

Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/22/2014

Invoice # 65029

API# 05-123-37913

Foreman: Lee Sharp

Customer: Anadarko Petroleum Corporation

Well Name: Greenleaf 15N-15HZ

County: Weld

State: Colorado

Sec: 15

Twp: 2N

Range: 65W

Consultant:

Rig Name & Number: Major 42

Distance To Location: 21.5

Units On Location: 3104/4020

Time Requested: 11:30

Time Arrived On Location: 10:00

Time Left Location: 1:30 p

WELL DATA

Casing Size OD (in) : 3.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 807
Total Depth (ft) : 320
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 0
Conductor ID : 0
Shoe Joint Length (ft) : 39
Landing Joint (ft) : 8

Max Rate:

Max Pressure:

Cement Data

Cement Name: BPN II

Cement Density (lb/gal) : 14.1

Cement Yield (cuft) : 1.49

Gallons Per Sack: 7.48

% Excess: 15%

Displacement Fluid lb/gal: 8.3

BBL to Pit:

Fluid Ahead (bbls): 30.0

H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10F+10D+10F=30

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.06 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 0.00 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 453.57 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 470.62 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 83.82 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 316 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 56.25 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 59.97 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 591.13 PSI

Pressure of the fluids inside casing

Displacement: 331.02 psi

Shoe Joint: 28.79 psi

Total 359.80 psi

Differential Pressure: 231.32 psi

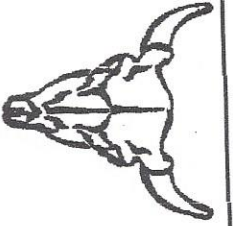
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 166.22 bbls

X *[Signature]*
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
Greenleaf 15N-15HZ

INVOICE #
LOCATION
FOREMAN
Date

65029
Weld
Lee Sharp
11/22/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	Time	Displace 1	PSI	Time	Displace 2	PSI	Time	Displace 3	PSI	Time	Displace 4	PSI	Time	Displace 5	PSI
Safety Meeting	11:10														
MIRU	10:45	0	12:08	0			0			0			0		
CIRCULATE	11:44	10	12:10	10			10			10			10		
Drop Plug		20	12:13	20			20			20			20		
		30	12:16	110			30			30			30		
		40	12:18	280			40			40			40		
		50	12:19	220			50			50			50		
M & P		60	12:23	Landed			60			60			60		
Time	Sacks	70					70			70			70		
11:50-12:08	317	80					80			80			80		
		90					90			90			90		
		100					100			100			100		
		110					110			110			110		
		120					120			120			120		
% Excess	1	120					120			120			120		
Mixed bbls	56.4	130					130			130			130		
Total Sacks	3	140					140			140			140		
bbl Returns	15	150					150			150			150		
Water Temp	100														

Notes:

The day

Completed with no issues got 15 bbl of return

Plug landed on calculated final lift 380 land at 1380 held 2 minutes released floats held 3/4 bbl return casing test

1000 psi held couple minutes casing passed

Work Performed

X

X

J E Cae

Title

X

Date

Greenleaf 15N-15HZ inv. 65029 Surface

