



02577974

FORM 4 Rev 12/05

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State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)694-2100 Fax: (303)694-2109



RECEIVED JUN 06 2012 COGCC/Rifle Office

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 100185 4. Contact Name: Bonnie Lamond
2. Name of Operator: Encana Oil & Gas (USA) Inc. Phone: 720.876.5156
3. Address: 370 17th Street Suite 1700 City: Denver State: CO Zip: 80202 Fax: 720.876.6177
5. API Number: 05-045-20386 OGCC Facility ID Number: 421390
6. Well/Facility Name: Twin Creek 7. Well/Facility Number: 12-3D1 (F12E)
8. Location (Qtr/Sec, Twp, Rng, Meridian): SENW Sec 12, T7S, R92W 6 P.M.
9. County: Garfield 10. Field Name: Mamm Creek
11. Federal, Indian or State Lease Number: COC55972E

General Notice

CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qr is substantive and requires a new permit)
CHANGE SPACING UNIT
CHANGE OF OPERATOR (prior to drilling):
CHANGE WELL NAME NUMBER
ABANDONED LOCATION:
NOTICE OF CONTINUED SHUT IN STATUS
SPUD DATE:
SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK
RECLAMATION:

Technical Engineering/Environmental Notice

Notice of Intent
Approximate Start Date: As soon as approved
Report of Work Done
Date Work Completed:
Details of work must be described in full on Technical Information Page (Page 2 must be submitted)
Intent to Recomplete (submit form 2)
Request to Vent or Flare
E&P Waste Disposal
Change Drilling Plans
Repair Well
Beneficial Reuse of E&P Waste
Gross Interval Changed?
Rule 502 variance requested
Status Update/Change of Remediation Plans for Spills and Releases
Casing/Cementing Program Change
Other: Request to Complete Mamm Creek Well

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Bonnie Lamond Date: 6/6/12 Email: bonnie.lamond@encana.com
Print Name: Bonnie Lamond Title: Permitting Technician

COGCC Approved: [Signature] Title: PE I Date: JUN 08 2012
CONDITIONS OF APPROVAL, IF ANY:

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

RECEIVED

JUN 06 2012

OGCC/Rifle Office

1. OGCC Operator Number:	<u>100185</u>	API Number:	<u>05- 045-20386</u>
2. Name of Operator:	<u>Encana Oil &amp; Gas (USA) Inc.</u>	OGCC Facility ID #	<u>421390</u>
3. Well/Facility Name:	<u>Twin Creek</u>	Well/Facility Number:	<u>12-3D1 (F12E)</u>
4. Location (QtrQtr, Sec, Twp, Rng, Meridian):	<u>SENW Sec 12, T7S, R92W 6 P.M.</u>		

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS

The above referenced well has been successfully cemented according to the approved plan and summary of bradenhead monitoring completed.

FM TOPS Molina: 149'  
FM TOPS Atwell Gulch: 601'  
Mudlog TOG based on 2500 units: See attachment

Encana Oil & Gas (USA) Inc. requests approval to commence completions.

**Attachments:**

- Cement Tickets
- Wellbore Diagram with FIT
- Bradenhead Pressure Report
- CBL
- Cement Proposals

Engineer Contact Information:

Ryan MiGilvery	or	Craig Miley
Completion Engineer		Completion Engineer
370 17th. Street, Suite 1700		370 17th. Street, Suite 1700
Denver, CO 80202		Denver, CO 80202
720-876-3681		720-876-5396

## Twin Creek 12-3D1 (F12E)

**Permit Estimated  
Formation Tops  
(MD / TVD)**

**16" Conductor @ 40'**

Cement to surface with 5 yds redi-mix

<b>Wasatch</b>	<b>Surface / Surface</b>
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**12-1/4" Surface Hole**

<b>Surface Casing</b>	<b>1109 / 1100</b>
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**9-5/8" 36# J/K55**

Cement to surface with:

Tail: 534 sx, 15.8, Class G, 1.17 ft<sup>3</sup>/sk

Total: 534 sx

(volume includes 80% excess)

**7-7/8" Production Hole**

<b>Mesa Verde</b>	<b>2742 / 2467</b>
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<b>Williams Fork</b>	<b>3508 / 3072</b>
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**TOC requirement 500ft above TOG**

<b>Top of Gas</b>	<b>4181 / 3702</b>
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<b>Coal Ridge</b>	<b>5888 / 5407</b>
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<b>Rollins</b>	<b>6613 / 6132</b>
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<b>Permit TD</b>	<b>6913 / 6432</b>
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<b>Production casing</b>	<b>6913 / 6432</b>
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**4-1/2" 11.6# 80 grade**

Cement with:

Lead: 83 sx, 12 TXI, 1.79 ft<sup>3</sup>/sk

Tail: 566 sx, 13 TXI, 1.43 ft<sup>3</sup>/sk

Total: 648 sx

(volume includes 30% excess)

**Casing &  
Hole size**



**Actual  
Conditions  
(MD / TVD)**

**16" Conductor @ 40'**

Cement to surface with 5 yds redi-mix

<b>Wasatch</b>	<b>Surface / Surface</b>
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**12-1/4" Surface Hole**

<b>Surface Casing</b>	<b># 1149 / 1126</b>
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**9-5/8"**

Cemented to surface with

534 sx, 15.8 ppg Class G, 1.16 ft<sup>3</sup>/sk

<b>DV Tool @</b>	<b># 3007 / 2677</b>
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**7-7/8" Production Hole**

<b>Mesa Verde</b>	<b>2749 / 2466</b>
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<b>Williams Fork</b>	<b>3448 / 3052</b>
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<b>Prod TOC from CBL</b>	<b>976 / 965</b>
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<b>Top of Gas</b>	<b>4265 / 3825</b>
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<b>Coal Ridge</b>	<b>5847 / 5405</b>
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<b>Rollins</b>	<b>no pick / no pick</b>
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<b>Actual TD</b>	<b>6008 / 5566</b>
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<b>Production casing</b>	<b>5992 / 5550</b>
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**4-1/2"**

Cemented with

Stage 1:

991 sx, 14.0 ppg TXI, 1.21 ft<sup>3</sup>/sk

Stage 2:

Lead: 643 sx, 14.0 ppg TXI, 1.21 ft<sup>3</sup>/sk

Tail: 100 sx, 15.8 ppg class G, 1.16 ft<sup>3</sup>/sk

Well:	Twin Creek 12-3D1
Pad:	F12E
API No:	05-045-20386-00
Permit No:	400061917

**Bradenhead Pressure Report Following Primary Cement Job**

Date Cemented:	4.5.12
Plug Bumped:	Yes

Annular Fluid Level After Job (Static or Falling?):	Static	
If falling, barrels of mud added until stabilized:	N/A	barrels

WOC Time:	14 hours
Bond Log Run:	4.6.12

Casing Slips Set:	yes
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**Bradenhead Pressures**

6 hrs:	0	psig
12 hrs:	0	psig
24 hrs:	0	psig
48 hrs:	0	psig
72 hrs:	0	psig

**Comments**

S.C. TOC - Surface  
P.C. TOC - 1200' lower quality to surface.  
DV at ~ 3010'  
TOC below DV - 3960'

Well Name	Well Number	ELEV_KB (TVDSS)	MOLINA (MD)	ATWELL GULCH (MD)	MSVRD (MD)	WLLMS_FRK (MD)	TOP_GAS_CONTINUOUS (MD)	COAL_RIDGE (MD)	TOP_GAS_2500 UNITS
Twin Creek	12-5A1	6167	107	546	2405	3004	3956	5425	N/A
Twin Creek	12-3D1	6167	169	632	2749	3448	4265	5847	5523' MD
Twin Creek	12-5D1	6167	88	514	2355	2948	3756	5334	N/A
Twin Creek	12-6D1	6167	100	527	2309	2889	3791	5298	N/A
Twin Creek	12-6C1	6167	62	464	2262	2802	3661	5185	N/A
Twin Creek	12-4D1	6167	177	635	2754	3505	4208	5823	*See note below (4133' MD)
Twin Creek	12-3D2	6167	149	601	2630	3302	4087	5692	**See note below (3984' MD)
Twin Creek	12-4A1	6167	219	684	3194	3867	4602	6044	N/A
Twin Creek	12-6A1	6167	118	557	2557	3180	3964	5536	3866' MD (2484' TVDSS)
Twin Creek	12-5A2	6167	142	590	2501	3097	3934	5561	*See note below (3940' MD)

Well Name	Well Number	TOP_GAS_2500 UNITS
Twin Creek	12-5A1	N/A
Twin Creek	12-3D1	5523' MD
Twin Creek	12-5D1	N/A
Twin Creek	12-6D1	N/A
Twin Creek	12-6C1	N/A
Twin Creek	12-4D1	*See note below (4133' MD)
Twin Creek	12-3D2	**See note below (3984' MD)
Twin Creek	12-4A1	N/A
Twin Creek	12-6A1	3866' MD (2484' TVDSS)
Twin Creek	12-5A2	*See note below (3940' MD)

Numbers are measured depth (MD) unless otherwise marked

TOP\_GAS\_2500\_UNITS- top marking shallowest occurrence of 2500 units of total gas from total gas curve collected during drilling of well.

N/A- Notation used when no point within well had >2500 units of total gas.

\* Total gas curve data poor quality or data collection issue for well. As neighbouring 7 wells with quality data had "TOP\_GAS\_2500\_UNITS" top deeper than 2484' TVDSS this TVDSS was used for these 2 wells to calculate corresponding MD. This MD in each well is a safe estimate where ECA is highly confident TOP\_GAS\_2500\_UNITS would fall below; especially given fact that many wells on this pad did not reach 2500 units at any point in drilling.

\*\* Total gas curve had spikes at 2497', 2747', and 5395' that are believed to be false readings. First, all other depths on this gas curve had a range of 0 to 1300 total gas units. Regarding false spikes at 2497' and 2747', none of the 7 wells on this pad with quality total gas data had total gas readings above 2500 units at this stratigraphic interval or above. In fact, no readings above 2500 units are found in these 7 wells in the 1200' below this stratigraphic horizon.

