### **BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION**

## APPLICATION OF VISTA DISPOSAL SOLUTIONS LLC, FOR A SALT WATER DISPOSAL WELL, IN EDDY COUNTY, NEW MEXICO.

Case No.

### **APPLICATION FOR SALT WATER DISPOSAL**

Vista Disposal Solutions LLC, by and through its undersigned attorney, applies for an

order approving a salt water disposal well, and in support thereof, states:

1. Applicant seeks an order proposing a salt water disposal well for its Austin

Federal SWD #1, (Pool Code 97869) to be drilled at a location 2,084' FSL and 226' FWL, Unit

L, Section 30, Township 25 South, Range 31 East, N.M.P.M., Eddy County, New Mexico.

2. Applicant proposes to set a packer at 16,860' feet below the surface of the earth

and then inject into the Devonian and Silurian formation at depths between 16,880' through

18,340' open hole, as stated in the attached C-108.

- 3. Attached hereto as Exhibit A is the C-108.
- 4. The granting of this application will prevent waste and protect correlative rights.

**WHEREFORE**, Applicant requests that, after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

PADILLA LAW FIRM, P.A.

### /s/ ERNEST L. PADILLA

ERNEST L. PADILLA, Attorney for Vista Disposal Solutions, LLC PO Box 2523 Santa Fe, New Mexico 87504 505-988-7577 padillalaw@qwestoffice.net

STATE OF NEW MEXICO	Oil Conservation Division	FORM C-108
ENERGY, MINERALS AND NATURAL	1220 South St. Francis Dr.	Revised June 10, 2003
RESOURCES DEPARTMENT	Santa Fe, New Mexico 87505	
APPLIC	CATION FOR AUTHORIZATION TO INJECT	

	APPLICATION FOR AUTHORIZATION TO INJECT
I.	PURPOSE:       Secondary Recovery       Pressure Maintenance       X       Disposal        Storage Application qualifies for administrative approval?       X       Yes       No
П.	OPERATOR: Vista Disposal Solutions, LLC
	ADDRESS: 12444 NM 10th St., Building G, Suite 202-512, Yukon, OK 73099
	CONTACT PARTY Nate Alleman PHONE: 918-382-7581
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?YesYesNo 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: Dan Arthur, P.E., SPEC	SS DANIEL APPL	TITLE: President/Chief Engineer
SIGNATURE: 1. and and	DATE:	11/26/2019
	1. a the	
E-MAIL ADDRESS:	A 30(1/26/2019) 5	

XV. If the information required under Sections VI, V ve has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 2

#### 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.

Application for Authorization to Inject Well Name: Austin Federal SWD #1

## III – Well Data (The Wellbore Diagram is included as Attachment 1) A.

## (1) General Well Information:

Operator: Vista Disposal Solutions, LLC (OGRID No. 329051) Lease Name & Well Number: Austin Federal SWD #1 Location Footage Calls: 2,084' FSL & 226' FWL Legal Location: Unit Letter L, S30 T25S R31E Ground Elevation: 3,365' Proposed Injection Interval: 16,880' – 18,340' County: Eddy

## (2) Casing Information:

Hole Size	Casing Size	Casing Weight	Setting Depth	Sacks of Cement	Estimated TOC	Method Determined
24"	20"	133.0 lb/ft	909'	900	Surface	Circulation
14-3/4"	13-3/8"	68.0 lb/ft	4,186'	935	Surface	Circulation
12-1/4″	9-5/8"	53.5 lb/ft	14,040'	4,660	Surface	Circulation
8-1/2"	7-5/8"	39.0 lb/ft	16,880'	250	13,840'	CBL
	24" 14-3/4" 12-1/4"	Hole Size         Size           24"         20"           14-3/4"         13-3/8"           12-1/4"         9-5/8"	Hole Size         Size         Weight           24"         20"         133.0 lb/ft           14-3/4"         13-3/8"         68.0 lb/ft           12-1/4"         9-5/8"         53.5 lb/ft	Hole Size         Size         Weight         Depth           24"         20"         133.0 lb/ft         909'           14-3/4"         13-3/8"         68.0 lb/ft         4,186'           12-1/4"         9-5/8"         53.5 lb/ft         14,040'	Hole Size         Size         Weight         Depth         Cement           24"         20"         133.0 lb/ft         909'         900           14-3/4"         13-3/8"         68.0 lb/ft         4,186'         935           12-1/4"         9-5/8"         53.5 lb/ft         14,040'         4,660	Hole Size         Size         Weight         Depth         Cement         TOC           24"         20"         133.0 lb/ft         909'         900         Surface           14-3/4"         13-3/8"         68.0 lb/ft         4,186'         935         Surface           12-1/4"         9-5/8"         53.5 lb/ft         14,040'         4,660         Surface

(3) Tubing Information:

4.5" (composite weight string) of fiberglass-coated tubing with setting depth of 16,860'

(4) Packer Information: Baker SC-2 or equivalent packer set at 16,860'

#### B.

- (1) Injection Formation Name: Devonian and Silurian formations Pool Name: SWD; DEVONIAN - SILURIAN Pool Code: 97869
- (2) Injection Interval: Open-hole injection between 16,880' 18,340'
- (3) Drilling Purpose: New Drill for Salt Water Disposal
- (4) Other Perforated Intervals: No other perforated intervals exist.
- (5) Overlying Oil and Gas Zones: Below are the approximate formation tops for known oil and gas producing zones in the area.
  - Permian Delaware Mountain Group (4,186')
  - Bone Springs (8,073')
  - Wolfcamp (11,490')
  - Atoka (14,190')
  - Morrow (14,632')

Underlying Oil and Gas Zones: No underlying oil and gas zones exist.

## V – Well and Lease Maps

The following maps are included in *Attachment 2*:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 2-mile Mineral Ownership Map
- 2-mile Surface Owernship Map
- 1.5-mile Deep SWD Map (Devonian/Silurian SWDs)
- 1-mile Well Detail List
- Potash Lease Map

## VI – AOR Well List

There are no wells within the 1-mile AOR that penetrate the proposed injection zone.

A list of the wells within the 1-mile AOR is included in *Attachment 2*.

## VII – Proposed Operation

- (1) Proposed Maximum Injection Rate: 40,000 bpd Proposed Average Injection Rate: 20,000 bpd
  - (2) A closed system will be used.
  - (3) Proposed Maximum Injection Pressure: 3,376 psi (based on 0.2 psi per foot) Proposed Average Injection Pressure: approximately 1,500 – 2,000 psi
  - (4) Source Water Analysis: It is expected that the injectate will consist of produced water from production wells completed in the Wolfcamp and Bone Springs formations. Analysis of water from these formations is included in *Attachment 3*.
  - (5) Injection Formation Water Analysis: The proposed SWD will be injecting water into the Devonian and Silurian formations which is a non-productive zone known to be compatible with formation water from the Wolfcamp and Bone Springs formations. Water analyses from the Devonian-Silurian formation in the area are included in *Attachment 4*.

## VIII – Geologic Description

The proposed injection interval includes the Devonian and Silurian formations from 16,880 – 18,340 feet. These formations consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are present within the subject formations in the area.

The base of the deepest Underground Source of Drinking Water (USDW) is at a depth of approximately 884 feet. Surface casing will be set at a depth of 909 feet, which is 25 feet below the top of the Rustler formation, which isolates the USDW. Geophysical log assessment was conducted to accurately determine the top of the Rustler formation, and the top and the base of the Salado formation in this area. Water well depths in the area range from approximately 200 - 300 feet below ground surface.

## IX – Proposed Stimulation Program

A small cleanup acid job may be used to remove mud and drill cuttings from the formation. However, no other formation stimulation is currently planned.

## X – Logging and Test Data

Geophysical logs will be submitted to the Division upon completion of the well.

