



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/24/2014  
Invoice #: 12303  
API#: 445564  
Foreman: MONTE

Customer: noble  
Well Name: five rivers k07-63-1hn

County: weld  
State: colorado  
Sec: 8  
Twp: 4n  
Range: 66w  
Consultant: eric  
Rig Name & Number: persision 829  
Distance To Location: 5.7  
Units On Location: 3103-3204  
Time Requested: 4:30  
Time Arrived On Location: 3:10  
Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.8250  
Casing Weight (lb) : 36  
Casing Depth (ft.) : 620  
Total Depth (ft) : 628  
Open Hole Diameter (in.) : 13.75  
Conductor Length (ft) : 96  
Conductor ID : 15.5  
Shoe Joint Length (ft) : 45  
Landing Joint (ft) : 24

Max Rate:  
Max Pressure:

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.27  
Gallons Per Sack: 5.89  
% Excess: 25%  
Displacement Fluid lb/gal:  
BBL to Pit:  
Fluid Ahead (bbls):  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
10 fresh 10 dye 20 fresh

Casing ID 8.921 Casing Grade J-55 only used

## Calculated Results

cuft of Shoe 19.53 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
cuft of Conductor 77.29 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
cuft of Casing 275.35 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
Total Slurry Volume 372.17 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 82.85 bbls  
(Total Slurry Volume) X (.1781) X (% Excess Cement)  
Sacks Needed 366 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 51.37 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 46.28 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

Hydrostatic Pressure: 489.24 PSI

## Pressure of the fluids inside casing

Displacement: #N/A psi

Shoe Joint: 35.53 psi

Total #N/A psi

Differential Pressure: #N/A psi

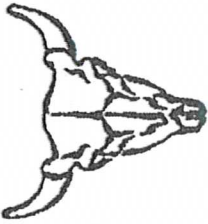
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 71.37 bbls

X JWI  
Authorization To Proceed

Customers hereby acknowledge 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

INVOICE #  
LOCATION  
FOREMAN  
Date

12303  
weld  
MONTE  
1/24/2014

Customer  
Well Name

noble  
five rivers k07-63-1hn

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DESCRIPTION OF JOB EVENTS

	6:30am 5:00 7:46	Displace 1		Displace 2		Displace 3		Displace 4		Displace 5	
		BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	Time
Safety Meeting		0	8:17	10	0			0			
MIRU		10	8:20	160	10			10			
CIRCULATE		20	8:22	240	20			20			
Drop Plug		30	8:24	300	30			30			
8:17		40	8:26	230	40			40			
		44.5	8:28	460	50			50			
M & P		60			60			60			
Time	Sacks	70			70			70			
7:55-8:14	366	80			80			80			
		90			90			90			
		100			100			100			
		110			110			110			
		120			120			120			
% Excess	25%	130			130			130			
Mixed bbls	51.3	140			140			140			
Total Sacks	366	150			150			150			
bbl Returns	9										

Notes:

safty meeting, miru, pressure test per company man, circulate 40 bbls ahead with dye in 2nd 10. mix and pump 366 sks at 25% excess

drop plug and displace 44.4 bbls h2o,

bump plug at 8:28 am at 460 psi raise pressure to 1000 psi hold 5 min release pressure

X Jw Sam  
Work Performed

X W.S.S.  
Title

X 1-24-13  
Date