



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/12/2014
Invoice #: 65040
API#:
Foreman: Steve

Customer: Noble Energy Inc.
Well Name: Talley(Wells Ranch AE 19-689)

County: Weld
State: Colorado
Sec:
Twp:
Range:
Consultant:
Rig Name & Number: H&P 321
Distance To Location:
Units On Location: 4031-3106
Time Requested: 230
Time Arrived On Location: 215
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 750
Total Depth (ft) : 760
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 110
Conductor ID : 15.5
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 0

Max Rate:
Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.1
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 0%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 15.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.21 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 88.56 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 312.54 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 420.31 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 74.86 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 282 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 50.24 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 54.52 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 549.01 PSI

Pressure of the fluids inside casing

Displacement: 304.09 psi

Shoe Joint: 32.42 psi

Total 336.51 psi

Differential Pressure: 212.50 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 139.76 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

Noble Energy Inc.
Talley(Wells Ranch AE 19-689)

INVOICE #
LOCATION
FOREMAN
Date

65040
Weld
Lee Sharp
12/12/2014

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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	14:50															
MIRU	14:30															
CIRCULATE	15:22	0	15:56		0			0			0			0		
Drop Plug		10	15:58	100	10			10			10			10		
15:56		20	16:00	150	20			20			20			20		
		30	16:03	300	30			30			30			30		
		40	16:05	350	40			40			40			40		
M & P		50	16:07	325	50			50			50			50		
Time	Sacks	60	Land	800	60			60			60			60		
15:30-15:55	303	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		
% Excess	10	120			120			120			120			120		
Mixed bbls	54	130			130			130			130			130		
Total Sacks	303	140			140			140			140			140		
bbl Returns	10	150			150			150			150			150		
Water Temp	100															

Notes:

The day

Job went smoothly

Plug landed on calculated final lift 320 landed at 800 psi

Float checked and held

X 
Work Performed

X WSS
Title

X 12-12-14
Date