## XI – Fresh Groundwater Samples

Based on a review of data from the New Mexico Office of the State Engineer, there are no groundwater well located within 1-mile of the proposed SWD location; therefore, no groundwater samples were collected in association with this application.

A water well map of the area is included in Attachment 5.

## XII – No Hydrologic Connection Statement

ALL Consulting has examined available geologic and engineering data, and has found no evidence of faulting present in the area that would provide a hydrologic connection between the injection interval and overlying USDWs. Additionally, the casing and cementing program has been designed to further ensure there will be no hydrologic connection between the injection interval and overlying USDWs. A letter from a knowledgeable and qualified expert stating that there is a low risk of seismic activity from the proposed injection activities is included in *Attachment 6.* 

## XIII – Proof of Notice

A Public Notice was filed with the Carlsbad Current Argus newspaper and an affidavit is included in *Attachment 7*.

A copy of the application was mailed to the OCD District Office, landowner, and leasehold operators within 1-mile of the proposed SWD location. A list of the recipients, as well as delivery confirmations, are included in *Attachment* **7**.

# Attachments

#### Attachment 1:

- C-102
- Wellbore Diagram

Attachment 2: Area of Review Information:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 2-mile Mineral Ownership Map
- 2-mile Surface Ownership Map
- 1.5-mile Deep SWD Map (Devonian/Silurian SWDs)
- 1-mile Well Detail List
- Potash Lease Map

Attachment 3: Source Water Analyses

Attachment 4: Injection Formation Water Analyses

Attachment 5: Water Well Map and Well Data

Attachment 6: Induced Seismicity Assessment Letter

Attachment 7: Public Notice Affidavit and Notice of Application Confirmations

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#### Attachment 1

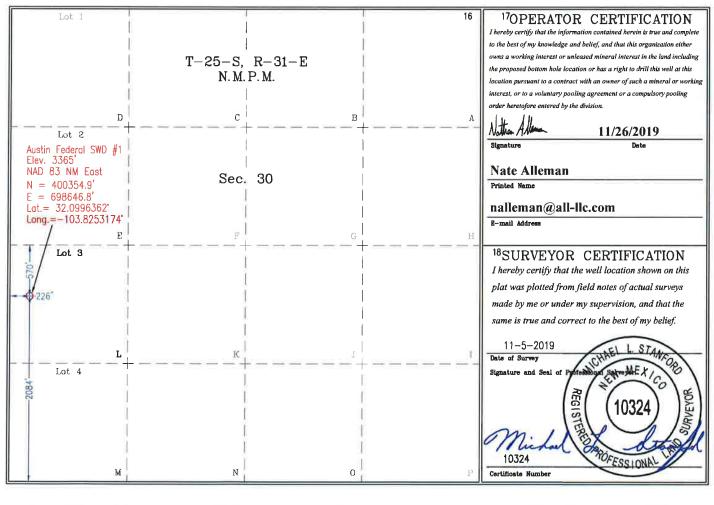
- C-102
- Wellbore Diagram

DISTRICT I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 DISTRICT II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office
DISTRICT III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462	1220 South St. Francis Dr. Santa Fe, NM 87505	□ AMENDED REPORT

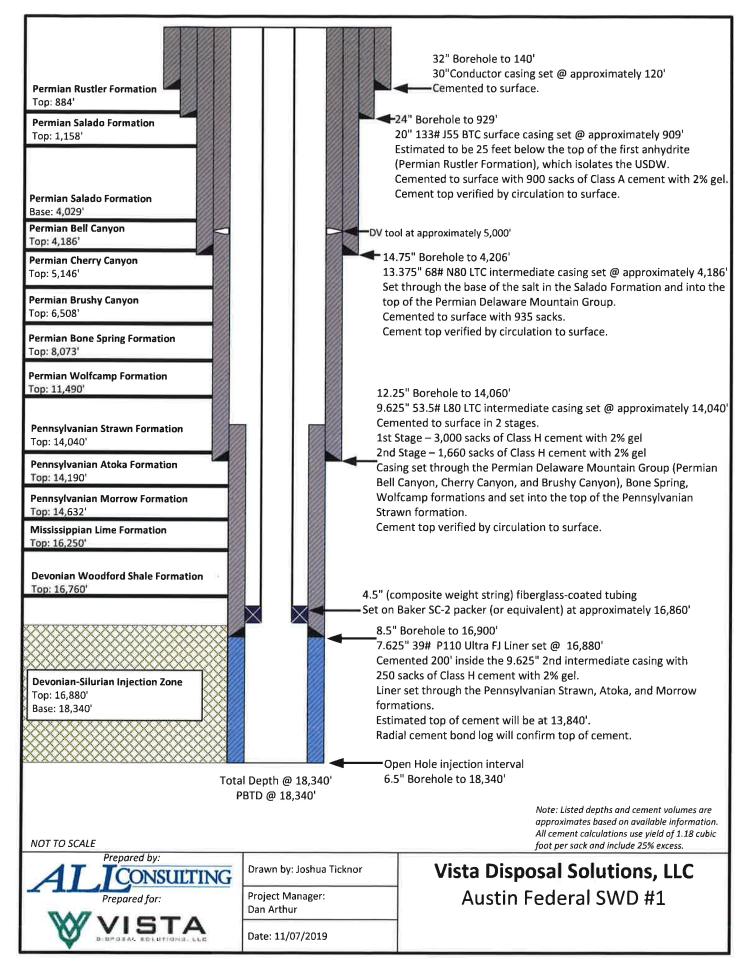
## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <sup>2</sup> Pool Code <sup>3</sup> Pool Name														
			97869 SWD; Devonian – Silurian				SWD; Devonian – Silurian							
roperty Code SProperty Name Austin Federal SWD						Federal SWD								
<sup>7</sup> OGRID No. 329051 Vista Disposal Solutions, LLC														
				<sup>10</sup> Surface	Location									
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County						
30	25-S	31–E	3	2084'	South	226"	West	Eddy						
		<sup>11</sup> Bott	om Hol	e Location I	f Different F	rom Surface	· · · · · ·							
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County						
	No. Section 30	No. Section Township 30 25-S	Code Austin F No. Vista Dispo Section Township Range 30 25-S 31-E <sup>11</sup> Bott	Code Austin Federal No. Vista Disposal Sol Section Township Range Lot Idn 30 25-S 31-E 3 <sup>11</sup> Bottom Hol	Code         Austin Federal SWD           No.         Vista Disposal Solutions, LLC           10         Surface           Section         Township           30         25-S           31-E         3           2084'           11           Bottom Hole Location I	Code         Austin Federal SWD           No. <sup>8</sup> Operator Name           Vista Disposal Solutions, LLC <sup>10</sup> Surface Location           Section         Township         Range         Lot Idn         Feet from the         North/South line           30         25-S         31-E         3         2084'         South <sup>11</sup> Bottom Hole Location If Different F	Code     SProperty Name       Austin Federal SWD     **Property Name       No.     **Operator Name       Vista Disposal Solutions, LLC     **Operator Name       10Surface Location       Section     Township     Range     Lot Idn     Feet from the     North/South line     Feet from the       30     25-S     31-E     3     2084'     South     226'       11 Bottom Hole Location If Different From Surface	Code     Austin Federal SWD       No.     *Operator Name       Vista Disposal Solutions, LLC       10Surface Location       Section     Township     Range     Lot Idn     Feet from the     North/South line     Feet from the     East/West line       30     25-S     31-E     3     2084'     South     226'     West       11 Bottom Hole Location If Different From Surface						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



16.9 Miles <u>SE</u> of <u>Malaga</u>, New Mexico.



TU 5632 Rev. M Effective Date: 11 Apr 2019

#### SC-2 Packer

#### **1** Introduction

The SC-2<sup>m</sup> packer is Baker Hughes, a GE company (BHGE)' primary packer for cased hole gravel pack and frac pack applications where a high performance retrievable packer is required.

