



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/1/2015

Invoice # 80120

API# 05-123-41287

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: BAT 3N2-9HZ

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: 400

Time Arrived On Location: 230

Time Left Location: 800

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,556
Total Depth (ft) : 1572
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
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: 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 17.70 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 889.11 cuft

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

Total Slurry Volume 937.33 cuft

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

bbls of Slurry 166.94 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 629 sk

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

Mix Water 112.04 bbls

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

Displacement: 117.53 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1147.88 PSI

Pressure of the fluids inside casing

Displacement: 653.35 psi

Shoe Joint: 30.08 psi

Total 683.42 psi

Differential Pressure: 464.45 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 279.56 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
BAT 3N2-9HZ

INVOICE #
LOCATION
FOREMAN
Date

80120
Weld
JASON KELEHER
4/1/2015

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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	510															
MIRU	245															
CIRCULATE	549	0	627	0	0			0			0			0		
Drop Plug		10	629	70	10			10			10			10		
627		20	631	60	20			20			20			20		
		30	633	60	30			30			30			30		
		40	636	90	40			40			40			40		
M & P		50	638	190	50			50			50			50		
Time	Sacks	60	640	220	60			60			60			60		
0555-0625	629	70	642	280	70			70			70			70		
		80	644	350	80			80			80			80		
		90	646	400	90			90			90			90		
		100	648	440	100			100			100			100		
		110	651	440	110			110			110			110		
% Excess	20%	120	653	460	120			120			120			120		
Mixed bbls	112	130	BUMP	880	130			130			130			130		
Total Sacks	629	140			140			140			140			140		
bbl Returns	17	150			150			150			150			150		
Water Temp	57															

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 0547, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 0549, MIXED AND PUMPED 629 SKS AT 14.2, 166.9 BBL AT 0555, SHUT DOWN AT 0625, STARTED DISPLACEMENT AT 0627, PLUG LANDED AT 440 PSI AT 0653 AND PRESSURED UP TO 880, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL WATER BACK, FLOATS HELD.

X

Signature

X

Title

X

Date

BAT 3N2-9HZ SURFACE

