



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/17/2015

Invoice # 80112

API# 05-123-40948

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: CHEESE STATE 1N-21HZ

County: Weld

State: Colorado

Sec: 28

Twp: 3N

Range: 65W

Consultant: TIM

Rig Name & Number: ADVANCED 10

Distance To Location: 12

Units On Location: 4027-3106, 4030-3203

Time Requested: 1300

Time Arrived On Location: 1130

Time Left Location: 1530

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,177
Total Depth (ft) : 1193
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
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: 18.0

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 18.99 cuft

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

cuft of Conductor 30.53 cuft

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

cuft of Casing 668.76 cuft

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

Total Slurry Volume 718.27 cuft

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

bbls of Slurry 127.92 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 482 sk

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

Mix Water 85.85 bbls

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

Displacement: 88.03 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 868.61 PSI

Pressure of the fluids inside casing

Displacement: 488.84 psi

Shoe Joint: 32.27 psi

Total 521.11 psi

Differential Pressure: 347.51 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 223.89 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
CHEESE STATE 1N-21HZ

INVOICE #
LOCATION
FOREMAN
Date

80112
Weld
JASON KELEHER
3/17/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting		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
MIRU	1330															
CIRCULATE	1145	0	1423	0	0			0			0			0		
Drop Plug	1351	10	1425	50	10			10			10			10		
1423		20	1427	50	20			20			20			20		
		30	1429	60	30			30			30			30		
		40	1431	150	40			40			40			40		
M & P		50	1433	230	50			50			50			50		
Time	Sacks	60	1435	290	60			60			60			60		
1356-1421	482	70	1437	340	70			70			70			70		
		80	1439	380	80			80			80			80		
		90	1441	350	90			90			90			90		
		100	BUMP	750	100			100			100			100		
		110			110			110			110			110		
% Excess	20%	120			120			120			120			120		
Mixed bbls	85.8	130			130			130			130			130		
Total Sacks	482	140			140			140			140			140		
bbl Returns	18	150			150			150			150			150		
Water Temp	53															

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 1348, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 1351, MIXED AND PUMPED 482 SKS AT 14.2, 127.9 BBL AT 1356, SHUT DOWN AT 1421, STARTED DISPLACEMENT AT 1423, PLUG LANDED AT 350 PSI AT 1441 AND PRESSURED UP TO 750, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL WATER BACK, FLOATS HELD.

X

Signature

X

Title

X

Date

CHEESE STATE 1N-21HZ SURFACE