#### 2 Description

The SC-2 packer is a fully retrievable, highperformance retainer production packer. Although the packer was originally designed for premium gravel pack applications, it may also be used as a standard completion packer in wells where a premium retrievable production packer is required.

The SC-2 packer is fully compatible with standard BHGE sealing accessories, including retrievable and expendable plugs.

Refer to the specifications guide in the Packer Size/Model Availability Guide, Specification Guide, and Packer/Accessory Guide for SC<sup>™</sup> and HP<sup>™</sup> Packers (Product Family H48861), Unit 5750 under Sand Control Tools for packer/accessory size and packer size/model availability.

#### **3** Application

The SC-2 packer is primarily used in gravel pack or frac pack applications where a higher differential pressure production rating, treating pressure rating and temperature are required. The SC-2 may also be used as a production packer.

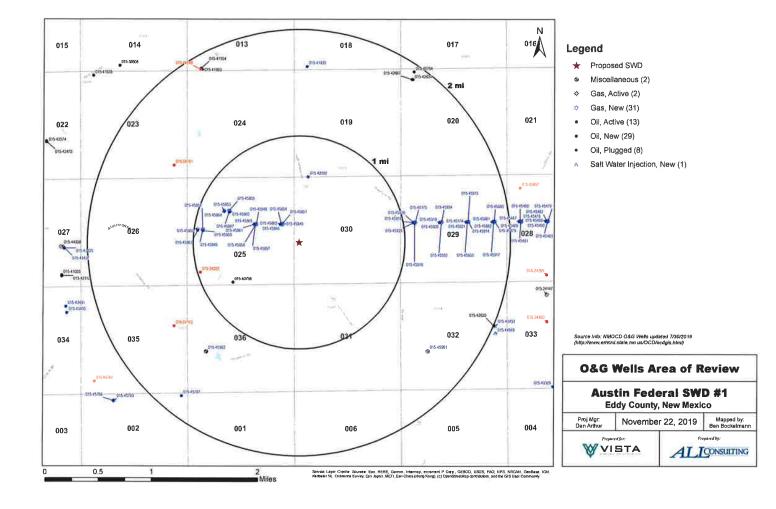


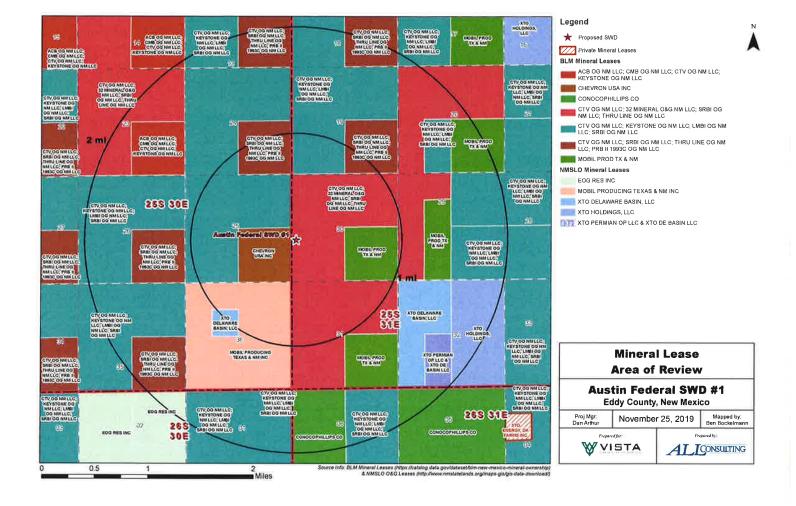
Drawing 662-476-1

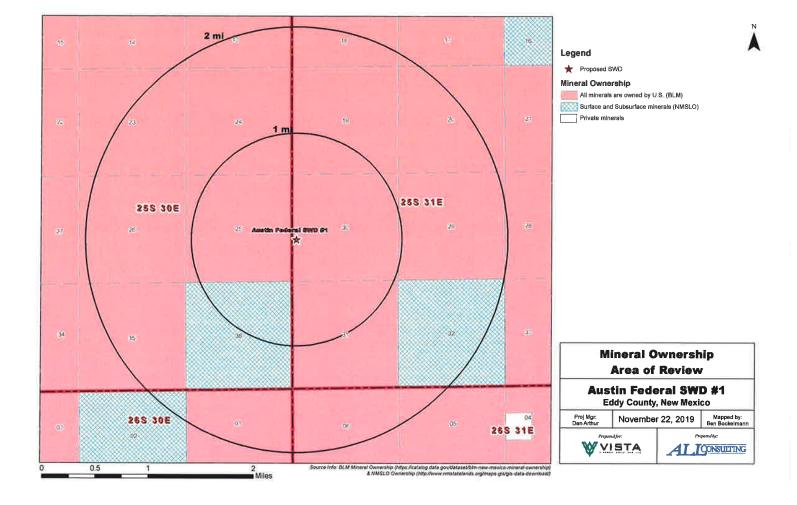
#### Attachment 2

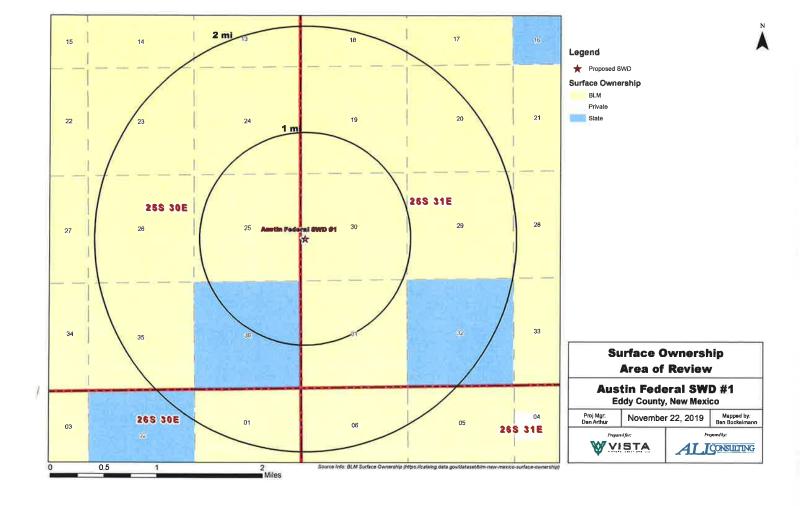
Area of Review Information:

