



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/26/2014
Invoice #: 12347
API#
Foreman: kirk

Customer: noble
Well Name: wells ranch ae 31-69hnc

County: weld
State: Colorado
Sec: 29
Twp: 6n
Range: 62w
Consultant: seth
Rig Name & Number: h&p 343
Distance To Location:
Units On Location: 3103-3210
Time Requested: 930 pm
Time Arrived On Location: 830pm
Time Left Location: 11:30pm

WELL DATA

Casing Size OD (in): 9.625
Casing Weight (lb): 36.00
Casing Depth (ft): 596
Total Depth (ft): 635
Open Hole Diameter (in.): 13.75
Conductor Length (ft): 100
Conductor ID: 15.5
Shoe Joint Length (ft): 44
Landing Joint (ft): 29

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: 0%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 40.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.10 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 260.84 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 360.44 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 64.19 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 284 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 39.80 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 44.92 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 470.60 PSI

Pressure of the fluids inside casing

Displacement: 238.01 psi

Shoe Joint: 34.74 psi

Total 272.75 psi

Differential Pressure: 197.85 psi

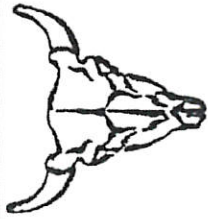
Collapse PSI: #N/A psi

Burst PSI: #N/A psi

Total Water Needed: 144.72 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 # 12347
LOCATION weld
FOREMAN kirk
Date 3/26/2014

Customer noble
Well Name wells ranch ae 31-69hnc

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI
Safety Meeting	943pm	0	1034	10	0			0			0			0		
MIRU	915pm	10	1037	60	10			10			10			10		
CIRCULATE	1003pm	20	1039	120	20			20			20			20		
Drop Plug		30	1041	220	30			30			30			30		
1034pm		40	1043	230	40			40			40			40		
M & P		50			50			50			50			50		
Time	Sacks	60			60			60			60			60		
1011 pm	328	70			70			70			70			70		
1031 pm stop		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	16%	120			120			120			120			120		
Mixed bbls	46	130			130			130			130			130		
Total Sacks	328	140			140			140			140			140		
bbl Returns	11	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 1047 pm 400 psi 74.1 bbls slurry

casing test 1000 psi for 15 min

X

X WSS
Title

X 3-26-14
Date

Work Performed