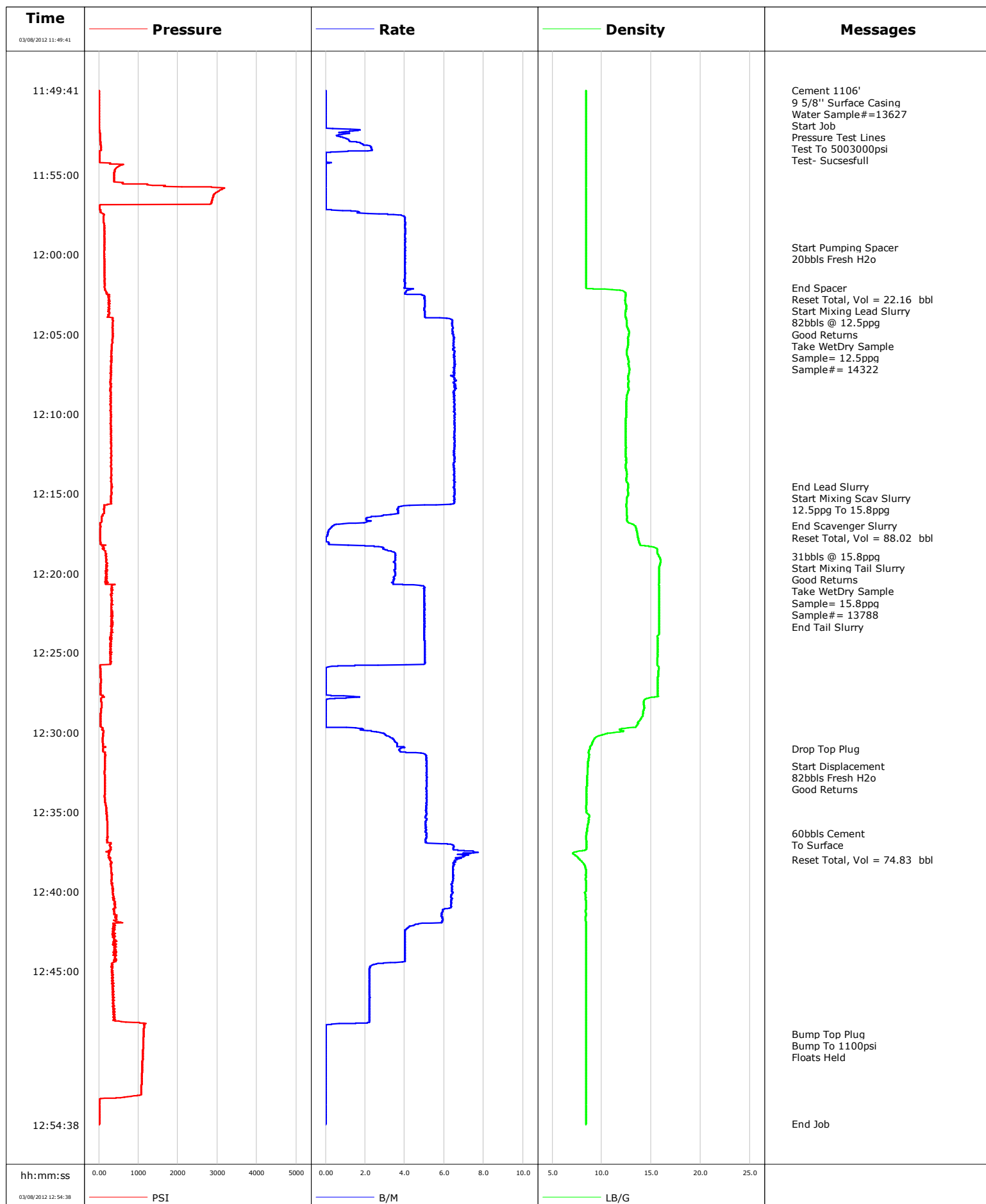


**Well** COOK GARDNER 20-4A  
**Field** BATTLEMENT MESA  
**Engineer**  
**Country** United States

**Client** ENCANA  
**SIR No.** COBA-00266  
**Job Type** SURFACE  
**Job Date** 03-08-2012

