Schlumberger

Cementing Service Report

Customer	Job Number
Encana	B7O8-00380

Well	Location (legal)	Schlumberger Location	Job Start
Encana Fee 3-16			Mar/09/2011

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Mamm Creek	Shale	deg	12.3 in	1327.0 ft	1327.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Garfield	Colorado	psi	94 degF	81 degF	lb/gal

Well Master	API/UWI
0631257997	

Rig Name	Drilled For	Service Via
M13	Gas	Land

Offshore Zone	Well Class	Well Type
	New	Exploration

Drilling Fluid Type	Max. Density	Plastic Viscosity
Bentonite	lb/gal	cP

Service Line	Job Type
Cementing	9 5/8 Surface

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
3520 psi	2030 psi	9 5/8

Service Instructions

Cement 9 5/8" Surface Casing
20 bbl H2O
137 bbl 15.8 G

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
40.0	16.0	65.0	N/A	N/A
1327.0	9.6	36.0	K55	8RD

Tubing/Drill Pipe

T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread

Perforations/Open Hole

Top, ft	Bottom, ft	shot/ft	No. of Shots	Total Interval
ft	ft			ft
ft	ft			Diameter
ft	ft			in

Treat Down	Displacement	Packer Type	Packer Depth
Casing	99.0 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	102.0 bbl	77.0 bbl	183.0 bbl

Casing/Tubing Secured	1 Hole Vol. Circulated prior to Cement
[X]	[X]

Lift Pressure	657 psi
Pipe Rotated	[ ] Pipe Reciprocated [ ]

No. Centralizers	Top Plugs	Bottom Plugs
18	1	0

Cement Head Type	Single

Job Scheduled For	Arrived on Location	Leave Location
Mar/09/2011 17:00	Mar/09/2011 17:00	Mar/10/2011 00:00

Casing Tools		Squeeze Job	
Shoe Type	Guide	Squeeze Type	
Shoe Depth	1327.0 ft	Tool Type	
Stage Tool Type		Tool Depth	ft
Stage Tool Depth	ft	Tail Pipe Size	in
Collar Type	Float	Tail Pipe Depth	ft
Collar Depth	1285.0 ft	Sqz. Total Vol.	bbl

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
03/09/2011	22:42:22	-98	0.0	8.40	0.0	Started Acquisition
03/09/2011	22:44:02	-97	0.0	8.40	0.0	
03/09/2011	22:45:42	-97	0.0	8.40	0.0	
03/09/2011	22:47:22	-97	0.0	8.40	0.1	
03/09/2011	22:49:02	-97	0.0	8.40	0.1	
03/09/2011	22:50:42	-97	0.0	8.40	0.1	
03/09/2011	22:52:22	-98	0.0	8.40	0.1	
03/09/2011	22:54:02	-97	0.0	8.40	0.1	
03/09/2011	22:55:42	-96	0.0	8.40	0.1	
03/09/2011	22:57:22	-97	0.0	8.40	0.2	
03/09/2011	22:59:02	-97	0.0	8.40	0.2	
03/09/2011	23:00:42	-97	0.0	8.40	0.2	
03/09/2011	23:02:22	-97	0.0	8.40	0.2	
03/09/2011	23:04:02	-97	0.0	8.40	0.2	
03/09/2011	23:05:42	-97	0.0	8.40	0.2	
03/09/2011	23:07:22	-97	0.0	8.40	0.3	
03/09/2011	23:09:02	-100	0.0	8.40	0.3	
03/09/2011	23:10:42	-82	0.0	8.39	2.2	
03/09/2011	23:11:39	1024	0.0	8.40	2.3	Pressure Test Lines
03/09/2011	23:11:45	1021	0.0	8.40	2.3	500 psi test good
03/09/2011	23:12:22	999	0.0	8.40	2.3	

Well	Field	Job Start	Customer	Job Number
Encana Fee 3-16	Mamm Creek	Mar/09/2011	Encana	B708-00380

