



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/12/2014

Invoice # 12626

API# 05-123-37976

Foreman: Calvin Reimers

Customer: Encana

Well Name: McConahay 4A-34H

County: Weld

State: Colo.

Sec: 34

Twp: 2N

Range: 66W

Consultant: Mike

Rig Name & Number: Ensign 124

Distance To Location: 24 Miles

Units On Location: 3106/3203

Time Requested: 200pm

Time Arrived On Location: 140pm

Time Left Location: 9:00 pm

WELL DATA

Casing Size OD (in) : 9.6250
 Casing Weight (lb) : 40
 Casing Depth (ft.) : 1,130
 Total Depth (ft) : 1160
 Open Hole Diameter (in.) : 12.25
 Conductor Length (ft) : 84
 Conductor ID : 16
 Shoe Joint Length (ft) : 45
 Landing Joint (ft) : 17

Max Rate: 7
 Max Pressure: 2500

Cement Data

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: 8.3
 BBL to Pit: 34
 Fluid Ahead (bbls):
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
 30bbls H2O+KCL+Dye in 2nd 10bbls

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.14 cuft
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 74.84 cuft
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 327.58 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 421.56 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 108.87 bbls
 (Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 481 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 67.50 bbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 83.56 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 892.23 PSI

Pressure of the fluids inside casing

Displacement: 467.84 psi

Shoe Joint: 35.51 psi

Total 503.34 psi

Differential Pressure: 388.89 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 201 ~~87.50~~ bbls

x Bud Burke
 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.



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Cementing Customer Satisfaction Survey

Service Date	2/12/2014
Well Name	McConahay 4A-34H
County	Weld
State	Colo.
SEC	34
TWP	2N
RNG	66W

Invoice Number	20511
API #	05-123-37976
Job Type	Single Cement Surface Pipe
Company Name	Encana

Customer Representative: Mike / Bubby

Supervisor Name: Calvin Reimers

Employee Name (Including Supervisor)
Calvin Reimers
Pablo S
Lee S
Keith P

Exposure Hours (Per Employee)
7
7
7
7
28

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

Please Circle:

Yes <input checked="" type="radio"/> No	Did an accident or injury occur?	Yes <input checked="" type="radio"/> No	Was a pre-job safety meeting held?
Yes <input checked="" type="radio"/> No	Did an injury requiring medical treatment occur?	Yes <input checked="" type="radio"/> No	Was a job safety analysis completed?
Yes <input checked="" type="radio"/> No	Did a first-aid injury occur?	Yes <input checked="" type="radio"/> No	Were emergency services discussed?
Yes <input checked="" type="radio"/> No	Did a vehicle accident occur?	Yes <input checked="" type="radio"/> No	Did environmental incident occur?
Yes <input checked="" type="radio"/> No	Was a post-job safety meeting held?	Yes <input checked="" type="radio"/> No	Did any near misses occur?

Additional Comments:

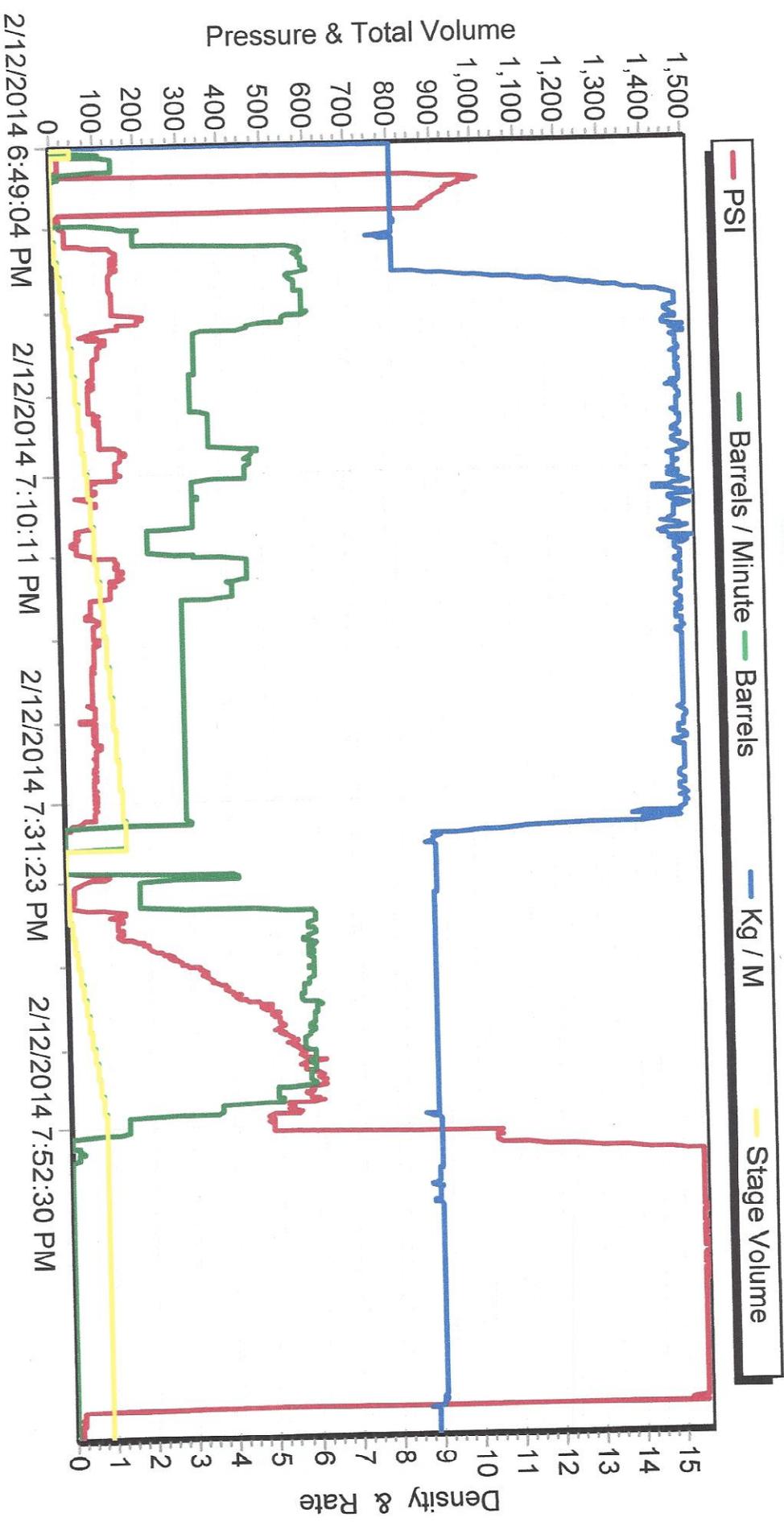
THE INFORMATION HEREIN IS CORRECT -

Paul Burke
Customer Representative's Signature

DATE: 2-12-14

MOSIR

M/D TOTCO 2000 SERIES



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