



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/9/2014
Invoice #: 25049
API#: 05-123-39194
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Hanson State 1N-36HZ

County: Weld
State: Colorado
Sec: 35
Twp: 3N
Range: 68W
Consultant: Randy / Toby
Rig Name & Number: Major 29
Distance To Location: 21 Miles
Units On Location: 4034-3104/4018-3204
Time Requested: 530pm
Time Arrived On Location: 345pm
Time Left Location: 10:15 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,106
Total Depth (ft) : 1123
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 8

Max Rate: 7
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 21%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 8
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
30bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.56 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 651.63 cuft

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

Total Slurry Volume 670.19 cuft

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

bbls of Slurry 119.36 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 450 sk

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

Mix Water 80.11 bbls

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

Displacement: 82.85 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 816.25 PSI

Pressure of the fluids inside casing

Displacement: 458.65 psi

Shoe Joint: 31.55 psi

Total 490.20 psi

Differential Pressure: 326.05 psi

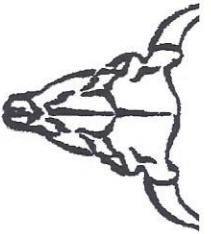
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 212.96 bbls

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 Well Cementing
Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Hansen State 1N-36H2

INVOICE #
LOCATION
FOREMAN
Date

25049
Weld
Calvin Reimers
9/9/2014

DESCRIPTION OF JOB EVENTS

Treatment Report Page 2

Safety Meeting	756pm	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	635pm	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI
MIRU	832pm	0	907pm	40	0			0			0			0		
CIRCULATE Drop Plug		10	910pm	20	10			10			10			10		
		20	912pm	20	20			20			20			20		
		30	914pm	70	30			30			30			30		
		40	916pm	120	40			40			40			40		
M & P		50	918pm	180	50			50			50			50		
		60	920pm	250	60			60			60			60		
		70	922pm	330	70			70			70			70		
		80	924pm	330	80			80			80			80		
904pm		90	926pm	310	90			90			90			90		
		100	Bump	1300	100	928pm		100			100			100		
		110	Bump	1000	110	930pm		110			110			110		
		120			120			120			120			120		
% Excess	21%	130			130			130			130			130		
Mixed bbls	80.11	140			140			140			140			140		
Total Sacks	450	150			150			150			150			150		
bbl Returns	8															
Water Temp	69.1															

Notes:

The day

1/2 BBL Back on Bleed Off

X Ready Work

X APC Consultant

X 09/09/14

Work Performed

Title

Date

SERIES 2000

