



State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



Table with columns DE, ET, OE, ES

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.)

RECEIVED JUN 06 2012 COGCC/Rifle Office

Form with 11 numbered fields for operator and well information, and a checklist for attachments.

General Notice

Form with checkboxes for location changes and GPS data fields.

GPS DATA: Date of Measurement, PDOP Reading, Instrument Operator's Name

CHANGE SPACING UNIT: Formation, Spacing order number, Unit Acreage, Unit configuration

CHANGE OF OPERATOR (prior to drilling) and CHANGE WELL NAME fields

ABANDONED LOCATION and NOTICE OF CONTINUED SHUT IN STATUS fields

SPUD DATE and REQUEST FOR CONFIDENTIAL STATUS fields

SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK table

RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.

Technical Engineering/Environmental Notice

Notice of Intent and Report of Work Done checkboxes

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

Grid of checkboxes for technical notices like Intent To Recomplete, Request to Vent or Flare, etc.

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

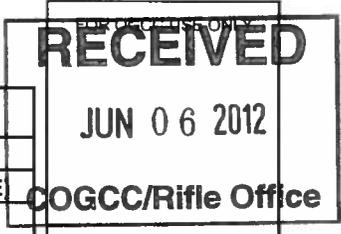
Signed: Miracle Pfister Date: 06/02/2012 Email: miracle.pfister@encana.com

Print Name: MIRACLE PFISTER Title: REGULATORY ANALYST

COGCC Approved: [Signature] Title: PEI Date: JUN 08 2012



TECHNICAL INFORMATION PAGE



1. OGCC Operator Number: **100185** API Number: **05- 045-20393**

2. Name of Operator: **Encana Oil & Gas (USA) Inc.** OGCC Facility ID # **421390**

3. Well/Facility Name: **Twin Creek** Well/Facility Number: **12-6D1 (F12E)**

4. Location (QtrQtr, Sec, Twp, Rng, Meridian): **SENW Sec 12, T7S, R92W 6 P.M.**

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: 100'  
FM TOPS Atwell Gulch: 527'  
Mudlog TOG based on 2500 units: not reached

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

**Attachments:**

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

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

Well:	Twin Creek 12-6D1
Pad:	F12E
API No:	05-045-20393-00
Permit No:	400062885

**Bradenhead Pressure Report Following Primary Cement Job**

Date Cemented:	04/17/2012
Plug Bumped:	Yes

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

WOC Time:	48 hours
Bond Log Run:	04/20/2012

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**

P.C. - I.C annulus pressure currently 510 psi

S.C. TOC - Surface  
I.C. TOC - 1150'  
P.C. TOC - 3080'

## Twin Creek 12-6D1 (F12E)

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

**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>1112 / 1100</b>
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**9-5/8" 36# J/K55**

Cement to surface with:

Tail: 536 sx, 15.8, Class G, 1.17 ft<sup>3</sup>/sk

Total: 536 sx

(volume includes 80% excess)

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

<b>Mesa Verde</b>	<b>2351 / 2317</b>
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<b>Williams Fork</b>	<b>2967 / 2922</b>
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**TOC requirement 500ft above TOG**

<b>Top of Gas</b>	<b>3604 / 3552</b>
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<b>Coal Ridge</b>	<b>5309 / 5257</b>
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<b>Rollins</b>	<b>6034 / 5982</b>
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<b>Permit TD</b>	<b>6334 / 6282</b>
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<b>Production casing</b>	<b>6334 / 6282</b>
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**4-1/2" 11.6# 80 grade**

Cement with:



**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># 1148 / 1128</b>
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**9-5/8"**

Cemented to surface with:

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

<b>Inter TOC from CBL</b>	<b>1045 / 1029</b>
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**8-3/4" Intermediate Hole**

<b>Mesa Verde</b>	<b>2309 / 2271</b>
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<b>Williams Fork</b>	<b>2889 / 2842</b>
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<b>Prod TOC</b>	<b>3080 / 3030</b>
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<b>Top of Gas</b>	<b>3795 / 3739</b>
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<b>Intermediate Casing</b>	<b>4365 / 4309</b>
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**7" 23# 55 grade**

Cemented to 1045' with:

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

<b>Coal Ridge</b>	<b>no pick/ no pick</b>
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<b>Rollins</b>	<b>no pick/ no pick</b>
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<b>Actual TD</b>	<b>5468 / 5412</b>
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<b>Production casing</b>	<b>5449 / 5393</b>
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**4-1/2"**

Cemented with

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

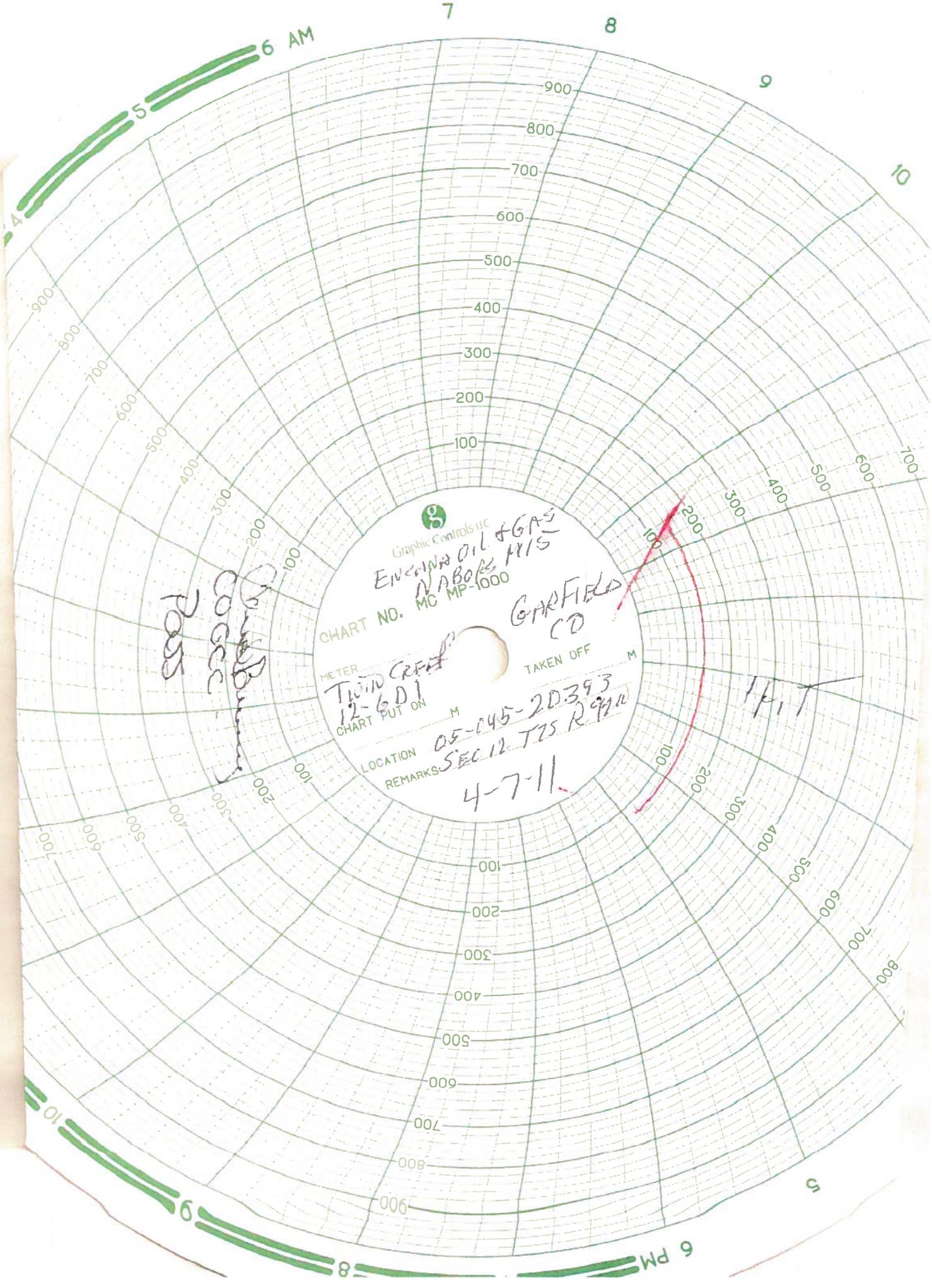
TOP\_GAS\_2500\_UNITS- top marking shallowest occurrence of 2500 units of total gas from total gas curve collected during drilling of well.

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



Graphic Controls Inc

ENGINE OIL & GAS  
NABORS M/S

CHART NO. MC MP-1000

GARFIELD  
CO

METER

TWIN CREST

TAKEN OFF

CHART PUT ON

LOCATION

05-045-20393  
SEC 12 T25 R 920

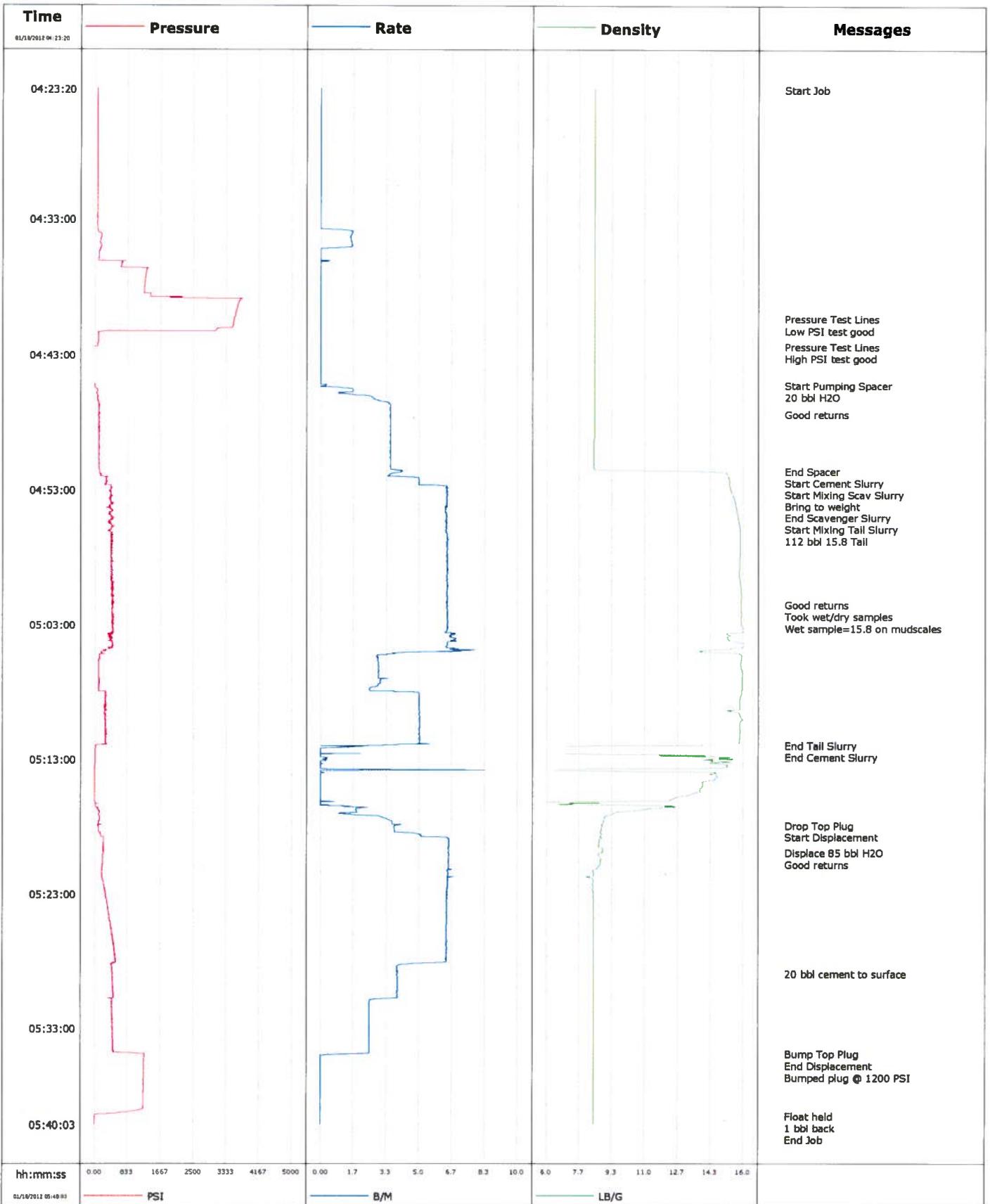
REMARKS

4-7-11

POSS  
COCC  
CAMPBELL

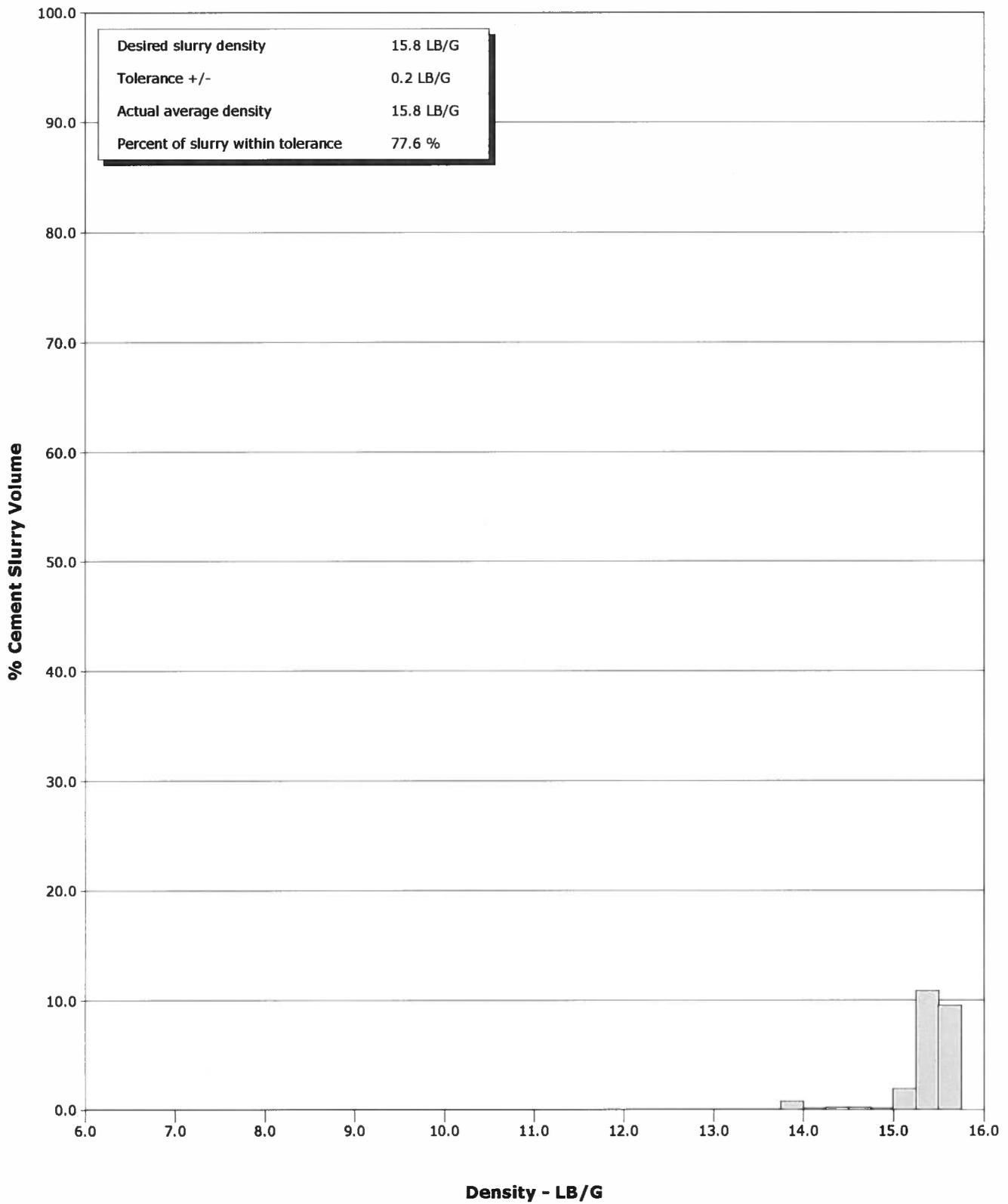
HIT

<b>Well</b>	12-6D1	<b>Client</b>	Encana
<b>Field</b>	Mamm Creek	<b>SIR No.</b>	COBA-00068
<b>Engineer</b>	Matt Fair/T. Willardson	<b>Job Type</b>	9 5/8 Surface
<b>Country</b>	United States	<b>Job Date</b>	01-17-2012



<b>Well</b>	12-6D1	<b>Client</b>	Encana
<b>Field</b>	Mamm Creek	<b>SIR No.</b>	COBA-00068
<b>Engineer</b>	Matt Fair/T. Willardson	<b>Job Type</b>	9 5/8 Surface
<b>Country</b>	United States	<b>Job Date</b>	01-17-2012

Cement Slurry - 01/18/2012 04:51:46 to 01/18/2012 05:12:06



				Customer Encana			Job Number COBA-00068			
Well 12-6D1		Location (legal)			Schlumberger Location			Job Start Jan/17/2012		
Field Mamm Creek		Formation Name/Type Shale		Deviation deg	Bit Size 12.3 in	Well MD 1148.0 ft		Well TVD 1168.0 ft		
County Garfield		State/Province Colorado			BHP psi	BHST 100 degF	BHCT 81 degF	Pore Press. Gradient lb/gal		
Well Master 0631250970		APE/UWI								
Rig Name Nabors M15		Drilled For Gas	Service Via Land		Casing/Liner					
					Depth, ft	Size, in	Weight, lb/ft	Grade	Thread	
Offshore Zone		Well Class New	Well Type Development		40.0	16.0	65.0	N/A	N/A	
					1148.0	9.6	36.0	K55	8RD	
Drilling Fluid Type Bentonite		Max. Density 8.90 lb/gal	Plastic Viscosity cP		Tubing/Drill Pipe					
					T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
Service Line Cementing		Job Type 9 5/8 Surface								
Max. Allowed Tub. Press 3520 psi		Max. Allowed Ann. Press 2030 psi	WH Connection Single Cement head		Perforations/Open Hole					
					Top, ft	Bottom, ft	shot/ft	No. of Shots	Total Interval ft	
Service Instructions Cement surface casing. 534 sks/112 bbl 15.8 tail Y=1.16					ft	ft			Diameter in	
					ft	ft				
					Treat Down Casing	Displacement 85.0 bbl	Packer Type	Packer Depth ft		
					Tubing Vol. bbl	Casing Vol. 89.0 bbl	Annular Vol. 67.0 bbl	Openhole Vol. 159.0 bbl		
Casing/Tubing Secured <input checked="" type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>			Casing Tools			Squeeze Job		
Lift Pressure 568 psi					Shoe Type Float	Squeeze Type				
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>			Shoe Depth 1146.0 ft	Tool Type				
No. Centralizers 13		Top Plugs 1	Bottom Plugs 0			Stage Tool Type	Tool Depth ft			
Cement Head Type Single				Stage Tool Depth ft	Tail Pipe Size in					
Job Scheduled For Jan/17/2012 21:00		Arrived on Location Jan/17/2012 21:00	Leave Location Jan/18/2012 07:00		Collar Type Float	Tail Pipe Depth ft				
					Collar Depth 1101.0 ft	Sqz. Total Vol. bbl				
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message					
01/18/2012	04:23:20	8.44	79	0.0	Started Acquisition					
01/18/2012	04:23:22	8.44	79	0.0	Start Job					
01/18/2012	04:25:00	8.44	78	0.0						
01/18/2012	04:26:40	8.44	78	0.0						
01/18/2012	04:28:20	8.44	75	0.0						
01/18/2012	04:30:00	8.44	74	0.0						
01/18/2012	04:31:40	8.44	75	0.0						
01/18/2012	04:33:20	8.44	72	0.0						
01/18/2012	04:35:00	8.44	173	1.6						
01/18/2012	04:36:40	8.44	1334	0.0						
01/18/2012	04:38:20	8.44	1252	0.0						
01/18/2012	04:40:00	8.44	3574	0.0						
01/18/2012	04:40:20	8.44	3545	0.0	Pressure Test Lines					
01/18/2012	04:40:21	8.44	3544	0.0	Low PSI test good					
01/18/2012	04:41:40	8.44	93	0.0						
01/18/2012	04:42:22	8.44	81	0.0	Pressure Test Lines					
01/18/2012	04:42:23	8.44	81	0.0	High PSI test good					
01/18/2012	04:43:20	8.44	-0	0.0						
01/18/2012	04:45:00	8.44	-7	0.0						
01/18/2012	04:45:15	8.44	1	0.3	Start Pumping Spacer					
01/18/2012	04:45:18	8.44	3	0.2	20 bbl H2O					

