



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/7/2015

Invoice # 80105

API# 05-123-40958

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: CREAM STATE 2N-21HZ

County: Weld

State: Colorado

Sec: 28

Twp: 3N

Range: 65W

Consultant: VIVIAN

Rig Name & Number: ADVANCED 10

Distance To Location: 12

Units On Location: 4031-3107, 4022-3213

Time Requested: 900

Time Arrived On Location: 800

Time Left Location: 1500

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,214
Total Depth (ft) : 1230
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 45
Conductor ID : 15.25
Shoe Joint Length (ft) : 41
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: 11.0

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 17.68 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 685.88 cuft

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

Total Slurry Volume 737.90 cuft

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

bbls of Slurry 131.42 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 495 sk

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

Mix Water 88.20 bbls

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

Displacement: 91.13 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 895.93 PSI

Pressure of the fluids inside casing

Displacement: 506.10 psi

Shoe Joint: 30.05 psi

Total 536.15 psi

Differential Pressure: 359.78 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 229.33 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
CREAM STATE 2N-21HZ

INVOICE #
LOCATION
FOREMAN
Date

80105
Weld
JASON KELEHER
3/7/2015

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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	1318	0	0			0			0			0		
Drop Plug		10	1320	20	10			10			10			10		
1318		20	1323	20	20			20			20			20		
		30	1327	70	30			30			30			30		
		40	1329	180	40			40			40			40		
M & P		50	1331	250	50			50			50			50		
Time Sacks		60	1333	300	60			60			60			60		
1250-1315		70	1335	320	70			70			70			70		
		80	1338	380	80			80			80			80		
		90	1340	410	90			90			90			90		
		100	BUMP	440	100			100			100			100		
		110			110			110			110			110		
% Excess		120			120			120			120			120		
Mixed bbls		130			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 1241, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 1243, MIXED AND PUMPED 495 SKS AT 14.2, 131.4 BBL AT 1250, SHUT DOWN AT 1315, STARTED DISPLACEMENT AT 1318, PLUG LANDED AT 440 PSI AT 1341 AND PRESSURED UP TO 1000, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL WATER BACK, FLOATS HELD.

X 
Signature

X
Title

X
Date

CREAM STATE 2N-21HZ SURFACE

