



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/8/2015
Invoice #: 35102
API#:
Foreman: Kirk Kallhoff

Customer: Noble Energy Inc.

Well Name: tripuca state Id 02-75-1bhn

County: Weld
State: Colorado

Sec: 14
Twp: 9n
Range: 58w

Consultant: stetson
Rig Name & Number: h&p 321
Distance To Location:
Units On Location: 4030-3103/4018-3204
Time Requested: 300 pm
Time Arrived On Location: 200 pm
Time Left Location: 10:00 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,198
Total Depth (ft) : 1243
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 35

Max Rate:
Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.23 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 89.10 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 643.95 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 751.28 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 133.80 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 504 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 89.80 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 92.07 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 883.76 PSI

Pressure of the fluids inside casing

Displacement: 498.45 psi

Shoe Joint: 30.98 psi

Total 529.43 psi

Differential Pressure: 354.34 psi

Collapse PSI: 2020.00 psi

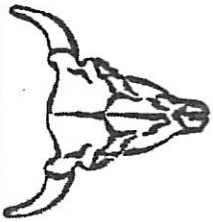
Burst PSI: 3520.00 psi

Total Water Needed: 221.87 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

INVOICE #
LOCATION
FOREMAN
Date

35102
Weld
Kirk Kallhoff
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Customer
Well Name

Noble Energy Inc.
tripuca state Id 02-75-1bhn

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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	730pm															
MIRU	645pm	0	850pm	10	0			0			0			0		
CIRCULATE	800pm	10	853pm	130	10			10			10			10		
Drop Plug		20	855pm	160	20			20			20			20		
850 pm		30	857pm	170	30			30			30			30		
		40	859pm	230	40			40			40			40		
M & P		50	901pm	290	50			50			50			50		
Time	Sacks	60	903pm	360	60			60			60			60		
807 pm	503	70	905pm	410	70			70			70			70		
847 pm stop		80	907pm	450	80			80			80			80		
		90	910pm	430	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	20%	120			120			120			120			120		
Mixed bbls	89.5	130			130			130			130			130		
Total Sacks	503	140			140			140			140			140		
bbl Returns	13	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 912 pm 620 psi

casing test 1000 psi 15 min

X

X WSS

X 1-8-15
Date