



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/3/2015
Invoice # 80122
API# 05-123-41286
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: BAT 28N-9HZ

County: Weld
State: Colorado
Sec: 9
Twp: 1N
Range: 65W

Consultant: VIVIAN
Rig Name & Number: ADVANCED 10
Distance To Location: 26
Units On Location: 4031-3107, 4030-3203
Time Requested: 2100
Time Arrived On Location: 2000
Time Left Location: 200

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,544
Total Depth (ft) : 1560
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 15.25
Shoe Joint Length (ft) : 38
Landing Joint (ft) : 5

Max Rate: 6
Max Pressure: 1500

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: 39.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

30 BBL WATER W/ DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 16.43 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 30.53 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 882.13 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 929.09 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 165.47 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 624 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 111.05 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 116.83 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1139.10 PSI

Pressure of the fluids inside casing

Displacement: 649.47 psi

Shoe Joint: 27.93 psi

Total 677.40 psi

Differential Pressure: 461.70 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 277.88 bbls

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

Anadarko Petroleum Corporation
BAT 28N-9HZ

INVOICE #
LOCATION
FOREMAN
Date

80122
Weld
JASON KELEHER
4/3/2015

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	1227	0	0			0			0			0		
Drop Plug		10	1229	90	10			10			10			10		
1227		20	1231	40	20			20			20			20		
		30	1233	40	30			30			30			30		
		40	1236	100	40			40			40			40		
M & P		50	1238	230	50			50			50			50		
Time Sacks		60	1240	280	60			60			60			60		
2348-0025		70	1242	320	70			70			70			70		
		80	1245	350	80			80			80			80		
		90	1247	380	90			90			90			90		
		100	1249	410	100			100			100			100		
		110	1253	450	110			110			110			110		
% Excess		120	1257	450	120			120			120			120		
Mixed bbls		130	BUMP	710	130			130			130			130		
Total Sacks		140			140			140			140			140		
bbl Returns		150			150			150			150			150		
Water Temp																

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 2340, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 2342, MIXED AND PUMPED 624 SKS AT 14.2, 165.5 BBL AT 2348, SHUT DOWN AT 0025, STARTED DISPLACEMENT AT 0027, PLUG LANDED AT 450 PSI AT 0057 AND PRESSURED UP TO 710, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL WATER BACK, FLOATS HELD.

x Vernon R
Signature

x Dale Foreman
Title

x 4/3/15
Date

BAT 28N-9HZ SURFACE

