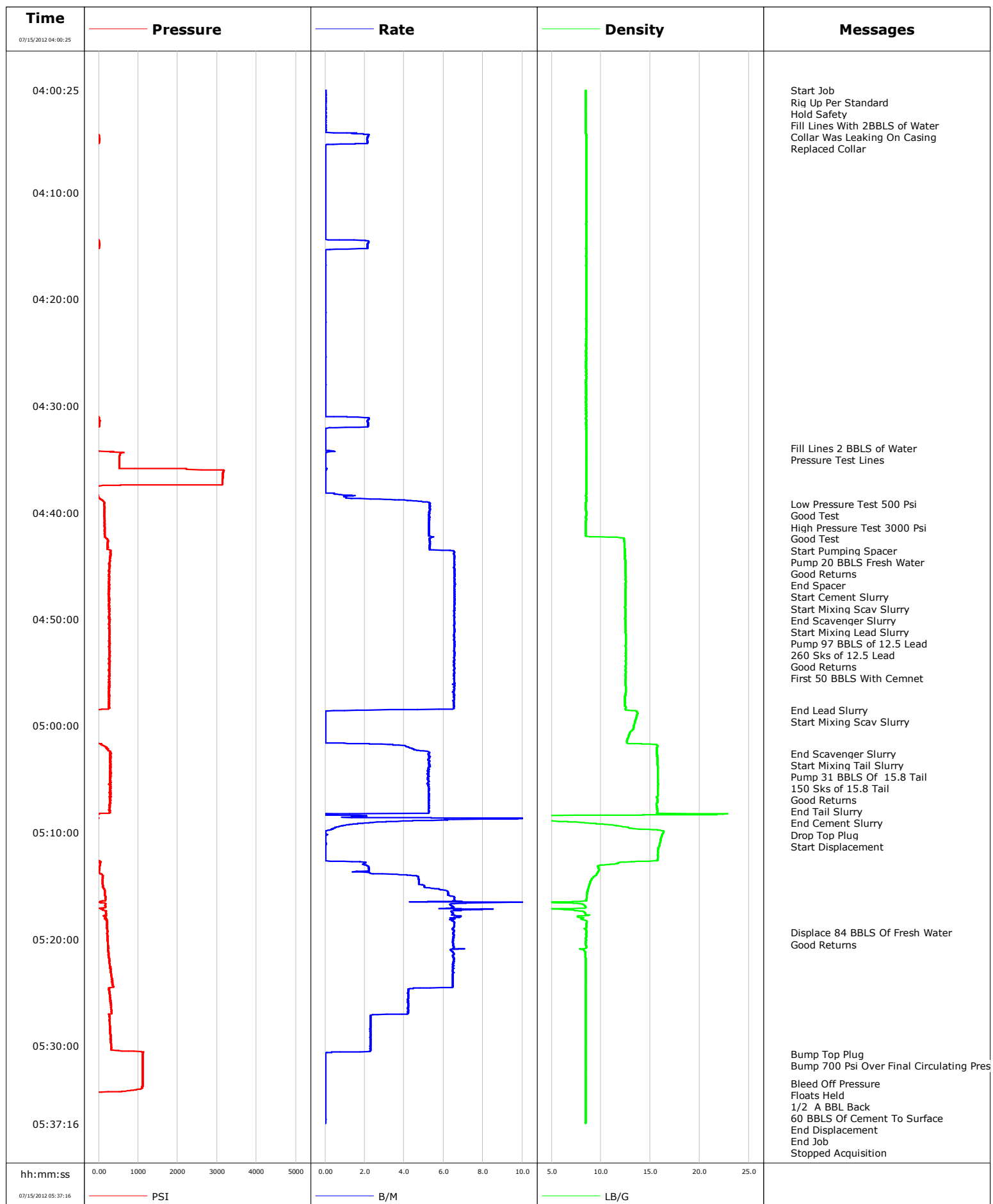


**Well** 21-2B  
**Field** Mamm Creek  
**Engineer**  
**Country** United States

**Client** Encana  
**SIR No.