Analysis by: Matthew Boyce, Geologist, South Piceance Team, Encana Oil and Gas (USA) Inc., 370 17th Street, Suite 1700



Michael Lippman  
Pass 3/28/12  
8:30pm

Graphic Controls Inc  
ENCANA OIL & GAS  
NARROWS M/S

CHART NO. MC MP-1000

METER: TWIN CHECK 12-301  
CHART PUT ON

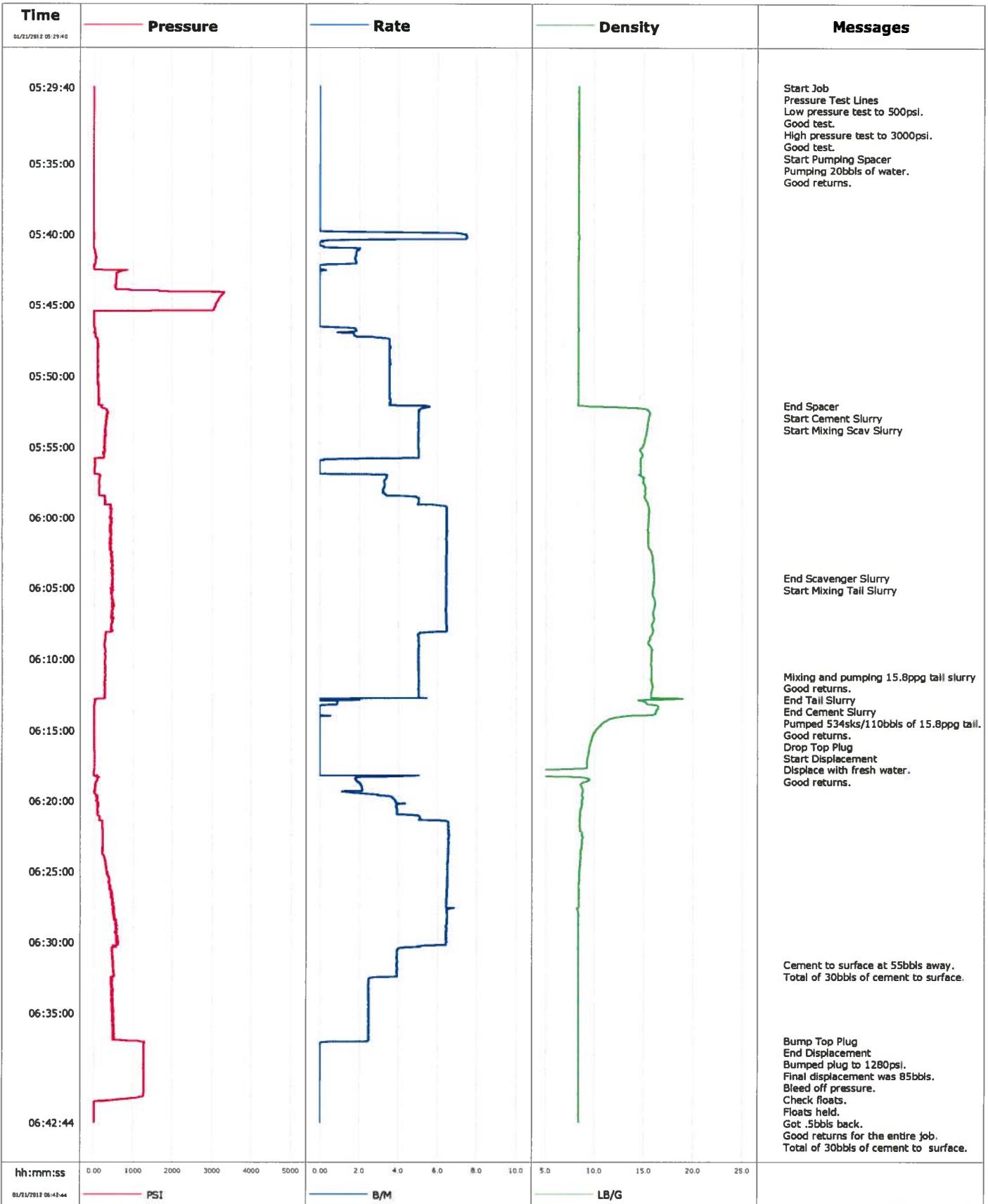
END FIELDS

TAKEN OFF

LOCATION CS-045-20386  
REMARKS SEC 12 TBS-RPT

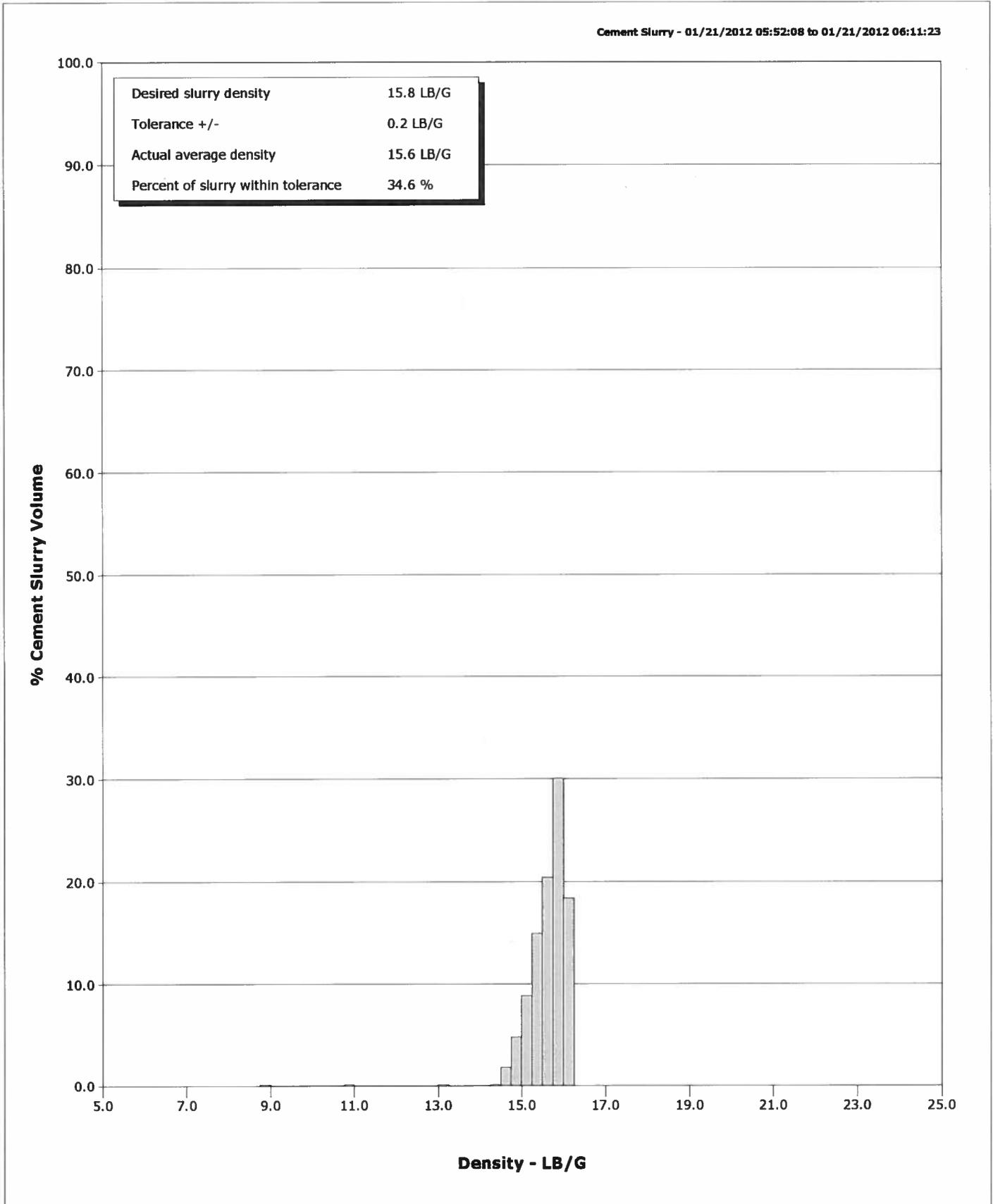
3-28-12

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



# Schlumberger Cementing Qa/Qc Density Report

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



<b>Customer</b> ENCANA				<b>Job Number</b> COBA-00070			
<b>Well</b> TWIN CREEK 12-3D1 TWIN CREEK 12-3D1			<b>Location (legal)</b> F12E		<b>Schlumberger Location</b> Grand Junction, Colorado		<b>Job Start</b> Jan/21/2012
<b>Field</b> DIVIDE CREEK		<b>Formation Name/Type</b> SHALE		<b>Deviation</b> 0 deg	<b>Bit Size</b> 12.3 in	<b>Well MD</b> 1153.0 ft	<b>Well TVD</b> 1153.0 ft
<b>County</b> GARFIELD		<b>State/Province</b> Colorado		<b>BHP</b>	<b>BHST</b> 100 degF	<b>BHCT</b> 81 degF	<b>Pore Press. Gradient</b>
<b>Well Master</b>		<b>API/UWI</b>					
<b>Rig Name</b> nabors m-15		<b>Drilled For</b> Gas		<b>Service Via</b> Land		<b>Casing/Liner</b>	
				<b>Depth, ft</b>	<b>Size, in</b>	<b>Weight, lb/ft</b>	<b>Grade</b>
				<b>Thread</b>			
<b>Offshore Zone</b>		<b>Well Class</b> New		<b>Well Type</b> Development			
				1153.0	9.630	36.0	J55
				0.0	0.000	0.0	8RD
<b>Drilling Fluid Type</b>		<b>Max. Density</b>		<b>Plastic Viscosity</b>		<b>Tubing/Drill Pipe</b>	
						<b>Depth,</b>	<b>Size,</b>
						<b>Weight,</b>	<b>Grade</b>
						<b>Thread</b>	
<b>Service Line</b> Cementing		<b>Job Type</b> 9 5/8" SURFACE					
<b>Max. Allowed Tub. Presa</b> 3000 psi		<b>Max. Allowed Ann. Press</b>		<b>WH Connection</b> 9 5/8" CEMENT HEAD		<b>Perforations/Open Hole</b>	
						<b>Top,</b>	<b>Bottom,</b>
						<b>No. of Shots</b>	<b>Total Interval</b>
							<b>Diameter</b>
						<b>Treat Down</b> Casing	<b>Displacement</b> 85.5 bbl
						<b>Packer Type</b>	<b>Packer Depth</b>
						<b>Tubing Vol.</b>	<b>Casing Vol.</b> 89.1 bbl
						<b>Annular Vol.</b> 68.0 bbl	<b>Openhole Vol.</b> 160.0 bbl
<b>Casing/Tubing Secured</b> <input checked="" type="checkbox"/>		<b>1 Hole Vol. Circulated prior to Cement</b> <input checked="" type="checkbox"/>		<b>Casing Tools</b>		<b>Squeeze Job</b>	
<b>Lift Pressure</b> 570 psi		<b>Shoe Type</b> Guide		<b>Squeeze Type</b>			
<b>Pipe Rotated</b> <input type="checkbox"/>		<b>Pipe Reciprocated</b> <input type="checkbox"/>		<b>Shoe Depth</b> 1153.0 ft		<b>Tool Type</b>	
<b>No. Centralizers</b>		<b>Top Plugs</b> 1		<b>Bottom Plugs</b>		<b>Stage Tool Type</b>	
						<b>Tool Depth</b>	
<b>Cement Head Type</b> Single		<b>Stage Tool Depth</b>		<b>Tail Pipe Size</b>			
<b>Job Scheduled For</b> Jan/21/2012		<b>Arrived on Location</b> Jan/21/2012		<b>Leave Location</b> Jan/21/2012		<b>Collar Type</b> Float	
						<b>Tail Pipe Depth</b>	
						<b>Collar Depth</b> 1106.0 ft	
						<b>Sqz. Total Vol.</b>	
<b>Date</b>	<b>Time 24-hr clock</b>	<b>Treating Pressure PSI</b>	<b>Flow Rate B/M</b>	<b>Density LB/G</b>	<b>Volume BBL</b>	<b>Message</b>	
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 20bbbls 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	COBA-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/110bbbls 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		COBA-00070	
Data	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?	<input checked="" type="checkbox"/>	Volume	30.0 bbl
	110.0 bbl	85.5 bbl	75 degF	Washed Thru Perfs	<input type="checkbox"/>	To	
Customer or Authorized Representative		Schlumberger Supervisor		Circulation Lost	<input type="checkbox"/>	Job Completed	<input checked="" type="checkbox"/>
ROBERT TATE		Jeff Patterson/T Willardson		-		-	

# REGULATORY DRILLING SUMMARY



Well : **Twin Creek 12-3D1 (F12E)**      API # : 05045203860000      Operations Date : 01/21/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 2  
 Spud Date :      Days From Spud : 1      Depth At 06:00 : 1170  
 Morning Operations : R/U Schlumberger ,pressure test lines      Estimated Total Depth : 5557

Time To	Description	Remarks :
8:00 AM	Pick Up Directional tools - Make Up new 12 1/4" PDC	1562 Days without a Lost Time incident
8:30 AM	Service Rig	5 Days without a Medical Aid or Restricted Work incident
6:00 PM	Directional Drill 12 1/4" Hole F/ 197' T/ 1170'= 973' in 9.5 hrs @ 102.4 ft/hr - TD'd Surf @ 1170' MD / 1150' TVD - 18:00 PM 1/20/2012	112 Days without a Recordable Spill
7:00 PM	Circ & Cond Hole - Pump High Visc Sweep & Circ Shakers Clean	371 Days without a Reportable Quantity Spill
9:30 PM	TOOH to Run 9 5/8" Surf csg	1825 gals fuel used past 24hrs
10:00 PM	Service Rig ,Top drive,grease crown,blocks,blackjack,drawworks,brakes, hoisting lines,check com,fom,pull master bushing.	14481 gals fuel on Location,
11:00 PM	PJSA with Franks casing crew,rig up Franks tools.	Rotating Hours on HWDP = 39.5 Hrs