Well		Field	Job Start	Customer	Job Number
12-6D1		Mamm Creek	Jan/17/2012	Encana	COBA-00068
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message
01/18/2012	04:47:21	8.43	123	3.5	Good returns
01/18/2012	04:48:20	8.43	113	3.5	
01/18/2012	04:50:00	8.42	120	3.5	
01/18/2012	04:51:36	11.90	128	4.2	End Spacer
01/18/2012	04:51:40	13.94	129	4.1	
01/18/2012	04:51:46	15.07	133	3.8	Start Cement Slurry
01/18/2012	04:51:47	15.15	133	3.7	Start Mixing Scav Slurry
01/18/2012	04:51:48	15.16	164	3.6	Bring to weight
01/18/2012	04:53:20	15.43	418	6.5	
01/18/2012	04:54:14	15.63	402	6.4	End Scavenger Slurry
01/18/2012	04:54:18	15.64	399	6.4	Start Mixing Tail Slurry
01/18/2012	04:54:20	15.65	289	6.4	112 bbl 15.8 Tail
01/18/2012	04:55:00	15.73	401	6.4	
01/18/2012	04:56:40	15.85	442	6.5	
01/18/2012	04:58:20	15.82	472	6.4	
01/18/2012	05:00:00	15.85	437	6.4	
01/18/2012	05:01:32	15.90	454	6.4	Good returns
01/18/2012	05:01:33	15.90	454	6.4	Took wet/dry samples
01/18/2012	05:01:40	15.89	457	6.4	
01/18/2012	05:03:20	16.01	456	6.5	
01/18/2012	05:05:00	13.79	174	7.1	
01/18/2012	05:06:40	15.96	118	2.9	
01/18/2012	05:08:20	15.88	267	5.0	
01/18/2012	05:10:00	15.90	268	5.0	
01/18/2012	05:11:40	15.80	272	5.0	
01/18/2012	05:11:58	17.96	36	3.2	End Tail Slurry
01/18/2012	05:12:06	5.11	28	1.8	End Cement Slurry
01/18/2012	05:13:20	14.60	12	0.1	
01/18/2012	05:15:00	13.92	8	0.0	
01/18/2012	05:16:40	11.34	82	1.8	
01/18/2012	05:17:53	8.83	100	4.0	Drop Top Plug
01/18/2012	05:17:54	8.83	85	4.0	Start Displacement
01/18/2012	05:18:20	8.78	101	3.8	
01/18/2012	05:19:55	8.85	224	6.5	Displace 85 bbl H2O
01/18/2012	05:20:00	8.73	230	6.5	
01/18/2012	05:20:23	8.75	211	6.5	Good returns
01/18/2012	05:21:40	8.42	201	6.4	
01/18/2012	05:23:20	8.40	291	6.5	
01/18/2012	05:25:00	8.41	390	6.4	
01/18/2012	05:26:40	8.41	481	6.4	
01/18/2012	05:28:20	8.41	447	3.9	
01/18/2012	05:28:56	8.41	457	3.9	20 bbl cement to surface
01/18/2012	05:30:00	8.41	482	3.9	
01/18/2012	05:31:40	8.41	454	2.5	
01/18/2012	05:33:20	8.41	457	2.5	
01/18/2012	05:34:53	8.41	1263	1.2	Bump Top Plug
01/18/2012	05:34:54	8.41	1266	1.2	End Displacement
01/18/2012	05:34:55	8.41	1266	0.5	Bumped plug @ 1200 PSI
01/18/2012	05:35:00	8.41	1269	0.0	
01/18/2012	05:36:40	8.42	1251	0.0	
01/18/2012	05:38:20	8.42	1242	0.0	
01/18/2012	05:39:27	8.42	16	0.0	Float held
01/18/2012	05:39:41	8.42	12	0.0	1 bbl back
01/18/2012	05:40:00	8.42	10	0.0	

<b>Well</b> 12-6D1	<b>Field</b> Mamm Creek	<b>Job Start</b> Jan/17/2012	<b>Customer</b> Encana	<b>Job Number</b> COBA-00068
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**Post Job Summary**

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 4.7	N2	Mud	Maximum Rate 8.4	Total Slurry 112.0	Mud 0.0	Spacer 20.5	N2	
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 3760	Final 10	Average 446	Bump Plug to 1000	Breakdown	Type	Volume bbl	Density lb/gal	
Avg. N2 Percent %	Designed Slurry Volume 112.0 bbl	Displacement 84.0 bbl	Mix Water Temp 60 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>	Volume 20.0 bbl	Washed Thru Perfs <input type="checkbox"/>	To ft	
Customer or Authorized Representative Erasmus Parras			Schlumberger Supervisor Matt Fair/T. Willardson		Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>		



# Service Quality Evaluation

<b>Client:</b>	Encana
<b>Field:</b>	Mamm Creek
<b>Rig:</b>	Nabors M15
<b>Well:</b>	12-6D1
<b>Service Line:</b>	Cementing
<b>Job Type:</b>	9 5/8 Surface

<b>Service Order #:</b>	
<b>Date:</b>	Jan/17/2012
<b>Operating Time (hh:mm):</b>	00:00
<b>Client Rep:</b>	Erasmio Parras
<b>Schlumberger Engineer:</b>	Matt Fair/T. Willardson
<b>Schlumberger FSM:</b>	

**Main Objective:**

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

		Score	Yes / No		Result
<b>1</b>	<b>HSE</b>				
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	5
1b	Free of environmental spill or non-compliant discharge	5	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	5
1c	Wellsite left clean	4	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	4
Sub-total					100%

<b>2</b>	<b>Design / Preparation</b>				
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
2b	Equipment maintenance schedule completed / Green tagged	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
2c	All materials and equipment required for job/contingency checked & on location	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
2d	Safety / pre-job meeting conducted with all involved present	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
Sub-total					100%

<b>3</b>	<b>Execution</b>				
3a	Lost time < 30 mins	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
3b	Equipment pressure tested successfully	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3d	Plugs / darts released and tested successfully	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3e	Density variation met expectations	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3f	Personnel performed as per expectations	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3g	Equipment performed as per expectations	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3h	Job pumped as per design	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
3i	Did job start on time	2	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	2
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	3
Sub-total					100%

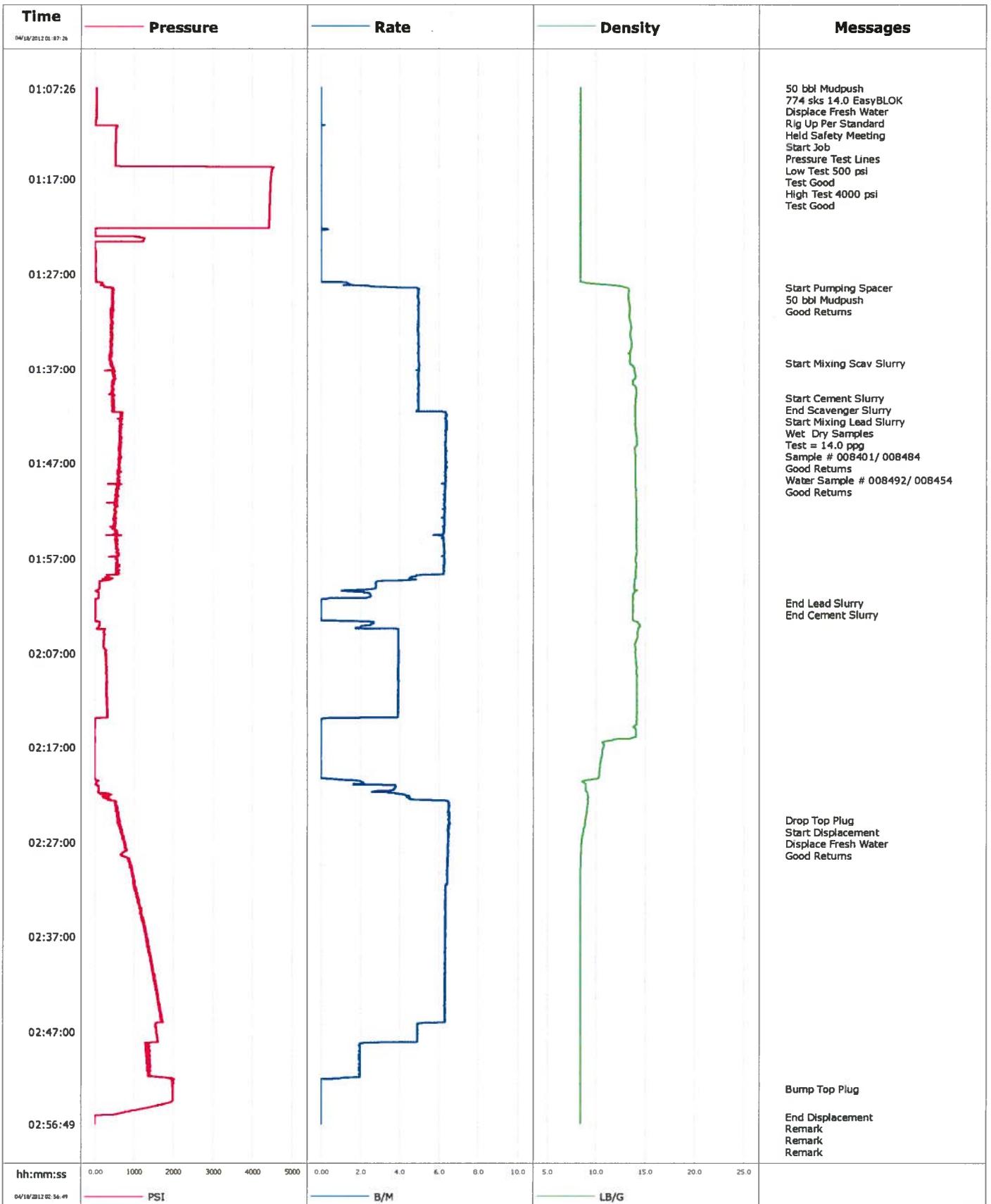
<b>4</b>	<b>Evaluation</b>				
4a	Main job objective achieved with no consequential non-productive time	10	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	10
Sub-total					100%

**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>

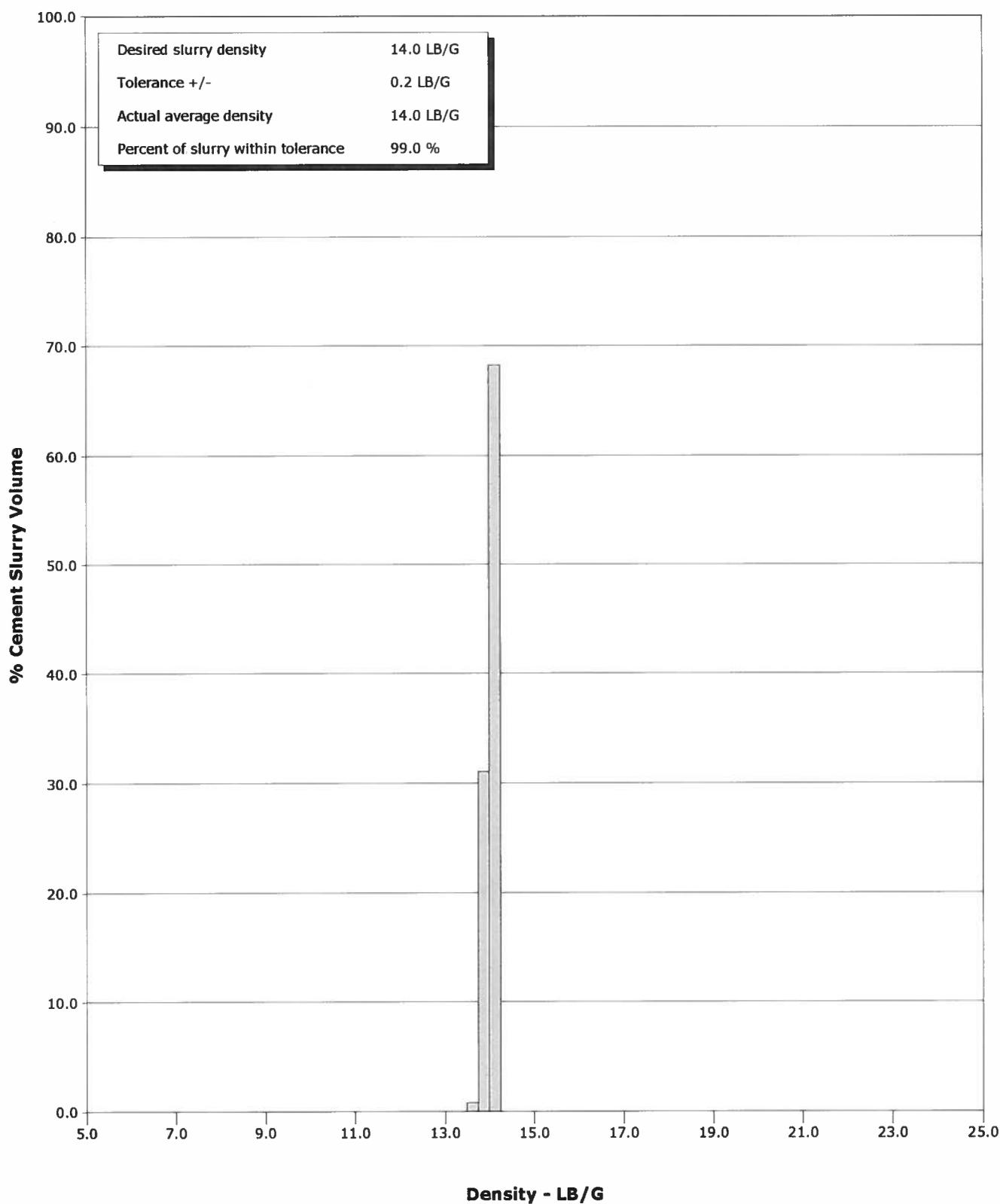
<b>Well</b>	Twin Creek 12-6D1 F12	<b>Client</b>	Encana
<b>Field</b>	Mamm Creek	<b>SIR No.</b>	
<b>Engineer</b>		<b>Job Type</b>	7" Intermediate
<b>Country</b>	United States	<b>Job Date</b>	04-17-2012



# Schlumberger Cementing Qa/Qc Density Report

<b>Well</b>	Twin Creek 12-6D1 F12	<b>Client</b>	Encana
<b>Field</b>	Mamm Creek	<b>SIR No.</b>	
<b>Engineer</b>		<b>Job Type</b>	7" Intermediate
<b>Country</b>	United States	<b>Job Date</b>	04-17-2012

Cement Slurry - 04/18/2012 01:40:14 to 04/18/2012 02:01:45





Well		Field		Job Start		Customer		Job Number	
Twin Creek 12-6D1 F12		Mamm Creek		Apr/17/2012		Encana		BTX1-00412	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
04/18/2012	01:15:39	669	0.0	8.43	0.0				
04/18/2012	01:17:39	4457	0.0	8.42	0.0				
04/18/2012	01:19:39	4437	0.0	8.42	0.0				
04/18/2012	01:21:39	4421	0.0	8.42	0.0				
04/18/2012	01:23:39	16	0.0	8.42	0.0				
04/18/2012	01:25:39	25	0.0	8.42	0.0				
04/18/2012	01:27:39	44	0.0	8.42	0.0				
04/18/2012	01:28:28					Start Pumping Spacer			
04/18/2012	01:28:28	470	4.7	13.10	1.3				
04/18/2012	01:28:30					50 bbl Mudpush			
04/18/2012	01:28:30					Good Returns			
04/18/2012	01:28:30	419	4.9	13.18	1.5				
04/18/2012	01:29:39	461	5.0	13.27	7.1				
04/18/2012	01:31:39	435	5.0	13.37	17.1				
04/18/2012	01:33:39	410	5.0	13.49	27.0				
04/18/2012	01:35:39	408	5.0	13.44	36.9				
04/18/2012	01:36:28					Start Mixing Scav Slurry			
04/18/2012	01:36:28	430	5.0	13.44	40.9				
04/18/2012	01:37:39	484	4.9	13.96	46.8				
04/18/2012	01:39:39	451	4.9	14.08	56.7				
04/18/2012	01:40:14					Start Cement Slurry			
04/18/2012	01:40:14	448	4.9	14.01	59.6				
04/18/2012	01:40:16					End Scavenger Slurry			
04/18/2012	01:40:16	457	4.9	14.01	59.8				
04/18/2012	01:40:18					Start Mixing Lead Slurry			
04/18/2012	01:40:18	495	5.0	14.01	59.9				
04/18/2012	01:40:21					Wet Dry Samples			
04/18/2012	01:40:21					Test = 14.0 ppg			
04/18/2012	01:40:21					Sample # 008401/ 008484			
04/18/2012	01:40:21					Good Returns			
04/18/2012	01:40:21					Water Sample # 008492/ 008454			
04/18/2012	01:40:21					Good Returns			
04/18/2012	01:40:21	486	5.0	14.01	60.2				
04/18/2012	01:41:39	655	6.3	13.96	66.7				
04/18/2012	01:43:39	667	6.3	14.02	79.4				
04/18/2012	01:45:39	629	6.3	13.91	92.1				
04/18/2012	01:47:39	615	6.3	14.01	104.8				
04/18/2012	01:49:39	603	6.3	14.01	117.5				
04/18/2012	01:51:39	562	6.3	14.09	130.1				
04/18/2012	01:53:39	531	6.3	14.08	142.6				
04/18/2012	01:55:39	564	6.3	14.10	155.1				
04/18/2012	01:57:39	570	6.3	14.08	167.6				
04/18/2012	01:59:39	127	2.8	13.88	178.2				
04/18/2012	02:01:39	28	0.0	13.68	182.1				
04/18/2012	02:01:44					End Lead Slurry			
04/18/2012	02:01:44	28	0.0	13.68	182.1				
04/18/2012	02:01:45					End Cement Slurry			
04/18/2012	02:01:45	28	0.0	13.68	182.1				
04/18/2012	02:03:39	40	0.7	13.69	182.2				
04/18/2012	02:05:39	243	3.9	14.15	188.6				
04/18/2012	02:07:39	287	3.9	14.02	196.5				
04/18/2012	02:09:39	308	3.9	14.16	204.3				
04/18/2012	02:11:39	312	3.9	14.14	212.2				
04/18/2012	02:13:39	333	3.9	14.13	220.0				