**  
**Job Type** Surface  
**Job Date** 07-15-2012

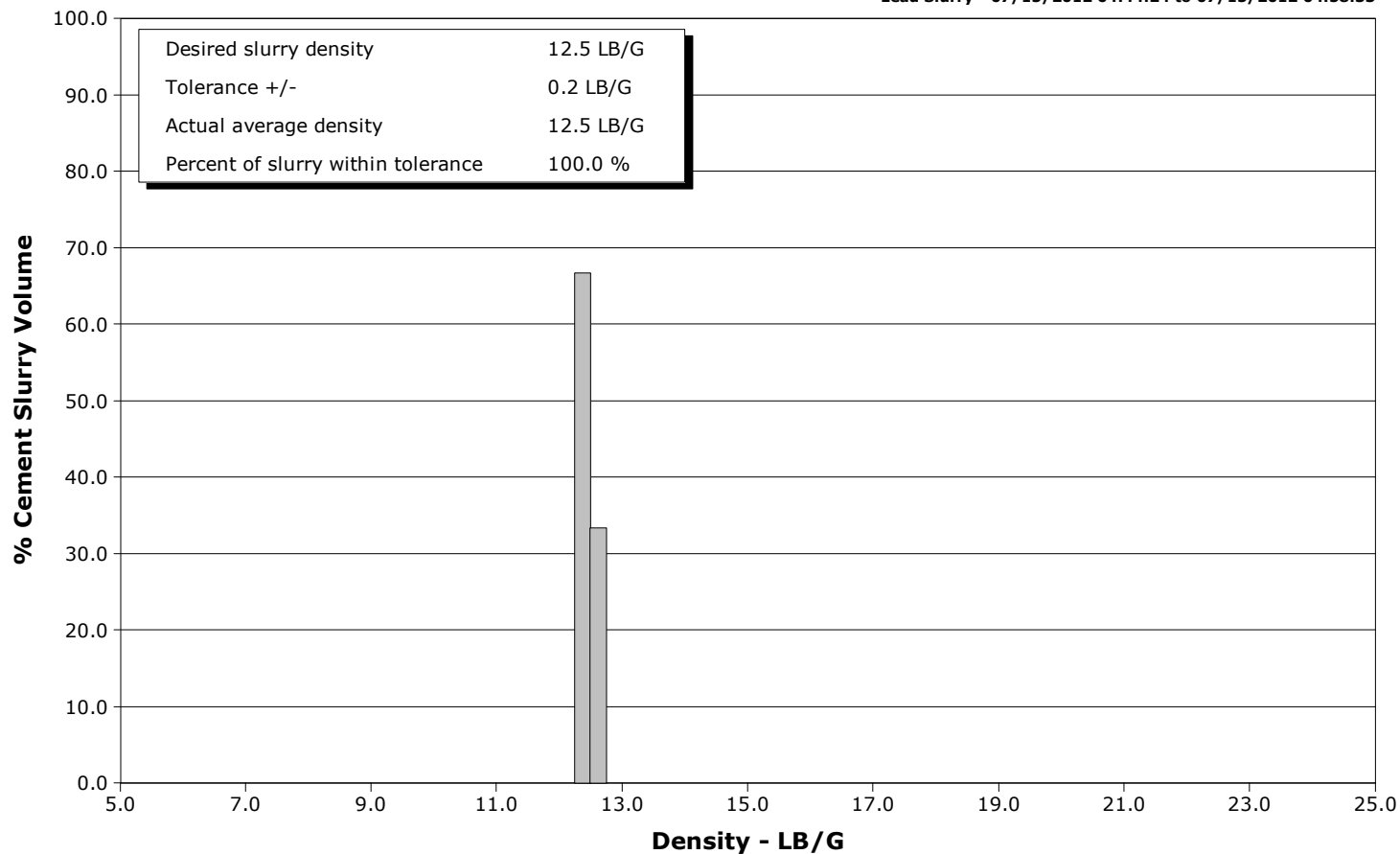


# Schlumberger Cementing Qa/Qc