



BISON

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

Invoice

Date	Invoice #
12/14/2014	65042

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	Crow Creek AA01-724	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	Winterization Charge	1			
	Subtotal of Services				
BFN III Winter ...	BFN III Blend	310	Sack		
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	15	oz		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	4	qt		
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



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

65042

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
Tally(Crow Creek AA01-724)	Weld	Colorado	12/14/2014	829
CHARGE TO	WELL LOCATION			
Noble Energy Inc.	Section	TWP	RANGE	
Attn: Accounting	1	3N	68W	
1625 Broadway Ste 2000	DELIVERED TO	LOCATION 1		CODE
Denver, CO 80202	Cr 74	Shop		
	SHIPPED VIA	LOCATION 2		CODE
	4031-3106/4020-3212	CR 74		
	TYPE AND PURPOSE OF JOB	LOCATION 3		CODE
		Shop		
	SURFACE	WELL TYPE		CODE

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					
SURFACE		1			
MILEAGE CHARGE					
Pickup	\$1.50 per Mile	120			
Truck/Equipment	\$1.50 per Mile	240			
CEMENT CHARGE:					
BFN III	RIG NAME & NUMBER: PD829 WELL NAME & NUMBER: Crow Creek AA01-724 APP NUMBER: 200 448 TANKER: 00000000000000000000 ARL DATE TYPE 320.1 0017 DELIVER TOTAL DUES - PPV D \$9179.60 FIELD APPROV: [Signature] DATE: 12/14/14 ROUTE TO APPROVE: [Signature] MAIL TO: NOBLE ENERGY INC ATTN: ACCOUNTS PAYABLE 1625 BROADWAY, SUITE 2000 DENVER, CO 80202 NO INVOICE WILL BE PAID W/O ALL ATTACHED SIGNED FIELD TICKETS	310			
ADDITIVES CHARGE:					
Dye Hot Pink		15			
KCL		4			
FLOAT EQUIPMENT:					
OTHER CHARGES:					
DATA ACQUISITION FEE		1			
Winterization		1			

If this account is not paid within 30 days of invoice date a FINANCE CHARGE will be made. Computed at a single monthly rate of 1 1/2% which is equal to an ANNUAL PERCENTAGE RATE OF 15%.

TAX

SUBJECT TO CORRECTION

Bison Oil Well Cementing, Inc. Representative

Customer or Agent

Customers hereby acknowledges and specifically agrees to the terms and conditions on this work order, including, without limitation, the provisions on the reverse hereof which include the release and indemnity.



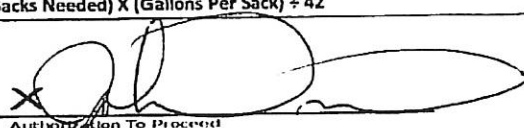
Bison Oil Well Cementing Single Cement Surface Pipe

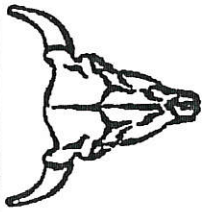
Date: 12/14/2014
Invoice #: 65042
API#: 40752
Foreman: Lee

Customer: Noble Energy Inc.
Well Name: Tally(Crow Creek AA01-724)

County: Weld
State: Colorado
Sec: 1
Twp: 3N
Range: 68W
Consultant: John
Rig Name & Number: 829
Distance To Location: 30
Units On Location: 4031-3106/4020-3212
Time Requested: 11:30
Time Arrived On Location: 10:45
Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft.) : 687	Cement Yield (cuft) : 1.49
Total Depth (ft) : 697	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.60	% Excess: 0%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15	BBL to Pit: 27
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 40.0
Landing Joint (ft) : 0	H2O Wash Up (bbls): 20.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	10F 10D 20F = 40bbl

Casing ID 8.921	Casing Grade J-55 only used
Calculated Results	Displacement: 49.72 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Shoe 19.04 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of cement in annulus
cuft of Conductor 57.75 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 506.80 PSI
cuft of Casing 296.66 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 373.45 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 277.31 psi
bbls of Slurry 66.51 bbls (Total Slurry Volume) X (.1781)	Shoe Joint: 32.36 psi
Sacks Needed 251 sk (Total Slurry Volume) + (Cement Yield) X (% Excess Cement)	Total 309.67 psi
Mix Water 44.64 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: 197.13 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	19.36 psi
 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 #	65042
LOCATION	Weld
FOREMAN	Lee
Date	12/14/2014

Customer	Noble Energy Inc.
Well Name	Tally(Crow Creek AA01-724)

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	1335														
MIRU	1310														
CIRCULATE	1417														
Drop Plug		0	1451		0			0			0			0	
1451		10	1453		10			10			10			10	
		20	1455		20			20			20			20	
		30	1459		30			30			30			30	
		40	1501		40			40			40			40	
		50	Land		50			50			50			50	
M & P		60			60			60			60			60	
Time		70			70			70			70			70	
1424-1451		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		130			130			130			130			130	
Mixed bbls	55.27	140			140			140			140			140	
Total Sacks	310	150			150			150			150			150	
bbl Returns	10														
Water Temp	100														

Notes:

The day

Job complete with no issues

Plug landed on calculated final lift was 230

Casing test began @ 1510 held 15 minutes 1525

beginning PSI 1020 final PSI 960

Floats checked and floats held 1526

X Coryn Title

X 12/14/14 Date

Work Performed