#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

011111111111111111111111111111111111111			MARGOOG	10101-14496	3 & NIVI-1U4/4
SUNDRY NOTICES AND	REPORTS	ON WELLS	2 A D D D C C C	6 If Indian,	Allottee or Tribe Name

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Form 3160-5	UNITED S <sup>i</sup> lali		RECE	IVE	F	ORM APPROVED	
(February 2005) DE	EPARTMENT OF THE		ALACD H	lob <b>bs</b>	O: Exp	MB No 1004-0137 ores March 31, 2007	
	REAU OF LAND MAN		uña 1 â	y 2009	5. Lease Serial No.		
SUNDRY	NOTICES AND REPO	ORTS ON WELL	kobbs	och	5 If Indian, Allottee of	r Tribe Name	
Do not use this	form for proposals to Use Form 3160-3 (A	to drill or to re-	enter an			· · · · · · · · · · · · · · · · · · ·	
SUBN	IIT IN TRIPLICATE – Other	instructions on pag	e 2.		7 If Unit of CA/Agree	ment, Name and/or No	
1 Type of Well					B Well Name and No		
	Well Other				Ling Federal Nos 3,		
2 Name of Operator Fasken Oil and Ranch, Ltd.	/			ļ.	), API Well No. 30-025-38608, 3874	8, 39121, 39122, & 39454	1 V
3a Address 303 West Wall St , Suite 1800, Midland, TX 7		3b. Phone No (inchi) 432-687-1777	ıde area code)	- 1	0 Field and Pool or E Apache Ridge; Bone		
4 Location of Well (Footage, Sec., 7 Please see remarks section	F.,R,M., or Survey Description	<i>;</i>			1 Country or Parish, Lea, New Mexico	,	
12 CHE	ECK THE APPROPRIATE BO	X(ES) TO INDICAT	E NATURE O	F NOTICE	E, REPORT OR OTHE	ER DATA	
TYPE OF SUBMISSION			TYPE	OF ACTIO	ON		
✓ Notice of Intent	Acidize	Deepen		Produc	ction (Start/Resume)	Water Shut-Off	
	Alter Casing	Fracture Tr	eat [	Reclan	nation	Well Integrity	
Subsequent Report	Casing Repair	New Const	=	Recom	•	Other Dispose pro	duced
Final Abandonment Notice	Change Plans Convert to Injection	Plug and A	bandon L		rarıly Abandon Disposal	water	
the proposal is to deepen direction Attach the Bond under which the following completion of the invo- testing has been completed. Final determined that the site is ready for	work will be performed or pro- lved operations If the operational Abandonment Notices must	ovide the Bond No. or on results in a multipl	n file with BLM e completion or	M/BIA Re or recomple	quired subsequent rep- tion in a new interval,	orts must be filed within 30 a Form 3160-4 must be file	days d once
Fasken Oil and Ranch, Ltd. is requ	uesting approval to dispose	produced water fror	n the Ling Fed	deral 3, 4,	, 5, 6, & 9 into the Li	ng Federal #1 SWD well.	
Item 4 - Location of Well				مصعدي			
Ling Federal #3 - 660' FNL & 1980 Ling Federal #4'-, 1660' FSL & 231 Ling Federal #5'- 990' FNL & 660' Ling Federal #6'- 2130' FNL & 660' Ling Federal #9 - 580' FSL & 1980' Location Information & API numbe 1980' FNL & 1980' FEL, Unit Lette	O' FEL, Unit Letter J, Sec. 3 FWL, Unit Letter D, Sec. 3 FWL, Unit Letter E, Sec. 3 FWL, Unit Letter C, Sec. 3 Frof the Ling Federal #1 r G, Sec. 31, T19S, R34E;	31, T19S, R34E , , , , , , , , , , , , , , , , , , ,	14496 14496 14496 10474 5-28064	`	NOV /s/ JD V	1 7 2009 Vhitlock Jr	
Please see attached additional rec	•	sposal of water can	be approved.	1		ND MANAGEMENT FIELD OFFICE	1
SUBJECT TO LIK APPROVAL BY S	· <del></del>			L	OMEGOND	TILLED OTTIOL	j
14 I hereby certify that the foregoing is							
Name (Printed/Typed) Kim Tyson		Tetlo	Regulatory A	Apolyet			
Tam i your		Title	- Regulatory 7				
Signature Kin Zun		Date	11/05/2009	l 			
	THIS SPACE	FOR FEDERAL	OR STAT	E OFFI	CE USE	``	
Approved by		) DI	STRICT	1 SUP	ERVISON	NOV 2 0 200	19
Conditions of approval, if any, are attached that the applicant holds legal or equitable entitle the applicant to conduct operation:	title to those rights in the subject		Office			Pate	<del></del> ,
Title 18 U S C Section 1001 and Title 4		crime for any person k	nowingly and w	villfully to i	nake to any department	or agency of the United State	s any false,

(Instructions on page 2)

 $fictitious \ or \ fraudulent \ statements \ or \ representations \ as \ to \ any \ matter \ within \ its \ jurisdiction$ 

The following information is needed before your disposal of produced water can be approved, Onshore Oil & Gas Order #7.

1. Name (s) of all formation (s) producing water on the lease.

Apache Ridge; Bone Springs Tonto; Wolfcamp

2. Amount of water produced from all formations in barrels per day.

125 barrels per day

3. A current water analysis of produced water from all zones showing at least the total dissolved solids, ph, and the concentrations of chlorides and sulfates.

See attached water analysis for the Ling Federal #3, 4, 5, and 6. Ling Federal #9 is currently awaiting well completion.

4. How water is stored on the lease.

The water is stored in tanks.

5. How water is moved to the disposal facility.

The water is moved by injection pump at the Ling Federal #3 Battery.

- 6. Identify the Disposal Facility by:
  - A. Operators Name.

Fasken Oil and Ranch, Ltd.

B. Well Name.

Ling Federal

C. Well type and well number. (SWDW) (WIW)

Well #1. This is a water injection well.

C. Location by ¼ ¼, section, township, & range.

SW 1/4 of the NE 1/4, Lot G, Section 31, T19S, R34E

7. A copy of the Underground Injection Control Permit – issued for the injection well by the Environmental Protection Agency or New Mexico Oil Conservation Division where the State has achieved primacy.

See attached permit.

# RECEIVED<sub>Martin Water Laboratories, Inc.</sub>

P.O. BOX 98 MIDLAND, TX. 79702 PHONE (432) 683-4521

NUV 117 2008

RESULT OF WATER ANALYSES

709 W INDIANA MIDLAND, TEXAS 79701 FAX (432) 682-8819

11505,0117	HELL WHAFIOLD	l .		
FASKEN OIL AND Mr. Carl FRANCH, LTD. 303 W. Wall, Suite 1800, Midland, TX 79701	SAMPLE RE	RY NOECEIVEDEPORTED	1108-51 11-5-08 11-6-08	
COMPANY Fasken Oil & Ranch	_ LEASE	Ling #3		
FIELD OR POOL  SECTION BLOCK SURVEY COUNTY _  SOURCE OF SAMPLE AND DATE TAKEN:  NO. 1 Submitted water sample - taken 11-4-08.	Lea	STATE	NM	
NO. 2				_
NO. 4 Bone Springs				

EMARKS:	Bone Springs			
	CHEMICAL AND PHYSICAL			
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0980			ļ
pH When Sampled				<b></b>
pH When Received	7.16			
Bicarbonate as HCO <sub>3</sub>	3,026			
Supersaturation as CaCO,				
Undersaturation as CaCO,			······································	
Total Hardness as CaCO,	1,550		·······	
Calcium as Ca	460			
Magnesium as Mg	97	1		`
Sodium and/or Potassium	60,787			
Sulfate as SO.	1,031			
Chloride as Cl	92,300			
Iron as Fe	2,5			
Barium as Ba	0			
Turbidity, Electric				
Color as Pt				,
Total Solids, Calculated	157,701			
Temperature *F.			•	
Carbon Dioxide, Calculated		ľ		
Dissalved Oxygen.			<i></i>	
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F	0.068			
Suspended Oil				
Flitrable Solids as mg/l				
Volume Filtered, ml				
	Results Reported As Milligran			
Additional Determinations And Remarks	This water shows cha	racteristics that are	similar to some of	our Bone
Springs records in central Lea count	ν.			
	•			
				····
		7		
,		<del></del>	•	
,				

Form No. 3

Greg Ogden, B.S.

# Endura Products Corporation P.O. Box 3394, Midland, Texas 79702

Phone (432) 684-4233 Fax (432) 684-4277

### **WATER ANALYSIS**

Date	9/17/2009	Endura Rep Norman Smiley	Code	10113410
Sampling	Point/Date W/J	H 9/15/2009	State	New Mexico
Company	Fasken Oil an	nd Ranch	County	Lea
Formation	ı	Lease Ling Federal	Well	#4
•				
DISSOLY	VED SOLIDS	•		

<u>CATIONS</u>	mg/l	me/l
Sodium, Na+ (Calc.)	39,146	1,702
Total Hardness as Ca++	6,088	0
Calcium Ca++	5,568	278
Magnesium, Mg+	317	26
Barium, Ba++	0	0
Iron (Total) Fe+++*	36	2
ANIONS		
Chlorides, Cl-	71,000	2,000
Sulfate, SO4-	300	6
Carbonate, CO3-	0	0
Bicarbonates, HCO3-	122	2
Sulfide, S-*	0	. 0
Total Dissolved Solid	116,489	•
OTHER PROPERTIES		

pH*	6.910
Specific Gravity,60/60 F.	1.072
Turbidity	592

#### **SCALING INDICIES**

TEMP, F	CA CO3	CASO4*2H2O	CA SO4	BA SO4
80	0.0518	-0.7885	-1.0006	-29.2009
120	0.3840	-0.7962	-0.8278	-29.4176
160	0.8983	-0.8021	-0.6611	-29.6473

#### **PERFORATIONS**

# Endura Products Corporation P.O. Box 3394, Midland, Texas 79702

Phone (432) 684-4233 Fax (432) 684-4277

### **WATER ANALYSIS**

Date 7/30/2009 Sampling Point/Date Sepa Company Fasken Oil and Formation		Code 10111716 State New Mexico County Lea Well #5
DISSOLVED SOLIDS		
<u>CATIONS</u>	mg/]	me/l
Sodium, Na+ (Calc.) Total Hardness as Ca++ Calcium Ca++ Magnesium, Mg+ Barium, Ba++ Iron (Total) Fe+++*	51,566 4,152 3,480 410 0 60	2,242 0 174 34 0 3
ANIONS		
Chlorides, Cl- Sulfate, SO4- Carbonate, CO3- Bicarbonates, HCO3- Sulfide, S-* Total Dissolved Solid	86,000 1,350 0 122 0 142,988	2,423 28 0 2 0
OTHER PROPERTIES		
pH* Specific Gravity,60/60 F. Turbidity	6.940 1.097 148 SCALING INDICIES	
	SCALING INDICIES	

TEMP, F	CA CO3	CASO4*2H2O	CA SO4	BA SO4
80	-0.0110	-0.3617	-0.5901	-29.2520
120	0.3381	-0.3688	-0.4168	-29.4602
160	0.8783	-0.3807	-0.2560	-29.6903

#### **PERFORATIONS**

# Endura Products Corporation P.O. Box 3394, Midland, Texas 79702

Phone (432) 684-4233 Fax (432) 684-4277

#### WATER ANALYSIS

Sampling Po		vell head 2/2 and Ranch	_		
DISSOLV	<u>ED SOLII</u>	<u>)S</u>			
CATIONS Sodium, Na- Total Hardne Calcium Ca+ Magnesium, Barium, Ba+ Iron (Total)	ess as Ca++ -+ Mg++ -+		mg/l 47,081 4,208 2,648 951 0 12	me/l 2,047 0 132 79 0	
ANIONS Chlorides, C Sulfate, SO4 Carbonate, C Bicarbonates Sulfide, S-* Total Dissol	l-  CO3- s, HCO3-		77,900 1,275 0 2,318 0 132,185	2,194 27 0 38	
OTHER P pH* Specific Gra Turbidity			6.740 1.082 136 SCALING INDICIES		
TEMP, F		CA CO3	<u>CASO4*2H2O</u>	CA SO4	<u>BA SO4</u>

