



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/11/2014  
 Invoice #: 12292  
 API#: 445564  
 Foreman: MONTE

Customer: encana  
 Well Name: mcCanahy 4c-34h

County: weld  
 State: colorado  
 Sec: 24  
 Twp: 2n  
 Range: 66w

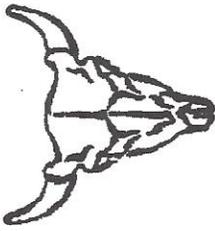
Consultant: mike  
 Rig Name & Number: encana 124  
 Distance To Location: 23.8  
 Units On Location: 3106-3211  
 Time Requested: 400pm  
 Time Arrived On Location: 320pm  
 Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.6250 Casing Weight (lb) : 40 Casing Depth (ft) : 1,234 Total Depth (ft) : 1244 Open Hole Diameter (in.) : 12.25 Conductor Length (ft) : 97 Conductor ID : 15.5 Shoe Joint Length (ft) : 44 Landing Joint (ft) :  Max Rate: Max Pressure:	Cement Name: BFN III Cement Density (lb/gal) : 15.2 Cement Yield (cuft) : 1.27 Gallons Per Sack: 5.89 % Excess: 45% Displacement Fluid lb/gal: BBL to Pit: Fluid Ahead (bbls): H2O Wash Up (bbls): 20.0  Spacer Ahead Makeup 10 freseh 10 dye 40 fresh

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> 18.73 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> 90.23 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> 78.09 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> 974.37 PSI
<b>cuft of Casing</b> 356.08 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> 452.91 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> #N/A psi <b>Shoe Joint:</b> 34.74 psi <b>Total:</b> #N/A psi
<b>bbls of Slurry</b> 116.96 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	<b>Differential Pressure:</b> #N/A psi
<b>Sacks Needed</b> 517 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Collapse PSI:</b> 2570.00 psi <b>Burst PSI:</b> 3950.00 psi
<b>Mix Water</b> 72.52 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Total Water Needed:</b> 92.52 bbls

*Paul Carey*  
 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**

INVOICE # 12292  
LOCATION weld  
FOREMAN MONTE  
Date 1/11/2014

Customer encana  
Well Name mcCanahy 4c-34h

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**DESCRIPTION OF JOB EVENTS**

	4:45pm 4:00 5:30	Displace 1		Displace 2		Displace 3		Displace 4		Displace 5		
		BbLS	Time	PSI	BbLS	Time	PSI	BbLS	Time	PSI	BbLS	Time
Safety Meeting	4:00	0	6:12	100	0	0	0	0	0	0	0	0
MIRU	5:30	10	6:15	100	10	10	10	10	10	10	10	10
CIRCULATE		20	6:17	110	20	20	20	20	20	20	20	20
Drop Plug	6:10	30	6:19	210	30	30	30	30	30	30	30	30
		40	6:21	310	40	40	40	40	40	40	40	40
		50	6:23	430	50	50	50	50	50	50	50	50
M & P		60	6:25	510	60	60	60	60	60	60	60	60
Time		70	6:27	590	70	70	70	70	70	70	70	70
5:35-6:08	Sacks 517	80	6:29	570	80	80	80	80	80	80	80	80
		90	6:31	690	90	90	90	90	90	90	90	90
		100			100	100	100	100	100	100	100	100
		110			110	110	110	110	110	110	110	110
		120			120	120	120	120	120	120	120	120
% Excess 45%		130			130	130	130	130	130	130	130	130
Mixed bbls 72.52		140			140	140	140	140	140	140	140	140
Total Sacks 517		150			150	150	150	150	150	150	150	150
bbl Returns 20												

**Notes:**

safety meeting, miru, pressure test per company man, circulate 30 bbls ahead with dye in 2nd 10. mix and pump 517 sks at 45% excess, drop plug and displace bbls 90  
drop plug and displace 59.2 bbls h2o,  
bump plug at 6:31pm at 690 psi

*Paul Carey*  
X \_\_\_\_\_  
Title

X 1-19-14  
Date



# Bison Oil Well Cementing Single Cement Surface Pipe

## Cementing Customer Satisfaction Survey

Service Date	1/11/2014
Well Name	mcCanahy 4c-34h
County	weld
State	colorado
SEC	24
TWP	2n
RNG	66w

Invoice Number	20511
API #	445564
Job Type	Single Cement Surface Pipe
Company Name	encana

Customer Representative: robert

Supervisor Name: monte

Employee Name (Including Supervisor)	
lee	
jeff	
kurt	
kieth	

Exposure Hours (Per Employee)	
4	
4	
4	
4	
12	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
5	Personnel -
5	Equipment -
5	Job Design -
5	Product/Material -
5	Health & Safety -
5	Environmental -
5	Timeliness -
5	Condition/Appearance -
5	Communication -

#### CUSTOMER SATISFACTION RATING

- Did our personnel perform to your satisfaction?
- Did our equipment perform to your satisfaction?
- Did we perform the job to the agreed upon design?
- Did our products and materials perform as you expected?
- Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)?
- Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)?
- Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
- Did the equipment condition and appearance meet your expectations?
- How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

- Did an accident or injury occur?
- Did an injury requiring medical treatment occur?
- Did a first-aid injury occur?
- Did a vehicle accident occur?
- Was a post-job safety meeting held?

Please Circle:

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

- Was a pre-job safety meeting held?
- Was a job safety analysis completed?
- Were emergency services discussed?
- Did environmental incident occur?
- Did any near misses occur?

Additional Comments:

Good Job, Appreciate the Competance of All workers

THE INFORMATION HEREIN IS CORRECT -

Paul Caray  
Customer Representative's Signature

DATE: \_\_\_\_\_

Any additional Customer Comments or HSE concerns should be described on the back of this form

# M/D TOTCO 2000 SERIES

