



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/22/2015

Invoice # 45132

API# 05-123-41003

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: MILK 36N-28HZ

County: Weld
State: Colorado

Sec: 21
Twp: 3N
Range: 65W

Consultant: TIM

Rig Name & Number: ADVANCED 10

Distance To Location: 11

Units On Location: 4031-3107, 4030-3203

Time Requested: 1000

Time Arrived On Location: 900

Time Left Location: 1430

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,209
Total Depth (ft) : 1224
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 45
Conductor ID : 15.25
Shoe Joint Length (ft) : 44
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: 16%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 24.0
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 18.93 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 34.34 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 657.50 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 710.77 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 126.59 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 477 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 84.96 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 90.46 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 891.71 PSI

Pressure of the fluids inside casing

Displacement: 502.39 psi

Shoe Joint: 32.18 psi

Total 534.57 psi

Differential Pressure: 357.14 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 225.42 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.



**Bison Oil Well Cementing
Single Cement Surface Pipe**

Customer
Well Name

Anadarko Petroleum Corporation
MILK 36N-28HZ

INVOICE #
LOCATION
FOREMAN
Date

45132
Weld
JASON KELEHER
2/22/2015

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	1130															
MIRU	910															
CIRCULATE	1209	0	1256	0	0			0			0			0		
Drop Plug		10	1258	60	10			10			10			10		
1256		20	1300	60	20			20			20			20		
		30	1303	90	30			30			30			30		
		40	1306	150	40			40			40			40		
M & P		50	1309	320	50			50			50			50		
Time	Sacks	60	1311	400	60			60			60			60		
1218-1253	477	70	1313	420	70			70			70			70		
		80	1315	410	80			80			80			80		
		90	1317	410	90			90			90			90		
		100	BUMP	910	100			100			100			100		
		110			110			110			110			110		
% Excess	16%	120			120			120			120			120		
Mixed bbls	84.9	130			130			130			130			130		
Total Sacks	477	140			140			140			140			140		
bbl Returns	24	150			150			150			150			150		
Water Temp	47															

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 1207, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 1209, MIXED AND PUMPED 477 SKS AT 14.2, 126.6 BBL AT 1218, SHUT DOWN AT 1253, STARTED DISPLACEMENT AT 1256, PLUG LANDED AT 410 PSI AT 1317 AND PRESSURED UP TO 910, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL BACK, FLOATS HELD.

X 
Work Performed

X _____
Title

X _____
Date

MILK 36N-28HZ SURFACE

