



02577976

FORM
4
Rev 12/05

Page 1

State of Colorado
Oil and Gas Conservation Commission

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

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 Designer (Rule 603b).



RECEIVED

JUN 06 2012

COGCC/Rifle Office

1. OGCC Operator Number: 100185	4. Contact Name: Bonnie Lamond	Complete this Attachment Checklist
2. Name of Operator: Encana Oil & Gas (USA) Inc.	Phone: 720.876.5156	
3. Address: 370 17th Street, Suite 1700	Fax: 720.876.6177	OP OGCC
City: Denver State: CO Zip: 80202		
5. API Number: 05-045-20387	OGCC Facility ID Number: 421390	Survey Plat
6. Well/Facility Name: Twin Creek	7. Well/Facility Number: 12-4D1 (F12E)	Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): SENW Sec 12, T7S, R92W 6 P.M.		Surface Egmt Diagram
9. County: Garfield	10. Field Name: Mamm Creek	Technical Info Page X
11. Federal, Indian or State Lease Number: COC55972E		Other

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNU/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Is location in a High Density Area (rule 603b)? Yes/No
	Distance to nearest well same formation
	Surface owner consultation date:
GPS DATA:	
Date of Measurement	PDOP Reading
	Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	<input type="checkbox"/> Remove from surface bond
Formation	Signed surface use agreement attached
Formation Code	
Spacing order number	
Unit Acreage	
Unit configuration	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	<input type="checkbox"/> CHANGE WELL NAME
Effective Date:	From:
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	To:
	Effective Date:
<input type="checkbox"/> ABANDONED LOCATION:	<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	Date well shut in or temporarily abandoned:
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No
Date Ready for inspection:	MIT required if shut in longer than two years. Date of last MIT
<input type="checkbox"/> SPUD DATE:	<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (5 yrs from date casing set)
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	*submit chl and cement job summaries
Method used	Cementing tool setting/perf depth
	Cement volume
	Cement top
	Cement bottom
	Date
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.	
Final reclamation will commence on approximately	<input type="checkbox"/> Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

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

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

Signed: Bonnie Lamond Date: 6/6/12 Email: bonnie.lamond@encana.comPrint Name: Bonnie Lamond Title: Permitting TechnicianCOGCC Approved: Keith Kij Title: PEI Date: JUN 08 2012

CONDITIONS OF APPROVAL, IF ANY:



TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY
RECEIVED
JUN 06 2012
OGCC/Rifle Office

1. OGCC Operator Number:	100185	API Number:	05- 045-20387
2. Name of Operator:	Encana Oil & Gas (USA) Inc.	OGCC Facility ID #	421390
3. Well/Facility Name:	Twin Creek	Well/Facility Number:	12-4D1 (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: 149'
FM TOPS Atwell Gulch: 601'
Mudlog TOG based on 2500 units: See attachment

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

Attachments:

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

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

Well:	Twin Creek 12-4D1
Pad:	F12E
API No:	05-045-20387-00
Permit No:	400067456

Bradenhead Pressure Report Following Primary Cement Job

Date Cemented:	3.2.12
Plug Bumped:	Yes

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

WOC Time:	12 hrs
Bond Log Run:	3.4.12

Casing Slips Set:	yes
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Brandenhead Pressures

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

Comments

S.C. TOC - Surface
P.C. TOC - 1180'
DV at ~ 3000'
TOC below DV - 3310

Twin Creek 12-4D1 (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		16" Conductor @ 40' Cement to surface with 5 yds redi-mix
WasatchSurface / Surface		WasatchSurface/ Surface
12-1/4" Surface Hole		12-1/4" Surface Hole
Surface Casing1137 / 1100 9-5/8" 36# J/K55 Cement to surface with: Tail: 548 sx, 15.8, Class G, 1.17 ft³/sk Total: 548 sx (volume includes 80% excess)		Surface Casing# 1149 / 1112 9-5/8" Cemented to surface with 546 sx, 15.8 ppg Class G, 1.16 ft³/sk
7-7/8" Production Hole		DV Tool @# 2977 / 2624 7-7/8" Production Hole
Mesa Verde2741 / 2447		Mesa Verde2754 / 2445
Williams Fork3470 / 3052		Williams Fork3505 / 3083
TOC requirement 500ft above TOG		Prod TOC from CBL1550 / 1462
Top of Gas4144 / 3682		Top of Gas4208 / 3756
Coal Ridge5850 / 5387		Coal Ridge5823 / 5367
Rollins6575 / 6112		Rollinsno pick/ no pick
Permit TD6873 / 6412		Actual TD5970 / 5513
Production casing6873 / 6412 4-1/2" 11.6# 80 grade Cement with: Lead: 83 sx, 12 TXI, 1.79 ft³/sk Tail: 565 sx, 13 TXI, 1.43 ft³/sk Total: 648 sx (volume includes 30% excess)		Production casing5959 / 5502 4-1/2" Cemented with Stage 1: Tail 997 sx, 14.0 ppg TXI, 1.21 ft³/sk Stage 2: Tail: 738 sx, 14.0 ppg TXI, 1.21 ft³/sk

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

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

Numbers are measured depth (MD) unless otherwise marked

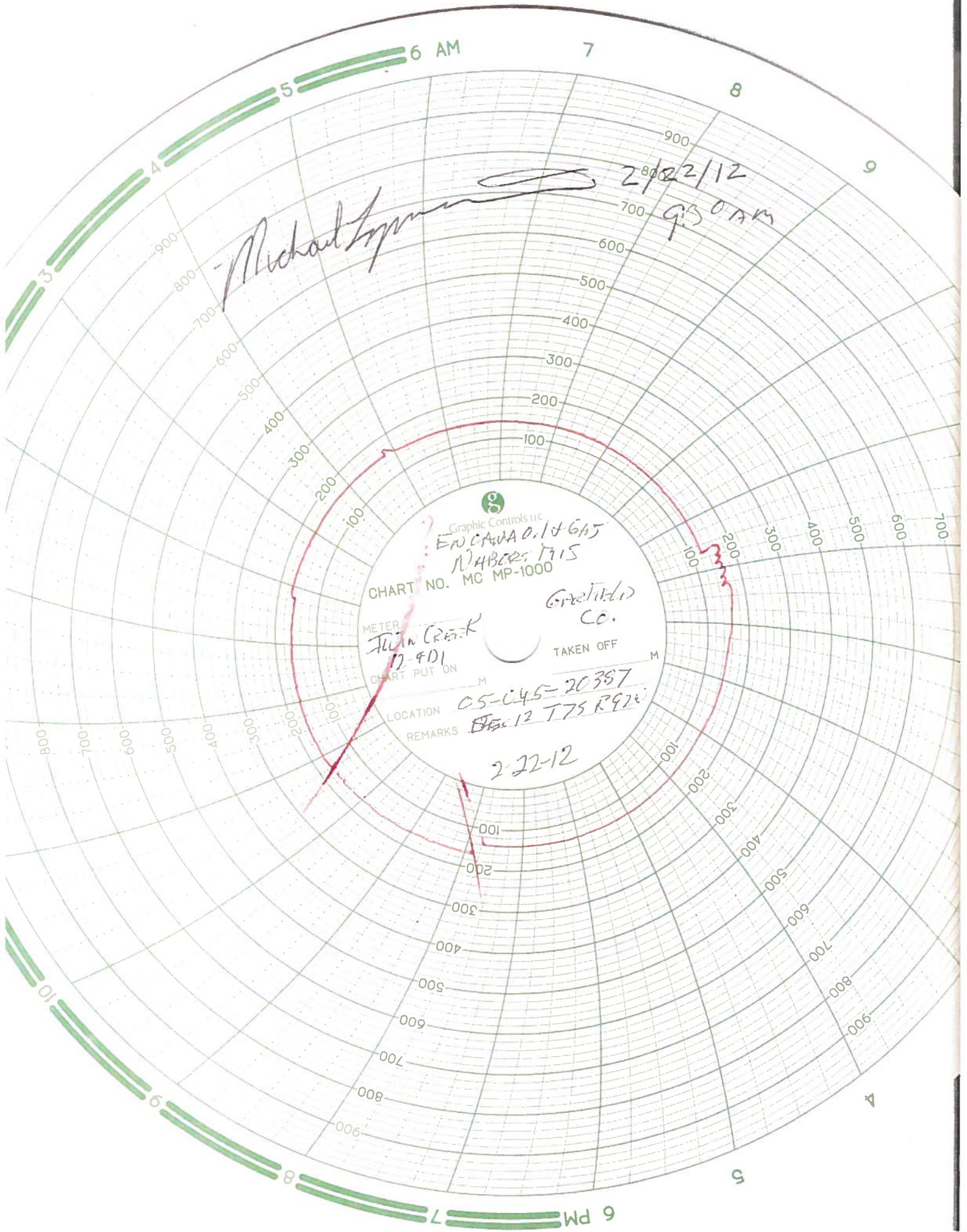
TOP_GAS_2500_UNITS- top marking shallowest occurrence of 2500 units of total gas from total gas curve collected during drilling of well.

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

* Total gas curve data poor quality or data collection issue for well. As neighbouring 7 wells with quality data had "TOP_GAS_2500_UNITS" top deeper than 2484' TVDSS this TVDSS was used for these 2 wells to calculate corresponding MD. This MD in each well is a safe estimate where ECA is highly confident TOP_GAS_2500_UNITS would fall below; especially given fact that many wells on this pad did not reach 2500 units at any point in drilling.

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

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

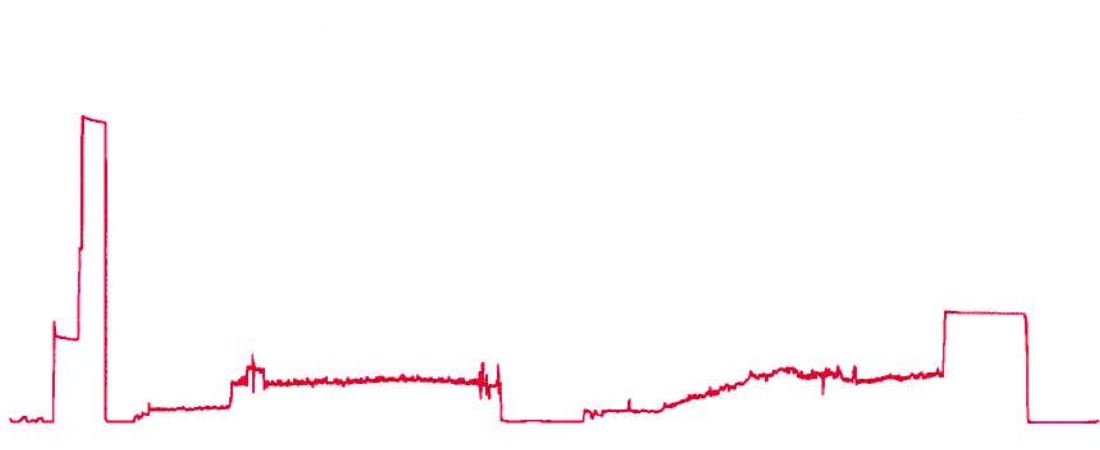
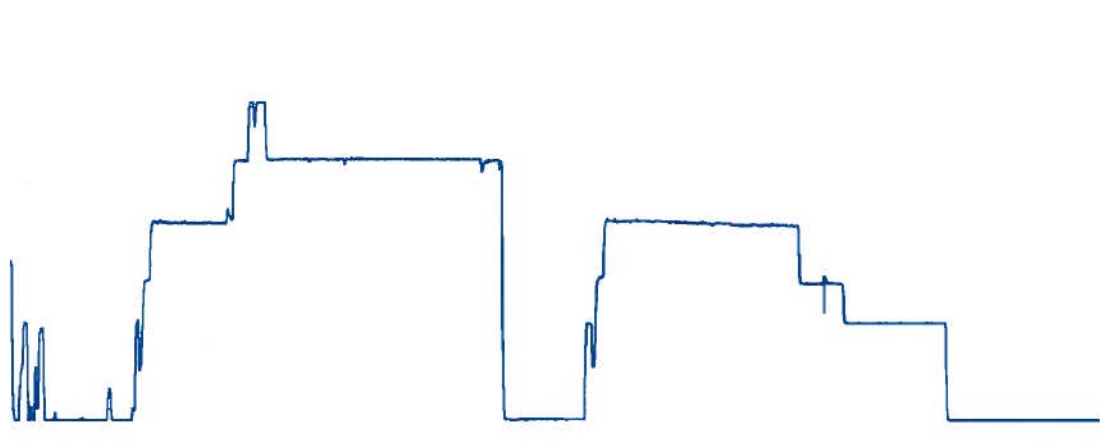



Michael Lynn

2/22/12
9:50 AM

Graphic Controls Inc
ENCANA OIL & GAS
NABORS 1715
CHART NO. MC MP-1000
METER
HUMIDITY
12-401
CHART PUT ON
LOCATION
C5-C45-20387
REMARKS
2-22-12
TAKEN OFF
CO.

