Bison Oil Well Cementing
Single Cement Surface Pipe

Date:	2/6/2017
Invoice #	666071
API#	05-123-42457
Foreman:	Nick

Customer: Anadarko Petroleum Corporation

Well Name: Guest 3N-12HZ

County:	Weld	Consultant:	Sean/Lane
State:	Colorado	Rig Name & Number:	WMO 252
		Distance To Location:	34 Miles
Sec:	13	Units On Location:	4020/4030/4032
Twp:	2N	Time Requested:	15:30
Range:	65W	Time Arrived On Location:	14:30
		Time Left Location:	

WELL DATA

Casing Size OD (in) :	_9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,819
Total Depth (ft) :	1840
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	80
Conductor ID :	15.25
Shoe Joint Length (ft) :	44
Landing Joint (ft) :	0
Max Rate:	8
Max Pressure:	2000

Cement Data

Cement Name:	BFN III
Cement Density (lb/gal) :	14.2
Cement Yield (cuft) :	1.49
Gallons Per Sack:	7.48
% Excess:	15%
Displacement Fluid lb/gal:	8.3
BBL to Pit:	0.0
Fluid Ahead (bbls):	30.0
H20 Wash Up (bbls):	20.0

Spacer Ahead Makeup

Dye in the second 10 bbl

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 61.05 cuft

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

cuft of Casing 977.39 cuft

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

Total Slurry Volume 1057.53 cuft

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

bbls of Slurry 188.35 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 710 sk

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

Mix Water 126.40 bbls

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

Displacement: 137.22 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1341.88 PSI

Pressure of the fluids inside casing

Displacement: 765.35 psi

Shoe Joint: 32.46 psi

Total 797.81 psi

Differential Pressure: 544.07 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 313.63 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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Customer	Anadarko Petroleum Corporation
Well Name	Guest 3N-12HZ

INVOICE #	666071
LOCATION	Weld
FOREMAN	Nick
Date	2/6/2017

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DESCRIPTION OF JOB EVENTS

Amount Pumped		Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess	15%	14:30	Arrive On Location	Rig was running casing.			
Mixed bbls	188.3	14:35	Well Site Assessment	Hazard hunt, Rig up safety meeting			
Total Sacks	710	17:30	Rig Up Equipment				
bbl Returns	19	18:20	JSA	Held safety meeting with all personell involved.			
Water Temp	50	18:37	Test Lines	Pressure tested lines to 1500 psi.			
		18:39	Spacer Ahead	Fresh water with Dye in the second 10.	7.2	30	160
Notes:		18:43	Pump Cement	14.2 ppg Cement	7.5	188.3	230
		19:13	Shut Down				
		19:14	Drop Plug	Plug was pre loaded.			
		19:14	Pump Displacement	Displaced with fresh water.	6.5	70	260
		19:40	Bump Plug	Bumped plug 500 psi over final lift. (1160 psi)	2	137.2	660
		19:41	Check Floats	Floats held (flowed back .5 bbl)			
		19:42	End Job	Rig down safety meeting.			
		19:45	Rig Down Equipment	Rig down and wash up.			
		20:15	Crew Left Location				

X _____
Work Preformed

X APC WSS
Title

X 2.6.17.
Date

Guest 3N-12HZ