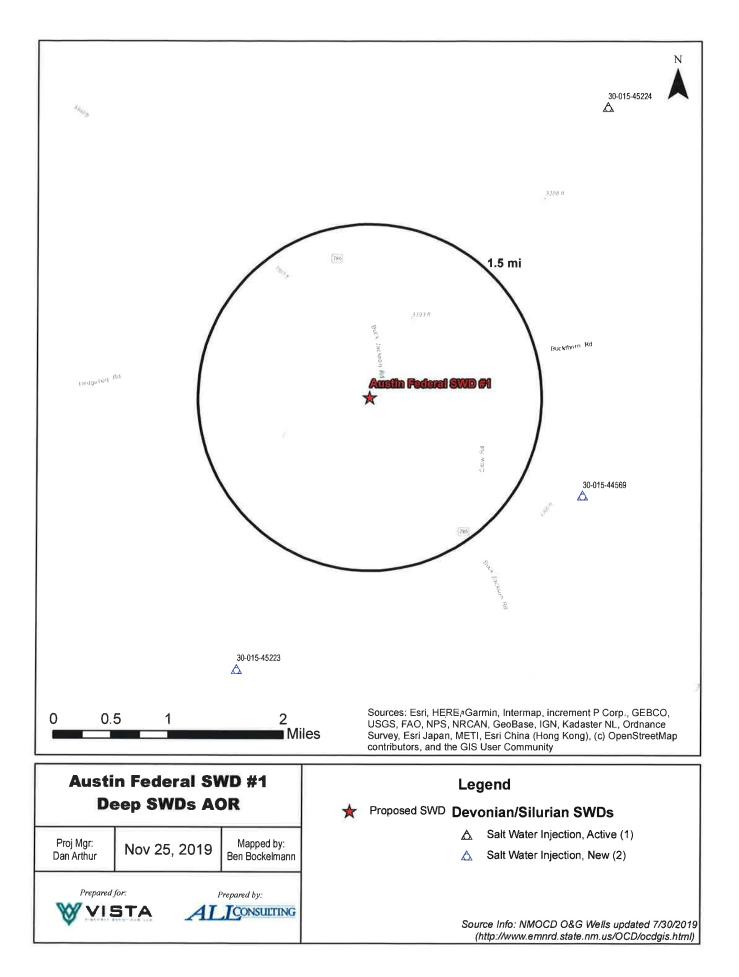
- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
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- 2-mile Surface Ownership Map
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- 1-mile Well Detail List
- Potash Lease Map



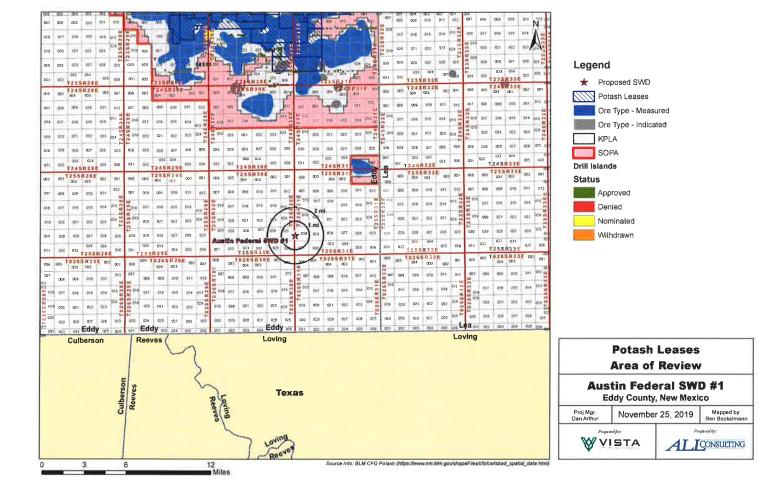








Well Name	API#	Well Type	Operator	Spud Date	Location (Sec., Tn., Rng.)	Total Vertical Depth (feet)	Penetrate Inj. Zone?
POKER LAKE UNIT 25 BD #126H	30-015-45858	G	XTO PERMIAN OPERATING LLC.	Not Drilled	G-25-25S-30E	Proposed (11637)	No
POKER LAKE UNIT 25 BD #705H	30-015-45861	0	XTO PERMIAN OPERATING LLC.	Not Drilled	G-25-25S-30E	Proposed (10004)	No
POKER LAKE UNIT 25 BD #903H	30-015-45864	0	XTO PERMIAN OPERATING LLC.	Not Drilled	F-25-25S-30E	Proposed (11197)	No
POKER LAKE UNIT 25 BD #106H	30-015-45848	G	XTO PERMIAN OPERATING LLC.	Not Drilled	G-25-25S-30E	Proposed (11631)	No
OKER LAKE UNIT 25 BD #128H	R LAKE UNIT 25 BD #126H         30-015-45858         G           R LAKE UNIT 25 BD #705H         30-015-45861         O           R LAKE UNIT 25 BD #903H         30-015-45864         O           R LAKE UNIT 25 BD #106H         30-015-45864         G           R LAKE UNIT 25 BD #108H         30-015-45866         O           R LAKE UNIT 25 BD #108H         30-015-45866         O           R LAKE UNIT 25 BD #007H         30-015-45866         O           R LAKE UNIT 25 BD #104H         30-015-45866         O           R LAKE UNIT 25 BD #104H         30-015-45865         O           R LAKE UNIT 25 BD #104H         30-015-45865         O           R LAKE UNIT 25 BD #121H         30-015-45850         G           R LAKE UNIT 25 BD #122H         30-015-45853         G           R LAKE UNIT 25 BD #109H         30-015-45859         O           R LAKE UNIT 25 BD #102H         30-015-45859         G           R LAKE UNIT 25 BD #122H         30-015-45855         G           R LAKE UNIT 25 BD #122H         30-015-45855         G           R LAKE UNIT 25 BD #122H         30-015-45867         G           R LAKE UNIT 25 BD #122H         30-015-45866         O           R LAKE UNIT 25 BD #122H         30-015-458667		XTO PERMIAN OPERATING LLC.	Not Drilled	H-25-25S-30E	Proposed (11710)	No
POKER LAKE UNIT 25 BD #907H	30-015-45866	0	XTO PERMIAN OPERATING LLC.	Not Drilled	H-25-25S-30E	Proposed (11263)	No
POKER LAKE UNIT 25 BD #104H	LAKE UNIT 25 BD #705H         30-015-45861         O           LAKE UNIT 25 BD #903H         30-015-45864         O           LAKE UNIT 25 BD #903H         30-015-45864         O           LAKE UNIT 25 BD #106H         30-015-45848         G           LAKE UNIT 25 BD #128H         30-015-45845         G           LAKE UNIT 25 BD #104H         30-015-45866         O           LAKE UNIT 25 BD #104H         30-015-45865         O           LAKE UNIT 25 BD #104H         30-015-45865         O           LAKE UNIT 25 BD #104H         30-015-45865         O           LAKE UNIT 25 BD #121H         30-015-45865         G           LAKE UNIT 25 BD #121H         30-015-45865         G           LAKE UNIT 25 BD #123H         30-015-45853         G           LAKE UNIT 25 BD #109H         30-015-45853         G           LAKE UNIT 25 BD #123H         30-015-45855         G           LAKE UNIT 25 BD #124H         30-015-45855         G           LAKE UNIT 25 BD #125H         30-015-45855         G           LAKE UNIT 25 BD #125H         30-015-45857         G           LAKE UNIT 25 BD #125H         30-015-45863         O           LAKE UNIT 25 BD #125H         30-015-45863         O		XTO PERMIAN OPERATING LLC.	Not Drilled	F-25-25S-30E	Proposed (11269)	No
DKER LAKE UNIT 25 BD #707H 30-015-45862 O			XTO PERMIAN OPERATING LLC.	Not Drilled	H-25-25S-30E	Proposed (10046)	No
00000000000000000000000000000000000000			XTO PERMIAN OPERATING LLC.	Not Drilled	G-25-25S-30E	Proposed (11206)	No
OKER LAKE UNIT 25 BD #121H	30-015-45850	G	XTO PERMIAN OPERATING LLC.	Not Drilled	E-25-25S-30E	Proposed (11639)	No
OKER LAKE UNIT 25 BD #123H	30-015-45853	G	XTO PERMIAN OPERATING LLC.	Not Drilled	F-25-25S-30E	Proposed (11637)	No
OKER LAKE UNIT 25 BD #701H	30-015-45859	0	XTO PERMIAN OPERATING LLC.	Not Drilled	E-25-25S-30E	Proposed (9964)	No
OKER LAKE UNIT 25 BD #108H	30-015-45849	G	XTO PERMIAN OPERATING LLC.	Not Drilled	H-25-25S-30E	Proposed (11388)	No
OKER LAKE UNIT 25 BD #122H	30-015-45852	G	XTO PERMIAN OPERATING LLC	Not Drilled	E-25-25S-30E	Proposed (11636)	No
OKER LAKE UNIT 25 BD #124H	30-015-45855	G	XTO PERMIAN OPERATING LLC.	Not Drilled	F-25-25S-30E	Proposed (11635)	No
OKER LAKE UNIT 25 BD #125H	30-015-45857	G	XTO PERMIAN OPERATING LLC.	Not Drilled	G-25-25S-30E	Proposed (11621)	No
OKER LAKE UNIT 25 BD #703H	30-015-45860	0	XTO PERMIAN OPERATING LLC	Not Drilled	F-25-25S-30E	Proposed (9985)	No
OKER LAKE UNIT 25 BD #901H	AKE UNIT 25 BD #705H         30-015-45861         O           AKE UNIT 25 BD #106H         30-015-45864         O           AKE UNIT 25 BD #106H         30-015-45864         O           AKE UNIT 25 BD #128H         30-015-45861         G           AKE UNIT 25 BD #128H         30-015-45866         O           AKE UNIT 25 BD #104H         30-015-45866         O           AKE UNIT 25 BD #104H         30-015-45867         G           AKE UNIT 25 BD #104H         30-015-45867         O           AKE UNIT 25 BD #104H         30-015-45867         O           AKE UNIT 25 BD #104H         30-015-45860         O           AKE UNIT 25 BD #102H         30-015-45860         O           AKE UNIT 25 BD #121H         30-015-45850         G           AKE UNIT 25 BD #1070H         30-015-45859         O           AKE UNIT 25 BD #108H         30-015-45859         O           AKE UNIT 25 BD #122H         30-015-45855         G           AKE UNIT 25 BD #122H         30-015-45855         G           AKE UNIT 25 BD #125H         30-015-45863         O           AKE UNIT 25 BD #125H         30-015-45863         O           AKE UNIT 25 BD #125H         30-015-45863         O           AKE UNIT		XTO PERMIAN OPERATING LLC.	Not Drilled	E-25-25S-30E	Proposed (11193)	No
OKER LAKE CVX JV PB #004H	30-015-40756	0	XTO PERMIAN OPERATING LLC.	11/29/2012	N-25-25S-30E	9294	No
LU PHANTOM BANKS 19 25 31 USA #001H	30-015-42692	0	XTO PERMIAN OPERATING LLC.	Not Drilled	4-19-25S-31E	Proposed (9330)	No
OKER LAKE UNIT 25 BD #127H	30-015-45854	G	XTO PERMIAN OPERATING LLC	Not Drilled	H-25-25S-30E	Proposed (11662)	No
OKER LAKE UNIT 25 BD #102H	30-015-45846	G	XTO PERMIAN OPERATING LLC.	Not Drilled	E-25-25\$-30E	Proposed (11293)	No
RE-ONGARD WELL #056	30-015-24222	Plugged	PRE-ONGARD WELL OPERATOR (Perry R. Bass)	11/16/1982	M-25-25S-30E	Plugged (4250)	No



