



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/23/2014  
 Invoice #: 12083  
 API#: 05-123-38057  
 Foreman: Calvin Reimers

Customer: Encana  
 Well Name: McConahay 1D-34H-H266

County: Weld  
 State: Colorado  
 Sec: 34  
 Twp: 2N  
 Range: 64W

Consultant: Rich  
 Rig Name & Number: Ensign 124  
 Distance To Location: 23 Miles  
 Units On Location: 3104/3203  
 Time Requested: 800pm  
 Time Arrived On Location: 615pm  
 Time Left Location: 6:30am

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 40.00	Cement Density (lb/gal) : 15.2
Casing Depth (ft.) : 1,075	Cement Yield (cuft) : 1.27
Total Depth (ft) : 1110	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 12.25	% Excess: 45%
Conductor Length (ft) : 84	Displacement Fluid lb/gal: 8.3
Conductor ID : 16	BBL to Pit: 30
Shoe Joint Length (ft) : 40	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 23	H2O Wash Up (bbls): 20.0
Max Rate: 7	Spacer Ahead Makeup
Max Pressure: 2500	10bbls H2O+KCL+Dye in 2nd 10bbls

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> 16.93 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> 80.24 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> 74.84 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> 849.02 PSI
<b>cuft of Casing</b> 310.44 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	<b>Pressure of the fluids inside casing</b>
<b>Total Slurry Volume</b> 402.21 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> 446.48 psi <b>Shoe Joint:</b> 31.40 psi <b>Total:</b> 477.88 psi
<b>bbls of Slurry</b> 103.87 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	<b>Differential Pressure:</b> 371.14 psi
<b>Sacks Needed</b> 459 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Collapse PSI:</b> #N/A psi <b>Burst PSI:</b> #N/A psi
<b>Mix Water</b> 64.40 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Total Water Needed:</b> 194.64 bbls

X James H. R.  
 Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.



**Bison Oil Well Cementing  
Single Cement Surface Pipe**

Customer  
Well Name

Encana  
McConahay 1D-34H-H266

INVOICE #  
LOCATION  
FOREMAN  
Date

12083  
Weld  
Calvin Reimers  
3/23/2014

Treatment Report Page 2

**DESCRIPTION OF JOB EVENTS**

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
Safety Meeting	330am															
MIRU	130am															
CIRCULATE	408am	0	456am	30	0			0			0			0		
Drop Plug		10	458am	120	10			10			10			10		
	455am	20	500am	210	20			20			20			20		
		30	502am	300	30			30			30			30		
		40	503am	410	40			40			40			40		
	M & P	50	505am	450	50			50			50			50		
	Time	Sacks			60	507am	490	60			60			60		
	415am	459	70	509am	530	70		70			70			70		
	452am		80	512am	440	80		80			80			80		
			90	Bump	1030	90		90			90			90		
			100			100		100			100			100		
			110			110		110			110			110		
	% Excess	45%	120			120		120			120			120		
	Mixed bbls	64.4	130			130		130			130			130		
	Total Sacks	459	140			140		140			140			140		
	bbl Returns	30	150			150		150			150			150		
	Water Temp	64														

Notes:

The day

Float Held

1/2 bbl back on bleed off

Casing PSI Test 513am 1500psi to 528am 1500psi

x James L. Bourn  
Work Performed

x Go Man  
Title

x 24 March 14  
Date



# Bison Oil Well Cementing Single Cement Surface Pipe

## Cementing Customer Satisfaction Survey

Service Date	3/23/2014
Well Name	McConahay 1D-34H-H266
County	Weld
State	Colorado
SEC	34
TWP	2N
RNG	64W

Invoice Number	12083
API #	05-123-38057
Job Type	Single Cement Surface Pipe
Company Name	Encana

Customer Representative Rich

Supervisor Name Calvin Reimers

Employee Name (Including Supervisor)
Calvin Reimers
Eric R
Keith P

Exposure Hours (Per Employee)
12.25
12.25
12.25
36.75

Total Exposure Hours

Did we encounter any problems on this job?  Yes  No

### To Be Completed By Customer

Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
  - 4 - Exceeded Expectation (Provided more than what was required/expected)
  - 3 - Met Expectations (Did what was expected)
  - 2 - Below Expectations (Job problems/failures occurred - \*Recovery made)
  - 1 - Poor Performance (Job problems/failures occurred - \*Some recovery made)
- \*Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING	CATEGORY	CUSTOMER SATISFACTION RATING
_____	Personnel -	Did our personnel perform to your satisfaction?
_____	Equipment -	Did our equipment perform to your satisfaction?
_____	Job Design -	Did we perform the job to the agreed upon design?
_____	Product/Material -	Did our products and materials perform as you expected?
_____	Health & Safety -	Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)?
_____	Environmental -	Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)?
_____	Timeliness -	Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
_____	Condition/Appearance -	Did the equipment condition and appearance meet your expectations?
_____	Communication -	How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

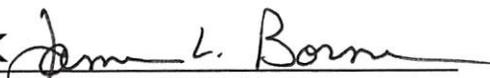
Yes No Did an accident or injury occur?  
 Yes No Did an injury requiring medical treatment occur?  
 Yes No Did a first-aid injury occur?  
 Yes No Did a vehicle accident occur?  
 Yes No Was a post-job safety meeting held?

