 in		Well MD 1038.0 ft		Well TVD 1000.0 ft				
County Garfield		State/Province Colorado			BHP		BHST 94 degF		BHCT 85 degF		Pore Press. Gradient				
Well Master 0631462957		API/UWI 05045220110000													
Rig Name Patterson 303		Drilled For Gas		Service Via Land		Casing/Liner									
Offshore Zone		Well Class New		Well Type Development		Depth, ft		Size, in		Weight, lb/ft		Grade		Thread	
						1036.5		9.630		36.0		J55		8RD	
Drilling Fluid Type		Max. Density 9.20 lb/gal		Plastic Viscosity		0.0		0.000		0.0					
						Tubing/Drill Pipe		Depth,		Size,		Weight,		Grade	
Service Line Cementing		Job Type Surface													
Max. Allowed Tub. Press 500 psi		Max. Allowed Ann. Press		WH Connection Single Cement head		Perforations/Open Hole									
Service Instructions						Top,		Bottom,				No. of Shots		Total Interval	
														Diameter	
						Treat Down Casing		Displacement 77.0 bbl		Packer Type		Packer Depth			
						Tubing Vol.		Casing Vol. 80.1 bbl		Annular Vol. 72.0 bbl		Openhole Vol. 155.0 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 513 psi				Shoe Type Guide				Squeeze Type							
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 1036.5 ft				Tool Type							
No. Centralizers		Top Plugs 1		Bottom Plugs		Stage Tool Type				Tool Depth					
Cement Head Type Single				Stage Tool Depth				Tail Pipe Size							
Job Scheduled For Jun/09/2013		Arrived on Location Jun/09/2013		Leave Location Jun/09/2013		Collar Type Float				Tail Pipe Depth					
						Collar Depth 991.1 ft				Sqz. Total Vol.					
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Stage BBL	Message								
06/09/2013	08:07:43						Started Acquisition								
06/09/2013	10:07:24	-5	0.0	8.37	0.0	0.0									
06/09/2013	10:07:25						Start Job								
06/09/2013	10:07:25	-5	0.0	8.37	0.0	0.0									
06/09/2013	10:07:27						Start Pumping Spacer								
06/09/2013	10:07:27	-5	0.0	8.37	0.0	0.0									
06/09/2013	10:07:43	-5	0.0	8.37	0.0	0.0									
06/09/2013	10:10:43	-5	0.0	8.37	0.0	0.0									
06/09/2013	10:13:43	575	0.4	8.36	2.1	2.1									
06/09/2013	10:16:43	1384	0.0	8.36	2.1	2.1									
06/09/2013	10:18:31						Pressure Test Lines								
06/09/2013	10:18:31	1339	0.0	8.36	2.1	2.1									
06/09/2013	10:19:43	2732	0.0	8.36	2.1	2.1									
06/09/2013	10:22:43	1	0.0	8.36	2.1	2.1									
06/09/2013	10:25:43	122	5.0	8.35	12.0	12.0									
06/09/2013	10:28:31						Reset Total, Vol = 22.16 bbl								
06/09/2013	10:28:31	173	5.1	12.55	26.2	26.2									
06/09/2013	10:28:33						End Spacer								
06/09/2013	10:28:33	177	5.0	12.55	0.2	0.2									
06/09/2013	10:28:34						Start Mixing Lead Slurry								
06/09/2013	10:28:34	173	5.1	12.54	0.3	0.3									

Well Hagen Federal 22-5a 22-5A(PC22)			Field Parachute		Job Start Jun/09/2013	Customer Encana	Job Number C459-01489
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Stage BBL	Message
06/09/2013	10:31:43	144	5.1	12.53	16.3	16.3	
06/09/2013	10:34:43	154	5.1	12.59	31.5	31.5	
06/09/2013	10:37:43	135	5.2	12.56	46.9	46.9	
06/09/2013	10:40:43	188	4.9	12.57	61.4	61.4	
06/09/2013	10:43:43	386	5.8	12.57	78.3	78.3	
06/09/2013	10:46:03						End Lead Slurry
06/09/2013	10:46:03	1	0.0	12.56	88.7	88.7	
06/09/2013	10:46:04						Reset Total, Vol = 93.65 bbl
06/09/2013	10:46:04	0	0.0	12.56	88.7	88.7	
06/09/2013	10:46:43	-3	0.0	12.56	0.0	0.0	
06/09/2013	10:48:19						Start Mixing Tail Slurry
06/09/2013	10:48:19	-3	0.0	12.55	0.0	0.0	
06/09/2013	10:49:43	169	3.8	15.77	2.5	2.5	
06/09/2013	10:52:43	298	4.7	15.88	16.2	16.2	
06/09/2013	10:55:43	176	4.8	15.83	30.1	30.1	
06/09/2013	10:56:12						End Tail Slurry
06/09/2013	10:56:12	29	2.6	15.80	32.4	32.4	
06/09/2013	10:56:13						Reset Total, Vol = 32.44 bbl
06/09/2013	10:56:13	24	2.6	15.83	32.4	32.4	
06/09/2013	10:56:16						Drop Top Plug
06/09/2013	10:56:16	25	0.5	15.88	0.1	0.1	
06/09/2013	10:56:17						Start Displacement
06/09/2013	10:56:17	24	0.2	15.88	0.1	0.1	
06/09/2013	10:58:43	7	0.0	14.59	0.8	0.8	
06/09/2013	11:01:43	92	3.5	9.18	5.6	5.6	
06/09/2013	11:04:43	60	5.0	7.62	21.4	21.4	
06/09/2013	11:07:43	422	5.8	8.35	38.6	38.6	
06/09/2013	11:10:43	259	5.6	8.36	55.8	55.8	
06/09/2013	11:13:43	520	3.7	8.36	68.5	68.5	
06/09/2013	11:16:43	423	2.0	8.36	75.0	75.0	
06/09/2013	11:19:43	311	2.0	8.36	80.5	80.5	
06/09/2013	11:20:39						Bump Top Plug
06/09/2013	11:20:39	896	0.0	8.36	82.2	82.2	
06/09/2013	11:20:40						End Displacement
06/09/2013	11:20:40	929	0.0	8.37	82.2	82.2	
06/09/2013	11:22:43	87	0.0	8.36	82.2	82.2	
06/09/2013	11:23:30						Check Floats-0.5bbl back
06/09/2013	11:23:30	-3	0.0	8.36	82.2	82.2	
06/09/2013	11:24:00						Reset Total, Vol = 77 bbl
06/09/2013	11:24:00	-2	0.0	8.37	82.2	82.2	
06/09/2013	11:24:24						End Job
06/09/2013	11:24:24	-29	1.7	8.36	0.1	0.1	
06/09/2013	11:24:26	-30	1.7	8.36	0.2	0.2	

<b>Well</b> Hagen Federal 22-5a 22-5A(PC22)	<b>Field</b> Parachute	<b>Job Start</b> Jun/09/2013	<b>Customer</b> Encana	<b>Job Number</b> C459-01489
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Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 4.4	N2	Mud 0.0	Maximum Rate 6.5	Total Slurry 126.0	Mud 0.0	Spacer 20.0	N2	
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 3576	Final -30	Average 360	Bump Plug to 746	Breakdown	Type	Volume	Density	
Avg. N2 Percent	Designed Slurry Volume 125.0 bbl		Displacement 77.0 bbl	Mix Water Temp 75 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>	Volume 47.0 bbl		
Customer or Authorized Representative Charlie Brown			Schlumberger Supervisor Michael Simon		Washed Thru Perfs <input type="checkbox"/>	To		
					Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>		
					-		-	