-0.5016 -0.5097

-0.5208

-0.7221

-0.5497

-0.3883

-29.2280

-29.4403

-29.6705

## **PERFORATIONS**

80

120

160

0.8918

1.2323

1.7596

## New Mexico Energy, Minerals and Natural Resources Department

#### Bill Richardson Governor

Joanna Prukop Cabinet Secretary Mark Fesmire
Division Director
Oil Conservation Division



Administrative Order IPI-346 June 19, 2009

Fasken Oil & Ranch, Ltd. 300 West Wall Ave, Suite 1800 Midland, TX 79701-5116

Attention: Ms. Kim Tyson

RECEIVED

JUN 2 5 2009

FASKEN OIL AND
RANCH, LTD.

**RE:** Injection Pressure Increase Request

Ling Federal Well No. 1 (API No. 30-025-28064) SWD-1142 Unit G, Sec 31, T 19 South, R 34 East, NMPM, Lea County, New Mexico Delaware formation Through perforations from 5679 feet to 8303 feet

Reference is made to your request on behalf of Fasken Oil & Ranch, Ltd. (OGRID 151416) received by the Division June 15, 2009, to increase the surface injection pressure limit on the above named disposal well.

Administrative Order No SWD-1142 approved on September 29, 2008, permitted the Ling Federal Well No. 1 for injection into the Delaware formation from 5679 feet to 8303 feet and allowed a maximum surface injection pressure of 1136 psi.

It is our understanding that this well will not take a sufficient volume of water at this pressure limit and a higher pressure limit is needed to enable increased water disposal.

The basis for granting this pressure increase is the step rate test run by Gray wireline on this well in May, 2009. Gray wireline measured the pressures during this test with surface and downhole pressure gauges.

You are hereby authorized to utilize up to <u>1500 psi</u> as the maximum surface injection pressure on this well provided the tubing, size, type, setting depth and perforation depths do not change. However, you are prohibited from injecting at pressures that would induce fracturing.

This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 5.9.



IPI-346 June 19, 2009 Page 2

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected fluid is not being confined to the injection zone or is endangering any fresh water aquifers.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Sincerely,

Mark E. Fesmire, P.E.

Director

#### MEF/tw

cc: Oil Conservation Division – Hobbs

Bureau of Land Management-Carlsbad

File: SWD-1136

# New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary RECEIVED

OCT 0 1 2008

FASKEN OIL AND RANCH, LTD. Mark Fesmire
Division Director
Oil Conservation Division



Administrative Order SWD-1142 September 29, 2008

APPLICATION OF FASKEN OIL & RANCH, LTD. FOR PRODUCED WATER DISPOSAL, LEA COUNTY, NEW MEXICO

## ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Fasken Oil & Ranch, Ltd. (OGRID 151416) made application to the New Mexico Oil Conservation Division for permission to utilize for produced water disposal its Ling Federal Well No. 1 (API No. 30-025-28064) located 1980 feet from the North line and 1980 feet from the East line of Section 31, Township 19 South, Range 34 East, NMPM, Lea County, New Mexico.

#### THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations. Satisfactory information has been provided that affected parties as defined in Rule 701B(2) have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met and the operator will be in compliance with the Division's Rule 40 after production wells surrounding this subject injection well are re-activated.

#### · IT IS THEREFORE ORDERED THAT:

Fasken Oil & Ranch, Ltd. is hereby authorized to utilize its Ling Federal Well No. 1 (API No. 30-025-28064) located 1980 feet from the North line and 1980 feet from the East line of Section 31, Township 19 South, Range 34 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of produced water for disposal purposes into the Delaware Mountain Group through perforations from 5679 feet to 8303 feet and through plastic-lined tubing set with a packer located within 100 feet of the top of the injection interval.

