

Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/11/2014

Invoice # 35053

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: kerr 29c-12hz

County: Weld

State: Colorado

Sec: 13

Twp: 2n

Range: 67w

Consultant: elis

Rig Name & Number: major 29

Distance To Location: 21

Units On Location: 4030-3103/4017-3210

Time Requested: 300 am

Time Arrived On Location: 115 am

Time Left Location: 6:00 pm

WELL DATA

Casing Size OD (in) : 9.625

Casing Weight (lb) : 36.00

Casing Depth (ft.) : 1,045

Total Depth (ft) : 1063

Open Hole Diameter (in.) : 13.50

Conductor Length (ft) :

Conductor ID :

Shoe Joint Length (ft) : 38

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: 16%

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 16.49 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 592.44 cuft

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

Total Slurry Volume 608.93 cuft

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

bbls of Slurry 108.45 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 409 sk

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

Mix Water 72.78 bbls

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

Displacement: 78.47 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 770.90 PSI

Pressure of the fluids inside casing

Displacement: 434.20 psi

Shoe Joint: 28.03 psi

Total 462.23 psi

Differential Pressure: 308.66 psi

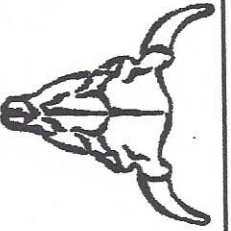
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 201.25 bbls

x *[Signature]* Major 29
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

Customer
Well Name

Anadarko Petroleum Corporation
Kerr 29c-12hz

INVOICE #
LOCATION
FOREMAN
Date

35053
Weld
Kirk Kallhoff
10/11/2014

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DESCRIPTION OF JOB EVENTS

Safety Meeting	356am	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	300am	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI
MIRU	412am	0	446am	10	0			0			0			0		
CIRCULATE		10	448am	50	10			10			10			10		
		20	451am	80	20			20			20			20		
		30	453am	130	30			30			30			30		
		40	455am	190	40			40			40			40		
Drop Plug		50	457am	260	50			50			50			50		
		60	459am	340	60			60			60			60		
		70	502am	380	70			70			70			70		
		80			80			80			80			80		
M & P		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
Time		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		
418 am	409															
442 am stop																
% Excess																
Mixed bbls	72.8															
Total Sacks	409															
bbl Returns	11															
Water Temp																

Notes:

bumped plug at 80 bbls at 507 am 1370 psi

108.5 bbls slurry

floats held

X *Elmer J. Brown* *10/11/14*

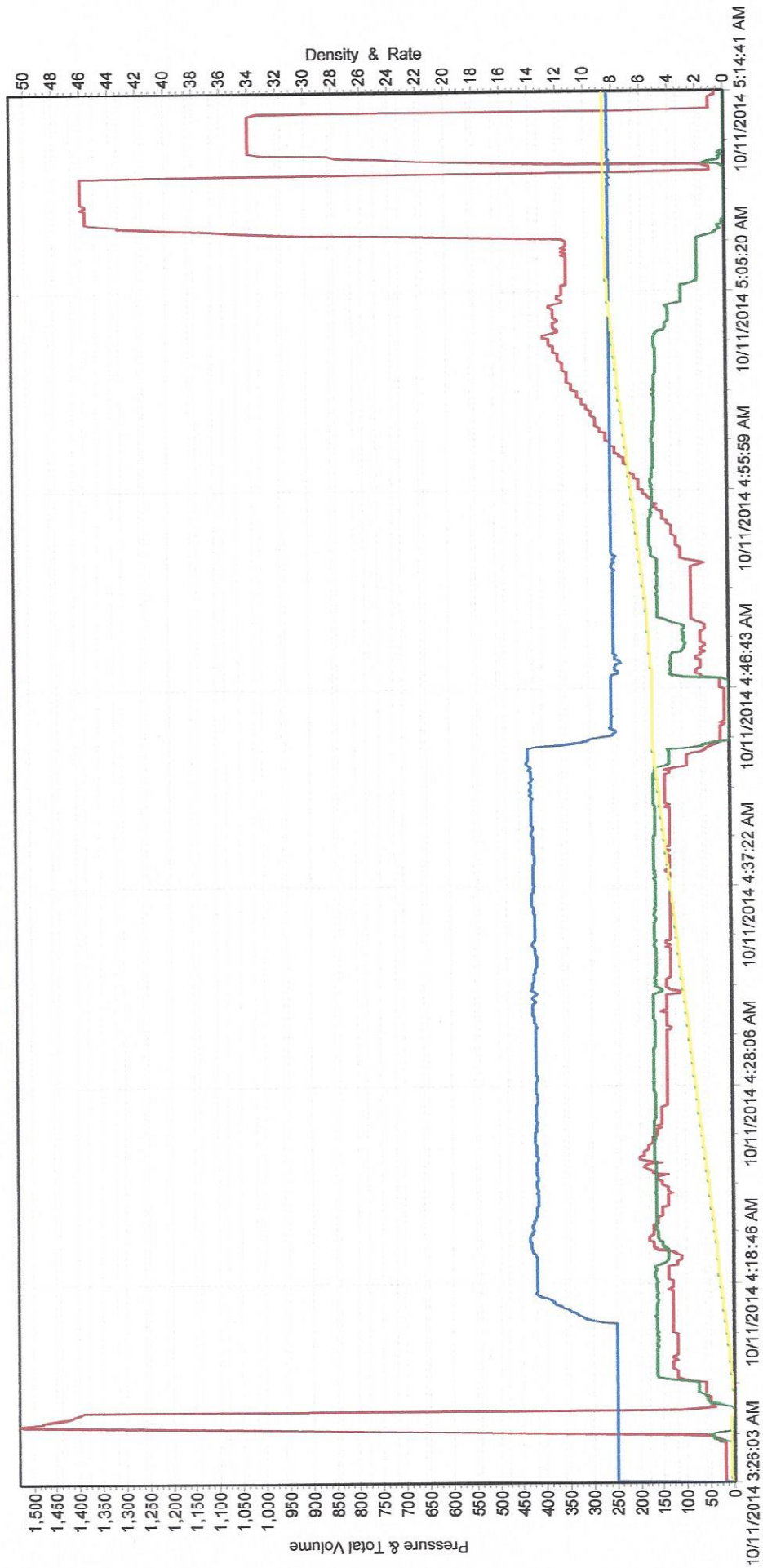
X Title

X Date *10-11-14*

Work Performed

M/D TOTCO 2000 SERIES

— PSI — Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume



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.