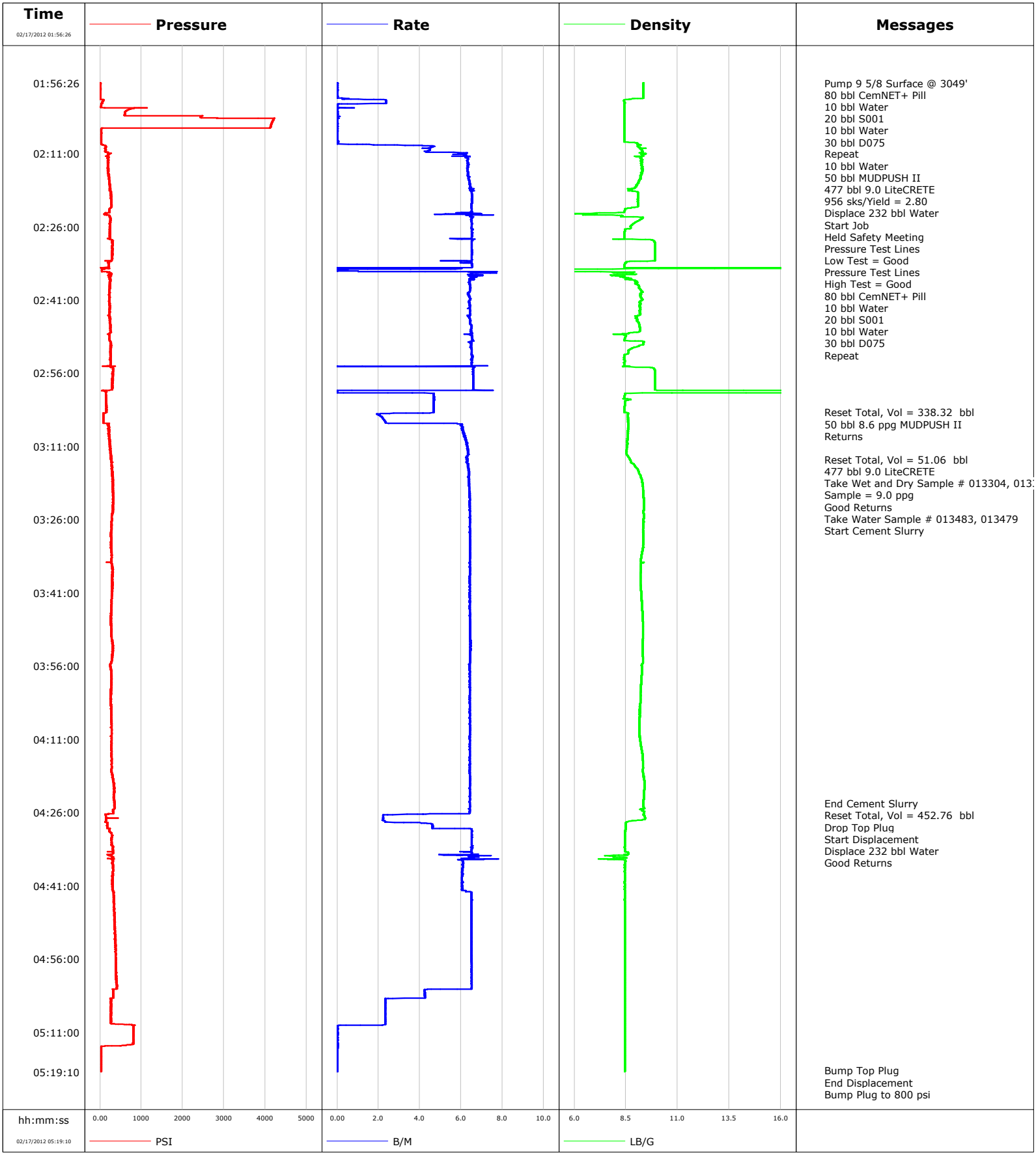
Schlumberger Cementing Job Report

CemCAT v1.3

Well	WD03A-30C1	**Client**	ENCANA
Field	STORY GULCH	**SIR No.**	
Engineer	Tom Leduc	**Job Type**	9 5/8 SURFACE
Country	United States	**Job Date**	02-17-2012



Cementing Service Report

Customer	Job Number
ENCANA	C0BA-00139

Well	Location (legal)	Schlumberger Location	Job Start
WD03A-30C1 WD03A-30C1	C30	Grand Junction	Feb/16/2012