Well		Field		Job Start		Customer		Job Number	
Twin Creek 12-6D1 F12		Mamm Creek		Apr/17/2012		Encana		BTX1-00412	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
04/18/2012	02:17:39	7	0.0	10.63	221.3				
04/18/2012	02:19:39	9	0.0	10.35	221.3				
04/18/2012	02:21:39	110	3.5	8.94	224.7				
04/18/2012	02:23:39	575	6.5	9.08	235.2				
04/18/2012	02:24:43					Drop Top Plug			
04/18/2012	02:24:43					Start Displacement			
04/18/2012	02:24:43	606	6.5	8.92	242.1				
04/18/2012	02:24:52					Displace Fresh Water			
04/18/2012	02:24:52					Good Returns			
04/18/2012	02:24:52	597	6.5	8.91	243.1				
04/18/2012	02:25:39	657	6.5	8.76	248.2				
04/18/2012	02:27:39	800	6.4	8.50	261.1				
04/18/2012	02:29:39	947	6.4	8.43	274.0				
04/18/2012	02:31:39	996	6.3	8.42	286.8				
04/18/2012	02:33:39	1140	6.3	8.42	299.5				
04/18/2012	02:35:39	1235	6.3	8.42	312.1				
04/18/2012	02:37:39	1339	6.3	8.42	324.8				
04/18/2012	02:39:39	1421	6.3	8.42	337.4				
04/18/2012	02:41:39	1521	6.3	8.42	350.0				
04/18/2012	02:43:39	1639	6.3	8.42	362.6				
04/18/2012	02:45:39	1716	6.3	8.42	375.2				
04/18/2012	02:47:39	1585	4.9	8.43	385.8				
04/18/2012	02:49:39	1335	2.0	8.43	391.5				
04/18/2012	02:51:39	1357	2.0	8.43	395.4				
04/18/2012	02:53:09					Bump Top Plug			
04/18/2012	02:53:09	1990	0.0	8.43	396.2				
04/18/2012	02:53:39	1994	0.0	8.43	396.2				
04/18/2012	02:55:39	754	0.0	8.43	396.2				
04/18/2012	02:56:04					End Displacement			
04/18/2012	02:56:04	2	0.0	8.43	396.2				
04/18/2012	02:56:07					Remark			
04/18/2012	02:56:07					Remark			
04/18/2012	02:56:07	1	0.0	8.43	396.2				
04/18/2012	02:56:08					Remark			
04/18/2012	02:56:08					Remark			
04/18/2012	02:56:08					Remark			
04/18/2012	02:56:08					Remark			
04/18/2012	02:56:08	2	0.0	8.43	396.2				

<b>Well</b> Twin Creek 12-6D1 F12	<b>Field</b> Mamm Creek	<b>Job Start</b> Apr/17/2012	<b>Customer</b> Encana	<b>Job Number</b> BTX1-00412
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### Post Job Summary

Average Pump Rates,				Volume of Fluid Injected,			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
Treating Pressure Summary,				Breakdown Fluid			
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
Avg. N2 Percent	Designed Slurry Volume		Displacement	Mix Water Temp 52 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>	Volume	
Customer or Authorized Representative Terry Dunn					Washed Thru Perfs <input type="checkbox"/>	To	
			Schlumberger Supervisor Jordan Moreland		Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>	
					-	-	

<b>Client:</b>	Encana
<b>Field:</b>	Mamm Creek
<b>Rig:</b>	Nabors M15
<b>Well:</b>	Twin Creek 12-6D1 F12
<b>Service Line:</b>	Cementing
<b>Job Type:</b>	7" Intermediate

<b>Service Order #:</b>	
<b>Date:</b>	Apr/17/2012
<b>Operating Time:</b>	0.0
<b>Client Rep:</b>	Encana
<b>Schlumberger Engineer:</b>	Jordan Moreland
<b>Schlumberger FSM:</b>	

**Main Objective:**

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

		Score	Yes / No		Result
<b>1</b>	<b>HSE</b>				
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
1b	Free of environmental spill or non-compliant discharge	5	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
1c	Free of RIRs	5	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
1d	Wellsite left clean	4	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

<b>2</b>	<b>Design / Preparation</b>				
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
2b	Equipment maintenance schedule completed / Green tagged	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
2c	All materials and equipment required for job/contingency checked & on location	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
2d	Safety / pre-job meeting conducted with all involved present	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

<b>3</b>	<b>Execution</b>				
3a	Lost time < 30 mins	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3b	Equipment pressure tested successfully	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3d	Plugs / darts released and tested successfully	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3e	Density variation met expectations	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3f	Personnel performed as per expectations	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3g	Equipment performed as per expectations	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3h	Job pumped per design	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3i	Did job start on time	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

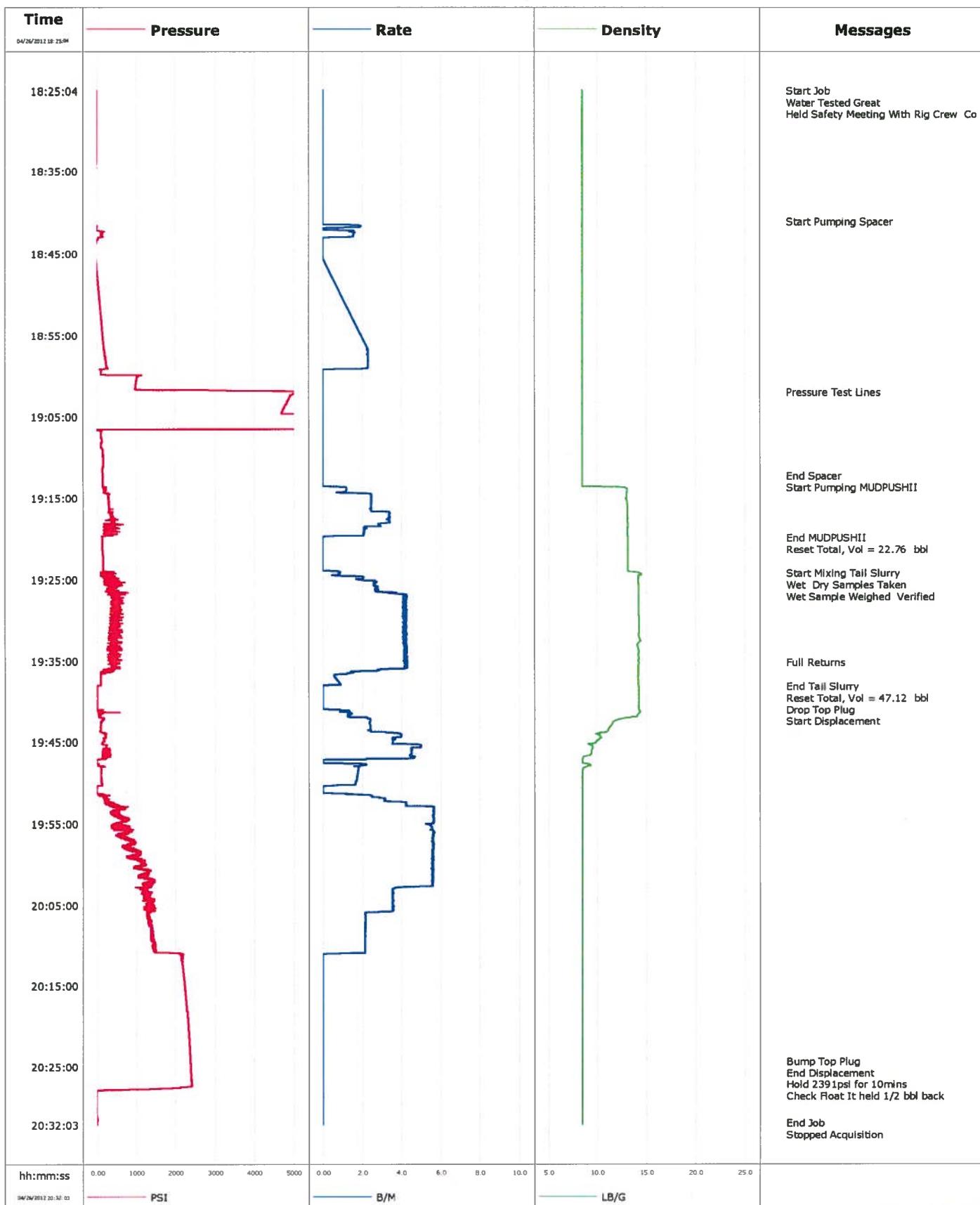
<b>4</b>	<b>Evaluation</b>				
4a	Main job objective achieved with no consequential non-productive time	10	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

**Total** 0%

**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>

<b>Well</b>	12-6D1 F12	<b>Client</b>	Encana
<b>Field</b>	Mamm Creek	<b>SIR No.</b>	COBA-00436
<b>Engineer</b>		<b>Job Type</b>	Long String
<b>Country</b>	United States	<b>Job Date</b>	04-26-2012



<b>Customer</b> Encana				<b>Job Number</b> 764618			
<b>Well</b> Twin Creek 12-6D1 F12		<b>Location (legal)</b> Rifle		<b>Schlumberger Location</b>		<b>Job Start</b> Apr/26/2012	
<b>Field</b> Mamm Creek		<b>Formation Name/Type</b>		<b>Deviation</b>	<b>Bit Size</b> 6.1 in	<b>Well MD</b> 5403.2 ft	<b>Well TVD</b> 5468.0 ft
<b>County</b> Garfield		<b>State/Province</b> CO		<b>BHP</b> 1551 psi	<b>BHST</b> 160 degF	<b>BHCT</b> 138 degF	<b>Pora Press. Gradient</b>
<b>Well Master</b> 0631250970		<b>API/UWI</b>					
<b>Rig Name</b> Nabors M15		<b>Drilled For</b> Oil & 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> Other			
				5448.6	4.500	11.6	S80
				0.0	0.000	0.0	
<b>Drilling Fluid Type</b> Bentonite		<b>Max. Density</b> 13.50 lb/gal		<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> Cem Prod Casing					
<b>Max. Allowed Tub. Press</b> 5000 psi		<b>Max. Allowed Ann. Press</b> 3000 psi		<b>WH Connection</b> 4 1/2		<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> 83.9 bbl	<b>Packer Type</b>	<b>Packer Depth</b>
				<b>Tubing Vol.</b>	<b>Casing Vol.</b> 85.0 bbl	<b>Annular Vol.</b> 91.0 bbl	<b>Openhole Vol.</b>
<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> 1551 psi				<b>Shoe Type</b> Float		<b>Squeeze Type</b>	
<b>Pipe Rotated</b> <input type="checkbox"/>		<b>Pipe Reciprocated</b> <input type="checkbox"/>		<b>Shoe Depth</b> 5448.6 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> Apr/26/2012		<b>Arrived on Location</b> Apr/26/2012		<b>Leave Location</b> Apr/26/2012		<b>Collar Type</b> Float	
						<b>Tail Pipe Depth</b>	
				<b>Collar Depth</b> 5403.2 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>	
04/26/2012	17:32:14					Started Acquisition	
04/26/2012	18:25:04					Start Job	
04/26/2012	18:25:04	-9	0.0	8.45	0.0		
04/26/2012	18:25:07					Water Tested Great	
04/26/2012	18:25:07					Held Safety Meeting With Rig Crew Co Man	
04/26/2012	18:25:07	-9	0.0	8.45	0.0		
04/26/2012	18:27:14	-10	0.0	8.45	0.0		
04/26/2012	18:37:14	-15	0.0	8.45	0.0		
04/26/2012	18:41:05					Start Pumping Spacer	
04/26/2012	18:41:05	-16	0.0	8.45	0.0		
04/26/2012	18:42:14	86	1.6	8.44	0.9		
04/26/2012	18:57:14	211	2.3	8.45	3.1		
04/26/2012	19:02:04					Pressure Test Lines	
04/26/2012	19:02:04	5100	0.0	8.45	7.7		
04/26/2012	19:02:14	5011	0.0	8.45	7.7		
04/26/2012	19:07:14	109	0.0	8.45	7.7		
04/26/2012	19:12:14	152	0.0	8.45	7.7		
04/26/2012	19:12:22					End Spacer	
04/26/2012	19:12:22	151	0.0	8.45	7.7		
04/26/2012	19:12:35					Start Pumping MUDPUSHII	
04/26/2012	19:12:35	152	0.0	8.45	7.7		

Well		Field		Job Start		Customer		Job Number	
Twin Creek 12-6D1 F12		Mamm Creek		Apr/26/2012		Encana		764618	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
04/26/2012	19:19:59					End MUDPUSHII			
04/26/2012	19:19:59	136	0.0	13.13	22.8				
04/26/2012	19:20:26					Reset Total, Vol = 22.76 bbl			
04/26/2012	19:20:26	136	0.0	13.13	22.8				
04/26/2012	19:22:14	161	0.0	13.11	22.8				
04/26/2012	19:24:19					Start Mixing Tail Slurry			
04/26/2012	19:24:19	102	0.9	14.21	23.0				
04/26/2012	19:24:24					Wet Dry Samples Taken			
04/26/2012	19:24:24	359	0.8	14.32	23.1				
04/26/2012	19:24:44					Wet Sample Weighed Verified			
04/26/2012	19:24:44	374	2.0	14.13	23.4				
04/26/2012	19:27:14	494	4.1	14.19	30.6				
04/26/2012	19:32:14	298	4.2	14.24	51.5				
04/26/2012	19:35:18					Full Returns			
04/26/2012	19:35:18	423	4.3	14.18	64.4				
04/26/2012	19:37:14	105	0.7	14.11	69.2				
04/26/2012	19:38:14					End Tail Slurry			
04/26/2012	19:38:14	12	0.0	14.20	69.9				
04/26/2012	19:38:16					Reset Total, Vol = 47.12 bbl			
04/26/2012	19:38:16	13	0.0	14.20	69.9				
04/26/2012	19:38:19					Drop Top Plug			
04/26/2012	19:38:19	15	0.0	14.20	69.9				
04/26/2012	19:38:20					Start Displacement			
04/26/2012	19:38:20	15	0.0	14.20	69.9				
04/26/2012	19:42:14	142	2.4	12.46	71.6				
04/26/2012	19:47:14	-3	0.7	8.47	89.6				
04/26/2012	19:52:14	207	3.2	8.45	96.5				
04/26/2012	19:57:14	880	5.6	8.45	123.2				
04/26/2012	20:02:14	1298	5.6	8.45	151.1				
04/26/2012	20:07:14	1322	2.2	8.44	168.3				
04/26/2012	20:12:14	2167	0.0	8.45	176.4				
04/26/2012	20:17:14	2275	0.0	8.45	176.4				
04/26/2012	20:22:14	2350	0.0	8.45	176.4				
04/26/2012	20:24:22					Bump Top Plug			
04/26/2012	20:24:22	2374	0.0	8.45	176.4				
04/26/2012	20:24:23					End Displacement			
04/26/2012	20:24:23	2375	0.0	8.45	176.4				
04/26/2012	20:25:41					Hold 2391psi for 10mins			
04/26/2012	20:25:41	2389	0.0	8.45	176.4				
04/26/2012	20:27:14	2408	0.0	8.45	176.4				
04/26/2012	20:28:02					Check Float It held 1/2 bbl back			
04/26/2012	20:28:02	-7	0.0	8.45	176.4				
04/26/2012	20:31:53					End Job			
04/26/2012	20:31:53	8	0.0	8.45	176.4				

<b>Well</b> Twin Creek 12-6D1 F12	<b>Field</b> Mamm Creek	<b>Job Start</b> Apr/26/2012	<b>Customer</b> Encana	<b>Job Number</b> 764618
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### Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
<b>Slurry</b> 3.3	<b>N2</b>	<b>Mud</b> 2.4	<b>Maximum Rate</b> 5.7	<b>Total Slurry</b> 48.4	<b>Mud</b> 0.0	<b>Spacer</b> 10.7	<b>N2</b>	
Treating Pressure Summary, psi					Breakdown Fluid			
<b>Maximum</b> 5492	<b>Final</b> 2391	<b>Average</b> 1030	<b>Bump Plug to</b> 2551	<b>Breakdown</b>	<b>Type</b>	<b>Volume</b>	<b>Density</b>	
<b>Avg. N2 Percent</b>	<b>Designed Slurry Volume</b> 49.0 bbl		<b>Displacement</b> 83.5 bbl	<b>Mix Water Temp</b> 67 degF	<b>Cement Circulated to Surface?</b> <input type="checkbox"/>	<b>Volume</b>		
					<b>Washed Thru Perfs</b> <input type="checkbox"/>	<b>To</b>		
<b>Customer or Authorized Representative</b> Tony Ketterling			<b>Schlumberger Supervisor</b> Wayne Silvester		<b>Circulation Lost</b> <input type="checkbox"/>	<b>Job Completed</b> <input checked="" type="checkbox"/>		
					-		-	

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 01/09/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 3
Spud Date :	Days From Spud : -6	Depth At 06:00 : 40
Morning Operations : Load Trucks		Estimated Total Depth : 5407

Remarks :

Time To      Description 6:00 AM      Move out 8 loads, Matting Boards, Koomey, Derrick, A-frame & Light plant, Festoon & Light Plant, Sub Base DS, Sub Base ODS. Road to Twin Creek unmanageable until 12:30 noon, Loads sent down to Tri-state Yard to wait, Rig Down Derrick & Remove Monkey Board & 2 landing Board & Unpin Derrick & load on truck, Separate Sub base, Send Loads to @ Twin Creek 12-6D1, Crew Setting up Mud system & matts as they arrive on new location. Apx 16 loads & Camp on Federal 28 Sent 36 loads to Twin Creek Location	1550 Days without a Lost Time incident 404 Days without a Medical Aid or Restricted Work incident 100 Days without a Recordable Spill 359 Days without a Reportable Quantity Spill 0 gals fuel used past 24hrs 0 gals fuel on Location, Rotating Hours on HWDP = Hrs Braden Head Pressures on the PL 28 Pad all = Zero Total Fluid Losses Last 24 hrs = xxx bbls Drg Foreman Robert Tate on Location until rig moved
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Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 01/08/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 2
Spud Date :	Days From Spud : -7	Depth At 06:00 :
Morning Operations : Dismantle Derrick,		Estimated Total Depth : 5407

