



BISON

Invoice

Date	Invoice #
4/24/2014	12142

Bison Oil Well Cementing Inc.
1547 Gaylord Street
Denver, CO 80206
303-296-3010

Bill To
Noble Energy Inc. Attn: Accounting 1625 Broadway Ste 2000 Denver, CO 80202

Location	Well Name & No.	Terms	Job Type		
Weld CO	Trisha LC29-76HNB	Net 30	Surface Pipe		
Item	Description	Qty	U/M	Rate	Amount
Pump surface	PUMP Charge-surface pipe	1			
Discount 15%	Discount 15%				
MILEAGE	Mileage charge	360			
Discount 15%	Discount 15%				
Data Acquisition ...	Data Acquisition Charge	1			
Discount 15%	Discount 15%				
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	349	Sack		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	4	qt		
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	8	oz		
Discount 15%	Discount 15%				
	Subtotal of Materials				

Please Remit Payment To:

Bison Oil Well Cementing, Inc.
P.O. Box 29671
Thornton, CO 80229

Subtotal

Sales Tax

Total

Balance Due



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/24/2014
Invoice #: 12142
API#: 05-123-38779
Foreman: LEE SHARP

Customer: NOBLE
Well Name: TRISHA LC 29-76HNB

County: WELD
State: Colorado
Sec: 29
Twp: 59W
Range: 9

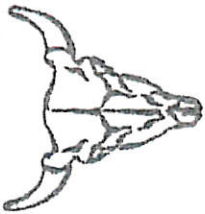
Consultant:
Rig Name & Number: H P 326
Distance To Location: 68
Units On Location: 40,273,106
Time Requested: 8:00
Time Arrived On Location: 8:27
Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BEN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 15.2
Casing Depth (ft.) : 631	Cement Yield (cuft) : 1.27
Total Depth (ft) : 641	Gallons Per Sack: 5.69
Open Hole Diameter (in.) : 13.75	% Excess: 20%
Conductor Length (ft) : 100	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.5	BBL to Pit: 0.0
Shoe Joint Length (ft) : 43	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 30	H2O Wash Up (bbls): 20.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	40BBL 10F+10DYE+10F+10F

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 47.80 bbls	
cuft of Shoe 18.52 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)		(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Conductor 80.51 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of cement in annulus	
cuft of Casing 279.24 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Hydrostatic Pressure: 498.24 PSI	
Total Slurry Volume 378.27 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Pressure of the fluids inside casing	
bbls of Slurry 80.84 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)		Displacement: 253.68 psi	
Sacks Needed 357 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		Shoe Joint: 33.68 psi	
Mix Water 50.12 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42		Total 287.37 psi	
		Differential Pressure: 210.87 psi	
		Collapse PSI: #N/A psi	
		Burst PSI: #N/A psi	
		Total Water Needed: 147.93 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

INVOICE #
LOCATION
FOREMAN
Date

12142
WELD
LEE SHARP
4/25/2014

Customer
Well Name

NOBLE
TRISHA LC 29-76HNB

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	9:50															
MIRU	10:25															
CIRCULATE	10:42	0	11:10	170	0			0			0			0		
Drop Plug		10	11:14	220	10			10			10			10		
		20	11:16	290	20			20			20			20		
11:09		30	11:18	320	30			30			30			30		
		40	11:20	1080	40			40			40			40		
M & P		50			50			50			50			50		
Time	Sacks	60			60			60			60			60		
		70			70			70			70			70		
		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	17%	130			130			130			130			130		
Mixed bbls	49	140			140			140			140			140		
Total Sacks	349	150			150			150			150			150		
bbl Returns	18															
Water Temp	60															

Notes:

The day JOB WENT WELL NO ISSUES TO REPORT

[Signature]

X *WSS*

X *4/25/14*

Work Performed