4:30 AM	Run surface casing 25 joints,9 5/8,36#,J55,LT&C,M/D casing shoe 1149',TVD 1133',with 13 centralizers f/1123' to 73'	Total Fluid Losses Last 24 hrs =0 bbls seepage
5:30 AM	C&C,R/D Franks tools,PJSA with Schlumberger.	4 Mud Loggers on Location
6:00 AM	Blow down mud lines ,R/U Schlumberger,presure test lines to 500/3000psi - OK	1 Mud Engineer on Location - Mike Lindell
		Raz Parras On Location as Night Supervisor
		Post Spud & Surf Csg / Cement Notification Sent to State 1/20/12
		Pre Spud Notification for the Twin Creek 12-3D2 made 1-20-12

Well : **Twin Creek 12-3D1 (F12E)**      API # : 05045203860000      Operations Date : 01/20/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 1  
 Spud Date :      Days From Spud : 0      Depth At 06:00 : 197  
 Morning Operations : Drilling 12 1/4" Hole @ 197'      Estimated Total Depth : 5557

Time To	Description	Remarks :
11:30 AM	PJSA on walk the rig to Twin Creek 12-3D1	1561 Days without a Lost Time incident
12:30 AM	Walk the rig to Twin Creek 12-3D1	4 Days without a Medical Aid or Restricted Work incident
1:00 AM	Rig up Gonzo Dredge pump	111 Days without a Recordable Spill
2:00 AM	P/U reamer drilling assembly.	370 Days without a Reportable Quantity Spill
6:00 AM	Drill 12/14" hole F/72' T/ 197' = 125' in 4 hrs @ 31.3 ft/hr	1735 gals fuel used past 24hrs
		14481 gals fuel on Location,
		Rotating Hours on HWDP = 30 Hrs
		Total Fluid Losses Last 24 hrs =0 bbls seepage
		4 Mud Loggers on Location
		1 Mud Engineer on Location - Mike Lindell
		Raz Parras On Location as Night Supervisor
		Post Spud & Surf Csg / Cement Notification Sent to State 1/20/12

Well : **Twin Creek 12-3D1 (F12E)**      API # : 05045203860000      Operations Date : 12/21/2009  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 0  
 Spud Date :      Days From Spud : -760      Depth At 06:00 :  
 Morning Operations :      Estimated Total Depth : 5557

Time To	Description	Remarks :
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# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-3D1 (F12E)</b>	API # : 05045203860000	Operations Date : 03/28/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 4
Spud Date :	Days From Spud : 68	Depth At 06:00 :
Morning Operations : M/U BHA		Estimated Total Depth : 5557

Time To	Description	Remarks :
3:00 PM	H.J.S.A., MIRU on Twin Creek 12-3D1	1629 Days without a Lost Time incident
5:00 PM	Install BOPE and N/U same	72 Days without a Medical Aid or Restricted Work incident
8:00 PM	H.J.S.A. Rig / Mesa Wireline ran surface CBL from 1026' to surface est. top cement at surface	67 Days without a Recordable Spill
11:30 PM	Bradenhead pressure on the Twin Creek 12-4A1 continues to plug 1" flare line, Stop op's on Twin Creek 12-3D1, Lift rig and skid sideways 8", Remove cellar cover, T/O Bradenhead line from wellhead 2" valve, Spot 80bbl flowback tank, H/U 2" hardline below rig mat level to Wellhead, "T" off at cellar and H/U 1" to flare line, Reposition rig over well, Bleed down Bradenhead pressures flaring gas to flare and fluid to flowback tank to test all lines	437 Days without a Reportable Quantity Spill 925 gals fuel used past 24hrs Bradenhead Pressures on the F12E pad as Follows: Twin Creek 12-5D1=10psi, 12-5A1=0psi, 12-5A2 60psi, 12-4D1 80psi 12-4A1 130psi, 12-6C1 60psi, 12-3D2 50psi Notification to COGCC for BOP Test / FIT
5:30 AM	Test BOP, Annular to 250psi/ 2500psi, Manifold and pipe/ blind rams 250psi/ 5000psi, casing to 1500psi for 30min.	
6:00 AM	Finish nipping up flow line	

Well : <b>Twin Creek 12-3D1 (F12E)</b>	API # : 05045203860000	Operations Date : 01/22/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 3
Spud Date :	Days From Spud : 2	Depth At 06:00 : 1170
Morning Operations : Rig Released @ 8:00AM 1/21/2012		Estimated Total Depth : 5557

Time To	Description	Remarks :
7:00 AM	Cement Surface Casing as Follows: Pumped 20bbls H2O Spacer + 534sx, 110bbls, 619cu/ft, of 15.8ppg, 5.10gl/sk, 1.16Yld Tail Cement - Final Circ Press @ 2bbl/min = 490psi - Bumped Plug w/ 1280psi - Held Pressure 6 Min. - Floats Held, Full Returns - Circ 30bbls Cement to Surface - CIP @ 6:43 AM 1/21/2012	1563 Days without a Lost Time incident
8:00 AM	Rig down Schlumberger, Landing Joint & Dredge Pump  Rig Released at 8:00 AM 1/21/2012	6 Days without a Medical Aid or Restricted Work incident 112 Days without a Recordable Spill 372 Days without a Reportable Quantity Spill xxxx gals fuel used past 24hrs 14481 gals fuel on Location, Rotating Hours on HWDP = 39.5 Hrs Total Fluid Losses Last 24 hrs =0 bbls seepage 4 Mud Loggers on Location 1 Mud Engineer on Location - Mike Lindell Raz Parras On Location as Night Supervisor Pre Spud Notification for the Twin Creek 12-3D2 made 1-20-12 Post Spud & Surf Csg / Cement Notification for 12-3D2 Made 1-21-12

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-3D1 (F12E)</b>	API # : 05045203860000	Operations Date : 03/30/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 6
Spud Date :	Days From Spud : 70	Depth At 06:00 : 3963
Morning Operations : Drilling		Estimated Total Depth : 5557