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
03/09/2011	23:13:52	3007	0.0	8.40	2.3	3000 psi test good
03/09/2011	23:14:02	3001	0.0	8.40	2.3	
03/09/2011	23:15:00	-89	1.2	8.40	2.4	Start Pumping Spacer
03/09/2011	23:15:03	-50	1.6	8.40	2.4	20 bbl H2O ahead
03/09/2011	23:15:42	-7	3.4	8.40	4.0	
03/09/2011	23:16:03	1	3.4	8.39	5.2	Good returns
03/09/2011	23:17:22	2	3.4	8.40	9.7	
03/09/2011	23:19:02	29	3.4	8.39	15.5	
03/09/2011	23:20:27	24	3.4	8.39	20.3	End Spacer
03/09/2011	23:20:31	26	3.4	8.39	20.6	Start Cement Slurry
03/09/2011	23:20:33	16	3.5	8.39	20.7	Start Mixing Scav Slurry
03/09/2011	23:20:35	9	3.9	9.03	20.8	Bring to weight
03/09/2011	23:20:42	19	3.5	15.36	21.2	
03/09/2011	23:21:53	321	4.4	15.71	25.8	End Scavenger Slurry
03/09/2011	23:21:54	54	4.3	15.71	25.9	Start Mixing Tail Slurry
03/09/2011	23:21:55	54	4.3	15.71	26.0	137 bbl 15.8 Tail
03/09/2011	23:21:56	188	4.3	15.72	26.1	Took wet/dry samples
03/09/2011	23:22:22	169	4.5	15.75	28.0	
03/09/2011	23:24:02	154	4.6	15.82	35.6	
03/09/2011	23:25:42	154	4.6	15.84	43.2	
03/09/2011	23:27:22	172	4.6	15.86	50.8	
03/09/2011	23:29:02	181	4.6	15.87	58.5	
03/09/2011	23:30:42	168	4.6	15.88	66.1	
03/09/2011	23:32:22	79	4.5	15.88	73.7	
03/09/2011	23:34:02	151	4.6	15.86	81.3	
03/09/2011	23:35:42	161	4.6	15.89	88.9	
03/09/2011	23:37:22	165	4.6	15.88	96.6	
03/09/2011	23:39:02	151	4.6	15.85	104.2	
03/09/2011	23:40:42	127	4.3	15.92	111.6	
03/09/2011	23:42:22	133	4.3	15.79	118.8	
03/09/2011	23:44:02	153	4.6	15.55	126.2	
03/09/2011	23:45:42	164	4.6	15.73	133.8	
03/09/2011	23:47:22	165	4.6	15.84	141.4	
03/09/2011	23:49:02	163	4.6	15.89	149.1	
03/09/2011	23:50:42	134	4.6	15.84	156.7	
03/09/2011	23:51:00	-96	0.0	23.82	157.8	End Cement Slurry
03/09/2011	23:51:01	-94	0.0	25.00	157.8	End Tail Slurry
03/09/2011	23:51:09	-92	0.0	25.00	157.8	Drop Top Plug
03/09/2011	23:51:10	-92	0.0	25.00	157.8	Start Displacement
03/09/2011	23:51:12	-84	0.0	25.00	157.8	Displace 99 bbl H2O
03/09/2011	23:52:22	-54	25.0	0.22	175.2	
03/09/2011	23:54:02	-72	0.0	0.09	192.2	
03/09/2011	23:55:42	-58	2.2	9.57	198.4	
03/09/2011	23:57:16	6	3.4	8.96	202.8	Good returns
03/09/2011	23:57:22	3	3.4	8.95	203.2	
03/09/2011	23:59:02	-1	3.5	8.57	208.9	
03/10/2011	00:00:42	17	4.6	8.50	216.2	
03/10/2011	00:02:22	84	4.5	8.21	223.9	
03/10/2011	00:04:02	152	4.6	8.21	231.5	
03/10/2011	00:05:42	185	4.6	8.35	239.1	
03/10/2011	00:07:22	254	4.6	8.38	246.7	
03/10/2011	00:09:02	321	4.6	8.38	254.3	
03/10/2011	00:09:30	323	4.6	8.38	256.4	59 bbl cement to surface
03/10/2011	00:10:42	364	4.6	8.38	261.8	