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
STORY GULCH	Shale	0 deg	14.8 in	3049.0 ft	3049.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
GARFIELD	Colorado		115 degF	95 degF	

Well Master	API/UWI
0631328655	

Rig Name	Drilled For	Service Via
PATTERSON 330	Gas	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity
Bentonite	8.90 lb/gal	17.000 cP

Service Line	Job Type
Cementing	9 5/8 SURFACE

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
3000 psi	500 psi	Single Cement head

Service Instructions
9 5/8 SURFACE @ 3049'

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
3049.0	9.630	36.0	J55	8RD
0.0	0.000	0.0		

Tubing/Drill Pipe

Depth,	Size,	Weight,	Grade	Thread

Perforations/Open Hole

Top,	Bottom,		No. of Shots	Total Interval
				Diameter

Treat Down	Displacement	Packer Type	Packer Depth
Casing	232.0 bbl		

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
	235.0 bbl	372.0 bbl	609.0 bbl

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

Lift Pressure	Pipe Rotated	Pipe Reciprocated
1509 psi	☐	☐

No. Centralizers	Top Plugs	Bottom Plugs

Cement Head Type
Single

Job Scheduled For	Arrived on Location	Leave Location
Feb/16/2012 20:00	Feb/17/2012 00:00	Feb/17/2012 07:00

Casing Tools		Squeeze Job	
Shoe Type	Float	Squeeze Type	
Shoe Depth	3049.0 ft	Tool Type	
Stage Tool Type		Tool Depth	
Stage Tool Depth		Tail Pipe Size	
Collar Type	Float	Tail Pipe Depth	
Collar Depth	3004.0 ft	Sqz. Total Vol.	

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/17/2012	01:56:26	9	0.0	9.34	0.0	
02/17/2012	01:56:27					Pump 9 5/8 Surface @ 3049'
02/17/2012	01:56:27	8	0.0	9.34	0.0	
02/17/2012	01:56:28					80 bbl CemNET+ Pill
02/17/2012	01:56:28					10 bbl Water
02/17/2012	01:56:28					20 bbl S001
02/17/2012	01:56:28					10 bbl Water
02/17/2012	01:56:28					30 bbl D075
02/17/2012	01:56:28	8	0.0	9.34	0.0	
02/17/2012	01:56:29					Repeat
02/17/2012	01:56:29					10 bbl Water
02/17/2012	01:56:29					50 bbl MUDPUSH II
02/17/2012	01:56:29					477 bbl 9.0 LiteCRETE
02/17/2012	01:56:29					956 sks/Yield = 2.80
02/17/2012	01:56:29	8	0.0	9.34	0.0	
02/17/2012	01:56:30					Displace 232 bbl Water
02/17/2012	01:56:30	8	0.0	9.34	0.0	
02/17/2012	01:56:33					Start Job
02/17/2012	01:56:33	9	0.0	9.34	0.0	
02/17/2012	01:56:34					Held Safety Meeting
02/17/2012	01:56:34	9	0.0	9.34	0.0	

Well	Field	Job Start	Customer	Job Number
WD03A-30C1 WD03A-30C1	STORY GULCH	Feb/16/2012	ENCANA	C0BA-00139