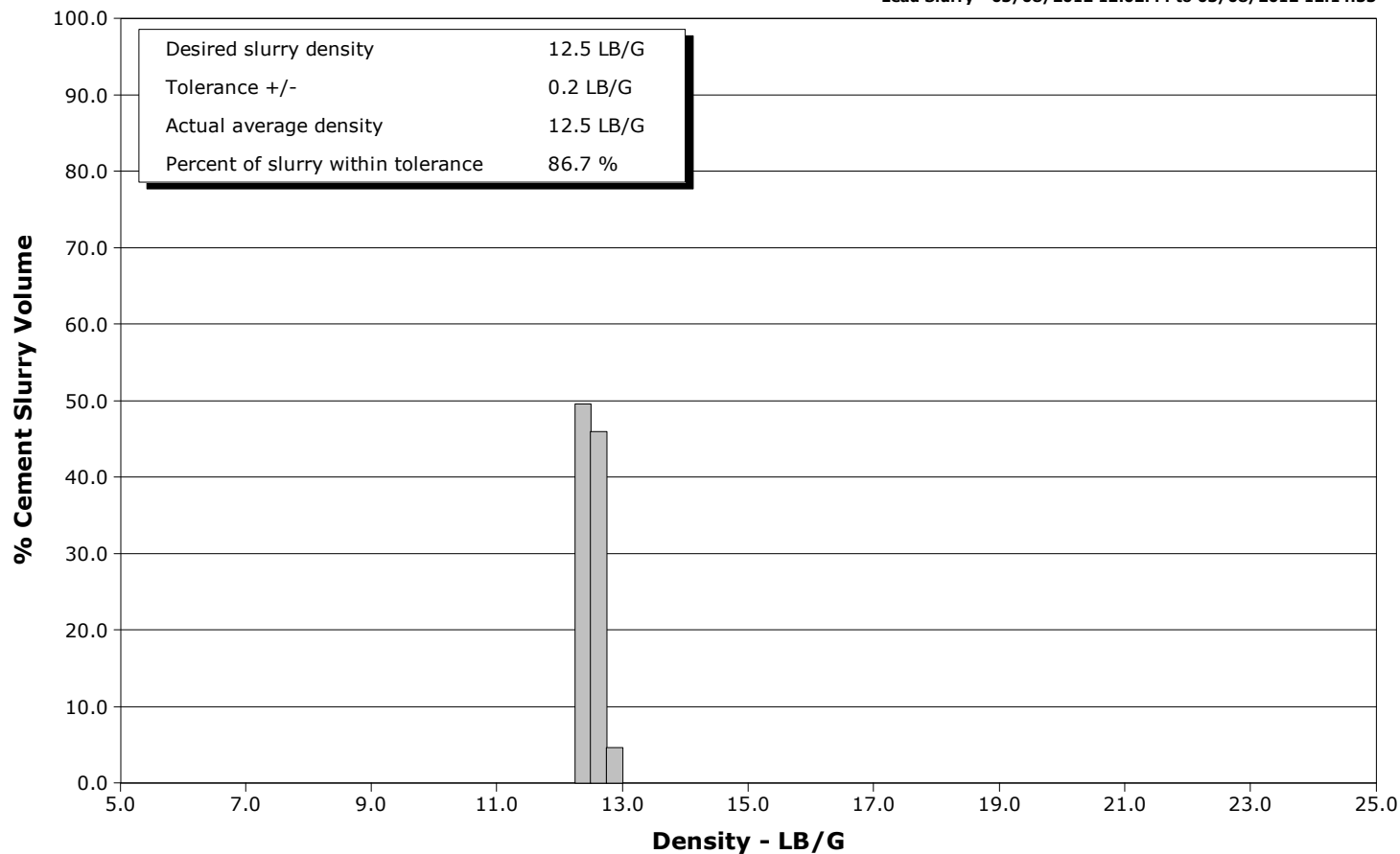


# Schlumberger Cementing Qa/Qc Density Report

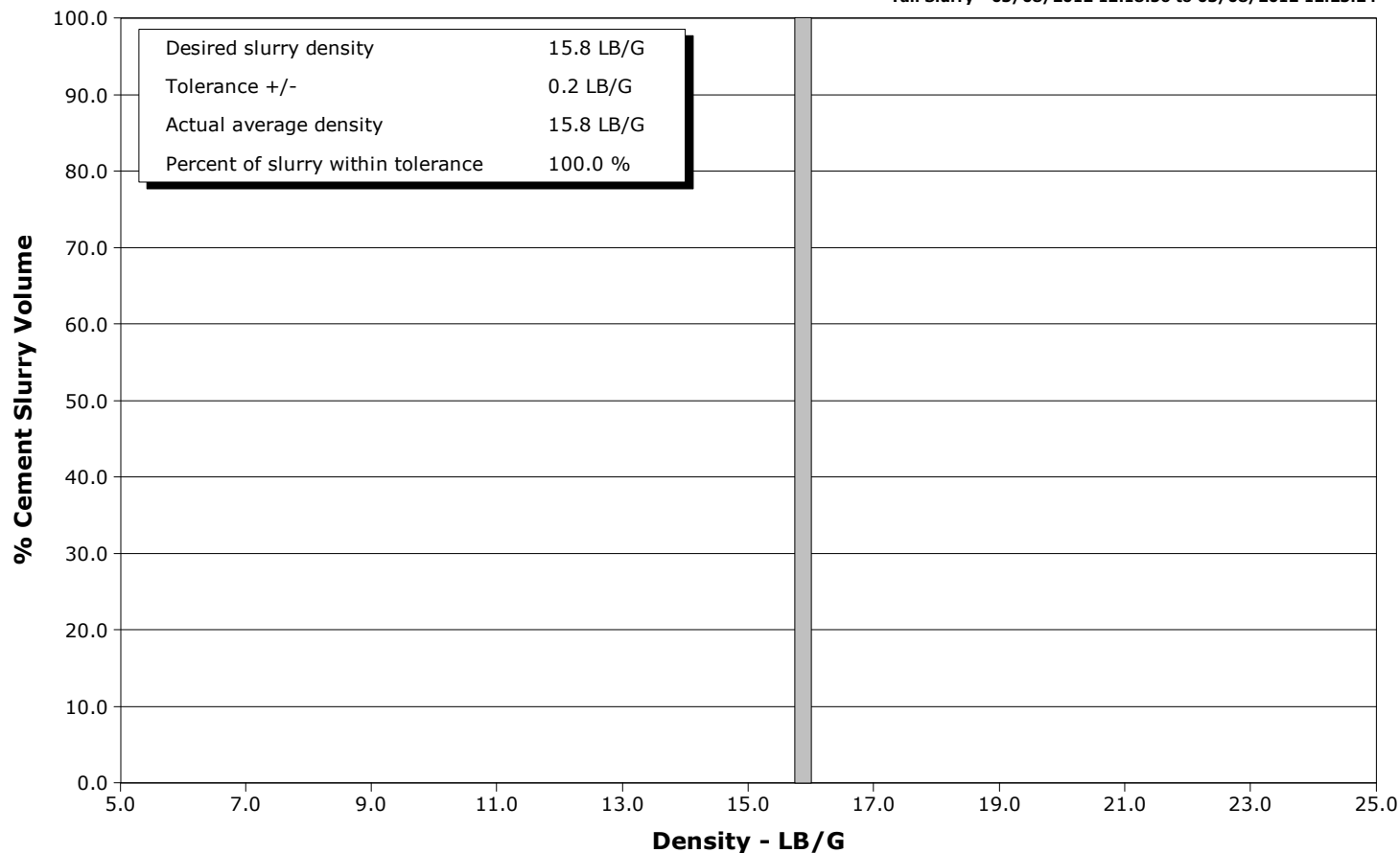
**Well** COOK GARDNER 20-4A  
**Field** BATTLEMENT MESA  
**Engineer**  
**Country** United States

