



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/27/2014
Invoice # 45043
API# 05-123-40171
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: SUMMIT 13C-32HZ

County: Weld
State: Colorado

Sec: 29
Twp: 2N
Range: 65W

Consultant: ALLEN
Rig Name & Number: MAJORS 42
Distance To Location: 26
Units On Location: 4031-3106/ 4022-3213
Time Requested: 1900
Time Arrived On Location: 1800
Time Left Location: 2330

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,108
Total Depth (ft) : 1118
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 2

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: 16%
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, DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.46 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 625.18 cuft

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

Total Slurry Volume 643.65 cuft

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

bbls of Slurry 114.63 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 432 sk

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

Mix Water 76.93 bbls

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

Displacement: 82.49 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 817.02 PSI

Pressure of the fluids inside casing

Displacement: 459.20 psi

Shoe Joint: 31.38 psi

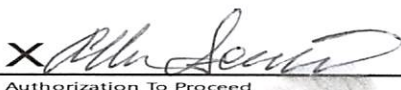
Total 490.59 psi

Differential Pressure: 326.44 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 209.42 bbls


Authorization To Proceed



**Bison Oil Well Cementing
Single Cement Surface Pipe**

Customer
Well Name

Anadarko Petroleum Corporation
SUMMIT 13C-32HZ

INVOICE #
LOCATION
FOREMAN
Date

45043
Weld
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9/27/2014

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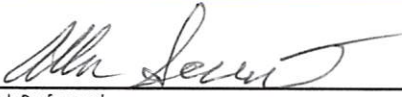
DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE	1900	0	2201	0	0			0			0			0		
Drop Plug	1815	10	2204	20	10			10			10			10		
2201	2129	20	2207	60	20			20			20			20		
		30	2210	60	30			30			30			30		
		40	2212	250	40			40			40			40		
M & P		50	2214	320	50			50			50			50		
Time	Sacks	60	2216	380	60			60			60			60		
2136-2138	432	70	2218	430	70			70			70			70		
		80	2220	350	80			80			80			80		
		90	2222	370	90			90			90			90		
		100	BUMP	1360	100			100			100			100		
		110			110			110			110			110		
% Excess	15%	120			120			120			120			120		
Mixed bbls	76.9	130			130			130			130			130		
Total Sacks	432	140			140			140			140			140		
bbl Returns	16	150			150			150			150			150		
Water Temp	73															

Notes:

PERFORMED PRESSURE TEST TO 2000 PSI AT 2124, PUMPED 30 BBL WATER W/ DYE IN 2ND 10 AT 2129, MIXED AND PUMPED 432 SKS AT 14.2, 114.6

BBL AT 2136, SHUT DOWN AT 2138, STARTED DISPLACEMENT AT 2201, LANDED PLUG AT 370 PSI AT 2222 AND PRESSURED UP TO 1360 PSI, HELD FOR 2 MINUTES AND CHECKED FLOATS, GOT .5 BBL BACK, REPRESSURED WELL TO 1000 PSI FOR 2 MINUTES AND RELEASED.

X 
Work Preformed

X _____
Title

X _____
Date

SUMMIT 13C-32HZ SURFACE

