

# Initial Application Part I

Received: 08/15/2019

*This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete*

RECEIVED: <b>08/15/2019</b>	REVIEWER:	TYPE: <b>SWD</b>	APP NO: <b>pMAM1922834333</b>
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Geological & Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

<b>Applicant:</b> <u>3Bear Field Services, LLC</u>	<b>OGRID Number:</b> <u>372603</u>
<b>Well Name:</b> <u>Outland SWD #1</u>	<b>API:</b> <u>New Well</u>
<b>Pool:</b> <u>NA</u>	<b>Pool Code:</b> <u>NA 97869</u>

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW**

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]  
 A. Location – Spacing Unit – Simultaneous Dedication  
 NSL       NSP (PROJECT AREA)       NSP (PRORATION UNIT)       SD

**SWD-2247**

- B. Check one only for [ I ] or [ II ]  
 [ I ] Commingling – Storage – Measurement  
 DHC     CTB     PLC     PC     OLS     OLM  
 [ II ] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery  
 WFX     PMX     SWD     IPI     EOR     PPR

- 2) **NOTIFICATION REQUIRED TO:** Check those which apply.  
 A.  Offset operators or lease holders  
 B.  Royalty, overriding royalty owners, revenue owners  
 C.  Application requires published notice  
 D.  Notification and/or concurrent approval by SLO  
 E.  Notification and/or concurrent approval by BLM  
 F.  Surface owner  
 G.  For all of the above, proof of notification or publication is attached, and/or,  
 H.  No notice required

<b>FOR OCD ONLY</b>	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	Application Content Complete

3) **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.**

Alberto A. Gutierrez, RG (Consultant to 3Bear)

Print or Type Name

Signature

August 9, 2019  
Date

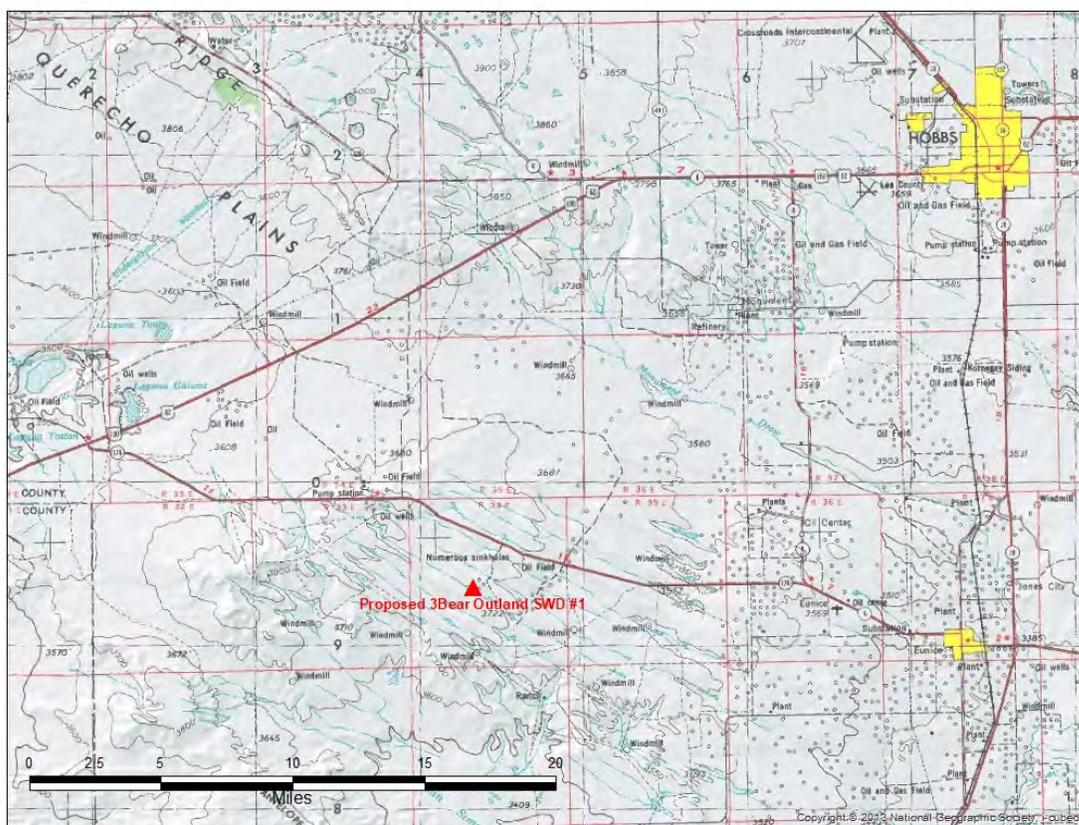
505-842-8000  
Phone Number

aag@geolex.com  
e-mail Address



# Proposed 3Bear Outland SWD #1 Application for Administrative Authorization to Inject

2614' FWL, 152' FSL Section 16, T21S, R34E, Lea Co., New Mexico



August 9, 2019

*Prepared for:*

**3Bear Field Services LLC  
500 Don Gaspar Avenue  
Santa Fe, New Mexico 87505**

*Prepared by:*

**Geolex, Inc.  
500 Marquette Avenue, NW, #1350  
Albuquerque, New Mexico 87102**

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval?  Yes \_\_\_\_\_ No
- II. OPERATOR: 3Bear Field Services, LLC.  
ADDRESS: 500 Don Gaspar Ave., Santa Fe NM 87505  
CONTACT PARTY: Alberto A. Gutierrez, R.G. - GEOLEX, INC. PHONE: (505)-842-8000
- 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. **A CROSS REFERENCE TO THE APPLICABLE SECTIONS OR APPENDICES IN THE ATTACHED C108 APPLICATION FOR EACH ROMAN NUMERAL BELOW IS SPECIFIED BY SECTION AND/OR APPENDIX NUMBERS.**
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes  No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_ N/A
- 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. **SECTIONS 5 and 6; APPENDICES A and B.**
- 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.  
**SECTION 5; APPENDIX A.**
- VII. Attach data on the proposed operation, including:
- Proposed average and maximum daily rate and volume of fluids to be injected; **SECTIONS 1, 2, and 3**
  - Whether the system is open or closed; **SECTIONS 1, 2, 4 and 7**
  - Proposed average and maximum injection pressure; **SECTIONS 1 and 3**
  - Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, **SECTIONS 3 and 4**
  - 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.). **SECTIONS 3 and 4**
- \*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. **SECTIONS 4 and 5 and APPENDIX A**
- IX. Describe the proposed stimulation program, if any. N/A
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **WELL IS NOT YET DRILLED**
- \*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. **SECTION 4.5**
- 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.  
**SECTION 7**
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **APPENDIX B**
- 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: Alberto A. Gutierrez, C.P.G. TITLE: President, Geolex, Inc.<sup>®</sup>; Consultant to DCP Midstream LP

SIGNATURE: \_\_\_\_\_  DATE: 08/9/2019

E-MAIL ADDRESS: aag@geolex.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: **SEE ATTACHED APPLICATION**

### 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.

**Outland SWD #1 Surface: 2614' FWL, 152' FSL Section 16, T21S, R34E, - SECTIONS 1, 3 and 4.**

(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. **SEE SECTION 3 FOR PROPOSED WELL DESIGN. FINAL DESIGNS WILL BE SUBMITTED WHEN PROPOSED WELL IS DRILLED AND COMPLETED.**

(3) A description of the tubing to be used including its size, lining material, and setting depth. **SECTION 3 AND FIGURE 3 FOR PROPOSED WELL DESIGN**

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used. **SECTION 3**

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. **SECTIONS 1 and 4**

(2) The injection interval and whether it is perforated or open-hole. **SECTION 3**

(3) State if the well was drilled for injection or, if not, the original purpose of the well. **N/A- WELL NOT YET DRILLED**

(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. **N/A**

(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. **SECTIONS 4 and 5; APPENDICES A and B**

### 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. **SECTION 5; APPENDIX B CONTAINS COPIES OF LETTERS SENT OPERATORS, LEASEHOLD OWNERS AND SURFACE OWNERS WITHIN THE AREA OF REVIEW PURSUANT TO NMOCD REGULATIONS AND CERTIFIED MAIL RETURN RECEIPTS**

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: **SEE APPENDIX B FOR COPY OF PUBLIC NOTICE AND AFFIDAVIT OF PUBLICATION OF NOTICE FROM NEWSPAPER**

(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.

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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.

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- Appendix A: Information on Oil and Gas Wells within Two Mile of Proposed 3Bear Outland SWD #1
- Appendix B: Identification of Operators, Lessees, Surface Owners, and other Interested Parties within One Half Mile of Proposed Outland SWD #1 for Notices; Copies of Notice Letters and Certified Mail Receipts, and Affidavit of Publication of Newspaper Notice

## 1.0 EXECUTIVE SUMMARY

On the behalf of 3Bear Field Services LLC (“3Bear”) Geolex, Inc. (Geolex) has prepared and is hereby submitting a complete C-108 application for administrative approval to drill, complete, and operate a salt water disposal well (Outland SWD #1) at 152’ FSL, 2,614’ FWL in Section 16, T21S, R34E in Lea County, New Mexico, approximately 24 miles Southwest of Hobbs, New Mexico (Figure 1).

3Bear will construct surface facilities at this location, and this new disposal well is proposed in order to properly dispose of saltwater from this 3Bear’s activities (Figure 2). 3Bear intends to inject up to 25,000 barrels per day (bpd) through the proposed well.