**Client** ENCANA  
**SIR No.** COBA-00266  
**Job Type** SURFACE  
**Job Date** 03-08-2012

**Lead Slurry - 03/08/2012 12:02:44 to 03/08/2012 12:14:33**



**Tail Slurry - 03/08/2012 12:18:56 to 03/08/2012 12:23:24**





# Cementing Service Report

				Customer ENCANA			Job Number COBA-00266										
Well COOK GARDNER 20-4A				Location (legal)			Schlumberger Location GCO			Job Start Mar/08/2012							
Field BATTLEMENT MESA				Formation Name/Type			Deviation		Bit Size		Well MD		Well TVD				
County GARFIELD				State/Province Colorado			BHP		BHST		BHCT		Pore Press. Gradient				
Well Master 0631266786				API/UWI													
Rig Name NABORS M-13		Drilled For Gas		Service Via		Casing/Liner											
						Depth,		Size,		Weight,		Grade		Thread			
Offshore Zone		Well Class		Well Type													
Drilling Fluid Type				Max. Density		Plastic Viscosity		Tubing/Drill Pipe									
								Depth,		Size,		Weight,		Grade		Thread	
Service Line Cementing		Job Type SURFACE															
Max. Allowed Tub. Press				Max. Allowed Ann. Press		WH Connection		Perforations/Open Hole									
								Top,		Bottom,				No. of Shots		Total Interval	
<b>Service Instructions</b> 219sks 12.5ppg lead 2.11ft3/sk 150sks 15.8ppg tail 1.17ft3/sk water test= good																Diameter	
Treat Down Casing				Displacement 82.0 bbl				Packer Type				Packer Depth					
Tubing Vol.				Casing Vol. 85.0 bbl				Annular Vol. 62.0 bbl				Openhole Vol. 147.0 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 547 psi								Shoe Type Guide				Squeeze Type					
Pipe Rotated <input type="checkbox"/>				Pipe Reciprocated <input type="checkbox"/>				Shoe Depth 1106.0 ft				Tool Type					
No. Centralizers				Top Plugs		Bottom Plugs		Stage Tool Type				Tool Depth					
Cement Head Type Single								Stage Tool Depth				Tail Pipe Size					
Job Scheduled For Mar/08/2012				Arrived on Location Mar/08/2012		Leave Location Mar/08/2012		Collar Type Diff-Fill				Tail Pipe Depth					
								Collar Depth 1062.0 ft				Sqz. Total Vol.					
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message											
03/08/2012	11:22:17					Started Acquisition											
03/08/2012	11:49:41	4	0.0	8.40	0.0												
03/08/2012	11:49:42					Cement 1106'											
03/08/2012	11:49:42					9 5/8" Surface Casing											
03/08/2012	11:49:42					Water Sample# =13627											
03/08/2012	11:49:42	4	0.0	8.40	0.0												
03/08/2012	11:49:44					Start Job											
03/08/2012	11:49:44	4	0.0	8.40	0.0												
03/08/2012	11:49:46					Pressure Test Lines											
03/08/2012	11:49:46					Test To 5003000psi											
03/08/2012	11:49:46	4	0.0	8.40	0.0												
03/08/2012	11:49:47					Test- Sucsesfull											
03/08/2012	11:49:47	4	0.0	8.40	0.0												
03/08/2012	11:50:17	4	0.0	8.40	0.0												
03/08/2012	11:52:17	15	1.2	8.40	0.3												
