



# BISON

## Invoice

Date	Invoice #
3/2/2014	12122

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	Oscar Y10-79-IHN	Net 30	Lead & Tail Surface		
Item	Description	Qty	U/M	Rate	Amount
Pump Charge-Other	Pump Charge-Other	1			
MILEAGE	Mileage charge-Truck	135			
Data Acquisition ...	Data Acquisition Charge	1			
	Subtotal of Services				
BFN HI Winter ...	BFN HI Blend	510	Sack		
KCL Mud Flush	(BHS 117)	3	qt		
Dye - 4880	Dye (Hot Pink 4880)	8	oz		
	Subtotal of Materials				

Please Remit Payment To:

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

Subtotal	
Sales Tax	
<b>Total</b>	
Balance	



**Bison Oil Well Cementing  
Tail & Lead**

Date: 3/2/20014

Invoice # 12122

API# 05-123-38190

Foreman: LEE

Customer: Noble Energy

Well Name: OSCAR Y10-79-1HN

Consultant:

Rig Name & Number: HP 330

Distance To Location: 26

Units On Location: 2

Time Requested: 4:00 PM

Time Arrived On Location: 11:25 AM

Time Left Location:

County: Weld

State: Colorado

Sec: 10

Twp: 2N

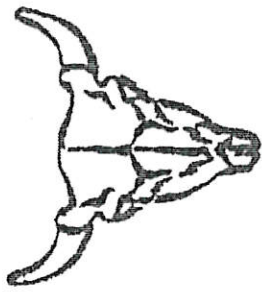
Range: 64W

WELL DATA	Cement Data
Casing Size (in) : 9.625 Casing Weight (lb) : 36 Casing Depth (ft.) : 1,162 Total Depth (ft) : 1172 Open Hole Diameter (in) : 13.75 Conductor Length (ft) : 100 Conductor ID : 15.5 Shoe Joint Length (ft) : 43 Landing Joint (ft) : 33  Sacks of Tail Requested : 100 HOC Tail (ft): 0 <small>One or the other, cannot have quantity in both</small>  Max Rate: Max Pressure:	<b>Lead</b> Cement Name: Cement Density (lb/gal) : 13.1 Cement Yield (cuft) : 1.69 Gallons Per Sack : 8.64 % Excess : 35%  <b>Tail</b> Cement Name: Cement Density (lb/gal) : 15.2 Cement Yield (cuft) : 1.27 Gallons Per Sack: 5.89 % Excess: 0%  Fluid Ahead (bbbls) : 30.0 H2O Wash Up (bbbls) : 20.0  <b>Spacer Ahead Makeup</b> 30 bbl die in second 10

Lead Calculated Results	Tail Calculated Results
HOC of Lead : 822.28 ft	Tail Cement Volume In Ann : 127.00 cuft (HOC Tail) X (OH Ann)
Casing Depth - HOC Tail	Total Volume of Tail Cement : 108.55 Cuft (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
Volume of Lead Cement : 432.43 cuft	bbbls of Tail Cement : 22.62 bbbls (HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
HOC of Lead X Open Hole Ann	HOC Tail : 206.42 ft (Tail Cement Volume) ÷ (OH Ann)
Volume of Conductor : 80.51 cuft (Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Sacks of Tail Cement : 100.00 sk (Total Volume of Tail Cement) ÷ (Cement Yield)
Total Volume of Lead Cement : 512.93 cuft (cuft of Lead Cement) + (Cuft of Conductor)	bbbls of Tail Mix Water : 14.02 bbbls (Sacks of Tail Cement X Gallons Per Sack) ÷ 42
bbbls of Lead Cement : 123.33 bbbls (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	Pressure of cement in annulus
Sacks of Lead Cement : 409.74 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Hydrostatic Pressure : 790.54 PSI
bbbls of Lead Mix Water : 84.29 bbbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Collapse PSI: 2020.00 psi
Displacement : 89.07 bbbls (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	Burst PSI: 3520.00 psi
Total Water Needed: 134.29 bbbls	

X 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  
Two Cement Surface Pipe**

