



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/15/2015

Invoice # 45113

API# 05-123-40744

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: GOODIN 16N-A6HZ

County: Weld

State: Colorado

Sec: 7

Twp: 1N

Range: 65W

Consultant: LESTER

Rig Name & Number: MAJORS 42

Distance To Location: 22

Units On Location: 4031-3107, 4024-3213

Time Requested: 1900

Time Arrived On Location: 1900

Time Left Location: 100

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,563
Total Depth (ft) : 1579
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: 23.0

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 815.45 cuft

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

Total Slurry Volume 869.32 cuft

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

bbls of Slurry 154.83 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 583 sk

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

Mix Water 103.91 bbls

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

Displacement: 118.10 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1152.90 PSI

Pressure of the fluids inside casing

Displacement: 655.22 psi

Shoe Joint: 31.89 psi

Total 687.11 psi

Differential Pressure: 465.79 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 272.00 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 16N-A6HZ

INVOICE #
LOCATION
FOREMAN
Date

45113
Weld
JASON KELEHER
1/15/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 2339 M & P Time 2304-2337 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	2230 1900 2256 2339 M & P Time 2304-2337 % 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	2339	0	0			0			0			0		
		10	2341	0	10			10			10			10		
		20	2343	40	20			20			20			20		
		30	2346	20	30			30			30			30		
		40	2348	60	40			40			40			40		
		50	2349	90	50			50			50			50		
		60	2351	140	60			60			60			60		
		70	2353	210	70			70			70			70		
		80	2355	330	80			80			80			80		
		90	2357	360	90			90			90			90		
		100	2359	410	100			100			100			100		
		110	1201	450	110			110			110			110		
		120	1206	460	120			120			120			120		
		130	BUMP	1330	130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		

Notes:

PERFORMED PRESSURE TEST TO 2000 PSI AT 2254, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 2256, MIXED AND PUMPED 583 SKS AT 14.2, 154.7 BBL AT 2304, SHUT DOWN AT 2337, STARTED DISPLACEMENT AT 2339, PLUG LANDED AT 460 PSI AT 0006 AND PRESSURED UP TO 1330, HELD FOR 2 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL BACK, FLOATS HELD, PRESSURED BACK UP TO 1000 PSI FOR 2 MINUTES AND RELEASED

X

Work Preformed

X

Title

J E Case

X

Date

GOODIN 16N-A6HZ SURFACE