3Bear will construct surface facilities at this location, and this new disposal well is proposed in order to properly dispose of saltwater from this 3Bear’s activities (Figure 2). 3Bear intends to inject up to 25,000 barrels per day (bpd) through the proposed well.

The proposed injection zone will be in the Devonian and Upper Silurian Wristen and Fusselman Formations, as well as the upper Ordovician Upper Montoya Formation, at depths of approximately 15,600 to 16,500 feet. Analysis of the reservoir characteristics of these units confirms that they act as excellent closed-system reservoirs that will accommodate 3Bear’s saltwater disposal needs.

There are 70 recorded wells within two miles of the proposed 3Bear Outland SWD #1 (see Figure A1, Appendix A). Of these 26 are active, 39 are plugged and abandoned, one is zone plugged, and 4 are approved locations that have not drilled. None of these well are either completed or proposed to reach deeper than 14,550 feet, over 1,000 feet above the proposed injection zone (Appendix A).

Within the one half mile radius of review there a total of 13 wells, of which 3 are active, 9 are plugged and abandoned, and one that is zone plugged. None of these wells are either completed or proposed to reach deeper than 11,944 feet, over 3,600 feet above the proposed injection zone (Appendix A).

The caprock above the injection zone contains approximately 260 feet of dense shale (Woodford Shale) and an additional 700 feet of low-permeability carbonates in the Osage and Barnett formations. Those formations will contain the injected water, and prevent any up migration.

The well will be constructed using a 4-string design to protect shallow fresh water, the Salado salt, the Capitan Aquifer, and deeper production zones (Figure 3). The three upper casing segments (to 11,530 feet) will be cemented to the surface, and a 7 5/8” liner will be run from 11,300 feet to 15,600 feet, with an overlap within the 9 5/8” of 230 feet. The well will then be completed as an open-hole interval, from approximately 15,600 to 16,500 feet.

Based on the New Mexico Water Rights Database from the New Mexico Office of the State Engineer, there are no freshwater wells within the one-mile area of review for the proposed saltwater disposal well.

All surface ownership within one-half mile of the proposed Outland SWD #1 is held by the State of Mexico and the Merchant Livestock Company. All mineral rights in the one-half mile area are held by the State of New Mexico. Operators in the area of interest include Mewbourne Oil Company, COG Operating LLC, Centennial Resource Production LLC, and Devon Energy Production Company, LP. Complete information on land ownership, operators, and lease holders are included in Appendix B.

In preparing this C-108 application, Geolex conducted a detailed examination of all of the elements required to be evaluated in order to prepare and obtain approval for this application for injection. The elements of this evaluation include:

- Identification and characterization of all hydrocarbon-producing zones of wells that surround and are present within 2 miles of the proposed location.
- The depths of perforated pay intervals in those wells relative to the depth of the target injection zones (Devonian, Fusselman and Montoya).
- The past and current uses of the proposed intervals.
- The stratigraphic and structural setting of the targeted zones relative to any nearby active or plugged wells, and other wells penetrating the intervals.
- The identification of and sample notification letter that will be sent to all surface owners within a one-half mile radius of the proposed injection well.
- Identification and characterization of all plugged and operating wells penetrating the proposed injection zone within a one-half mile radius of the proposed injection well.
- The details of the proposed injection operation, including general well design and average and maximum daily rates of injection and injection pressures.
- Sources of injection fluid and compatibility with the formation fluid of the injection zone.
- Location and identification of any fresh water bearing zones in the area; the depth and quality of available groundwater in the vicinity of the proposed well, including a determination that there are no structures which could possibly communicate the disposal zone with any known sources of drinking water.

Based upon this detailed evaluation, Geolex and 3Bear have determined that the proposed Outland SDW #1 is a safe and environmentally-sound project for the disposal of produced water.

## 2.0 INTRODUCTION AND ORGANIZATION OF C-108 APPLICATION

The completed NMOCD Form C-108 is included before the Table of Contents of this document and references appropriate sections where data required to be submitted are included herein.

This application organizes and details all of the information required by NMOCD and NMOCC to evaluate and approve the submitted Form C-108 – Application for Authorization to Inject. This information is presented in the following categories:

- A detailed description of the location, construction, and operation of the proposed disposal well (Section 3.0)
- A summary of the regional and local geology, the hydrogeology, and the location of drinking water wells within the ½ mile area of review (Section 4.0)
- The identification, location, status, production zones, and other relevant information on oil and gas wells within the ½ mile area of review. (Section 5.0)
- The identification and required notification for operators and surface land owners that are located within the ½ mile area of review (Section 6.0)
- An affirmative statement, based on analysis of geologic conditions at the site, that there is no hydraulic connection between the proposed injection zone and any known sources of drinking water (Section 7.0)

### 3.0 PROPOSED CONSTRUCTION AND OPERATION OF 3BEAR SWD #1

#### 3.1 DESIGN OF 3BEAR SWD #1

The SWD facilities and well will be integrated components of the 3Bear surface facilities. The preliminary well design for the new injection well is shown on Figure 3. This well will be made to accommodate injection of 25,000 bpd of produced water.

The well will be advanced vertically to its anticipated total depth of approximately 16,500 feet. The injection zone (15,600 to 16,500 feet) will be completed as an open hole interval.

The four casing strings are detailed on the well injection data sheet and Figure 4 schematic. Surface casing (20") will be set in a competent bed above the salt, at approximately 1,600 feet. The first intermediate casing (13 3/8") will be set through the salt to approximately 5,700 feet to protect the Capitan Aquifer. The second intermediate 9 5/8" casing will be advanced to approximately 11,050 feet protecting the 1<sup>st</sup> and 2<sup>nd</sup> sands of the Bone Spring. The 7 5/8" production liner will be placed from 11,300 feet to 15,600 feet, with an overlap of 230 feet. The final completion will be constructed as a 6 1/8" open hole interval, to a total depth of approximately 16,500 feet.

Both intermediate segments will be logged using Dual Induction and Density-Neutron-Gamma Ray Porosity. The proposed open hole logging suite for the TD run consists of a Dual Induction, Density-Neutron-Gamma Ray Porosity.

All casing segments will be cemented to the surface, and the liner will be cemented into the 9 5/8" second intermediate. A casing integrity test (pressure test) will be performed to test the casing. Full 360-degree cement-bond logs will be performed for each casing segment as well.

Once the integrity of the cement jobs has been determined a temporary string of removable packer and tubing will be run, and injection tests (step tests) will be performed to determine the final injection pressures and volumes. Once the reservoirs have been tested, the final tubing string will include a permanent packer, and approximately 14,625 feet of 5 1/2-inch tubing.

### 3.2 CALCULATED MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP)

The total volume of produced water to be injected under this scenario will be approximately 25,000 barrels per day. Pressure reduction valves will be incorporated to assure that maximum allowable operating pressure allowed by NMOCD will not be exceeded.

The MAOP for the 3Bear SWD #1 is calculated using the following method approved by NMOCD as shown below:

$$IP_{max} = PG (D_{top}) \quad \text{where: } IP_{max} = \text{maximum surface injection pressure (psig)}$$

$$PG = \text{pressure gradient of mixed injection fluid (psig/foot)}$$

$$D_{top} = \text{depth at top of perforated interval of injection zone (feet)}$$

and  $PG = 0.2 + 0.433 (1.04 - SG_{sw})$  where:

$SG_{sw}$  = specific gravity of the disposed salt water (~1.04)

Therefore:

$$PG = 0.2 + 0.433 (1.04 - 1.04) = 0.2$$

$$IP_{max} = PG (D_{top}) = 0.2 \times 15,600 = 3,120 \text{ psig}$$

3Bear requests a MAOP to 3,120 psig.

## 4.0 REGIONAL AND LOCAL GEOLOGY AND HYDROGEOLOGY

### 4.1 GENERAL GEOLOGIC SETTING/SURFICIAL GEOLOGY

The 3Bear Outland SWD #1 will be located in Section 16, T21S, R34E in Lea County, New Mexico, about 24 miles southwest of Hobbs, New Mexico (Figure 1).

### 4.2 BEDROCK GEOLOGY

The 3Bear Facility and proposed well are located in the northern portion of the Delaware Basin, a sub-basin of the larger, encompassing Permian Basin, which covers a large area of southeastern New Mexico and west Texas ( Figure 4). The Permian Basin lies within the area of the larger, ancestral (pre-Mississippian) Tabosa Basin, which covered an area that included the entire present-day Permian Basin area and beyond. The Tabosa Basin was a shallow sub-tropical basin throughout the period between the Ordovician and early Mississippian (Osagean). The Permian Basin as we know it today began to take form during the Middle to Late Mississippian, with various segments (Delaware and Midland Basins, Central Basin Platform, North Platforms) arising from the ancestral Tabosa Basin. The Delaware Basin was subsequently deepened by periodic deformation during the Hercynian orogeny of the Pennsylvanian through Early Permian. Following the orogeny, the Delaware Basin was structurally stable and gradually was filled by large quantities of clastic sediments while carbonates were deposited on the surrounding shelves, and was further deepened by basin subsidence.

Figure 5 is a generalized stratigraphic column showing the formations that underlie the proposed well site. The entire lower Paleozoic interval (Ellenburger through Devonian) was periodically subjected to subaerial exposure and prolonged periods of karsting, most especially in the Fusselman and Devonian. The result of this exposure was development of systems of karst-related secondary porosity, which included solution-enlargement of fractures and vugs, and development of small cavities and caves. Particularly in the Fusselman, solution features from temporally-distinct karst events became interconnected with each successive episode, so there could be some degree of vertical continuity in parts of the Fusselman section that could lead to enhanced vertical and horizontal permeability.

