



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/3/2014

Invoice # 12251

API#

Foreman: monte

Customer: noble

Well Name: wells ranch AE30=66=1BHNB

County: weld

State: Colorado

Sec: 29

Twp: 6N

Range: 62W

Consultant: josh

Rig Name & Number: H&P 321

Distance To Location: 32.8

Units On Location: 4028-3202/4031-3210

Time Requested: 12:15

Time Arrived On Location: 1:00

Time Left Location: 2:30

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 582
Total Depth (ft) : 644
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 15.6
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 34

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: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 0.0
Fluid Ahead (bbls): 40.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10 fresh 10 dye 20 fresh

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.53 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 82.20 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 304.17 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 405.91 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 72.29 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 320 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 44.82 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 44.14 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 459.55 PSI

Pressure of the fluids inside casing

Displacement: 231.54 psi

Shoe Joint: 35.53 psi

Total 267.08 psi

Differential Pressure: 192.47 psi

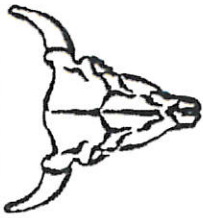
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 148.96 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 # 12251
LOCATION weld
FOREMAN monte
Date 5/3/2014

Customer
Well Name

noble
wells ranch AE30=66=1BHNB

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	1:00 12:30 1:22	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		0	1:47	0	0			0			0			0		
MIRU		10	1:49	40	10			10			10			10		
CIRCULATE		20	1:53	140	20			20			20			20		
Drop Plug		30	1:56	170	30			30			30			30		
1:47		40	1:59	260	40			40			40			40		
		50	2:02	570	50			50			50			50		
M & P		60			60			60			60			60		
Time	Sacks	70			70			70			70			70		
1:32-1:45	320	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		
% Excess	0%	130			130			130			130			130		
Mixed bbls	44.82	140			140			140			140			140		
Total Sacks	320	150			150			150			150			150		
bbl Returns	18															
Water Temp	53															

Notes:

safely meeting, miru. Pressure test per company man. Circulate 40 bbls ahead with dye in 2nd 10, mix and pump 320 sks at 20 % excess, drop plug and displace 44.9 b

X WSS

X 5/3/14
Date

Work Prepared