#### IT IS FURTHER ORDERED THAT:



The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Within 6 months of beginning injection, the operator shall supply the Division with a copy of an injection [temperature and tracer survey] log run while injecting at this well's average injection rate, identifying the injection intervals within the perforated interval.

After installing injection tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The wellhead injection pressure on the well shall be limited to **no more than 1136 psi.** In addition, the injection well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface injection pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the injection formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of injection to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rule Nos. 706 and 1115 of the Division Rules and Regulations.

Without limitation on the duties of the operator as provided in Division Rules 19 and 116, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

In accordance with Rule No 705.C, the injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause shown. One year after injection operations into the well has ceased, the injection authority will terminate *ipso facto*.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

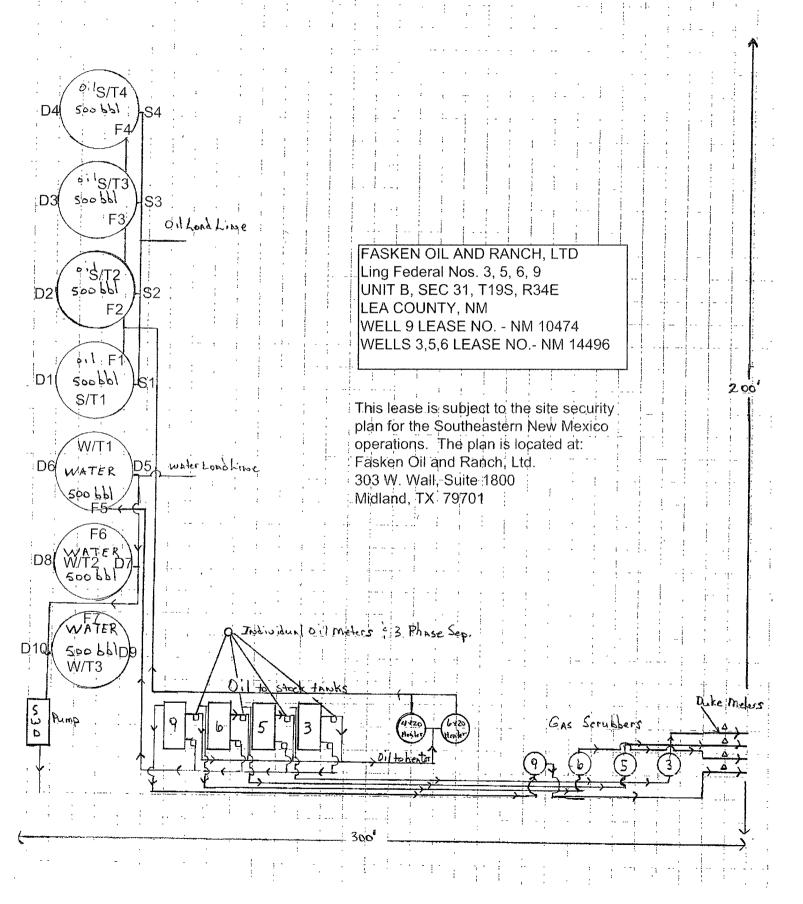
MARK E. FESMIRE, P.E.

Director

MEF/wvjj.

cc: Oil Conservation Division - Hobbs

Bureau of Land Management - Carlsbad



# Attachment 1-1 To Site Facility Diagram Ling Federal Nos. 3,5,6 - Lease No. NM 14496 Ling Federal No. 9 - Lease No. NM 10474

General sealing of valves, sales by tank gauging and transport truck.

Production phase - drain valves D1 through D4, D6, D8, D10 are sealed closed. sales valves S1, S2, S3 and S4 are sealed closed.

Sales phase - Sales are from tanks S/T1, S/T2, S/T3 or S/T4.

Sealing of valves:

Tank S/T - valves D1 through D4, F1 through F4 and S1 through S4 sealed closed.

Production System - Closed