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/17/2012	01:56:35	9	0.0	9.34	0.0	
02/17/2012	01:56:36					Low Test = Good
02/17/2012	01:56:36	8	0.0	9.34	0.0	
02/17/2012	01:56:37					Pressure Test Lines
02/17/2012	01:56:37	8	0.0	9.34	0.0	
02/17/2012	01:56:38					High Test = Good
02/17/2012	01:56:38	8	0.0	9.34	0.0	
02/17/2012	01:56:45					80 bbl CemNET+ Pill
02/17/2012	01:56:45	14	0.0	9.34	0.0	
02/17/2012	01:56:46					10 bbl Water
02/17/2012	01:56:46					20 bbl S001
02/17/2012	01:56:46					10 bbl Water
02/17/2012	01:56:46					30 bbl D075
02/17/2012	01:56:46					Repeat
02/17/2012	01:56:46	12	0.0	9.34	0.0	
02/17/2012	01:58:56	7	0.0	9.34	0.0	
02/17/2012	02:01:26	27	0.0	8.42	2.3	
02/17/2012	02:03:56	4198	0.0	8.42	2.4	
02/17/2012	02:06:26	29	0.0	8.42	2.4	
02/17/2012	02:08:56	25	0.1	9.06	2.5	
02/17/2012	02:11:26	208	6.2	9.29	13.6	
02/17/2012	02:13:56	205	6.3	9.26	29.4	
02/17/2012	02:16:26	228	6.4	9.13	45.2	
02/17/2012	02:18:56	259	6.5	9.08	61.4	
02/17/2012	02:21:26	266	6.5	9.08	77.7	
02/17/2012	02:23:56	234	6.5	8.25	93.7	
02/17/2012	02:26:26	245	6.5	8.56	110.0	
02/17/2012	02:28:56	308	6.5	9.87	126.3	
02/17/2012	02:31:26	284	6.5	9.90	142.5	
02/17/2012	02:33:56	211	6.5	8.42	158.7	
02/17/2012	02:36:26	245	6.5	8.54	170.8	
02/17/2012	02:38:56	232	6.4	9.21	186.9	
02/17/2012	02:41:26	226	6.4	9.17	202.9	
02/17/2012	02:43:56	226	6.4	9.18	219.0	
02/17/2012	02:46:26	253	6.5	9.17	235.0	
02/17/2012	02:48:56	223	6.5	8.43	251.3	
02/17/2012	02:51:26	243	6.5	8.62	267.5	
02/17/2012	02:53:56	255	6.5	8.41	283.8	
02/17/2012	02:56:26	310	6.6	9.90	299.4	
02/17/2012	02:58:56	288	6.6	9.90	315.9	
02/17/2012	03:01:26	152	4.7	8.72	326.4	
02/17/2012	03:03:56	156	4.7	8.42	338.1	
02/17/2012	03:03:59					Reset Total, Vol = 338.32 bbl
02/17/2012	03:03:59	155	4.7	8.42	338.3	
02/17/2012	03:04:00					50 bbl 8.6 ppg MUDPUSH II
02/17/2012	03:04:00	155	4.7	8.42	338.4	
02/17/2012	03:04:01					Returns
02/17/2012	03:04:01	154	4.7	8.42	338.5	
02/17/2012	03:06:26	202	6.0	8.61	344.7	
02/17/2012	03:08:56	233	6.1	8.57	360.0	
02/17/2012	03:11:26	251	6.3	8.54	375.6	
02/17/2012	03:13:37					Reset Total, Vol = 51.06 bbl
02/17/2012	03:13:37	277	6.3	8.68	389.4	

Well	Field	Job Start	Customer	Job Number
WD03A-30C1 WD03A-30C1	STORY GULCH	Feb/16/2012	ENCANA	C0BA-00139

