Oct 171_			PG	<i>l</i> ó.	71		TYPE	B	T	PRG1329455	264
DATE IN 7013	SUSPENSE	ENGINEER	, –	LOGGED IN .	41/1	2	TYPE	<u> </u>	l S	APP NO.	1
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ABOVE THIS LINE FOR DIVISION USE ONLY

#### NEW MEXICO OIL CONSERVATION DIVISION



		1220 South St. Francis Drive, Santa Fe, NM 87505	
		ADMINISTRATIVE APPLICATION CHECKLIST	<u> </u>
	THIS CHECKLIST IS MA	ANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULE WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE	ES AND REGULATIONS
Appli	[DHC-Dowr [PC-Po		mmingling] ement] 
[1]		PLICATION - Check Those Which Apply for [A]	Fasicen
	[A]	Location - Spacing Unit - Simultaneous Dedication  NSL NSP SD	Fasker Quail State 161
	Check [B]	One Only for [B] or [C]  Commingling - Storage - Measurement  DHC CTB PLC PC OLS OLM	
	[C]	Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  WFX PMX SWD IPI EOR PPR	
	[D]	Other: Specify	emonium • • general general
[2]	NOTIFICATI [A]	ON REQUIRED TO: - Check Those Which Apply, or Does Not Apply Working, Royalty or Overriding Royalty Interest Owners	30-025-393
	[B]	X Offset Operators, Leaseholders or Surface Owner	
	[C]	X Application is One Which Requires Published Legal Notice	
	[D]	Notification and/or Concurrent Approval by BLM or SLO U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office	
	[E]	X For all of the above, Proof of Notification or Publication is Attached	, and/or,
	[F]	Waivers are Attached	
[3]		CURATE AND COMPLETE INFORMATION REQUIRED TO PROTION INDICATED ABOVE.	CESS THE TYPE

**CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Kim Tyson	Kim Dyon	Regulatory Analyst	10-11-2013
Print or Type Name	Signature	Title	Date
		kimt@forl.com	
		e-mail Address	

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

# Santa Fe, New Mexico 87505

FORM C-108 Revised June 10, 2003

# APPLICATION FOR AUTHORIZATION TO INJECT PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage

1.	Application qualifies for administrative approval?  Yes  Pressure Maintenance  X Disposal Storage  Yes
П.	OPERATOR: Fasken 0il and Ranch, Ltd.
	ADDRESS: 6101 Holiday Hill Road, Midland, TX 79707
	CONTACT PARTY: Kim Tyson PHONE: 432-687-1777
III.	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? Yes X No  If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).</li> </ol>
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	NAME: Kim Tyson TITLE: Regulatory Analyst
	SIGNATURE: DATE: 10-11-2013
*	E-MAIL ADDRESS: kimt@for1.com  If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

#### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining material, and setting depth.
  - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

#### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

#### III. Well Data

- A) Tabular Well Data
  - Quail State "16" No. 2 Surface: 1230' FSL & 1980' FWL Sec. 16, T-20-S, R-34-E
  - 2. Surface Casing: 13-3/8" 54.5# / 48# K-55 & H-40 set @ 1611' & cemented to surface (circulated 445 sx cement) w/ 900 sx "C" w/ 4% gel and 2% CaCL2 + 350 sx "C" w/ 2% CaCL2.

Intermediate Casing: 9-5/8" 40# / 36# / 55# HCK55 & K55 @ 5247'. DV @ 4010'. Cemented to surface (circulated 337 sx cement) w/ 1850 sx HLC w/ 15% salt, 1/8# Poly flake + 400 sx "C".

Production Casing: 5-1/2" 17# HCP-110 @ 13,575'. DV @ 8493'. Cemented with 1200 sx "Super H" + 700 sx light "H" + 200 sx "H", TOC @ 3706' by temperature survey.

- 3. 2-7/8" poly-lined to 5275'
- 4. Packer Type 5-1/2" x 2-7/8" nickel plated Weatherford Arrowset 1-X Double Grip Casing Packer with T-2 on/off tool, 316 SS Top Sub and 2-7/8" x 2.25" "F" SS seal nipple. Packer will be set at 5275'.
- B) Proposed Injection Formation Data
  - 1. Injection Formation Name: Delaware
  - 2. Injection Interval 5,334' to 8,355' perforated.
  - 3. Original Purpose of Well Morrow gas producer.
  - 4. Perforated Intervals see attached wellbore diagrams.
  - Next Higher Oil/Gas Productive Zone Yates @ 3352'
     Next Lower Oil/Gas Productive Zone Bone Springs @ 8355'
- VII. Proposed Operation
  - Average Daily Rate 5,000 BPD Maximum Daily Rate – 10,000 BPD
  - 2. This will be a closed system.
  - 3. Average Injection Pressure 800 psi Maximum Injection Pressure – 1,067 psi

- 4. Produced water from the Bone Springs, Wolfcamp, Strawn, Atoka, Delaware, and Morrow formations will be injected into the Delaware interval. (See attached compatibility analysis) Strawn and Atoka water samples are unavailable due to the lack of wells producing from these formations in this area at this time.
- 5. See attached Delaware chemical analysis.

#### VIII. Geologic Data

#### 1. Formation Tops

Formation Name	Measured Depth (ft.)
Rustler	1.043'
Yates	3,352
Delaware	5,334'
Bone Spring	8,355
1st Bone Spring	9.485'
2nd Bone Spring	10,012'
3rd Bone Spring	10,699'
Strawn	12,368'
Atoka	12,546'
Morrow	12,721'
Lower Morrow	13,438'
Barnett	13,548'

#### 2. Injection Zone Lithology

The injection interval of 5,334'-8,355' is the Delaware formation of the Permian age. Its lithology primarily consists of sand and contains shale and dolomite stringers. The top of the Delaware formation in this wellbore starts at 5,334' MD and ends at the top of the Bone Springs located at 8,355' MD.

