Bison Oil Well Cementing
Single Cement Surface Pipe

Date: 4/4/2015
Invoice # 80068
API#
Foreman: kirk kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: bane 28n1-9hz

County: Weld
State: Colorado
Sec: 9
Twp: 1n
Range: 65w

Consultant: larry
Rig Name & Number: advanced 10
Distance To Location: 26
Units On Location: 4027-3106/4030-3203
Time Requested: 600 am
Time Arrived On Location: 415 am
Time Left Location: 8:45 am

WELL DATA

Casing Size OD (in) :	_9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,578
Total Depth (ft) :	1596
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	40
Conductor ID :	16
Shoe Joint Length (ft) :	44
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:	20%
Displacement Fluid lb/gal:	8.3
BBL to Pit:	
Fluid Ahead (bbls):	30.0
H20 Wash Up (bbls):	10.0

Spacer Ahead Makeup

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results

cuft of Shoe 19.10 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 35.64 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 902.00 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 956.74 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 170.39 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 642 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 114.36 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 119.21 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1164.09 PSI

Pressure of the fluids inside casing

Displacement: 661.43 psi
Shoe Joint: 32.46 psi
Total 693.89 psi

Differential Pressure: 470.20 psi

Collapse PSI: 2020.00 psi
Burst PSI: 3520.00 psi

Total Water Needed: 273.56 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.

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Single Cement Surface Pipe

INVOICE #	80068
LOCATION	Weld
FOREMAN	kirk kallhoff
Date	4/4/2015

Customer	Anadarko Petroleum Corporation
Well Name	bane 28n1-9hz

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
Safety Meeting	624am	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
MIRU	430am	0	738am	10	0			0			0			0		
CIRCULATE	655am	10	740am	80	10			10			10			10		
Drop Plug		20	742am	100	20			20			20			20		
738 am		30	744am	100	30			30			30			30		
		40	746am	130	40			40			40			40		
M & P		50	748am	180	50			50			50			50		
Time	**Sacks**	60	450am	220	60			60			60			60		
701 am	642	70	752am	260	70			70			70			70		
738 am stop		80	754am	330	80			80			80			80		
		90	756am	400	90			90			90			90		
		100	758am	440	100			100			100			100		
		110	800am	470	110			110			110			110		
% Excess	20%	120			120			120			120			120		
Mixed bbls	114.3	130			130			130			130			130		
Total Sacks	642	140			140			140			140			140		
bbl Returns	22	150			150			150			150			150		
Water Temp																

Notes:

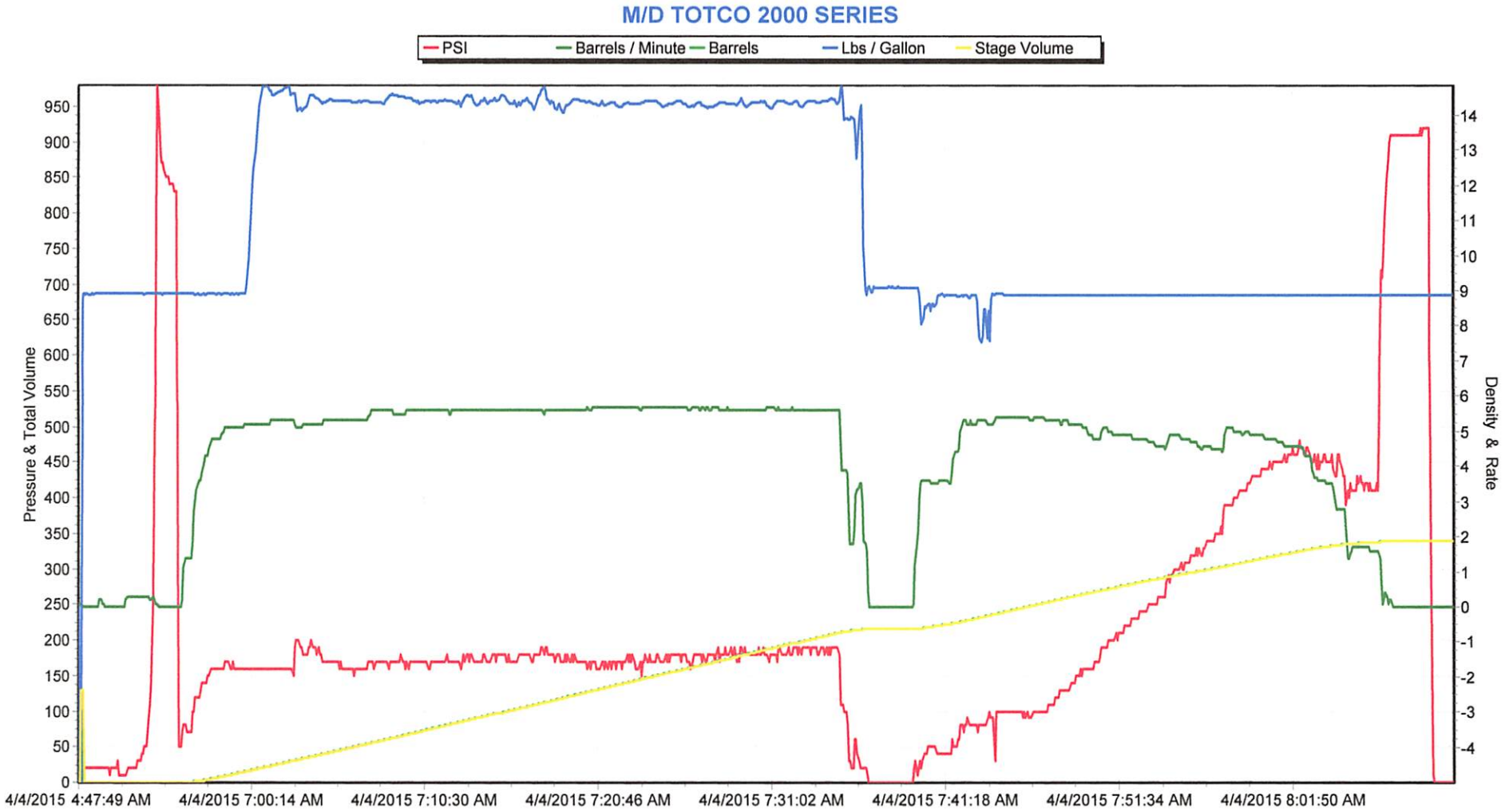
psi test 1000 psi, cicr 30 bbls h2o at 655 am, m&p 642 sks 170.3 bbls slurry at 701 am to 734 am, drop plug at 738 am

bumped plug at 805 am 910 psi, psi before bump 420 psi, floats held, 22 bbls cement back

X _____ Work Preformed

X _____ Title

X 4-4-15 Date


M/D TOTCO 2000 SERIES
PSI
Barrels / Minute
Barrels
Lbs / Gallon
Stage Volume
Pressure & Total Volume
Density & Rate
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
14
13
12
11
10
9
8
7
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5
4
3
2
1
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