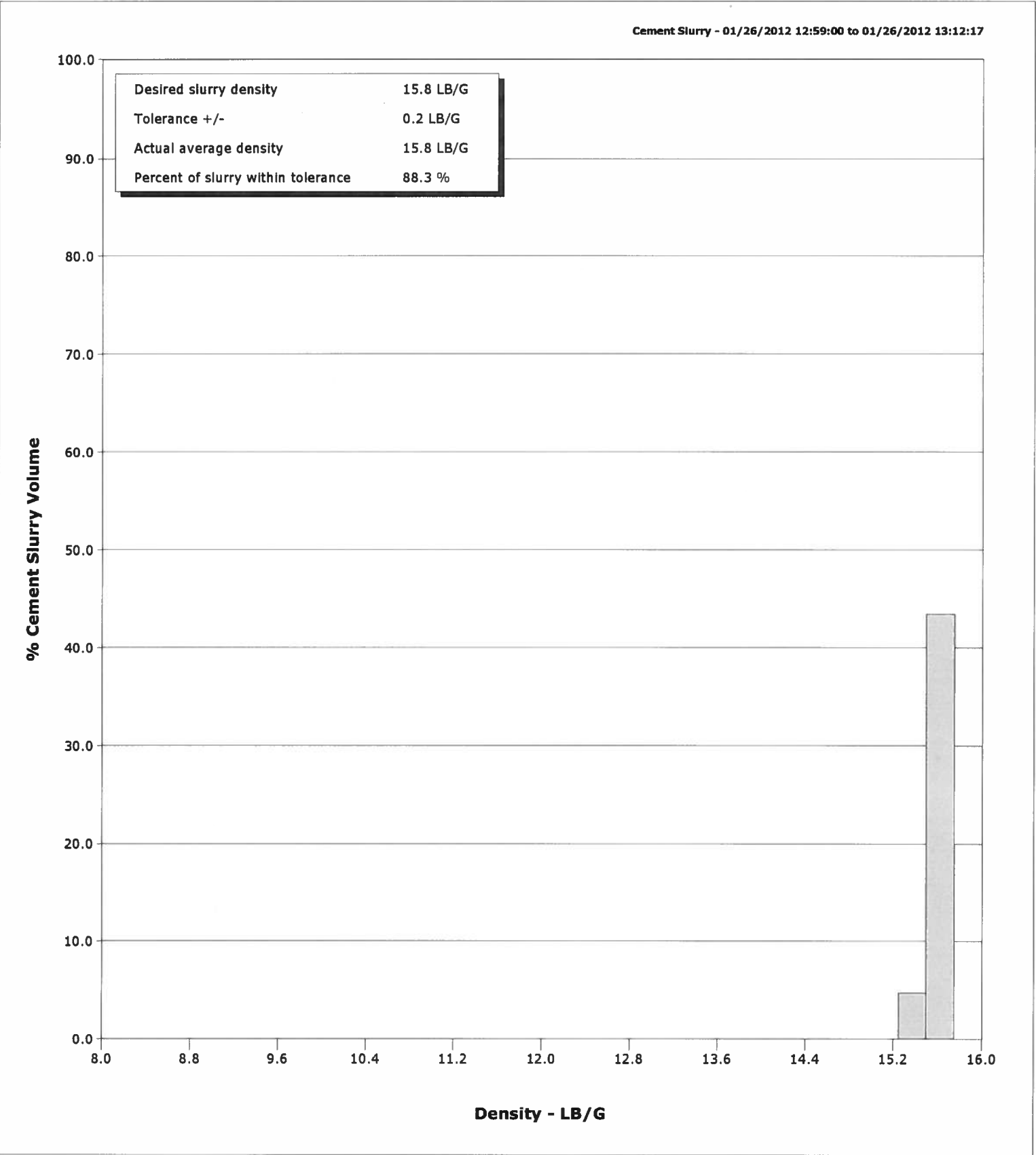
Well	Twin Creek 12-4D1		Client	EnCana	
Field	Mamm Creek		SIR No.	C0BA-00074	
Engineer	Ryan Bowditch		Job Type	9 5/8" Casing	
Country	United States		Job Date	01-26-2012	

Time	Pressure	Rate	Density	Messages
01/26/2012 12:42:13				
12:42:13				<p>Start Job Held Safety Meeting Rig Up Per Standard Verified Flow Rates 2 bbls Water Ahead Reset Total, Vol = 2.47 bbl Pressure Test Lines 500 psi Pressure Test Pressure Test = Good Pressure Test Lines 3000 psi Pressure Test Pressure Test = Good Reset Total, Vol = 0.18 bbl Start Pumping Water 20 bbls Water Good Returns End Water Reset Total, Vol = 27.24 bbl Start Cement Slurry Start Mixing Tail Slurry Good Returns Took Dry Samples (007862), (007834) Took Water Samples (007860)</p> <p>End Tail Slurry End Cement Slurry Drop Top Plug Bump Top Plug Start Displacement Tattle Tail Disappeared 84 bbls Displacement</p> <p>Cement to Surface at 50 bbls 35 bbls of Cement to Surface</p> <p>Bump Top Plug End Displacement Final Circulating Pressure = 600 psi Bump Plug to 1400 psi 35 bbls Good Cement to Surface Floats Held 1/2 bbl Bled Back</p>
12:47:00				
12:52:00				
12:57:00				
13:02:00				
13:07:00				
13:12:00				
13:17:00				
13:22:00				
13:27:00				
13:32:00				
13:37:00				
13:42:00				
13:51:47				
hh:mm:ss	0.00 1000 2000 3000 4000 5000	0.00 2.0 4.0 6.0 8.0 10.0	5.0 10.0 15.0 20.0 25.0	
01/26/2012 13:51:47	PSI	B/M	LB/G	

Schlumberger

Cementing Qa/Qc Density Report

Well	Twin Creek 12-4D1	Client	EnCana
Field	Mamm Creek	SIR No.	C0BA-00074
Engineer	Ryan Bowditch	Job Type	9 5/8" Casing
Country	United States	Job Date	01-26-2012



Well			Field		Job Start		Customer		Job Number
Twin Creek 12-4D1			Mamm Creek		Jan/26/2012		EnCana		C0BA-00074
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/ M	Density LB/ G	Volume BBL	Solid Fraction NULL	Message		
01/26/2012	12:56:04	178	5.3	9.82	30.6	41	Reset Total, Vol = 27.24 bbl		
01/26/2012	12:57:13	574	6.6	15.26	37.5	44			
01/26/2012	12:58:53	486	6.6	15.49	50.1	35			
01/26/2012	12:59:00	524	6.6	15.47	50.8	34	Start Cement Slurry		
01/26/2012	12:59:25	505	6.6	15.46	53.6	31	Start Mixing Tail Slurry		
01/26/2012	12:59:53	503	6.6	15.53	56.7	30	Good Returns		
01/26/2012	13:00:13	483	6.6	15.58	58.9	32	Took Dry Samples (007862) (007834)		
01/26/2012	13:00:14	492	6.6	15.59	59.0	32	Took Water Samples (007860)		
01/26/2012	13:00:33	488	6.6	15.63	61.1	33			
01/26/2012	13:02:13	494	6.6	15.72	72.1	40			
01/26/2012	13:03:53	542	6.6	15.74	83.1	43			
01/26/2012	13:05:33	526	6.6	15.88	94.1	46			
01/26/2012	13:07:13	537	6.6	15.97	105.2	47			
01/26/2012	13:08:53	525	6.6	15.94	116.2	47			
01/26/2012	13:10:33	512	6.6	15.78	127.2	47			
01/26/2012	13:12:13	456	6.6	15.59	138.2	0			
01/26/2012	13:12:15	476	6.6	15.59	138.4	0	End Tail Slurry		
01/26/2012	13:12:17	627	6.6	15.59	138.7	0	End Cement Slurry		
01/26/2012	13:13:34	468	6.4	15.48	147.1	4	Drop Top Plug		
01/26/2012	13:13:44	25	1.5	15.51	148.0	28	Start Displacement		
01/26/2012	13:13:53	11	0.1	15.50	148.0	0			
01/26/2012	13:15:33	12	0.0	15.46	148.1	0			
01/26/2012	13:17:13	3	0.0	15.49	148.2	0			
01/26/2012	13:18:53	1	0.0	15.51	148.2	0			
01/26/2012	13:19:10	147	2.5	15.43	148.6	29	Tattle Tail Disappeared		
01/26/2012	13:19:11	130	2.5	15.43	148.6	29	84 bbls Displacement		
01/26/2012	13:20:33	138	5.0	9.20	153.2	28			
01/26/2012	13:22:13	140	5.0	8.76	161.6	9			
01/26/2012	13:23:53	141	5.0	8.56	170.0	8			
01/26/2012	13:25:33	260	5.0	8.41	178.3	4			
01/26/2012	13:27:13	358	5.0	8.39	186.6	6			
01/26/2012	13:28:53	494	4.9	8.41	194.9	5			
01/26/2012	13:30:33	593	4.9	8.41	203.1	5			
01/26/2012	13:31:02	611	4.9	8.40	205.5	3	Cement to Surface at 50 bbls		
01/26/2012	13:31:40	667	4.9	8.40	208.6	3	35 bbls of Cement to Surface		
01/26/2012	13:32:13	673	4.9	8.40	211.3	7			
01/26/2012	13:33:53	614	3.4	8.40	217.7	26			
01/26/2012	13:35:33	532	2.7	8.40	223.5	0			
01/26/2012	13:37:13	523	2.5	8.40	227.6	0			
01/26/2012	13:38:53	575	2.5	8.40	231.7	0			
01/26/2012	13:40:33	629	2.5	8.40	235.8	0			
01/26/2012	13:42:04	1378	0.8	8.40	239.5	0	Bump Top Plug		
01/26/2012	13:42:05	1378	0.8	8.40	239.5	0	End Displacement		
01/26/2012	13:42:07	1393	0.2	8.40	239.6	0	Final Circulating Pressure = 600 psi		
01/26/2012	13:42:13	1393	0.0	8.40	239.6	0			
01/26/2012	13:43:53	1384	0.0	8.40	239.6	0			
01/26/2012	13:45:33	1381	0.0	8.40	239.6	0			
01/26/2012	13:47:13	1210	0.0	8.40	239.6	0			
01/26/2012	13:47:42	-1	0.0	8.41	239.6	0	Floats Held		
01/26/2012	13:47:43	-1	0.0	8.41	239.6	0	1/2 bbl Bled Back		
01/26/2012	13:48:53	-3	0.0	8.41	239.6	0			