Well	Field	Job Start	Customer	Job Number
Encana Fee 3-16	Mamm Creek	Mar/09/2011	Encana	B7O8-00380

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
03/10/2011	00:14:02	425	4.5	8.38	277.0	
03/10/2011	00:15:42	433	4.1	8.38	284.5	
03/10/2011	00:17:22	445	4.0	8.38	291.3	
03/10/2011	00:19:02	428	2.0	8.38	295.9	
03/10/2011	00:20:42	424	2.1	8.38	299.3	
03/10/2011	00:21:37	1011	0.0	8.39	300.9	End Displacement
03/10/2011	00:21:38	1011	0.0	8.39	300.9	Bump Top Plug
03/10/2011	00:21:39	1011	0.0	8.39	300.9	Bumped plug @ 1000 psi
03/10/2011	00:22:22	989	0.0	8.39	300.9	
03/10/2011	00:24:02	947	0.0	8.39	300.9	
03/10/2011	00:25:42	-95	0.0	8.39	300.9	
03/10/2011	00:25:48	-94	0.0	8.39	300.9	1/2 bbl H2O back

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
2.9			25.0	137.0	0.0	20.0	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
3126	-94	325	1000			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp		
%	137.0 bbl	98.0 bbl	70 degF	Cement Circulated to Surface? [X]	Volume 59.0 bbl
				Washed Thru Perfs [ ]	To ft

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Vlad Kochetov	Matt Fair	-	-

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Service Quality Evaluation

Client:	Encana
Field:	Mamm Creek
Rig:	M13
Well:	Encana Fee 3-16
Service Line:	Cementing
Job Type:	9 5/8 Surface

Service Order #:	
Date:	Mar/09/2011
Operating Time (hh:mm):	00:00
Client Rep:	Vlad Kochetov
Schlumberger Engineer:	Matt Fair
Schlumberger FSM:	

Main Objective:

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 ☒ no ☐	5
1b	Free of environmental spill or non-compliant discharge	5	yes ☒ no ☐	5
1c	Wellsite left clean	4	yes ☒ no ☐	4
			Sub-total	100%
2	**Design / Preparation**			
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes ☒ no ☐	3
2b	Equipment maintenance schedule completed / Green tagged	2	yes ☒ no ☐	2
2c	All materials and equipment required for job/contingency checked & on location	2	yes ☒ no ☐	2
2d	Safety / pre-job meeting conducted with all involved present	2	yes ☒ no ☐	2
			Sub-total	100%
3	**Execution**			
3a	Lost time < 30 mins	3	yes ☒ no ☐	3
3b	Equipment pressure tested succesfully	3	yes ☒ no ☐	3
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes ☒ no ☐	2
3d	Plugs / darts released and tested succesfully	2	yes ☒ no ☐	2
3e	Density variation met expectations	2	yes ☒ no ☐	2
3f	Personnel performed as per expectations	2	yes ☒ no ☐	2
3g	Equipment performed as per expectations	2	yes ☒ no ☐	2
3h	Job pumped as per design	3	yes ☒ no ☐	3
3i	Did job start on time	2	yes ☒ no ☐	2
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes ☒ no ☐	3
			Sub-total	100%
4	**Evaluation**			
4a	Main job objective achieved with no consequential non-productive time	10	yes ☒ no ☐	10
			Sub-total	100%