#### Attachment 3

Source Water Analyses

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## Water Analysis

Date: 23-Aug-11

#### 2708 West County Road, Hobbs NM 88240 Phone (575) 392-5556 Fax (575) 392-7307

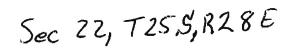
Company		Vell Name	Draw 1th	lounty	State	
		BD		New Mexico		
Sample Source	Swab Sa	mple	Sample #	1-265-294		
Formation			Depth			
Specific Gravity	1.170		SG 🖪	60 °F	1.172	
pН	6.30		S	ulfides	Absent	
Temperature (*F)	70		Reducing /	Agente		
Cations						
Sodium (Calc)		in Mg/L	77,962	in PPM	66,520	
Calcium		in Mg/L	4,000	in PPM	3,413	
Magnesium		in Mg/L	1,200	in PPM	1,024	
Soluable fron (FE2)		in Mg/L	10.0	in PPM	9	
Anions						
Chlorides		in Mg/L	130,000	in PPM	110,922	
Sullates		in Mg/L	250	in PPM	213	
Bicarbonates		in Mg/L	127	in PPM	106	
Total Hardness (as CaCO	3)	in Mg/L	15,000	in PPM	12,799	
Total Dissolved Solida (Ce	-	in Mg/L	213,549	in PPM	182,209	
Equivalent NeCl Concentr	ation	in Mg/L	182,968	in PPM	156,031	
icaling Tendencies						
Calcium Carbonate Index Baby 800 000	Remain / 500 0	00-1000000	Possible / Above 1,	000 000 Pmbable	507,520	
Calcium Sulfate (Gyp) Inde	X		Possible / Above 10		f,000,000	
his Calculation is only an appr semant.			I POT A MARKED A			
emarks RW=.0486	705		anna a' an an Aslanda			

Remarks RW=.048@70F

Report # 3188

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2



Bone Spring

North Permian Basin Region P.O. Box 740 Sundown, TX 79372-0740 (806) 228-8121 Leb Team Leader - Sheliz Hernandez (432) 495-7240

## Water Analysis Report by Baker Petrolite

Company.		Sales RDT;	33514.1
Region:	PERMIAN BASIN	Account Manager:	TONY HERNANDEZ (575) 910-7135
Area:	ARTESIA, NM	Sample #:	534665
Lease/Platform:	PINOCHLE BPN' STATE COM	Analysis ID #:	106795
Entity (or well #):	2 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summery	Analysis of Sample 534665 @ 75 F										
Sampling Date: 03/10/11	Anlons	mg/l	meq/l	Cations	mg/l	heat					
Analysis Date: 03/16/11	Chioride:	109618.0	3081.92	Sodium:	79275.7	3058.82					
Analyst: SANDRA GOMEZ	Blearbonate:	2135.0	34.99	lagnesium:	195.0	16.04					
TDB (mail or aim3): 184911.1	Carbonate:	0.0	۵.	Calcium:	644.0	42.12					
	Sulfate:	747.0	15.55	Strentium:	220.0	5.02					
Density (g/cm3, tonne/m3): 1.113 Anion/Cation Ratio: 1	Phoephale:			Berlum:	0,8	0.01					
Anionroauon tutio:	Borate:			kon:	6.5	0.23					
	Silicate:			Polessium:	889.0	22.22					
				Aluminum:							
Carbon Dioxide: 0 50 PPM	Hydrogen Suilide:		0 PPM	Chromium:							
Oxygen:	pH at time of sampling:		,	Copper:							
Comments:				Lead:							
	pH at time of analysis:			Manganese:	0.100	0.					
	pH used in Calculation	1:	7	Nicitel:							
Conditions Values Cal	iculated at the Given										

		and the second se		بجنا الالبادية		II COLUIN						
	Gauge Press.	•	alcite CeCO <sub>3</sub>		Gypsum CaSO 22H2 0		iydrite aSO4		sstite rSO4		rile ISO 4	CO2 Press
Ŧ	pel	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	pei
80	0	1.08	188.52	-1.20	0.00	-1.18	0.00	-0.11	0.00	0.56	0.29	1.72
100	0	1.10	206.06	-1.29	0.00	-1.20	0.00	-0.15	0.00	0.35	0.29	2.35
120	0	1.12	224.17	-1.38	0.00	-1.19	0.00	-0.17	0.00	0.16	0.00	3,17
140	0	1.13	243.17	-1.42	0.00	-1.18	0 00	-0.18	0,00	0.00	0.00	4,21

Note 1: When assessing the sevenity of the scale problem, both the education index (SI) and emount of scale must be considered.

Note 2: Precipitation of each scale is considered asparately. Total scale will be less than the sum of the amounts of the five acetes.