Well Twin Creek 12-4D1	Field Mamm Creek	Job Start Jan/26/2012	Customer EnCana	Job Number C0BA-00074
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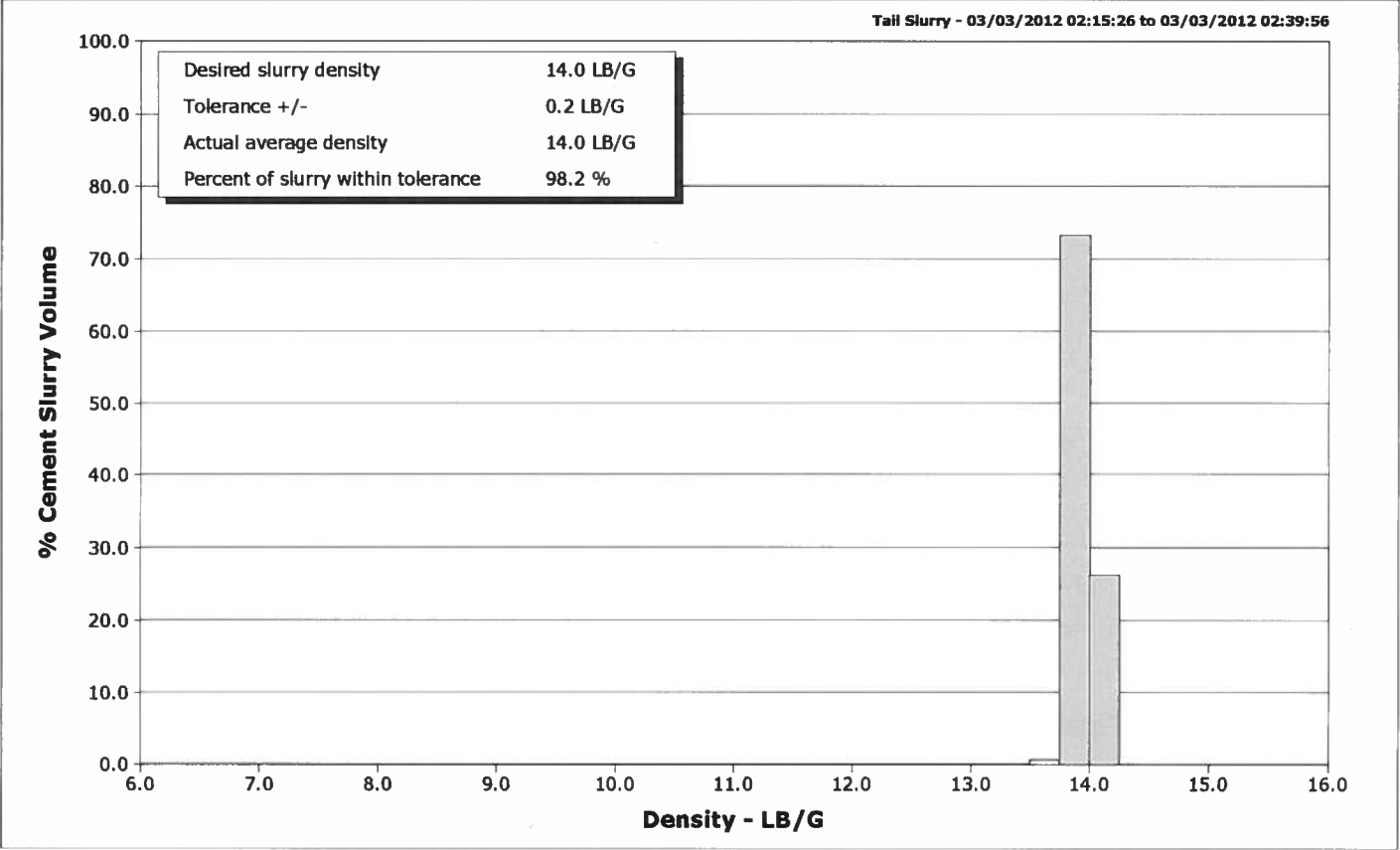
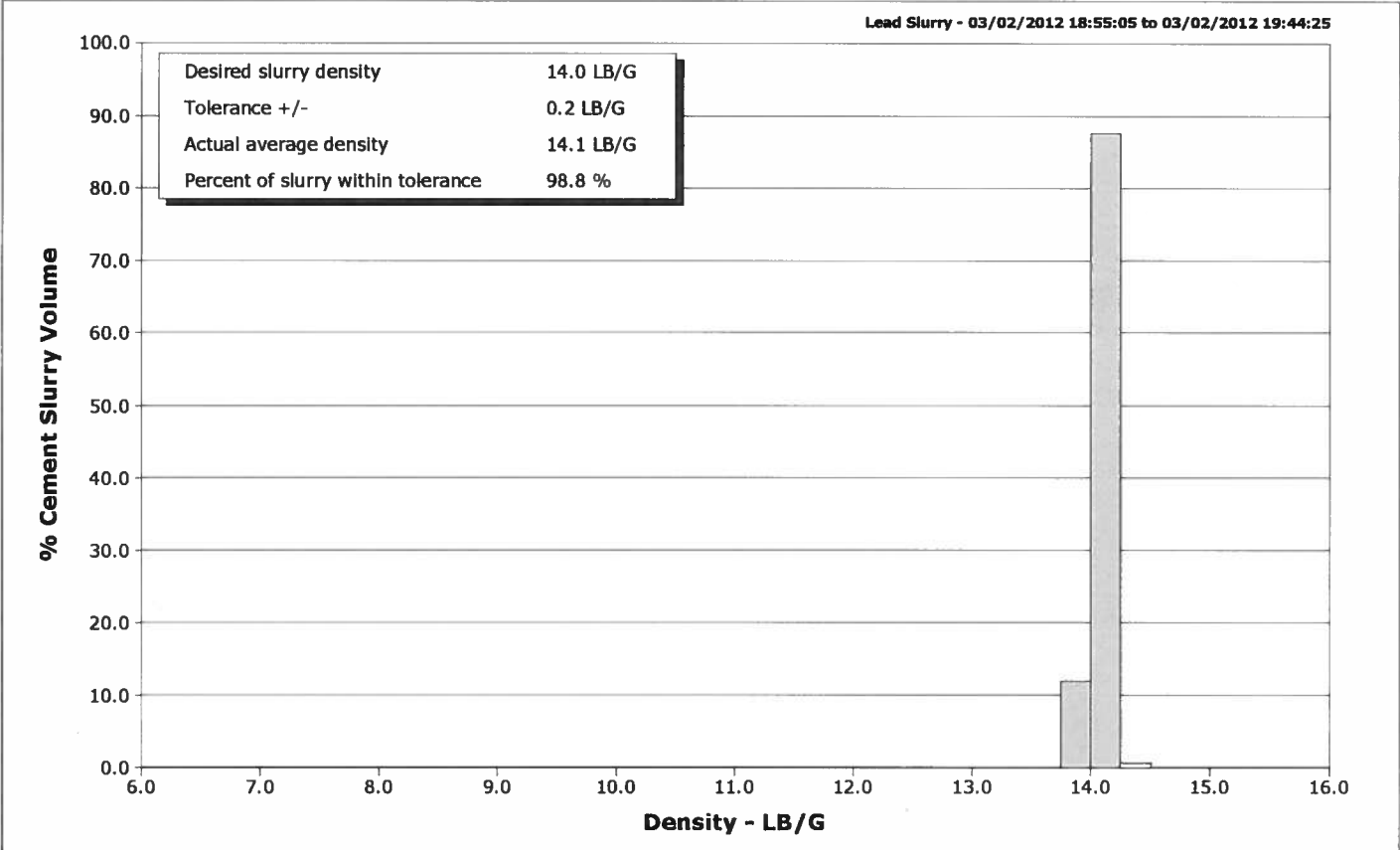
Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 4.3	N2	Mud	Maximum Rate 8.1	Total Slurry 113.0	Mud 0.0	Spacer 20.0	N2	
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 3874	Final 10	Average 533	Bump Plug to 1400	Breakdown	Type	Volume bbl	Density lb/gal	
Avg. N2 Percent %		Designed Slurry Volume 113.0 bbl	Displacement 84.0 bbl	Mix Water Temp 62 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>		Volume 35.0 bbl	
Customer or Authorized Representative Robert Tate					Washed Thru Perfs <input type="checkbox"/>		To ft	
					Circulation Lost <input type="checkbox"/>		Job Completed <input checked="" type="checkbox"/>	
					-		-	

Well	Twin Creek 12-4D1	Client	Encana
Field	Mamm Creek	SIR No.	BQMF-00918
Engineer	Matt Fair/Z. Langsdorf	Job Type	2 Stage Production
Country	United States	Job Date	03-02-2012



Well	Twin Creek 12-4D1	Client	Encana
Field	Mamm Creek	SIR No.	BQMF-00918
Engineer	Matt Fair/Z. Langsdorf	Job Type	2 Stage Production
Country	United States	Job Date	03-02-2012



Schlumberger

Cementing Service Report

				Customer		Encana		Job Number		BQMF-00918	
Well			Location (legal)			Schlumberger Location			Job Start		
Twin Creek 12-4D1									Mar/02/2012		
Field		Formation Name/Type		Deviation		Bit Size		Well MD		Well TVD	
Mamm Creek		Shale		deg		8.8 in		5957.0 ft		5957.0 ft	
County		State/Province		BHP		BHST		BHCT		Pore Press. Gradient	
Garfield		Colorado		psi		160 degF		138 degF		lb/gal	
Well Master		API/UWI									
0631250964											
Rig Name		Drilled For		Service Via		Casing/Liner					
Nabors M15		Gas		Land							
						Depth, ft		Size, in		Weight, lb/ft	
								Grade		Thread	
Offshore Zone		Well Class		Well Type		1170.0		9.6		36.0	
		New		Development		5957.0		4.5		11.6	
								N/A		N/A	
								N80		BUTT	
Drilling Fluid Type		Max. Density		Plastic Viscosity		Tubing/Drill Pipe					
Bentonite		12.40 lb/gal		cP							
						T/D		Depth, ft		Size, in	
								Weight, lb/ft		Grade	
										Thread	
Service Line		Job Type									
Cementing		2 Stage Production									
Max. Allowed Tub. Press		Max. Allowed Ann. Press		WH Connection		Perforations/Open Hole					
6350 psi		7780 psi		Single Cement head							
						Top, ft		Bottom, ft		shot/ft	
										No. of Shots	
										Total Interval	
						ft		ft		ft	
						ft		ft		Diameter	
						ft		ft		in	
						Treat Down		Displacement		Packer Type	
						Casing		139.0 bbl		Packer Depth	
										ft	
						Tubing Vol.		Casing Vol.		Annular Vol.	
						bbl		140.0 bbl		329.0 bbl	
										Openhole Vol.	
										590.0 bbl	
Casing/Tubing Secured		1 Hole Vol. Circulated prior to Cement				Casing Tools		Squeeze Job			
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									
Lift Pressure		4345 psi				Shoe Type		Float		Squeeze Type	
Pipe Rotated		Pipe Reciprocated				Shoe Depth		5857.0 ft		Tool Type	
<input type="checkbox"/>		<input type="checkbox"/>									
No. Centralizers		Top Plugs		Bottom Plugs		Stage Tool Type		DV		Tool Depth	
		1		0						ft	
Cement Head Type		Single				Stage Tool Depth		3009.0 ft		Tail Pipe Size	
										in	
Job Scheduled For		Arrived on Location		Leave Location		Collar Type		Float		Tail Pipe Depth	
Mar/02/2012 11:00		Mar/02/2012 11:00		Mar/02/2012 05:00						ft	
						Collar Depth		5912.0 ft		Sqr. Total Vol.	
										bbl	
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message						
03/02/2012	18:01:29	8.44	2	0.0	Started Acquisition						
03/02/2012	18:03:09	8.44	2	0.0							
03/02/2012	18:04:49	8.44	2	0.0							
03/02/2012	18:06:29	8.44	3	0.0							
03/02/2012	18:08:09	8.44	3	0.0							
03/02/2012	18:09:49	8.44	4	0.0							
03/02/2012	18:11:29	8.44	4	0.0							
03/02/2012	18:13:09	8.44	5	0.0							
03/02/2012	18:14:49	8.45	5	0.0							
03/02/2012	18:16:29	8.45	6	0.0							
03/02/2012	18:18:09	8.45	5	0.0							
03/02/2012	18:19:49	8.45	6	0.0							
03/02/2012	18:21:29	8.45	6	0.0							
03/02/2012	18:23:09	8.45	3	0.0							
03/02/2012	18:24:49	8.44	21	0.0							
03/02/2012	18:26:29	8.44	138	1.4							
03/02/2012	18:28:09	8.44	866	0.0							
03/02/2012	18:29:49	8.44	5342	0.0							
03/02/2012	18:30:13	8.44	5196	0.0	Pressure Test Lines						
03/02/2012	18:30:14	8.44	5194	0.0	Low PSI test good						
03/02/2012	18:31:15	8.44	5124	0.0	Pressure Test Lines						

Well		Field	Job Start	Customer	Job Number
Twin Creek 12-4D1		Mamm Creek	Mar/02/2012	Encana	BQMF-00918
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message
03/02/2012	18:31:29	8.44	5109	0.0	
03/02/2012	18:33:09	8.44	33	0.0	
03/02/2012	18:34:49	8.44	27	0.0	
03/02/2012	18:36:29	8.44	25	0.0	
03/02/2012	18:36:46	8.44	60	1.0	Start Pumping Spacer
03/02/2012	18:36:48	8.45	65	1.4	50 bbl MUDPUSH II
03/02/2012	18:38:09	13.29	237	2.5	
03/02/2012	18:39:49	13.49	262	2.5	
03/02/2012	18:41:29	13.61	230	2.5	
03/02/2012	18:43:09	13.43	290	3.4	
03/02/2012	18:43:48	13.43	317	3.4	Good returns
03/02/2012	18:44:49	13.42	310	3.4	
03/02/2012	18:46:29	13.49	271	3.4	
03/02/2012	18:48:09	13.37	269	3.5	
03/02/2012	18:49:49	13.30	275	3.5	
03/02/2012	18:51:29	13.43	287	3.5	
03/02/2012	18:53:09	13.72	326	3.4	
03/02/2012	18:53:19	13.72	313	3.5	End Spacer
03/02/2012	18:53:26	13.75	318	3.4	Start Cement Slurry
03/02/2012	18:53:27	13.75	337	3.4	Start Mixing Scav Slurry
03/02/2012	18:53:30	13.76	273	3.4	Bring to weight
03/02/2012	18:54:49	13.89	507	5.0	
03/02/2012	18:55:04	13.91	466	5.0	End Scavenger Slurry
03/02/2012	18:55:05	13.91	476	5.0	Start Mixing Lead Slurry
03/02/2012	18:55:14	13.93	453	5.0	215 bbl 14.0 #
03/02/2012	18:56:29	13.99	416	5.0	
03/02/2012	18:58:09	14.03	367	5.0	
03/02/2012	18:59:49	13.99	341	4.9	
03/02/2012	19:00:40	14.01	313	5.0	Good returns
03/02/2012	19:01:29	14.10	302	5.0	
03/02/2012	19:03:09	14.15	253	5.0	
03/02/2012	19:04:49	14.17	241	5.0	
03/02/2012	19:06:29	14.11	254	5.0	
03/02/2012	19:08:05	14.10	247	5.0	Took wet/dry samples
03/02/2012	19:08:06	14.10	241	5.0	Wet sample=14.0 on mudscales
03/02/2012	19:08:09	14.10	238	5.0	
03/02/2012	19:09:49	14.09	261	4.9	
03/02/2012	19:11:29	14.08	285	5.0	
03/02/2012	19:13:09	14.06	277	5.0	
03/02/2012	19:14:49	14.08	259	5.0	
03/02/2012	19:16:29	14.08	262	5.0	
03/02/2012	19:18:09	14.10	274	4.9	
03/02/2012	19:19:49	14.09	253	5.0	
03/02/2012	19:21:29	14.06	249	4.9	
03/02/2012	19:23:09	14.01	284	5.0	
03/02/2012	19:24:49	14.05	260	5.0	
03/02/2012	19:26:29	14.13	225	5.0	
03/02/2012	19:28:09	14.21	284	5.0	
03/02/2012	19:29:49	14.07	185	4.0	
03/02/2012	19:31:29	13.98	18	0.5	
03/02/2012	19:33:09	14.01	111	3.0	
03/02/2012	19:34:49	14.06	113	3.0	
03/02/2012	19:36:29	14.07	89	2.9	
03/02/2012	19:38:09	14.08	102	2.6	