3. The Ogallala formation is the only freshwater zone believed to be within this area. The base of this formation runs to a depth of 135'. This information was verified by Geoffrey Lecking with the OCD. This formation is sealed off from the wellbore with 1611' of 13-3/8" 54.5# K-55 & 48# H40 casing that was cemented to surface with 1250 sx cement. The 9-5/8" 40# / 36# / 55# intermediate string was run to 5,247' and circulated to surface with 2,250 sx cement and provides a second seal to further protect the Ogallala formation.

#### IX. Stimulation Program

This interval will be acidized with 15% NEFE HCL acid.

#### X. Logging and Test Data

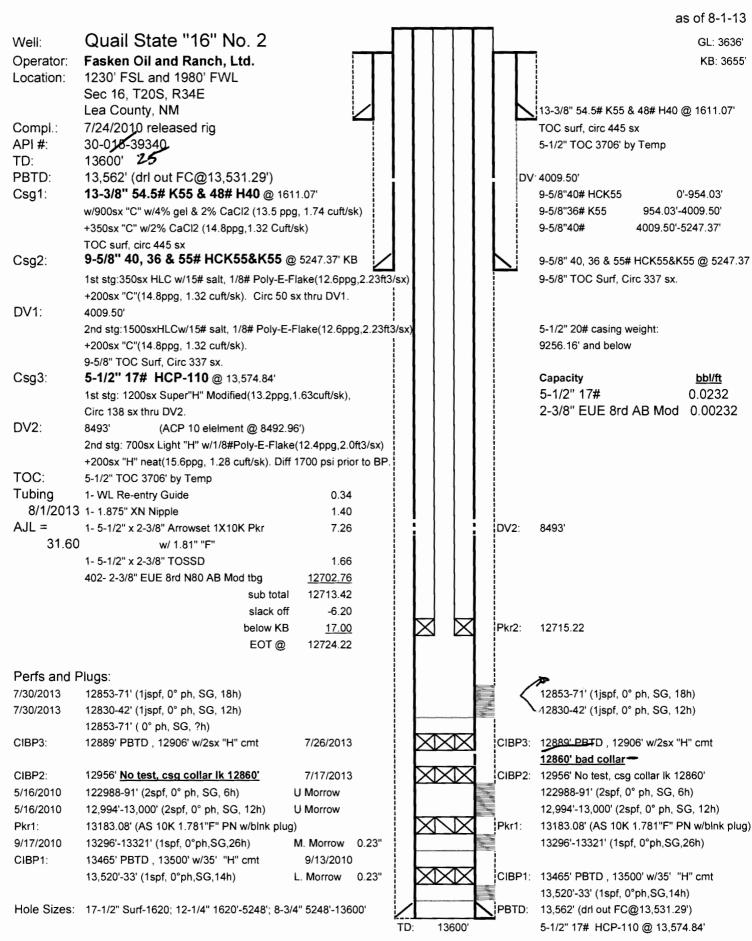
Logging data previously filed with Commission.

2. Test data previously filed with Commission.

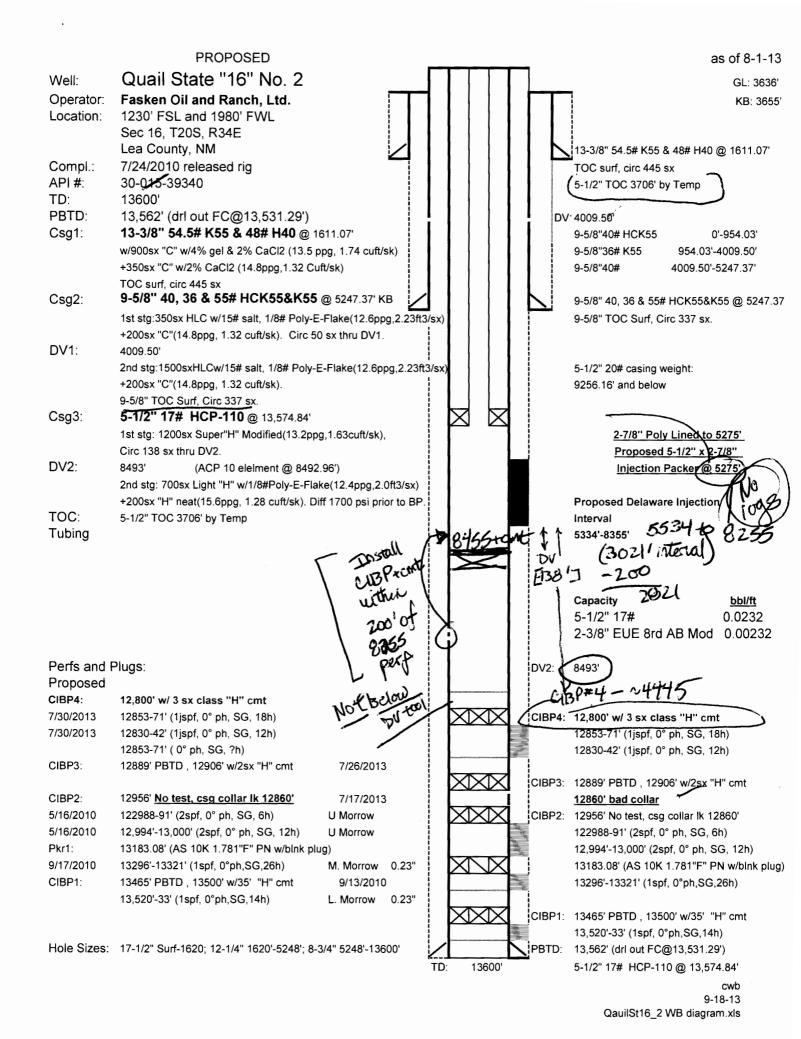
#### XI. Affirmative Statement

Upon examination of the available geologic and engineering data, no evidence of open faults or any other hydraulic connection between the disposal zones and an underground source of drinking water was found.