<table border="0"> <thead> <tr> <th style="text-align: left;">Time To</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>6:30 AM</td> <td>Drill from 1971' to 2066'</td> </tr> <tr> <td>7:00 AM</td> <td>Service rig</td> </tr> <tr> <td>6:00 PM</td> <td>Drill from 2066' to 3205', 20k wob, built mud wt from 10.7ppg to 11.0ppg, 120 spm, 55 rpm, 500 gpm</td> </tr> <tr> <td>7:00 PM</td> <td>Drill from 3205' to 3300'</td> </tr> <tr> <td>7:30 PM</td> <td>Service rig</td> </tr> <tr> <td>6:00 AM</td> <td>Drill from 3300' to 3963', 16k wob, 70 rpm, 120 spm, 500 gpm building mud wt from 11.0 ppg to 11.2ppg</td> </tr> </tbody> </table>	Time To	Description	6:30 AM	Drill from 1971' to 2066'	7:00 AM	Service rig	6:00 PM	Drill from 2066' to 3205', 20k wob, built mud wt from 10.7ppg to 11.0ppg, 120 spm, 55 rpm, 500 gpm	7:00 PM	Drill from 3205' to 3300'	7:30 PM	Service rig	6:00 AM	Drill from 3300' to 3963', 16k wob, 70 rpm, 120 spm, 500 gpm building mud wt from 11.0 ppg to 11.2ppg	Remarks : 1631 Days without a Lost Time incident 74 Days without a Medical Aid or Restricted Work incident 69 Days without a Recordable Spill 439 Days without a Reportable Quantity Spill 1605 gals fuel used past 24hrs Bradenhead Pressures on the F12E pad as Follows: Twin Creek 12-5D1=40psi, 12-5A1=0psi, 12-5A2 100psi, 12-4D1 90psi 12-4A1 130psi, 12-6C1 80psi, 12-3D2 130psi Notification to COGCC for BOP Test / FIT Mike Longworth on location to witness FIT	
Time To	Description															
6:30 AM	Drill from 1971' to 2066'															
7:00 AM	Service rig															
6:00 PM	Drill from 2066' to 3205', 20k wob, built mud wt from 10.7ppg to 11.0ppg, 120 spm, 55 rpm, 500 gpm															
7:00 PM	Drill from 3205' to 3300'															
7:30 PM	Service rig															
6:00 AM	Drill from 3300' to 3963', 16k wob, 70 rpm, 120 spm, 500 gpm building mud wt from 11.0 ppg to 11.2ppg															

Well : <b>Twin Creek 12-3D1 (F12E)</b>	API # : 05045203860000	Operations Date : 03/29/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 5
Spud Date :	Days From Spud : 69	Depth At 06:00 : 1971
Morning Operations : Drilling @ 2089'		Estimated Total Depth : 5557

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Time To	Description																											
8:00 AM	Nipple up, install turn buckles on BOP, pre spud check list																											
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2:30 PM	Trip in the hole inspecting 10 stands of HWDP, installed rotating rubber																											
4:00 PM	Slip & cut drilling line																											
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# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-3D1 (F12E)</b>		API # : 05045203860000	Operations Date : 04/01/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 8
Spud Date :	Days From Spud : 72		Depth At 06:00 : 5078
Morning Operations : Changing out BHA			Estimated Total Depth : 5557
<b>Remarks :</b>			
Time To	Description	1633 Days without a Lost Time incident 24 hr losses 1002 bbls      Total losses	
6:30 AM	Drill from 4815' to 5005'	1002 bbls	
7:00 AM	Rig service	76 Days without a Medical Aid or Restricted Work incident	
10:00 AM	Drill from 5005' to 5078' lost returns @ 10:10 lost 67bbls	71 Days without a Recordable Spill	
11:00 AM	Build 50 bbl LCM poly swell pill	441 Days without a Reportable Quantity Spill	
11:30 AM	Spot pill lost 147 bbls spotting pill	1184 gals fuel used past 24hrs	
12:30 PM	TOOH 10 stands filling with trip tank, no returns lost 141bbls filling with trip tank over the back side	Bradenhead Pressures on the F12E pad as Follows: Twin Creek 12-5D1=60psi, 12-5A1=0psi, 12-5A2 130psi, 12-4D1 110psi 12-4A1 130psi, 12-6C1 90psi, 12-3D2 80psi	
1:30 PM	Build 50 bbl LCM poly swell pill	Notification to COGCC for BOP Test / FIT Mike Longworth on location to witness FIT	
2:00 PM	Spot pill lost 110 bbls spotting pill		
3:00 PM	TOOH 6 stands filling with trip tank lost 68bbls No returns		
6:00 PM	Build 484 bbls of volume in pits filling back side with trip tank lost 66 bbls no return total losses day tour 619		
10:00 PM	Build 160 bbls of volume 12.3 ppg 43 vis in pits pump 28 bbls with trip tank and got return, hole still seeping 60 bbls hour		
10:30 PM	Rig service		
11:30 PM	Trip in the hole 16 stands @ 60 ft/ min with no displacement		
1:30 AM	Build 30bbl LCM pill to spot on bottom treated mud that was delivered from M11, spotted pill, had some returns 40-50%		
4:30 AM	TOOH, pulled 10 stands w/ 2 flow checks, filled hole with trip tank hole took 17.2bbls calc fill 14.2, pumped dry job for bit trip, pulled 5 stands and found poly swell in drill pipe		
6:00 AM	Circulate & condition to clean poly swell out of DP built new dry job total losses night tour 383 bbls		

Well : <b>Twin Creek 12-3D1 (F12E)</b>		API # : 05045203860000	Operations Date : 03/31/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 7
Spud Date :	Days From Spud : 71		Depth At 06:00 : 4815
Morning Operations : Drilling @ 4907'			Estimated Total Depth : 5557
<b>Remarks :</b>			
Time To	Description	1632 Days without a Lost Time incident Both crew held spill drills 4 different scenarios	
9:00 AM	Drill from 3963' to 4058', 120 spm, 500 gpm, 18k wob, 70 rpm built mud wt from 11.2ppg to 12.2 ppg	75 Days without a Medical Aid or Restricted Work incident	
9:30 AM	Service rig	70 Days without a Recordable Spill	
6:00 PM	Drill from 4058' to 4342', 120 spm, 500 gpm, 18k wob, 70 rpm, mud wt 12.2 ppg	440 Days without a Reportable Quantity Spill	
7:30 PM	Drill from 4342' to 4437'	1605 gals fuel used past 24hrs	
8:00 PM	Service rig	Bradenhead Pressures on the F12E pad as Follows: Twin Creek 12-5D1=90psi, 12-5A1=0psi, 12-5A2 100psi, 12-4D1 60psi 12-4A1 130psi, 12-6C1 100psi, 12-3D2 130psi	
6:00 AM	Drill from 4437' to 4815', 120 spm, 500 gpm, 18k wob, 70 rpm, mud wt 12.2 ppg	Notification to COGCC for BOP Test / FIT Mike Longworth on location to witness FIT	

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-3D1 (F12E)      API # : 05045203860000      Operations Date : 04/02/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 9  
 Spud Date :      Days From Spud : 73      Depth At 06:00 : 5135  
 Morning Operations : Drilling 5179'      Estimated Total Depth : 5557

Time To	Description
6:30 AM	Service rig
8:30 AM	Trip out of the hole 24 stds of DP, 10 stds of HWDP calc. fill 31.7 bbls, actual fill 35.8 bbls
9:00 AM	Pull rotating rubber
11:00 AM	Directional work, changed out bit, motor and batteries, function tested BOP
11:30 AM	Trip in the hole, install rotating rubber
5:30 PM	Trip in the hole to 4815' circulating bottoms up every 1500'
6:00 PM	Reaming last 4 stands to bottom
6:30 PM	Service rig
8:00 PM	Drill from 5078' to 5135' with 90% returns lost 150 bbls, pumped LCM sweep, mud wt 12.2ppg
10:30 PM	Shut down pumps picked up off bottom built 40bbls LCM poly swell pill, built 100 bbls of new mud 12.0ppg
12:00 AM	Trip out of the, pulled 11 stands of drill pipe, filling with trip tank calc. fill 19.1bbls actual fill 16.4
3:30 AM	Circulated over the top of the hole with tank, built 250bbls of new mud 11.9ppg
4:30 AM	Trip in the hole 11 stds circulated after 5 stds no losses
6:00 AM	Circulated bottoms up to clean hole so that shakers would handle 80 spm

Remarks :  
 1634 Days without a Lost Time incident  
 24 hr losses 300 bbls      Total losses  
 1302 bbls  
 77 Days without a Medical Aid or Restricted Work incident  
 72 Days without a Recordable Spill  
 442 Days without a Reportable Quantity Spill  
 1015 gals fuel used past 24hrs  
 Bradenhead Pressures on the F12E pad as Follows:  
 Twin Creek 12-5D1=100psi, 12-5A1=0psi, 12-5A2 90psi,  
 12-4D1 20 psi 12-4A1 130psi, 12-6C1 105psi, 12-3D2  
 0psi  
 Notification to COGCC for 24 hour losses

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-3D1 (F12E)      API # : 05045203860000      Operations Date : 04/03/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 10  
 Spud Date :      Days From Spud : 74      Depth At 06:00 : 6008  
 Morning Operations : Circulating hole clean & gas down adjusting mud wt for trip      Estimated Total Depth : 5557

