



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/8/2015

Invoice # 45124

API# 05-123-40995

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: GRISWOLD 28N-11HZ

County: Weld

State: Colorado

Sec: 11

Twp: 1N

Range: 66W

Consultant: TOBY

Rig Name & Number: ADVANCED 10

Distance To Location: 27

Units On Location: 4031-3107, 4024-3203

Time Requested: 2330

Time Arrived On Location: 2200

Time Left Location: 600

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,748
Total Depth (ft) : 1762
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 47
Conductor ID : 15.25
Shoe Joint Length (ft) : 44
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: 16.0

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 19.18 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 35.87 cuft

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

cuft of Casing 997.37 cuft

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

Total Slurry Volume 1052.41 cuft

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

bbls of Slurry 187.43 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 706 sk

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

Mix Water 125.79 bbls

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

Displacement: 132.08 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1289.21 PSI

Pressure of the fluids inside casing

Displacement: 734.49 psi

Shoe Joint: 32.59 psi

Total 767.08 psi

Differential Pressure: 522.13 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 307.87 bbls

X *Ellis Arriaga AEIO*
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
GRISWOLD 28N-11HZ

INVOICE #
LOCATION
FOREMAN
Date

45124
Weld
JASON KELEHER
2/8/2015

Treatment Report Page 2

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	245															
MIRU	2200															
CIRCULATE	317	0	409	0	0			0			0			0		
Drop Plug		10	410	50	10			10			10			10		
408		20	413	40	20			20			20			20		
		30	416	30	30			30			30			30		
		40	418	40	40			40			40			40		
M & P		50	421	120	50			50			50			50		
Time	Sacks	60	424	200	60			60			60			60		
0325-0405	706	70	427	280	70			70			70			70		
		80	431	300	80			80			80			80		
		90	434	380	90			90			90			90		
		100	438	420	100			100			100			100		
		110	442	490	110			110			110			110		
% Excess	20%	120	446	550	120			120			120			120		
Mixed bbls	125.7	130	451	570	130			130			130			130		
Total Sacks	706	140	452	610	140			140			140			140		
bbl Returns	16	150	BUMP	1020	150			150			150			150		
Water Temp	51															

Notes:

PERFORMED PRESSURE TEST TO 2000 PSI AT 0315, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 0317, MIXED AND PUMPED 706 SKS AT 14.2, 187.4 BBL AT 0325, SHUT DOWN AT 0405, STARTED DISPLACEMENT AT 0409, PLUG LANDED AT 610 PSI AT 0452 AND PRESSURED UP TO 10200, HELD FOR 3 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL BACK, FLOATS HELD.

X AELO
Work Preformed

X _____
Title

X _____
Date

GRISWOLD 28N-11HZ SURFACE

