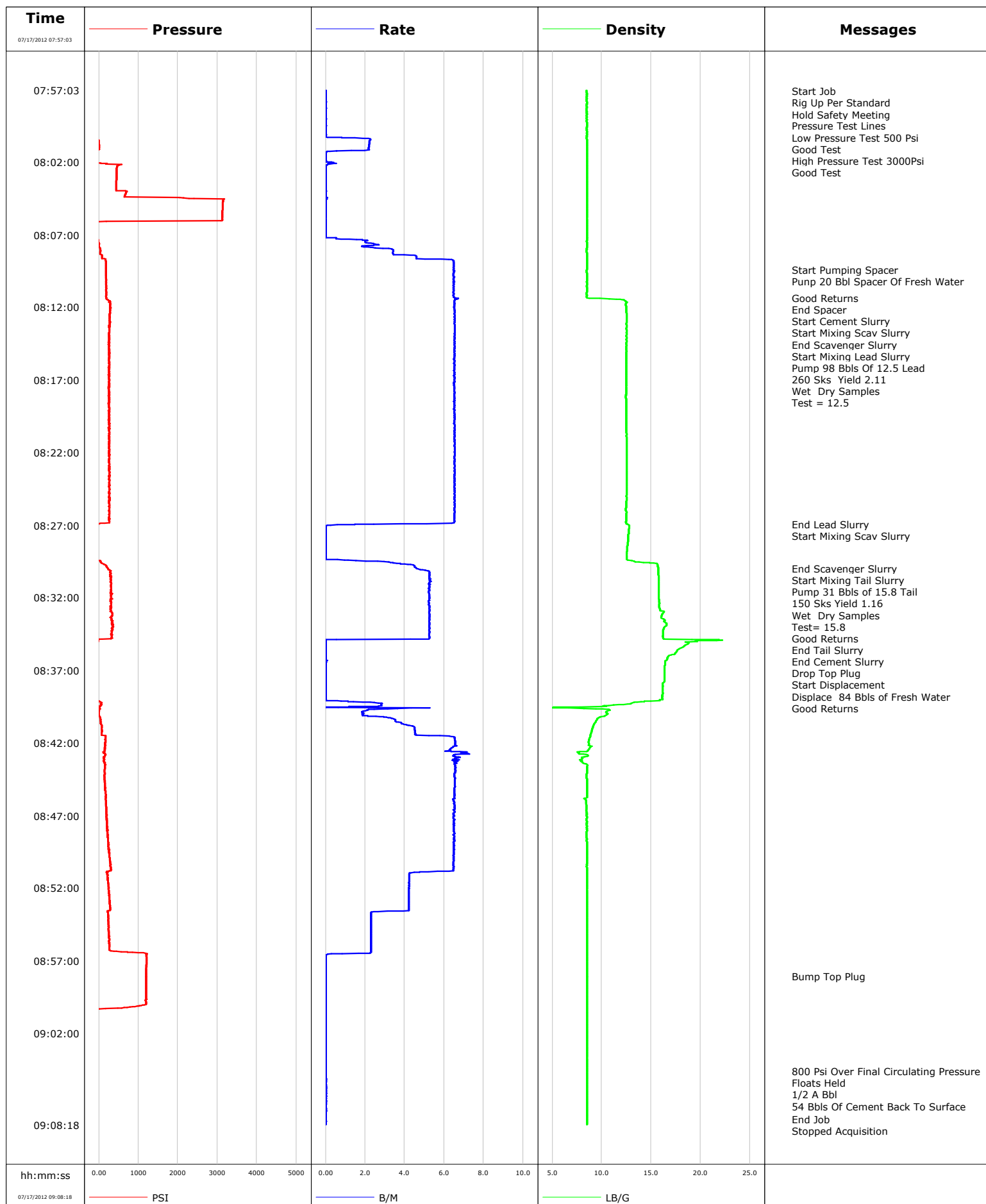


**Well** MCU FEE 17-9B  
**Field** Mamm Creek  
**Engineer**  
**Country** United States

**Client** Encana  
**SIR No.