Time To	Description
7:00 AM	Dill from 5135' to 5194', 335 gpm, mud wt 11.9ppg
7:30 AM	Service rig
9:00 AM	Sliding from 5194' to 5219'
10:30 AM	Drill from 5219' to 5289' 335 gpm, mud wt 12.0ppg, Hole started seeping @ 1bbl/min
12:00 PM	Circulate and condition mud, lost 80% returns @ 5289' built 50bbl LCM poly pill and spotted lost 80bbls
1:00 PM	TOOH from 5289' to 4532' 8 stds filling hole with trip tank we gained 6.24 bbls calc. fill was 4.18bbls, flow checked @ 4815' no flow @had tight spot @ 5105' watched for swabbing Hole was not swabbing
2:30 PM	Circulate and condition mud @ 40 spm, let shakers clean up, built 200 bbls of volume
3:00 PM	TIH from 4532' to 5194' washed last stand to bottom with full returns
3:30 PM	Circulate and condition mud, pump out trip tanks, let shakers clean up, getting back lots of LCM Total losses on day tour 200 bbls
7:00 PM	Drill from 5194' to 5479' 335 gpm, mud wt 12.0ppg with 95% returns hole seeping just a little
7:30 PM	Service rig
6:00 AM	Drill from 5479' to 6008' hole seeping about 40bbls hr Total losses night tour 450bbls

Remarks :  
 1635 Days without a Lost Time incident  
 24 hr losses 650 bbls      Total losses  
 1952 bbls  
 78 Days without a Medical Aid or Restricted Work incident  
 Both crews held BOP drills  
 73 Days without a Recordable Spill  
 443 Days without a Reportable Quantity Spill  
 1449 gals fuel used past 24hrs  
 Bradenhead Pressures on the F12E pad as Follows:  
 Twin Creek 12-5D1=60psi, 12-5A1=0psi, 12-5A2 90psi,  
 12-4D1 0 psi 12-4A1 100psi, 12-6C1 70psi, 12-3D2 10psi  
 Notification to COGCC for 24 hour losses & casing/  
 cement  
 HWDP hrs=91.5

# REGULATORY DRILLING SUMMARY



Well : **Twin Creek 12-3D1 (F12E)**      API # : 05045203860000      Operations Date : 04/04/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 11  
 Spud Date :      Days From Spud : 75      Depth At 06:00 : 6008  
 Morning Operations : Lay down BHA      Estimated Total Depth : 5557

Time To	Description
2:30 PM	Circulate and condition mud, pumped two high vis sweeps build volume and wt from 11.9ppg to 12.2ppg to bring background gas under 1000 units lost some returns, slowed pumps down to 40 spm, sent 10 bbl sweeps to control losses, built 45 bbl LCM sweep and chased with poly swell displace, lost 150 bbls hole wouldn't hold 12.2ppg with 10% LCM in active system so we spotted poly swell
4:00 PM	TOOH from 6008' to 5099' 10stds, trying to get above poly swell and regain full returns filling continuously hole took 11.8bbls to fill calc fill was 16.8bbls
6:00 PM	Circulate and condition mud @ 5099' watching losses, mud wt in 12.2ppg mud wt out still gas cut 11.9ppg after two bottoms up with mo losses mud wt in 12.2ppg and mud wt out 12.1+
8:30 PM	Circulate and condition to hold a 12.2ppg mud wt in and 12.1ppg out built 100 bbls of new mud and dry job, flow checked for 1 hour 30min flow slowed way down but just would not stop, turned pumps back on and the hole was sweeping, built 120 bbls of new mud and 40 bbl pill
12:00 AM	Spot 45 bbls of LCM poly swell
1:00 AM	TOOH 5 stds to get above poly swell hole tool 2.2bbls calc. fill 3.4bbls
2:00 AM	Circulate above poly swell to bring mud wt up to 12.3ppg in and 12.2ppg out, built 35bbl dry job, 30 min flow check No flow
6:00 AM	TOOH 30 stds of drill pipe flow checked every 5 stds for the first 10 stds then every 10 stds for 15 min hole took 15.1bbls calc. fill 15.6 bbls Total losses night tour 146bbls

Remarks :  
 1636 Days without a Lost Time incident  
 24 hr losses 298 bbls      Total losses  
 2250 bbls  
 79 Days without a Medical Aid or Restricted Work incident  
 74 Days without a Recordable Spill  
 444 Days without a Reportable Quantity Spill  
 1255 gals fuel used past 24hrs  
 Bradenhead Pressures on the F12E pad as Follows:  
 Twin Creek 12-5D1=40psi, 12-5A1=0psi, 12-5A2 90psi,  
 12-4D1 0 psi 12-4A1 100psi, 12-6C1 30psi, 12-3D2 20psi  
 Notification to COGCC for 24 hour losses & casing/  
 cement  
 HWDP hrs=91.5

# REGULATORY DRILLING SUMMARY



Well : **Twin Creek 12-3D1 (F12E)**      API # : 05045203860000      Operations Date : 04/05/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 12  
 Spud Date :      Days From Spud : 76      Depth At 06:00 : 6008  
 Morning Operations : Circulating hole clean and gas down for cement      Estimated Total Depth : 5557

Time To	Description
7:30 AM	TOOH From 1498' to 100'Flow checking every 10 stds
8:00 AM	Safety meeting on laying down BHA
9:00 AM	Lay down BHA
9:30 AM	Remove wear bushing function test BOP
10:00 AM	Pre job safety meeting with casing crew
10:30 AM	Rig up casing crew
2:00 PM	Run casing to 1996' circulating every 1000'
3:30 PM	Circulate bottoms up and gas down under 1000 units
5:00 PM	Run casing to 3071' circulating every 1000'
6:00 PM	Circulate bottoms up and gas down under 1000 units
6:30 PM	Service rig
7:00 PM	Run casing to 4038' circulating every 1000'
9:00 PM	Circulate bottoms up and gas down under 1000 units
10:00 PM	Run casing to 5091' circulating every 1000'
11:30 PM	Circulate bottoms up and gas down under 1000 units
12:00 AM	Run casing from 5091' to 5111' hit a tight spot, pulled back out to 5091' swaged up
4:00 AM	Circulated and wash joint down through tight spot
5:30 AM	Run casing to 5997' circulating bottoms up every 1000'
6:00 AM	Circulate bottoms up to clean hole for cement, rig down casing crew circulating on bottom with no losses

Remarks :  
 1637 Days without a Lost Time incident  
 24 hr losses 0 bbls      Total losses 2250 bbls  
 80 Days without a Medical Aid or Restricted Work incident  
 75 Days without a Recordable Spill  
 445 Days without a Reportable Quantity Spill  
 ??? gals fuel used past 24hrs  
 Bradenhead Pressures on the F12E pad as Follows:  
 Twin Creek 12-5D1=40psi, 12-5A1=0psi, 12-5A2 90psi,  
 12-4D1 0 psi 12-4A1 100psi, 12-6C1 30psi, 12-3D2 20psi  
 Notification to COGCC for 24 hour losses & casing/ cement

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-3D1 (F12E)</b>	API # : 05045203860000	Operations Date : 04/07/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 14
Spud Date :	Days From Spud : 78	Depth At 06:00 :
Morning Operations :		Estimated Total Depth : 5557

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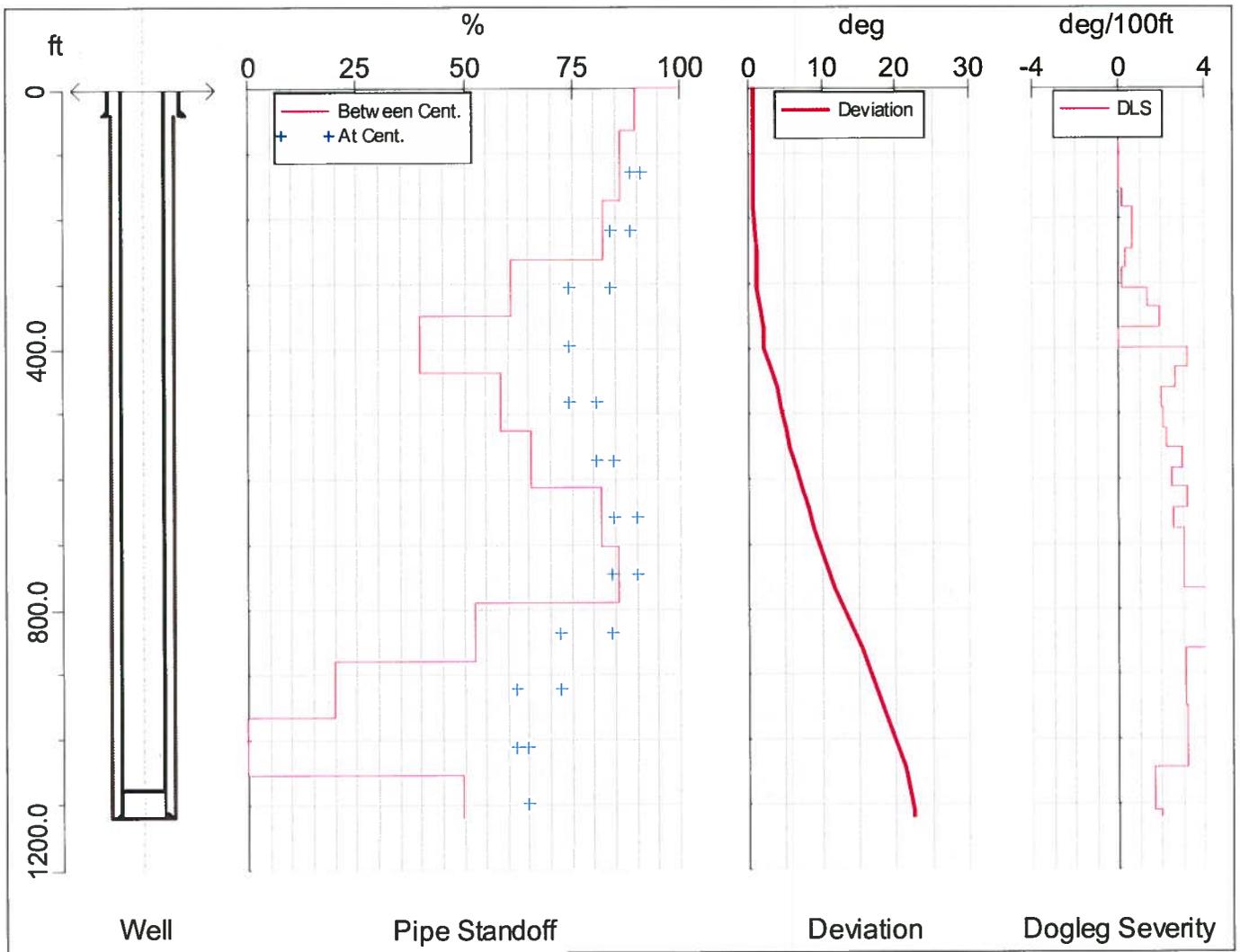
Well : <b>Twin Creek 12-3D1 (F12E)</b>	API # : 05045203860000	Operations Date : 04/06/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 13
Spud Date :	Days From Spud : 77	Depth At 06:00 :
Morning Operations : Running CBL		Estimated Total Depth : 5557

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# Twin Creek 12-3D1

Type	Quantity	Centralizers per Joint	Spacing (ft)	From (ft)	To (ft)	Stop Rings
12 1/4 " BOW	12	1/2	88	Surface	TD	0



# Multistage Cementing



Company: ENCANA USA - PARACHUTE FIELD OFC (EDI)  
Well Name: Twin Creek 12-3D1  
Field: Mamm Creek  
County: Garfield  
State: CO

Date: 3/31/2012

Well Location: F12E

API Number: 05045203860000

Proposal Number: 3

Made By: Matt Hudson

Service from District: Grand Junction, CO

District Phone: 303-486-3245

Objective: Stage 1

50bbbls MUDPUSH II Spacer

Surface Casing Shoe: 1170ft.