Remarks :

Time To      Description 6:00 AM      Continue to Rig Down and Send out 18 Loads to Twin Creek 12-6D1, Pit #2, Deisel Tk, Gen #3, Gen #2, Matt-Stair-Feston rails, matts & Walkway, Pit Roofs, Matts, Matts, Boiler Tk, Day Tk, Upright Tk, Boiler, Upright, Pit #3, Mud Pump #1, Mud Pump #2, Send Loads to Tri-State Yard Due to Heavy Snow Lower Derrick	
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Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 01/07/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 1
Spud Date :	Days From Spud : -8	Depth At 06:00 : 8005
Morning Operations : Rig Down		Estimated Total Depth : 5407

Remarks :

Time To      Description 6:00 AM      Rig Down Mud Pits & Gas Buster, Shakers & Desilter/ desander, R/D Rig Floor & Sub Elect, Send 10 Loads to new Twin Creek location, Drill Collars & Racks, Cat Walk, Stompers & Racks. Shakers, Racks, Junk Tub, Racks Chocks, Racks & Flowline, Barrels & Stands, Trucks Were on location @ 10:30 Night Crew Dismantling Backside	
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Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 12/21/2009
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 0
Spud Date :	Days From Spud : -755	Depth At 06:00 :
Morning Operations :		Estimated Total Depth : 5407

Remarks :

Time To      Description	
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# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 01/12/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 6
Spud Date :	Days From Spud : -3		Depth At 06:00 : 40
Morning Operations : Spool Drill Line On Drum,			Estimated Total Depth : 5407
Remarks :			
Time To	Description	1553 Days without a Lost Time incident	
6:00 AM	Continue Mods on Pitts, Add baffles to Pill pit, Change Suction & Discharge for BOS Centrifuge, R/U Backyard festoon, Install Wrangler, Strong Back & Stompers & R/U Doghouse, Clean Up Yard & Set Matts, Hook Up Mud Logging Unit, Install Sewer plumbing & Communications on Camp, R/U Steam Lines, Filled Boiler & Drain To fix seal Leaking, Dig & Install Flare Lines F/ Choke House, Replace Brake Pads & Burn-in,	407 Days without a Medical Aid or Restricted Work incident	
		103 Days without a Recordable Spill	
		362 Days without a Reportable Quantity Spill	
		300 gals fuel used past 24hrs	
		7000 gals fuel on Location,	
		Rotating Hours on HWDP = Hrs	
		Braden Head Pressures on the PL 28 Pad all = Zero	
		Total Fluid Losses Last 24 hrs =xxx bbls	

Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 01/11/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 5
Spud Date :	Days From Spud : -4		Depth At 06:00 :
Morning Operations : General Rig Up			Estimated Total Depth : 5407
Remarks :			
Time To	Description	1552 Days without a Lost Time incident	
6:00 AM	Move Camp f/ Fed 28 to Twin Creek 12 6D1, Work on Mud tks, Change Valves & Modifications, R/U HPU & Raise Derrick, Work on Backyard, M/U Fuel berm & Install Fuel Tank	406 Days without a Medical Aid or Restricted Work incident	
		102 Days without a Recordable Spill	
		361 Days without a Reportable Quantity Spill	
		0 gals fuel used past 24hrs	
		0 gals fuel on Location,	
		Rotating Hours on HWDP = Hrs	
		Braden Head Pressures on the PL 28 Pad all = Zero	
		Total Fluid Losses Last 24 hrs =xxx bbls	
		Drlg Foreman Robert Tate on Location until rig moved	

Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 01/10/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 4
Spud Date :	Days From Spud : -5		Depth At 06:00 :
Morning Operations : R/D & Load Out Camp			Estimated Total Depth : 5407
Remarks :			
Time To	Description	1551 Days without a Lost Time incident	
6:00 AM	Move Loads f/ Federal 28 13-BB to Twin Creek, Remove New Park Matts & Dig up Flare Line. Clean Up Camp & Pack Up Camp Set up Pits & Install New Valves & Rig Up Backyard, Sent 24 loads to New Location, Manifold, Doghouse, Drawworks, Matts, HPU, BOS Unit, Stompers, VFD House, Stomper, Matts, Matts, Bit Cont & Hopper, Matts - Desander& desiltr, BOP & Wrangler, Matts, Derrick Boards & Feftoon, Matts - ST80, Junk Basket, Bar Hopper- stab Stand- Oil Skid- stand, Catch Bin, Drill Line-festoon Rail - Flare Stack	405 Days without a Medical Aid or Restricted Work incident	
		101 Days without a Recordable Spill	
		360 Days without a Reportable Quantity Spill	
		0 gals fuel used past 24hrs	
		0 gals fuel on Location,	
		Rotating Hours on HWDP = Hrs	
		Braden Head Pressures on the PL 28 Pad all = Zero	
		Total Fluid Losses Last 24 hrs =xxx bbls	
		Drlg Foreman Robert Tate on Location until rig moved	

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 01/14/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 8
Spud Date :	Days From Spud : -1		Depth At 06:00 :
Morning Operations : Work On Mixing System			Estimated Total Depth : 5407
		Remarks :	
Time To	Description	1555 Days without a Lost Time incident	
6:30 AM	PJSM on Walking Rig	409 Days without a Medical Aid or Restricted Work incident	
7:00 AM	Skid Rig to Center on Twin Creek 12-6D1	105 Days without a Recordable Spill	
6:00 PM	Rig Up Steem Lines to Sub Base & Rig Floor, Instal Heaters, Replace Service Loop Track in 2 Spots, Hook Rig Power Up To Camp, Hook Up Manifolds to Back Side Of Pits, Work With Electrician around Rig, Dig Trench & M/U 3" & 1" gas Lines & 1.5" Elect to Hook Up Gens to Gas, Finish Setting Down New Matts For Mud Chemicals	364 Days without a Reportable Quantity Spill 1700 gals fuel used past 24hrs 9546 gals fuel on Location, Rotating Hours on HWDP = Hrs Braden Head Pressures on the PL 28 Pad all = Zero Total Fluid Losses Last 24 hrs =xxx bbls	
6:00 AM	Rig Up Water Lines & Change Valves In Water Pump House, Hang Tarps In Sub & RigFloor, Hang Lights On Pits, Set Pragma PM3000, Run Lines to Uprights & Fill w/ Water		

Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 01/13/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 7
Spud Date :	Days From Spud : -2		Depth At 06:00 :
Morning Operations : Centering Rig Over Well			Estimated Total Depth : 5407
		Remarks :	
Time To	Description	1554 Days without a Lost Time incident	
3:30 PM	Hang Up Tarps on Sub, R/U Tuggers, Spool Drill Line on Drum, Remove Dolly Blockm Change out Service Loop, Wire Up Top Drive, Replace Drain Plug Gasket on Boiler, Fill Boiler	408 Days without a Medical Aid or Restricted Work incident	
4:00 PM	Hold PJSM to raise Mast	104 Days without a Recordable Spill	
5:00 PM	Raise Mast & Unbridle Blocks, Set Parameters	363 Days without a Reportable Quantity Spill 600 gals fuel used past 24hrs 4155 gals fuel on Location, Rotating Hours on HWDP = Hrs Braden Head Pressures on the PL 28 Pad all = Zero Total Fluid Losses Last 24 hrs =xxx bbls	
2:30 AM	R/U Top Drive Electrical Lugging in Cables, Test Top Drive, Lines Crosses - Changed Ok, R/U Stompers & Test, Hang Wind Walls, R/U Boiler Lines To Mud Uprights, Camp power generator shut down a few times trying to keep up with demand		
3:00 AM	PJSM On Pinning Stompers		
3:30 AM	R/U Stompers & Strong Back, Hang Stairs, Ran HPU Lines for Walking		
4:00 AM	PJSM on Walking Rig		
6:00 AM	Skid Rig to Twin Creek 12-6D1 well		

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 01/16/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 10
Spud Date :	Days From Spud : 1	Depth At 06:00 : 170
Morning Operations : P/U Directional Assy		Estimated Total Depth : 5407

Time To	Description	Remarks :
1:30 PM	Rig Up Drill Floor, M/U IBOP, Install Clamps, Strap HWDP, R/U Gonzo Hyd Lines, Hang Tongs, Service ST-80, Hook Up Air to Rig Floor, Move Wrangler Back	1557 Days without a Lost Time incident 411 Days without a Medical Aid or Restricted Work incident 107 Days without a Recordable Spill 366 Days without a Reportable Quantity Spill 1409 gals fuel used past 24hrs 14096 gals fuel on Location, Rotating Hours on HWDP = 2.5 Hrs Total Fluid Losses Last 24 hrs =30 bbls seepage Notified State of Postspud Notified Charlie Jensen on Start of Drilling 4 Mud Loggers on Location
2:00 PM	Service Top Drive	
5:00 PM	P/U 36 jts of HWDP & Rack Back	
5:30 PM	Rig Up Gonvo Dredge Pump & Water Hose f/ Celler	
6:00 PM	P/U BHA, Reamer Assy & P/U 8" DC	
6:30 PM	PJSM on Picking Up BHA	
8:30 PM	Cont to P/U 8" Drill Collars, Bit & Reamer	
9:00 PM	Rotary Drill f/ 65' to 70'	
9:30 PM	POOH due to Leak in Lower Control Valve & IBOP, Repair Shaker	
10:00 PM	Service Top Drive & Change Out LWCV	
10:30 PM	Trip in Hole To 73'	
10:30 PM	Rotary Drill 12.25" hole f/ 73' to 130'	
12:00 AM	POOH to 55'	
12:30 PM	M/U last of Reamer Assy	
1:30 AM	RIH to 73'	
2:30 AM	Wash & Ream f/ 73' to 130'	
4:30 AM	Rotary Drill f/ 130' to 170'	
5:00 AM	Condition & Circ Hole Clean	
6:00 AM	POOH w/ Reamer assy, Blow Down Mud Lines	

Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 01/15/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 9
Spud Date :	Days From Spud : 0	Depth At 06:00 : 40
Morning Operations : Prepare to Pick Up HWDP		Estimated Total Depth : 5407

Time To	Description	Remarks :
12:00 PM	Replace Impeller on Hopper Pump & Change out 3" suction Valves for hopper, 3" Butterfly Valve for Water line, C/O valves in Water Pump House, Transfer Water to Upright, WOC Changed out 2" gas Line to 3"Line	1556 Days without a Lost Time incident 410 Days without a Medical Aid or Restricted Work incident 106 Days without a Recordable Spill 365 Days without a Reportable Quantity Spill 1041 gals fuel used past 24hrs 8505 gals fuel on Location, Rotating Hours on HWDP = Hrs Total Fluid Losses Last 24 hrs =0 bbls Notified State of Prespud & Running CSG & Cementing Notified Charlie Jensen on Start of Drilling Had FSA with Scott Castro, Notified Safety on Call- Slick
6:00 PM	Changed Out Pressure Block In Brake HPU, Drained Oil & Refilled HPU, Functioned Brakes, Hung Board & Shaker Camaras, Continue to work on Valves, Electrician repair Loose Lug in Pragma	
12:00 AM	R/U Pragma 3000, Found Broken Slide Rail, Had Welder come & Repair, Hang Kelly Hose, Hang sub Mud Line, Hang HPU Lines	
6:00 AM	R/U Pits, Fill Pits & Repair Leaks, Mix Spud Mud, Work on Pragma Fault, Prepare to Pick Up HWDP	

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-6D1 (F12E)	API # : 05045203930000	Operations Date : 01/18/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 12
Spud Date :	Days From Spud : 3	Depth At 06:00 : 1168
Morning Operations : Release Rig to Skid Thin Creek 12-6A1		Estimated Total Depth : 5407

Time To	Description	Remarks :
7:00 AM	Shut Down MWD, clean bit, Rack BHA back.	1559 Days without a Lost Time incident 3 Days without a Medical Aid or Restricted Work incident 109 Days without a Recordable Spill 368 Days without a Reportable Quantity Spill 1458 gals fuel used past 24hrs 10803 gals fuel on Location, Rotating Hours on HWDP = 11.5 Hrs Total Fluid Losses Last 24 hrs =30 bbls seepage 4 Mud Loggers on Location
12:00 PM	P/U Reamer, Ream & wash to bottom.	
12:30 PM	Circ & Cond, run 10 bbls sweep circulate out.	
5:00 PM	Back ream out of the Tight Hole.	
8:00 PM	PJSA with Schlumberger, rig up logs, run open hole logs, (Tool not working at first but began to work on way out, Went back to BTM & Relogged, R/D logs.	
8:30 PM	Service rig, grease black jack, drawworks, inspect brakes, top drive, hoisting lines, check com, fom.	
9:00 PM	PJSA with Franks casing crew	
9:30 PM	Rig Up Csg Crew, Pull Master Bushings	
1:30 AM	M/U Shoe (@1148'), Jt, Float (@1100'), 24 jts of 9-5/8" 36# J55 LTC CSG w/ 13 centralizers,	
2:30 AM	M/U Wellhead & Landing Jt, Orientate & Land Out	
3:00 AM	Rig out CSG Crew	
3:30 AM	PJSM w/ Schlum Cementers & Crew	
4:00 AM	R/U CMT Head & CMT Lines, Test to 3000psi,	
6:00 AM	Pump 20bbl water, 112bbl 15.8ppg Tail (534sk), Displace w/ 85bbl Water, Bump Plug & hold 750psi over, 20bbl Good CMT to Surface, R/O Cementers, Remove Landing Jt, Release Rig @ 6:00am	
6:00 AM	Release Rig to Skid to Twin Creek 12-6A1	

Well : Twin Creek 12-6D1 (F12E)	API # : 05045203930000	Operations Date : 01/17/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 11
Spud Date :	Days From Spud : 2	Depth At 06:00 : 1168
Morning Operations : Stand Back BHA		Estimated Total Depth : 5407

Time To	Description	Remarks :
6:30 AM	Service Rig,greased wash pipe,check brakes	1558 Days without a Lost Time incident 2 Days without a Medical Aid or Restricted Work incident 108 Days without a Recordable Spill 367 Days without a Reportable Quantity Spill 1835 gals fuel used past 24hrs 12261 gals fuel on Location, Rotating Hours on HWDP = 11.5 Hrs Total Fluid Losses Last 24 hrs =30 bbls seepage 4 Mud Loggers on Location
10:30 AM	Directional Work,PU Directional BHA & HWDP	
1:00 PM	Downtime Mud-System replace O-Ring on standpipe, Had to Undue Clamps in Derrick & Raise pipe to replace	
4:30 PM	P/U Dir BHA, last collar would not go Down, L/D DC, P/U joint of HWDP drill down, L/D HWDP jt, P/U DC still would not go, L/D DC, P/U single & 1stand wash to bottom,stood back stand, L/D single P/U DC & single.	
6:30 PM	Rotary drill & slide F/ 170' To 368'	
7:00 PM	Service Rig ,service top drive,grease black jack,drawingworks,inspect top drive,hoisting lines,brakes,check fom,com.	
2:00 AM	Rotary drill & slide F/ 368' To 1168' TD surface	
2:30 AM	C&C pump 20 bbls sweep,circ hole clean	
3:00 AM	Blow Down TD & Mud lines to Pits.	
6:00 AM	POOH, Fill-Up Lines Frozen, Had to fill with TD	

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 04/14/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 14
Spud Date :	Days From Spud : 90		Depth At 06:00 : 2539
Morning Operations : Dir Drig 8-3/4" Hole @ 2539'.			Estimated Total Depth : 5407
<b>Remarks :</b>			
Time To	Description	1646 Days without a Lost Time incident 24 hr losses 0 bbls      Total losses 0 bbls	
10:00 AM	P/U & M/U DIR BHA; Scribe & Orient same.	89 Days without a Medical Aid or Restricted Work incident	
11:30 AM	Trip in Hole to 1018' w/ BHA.	84 Days without a Recordable Spill	
12:30 PM	Rig service; Function Test & Sevice Top Drive, Replace Saver Sub.	454 Days without a Reportable Quantity Spill	
1:00 PM	Change out Rotating Head Rubber and install same.	940 Gals fuel used past 24hrs	
3:00 PM	Fill Pipe, Break Circ, Wash down. Tag Cmt @ 1032'. Drill Cmt, FC, Shoe Jnt, FS and Rathole to 1168'. Drill to 1196' MD, 1174' TVD.	Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=80psi, 12-5A1=0psi, 12-5A2=10psi, 12-4D1=120 psi, 12-4A1=150psi, 12-6C1=80psi, 12-3D2=150psi, 12-3D1=0psi, 12-6A1=0psi.	
4:00 PM	Pump sweep and circ hole clean for FIT.	NOTE: 1) FIT witnessed by Shaun Kellerby of COGCC, signed off and approved successful test. 04/13/12 @ 17:00 Hrs.	
5:00 PM	Perform FIT @ 1174 TVD: MW: 10.4ppg, SAP: 160psi for 15 mins, Press Bled off 12psi. Witnessed by Shaun Kellerby of COGCC and approved @ 13.0ppge test.	2) BOP Drill performed by Day and Night Crews, Well secure in under 1min with crews in position.	
6:00 PM	Dir Drill 8-3/4" Hole f/ 1196' to 1302'. (106' @ 106fph).		
6:30 PM	Circ & Clean Hole; Calibrate Flowline sensor - change out due to lightning strike.		
7:00 PM	Rig service; Grease Rig & service Top drive.		
6:00 AM	Dir Drill 8-3/4" Hole f/ 1302' to 2539'. (112.5fph).		

Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 04/13/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 13
Spud Date :	Days From Spud : 89		Depth At 06:00 : 1168
Morning Operations : Make up DIR BHA			Estimated Total Depth : 5407
<b>Remarks :</b>			
Time To	Description	1644 Days without a Lost Time incident 24 hr losses 0 bbls      Total losses 0 bbls	
2:30 PM	Walk Rig f/ 12-6A1 to 12-6D1.	87 Days without a Medical Aid or Restricted Work incident	
6:00 PM	N/U BOPE, Change out 7" Csg Rams to 4.5" DP Rams.	82 Days without a Recordable Spill	
7:30 PM	Cont to N/U BOPE; Install Flowline.	452 Days without a Reportable Quantity Spill	
1:00 AM	Held PJSM w/ Rebel Testers; Press Test BOPE. Test IBOP, LWCV, Stabbing & Dart Valves, All Choke & Kill Lines & Vales, Blind & Pipe Rams, Choke & Kill Lines to LOW: 250 psi f/ 5mins & HIGH: 5000psi f/ 10mins ea. Test Annular, Manual & Remote Chokes to LOW: 250psi f/ 5mins & HIGH: 1500psi f/ 10mins ea. Test Casing to 1500psi f/ 30mins.	832 gals fuel used past 24hrs	
4:00 AM	Held PJSM w/ Schlumberger Wireline. R/U & Run CBL/Temp Log. Cement to Surface. NOTE: Cont to P/T Choke Manifold Lines & Valves to LOW: 250psi f/ 5mins & HIGH: 5000psi f/ 10 mins ea while logging.	Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=80psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=140 psi, 12-4A1=150psi, 12-6C1=80psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi. NOTE: RIG RELEASED f/ 12-6A1 @ 13:30 Hrs 04/12/2012.	
5:00 AM	Install Wear Bushing.		
6:00 AM	Flush & Check Flowline connections; Set Rotating Rubber		

# REGULATORY DRILLING SUMMARY



Well : **Twin Creek 12-6D1 (F12E)** API # : 05045203930000 Operations Date : 04/15/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM Area : Mamm Creek Report # : 15  
 Spud Date : Days From Spud : 91 Depth At 06:00 : 3582  
 Morning Operations : Dir Drlg @ 3582'. Bckgrd Gas @ 26 units. Estimated Total Depth : 5407

Time To	Description	Remarks :
6:30 AM	Rig service; Grease Rig, Wash Pipe. Check brakes, Crown/floor saver. Service Brake press settings.	1647 Days without a Lost Time incident 24 hr losses 0 bbls Total losses 0 90 Days without a Medical Aid or Restricted Work incident
12:00 PM	Dir Drill 8-3/4" Hole f/ 2529' to 2917'. (388' @ 70.5fph).	85 Days without a Recordable Spill
12:30 PM	Held Nabors Safety Stand Down; Hand Placement due to increased injuries in Nabors.	455 Days without a Reportable Quantity Spill 1663 Gals fuel used past 24hrs Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=90psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=10 psi, 12-4A1=150psi, 12-6C1=0psi, 12-3D2=150psi, 12-3D1=0psi, 12-6A1=0psi.
5:30 PM	Dir Drill 8-3/4" Hole f/ 2917' to 3361'. (444' @ 88.8 fph).	
9:00 PM	Shut well in due to increased Flow (62% to 77%), Pit Gain: 16 bbls, Gas Increase (5 to 1430 units. ISP: 17 units, FSP: 100 psi. Open well and bring pumps to 50spm at 100% open choke, Circ surface to surface strokes (2400); Max Flare -10', Mud Cut: 0.8ppg. Flare to zero after 1900 strokes. Shut well in: 0 psi, Open well and Flow Check, surging initially to zero flow. Open well in stages to flow line and close HCR. Circulate Surface to Surface while increasing Mud Wt to 12.2ppg In/Out. Mud Cut f/ 11.3ppg to 11.8 ppg after 200 strokes and to 12.2 at 2400 strokes.	
10:00 PM	Dir Drill 8-3/4" Hole f/ 3361' to 3392' (31' @ 31 fph).	
10:30 PM	Rig service; Grease Rig, Inspect Top drive, Drawworks, BrakesCrwon saver.	
11:30 PM	Dir Drill 8-3/4" Hole f/ 3392' to 3460'. (68' @ 68 fph).	
2:30 AM	Shut well in due to increased flow (58% to 74%, Pit Gain of 17.1 bbls. Monitor Pressures: iSIP: 11 psi increased to 90psi. Open well, initiate flow bring pumps to 50spm while opening choke to 100% and circ Surf-Surf strokes (2450). Max Flare: 10', Max Mud Cut: 11.5ppg. Flare out at 1700 strokes. Shut well in, check press: 0psi. Flow Check for 15 mins, CBU w/ 10' flare and Mud Cut to 11.8ppg.	
3:30 AM	Raise Mud Wt to 12.6ppg In/Out with Background gas decreasing to 15 units.	
6:00 AM	Dir Drill 8-3/4" Hole f/ 3460' to 3582'. (122' @ 48.8 fph). Bckgrd Gas ~15 to 40 units.	

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-6D1 (F12E)	API # : 05045203930000	Operations Date : 04/16/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 16
Spud Date :	Days From Spud : 92	Depth At 06:00 : 4420
Morning Operations : Pump and spot 2nd LCM Pill due to ~60bph losses after 1st Pill.		Estimated Total Depth : 5407

Time To	Description	Remarks :
7:00 AM	Dir Drill 8-3/4" Hole f/ 3582' to 3677'. (95' @ 95fph).	1648 Days without a Lost Time incident
7:30 AM	Rig service; Grease Wash pipe & Rig; Check and service Brakes and pressures.	24 hr losses 80 bbls Total losses 80 bbls
8:00 PM	Dir Drill 8-3/4" Hole f/ 3677' to 4339'. (662' @ 57.6 fph)	91 Days without a Medical Aid or Restricted Work incident
8:30 PM	Rig service;	86 Days without a Recordable Spill
9:30 PM	Dir Drill 8-3/4" Hole f/ 4339' to 4420'. (81' @ 81 fph). NOTE: started losing returns @ 4410'.	456 Days without a Reportable Quantity Spill
11:30 PM	Pump & Spot 20bbls of 35ppb Fine LCM Pill on bttm, Pull 190' above and circ bttms up @ 40-50spm. 10-15' Flare, Mud Cut to 11.9ppg (Gas detector quit functioning partial way through bttms up). Slight seepage losses (6 bbls) while circulating and mixing 45ppb Severe LCM Pill. Wash to bttm w/ returns.	2188 Gals fuel used past 24hrs
1:00 AM	Pump & Spot 40 bbls 45ppb Severe LCM Pill on bttm and pull 7 stds above pill to 3750'.	Bradenhead Pressures on the F12E pad as Follows:
4:00 AM	Circ Bttms up @ 20spm while allowing pill to soak/seal off loss zone.	Twin Creek: 12-5D1=100psi, 12-5A1=0psi,
6:00 AM	Wash to bttm at 40spm w/ no losses. Slowly increase to 60spm. Had losses over shakers, slow pump to 40spm and started having downhole losses @ ~60bph.	12-5A2=10psi, 12-4D1=50 psi, 12-4A1=150psi,
		12-6C1=10psi, 12-3D2=150psi, 12-3D1=0psi,
		12-6A1=0psi.

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-6D1 (F12E)		API # : 05045203930000	Operations Date : 04/17/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 17
Spud Date :	Days From Spud : 93	Depth At 06:00 :	4420
Morning Operations : Making up 7" Float Shoe & Collar.		Estimated Total Depth :	5407
		Remarks :	
Time To	Description	1649 Days without a Lost Time incident 24 hr losses 50 bbls      Total losses 130 bbls	
7:30 AM	Circulate at 4420' at 40spm with 30bbls/hr seepage losses, Mix and spot 40bbls 40lbs/bbl LCM pill (Lost 35bbls)	92 Days without a Medical Aid or Restricted Work incident	
8:30 AM	Pull to 3281'	87 Days without a Recordable Spill	
9:30 AM	Establish circulation at 10spm and work up to 40spm circulating 2000 strokes B/U with no seepage losses detected	457 Days without a Reportable Quantity Spill Gals fuel used past 24hrs	
10:00 AM	TIH slow to 3760'	Bradenhead Pressures on the F12E pad as Follows:	
12:00 PM	Circulate raise mud weight to 12.8ppg with no seepage losses detected	Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=15psi, 12-4D1=60 psi, 12-4A1=80psi, 12-6C1=0psi, 12-3D2=100psi, 12-3D1=0psi, 12-6A1=0psi.	
6:30 PM	Stage in hole circulating B/U at 4056' and wash from 4230' to 4339' increasing strokes to 65spm conditioning mud weight at 12.8ppg with no seepage losses detected Unload, Clean, Drift and measure 7" csg.		
11:00 PM	Perform 30 min Flow Check an Btm; Pump Slug and trip out of hole to run 7" Int. Csg. Flow check @ 5stds and ea 10 stds out of hole. Flow check out of hole. HOLE FILL: Calc: 28.73 bbls, Act: 36.0 bbls.		
12:30 AM	Held PJSM w/ Directional & Crew; L/D DIR BHA.		
1:00 AM	P/U single & Pull Wear Bshg.		
3:30 AM	Held PJSM, Change out Pipe Rams to Csg Rams .		
4:30 AM	Held PJSM & Press Test Csg Rams to LOW: 250 psi f/ 5mins & HIGH: 5000psi f/ 10 mins.		
6:00 AM	Held PJSM and R/U Frank's Csg equip.		

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-6D1 (F12E)      API # : 05045203930000      Operations Date : 04/18/2012  
 Surface Location : SENW Sec 12 T7S - R92W 6th PM      Area : Mamm Creek      Report # : 18  
 Spud Date :      Days From Spud : 94      Depth At 06:00 : 4420  
 Morning Operations : N/D BOPE ; Set Slips & Pack-Off.      Estimated Total Depth : 5407

Time To	Description	Remarks :
6:30 AM	Rig service; Inspect & Service Top Drive, Wash Pipe, Blocks & Drawworks. Service Brake Pressure.	1650 Days without a Lost Time incident 24 hr losses 00 bbls      Total losses 130 bbls
2:00 PM	Held PJSM w/ Frank's and Rig personnel. M/U 7" Float Shoe, Shoe Jnt, Float Collar & Jnt above w/ Threadlock and Torq to 3910 ft. lbs. Ran Csg to 1143'.	93 Days without a Medical Aid or Restricted Work incident
3:00 PM	Install Rotating Head Rubber, Fill Pipe, Break Circ & Circ hole clen. (5-7' Flare, Mud Cut to 12.0ppg. Attempt to come down to set slips and new rubber was sticking Csg, Work Csg up & down to burn rot. head rubber.	88 Days without a Recordable Spill 458 Days without a Reportable Quantity Spill 890 Gals fuel used past 24hrs Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=10psi, 12-4D1=50 psi, 12-4A1=150psi, 12-6C1=10psi, 12-3D2=150psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.
4:30 PM	Cont to run in hole w/ 7" csg to 3094'. Flare starting to become steady @ 1' to 3'.	
5:30 PM	Fill Pipe, Break Circ & Circ out gas cut mud, 3'-5' Flare w/ Mud Cut: 12.0ppg.	
6:00 PM	Cont To Run 7" Csg to 3731'.	
8:00 PM	Raise Mud Wt in tanks to 12.8ppg and Circ hole clean; Mud Cut: 12.0+ppg, Max Flare: 5-6'.	
12:00 AM	Run 7" Csg to 4386'; tagged solid fill @ 4386', could not wash out. Lay out Jnt #104. Ran total: 103 Jnts, 7.0", 23#, J-55, LT&C New Casing, Landed @ 4365', FS @ 4363.5', FC @ 4319.48'.	
1:00 AM	Rig Up Cmt Head & Circ Hole clean and Gas units down. Mud Cut 12.7ppg, Gas: 24 units	
3:30 AM	Held PJSM; Press Test Schlumberger to LOW: 250 psi f/ 5mins & HIGH: 4000psi f/ 10mins. Mix & Pump 50 bbls MudPush II + 6.0 lb/bbl D182 + 275.64 lb/bbl D031 @ 13.4ppg, Mix & Pump (774 sxs) 167 bbls EasyBLOK TXI Tail Cmt + 75 lb/sx D049 + 6.0% D154 + 0.6% D400 + 0.1% D153 + 0.2% D202 + 0.5% D013 + 0.5% D046 + 0.25 lb/bbl D029 & 1.5 lb/bbl CemNet @ 14.0 ppg. Yield: 1.21 ft3/sx; Water: 5.477 gal/sx. Drop Plug & displace w/ 170 bbls H2O @ 6.3 bpm. Slow to 2.5 bpm and Final Circ Press = 1400 pis, Bump Plug @ 2000 psi. Bumped Plug @ 02:21 hrs. Held, Bled back 1.5 bbls, Check floats held OK. Had 46 bbls good cement returns to surface.	
6:00 AM	N/D BOP's to set slips.	

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 04/19/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 19
Spud Date :	Days From Spud : 95	Depth At 06:00 : 4420
Morning Operations : Press Test BOPE.		Estimated Total Depth : 5407

Time To	Description	Remarks :
		1651 Days without a Lost Time incident 24 hr losses 00 bbls      Total losses 130 bbls
9:00 AM	Held PJSM w/ GE Personnel; Set Slips w/ 85k tension. Cut-off Landing Jnt and L/D same. Make final cut and dress 7" csg stub. Install Pack-Off Assy and Press test to 5000 psi.	94 Days without a Medical Aid or Restricted Work incident
1:30 PM	Set BOP stack and wellhead and N/U. Change out 7" csg rams to 4" Var Rams. Dressed and installed Flowline and hammer unions. Rig down Swaco Remote Choke on Floor, Pump house and choke manifold. Install flowline to rotating head, Kill Line.	89 Days without a Recordable Spill 459 Days without a Reportable Quantity Spill 1226 Gals fuel used past 24hrs
2:00 PM	Rig service; Service and inspect Top Drive, Drawworks, Wash Pipe, Blocks and Bracks. Perform Service Brake pressure inspection.	Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=0psi, 12-5A1=0psi, 12-5A2=10psi, 12-4D1=60 psi, 12-4A1=110psi, 12-6C1=10psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.
3:30 PM	Nipple up Expro Chokes, remote Panel and Pump strokes. Install cellar covers, snug up turnbuckles and centre stack. Change out elevators f/ csg to drill Pipe.	
10:00 PM	Held PJSM with all personnel on location. L/D 30 Jnts 4.5" HWDP and Drill pipe in Mousehole. (Cont to R/U Expro Chokes)	
10:30 PM	Rig Service; Change out ST-80 Dies.	
12:30 AM	Finish L/D 4.5" Drill String. Total 168 jnts.	
1:30 AM	R/D Floor of all 4.5" Tools, Break Top Drive Saver Subs. L/D Floor Valves, Bit breakers, elevators, slips, etc.	
2:30 AM	P/U all 4" Drill String tools to rig floor. Install new Saver Sub and Gripper dies. Tighten clamp to Lower Well control valve.	
6:00 AM	Held PJSM w/ Rebel Testers and Press Test BOPE.	

# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-6D1 (F12E)		API # : 05045203930000	Operations Date : 04/20/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 20
Spud Date :	Days From Spud : 96	Depth At 06:00 :	4420
Morning Operations : P/U XT39 Drill Pipe.		Estimated Total Depth :	5407

Time To	Description	Remarks :
3:30 PM	Held PJSM & Press Test w/ Rebel testers: Press Test Choke manifold Valves & Lines, Pipe & Blind Rams, Choke & Kill Line Valves and lines, Stabbing Valve & dart Valves, Top Drive Upper & Lower Saver Valves, X/O Subs & Check valve to LOW: 250 psi & HIGH: 5000 psi. Test Annular to LOW: 250 psi & HIGH: 1500 psi and Mud Line back to Pump to HIGH: 4000 psi. Perform Accumulator Function Test: 4 functions w/ Bleed off to 2250 psi, Recharge Time: Primary Pump: 1min 24secs & Secondary Air Pumps: 41 secs & Both Pumps: 40 secs. Precharge Test: Bleed Down @ 800 psi and Up: 1000 psi. Test all bottles, all bottles except 2 at 1100 psi. Recharge 2 low bottles to 1100 psi.	1652 Days without a Lost Time incident 24 hr losses 00 bbls      Total losses 130 bbls 95 Days without a Medical Aid or Restricted Work incident 90 Days without a Recordable Spill 460 Days without a Reportable Quantity Spill 925 Gals fuel used past 24hrs Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=60 psi, 12-4A1=50psi, 12-6C1=100psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.
4:00 PM	Held Operational Stand Down and Care/Handling of XT39 Drill Pipe.	NOTE: Reviewed S. Piceance March 2012 HID and Incidents with both Crews. Safety Stand Down on Handling/Care of XT39 Drill String.
5:00 PM	Rig Service; Grease Rig, Inspect Top Drive, drawworks, Brakes, Hoisting Lines. Set Crown and Com savers.	
5:30 PM	Install Wear Bshg. and stab Rotating Head Rubber.	
6:00 PM	P/U 4" XT39 HWDP, Make & Break each connection.	
6:30 PM	Rig service; Top Drive Inspection and service; Inspect Pragma, hoisting lines and equip f/ P/U DP.	
7:30 PM	Operational Stand Down f/ Handling/Care XT39 DP	
6:00 AM	Cont to pick up XT39 DP HWDP (30jnts) and XT39 Drill Pipe. Rack 25 stds DP in derrick. Make and break ea connection and torque to 18000 ft.lbs.	