Density Report

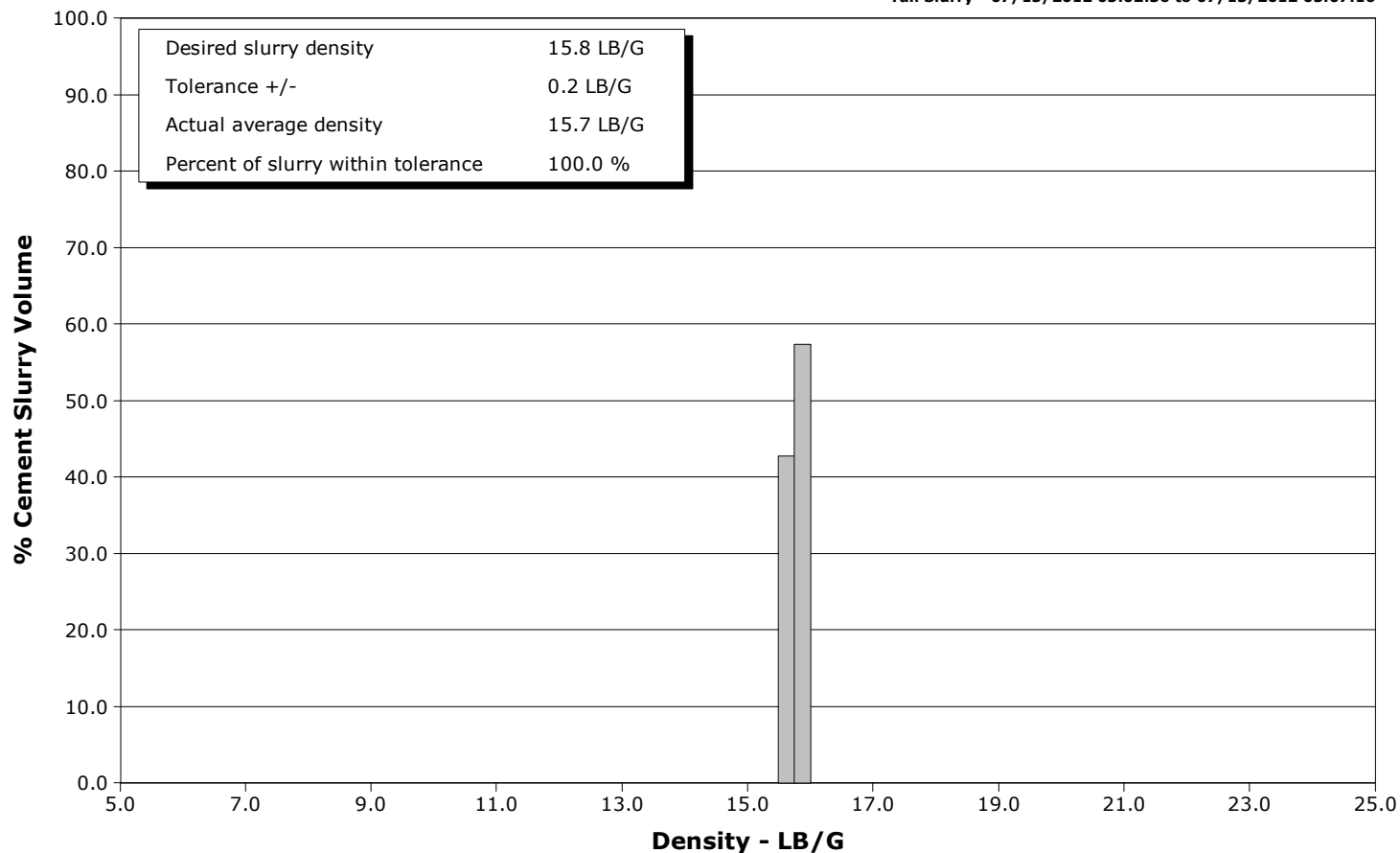
**Well** 21-2B  
**Field** Mamm Creek  
**Engineer**  
**Country** United States