In this immediate area of the Permian Basin, major tectonic activity was primarily confined to the lower Paleozoic section, where seismic data shows major faulting and ancillary fracturing affected rocks only as high up as the lower Woodford Shale. Faulting higher in the section that is related to the Hercynian orogeny is more prevalent closer to the Central Basin Platform margins and the northern margins of the Northwest Shelf.

The sub-Woodford Paleozoic rocks extend down to the Ordovician Ellenburger Formation, which sit on the basement over a veneer of Early Ordovician sandstones and granite wash. The Ellenburger is comprised of dolomites and limestones, and is up to several hundred feet thick. It is overlain by about 400 feet of Ordovician Simpson sandstones and tight limestones, in turn overlain by about 400 feet of Montoya cherty carbonates.

The Silurian Fusselman and Wristen, and Devonian Thirty-one Formations overlie the Montoya, and are comprised of interbedded dolomites and dolomitic limestones that are capped by the Woodford Shale. The Woodford shale is overlain by several hundred feet of Osagean limestone, which is overlain by several hundred feet of shales and basinal limestones of the Upper Mississippian Chester Formation. The Pennsylvanian Morrow, Atoka, Strawn, and a starved section of Cisco-Canyon complete the pre-Permian

section. Within this entire sequence, the Morrow is a gas producing zone, with smaller contributions from the Atoka and Strawn. The proposed Silurian-Devonian injection zone does not produce economic hydrocarbons for more than 10 miles away from the well site.

#### **4.3 LITHOLOGIC AND RESERVOIR CHARACTERISTICS OF THE SILURO-DEVONIAN FORMATIONS**

The proposed injection interval includes the Devonian Thirty-one, and Silurian Wristen and Fusselman Formations, collectively referred to as the Siluro-Devonian. The proposed injection interval includes a number of intervals of dolomites and dolomitic limestones with moderate to high primary porosity, and secondary, solution-enlarged porosity that is related to karst events that periodically occurred throughout the section, most notably in the Fusselman Formation. These karst events produced solution cavities and enlarged fractures throughout the section, which can be substantial enough to provide additional permeability that is not readily apparent on well logs. The porous zones are separated by tight limestones and dolomites.

There are no producing zones within or below the Siluro-Devonian in the area of the proposed well, and the injection interval is separated from the nearest producing zone (Morrow) by 260 feet of Woodford shale, 500 feet of tight Osagean limestones, and 400 feet of tight Chesterian and Barnett shales and deep water limestones. It lies a minimum of 1,000 feet above the Precambrian basement.

#### **4.4 CHEMISTRY OF THE RESERVOIR FLUIDS**

Reservoir fluids were collected and analyzed from the Devonian interval at the DCP Midstream Zia AGI #2 (3002542207), located in Section 19, T19S, R 32E, approximately 18 miles northeast of the proposed WD #1. These analyses showed an average of TDS of 42,750 parts per million (ppm). The major ions were chloride (23,700 ppm) and sodium (15,140 ppm). The Devonian reservoir fluids are compatible with produced waters from wells in this area.

#### **4.5 GROUNDWATER HYDROLOGY IN THE VICINITY OF THE PROPOSED INJECTION WELL**

A review of the State Engineer's files shows no reported water wells within one mile of the proposed 3Bear Outland SWD #1 location. Total dissolved solids in the shallow groundwater in the project area is highly variable, ranging from 5,000 to over 125,000 parts per million (Hydrological Assessment, Figure 4-9, p. 4-15). As described in Section 3.1, the surface casing will be extended to approximately 1,600 feet, effectively isolating the shallow ground water.

## 5.0 OIL AND GAS WELLS IN THE 3BEAR SWD#1 AREA OF REVIEW

There are 70 recorded wells within two miles of the proposed 3Bear Outland SWD #1 (see Figure A-1, Appendix A). Of these 26 are active, 39 are plugged and abandoned, one is zone plugged, and 4 are approved locations that have not drilled (Table A-1, Appendix A).

None of these wells, either completed or proposed, reach depths greater than 14,550 feet, over 1,000 feet above the proposed injection zone.

Within one-half mile of the proposed SWD #1 there are 13 wells, of which 3 are active, 9 are plugged, one that is zone plugged. Relevant information for them is summarized in Table 1 below.

API	OPERATOR	WELL NAME	DEPTH (ft)	TYPE	STATUS	MILES
	3BEAR FIELD SERVICES	OUTLAND SWD #1		S	New (Not drilled or compl)	0
3002502553	HAL J RASMUSSEN OPER INC	VALERO STATE 001	3925	G	Plugged	0.11
3002540342	MEWBOURNE OIL CO	REBEL 16 9 B2OJ STATE COM 001H	10805	O	Plugged	0.11
3002542193	DEVON ENERGY PRODUCTION COMPANY, LP	MONK 21 STATE 004H	10780	O	Active	0.15
3002502557	HAL J RASMUSSEN OPER INC	STATE A 001	3926	O	Plugged	0.16
3002502564	SHELL OIL CO	STATE B 002	3930	O	Plugged	0.16
3002502563	HAL J RASMUSSEN OPER INC	STATE B 001	3912	O	Plugged	0.2
3002508467	HAL J RASMUSSEN OPER INC	STATE A 002	4185	O	Zone Plugged	0.33
3002502554	D B BAXTER	STATE 002	3951	S	Plugged	0.36
3002502558	WILLIAM E HENDON JR	STATE C 001	4000	S	Plugged	0.37
3002540986	DEVON ENERGY PRODUCTION COMPANY, LP	MONK 21 STATE COM 001H	10944	O	Active	0.41
3002540843	CENTENNIAL RESOURCE PRODUCTION, LLC	JAMALBERRY 001H	10836	O	Active	0.41
3002502565	SHELL OIL CO	STATE B 003	3990	O	Plugged	0.43
3002502559	HAL J RASMUSSEN OPER INC	STATE C 002	3944	S	Plugged	0.47

**6.0 IDENTIFICATION AND REQUIRED NOTIFICATION OF OPERATORS, SUBSURFACE LESSEES, AND SURFACE OWNERS WITHIN THE AREA OF REVIEW**

3Bear contracted Lonquist & Company, LLC to research land records in Lea County to obtain a listing of all operators, oil, gas and mineral lessees, and surface owners within a one-half mile radius of the proposed AGI well. Appendix B includes the results from that search.

Table B-1 summarizes the operators and lessees in the one-half mile area of review, and Table B-2 lists the identified surface owners. These Tables comprises the universe of persons that must be notified 20 days prior to the NMOCC hearing. The areas held by operators are shown in Figure B-1, Figure B-2 shows the areas held by lessees, and Figure B-3 depicts surface ownership. Appendix B also includes copies of individual Notice Letters and Certified Mail Receipts, and Copies of the newspaper notice and affidavit of publication.

**7.0 AFFIRMATIVE STATEMENT OF LACK OF HYDRAULIC CONNECTION BETWEEN PROPOSED INJECTION ZONE AND KNOWN SOURCES OF DRINKING WATER**

As part of the work performed to support this application, a detailed investigation of the structure, stratigraphy and hydrogeology of the area surrounding the proposed 3Bear Outland SWD #1 well has been performed. The investigation included the analysis of available geologic data and hydrogeologic data from wells and literature identified in Sections 3, 4 and 5 above including related appendices. Based on this investigation and analysis of these data, it is clear that there are no open fractures, faults or other structures which could potentially result in the communication of fluids between the proposed injection zone with any known sources of drinking water or oil or gas production in the vicinity as described above in Sections 4 and 5 of this application.

I have reviewed this information and affirm that is correct to the best of my knowledge.

Alberto A. Gutierrez, R.G  
President  
Geolex, Inc.