03/08/2012	11:54:17	285	0.0	8.40	2.2												
03/08/2012	11:56:17	2902	0.0	8.40	2.2												
03/08/2012	11:58:17	136	4.0	8.39	5.8												
03/08/2012	11:59:31					Start Pumping Spacer											
03/08/2012	11:59:31					20bbls Fresh H2o											
03/08/2012	11:59:31	138	4.0	8.39	10.8												

Well			Field		Job Start		Customer	Job Number
COOK GARDNER 20-4A			BATTLEMENT MESA		Mar/08/2012		ENCANA	COBA-00266
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
03/08/2012	12:02:06					End Spacer		
03/08/2012	12:02:06	150	4.0	8.39	21.2			
03/08/2012	12:02:17	166	4.1	12.08	22.0			
03/08/2012	12:02:20					Reset Total, Vol = 22.16 bbl		
03/08/2012	12:02:20	181	4.1	12.30	22.2			
03/08/2012	12:02:44					Start Mixing Lead Slurry		
03/08/2012	12:02:44	237	5.0	12.39	24.0			
03/08/2012	12:02:45					82bbls @ 12.5ppg		
03/08/2012	12:02:45	257	5.0	12.38	24.1			
03/08/2012	12:02:46					Good Returns		
03/08/2012	12:02:46					Take WetDry Sample		
03/08/2012	12:02:46					Sample= 12.5ppg		
03/08/2012	12:02:46	252	5.0	12.37	24.1			
03/08/2012	12:03:13					Sample#= 14322		
03/08/2012	12:03:13	262	5.0	12.48	26.4			
03/08/2012	12:04:17	348	6.4	12.53	32.2			
03/08/2012	12:06:17	311	6.5	12.53	45.1			
03/08/2012	12:08:17	310	6.5	12.69	58.1			
03/08/2012	12:10:17	297	6.5	12.45	71.1			
03/08/2012	12:12:17	319	6.5	12.44	84.2			
03/08/2012	12:14:17	310	6.5	12.54	97.2			
03/08/2012	12:14:33					End Lead Slurry		
03/08/2012	12:14:33	334	6.5	12.69	98.9			
03/08/2012	12:14:41					Start Mixing Scav Slurry		
03/08/2012	12:14:41	323	6.5	12.65	99.8			
03/08/2012	12:14:43					12.5ppg To 15.8ppg		
03/08/2012	12:14:43	321	6.5	12.64	100.0			
03/08/2012	12:16:17	127	3.7	12.51	108.6			
03/08/2012	12:17:01					End Scavenger Slurry		
03/08/2012	12:17:01	34	0.4	13.32	110.1			
03/08/2012	12:17:11					Reset Total, Vol = 88.02 bbl		
03/08/2012	12:17:11	37	0.3	13.47	110.2			
03/08/2012	12:18:17	84	2.0	14.40	110.4			
03/08/2012	12:18:56					31bbls @ 15.8ppg		
03/08/2012	12:18:56					Start Mixing Tail Slurry		
03/08/2012	12:18:56	193	3.5	15.77	112.4			
03/08/2012	12:18:57					Good Returns		
03/08/2012	12:18:57					Take WetDry Sample		
03/08/2012	12:18:57					Sample= 15.8ppg		
03/08/2012	12:18:57	193	3.5	15.80	112.5			
03/08/2012	12:19:24					Sample#= 13788		
03/08/2012	12:19:24	213	3.5	15.92	114.0			
03/08/2012	12:20:17	170	3.4	15.81	117.1			
03/08/2012	12:22:17	320	5.0	15.80	126.4			
03/08/2012	12:23:24					End Tail Slurry		
03/08/2012	12:23:24	319	5.0	15.81	132.0			
03/08/2012	12:24:17	298	5.0	15.67	136.4			
03/08/2012	12:26:17	40	0.0	15.70	144.0			
03/08/2012	12:28:17	64	0.0	14.25	144.2			
03/08/2012	12:30:17	99	3.2	9.51	145.7			
03/08/2012	12:31:00					Drop Top Plug		
03/08/2012	12:31:00	111	3.8	8.80	148.2			
03/08/2012	12:32:05					Start Displacement		
03/08/2012	12:32:05	158	5.1	8.59	153.4			