Jeff Bryden, Sr. Geologist



cwb 9-18-13 QauilSt16\_2 WB diagram.xls

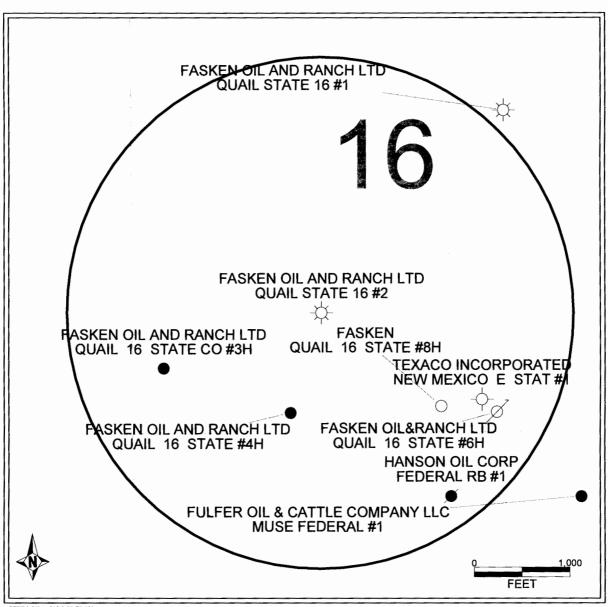


#### INJECTION WELL DATA SHEET

VELL NAME & NUMBER: Quail "16" State		16	20S	34E
VELL LOCATION: 1230' FSL & 1980' FWL FOOTAGE LOCATION	N UNIT LETTER	SECTION	TOWNSHIP	RANGE
WELLBORE SCHEMATIC			ONSTRUCTION DAT	
	Hole Size:17_1/	2"	13 3 Casing Size: 48#	3/8", 54.5# & @ 1611'
	Cemented with:1	250 sx.	or	ft <sup>3</sup>
	Top of Cement:S	urface	Method Determine	d: Circulated
		<u>Intermedia</u>	ate Casing	
	Hole Size: 12 1	/4"	Casing Size: 55# (	8", 36#, 40# & @ 5247'
	Cemented with: 22	50 sx.	OV To	ool @ 4010'
	Top of Cement:Su		Method Determine	d: Circulated
		Production	on Casing	
	Hole Size: 8 3/	′4"	Casing Size: 5 1/	2", 17# @ 13,57
	Cemented with:	2100 sx.	or	ft <sup>3</sup>
	Top of Cement:	3706'	Method Determine	d: Temp. Survey
	Total Depth: 13	,600'		
		Injection	<u>Interval</u>	
	5334	• fee	et to 8355'	

## INJECTION WELL DATA SHEET

Tubi	ng Size: _	2	7/8"		Linin	g Material:	Polylin	ed		
Тур	e of Packer:		1/2" X 2 7/8 asing Packer	" nickel p	lated	Weatherford	Arrowset	1-X	Doub1e	Gri <sub>l</sub>
Pack	cer Setting	, D	epth:5275	, 1						
Oth	er Type of	Τι	ibing/Casing Sea	ıl (if applicabl	le): <u>N</u>	1/A				
				<u>Add</u>	litional 1	<u>Data</u>				
Ι.	Is this a n	ew	well drilled for	injection?		Yes	<u>x</u> No			
	If no, for	wh	at purpose was t	he well origin	ally dri	lled? <u>Morrow</u>	Gas Well	•		
2.	Name of	the	Injection Forma	tion: <u>Dela</u>	ware					
3.	Name of	Fie	ld or Pool (if ap	olicable): <u>Te</u>	as; De	laware, Sou	theast			
4.										
	wellbor	e	schematic.							
5.	Give the injection	nar zor	ne and depths of ne in this area:	any oil or gas Yates - 335	s zones	underlying or o 3419', Delaw	verlying the are - 533	prop	osed 5600',	
	Bone Sp	ri	ng - 8355' -	11,308', 8	Strawn	- 12,368' -	12,375',			
	Atoka -	1	2,546' - 12,7	722 <b>',</b> and M	orrow	- 12,721' -	13,438'			



PETRA 9/24/2013 9:30:51 AM

Fasken Oil and Ranch, Ltd. Quail "16" State No. 2 1230' FSL & 1980' FWL Sec. 16, T20S, R34E Lea County

# Fasken Oil and Ranch, Ltd.

# Quail "16" State No. 2

### Table of Well Data within 1/2 Mile

Operator	Well Name and Number	API Number	Oil or <u>Gas</u>	Spud <u>Date</u>	Total <u>Depth</u>	Formation and Perfs	
Fasken Oil and Ranch, Ltd.	Quail "16" State No. 3H	30-025-40361	Oil Well	04/19/2012	14,988' MI 10,957' TV	D Bone Spring (D 12,426' – 14,930'	>
<b>Location:</b> SHL - 660' FSL & 300' FWL; BHL – 381' FNL & 379' FWL Sec. 16, T20S, R34E							
Casing:	13 3/8" @ 1594' w/ 125 9 5/8" @ 5216' w/ DV 7 5 ½" @ 14,988' w/ 2550	Гооl @ 3822 <sup>°</sup> w/ 2350	) sx – TOC @ Surface				
Texaco Inc.	NM "E" State NCT-3 No. 1	30-025-29497	Dry Hole	02/16/1986	3650'	N/A	

330' FSL & 1655' FEL

Well does not penetrate the proposed injection interval.

Sec. 16, T20S, R34E

Location:

Casing:

Operator	Well Name and Number	API Number	Oil or <u>Gas</u>	Spud <u>Date</u>	Total <u>Depth</u>	Formation and Perfs			
Fasken Oil and Ranch, Ltd.	Quail "16" State No. 4H	30-025-40531	Oil Well	12/20/2012	15,605' MD 10,943' TVD	Bone Spring 11,221' – 15,530'			
Location:	SHL - 200' FSL & 1650 Sec. 16, T20S, R34E	SHL - 200' FSL & 1650' FWL; BHL 336' FNL & 1601' FWL Sec. 16, T20S, R34E							
Casing:	13 3/8" @ 1564' w/ 1250 sx – TOC @ Surface 9 5/8" @ 5200 w/ DV Tool @ 3999' w/ 2150 sx – TOC @ Surface 5 ½" @ 15,587' w/ 2650 sx – TOC @ Surface								
Fasken Oil and Ranch, Ltd.	Quail "16" State No. 6H	30-025-40	941 Plugged & Abandoned	06/30/2013	8459'	N/A			
Location:	SHL – 250' FSL & 1500' FEL; BHL – 201' FSL & 1707' FEL Sec. 16, T20S, R34E								
Casing:	13 3/8" @ 1626' w/ 1150 sx – TOC @ Surface 9 5/8" @ 5192' w/ DV Tool @ 3776' w/ 2400 sx – TOC @ Surface								
Xeric Oil & Gas Corp.	Federal RB No. 1	30-025-21	688 Plugged & Abandoned	12/20/1965	3742'	N/A			
Location:	660' FNL & 1980' FEL								

Casing:

Well does not penetrate the proposed injection interval.

Sec. 16, T20S, R34E

<b>Operator</b>	Well Name and Number	API Number	Oil or <u>Gas</u>	Spud <u>Date</u>	Total Formation <u>Depth</u> <u>and Pefs</u>
Fasken Oil and Ranch. Ltd.	Quail "16" State No. 8H	30-025-41366	Oil Well Currently Drilling	09/03/2013	15,490' MD Bone Spring 10,944' TVD (Proposed Depths)

**Location:** SHL - 262' FSL & 2080' FEL; Proposed BHL 330' FNL & 2080' FEL

Sec. 16, T20S, R34E

Casing: 13 3/8" @ 1627' w/ 1150 sx – TOC @ Surface

9 5/8" @ 5205' w/ DV Tool @ 3764' w/ 5955 sx – TOC @ Surface

5 1/2" @ 15,527' w/ 2650 sx – TOC @ 5000' (Proposed)

# Fasken Oil and Ranch, Ltd. Quail "16" State No. 2 SWD Application List of Notified Parties

#### Offset Operators and Leasehold Owners within a 1/2 mile radius

Fasken Oil and Ranch, Ltd. 6101 Holiday Hill Road Midland, TX 79707

Attn: Mr. Greg Fulfer Fulfer Oil & Cattle Company, LLC P.O. Box 1224 Jal, NM 88252

Attn: NOJV Land TL Chevron U.S.A. Inc. P.O. Box 2100 Houston, TX 77252

Geronimo Holding Corporation 1801 W. Texas Midland, TX 79701

Attn: Monty Montgomery CTV O&G NM, L.L.C. 201 Main St., Suite 2900 Fort Worth, TX 76102

Attn: Monty Montgomery SRBI O&G NM, L.L.C. 201 Main St., Suite 2900 Fort Worth, TX 76102

Attn: Monty Montgomery Thru Line O&G NM, L.L.C. 201 Main St., Suite 2900 Fort Worth, TX 76102

Attn: Monty Montgomery Keystone O&G NM, L.L.C. 201 Main St., Suite 2900 Fort Worth, TX 76102 Attn: Monty Montgomery LMBI O&G NM, L.L.C. 201 Main St., Suite 2900 Fort Worth, TX 76102

Oxy USA WTP Limited Partnership 6 Desta Dr. Suite 6000 Midland, TX 79705

Doyle Hartman P.O. Box 10426 Midland, TX 79702

James A. Davidson c/o Doyle Hartman P.O. Box 10426 Midland, TX 79702

Larry A. Nermyr c/o Doyle Hartman P.O. Box 10426 Midland, TX 79702

John E. Hendrix Corporation P.O. Box 3040 Midland, TX 79702

Ronnie H. Westbrook 6704 Pebble Ct. Midland, TX 79707

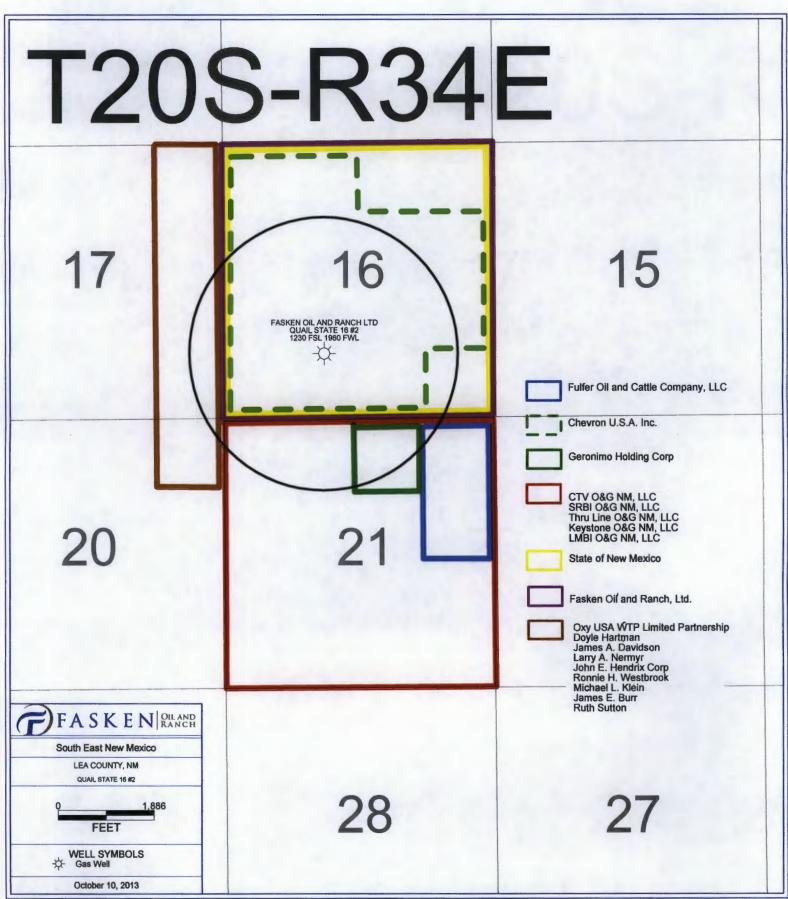
Michael L. Klein 600 N. Marienfeld, Suite 906 Midland, TX 79701 James E. Burr P.O. Box 8050 Midland, TX 79708 Ruth Sutton 2826 Moss Ave. Midland, TX 79705

#### **Surface Owner**

State of New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe, NM 87501

#### **Other Notified Parties**

New Mexico Oil Conservation Division 1625 N. French Dr. Hobbs, NM 88240





# Martin Water Laboratories, Inc.

Analysts & Consultants since 1953
Bacterial & Chemical Analysis

To: Clay Lamb

6101 Holiday Hill Road Midland, TX 79707 Laboratory No.

0713-539

Sample Received

7-29-13

Results Reported

7-29-13

Company:

Fasken Oil & Ranch

County:

Lea, NM

Clay Lamb:

Using the submitted analyses of Bone Springs (CESI Chemical Analysis), Wolfcamp (Endura Analysis), Morrow (Halliburton Analysis), and Delaware (Halliburton Analysis), I have hypothetically combined them in various proportions and attempted to determine the potential for scale and/or precipitation to occur with the mixtures. None of the combinations would likely result in barium sulfate scale, but I have to assume no barium to be present in the Delaware and Morrow samples (barium was not tested for). An equal combination shows no supersaturation to calcium sulfate and therefore no significant gypsum would be expected. Due to insufficient information provided by these analyses, I am unable to determine an accurate calcium carbonate scale potential or iron sulfide precipitation at this time. However, the low bicarbonate and pH levels suggest low carbonate tendencies.

In summary of the above, and based only on the information provided by these analyses, these waters appear to be compatible when combined.

Greg Ogden, B.S.

1948 4

# HALLIBURTON DIVISION LABORATO

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEDICO 88240

#### LABORATORY WATER ANALYSIS

APR 1 0 1989	Water Analysis file
Durg	Water Analysis
330 SPG	file

No. 062

To Barbara Fasken			Date	4-4-89	
303 West Wall Ave S	uite 1901			y of Hafilburton Company and neither or a copy thereof is to be published	
Midland TX 79701			or disclosed without first securing the express written approved of laboratory management it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.		
Submitted by					
Well No.	Depth		Formation.	Morrow	
County	Field				
Use This Sumple	Ling Fed #1	Ling Fed #2			
Resistivity	0.238 @ 70°	0.667 @ 70°			
Specific Gravity	1.050	1.010			
pH	4.1	6.6			
Calcium (Ca)		1,800		*MPL	
Magnesium (Mg)	Nil	Nil			
Chlorides (Cl)	27,000	9,000			
Sulfates (SO <sub>4</sub> )	Light	Light			
Bicarbonates (HCO <sub>3</sub> )	Ni1	80			
Soluble Iron (Fe)	Heavy	Ni1			
	31, 350	19, 530			
Remarks:		The second se		*Milligrams per liter	
	Dancaskil	ly submitted,		-	
Jay Bradford	'	•			
Analyst: Gay Bladfold		НА	LLIBURTON	COMPANY	
Cu.		Ву	CHEN	167	

#### H. BURTON DIVISION LABORATORY

# HALLIBURTON SERVICES MIDLAND DIVISION HOBBS, NEW MEXICO 88240

#### LABORATORY WATER ANALYSIS

No. <u>₩83</u>-078

To David Fasken		Date 1-20-83		
807 lst Nation	al B <b>ank Buildin</b> g	This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.		
Submitted by		Date Rec	1-20-83	
Well No. Ling Feder	al #1 Depth 6,236'	Formation	Delaware	
County Lea	Field W. Hobbs	Source	DST #1	
	Sampler	Tool Top	Top of Fluid	
Resistivity	0.167 @ 70°F.	0.168 @ 70°F.	0,220 @ 60°F.	
Specific Gravity	1.035			
pH	7.9			
Calcium (Ca)	3,200		*MPL	
Magnesium (Mg)	150			
Chlorides (Cl)	25,000	24,000	18,500	
Sulfates (SO <sub>4</sub> )	3,300			
Bicarbonates (HCO <sub>3</sub> )	120			
Soluble Iron (Fe)	Nil			
Pit Sample ↔	Res. @ 70°F 0.247	Chļorides, mpl - 15,	000	
Remarks:			*Milligrams per liter	
	Respectfully	submitted,		
Analyst: Brewer		HALLIBURTO	N COMPANY	
CC:		Ву	Brewer	

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.



1004 S. Plainsman Road Marlow, OK 73055 Ph.: 800- 256-4703 Fx.: (580)-658-3223

Test: FS-0032-0213 Date: 2/1/2013

Company: Cudd Pumping-Fasken Oil

Submitted By: Bill Ford Well Name:

Depth: Formation: Bonespring Shale

Location: Leigh County, NM Source: Date Taken:

#### THE SAMPLE CONTAINED: ANALYSIS OF WATER

WATER	% by Vol.	CALCIUM	5,727	mg/L
OIL	% by Vol.	MAGNESIUM	1,093	mg/L
SOLIDS	% by Vol.	BARIUM	0	mg/L
EMULSION	% by Vol.	IRON²	17	mg/L
	•	POTASSIUM		mg/L
ANALYSIS OF OIL:		CHLORIDES	89,000	mg/L
		BICARBONATES	153	mg/L
BS&W	% by Wt.	CARBONATES		mg/L
API Gr.	° @ 60 °F	HYDROXIDES		mg/L
PARAFFIN	% by Wt.	SULFATES	275	mg/L
ASPHALTENES	% by Wt.	SODIUM (Calc.)	44,933	mg/L
CLOUD POINT	°F	TDS (Calc.)	137,770	mg/L
POUR POINT	°F	IODIDES (Qual.)	·	,

pH 6.37 ANALYSIS OF SOLIDS: Sp. Gr. 1.0961

Rw 0.070 Ohm-Meters

TEMPERATURE 70 ° F

#### COMMENTS:

The sodium and TDS are calculated using the French Creek DownHole SAT.

Respectfully submitted,

Name Sherry Gaskins

Sheny Baskins

Title Chemist

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

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

## **WATER ANALYSIS**

Date	10/7/2009	Endura Rep Norman Smiley	Code 10114034
Sampling	Point/Date we	ell head 9/29/2009	State New Mexico
Company	Fasken Oil a	and Ranch	County Lea
Formatio	n	Lease Ling Federal	Well #4 Wolfcamp Water
DISSOL	VED SOLID	<u>S</u>	
CATION	<u>S</u>	mg/l	me/l
Sodium, N	Va+ (Calc.)	24,127	1,049
	dness as Ca++	5,272	0
Calcium C		5,176	259
Magnesiu		59	5
Barium, B		0	0
Iron (Tota	ıl) Fe+++*	21	1
ANIONS			
Chlorides,	Cl-	46,550	1,311
Sulfate, So	04-	96	2
Carbonate	*	0	0
	tes, HCO3-	49	1
Sulfide, S-		0	0
Total Diss	olved Solid	76,078	
OTHER	PROPERTIE	<u>s</u>	
pH*		6.470	
Specific (	Gravity,60/60 F.	1.076	
Turbidity		266	
		SCALING INDICIES	
TEMP	Б	C. CO2	CA CO4 PA CO4

TEMP, F	<u>CA CO3</u>	CASO4*2H2O	<u>CA SO4</u>	BA SO4
80	-0.9152	-1.2275	-1.4135	-29.0795
120	-0.6052	-1.2350	-1.2405	-29.3083
160	-0.1294	-1.2274	-1.0602	-29.5321

## **PERFORATIONS**

## **Affidavit of Publication**

State of New Mexico, County of Lea.

#### I, DANIEL RUSSELL PUBLISHER

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period

of 1 issue(s).
Beginning with the issue dated
September 25, 2013
and ending with the issue dated
September 25, 2013

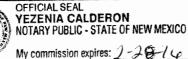
PUBLISHER
Sworn and subscribed to before me this 25th day of

September, 2013

Notary Public

My commission expires February 28, 2016

(Seal)



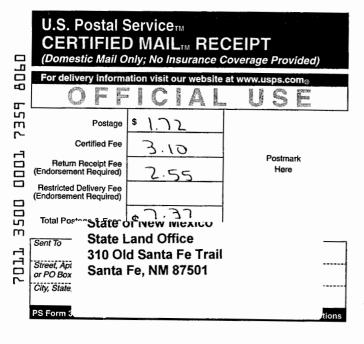
This newspaper is duly qualified to publish legal notices or advertisments within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

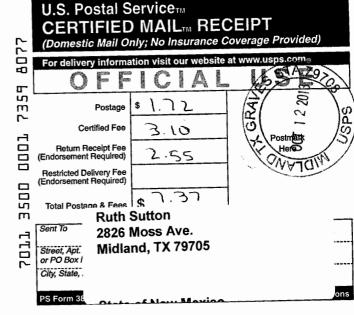
#### LEGAL

#### LEGAL NOTICE September 25, 2013

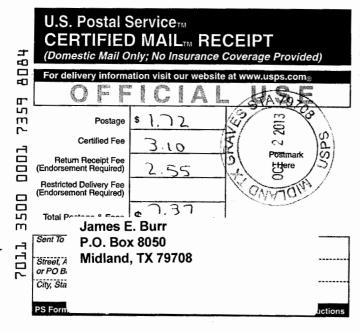
Fasken Oil and Ranch, Ltd., 6101 Holiday Hill Road, Midland Texas 79707, is filing Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking . administrative approval for a salt water disposal well. The proposed well, Quail "16" State No. 2. is located 1230' FSL, 1980' FWL, Section 16, T20S, R34E, Lea County, New Mexico. Disposal water will be sourced from area wells producing from the Bone Springs, Wolfcamp, Delaware, Morrow, Atoka, and Strawn formations. The disposal water will be injected into the Delaware formation at a depth of 5334' - 8355', at a maximum surface pressure of 1067 psi and a maximum rate of 10,000 BPD. Any interested party who has an objection to this application must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party questions or comments may contact Kim Tyson at Fasken Oil and Ranch, Ltd., 6101 Holiday Hill Road, Midland, Texas 79707, or call (432) 687-1777. #28461