10lb/bbl CemNET Plus

Mesa Verde: 2734ft. (2467)

14.0# EasyBLOK TXI: 3000ft.

Top of Gas: 4135ft. (3702)

1.5lb/bbl CemNET

DV Tool: 3000ft.

Stage 2

8 3/4" Bit Depth: TD.

50bbbls MUDPUSH II Spacer

TD: 5991ft. (5557)

10lb/bbl CemNET Plus

14.0# EasyBLOK TXI: 670ft.

1.5lb/bbl CemNET

100sks 15.8# G Tail.

1.5lb/bbl CemNET

#### Disclaimer Notice:

This information is presented in good faith, but no warranty is given by Schlumberger and Schlumberger assumes no liability for advice or recommendations made concerning the use of any product or service. The results given are estimates based on calculations produced by a computer model including various assumptions on the well, reservoir and treatment. The results depend on input data provided by the customer and estimates of unknown data and can be more accurate than the model, the assumptions and such input data. The information presented is Schlumberger's best estimate of the results that may be achieved and should be used for comparison purposes rather than absolute values. The quality of input data, and hence results, may be improved through the use of downhole tests and procedures which Schlumberger can assist in selecting. Proceeds from infringement of patents of Schlumberger or others is not to be construed for any such rights granted unless expressly agreed to in writing.

# Schlumberger



## EXECUTIVE SUMMARY

Enclosed are our recommendations for Schlumberger intervention on the referenced well. The proposal includes well data, design data, materials and resources requirements and cost estimates. The purpose of our services is to perform a Multistage Cementing treatment.

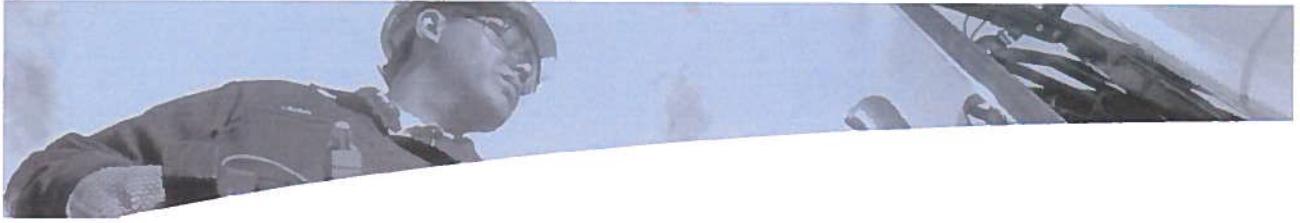
Schlumberger has established a safety policy to which all Schlumberger personnel must adhere. A pre-job safety meeting will be held with customer representatives and other on location personnel to familiarize everyone with existing hazards and safety procedures. We would appreciate close cooperation between the customer representative and the Schlumberger representative to ensure a safe operation.

The estimated total cost of our services is **\$ 108,323.41**. All costs are estimates only. Actual costs will be determined by time, material and equipment used during treatment. Taxes are not included. All work will be subject to Schlumberger then-current General Terms and Conditions or to the terms and conditions of a Master Service Agreement if one is in force between Schlumberger and Customer. This quote is valid for a period of thirty (30) days from the date submitted.

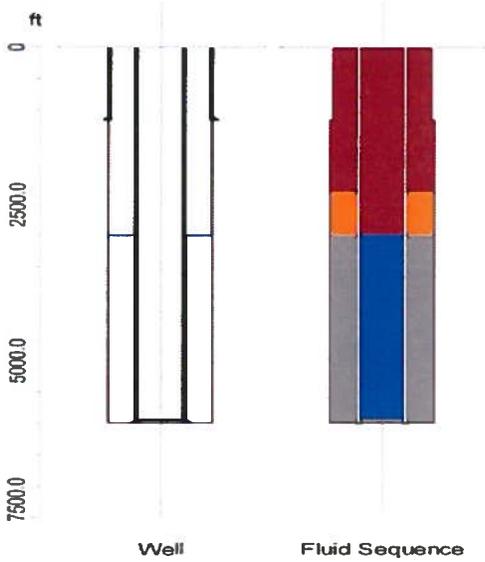
Thank you for considering Schlumberger.  
Please do not hesitate to contact me with any questions or concerns.

Sincerely,

Matt Hudson  
303-862-1701  
mHUDSON2@slb.com



## WELL DATA Stage 1



**IMPORTANT**  
The well data shown on this page is based on information available when this treatment program was prepared. This data must be confirmed on location with the wellsite supervisor prior to the treatment. Any changes in the well data need to be reviewed for their impact on the treatment design.

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
MUDPUSH II	50.0	13.20	2296.9
14.0# EasyBLOK TXI	213.4	14.00	3000.0
Water	45.9	8.32	2995.9
Mud	46.6	12.50	0.0

Total Liquid Volume : 355.9 bbl

Well Data	
Job Type :	Multistage Cementing
Total Depth (Measured) :	5991.0 ft
True Vertical Depth (TVD) :	5549.6 ft
BHST (Tubular Bottom Static Temperature) :	160 degF
BHCT (Tubular Bottom Circulating Temperature) :	114 degF

Open Hole		
Mean Diameter without Excess	Bottom Depth	Annular Excess
8.750 in	5991.0 ft	30.0 %

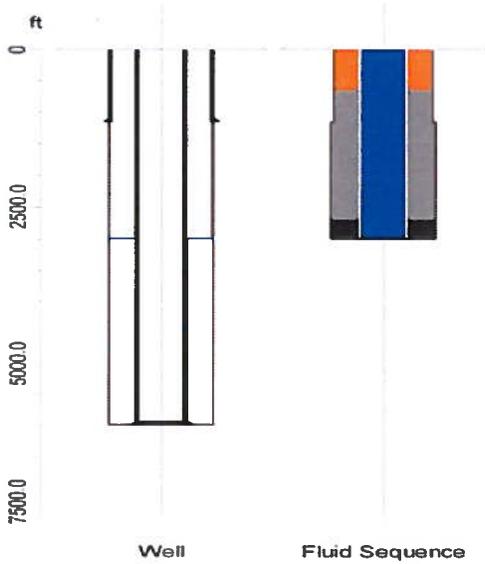
Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
9 5/8 in	36.0 lb/ft	K-55	LTC	0.43 ft <sup>3</sup> /ft	1170.0 ft

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
4 1/2 in	11.6 lb/ft	N-80	BTC	0.09 ft <sup>3</sup> /ft	5991.0 ft

Annular Capacity (without Excess) : Casing Bottom / Open Hole : 0.31 ft<sup>3</sup>/ft  
Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 0.32 ft<sup>3</sup>/ft



## WELL DATA Stage 2



**IMPORTANT**  
The well data shown on this page is based on information available when this treatment program was prepared. This data must be confirmed on location with the well site supervisor prior to the treatment. Any changes in the well data need to be reviewed for their impact on the treatment design.

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
MUDPUSH II	50.0	13.20	0.0
14.0# EasyBLOK TXI	138.4	14.00	670.0
15.8# G Tail	20.6	15.80	2710.3
Water	46.6	8.32	0.0

Total Liquid Volume : 255.6 bbl

Well Data	
Job Type :	Multistage Cementing
Total Depth (Measured) :	5991.0 ft
True Vertical Depth (TVD) :	5549.6 ft
BHST (Tubular Bottom Static Temperature) :	119 degF
BHCT (Tubular Bottom Circulating Temperature) :	114 degF

Open Hole		
Mean Diameter without Excess	Bottom Depth	Annular Excess
8.750 in	5991.0 ft	30.0 %

Stage Collar	
Measured Depth :	3000.0 ft

Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
9 5/8 in	36.0 lb/ft	K-55	LTC	0.43 ft <sup>3</sup> /ft	1170.0 ft

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
4 1/2 in	11.6 lb/ft	N-80	BTC	0.09 ft <sup>3</sup> /ft	5991.0 ft

Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 0.32 ft<sup>3</sup>/ft



## FLUID SYSTEMS 1

MUDPUSH II			
<b>System</b>	MUDPUSH II		
<b>Density</b>	13.20 lb/gal		
<b>Total Volume</b>	50.0 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>
	D031	Weighting Agent	6302.6 lb/mgal
	D182	MUDPUSH II Additive	6.0 lb/bbl Base Fluid
	<b>D097</b>	<b>Losseal W/O (CemNET Plus)</b>	<b>10.0 lb/bbl Spacer</b>

14.0# EasyBLOK TXI (990 sacks, 75 lb per sack of Blend)			
<b>System</b>	Conventional		
<b>Density</b>	14.00 lb/gal		
<b>Yield</b>	1.21 ft <sup>3</sup> /sk		
<b>Mixed Water</b>	5.477 gal/sk		
<b>Mixed Fluid</b>	5.477 gal/sk		
<b>Total Volume</b>	213.4 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>
	D049	Cement	75.00 lb/sk WBWOB
	D154	Extender	6.0 % BWOB
	D400	Gas Control Agent	0.6 % BWOB
	D153	Anti-Settling Agent	0.1 % BWOB
	D202	Dispersant	0.2 % BWOB
	D013	Retarder	0.55 % BWOB
	D346	Anti Foam	0.5 % BWOB
	D329	Lost Circulation Control Agent	0.25 lb/sk WBWOB
	<b>D095</b>	<b>CemNET</b>	<b>1.5 lb/bbl</b>

Water			
<b>System</b>	Water		
<b>Density</b>	8.32 lb/gal		
<b>Total Volume</b>	45.9 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>

Some of the chemicals specified in this program may have toxic properties. All personnel should be familiar with the inherent dangers and appropriate safeguards to prevent accidental injury. Use of the chemicals may be governed by certain laws and regulations and should only be used in accordance with such. Please refer to the MSDS sheets for the recommended safety precautions and required minimum personal protective equipment.