Well		Field	Job Start	Customer	Job Number
Twin Creek 12-4D1		Mamm Creek	Mar/02/2012	Encana	BQMF-00918
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message
03/02/2012	19:41:29	13.96	188	3.0	
03/02/2012	19:43:09	13.94	111	3.0	
03/02/2012	19:44:25	13.96	25	2.0	End Lead Slurry
03/02/2012	19:44:49	14.02	16	0.0	
03/02/2012	19:46:29	14.00	9	0.0	
03/02/2012	19:48:09	13.99	10	0.0	
03/02/2012	19:49:49	9.00	80	2.1	
03/02/2012	19:51:29	8.74	11	0.0	
03/02/2012	19:53:09	8.68	8	0.0	
03/02/2012	19:54:49	8.48	88	2.6	
03/02/2012	19:56:29	7.01	143	6.0	
03/02/2012	19:58:09	9.16	247	5.0	
03/02/2012	19:59:49	8.47	302	5.0	
03/02/2012	20:01:29	8.45	25	0.0	
03/02/2012	20:03:09	8.45	7	0.0	
03/02/2012	20:04:49	8.44	9	0.0	
03/02/2012	20:06:29	8.44	9	0.0	
03/02/2012	20:07:58	8.43	266	2.5	Drop Top Plug
03/02/2012	20:07:59	8.43	266	2.5	Start Displacement
03/02/2012	20:08:00	8.43	297	2.5	Displace 92 bbl mud
03/02/2012	20:08:09	8.43	199	2.5	
03/02/2012	20:09:49	8.43	384	5.0	
03/02/2012	20:11:29	8.43	512	5.0	
03/02/2012	20:13:09	12.09	429	2.6	
03/02/2012	20:14:49	12.13	484	3.5	
03/02/2012	20:16:29	12.55	425	2.2	
03/02/2012	20:18:09	12.55	453	2.0	
03/02/2012	20:19:49	12.75	453	2.0	
03/02/2012	20:21:25	12.76	470	2.0	Good returns
03/02/2012	20:21:29	12.76	469	2.0	
03/02/2012	20:23:09	12.77	497	2.0	
03/02/2012	20:24:49	12.82	678	4.0	
03/02/2012	20:26:29	12.81	719	4.3	
03/02/2012	20:28:09	12.82	740	4.3	
03/02/2012	20:29:49	12.82	776	4.3	
03/02/2012	20:31:29	12.82	659	1.9	
03/02/2012	20:33:09	12.82	682	1.9	
03/02/2012	20:34:49	12.82	676	1.9	
03/02/2012	20:36:29	12.82	687	1.9	
03/02/2012	20:38:06	12.83	1101	1.0	Bump Top Plug
03/02/2012	20:38:07	12.86	1101	0.4	Bumped plug @ 1100 PSI
03/02/2012	20:38:09	12.86	1126	0.2	
03/02/2012	20:39:49	12.88	1125	0.0	
03/02/2012	20:41:29	12.88	1144	0.0	
03/02/2012	20:43:09	12.88	1161	0.0	
03/02/2012	20:44:49	12.88	1177	0.0	
03/02/2012	20:46:29	12.88	1191	0.0	
03/02/2012	20:48:09	12.89	1205	0.0	
03/02/2012	20:49:49	12.89	1217	0.0	
03/02/2012	20:51:29	12.89	1228	0.0	
03/02/2012	20:53:09	12.89	1239	0.0	
03/02/2012	20:54:49	12.89	1249	0.0	
03/02/2012	20:56:29	12.89	1256	0.0	
03/02/2012	20:58:09	12.89	1153	0.0	

Well		Field	Job Start	Customer	Job Number
Twin Creek 12-4D1		Mamm Creek	Mar/02/2012	Encana	BQMF-00918
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message
03/02/2012	20:59:07	12.89	3	0.0	1/2 bbl back
03/02/2012	20:59:40	12.89	3	0.0	Pressure up on DV tool
03/02/2012	20:59:49	12.89	3	0.0	
03/02/2012	21:01:26	12.84	18	1.3	DV tool opened @ 1500 PSI
03/02/2012	21:01:29	12.85	18	0.9	
03/02/2012	21:03:09	12.88	138	0.0	
03/02/2012	21:04:49	12.80	186	2.0	
03/02/2012	21:06:29	7.45	90	0.5	
03/02/2012	21:08:09	12.82	159	2.4	
03/02/2012	21:09:49	12.87	32	0.0	
03/02/2012	21:11:29	12.86	12	0.0	
03/02/2012	21:13:09	12.85	11	0.0	
03/02/2012	21:14:49	12.85	11	0.0	
03/02/2012	21:16:29	12.85	10	0.0	
03/02/2012	21:18:09	12.85	9	0.0	
03/02/2012	21:19:49	12.85	8	0.0	
03/02/2012	21:21:29	12.85	3	0.0	
03/02/2012	21:23:09	12.85	4	0.0	
03/03/2012	01:36:29	8.63	3	0.0	
03/03/2012	01:38:09	8.64	7	0.0	
03/03/2012	01:39:49	8.62	64	1.1	
03/03/2012	01:41:29	8.61	48	0.0	
03/03/2012	01:43:09	8.61	1453	0.0	
03/03/2012	01:43:31	8.61	1498	0.0	Pressure Test Lines
03/03/2012	01:43:32	8.61	1497	0.0	Low PSI test good
03/03/2012	01:44:33	8.61	5058	0.0	Pressure Test Lines
03/03/2012	01:44:34	8.61	5057	0.0	High PSI test good
03/03/2012	01:44:49	8.61	5047	0.0	
03/03/2012	01:46:29	8.61	33	0.0	
03/03/2012	01:48:09	8.60	32	0.0	
03/03/2012	01:49:49	8.60	31	0.0	
03/03/2012	01:50:12	8.60	60	0.0	Start Pumping Spacer
03/03/2012	01:50:16	8.58	56	1.2	50 bbl MUDPUSH II
03/03/2012	01:51:29	11.68	189	2.5	
03/03/2012	01:53:09	12.09	339	5.0	
03/03/2012	01:54:49	12.54	316	4.4	
03/03/2012	01:56:29	12.51	153	1.5	
03/03/2012	01:57:02	12.51	174	1.5	Good returns
03/03/2012	01:58:09	12.54	93	0.0	
03/03/2012	01:59:49	12.53	89	0.0	
03/03/2012	02:01:29	12.52	88	0.0	
03/03/2012	02:03:09	13.04	206	2.3	
03/03/2012	02:04:49	13.18	235	3.3	
03/03/2012	02:06:29	13.16	235	3.3	
03/03/2012	02:08:09	13.19	266	3.3	
03/03/2012	02:09:49	13.46	231	3.3	
03/03/2012	02:10:51	13.87	212	3.3	End Spacer
03/03/2012	02:10:55	13.77	267	3.3	Start Cement Slurry
03/03/2012	02:10:57	13.76	236	3.3	Start Mixing Scav Slurry
03/03/2012	02:10:58	13.76	236	3.3	Bring to weight
03/03/2012	02:11:29	13.71	218	3.3	
03/03/2012	02:13:09	13.91	204	3.3	
03/03/2012	02:14:49	13.81	438	5.0	
03/03/2012	02:15:24	13.86	401	5.0	End Scavenger Slurry

Well		Field	Job Start	Customer	Job Number
Twin Creek 12-4D1		Mamm Creek	Mar/02/2012	Encana	BQMF-00918
Date	Time 24-hr clock	CPF1_DENSITY LB/G	CPF1_PRESS PSI	CPF1_TTL_RATE B/M	Message
03/03/2012	02:15:28	13.85	446	5.0	159 bbl 14.0#
03/03/2012	02:15:48	13.85	390	5.0	Good returns
03/03/2012	02:16:29	13.87	383	5.0	
03/03/2012	02:18:09	13.96	584	6.4	
03/03/2012	02:19:49	13.92	587	6.4	
03/03/2012	02:21:29	13.94	556	6.4	
03/03/2012	02:23:09	13.95	581	6.4	
03/03/2012	02:24:49	13.99	643	6.4	
03/03/2012	02:26:29	13.97	612	6.4	
03/03/2012	02:28:09	13.93	614	6.3	
03/03/2012	02:29:49	14.02	617	6.4	
03/03/2012	02:31:29	13.93	367	4.8	
03/03/2012	02:33:09	13.90	383	4.9	
03/03/2012	02:34:49	14.00	634	6.3	
03/03/2012	02:36:29	14.08	655	6.3	
03/03/2012	02:38:09	13.99	671	6.3	
03/03/2012	02:39:49	13.82	737	6.4	
03/03/2012	02:39:56	13.81	71	4.1	End Tail Slurry
03/03/2012	02:39:59	14.12	47	1.9	End Cement Slurry
03/03/2012	02:41:29	13.89	22	0.0	
03/03/2012	02:43:09	11.68	75	1.5	
03/03/2012	02:44:49	8.44	238	4.9	
03/03/2012	02:46:29	9.81	103	4.1	
03/03/2012	02:48:09	8.49	230	4.5	
03/03/2012	02:49:49	8.27	124	4.4	
03/03/2012	02:51:29	6.44	27	1.4	
03/03/2012	02:53:09	0.01	14	0.0	
03/03/2012	02:54:49	0.01	17	0.0	
03/03/2012	02:56:29	0.01	19	0.0	
03/03/2012	02:58:09	0.01	19	0.0	
03/03/2012	02:59:49	0.01	19	0.0	
03/03/2012	03:01:29	0.01	18	0.0	
03/03/2012	03:03:09	0.02	19	0.0	
03/03/2012	03:04:49	1.26	19	0.0	
03/03/2012	03:05:17	8.46	221	0.7	Drop Top Plug
03/03/2012	03:05:18	8.46	194	0.7	Start Displacement
03/03/2012	03:06:29	8.46	174	1.7	
03/03/2012	03:08:09	8.47	519	4.2	
03/03/2012	03:08:28	8.47	532	4.7	Displace 47 bbl H2O
03/03/2012	03:09:30	8.47	651	4.7	Good returns
03/03/2012	03:09:49	8.47	537	4.6	
03/03/2012	03:11:29	8.47	785	4.6	
03/03/2012	03:13:09	8.47	720	3.9	
03/03/2012	03:14:49	8.47	821	3.9	
03/03/2012	03:16:29	8.47	814	2.5	
03/03/2012	03:18:09	8.47	829	2.5	
03/03/2012	03:19:21	8.47	2285	0.2	Bump Top Plug
03/03/2012	03:19:25	8.47	2319	0.0	Bumped plug @ 2200 PSI
03/03/2012	03:19:49	8.47	2252	0.0	
03/03/2012	03:21:29	8.47	2229	0.0	
03/03/2012	03:22:50	8.47	2547	0.5	Pressure up to 2700 PSI
03/03/2012	03:23:09	8.47	2684	0.0	
03/03/2012	03:24:49	8.47	2664	0.0	
03/03/2012	03:26:29	8.47	2671	0.0	

Well Twin Creek 12-4D1			Field Mamm Creek		Job Start Mar/02/2012		Customer Encana		Job Number BQMF-00918	
Date	Time 24-hr clock	CPF1_DENSITY LB/G		CPF1_PRESS PSI		CPF1_TTL_RATE B/M		Message		
03/03/2012	03:29:03	8.47		9		0.0		Float held		

