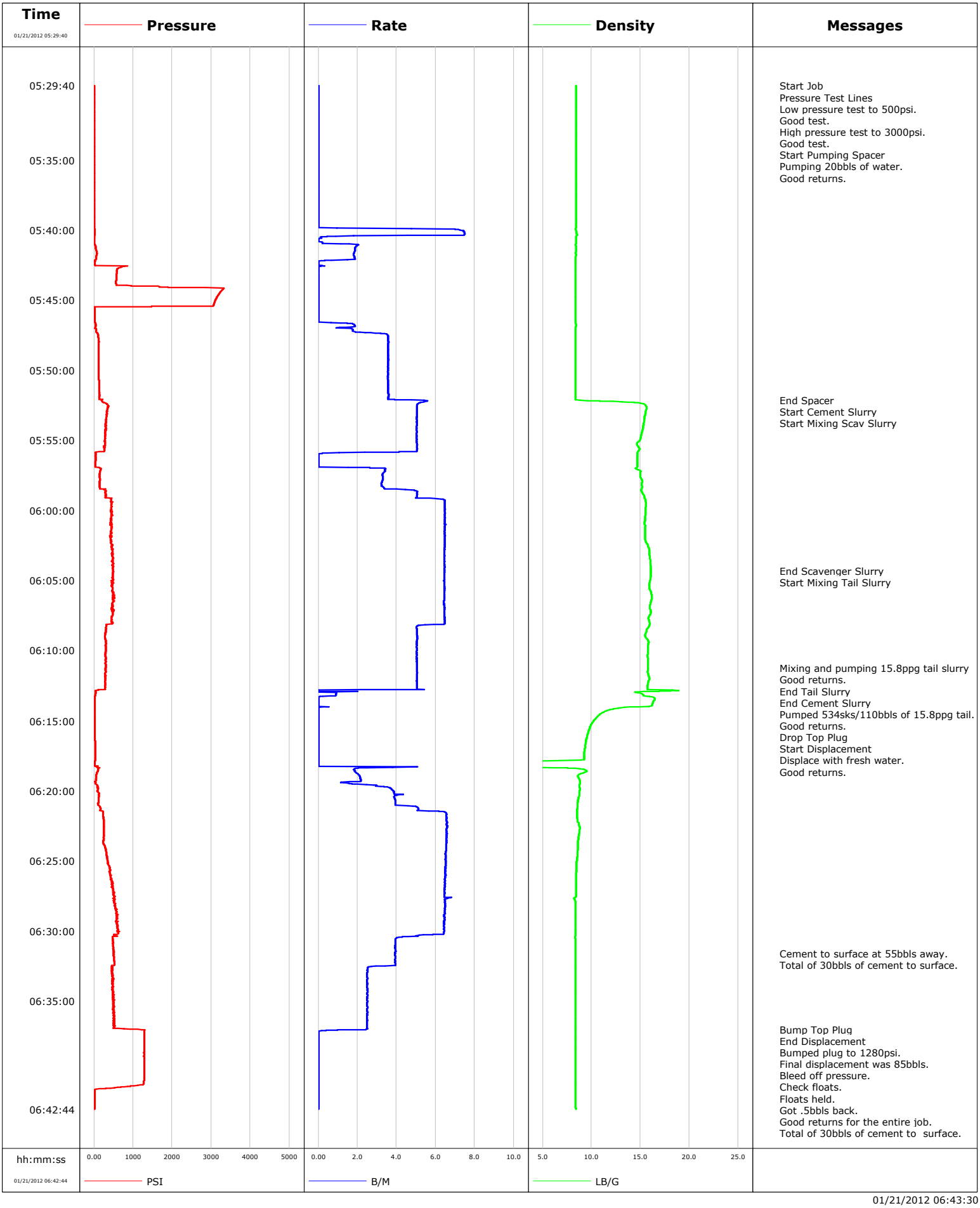
Schlumberger Cementing Job Report

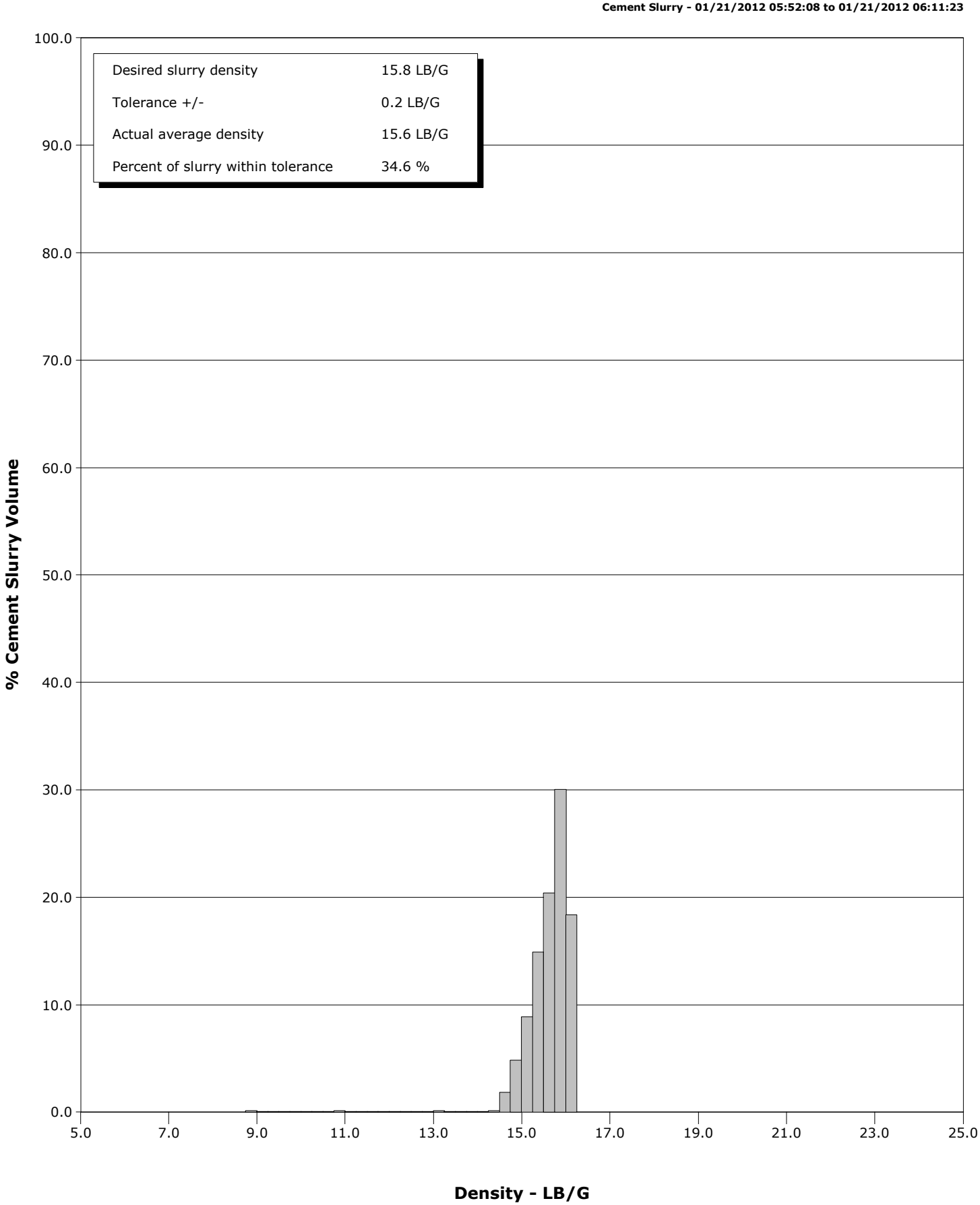
CemCAT v1.3

Well	TWIN CREEK 12-3D1	**Client**	ENCANA
Field	DIVIDE CREEK	**SIR No.**	C0BA-00070
Engineer	Jeff Patterson/T Willardson	**Job Type**	9 5/8" SURFACE
Country	United States	**Job Date**	01-21-2012



Schlumberger Cementing Qa/Qc Density Report

Well	TWIN CREEK 12-3D1	**Client**	ENCANA
Field	DIVIDE CREEK	**SIR No.**	C0BA-00070
Engineer	Jeff Patterson/T Willardson	**Job Type**	9 5/8" SURFACE
Country	United States	**Job Date**	01-21-2012



Cementing Service Report

Customer	Job Number
ENCANA	C0BA-00070

Well	Location (legal)	Schlumberger Location	Job Start
TWIN CREEK 12-3D1 TWIN CREEK 12-3D1	F12E	Grand Junction, Colorado	Jan/21/2012

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
DIVIDE CREEK	SHALE	0 deg	12.3 in	1153.0 ft	1153.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
GARFIELD	Colorado		100 degF	81 degF	

Well Master: | API/UWI:

Rig Name	Drilled For	Service Via
nabors m-15	Gas	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity

Service Line	Job Type
Cementing	9 5/8" SURFACE

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
3000 psi		9 5/8"CEMENT HEAD

Service Instructions

cement surface casing with.
20bbls water.
534sks 15.8ppg tail. yield= 1.16
displace with water.