## FLUID SYSTEMS 2

MUDPUSH II			
<b>System</b>	MUDPUSH II		
<b>Density</b>	13.20 lb/gal		
<b>Total Volume</b>	50.0 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>
	D031	Weighting Agent	6302.6 lb/mgal
	D182	MUDPUSH II Additive	6.0 lb/bbl Base Fluid
	<b>D097</b>	<b>Losseal W/O (CemNET Plus)</b>	<b>10.0 lb/bbl Spacer</b>

14.0# EasyBLOK TXI (643 sacks, 75 lb per sack of Blend)			
<b>System</b>	Conventional		
<b>Density</b>	14.00 lb/gal		
<b>Yield</b>	1.21 ft <sup>3</sup> /sk		
<b>Mixed Water</b>	5.496 gal/sk		
<b>Mixed Fluid</b>	5.496 gal/sk		
<b>Total Volume</b>	138.4 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>
	D049	Cement	75.00 lb/sk WBWOB
	D154	Extender	6.0 % BWOB
	D400	Gas Control Agent	0.5 % BWOB
	D153	Anti-Settling Agent	0.15 % BWOB
	D202	Dispersant	0.2 % BWOB
	D013	Retarder	0.3 % BWOB
	D046	Anti Foam	0.5 % BWOB
	D029	Lost Circulation Control Agent	0.25 lb/sk WBWOB
	<b>D095</b>	<b>CemNET</b>	<b>1.5 lb/bbl</b>

15.8# G Tail (100 sacks, 94 lb per sack of Blend)			
<b>System</b>	Conventional		
<b>Density</b>	15.80 lb/gal		
<b>Yield</b>	1.16 ft <sup>3</sup> /sk		
<b>Mixed Water</b>	5.099 gal/sk		
<b>Mixed Fluid</b>	5.099 gal/sk		
<b>Total Volume</b>	20.6 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>
	G	Cement	94.00 lb/sk WBWOB
	D065	Dispersant	0.2 % BWOB
	D013	Retarder	0.1 % BWOB
	D046	Anti Foam	0.2 % BWOB
	D029	Lost Circulation Control Agent	0.25 lb/sk WBWOB
	<b>D095</b>	<b>CemNET</b>	<b>1.5 lb/bbl</b>

Water			
<b>System</b>	Water		
<b>Density</b>	8.32 lb/gal		
<b>Total Volume</b>	46.6 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>



Some of the chemicals specified in this program may have toxic properties. All personnel should be familiar with the inherent dangers and appropriate safeguards to prevent accidental injury. Use of the chemicals may be governed by certain laws and regulations and should only be used in accordance with such. Please refer to the MSDS sheets for the recommended safety precautions and required minimum personal protective equipment.

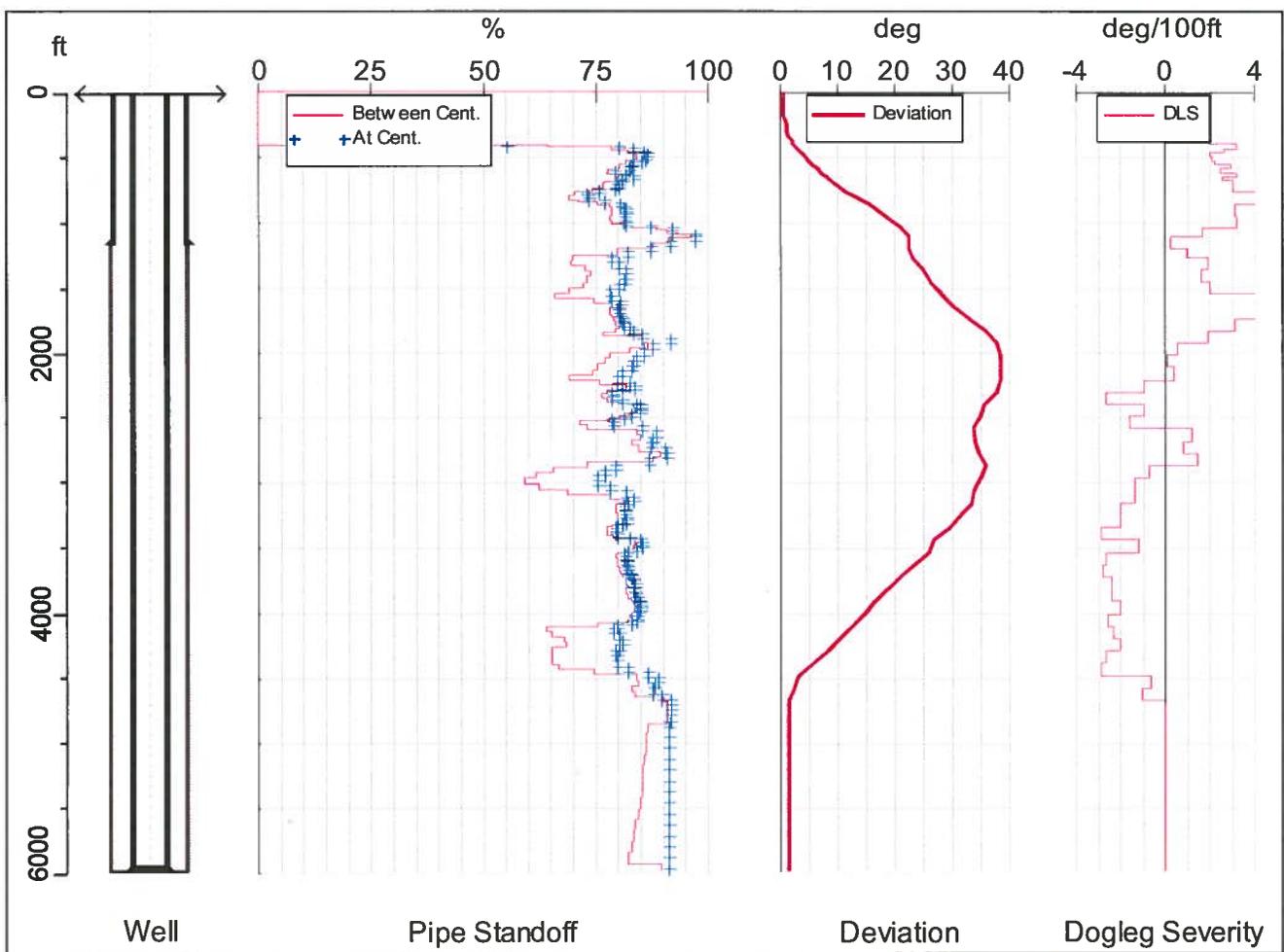
## PROCEDURES

1. **MI (Move in) Schlumberger equipment.**
2. **Conduct Rig-up, Prime-up and pressure test safety meeting.**
3. **RU (Rig up) Schlumberger equipment and pressure test to customer master valve.**
4. **Conduct pre-job safety meeting.**
5. **Perform treatment per design pumping schedule and instructions of client representative.**
6. **ADD 50lbs SUGAR TO FIRST 50bbls DISPLACEMENT**
7. **Add L064 EVENLY to displacement (1gal/10bbls).**
8. **Conduct post job rig down meeting.**
9. **Purge all High Pressure and Low Pressure treating lines with air PRIOR TO RIG-DOWN.**
10. **Rig down Schlumberger equipment.**
11. **Conduct convoy meeting and move out Schlumberger equipment.**



