

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING NOVEMBER 14, 2019**

CASE No. 20825

VERLANDER SWD No.1 WELL

LEA COUNTY, NEW MEXICO



**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF GOODNIGHT
MIDSTREAM PERMIAN, LLC FOR
APPROVAL OF A SALT WATER DISPOSAL
WELL, LEA COUNTY NEW MEXICO.**

CASE NOS. 20825

AFFIDAVIT OF NATHAN ALLEMAN

I, Nathan Alleman, of lawful age and being first duly sworn, declares as follows:

1. My name is Nathan Alleman. I work for ALL Consulting as a regulatory specialist and project manager. I have been retained by Goodnight Midstream Permian, LLC ("Goodnight Midstream").
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in regulatory matters and permitting salt water disposal wells. My credentials as an expert in regulatory matters and permitting salt water disposal wells have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by Goodnight Midstream in this case, and I am familiar with the status of the lands in the subject area.
4. This application was originally filed for administrative approval but was protested during the administrative review period by the New Mexico State Land Office. As a result of that protest, Goodnight Midstream requested that the application be set for hearing before a Division Examiner. The New Mexico State Land Office is the only entity that objected to this application. The State Land Office has stated that it does not oppose presentation of this case by affidavit. Therefore, I do not expect any opposition at hearing.

5. **Exhibit 1**, attached hereto, is a full and complete copy of the Form C-108 application filed by Goodnight Midstream.

6. In this application, Goodnight Midstream seeks authority to inject produced salt water for purposes of disposal through its proposed Verlander SWD No. 1 Well (API No. pending), which will be located 2,482 feet from the north line and 1,277 feet from the east line (Unit H), Section 12, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico. Page 2 in Exhibit 1 contains a C-102 depicting the location for the proposed injection well.

7. The proposed injection disposal interval will be within the San Andres-Glorieta formation [SWD; San Andres-Glorieta (Pool Code 96127)] between 4,251 feet and 5,550 feet below the ground through a perforated completion. The estimated average surface injection pressure is expected to be approximately 600 psi. The maximum surface injection pressure will be 850 psi.

8. The proposed injection is a new project and will be a closed injection system. It will operate as a commercial salt water disposal well.

9. Exhibit 1, page 44, contains a map depicting the location of the proposed injection well and the relative location of three freshwater wells within a one-mile radius. Water sample analyses for each freshwater well are included at pages 41-43 in Exhibit 1.

10. Notice of this application was provided to the surface owner and oil and gas lessees and operators of record within a half-mile area of review that are entitled to receive notice. Parties entitled to notice were identified based on a determination of the title of lands and interests as recorded in the records of Lea County and from a review of New Mexico Oil Conservation Division and BLM operator records as of the time the application was filed. *See* Exhibit 1, page 47-58. Exhibit 1, page 12, is a map that depicts all lease tracts within the half-

mile area of review. A complete list of the parties entitled to notice is included in Exhibit 1 at pages 59-61.

11. Exhibit 1, page 62, is a copy of a sample notice letter sent to all parties entitled to notice of the C-108 administrative application within the half-mile area of review. Exhibit 1, pages 63-69, is proof that notice of the application was sent by certified mail, return receipt requested, as required by Division rule. Constructive notice was also provided by publication in a newspaper of general circulation in Lea County, New Mexico, where the proposed injection well will be located. A copy of the affidavit of publication is included in Exhibit 1 at page 70.

12. It is my opinion that Goodnight Midstream undertook a good faith effort to locate and identify the correct parties and valid addresses required for notice within the half-mile area of review. To the best of my knowledge the addresses used for notice purposes are valid and correct. There were no unlocatable parties for whom we were unable to locate a valid address.

13. The U.S. Bureau of Land Management owns both the surface and minerals at the location of the proposed injection well. Page 12 in Exhibit 1 is a map depicting all oil and gas leases within a one-mile radius of the proposed injection well. Page 12 of that same exhibit contains a table identifying each of the lessees of record and the operators for those leases.

14. **Exhibit 2** is a copy of an attorney affidavit prepared by Holland & Hart LLP reflecting that notice of this hearing was sent to the State Land Office, as the sole protestant. FURTHER AFFIANT SAYETH NOT.

Nathan Alleman
Nathan Alleman

STATE OF OKLAHOMA)
COUNTY OF Wagoner)

SUBSCRIBED and SWORN to before me this 5th day of November ^
2019 by Nathan Alleman.

Rita Giordano
NOTARY PUBLIC

My Commission Expires:
1.27.23



13775043_v1

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

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address Goodnight Midstream Permian, LLC &#13; 5910 N Central		2. OGRID Number 37231	
3. API Number 30-025		4. Well No. 1	
5. Property Name VERLANDER		6. Well No. 1	

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	12	21S	36E		2482	N	1277	E	

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name SWD; San Andres -	Pool Code 9612
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Additional Well Information

11. Work Type N	12. Well Type S	13. Cable/Rotary R	14. Lease Type P	15. Ground Level Elevation
16. Multiple N	17. Proposed Depth 5650'	18. Formation San Andres - Glorieta	19. Contractor TBD	20. Spud Date Upon C-108
Depth to Ground water 154' in CP 00986 POD1		Distance from nearest fresh water well ~3000' southwest of Robert McCasland well		Distance to nearest surface water ~ 2 miles north of

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

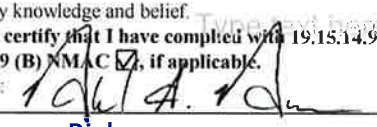
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	12.25"	9.625"	40	1280'	705	GL
Production	8.75"	7"	26	5650'	1475	GL &#13;

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular & amp; Rams	3000 psi	3000 psi	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify that I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.
Signature: 

Printed name: **Rich**
Title: **CO**
E-mail Address: **rrehm@goodnightmidstream.co**
Date: **7/25/19** Phone: **(214)**

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. 1

Submitted by: **Goodnight Midstream Permian, LLC**

Hearing Date: November 14, 2019

Case No. 20825

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
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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 372311		³ Pool Name SWD; SAN ANDRES -	
⁴ Property Code		⁵ Property Name &#13; VERLANDER SWD		⁶ Well Number	
⁷ OGRID No.		⁸ Operator Name GOODNIGHT MIDSTREAM PERMIAN,		⁹ Elevation 3503.33'	

¹⁰ Surface Location									
UL or lot no. H	Section 12	Township 21S	Range 36E	Lot Idn	Feet from the 2482'	North/South line NORTH	Feet from the 1277'	East/West line EAST	County LEA

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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.

<p>LAT: N32.500659 LONG: W103.227518 NORTH: 547,638.2 EAST: 882,260.3 NMSPACE NAD83</p> <p>LAT: N32.500693 LONG: W103.218994 NORTH: 547,678.3 EAST: 884,888.3 NMSPACE NAD83</p> <p>LAT: N32.500725 LONG: W103.210470 NORTH: 547,717.4 EAST: 887,516.2 NMSPACE NAD83</p> <p>LAT: N32.493889 LONG: W103.214611 NORTH: 545,216.7 EAST: 886,265.6 NMSPACE NAD83</p> <p>LAT: N32.493414 LONG: W103.227514 NORTH: 545,002.5 EAST: 882,288.7 NMSPACE NAD83</p> <p>LAT: N32.493468 LONG: W103.210468 NORTH: 545,076.9 EAST: 887,544.6 NMSPACE NAD83</p> <p>LAT: N32.486212 LONG: W103.210467 NORTH: 542,437.1 EAST: 887,572.8 NMSPACE NAD83</p>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>[Signature]</i> 7/25/19 Signature Date</p> <p>Rich Rehm, Printed Name</p> <p>rrehm@goodnightmidstream.co E-mail Address</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge.</p> <p>January 17, 2019 Date of Survey</p> <p><i>[Signature]</i> Signature and Seal of Professional Surveyor</p> <p>ALTON S. GEISENDORFF, JR. REGISTERED PROFESSIONAL SURVEYOR 4474</p> <p><i>[Signature]</i> 3/21/2019 Certificate Number</p>

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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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

Applicant: Goodnight Midstream Permian, LLC **OGRID Number:** 372311
Well Name: VERLANDER SWD #1 **API:** 30-025-
Pool: SWD; San Andres-Glorieta **Pool Code:** 96127

**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

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 holdersB. ☒ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☒ Notification and/or concurrent approval by SLOE. ☐ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☒ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**☐

Notice Complete

☐

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.

Rich Rehm COO

Print or Type Name

Signature

7/25/19

Date

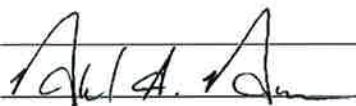
(214) 391 2039

Phone Number

rrehm@goodnightmidstream.com

e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No
- II. OPERATOR: Goodnight Midstream Permian, (OGRID)
ADDRESS: 5910 N Central Expressway, Suite 850 Dallas, TX
CONTACT PARTY: Agent: Midcon Resource Group, LLC - Thomas PHONE: (701)
Agent Email:
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes X No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. 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.).
- *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: Rich TITLE: CO
SIGNATURE:  DATE: 7/25/19
E-MAIL ADDRESS: rrehm@goodnightmidstream.co
- * 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: _____

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

INJECTION WELL DATA SHEET

OPERATOR: **Goodnight Midstream Permian, LLC**WELL NAME & NUMBER: **VERLANDER SWD #001**WELL LOCATION: **2482' FNL & 1277' FEL**

FOOTAGE LOCATION

H

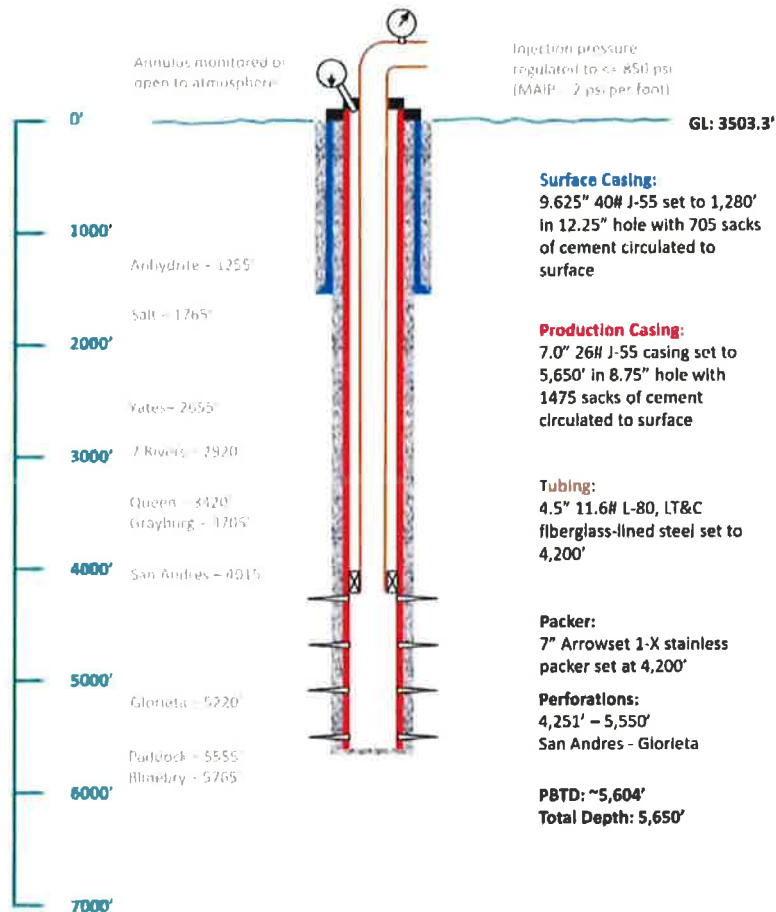
UNIT LETTER

12

SECTION

2

TOWN

WELLBORE SCHEMATICWELL CONSTRUCTIONSurface CasingHole Size: **12-1/4"**

Casing Size

Cemented with: **705** sx. **or**Top of Cement: **0'**

Method D

Intermediate Casing

Hole Size: _____

Casing Size

Cemented with: _____ sx. **or**

Top of Cement: _____

Method D

Production CasingHole Size: **8-3/4"**

Casing Size

Cemented with: **1475** sx. **or**Top of Cement: **0'**

Method D

Total Depth: **5650'**Injection Interval**4251'** feet to _____

(Perforated or Open Hole; indicate

INJECTION WELL DATA SHEET

Tubing Size: 4-1/2" Lining Material: Fiberglass

Type of Packer: 7" Arrowset 1-X Stainless

Packer Setting Depth: Proposed-4,200'

Other Type of Tubing/Casing Seal (if applicable):

Additional Data

1. Is this a new well drilled for injection? X Yes No

If no, for what purpose was the well originally drilled?

2. Name of the Injection Formation: San Andres &

3. Name of Field or Pool (if applicable): SWD; San Andres-Glorieta 

4. Has the well ever been perforated in any other zone(s)? List all such perforate intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the injection zone in this area: (1/2-mile AOR)

Over: Yates~ (2655'); Seven Rivers ~(2920'); Queen ~(3420'); Grayburg ~(370

Under: Blinbry ~(5765'); Tubb ~(6355'); Drinkard ~(6740')

APPLICATION FOR AUTHORIZATION TO INJECT
VERLANDER SWD #1 – API# 30-025-XXXXX
2482' FNL & 1277' FEL, Unit H of Sec 12-T21S-R36E
Lea County, New Mexico

I. PURPOSE: The purpose of this application is to gain approval to drill and complete the VERLANDER SWD #1 well within the San Andres and Glorieta formations. This application DOES qualify for administrative approval.

II. OPERATOR: Goodnight Midstream Permian, LLC (OGRID 372311)
ADDRESS: 5910 N Central Expressway, Suite 850 Dallas, TX 75206 OPERATOR PHONE: (214) 891-2039
AGENT: Midcon Resource Group, LLC – Thomas Schumacher
AGENT PHONE: (701) 400-9909 AGENT EMAIL: tom@midcongroup.com

III. WELL DATA: Well data for this application is listed below and detailed on the Proposed Wellbore Schematic that is included as Attachment III-1.

