



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/16/2014

Invoice #: 12209

API#: 05-123-38667

Foreman: Calvin Reimers

Customer: Noble

Well Name: Wells Ranch AA 35-62-1HNA

County: Weld

State: Colorado

Sec: 36

Twp: 6N

Range: 63W

Consultant: Kevin

Rig Name & Number: H&P 277

Distance To Location: 34 Miles

Units On Location: 3104/3210

Time Requested: 930am

Time Arrived On Location: 840am

Time Left Location: 100pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 601
Total Depth (ft) : 635
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 28

Max Rate: 7

Max Pressure: 2500

Cement Data

Cement Name: BFN III

Cement Density (lb/gal) : 15.2

Cement Yield (cuft) : 1.27

Gallons Per Sack: 5.89

% Excess: 25%

Displacement Fluid lb/gal: 8.3

BBL to Pit: 30

Fluid Ahead (bbls): 40.0

H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10bbls H2O+KCL+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.62 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 263.69 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 372.41 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 82.91 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 367 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 51.40 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.20 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 474.89 PSI

Pressure of the fluids inside casing

Displacement: 239.84 psi

Shoe Joint: 35.69 psi

Total 275.53 psi

Differential Pressure: 199.36 psi

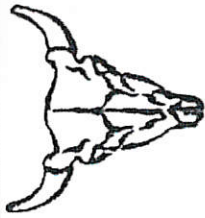
Collapse PSI: #N/A psi

Burst PSI: #N/A psi

Total Water Needed: 156.60 bbls

X *Kevin*
Authorization To Proceed

Customers hereby acknowledge and specifically agree 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 35-62-1HNA

INVOICE #
LOCATION
FOREMAN
Date

12209
Weld
Calvin Reimers
4/16/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	1047am 1020am 1111am	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	1139am	80	0			0			0			0		
MIRU		10	1142am	130	10			10			10			10		
CIRCULATE		20	1144am	180	20			20			20			20		
Drop Plug		30	1146am	240	30			30			30			30		
1138am		40	1148am	240	40			40			40			40		
		50	1152am	220	50			50			50			50		
M & P		60	Bump	330	60			60			60			60		
Time	Sacks	70			70			70			70			70		
1119am		80			80			80			80			80		
1137am		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
% Excess	2.4%	130			130			130			130			130		
Mixed bbls	51.4	140			140			140			140			140		
Total Sacks	337	150			150			150			150			150		
bbl Returns	14															
Water Temp	46.6															

Notes:

The day

Float Held

1/2 bbl back on bleed off

Casing PSI Test 1153am 1030psi to 1208pm 1050psi

X

X

Title

X

Date