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 04/22/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 22
Spud Date :	Days From Spud : 98	Depth At 06:00 :	4760
Morning Operations : Drilling @ 4800'		Estimated Total Depth :	5407
Remarks :			
Time To	Description	1654 Days without a Lost Time incident 24 hr losses 100 bbls      Total losses 230 bbls	
8:30 AM	Wash and ream cement from 4290' float @ 4319' building mud from 12.0ppg to 12.3ppg SPR @ 4318' 12.3ppg	97 Days without a Medical Aid or Restricted Work incident	
9:00 AM	Service top drive	92 Days without a Recordable Spill	
11:30 AM	Wash and ream cement from 4345', Shoe @ 4361', hole was packing off drilling cement had to keep stopping and ream back to the shoe and circulate to clean hole	462 Days without a Reportable Quantity Spill 1108 Gals fuel used past 24hrs	
6:00 PM	Dir. Drill from 4420' to 4535' with 15' of sliding, 300gpm, 60 rpm, 13-15k wob, 40 vis, 12.3ppg mwt      Made 115' ROP=17.6fpr	Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=50 psi, 12-4A1=150psi, 12-6C1=10psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.	
7:30 PM	Dir. Drill from 4535' to 4630', mwt12.3ppg Made 95' ROP=63.3fpr		
8:00 PM	Service rig		
11:30 PM	Dir. Drill from 4630' to 4725', hole started seeping @ 4700' slowed pumps down to 260 gpm, finished drilling stand down lost 75 bbls		
1:00 AM	Circulate building 40bbl LCM pill, spotted 20bbl LCM pill on bottom		
1:30 AM	TOOH 6 stands to 4155'		
4:00 AM	Circulate on top of pill @ 42 spm, 176 gpm, for 3hrs letting pill soak		
5:00 AM	TIH from 4155' to 4630' washed last stand to bottom @ 260gpm with full returns		
6:00 AM	Dir. Drill from 4725' to 4760' 62spm, 260 gpm, 12.3ppg mwt, Total losses 100bbls		

Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 04/21/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 21
Spud Date :	Days From Spud : 97	Depth At 06:00 :	4420
Morning Operations : Wash and ream to bottom		Estimated Total Depth :	5407
Remarks :			
Time To	Description	1653 Days without a Lost Time incident 24 hr losses 00 bbls      Total losses 130 bbls	
6:30 AM	Service rig	96 Days without a Medical Aid or Restricted Work incident	
7:00 AM	Pre job safety on picking up 4" drill pipe	91 Days without a Recordable Spill	
1:00 PM	Cont to pick up 75 jnts XT39 Drill Pipe. Rack 25 stds DP in derrick. Make and break ea connection and torque to 18000 ft.lbs.	461 Days without a Reportable Quantity Spill 964 Gals fuel used past 24hrs	
1:30 PM	Pre job safety meeting with loggers	Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=60 psi, 12-4A1=50psi, 12-6C1=100psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.	
7:30 PM	Cased hole logs, loggers TD 4161', top of cement 1145'		
10:00 PM	Test casing to 1400 psi for 30 min lost 30 psi		
10:30 PM	Pre job safety meeting with on picking up BHA		
12:00 AM	Pick up BHA, install batteries and orient tools		
12:30 AM	Service rig		
1:30 AM	Trip in the 10 stds of HWDP to 1025'		
2:30 AM	Pick up 12 jts of 4" DP make and break each connection		
5:30 AM	Trip in the from 1404' to 4155', fill pipe		
6:00 AM	Wash and ream from 4155' to 4250'		

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 04/24/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 24
Spud Date :	Days From Spud : 100	Depth At 06:00 :	4913
Morning Operations : Tripping out of the hole		Estimated Total Depth :	5407

Time To	Description	Remarks :
6:30 AM	Finish up flow check well was still flowing got back 50bbbls in hour	1656 Days without a Lost Time incident 24 hr losses bbbls Total losses 230
7:00 AM	Service rig	99 Days without a Medical Aid or Restricted Work incident
10:30 AM	Reamed 7 stds to bottom, circulate LCM and 12.3ppg mud from bottom of hole	94 Days without a Recordable Spill 464 Days without a Reportable Quantity Spill 1038 Gals fuel used past 24hrs
3:30 PM	Circulate lowering mud wt from 12.8ppg to 12.4ppg	Bradenhead Pressures on the F12E pad as Follows:
5:30 PM	Flow check from 30 min, well was flow gained 65bbbls in pits, shut well in and monitored pressure for 1 hour DP PSI was 100, CiCP was 140, open choke bled off pressure though gas buster no flare, circulated bottoms up through gas buster mud wt out was down to 11.8ppg, flare 5-15'	Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=50 psi, 12-4A1=150psi, 12-6C1=10psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.
6:00 PM	Circulate gas cut mud from well	
8:00 PM	Hole started seeping at 12.4ppg built and spotted 12.ppg 15% LCM pill in open hole	
9:00 PM	Tripped out of the 7 stds of DP hole took 4.2bbl calc. fill 10bbbls	
3:30 AM	Circulate and condition mud build mud wt from 12.4ppg to 12.8pg 1 hour flow check	
6:00 AM	Trip out the hole 22 stds of DP filling hole with trip tank continuously	

Well : <b>Twin Creek 12-6D1 (F12E)</b>		API # : 05045203930000	Operations Date : 04/23/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 23
Spud Date :	Days From Spud : 99	Depth At 06:00 :	4913
Morning Operations : Washing back to bottom 7stds, circulate bottoms up, flow check		Estimated Total Depth :	5407

Time To	Description	Remarks :
9:30 AM	Dir. Drill from 4760' to 4819' made 59' ROP 16.8 fpr 15-16k wob,	1655 Days without a Lost Time incident 24 hr losses bbbls Total losses 230
10:00 AM	Service rig	98 Days without a Medical Aid or Restricted Work incident
1:30 PM	Dir. Drill from 4819' to 4913' made 94' ROP 26.8 fpr 18k wob ROP dropped off to 10' hr	93 Days without a Recordable Spill 463 Days without a Reportable Quantity Spill 1108 Gals fuel used past 24hrs
3:00 PM	Circulate and condition mud bring mud wt up from 12.2ppg to 12.3ppg for bit trip, spotted LCM pill in open hole	Bradenhead Pressures on the F12E pad as Follows:
4:00 PM	Trip out of the 7 stds into casing above LCM pill, hole took no displacement, trip tank gained 2bbbls	Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=50 psi, 12-4A1=150psi, 12-6C1=10psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.
6:00 PM	Circulated bottoms up due to 2 bbbls gain in trip tank, had no bottoms up gas, shut down for 30min flow check after 30 min well was still flowing 3 Gal/ Min or 4.3bbbls hr, circulated building mud wt from 12.3ppg to 12.4+ppg	
7:00 PM	Flow check for 1hr well still flowing at 5 Gal/ Min or 7.1bbbls hr	
8:30 PM	Circulate and build mud wt from 12.4ppg to 12.5ppg	
9:30 PM	Flow check for 1hr well still flowing at 5 Gal/ Min or 7.1bbbls hr	
12:30 AM	Circulate and build mud wt from 12.5 ppg to 12.7ppg	
2:00 AM	Flow check 1.5hrs flow slowed down to 15bbl hrs but still gained 40bbbls on flow check	
5:30 AM	Circulate and build mud wt from 12.7ppg to 12.8ppg	
6:00 AM	Flow check	

# REGULATORY DRILLING SUMMARY



Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 04/26/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 26
Spud Date :	Days From Spud : 102	Depth At 06:00 : 5468
Morning Operations : Rigging up casing tools, start running casing		Estimated Total Depth : 5407

<table border="0" style="width: 100%;"> <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>Service rig</td></tr> <tr><td>10:30 AM</td><td>Drill from 5385' to 5468' TD, made 83' 12.4ppg mud wt lost 19bbls</td></tr> <tr><td>1:00 PM</td><td>Circulate and condition hole for casing built mud wt from 12.4ppg to 12.8ppg lost 102 bbbls down hole</td></tr> <tr><td>2:30 PM</td><td>Flow check for 1 1/2hrs , well still flowing at 22bbbls hr got back 45bbbls</td></tr> <tr><td>5:45 PM</td><td>Circulate and build mud wt from 12.8ppg to 13.0 ppg lost 88 bbbls down hole total losses on day tour 173bbbls</td></tr> <tr><td>7:00 PM</td><td>Flow check w/ 13.0ppg mud wt well stopped flowing after an hour</td></tr> <tr><td>7:30 PM</td><td>Service rig</td></tr> <tr><td>2:00 AM</td><td>TOOH, pulled 47 stds of DP, 10 stds of HWDP hole took 54.3bbbl calc, fill was 31.69bbbls</td></tr> <tr><td>3:00 AM</td><td>Lay down directional tools</td></tr> <tr><td>5:30 AM</td><td>Remove wear bushing</td></tr> <tr><td>6:00 AM</td><td>Pre job safety meeting with casing crew</td></tr> </tbody> </table>	Time To	Description	6:30 AM	Service rig	10:30 AM	Drill from 5385' to 5468' TD, made 83' 12.4ppg mud wt lost 19bbls	1:00 PM	Circulate and condition hole for casing built mud wt from 12.4ppg to 12.8ppg lost 102 bbbls down hole	2:30 PM	Flow check for 1 1/2hrs , well still flowing at 22bbbls hr got back 45bbbls	5:45 PM	Circulate and build mud wt from 12.8ppg to 13.0 ppg lost 88 bbbls down hole total losses on day tour 173bbbls	7:00 PM	Flow check w/ 13.0ppg mud wt well stopped flowing after an hour	7:30 PM	Service rig	2:00 AM	TOOH, pulled 47 stds of DP, 10 stds of HWDP hole took 54.3bbbl calc, fill was 31.69bbbls	3:00 AM	Lay down directional tools	5:30 AM	Remove wear bushing	6:00 AM	Pre job safety meeting with casing crew	<p>Remarks :</p> <p>1658 Days without a Lost Time incident 24 hr losses 0 bbbls      Total losses 458 bbbls</p> <p>101 Days without a Medical Aid or Restricted Work incident</p> <p>96 Days without a Recordable Spill 466 Days without a Reportable Quantity Spill 705 Gals fuel used past 24hrs</p> <p>Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=50 psi, 12-4A1=150psi, 12-6C1=10psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.</p>
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Well : <b>Twin Creek 12-6D1 (F12E)</b>	API # : 05045203930000	Operations Date : 04/25/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 25
Spud Date :	Days From Spud : 101	Depth At 06:00 : 5385
Morning Operations : Drilling @ 5385'		Estimated Total Depth : 5407

<table border="0" style="width: 100%;"> <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>Service rig</td></tr> <tr><td>8:30 AM</td><td>Trip out of the hole 13 stds of DP, 10 stds of WHDP, filling continuously with trip tank calc. fill 24.4bbbls actual fill 22.2bbbls flow checks every 1000'</td></tr> <tr><td>9:00 AM</td><td>Pull rotating rubber</td></tr> <tr><td>11:00 AM</td><td>Lay down Motor, bit and change out batteries</td></tr> <tr><td>11:30 AM</td><td>Install rotating rubber</td></tr> <tr><td>1:30 PM</td><td>Trip in the hole 10 stds of HWDP, 16 stds of DP calc. disp, 23.3 bbbls, actual disp. 27.4 bbbls</td></tr> <tr><td>2:00 PM</td><td>Circulate bottoms up @ 2543' hole took 65bbbls down hole</td></tr> <tr><td>3:30 PM</td><td>Trip in the hole 21 stds DP calc. disp. 11.97bbbls, actual disp. 13.46bbbls</td></tr> <tr><td>5:30 PM</td><td>Wash and ream last 4 stds to bottom lost 43bbbls down hole 12.8ppg mud wt</td></tr> <tr><td>6:00 PM</td><td>Get drilling perimeters with new BHA</td></tr> <tr><td>8:00 PM</td><td>Dir. Drill from 4913' to 5009', 12.8ppg mud wt, 15k wob, 60 rpm, 50spm, 209 gpm, 400-450 diff hole seeping slow</td></tr> <tr><td>8:30 PM</td><td>Service rig</td></tr> <tr><td>6:00 AM</td><td>Dir. Drill from 5009' to 5385' 12.5 ppg mud wt, 10-13k wob, hole seeped 120 bbbls on night tour</td></tr> </tbody> </table>	Time To	Description	6:30 AM	Service rig	8:30 AM	Trip out of the hole 13 stds of DP, 10 stds of WHDP, filling continuously with trip tank calc. fill 24.4bbbls actual fill 22.2bbbls flow checks every 1000'	9:00 AM	Pull rotating rubber	11:00 AM	Lay down Motor, bit and change out batteries	11:30 AM	Install rotating rubber	1:30 PM	Trip in the hole 10 stds of HWDP, 16 stds of DP calc. disp, 23.3 bbbls, actual disp. 27.4 bbbls	2:00 PM	Circulate bottoms up @ 2543' hole took 65bbbls down hole	3:30 PM	Trip in the hole 21 stds DP calc. disp. 11.97bbbls, actual disp. 13.46bbbls	5:30 PM	Wash and ream last 4 stds to bottom lost 43bbbls down hole 12.8ppg mud wt	6:00 PM	Get drilling perimeters with new BHA	8:00 PM	Dir. Drill from 4913' to 5009', 12.8ppg mud wt, 15k wob, 60 rpm, 50spm, 209 gpm, 400-450 diff hole seeping slow	8:30 PM	Service rig	6:00 AM	Dir. Drill from 5009' to 5385' 12.5 ppg mud wt, 10-13k wob, hole seeped 120 bbbls on night tour	<p>Remarks :</p> <p>1657 Days without a Lost Time incident 24 hr losses 228 bbbls      Total losses 458 bbbls</p> <p>100 Days without a Medical Aid or Restricted Work incident</p> <p>95 Days without a Recordable Spill 465 Days without a Reportable Quantity Spill 1979 Gals fuel used past 24hrs</p> <p>Bradenhead Pressures on the F12E pad as Follows: Twin Creek: 12-5D1=100psi, 12-5A1=0psi, 12-5A2=0psi, 12-4D1=50 psi, 12-4A1=150psi, 12-6C1=10psi, 12-3D2=0psi, 12-3D1=0psi, 12-6A1=0psi, 12-6D1 = 0 psi.</p>
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# REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-6D1 (F12E)	API # : 05045203930000	Operations Date : 04/28/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 28
Spud Date :	Days From Spud : 104	Depth At 06:00 :
Morning Operations :		Estimated Total Depth : 5407

Time To	Description	Remarks :
7:00 AM	Waiting on cement SICP 06:00 110psi, SICP 07:00 100psi	1660 Days without a Lost Time incident
8:00 AM	Opened well @ 07:21 set casing slip w/95k, install braden head gauge (180psi)	24 hr losses 0 bbls Total losses 458 bbls
10:30 AM	Nipple down BOP, cut casing, lay down casing cut off	103 Days without a Medical Aid or Restricted Work incident
11:00 AM	Work as directed by operator securing well Rig released @ 1100	98 Days without a Recordable Spill
		468 Days without a Reportable Quantity Spill
		XXX 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=50 psi, 12-4A1=150psi,
		12-6C1=0psi, 12-3D2=0psi, 12-3D1=5psi, 12-6A1=0psi,
		12-6D1 = 0 psi. Prod. 180psi

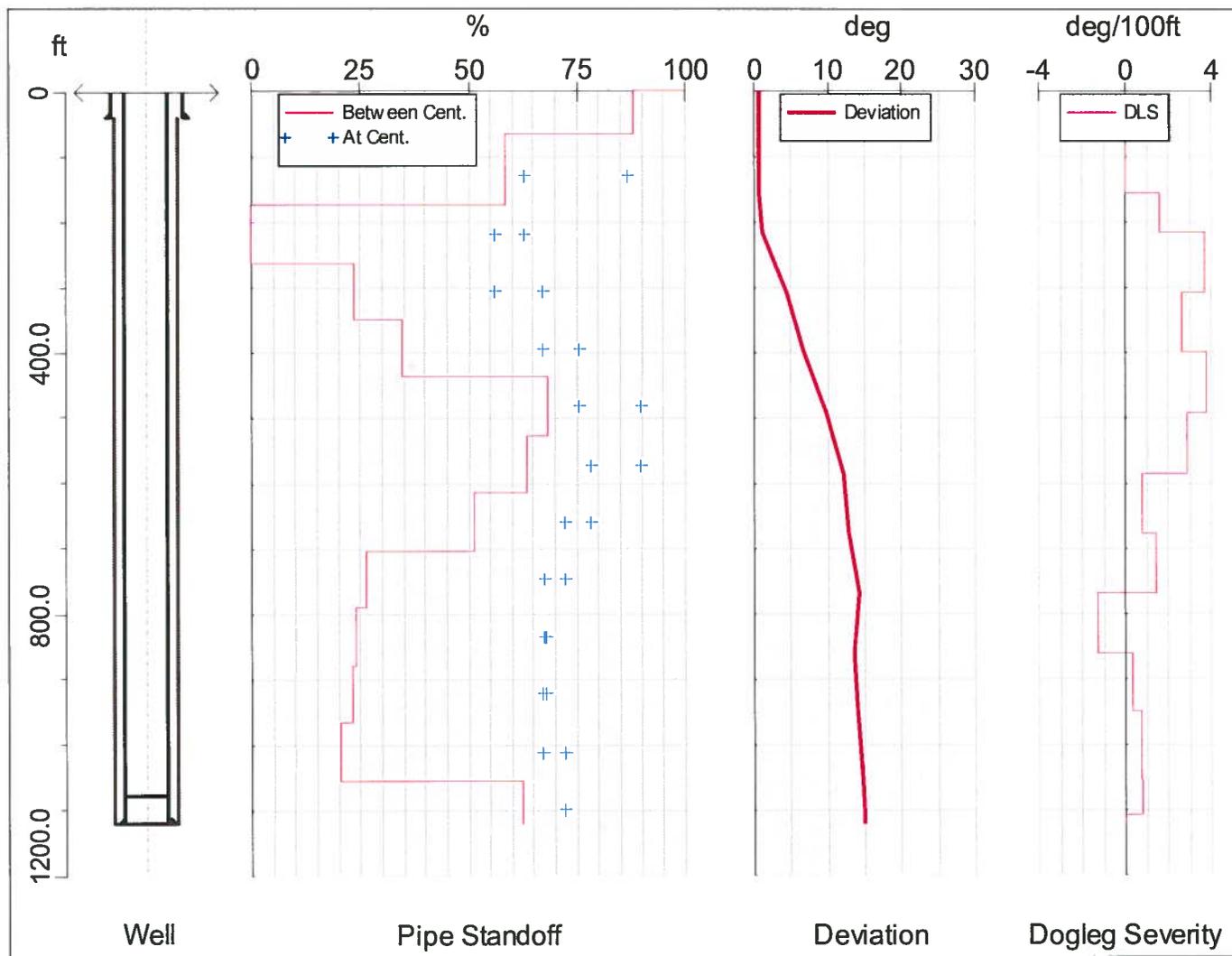
Well : Twin Creek 12-6D1 (F12E)	API # : 05045203930000	Operations Date : 04/27/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM	Area : Mamm Creek	Report # : 27
Spud Date :	Days From Spud : 103	Depth At 06:00 : 5468
Morning Operations : Setting casing slips		Estimated Total Depth : 5407

Time To	Description	Remarks :
6:30 AM	Rig up Casing crew	1659 Days without a Lost Time incident
5:00 PM	Ran 125 jts of 4.5" 11.6# S80 BTC + 2 marker jts, w/ 64 centralizers circulated bottoms up every 1000'	24 hr losses 0 bbls Total losses 458 bbls
5:30 PM	Circulate hole clean for casing, rig down casing crew	102 Days without a Medical Aid or Restricted Work incident
6:00 PM	Circulate hole clean for casing, rig up cementers	97 Days without a Recordable Spill
6:30 PM	Circulate hole clean for casing, pre job safety meeting with cementers	467 Days without a Reportable Quantity Spill
7:00 PM	Circulate hole clean for casing	925 Gals fuel used past 24hrs
8:30 PM	Primary cement, pumped 20 bbls of 13.2ppg mud push, 49 bbls of 14.0ppg tail, displaced 83 bbls of water, bumped plug 500psi over, floats held. No cement to surface	Bradenhead Pressures on the F12E pad as Follows:
4:00 AM	Waiting on cement after cementing well was still flowing so we shut the well in to let cement set up, after shutting the well in we had 60psi at 4:00 am we 90psi	Twin Creek: 12-5D1=100psi, 12-5A1=0psi,
6:00 AM	Opened well, checked for flow, well was still flowing at 10.7bbls/ hr, shut well back in waited on GE to set slips	12-5A2=90psi, 12-4D1=50 psi, 12-4A1=150psi,
		12-6C1=0psi, 12-3D2=0psi, 12-3D1=5psi, 12-6A1=0psi,
		12-6D1 = 0 psi.

# Twin Creek 12-6D1

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



# Casing Cementing



**Company:** ENCANA USA - PARACHUTE FIELD OFC (EDI)  
**Well Name:** Twin Creek 12-6D1  
**Field:** Mamm Creek  
**County:** Garfield  
**State:** CO

**Date:** 4/16/2012  
**Well Location:** F12E  
**API Number:** 05045203930000  
**Proposal Number:** 1  
**Contact:**  
**Made By:** Matt Hudson  
**Service from District:** Grand Junction, CO  
**District Phone:** 303-486-3245  
**Objective:** 50bbls MUDPUSH II Spacer  
10lb/bbl CemNET Plus  
14.0# EasyBLOK TXI: Surface.  
1.5lb/bbl CemNET  
Mesa Verde: 2352ft. (2317)  
Top of Gas: 3605ft. (3552)  
8 3/4" Bit Depth: TD.  
TD: 4420ft.