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: VERLANDER SWD LEASE TYPE: Fee
WELL NAME & NO.: VERLANDER SWD #1
LOCATION: 2482' FNL & 1277' FEL, Unit H of Sec 12-T21S-R36E
- (2) SURFACE CASING: The 9.625" 40# J-55 will be set to 1,280' in 12.25" hole and cemented with 705 sacks of cement circulated to surface.
PRODUCTION CASING: The 7" 26# J-55 production casing will be set to 5,650' in an 8.75" hole and cemented with 1475 sacks of cement circulated to surface and confirmed with CBL.
- (3) TUBING: 4.5" 11.6# L-80, LT&C fiberglass-lined steel tubing will be set to ~4,200'.
- (4) PACKER: 7" Arrowset 1-X stainless packer will be set to ~4,200'.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well.

- (1) INJECTION FORMATION: SWD; San Andres-Glorieta (96127)
- (2) INJECTION INTERVAL: This application is proposing to perforate the San Andres and Glorieta intervals from 4,251' – 5,550'.
- (3) WELL'S ORIGINAL PURPOSE: The well will be drilled as a saltwater disposal well.
- (4) CURRENT PERFORATED INTERVAL STATUS: Well has not yet been drilled.
- (5) NEXT HIGHER OIL/GAS ZONE:
EUNICE MONUMENT, GRAYBURG-SAN ANDRES. The ROY RIDDEL #3 well (API# 30-025-35486) is approximately 2250' south-southeast from the proposed VERLANDER SWD #1 and produces from this "pool" but was never completed within the San Andres Formation.

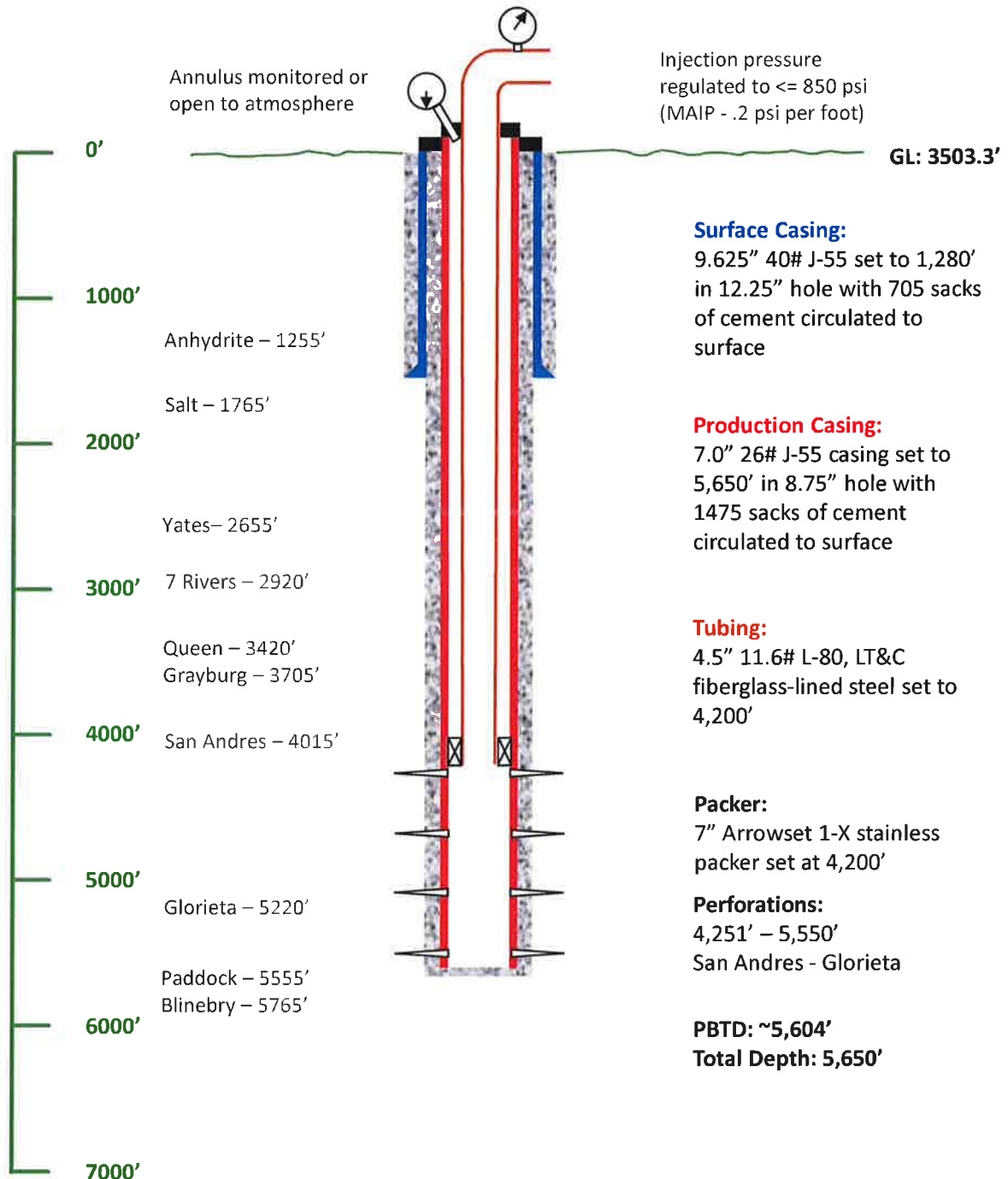
PENROSE SKELLY, GRAYBURG. The ALEXANDER #1 well (API# 30-025-09905) is approximately 2100' east-southeast from the proposed VERLANDER SWD #1 and produces from the Grayburg Formation.

NEXT LOWER OIL/GAS ZONE:

BLINEBRY OIL & GAS. The DECK SATATE 7 #1 well (API# 30-025-33677) is approximately 2450' southwest of the proposed VERLANDER SWD 1 and produces from this pool.

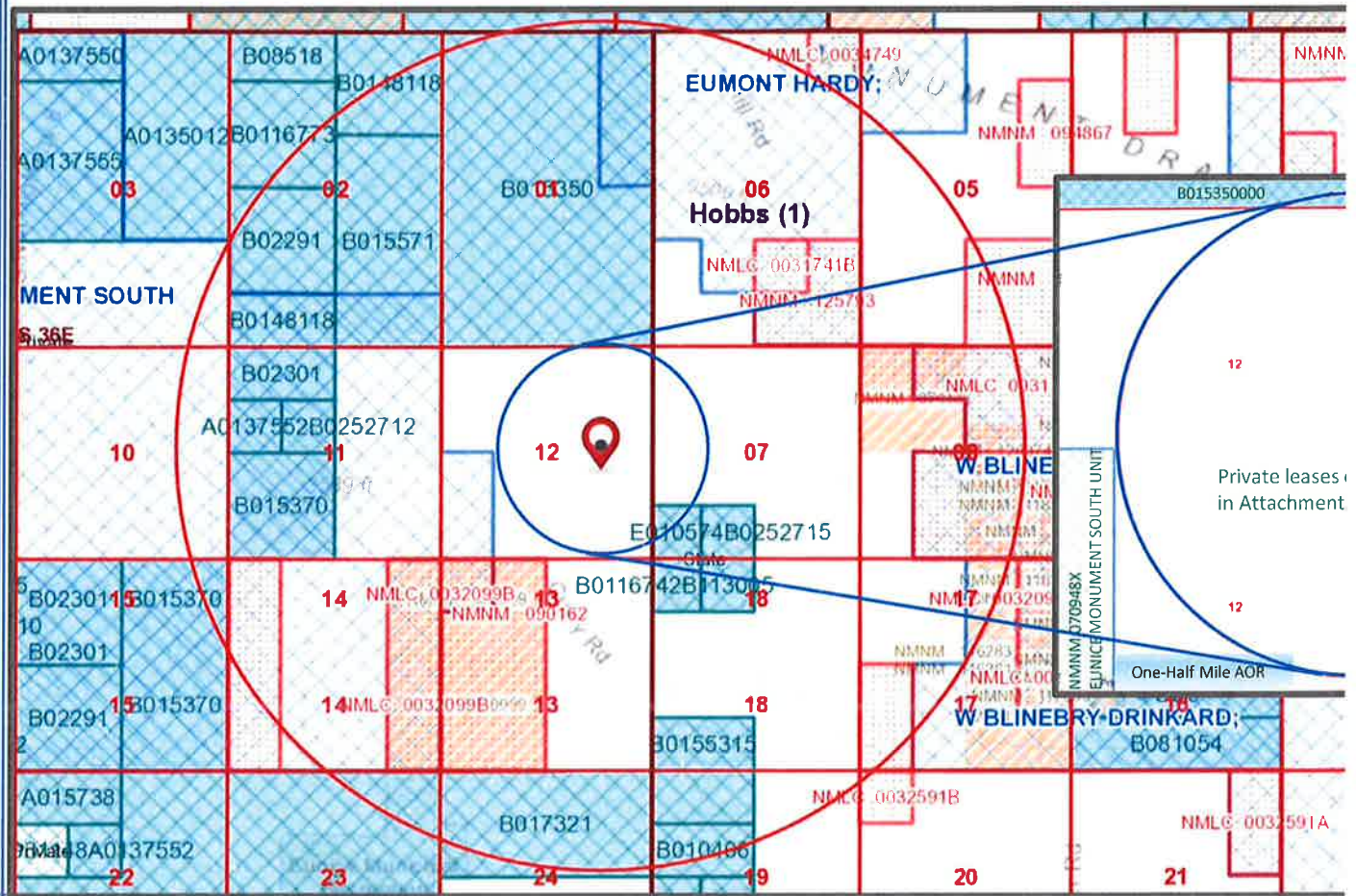
Proposed Wellbore Schematic – Attachment III-1

VERLANDER SWD #001 – API# 30-025-XXXXX
2482' FNL & 1277' FEL, Unit H of Sec 12-T21S-R36E
Lea County, New Mexico

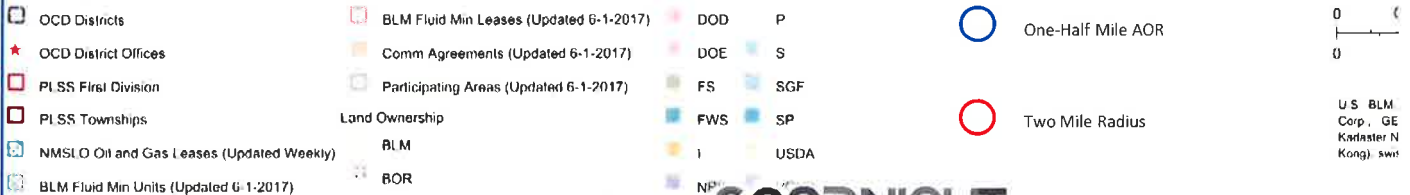


- IV. EXPANSION PROJECT STATUS: This is not an expansion of an existing project. It is a request to complete the proposed VERLANDER SWD #1 within the San Andres and Glorieta intervals from 4,251' – 5,550'.
- V. AREA OF REVIEW MAPS: Maps that identify New Mexico State Land leases and wells within two miles of the proposed VERLANDER SWD #1 are included as Attachments V-1 and V-2. They both include finer detailed one-half mile inset maps. Attachment V-3 details a historic plat overlain with the individual NM and privately leased tracts and a chart that defines these tracts within the AOR.

All Leases Within 2 Miles & AOR – Attachment V-1



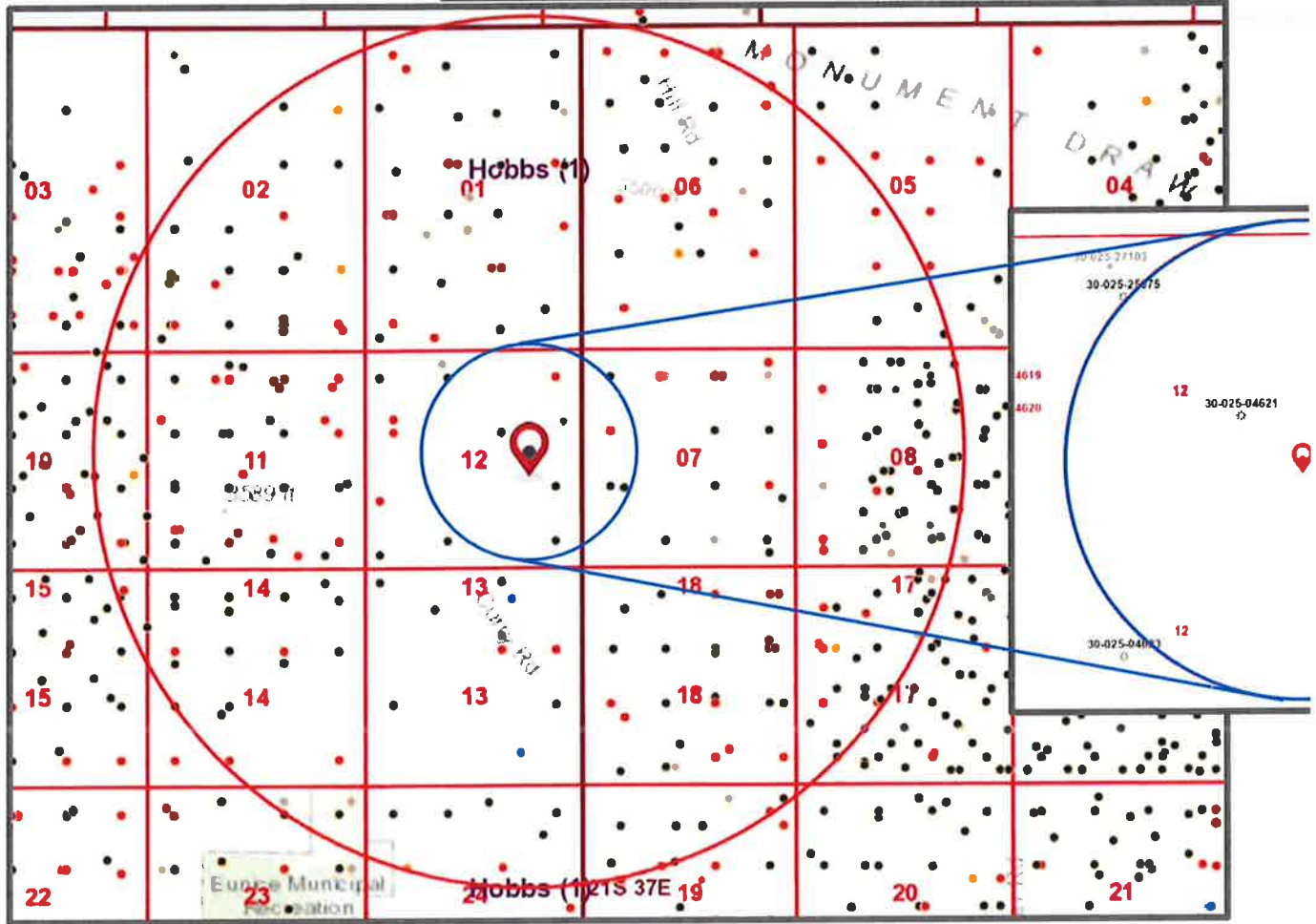
8/18/2019, 3:07:58 PM



GOODNIGHT
MIDSTREAM

NM OCD Oil and Gas Map: <http://nm.emmrd.maps.arcgis.com/ap>

All Wells Within 2 Miles & AOR- Attachment V-2



3/18/2019, 3:23:52 PM

Well Locations - Small Scale

- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

Well Locations - Large Scale

- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2 Plugged
- CO2 Temporarily Abandoned

