



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/26/2014

Invoice # 12186

API#

Foreman: kirk

Customer: encana

Well Name: mcconahay 1e-34h

County: weld

State: Colorado

Sec: 34

Twp: 2n

Range: 66w

Consultant: dave

Rig Name & Number: ensign 124

Distance To Location:

Units On Location: 3106-3211

Time Requested: 1200 pm

Time Arrived On Location: 1030 am

Time Left Location: 9:30 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft) : 1,092
Total Depth (ft) : 1125
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 100
Conductor ID : 15.5
Shoe Joint Length (ft) : 38
Landing Joint (ft) : 22

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: 40%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 15.0

Spacer Ahead Makeup

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 16.18 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 80.51 cuft

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

cuft of Casing 310.67 cuft

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

Total Slurry Volume 407.36 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 101.57 bbls

(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 449 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 62.97 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 81.59 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 862.24 PSI

Pressure of the fluids inside casing

Displacement: 454.46 psi

Shoe Joint: 30.00 psi

Total 484.47 psi

Differential Pressure: 377.77 psi

Collapse PSI: #N/A psi

Burst PSI: #N/A psi

Total Water Needed: 189.56 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
mcconahay 1e-34h

INVOICE #
LOCATION
FOREMAN
Date

12186
weld
kirk
4/26/2014

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DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU	643pm	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE	508pm	0	753pm	10	0			0			0			0		
Drop Plug	713pm	10	755pm	60	10			10			10			10		
718 am		20	757pm	190	20			20			20			20		
		30	759pm	310	30			30			30			30		
		40	801pm	410	40			40			40			40		
M & P		50	803pm	460	50			50			50			50		
Time	Sacks	60	805pm	510	60			60			60			60		
721pm	449	70	808pm	540	70			70			70			70		
750 pm stop		80	811pm	460	80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	40%	120			120			120			120			120		
Mixed bbls	63	130			130			130			130			130		
Total Sacks	449	140			140			140			140			140		
bbl Returns	39	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 814pm 590 psi 101.5 bbls slurry

casing test 1500 psi for 15 min

X Jim L. Born
Work Performed

X Co Man
Title

X 4-26-14
Date

M/D TOTCO 2000 SERIES

