



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/30/2015

Invoice # 45120

API# 05-123-40922

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: GRISWOLD 2N-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: 1200

Time Arrived On Location: 2200

Time Left Location: 300

WELL DATA

Casing Size OD (in) : 9.625

Casing Weight (lb) : 36.00

Casing Depth (ft.) : 1,722

Total Depth (ft) : 1732

Open Hole Diameter (in.) : 13.50

Conductor Length (ft) : 47

Conductor ID : 15.25

Shoe Joint Length (ft) : 41

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: 15%

Displacement Fluid lb/gal: 8.3

BBL to Pit: 14.0

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 17.75 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 941.58 cuft

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

Total Slurry Volume 995.20 cuft

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

bbls of Slurry 177.24 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 668 sk

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

Mix Water 118.95 bbls

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

Displacement: 130.37 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1270.53 PSI

Pressure of the fluids inside casing

Displacement: 724.98 psi

Shoe Joint: 30.17 psi

Total 755.16 psi

Differential Pressure: 515.38 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 299.32 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
GRISWOLD 2N-11HZ

INVOICE #
LOCATION
FOREMAN
Date

45120
Weld
JASON KELEHER
1/30/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 143 M & P Time Sacks 0103-0141 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	1230 2215 1257 15% 118.9 668 14 44	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	143	0	0			0			0			0		
		10	145	60	10			10			10			10		
		20	147	50	20			20			20			20		
		30	150	20	30			30			30			30		
		40	152	80	40			40			40			40		
		50	154	140	50			50			50			50		
		60	156	210	60			60			60			60		
		70	157	270	70			70			70			70		
		80	159	330	80			80			80			80		
		90	201	400	90			90			90			90		
		100	203	470	100			100			100			100		
		110	205	520	110			110			110			110		
		120	207	560	120			120			120			120		
		130	210	540	130			130			130			130		
		140	BUMP	1530	140			140			140			140		
		150			150			150			150			150		

Notes:

PERFORMED PRESSURE TEST TO 2000 PSI AT 0055, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 0057, MIXED AND PUMPED 668 SKS AT 14.2,
177.2 BBL AT 0103, SHUT DOWN AT 0141, STARTED DISPLACEMENT AT 0143, PLUG LANDED AT 540 PSI AT 0210 AND PRESSURED UP TO 1530, 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 Performed

X
Title

X
Date

GRISWOLD 2N-11HZ SURFACE

