



THE STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS  
CONSERVATION DIVISION

DISPOSAL WELL PERMIT

Oper. License #: 33190 Permit #: D-30726  
 Operator: Noble Energy, Inc. Well Name & No.: Raile SWD #1  
 Address: 1625 Broadway, Ste. 2200 Location: 3611'FSL 430'FEL  
 City: Denver Sec. 6 TWP 4 RGE 41  (E)  (W)  
 State: Colorado County: Cheyenne  
 Zip Code: 80202 Field Name: Cherry Creek Niobrara Gas Area

Project Acreage: Sec. 31-T3S-41W; SEC. 6-T4S-R41W; N/2-NW/4 SEC. 7-T4S-R41W; W/2 & E/2-E/2 SEC. 1, N/2-NE/4 SEC. 12-T4S-R42W.

After reviewing the operator's application for Disposal Well Permit dated 10-14-2010, the Conservation Division grants a permit for the injection of produced saltwater or other fluids approved by the Conservation Division. The permitted well is subject to the specifications and requirements of this permit including any attachments or any attached amendments.

- The injection formation is known as the Cedar Hills.
- The depth of the permitted injection interval is from 3250' to 3285',  (PF),  (OH)
- The maximum authorized injection rate is 2500 barrels of fluid per day.
- The maximum authorized injection pressure is 600 PSIG.
- Attachment  YES,  NO.

Complete casing information is as follows:

	<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>INTERVAL CEMENTED</u>	<u>SACKS CEMENT USED</u>
Conductor	NONE"	'	' to '	
Surface	9-5/8"	309'	0' to 309'	170
Intermediate	NONE"	'	' to '	
Production	7"	3250'	1290' to 3250'	315
Tubing	3-1/2"	3208'	' to '	

Additional Cementing: NONE' to '

Packer type and setting depth: TENSION set @ 3208'

Well(s), Leases(s) and Facilities supplying fluid for injection:

Lease Operator	Lease Name	Lease Description
SEE PAGE 2		

In addition to the specific permit conditions and requirements set out above or on the attachment hereto, this permit is subject to all of the provisions of K.A.R. 83-3-400 et seq. Injection authority cannot be transferred without approval of the Conservation Division.

Date of Approval: 1-27-2011

Director, Underground Injection Control  
Conservation Division

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 2822004		Quote #:		Sales Order #: 7801199							
Customer: NOBLE ENERGY INC E-BUSINESS				Customer Rep: McCLELLAND, MIKE									
Well Name: Raile SWD			Well #: 1		API/UWI #:								
Field:		City (SAP): UNKNOWN		County/Parish: Cheyenne		State: Kansas							
Job Purpose: Plug-Lost Circulation Service													
Well Type: Development Well				Job Type: Plug-Lost Circulation Service									
Sales Person: JACOBS, JESS			Srvc Supervisor: SALDIVAR, JUAN			MBU ID Emp #: 100534							
<b>Job Personnel</b>													
HES Emp Name		Exp Hrs	Emp #	HES Emp Name		Exp Hrs	Emp #	HES Emp Name		Exp Hrs	Emp #		
BELL, ROBERT Preston		4	437060	FANTASIA, JOSEPH Brandon		4	485445	SALDIVAR, JUAN R		4	100534		
<b>Equipment</b>													
HES Unit #	Distance-1 way		HES Unit #	Distance-1 way		HES Unit #	Distance-1 way		HES Unit #	Distance-1 way			
10829456	191 mile		11398490	191 mile		10085552	191 mile						
<b>Job Hours</b>													
Date	On Location Hours		Operating Hours	Date	On Location Hours		Operating Hours	Date	On Location Hours		Operating Hours		
TOTAL				Total is the sum of each column separately									
<b>Job</b>						<b>Job Times</b>							
Formation Name						Date		Time		Time Zone			
Formation Depth (MD) Top		Bottom				Called Out		27 - Nov - 2010		05:00 MST			
Form Type		BHST				On Location		27 - Nov - 2010		12:00 MST			
Job depth MD		3104. ft		Job Depth TVD		3104. ft		Job Started		27 - Nov - 2010 13:50 MST			
Water Depth				Wk Ht Above Floor		3. ft		Job Completed		27 - Nov - 2010 17:30 MST			
Perforation Depth (MD) From		To				Departed Loc		27 - Nov - 2010		18:00 MST			
<b>Well Data</b>													
Description		New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread		Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Surface Casing		Unknown		9.625	8.921	36.				1732.			
<b>Tools and Accessories</b>													
Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			
<b>Miscellaneous Materials</b>													
Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty		Conc %	
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size		Qty	
<b>Fluid Data</b>													
<b>Stage/Plug #: 1</b>													
Fluid #	Stage Type		Fluid Name			Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk	
1	SUPER FLUSH 100		SUPER FLUSH 100 - SBM (12191)				bbl	9.5	.0	.0	.0		
<b>Calculated Values</b>			<b>Pressures</b>			<b>Volumes</b>							
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad					
Top Of Cement		5 Min		Cement Returns		Actual Displacement		Treatment					
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job					

Rates											
Circulating		Mixing			Displacement			Avg. Job			
Cement Left In Pipe	Amount	0 ft	Reason	Shoe Joint							
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID				
<b>The Information Stated Herein Is Correct</b>				Customer Representative Signature							

*The Road to Excellence Starts with Safety*

Sold To #: 345242	Ship To #: 2822004	Quote #:	Sales Order #: 7801199
Customer: NOBLE ENERGY INC E-BUSINESS		Customer Rep: McCLELLAND, MIKE	
Well Name: Raile SWD	Well #: 1	API/UWI #:	
Field:	City (SAP): UNKNOWN	County/Parish: Cheyenne	State: Kansas
Legal Description:			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor:		Rig/Platform Name/Num:	
Job Purpose: Plug-Lost Circulation Service			Ticket Amount:
Well Type: Development Well		Job Type: Plug-Lost Circulation Service	
Sales Person: JACOBS, JESS		Srvc Supervisor: SALDIVAR, JUAN	MBU ID Emp #: 100534

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Arrive At Loc	11/27/2010 12:00							
Safety Huddle	11/27/2010 12:10							
Rig-Up Equipment	11/27/2010 12:15							
Safety Meeting	11/27/2010 13:45							
Test Lines	11/27/2010 13:56					2745.0		
Pump Gel Pill	11/27/2010 13:57		2	10		70.0		LCM GEL PILL
Pump Spacer	11/27/2010 14:02		2	10		74.0		CALCIUM CHLORIDE WATER
Pump Water	11/27/2010 14:05		2	5		59.0		
Other	11/27/2010 14:08		2	10		83.0		SUPER FLUSH
Pump Water	11/27/2010 14:20		2	10		82.0		
Pump Spacer	11/27/2010 14:22		2	10		76.0		CALCIUM CHLORIDE WATER
Pump Displacement	11/27/2010 14:25		4	50		76.0		WATER
Shutdown	11/27/2010 14:35							PRESSURE DROPPED. RIG PULLED DRILL PIPE OUT OF HOLE.
Standby Orders	11/27/2010 14:36							STANDBY FOR AN HOUR. FOR SECOND JOB.
Safety Meeting	11/27/2010 16:30							
Pump Gel Pill	11/27/2010 16:50		1.5	10		6.0		LCM PILL

# HALLIBURTON

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Spacer	11/27/2010 16:53		1.5	5		11.0		CALCIUM CHLORIDE WATER
Pump Water	11/27/2010 16:57		1.5	5		20.0		WATER
Other	11/27/2010 16:58		1.5	10		-5.0		SUPER FLUSH
Pump Water	11/27/2010 17:10		1.5	5		20.0		WATER
Pump Spacer	11/27/2010 17:12		1.5	10		21.0		CALCIUM CHLORIDE WATER
Pump Water	11/27/2010 17:14		1.5	50		16.0		WATER DISPLACEMENT
Shutdown	11/27/2010 17:30					-10.0		WELL WENT INTO VACUUM.
Safety Huddle	11/27/2010 17:35							
Rig-Down Equipment	11/27/2010 17:40							
Job Complete	11/27/2010 18:00							

Sold To #: 345242

Ship To #: 2822004

Quote #:

Sales Order #:

7801199

SUMMIT Version: 7.20.130

Saturday, November 27, 2010 06:05:00

# BISON OIL WELL CEMENTING, INC.



1738 Wynkoop St., Ste. 102  
 Denver, Colorado 80202  
 Phone: 303-296-3010  
 Fax: 303-298-8143  
 E-mail: bisonoil1@qwestoffice.net

REF. INVOICE # 9409  
 LOCATION St. Francis  
 FOREMAN Randy Newton

## TREATMENT REPORT

DATE	WELL NAME	SECTION	TWP	RGE	COUNTY	FORMATION
11-20-10	Raite SWD #1	6	45	41W	cheyenne	

CHARGE TO <u>Noble Energy</u>	OWNER <u>Noble Energy</u>
MAILING ADDRESS	OPERATOR
CITY	CONTRACTOR <u>Excell Rig 3</u>
STATE ZIP CODE	DISTANCE TO LOCATION <u>65 mi</u>
TIME ARRIVED ON LOCATION <u>11:30 a.m.</u>	TIME LEFT LOCATION

WELL DATA			PRESSURE LIMITATIONS		
HOLE SIZE <u>12 1/4</u>	TUBING SIZE	PERFORATIONS		THEORETICAL	INSTRUCTED
TOTAL DEPTH <u>317</u>	TUBING DEPTH	SHOTS/FT	SURFACE PIPE ANNULUS LONG		
	TUBING WEIGHT	OPEN HOLE	STRING		
CASING SIZE <u>9 5/8</u>	TUBING CONDITION		TUBING		
CASING DEPTH <u>308</u>	<u>PBTD 266</u>	TREATMENT VIA	TYPE OF TREATMENT		TREATMENT RATE
CASING WEIGHT <u>36 lb</u>	PACKER DEPTH		<input checked="" type="checkbox"/> SURFACE PIPE	BREAKDOWN BPM	
CASING CONDITION <u>good</u>			<input type="checkbox"/> PRODUCTION CASING	INITIAL BPM	
			<input type="checkbox"/> SQUEEZE CEMENT	FINAL BPM	
			<input type="checkbox"/> ACID BREAKDOWN	MINIMUM BPM	
			<input type="checkbox"/> ACID STIMULATION	MAXIMUM BPM	
			<input type="checkbox"/> ACID SPOTTING	AVERAGE BPM	
			<input type="checkbox"/> MISC PUMP		
			<input type="checkbox"/> OTHER	HYD HHP = RATE X PRESSURE X 40.8	

PRESSURE SUMMARY			
BREAKDOWN or CIRCULATING	psi	AVERAGE	psi
FINAL DISPLACEMENT	psi	ISIP	psi
ANNULUS	psi	5 MIN SIP	psi
MAXIMUM	psi	15 MIN SIP	psi
MINIMUM	psi		

INSTRUCTIONS PRIOR TO JOB MIRU 5m, circ, MTP 178 bbls of 133-1.1k @ 15.2<sup>th</sup> per gal water  
req of 4.78 gal per sk 19.7 bbls mix yield of 1.13 cu ft per sk Drop plug displace 20.5 bbls  
water shut in well rig down  
Annulus .3131 cap .0773  
75% excess as per Tom Thomas Noble Rep

JOB SUMMARY						
DESCRIPTION OF JOB EVENTS	MIRU	5m	circ	MTP	Drop plug	Displace
	1:00pm	3:25pm	3:27pm	3:30pm	3:40pm	3:48pm
shut in						3:51 10 100
3:58pm		4:05pm				3:56 20.5 600

4 bbls cement to pit  
plug located @ 4:00 PM

*Tom Thomas*

AUTHORIZATION TO PROCEED

TITLE

DATE

11-20-10

# BISON OIL WELL CEMENTING, INC.

1738 Wynkoop St., Ste. 102  
 Denver, Colorado 80202  
 Phone: 303-296-3010  
 Fax: 303-298-8143  
 E-mail: bisonoil1@qwestoffice.net



## SERVICE INVOICE

No 9411

WELL NO. AND FARM <i>Raile SWD #1</i>		COUNTY <i>Cheyenne</i>	STATE <i>KS</i>	DATE <i>11-28-10</i>
CHARGE TO <i>Noble Energy</i>		WELL LOCATION SEC. <i>6</i> TWP. <i>4S</i> RANGE <i>41W</i>		CONTRACTOR <i>Excellency 3</i>
DELIVERED TO			LOCATION <i>1 Yuma</i>	CODE
SHIPPED VIA			LOCATION <i>2 St Francis</i>	CODE
TYPE AND PURPOSE OF JOB <i>Cement Plug</i>			LOCATION <i>3 Yuma</i>	CODE
			WELL TYPE <i>SWD</i>	CODE

PRICE REFERENCE	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT	
		QTY.	MEAS.			
	<i>pump charge</i>	<i>1</i>	<i>pc</i>	<i>3000.00</i>	<i>3000</i>	<i>00</i>
	<i>mileage x 2 trucks 65mi</i>	<i>130mi</i>	<i>per mi</i>	<i>3.00</i>	<i>390</i>	<i>00</i>
	<i>2005 Neat cement w 10<sup>th</sup> persk coal seal</i>	<i>2005</i>	<i>per sk</i>	<i>20.00</i>	<i>4000</i>	<i>00</i>
	<i>cotton seed hulls</i>	<i>455</i>	<i>per bag</i>	<i>25.00</i>	<i>100</i>	<i>00</i>
	<i>Raile SWD #1</i>					
	<i>131344</i>					
	<i>Truck</i>					
		Total Weight	Loaded Miles	Ton Miles		

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 18%.

TAX REFERENCES

*Thank You*

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

SUB TOTAL

*7490 00*

TAX

TOTAL

SUBJECT TO CORRECTION

Customer or His Agent

Bison Oil Well Cementing, Inc. Representative

Customers hereby acknowledges 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.

# BISON OIL WELL CEMENTING, INC.



1738 Wynkoop St., Ste. 102  
 Denver, Colorado 80202  
 Phone: 303-296-3010  
 Fax: 303-298-8143  
 E-mail: bisonoil1@qwestoffice.net

REF. INVOICE # 9412  
 LOCATION St Francis  
 FOREMAN Randy Newton

## TREATMENT REPORT

DATE <u>12-1-10</u>	WELL NAME <u>Rate SWD #1</u>	SECTION <u>6</u>	TWP <u>45</u>	RGE <u>41W</u>	COUNTY <u>cheyenne</u>	FORMATION
CHARGE TO <u>Noble Energy</u>			OWNER <u>Noble</u>			
MAILING ADDRESS			OPERATOR			
CITY			CONTRACTOR <u>Excell 1-3</u>			
STATE ZIP CODE			DISTANCE TO LOCATION <u>650</u>			
TIME ARRIVED ON LOCATION <u>4:15 AM</u>			TIME LEFT LOCATION <u>9:15 PM</u>			

WELL DATA			PRESSURE LIMITATIONS		
HOLE SIZE <u>8 3/4</u>	TUBING SIZE	PERFORATIONS		THEORETICAL	INSTRUCTED
TOTAL DEPTH <u>3250</u>	TUBING DEPTH	SHOTS/FT	SURFACE PIPE ANNULUS LONG		
	TUBING WEIGHT	OPEN HOLE	STRING		
CASING SIZE <u>7"</u>	TUBING CONDITION		TUBING		
CASING DEPTH <u>3268</u>	<u>log</u> 3230	TREATMENT VIA	TYPE OF TREATMENT		TREATMENT RATE
CASING WEIGHT <u>23%</u>	PACKER DEPTH		<input type="checkbox"/> SURFACE PIPE	BREAKDOWN BPM	
CASING CONDITION <u>50-A</u>			<input type="checkbox"/> PRODUCTION CASING	INITIAL BPM	
			<input type="checkbox"/> SQUEEZE CEMENT	FINAL BPM	
			<input type="checkbox"/> ACID BREAKDOWN	MINIMUM BPM	
			<input type="checkbox"/> ACID STIMULATION	MAXIMUM BPM	
			<input type="checkbox"/> ACID SPOTTING	AVERAGE BPM	
			<input type="checkbox"/> MISC PUMP		
			<input type="checkbox"/> OTHER	HYD HHP = RATE X PRESSURE X 40.8	

INSTRUCTIONS PRIOR TO JOB MT Ru Sm mud plug m+p 275 sks of N gel @ 12.15 gal water / 100 gal 12.09 gal / sk 79 bbls yield of 2.27 m / sk 111 Bbls slurry m+p 40 sks B.L.C. @ 14.5 15 gal water req 6.8 gal / sk 6 bbls yield of 1.4 10 bbls slurry shut down dropping to 127 bbls sand plug 1:15 down

**JOB SUMMARY**

DESCRIPTION OF JOB EVENTS MT Ru Sm mud plug m+p m+p DIOL plug

<u>7:42</u>	<u>1 sand plug</u>	<u>8:32</u>	<u>1 gel down</u>	<u>8:40</u>
<u>7:45 10 60</u>		<u>8:03 80 180</u>		
<u>7:47 20 100</u>		<u>8:07 90 200</u>		
<u>7:50 30 120</u>		<u>8:11 100 300</u>		
<u>7:53 40 120</u>		<u>8:21 110 450</u>		
<u>7:56 50 120</u>		<u>8:28 120 500</u>		
<u>7:58 60 120</u>		<u>8:32 127 1000</u>		
<u>8:00 70 120</u>				

*Tom Th...*

AUTHORIZATION TO PROCEED

TITLE

DATE