Gas Active

- Gas Cancelled, Never Drilled
- Gas New
- Gas Plugged
- Gas Temporarily Abandoned
- Injection Active

Injection, Cancelled

- Injection New
- Injection Plugged
- Injection Temporarily Abandoned
- Oil Active
- Oil Cancelled

Oil New

- Oil Plugged
- Oil Temporarily Abandoned
- Salt Water Injection Active
- Salt Water Injection Cancelled
- Salt Water Injection New

One-Half Mile AOR

Two Mile Radius

0 0.5
0

Sources: Esri, USGS, FAO, N Survey, Esri J OpenStreetMap

GOODNIGHT
MIDSTREAM

NM OGD Oil and Gas Map <http://nm-omnd.maps.ogd.state.nm.gov/apps/>

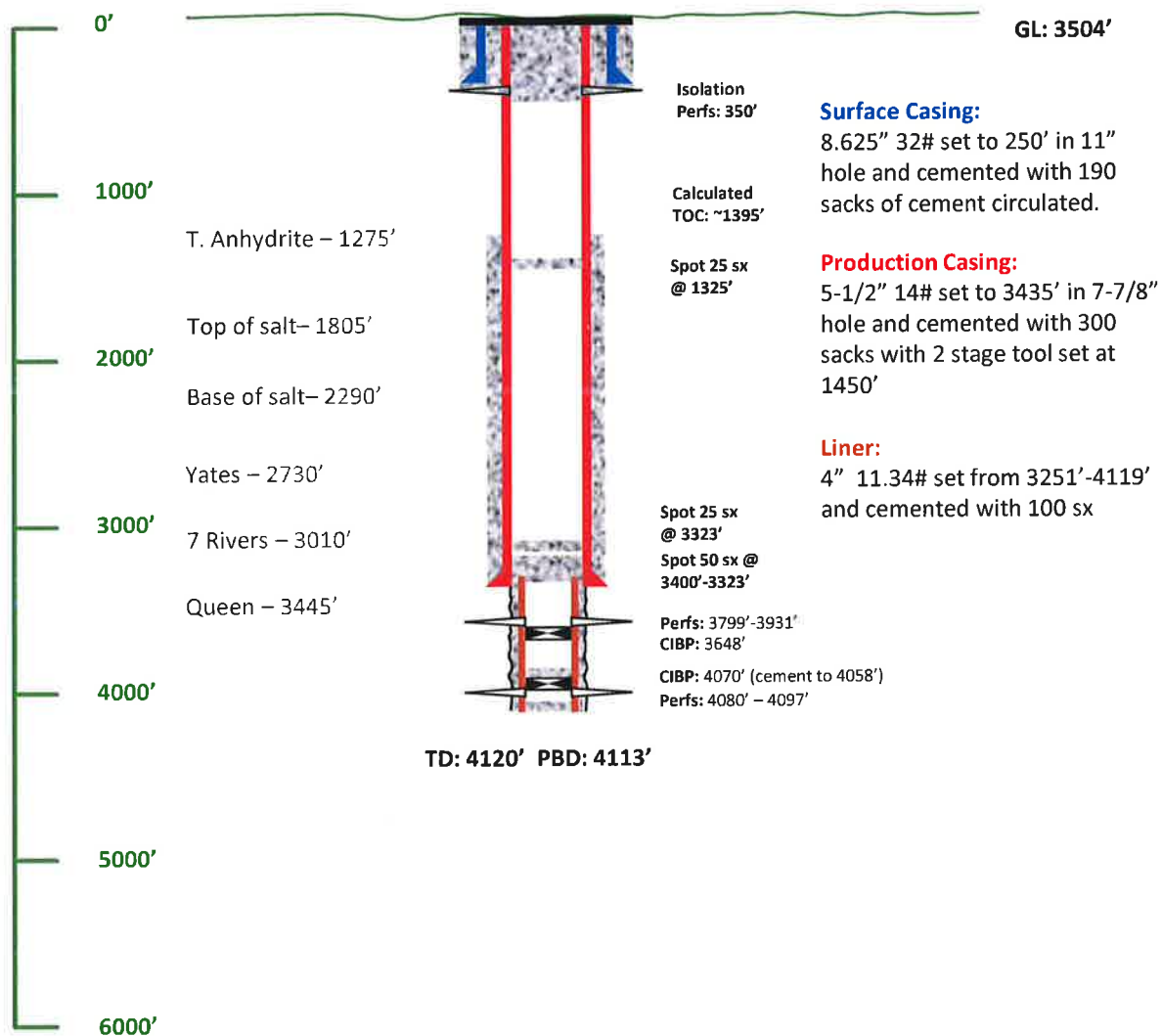
*VI. DATA ON WELLS IN AOR: OCD GIS details 8 wells within the one-half mile AOR consisting of 4 active producers, 3 P&A's and 1 cancelled APD. A tabulation of data of public record for these wells is included as Attachment VI-1. It includes each well's type, status, pool, construction, location, GL, and TVD. Detailed schematics are included as Attachments VI-2, VI-3, VI-4 and VI-5 for four wells that may have penetrated the proposed injection zone.

Data on Wells in AOR – Attachment VI-1

VERLANDER SWD 1 Area of Review Wells						
#	API #	Well Name	Operator	Status	Type	Well Completions
1	30-025-04621	CARTER #001	SPECIAL ENERGY CORP	Active	Gas	[76480] EUMONT, YATES-7 RVR-S-QUEEN (GAS) This is a vertical gas well that was spud on 9/19/1954. 8-5/8" surface casing was set to 1350' and cemented with 500 sacks circulated to surface. 88 joints of 5-1/2" casing was set to 3416' and cemented with 3430' - 3630' and completed on 9/28/1954. This well never penetrated the San Andres or Glorieta.
2	30-025-04624	ROY RIDDEL #002	TEXACO EXPLORATION & PRODUCTION INC	P&A Released	Gas	[76480] EUMONT, YATES-7 RVR-S-QUEEN (GAS) This is a vertical gas well that was spud on 5/13/1955. 8-5/8" surface casing was set to 1328' and cemented with 800 sack; 5-1/2" production casing was set to 3530' and cemented with 500 sack; The well was open hole on 6/1/1955. On 4/14/1964 operator pulled 2200' of 5-1/2" casing; spotted 30 sx plugs @ 3676' and 3505'; 15 sx plugs at top of unrecoverable 5-1/2" and @ bottom of 8-5/8" surface casing; and was P&A'd. This well never penetrated the San Andres or Glorieta.
3	30-025-06429	ALEXANDER #001	MILLARD DECK ESTATE	P&A Released	Gas	[76480] EUMONT, YATES-7 RVR-S-QUEEN (GAS) This is a vertical gas well that was spud on 9/29/1954. 8-5/8" surface casing was set @ 250' and cemented to surface with 190 sx; 5-1/2" production casing was ran to 3435' and cemented with 300 sx of ceme then drilled out to 3650' and completed open hole. After depletion, the well was extended to 4119', a liner was run, perfed, and was unproductive. The well was plugged back to 4058' and perfed from 3799-3' plug @ 3400'-3323'; 25 sx plug @ 3323'; 25 sx plug @ 1325' and 92 sx plug @ 350' thru perfs to surface and the site released. This well may have penetrated the upper San Andres but no record of production c adequately isolates the proposed injection zone. Wellbore schematic is included as Attachment VI-2
4	30-025-09905	ALEXANDER #001	UPLAND PRODUCTION COMPANY	Active	Oil	[50350] PENROSE SKELLY, GRAYBURG This is a vertical oil well that was spud on 5/13/1936. 13-5/8" casing was set at 239' cemented with 250 sx, 9-5/8" casing set to 1319' with 800 sx and 7" casing to 3157' cemented with 235 sx. The well was open hole then plugged back from 3829' to 3817' due to a high oil/gas ratio and shot from 3760' to 3817'. This well never penetrated the San Andres or Glorieta
5	30-025-33677	DECK ESTATE 7 #001	PENROC OIL CORP	Active	Oil	[6660] BLINEBRY OIL AND GAS (OIL); [29760] HARDY, TUBB-DRINKARD; [96705] EUNICE, MCKEE, NORTH; [96835] HARE, SAN ANDRES, NORTHWEST This is a vertical oil well that was spud on 12/17/1996, 13-3/8" surface casing was set @435' with 455 sx (circulated); 8-5/8" intermediate casing was set to 4000' with 1900 sx (circulated); and 5-1/2" producti 2565 sx. The well was perforated @ 9600'-9950' and completed in the McKee on 3/25/1997. The well was soon plugged back, the Glorieta and San Andres were perforated and tested on the way out of the hc commercial production was ever recorded for the San Andres or Glorieta. The well was re-entered on 1/26/04 and perforated from 5659'-5665' and 6784'-6832' and completed in the Blinebry Oil & Gas and H the San Andres & Glorieta formations but the calculated cement top adequately isolates the proposed injection zone. Wellbore schematic is included as Attachment VI-3
6	30-025-35486	ROY RIDDEL #003	CHEVRON U S A INC	Active	Oil	[22800] EUMONT, YATES-7 RVR-S-QUEEN (OIL); [23000] EUNICE MONUMENT, GRAYBURG-SAN ANDRES This well was spud on 4/11/2001, 8-5/8" surface casing was set to 382' with 300 sx and 5-1/2" production casing was set to 4000' with 750 sx, both were circulated. The well was perforated in the Grayburg fr @ 3855' and squeezed after flowing 17 bbls SW/hr. The Grayburg was again perfed from 3749'-3831' and 3527'-3679'. This well produces from the Eunice Monument, Grayburg-"San Andres" Pool but was not schematic is included as Attachment VI-4
7	30-025-35623	ROY RIDDEL #004	CHEVRON U S A INC	P&A Not Released	Oil	[22800] EUMONT, YATES-7 RVR-S-QUEEN (OIL) This well was spud on 7/1/2001, 8-5/8" surface casing was set to 408' with 325 sx and 5-1/2" production casing was set to 4000' with 875 sx, both were circulated to surface. The well was perforated from 35 This well was never completed in the San Andres. The well was P&A on 3/11/2019. A wellbore schematic is included as Attachment VI-5
8	30-025-36637	DECK ESTATE 12 #001	CONOCOPHILLIPS COMPANY	Cancelled APD	Oil	[29710] HARDY, BLINEBRY; [29760] HARDY, TUBB-DRINKARD This well was never drilled.

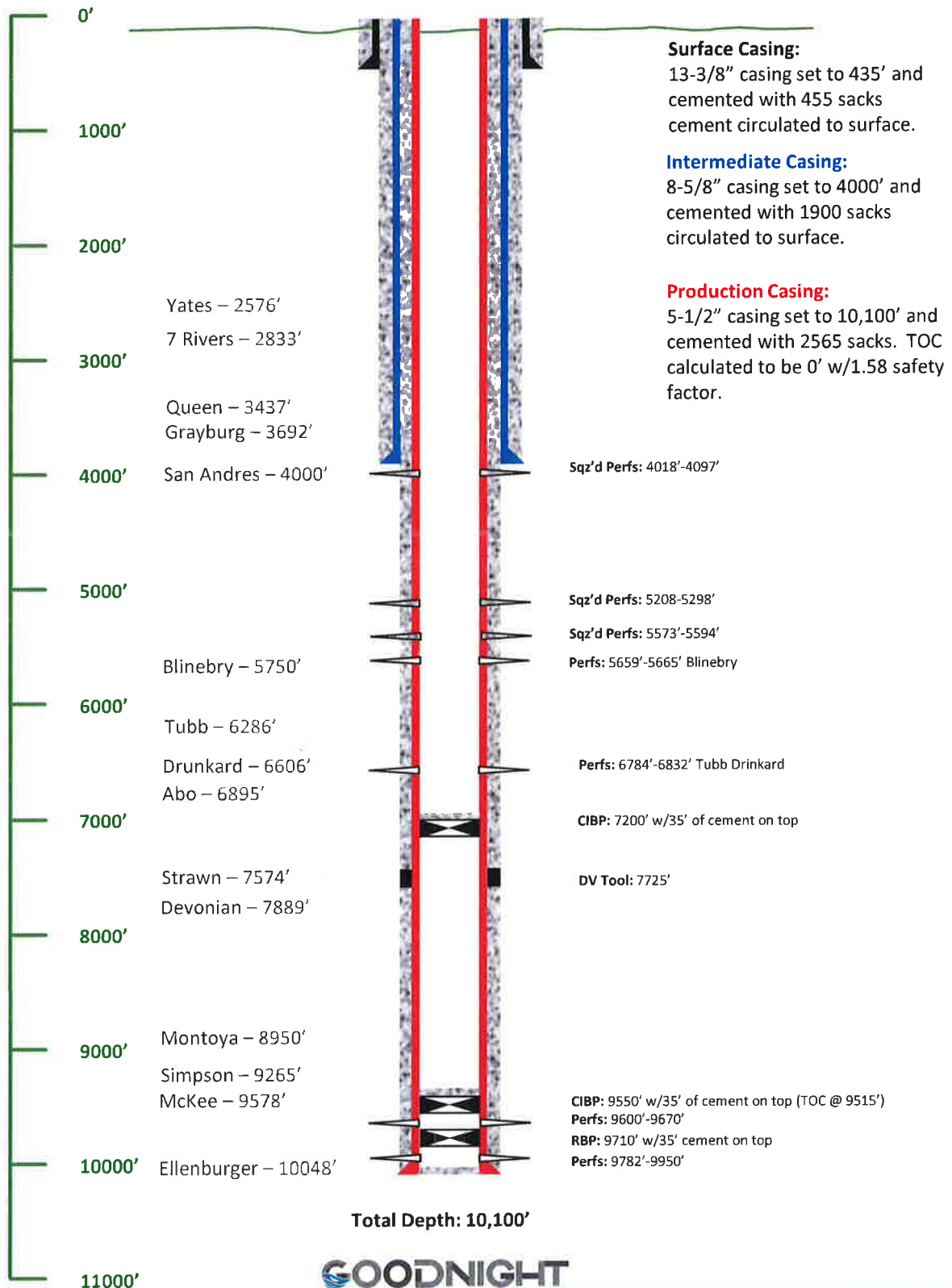
Schematic of Wellbore that may Penetrate Injection Zone – Attachment VI-2