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl								
Slurry 3.8	N2		Mud	Maxmum Rate 8.1	Total Slurry 374.0	Mud 0.0	Spacer 101.0	N2					
Treating Pressure Summary, psi					Breakdown Fluid								
Maximum 5133	Final 9	Average 444	Bump Plug to 1100	Breakdown	Type	Volume bbl		Density lb/gal					
Avg. N2 Percent %		Designed Slurry Volume 374.0 bbl		Displacement 130.5 bbl		Mix Water Temp 65 degF		Cement Circulated to Surface? <input type="checkbox"/>		Volume bbl			
								Washed Thru Perfs <input type="checkbox"/>		To ft			
Customer or Authorized Representative Tony Ketterling						Schlumberger Supervisor Matt Fair/Z. Langsdorf				Circulation Lost <input type="checkbox"/>		Job Completed <input checked="" type="checkbox"/>	
										-		-	

Schlumberger

Service Quality Evaluation

Client:	Encana
Field:	Mamm Creek
Rlg:	Nabors M15
Well:	Twin Creek 12-4D1
Service Line:	Cementing
Job Type:	2 Stage Production

Service Order #:	
Date:	Mar/02/2012
Operating Time (hh:mm):	00:00
Client Rep:	Tony Ketterling
Schlumberger Engineer:	Matt Fair/Z. Langsdorf
Schlumberger FSM:	

Main Objective:

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

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

2	Design / Preparation						
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%

3	Execution						
3a	Lost time < 30 mins	3	yes	<input checked="" type="checkbox"/>	no	<input type="checkbox"/>	3
3b	Equipment pressure tested succesfully	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 succesfully	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%

4	Evaluation					
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%

Total100%

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

Client:	Schlumberger:
Client Signature:	Schlumberger Signature:

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 12/21/2009
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 0
Spud Date :	Days From Spud : -765	Depth At 06:00 :	
Morning Operations :		Estimated Total Depth :	5537
Remarks :			
Time To	Description		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 01/27/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 2
Spud Date : Days From Spud : 2		Depth At 06:00 : 1170	
Morning Operations : Rig Released @ 3:00PM 1/26/2012		Estimated Total Depth : 5537	
		Remarks :	
Time To	Description	1568 Days without a Lost Time incident	
6:30 AM	Pre-Job Safety Meeting TOO H w/ Directional Tools	11 Days without a Medical Aid or Restricted Work incident	
7:00 AM	TOOH - Stand back BHA - Turn Off tools & Drain Motor	117 Days without a Recordable Spill	
7:30 AM	Service Rig	377 Days without a Reportable Quantity Spill	
8:00 AM	Pre-Job Safety Meeting on Running Casing	xxxx gals fuel used past 24hrs	
8:30 AM	Rig Up Frank's Casing Tools	12862 gals fuel on Location,	
10:30 AM	Ran 25 jts of 9 5/8" 36# J55 LT&C Casing As Follows: Shoe At 1149' MD 1114' TVD Float Collar at 1101' MD - Ran 13 Centralizers F/ 1123' T/ 73'	Rotating Hours on HWDP =88.5 Hrs	
11:00 AM	Rig Down Casing Tools	Total Fluid Losses Last 24 hrs =0 bbls seepage	
12:30 PM	Circ & Cond Hole For Cement while waiting on Schlumberger to rig up - Schlumberger on Location at 11:15 AM	4 Mud Loggers on Location	
1:00 PM	Pre-Job Safety Meeting - Cementing Surf Csg	1 Mud Engineer on Location - Mike Lindell	
2:30 PM	Cement Surf Csg As Follows: Test Lines to 500/3000psi - OK - Pumped 20bbls H2O Spacer + 113bbls,543sx,629cu/ft of "G" at 15.8ppg,1.16Yld,5.11gl/sk + 85bbls H2O - Final Circ Press@ 2.5bbl/min = 600psi - Bumped Plug w/ 1400psi - Full returns - Ciec 35bbls Cement to Surface - Float Held - CIP @ 13:47 PM 1/26/2012	Raz Parras On Location as Night Supervisor	
3:00 PM	Rig Down Dredge Pump & Landing Joint Rig Released at 3:00PM 1/26/2012	Pre Spud Notification for the Twin Creek 12-5A2 made 1-26-12	
		Post Spud & Surf Csg / Cement Notification for 12-4D1 Made 1-25-12	
		Hazard ID YES	

Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 01/26/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 1
Spud Date : Days From Spud : 1		Depth At 06:00 : 1170	
Morning Operations : TOO H to run 9 .625 surface casing		Estimated Total Depth : 5537	
		Remarks :	
Time To	Description	1567 Days without a Lost Time incident	
2:30 PM	Skid Rig Over Twin Creek 12-4D1 Well - Rig Up Gonzo Dredge Pump	10 Days without a Medical Aid or Restricted Work incident	
4:00 PM	Spud 12 1/4" Hole at 2:30 PM 1/25/2012 - Drilled 12 1/4" Hole F/ 62' T/ 197'	116 Days without a Recordable Spill	
4:30 PM	TOOH to Pick up Directional tools	376 Days without a Reportable Quantity Spill	
5:00 PM	TIH W/ Directional Tools T/ 197'	2416 gals fuel used past 24hrs	
6:00 PM	Directional Drill 12 1/4" Hole F/ 197' T/270'=73' in one hr.	12862 gals fuel on Location,	
6:30 PM	Service Rig top[drive,topdrive inspection,inspect service loop,black jack,check parameters,hoist lines,brakes.	Rotating Hours on HWDP =88.5 Hrs	
3:30 AM	Directional drill 12 1/4" hole F/ 270' To 1170'=900' IN 9 hrs 100 ft/hr.	Total Fluid Losses Last 24 hrs =0 bbls seepage	
4:30 AM	C&C run two 20 bbls sweep,circulate out until shakers or clean.	4 Mud Loggers on Location	
6:00 AM	TOOH,shut Directional tool off,clean bit & check,drain mud motor,rack back.	1 Mud Engineer on Location - Mike Lindell	
		Raz Parras On Location as Night Supervisor	
		Pre Spud Notification for the Twin Creek 12-5A2 made 1-26-12	
		Post Spud & Surf Csg / Cement Notification for 12-4D1 Made 1-25-12	
		Hazard ID YES	