Date: 3/2/20014  
 INVOICE #: 12122  
 LOCATION: Weld  
 FOREMAN: LEE

Customer: Noble Energy  
 Well Name: OSCAR Y10-79-1HN

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	0	17:45	80	0			0			0			0		
MIRU	10	17:50	120	10			10			10			10		
CIRCULATE	20	17:52	150	20			20			20			20		
Drop Plug	30	17:54	220	30			30			30			30		
12.3	40	17:56	260	40			40			40			40		
M & P	50	17:57	360	50			50			50			50		
Time	60	17:59	340	60			60			60			60		
16:52	70	18:01	370	70			70			70			70		
17:30	80	18:03	410	80			80			80			80		
	90			90			90			90			90		
	100			100			100			100			100		
	110			110			110			110			110		
	120			120			120			120			120		
Lead mixed bbls	130			130			130			130			130		
Lead % Excess	140			140			140			140			140		
Lead Sacks	150			150			150			150			150		

**Notes:**

MIRU @ 15:00 SAFETY@ 15:15 BREAK CIRCULATION@ 16:50 LEAD CEMENT@16:52 TAIL@ 17:30 DROP@17:45 LAND@ 18:04 CASING TEST@18:05  
 RELEASE AND TEST FLOATS@18:20 RIG DOWN AND CLEAN @18:29 DEPART SITE @ 18:50

Tail mixed bbls	14
Tail % Excess	0%
Tail Sacks	100
Total Sacks	508
bbl Returns	

X \_\_\_\_\_ X \_\_\_\_\_  
 Work Performed Title

X \_\_\_\_\_ X \_\_\_\_\_  
 Date Date



# Bison Oil Well Cementing Tail & Lead

## Cementing Customer Satisfaction Survey

Service Date	3/2/20014
Well Name	OSCAR Y10-79-1HN
County	Weld
State	Colorado
SEC	10
TWP	2N
RNG	64W

Invoice Number	12122
API #	05-123-38190
Job Type	
Company Name	Noble Energy

Customer Representative: HuetSupervisor Name: LEE

Employee Name (Including Supervisor)
LEE
PABLO
ALLEN

Exposure Hours (Per Employee)


Total Exposure Hours

0Did we encounter any problems on this job?  Yes  No

### To Be Completed By Customer

#### Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
  - 4 - Exceeded Expectation (Provided more than what was required/expected)
  - 3 - Met Expectations (Did what was expected)
  - 2 - Below Expectations (Job problems/failures occurred - \*Recovery made)
  - 1 - Poor Performance (Job problems/failures occurred - \*Some recovery made)
- \*Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING	CATEGORY
<u>5</u>	Personnel -
<u>5</u>	Equipment -
<u>5</u>	Job Design -
<u>5</u>	Product/Material -
<u>5</u>	Health & Safety -
<u>5</u>	Environmental -
<u>5</u>	Timeliness -
<u>5</u>	Condition/Appearance -
<u>5</u>	Communication -

#### CUSTOMER SATISFACTION RATING

- Did our personnel perform to your satisfaction?
- Did our equipment perform to your satisfaction?
- Did we perform the job to the agreed upon design?
- Did our products and materials perform as you expected?
- Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)?
- Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)?
- Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
- Did the equipment condition and appearance meet your expectations?
- How well did our personnel communicate during mobilization, rig up and job execution?

#### Please Circle:

- Yes No Did an accident or injury occur?
- Yes No Did an injury requiring medical treatment occur?
- Yes No Did a first-aid injury occur?
- Yes No Did a vehicle accident occur?
- Yes No Was a post-job safety meeting held?

#### Please Circle:

- Yes No Was a pre-job safety meeting held?
- Yes No Was a job safety analysis completed?
- Yes No Were emergency services discussed?
- Yes No Did environmental incident occur?
- Yes No Did any near misses occur?

#### Additional Comments:

Good Job Thanks!

THE INFORMATION HEREIN IS CORRECT -

X

Customer Representative's Signature

DATE:

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Any additional Customer Comments or HSE concerns should be described on the back of this form