ALEXANDER #001 – API# 30-025- 06429
1980 FNL & 660 FWL, Unit E (Lot 2) of Sec 7-T21S-R37E
Lea County, New Mexico



Schematic of Wellbore that may Penetrate Injection Zone – Attachment VI-3

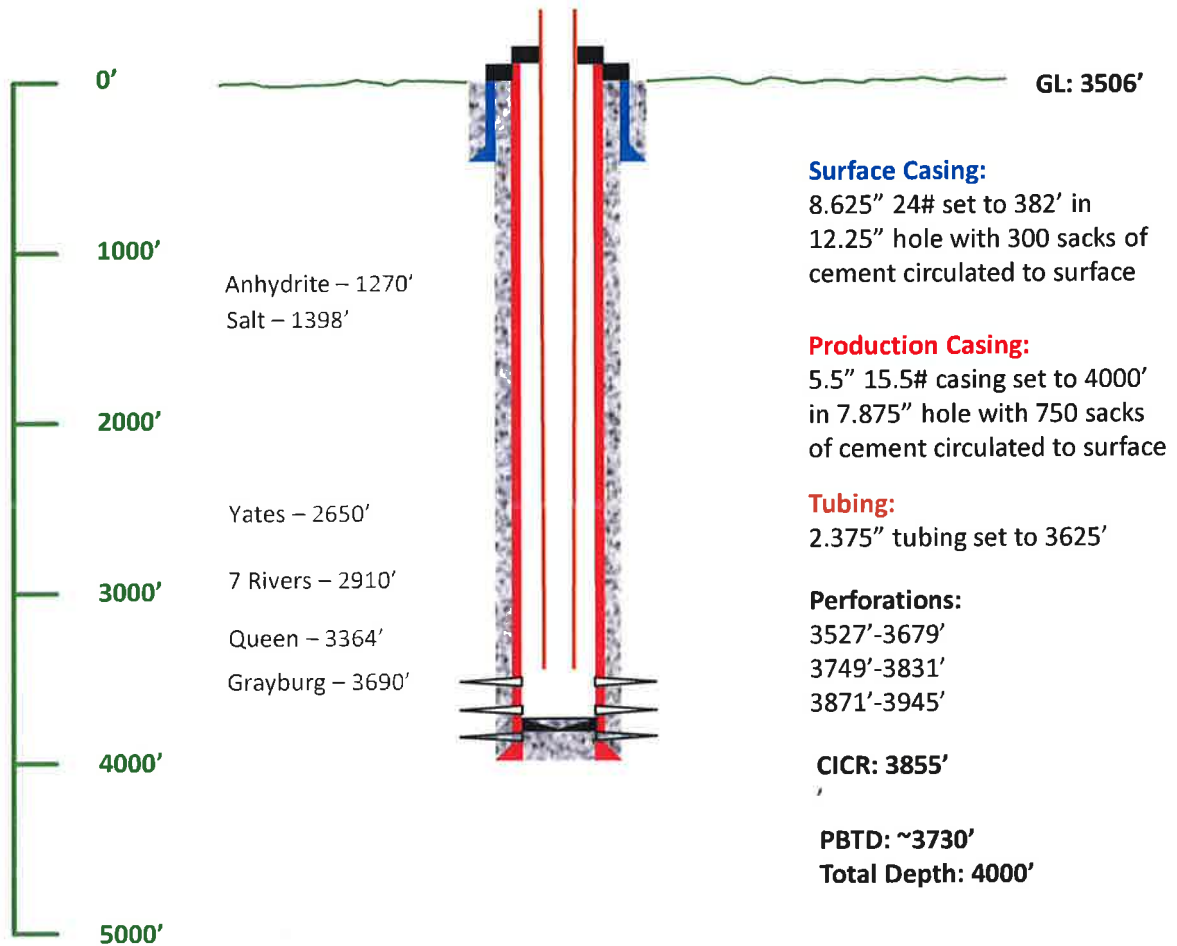
DECK ESTATE 7 #001– API# 30-025- 33677
1930 FSL & 990 FWL, Unit L of Sec 7-T21S-R37E
Lea County, New Mexico



GOODNIGHT
MODSTREAM

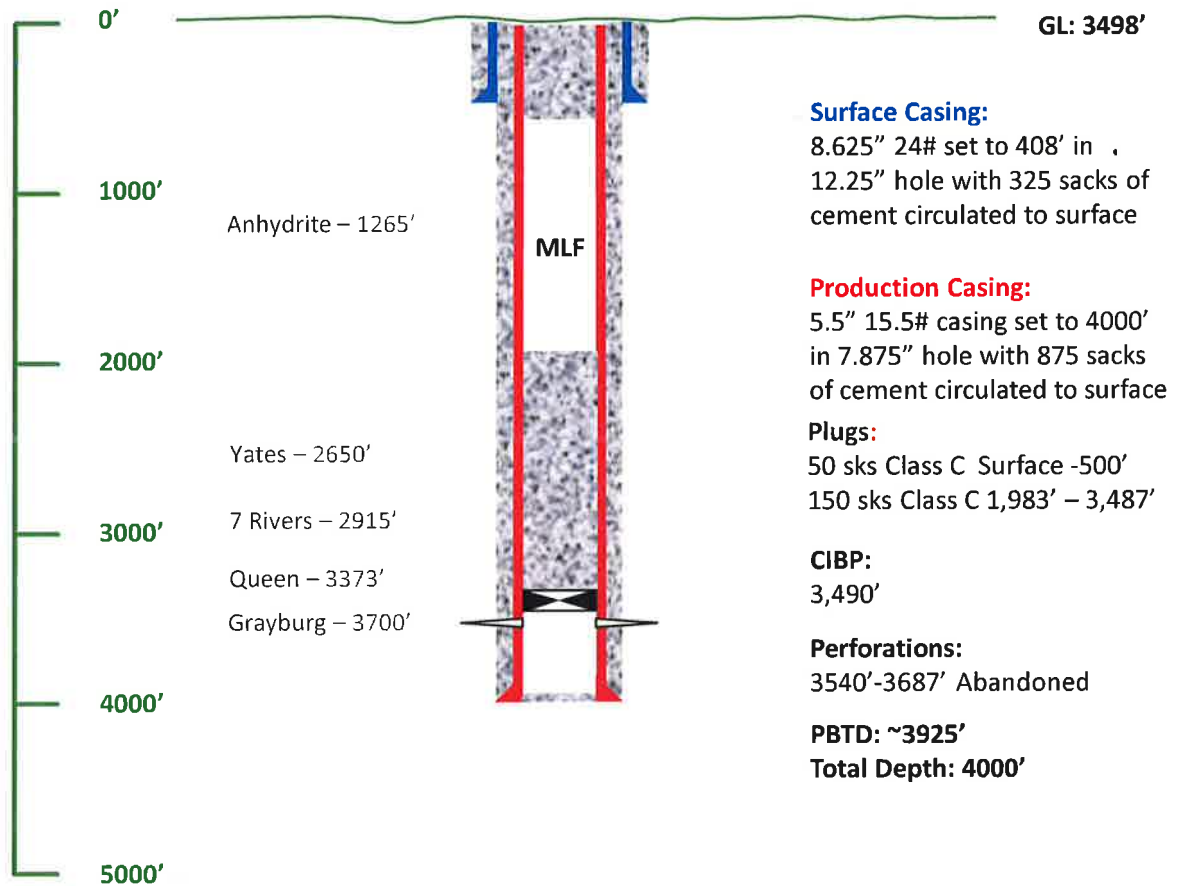
Schematic of Wellbores that may Penetrates Injection Zone – Attachment VI-4

ROY RIDDLE #003– API# 30-025-35486
660 FSL & 660 FEL, Unit P of Sec 12-T21S-R36E
Lea County, New Mexico



Schematic of Wellbores that may Penetrate Injection Zone – Attachment VI-5

ROY RIDDLE #004– API# 30-025- 35623
1980 FSL & 660 FEL, Unit I of Sec 12-T21S-R36E
Lea County, New Mexico



VII. OPERATIONAL DATA

- (1) PROPOSED AVERAGE & MAXIMUM DAILY RATE: Average Daily Rate ~15,000 bpd/Maximum Daily Rate - Limited by MIP (850 psi) only.
- (2) SYSTEM OPEN/CLOSED: System will be closed. Goodnight Midstream Permian, LLC is building a several dozen mile gathering system across multiple townships.
- (3) PROPOSED AVERAGE & MAXIMUM INJECTION PRESSURE: Average Injection Pressure will be ~600 psi. Maximum Injection Pressure will be 850 psi based on the proposed depth to top perf.
(0.2 psi/foot X 4251' = 850 psi)
- (4) INJECTION FLUID ANALYSIS: Injection fluid will be produced water from Permian Basin wells including Yates, Seven Rivers, Queen, Grayburg, San Andres, Delaware, Blinberry, Drinkard, Tubb, Bone Spring, Wolfcamp, Strawn, Pennsylvanian, and Morrow. Attachment VII-4.1 details water analysis data from the NM Produced Water Quality Database V.2 of many of these zones from nearby wells in Township 21S, Range 37E. Attachment VII-4.2 details produced water samples from wells in other townships and Attachment VII-4.3 is a recent analysis of typical produced water that is currently being disposed through Goodnight's pipeline/disposal system in this area.

COMPATABILITY – EOG's RED HAT STATE SWD #1 (API# 30-025-31110) is a similar SWD; San Andres-Glorieta disposal well in Lea County. A total of 2,259,695 barrels have been disposed through this well with no reported problems.

- (5) DISPOSAL ZONE DATA: The most recent sample of San Andres – Glorieta formation water was swabbed during the original completion of the neighboring TED 28 SWD #1 located approximately 4.5 miles southwest of the VERLANDER SWD #1 site. The samples were analyzed and the results submitted to the OCD. Those results are included as Attachment VII-5.1

See also Section VIII, Appropriate Geologic Data for additional disposal zone information

Produced Water Samples from Township 21S, Range 37E - Attachment VII-4.1 (3 pages)

Well Name	API	Section	Unit	Formation	TDS mg/l	Chloride mg/l	Carbonate mg/l	Sulfate mg/l
TURNER #020	3002534592	22	P	ABO	102364	64870	327	2545
EASTBLINEBRY DRINKARD UNIT #026	3002506536	11	G	ABO	203532	140598	246	931
TURNER #020	3002534592	22	P	ABO	206373	142558	487	1976
ROY BARTON #001	3002506763	23	G	ABO	81045	46135	544	4012
EASTBLINEBRY DRINKARD UNIT #049	3002506582	14	G	ABO	182624			
J G HARE #006	3002506966	33	L	ABO	104072	62570	81	1939
OWEN #001	3002507021	35	P	ABO		25600		3880
WANTZ FEDERAL#003	3002529688	1	X	ABO	136800	74600	117	1100
WANTZ FEDERAL#004	3002529728	1	Q	ABO	134300	72600	68	1000
L G WARLICK A #001	3002506664	19	I	ARTESIA	56761	35250	282	1564
EUNICE COM #001	3002506667	19	K	ARTESIA	8324	2751	1004	1757
E O CARSON #022	3002506876	28	L	ARTESIA	85857	48380	424	4244
CORDELIA HARDY #002	3002506890	29	D	ARTESIA	10869	4729	2189	329
CORDELIA HARDY #002	3002506890	29	D	ARTESIA	8484	3555	1339	604
CORDELIA HARDY #004	3002506892	29	F	ARTESIA	8251	3300	1338	604
EAST BLINEBRY DRINKARD UNIT #016	3002506526	11	A	BLINEBRY	172622	116637	204	1402
HUMBLE FEDERAL#001	3002506331	1	X	BLINEBRY	149754			
WEST BLINEBRY DRINKARD UNIT #041	3002506434	8	I	BLINEBRY	163873	102000	493	1560
WEST BLINEBRY DRINKARD UNIT #037	3002506439	9	P	BLINEBRY	154648	94000	280	2320
EASTBLINEBRY DRINKARD UNIT #047	3002506551	12	J	BLINEBRY	162400	98400	610	1249
EASTBLINEBRY DRINKARD UNIT #054	3002506567	13	B	BLINEBRY	139864			
WEST BLINEBRY DRINKARD UNIT #061	3002506629	16	D	BLINEBRY	156109	97730	772	1041
M E WANTZ #001	3002506706	21	N	BLINEBRY	144900	78550	74	1082
ELLIOTTA #004	3002506719	21	H	BLINEBRY	112888	68410	796	1499
ELMER CHILL #001	3002506790	26	P	BLINEBRY	154917	93510	148	1330
MARSHALL B #008	3002506825	27	L	BLINEBRY	94670	56800	340	2500
D HARDY #003	3002506897	29	H	BLINEBRY	70206	40630	265	2835
V M HENDERSON#003	3002506909	30	H	BLINEBRY	86101			
V M HENDERSON#003	3002506909	30	H	BLINEBRY	193811			
MARK OWEN #004	3002507003	34	J	BLINEBRY	159553	97920	856	1530
OWEN #007	3002507028	35	I	BLINEBRY	23710	12400	2400	220
STATE C TRACT 13 #005	3002507051	36	E	BLINEBRY	86043	53010	464	985
ELMER CHILL #001	3002506790	26	P	BLINEBRY	188764	115958	121	1702
FIELDS#001	3002506553	12	O	BLINEBRY	150574	91350	488	1833
EO CARSON #014	3002506985	33	C	BLINEBRY	124310	78802	280	1120
ELMER CHILL #001	3002506790	26	p	BLINEBRY	173214	106456	291	1223
NORTHEAST DRINKARD UNIT #520	3002534602	10	O	BLINEBRY/TUBB/DRINKARD	30958	16709	688	2708
NORTHEAST DRINKARD UNIT #220	3002506358	2	J	BLINEBRY/TUBB/DRINKARD	33622	18219	475	2940
NORTHEAST DRINKARD UNIT #306	3002506507	3	R	BLINEBRY/TUBB/DRINKARD	19094	8981	881	2745
NORTHEAST DRINKARD UNIT #401	3002506459	10	D	BLINEBRY/TUBB/DRINKARD	53498	32154	739	1857
NORTHEAST DRINKARD UNIT #204	3002506506	3	L	BLINEBRY/TUBB/DRINKARD	29171	15870	1102	1905
NORTHEAST DRINKARD UNIT #619	3002534410	15	A	BLINEBRY/TUBB/DRINKARD	16289	7411	1014	2237
NORTHEAST DRINKARD UNIT #107	3002520315	3	F	BLINEBRY/TUBB/DRINKARD	110630	66400	670	1570
NORTHEAST DRINKARD UNIT #924	3002534595	23	M	BLINEBRY/TUBB/DRINKARD	83002	52796	789	1672
WEST BLINEBRY DRINKARD UNIT #041	3002506434	8	I	BLINEBRY/TUBB/ DRINKARD	112968	81309	265	887
WEST BLINEBRY DRINKARD UNIT #039	3002506441	9	M	BLINEBRY/TUBB/ DRINKARD	161776	108281	203	1545
WEST BLINEBRY DRINKARD UNIT #037	3002506439	9	p	BLINEBRY/TUBB/ DRINKARD	185366	127549	279	1058
NORTHEAST DRINKARD UNIT #233	3002534431	3	K	BLINEBRY/TUBB/ DRINKARD	77148	46967	451	2786
NORTHEAST DRINKARD UNIT #120	3002506357	2	B	BLINEBRY/TUBB/ DRINKARD	65372	38518	333	3662
NORTHEAST DRINKARD UNIT #220	3002506358	2	J	BLINEBRY/TUBB/ DRINKARD	44602	25713	265	2814
NORTHEAST DRINKARD UNIT #311	3002506367	2	T	BLINEBRY/TUBB/ DRINKARD	61709	37295	677	2085
NORTHEAST DRINKARD UNIT #213	3002506368	2	D	BLINEBRY/TUBB/ DRINKARD	73938	46169	270	1869
NORTHEAST DRINKARD UNIT #406	3002506451	10	B	BLINEBRY/TUBB/ DRINKARD	37392	21216	895	2104

NORTHEAST DRINKARD UNIT #410	3002506453	10	H	BLINEBRY/TUBB/ DRINKARD	161505	109855	136	1365
NORTHEAST DRINKARD UNIT #217	3002506485	2	K	BLINEBRY/TUBB/DRINKARD	28464	15035	1099	2190
NORTHEAST DRINKARD UNIT #219	3002506486	2	N	BLINEBRY/TUBB/DRINKARD	34651	19115	615	2581
NORTHEAST DRINKARD UNIT #316	3002506487	2	S	BLINEBRY/TUBB/DRINKARD	34607	19025	1131	2269
NORTHEAST DRINKARD UNIT #317	3002506488	2	V	BLINEBRY/TUBB/DRINKARD	52388	31034	647	2130
NORTHEAST DRINKARD UNIT #310	3002506497	3	X	BLINEBRY/TUBB/DRINKARD	19312	9120	1277	2208
NORTHEAST DRINKARD UNIT #513	3002506533	11	N	BLINEBRY/TUBB/DRINKARD	83385	52667	220	1764
NORTHEAST DRINKARD UNIT #705	3002506602	15	N	BLINEBRY/TUBB/DRINKARD	177936	120760	192	1405
NORTHEAST DRINKARD UNIT #609	3002506610	15	B	BLINEBRY/TUBB/DRINKARD	56067	33596	280	2364
NORTHEASTDRINKARD UNIT #805	3002506736	22	F	BLINEBRY/TUBB/DRINKARD	18427	8868	1312	1821
NORTHEAST DRINKARD UNIT #915	3002506766	23	J	BLINEBRY/TUBB/DRINKARD	163742	110730	298	1189
NORTHEAST DRINKARD UNIT #810	3002506770	23	D	BLINEBRY/TUBB/DRINKARD	23491	12014	722	2381
NORTHEAST DRINKARD UNIT #702	3002509911	15	M	BLINEBRY/TUBB/DRINKARD	35019	19818	464	2202
NORTHEAST DRINKARD UNIT #602	3002509914	15	E	BLINEBRY/TUBB/DRINKARD	20364	9863	707	2241
NORTHEAST DRINKARD UNIT #701	3002509916	15	L	BLINEBRY/TUBB/DRINKARD	34550	19443	526	2239
NORTHEAST DRINKARD UNIT #704	3002509917	15	N	BLINEBRY/TUBB/DRINKARD	64379	39321	665	2030
NORTHEAST DRINKARD UNIT #510	3002520218	11	L	BLINEBRY/TUBB/DRINKARD	147901	99247	229	1193
NORTHEAST DRINKARD UNIT #918	3002521349	23	P	BLINEBRY/TUBB/DRINKARD	167463	113402	246	1307
NORTHEAST DRINKARD UNIT #321	3002506352	2	X	BLINEBRY/TUBB/DRINKARD	8744	3729	1357	678
NORTHEAST DRINKARD UNIT #120	3002506357	2	B	BLINEBRY/TUBB/DRINKARD	98092	59550	304	612
NORTHEAST DRINKARD UNIT #323	3002506361	2	J	BLINEBRY/TUBB/DRINKARD	173597	107200	90	561
NORTHEAST DRINKARD UNIT #322	3002506372	2	S	BLINEBRY/TUBB/DRINKARD	168128	104100	305	481
NORTHEAST DRINKARD UNIT #203	3002506398	4	P	BLINEBRY/TUBB/DRINKARD	169600			
NORTHEAST DRINKARD UNIT #106	3002506410	3	C	BLINEBRY/TUBB/DRINKARD	118561	70520	434	2496
NORTHEAST DRINKARD UNIT #511	3002506532	11	M	BLINEBRY/TUBB/DRINKARD	123872	77030	183	1085
NORTHEAST DRINKARD UNIT #514	3002530913	10	L	BLINEBRY/TUBB/DRINKARD	16642	7798	1113	1902
NORTHEAST DRINKARD UNIT #225	3002534249	2	I	BLINEBRY/TUBB/DRINKARD	31396	17092	550	2590
NORTHEAST DRINKARD UNIT #326	3002534365	3	p	BLINEBRY/TUBB/DRINKARD	32205	17459	614	2426
NORTHEAST DRINKARD UNIT #327	3002534366	3	J	BLINEBRY/TUBB/DRINKARD	34403	19343	451	2342
NORTHEAST DRINKARD UNIT #328	3002534367	10	B	BLINEBRY/TUBB/DRINKARD	27050	14299	573	2562
NORTHEAST DRINKARD UNIT #226	3002534380	3	Q	BLINEBRY/TUBB/DRINKARD	76889	47794	439	2290
NORTHEAST DRINKARD UNIT #330	3002534414	2	U	BLINEBRY/TUBB/DRINKARD	67748	41366	448	2335
NORTHEAST DRINKARD UNIT #126	3002534415	2	E	BLINEBRY/TUBB/DRINKARD	52064	30521	572	2703
NORTHEAST DRINKARD UNIT #227	3002534428	3	J	BLINEBRY/TUBB/DRINKARD	33767	18682	576	2422
NORTHEAST DRINKARD UNIT #329	3002534432	3	W	BLINEBRY/TUBB/DRINKARD	27499	14645	537	2537
NORTHEAST DRINKARD UNIT #414	3002534435	10	J	BLINEBRY/TUBB/DRINKARD	91968	58277	313	2158
NORTHEAST DRINKARD UNIT #412	3002534490	10	B	BLINEBRY/TUBB/DRINKARD	30501	16825	438	2371
NORTHEAST DRINKARD UNIT #223	3002506355	2	P	BLINEBRY/TUBB/DRINKARD	77777	47830	360	2563
NORTHEAST DRINKARD UNIT #223	3002506355	2	P	BLINEBRY/TUBB/DRINKARD	62724	37894	293	2433
NORTHEAST DRINKARD UNIT #106	3002506410	3	C	BLINEBRY/TUBB/DRINKARD	152012	100384	174	2136
NORTHEAST DRINKARD UNIT #401	3002506459	10	D	BLINEBRY/TUBB/DRINKARD	72664	43349	467	1910
NORTHEAST DRINKARD UNIT #204	3002506506	3	L	BLINEBRY/TUBB/DRINKARD	30555	16047	1148	2567
NORTHEAST DRINKARD UNIT #207	3002506519	3	14	BLINEBRY/TUBB/DRINKARD	72037	44303	936	1812
NORTHEAST DRINKARD UNIT #207	3002506519	3	14	BLINEBRY/TUBB/DRINKARD	84881	52777	270	2670
NORTHEAST DRINKARD UNIT #107	3002520315	3	F	BLINEBRY/TUBB/DRINKARD	37908	20521	1017	2960
NORTHEAST DRINKARD UNIT #124	3002534424	3	K	BLINEBRY/TUBB/DRINKARD	62611	37355	445	2837
NORTHEAST DRINKARD UNIT #125	3002534425	3	J	BLINEBRY/TUBB/DRINKARD	109980	70101	183	2481
NORTHEAST DRINKARD UNIT #228	3002534427	3	J	BLINEBRY/TUBB/DRINKARD	67571	40921	268	2754
NORTHEAST DRINKARD UNIT #306	3002506507	3	R	BLINEBRY/TUBB/DRINKARD	20617	9962	1017	2455
NORTHEAST DRINKARD UNIT #614	3002506579	14	D	BLINEBRY/TUBB/DRINKARD	68924	41546	1023	2184
NORTHEAST DRINKARD UNIT #617	3002506580	14	F	BLINEBRY/TUBB/DRINKARD	189339	129128	179	1244
A T TURNER #009	3002506751	22	K	ELLENBURGER	94230	52400	540	5700
EO CARSON #016	3002506987	33	D	FUSSELMAN	100876	59330	878	2929
V M HENDERSON #002	3002506908	30	A	GLORIETA	138153	81610	744	2735
ARGO #007	3002509915	15	L	GRAYBURG	123777			
HAWK FEDERAL B 1 #012	3002506435	8	O	GRAYBURG	18553	11206	252	103
WEST BLINEBRYDRINKARD UNIT #043	3002526601	8	N	GRAYBURG	13256	7329	180	738
LOCKHART B 11 #003	3002506525	11	E	GRAYBURG	85125	53772	199	1831
TURNER #004	3002506746	22	M	GRAYBURG	95429	59121	861	3066

TURNER #011	3002506753	22	N	GRAYBURG	106450	67814	525	2271
HARRY LEONARD NCT E #005	3002506624	16	H	GRAYBURG	198705			
ARGO A #007	3002506739	22	E	GRAYBURG	238149	166197	295	1829
ARGO A #008	3002506740	22	D	GRAYBURG	118524	76444	275	1602
LOCKHART A 17#002	3002506637	17	I	GRAYBURG	147051	89860	88	1325
H T MATTERN NCT C #001	3002506657	18	I	GRAYBURG	23006	10150	2040	2517
LG WARLICK B #001	3002506665	19	H	GRAYBURG	134673	79530	791	3055
EUNICE KING #001	3002506837	28	E	GRAYBURG	16028	6881	3007	479
EUNICE KING #003	3002506839	28	F	GRAYBURG	14405	6347	1614	959
V M HENDERSON #001	3002506907	30	H	GRAYBURG	12182	3794	2785	1574
ARGO #007	3002509915	15	L	GRAYBURG	123162	75000	153	1138
W W WEATHERLY #001	3002506644	17	K	GRAYBURG	11484	4241	2880	466
TEXACO #001	3002535373	3	T	GRAYBURG	54027	26650	330	1770
W W WEATHERLY #001	3002506644	17	K	GRAYBURG	14238	4702	4037	716
WEST BLINEBRY DRINKARD UNIT #072	3002506645	17	J	GRAYBURG	15453	7280	1958	630
H STURNER #002	3002506884	29	M	GRAYBURG	15574	7136	2488	395
C L HARDY #004	3002506705	20	M	PADDOCK	132840	78800	790	2500
J N CARSON NCT C #009	3002506836	28	I	PADDOCK	91426	51970	309	4579
C L HARDY #002	3002506685	20	N	PADDOCK		72800	800	3700
V M HENDERSON #005	3002506911	30	B	PENROSE	13143	3996	2926	1826
EUNICE KING #024	3002506864	28	E	SAN ANDRES	97871	57350	223	3405
EUNICE KING #024	3002506864	28	E	SAN ANDRES	57304	31970	618	3301
HAWK B 10 #005	3002506455	10	B	SIMPSON	169290	115417	256	18
HARRY LEONARD NCT F #015	3002506359	2	G	SIMPSON	168218	103100	28	1120
LOCKHART B 12 #005	3002506540	12	E	SIMPSON	13070	6841	150	241
EUNICE KING #007	3002506843	28	G	SIMPSON	75060	42400	410	4150
NORTHEAST DRINKARD UNIT #723	3002506605	15	M	SIMPSON	118800	73000	122	1004
NORTHEAST DRINKARD UNIT #723	3002506605	15	M	SIMPSON	124500	76050	336	1140
AM YORK #002	3002509924	20	A	TUBB	158624			
WEST BLINEBRY DRINKARD UNIT #032	3002506437	9	F	TUBB	195187	118000	158	3250
WEST BLINEBRY DRINKARD UNIT #037	3002506439	9	P	TUBB	195890	118000	390	2750
WEST BLINEBRY DRINKARD UNIT #006	3002506443	9	B	TUBB	131370	81170	143	275
NEW MEXICO V STATE #007	3002506469	10	N	TUBB	174558	107000	488	1270
LG WARLICK A #001	3002506664	19	I	TUBB	163230	105700	189	801
NANCY STEPHENS #001	3002506774	24	D	TUBB	188423	115300	622	1301
WEST BLINEBRY DRINKARD UNIT #073	3002506646	17	G	TUBB	158923	97412	122	1261
WEST BLINEBRY DRINKARD UNIT #073	3002506646	17	G	TUBB	9666	4300	1693	160
AM YORK #002	3002509924	20	A	TUBB	198080	119774	252	3350
C L HARDY #002	3002506685	26	K	TUBB	184903	114000	610	700
STATE C TR 13 #008	3002507050	36	D	YESO	144570	90010	779	420

Other Produced Water Samples - Attachment VII-4.2								
API	Section	Township	Range	Formation	TDS	Chloride	Bicarbonate	Sulfate
					mg/l	mg/l	mg/l	mg/l
30-025-02424	11	20S	34E	BONE SPRING	29436	16720	634	1142
30-025-02427	12	20S	34E	BONE SPRING	15429			
30-025-02427	12	20S	34E	BONE SPRING	180701	108300	1016	670
30-025-02429	12	20S	34E	BONE SPRING	202606	118100	5196	992
30-025-02429	12	20S	34E	BONE SPRING	121800			
30-025-02431	12	20S	34E	BONE SPRING	147229	89640	108	1038
30-025-31696	2	20S	34E	DELAWARE	152064	102148	404	691
30-025-32105	2	20S	34E	DELAWARE	296822	215237	143	294
30-025-32466	2	20S	34E	DELAWARE	340838	245270	229	147
30-025-02427	12	20S	34E	DELAWARE	214787	132700	208	1816
30-025-02431	12	20S	34E	DEVONIAN	33414	18570	227	1961
30-025-02432	13	20S	34E	DEVONIAN	45778	26440	1145	729
30-025-01912	16	16S	34E	WOLFCAMP	164004	102500	4204	1249
30-025-01922	20	16S	34E	WOLFCAMP	104541	64290	280	541
30-025-01922	20	16S	34E	WOLFCAMP	104033	64080	268	515
30-025-01922	20	16S	34E	WOLFCAMP	105175	65570	207	192
30-025-01925	21	16S	34E	WOLFCAMP	86355	51800	610	665
30-025-01928	21	16S	34E	WOLFCAMP	119102	73300	227	454
30-025-01928	21	16S	34E	WOLFCAMP	35422	19170	979	1949
30-025-01930	22	16S	34E	WOLFCAMP	30015	14800	750	3300
30-025-01931	22	16S	34E	WOLFCAMP	87680	53000	301	681
30-025-01933	28	16S	34E	WOLFCAMP	59960	35100	515	1500
30-025-01933	28	16S	34E	WOLFCAMP	60309	35350	586	1297
30-025-01940	30	16S	34E	WOLFCAMP	82422	49890	361	787
30-025-01944	30	16S	34E	WOLFCAMP	83960	51410	418	641
30-025-20222	27	16S	34E	WOLFCAMP	85457	51020	544	1201
30-015-42895	2	23S	31E	WOLFCAMP	119472	73173		1036



Fenway Produced Water Analysis- Attachment VII-4.3

Page 1 of 2

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
P.O. Box 301
Lovington NM, 88260

Project: GOODNIGHT MIDSTREAM
Project Number: NONE GIVEN
Project Manager: LANCE CRENSHAW
Fax To: (575) 396-1429

Reported:
05-Feb-19 17:18

FENWAY 11900304-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	1630		5.00	mg/L	1	9012407	AC	30-Jan-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9012407	AC	30-Jan-19	310.1	
Chloride*	73000		4.00	mg/L	1	9012811	AC	31-Jan-19	4500-Cl-B	
Conductivity*	146000		1.00	uS/cm	1	9013002	AC	30-Jan-19	120.1	
pH*	7.25		0.100	pH Units	1	9013002	AC	30-Jan-19	150.1	
Resistivity	0.0684			Ohm-cm	1	9013002	AC	30-Jan-19	120.1	
Specific Gravity @ 60° F	1.076		0.000	[blank]	1	9013007	AC	30-Jan-19	SM 2710F	
Sulfate*	1810		250	mg/L	25	9013006	AC	30-Jan-19	375.4	
TDS*	107000		5.00	mg/L	1	9012801	AC	31-Jan-19	160.1	
Alkalinity, Total*	1340		4.00	mg/L	1	9012407	AC	30-Jan-19	310.1	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Barium*	<10.0		10.0	mg/L	200	B901226	AES	04-Feb-19	EPA200.7	
Calcium*	1730		20.0	mg/L	200	B901226	AES	04-Feb-19	EPA200.7	
Iron*	10.2		10.0	mg/L	200	B901226	AES	04-Feb-19	EPA200.7	
Magnesium*	271		20.0	mg/L	200	B901226	AES	04-Feb-19	EPA200.7	
Potassium*	1100		200	mg/L	200	B901226	AES	04-Feb-19	EPA200.7	
Sodium*	48600		200	mg/L	200	B901226	AES	04-Feb-19	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES
SCALE INDEX WATER ANALYSIS REPORT

Company : GOODNIGHT MIDSTREAM
 Lease Name : LAB # H900304-03
 Well Number : FENWAY
 Location : 32.456025 -103.274594

Date Sampled : 01/28/19
 Company Rep. : RALPH TIJERINA

ANALYSIS

1. pH	7.25	
2. Specific Gravity @ 60/60 F.	1.0760	
3. CaCO ₃ Saturation Index @ 80 F.	+1.103	'Calcium Carbonate Scale Possible'
@ 140 F.	+2.013	'Calcium Carbonate Scale Possible'

Dissolved Gasses

4. Hydrogen Sulfide	ND	PPM
5. Carbon Dioxide	ND	PPM
6. Dissolved Oxygen	ND	PPM

Cations

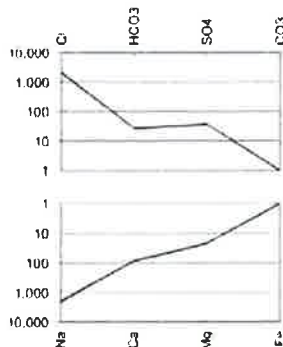
		/	Eq. Wt.	=	MEQ/L
7. Calcium (Ca++)	1,730.00	/	20.1	=	86.07
8. Magnesium (Mg++)	271.00	/	12.2	=	22.21
9. Sodium (Na+)	48,600	/	23.0	=	2,011.82
10. Barium (Ba++)	0.000	/	68.7	=	0.00

Anions

11. Hydroxyl (OH-)	0	/	17.0	=	0.00
12. Carbonate (CO ₃ =)	0	/	30.0	=	0.00
13. Bicarbonate (HCO ₃ -)	1,630	/	61.1	=	26.68
14. Sulfate (SO ₄ =)	1,810	/	48.8	=	37.09
15. Chloride (Cl-)	73,000	/	35.5	=	2,056.34

Other

16. Total Iron (Fe)	10.200	/	18.2	=	0.56
17. Total Dissolved Solids	107,000				
18. Total Hardness As CaCO ₃	5,436.0				
19. Calcium Sulfate Solubility @ 90 F.	5,879				
20. Resistivity (Measured)	0.068	Ohm/Meters	@ 77	Degrees (F)	

Logarithmic Water Pattern**PROBABLE MINERAL COMPOSITION**

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO ₃) ₂	81.04	X	26.68	=	2,162
CaSO ₄	68.07	X	37.09	=	2,525
CaCl ₂	55.50	X	22.30	=	1,238
Mg(HCO ₃) ₂	73.17	X	0.00	=	0
MgSO ₄	60.19	X	0.00	=	0
MgCl ₂	47.62	X	22.21	=	1,058
NaHCO ₃	84.00	X	0.00	=	0
NaSO ₄	71.03	X	0.00	=	0
NaCl	58.46	X	2,011.82	=	117,611

ND = Not Determined

Swabbed Formation Water Analyses– Attachment VII-5.1
Page 1 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions 703 East Clinton Hobbs NM, 88240	Project: TED WILLIAMS SWD #1 Project Number: CAM - 18-001 Project Manager: Bob Allen Fax To: (575) 393-4388	Reported: 21-Sep-18 08:43
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LOWER ZONE # 1 SWAB	H802574-01	Water	10-Sep-18 08:50	11-Sep-18 16:43
LOWER ZONE # 2 SWAB	H802574-02	Water	10-Sep-18 09:05	11-Sep-18 16:43
LOWER ZONE # 3 SWAB	H802574-03	Water	10-Sep-18 09:25	11-Sep-18 16:43
LOWER ZONE # 4 SWAB	H802574-04	Water	10-Sep-18 09:40	11-Sep-18 16:43
UPPER ZONE # 1 SWAB	H802574-05	Water	10-Sep-18 12:15	11-Sep-18 16:43
UPPER ZONE # 2 SWAB	H802574-06	Water	10-Sep-18 12:29	11-Sep-18 16:43
UPPER ZONE # 3 SWAB	H802574-07	Water	10-Sep-18 12:42	11-Sep-18 16:43
UPPER ZONE # 4 SWAB	H802574-08	Water	10-Sep-18 12:55	11-Sep-18 16:43

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses– Attachment VII-5.1
Page 2 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
Project Number: CAM - 18-001
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
21-Sep-18 08:43

LOWER ZONE #1 SWAB
11802574-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	5300		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-Cl-B	
TDS*	9400		5.00	mg/L	1	8090710	AC	13-Sep-18	160.1	

Volatile Organic Compounds by EPA Method 8021

Benzene*	0.067		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Toluene*	0.010		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	0.001		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	0.005		0.003	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total BTEX	0.083		0.006	mg/L	1	8091213	MS	13-Sep-18	8021B	
Surrogate: 4-Bromofluorobenzene (P1D)			95.4 %		81.3-128	8091213	MS	13-Sep-18	8021B	

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Ceiley D. Keene

Ceiley D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses– Attachment VII-5.1
Page 3 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
 703 East Clinton
 Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
 Project Number: CAM - 18-001
 Project Manager: Bob Allen
 Fax To: (575) 393-4388

Reported:
 21-Sep-18 08:43

LOWER ZONE # 2 SWAB
11802574-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	13300		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-C1-13	
TDS*	19800		5.00	mg/L	1	8090710	AC	13-Sep-18	1601	

Volatile Organic Compounds by EPA Method 8021

Benzene*	0.013		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Toluene*	0.003		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.001		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	<0.003		0.003	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total BTEX	0.016		0.006	mg/L	1	8091213	MS	13-Sep-18	8021B	
Surrogate: 4-Bromofluorobenzene (PFD)			94.3 %	81.3-128		8091213	MS	13-Sep-18	8021B	

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Celestine Keene

Celestine D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses– Attachment VII-5.1
Page 4 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
Project Number: CAM - 18-001
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
21-Sep-18 08:43

**LOWER ZONE # 3 SWAB
H802574-03 (Water)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	8800		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-Cl-B	
TDS*	14200		5.00	mg/L	1	8090710	AC	13-Sep-18	160.1	

Volatile Organic Compounds by EPA Method 8021

Benzene*	0.045		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Toluene*	0.007		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.001		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	<0.003		0.003	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total BTEX	0.052		0.006	mg/L	1	8091213	MS	13-Sep-18	8021B	
Surrogate 1-Bromofluorobenzene (PID)			93.1 %	81.3-128		8091213	MS	13-Sep-18	8021B	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses– Attachment VII-5.1
Page 5 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
 703 East Clinton
 Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
 Project Number: CAM - 18-001
 Project Manager: Bob Allen
 Fax To: (575) 393-4388

Reported:
 21-Sep-18 08:43

LOWER ZONE #4 SWAB
H802574-04 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	23700		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-CL-B	
TDS*	40100		5.00	mg/L	1	8090710	AC	13-Sep-18	160-I	

Volatile Organic Compounds by EPA Method 8021

Benzene*	2.78		0.050	mg/L	50	8091213	MS	13-Sep-18	8021B	
Toluene*	0.223		0.050	mg/L	50	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/L	50	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	<0.150		0.150	mg/L	50	8091213	MS	13-Sep-18	8021B	
Total BTX	3.00		0.300	mg/L	50	8091213	MS	13-Sep-18	8021B	
Surrogate 4-Bromofluorobenzene (P11)			96.2 %	81.3-128		8091213	MS	13-Sep-18	8021B	

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C. D. Keene

Celey D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses – Attachment VII-5.1
Page 6 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
Project Number: CAM - 18-001
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
21-Sep-18 08:43

UPPER ZONE #1 SWAB
11802574-05 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	48500		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-Cl-B	
TDS*	80100		5.00	mg/L	1	8090710	AC	13-Sep-18	160.1	

Volatile Organic Compounds by EPA Method 8021

Benzene*	0.380		0.010	mg/L	10	8091213	MS	13-Sep-18	8021B	
Toluene*	0.045		0.010	mg/L	10	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.010		0.010	mg/L	10	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	<0.030		0.030	mg/L	10	8091213	MS	13-Sep-18	8021B	
Total BTX	0.425		0.060	mg/L	10	8091213	MS	13-Sep-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>										
			98.7%	81.3-128		8091213	MS	13-Sep-18	8021B	

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C. D. Keene

Celey D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses – Attachment VII-5.1
Page 7 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
 703 East Clinton
 Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
 Project Number: CAM - 18-001
 Project Manager: Bob Allen
 Fax To: (575) 393-4388

Reported:
 21-Sep-18 08:43

UPPER ZONE #2 SWAB
H802574-06 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	49500		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-Cl-B	
TDS*	81500		5.00	mg/L	1	8090710	AC	13-Sep-18	160 I	

Volatile Organic Compounds by EPA Method 8021

Benzene*	0.085		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Toluene*	0.014		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.001		0.001	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	0.004		0.003	mg/L	1	8091213	MS	13-Sep-18	8021B	
Total BTEX	0.103		0.006	mg/L	1	8091213	MS	13-Sep-18	8021B	

Surrogate: 4-Bromofluorobenzene (P11)

86.3 % 81.3-128 8091213 MS 13-Sep-18 8021B

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* = Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses – Attachment VII-5.1
Page 8 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions 703 East Clinton Hobbs NM, 88240	Project: TED WILLIAMS SWD #1 Project Number: CAM - 18-001 Project Manager: Bob Allen Fax To: (575) 393-4388	Reported: 21-Sep-18 08:43
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UPPER ZONE # 3 SWAB
11802574-07 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Chloride*	21200		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-C1-B	
TDS*	40400		5.00	mg/L	1	8090710	AC	13-Sep-18	160.1	

Volatile Organic Compounds by EPA Method 8021

Benzene*	4.33		0.050	mg/L	50	8091213	MS	13-Sep-18	8021B	
Toluene*	0.551		0.050	mg/L	50	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/L	50	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	0.289		0.150	mg/L	50	8091213	MS	13-Sep-18	8021B	
Total BTEX	5.17		0.300	mg/L	50	8091213	MS	13-Sep-18	8021B	
Spike: 4-Bromofluorobenzene (P111)			95.1 %	8/ 3-128		8091213	MS	13-Sep-18	8021B	

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Cevey D. Keene, Lab Director/Quality Manager

Swabbed Formation Water Analyses – Attachment VII-5.1
Page 9 of 9



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TED WILLIAMS SWD #1
Project Number: CAM - 18-001
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
21-Sep-18 08:43

UPPER ZONE # 4 SWAB
H802574-08 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories

Inorganic Compounds

Chloride*	9800		4.00	mg/L	1	8090703	AC	14-Sep-18	4500-Cl-B	
TDS*	16400		5.00	mg/L	1	8091202	AC	13-Sep-18	160.1	

Volatile Organic Compounds by EPA Method 8021

Benzene*	6.20		0.100	mg/L	100	8091213	MS	13-Sep-18	8021B	
Toluene*	0.664		0.100	mg/L	100	8091213	MS	13-Sep-18	8021B	
Ethylbenzene*	<0.100		0.100	mg/L	100	8091213	MS	13-Sep-18	8021B	
Total Xylenes*	<0.300		0.300	mg/L	100	8091213	MS	13-Sep-18	8021B	
Total BTEX	6.86		0.600	mg/L	100	8091213	MS	13-Sep-18	8021B	
Surrogate: 1-Bromofluorobenzene (PFB)			94.7 %	81.3-128		8091213	MS	13-Sep-18	8021B	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

***VIII.APPROPRIATE GEOLOGIC DATA:** The red beds are the nearest underground source of drinking water above the proposed disposal interval. They are reportedly 1,265' deep in the ROY RIDDEL #4 well (API# 30-025-35623) that is approximately 1,050' southeast of the VERLANDER SWD #1. There is approximately 2,760' of vertical separation and more than a thousand feet of anhydrite and salt between the bottom of the only likely underground water source (red beds) and the top of the San Andres.

Attachment VIII-1 is a NM State Engineer report that details the nearest recorded freshwater well, CP-00986-POD1 to be approximately one mile northeast and an additional ten wells within two miles. The deepest well is 340'. No underground sources of drinking water are below the proposed disposal interval and the Ogallala aquifer is approximately 3 miles north of this proposed well as detailed in Attachment VIII-2

Estimated formation tops at the proposed VERLANDER SWD 1 location are as follows:

Anhydrite – 1255'
Salt – 1765'
Yates – 2655'
Seven Rivers – 2920'
Queen – 3420'
Grayburg = 3705'
San Andres = 4015'
Glorieta = 5220'
Paddock = 5555'

. Geologic Discussion of formations Grayburg through Blinebry; reservoirs and permeability barriers.

Reference wells: 30 025 35853 Lot D section 7 and 30 025 33677 Lot L section 7.

At these locations (the Verlander SWD will be between them but offset to the west) the Grayburg is part of the barrier that will prevent water from reaching the hydrocarbon producing zones above. The upper Grayburg is tight rock consisting of anhydrite and low porosity dolomite. The porosity is less than 5% averaging 2-3%. This interval is 150 feet thick in the 35853 well and 220 feet thick in the 33677 well.

Below the tight upper Grayburg is an interval with mostly anhydrite-low porosity dolomite with thin shale and siltstone interbeds. These do have some fluid storage capacity 6-9% porosity but are low permeability. When they are hydrocarbon charged, they can be stratigraphic traps for oil below the regional oil water contact of the Eunice Monument South Unit (EMSU). There are no hydrocarbon charged stratigraphic traps in the area. This interval is 150 feet thick and has tested salt water at this elevation. The combined 300 feet of thickness will act as part of the permeability barrier.

In addition, the top 100 feet of the San Andres is dominantly anhydrite. This is a very good barrier. The San Andres barrier is 100 feet thick in both the 35853 and the 33677 wells. The Verlander location is expected to be similar in thickness.

The San Andres injection interval, 4251 feet to 5200 feet MD will be alternating layers of porous dolomite and limestone. The dolomite ranges from 8% porosity up to 15% with excellent fluid transmissivity properties in the top, to porous dolomite and limestone with porosities from 3% to 8% in the bottom. The disposal reservoir will have a net thickness of 280 feet out of a gross thickness of 950.

NOTE: The well history of the 33677 well shows the operator requested an oil pool designation for the San Andres. This was done in June of 1998. The zone was tested and no oil was produced. The well was plugged back in July of 1998; San Andres was abandoned. The cumulative oil sold under that pool was zero (0). The well still has the "San Andres oil pool" designation in the OCD files, although it never sold any oil.

The basal San Andres lithologic unit is an 80 to 100 foot limestone interval with very low porosity, 1% - 3%. This interval is the barrier between the Glorieta and San Andres reservoirs.

The Glorieta in the 35853 is 340 feet of thin-bedded dolomitic siltstones and silty to sandy dolomites. Porosities are good, ranging from 5% to 11%. Thicknesses and rock properties are the same in the 33677 well. This will be a good reservoir for the disposal of fluid; very large area and thickness.

The interval below the Glorieta is the Paddock; Paddock in name. The lithology that produces oil in other wells is not present at this location. The rock type is similar to the Glorieta above, interbedded shales and dolomitic siltstones. In effect it is more Glorieta although operators in the area call the "Paddock" top at this depth.

Below the Paddock is the Blinebry interval. The Blinebry is 750' of tight dolomite in both wells. This is an excellent, exceptionally thick barrier to flow.

A cross-section detailing appropriate geologic data of the confining zones and the San Andres – Glorieta injection zone is included as Attachment VIII-3. It describes lithologic detail, geologic name, thickness and depth.

NMOSE Reported Freshwater Well Data– Attachment VIII-1

VERLANDER SWD #001 – API# 30-025-XXXXX
2482' FNL & 1277' FEL, Unit H of Sec 21-T21S-R36E
Lea County, New Mexico



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW#### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has been
replaced,
O=orphaned,
C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00986 POD1		CP	LE	4	3	4	06	21S	37E	669110	3597437	1612	154		1-Mile
CP 00685 POD1		CP	LE	2	3	4	11	21S	36E	666038	3595997*	1801	220		
CP 00877		CP	LE				06	21S	37E	668920	3598153*	1961	150	73	77
CP 00446 POD1		CP	LE	1	4	4	13	21S	36E	667871	3594424*	2165	185	148	37
CP 00446 POD2		CP	LE	1	4	4	13	21S	36E	667871	3594424*	2165	200	151	49
CP 01245 POD1		CP	LE			4	18	21S	37E	668676	3594411	2367	220		
CP 01026 POD1		CP	LE	1	1	3	17	21S	37E	669809	3594958	2631	167	95	72
CP 00447 POD1		CP	LE	2	4	4	18	21S	37E	669647	3594451*	2862	95		
CP 00448 POD1		CP	LE	2	4	4	18	21S	37E	669647	3594451*	2862	100		
CP 00676		CP	LE		4	4	18	21S	37E	669548	3594352*	2873	140	106	34
CP 00690		CP	LE		4	4	03	21S	36E	664706	3597487*	3165	340		

Average Depth to Water: 114 feet

Minimum Depth: 73 feet

Maximum Depth: 151 feet

Record Count: 11

Basin/County Search:

County: Lea

UTM NAD83 Radius Search (in meters):

Easting (X): 667740.866

Northing (Y): 3596585.949

Radius: 3220

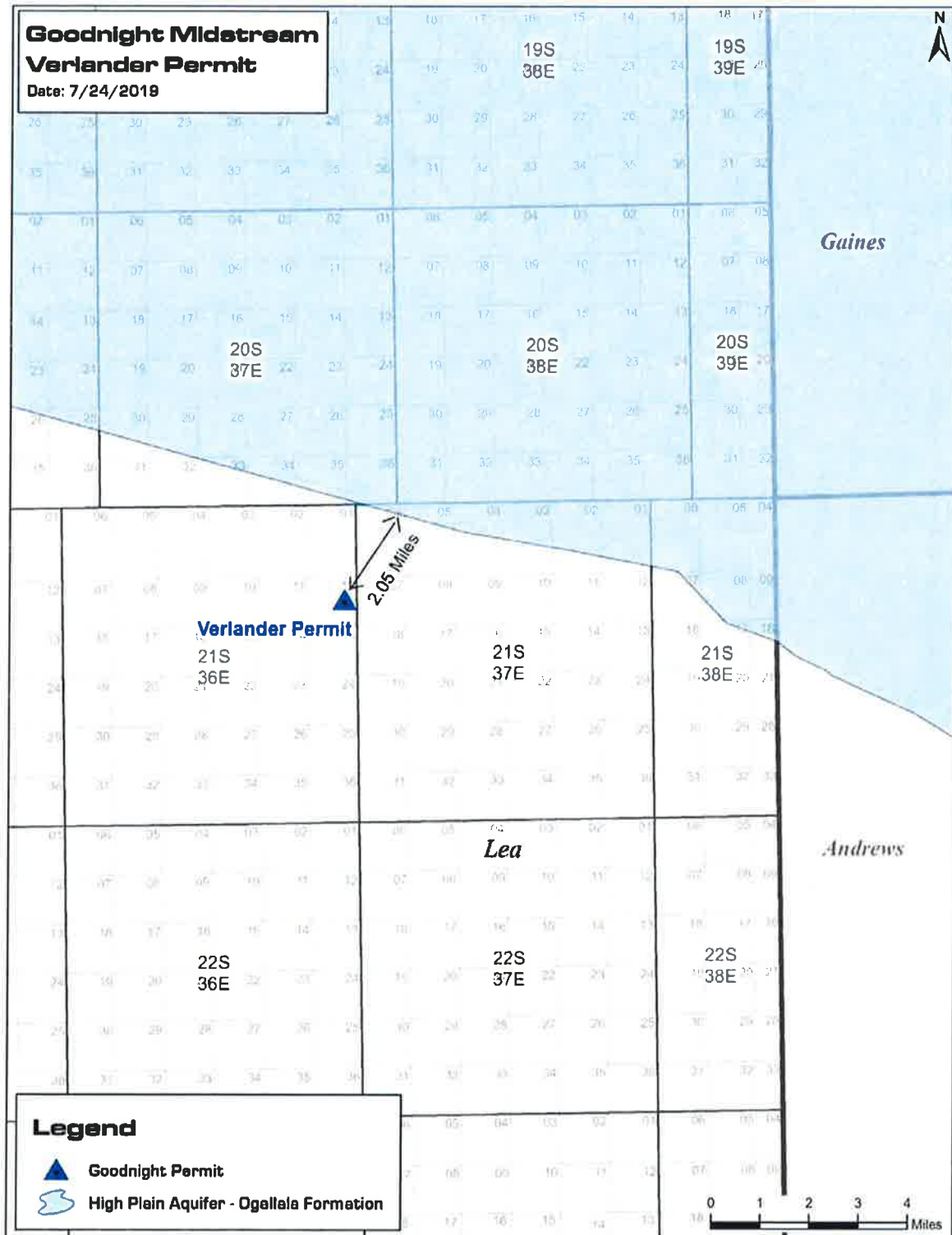
*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/1/19 3:34 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Map of High Plains/Ogallala Aquifer– Attachment VIII-2