 \_\_\_\_\_ Date: \_\_\_\_\_ August 9, 2019 \_\_\_\_\_

## **Figures**

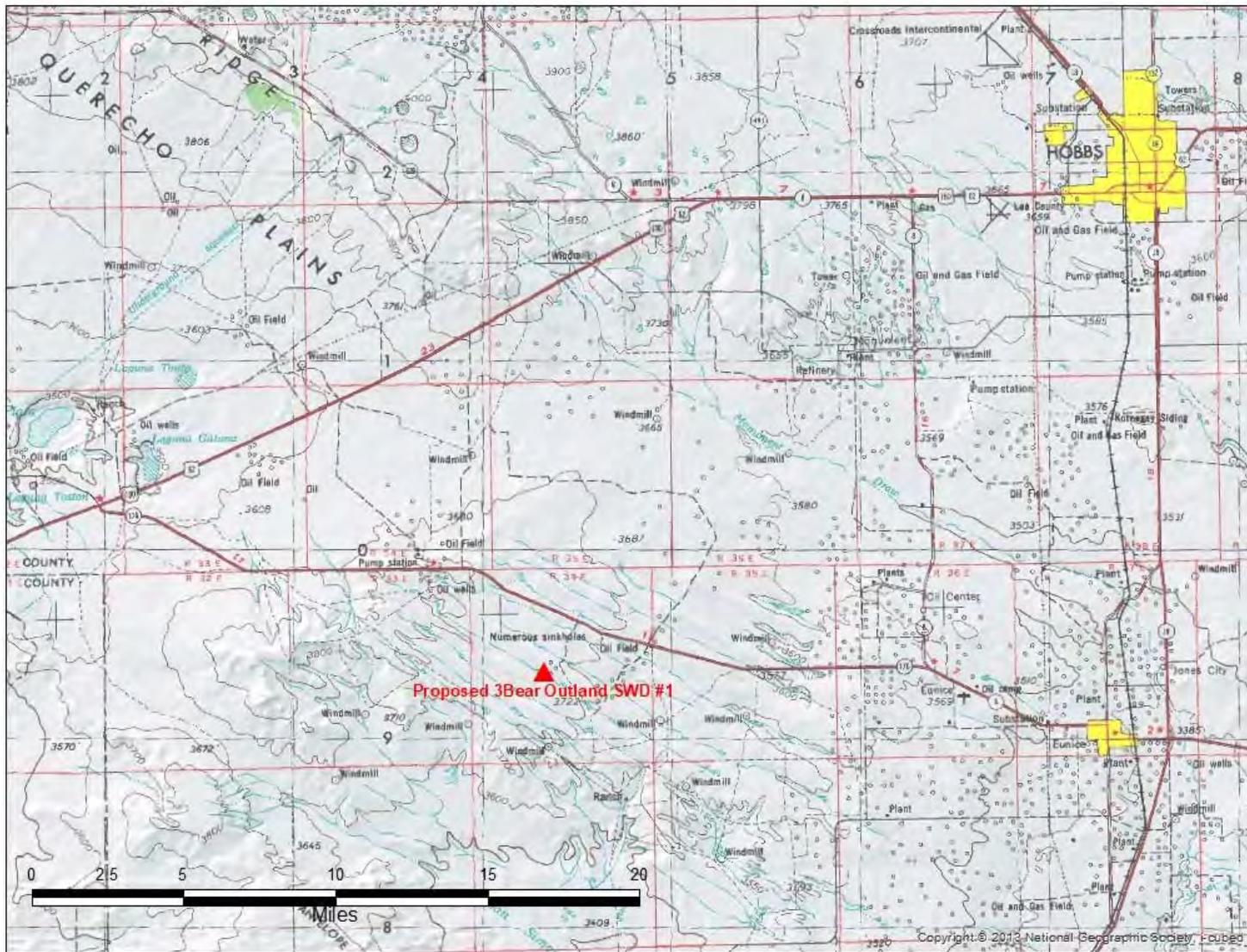
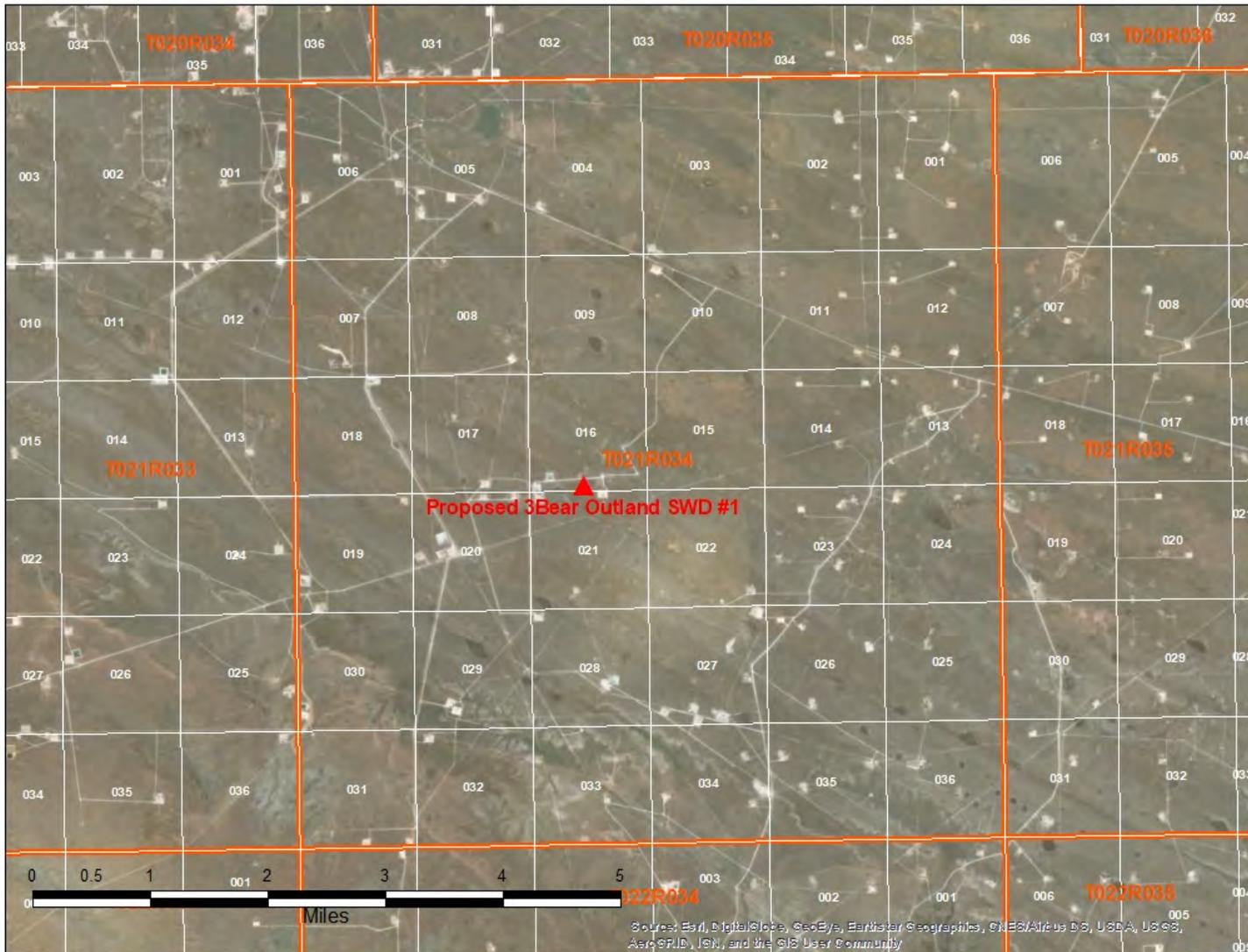