**Client** Encana  
**SIR No.**  
**Job Type** Surface  
**Job Date** 07-15-2012

**Lead Slurry - 07/15/2012 04:44:24 to 07/15/2012 04:58:33**



**Tail Slurry - 07/15/2012 05:02:36 to 07/15/2012 05:07:16**



Page 1 of 6

Well			Field		Job Start	Customer	Job Number
21-2B 21-3B			Mamm Creek		Jul/15/2012	Encana	809250
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
07/15/2012	04:05:21	10	2.1	8.48	2.0		
07/15/2012	04:05:51	-30	0.0	8.48	2.3		
07/15/2012	04:06:21	-31	0.0	8.48	2.3		
07/15/2012	04:06:51	-32	0.0	8.48	2.3		
07/15/2012	04:07:21	-32	0.0	8.48	2.3		
07/15/2012	04:07:51	-32	0.0	8.48	2.3		
07/15/2012	04:08:21	-33	0.0	8.48	2.3		
07/15/2012	04:08:51	-33	0.0	8.48	2.3		
07/15/2012	04:09:21	-33	0.0	8.48	2.3		
07/15/2012	04:09:51	-35	0.0	8.48	2.4		
07/15/2012	04:10:21	-35	0.0	8.48	2.4		
07/15/2012	04:10:51	-35	0.0	8.48	2.4		
07/15/2012	04:11:21	-35	0.0	8.48	2.4		
07/15/2012	04:11:51	-35	0.0	8.48	2.4		
07/15/2012	04:12:21	-35	0.0	8.48	2.4		
07/15/2012	04:12:51	-36	0.0	8.48	2.4		
07/15/2012	04:13:21	-36	0.0	8.48	2.4		
07/15/2012	04:13:51	-36	0.0	8.48	2.4		
07/15/2012	04:14:21	-36	0.0	8.48	2.4		
07/15/2012	04:14:51	21	2.1	8.48	3.2		
07/15/2012	04:15:21	-19	0.2	8.48	4.2		
07/15/2012	04:15:51	-34	0.0	8.48	4.3		
07/15/2012	04:16:21	-35	0.0	8.48	4.3		
07/15/2012	04:16:51	-35	0.0	8.48	4.3		
07/15/2012	04:17:21	-36	0.0	8.48	4.3		
07/15/2012	04:17:51	-36	0.0	8.48	4.3		
07/15/2012	04:18:21	-36	0.0	8.48	4.3		
07/15/2012	04:18:51	-36	0.0	8.48	4.3		
07/15/2012	04:19:21	-37	0.0	8.48	4.3		
07/15/2012	04:19:51	-36	0.0	8.48	4.3		
07/15/2012	04:20:21	-36	0.0	8.48	4.3		
07/15/2012	04:20:51	-36	0.0	8.48	4.3		
07/15/2012	04:21:21	-36	0.0	8.48	4.4		
07/15/2012	04:21:51	-35	0.0	8.48	4.4		
07/15/2012	04:22:21	-35	0.0	8.48	4.4		
07/15/2012	04:22:51	-35	0.0	8.48	4.4		
07/15/2012	04:23:21	-36	0.0	8.48	4.4		
07/15/2012	04:23:51	-36	0.0	8.48	4.4		
07/15/2012	04:24:21	-35	0.0	8.48	4.4		
07/15/2012	04:24:51	-37	0.0	8.48	4.4		
07/15/2012	04:25:21	-36	0.0	8.48	4.4		
07/15/2012	04:25:51	-37	0.0	8.48	4.4		
07/15/2012	04:26:21	-37	0.0	8.48	4.4		
07/15/2012	04:26:51	-36	0.0	8.48	4.4		
07/15/2012	04:27:21	-37	0.0	8.48	4.5		
07/15/2012	04:27:51	-36	0.0	8.48	4.5		
07/15/2012	04:28:21	-36	0.0	8.48	4.5		
07/15/2012	04:28:51	-36	0.0	8.48	4.5		
07/15/2012	04:29:21	-37	0.0	8.48	4.5		
07/15/2012	04:29:51	-36	0.0	8.48	4.5		
07/15/2012	04:30:21	-36	0.0	8.48	4.5		
07/15/2012	04:30:51	-36	0.0	8.48	4.5		
07/15/2012	04:31:21	24	2.2	8.48	5.2		
07/15/2012	04:31:51	13	2.2	8.48	6.2		

