



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/13/2015

Invoice # 45111

API# 05-123-40747

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: GOODIN 37N-B6HZ

County: Weld

State: Colorado

Sec: 7

Twp: 1N

Range: 65W

Consultant: TOBY

Rig Name & Number: MAJORS 42

Distance To Location: 22

Units On Location: 4031-3107, 4024-3203

Time Requested: 1230

Time Arrived On Location: 1030

Time Left Location: 1630

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,559
Total Depth (ft) : 1575
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 46
Conductor ID : 15.25
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 8

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: 10%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 21.0
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 18.76 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 35.10 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 813.18 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 867.04 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 154.42 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 582 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 103.63 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 117.77 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1149.79 PSI

Pressure of the fluids inside casing

Displacement: 653.41 psi

Shoe Joint: 31.88 psi

Total 685.29 psi

Differential Pressure: 464.50 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 271.41 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
GOODIN 37N-B6HZ

INVOICE #
LOCATION
FOREMAN
Date

45111
Weld
JASON KELEHER
1/13/2015

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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	1456	0	0			0			0			0		
Drop Plug		10	1458	70	10			10			10			10		
1452		20	1500	70	20			20			20			20		
		30	1502	70	30			30			30			30		
		40	1504	80	40			40			40			40		
M & P		50	1507	200	50			50			50			50		
Time Sacks		60	1509	240	60			60			60			60		
1358-1453		70	1514	270	70			70			70			70		
		80	1517	340	80			80			80			80		
		90	1522	360	90			90			90			90		
		100	1524	360	100			100			100			100		
		110	BUMP	1310	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 2000 PSI AT 1342, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 1344, MIXED AND PUMPED 582 SKS AT 14.2,
154.4 BBL AT 1358, SHUT DOWN AT 1453, STARTED DISPLACEMENT AT 1454, PLUG LANDED AT 4400 PSI AT 1531 AND PRESSURED UP TO 1480, HELD
FOR 2 MINUTES AND RELEASED TO CHECK FLOATS, GOT .75 BBL BACK, FLOATS HELD, PRESSURED BACK UP TO 1000 PSI FOR 2 MINUTES AND RELEASED

X

Work Performed

X

Title

X

Date

GOODIN 37N-B6HZ SURFACE