Figure 1: Location of Proposed 3Bear Outland SWD #1



**Figure 2: Detail Location of 3Bear Proposed Outland SWD #1**

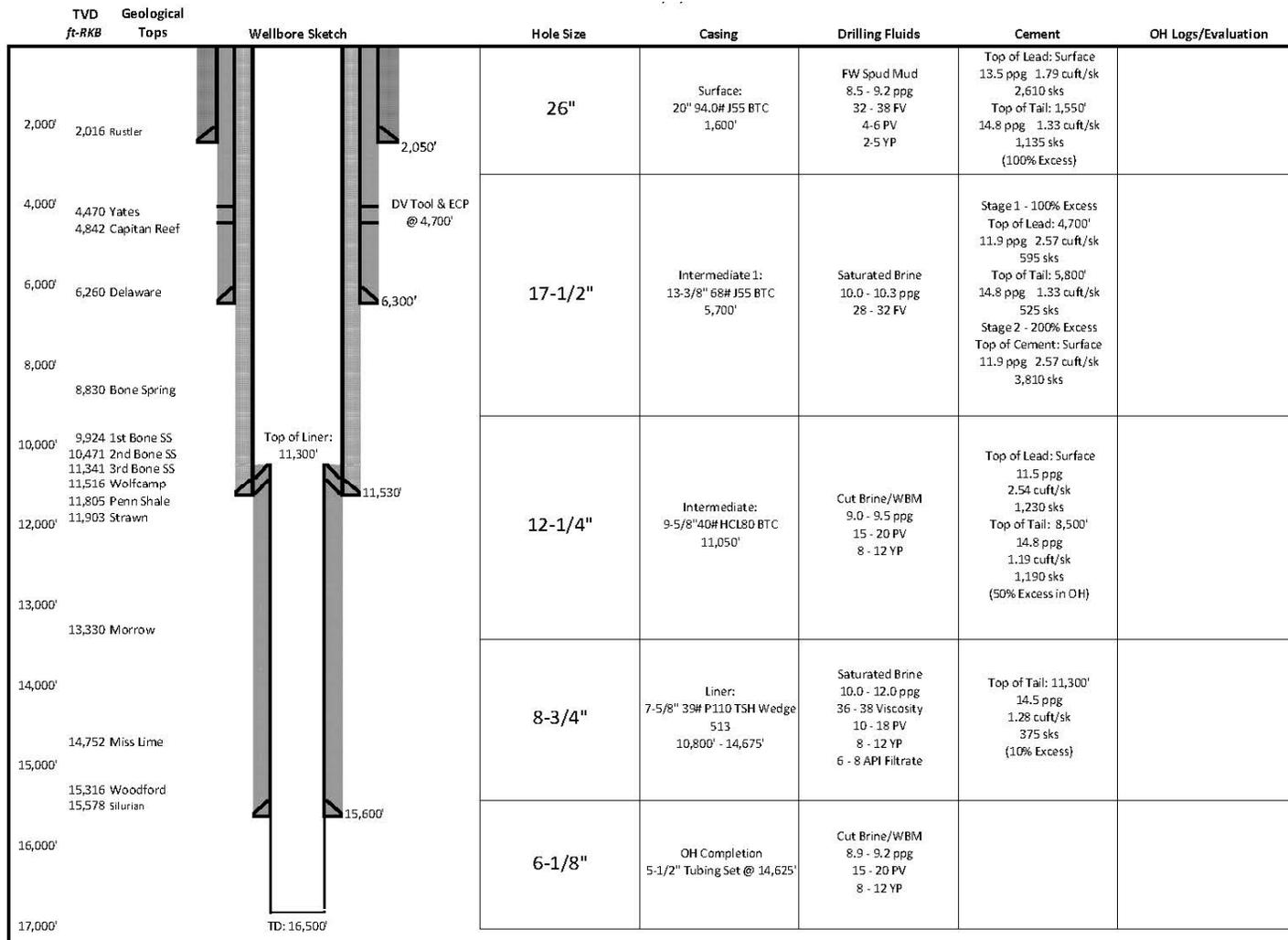


Figure 3: Well Schematic for Proposed 3 Bear Outland SWD #1

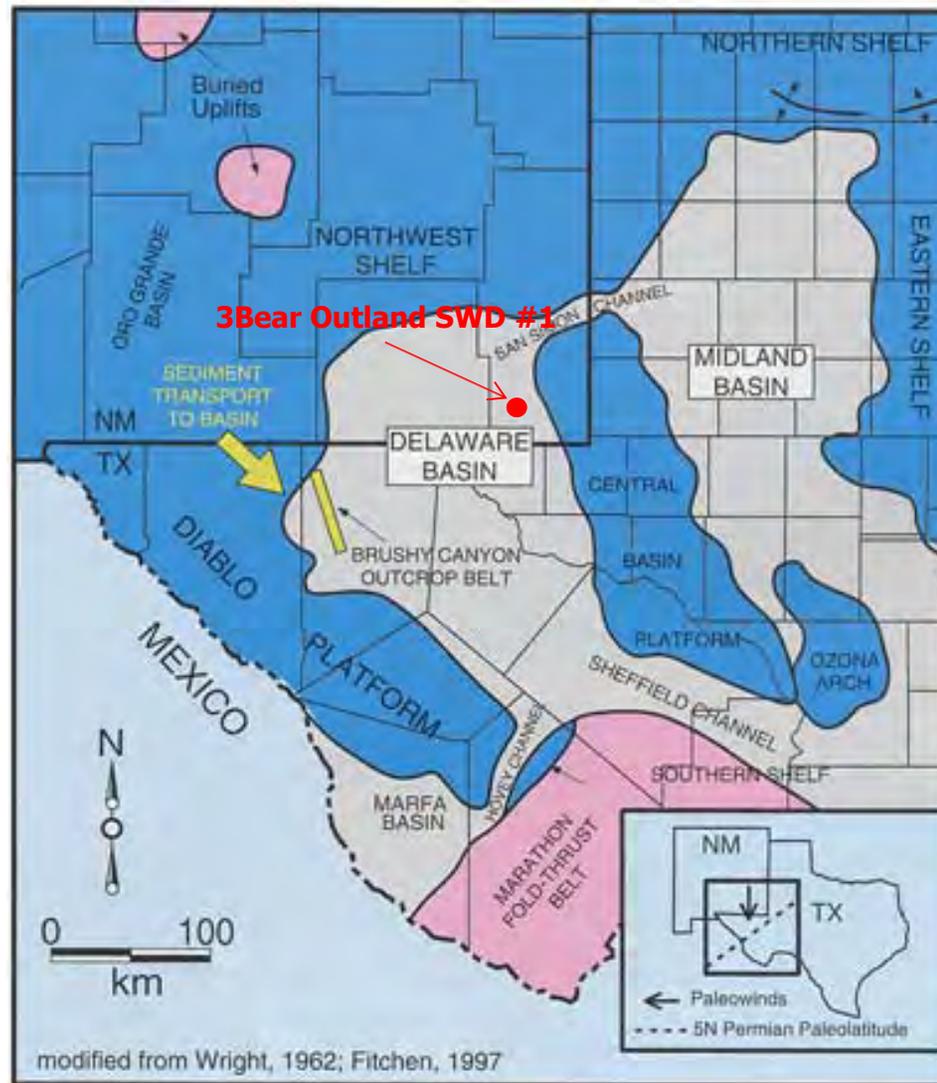
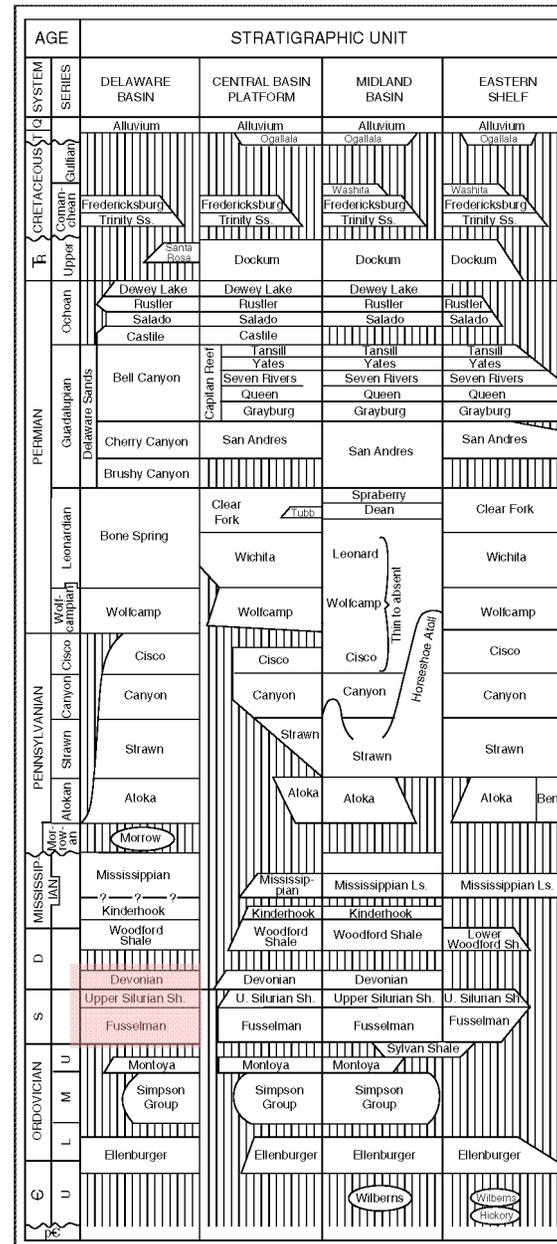