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/22/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 3
Spud Date :	Days From Spud : 28	Depth At 06:00 :	1170
Morning Operations : Drilling Cement		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1594 Days without a Lost Time incident	
9:30 AM	MIRU - Walk Rig onto the Twin Creek 12-4D1	37 Days without a Medical Aid or Restricted Work incident	
10:00 AM	4 Bolt BOP Stack - Prep to run CBL Log	32 Days without a Recordable Spill	
10:30 AM	HTPSM w/ Loggers	403 Days without a Reportable Quantity Spill	
1:00 PM	Cased Hole Logs - W.L. Depth = 1010' - Float Set at 1101' - Nipple up BOPE While Logging - Install Flowline - Flowline Stand - Safety Cables	1644 gals fuel used past 24hrs	
1:30 PM	HTPSM w/ Rebel Testers	12034 gals fuel on Location,	
8:30 PM	Test BOPE s Follows: Dart valve, Lower Top Drive, IBOP, Floor Valve, Inside kill VALVE, Outside Killline Valve, HCR Valve, Inside Chokeline Valve, Chokeline, Pipe Rams 250/5000psi for 5/10 Min - Annular to 250/2500psi for 5/10 Min - Super Choke 1500psi 5 Min - ISO Valve, Choke Manifold Valves, Blind Rams, Kill Check Valve 250/5000psi 5/10 Min - Manual Chokes 250/1500psi 5/10 Min - Casing to 1500psi 30 Min - ALL OK Had to change out Dart Valve	Rotating Hours on HWDP = 0 Hrs	
9:00 PM	Install Wear Bushing	Total Fluid Losses Last 24 hrs =0 bbls seepage - Total Losses on the 12-4D1 = 0bbls	
9:30 PM	Service Top Drive	1 Mud Engineer on Location - Mike Lindell	
10:00 PM	TIH w/ 5 Stds HWDP	BOP & FIT Notification for 12-4D1 Made 2-20-12	
11:00 PM	TIH W/ one Std DP w/ Rotatinghead Rubber - Test Flowline & Surface lines for Leaks @ 100 SPM - Stand Back DP & Rotatinghead Rubber - TIH 5 More stds HWDP	Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi, 12-5A2 = 0 psi	
12:00 AM	Lay Down HWDP - 30 Jts	Hazard ID 0	
12:30 AM	Pre- Job Safety Meeting W/ Directional Crew		
2:30 AM	Pick Up Directional Tools - Install Batteries - Bend Mud Motor T/ 2.12 Deg.		
4:00 AM	Pick up 30 Jts HWDP - Latch up 1st Std DP & Install wear bushing - TIH - Tagged Cement at 1010'		
6:00 AM	Drilling Cement & Float Equipment - Tagged Flaot Collar at 1101' MD - Drilling Cement at 1116'		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/23/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 4
Spud Date :	Days From Spud : 29	Depth At 06:00 :	2452
Morning Operations : W/O Mud Motor		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1595 Days without a Lost Time incident 38 Days without a Medical Aid or Restricted Work incident 33 Days without a Recordable Spill 404 Days without a Reportable Quantity Spill 1461 gals fuel used past 24hrs 10573 gals fuel on Location, Rotating Hours on HWDP = 13.5 Hrs Total Fluid Losses Last 24 hrs =0 bbls seepage - Total Losses on the 12-4D1 = 0bbls 1 Mud Engineer on Location - Mike Lindell	
6:30 AM	Drilling Cement & Float Equipment		
7:00 AM	Drilling 8 3/4" Hole F/ 1170' T/ 1199' = 22' in .5 hrs @ 44 ft/hr		
7:30 AM	Circ & Cond - pump Sweep in Preperation for FIT		
9:30 AM	Formation Integrity Test (FIT) - @ 1163' TVD W/ 10.3ppg MW - Test to 13.0 ppg MW Equivalent = 163psi at surface - Passed on fourth test - Lost 14psi in 15 Min - Allowed 10% Loss (163psi) In 15 Min. - Test Witnessed by Mike Longworth from COGCC		
10:30 AM	Directional Drill 8 3/4" Hole F/ 1199' T/ 1211' = 12' in .5 hrs @ 24 ft/hr SPR @ 1207' W/ 10.2ppg MW #1 20/105, 30/165, 40/240 psi #2 20/105, 30/160, 40/240 psi	BOP & FIT Notification for 12-4D1 Made 2-20-12 Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi, 12-5A2 = 0 psi Hazard ID 0	
11:00 AM	Service Rig		
6:30 PM	Directional Drill 8 3/4" Hole F/ 1211' T/ 2068' = 857' in 7.5 Hrs @ 114.3 ft/hr SPR @b 2068' W/10.8ppg MW #1 20/90, 30/135, 40/222 psi #2 20/91, 30/143, 40/226 psi		
7:00 PM	Service Rig		
12:30 AM	Directional Drill 8 3/4" Hole F/ 2068' T/ 2452' = 384' in 5.5 hrs @ 69.8 ft/hr - Unable to Slide - Lost 230psi Pump Press in last 30 Min		
2:00 AM	Pump Sweep at reduced Pump Rate 40 SPM - Fill Trip Tank - Pump Dry Pill - 15 min Flow Check		
5:00 AM	TOOH - Break Bit - Drain & Lay Down Motor Continuosly Fill hole Calculated displacement = 24.74bbls - Actual Displacement = 28.35 bbls - NOTE: Washed Out Motor At Connection For Float Sub - 5.75" Long 1/4 to 3/8" Wide		
6:00 AM	Waiting On New Mud Motor From Cathedral - BOP Drill 60 Second Response Time		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/24/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 5
Spud Date :	Days From Spud : 30	Depth At 06:00 :	3969
Morning Operations : Drilling Ahead At 3969'		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1596 Days without a Lost Time incident	
6:30 AM	Service Rig	39 Days without a Medical Aid or Restricted Work incident	
7:00 AM	Pre- Job Safety Meeting on Picking Up Heavy Drilling Tools i.e. Mud Motor	34 Days without a Recordable Spill	
		405 Days without a Reportable Quantity Spill	
		2502 gals fuel used past 24hrs	
		8071 gals fuel on Location,	
7:30 AM	Pick up New Motor & Bit - Turn On & Orientate Tools	Rotating Hours on HWDP = 13.5 Hrs	
8:00 AM	Pre- Job Safety Meeting - Tripping in Hole	Total Fluid Losses Last 24 hrs =0 bbls seepage - Total	
9:00 AM	Trip in Hole w/ Bit #4	Losses on the 12-4D1 = 0bbls	
10:00 AM	Circ & Cond - Circ Bottoms Up - 10bbl Sweep	1 Mud Engineer on Location - Mike Lindell	
6:00 PM	Directional Drill 8 3/4" Hole F/ 2452' T/ 3209' = 757' in 8 hrs At 94.6 ft/hr	BOP & FIT Notification for 12-4D1 Made 2-20-12	
		Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi,	
		12-5A2 = 0 psi	
		Hazard ID 0	
	SPR @ 2449' W/ 10.8ppg MW		
	#1 20/105, 30/185, 40/280 psi		
	#2 20/105, 30/185, 40/280 psi		
6:30 PM	Service Rig		
6:00 AM	Directional Drill 8 3/4" Hole F/ 3209' T/ 3969' = 760 @ 66.1 ft/hr		
	SPR # 3209' W/ 11.2ppg MW		
	#1 20/125, 30/204, 40/307 psi		
	#2 20/120, 30/204, 40/311 psi		
	SPR @ 3779' W/ 11.7 ppg MW		
	#120/184, 30/264, 40/358 psi		
	#2 20/187, 30/250, 40/366 psi		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/25/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 6
Spud Date : Days From Spud : 31		Depth At 06:00 : 4728	
Morning Operations : Drilling		Estimated Total Depth : 5537	
		Remarks :	
Time To	Description	1597 Days without a Lost Time incident	
6:30 AM	Service rig	40 Days without a Medical Aid or Restricted Work incident	
9:00 AM	Directional Drill 8 3/4" Hole F/ 3969 T/ 3993' = 24' in 2.5 hrs @ 9.6 ft/hr	35 Days without a Recordable Spill	
	SPR @ 3969' W/ 12.1ppg MW	406 Days without a Reportable Quantity Spill	
	#1 20/195, 30/260, 40/365 psi	2004 gals fuel used past 24hrs	
	#2 20/185, 30/260, 40/355 psi	13067 gals fuel on Location,	
		Rotating Hours on HWDP = 47.0 Hrs	
10:00 AM	Circ & Cond For Bit Trip - Pump Sweep - Fill Trip Tank	Total Fluid Losses Last 24 hrs =0 bbls seepage - Total	
10:30 AM	Pre- Job Safety meeting on Tripping Pipe - Flow Check	Losses on the 12-4D1 = 0bbls	
5:30 PM	TOOH for Bit / Motor - Calc. Displacement = 22 bbls - Actual Displacement = 32 bbls - Change Out Bit - Function Test Blind & Pipe Rams - Make Up New Bit - TIH	1 Mud Engineer on Location - Mike Lindell	
6:00 PM	Circ & Cond - Flush Bottom Hole in Case of Junk - Pump 10 bbl Sweep	BOP & FIT Notification for 12-4D1 Made 2-20-12	
6:30 PM	Directional Drill 8 3/4" Hole w/ Bit #5 F/ 3993' T/ 4064' = 71' in .5 hrs @142 ft/hr	Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi,	
	SPR @ 4064' W/ 12.1ppg	12-5A2 = 0 psi	
	#1 20/230, 30/286, 40/393 psi	Hazard ID 0	
	#2 20/218, 30/287, 40/388 psi		
7:00 PM	Service Rig		
6:00 AM	Directional Drill 8 3/4" Hole F/ 4064' T/ 4728' = 664' in 11 hrs @ 60.4 ft/hr		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/26/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 7
Spud Date :	Days From Spud : 32	Depth At 06:00 :	5168
Morning Operations : Spot LCM Pill & Soak Treat Lost Circ.		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1598 Days without a Lost Time incident 41 Days without a Medical Aid or Restricted Work incident 36 Days without a Recordable Spill 406 Days without a Reportable Quantity Spill 2076 gals fuel used past 24hrs 10991 gals fuel on Location, Rotating Hours on HWDP = 57.0 Hrs Total Fluid Losses Last 24 hrs = 363 bbls seepage - Total Losses on the 12-4D1 = 363bbls 1 Mud Engineer on Location - Mike Lindell BOP & FIT Notification for 12-4D1 Made 2-20-12 Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi, 12-5A2 = 0 psi Hazard ID 0 Fluid Loss Notification to State sent 2-26-2012	
8:00 AM	Directional Drill 8 3/4" Hole F/ 4728' T/ 4823' =95' in 2 hrs @ 47.5 ft/hr		
8:30 AM	Service Rig		
11:00 AM	Directional Drill 8 3/4" Hole F/ 4823' T/ 4993' = 170' in 2.5 hrs @ 68 ft/hr - Lost Returns		
12:30 PM	Circ & Cond - Pump High LCM Sweep - Regained Partial Returns - Mix & Pump 30 bbl High LCM Pill & Spot on Bottom - Total losses = 185 bbls		
1:00 PM	TOOH - Pull 7 Stds DP - To get Above LCM Pill - Wait 2 Hrs let Pill Soak - Calculated Displacement = 5 bbls - Actual Displacement = 7 bbls		
3:00 PM	Let LCM Pill Soak 2.5 Hrs		
4:00 PM	Wash & Ream 7 Stds To Bottom - No Losses		
6:30 PM	Directional Drill 8 3/4" Hole F/ 4993' T/ 5107' = 114' in 2.5 hrs @ 45.6 ft/hr		
7:00 PM	Circ & Cond - Pump 20 BBI LCM Sweep Regained Partial Returns - Pump 30 bbl High LCM Pill with returns at slow pump rate 40 SPM - Lost 89 bbls Total		
7:30 PM	Tooh 2 Stds to 4917' - Calc disp. = 1.04bbls - Actual Displ. =1.73 bbls		
1:30 AM	Let LCM Pill Soak - Rebuild 100bbls Volume & wieght up F/ 8.9ppg T/ 12.4 ppg		
2:00 AM	Wash & Ream to Bottom - Full Returns SPR @ 5107' W/ 12.4 ppg MW #1 20/165, 30/269, 40/410 psi #2 20/167, 30/263, 40/405 psi		
5:00 AM	Directional Drill 8 3/4" Hole F/ 5107' T/ 5168' = 61' in 3 hrs @ 20.3 ft/hr - Lost Returns 74 bbls		
6:00 AM	Pump 15bbl Sweep - No Returns - Spot 50 bbl High LCM pill W/ Returns @ Slow Pump Rate & Let Soak for 2 hrs . Total Losses last 24 hrs = 363 bbls		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/27/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 8
Spud Date : Days From Spud : 33		Depth At 06:00 : 5393	
Morning Operations : Circ & Cond - Raise MW		Estimated Total Depth : 5537	
		Remarks :	
Time To	Description	1599 Days without a Lost Time incident	
6:30 AM	Circ & Cond.- Spot 40 bbls High LCM Pill Over Lost Zone & Let Soak For Two Hrs	42 Days without a Medical Aid or Restricted Work incident	
7:00 AM	Service Rig	37 Days without a Recordable Spill	
8:30 AM	Pull 6 Stds DP - Above LCM Pill - Let Pill Set in Well bore for Two Hrs Minimum	407 Days without a Reportable Quantity Spill	
12:00 PM	Rebuild Pit Volume While LCM Pill Soaks	1256 gals fuel used past 24hrs	
1:00 PM	TIH 6 Stds - Wash & REam Lat 3 Stds To Bottom	9735 gals fuel on Location,	
1:30 PM	Directional Drill 8 3/4" Hole F/ 5168' T/ 5183' = 15' in .5 hrs At 30 ft/hr - Lost All Returns at 5183'	Rotating Hours on HWDP = 61.0 Hrs	
2:30 PM	Pump High LCM Sweep - Regained Partial returns at 80 SPM	Total Fluid Losses Last 24 hrs =617 bbls seepage - Total	
6:00 PM	Directional Drill 8 3/4" Hole F/ 5183' T/ 5393' =210' = 84 ft/hr - Steady Seepage at approx. 90 to 100 bbls/ hr - Total lost to Form Last 12 Hrs = 315 bbls	Losses on the 12-4D1 = 980 bbls	
3:30 AM	Circ Over Top of Hole While Rebuilding Pit Volume - Lost 15bbls in 9.5 hrs	1 Mud Engineer on Location - Mike Lindell	
4:30 AM	Circ Bottoms Up to Circ Out Gas - 458 Units W/ 10/15 ft Flare - Lost 43 bbls @ 80 SPM	BOP & FIT Notification for 12-4D1 Made 2-20-12	
6:00 AM	Had Light Spot in Mud System - Stopped Circ & Raise MW F/ 11.8 ppg T/ 12.4 ppg - Total Losses Last 12 Hrs = 302 bbls	Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi,	
		12-5A2 = 0 psi	
		Hazard ID 0	
		Fluid Loss Notification to State sent 2-27-2012	

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/28/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 9
Spud Date : Days From Spud : 34		Depth At 06:00 : 5407	
Morning Operations : Circ & Cond. - Treating Lost Circ		Estimated Total Depth : 5537	
		Remarks :	
Time To	Description	1600 Days without a Lost Time incident	
6:30 AM	Service Rig	43 Days without a Medical Aid or Restricted Work incident	
10:30 AM	Treating Lost Circ. - Pumped 4 - 5bbl LCM Sweeps + 1-20bbl LCM Sweep + 1-7bbl LCM Sweep - Kept hole Full Circ over Back Side - While Building 50bbl High Visc / High LCM Pill	38 Days without a Recordable Spill	
		408 Days without a Reportable Quantity Spill	
		1663 gals fuel used past 24hrs	
		15072 gals fuel on Location,	
		Rotating Hours on HWDP = 62.0 Hrs	
11:00 AM	Spot 50bbl High Visc. / High LCM Pill on Bottom To Soak for 3 hrs +/-	Total Fluid Losses Last 24 hrs =814 bbls seepage - Total	
		Losses on the 12-4D1 = 1794bbls	
1:00 PM	TOOH 8 Stds - Tight Hole At 5193' - Calculated Displacement = 3.7 bbls - Actual Displacement = 7.85 bbls	1 Mud Engineer on Location - Mike Lindell	
		BOP & FIT Notification for 12-4D1 Made 2-20-12	
5:00 PM	Circ Over Backside to monitor Seepage While Rebuilding Volume Lost 320bbls First 12 hrs + 10bbls While Circ Across Backside	Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi,	
		12-5A2 = 0 psi	
		Hazard ID 0	
6:00 PM	Wash & Ream back to bottom at SPR (40 SPM)	Fluid Loss Notification to State sent 2-28-2012	
6:30 PM	Service Rig		
10:30 PM	Wash & Ream to bottom - Lost 56 bbls While Reaming		
12:30 AM	Circ & Cond. - Circulate Out Heavy LCM Pill & Trip Gas 500 U @ SPR (40 SPM) - Lost 15 bbls		
1:30 AM	Directional Drill 8 3/4" Hole F/ 5393' T/ 5407' = 14' @ 14 ft/hr Drilling With Minimum Pump Rate - Lost Returns At 5407' - Lost 70 bbls		
2:00 AM	Spot 50 bbl High Visc / High LCM Pill - Let Soak While Rebuilding Volume		
3:00 AM	TOOH 7 Stds - Tight at 5193' - Hole Took 39bbls		
6:00 AM	Let LCM Pill Soak - Rebuild Volume 300 bblsc		
	BOP Drill - 55 Second Response Time		

REGULATORY DRILLING SUMMARY



Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 02/29/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 10
Spud Date :	Days From Spud : 35	Depth At 06:00 :	5582
Morning Operations : Circ & Cond Mud - Wiegth Up Pits - MW Dropped F/ 12.2 ppg to 11.7 ppg		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1601 Days without a Lost Time incident 44 Days without a Medical Aid or Restricted Work incident 39 Days without a Recordable Spill 409 Days without a Reportable Quantity Spill 2005 gals fuel used past 24hrs 13067 gals fuel on Location, Rotating Hours on HWDP = 62.0 Hrs Total Fluid Losses Last 24 hrs =267 bbls seepage - Total Losses on the 12-4D1 = 2061bbls 1 Mud Engineer on Location - Mike Lindell BOP & FIT Notification for 12-4D1 Made 2-20-12 Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi, 12-5A2 = 20 psi Hazard ID 0 Fluid Loss Notification to State sent 2-29-2012	
11:30 AM	Circ Over Backside to monitor losses while rebuilding volume in Mud Pits		
12:30 PM	Wash & Ream 6 stds DP to Bottom - Lost 80 bbls While Reaming		
1:00 PM	Directional Drill 8 3/4" Hole F/ 5407' T/ 5422' = 15' in .5 hrs @ 30 ft/hr - Rotate Drilling Prior to Slide To insure returns - Shakers Started Running over when LCM Pill Came Around w/ bottoms Up		
1:30 PM	Circ & Cond. Hole Circ Out LCM Pill - Lost 22 bbls		
9:00 PM	Directional Drill 8 3/4" Hole (Sliding) F/ 5422' T/ 5566' = 144' in 7.5 hrs @ 19.2 ft/hr - Lost Returns @ 5422' - 65 bbls SPR @ 5488' W/ 12.2ppg MW #1 20/265, 30/365, 40/480 psi #2 20/275, 30/370, 40/485 psi Note: BOP Drill @ 14:15 PM - 42 Second Response Time		
11:00 PM	Build & Spot 50 bbl High Visc / High LCM Pill on bottom		
12:30 AM	TOOH 7 Stds To get Bit above Pill - Calculated Displacement = 3.66 bbls - Actual Displacement = 8 bbls		
2:30 AM	Rebuild & Weight Up 160 BBls While Pill Soaks		
4:30 AM	Wash & Ream 7 Stds To Bottom - Hole Still Seeping - Lost		
5:00 AM	Directional Drill (Slide) 8 3/4" Hole F/ 5566' T/ 5582' = 16' in .5 hrs @ 32 ft/hr - Hole Continued to Seep but tapered off - Discovered 11.7 ppg MW at Suction - Shut Down Drilling & Circulating Lost 35 bbls		
6:00 AM	Wiegth up Pits To 12.2 ppg MW Before Resuming Drilling Ops		