Note 3: The reported CO2 preasure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

#### Attachment 4

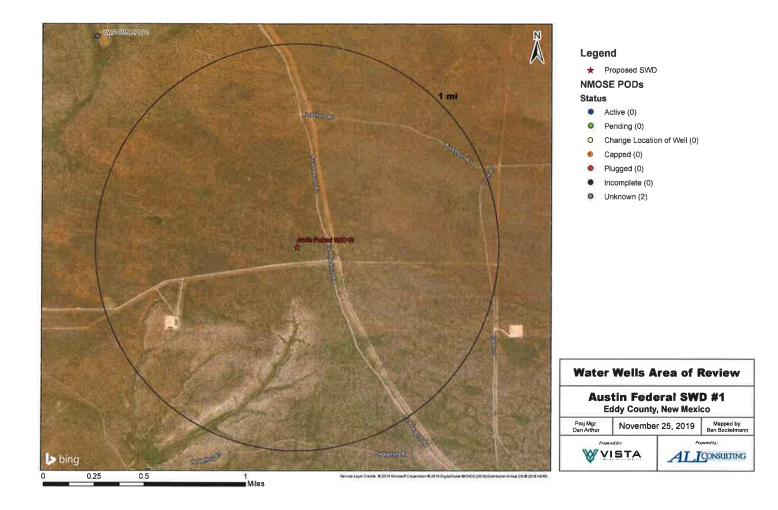
Injection Formation Water Analyses

								n Formatio							100 March 100 Ma		11.000
Wellnama	API	Letitude 1	Longitude	Section Township		Unit	Firms	- Devonia Flamw	County		Company		Formation	Tds.mal	Ichloride met	Bicarbonate mat.	Ridlate met
STATE B COM #001	3002509716		-103 2212524	36 245	364	C	600N	- manufactor	LEA	NM	Constraints and	CUSTER	DEVONIAN	176234	and the second data was in the second		and the second se
FARNSWORTH FEDERAL #006	3002511950	32.077725	-103 162468		378	A .	650N			NM	-	CADSIN	DEVONIAN	31931			
ARNOTT RAMSAY NCT-B #003	3002511863				171	A	650N	660E		NM	-	CR0507	GEVONIAN		100382	476	
ARNOTT RAMSAY NCT-8 4003	3002511863	32.092228	-103 1284439		176	A .	650N	65CE		NM	-	CROSBY	OEVOREAN	158761			
COPPER #001	3002511818	32 079484	-103.1656721		376	1	19805	15816	IEA	sen.e	-	CROSINY	DEVONIAN	22506		1089	1079
STATE NJ A ROOT	3002511358		-103.1273346		376	A	6639	GUE	LEA	1954	-	LIUSTIS NORTH	DEVONIAN	105354			
WESTATES FEDERAL ROOM	3002511389	32 161129	-101 1241226	1 255	171	r	19809	130W	(EA	NM	-	JUSTIS NORTH	FUSSELMAN	\$0880	46200	140	
WESTATES FEDERAL IDOA	3002511389	32,161120	-103.1241226	1 255	376	í.	119501	330W	LEA	NA	-	JUSTIS NORTH	FUSSELMAN	84900			
WESTATES FEDERAL BOOA	3002511389		-103 1241226		371	C	1980N	100W		NM	-	INSTIS NORTH	FUSSELMAN	72200		370	
WESTATES FEDERAL #004	3002511389	32 161129	-101 1241226	1 255	A7E	1	1980N	130W	LEA	NM		JUSTIS NONTH	FUSSELMAN	80900			
WESTATES FEDERAL #004	3002511389	32.161129	-103 1241226	1/255	176	1	198094	330W		INING	-	DRISTIS NORTH	FUSSELMAN	7760		550	
WESTATES FEDERAL ROOM	3002511389	32.161129	-103.1741226	11255	376	E	1980N	DOW.	LEA	NM		INSUSTIS NORTH	FUSSELMAN	13500	27000	650	5810
WESTATES FEDERAL #DO4	3002511388	32.161129	-103 1741226	1 255	376	1	1980N	SHOW	LEA	NM		JUSTIS NORTH	JUSSELMAN	114000	65000	280	
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WESTATES FEDERAL MOON	3007511393	32.162121	103.1241226	1 255	370	t.	1620N	330W	LEA	NM	1	JUSTIS NORTH	FUSSELMAN	91058			
WESTATES FEDERAL BOOR	1002511293	32.162121	-103 1741726	1 255	175	E	1620N	LIKW	LEA	NM	1	UUSTIS NORTH	FUSSELMAN	86847	50450	163	2544
STATE Y 4009	3002513777	32.10582	-103 1113434	25 255	376	Α.	99014	990E	LEA	1414		IUSTIS	FUSSELMAN	219570	129000	960	4630
STATE Y RCOS	3002511777	32.10582	-103.1113434	25 255	371	A	1990N	9906		1214		ILISTIS	FUSSELMAN	163430	96000		
FOUTH JUSTIS UNIT HOUSE	3002511760	32.106728	-103.1184616	25 255	321	c	GEON	2080W		NM	-	(USTRS	FUSSELMAN	63817	35870		
CARLSON A #002	3007511764	32.100384	-103.1113434	25 255	171	1	21105	19905	LEA	NM	-	11.67/15	FUSSELMAN	208280	124000	510	3400
CARLSON B 25 R004	3002511784	32 096756	103 1113434	75 255	371	p	9905	1990E	LEA	NM	-	IUSTIS	FUSSELMAN	184030	112900	68	1804

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Attachment 5

Water Well Map and Well Data



	and the second second		Vista Disposal Solutions, LLC -	Austin Federal SWD #	1	
SWD	Water Wells	Owner	Available Contact Information	Use	Sampling Required	Notes
	lls are present within 1 n					

.

#### Attachment 6

Induced Seismicity Assessment Letter



November 26, 2019

Mr. Phillip Goetze, P.G. NM EMNRD – Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87505

Subject: Induced Seismicity Potential Statement for the Austin Federal SWD #1

Dear Mr. Goetze,

This letter provides information regarding the seismic potential associated with injection operations associated with Vista Disposal Solutions, LLC (Vista), proposed Austin Federal SWD #1, hereinafter referred to as the "Subject Well."

As outlined herein, based on my experience as an expert on the issue of induced seismicity, it is my opinion that the potential for the proposed injection well to cause injection-induced seismicity is expected to be minimal, at best. This conclusion is based on (1) the lack of historic seismic activity and faulting in the area, (2) the low fault slip potential (FSP) of Precambrian faults in the area, (3) the presence of confining layers, and (4) the overall vertical distance between the proposed injection zone and basement rock.

The Subject Well, is located 2,084' FSL & 226' FWL of Section 30, in T25-S and R31-E of Eddy County, New Mexico. Historically, the Eddy and Lea Counties area has experienced very limited recorded seismic activity (per the U.S. Geological Survey [USGS] earthquake catalog database). There has been one known seismic event located within a 25-mile radius of the proposed Subject Well. The closest recorded seismic event was a M3.1 that occurred on March 18<sup>th</sup>, 2012 and was located approximately 13.1 miles northwest of the Subject Well (See Exhibit 1). The closest Class IID well injecting into the same formations (Devonian-Silurian) of the Subject Well is approximately 2.0 miles to the southeast (See Exhibit 1).

Vista does not own either 2D or 3D seismic reflection data in the area of the Subject Well. Publicly available fault data from USGS indicates that the closest known fault is approximately 11.4 miles northwest of the Subject Well (See Exhibit 1).

In a recent paper written by Snee and Zoback (2018) entitled "State of Stress in the Permian Basin, Texas and New Mexico: Implications for Induced Seismicity,", the authors found that large groups of mostly north-south striking Precambrian basement faults, predominantly located along the Central Basin Platform, the western Delaware Basin, and large parts of the Northwest Shelf (which includes Eddy and Lea counties, New Mexico) have low FSP at the modeled fluid-pressure Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

perturbation. The map in Exhibit 2 depicts the low probability risk of FSP for the Delaware Basin and Northwest Shelf areas (Snee and Zoback 2018).