Well			Field		Job Start		Customer		Job Number	
21-2B 21-3B			Mamm Creek		Jul/15/2012		Encana		809250	
Date	Time 24-hr clock	Treating Pressure PSI		Flow Rate B/M	Density LB/G		Volume BBL		Message	
07/15/2012	04:32:51	-31		0.0	8.48		6.7			
07/15/2012	04:33:21	-32		0.0	8.48		6.7			
07/15/2012	04:33:51	-32		0.0	8.48		6.7			
07/15/2012	04:34:00								Fill Lines 2 BBLS of Water	
07/15/2012	04:34:00	-32		0.0	8.48		6.7			
07/15/2012	04:34:04								Pressure Test Lines	
07/15/2012	04:34:04	-32		0.0	8.48		6.7			
07/15/2012	04:34:21	290		0.1	8.48		6.7			
07/15/2012	04:34:51	522		0.0	8.48		6.7			
07/15/2012	04:35:21	518		0.0	8.48		6.7			
07/15/2012	04:35:51	519		0.0	8.48		6.7			
07/15/2012	04:36:21	3147		0.0	8.48		6.8			
07/15/2012	04:36:51	3137		0.0	8.48		6.8			
07/15/2012	04:37:21	3127		0.0	8.48		6.8			
07/15/2012	04:37:51	-29		0.0	8.48		6.8			
07/15/2012	04:38:21	-16		0.8	8.48		6.9			
07/15/2012	04:38:51	92		4.0	8.48		7.7			
07/15/2012	04:39:11								Low Pressure Test 500 Psi	
07/15/2012	04:39:11								Good Test	
07/15/2012	04:39:11								High Pressure Test 3000 Psi	
07/15/2012	04:39:11								Good Test	
07/15/2012	04:39:11	136		5.3	8.48		9.3			
07/15/2012	04:39:13								Start Pumping Spacer	
07/15/2012	04:39:13	133		5.3	8.48		9.5			
07/15/2012	04:39:20								Pump 20 BBLS Fresh Water	
07/15/2012	04:39:20	134		5.3	8.48		10.1			
07/15/2012	04:39:21								Good Returns	
07/15/2012	04:39:21	136		5.3	8.48		10.2			
07/15/2012	04:39:51	146		5.3	8.48		12.9			
07/15/2012	04:40:21	146		5.3	8.48		15.5			
07/15/2012	04:40:51	149		5.3	8.48		18.1			
07/15/2012	04:41:21	152		5.3	8.48		20.8			
07/15/2012	04:41:51	150		5.2	8.48		23.4			
07/15/2012	04:42:14								End Spacer	
07/15/2012	04:42:14	153		5.3	8.48		25.4			
07/15/2012	04:42:21	168		5.4	11.59		26.0			
07/15/2012	04:42:22								Start Cement Slurry	
07/15/2012	04:42:22	181		5.4	12.05		26.1			
07/15/2012	04:42:24								Start Mixing Scav Slurry	
07/15/2012	04:42:24	181		5.3	12.32		26.3			
07/15/2012	04:42:51	235		5.3	12.37		28.7			
07/15/2012	04:43:21	222		5.3	12.39		31.3			
07/15/2012	04:43:51	290		6.5	12.42		34.4			
07/15/2012	04:44:21	276		6.5	12.44		37.6			
07/15/2012	04:44:24								End Scavenger Slurry	
07/15/2012	04:44:24								Start Mixing Lead Slurry	
07/15/2012	04:44:24	272		6.5	12.45		38.0			
07/15/2012	04:44:51	275		6.6	12.46		40.9			
07/15/2012	04:45:05								Pump 97 BBLS of 12.5 Lead	
07/15/2012	04:45:05	277		6.5	12.48		42.4			
07/15/2012	04:45:14								260 Sks of 12.5 Lead	
07/15/2012	04:45:14	273		6.5	12.46		43.4			
07/15/2012	04:45:21	269		6.5	12.47		44.2			
07/15/2012	04:45:51	271		6.6	12.48		47.5			

