



# Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12709

API# 445564

Foreman: monte

Customer: noble

Well Name: wells ranch ae20-63-hn

County: Weld

State: Colorado

Sec: 20

Twp: 6n

Range: 62w

Consultant:

Rig Name & Number: h & p 343

Distance To Location: 36.8

Units On Location: 3102 & 3210

Time Requested: 1130

Time Arrived On Location: 1130

Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.8250  
Casing Weight (lb) : 36  
Casing Depth (ft) : 965  
Total Depth (ft) : 970  
Open Hole Diameter (in.) : 13.75  
Conductor Length (ft) : 100  
Conductor ID : 16  
Shoe Joint Length (ft) : 42  
Landing Joint (ft) : 29

Max Rate:

Max Pressure:

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.274  
Gallons Per Sack: 5.89  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 73.6  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10 fresh 10 dye 50 fresh

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 18.24 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 89.10 cuft

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

cuft of Casing 439.73 cuft

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

Total Slurry Volume 547.07 cuft

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

bbls of Slurry 112.05 bbls

(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 494 sk

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

Mix Water 69.25 bbls

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

Displacement: 73.62 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 762.18 PSI

## Pressure of the fluids inside casing

Displacement: 398.09 psi

Shoe Joint: 33.18 psi

Total 431.27 psi

Differential Pressure: 330.91 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 162.88 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.

# BISON OIL WELL CEMENTING, INC.

1547 Gaylord Street  
Denver, Colorado 80206  
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INVOICE #  
LOCATION  
FOREMAN

12709  
68+69  
monte

Treatment Report Page 2

## DESCRIPTION OF JOB EVENTS

Safety Meeting	12C	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5			Displace 5		
MIRU	100	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
CIRCULATE	209	0	301	50	0			0			0			0			0		
Drop Plug		10	305	80	10			10			10			10			10		
		20	309	80	20			20			20			20			20		
301		30	309	130	30			30			30			30			30		
		40	311	210	40			40			40			40			40		
M & P		50	313	280	50			50			50			50			50		
Time	Sacks	60	315	350	60			60			60			60			60		
220	494	70	319	380	70			70			70			70			70		
250 stop		80	320	420	80			80			80			80			80		
		90			90			90			90			90			90		
		100			100			100			100			100			100		
		110			110			110			110			110			110		
		120			120			120			120			120			120		
		130			130			130			130			130			130		
		140			140			140			140			140			140		
		150			150			150			150			150			150		

Notes:

circulate 70 bbls Ahead with dye in and 10 mix + pump 494 sls cement at 1500  
excess at 1500 1.27 yield 5.89 H<sub>2</sub>O drop plug + Displace 70.9 bbls H<sub>2</sub>O drop plug  
at 400 PSI at 319pm Hold 5 min Release Pressure wash up Rig down

X *John S.*

X *lss*

X 8-27-13

Work performed

Title

Date