**  
**Job Type** Surface  
**Job Date** 07-17-2012

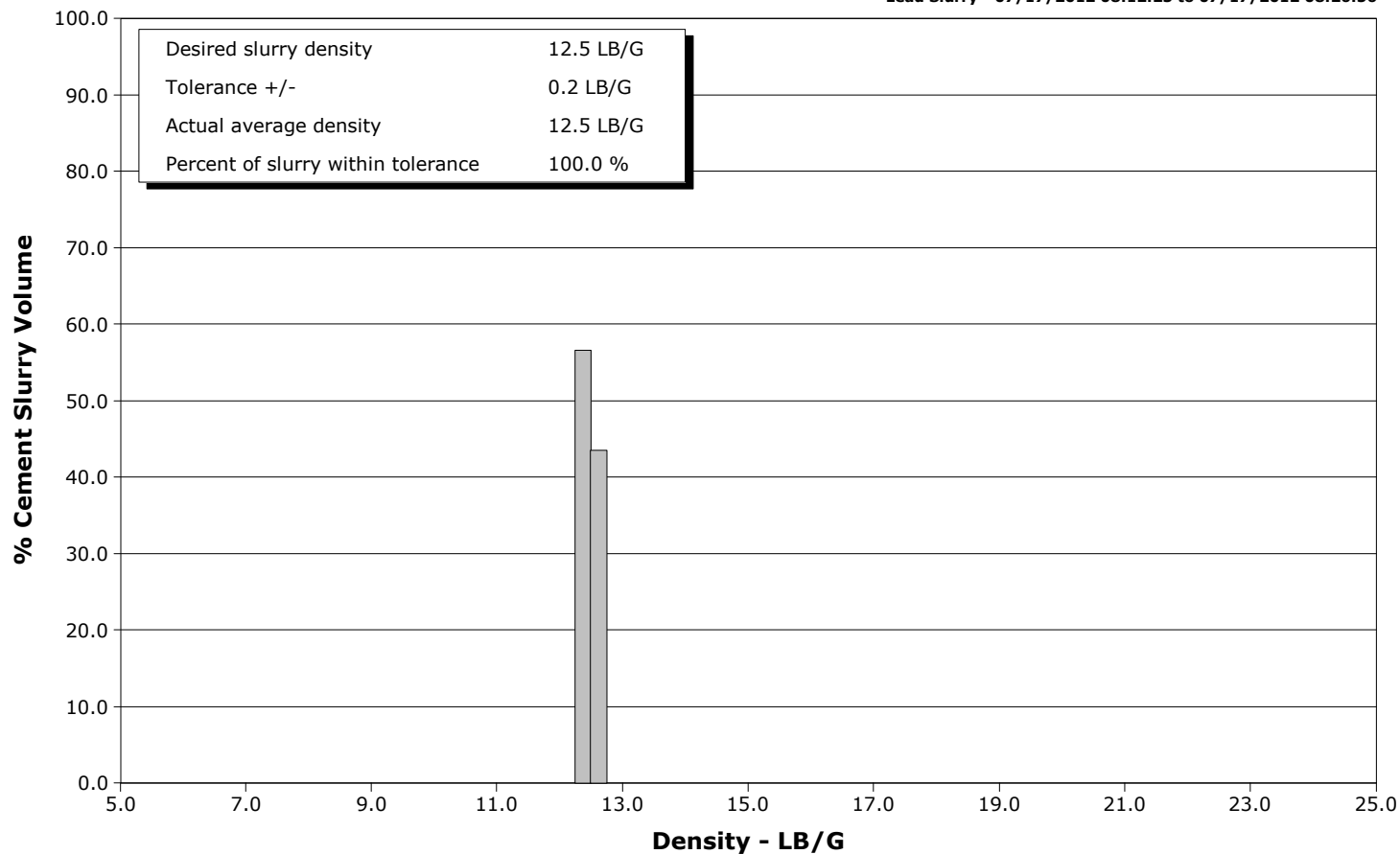


# Schlumberger Cementing Qa/Qc