Well			Field		Job Start	Customer	Job Number
21-2B 21-3B			Mamm Creek		Jul/15/2012	Encana	809250
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
07/15/2012	04:46:51	263	6.5	12.48	54.0		
07/15/2012	04:47:21	261	6.5	12.48	57.3		
07/15/2012	04:47:51	254	6.6	12.48	60.6		
07/15/2012	04:47:58					Good Returns	
07/15/2012	04:47:58	263	6.5	12.48	61.3		
07/15/2012	04:48:21	254	6.5	12.46	63.8		
07/15/2012	04:48:51	259	6.6	12.45	67.1		
07/15/2012	04:49:21	270	6.5	12.46	70.4		
07/15/2012	04:49:36					First 50 BBLS With Cemnet	
07/15/2012	04:49:36	264	6.5	12.46	72.0		
07/15/2012	04:49:51	270	6.5	12.46	73.6		
07/15/2012	04:50:21	269	6.5	12.47	76.9		
07/15/2012	04:50:51	255	6.5	12.48	80.2		
07/15/2012	04:51:21	277	6.5	12.50	83.5		
07/15/2012	04:51:51	262	6.5	12.52	86.7		
07/15/2012	04:52:21	278	6.5	12.51	90.0		
07/15/2012	04:52:51	272	6.5	12.51	93.3		
07/15/2012	04:53:21	270	6.5	12.50	96.5		
07/15/2012	04:53:51	269	6.5	12.50	99.8		
07/15/2012	04:54:21	266	6.5	12.50	103.1		
07/15/2012	04:54:51	274	6.5	12.50	106.3		
07/15/2012	04:55:21	271	6.5	12.49	109.6		
07/15/2012	04:55:51	273	6.5	12.47	112.9		
07/15/2012	04:56:21	261	6.5	12.51	116.1		
07/15/2012	04:56:51	253	6.5	12.52	119.4		
07/15/2012	04:57:21	268	6.5	12.43	122.7		
07/15/2012	04:57:51	263	6.5	12.43	125.9		
07/15/2012	04:58:21	268	6.5	12.50	129.2		
07/15/2012	04:58:33					End Lead Slurry	
07/15/2012	04:58:33	-22	1.6	12.75	130.1		
07/15/2012	04:58:40					Start Mixing Scav Slurry	
07/15/2012	04:58:40	-35	0.0	13.65	130.2		
07/15/2012	04:58:51	-35	0.0	13.69	130.2		
07/15/2012	04:59:21	-34	0.0	13.55	130.2		
07/15/2012	04:59:51	-34	0.0	13.37	130.2		
07/15/2012	05:00:21	-30	0.0	13.24	130.2		
07/15/2012	05:00:51	-30	0.0	12.85	130.2		
07/15/2012	05:01:21	-31	0.0	12.65	130.2		
07/15/2012	05:01:51	122	3.9	15.72	130.8		
07/15/2012	05:02:21	282	5.0	15.65	133.0		
07/15/2012	05:02:34					End Scavenger Slurry	
07/15/2012	05:02:34	313	5.3	15.67	134.1		
07/15/2012	05:02:36					Start Mixing Tail Slurry	
07/15/2012	05:02:36	287	5.2	15.67	134.3		
07/15/2012	05:02:43					Pump 31 BBLS Of 15.8 Tail	
07/15/2012	05:02:43					150 Sks of 15.8 Tail	
07/15/2012	05:02:43	291	5.2	15.69	134.9		
07/15/2012	05:02:46					Good Returns	
07/15/2012	05:02:46	314	5.2	15.69	135.2		
07/15/2012	05:02:51	290	5.3	15.68	135.6		
07/15/2012	05:03:21	304	5.3	15.71	138.3		
07/15/2012	05:03:51	292	5.3	15.74	140.9		
07/15/2012	05:04:21	287	5.2	15.76	143.5		
07/15/2012	05:04:51	278	5.2	15.76	146.1		

