



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/15/2015
Invoice # 80011
API# 05-123-40946
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Cheese State 26N-21HZ

County: Weld
State: Colorado
Sec: 28
Twp: 3N
Range: 65W

Consultant: Randy/Tim
Rig Name & Number: Advanced 10
Distance To Location: 12 Miles
Units On Location: 4027-3106/4030-3203
Time Requested: 1100pm
Time Arrived On Location: 915pm
Time Left Location: 3:00 AM

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,194
Total Depth (ft) : 1210
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 16
Shoe Joint Length (ft) : 41
Landing Joint (ft) : 8

Max Rate: 6
Max Pressure: 1750

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 10
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 17.82 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 35.64 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 676.78 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 730.23 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 130.05 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 490 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 87.28 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 89.75 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 880.79 PSI

Pressure of the fluids inside casing

Displacement: 497.12 psi

Shoe Joint: 30.28 psi

Total 527.40 psi

Differential Pressure: 353.39 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 227.03 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.



DISON ON WELL CEMENTING
Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Cheese State 26N-21HZ

INVOICE #
LOCATION
FOREMAN
Date

00011
Weld
Calvin Reimers
3/16/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE		0	151am	90	0			0			0			0		
Drop Plug		10	153am	60	10			10			10			10		
150am		20	155am	100	20			20			20			20		
		30	157am	100	30			30			30			30		
		40	159am	210	40			40			40			40		
M & P		50	201am	270	50			50			50			50		
Time Sacks		60	203am	320	60			60			60			60		
123am	490	70	204am	380	70			70			70			70		
148am		80	206am	320	80			80			80			80		
		90	210am	320	90			90			90			90		
		100	Bump	830	100			100			100			100		
		110			110			110			110			110		
% Excess	20%	120			120			120			120			120		
Mixed bbls	87.28	130			130			130			130			130		
Total Sacks	490	140			140			140			140			140		
bbl Returns	10	150			150			150			150			150		
Water Temp	62.4															

Notes:

The day

1/2 bbl Back on Bleed Off

X Randy Case
Work Performed

X APC Consultant
Title

X 03/16/2015
Date

SERIES 2000