Figure 4: General Structure of the Permian Basin

Figure 5: General Stratigraphy of the Permian Basin

Proposed Injection Zone:  
Devonian and Silurian



## **Appendix A:**

### **Information on Oil and Gas Wells within Two Miles of Proposed 3Bear Outland SWD #1**

**Table A-1: Wells within Two Miles of Proposed 3Bear Outland SWD #1**

**Figure A-1: Wells within Two Miles of Proposed 3Bear Outland SWD #1**

Table A-1. Summary of Wells Within Two Miles of Proposed 33ear Outland SWD #1

API	OPERATOR	WELL NAME	RANGE	TOWNSHIP	SECTION	SDV	UI	SPUD DATE	PLUG DATE	TVD DEPTH	WELL TYPE	COMPL STATUS	ELEVGL	LAND TYPE	LATITUDE	LONGITUDE	MILES
3002502553	3BEAR FIELD SERVICES	OUTLAND SWD #1	34E	21.05	16						0	New (Not drilled or compl)	3724	S	32.474206	-103.477497	0.11
3002502554	HALL RASMUSSEN OPER INC	VALERO STATE 001	34E	21.05	16 N			11/29/2004		3925	G	Plugged		S	32.47349193	-103.4798573	0.11
3002540342	MEVBOURNE OIL CO	REBEL 16 9 B201 STATE COM 001H	34E	21.05	16 O		5/19/2012			10805	0	Plugged		S	32.47247763	-103.473145	0.11
3002542193	DEVON ENERGY PRODUCTION COMPANY, LP	MONK 21 STATE 004H	34E	21.05	21 B		5/31/2015			10780	0	Active		S	32.47105978	-103.4727638	0.15
3002502567	HALL RASMUSSEN OPER INC	STATE A 001	34E	21.05	16 O			12/1/2004		3926	0	Plugged		S	32.47344065	-103.4727306	0.16
3002502564	SHELL OIL CO	STATE B 002	34E	21.05	21 C		1/1/1900			3830	0	Plugged		S	32.46980356	-103.475858	0.16
3002502563	HALL RASMUSSEN OPER INC	STATE B 001	34E	21.05	21 B			1/6/2005		3912	0	Plugged		S	32.46981229	-103.4727289	0.2
3002502544	HALL RASMUSSEN OPER INC	STATE A 002	34E	21.05	16 P		7/7/1949			4185	0	Zone Plugged		S	32.47344985	-103.4695048	0.33
3002502558	D B BAKTER	STATE C 001	34E	21.05	16 K		7/29/1959			3951	5	Plugged		S	32.47470621	-103.4695354	0.36
3002502559	WILLIAM E HENDON JR	STATE C 002	34E	21.05	16 J		6/4/1984			4000	5	Plugged		S	32.47706902	-103.4727273	0.37
3002540863	CENTENNIAL RESOURCE PRODUCTION, LLC	JAMALBERRY 001H	34E	21.05	16 M		12/27/2014			10944	0	Active		S	32.47200924	-103.48202649	0.41
3002502565	SHELL OIL CO	STATE B 003	34E	21.05	21 G		1/1/1900			3980	0	Plugged		S	32.46618392	-103.4727269	0.43
3002502559	HALL RASMUSSEN OPER INC	STATE V 001	34E	21.05	16 I		1/16/1985			3944	5	Plugged		S	32.47707802	-103.4695041	0.47
3002502555	CITIES SERVICE OIL	STATE V 002	34E	21.05	16 G		1/1/1900			3991	0	Plugged		S	32.4607103	-103.4727294	0.61
3002540861	DEVON ENERGY PRODUCTION COMPANY, LP	PENNYPACKER 17 STATE 001H	34E	21.05	20 A		7/18/2014			10927	0	Active		S	32.47107007	-103.4854456	0.62
3002540868	COG OPERATING LLC	OSPREY 20 STATE COM 001H	34E	21.05	20 A		1/1/1900			4130	0	Plugged		S	32.46977724	-103.4853339	0.64
3002502561	DAVIDSON & CLOWER	SHELL STATE 001	34E	21.05	16 H		1/1/1900			3914	0	Plugged		S	32.47981146	-103.4673531	0.7
3002502566	CITIES SERVICE OIL	STATE V 002	34E	21.05	15 L		1/1/1900			3914	0	Plugged		S	32.47799773	-103.4652029	0.7
3002502560	SHELL OIL CO	STATE D 001	34E	21.05	15 E		1/1/1900			3913	0	Plugged		S	32.47981895	-103.4652026	0.78
3002502551	WILSON OIL CO	STATE D07	34E	21.05	22 L		1/1/1900			200	0	Plugged		S	32.46986643	-103.4640921	0.86
3002536159	HALE PRODUCTION CO	SANDERS STATE 001	34E	21.05	22 L		1/1/1900			10836	0	Active		S	32.47249354	-103.469764	0.86
3002540861	DEVON ENERGY PRODUCTION COMPANY, LP	PENNYPACKER 17 STATE 001H	34E	21.05	20 B		12/3/2014			11884	0	Active		S	32.47106421	-103.489746	0.87
3002541810	COG OPERATING LLC	OSPREY 20 STATE COM 003H	34E	21.05	20 B		3/2/2015			10962	0	Active		S	32.4589038	-103.4765067	0.89
3002542350	COG OPERATING LLC	OSPREY 20 STATE COM 006H	34E	21.05	21 N		1/1/1900			14550	0	Plugged		S	32.45890043	-103.4775818	0.92
3002525942	POGO PRODUCING CO	STATE L 921 002	34E	21.05	21 N		1/1/1900			263	0	Plugged		S	32.48526155	-103.4652018	1.07
3002502552	WILSON OIL CO	STATE 059	34E	21.05	15 D		1/1/1900			4058	0	Plugged		S	32.48526155	-103.4652018	1.07
3002502566	J W BROWN ET AL	STATE 001	34E	21.05	22 M		1/1/1900			4144	0	Plugged		S	32.45894197	-103.464122	1.1
3002533108	BURLINGTON RESOURCES OIL & GAS CO	PLATINUM STATE 001	34E	21.05	17 G		10/27/1995	7/26/2002		6570	0	Plugged		S	32.48066606	-103.4909123	1.1
3002541898	MEVBOURNE OIL CO	BIRDDOG 20 17 B2FC STATE COM 001H	34E	21.05	20 F		8/26/2017			10850	0	Active		S	32.46494423	-103.4926788	1.14
3002542455	DEVON ENERGY PRODUCTION COMPANY, LP	CHILES 28 STATE 001	34E	21.05	28 D		5/21/2015	6/3/2015		4222	0	Plugged		S	32.45614298	-103.4822159	1.17
3002542460	DEVON ENERGY PRODUCTION COMPANY, LP	CHILES 28 STATE 001Y	34E	21.05	28 D		6/5/2015			11057	0	Active		S	32.45614285	-103.4822173	1.18
3002541691	EOG RESOURCES INC	PAPAYA BVP STATE 002H	34E	21.05	10 M		3/28/2014			160	0	Plugged		S	32.48429231	-103.4635497	1.21
3002502560	VICKERS PETROLEUM CO	SHELL STATE 001	34E	21.05	17 B		1/1/1900			4116	0	Plugged		S	32.48788687	-103.4898362	1.21
3002540348	COG OPERATING LLC	OSPREY 20 STATE COM 004H	34E	21.05	20 K		9/29/1996	2/5/2005		14303	0	Active		S	32.48065083	-103.4956702	1.26
3002521342	EOG Y RESOURCES, INC.	ALPHABET AQR STATE 001	34E	21.05	20 K		7/15/2013			10959	0	Active		S	32.4641173	-103.4946644	1.28
3002540969	COG OPERATING LLC	OSPREY 20 STATE COM 003H	34E	21.05	21 N		7/9/2016			9164	0	Active		S	32.4577038	-103.4598833	1.32
3002542536	COG OPERATING LLC	LYCHEE STATE COM 003H	34E	21.05	22 N		7/19/2016			10828	0	Active		S	32.46503294	-103.4981843	1.44
3002543235	MEVBOURNE OIL CO	BIRDDOG 20 17 B2ED STATE COM 001H	34E	21.05	20 E		3/30/2015			10470	0	Active		S	32.4577172	-103.4557699	1.49
3002542445	COG OPERATING LLC	LYCHEE BWS STATE COM 001H	34E	21.05	22 O		10/23/2014			10990	0	Active		S	32.4637693	-103.4992641	1.53
3002541674	COG OPERATING LLC	FRUIT STATE SWD 001	34E	21.05	19 A		3/16/2014			7308	5	Active		S	32.47065016	-103.5013892	1.55
3002502562	YOM J KINNEY	STATE 001	34E	21.05	20 M		1/1/1900			4185	0	Plugged		S	32.45885414	-103.4989351	1.64
3002535553	DEVON ENERGY PRODUCTION COMPANY, LP	OW STATE 001	34E	21.05	22 P		7/31/2001	8/6/2009		13400	0	New (Not drilled or compl)		S	32.49382794	-103.451318	1.65
3002545253	EOG RESOURCES INC	BERRY 8 STATE COM 202H	34E	21.05	8 H					0	0	New (Not drilled or compl)		S	32.49430485	-103.4861025	1.66
3002545254	EOG RESOURCES INC	BERRY 8 STATE COM 203H	34E	21.05	8 H					0	0	New (Not drilled or compl)		S	32.44747785	-103.4727083	1.7
3002521002	WILSON OIL CO	STATE L 922 002	34E	21.05	10 K		1/1/1900	1/1/1900		14195	0	Plugged		S	32.49254976	-103.4587469	1.7
3002529723	MONTENO OPERATING	SUNBURST STATE 001	34E	21.05	10 E		1/1/1900	1/1/1900		4050	0	Plugged		S	32.49254976	-103.4587469	1.7
3002502574	WILSON OIL CO	STATE 038	34E	21.05	23 E		1/1/1900	1/1/1900		3943	0	Plugged		S	32.46556298	-103.445478	1.76
3002502849	SINCLAIR OIL & GAS COMPANY	SOUTH WILSON DEEP UN 001	34E	21.05	23 L		1/1/1900	1/1/1900		14965	0	Active		S	32.46261742	-103.4470207	1.76
3002502525	SHELLY OIL COMPANY	STATE T 001	34E	21.05	10 P		6/13/2014			4075	0	Plugged		S	32.48100504	-103.4513273	1.77
3002541888	CAZA OPERATING, LLC	GRAMMA 27 STATE 002H	34E	21.05	27 A		1/1/1900	1/1/1900		4100	0	Active		S	32.45627823	-103.4509495	1.78
3002502570	WILSON OIL CO	STATE 035	34E	21.05	23 L		1/1/1900	1/1/1900		3972	0	Plugged		S	32.4534802	-103.4513126	1.8
3002502563	WILSON OIL CO	STATE BATTERY 5 004	34E	21.05	23 L		1/1/1900	1/1/1900		13100	0	Plugged		S	32.46262088	-103.4454956	1.82
3002536082	CHISHOLM ENERGY OPERATING, LLC	GRAMMA RIDGE 23 STATE 002	34E	21.05	23 C		1/18/2003			13405	0	Active		S	32.46899732	-103.4438006	1.83
3002529164	POGO PRODUCING CO	GRW 001	34E	21.05	27 G		1/1/1900	1/1/1900		13405	0	Plugged		S	32.45171099	-103.4545302	1.84
3002502574	SHELLY OIL COMPANY	STATE X 001	34E	21.05	9 D		1/1/1900	1/1/1900		4150	0	Plugged		S	32.49884193	-103.46123	1.88
3002544885	DEVON ENERGY PRODUCTION COMPANY, LP	PAPAYA 10 STATE 502H	34E	21.05	10 D		11/19/2015			10743	0	Active		S	32.49814729	-103.4640937	1.9
3002502582	WILSON OIL CO	STATE 028	34E	21.05	23 M		1/1/1900	1/1/1900		3888	0	New (Not drilled or compl)		S	32.48692724	-103.447265	1.92
3002545352	DEVON ENERGY PRODUCTION COMPANY, LP	CHILES 28 21 STATE COM 003H	34E	21.05	28 D		12/1/1995	12/1/1996		90	0	Plugged		S	32.45908542	-103.4459417	1.95
3002545350	DEVON ENERGY PRODUCTION COMPANY, LP	CHILES 28 21 STATE COM 002H	34E	21.05	28 O		11/24/2018			11542	0	Active		S	32.4433716	-103.4823052	1.98
3002544157	CHISHOLM ENERGY OPERATING, LLC	OUTLAND 14 23 STATE COM 285 002H	34E	21.05	28 O		1/3/2013			11542	0	Active		S	32.4433716	-103.4730051	1.98
3002512568	WILSON OIL CO	STATE 025Y	34E	21.05	14 F		6/7/2018			10392	0	New (Not drilled or compl)		S	32.48357165	-103.4737074	1.98
3002544158	CHISHOLM ENERGY OPERATING, LLC	OUTLAND 14 23 STATE COM 285 003H	34E	21.05	28 F		8/2/2018			10356	0	Active		S	32.48588767	-103.4449928	1.99
3002537166	OOY USA WTP LIMITED PARTNERSHIP	OOY GR 26 STATE 001	34E	21.05	26 D		12/1/1947			3850	0	Active		S	32.48588832	-103.4447973	2
3002502579	HALL RASMUSSEN OPER INC	STATE 23 025	34E	21.05	23 F		1/1/1900			3676							



