



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/14/2014

Invoice #: 35018

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: douthit 40c-27hz

County: Weld

State: Colorado

Sec: 26

Twp: 3n

Range: 68w

Consultant: ellis

Rig Name & Number: major 29

Distance To Location: 25

Units On Location: 4030-3103/4019-3204

Time Requested: 230 am

Time Arrived On Location: 1230 am

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,229
 Total Depth (ft) : 1237
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) :
 Conductor ID :
 Shoe Joint Length (ft) : 42
 Landing Joint (ft) : 8

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: 15%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit:
 Fluid Ahead (bbls): 30.0
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.23 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 690.75 cuft

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

Total Slurry Volume 708.98 cuft

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

bbls of Slurry 126.27 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 476 sk

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

Mix Water 84.74 bbls

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

Displacement: 92.38 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 906.63 PSI

Pressure of the fluids inside casing

Displacement: 511.81 psi

Shoe Joint: 30.98 psi

Total 542.80 psi

Differential Pressure: 363.84 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 227.13 bbls

X *Ellis*
 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
douthit 40c-27hz

INVOICE #	35018
LOCATION	Weld
FOREMAN	Kirk Kallhoff
Date	8/14/2014

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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	320am															
MIRU	100am															
CIRCULATE	338am	0	421am	10	0			0			0			0		
Drop Plug		10	424am	40	10			10			10			10		
421 am		20	427am	60	20			20			20			20		
		30	429am	70	30			30			30			30		
		40	432am	140	40			40			40			40		
M & P		50	434am	200	50			50			50			50		
Time	Sacks	60	437am	270	60			60			60			60		
345 am	477	70	439am	360	70			70			70			70		
418 am stop		80	442am	400	80			80			80			80		
		90	946am	430	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	15%	120			120			120			120			120		
Mixed bbls	84.9	130			130			130			130			130		
Total Sacks	477	140			140			140			140			140		
bbl Returns	12	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 450 am 1200 psi 126.2 bbls slurry

floats held

X _____
Work Performed

X *Ellie Arman*
Title

X 8-14-14
Date

M/D TOTCO 2000 SERIES

— PSI — Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume

