



BISON

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

Invoice

Date	Invoice #
10/8/2013	12742

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 St. AC36-74HN	Net 30	Surface Pipe		
Item	Description	Qty	U/M	Rate	Amount
Pump surface	PUMP Charge-surface pipe	1		1,480.00	1,480.00
Discount 15%	Discount 15%				
MILEAGE	Mileage charge	360		1.00	360.00
Discount 15%	Discount 15%				
Data Acquisition ...	Data Acquisition Charge	1		225.00	225.00
Discount 15%	Discount 15%				
	Subtotal of Services				1,865.00
BFN III Summer ...	BFN III Blend	352	Sack	18.15	6,388.80
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	4	qt	7.50	30.00
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	10	oz	15.00	150.00
Discount 15%	Discount 15%				
	Subtotal of Materials				6,768.80

Please Remit Payment To:

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

Subtotal

Sales Tax (2.9%)

Total

Balance Due

BISON OIL WELL CEMENTING, INC.

1547 Gaylord Street
Denver, Colorado 80206
Phone: 303-296-3010
Fax: 303-298-8143
E-mail: bisonoil1@qwestoffice.net



INVOICE #
LOCATION
FOREMAN

12742
392-741
KIL

TREATMENT REPORT

DATE	WELL NAME	SECTION	TWP	RGE	COUNTY
10-8-13	Crow Creek State AC 36-711-10	36	7N	63W	Weld
BILL TO	CONSULTANT				
note	Rogers				
OWNER	RIG NAME & NUMBER				
	H&P 277				
MAILING ADDRESS	DISTANCE TO LOCATION		UNITS ON LOCATION		
			303-3204		
CITY	TIME REQUESTED		TIME ARRIVED ON LOCATION		
	1:00pm		11:30am		
STATE, ZIP	TIME LEFT LOCATION				
	4:30pm				

WELL DATA

HOLE SIZE	TUBING SIZE	PERFORATIONS
13 3/4		
TOTAL DEPTH	TUBING DEPTH	SHOTS/FT
635		
CASING SIZE	TUBING WEIGHT	OPEN HOLE
9 5/8		
CASING DEPTH	TUBING CONDITION	TREATMENT VIA
625		
CASING WEIGHT	PACKER DEPTH	
36 lb		
CASING CONDITION	Good	
Max Rate		
Max Pressure		

Cement Makeup

Cement Blend	BF 3/4 BCC A-1.25 Super SE BFLA-1		
Cement - Specs	lbs	Yield	Water Requirements
	15.2	1.27	5.89
Annulus Factor	Capacity Factor		
1.5258	1.0773		
<p>TYPE OF TREATMENT</p> <p><input checked="" type="checkbox"/> Surface Pipe <input type="checkbox"/> Production <input type="checkbox"/> Squeeze</p> <p><input type="checkbox"/> MISC Pump <input type="checkbox"/> P&A</p>			

HYD HHP = RATE X PRESSURE / 40.8

% Excess	30%
BBL to Pit	10

DESCRIPTION OF JOB EVENTS

Safety meeting, Rig up, PSE test, Per man cir 40 BBLs KLL H2O 2nd 104 Dye mix & Pump 352
sls cement at 30% Excess at 1.27 yield at 15.2 lbs cement till stopped by rearing Release Plug
Disp 45.1 BBLs H2O, Bump Plug At 150 PSE wait 5 min Release PSE wash up Rig Down.

X Rohit Nish
Authorization To Proceed

Title

X 10-8-13
Date

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

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Denver, Colorado 80206
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Treatment Report Page 2

Safety Meeting	2'30	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU	1'50	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
CIRCULATE	3'45	0	3'37	10	0			0			0			0		
Drop Plug		10	3'39	60	10			10			10			10		
3'37 5min		20	3'41	160	20			20			20			20		
		30	3'43	210	30			30			30			30		
		40	3'45	240	40			40			40			40		
M & P		450	3'48	220	50			50			50			50		
Time	Sacks	60			60			60			60			60		
3'13 6min	352	70			70			70			70			70		
3'13 stop		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		
		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		

used 3040 Express used 352 sds cement 79.8 B's slurry 103 B's 70 RT
Bumped Plug At 3:48 am 420 PST

X Robert Nichols
Work Performed

X	Title
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X 10-8-13
Date



Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12742

API#

Foreman: kirk

Customer: noble

Well Name: crow creek state ac 36-74hn

County: Weld

State: Colorado

Sec: 36

Twp: 7n

Range: 63w

Consultant: robert

Rig Name & Number: h&p 277

Distance To Location:

Units On Location: 3103 3204

Time Requested: 1:00 AM

Time Arrived On Location: 11:30am

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.6250
Casing Weight (lb) : 36
Casing Depth (ft) : 597
Total Depth (ft) : 635
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 15.5
Shoe Joint Length (ft) : 41
Landing Joint (ft) : 28

Max Rate:

Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.274
Gallons Per Sack: 5.89
% Excess: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 45.1
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.80 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 80.51 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X
(Conductor Length ft)
cuft of Casing 246.64 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing
Depth - Conductor Length - Landing Joint)
Total Slurry Volume 344.94 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 79.86 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)
Sacks Needed 352 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 49.36 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.15 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe
Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 471.39 PSI

Pressure of the fluids inside casing

Displacement: 239.74 psi

Shoe Joint: 32.37 psi

Total 272.11 psi

Differential Pressure: 199.28 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 114.51 bbls

X *Robert M. Smith*
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.