



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/24/2014
Invoice #: 25074
API#: 05-123-36451
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Buffalo 14C-15HZ

County: Weld
State: Colorado
Sec: 6
Twp: 1N
Range: 68W

Consultant: Allen
Rig Name & Number: Major 42
Distance To Location: 29 Miles
Units On Location: 4023-3104/4024-3203
Time Requested: 500am
Time Arrived On Location: 245am
Time Left Location: 7:30 AM

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,276
Total Depth (ft) : 1292
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: 16%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 16
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 18.70 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 721.80 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing
Depth - Conductor Length)

Total Slurry Volume 740.50 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 131.88 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 497 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 88.51 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 95.94 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 941.34 PSI

Pressure of the fluids inside casing

Displacement: 531.63 psi

Shoe Joint: 31.78 psi

Total 563.41 psi

Differential Pressure: 377.93 psi

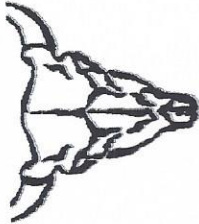
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 234.45 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.



Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Buffalo 14C-15HZ

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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	538am														
MIRU	510am														
CIRCULATE	559am														
Drop Plug															
626am															
M & P															
Time	Sacks														
606am	497														
622am															
% Excess	16%														
Mixed bbls	88.51														
Total Sacks	497														
lbb Returns	16														
Water Temp	57.4														

Notes:

The day

1/2 bbl back on bleed off

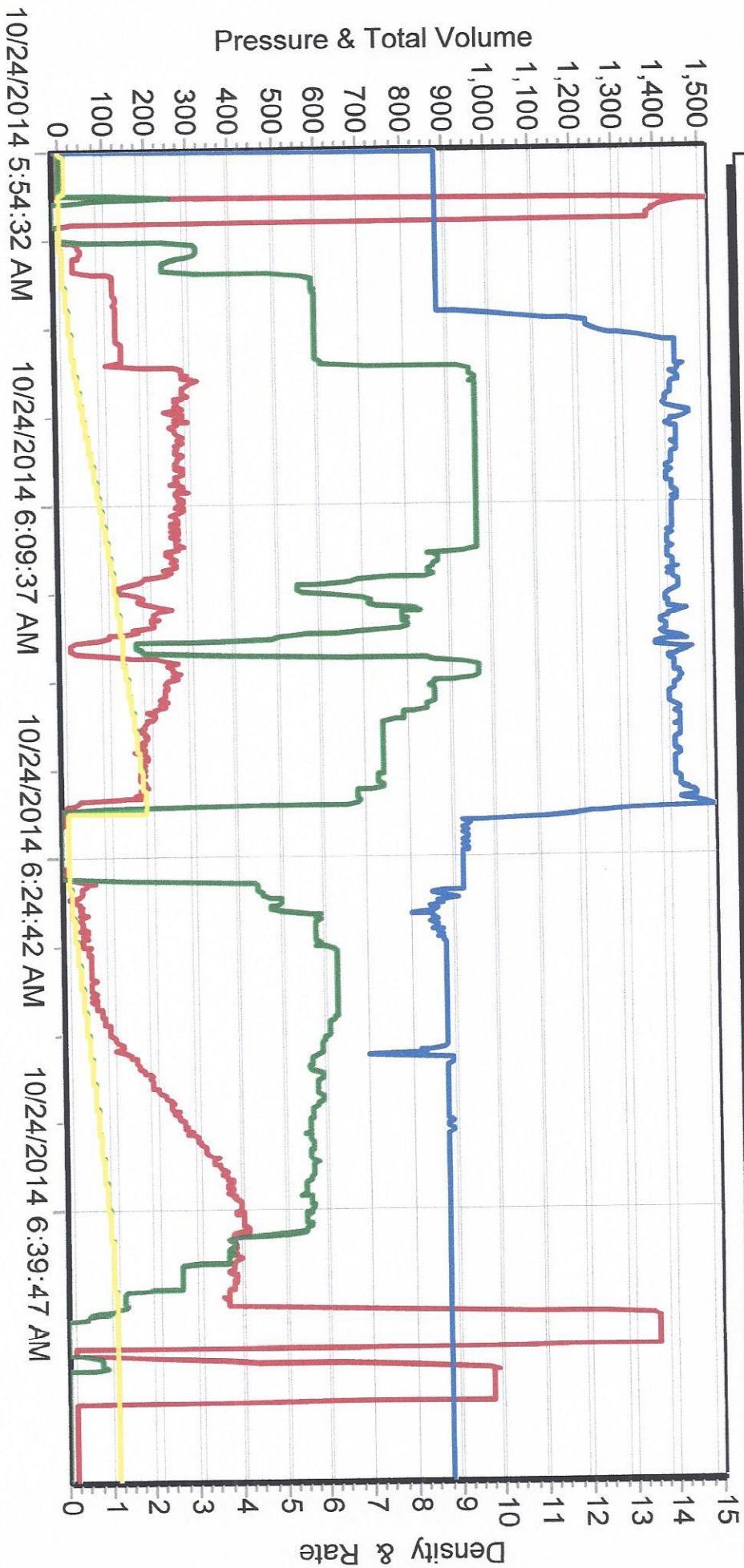
X *[Signature]*

X Title

X 10-24-14 Date

Work Performed

SERIES 2000



Release and Indemnification

Customer acknowledges and assumes the risks associated with oil well drilling, cementing and acidizing, including, without limitation, destabilization, loss of production, contamination, fracturing and loss of well control. Customer agrees to release Bison Oil Well Cementing, Inc., Bison Energy Services, Inc., its agents, employees and assigns, from any and all liability for any and all damages whatsoever to property of any kind owned by, in the possession of, or leased by customer and those persons or entities customer has the ability to bind by contract. Customer also agrees to indemnify and hold harmless Bison Oil Well Cementing, Inc., Bison Energy Services, Inc., its agents, employees and assigns, from and against any and all liability, claims, costs, expenses, attorneys fees and damages whatsoever for claims, costs, expenses, attorneys fees and damages whatsoever for personal injury, illness, death, property damage and loss resulting from: loss or reduction of production, destabilization loss of oil well control, failure of or contamination by acid stimulation, hydraulic fracturing, cementing, pumping services, incompatible fluid or other processes to stimulate, complete or end production, and/or any other condition. Customer's release, indemnity and hold harmless obligation shall apply even if the liability and claims are caused by the sole, concurrent, active or passive negligence, fault, or strict liability of Bison Oil Well Cementing, Inc. and/or Bison Energy Services, Inc. or any defect in the data, products, supplies, materials or equipment furnished by Bison Oil Well Cementing, Inc. whether in the design, manufacturing, maintenance, or marketing thereof or from failure to warn of such defect. In the event that any portion of this release and indemnity is found by a court of competent jurisdiction to be inoperable or unenforceable, the remaining portions and provisions shall apply, and customer agrees that the contract price herein shall be the limit of Bison Oil Well Cementing, Inc.'s liability, if any.