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
1153.0	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	85.5 bbl		

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
	89.1 bbl	68.0 bbl	160.0 bbl

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

Lift Pressure	570 psi	Shoe Type	Guide	Squeeze Type	
Pipe Rotated	☐	Pipe Reciprocated	☐	Shoe Depth	1153.0 ft	Tool Type	
No. Centralizers		Top Plugs	1	Bottom Plugs	Stage Tool Type		Tool Depth	
Cement Head Type	Single				Stage Tool Depth		Tail Pipe Size	
Job Scheduled For	Arrived on Location	Leave Location			Collar Type	Float	Tail Pipe Depth	
Jan/21/2012	Jan/21/2012	Jan/21/2012			Collar Depth	1106.0 ft	Sqz. Total Vol.	

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
01/21/2012	05:11:52					Started Acquisition
01/21/2012	05:29:40	6	0.0	8.38	0.0	
01/21/2012	05:29:41					Start Job
01/21/2012	05:29:41	6	0.0	8.38	0.0	
01/21/2012	05:29:43					Pressure Test Lines
01/21/2012	05:29:43	6	0.0	8.38	0.0	
01/21/2012	05:29:45					Low pressure test to 500psi.
01/21/2012	05:29:45					Good test.
01/21/2012	05:29:45	6	0.0	8.38	0.0	
01/21/2012	05:29:46					High pressure test to 3000psi.
01/21/2012	05:29:46					Good test.
01/21/2012	05:29:46	6	0.0	8.38	0.0	
01/21/2012	05:29:48					Start Pumping Spacer
01/21/2012	05:29:48	6	0.0	8.38	0.0	
01/21/2012	05:29:50					Pumping 20bbls of water.
01/21/2012	05:29:50					Good returns.
01/21/2012	05:29:50	6	0.0	8.38	0.0	
01/21/2012	05:30:12	6	0.0	8.38	0.0	
01/21/2012	05:31:52	6	0.0	8.38	0.0	
01/21/2012	05:33:32	5	0.0	8.38	0.0	
01/21/2012	05:35:12	5	0.0	8.38	0.0	

Well	Field	Job Start	Customer	Job Number
TWIN CREEK 12-3D1 TWIN CREEK 12-3D1	DIVIDE CREEK	Jan/21/2012	ENCANA	C0BA-00070

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
01/21/2012	05:38:32	4	0.0	8.38	0.0	
01/21/2012	05:40:12	17	7.5	8.47	2.3	
01/21/2012	05:41:52	57	1.8	8.38	5.5	
01/21/2012	05:43:32	566	0.0	8.38	6.0	
01/21/2012	05:45:12	3074	0.0	8.38	6.0	
01/21/2012	05:46:52	43	1.9	8.38	6.5	
01/21/2012	05:48:32	112	3.6	8.38	11.6	
01/21/2012	05:50:12	116	3.6	8.37	17.5	
01/21/2012	05:51:52	136	3.6	8.37	23.5	
01/21/2012	05:52:06					End Spacer
01/21/2012	05:52:06	193	3.9	8.37	24.3	
01/21/2012	05:52:08					Start Cement Slurry
01/21/2012	05:52:08	194	5.4	8.79	24.5	
01/21/2012	05:52:09					Start Mixing Scav Slurry
01/21/2012	05:52:09	194	5.4	8.79	24.5	
01/21/2012	05:53:32	314	5.0	15.38	31.6	
01/21/2012	05:55:12	287	5.0	14.65	40.0	
01/21/2012	05:56:52	27	0.0	14.68	43.3	
01/21/2012	05:58:32	283	4.8	15.08	48.6	
01/21/2012	06:00:12	442	6.5	15.53	58.5	
01/21/2012	06:01:52	457	6.5	15.45	69.3	
01/21/2012	06:03:32	466	6.4	15.98	80.0	
01/21/2012	06:04:19					End Scavenger Slurry
01/21/2012	06:04:19	480	6.4	16.05	85.1	
01/21/2012	06:04:21					Start Mixing Tail Slurry
01/21/2012	06:04:21	479	6.4	16.05	85.3	
01/21/2012	06:05:12	506	6.4	15.93	90.8	
01/21/2012	06:06:52	500	6.4	15.94	101.5	
01/21/2012	06:08:32	300	5.0	15.63	111.7	
01/21/2012	06:10:12	302	5.0	15.74	120.1	
01/21/2012	06:11:14					Mixing and pumping 15.8ppg tail slurry
01/21/2012	06:11:14					Good returns.
01/21/2012	06:11:14	297	5.0	15.78	125.3	
01/21/2012	06:11:22					End Tail Slurry
01/21/2012	06:11:22	301	5.0	15.76	126.0	
01/21/2012	06:11:23					End Cement Slurry
01/21/2012	06:11:23	294	5.0	15.76	126.1	
01/21/2012	06:11:25					Pumped 534sks/110bbls of 15.8ppg tail.
01/21/2012	06:11:25					Good returns.
01/21/2012	06:11:25	291	5.0	15.75	126.2	
01/21/2012	06:11:30					Drop Top Plug
01/21/2012	06:11:30	297	5.0	15.73	126.7	
01/21/2012	06:11:31					Start Displacement
01/21/2012	06:11:31	297	5.0	15.70	126.7	
01/21/2012	06:11:32					Displace with fresh water.
01/21/2012	06:11:32	298	5.0	15.70	126.8	
01/21/2012	06:11:33					Good returns.
01/21/2012	06:11:33	297	5.0	15.70	126.9	
01/21/2012	06:11:52	290	5.0	15.87	128.5	
01/21/2012	06:13:32	19	0.0	16.43	133.5	
01/21/2012	06:15:12	16	0.0	10.04	133.5	
01/21/2012	06:16:52	27	0.0	9.33	133.5	
01/21/2012	06:18:32	104	1.8	9.40	134.1	
01/21/2012	06:20:12	124	3.9	8.75	138.4	

