



Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12760
API#
Foreman: Kirk Kallhoff

Customer: noble
Well Name: schaffer k16-64-1hn

County: Weld County
State: Colorado
Sec: 6
Twp: 4n
Range: 64w
Consultant: tawn
Rig Name & Number: pd 828
Distance To Location:
Units On Location: 3103-3210
Time Requested: 1130 am
Time Arrived On Location: 1030 am
Time Left Location: 2:00 pm

WELL DATA


Casing Size OD (in) : 9.6250
Casing Weight (lb) : 36
Casing Depth (ft) : 563
Total Depth (ft) : 595
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 15.5
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 20

Max Rate:
Max Pressure:

Cement Data

Cement Name: BEN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls):
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 41.82 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Shoe 18.23 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)		Pressure of cement in annulus	
cuft of Conductor 80.51 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Hydrostatic Pressure: 444.54 PSI	
cuft of Casing 243.48 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Pressure of the fluids inside casing	
Total Slurry Volume 342.22 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Displacement: 224.65 psi	
bbls of Slurry 79.23 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)		Shoe Joint: 33.16 psi	
Sacks Needed 350 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		Total 257.81 psi	
Mix Water 49.13 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42		Differential Pressure: 186.74 psi	
		Collapse PSI: 2020.00 psi	
		Burst PSI: 3520.00 psi	
		Total Water Needed: 69.13 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

noble
schafer k16-64-1hn

INVOICE #
LOCATION
FOREMAN

12760
Weld County
Kirk Kallhoff

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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	1200														
MIRU	1120														
CIRCULATE	1237	0	106	20	110	180	20	110	180	20	110	180	20	110	180
Drop Plug		10	108	110	20	110	180	20	110	180	20	110	180	20	110
		20	110	180	20	110	180	20	110	180	20	110	180	20	110
		30	112	230	30	112	230	30	112	230	30	112	230	30	112
		40	114	200	40	114	200	40	114	200	40	114	200	40	114
M & P		50			50			50			50			50	
Time	Sacks	60			60			60			60			60	
1244pm	374	70			70			70			70			70	
102pm stop		80			80			80			80			80	
		90			90			90			90			90	
		100			100			100			100			100	
		110			110			110			110			110	
		120			120			120			120			120	
% Excess	35%	130			130			130			130			130	
Mixed bbls	51	140			140			140			140			140	
Total Sacks	364	150			150			150			150			150	
bbl Returns															

Notes:

bumped plug at 116 pm 480 psi

X
Work Performed

X
Title

X
Date