#### Disclaimer Notice:

The information is presented in good faith, but no warranty is given, 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 elements of unknown data that may not be more accurate than the model, be assumed to and such input data. The information presented is Schlumberger's best estimate of the results that may be achieved and shall be used for comparison purposes rather than absolute values. The quality of input data, and hence results, may be improved through the use of certain tests and procedures which Schlumberger can assist in selecting. Freedom from infringement of patents of Schlumberger or third parties is not to be inferred nor are any such rights granted hereon, expressly or by implication.

# 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 Casing 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 **\$ 55,091.77**. 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.

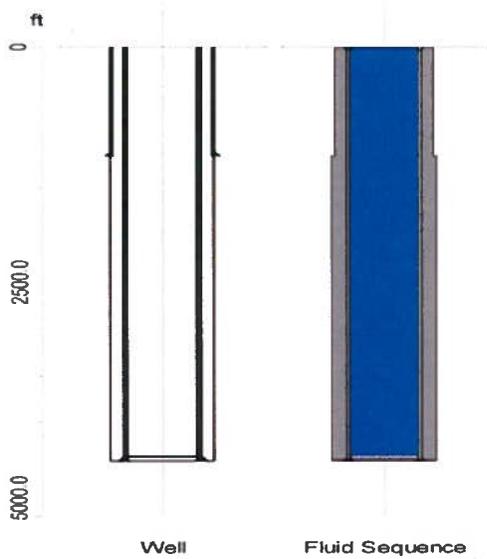
Thank you for considering Schlumberger.  
Please do not hesitate to contact me with any questions or concerns.

Sincerely,

Matt Hudson  
303-862-1701  
mhudson2@slb.com



## WELL DATA



### 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.

Well Data	
Job Type :	Casing Cementing
Total Depth (Measured) :	4420.0 ft
True Vertical Depth (TVD) :	4364.1 ft
BHST (Tubular Bottom Static Temperature) :	140 degF
BHCT (Tubular Bottom Circulating Temperature) :	116 degF

Open Hole		
Mean Diameter without Excess	Bottom Depth	Annular Excess
8.750 in	4420.0 ft	50.0 %

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

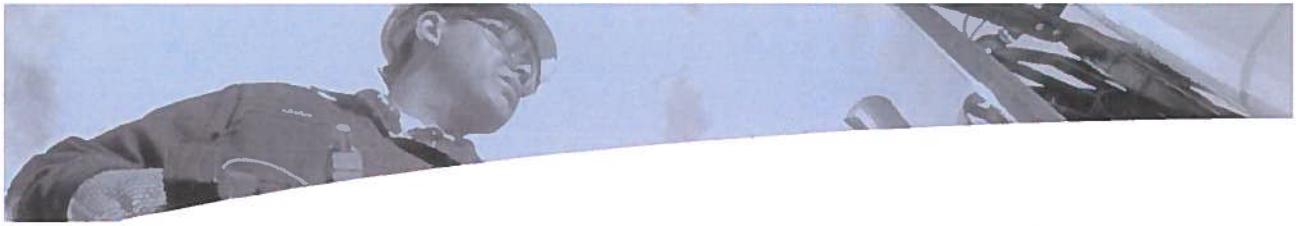
Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
7 in	23.0 lb/ft	J-55	LTC	0.22 ft <sup>3</sup> /ft	4420.0 ft

Annular Capacity (without Excess) : Casing Bottom / Open Hole : 0.15 ft<sup>3</sup>/ft

Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 0.17 ft<sup>3</sup>/ft

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
MUDPUSH II	50.0	13.40	0.0
14.0# EasyBLOK TXI	166.9	14.00	0.0
Water	172.4	8.32	0.0

Total Liquid Volume : 389.3 bbl



## FLUID SYSTEMS

MUDPUSH II			
<b>System</b>	MUDPUSH II		
<b>Density</b>	13.40 lb/gal		
<b>Total Volume</b>	50.0 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>
	D031	Weighting Agent	6562.8 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 TX1 (774 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>	166.9 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	0.5 % 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>	

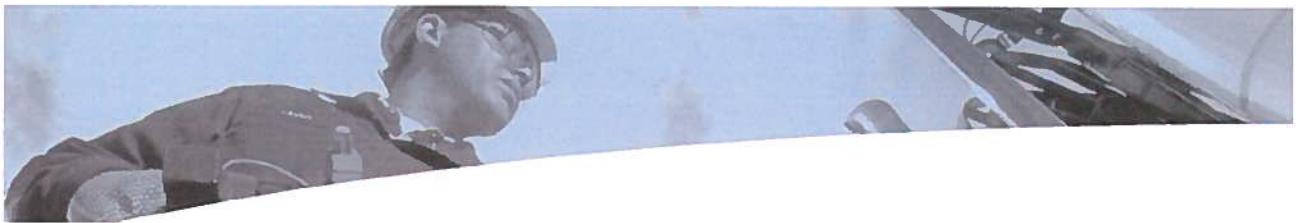
Water			
<b>System</b>	Water		
<b>Density</b>	8.32 lb/gal		
<b>Total Volume</b>	172.4 bbl		
<b>Additives</b>	<b>Code</b>	<b>Description</b>	<b>Concentration</b>

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.



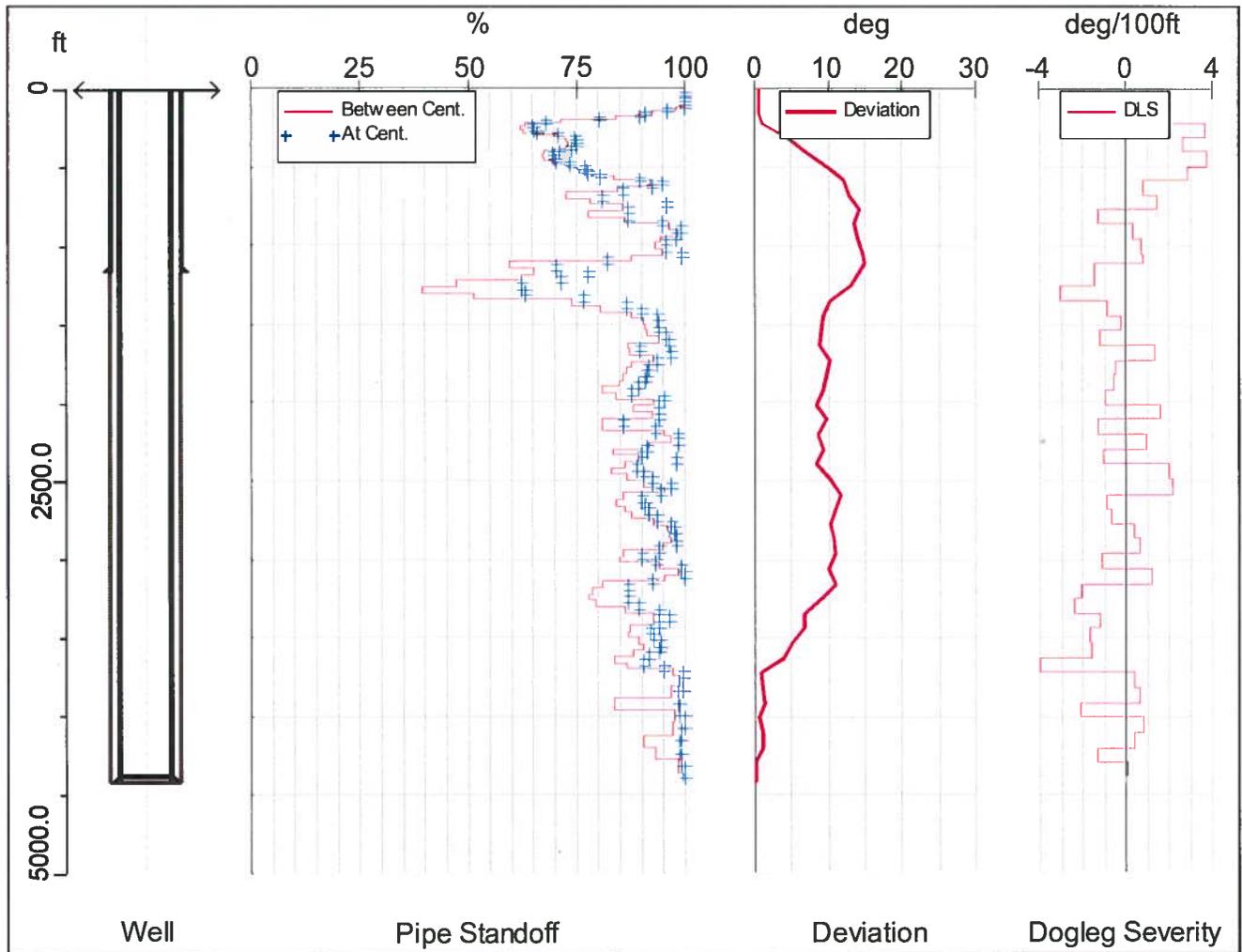
## PROCEDURES

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. Conduct post job rig down meeting.
7. Purge all High Pressure and Low Pressure treating lines with air PRIOR TO RIG-DOWN.
8. Rig down Schlumberger equipment.
9. Conduct convoy meeting and move out Schlumberger equipment.



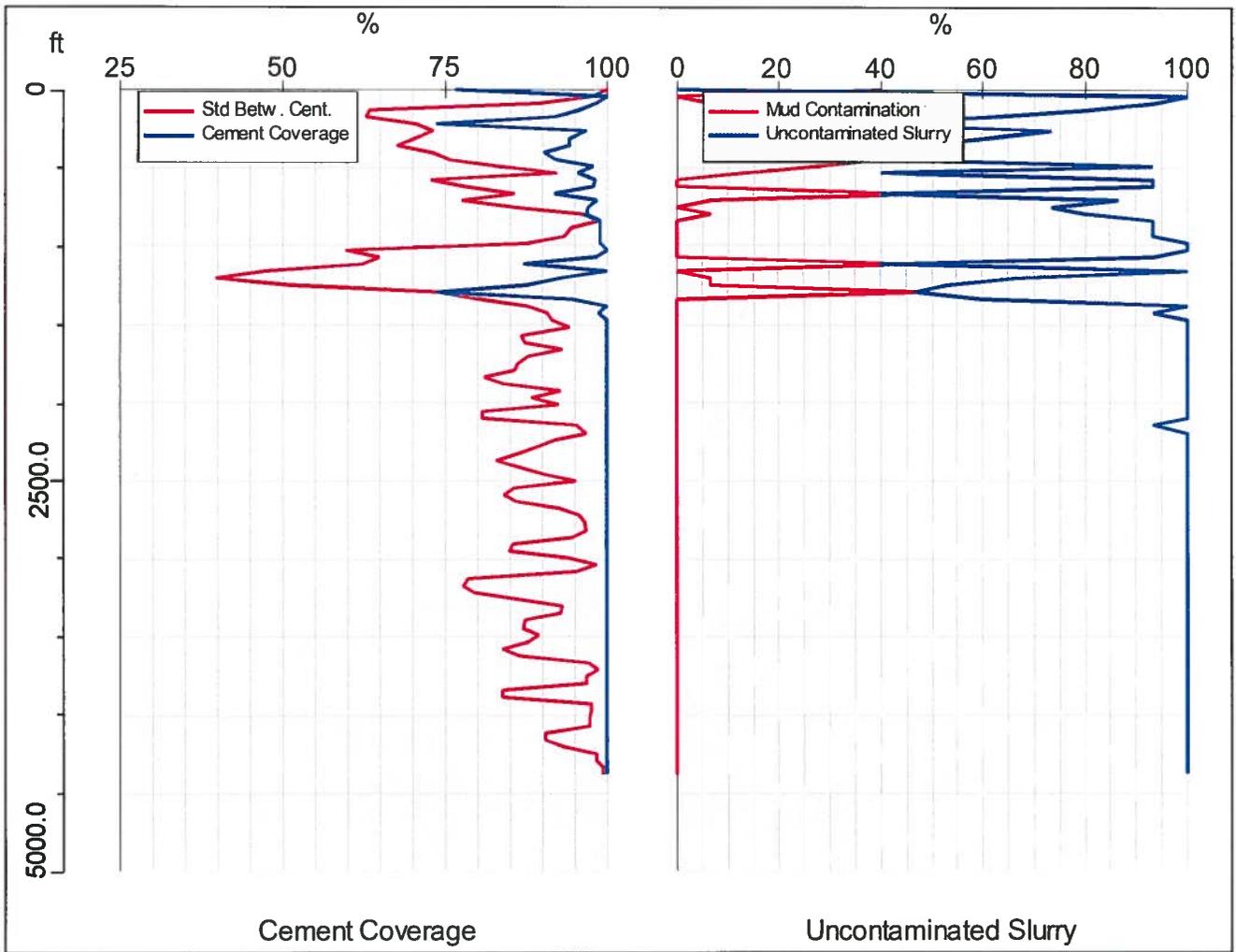
## CENTRALIZERS

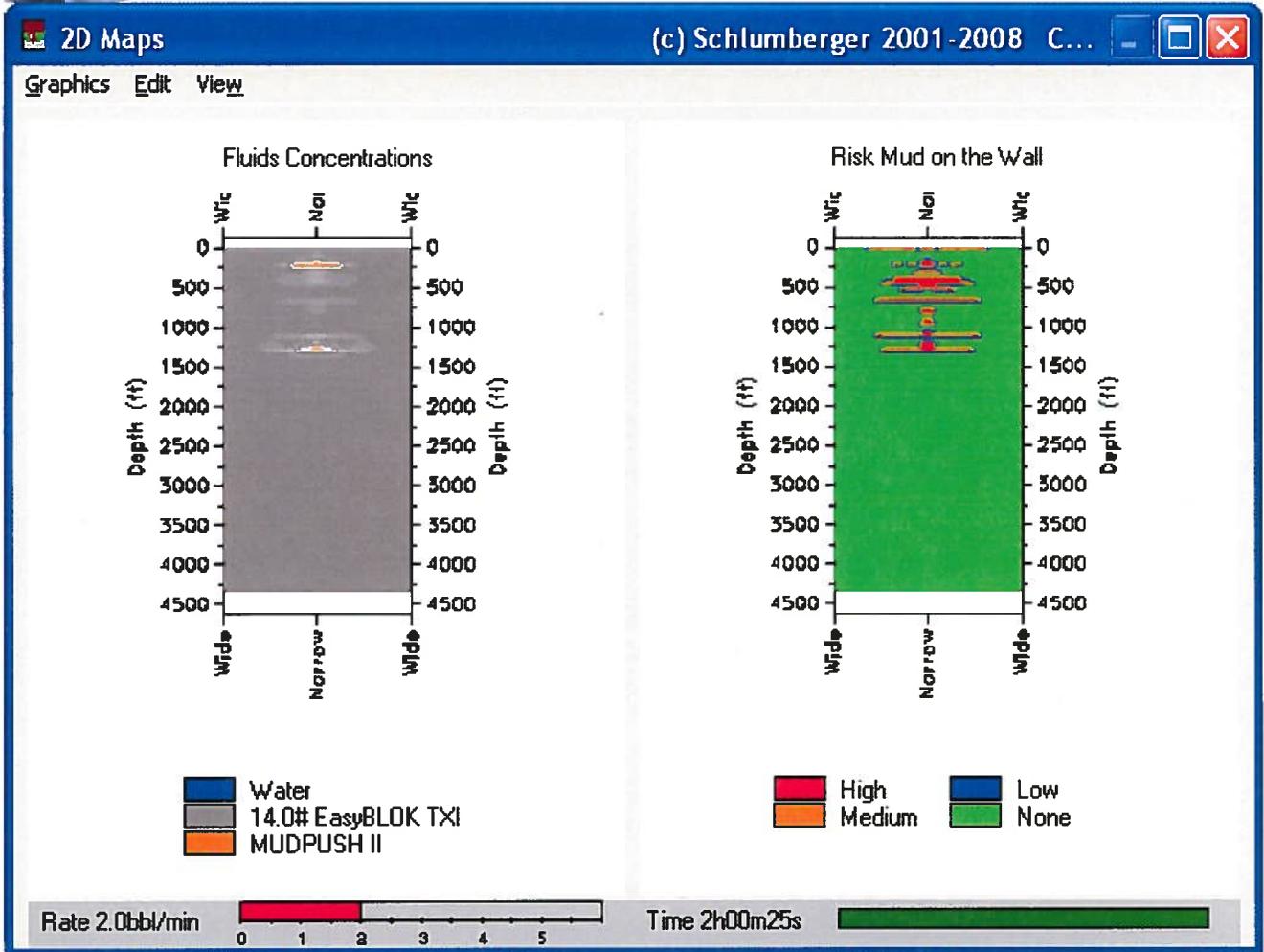
Type	Quantity	Centralizers per Joint	Spacing (ft)	From (ft)	To (ft)	Stop Rings
8 3/4" BOW	30	2/1	20	Surface	620	15
8 3/4" BOW	79	1/1	40	620	3780	0
8 3/4" BOW	8	1/2	80	3780	TD	0





## WELLCLEAN II Simulation







## PRICE ESTIMATE

Equipment and Services						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
48019000	Bulk Unit, Cement Add Hr	8 HR	107.50	860.00	45.2 %	471.28
48021000	Silo, Cement	3 EA	570.00	1,710.00	45.2 %	937.08
48601000	Cement Plug Container	1 JOB	520.00	520.00	45.2 %	284.96
49100000	Cement Blending Charge	1109 CF	2.27	2,517.43	45.2 %	1,379.55
49102000	Transportation, Cement Ton-mile	2883 MI	2.02	5,823.66	45.2 %	3,191.37
56702070	Plug, Cementing Top Plastic 7 in	1 EA	282.50	282.50	45.2 %	154.81
58498000	Taxes	1 JOB	1,541.05	1,541.05	0 %	1,541.05
59200002	Transportation, Mileage Heavy Vehicles	600 MI	5.52	3,312.00	45.2 %	1,814.98
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
102871045	Pump, Casing Cement 4001-4500 ft	1 EA	3,000.00	3,000.00	45.2 %	1,644.00
107264001	Regulatory Conformance Charge	10 EA	341.00	3,410.00	0 %	3,410.00

**Subtotals:      \$ 24,342.64              \$ 15,577.65**

Materials						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
B838	B838 CemNETplus conversion charge	50 BBL	148.50	7,425.00	45.2 %	4,068.90
D013	Retarder	320 LB	2.61	835.20	45.2 %	457.69
D029	Cellophane Flakes	194 LB	3.97	770.18	45.2 %	422.06
D031	Barite	138 CW	38.61	5,328.18	45.2 %	2,919.84
D046	Antifoam Agent, All Purpose	291 LB	4.75	1,382.25	45.2 %	757.47
D049	Cement, TXI LITEWEIGHT	774 CF	21.95	16,989.30	45.2 %	9,310.14
D153	Antisettling Agent	59 LB	7.69	453.71	45.2 %	248.63
D154	Extender, LT	3483 LB	1.40	4,876.20	45.2 %	2,672.16
D202	Low-Temperature Solid Dispersant D202	117 LB	19.15	2,240.55	45.2 %	1,227.82
D400	EasyBLOK D400	349 LB	47.00	16,403.00	45.2 %	8,988.84
D970	MUDPUSH II Fresh Water Based Spacer	50 BBL	116.00	5,800.00	45.2 %	3,178.40
D974	CemNET Conversion	167 BBL	57.50	9,602.50	45.2 %	5,262.17

**Subtotals:      \$ 72,106.07              \$ 39,514.12**

Total Discount:	\$	41,356.94
<b>Job Price Estimate*:</b>	<b>\$</b>	<b>55,091.77</b>

# Casing Cementing



**Company:** ENCANA USA - PARACHUTE FIELD OFC (EDI)  
**Well Name:** Twin Creek 12-6D1  
**Field:** Mamm Creek  
**County:** Garfield  
**State:** CO

**Date:** 4/16/2012  
**Well Location:** F12E  
**API Number:** 05045203930000  
**Proposal Number:** 2  
**Contact:**  
**Made By:** Matt Hudson  
**Service from District:** Grand Junction, CO  
**District Phone:** 303-486-3245  
**Objective:** Top of Cement: 3105ft.  
Surface Casing Shoe: 1170ft.  
Mesa Verde: 2352ft. (2317)  
Top of Gas: 3605ft. (3552)  
6 1/9" Bit.  
TD: 5460ft. (5407)

#### Disclaimer Notice

This information is presented in good faith, but no warranty is given by Schlumberger as to the accuracy of the information. Schlumberger disclaims any 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 and are subject to 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 no more accurate than the model, the assumptions and the 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 certain tests and procedures which Schlumberger can assist in selecting. Freedom from infringement of patents of Schlumberger or others is not to be inferred nor are 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 Casing 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 **\$ 22,277.85**. 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.