Geologic analysis indicates that the proposed Devonian-Silurian injection zone is overlain by approximately 200 to 400 feet of Woodford Shale, which is the upper confining zone and will serve as a barrier for upward injection fluid migration. Additionally, the Simpson Group that lies directly below the Montoya Formation will act as a lower confining zone to prohibit fluids from migrating downward into the underlying Ellenberger Formation and Precambrian basement rock. See the stratigraphic column for the Delaware Basin included in Exhibit 3.

In the Eddy and Lea Counties area of New Mexico, the Simpson Group is comprised of a series of Middle to Upper Ordovician carbonates, several sandstones, and sandy shales that range from approximately 350 to 650 feet thick (Jones 2008). This group of rocks is capped by the limestones of the Bromide Formation, which is approximately 200 feet thick in this area (Jones 2008). The closest deep well drilled into the Precambrian basement was completed by the Skelly Oil Company in 1975. This well is located in Section 17, Range 36E, Township 25S of Lea County (API No.30-025-25046) and encountered 602 feet of Ellenburger Formation before reaching the top of the Precambrian granite at a depth of 18,920 feet. Based on the estimated thickness of the Simpson Group and Ellenburger Formation in this area, the Precambrian basement should be approximately 1,000 to 1,200 feet below the bottom of the proposed injection zones in the Subject Well.

### Conclusion

As an expert on the issue of induced seismicity, it is my opinion that the potential for the proposed injection well to cause injection-induced seismicity is expected to be minimal, at best. This conclusion is based on (1) the lack of historic seismic activity and faulting in the area, (2) the low FSP of Precambrian faults in the area, (3) the presence of confining layers, and (4) the overall vertical distance between the proposed injection zone and basement rock.

Sincerely, ALL Consulting

J. Daniel Arthur, P.E., SPEC President and Chief Engineer

Enclosures References Exhibits Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

## References

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Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

Ball, Mahlon M. 1995. "Permian Basin Province (044)." In *National Assessment of United States Oil and Gas Resources—Results, Methodology, and Supporting Data.* U.S. Geological Survey. https://certmapper.cr.usgs.gov/data/noga95/prov44/text/prov44.pdf (accessed June 18, 2018).

Green, G.N., and G.E. Jones. 1997. "The Digital Geologic Map of New Mexico in ARC/INFO Format." U.S. Geological Survey Open-File Report 97-0052. https://mrdata.usgs.gov/geology/state/state.php?state=NM (accessed June 14, 2018).

Jones, Rebecca H. 2008. "The Middle-Upper Ordovician Simpson Group of the Permian Basin: Deposition, Diagenesis, and Reservoir Development." <u>http://www.beg.utexas.edu/resprog/permianbasin/PBGSP\_members/writ\_synth/Simpson.pdf</u> (accessed June 19, 2018).

Snee, Jens-Erik Lund, and Mark D. Zoback. 2018. "State of Stress in the Permian Basin, Texas and New Mexico: Implications for Induced Seismicity." *The Leading Edge* 37, no. 2 (February 2018): 127-34.

U.S. Geological Survey (USGS). No date. Earthquakes Hazard Program: Earthquake Catalog. https://earthquake.usgs.gov/earthquakes/search/ (accessed June 14, 2018). Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

## **Exhibits**

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Page 34 of 44

Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

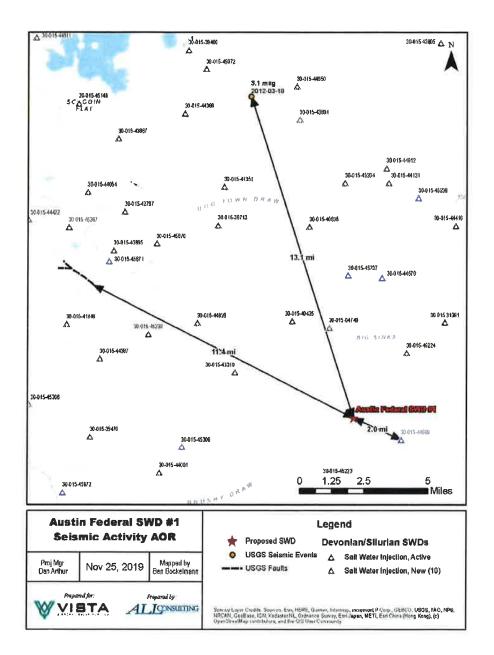


Exhibit 1. Map Showing the Distances from Known and Inferred Faults, Seismic Event, and Closest Deep Injection Well

Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

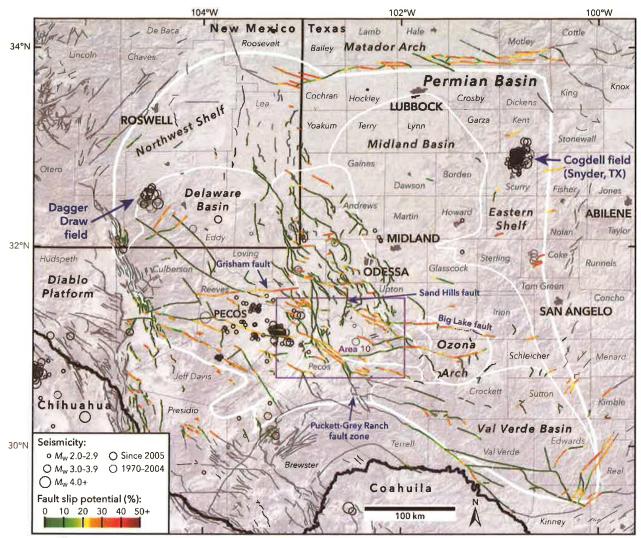


Exhibit 2. Results of the Snee and Zoback (2018) Probabilistic FSP Analysis Across the Permian Basin

Induced Seismicity Potential Statement for the Austin Federal SWD #1 November 26, 2019

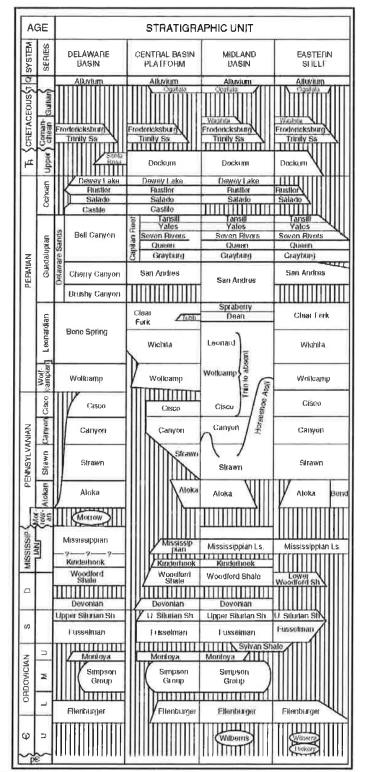


Exhibit 3. Delaware Basin Stratigraphic Chart (Ball 1995)

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Attachment 7

Public Notice Affidavit and Notice of Application Confirmations

## APPLICATION FOR AUTHORIZATION TO INJECT

NOTICE IS HEREBY GIVEN: That Vista Disposal Solutions, LLC, 12444 NW 10<sup>th</sup> St., Building G, Suite 202-512, Yukon, OK 73099, is requesting that the New Mexico Oil Conservation Division administratively approve the APPLICATION FOR AUTHORIZATION TO INJECT as follows:

PURPOSE: The intended purpose of the injection well is to dispose of salt water produced from permitted oil and gas wells.

