



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/17/2015

Invoice # 35109

API#

Foreman: kirk kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: hunziker 1n-28hz

County: Weld

State: Colorado

Sec:

Twp:

Range:

Consultant: randy

Rig Name & Number: advanced 10

Distance To Location: 25

Units On Location: 4030-3203/4024-3203

Time Requested: 1200 am

Time Arrived On Location: 1200 am

Time Left Location: 4:15 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,305
Total Depth (ft) : 1324
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 50
Conductor ID : 16
Shoe Joint Length (ft) : 43
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: 15%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.66 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 44.55 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 705.36 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 768.57 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 136.88 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 516 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 91.87 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 98.18 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 962.70 PSI

Pressure of the fluids inside casing

Displacement: 544.15 psi

Shoe Joint: 31.72 psi

Total 575.87 psi

Differential Pressure: 386.83 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 230.05 bbls

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
hunziker 1n-28hz

INVOICE #
LOCATION
FOREMAN
Date

35109
Weld
kirk kallhoff
1/17/2015

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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	155am															
MIRU	1230a															
CIRCULATE	238am	0	318am	10	0			0			0			0		
Drop Plug		10	321am	40	10			10			10			10		
318 am		20	323am	40	20			20			20			20		
		30	325am	80	30			30			30			30		
		40	327am	120	40			40			40			40		
M & P		50	329am	200	50			50			50			50		
Time	Sacks	60	331am	260	60			60			60			60		
245 am	516	70	333am	330	70			70			70			70		
314am stop		80	335am	400	80			80			80			80		
		90	337am	410	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	15%	120			120			120			120			120		
Mixed bbls	91.9	130			130			130			130			130		
Total Sacks	516	140			140			140			140			140		
bbl Returns	4	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 341am 1410 psi

floats held

x Randy Case
Work Performed

x APC Consultant
Title

x 1-17-15
Date

M/D TOTCO 2000 SERIES