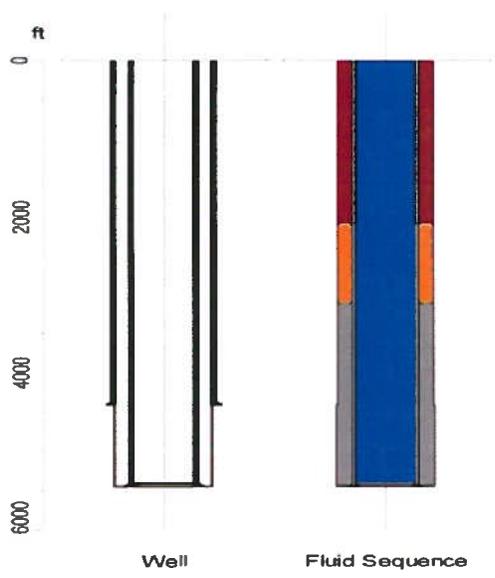
Thank you for considering Schlumberger.  
Please do not hesitate to contact me with any questions or concerns.

Sincerely,

Matt Hudson  
303-862-1701  
mudson2@slb.com



## WELL DATA



Well Data	
Job Type :	Casing Cementing
Total Depth (Measured) :	5460.0 ft
True Vertical Depth (TVD) :	5404.1 ft
BHST (Tubular Bottom Static Temperature) :	160 degF
BHCT (Tubular Bottom Circulating Temperature) :	138 degF

Open Hole		
Mean Diameter without Excess	Bottom Depth	Annular Excess
6.125 in	5460.0 ft	30.0 %

Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
7 in	23.0 lb/ft	J-55	LTC	0.22 ft3/ft	4420.0 ft

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
4 1/2 in	11.6 lb/ft	N-80	BTC	0.09 ft3/ft	5460.0 ft

**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.

Annular Capacity (without Excess) : Casing Bottom / Open Hole : 0.09 ft3/ft  
 Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 0.11 ft3/ft

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
MUDPUSH II	20.0	13.20	2089.6
14.0# EasyBLOK TXI	49.2	14.00	3105.0
Water	84.2	8.32	0.0

Total Liquid Volume : 153.4 bbl



## FLUID SYSTEMS

MUDPUSH II			
<b>System</b>	MUDPUSH II		
<b>Density</b>	13.20 lb/gal		
<b>Total Volume</b>	20.0 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 (229 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>	5.478 gal/sk		
<b>Mixed Fluid</b>	5.478 gal/sk		
<b>Total Volume</b>	49.2 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	0.3 % BWOB
	D013	Retarder	0.55 % 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>	

Water			
<b>System</b>	Water		
<b>Density</b>	8.32 lb/gal		
<b>Total Volume</b>	84.2 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.



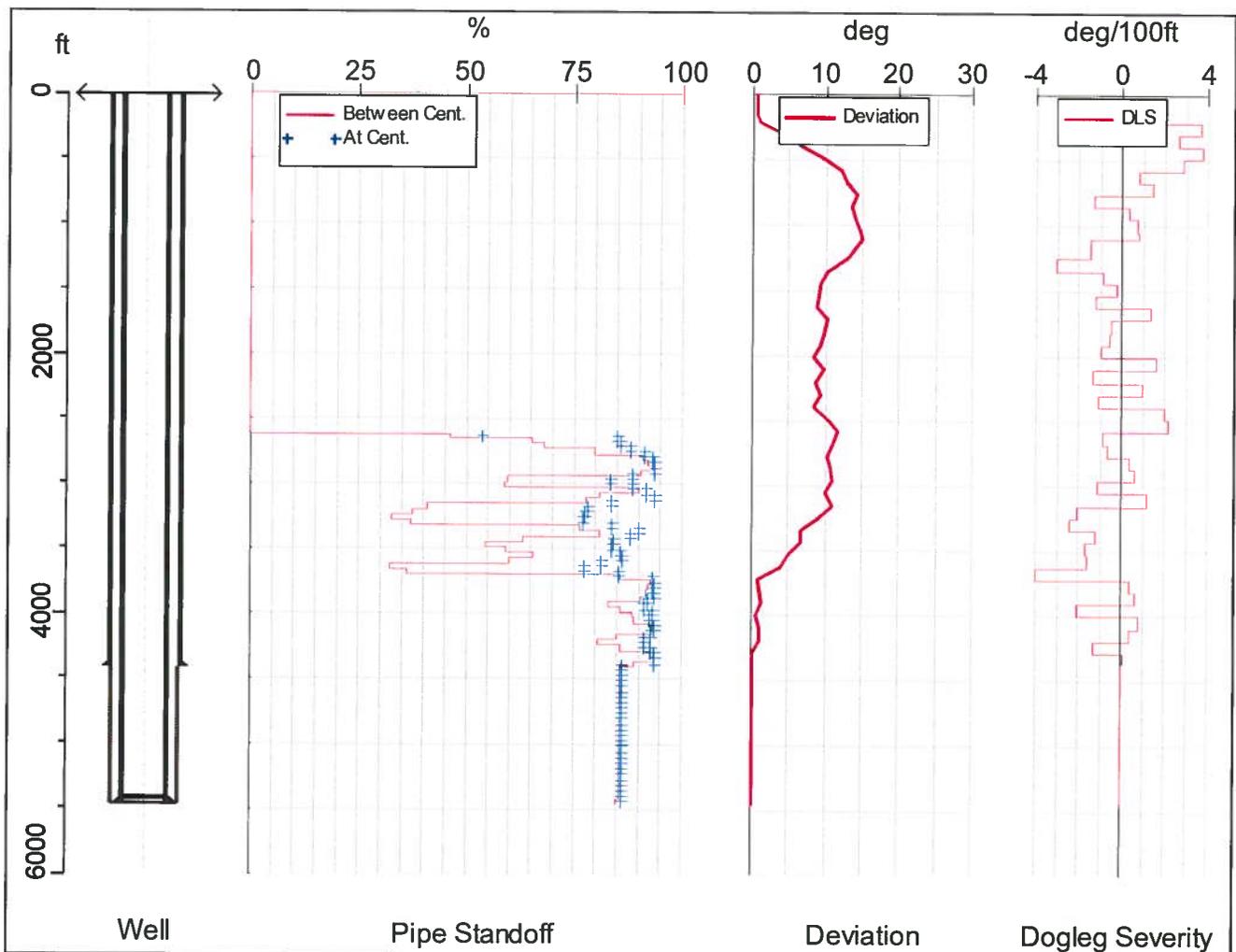
## PROCEDURES

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. Conduct post.job rig down meeting.
7. Purge all High Pressure and Low Pressure treating lines with air PRIOR TO RIG-DOWN.
8. Rig down Schlumberger equipment.
9. Conduct convoy meeting and move out Schlumberger equipment.



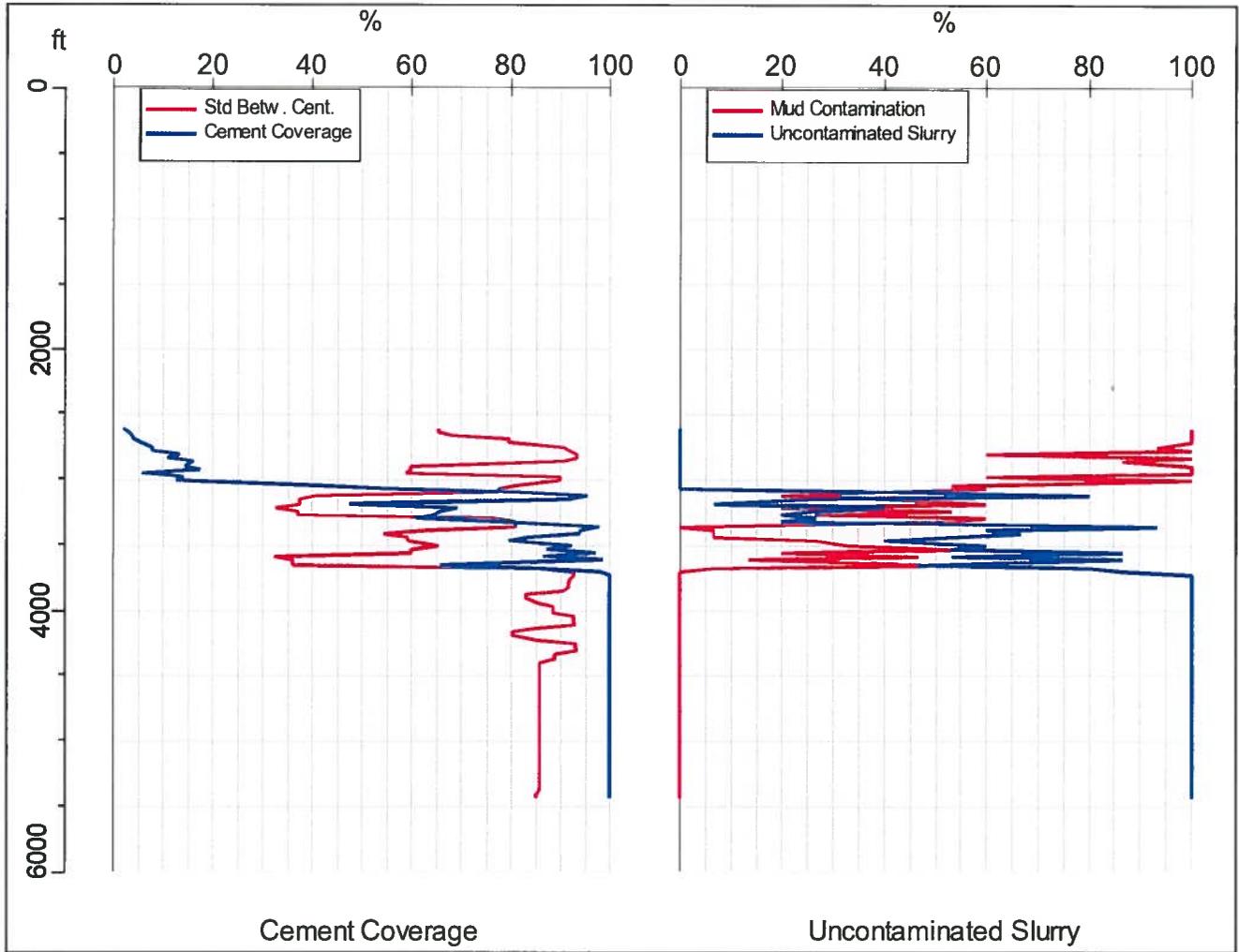
## CENTRALIZERS

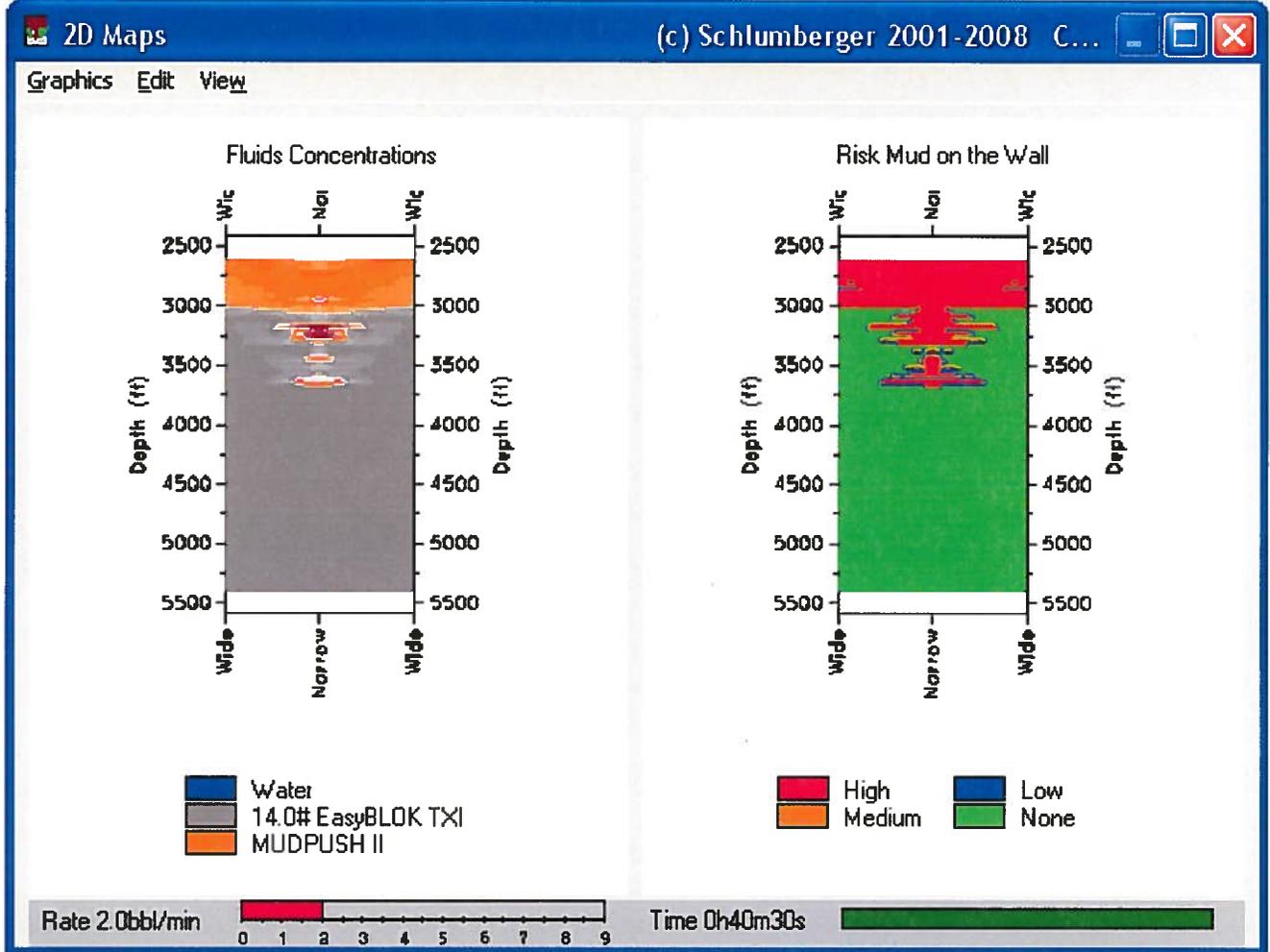
Type	Quantity	Centralizers per Joint	Spacing (ft)	From (ft)	To (ft)	Stop Rings
6 1/8" BOW	68	1/1	42	2604	TD	0





## WELLCLEAN II Simulation







## PRICE ESTIMATE

Equipment and Services						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
48019000	Bulk Unit, Cement Add Hr	4 HR	107.50	430.00	45.2 %	235.64
48021000	Silo, Cement	1 EA	570.00	570.00	45.2 %	312.36
48601000	Cement Plug Container	1 JOB	520.00	520.00	45.2 %	284.96
49100000	Cement Blending Charge	336 CF	2.27	762.72	45.2 %	417.97
49102000	Transportation, Cement Ton-mile	898 MI	2.02	1,813.96	45.2 %	994.05
56702044	Plug, Cementing Top Plastic 4.5 in	1 EA	151.00	151.00	45.2 %	82.75
58498000	Taxes	1 JOB	1,541.05	1,541.05	0 %	1,541.05
59200002	Transportation, Mileage Heavy Vehicles	300 MI	5.52	1,656.00	45.2 %	907.49
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
102871055	Pump, Casing Cement 5001-5500 ft	1 EA	3,300.00	3,300.00	45.2 %	1,808.40
107264001	Regulatory Conformance Charge	6 EA	341.00	2,046.00	0 %	2,046.00

**Subtotals: \$ 14,156.73 \$ 9,379.24**

Materials						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
B838	B838 CemNETplus conversion charge	20 BBL	148.50	2,970.00	45.2 %	1,627.56
D013	Retarder	95 LB	2.61	247.95	45.2 %	135.88
D029	Cellophane Flakes	58 LB	3.97	230.26	45.2 %	126.18
D031	Barite	53 CW	38.61	2,046.33	45.2 %	1,121.39
D046	Antifoam Agent, All Purpose	86 LB	4.75	408.50	45.2 %	223.86
D049	Cement, TXI LITEWEIGHT	229 CF	21.95	5,026.55	45.2 %	2,754.55
D153	Antisettling Agent	18 LB	7.69	138.42	45.2 %	75.85
D154	Extender, LT	1027 LB	1.40	1,437.80	45.2 %	787.91
D202	Low-Temperature Solid Dispersant D202	52 LB	19.15	995.80	45.2 %	545.70
D400	EasyBLOK D400	103 LB	47.00	4,841.00	45.2 %	2,652.87
D970	MUDPUSH II Fresh Water Based Spacer	20 BBL	116.00	2,320.00	45.2 %	1,271.36
D974	CemNET Conversion	50 BBL	57.50	2,875.00	45.2 %	1,575.50

**Subtotals: \$ 23,537.61 \$ 12,898.61**

Total Discount:	\$	15,416.49
<b>Job Price Estimate*:</b>	<b>\$</b>	<b>22,277.85</b>