



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/16/2015

Invoice # 45127

API# 05-123-41000

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: BUTTERBALL 34C-11HZ

County: Weld

State: Colorado

Sec: 10

Twp: 2N

Range: 67W

Consultant: RANDY

Rig Name & Number: ADVANCED 10

Distance To Location: 18

Units On Location: 4031-3107, 4022-3213

Time Requested: 2330

Time Arrived On Location: 2200

Time Left Location: 630

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,132
Total Depth (ft) : 1147
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 60
Conductor ID : 15.25
Shoe Joint Length (ft) : 43
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: 15%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 17.0
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 18.77 cuft

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

cuft of Conductor 45.79 cuft

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

cuft of Casing 602.49 cuft

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

Total Slurry Volume 667.06 cuft

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

bbls of Slurry 118.80 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 448 sk

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

Mix Water 79.73 bbls

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

Displacement: 84.55 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 835.06 PSI

Pressure of the fluids inside casing

Displacement: 469.44 psi

Shoe Joint: 31.91 psi

Total 501.35 psi

Differential Pressure: 333.72 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 214.29 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
BUTTERBALL 34C-11HZ

INVOICE #
LOCATION
FOREMAN
Date

45127
Weld
JASON KELEHER
2/16/2015

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DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 507 M & P Time Sacks 0443-0505 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	315 2215 421 507 M & P Time Sacks 0443-0505 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	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
		0	507	0	0			0			0			0		
		10	509	60	10			10			10			10		
		20	511	60	20			20			20			20		
		30	514	90	30			30			30			30		
		40	516	160	40			40			40			40		
		50	519	240	50			50			50			50		
		60	521	310	60			60			60			60		
		70	523	360	70			70			70			70		
		80	526	360	80			80			80			80		
		90	528	370	90			90			90			90		
		100	BUMP	760	100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 0415, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 0421, MIXED AND PUMPED 448 SKS AT 14.2, 118.8 BBL AT 0443, SHUT DOWN AT 0505, STARTED DISPLACEMENT AT 0505, PLUG LANDED AT 370 PSI AT 0528 AND PRESSURED UP TO 760, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL BACK, FLOATS HELD.

X Randy Case
Work Performed

X APC
Title

X 02/16/2015
Date

BUTTERBALL 34C-11HZ SURFACE