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/17/2012	03:13:39					Take Wet and Dry Sample # 013304, 013375, 013404, 013129
02/17/2012	03:13:39					Sample = 9.0 ppg
02/17/2012	03:13:39	260	6.3	8.68	389.6	
02/17/2012	03:13:40					Good Returns
02/17/2012	03:13:40					Take Water Sample # 013483, 013479
02/17/2012	03:13:40	260	6.3	8.68	389.7	
02/17/2012	03:13:56	275	6.3	8.71	391.4	
02/17/2012	03:16:26	286	6.4	9.13	407.2	
02/17/2012	03:18:07					Start Cement Slurry
02/17/2012	03:18:07	310	6.4	9.28	418.0	
02/17/2012	03:18:56	306	6.4	9.30	423.2	
02/17/2012	03:21:26	321	6.4	9.36	439.2	
02/17/2012	03:23:56	312	6.4	9.36	455.2	
02/17/2012	03:26:26	272	6.4	9.36	471.3	
02/17/2012	03:28:56	267	6.4	9.34	487.3	
02/17/2012	03:31:26	268	6.4	9.33	503.4	
02/17/2012	03:33:56	276	6.4	9.24	519.5	
02/17/2012	03:36:26	306	6.4	9.22	535.5	
02/17/2012	03:38:56	304	6.4	9.21	551.6	
02/17/2012	03:41:26	288	6.4	9.25	567.6	
02/17/2012	03:43:56	273	6.4	9.28	583.7	
02/17/2012	03:46:26	264	6.4	9.30	599.7	
02/17/2012	03:48:56	271	6.4	9.32	615.8	
02/17/2012	03:51:26	312	6.5	9.30	631.9	
02/17/2012	03:53:56	300	6.4	9.31	648.0	
02/17/2012	03:56:26	255	6.4	9.28	664.1	
02/17/2012	03:58:56	275	6.4	9.26	680.1	
02/17/2012	04:01:26	267	6.4	9.22	696.2	
02/17/2012	04:03:56	268	6.4	9.18	712.2	
02/17/2012	04:06:26	268	6.4	9.17	728.3	
02/17/2012	04:08:56	283	6.4	9.16	744.3	
02/17/2012	04:11:26	284	6.4	9.19	760.4	
02/17/2012	04:13:56	278	6.4	9.29	776.4	
02/17/2012	04:16:26	289	6.4	9.33	792.5	
02/17/2012	04:18:56	303	6.4	9.36	808.5	
02/17/2012	04:21:26	353	6.4	9.38	824.6	
02/17/2012	04:23:56	339	6.4	9.35	840.6	
02/17/2012	04:24:09					End Cement Slurry
02/17/2012	04:24:09	352	6.4	9.34	842.0	
02/17/2012	04:24:10					Reset Total, Vol = 452.76 bbl
02/17/2012	04:24:10	356	6.4	9.34	842.1	
02/17/2012	04:24:11					Drop Top Plug
02/17/2012	04:24:11					Start Displacement
02/17/2012	04:24:11	346	6.4	9.34	842.2	
02/17/2012	04:24:12					Displace 232 bbl Water
02/17/2012	04:24:12	346	6.4	9.34	842.3	
02/17/2012	04:24:13					Good Returns
02/17/2012	04:24:13	348	6.4	9.34	842.4	
02/17/2012	04:26:26	123	3.4	9.37	856.4	
02/17/2012	04:28:56	167	4.6	8.48	863.9	
02/17/2012	04:31:26	268	6.5	8.44	879.5	
02/17/2012	04:33:56	320	6.5	8.44	895.8	
02/17/2012	04:36:26	297	6.1	8.47	911.7	

Well	Field	Job Start	Customer	Job Number
WD03A-30C1 WD03A-30C1	STORY GULCH	Feb/16/2012	ENCANA	C0BA-00139

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/17/2012	04:41:26	304	6.1	8.44	942.0	
02/17/2012	04:43:56	344	6.5	8.42	957.9	
02/17/2012	04:46:26	343	6.5	8.44	974.1	
02/17/2012	04:48:56	352	6.5	8.44	990.3	
02/17/2012	04:51:26	363	6.5	8.44	1006.6	
02/17/2012	04:53:56	385	6.5	8.44	1022.8	
02/17/2012	04:56:26	384	6.5	8.44	1039.1	
02/17/2012	04:58:56	393	6.5	8.44	1055.3	
02/17/2012	05:01:26	405	6.5	8.44	1071.6	
02/17/2012	05:03:56	327	4.2	8.44	1084.0	
02/17/2012	05:06:26	263	2.3	8.44	1090.2	
02/17/2012	05:08:56	264	2.3	8.44	1096.0	
02/17/2012	05:11:26	809	0.0	8.44	1097.6	
02/17/2012	05:13:56	79	0.0	8.44	1097.7	
02/17/2012	05:16:26	28	0.0	8.44	1097.7	
02/17/2012	05:18:53					Bump Top Plug
02/17/2012	05:18:53	29	0.0	8.44	1097.8	
02/17/2012	05:18:54					End Displacement
02/17/2012	05:18:54	29	0.0	8.44	1097.8	
02/17/2012	05:18:56					Bump Plug to 800 psi
02/17/2012	05:18:56					Bled Off Pressure
02/17/2012	05:18:56					1 bbl Back
02/17/2012	05:18:56	29	0.0	8.44	1097.8	
02/17/2012	05:18:57					Floats Held
02/17/2012	05:18:57					200 bbl Cement to Surface
02/17/2012	05:18:57					Wait on Parasite Line
02/17/2012	05:18:57	29	0.0	8.44	1097.8	
02/17/2012	06:20:57					Pump 10 bbl Sugar Water Through Parasite Line
02/17/2012	06:20:57					Rig Down

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
5.4		0.0	7.8	1097.8	0.0	417.9	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
4232	0	316	700				

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
	477.0 bbl	255.6 bbl	60 degF	X	
				Washed Thru Perfs ☐	To

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
RANDY BURKE	Tom Leduc	-	X -