Well			Field		Job Start	Customer	Job Number
COOK GARDNER 20-4A			BATTLEMENT MESA		Mar/08/2012	ENCANA	COBA-00266
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
03/08/2012	12:32:07					Good Returns	
03/08/2012	12:32:07	157	5.1	8.59	153.5		
03/08/2012	12:32:17	152	5.1	8.57	154.4		
03/08/2012	12:34:17	161	5.1	8.46	164.6		
03/08/2012	12:36:17	217	5.1	8.48	174.8		
03/08/2012	12:36:20					60bbls Cement	
03/08/2012	12:36:20					To Surface	
03/08/2012	12:36:20	219	5.1	8.46	175.0		
03/08/2012	12:37:58					Reset Total, Vol = 74.83 bbl	
03/08/2012	12:37:58	266	6.6	7.75	185.0		
03/08/2012	12:38:17	294	6.5	8.20	187.1		
03/08/2012	12:40:17	379	6.4	8.38	199.9		
03/08/2012	12:42:17	384	4.2	8.39	211.6		
03/08/2012	12:44:17	390	4.0	8.39	219.7		
03/08/2012	12:46:17	377	2.2	8.39	224.5		
03/08/2012	12:48:17	1182	1.5	8.40	228.9		
03/08/2012	12:48:55					Bump Top Plug	
03/08/2012	12:48:55	1131	0.0	8.40	228.9		
03/08/2012	12:48:56					Bump To 1100psi	
03/08/2012	12:48:56					Floats Held	
03/08/2012	12:48:56	1131	0.0	8.40	228.9		
03/08/2012	12:50:17	1109	0.0	8.40	228.9		
03/08/2012	12:52:17	1076	0.0	8.40	228.9		
03/08/2012	12:54:17	21	0.0	8.40	228.9		
03/08/2012	12:54:36					End Job	

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl				
Slurry 4.7	N2	Mud 0.0	Maximum Rate 7.7		Total Slurry 228.9	Mud 0.0	Spacer 21.1	N2	
Treating Pressure Summary, psi					Breakdown Fluid				
Maximum 3180	Final 244	Average 336	Bump Plug to	Breakdown	Type		Volume		Density
Avg. N2 Percent		Designed Slurry Volume 114.0 bbl		Displacement 73.7 bbl	Mix Water Temp 65 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>		Volume 60.0 bbl	
						Washed Thru Perfs <input type="checkbox"/>		To	
Customer or Authorized Representative VLAD KOCHETOV				Schlumberger Supervisor JASON CRICK		Circulation Lost <input type="checkbox"/>		Job Completed <input checked="" type="checkbox"/>	
						-		-	