REGULATORY DRILLING SUMMARY

Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 03/02/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 12
Spud Date :	Days From Spud : 37	Depth At 06:00 :	5970
Morning Operations : Running Casing @ 3000'		Estimated Total Depth :	5537
Time To	Description	Remarks :	
8:30 AM	Drill from 5911' to 5970' TD 80 spm, 335 gpm, 12.4 ppg mwt, rpm 70 wob 12k	1603 Days without a Lost Time incident	
11:30 AM	Circulate and condition mud for casing, built 70bbls of volume, built mwt from 12.4ppg to 12.5ppg	46 Days without a Medical Aid or Restricted Work incident	
2:00 PM	Pulled two stands off bottom spotted LCM pill, 30 min flow check	41 Days without a Recordable Spill	
6:00 PM	Trip out of the hole to 1901' checking flow every 10 stands, filling over the top w/ trip tank Hole took 21.5bbls calc. fill was 21.72bbls	411 Days without a Reportable Quantity Spill	
7:00 PM	Trip out of the hole, pulled 3 std's of DP, 10 std's of HWDP, filling over the top w/ trip tank hole took 19.36bbls, calc fill 16.45	1675 gals fuel used past 24hrs	
8:30 PM	Laid down directional tools and bit, Bit was in bad shape it was DBR	9526 gals fuel on Location,	
9:00 PM	Service rig	Rotating Hours on HWDP = 70.0 Hrs	
9:30 PM	Pre job safety meeting with casing crew	Total Fluid Losses Last 24 hrs = 0bbls seepage - Total	
10:00 PM	Rig up to run casing, pick up casing tools	Losses on the 12-4D1 = 2631bbls	
12:00 AM	Run casing, picked up shoe jt float collar & 5 jts of casing	1 Mud Engineer on Location - Robert Szymczak	
1:30 AM	Down time-top drive	Production Csg/ cement Notification for 12-4D1 Made	
3:30 AM	Ran 36 jts of 4.5" 11.6# S80 BT&C w/ 17 centralizers	2-29-12	
4:30 AM	Installed rotating rubber & circulated bottoms up	Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi,	
6:00 AM	Ran 10 jts of 4.5" 11.6# S80 BT&C w/ 20 centralizers	12-5A2 = 50 psi it was at 50psi but i blow it down and all it	
		did was hiss and it was done	
		Hazard ID 1	
		Fluid Loss Notification to State sent 3-1-2012	

Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 03/01/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 11
Spud Date :	Days From Spud : 36	Depth At 06:00 :	5911
Morning Operations : Reaming back to bottom		Estimated Total Depth :	5537
Time To	Description	Remarks :	
6:30 AM	Service top drive	1602 Days without a Lost Time incident	
3:30 PM	Drill from 5582' to 5911' 80 spm 335 gpm, lost 410 bbls down hole	45 Days without a Medical Aid or Restricted Work incident	
4:30 PM	Circulate and condition build LCM pill and spot on bottom	40 Days without a Recordable Spill	
8:00 PM	Trip out of the hole 9 stds to build volume filling over the top of the with trip tank hole took 10.46bbls calc. fill 4.94bbls	410 Days without a Reportable Quantity Spill	
8:30 PM	Service top drive	1866 gals fuel used past 24hrs	
2:30 AM	Build volume- built 160bbls of mud from fresh water raise MW in active system from 12.2ppg to 12.4ppg built 70 bbls of sweep while circulating, lost 60bbls	11201 gals fuel on Location,	
4:30 AM	Wash & ream 3 stds lost 100bbls while working tight spot @ 5188'	Rotating Hours on HWDP = 70.0 Hrs	
6:00 AM	Isolated pit #6 to build volume while reaming back to bottom	Total Fluid Losses Last 24 hrs = 570bbls seepage - Total	
		Losses on the 12-4D1 = 2631bbls	
		1 Mud Engineer on Location - Mike Lindell	
		Production Csg/ cement Notification for 12-4D1 Made	
		2-29-12	
		Bradenhead Pressures on the 12-5D1 = 0, 12-5A1 = 0 psi,	
		12-5A2 = 20 psi	
		Hazard ID 0	
		Fluid Loss Notification to State sent 2-29-2012	

REGULATORY DRILLING SUMMARY

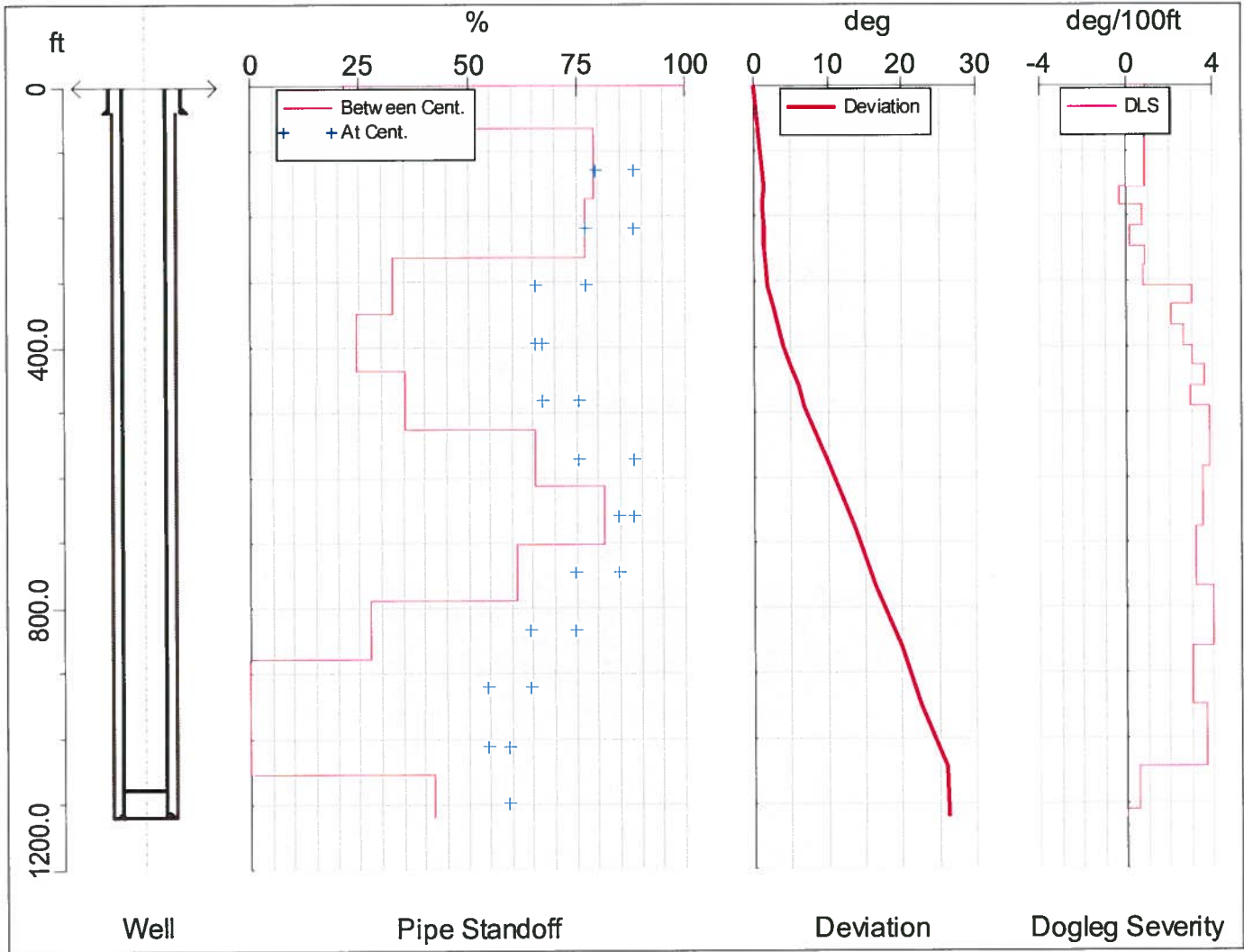


Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 03/04/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 14
Spud Date :	Days From Spud : 39	Depth At 06:00 :	
Morning Operations :		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1605 Days without a Lost Time incident	
1:00 PM	Nipple down BOP, set slips cut casing & wait on cement	48 Days without a Medical Aid or Restricted Work incident	
1:30 PM	Pre job safety meeting with loggers	43 Days without a Recordable Spill	
2:00 PM	Rig up logging truck	413 Days without a Reportable Quantity Spill	
4:00 PM	Run in hole with logs started logging out of the @ 15:30 top of cement around 1500'	1866 gals fuel used past 24hrs	
4:30 PM	Rig down loggers and released rig @ 16:30 on 3-3-12	7660 gals fuel on Location,	
		Rotating Hours on HWDP = 70.0 Hrs	
		Total Fluid Losses Last 24 hrs = 0bbls seepage - Total	
		Losses on the 12-4D1 = 2631bbls	
		1 Mud Engineer on Location - Robert Szymczak	
		BOP, FIT Notification for 12-4A1 Made 3-3-12	
		Bradenhead Pressures on the F12E pad 0 psi Twin Creek	
		13-4D1 6, 12, 24 0psi	
		Hazard ID 0	

Well : Twin Creek 12-4D1 (F12E)		API # : 05045203870000	Operations Date : 03/03/2012
Surface Location : SENW Sec 12 T7S - R92W 6th PM		Area : Mamm Creek	Report # : 13
Spud Date :	Days From Spud : 38	Depth At 06:00 : 5970	
Morning Operations : Setting casing slips		Estimated Total Depth :	5537
		Remarks :	
Time To	Description	1604 Days without a Lost Time incident	
6:30 AM	Service rig	47 Days without a Medical Aid or Restricted Work incident	
3:00 PM	Ran 134 jts of 4.5" 11.6# S80 BTC casing	42 Days without a Recordable Spill	
4:00 PM	Circulate bottoms up to remove gas	412 Days without a Reportable Quantity Spill	
5:00 PM	Pulled rotating rubber made up mandrel and landing jt and land casing, install rotating rubber	1866 gals fuel used past 24hrs	
5:30 PM	Rig down casing crew	7660 gals fuel on Location,	
6:30 PM	Pre job safety with schlumberger and rig up cement head	Rotating Hours on HWDP = 70.0 Hrs	
7:00 PM	Rig up cementers for 2 stage cement job	Total Fluid Losses Last 24 hrs = 0bbls seepage - Total	
9:00 PM	Pumped stage 1 50bbls of 13.2ppg mud push, 215bbls of 14.0ppg easyblock TXI lead, displaced 45bbls of water and 47bbls of 12.5ppg drilling mud bumped plug 1100psi held for 10 mins, opened DV tool @ 1700 psi	Losses on the 12-4D1 = 2631bbls	
1:00 AM	Waited 4 hrs on first stage circulating through DV no gain no losses crew worked on rounding up tools for nipple up and house keeping	1 Mud Engineer on Location - Robert Szymczak	
1:30 AM	Pre job safety with schlumberger on stage 2	Notification for 12-4D1 Made 2-29-12	
3:30 AM	Pumped stage 2, 50bbls of 13.2ppg mud push, 159bbls of 14.0ppg easyblock TXI lead, displaced 46.8bbls of water bumped plug 800 psi over,	Bradenhead Pressures on the F12E pad 0 psi	
4:00 AM	Rig down cementers	Hazard ID 0	
6:00 AM	Nipple down BOP to set slips		

Twin Creek 12-4D1

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



Multistage Cementing



Company: ENCANA USA - PARACHUTE FIELD OFC (EDI)

Well Name: Twin Creek 12-4D1

Field: Mamm Creek

County: Garfield

State: CO

Date: 2/25/2012

Well Location: F12E

API Number: 05045203870000

Proposal Number: 2

Contact:

Made By: Matt Hudson

Service from District: Grand Junction, CO

District Phone: 303-486-3245

Objective: 50bbls MUDPUSH II Spacer (Each Stage)

10lb/bbl CemNET Plus

14.0# EasyBLOK TXI: 670ft.

2lb/bbl CemNET

Surface Casing Shoe: 1160ft.

Mesa Verde: 2744ft. (2447)

DV Tool: 3000ft.

Top of Gas: 4155ft. (3682)

8 3/4" Bit Depth: TD.

