

Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/16/2014
Invoice #: 35069
API#:
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: rissler state 4n-36hz

County: Weld
State: Colorado

Sec: 36
Twp: 4n
Range: 66w

Consultant: toby
Rig Name & Number: major 42
Distance To Location: 5
Units On Location: 4030-3103/4024-3203
Time Requested: 900 pm
Time Arrived On Location: 900 pm
Time Left Location: 3:30 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,153
Total Depth (ft) : 1171
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 40
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: 17%
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 17.36 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 659.30 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 676.66 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 120.51 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 454 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 80.88 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 86.66 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 850.57 PSI

Pressure of the fluids inside casing

Displacement: 479.90 psi

Shoe Joint: 29.51 psi

Total 509.41 psi

Differential Pressure: 341.16 psi

Collapse PSI: 2020.00 psi

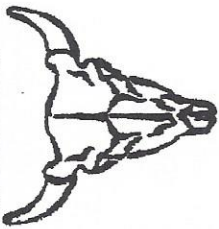
Burst PSI: 3520.00 psi

Total Water Needed: 217.54 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 Oil Well Cementing
Single Cement Surface Pipe**

INVOICE #
LOCATION
FOREMAN
Date

35069
Weld
Kirk Kallhoff
11/17/2014

Customer
Well Name

Anadarko Petroleum Corporation
rissler state 4n-36hz

Treatment Report Page 2

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	0	216am	10	0			0			0			0		
MIRU	10	219am	70	10			10			10			10		
CIRCULATE	20	221am	70	20			20			20			20		
Drop Plug	30	223am	100	30			30			30			30		
216 am	40	225am	170	40			40			40			40		
	50	227am	250	50			50			50			50		
M & P	60	229am	310	60			60			60			60		
Time	70	231am	370	70			70			70			70		
144 am	80	233am	380	80			80			80			80		
213 am stop	90			90			90			90			90		
	100			100			100			100			100		
	110			110			110			110			110		
	120			120			120			120			120		
% Excess	130			130			130			130			130		
Mixed bbls	140			140			140			140			140		
Total Sacks	150			150			150			150			150		
bbl Returns															
Water Temp															

Notes:

bumped plug at 237 am 1400 psi at 87.6 bbls

120.5 bbls slurry

floats held

X

X

Work Performed

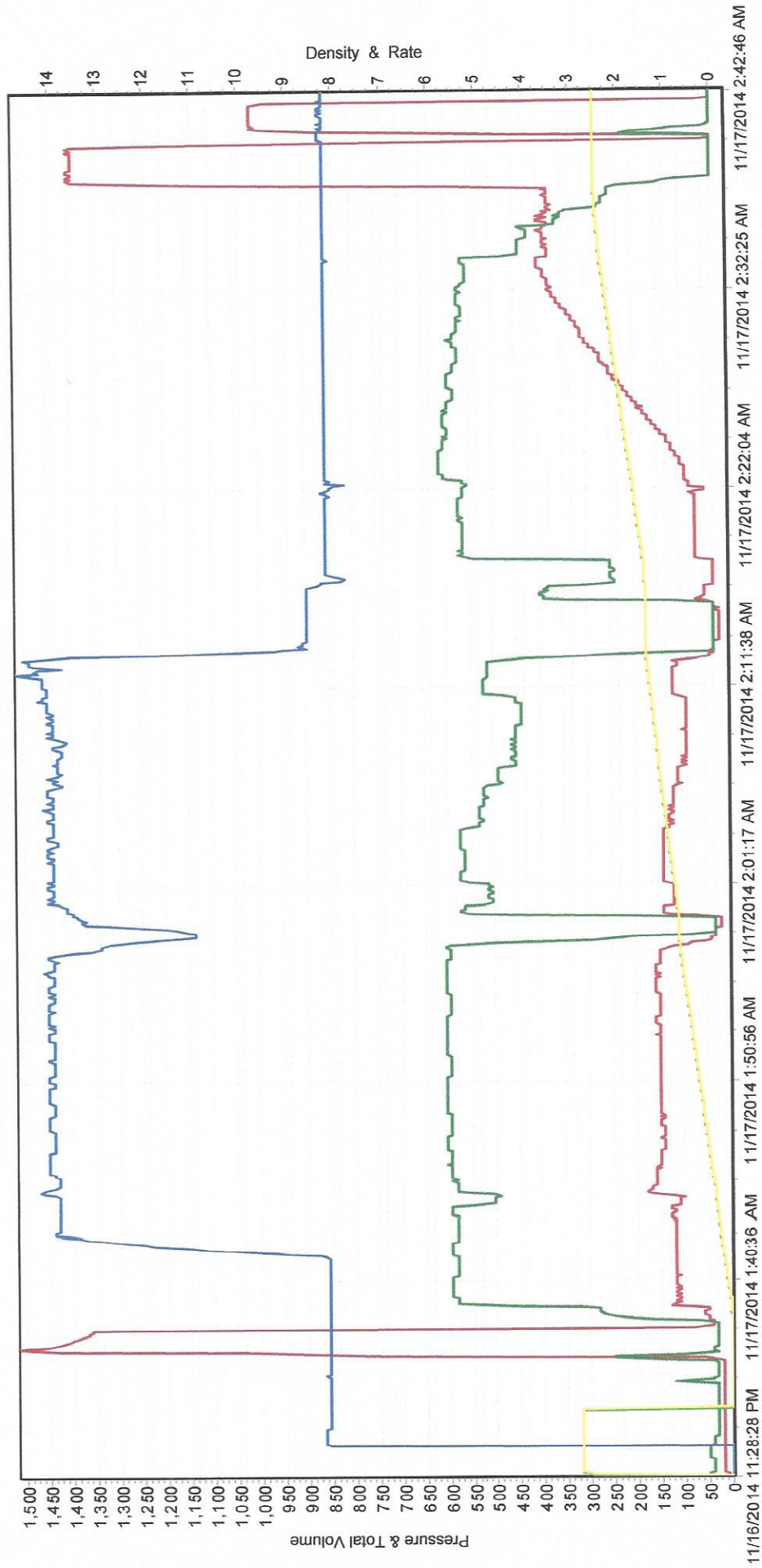
Title

X

Date

11-17-14

M/D TOTCO 2000 SERIES



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.