Please Circle:

Yes No Was a pre-job safety meeting held?  
 Yes No Was a job safety analysis completed?  
 Yes No Were emergency services discussed?  
 Yes No Did environmental incident occur?  
 Yes No Did any near misses occur?

Additional Comments:

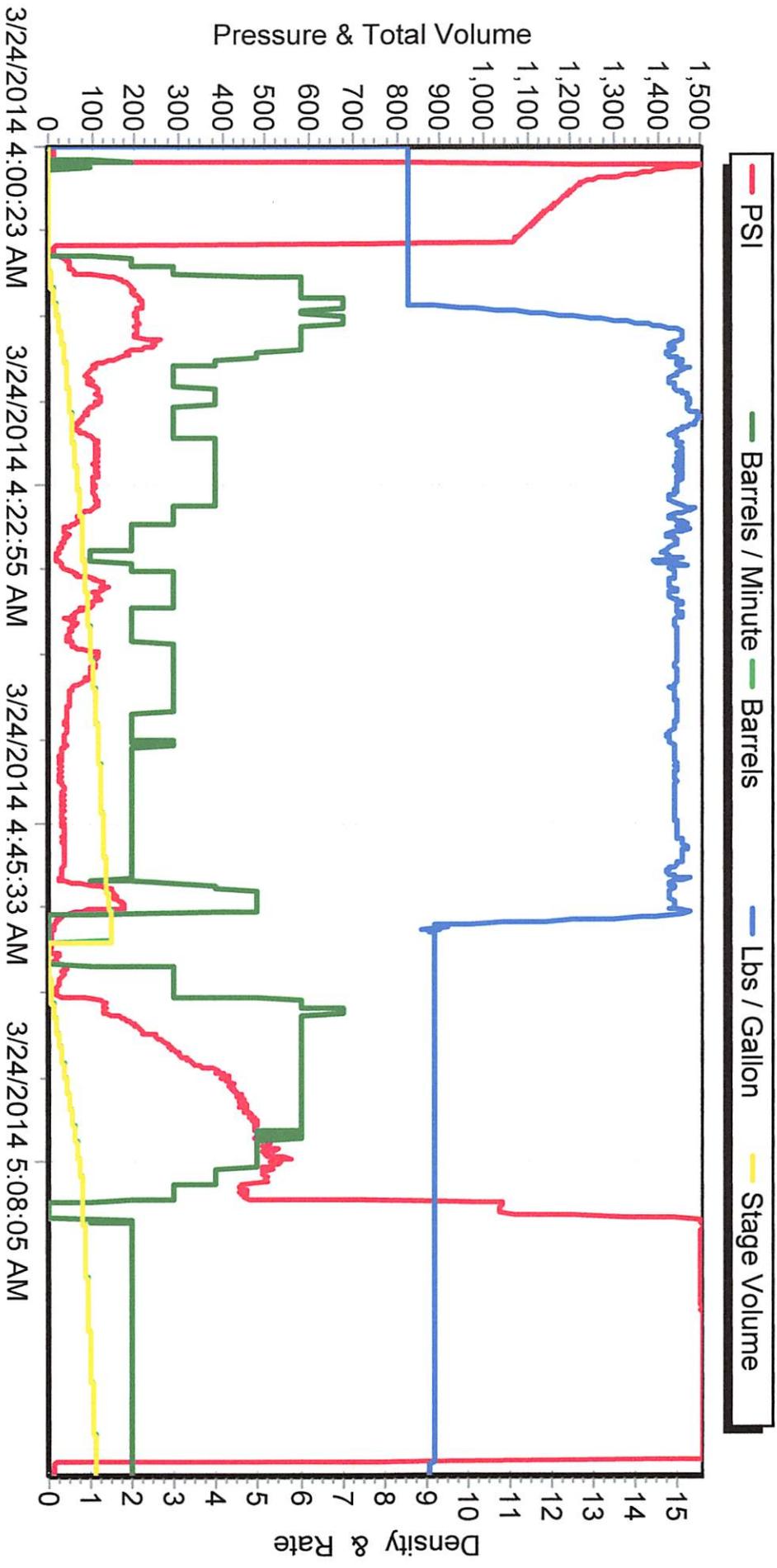
THE INFORMATION HEREIN IS CORRECT -

X   
 Customer Representative's Signature

DATE: 24 March 14

01/20/13

# M/D TOTCO 2000 SERIES



01/20/13