Density Report

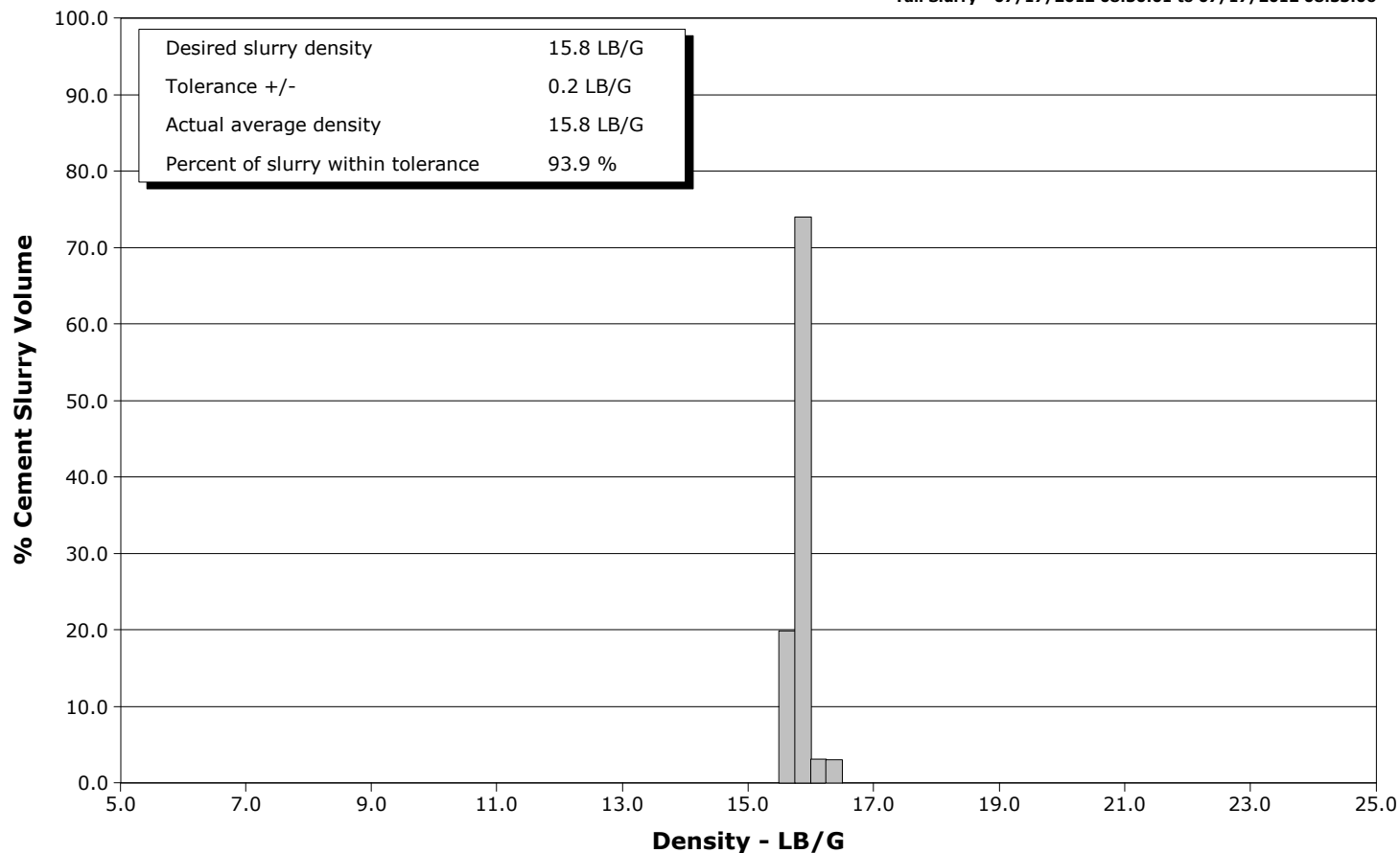
**Well** MCU FEE 17-9B  
**Field** Mamm Creek  
**Engineer**  
**Country** United States

