



BISON

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

Invoice

Date	Invoice #
4/27/2014	12216

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	STORIS E24-75-1HC	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%				
Service Charge	Casing Psi Test	1			
HOURS	Wait Time	0.5			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	400	Sack		
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	16	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: 4/27/2014
Invoice # 12216
API# 05-123-38144
Foreman: Calvin Reimers

Customer: Noble
Well Name: Storis E 24-75-1HC

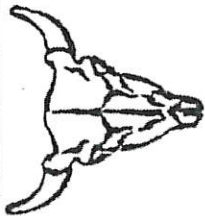
County: Weld Consultant: Steve / Mike
State: Colorado Rig Name & Number: H&P 315
Distance To Location: 22 Miles
Sec: 24 Units On Location: 3104/3203
Twp: 6N Time Requested: 800pm
Range: 65W Time Arrived On Location: 705pm
Time Left Location: 1230am

WELL DATA		Cement Data	
Casing Size OD (in) :	9.625	Cement Name:	BFN III
Casing Weight (lb) :	36.00	Cement Density (lb/gal) :	15.2
Casing Depth (ft.) :	771	Cement Yield (cuft) :	1.27
Total Depth (ft) :	800	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	13.75	% Excess:	10%
Conductor Length (ft) :	100	Displacement Fluid lb/gal:	8.3
Conductor ID :	16	BBL to Pit:	10.0
Shoe Joint Length (ft) :	45	Fluid Ahead (bbls):	50.0
Landing Joint (ft) :	31	H2O Wash Up (bbls):	20.0
Max Rate:	7	Spacer Ahead Makeup	
Max Pressure:	2500	50 bbls H2O+Dye in 2nd 10bbls	

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 58.53 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Shoe	19.55 cuft	Pressure of cement in annulus	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		Hydrostatic Pressure:	608.78 PSI
cuft of Conductor	89.10 cuft	Pressure of the fluids inside casing	
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Displacement:	313.02 psi
cuft of Casing	352.87 cuft	Shoe Joint:	35.56 psi
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Total	348.58 psi
Total Slurry Volume	461.51 cuft	Differential Pressure:	260.20 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Collapse PSI:	#N/A psi
bbls of Slurry	90.41 bbls	Burst PSI:	#N/A psi
(Total Slurry Volume) X (.1781) X (% Excess Cement)		Total Water Needed:	184.59 bbls
Sacks Needed	400 sk		
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
Mix Water	56.06 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 # 12216
LOCATION Weld
FOREMAN Calvin Reimers
Date 4/27/2014

Customer Noble
Well Name Storis E 24-75-1HC

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	Safety Meeting MIRU CIRCULATE Drop Plug 1104pm M & P Time	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
	950pm	0	1105pm	80	0			0			0			0		
	910pm	10	1108pm	110	10			10			10			10		
	1027pm	20	1110pm	170	20			20			20			20		
		30	1111pm	240	30			30			30			30		
		40	1113pm	300	40			40			40			40		
		50	1115pm	330	50			50			50			50		
		60	1119pm	280	60			60			60			60		
		70	Bump	400	70			70			70			70		
	1035pm	80			80			80			80			80		
	1101pm	90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		
% Excess	10%															
Mixed bbls	56.06															
Total Sacks	400															
bbl Returns	10															
Water Temp	51.2															

Notes:

The day

Float Held

1/2 bbl back on bleed off

Casing PSI Test 1120pm 1020psi to 1135pm 1030psi

X *[Signature]*

X *WSS*

X *4/27/14*

Work Performed

Title

Date