Total 100%

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

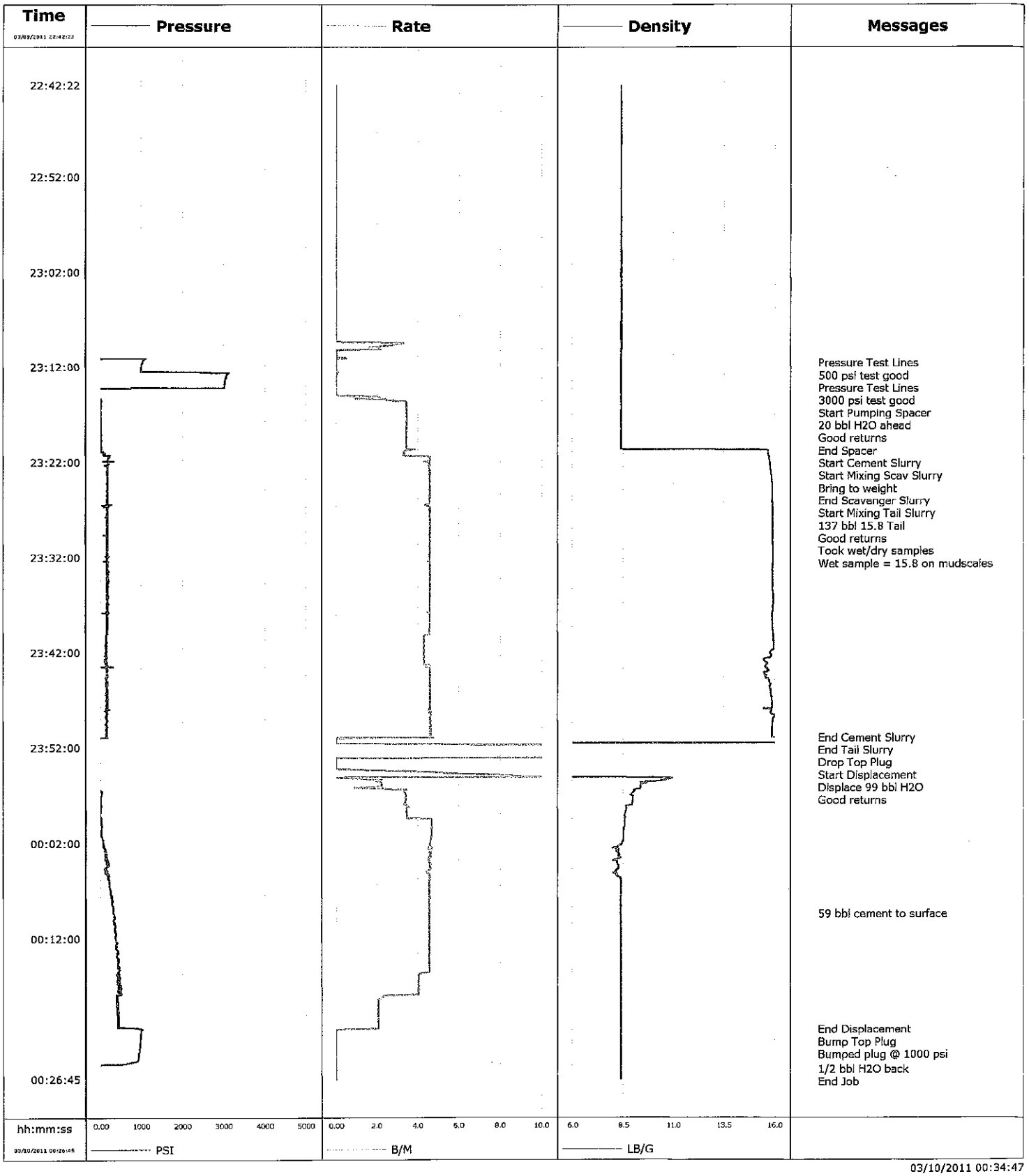
Client:	**Schlumberger:**
Client Signature:	**Schlumberger Signature:**

Schlumberger

Cementing Job Report

CemCAT v1.5

Well	Encana Fee 3-16	**Client**	Encana
Field	Mamm Creek	**SIR No.**	B708-00380
Engineer	Matt Fair	**Job Type**	9 5/8 Surface
Country	United States	**Job Date**	03-09-2011



Schlumberger

Cementing Qa/Qc Density Report

Well	Encana Fee 3-16	**Client**	Encana
Field	Mamm Creek	**SIR No.**	B708-00380
Engineer	Matt Fair	**Job Type**	9 5/8 Surface
Country	United States	**Job Date**	03-09-2011