



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/14/2014
Invoice #: 12285
API#: _____
Foreman: Kirk

Customer: noble
Well Name: wells ranch aa 35-65-1bhnc

County: weld
State: Colorado
Sec: 36
Twp: 6n
Range: 63w

Consultant: johnny
Rig Name & Number: h&p 343
Distance To Location: _____
Units On Location: 3103-3205
Time Requested: 830 am
Time Arrived On Location: 730 am
Time Left Location: 12:00 pm

WELL DATA

Casing Size OD (in) : 9.6250
Casing Weight (lb) : 36
Casing Depth (ft) : 610
Total Depth (ft) : 635
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 15.5
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 25

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: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit: _____
Fluid Ahead (bbls): _____
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8 921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.66 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 268.20 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 367.37 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 85.06 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 376 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 52.74 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.77 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 481.66 PSI

Pressure of the fluids inside casing

Displacement: 244.48 psi

Shoe Joint: 33.95 psi

Total 278.43 psi

Differential Pressure: 203.22 psi

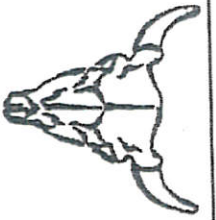
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 72.74 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
wells ranch aa 35-65-1bhc

INVOICE #
LOCATION
FOREMAN
Date

12285
weld
Kirk
2/14/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	1030am 940am 1045am	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI
Safety Meeting																
MIRU																
CIRCULATE		0	1115	10	0			0			0			0		
Drop Plug		10	1117	80	10			10			10			10		
		20	1119	150	20			20			20			20		
1115am		30	1121	230	30			30			30			30		
		40	1123	230	40			40			40			40		
M & P		50			50			50			50			50		
		60			60			60			60			60		
Time	Sacks	60			70			70			70			70		
1055 am	346	70			80			80			80			80		
1112 am stop		80			90			90			90			90		
		90			100			100			100			100		
		100			110			110			110			110		
		110			120			120			120			120		
% Excess	20%	120			130			130			130			130		
Mixed bbls	48.5	130			140			140			140			140		
Total Sacks	346	140			150			150			150			150		
bbl Returns	15	150														

Notes:

bumped plug at 1126 am 390 psi 78.2 bbls slurry

X *[Signature]* Title *[Signature]* Date 2-14-14