## **Appendix B:**

### **Identification of Operators, Lessees, Surface Owners, and other Interested Parties within One Half Mile of Proposed Outland SWD #1 for Notices; Copies of Notice Letters and Certified Mail Receipts, and Affidavit of Publication of Newspaper Notice**

**Table B-1:** Operators, Lessees and Surface Owners within One Half Mile of Proposed 3Bear Outland SWD #1

**Figure B-1:** Operators within One-Half Mile of Proposed 3Bear Outland SWD #1

**Figure B-2:** Lessees within One-Half Mile of Proposed 3Bear Outland SWD #1

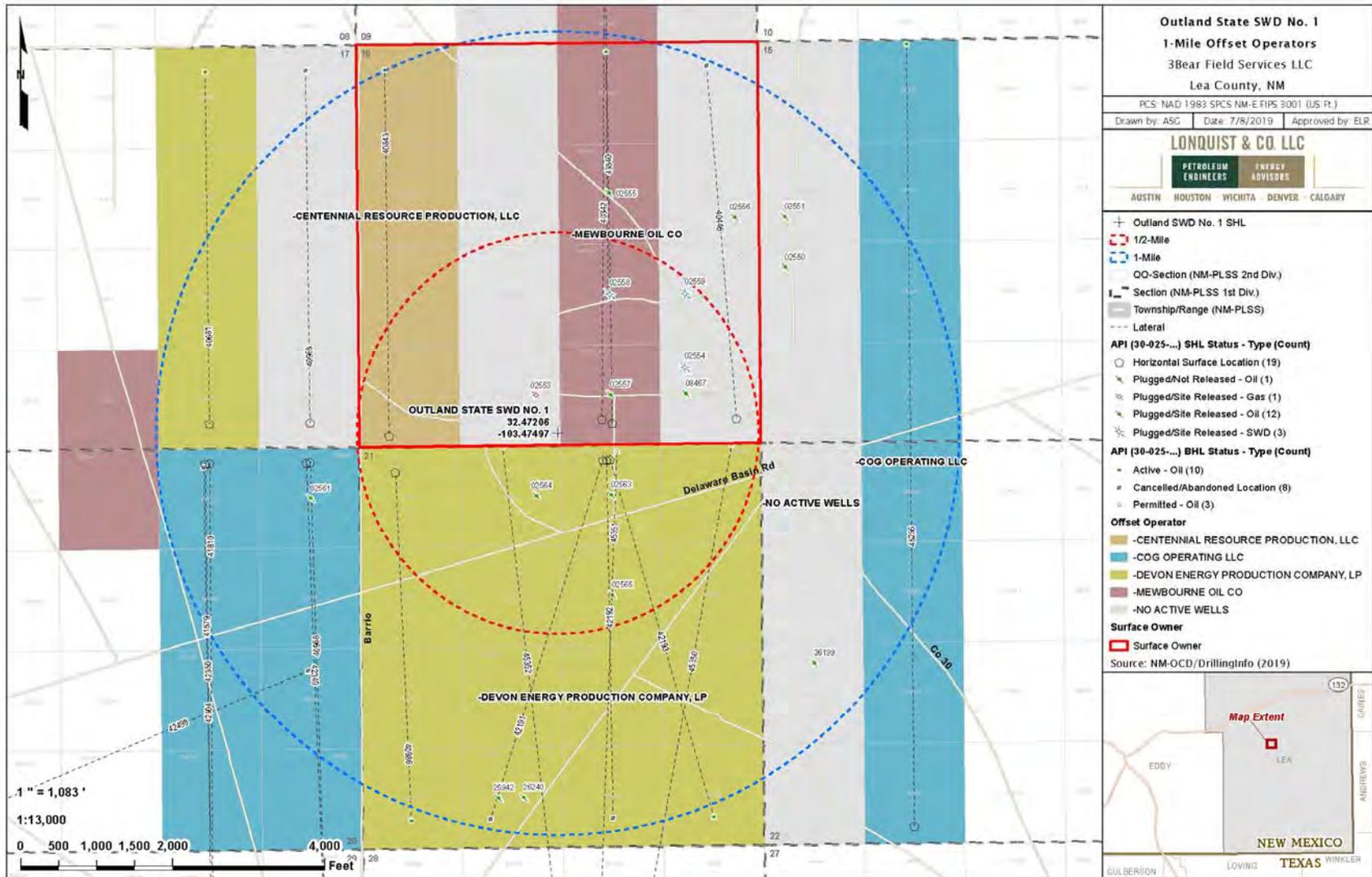
**Figure B-3:** Surface Owners within One Half Mile of Proposed 3Bear Outland SWD #1

**Attachment A:** Copies of Notice Letter Sent and Return Receipts

**Attachment B:** Public Notice and Affidavit of Publication

**TABLE B1: Operators, Lessees and Surface Owners within One-Half Mile of Proposed 3Bear Outland SWD**

<b>OPERATORS</b>		
MEWBOURNE OIL CO	P.O. BOX 5270	HOBBS, NM 88241
COG OPERATING LLC	600 W ILLINOIS AVE	MIDLAND, TX 79701
CENTENNIAL RESOURCE PRODUCTION, LLC	1001 17TH STREET, SUITE 1800	Denver, CO 80202
DEVON ENERGY PRODUCTION COMPANY, LP	333 WEST SHERIDAN AVE.	OKLAHOMA CITY, OK 73102
<b>MINERAL LESSEES</b>		
THE ALLAR COMPANY	P. O. BOX 1567	GRAHAM, TX 76450
OXY USA WTP LIMITED PARTNERSHIP	PO BOX 4294	HOUSTON, TX 77210
MEWBOURNE OIL CO	4801 BUSINESS PARK BLVD., PO BOX 5270	HOBBS, NM 88240
DEVON ENERGY PRODUCTION COMPANY, LP	333 WEST SHERIDAN AVE.	OKLAHOMA CITY 73102
JOHN S. CATRON & FLETCHER R. CATRON	PO BOX 788	SANTA FE 87504-0788
<b>LAND OWNERS</b>		
MERCHANT LIVESTOCK	P.O. BOX 1105	EUNICE, NM 88231
STATE OF NEW MEXICO	310 OLD SANTA FE TRAIL	SANTA FE, NM 87501



