



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/12/2013  
Invoice #: 12565  
API#:   
Foreman: Kirk

Customer: noble  
Well Name: wells ranch st aa27-79hn

County: weld  
State: Colorado  
Sec: 21  
Twp: 6n  
Range: 63w

Consultant: cliff  
Rig Name & Number: h&p 277  
Distance To Location:   
Units On Location: 3103-3212  
Time Requested: 500 pm  
Time Arrived On Location: 330 pm  
Time Left Location: 8:30 pm

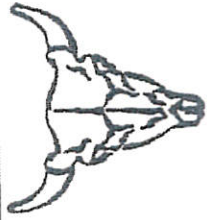
WELL DATA		Cement Data	
Casing Size OD (in) :	9.6250	Cement Name:	BFN III
Casing Weight (lb) :	36	Cement Density (lb/gal) :	15.2
Casing Depth (ft) :	889	Cement Yield (cuft) :	1.27
Total Depth (ft) :	926	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	13.75	% Excess:	30%
Conductor Length (ft) :	100	Displacement Fluid lb/gal:	8.3
Conductor ID :	15.5	BBL to Pit:	
Shoe Joint Length (ft) :	42	Fluid Ahead (bbls):	
Landing Joint (ft) :	27	H2O Wash Up (bbls):	20.0
Max Rate:		Spacer Ahead Makeup	
Max Pressure:			

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 67.57 bbls	
cuft of Shoe	18.23 cuft	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		Pressure of cement in annulus	
cuft of Conductor	80.51 cuft	Hydrostatic Pressure:	701.95 PSI
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing	414.92 cuft	Displacement:	365.21 psi
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint:	33.16 psi
Total Slurry Volume	513.66 cuft	Total	398.37 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure:	303.58 psi
bbls of Slurry	118.93 bbls	Collapse PSI:	2020.00 psi
(Total Slurry Volume) X (.1781) X (% Excess Cement)		Burst PSI:	3520.00 psi
Sacks Needed	526 sk	Total Water Needed:	93.74 bbls
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
Mix Water	73.74 bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

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

INVOICE #  
LOCATION  
FOREMAN  
Date

12565  
weld  
Kirk  
12/12/2013

Customer  
Well Name

noble  
wells ranch st aa27-79hn

Treatment Report Page 2

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	530pm														
MIRU	510pm														
CIRCULATE	651pm														
Drop Plug															
731 pm															
M & P															
Time															
704 pm															
728 pm stop															
% Excess															
Mixed bbls															
Total Sacks															
bbl Returns															

Notes:

bumped plug at 749 pm 490 psi 100.6 bbls slurry

X *[Signature]*  
Work Performed

X *[Signature]*  
Title

X 12-12-13  
Date