



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/24/2015
Invoice #: 65067
API#: AFE 2092432
Foreman: Lee Sharp

Customer: Anadarko Petroleum Corporation
Well Name: Milk 36C-28HZ

County: Weld
State: Colorado
Sec:
Twp:
Range:

Consultant: Randy
Rig Name & Number: Rig 10
Distance To Location: 8
Units On Location: 4027-3106 / 4030-3203
Time Requested: 12:30
Time Arrived On Location: 12:00
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,220
Total Depth (ft) : 1230
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 45
Conductor ID : 16
Shoe Joint Length (ft) : 44
Landing Joint (ft) :

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: 14%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 0.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
10 10D 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.98 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 40.09 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 654.52 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 713.59 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 127.09 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 479 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 85.29 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 90.92 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 899.82 PSI

Pressure of the fluids inside casing

Displacement: 507.08 psi

Shoe Joint: 32.26 psi

Total 539.34 psi

Differential Pressure: 360.48 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 226.21 bbls

Randy Case
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
Milk 36C-28HZ

INVOICE #
LOCATION
FOREMAN
Date

65067
Weld
Lee Sharp
2/24/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		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	3:15															
MIRU	12:20															
CIRCULATE	4:03	0	4:42		0			0			0			0		
Drop Plug		10	4:45	60	10			10			10			10		
4:42		20	4:47	20	20			20			20			20		
		30	4:50	40	30			30			30			30		
		40	4:52	140	40			40			40			40		
M & P		50	4:54	200	50			50			50			50		
Time	Sacks	60	4:56	270	60			60			60			60		
4:15-4:39	479	70	4:58	320	70			70			70			70		
		80	5:06	510	80			80			80			80		
		90	5:10	770	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	14%	120			120			120			120			120		
Mixed bbls	85.3	130			130			130			130			130		
Total Sacks	479	140			140			140			140			140		
bbl Returns	17	150			150			150			150			150		
Water Temp	50															

Notes:

The day

Job went smoothly with no issue.

Plug landed on calculated bump 300 psi 770 psi

Floats held 3/4 back.

17 bbl of return

x Randy Case
Work Performed

x APC Consultant
Title

x 02/24/15
Date

Milk 36C-28HZ inv. 65067