TD: 6011ft (5537)

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 estimates as to unknown data and can no more accurate than the model, the assumptions and such input data. The information presented is Schlumberger's best estimate of the results that may be achieved and should be used for comparison purposes rather than absolute values. The quality of input data and hence results, may be improved through the use of certain tools and procedures which Schlumberger can assist in selecting. Freedoms 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 Multistage Cementing treatment.

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

The estimated total cost of our services is **\$ 108,698.70**. 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.

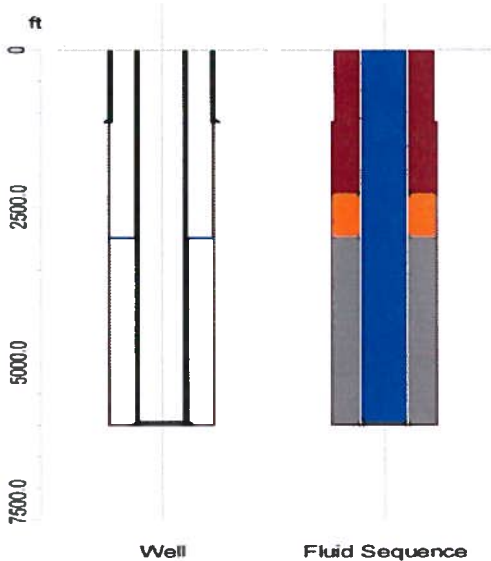
Thank you for considering Schlumberger.
Please do not hesitate to contact me with any questions or concerns.

Sincerely,

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



WELL DATA Stage 1



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

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
MUDPUSH II	50.0	13.20	2296.9
14.0# EasyBLOK TXI	214.8	14.00	3000.0
Water	92.8	8.32	0.0

Total Liquid Volume : 357.6 bbl

Well Data	
Job Type :	Multistage Cementing
Total Depth (Measured) :	6011.0 ft
True Vertical Depth (TVD) :	5555.0 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
8.750 in	6011.0 ft	30.0 %

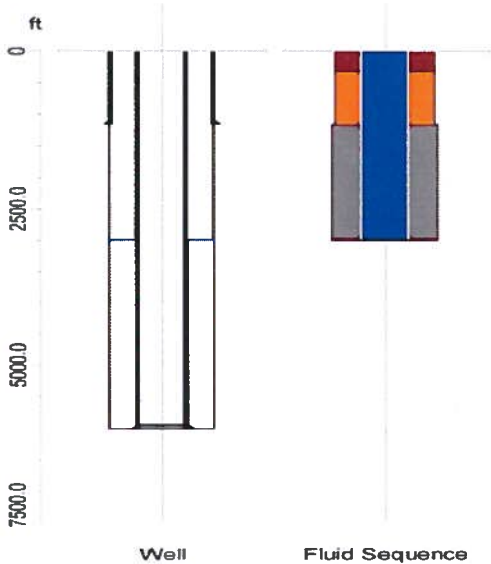
Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
9 5/8 in	36.0 lb/ft	K-55	LTC	0.43 ft3/ft	1170.0 ft

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
4 1/2 in	11.6 lb/ft	N-80	BTC	0.09 ft3/ft	6011.0 ft

Annular Capacity (without Excess) : Casing Bottom / Open Hole : 0.31 ft3/ft
Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 0.32 ft3/ft



WELL DATA Stage 2



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

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
MUDPUSH II	50.0	13.20	0.0
14.0# EasyBLOK TXI	159.0	14.00	670.0
Water	46.6	8.32	0.0

Total Liquid Volume : 255.6 bbl

Well Data	
Job Type :	Multistage Cementing
Total Depth (Measured) :	6011.0 ft
True Vertical Depth (TVD) :	5555.0 ft
BHST (Tubular Bottom Static Temperature) :	118 degF
BHCT (Tubular Bottom Circulating Temperature) :	-460 degF

Open Hole		
Mean Diameter without Excess	Bottom Depth	Annular Excess
8.750 in	6011.0 ft	30.0 %

Stage Collar	
Measured Depth :	3000.0 ft

Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
9 5/8 in	36.0 lb/ft	K-55	LTC	0.43 ft3/ft	1170.0 ft

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
4 1/2 in	11.6 lb/ft	N-80	BTC	0.09 ft3/ft	6011.0 ft

Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 0.32 ft3/ft



FLUID SYSTEMS 1

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

14.0# EasyBLOK TXI (997 sacks, 75 lb per sack of Blend)			
System	Conventional		
Density	14.00 lb/gal		
Yield	1.21 ft3/sk		
Mixed Water	5.477 gal/sk		
Mixed Fluid	5.477 gal/sk		
Total Volume	214.8 bbl		
Additives	Code	Description	Concentration
	D049	Cement	75.00 lb/sk WBWOB
	D154	Extender	6.0 % BWOB
	D400	Gas Control Agent	0.6 % BWOB
	D202	Dispersant	0.2 % BWOB
	D153	Anti-Settling Agent	0.1 % BWOB
	D013	Retarder	0.5 % BWOB
	D046	Anti Foam	0.5 % BWOB
	D029	Lost Circulation Control Agent	0.25 lb/sk WBWOB
	D095	CemNET	2.0 lb/bbl

Water			
System	Water		
Density	8.32 lb/gal		
Total Volume	92.8 bbl		
Additives	Code	Description	Concentration

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



FLUID SYSTEMS 2

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

14.0# EasyBLOK TXI (738 sacks, 75 lb per sack of Blend)			
System	Conventional		
Density	14.00 lb/gal		
Yield	1.21 ft3/sk		
Mixed Water	5.495 gal/sk		
Mixed Fluid	5.495 gal/sk		
Total Volume	159.0 bbl		
Additives	Code	Description	Concentration
	D049	Cement	75.00 lb/sk WBWOB
	D154	Extender	6.0 % BWOB
	D400	Gas Control Agent	0.5 % BWOB
	D202	Dispersant	0.2 % BWOB
	D153	Anti-Settling Agent	0.15 % BWOB
	D013	Retarder	0.3 % BWOB
	D046	Anti Foam	0.5 % BWOB
	D029	Lost Circulation Control Agent	0.25 lb/sk WBWOB
	D095	CemNET	2.0 lb/bbl

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

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



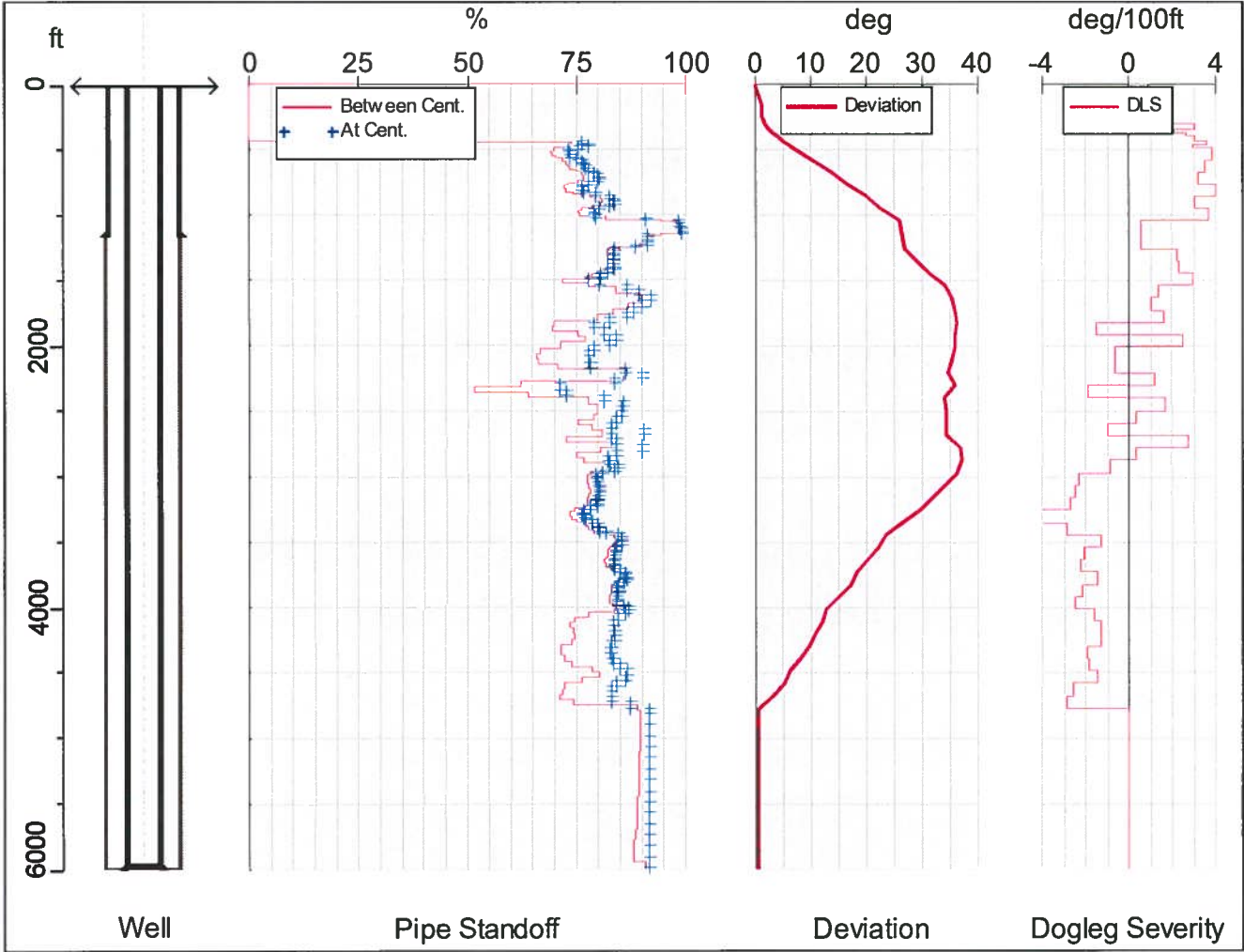
PROCEDURES

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



CENTRALIZERS

Type	Quantity	Centralizers per Joint	Spacing (ft)	From (ft)	To (ft)	Stop Rings
8 3/4" BOW	52	2/1	21	425	1516	26
8 3/4" BOW	33	1/1	42	1517	2903	0
8 3/4" BOW	54	2/1	21	2903	4037	27
8 3/4" BOW	19	1/1	42	4037	4835	0
8 3/4" BOW	14	1/2	84	4835	TD	0





PRICE ESTIMATE

Equipment and Services						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
48016000	Cement Multiple Stage Charge	1 EA	2,400.00	2,400.00	45.2 %	1,315.20
48019000	Bulk Unit, Cement Add Hr	8 HR	107.50	860.00	45.2 %	471.28
48021000	Silo, Cement	3 EA	570.00	1,710.00	45.2 %	937.08
48501000	Cement Plug Container	1 JOB	520.00	520.00	45.2 %	284.96
49100000	Cement Blending Charge	2451 CF	2.27	5,563.77	45.2 %	3,048.95
49102000	Transportation, Cement Ton-mile	6286 MI	2.02	12,697.72	45.2 %	6,958.35
58498000	Taxes	1 JOB	3,293.29	3,293.29	0 %	3,293.29
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
102871065	Pump, Casing Cement 6001-6500 ft	1 EA	3,600.00	3,600.00	45.2 %	1,972.80
107264001	Regulatory Conformance Charge	10 EA	341.00	3,410.00	0 %	3,410.00

Subtotals: \$ 38,732.78 \$ 24,255.46

Materials						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
B838	B838 CemNETplus conversion charge	100 BBL	148.50	14,850.00	45.2 %	8,137.80
D013	Retarder	577 LB	2.61	1,505.97	45.2 %	825.27
D029	Cellophane Flakes	434 LB	3.97	1,722.98	45.2 %	944.19
D031	Barite	265 CW	38.61	10,231.65	45.2 %	5,606.94
D046	Antifoam Agent, All Purpose	651 LB	4.75	3,092.25	45.2 %	1,694.55
D049	Cement, TXI LITEWEIGHT	1734 CF	21.95	38,061.30	45.2 %	20,857.59
D153	Antisettling Agent	158 LB	7.69	1,215.02	45.2 %	665.83
D154	Extender, LT	7803 LB	1.40	10,924.20	45.2 %	5,986.46
D202	Low-Temperature Solid Dispersant D202	261 LB	19.15	4,998.15	45.2 %	2,738.99
D400	EasyBLOK D400	725 LB	47.00	34,075.00	45.2 %	18,673.10
D970	MUCPUSH II Fresh Water Based Spacer	100 BBL	116.00	11,600.00	45.2 %	6,356.80
D974	CemNET Conversion	374 BBL	57.50	21,505.00	45.2 %	11,784.74
L064	Clay Stabilizer	10 GA	31.20	312.00	45.2 %	170.98

Subtotals: \$ 154,093.52 \$ 84,443.24

Total Discount:	\$	84,127.60
Job Price Estimate*:	\$	108,698.70