**Client** Encana  
**SIR No.**  
**Job Type** Surface  
**Job Date** 07-17-2012

**Lead Slurry - 07/17/2012 08:12:25 to 07/17/2012 08:26:56**



**Tail Slurry - 07/17/2012 08:30:01 to 07/17/2012 08:33:06**





# Cementing Service Report

				Customer Encana		Job Number 809252		
Well MCU FEE 17-9B 0631279567			Location (legal) M16W		Schlumberger Location GCO		Job Start Jul/17/2012	
Field Mamm Creek		Formation Name/Type		Deviation	Bit Size 12.3 in	Well MD 1131.0 ft		Well TVD
County Garfield		State/Province Colorado		BHP	BHST 95 degF	BHCT 81 degF	Pore Press. Gradient	
Well Master 0631279567		API/UWI						
Rig Name Patterson 308	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	40.0	16.000	65.0	J55	8RD	
			1131.0	9.630	36.0	K55	8RD	
Drilling Fluid Type Bentonite		Max. Density	Plastic Viscosity	Tubing/Drill Pipe				
				Depth,	Size,	Weight,	Grade	Thread
Service Line Cementing	Job Type Surface							
Max. Allowed Tub. Press 500 psi	Max. Allowed Ann. Press	WH Connection Single Cement head	Perforations/Open Hole					
			Top,	Bottom,		No. of Shots	Total Interval	
Service Instructions							Diameter	
			Treat Down Casing	Displacement 84.0 bbl	Packer Type	Packer Depth		
Tubing Vol.	Casing Vol. 84.0 bbl	Annular Vol. 73.0 bbl	Openhole Vol. 197.0 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 560 psi			Shoe Type Guide		Squeeze Type			
Pipe Rotated <input type="checkbox"/>	Pipe Reciprocated <input type="checkbox"/>	Shoe Depth 1131.0 ft		Tool Type				
No. Centralizers		Top Plugs 1	Bottom Plugs	Stage Tool Type		Tool Depth		
Cement Head Type			Stage Tool Depth		Tail Pipe Size			
Job Scheduled For Jul/17/2012		Arrived on Location Jul/17/2012	Leave Location Jul/17/2012	Collar Type Float		Tail Pipe Depth		
			Collar Depth 1086.0 ft		Sqz. Total Vol.			
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
07/17/2012	07:31:58					Started Acquisition		
07/17/2012	07:57:03	-57	0.0	8.48	0.0			
07/17/2012	07:57:06					Start Job		
07/17/2012	07:57:06	-58	0.0	8.48	0.0			
07/17/2012	07:57:08					Rig Up Per Standard		
07/17/2012	07:57:08					Hold Safety Meeting		
07/17/2012	07:57:08	-58	0.0	8.48	0.0			
07/17/2012	07:57:16					Pressure Test Lines		
07/17/2012	07:57:16	-58	0.0	8.48	0.0			
07/17/2012	07:57:18					Low Pressure Test 500 Psi		
07/17/2012	07:57:18					Good Test		
07/17/2012	07:57:18	-57	0.0	8.48	0.0			
07/17/2012	07:57:19					High Pressure Test 3000Psi		
07/17/2012	07:57:19					Good Test		
07/17/2012	07:57:19	-58	0.0	8.48	0.0			
07/17/2012	07:57:58	-58	0.0	8.48	0.0			
07/17/2012	07:59:58	-58	0.0	8.48	0.1			
07/17/2012	08:01:58	-43	0.0	8.48	2.0			
07/17/2012	08:03:58	436	0.0	8.48	2.1			
07/17/2012	08:05:58	3119	0.0	8.48	2.2			
07/17/2012	08:07:58	35	3.2	8.48	3.6			

