

Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/7/2014

Invoice # 55022

API#

Foreman: monte

Customer: Encana

Well Name: Drieth 4g-6h-136b

County: Weld

State: Colorado

Sec: 6

Twp: 3n

Range: 68w

Consultant: kevin

Rig Name & Number: h&p 522

Distance To Location: 26.3

Units On Location: 4028-3201 4017-3211

Time Requested: 11:00am

Time Arrived On Location: 10:00am

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft.) : 875
Total Depth (ft) : 880
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 110
Conductor ID : 15.6
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 39

Max Rate: 5

Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 50%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 20.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10 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 90.42 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 359.37 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 468.95 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 83.52 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 369 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 51.78 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 65.89 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 690.90 PSI

Pressure of the fluids inside casing

Displacement: 357.88 psi

Shoe Joint: 35.53 psi

Total 393.41 psi

Differential Pressure: 297.49 psi

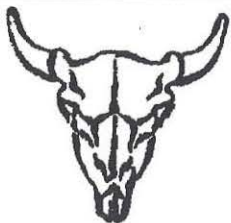
Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 157.68 bbls

X *Kevin Beyer*
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
Drieth 4g-6h-136b

INVOICE #
LOCATION
FOREMAN
Date

55022
Weld
monte
9/7/2014

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	2:55															
MIRU	2:15															
CIRCULATE	3:12	0	3:40	0	0			0			0			0		
Drop Plug		10	3:44	30	10			10			10			10		
3:37		20	3:46	150	20			20			20			20		
		30	3:48	170	30			30			30			30		
		40	3:50	290	40			40			40			40		
M & P		50	3:52	300	50			50			50			50		
Time	Sacks	60	3:54	300	60			60			60			60		
3:17-3:37	369	70	3:55	630	70			70			70			70		
		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	50%	120			120			120			120			120		
Mixed bbls	51.78	130			130			130			130			130		
Total Sacks	369	140			140			140			140			140		
bbl Returns	21	150			150			150			150			150		
Water Temp	58															

Notes:

Safety Meeting, miru, pressure test per company man circulate 20 bbls ahead with dye in 2nd 10,
mix and pump 369 sks at 50 % excess. drop plug and displace 65.89 bbls h2o
cassing test 1500 lb for 15 min

X

Work Preformed

X

Title

Kevin Berger

X

Date

9-7-14