



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/25/2014
Invoice #: 12030
API#
Foreman: Kirk Kallhoff

Customer: Noble
Well Name: wells ranch ae30-62 hnc

County: weld
State: Colorado
Sec: 29
Twp: 6n
Range: 62w
Consultant: matt
Rig Name & Number: h&p343
Distance To Location: 30
Units On Location: 3103-3210
Time Requested: 700 am
Time Arrived On Location: 600 am
Time Left Location: 1:30 pm

WELL DATA

Casing Size OD (in): 9.625
Casing Weight (lb): 36.00
Casing Depth (ft): 601
Total Depth (ft): 641
Open Hole Diameter (in.): 13.75
Conductor Length (ft): 100
Conductor ID: 16
Shoe Joint Length (ft): 43
Landing Joint (ft): 30

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): 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 18.66 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 342.51 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 450.27 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 80.19 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 355 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 49.72 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.46 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 474.55 PSI

Pressure of the fluids inside casing

Displacement: 240.60 psi

Shoe Joint: 33.95 psi

Total 274.55 psi

Differential Pressure: 200.00 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 155.18 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 ae30-62 hnc

INVOICE #
LOCATION
FOREMAN
Date

Tr

DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4		
MIRU	723am	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	
CIRCULATE	645am	0	821am	10	0			0			0		
Drop Plug	738am	10	823am	90	10			10			10		
821 am		20	825am	160	20			20			20		
		30	827am	210	30			30			30		
		40	829am	240	40			40			40		
M & P		50			50			50			50		
Time	Sacks	60			60			60			60		
756 am	349	70			70			70			70		
818 am		80			80			80			80		
		90			90			90			90		
		100			100			100			100		
		110			110			110			110		
% Excess	20%	120			120			120			120		
Mixed bbls	49	130			130			130			130		
Total Sacks	349	140			140			140			140		
bbl Returns	17	150			150			150			150		
Water Temp													

Notes:

bumped plug at 833 am 470 psi 78.9 bbls slurry

casing test 1000 psi for 15 min

X Mark
Work Preformed

X _____
Title