Well			Field		Job Start		Customer		Job Number	
MCU FEE 17-9B 0631279567			Mamm Creek		Jul/17/2012		Encana		809252	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
07/17/2012	08:09:26	176	6.5	8.48	11.2					
07/17/2012	08:09:29					Punp 20 Bbl Spacer Of Fresh Water				
07/17/2012	08:09:29	174	6.5	8.48	11.6					
07/17/2012	08:09:58	185	6.5	8.48	14.7					
07/17/2012	08:11:21					Good Returns				
07/17/2012	08:11:21	189	6.5	8.49	23.7					
07/17/2012	08:11:31					End Spacer				
07/17/2012	08:11:31	243	6.5	12.26	24.8					
07/17/2012	08:11:35					Start Cement Slurry				
07/17/2012	08:11:35	279	6.5	12.43	25.2					
07/17/2012	08:11:36					Start Mixing Scav Slurry				
07/17/2012	08:11:36	274	6.5	12.44	25.3					
07/17/2012	08:11:58	286	6.5	12.46	27.7					
07/17/2012	08:12:21					End Scavenger Slurry				
07/17/2012	08:12:21	285	6.5	12.49	30.2					
07/17/2012	08:12:25					Start Mixing Lead Slurry				
07/17/2012	08:12:25	283	6.5	12.50	30.6					
07/17/2012	08:12:27					Pump 98 Bbls Of 12.5 Lead				
07/17/2012	08:12:27	266	6.5	12.51	30.8					
07/17/2012	08:12:28					260 Sks Yield 2.11				
07/17/2012	08:12:28	286	6.5	12.51	30.9					
07/17/2012	08:12:33					Wet Dry Samples				
07/17/2012	08:12:33	287	6.5	12.52	31.5					
07/17/2012	08:12:36					Test = 12.5				
07/17/2012	08:12:36	270	6.5	12.52	31.8					
07/17/2012	08:13:58	258	6.5	12.50	40.7					
07/17/2012	08:15:58	257	6.5	12.48	53.8					
07/17/2012	08:17:58	248	6.5	12.46	66.8					
07/17/2012	08:19:58	251	6.5	12.50	79.8					
07/17/2012	08:21:58	266	6.5	12.53	92.9					
07/17/2012	08:23:58	274	6.5	12.54	105.9					
07/17/2012	08:25:58	248	6.5	12.45	118.9					
07/17/2012	08:26:56					End Lead Slurry				
07/17/2012	08:26:56	-18	2.5	12.56	125.1					
07/17/2012	08:27:01					Start Mixing Scav Slurry				
07/17/2012	08:27:01	-39	0.1	12.76	125.2					
07/17/2012	08:27:58	-46	0.0	12.66	125.2					
07/17/2012	08:29:58	228	4.6	15.70	127.2					
07/17/2012	08:30:00					End Scavenger Slurry				
07/17/2012	08:30:00	223	4.6	15.70	127.4					
07/17/2012	08:30:01					Start Mixing Tail Slurry				
07/17/2012	08:30:01	223	4.6	15.70	127.5					
07/17/2012	08:30:03					Pump 31 Bbls of 15.8 Tail				
07/17/2012	08:30:03	251	4.7	15.70	127.6					
07/17/2012	08:30:04					150 Sks Yield 1.16				
07/17/2012	08:30:04	237	4.7	15.70	127.7					
07/17/2012	08:30:05					Wet Dry Samples				
07/17/2012	08:30:05	237	4.8	15.70	127.8					
07/17/2012	08:30:06					Test= 15.8				
07/17/2012	08:30:06					Good Returns				
07/17/2012	08:30:06	281	4.9	15.70	127.9					
07/17/2012	08:31:58	300	5.2	15.77	137.6					
07/17/2012	08:33:06					End Tail Slurry				
07/17/2012	08:33:06	337	5.2	16.15	143.6					

