



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/23/2014

Invoice # 25054

API# 05-123-39596

Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Steward 13C-6HZ

County: Weld
State: Colorado

Sec: 6
Twp: 1N
Range: 65W

Consultant: Ellis

Rig Name & Number: Major 29

Distance To Location: 22 Miles

Units On Location: 4023-3104/4024-3203

Time Requested: 800pm

Time Arrived On Location: 715pm

Time Left Location: 2:00 AM

WELL DATA

Casing Size OD (in) :	9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,597
Total Depth (ft) :	1613
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:	4
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	18.57	cuft
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)		
cuft of Conductor	0.00	cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		
cuft of Casing	942.43	cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		
Total Slurry Volume	961.00	cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		
bbls of Slurry	171.15	bbls
(Total Slurry Volume) X (.1781)		
Sacks Needed	645	sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		
Mix Water	114.87	bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42		

Displacement: 120.77 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1178.07 PSI

Pressure of the fluids inside casing

Displacement: 670.12 psi

Shoe Joint: 31.57 psi

Total 701.69 psi

Differential Pressure: 476.38 psi

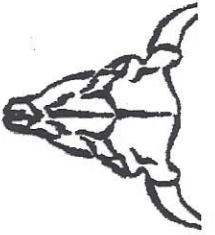
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 285.63 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 Well Cementing
Single Cement Surface Pipe

Customer
 Well Name

Anadarko Petroleum Corporation
 Steward 13C-6HZ

INV# 25054
 LOCATION
 FOREMAN
 Date

Weld
 Calvin Reimers
 9/24/2014

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DESCRIPTION OF JOB EVENTS

	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5			
	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	
Safety Meeting	853pm															
MIRU	720pm															
CIRCULATE	935pm	0	1030pm	70	0	1033pm	0	10	1035pm	50	20	1037pm	70	30	1039pm	70
Drop Plug	1029pm	10	1040pm	130	50	1042pm	200	60	1044pm	250	70	1045pm	330	80	1047pm	390
		20	1049pm	430	100	1050pm	450	110	1053pm	450	120	1055pm	130	130	1057pm	140
		30														
		40														
		50														
M & P		60														
Time	Sacks	60	1042pm	200	60	1044pm	250	70	1045pm	330	80	1047pm	390	90	1049pm	430
1000pm	645	70	1044pm	250	70	1045pm	330	80	1047pm	390	90	1049pm	430	100	1050pm	450
1027pm		80	1045pm	330	80	1047pm	390	90	1049pm	430	100	1050pm	450	110	1053pm	450
Top Job		90	1047pm	390	90	1049pm	430	100	1050pm	450	110	1053pm	450	120	1055pm	450
1244am		100	1049pm	430	100	1050pm	450	110	1053pm	450	120	1055pm	450	130	1057pm	140
1255am		110	1050pm	450	110	1053pm	450	120	1055pm	450	130	1057pm	140	140	150	150
% Excess	21%	120	1053pm	450	120	1055pm	450	130	1057pm	140	140	150	150			
Mixed bbls	114.87	130	Bump	1500	130	Bump	1500	140								
Total Sacks	645	140	Bump	1010	140											
bbl Returns	4	150			150											
Water Temp	66.1															

Notes:

The day

1/2 bbl back on bleed off

Top Job 73 sks 19.37 bbls Slurry

Used 50 ft of 1 inch

Total Used 718 sks 190.53 bbls Slurry

X *Edwin ...*

X

X

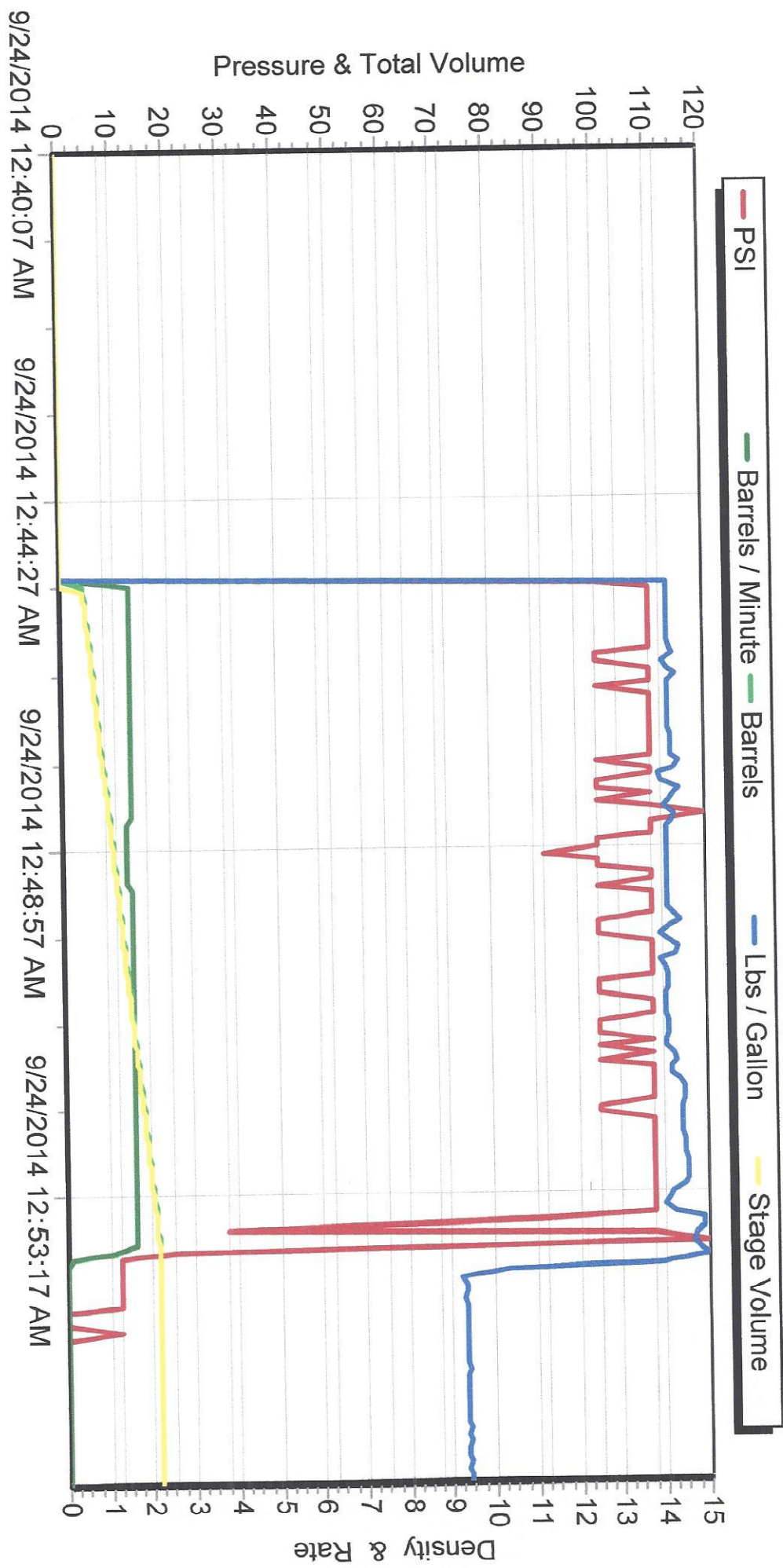
Work Performed

Title

Date

TOP JOB 50' OF 1"
73 SKS, 19.37 bbls Sherry

SERIES 2000



SERIES 2000