Well			Field		Job Start	Customer	Job Number
21-2B 21-3B			Mamm Creek		Jul/15/2012	Encana	809250
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
07/15/2012	05:05:51	313	5.2	15.76	151.3		
07/15/2012	05:06:21	301	5.2	15.76	154.0		
07/15/2012	05:06:51	281	5.3	15.70	156.6		
07/15/2012	05:07:16					End Tail Slurry	
07/15/2012	05:07:16	282	5.2	15.62	158.8		
07/15/2012	05:07:21	271	5.2	15.61	159.2		
07/15/2012	05:07:46					End Cement Slurry	
07/15/2012	05:07:46	277	5.2	15.69	161.4		
07/15/2012	05:07:51	264	5.2	15.69	161.8		
07/15/2012	05:08:21	-20	0.0	14.26	163.8		
07/15/2012	05:08:36					Drop Top Plug	
07/15/2012	05:08:36	-20	1.4	0.46	164.2		
07/15/2012	05:08:40					Start Displacement	
07/15/2012	05:08:40	-9	17.8	0.64	164.8		
07/15/2012	05:08:51	-17	5.9	2.38	166.4		
07/15/2012	05:09:21	-22	0.9	11.53	167.6		
07/15/2012	05:09:51	-23	0.0	16.30	167.8		
07/15/2012	05:10:21	-23	0.0	16.15	167.9		
07/15/2012	05:10:51	-23	0.0	16.01	167.9		
07/15/2012	05:11:21	-21	0.0	15.86	167.9		
07/15/2012	05:11:51	-19	0.0	15.78	167.9		
07/15/2012	05:12:21	-19	0.0	15.76	167.9		
07/15/2012	05:12:51	42	2.0	11.69	168.2		
07/15/2012	05:13:21	18	2.2	9.75	169.2		
07/15/2012	05:13:51	29	2.4	9.61	170.3		
07/15/2012	05:14:21	96	4.7	9.07	172.4		
07/15/2012	05:14:51	95	4.8	8.85	174.8		
07/15/2012	05:15:21	142	5.9	8.67	177.4		
07/15/2012	05:15:51	159	6.2	8.57	180.5		
07/15/2012	05:16:21	174	6.6	8.52	183.7		
07/15/2012	05:16:51	160	6.4	8.35	187.1		
07/15/2012	05:17:21	169	6.4	7.86	190.5		
07/15/2012	05:17:51	143	6.9	7.68	193.7		
07/15/2012	05:18:21	208	6.5	8.55	197.0		
07/15/2012	05:18:51	209	6.5	8.51	200.3		
07/15/2012	05:19:21	213	6.5	8.49	203.5		
07/15/2012	05:19:23					Displace 84 BBLS Of Fresh Water	
07/15/2012	05:19:23	211	6.5	8.49	203.7		
07/15/2012	05:19:24					Good Returns	
07/15/2012	05:19:24	211	6.5	8.49	203.8		
07/15/2012	05:19:51	217	6.5	8.48	206.7		
07/15/2012	05:20:21	223	6.5	8.47	210.0		
07/15/2012	05:20:51	247	6.5	8.49	213.2		
07/15/2012	05:21:21	253	6.5	8.43	216.5		
07/15/2012	05:21:51	262	6.5	8.46	219.7		
07/15/2012	05:22:21	271	6.5	8.47	223.0		
07/15/2012	05:22:51	297	6.5	8.47	226.2		
07/15/2012	05:23:21	319	6.5	8.47	229.4		
07/15/2012	05:23:51	339	6.5	8.47	232.7		
07/15/2012	05:24:21	352	6.5	8.47	235.9		
07/15/2012	05:24:51	275	4.2	8.47	238.5		
07/15/2012	05:25:21	279	4.2	8.47	240.6		
07/15/2012	05:25:51	302	4.2	8.47	242.7		
07/15/2012	05:26:21	309	4.2	8.47	244.8		

