



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/30/2014
 Invoice # 12308
 API# 445564
 Foreman: MONTE

Customer: encana
 Well Name: volg mccoey 2f-sh-f267

County: weld
 State: colorado
 Sec: 5
 Twp: 2n
 Range: 67w

Consultant: quiz
 Rig Name & Number: h & p 278
 Distance To Location: 24.2
 Units On Location: 3106-2311
 Time Requested: 2:30am
 Time Arrived On Location: 2:00am
 Time Left Location: _____

WELL DATA

Casing Size OD (in) : 9.6250
 Casing Weight (lb) : 40
 Casing Depth (ft.) : 850
 Total Depth (ft) : 865
 Open Hole Diameter (in.) : 12.25
 Conductor Length (ft) : 108
 Conductor ID : 15.5
 Shoe Joint Length (ft) : 45
 Landing Joint (ft) : 28

Max Rate: _____
 Max Pressure: _____

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 15.2
 Cement Yield (cuft) : 1.27
 Gallons Per Sack: 5.89
 % Excess: 35%
 Displacement Fluid lb/gal: _____
 BBL to Pit: _____
 Fluid Ahead (bbls): _____
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

20 fresh 10 dye

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.16 **cuft**
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 86.95 **cuft**
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 232.38 **cuft**
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 338.48 **cuft**
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 81.38 **bbls**
 (Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 360 **sk**
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 50.46 **bbls**
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 63.16 **bbls**
 (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 671.16 **PSI**

Pressure of the fluids inside casing

Displacement: #N/A **psi**

Shoe Joint: 35.53 **psi**

Total #N/A **psi**

Differential Pressure: #N/A **psi**

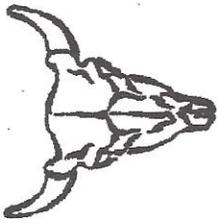
Collapse PSI: 2570.00 **psi**

Burst PSI: 3950.00 **psi**

Total Water Needed: 70.46 **bbls**

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 #
LOCATION
FOREMAN
Date

12308
weld
MONTE
1/30/2014

Customer
Well Name

encana
volg mccooy 2f-sh-f267

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	6:15am	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BbLS	Time	PSI												
Safety Meeting	5:10	0	7:40	20	0		0			0			0			
MIRU	7:12	10	7:43	130	10		10			10			10			
CIRCULATE		20	7:45	260	20		20			20			20			
Drop Plug		30	7:47	300	30		30			30			30			
		40	7:49	390	40		40			40			40			
		50	7:51	436	50		50			50			50			
M & P		60	7:55	370	60		60			60			60			
Time		360	7:59	450	70		70			70			70			
7:14-7:38		80			80		80			80			80			
		90			90		90			90			90			
		100			100		100			100			100			
		110			110		110			110			110			
		120			120		120			120			120			
% Excess		130			130		130			130			130			
Mixed bbbls		140			140		140			140			140			
Total Sacks		150			150		150			150			150			
bbbl Returns																

Notes:

safety meeting, miru, pressure test per company man, circulate 30 bbbls ahead with dye in last 10. mix and pump 360 sks at 35 % excess
drop plug and displace 61.42 bbbls h2o, 31 back

X *[Signature]*
Work Performed

X Title

X 1-30-14
Date



Bison Oil Well Cementing Single Cement Surface Pipe

Cementing Customer Satisfaction Survey

Service Date	1/30/2014
Well Name	volg mccooy 2f-sh-f267
County	weld
State	colorado
SEC	5
TWP	2n
RNG	67w

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

Customer Representative charlie

Supervisor Name monte

Employee Name (Including Supervisor)	
	lee
	jeff
	kurt

Exposure Hours (Per Employee)	
	7
	7
	7
	21

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 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 -

[Signature]

Customer Representative's Signature

DATE: _____

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