Well	Field	Job Start	Customer	Job Number
TWIN CREEK 12-3D1 TWIN CREEK 12-3D1	DIVIDE CREEK	Jan/21/2012	ENCANA	C0BA-00070

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
01/21/2012	06:23:32	246	6.5	8.63	157.4	
01/21/2012	06:25:12	354	6.5	8.47	168.3	
01/21/2012	06:26:52	477	6.5	8.41	179.1	
01/21/2012	06:28:32	561	6.5	8.36	189.9	
01/21/2012	06:30:12	636	6.4	8.37	200.6	
01/21/2012	06:31:37					Cement to surface at 55bbls away.
01/21/2012	06:31:37	512	3.9	8.37	206.6	
01/21/2012	06:31:38					Total of 30bbls of cement to surface.
01/21/2012	06:31:38	502	3.9	8.37	206.6	
01/21/2012	06:31:52	508	3.9	8.37	207.5	
01/21/2012	06:33:32	496	2.5	8.37	212.6	
01/21/2012	06:35:12	512	2.5	8.37	216.8	
01/21/2012	06:36:52	507	2.5	8.37	221.0	
01/21/2012	06:37:01					Bump Top Plug
01/21/2012	06:37:01	939	2.5	8.37	221.3	
01/21/2012	06:37:02					End Displacement
01/21/2012	06:37:02	1117	2.4	8.37	221.4	
01/21/2012	06:37:03					Bumped plug to 1280psi.
01/21/2012	06:37:03					Final displacement was 85bbls.
01/21/2012	06:37:03	1225	2.4	8.37	221.4	
01/21/2012	06:37:04					Bleed off pressure.
01/21/2012	06:37:04					Check floats.
01/21/2012	06:37:04	1225	2.0	8.37	221.4	
01/21/2012	06:37:05					Floats held.
01/21/2012	06:37:05					Got .5bbls back.
01/21/2012	06:37:05					Good returns for the entire job.
01/21/2012	06:37:05	1303	1.0	8.37	221.5	
01/21/2012	06:37:06					Total of 30bbls of cement to surface.
01/21/2012	06:37:06	1303	1.0	8.37	221.5	
01/21/2012	06:38:32	1275	0.0	8.38	221.5	
01/21/2012	06:40:12	1275	0.0	8.38	221.5	
01/21/2012	06:41:52	13	0.0	8.38	221.5	
01/21/2012	06:42:37					End Job
01/21/2012	06:42:37	13	0.0	8.38	221.5	

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
6.5			8.0	110.0		20.0	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
3000	1280	300	1280				

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
	110.0 bbl	85.5 bbl	75 degF	X	30.0 bbl
				Washed Thru Perfs ☐	To

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
ROBERT TATE	Jeff Patterson/T Willardson	-	X
		-	-