Well			Field		Job Start	Customer	Job Number
21-2B 21-3B			Mamm Creek		Jul/15/2012	Encana	809250
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
07/15/2012	05:27:21	276	2.3	8.47	248.4		
07/15/2012	05:27:51	272	2.3	8.47	249.6		
07/15/2012	05:28:21	287	2.3	8.47	250.7		
07/15/2012	05:28:51	289	2.3	8.47	251.9		
07/15/2012	05:29:21	304	2.3	8.47	253.0		
07/15/2012	05:29:51	311	2.3	8.47	254.1		
07/15/2012	05:30:21	308	2.3	8.47	255.3		
07/15/2012	05:30:44					Bump Top Plug	
07/15/2012	05:30:44	1116	0.0	8.47	255.8		
07/15/2012	05:30:51	1114	0.0	8.47	255.8		
07/15/2012	05:31:01					Bump 700 Psi Over Final Circulating Pressure	
07/15/2012	05:31:01	1114	0.0	8.47	255.8		
07/15/2012	05:31:21	1113	0.0	8.47	255.8		
07/15/2012	05:31:51	1112	0.0	8.47	255.8		
07/15/2012	05:32:21	1110	0.0	8.47	255.8		
07/15/2012	05:32:51	1110	0.0	8.47	255.8		
07/15/2012	05:33:21	1109	0.0	8.47	255.8		
07/15/2012	05:33:29					Bleed Off Pressure	
07/15/2012	05:33:29	1108	0.0	8.47	255.8		
07/15/2012	05:33:31					Floats Held	
07/15/2012	05:33:31	1108	0.0	8.47	255.8		
07/15/2012	05:33:51	1089	0.0	8.47	255.8		
07/15/2012	05:34:21	-13	0.0	8.48	255.8		
07/15/2012	05:34:51	-24	0.0	8.47	255.8		
07/15/2012	05:35:17					1/2 A BBL Back	
07/15/2012	05:35:17					60 BBLS Of Cement To Surface	
07/15/2012	05:35:17	-23	0.0	8.47	255.9		
07/15/2012	05:35:21	-24	0.0	8.47	255.9		
07/15/2012	05:35:51	-24	0.0	8.48	255.9		
07/15/2012	05:36:20					End Displacement	
07/15/2012	05:36:20	-24	0.0	8.47	255.9		
07/15/2012	05:36:21	-24	0.0	8.48	255.9		
07/15/2012	05:36:29					End Job	
07/15/2012	05:36:29	-24	0.0	8.48	255.9		
07/15/2012	05:36:51	-24	0.0	8.47	255.9		

Post Job Summary

Average Pump Rates,					Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate		Total Slurry 128.0	Mud	Spacer 20.0	N2
Treating Pressure Summary,					Breakdown Fluid			
Maximum	Final	Average	Bump Plug to	Breakdown	Type		Volume	Density
Avg. N2 Percent		Designed Slurry Volume 128.0 bbl		Displacement 80.0 bbl	Mix Water Temp 72 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>		Volume 60.0 bbl
						Washed Thru Perfs <input type="checkbox"/>		To
Customer or Authorized Representative				Schlumberger Supervisor		Circulation Lost <input type="checkbox"/>		Job Completed <input checked="" type="checkbox"/>
Erasmio Parras				Justin Zika		-		-





<b>Service Order #:</b>	
<b>Date:</b>	Jul/15/2012
<b>Operating Time:</b>	0.0
<b>Client Rep:</b>	Encana
<b>Schlumberger Engineer:</b>	Justin Zika
<b>Schlumberger FSM:</b>	

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

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%

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

<b>Client:</b>	<b>Schlumberger:</b>
<b>Client Signature:</b>	<b>Schlumberger Signature:</b>