



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/31/2014
Invoice #: 25078
API#: 05-123-36461
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Buffalo 13N-15HZ

County: Weld
State: Colorado
Sec: 6
Twp: 1N
Range: 68W

Consultant: Allen
Rig Name & Number: Major 42
Distance To Location: 29 Miles
Units On Location: 4023-3104/4024-3203
Time Requested: 300pm
Time Arrived On Location: 145pm
Time Left Location: 8:45pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,302
Total Depth (ft) : 1318
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 8

Max Rate: 7
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 26%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 18
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
30bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.59 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 0.00 cuft

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

cuft of Casing 799.37 cuft

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

Total Slurry Volume 817.96 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 145.68 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 549 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 97.77 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 97.98 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 960.66 PSI

Pressure of the fluids inside casing

Displacement: 543.04 psi

Shoe Joint: 31.59 psi

Total 574.63 psi

Differential Pressure: 386.04 psi

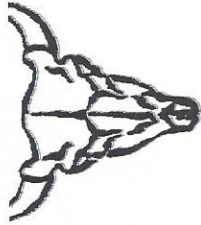
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 245.75 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.



Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Buffalo 13N-15HZ

LOCATION
FOREMAN
Date

Weld
Calvin Reimers
10/31/2014

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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	355pm			0	502pm	50	0			0			0		
MIRU	330pm			10	505pm	30	10			10			10		
CIRCULATE	431pm			20	506pm	70	20			20			20		
Drop Plug				30	508pm	100	30			30			30		
501pm				40	510pm	170	40			40			40		
				50	512pm	220	50			50			50		
M & P				60	514pm	280	60			60			60		
Time	Sacks			70	516pm	340	70			70			70		
438pm		549		80	518pm	390	80			80			80		
458pm				90	520pm	390	90			90			90		
Top Off				100	524pm	370	100			100			100		
737pm		79		110	Bump	1360	110	526pm		110			110		
750pm				120	Bump	1020	120	528pm		120			120		
% Excess	26%			130			130			130			130		
Mixed bbls	97.77			140			140			140			140		
Total Sacks	549			150			150			150			150		
bbl Returns	18														
Water Temp	61														

Notes:

The day

1/2 bbl back on bleed off

Used 79 sks 20.96 bbls Slurry on Top Off

Total used 628 sks and 166.64 bbls Slurry

X

X

X

Work Performed

Title

Date

SERIES 2000

