Bison Oil Well Cementing
Single Cement Surface Pipe

Date: 7/27/2015
Invoice # 80509
API#
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: adamson 35c-28hz

County: Weld
State: Colorado
Sec: 21
Twp: 2n
Range: 65w

Consultant: luke
Rig Name & Number: noble 2
Distance To Location: 17
Units On Location: 4031-3103/4024-3203
Time Requested: 1030 am
Time Arrived On Location: 1030 am
Time Left Location: 1:30 pm

WELL DATA

Casing Size OD (in) :	_9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,847
Total Depth (ft) :	1851
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	40
Conductor ID :	16
Shoe Joint Length (ft) :	40
Landing Joint (ft) :	10
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 17.36 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 1059.76 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1112.76 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 198.18 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 747 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 133.01 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.47 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1362.53 PSI

Pressure of the fluids inside casing

Displacement: 779.14 psi
Shoe Joint: 29.51 psi
Total 808.65 psi

Differential Pressure: 553.88 psi

Collapse PSI: 2020.00 psi
Burst PSI: 3520.00 psi

Total Water Needed: 313.47 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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INVOICE #	80509
LOCATION	Weld
FOREMAN	Kirk Kallhoff
Date	7/27/2015

Customer	Anadarko Petroleum Corporation
Well Name	adamson 35c-28hz

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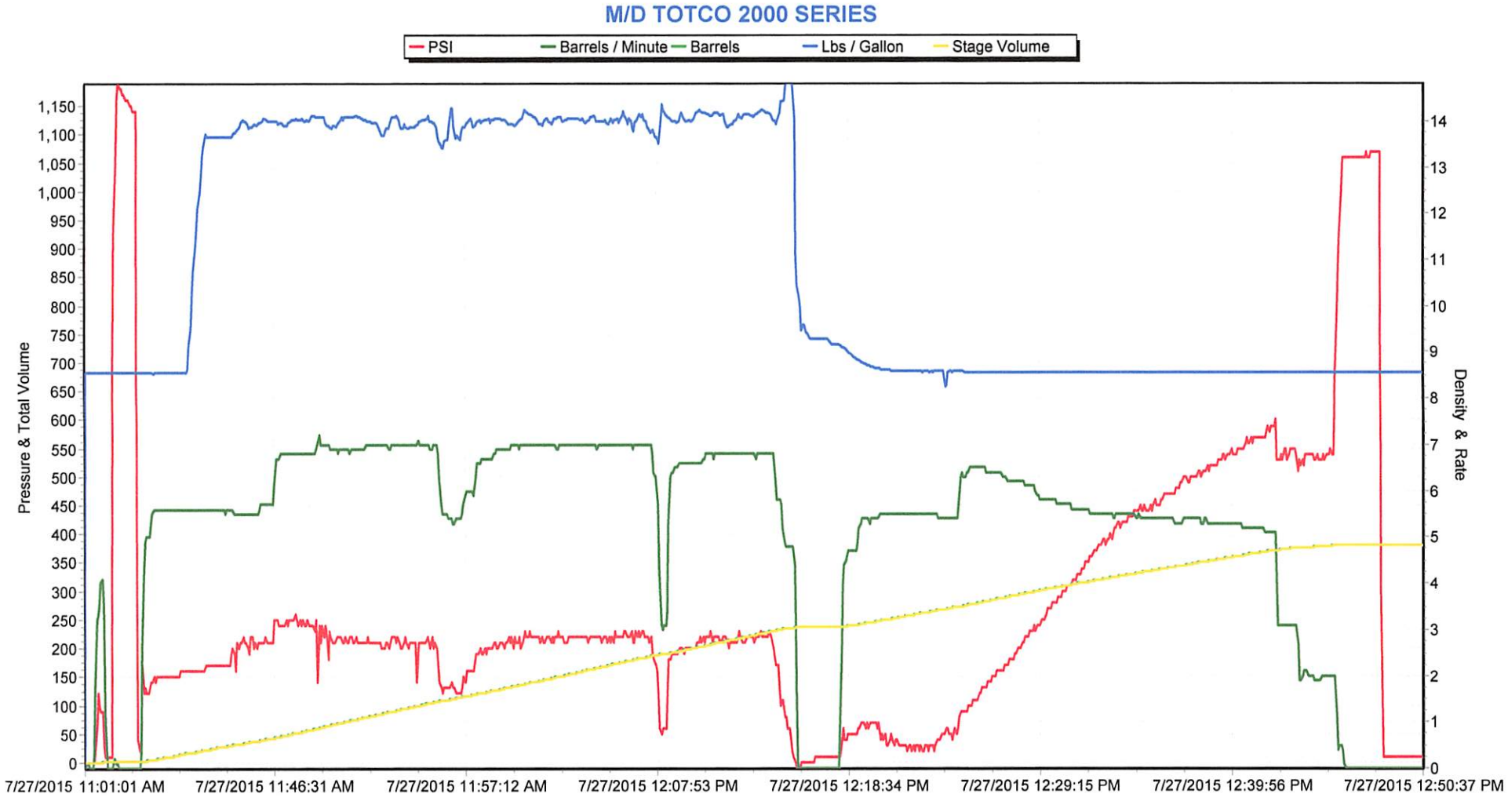
DESCRIPTION OF JOB EVENTS

Amount Pumped		Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess	20%	1045 am	Rig up				
Mixed bbls	133	1113 am	JSA				
Total Sacks	747	1135 am	Pressure Test		1	1	1200
bbl Returns	40	1137 am	Spacer Ahead	10 bbls h2o	5	10	
Water Temp			Spacer Ahead	10 bbls dye h2o		10	
			Spacer Ahead	10 bbls h2o		10	90
Notes:		1142 am	Lead Cement	747 sks 198.1 bbls slurry	5	198.1	150
		1212 pm	Shutdown				
		1214 pm	Drop Plug				
		1214 pm	Start Displacement	140.4 bbls h20	5	140.4	150
		1244 pm	Bump Plug	bumped at calculated 550 psi lift psi	2		1050
		1248 pm	End Job				
		110 pm	Rig Down				
		130 am	Leave Location				

X Luke Rains
Work Preformed

X
Title

X 7-27-15
Date


M/D TOTCO 2000 SERIES
PSI
Barrels / Minute
Barrels
Lbs / Gallon
Stage Volume
Pressure & Total Volume
Density & Rate
1,150
1,100
1,050
1,000
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
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14
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7/27/2015 11:01:01 AM
7/27/2015 11:46:31 AM
7/27/2015 11:57:12 AM
7/27/2015 12:07:53 PM
7/27/2015 12:18:34 PM
7/27/2015 12:29:15 PM
7/27/2015 12:39:56 PM
7/27/2015 12:50:37 PM