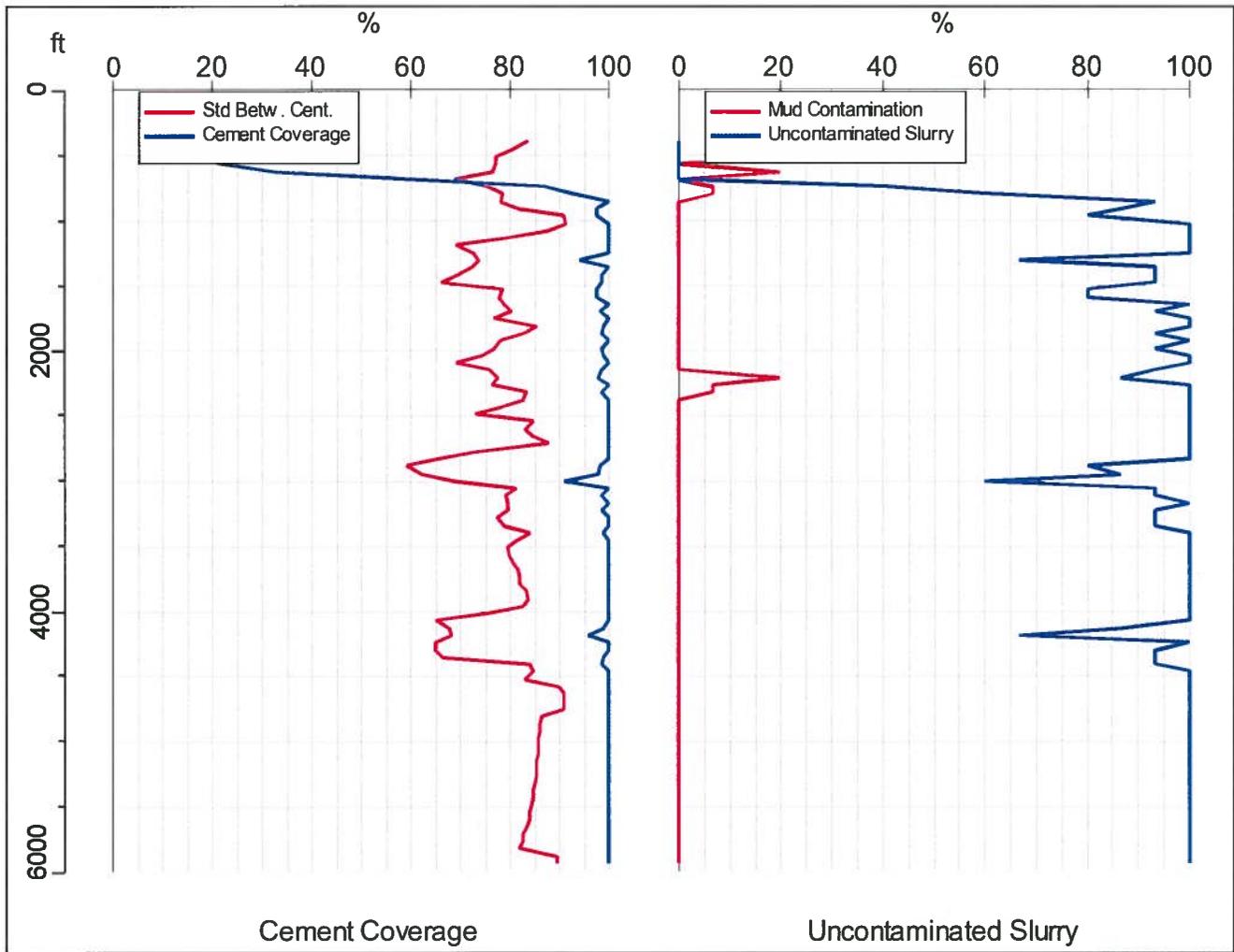
## CENTRALIZERS

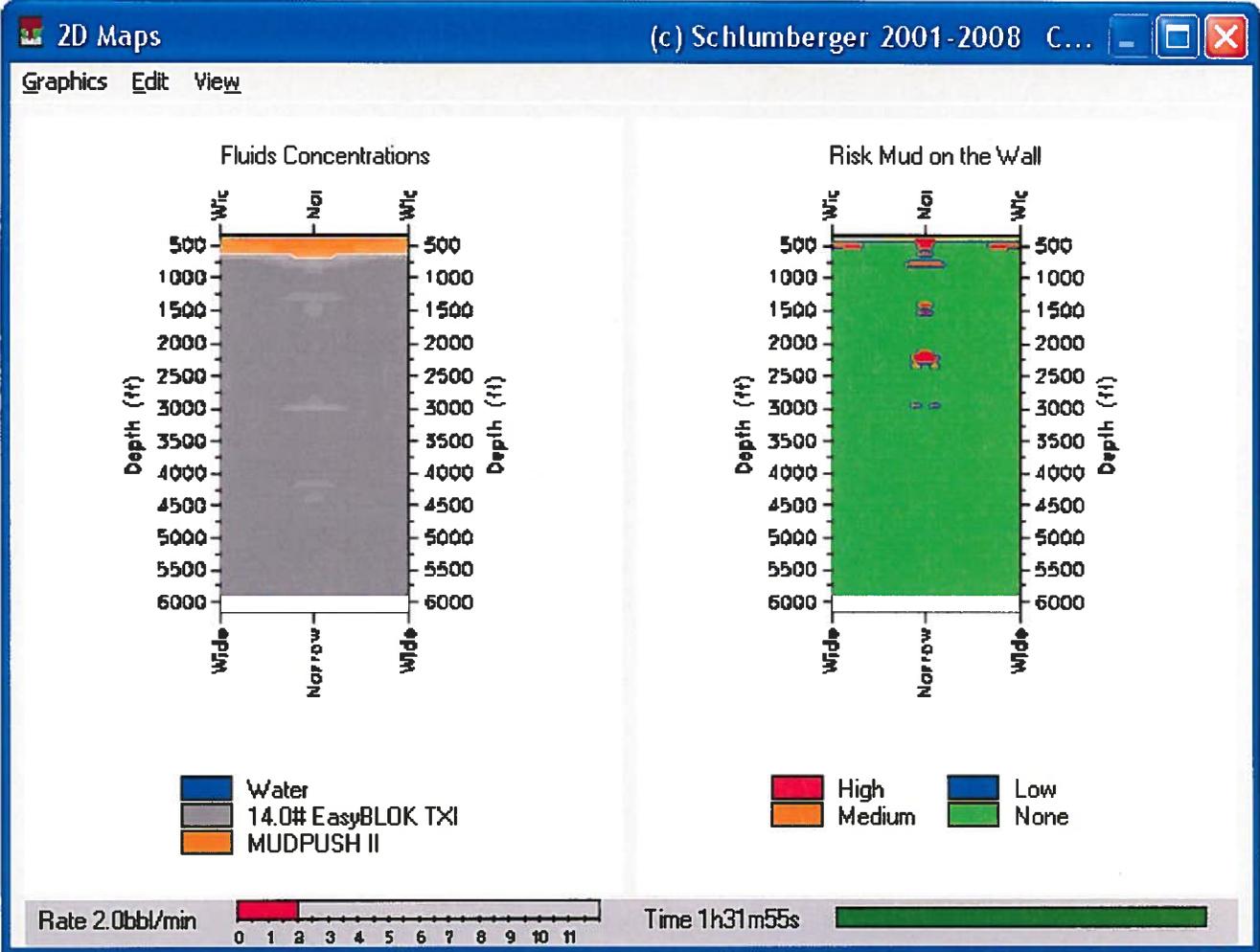
Type	Quantity	Centralizers per Joint	Spacing (ft)	From (ft)	To (ft)	Stop Rings
8 3/4" BOW	34	2/1	21	405	1119	17
8 3/4" BOW	12	1/1	42	1119	1623	0
8 3/4" BOW	10	2/1	21	1623	1833	5
8 3/4" BOW	10	1/1	42	1833	2253	0
8 3/4" BOW	14	2/1	21	2253	2547	7
8 3/4" BOW	14	1/1	42	2547	3135	0
8 3/4" BOW	46	2/1	21	3135	4101	23
8 3/4" BOW	19	1/1	42	4101	4899	0
8 3/4" BOW	13	1/2	84	4899	TD	0





## WELLCLEAN II Simulation







## PRICE ESTIMATE

Equipment and Services						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
48016000	Cement Multiple Stage Charge	1 EA	2,400.00	2,400.00	45.2 %	1,315.20
48019000	Bulk Unit, Cement Add Hr	8 HR	107.50	860.00	45.2 %	471.28
48021000	Silo, Cement	5 EA	570.00	2,850.00	45.2 %	1,561.80
48601000	Cement Plug Container	1 JOB	520.00	520.00	45.2 %	284.96
49100000	Cement Blending Charge	2417 CF	2.27	5,486.59	45.2 %	3,006.65
49102000	Transportation, Cement Ton-mile	6329 MI	2.02	12,784.58	45.2 %	7,005.95
56702044	Plug, Cementing Top Plastic 4.5 in	1 EA	151.00	151.00	45.2 %	82.75
58498000	Taxes	1 JOB	2,950.36	2,950.36	0 %	2,950.36
59200002	Transportation, Mileage Heavy Vehicles	900 MI	5.52	4,968.00	45.2 %	2,722.46
59200005	Transportation, Mileage Light Vehicles	150 MI	3.24	486.00	45.2 %	266.33
59697004	CemCAT Monitoring System	1 JOB	880.00	880.00	45.2 %	482.24
102871060	Pump, Casing Cement 5501-6000 ft	1 EA	3,500.00	3,500.00	45.2 %	1,919.00
107264001	Regulatory Conformance Charge	10 EA	341.00	3,410.00	0 %	3,410.00

**Subtotals:      \$ 41,246.53                      \$ 25,477.98**

Materials						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
B838	B838 CemNETplus conversion charge	100 BBL	148.50	14,850.00	45.2 %	8,137.80
D013	Retarder	563 LB	2.61	1,469.43	45.2 %	805.25
D029	Cellophane Flakes	433 LB	3.97	1,719.01	45.2 %	942.02
D031	Barite	265 CW	38.61	10,231.65	45.2 %	5,606.94
D046	Antifoam Agent, All Purpose	631 LB	4.75	2,997.25	45.2 %	1,642.49
D049	Cement, TXI LITEWEIGHT	1632 CF	21.95	35,822.40	45.2 %	19,630.68
D065	TIC Dispersant	19 LB	7.35	139.65	45.2 %	76.53
D153	Antisettling Agent	147 LB	7.69	1,130.43	45.2 %	619.48
D154	Extender, LT	7343 LB	1.40	10,280.20	45.2 %	5,633.55
D202	Low-Temperature Solid Dispersant D202	245 LB	19.15	4,691.75	45.2 %	2,571.08
D400	EasyBLOK D400	687 LB	47.00	32,289.00	45.2 %	17,694.37
D907	Cement, Class G	100 CF	22.55	2,255.00	45.2 %	1,235.74
D970	MUCPUSH II Fresh Water Based Spacer	100 BBL	116.00	11,600.00	45.2 %	6,356.80
D974	CemNET Conversion	372 BBL	57.50	21,390.00	45.2 %	11,721.72
L064	Clay Stabilizer	10 GA	31.20	312.00	45.2 %	170.98

**Subtotals:      \$ 151,177.77                      \$ 82,845.43**

Total Discount:	\$	84,100.89
<b>Job Price Estimate*:</b>	<b>\$</b>	<b>108,323.41</b>