



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/8/2014
Invoice #: 25020
API#: 05-123-38835
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Vogl State 39N-36HZ

County: Weld
State: Colorado
Sec: 36
Twp: 3N
Range: 68W
Consultant: Randy
Rig Name & Number: Major 29
Distance To Location: 18 Miles
Units On Location: 4023-3104/4020-3212
Time Requested: 1000pm
Time Arrived On Location: 835pm
Time Left Location: 3:15 AM

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft) : 1,135	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1150	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 27%
Conductor Length (ft) :	Displacement Fluid lb/gal: 8.3
Conductor ID :	BBL to Pit: 12
Shoe Joint Length (ft) : 43	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 8	H2O Wash Up (bbls): 20.0
Max Rate: 7	Spacer Ahead Makeup
Max Pressure: 2500	30BBLs+Dye in 2nd 10BBLs

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 85.07 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Shoe	18.58	cuft	Pressure of cement in annulus
(Casing ID Squared) X (.005454) X (Shoe Joint ft)			
cuft of Conductor	0.00	cuft	Hydrostatic Pressure: 837.41 PSI
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)			
cuft of Casing	706.24	cuft	Pressure of the fluids inside casing
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)			
Total Slurry Volume	724.82	cuft	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)			
bbls of Slurry	129.09	bbls	Displacement: 471.00 psi
(Total Slurry Volume) X (.1781)			Shoe Joint: 31.58 psi
Sacks Needed	486	sk	Total 502.58 psi
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			Differential Pressure: 334.83 psi
Mix Water	86.64	bbls	Collapse PSI: 2020.00 psi
(Sacks Needed) X (Gallons Per Sack) ÷ 42			Burst PSI: 3520.00 psi
			Total Water Needed: 221.70 bbls

Authorization to Proceed



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

Customer
Well Name

Anadarko Petroleum Corporation
Vogl State 39N-36HZ

INVOICE #
LOCATION
FOREMAN
Date

25020
Weld
Calvin Reimers
7/9/2014

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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	107am															
MIRU	1115pm															
CIRCULATE	137am	0	210am	70	0			0			0			0		
Drop Plug		10	214am	10	10			10			10			10		
209am		20	216am	40	20			20			20			20		
		30	219am	100	30			30			30			30		
		40	220am	200	40			40			40			40		
M & P		50	222am	270	50			50			50			50		
Time	Sacks	60	224am	320	60			60			60			60		
143am	486	70	226am	380	70			70			70			70		
206am		80	228am	400	80			80			80			80		
		90	230am	350	90			90			90			90		
		100	Bump	1420	100			100			100			100		
		110	Bump	1040	110			110			110			110		
% Excess	27%	120			120			120			120			120		
Mixed bbls	86.64	130			130			130			130			130		
Total Sacks	486	140			140			140			140			140		
bbl Returns	12	150			150			150			150			150		
Water Temp	71.4															

Notes:

The day

1/2 bbl back on bleed off

X *Randy Case*
Work Performed

X
Title

X
Date

M/D TOTCO 2000 SERIES

