



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/21/2014
Invoice #: 65047
API#: AFE 2101858
Foreman: Lee Sharp

Customer: Anadarko Petroleum Corporation

Well Name: GreenLeaf 26-2HZ

County: Weld
State: Colorado

Sec: _____
Twp: _____
Range: _____

Consultant: Randy
Rig Name & Number: Major 42
Distance To Location: 27
Units On Location: 4027-3106/ 4028-3212
Time Requested: 9:30
Time Arrived On Location: 8:30
Time Left Location: _____

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,273
Total Depth (ft) : 1283
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 15.325
Shoe Joint Length (ft) : 41
Landing Joint (ft) : 0

Max Rate: _____
Max Pressure: _____

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 12%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 16.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
10F 10D 10F

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.99 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 77.56 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 642.04 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 737.59 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 131.37 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 495 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 88.16 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 95.20 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 939.05 PSI

Pressure of the fluids inside casing

Displacement: 531.00 psi

Shoe Joint: 30.57 psi

Total 561.57 psi

Differential Pressure: 377.48 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 233.37 bbls

X *Randy Case*
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 26-2HZ

INVOICE #
LOCATION
FOREMAN
Date

65047
Weld
Lee Sharp
12/21/2014

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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	12:45															
MIRU	11:30															
CIRCULATE	13:06	0	13:50		0			0			0			0		
Drop Plug		10	13:52	-10	10			10			10			10		
13:50		20	13:55	-10	20			20			20			20		
		30	13:59	10	30			30			30			30		
		40	14:01	110	40			40			40			40		
M & P		50	14:03	180	50			50			50			50		
Time	Sacks	60	14:05	260	60			60			60			60		
13:13-13:48	495	70	14:07	290	70			70			70			70		
		80	14:09	370	80			80			80			80		
		90	14:12	380	90			90			90			90		
		100	Landed	1380	100			100			100			100		
		110			110			110			110			110		
% Excess	12%	120			120			120			120			120		
Mixed bbls	88.16	130			130			130			130			130		
Total Sacks	495	140			140			140			140			140		
bbl Returns	16	150			150			150			150			150		
Water Temp	60															

Notes:

The day

Job went smoothly with no issue

Plug landed on calculated final lift 360 psi bumped and 1380 psi at 14:16 held 2 minutes relaeased

floats checked and held

casing test began at 14:24 1000 Psi released at 14:26 passed

X Randy Case
Work Preformed

X APC Consultant
Title

X
Date

GreenLeaf 26-2HZ inv. 65047