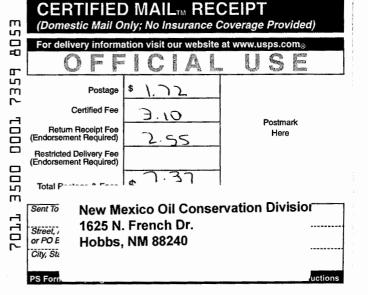
67106447 00123125 KIM TYSON FASKEN OIL AND RANCH, LTD 6101 HOLIDAY HILL ROAD MIDLAND, TX 79707

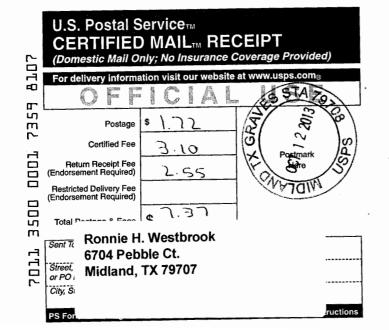




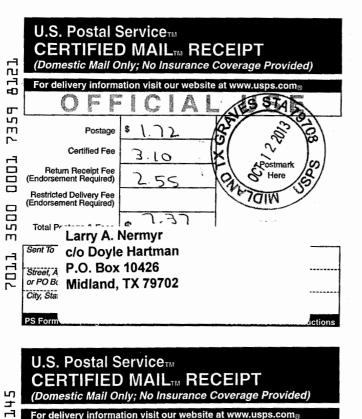
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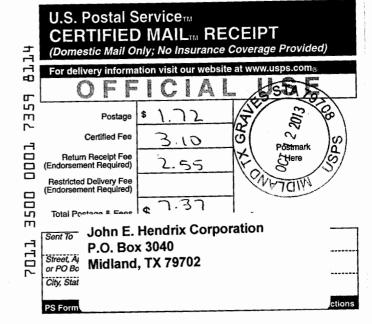


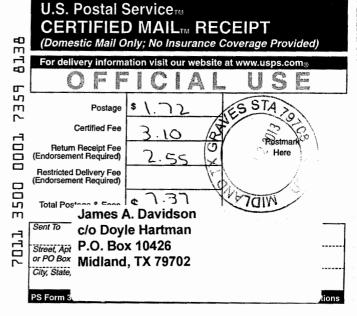
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	PS Form			

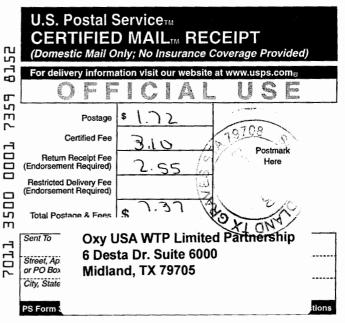


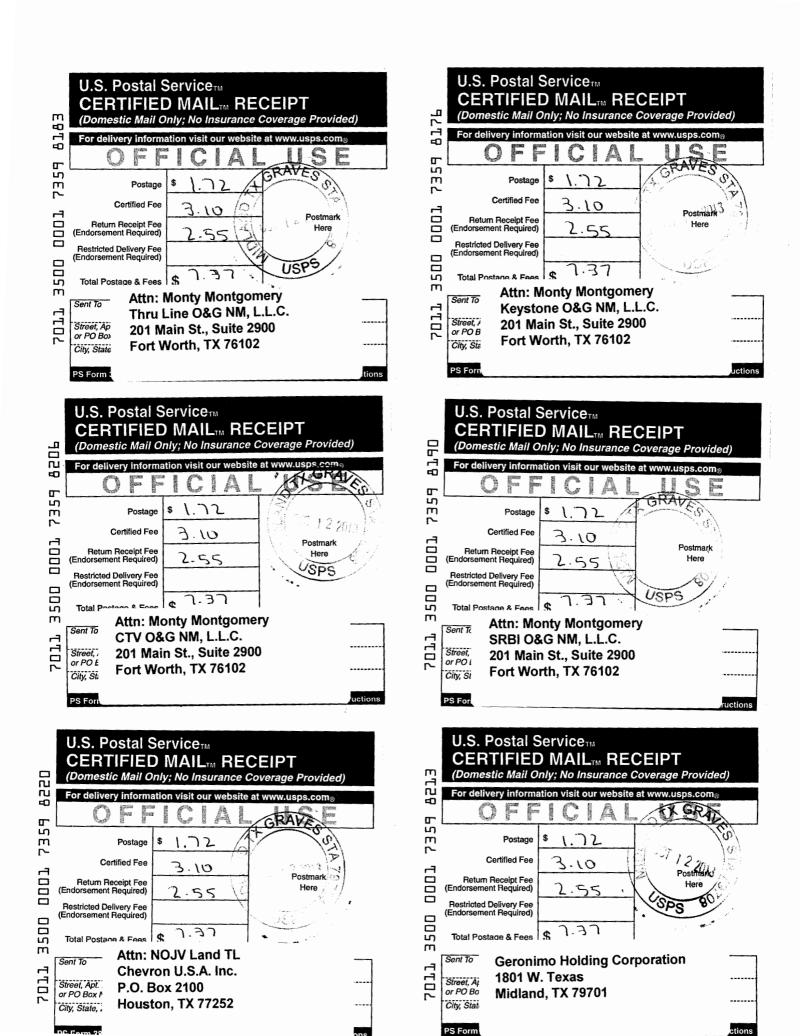














#### Goetze, Phillip, EMNRD

From:

Kim Tyson <kimt@forl.com>

Sent:

Friday, November 15, 2013 8:42 AM

To:

Goetze, Phillip, EMNRD

Subject:

Quail "16" State No. 2 - SWD Application

**Attachments:** 

Quail 16 State #2 - Corrected Certified Receipts.pdf

Importance:

High

Phillip,

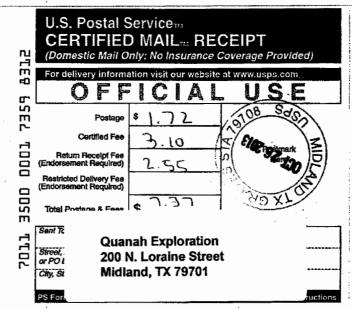
Please find attached two certified receipts for parties that were re-notified of the Quail "16" State No. 2 SWD application. We originally had incorrect addresses for these two parties and had to re-send the application to at the correct addresses. Could you please attach this to our Quail "16" SWD application?

If you have any questions please call me at 432-687-1777 or e-mail me at kimt@forl.com.

Thanks for your help concerning this matter.

Kim Tyson





C-108 Review Checklist: Received Add. Request: Suspended:
PERMIT TYPE: WFX / PMX / SWD Number: 1453 Permit Date: 1453 Permit Date: NA (10/26/13)
Well No. 2 Well Name(s): Quail to State
API : 30-025-39340 Spud Date: 05   01   2010 New or Old New (UIC Class II Primacy 03/07/1982)
Footages 1230 F9L/1980 FWL Low Unit Sec/16 Tsp 205 Rge 34E County Lea
General Location: Pool: Laguna Valley: Morrow Gospaol No.:
Operator: Fasken Oil and Ranch, Ltd. OGRID: 151416 contact: Kim Tyson
COMPLIANCE RULE 5.9: Inactive Wells: 1 Total Wells: 133 Fincl Assur: OK Compl. Order? No IS 5.9 OK? OK
Well File Reviewed & Current Status: Depleted Morrow Producer; depleted based on reporting
Well Diagrams: NEW: Proposed RE-ENTER: Before Conv. After Conv. D Are Elogs in Imaging 1: No Diagrams: NEW: Proposed Out of the North Research
Planned Rehab Work to Well: Reenter/ New perfs at Delaware internal; alto above 100 of bottom
Wells at 17
Well Construction Details:  Sizes (in)  Borehole / Pipe  Setting  Setting  Cement  Sizes (in)  Sor Cf  Determination Method
Planned _or Existing _Conductor Stage
Planned_or Existing Surface 13/8 0 to 1011 1250 mt to surface
Planned_or Existing interm/Prod 95/8 0 to 5247 W 4010 2250 total Circle to SUTTONE
Planned_or Existing / Prod/Interm 5 1/2 0 to 13575 DV 8493 2100 total TOC 3700 b/15
Planned_or Existing _ Liner/Prod Existing pages [12830 to 135337
A Constitution of the Cons
Planned of Existing OH PERF Now per 3 301 301 301 301 301 301
Injection Stratigraphic Units: Depths (ft) Injection of Confining Tops? Brilled D 13600 PBTD 12889
Adjacent Unit: Litho. Struc. Por. NEW TD NEW TD NEW PB(D±8455)
Confining Unit Litho. Struc. Por. + ZOO DE YOUTE - OUTSIDE CUPITON NEW Open Hole Or NEW Perfs O
Proposed Inj Interval TOP: 5334 Delawine 5334 Tubing Size 2/8 in. Inter Goated? 165
Proposed Inj Interval BOTTOM: 8355 8255 Nto 8355 Proposed Packer Depth
Confining Unit: Litho Struc. Por. +100(91) Bone Spring 8355 Min. Packer Depth 5734 (100-ft limit)
Adjacent Unit: Litho. Struc. Por.  Proposed Max. Surface Press. 1067 psi
AOR: Hydrologic and Geologic Information Admin. Inj. Press
POTASH: R-111-P Noticed? SLO BLM Sec Ord WIPP Moticed? NA SALADO: T:B: CLIFF HOUSE NA
FRESH WATER: Formation Oyallolo Max Depth Wells? FW Analysis HYDROLOGIC AFFIRM By Qualified Person
Disposal Fluid: Formation Source(s) Boxe Spring WC String Delegolarities? YES On Lease Operator Only & or Commercial O
Disposal Interval: Injection Rate (Avg/Max BWPD): 500 / CAPITAN REEF: thru (Padj NA)
HC Potential: Producing Interval A County Producing? NO Method: Logs/DST/P&V/Other 2-Mile Radius Pool Map (7)
AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: Horizontals? Yes -aul 3
Penetrating Wells: No. Active Wells 2 Num Repairs? On which well(s)? Diagrams? No.
Penetrating Wells: No. P&A Wells On which well(s)? (all shallow lates) Diagrams? NA
NOTICE: Newspaper Date 69 25/13 Mineral Owner 5LO Surface Owner 5LO/Lessae N. Date 10 12/13
RULE 26.7(A): Identified Tracts? 165 Affected Persons: 11 04 G companies 7 estate/individuals N. Date Oct 17/13
Permit Conditions: Issues: * Linit N-not leased for minerals - SLO notification closest/Intrepid I 8 miles  CIBP toodeep for permitted interval  (3) Provide HC potential by
Add Permit Cond: 7 Con of Angood - it was reduce on 10-1015

