



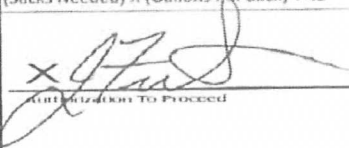
Bison Oil Well Cementing Single Cement Surface Pipe

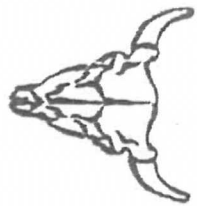
Date: 1/14/2014
Invoice #: 12367
API#: 05-123-36328
Foreman: Calvin Reimers

Customer: Noble
Well Name: No Worries PC G 14-63-1HN

County: Weld
State: Colorado
Sec: 14
Twp: 4N
Range: 65W
Consultant: Justin
Rig Name & Number: H&P 273
Distance To Location: 5 Miles
Units On Location: 3106/3211
Time Requested: 1230am
Time Arrived On Location: 1100pm
Time Left Location: 245am

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) :	602	Cement Yield (cuft) :	1.27
Total Depth (ft) :	635	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	13.75	% Excess:	20%
Conductor Length (ft) :	100	Displacement Fluid lb/gal:	8.3
Conductor ID :	16	BBL to Pit:	12.0
Shoe Joint Length (ft) :	43	Fluid Ahead (bbls):	
Landing Joint (ft) :	29	H2O Wash Up (bbls):	20.0
Max Rate:	7	Spacer Ahead Makeup	
Max Pressure:	2500	10bbls H2O+KCL+Dye in 2nd 10bbls	

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 45.44 bbls	
cuft of Shoe	18.74 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	89.10 cuft	Hydrostatic Pressure:	475.28 PSI
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing	263.95 cuft	Displacement:	240.92 psi
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint:	34.09 psi
Total Slurry Volume	371.79 cuft	Total	275.01 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure:	200.27 psi
bbls of Slurry	79.46 bbls	Collapse PSI:	2020.00 psi
(Total Slurry Volume) X (.1781) X (% Excess Cement)		Burst PSI:	3520.00 psi
Sacks Needed	351 sk	Total Water Needed:	69.26 bbls
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
Mix Water	49.26 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

Customer
Well Name

No Worries PC G 14-63-1HN

INVOICE #
LOCATION
FOREMAN
Date

12367
Weld
Calvin Reimers
1/14/2014

DESCRIPTION OF JOB EVENTS

Treatment Report Page 2

Safety Meeting	1237am 1200am 105am	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
MIRU		0	131am	100	0			0			0			0		
CIRCULATE		10	135am	150	10			10			10			10		
Drop Plug		20	137am	220	20			20			20			20		
		30	138am	290	30			30			30			30		
130am		40	141am	270	40			40			40			40		
		50	143am	250	50			50			50			50		
M & P		60	Bump	520	60			60			60			60		
Time	Sacks	70			70			70			70			70		
112am	351	80			80			80			80			80		
128am		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	20%	120			120			120			120			120		
Mixed bbls	49.26	130			130			130			130			130		
Total Sacks	351	140			140			140			140			140		
		150			150			150			150			150		
bbl Returns	12															

Notes:

The day

Float Held

1/2 bbl back on bleed off

Work Performed

X

Title

NEF WSS

X

Date

1/14/14