WELL NAME AND LOCATION: Austin Federal SWD #1

NW 1/4 SW 1/4, Section 30, Township 25S, Range 31E					
2,084' FSL & 1	226' FWL				
Eddy County, 1	NM				
NAME AND DEPTH OF DISPOSAL ZONE:	Devonian - Silurian (16,880' - 18,340')				
EXPECTED MAXIMUM INJECTION RATE:	40,000 Bbls/day				

EXPECTED MAXIMUM INJECTION PRESSURE: 3,376 psi (surface)

Objections or requests for hearing must be filed with the New Mexico Oil Conservation Division within fifteen (15) days. Any objection or request for hearing should be mailed to the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505.

Additional information may be obtained by contacting Nate Alleman at 918-382-7581.

## Carlsbad Current Argus.

#### Affidavit of Publication Ad # 0003902797

#### ALL CONSULTING- CARL SBAD **1718 SOUTH CHEYENNE AVENUE**

**TULSA, OK 74119** 

I, a legal clerk of the Carlsbad Current Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

#### November 15, 2019

Legal Clerk

Subscribed and sworn before me this November 15,

2019:

State of WI, County of Brown NOTARY PUBLIC

My commission expires

Ad # 0003902797 PO #: Austin Federal SWD #1 # of Affidavits : 1

#### APPLICATION FOR **AUTHORIZATION TO INJEC1**

NOTICE IS HEREBY GIVEN: That Vista Disposal Solu-tions, LLC, 12444 NW 10th St., Building G, Suite 202-512, Yukon, OK 73099, is re-questing that the New questing that the New Mexico Oil Conservation Division administratively ap-prove the APPLICATION FOF AUTHORIZATION TO INJECT as follows:

PURPOSE: The intended purpose of the injection well is to dispose of salt water pro-duced from permitted oil and gas wells.

WELL NAME AND LOCA-TION: Austin Federal SWD #1

NW ¼ SW ¼, Section 30, Township 25S, Range 31E 2,084' FSL & 226' FWL Eddy County, NM

NAME AND DEPTH OF DIS-POSAL ZONE: Devonian - Silurian (16.880' - 18,340') EXPECTED MAXIMUM JECTION RATE: 40 Bbis/day EXPECTED MAXIMUM ECTION DESSURE: 40 IN-40.000

IN-JECTION PRESSURE: 3,376 psi (surface)

Objections or requests for hearing must be filed with the New Mexico Oil Conservation Division within fil-teen (15) days. Any objec-tion or request for hearing should be mailed to the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe. New Mexico 87505.

Additional information may be obtained by contacting Nate Alleman at 918-382-7581

November 15, 2019



OCD DistrictOCD DistrictOCD DistrictNMOCD District 2811 S. 1st St.ArtesiaNM882Leasehold Operators32 Mineral Oil & Gas New Mexico, LLC (32 MINERAL O&G NM LLC)123 E Marcy St., Suite 101Santa FeNM875Commision of Public Lands - State Land Office310 Old Santa Fe TrailSanta FeNM875Commision of Public Lands - State Land Office310 Old Santa Fe TrailSanta FeNM875Commision of Public Lands - State Land Office310 Old Santa Fe TrailSanta FeNM875CTV Oil & Gas New Mexico, LLC (CTV OG NM LLC)201 Main Street, Suite 2700Fort WorthTX765CKEYSTONE OG NM LLC)LMBI Oil & Gas New Mexico, LLC (LMBI OG NM LLC)201 Main Street, Ste 2700Fort WorthTX775Mobil Producing Texas & New Mexico Inc. (MOBIL PROD TX & NM) (MOBIL PRODUCING TEXAS & NM INC)P.O. Box 4697HoustonTX775PRB II 1993C Oil & Gas New Mexico, LLC (PRB II 1993C Oil & Gas New Mexico, LLC)201 Main Street, Suite 3200Fort WorthTX765SRBI O&G NM, LLC (SRBI O&G NM LLC)201 Main Street, Suite 3200Fort WorthTX765Colspan="2">SRBI O&G NM LLC)201 Main Street, Suite 3200Fort WorthTX765Colspan="2">SRBI O&G NM LLC)201 Main Street, Suite 3200Fort WorthTX765Colspan="2">SRBI O&G NM LLC)201 Mai	Entity	Address	City	State	Zip Code				
OCD DistrictOCD DistrictOCD DistrictNMOCD District 2811 S. 1st St.ArtesiaNM882Leasehold Operators32 Mineral Oil & Gas New Mexico, LLC (32 MINERAL O&G NM LLC)123 E Marcy St., Suite 101Santa FeNM875Commision of Public Lands - State Land Office310 Old Santa Fe TrailSanta FeNM875Commision of Public Lands - State Land Office310 Old Santa Fe TrailSanta FeNM875Commision of Public Lands - State Land Office310 Old Santa Fe TrailSanta FeNM875CTV Oil & Gas New Mexico, LLC (CTV OG NM LLC)201 Main Street, Suite 2700Fort WorthTX765CKEYSTONE OG NM LLC)LMBI Oil & Gas New Mexico, LLC (LMBI OG NM LLC)201 Main Street, Ste 2700Fort WorthTX775Mobil Producing Texas & New Mexico Inc. (MOBIL PROD TX & NM) (MOBIL PRODUCING TEXAS & NM INC)P.O. Box 4697HoustonTX775PRB II 1993C Oil & Gas New Mexico, LLC (PRB II 1993C Oil & Gas New Mexico, LLC)201 Main Street, Suite 3200Fort WorthTX765SRBI O&G NM, LLC (SRBI O&G NM LLC)201 Main Street, Suite 3200Fort WorthTX765Colspan="2">SRBI O&G NM LLC)201 Main Street, Suite 3200Fort WorthTX765Colspan="2">SRBI O&G NM LLC)201 Main Street, Suite 3200Fort WorthTX765Colspan="2">SRBI O&G NM LLC)201 Mai									
NMOCD District 2       811 S. 1st St.       Artesia       NM       882         Leasehold Operators         32 Mineral Oil & Gas New Mexico, LLC         (32 MINERAL O&G NM LLC)       123 E Marcy St., Suite 101       Santa Fe       NM       875         Chevron USA INC.)       6301 Deauville Blvd       Midland       TX       795         Commision of Public Lands - State Land Office       310 Old Santa Fe Trail       Santa Fe       NM       875         CTV Oil & Gas New Mexico, LLC         (CTV OG NM LLC)       201 Main Street, Suite 2700       Fort Worth       TX       756         (KEYSTONE OG NM LLC)       222 W. Las Colinas Blvd.       Irving       TX       756         LMBI Oil & Gas New Mexico, LLC       201 Main Street, Ste 2700       Fort Worth       TX       756         Mobil Producing Texas & New Mexico Inc. (MOBIL       P.O. Box 4697       Houston       TX       777         (MOBIL PRODUCING TEXAS & NM INC)       201 Main Street, Suite 3200       Fort Worth       TX       761         PRB II 1993C Oil & Gas New Mexico, LLC       201 Main Street, Suite 3200       Fort Worth       TX       762         GRBI O&G NM, LLC)       201 Main Street, Suite 3200       Fort Worth       TX       763 </td <td>New Mexico BLM</td> <td>620 E Greene St.</td> <td>Carlsbad</td> <td>NM</td> <td>88220</td>	New Mexico BLM	620 E Greene St.	Carlsbad	NM	88220				
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KTO Permian Operating, LLC     KTO PERMIAN OPERATING LLC.)     6401 Holiday Hill Rd.     Midland     TX     797       XTO DELWARE BASIN, LLC)     Karakan Sanakan	XTO PERMIAN OPERATING LLC.)	6401 Holiday Hill Rd.	Midland	тх	79707				



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**XTO Permian Operating, LLC** 6401 Holiday Hill Rd. Midland TX 79707-2156

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