**Figure B-1: Operators within One-Half Mile of Proposed 3Bear Outland SWD #1**

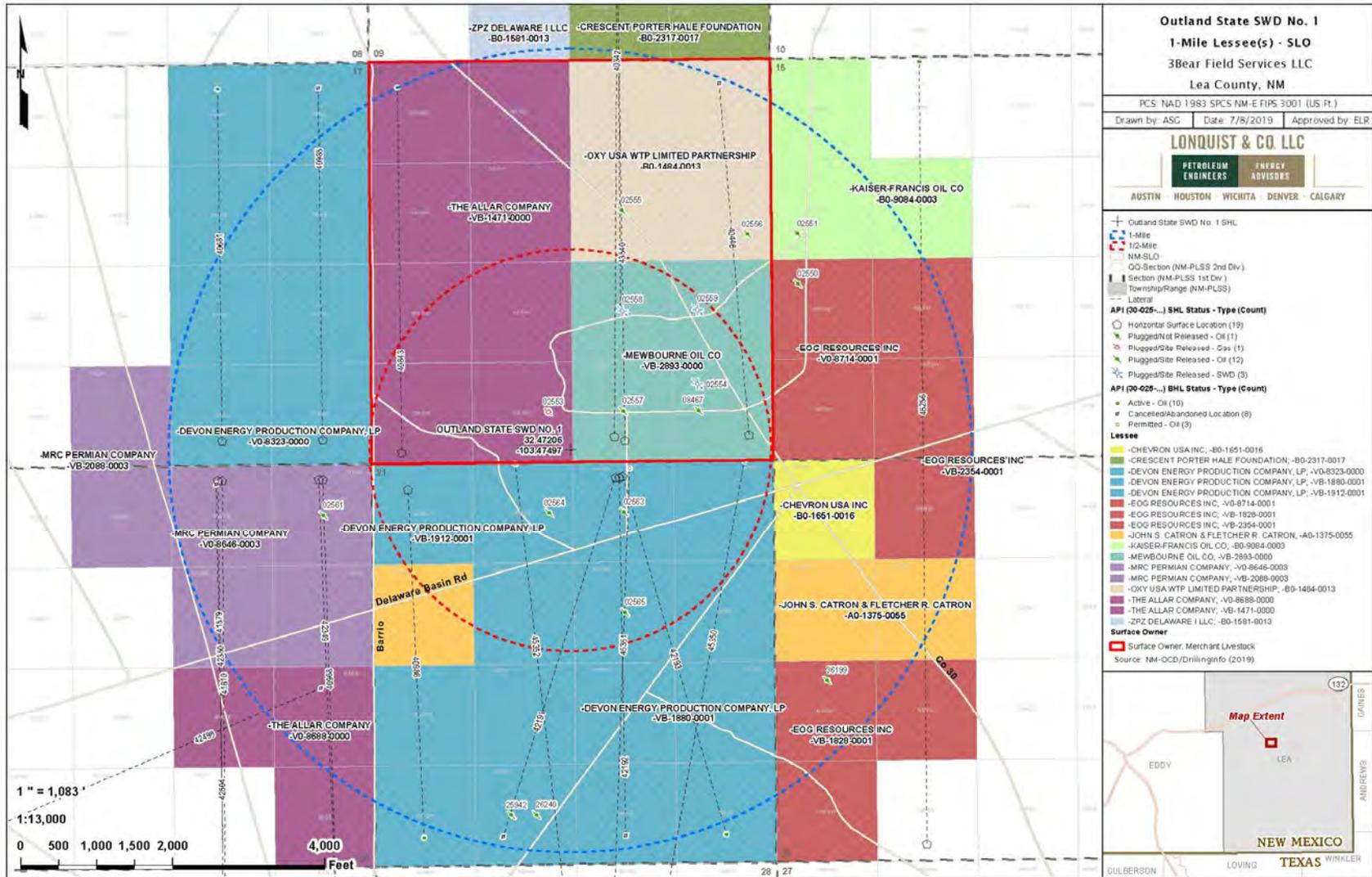


Figure 2: Lessees within One-Half Mile of 3Bear Proposed Outland SWD #1



Figure 3: Surface Owners within One-Half Mile of Proposed Outland SWD #1

July 22, 2019

The Allar Company  
P. O. Box 1567  
Graham, TX 76450

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

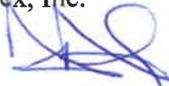
To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for 3Bear Field Services LLC's Outland SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application.

According to the New Mexico Oil Conservation Division, surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date in which this application was mailed to them.

If you have any questions concerning this application you may contact Mr. Alberto Gutierrez or Mr. James C. Hunter at (505) 842-8000 at Geolex, Inc.; 500 Marquette Avenue NW, Suite 1350; Albuquerque, New Mexico 87102.

Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

John S. Catron & Fletcher R. Catron  
PO Box 788  
Santa Fe 87504-0788

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

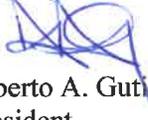
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

Centennial Resource Production, LLC  
1001 17TH Street, Suite 1800  
Denver, CO 80202

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

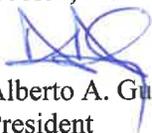
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

COG Operating LLC  
600 W Illinois Ave  
Midland, TX 79701

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

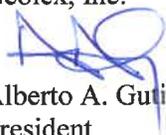
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

Devon Energy Production Company, LP  
333 West Sheridan Ave.  
Oklahoma City, OK 73102

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

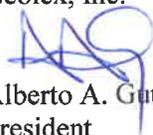
To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for 3Bear Field Services LLC's Outland SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application.

According to the New Mexico Oil Conservation Division, surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date in which this application was mailed to them.

If you have any questions concerning this application you may contact Mr. Alberto Gutierrez or Mr. James C. Hunter at (505) 842-8000 at Geolex, Inc.; 500 Marquette Avenue NW, Suite 1350; Albuquerque, New Mexico 87102.

Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

Merchant Livestock  
P.O. Box 1105  
Eunice, NM 88231

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

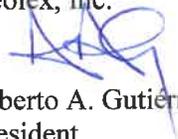
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 23, 2019

Mewbourne Oil CO  
P.O. Box 5270  
Hobbs, NM 88241

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

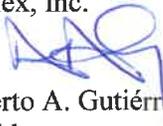
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

OXY USA WTP Limited Partnership  
PO BOX 4294  
Houston, TX 77210

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

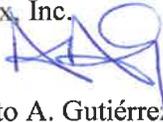
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

July 22, 2019

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

VIA CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

RE: 3BEAR FIELD SERVICES LLC PROPOSED OUTLAND SWD #1

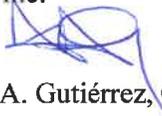
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Sincerely,  
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.  
President  
Consultant to 3Bear Field Services LLP  
Enclosure: C-108 Application for Authority to Inject

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Merchant Livestock  
PO Box 1105  
Eunice, NM 88231

2. Article Number (Transfer from service label)  
7016 1970 0000 8250 9078

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *Liam H Pearson*  Agent  Addressee

B. Received by (Printed Name)  
Liam H Pearson

C. Date of Delivery  
7/30/19

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

JUL 30 2019

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John S. Catron &  
Fletcher R. Catron  
PO Box 788  
Santa Fe, 87504-0788

2. Article Number (Transfer from service label)  
7016 1970 0000 8250 9061

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *Raven Pena*  Agent  Addressee

B. Received by (Printed Name)  
RAVEN PENNA

C. Date of Delivery  
7/29/19

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

JUL 29 2019

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

2. Article Number (Transfer from service label)  
7016 1970 0000 8250 9085

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *[Signature]*  Agent  Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Centennial Resource  
Production LLC  
1001 17th St. Ste 1800  
Denver, CO 80202

2. Article Number (Transfer from service label)  
7016 1970 0000 8250 8262

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *[Signature]*  Agent  Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Melbourne Oil Co.  
PO Box 5270  
Tobbs, NM 88241

9590 9402 2370 6249 0032 13

2. Article Number (Transfer from service label)

7016 1970 0000 8250 8248

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *[Signature]*  Agent  Addressee

B. Received by (Printed Name) *[Signature]* C. Date of Delivery *7-31-19*

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Devon Energy  
Production Company LP  
333 West Sheridan Ave  
Oklahoma City, OK 73102

9590 9402 2370 6249 0031 76

2. Article Number (Transfer from service label)

7016 1970 0000 8250 8361

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *[Signature]*  Agent  Addressee

B. Received by (Printed Name) C. Date of Delivery *7-29-19*

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt



**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

The Allen Company  
PO Box 1567  
Graham, TX 76450

9590 9402 2370 6249 0031 69

2. Article Number (Transfer from service label)

7016 1970 0000 8250 8378

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *[Signature]*  Agent  Addressee

B. Received by (Printed Name) *[Signature]* C. Date of Delivery *7-29-17*

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

COG operating LLC  
600 W Illinois Ave  
Midland, TX 79701

9590 9402 2370 6249 0032 06

2. Article Number (Transfer from service label)

7016 1970 0000 8250 8255

PS Form 3811, July 2015 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *[Signature]*  Agent  Addressee

B. Received by (Printed Name) *[Signature]* C. Date of Delivery *7-29-17*

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery (over \$500)

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Return Receipt for Merchandise  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY																
<ul style="list-style-type: none"> <li>■ Complete items 1, 2, and 3.</li> <li>■ Print your name and address on the reverse so that we can return the card to you.</li> <li>■ Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature <span style="float: right;"><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</span></p> <p><b>X</b></p>																
<p>1. Article Addressed to:</p> <p>OKY USA WTP Limited Partnership PO Box 4294 Houston, TX 77210</p>  <p>9590 9402 2370 6249 0031 52</p>	<p>B. Received by (Printed Name) <span style="float: right;">C. Date of Delivery</span></p> <p><span style="float: right;">7-31</span></p>																
<p>2. Article Number (Transfer from service label)</p> <p>7016 1970 0000 8250 8392</p>	<p>D. Is delivery address different from item 1? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If YES, enter delivery address below: <b>James Board</b></p> <p><b>HOUSTON TX 77210</b></p> <p>3. Service Type</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
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<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>	<p>Domestic Return Receipt</p>																

# 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, 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  
July 26, 2019  
and ending with the issue dated  
July 26, 2019.



Publisher

Sworn and subscribed to before me this  
26th day of July 2019.



Business Manager

My commission expires  
January 29, 2023

(Seal)



OFFICIAL SEAL  
GUSSIE BLACK  
Notary Public  
State of New Mexico  
My Commission Expires 1-29-23

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

## LEGAL NOTICE JULY 26, 2019

3Bear Field Services LLC, 415 W. Wall St., Suite 1212, Midland, Texas 79701, is filling Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for administrative approval for its salt water disposal well Outland SWD No. 1. The proposed well will be located at 152' FSL & 2614' FWL in Section 16, Township 21S, Range 34E in Lea County, New Mexico. Disposal water will be sourced from area production, and will be injected into the Devonian to Montoya Formations through an open hole completion between approximately 15,600' and a total depth of approximately 16,500' feet. The maximum allowable operating surface pressure will not exceed 3,120 psig with a maximum rate of 25,000 BWPD. Interested parties opposing the action must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. Additional information can be obtained from the applicant's agent, Geolex, Inc. 500 Marquette Avenue, NW, Albuquerque, NM 87102. #34500

67101169

00231322

ALBERTO A. GUTIERREZ  
GEOLEX, INC.  
500 MARQUETTE AVE. NW, SUITE 1350  
ALBUQUERQUE, NM 87102