Well			Field		Job Start		Customer	Job Number
MCU FEE 17-9B 0631279567			Mamm Creek		Jul/17/2012		Encana	809252
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
07/17/2012	08:34:59					End Cement Slurry		
07/17/2012	08:34:59	-22	0.0	19.47	152.9			
07/17/2012	08:35:04					Drop Top Plug		
07/17/2012	08:35:04	-25	0.0	18.45	152.9			
07/17/2012	08:35:06					Start Displacement		
07/17/2012	08:35:06	-27	0.0	18.67	152.9			
07/17/2012	08:35:11					Displace 84 Bbls of Fresh Water		
07/17/2012	08:35:11	-30	0.0	18.77	152.9			
07/17/2012	08:35:12					Good Returns		
07/17/2012	08:35:12	-31	0.0	18.71	152.9			
07/17/2012	08:35:58	-41	0.0	16.94	152.9			
07/17/2012	08:37:58	-42	0.0	16.15	152.9			
07/17/2012	08:39:58	-7	1.9	10.53	154.8			
07/17/2012	08:41:58	157	6.6	8.66	163.6			
07/17/2012	08:43:58	144	6.6	8.51	176.8			
07/17/2012	08:45:58	176	6.5	8.41	189.8			
07/17/2012	08:47:58	218	6.5	8.48	202.8			
07/17/2012	08:49:58	271	6.5	8.48	215.8			
07/17/2012	08:51:58	248	4.2	8.48	226.3			
07/17/2012	08:53:58	231	2.3	8.48	234.0			
07/17/2012	08:55:58	266	2.3	8.48	238.6			
07/17/2012	08:57:58	1200	0.0	8.48	239.8			
07/17/2012	08:58:04					Bump Top Plug		
07/17/2012	08:58:04	1199	0.0	8.48	239.8			
07/17/2012	08:59:58	1191	0.0	8.49	239.9			
07/17/2012	09:01:58	-49	0.0	8.49	239.9			
07/17/2012	09:03:58	-48	0.0	8.49	239.9			
07/17/2012	09:04:36					800 Psi Over Final Circulating Pressure		
07/17/2012	09:04:36					Floats Held		
07/17/2012	09:04:36	-48	0.0	8.49	239.9			
07/17/2012	09:04:37					1/2 A Bbl		
07/17/2012	09:04:37	-48	0.0	8.49	239.9			
07/17/2012	09:05:58	-48	0.0	8.49	240.0			
07/17/2012	09:06:18					54 Bbls Of Cement Back To Surface		
07/17/2012	09:06:18	-48	0.0	8.49	240.0			
07/17/2012	09:07:54					End Job		
07/17/2012	09:07:54	-42	0.0	8.49	240.0			
07/17/2012	09:07:58	-39	0.0	8.49	240.0			

<b>Well</b> MCU FEE 17-9B 0631279567	<b>Field</b> Mamm Creek	<b>Job Start</b> Jul/17/2012	<b>Customer</b> Encana	<b>Job Number</b> 809252
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Post Job Summary

Average Pump Rates,					Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate		Total Slurry 129.0	Mud	Spacer 20.0	N2
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 500	Final 1100	Average	Bump Plug to	Breakdown	Type	Volume		Density
Avg. N2 Percent		Designed Slurry Volume 129.0 bbl		Displacement 84.0 bbl	Mix Water Temp 72 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>	Volume 54.0 bbl	
						Washed Thru Perfs <input type="checkbox"/>	To	
Customer or Authorized Representative Jefferey Johnson			Schlumberger Supervisor Justin Zika			Circulation Lost <input type="checkbox"/>	Job Completed <input type="checkbox"/>	
						-	-	



# Service Quality Evaluation

Client:	Encana
Field:	Mamm Creek
Rig:	Patterson 308
Well:	MCU FEE 17-9B
Service Line:	Cementing
Job Type:	Surface

Service Order #:	
Date:	Jul/17/2012
Operating Time:	0.0
Client Rep:	Encana
Schlumberger Engineer:	Justin Zika
Schlumberger FSM:	Owen Oleson

Main Objective: Cement Surface Casing

To be completed by Company Rep. Please answer Y (Yes) or N (No) and add any comments below.

		Score	Yes / No		Result
1	HSE				
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	5
1b	Free of environmental spill or non-compliant discharge	5	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	5
1c	Free of RIRs	5	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	5
1d	Wellsite left clean	4	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	4
Sub-total					100%

2	Design / Preparation				
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
2b	Equipment maintenance schedule completed / Green tagged	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
2c	All materials and equipment required for job/contingency checked & on location	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
2d	Safety / pre-job meeting conducted with all involved present	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
Sub-total					100%

3	Execution				
3a	Lost time < 30 mins	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
3b	Equipment pressure tested succesfully	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3d	Plugs / darts released and tested succesfully	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3e	Density variation met expectations	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3f	Personnel performed as per expectations	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3g	Equipment performed as per expectations	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3h	Job pumped per design	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
3i	Did job start on time	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
Sub-total					100%

4	Evaluation				
4a	Main job objective achieved with no consequential non-productive time	10	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	10
Sub-total					100%

Total 100%

Comments: (Please include a brief explanation for a "NO" response and summarize any innovations attempted on this well.)

Client:	Schlumberger:
Good Job	Thank You
Client Signature:	Schlumberger Signature: