



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/1/2014
Invoice #: 12250
API#
Foreman: Zach/Monte

Customer: Encana
Well Name: Bohrer 2H-19HE368

County: weld
State: Colorado
Sec: 19
Twp: 3N
Range: 68W
Consultant: Robert
Rig Name & Number: Patteson
Distance To Location: 22.5
Units On Location: 4027-3106/4031-3210
Time Requested: 20:00
Time Arrived On Location: 19:20
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft) : 844
Total Depth (ft) : 870
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 112
Conductor ID : 15.6
Shoe Joint Length (ft) : 46
Landing Joint (ft) : 35

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: 60%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 0.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.77 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 92.07 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 366.80 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 478.63 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 85.24 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 377 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 52.85 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 63.13 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 666.42 PSI

Pressure of the fluids inside casing

Displacement: 343.90 psi

Shoe Joint: 36.66 psi

Total 380.56 psi

Differential Pressure: 285.86 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 165.98 bbls

X 
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
Bohrer 2H-19HE368

INVOICE #
LOCATION
FOREMAN
Date

12250
weld
Zach/Monte
5/1/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 22:56 M & P Time start 22:25 end 22:54 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	22:00 21:15 22:21 Sacks 377 0% 52.85 377 33 65	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
		0	22:57	0	0			0			0			0		
		10	22:59	190	10			10			10			10		
		20	23:00	280	20			20			20			20		
		30	23:02	340	30			30			30			30		
		40	23:04	420	40			40			40			40		
		50	23:06	470	50			50			50			50		
		60	23:09	390	60			60			60			60		
		70			70			70			70			70		
		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		
		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		

Notes:

rig up, safety meeting, pressure test per company man, started pumping cement at 22:25 mixed and pumped 377 sks. Then displaced 61.5bbls bumped plug at 23:10

X

Work Performed

X

Title

X

Date