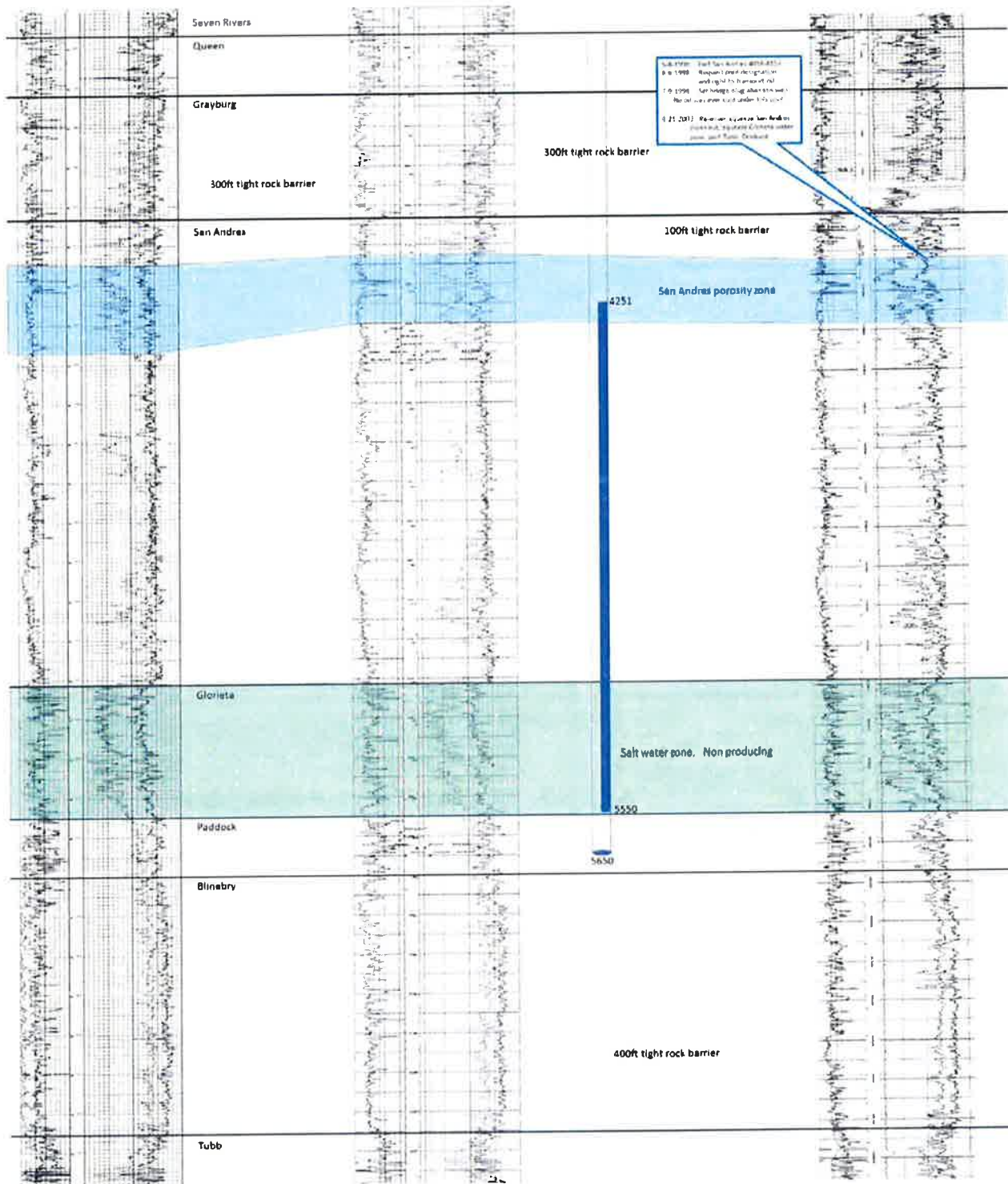
GOODNIGHT
MIDSTREAM

Appropriate Geologic Data– Attachment VIII-3

Conoco Oxy State F1#1
30-025-35176 P1-21S-36E
KB: 3508 TD: 8000 2000

BP America	Mae F Curry #3	Goodnight Midstream	Verlander #1
30-025-35853	D 7-215-36E	30-025-00000	G 12-215-36E
KB. 3500	TD: 6985 2002		

Conoco Deck Estate 7#1
30-025-33677 L 7-215-36E
KB 3504 TD: 7176 1997



GOODNIGHT
MIDSTREAM

- IX. STIMULATION PROGRAM: A conventional acid job may be performed on the proposed San Andres/Glorieta perforated interval from 4,251' – 5,550' to clean and open the formation.
- *X. LOGGING & TEST DATA: Cement Bond, Gamma-Ray/CCL, and Composite Logs will be submitted to the OCD after completion of this well and prior to first injection.
- *XI. FRESHWATER ANALYSES: Three freshwater wells were found within one mile of the proposed VERLANDER SWD #1 and sampled on March 19, 2019. The Dasco Land Corp well seems to correlate to CP-00685-POD1 found on the NM State Engineer report but the location was found to be approximately 1,000' east of the state's documented location. The other two freshwater wells, the Robert McCasland and Sample #2, are not found on the NM State Engineer report. Analyses of these three wells are included as Attachments XI-1, XI-2 and XI-3 while Attachment XI-4 details their locations.



Dasco Land Sample #1 Analysis- Attachment XI-1

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
P.O. Box 301
Lovington NM, 88260

Project: VERLANDER SWD #1
Project Number: #10433
Project Manager: LANCE CRENSHAW
Fax To: (575) 396-1429

Reported:
29-Mar-19 17:07

DASCO LAND CORP. 32.48821-103.2297 H901049-01 (Water)

Analyte	Result	MDI	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	288		5.00	mg/L	1	9031804	AC	20-Mar-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9031804	AC	20-Mar-19	310.1	
Chloride*	96.0		4.00	mg/L	1	9031903	AC	20-Mar-19	4500-CL-B	
Conductivity*	716		1.00	uS/cm	1	9031901	AC	19-Mar-19	120.1	
pH*	8.97		0.100	pH Units	1	9031901	AC	19-Mar-19	150.1	
Specific Gravity @ 60° F	1.000		0.000	[blank]	1	9032010	AC	20-Mar-19	SM 2710F	
Sulfate*	87.3		25.0	mg/L	2.5	9032002	AC	20-Mar-19	175.4	
TDS*	408		5.00	mg/L	1	9032001	AC	22-Mar-19	160.1	
Alkalinity, Total*	236		4.00	mg/L	1	9031804	AC	20-Mar-19	310.1	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Calcium*	29.9		0.500	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	
Magnesium*	24.5		0.500	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	
Potassium*	5.23		5.00	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	
Sodium*	85.5		5.00	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



Sample #2 Analysis– Attachment XI-2

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Analytical Results For:

Etech Environmental & Safety Solutions
P.O. Box 301
Lovington NM, 88260

Project: VERLANDER SWD #1
Project Number: #10433
Project Manager: LANCE CRENSHAW
Fax To: (575) 396-1429

Reported:
29-Mar-19 17:07

SAMPLE #2 32.482796-103.213849

11901049-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	322		5.00	mg/L	1	9031804	AC	20-Mar-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9031804	AC	20-Mar-19	310.1	
Chloride*	72.0		4.00	mg/L	1	9031903	AC	20-Mar-19	4500-CL-B	
Conductivity*	743		1.00	nS/cm	1	9031901	AC	19-Mar-19	120.1	
pH*	8.14		0.100	pH Units	1	9031901	AC	19-Mar-19	150.1	
Specific Gravity @ 60° F	1.002		0.000	[blank]	1	9032010	AC	20-Mar-19	SM 2710F	
Sulfate*	99.0		25.0	mg/L	2.5	9032002	AC	20-Mar-19	375.4	
TDS*	452		5.00	mg/L	1	9032001	AC	22-Mar-19	160.1	
Alkalinity, Total*	264		4.00	mg/L	1	9031804	AC	20-Mar-19	310.1	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Calcium*	43.3		0.500	mg/L	\$	B903196	AES	25-Mar-19	EPA200.7	
Magnesium*	20.3		0.500	mg/L	\$	B903196	AES	25-Mar-19	EPA200.7	
Potassium*	5.54		5.00	mg/L	\$	B903196	AES	25-Mar-19	EPA200.7	
Sodium*	80.9		5.00	mg/L	\$	B903196	AES	25-Mar-19	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



R. McCasland Sample #3 Analysis– Attachment XI-3

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
P.O. Box 301
Lovington NM, 88260

Project: VERLANDER SWD #1
Project Number: #10433
Project Manager: LANCE CRENSHAW
Fax To: (575) 396-1429

Reported:
29-Mar-19 17:07

ROBERT MCCASLAND SAMPLE #3 32.498742-103.206514 H901049-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	239		5.00	mg/L	1	9031804	AC	20-Mar-19	310.1	
Alkalinity, Carbonate	< 1.00		1.00	mg/L	1	9031804	AC	20-Mar-19	310.1	
Chloride*	64.0		4.00	mg/L	1	9031903	AC	20-Mar-19	4500-CL-B	
Conductivity*	645		1.00	nS/cm	1	9031901	AC	19-Mar-19	120.1	
pH*	8.75		0.100	pH Units	1	9031901	AC	19-Mar-19	150.1	
Specific Gravity @ 60° F	1.003		0.000	[blank]	1	9032010	AC	20-Mar-19	SM 2710F	
Sulfate*	98.0		25.0	mg/L	2.5	9032002	AC	20-Mar-19	375.4	
TDS*	394		5.00	mg/L	1	9032001	AC	22-Mar-19	160.1	
Alkalinity, Total*	196		4.00	mg/L	1	9031804	AC	20-Mar-19	310.1	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Calcium*	35.3		0.500	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	
Magnesium*	22.6		0.500	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	
Potassium*	<5.00		5.00	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	
Sodium*	63.0		5.00	mg/L	5	B903196	AES	25-Mar-19	EPA200.7	


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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Map of Sampled Freshwater Wells – Attachment XI-4

 One Mile AOR



XII. AFFIRMATIVE STATEMENT: A hydrogeologic study stating no evidence of faulting or communication was found is included as Attachment XII-1.



Steve Drake
V.P. Geology and Reservoir Engineering
Goodnight Midstream, LLC
5910 North Central Expressway, Suite 850
Dallas, Texas 75206

RE: Goodnight Midstream, LLC Verlander SWD well permit

Lot H, Section 12, Township 21S Range 36E
Lea County, New Mexico

Goodnight Midstream conducted a hydrogeologic investigation related to the proposed injection well. The scope of the investigation was to determine if there is any hydrologic connection between the proposed injection interval and any sources of underground drinking water.

Goodnight geologist performed an analysis of subsurface well log data. It is our conclusion that there is no evidence of faulting in the data we evaluated at the depths that are being considered. There are small scale flexures which may or may not be associated with small scale faults. None of these flexures extend above the Wolfcamp unconformity and are not seen in the Leonard intervals.

Goodnight acquired and evaluated 3D seismic covering the lands to the west of the proposed salt water disposal well. This data does not cover the proposed location but it does show the geologic setting in the nearby area. No faults are seen in the Artesia Group, San Andres, Glorieta, or Leonard series.

We see no evidence of faulting that would extend to or form a connection between the injection zone and any underground sources of drinking water.


Steve Drake
V.P. Geology and Reservoir Engineering
Goodnight Midstream, LLC

3-25-2019
Date

XIII. PROPER NOTICE:

All operators and lessees of record within the tracts of the area of review have been accounted for and were previously detailed on Attachment V-3. A thorough lease and mineral ownership investigation was performed upon all private tracts within the AOR by MLT Land Services, LLC. Their findings are included as Attachment XIII-1 through XIII-6.

The surface owner for the VERLANDER SWD 1 site is the Dasco Cattle Co, LLC. Contact information for all operators, lessees, surface and mineral owners is included as Attachment XIII-7. A copy of the C-108 and proper notice of application for disposal into the San Andres & Glorieta (4,251' – 5,550') was given via letter to all parties listed. A copy of a typical letter and certified mail receipts are included as Attachment XIII-8 & XIII-9 as “proof of notice”.

A legal notice was also published in the Hubb News-Sun. A proof copy of the published notice is included as Attachment XIII-10.

XIV. CERTIFICATION: See certification on original C-108

MLT Land Services, LLC

3001 West Loop North 250, North Ste C105-150, Midland, Texas 79705 | (940)999-4272 | Brad@MLTlandservices.com

April 16, 2019

RE: Verlander SWD Well – N2 NW/4 and the S/2 NW/4 Section 12 T21S R36E Lea County, NM

**Tom Schumacher
MidCon Resource Group, LLC
701-400-9909**

Dear Mr. Schumacher,

The active leases for the tract of land cited above are for the McQuatters #001 – API # 30-025-25675 and the McQuatters #002 – API # 30-025-26531 wells. These are included in the Eumont Gas Pool as a Standard 160 acre Gas Proration Unit and the includes entire 160 acres of the NW/4 of Section 12, T21S R36E in the pool. These wells were drilled through the Queen Formation to a depth of approximately 3,750 feet and the producing zone of these wells are in the Queen formation with producing zones from about the 3,507 foot depth to the 3,685 foot depth. Neither of these wells are producing in the proposed Verlander SWD Well zone. According to the State of New Mexico Records for these wells, the operator is the Petroleum Exploration Company Ltd.

The entire mineral ownership of the N/2 of the NW/4 is held by production from the original lease dated 7/7/1927 and filed in the Oil & Gas Records of Lea County, NM under Vol 8, Page 195. There were not depth restrictions of Pugh Clauses included in the lease. Therefore, by contacting the operator of the well, you would meet the requirements of the State of New Mexico.

The S/2 NW/4 of Section 12 T21S R36E has all the minerals forced pooled in the above unit to 4,000 feet. All the depths below 4,000 feet are open for lease and the mineral owners to report to are listed in the separate report. By contacting the above stated operator of the well and the listed mineral owners, you would meet the requirements of the State of New Mexico.

Sincerely yours,



Thomas A. Sewall
Senior Right-of-Way Agent and Landman
MLT Land Services, LLC

Verlander Well <u>S/2 NW/4 Section 12 T21S R36E</u>
Commerce Trust Company, Agent for Patterson 1976 Trust Investments, LLC by Farmers National Company, Agent 5110 South Yale Ave Suite 400 Tulsa, OK 74135
Etz Oil Properties, Ltd. P. O. Box 73406 Phoenix AZ 85050
George H. Etz, Jr., Trustee 1105 Xanthisma McAllen, TX 78504
Lincicome Oil & Gas, LLC 7 Woodland Drive Vienna, WV 26105
Keohane, Inc. 3619 E 2nd Street Roswell, NM 88201
Toles-Com-Ltd, LLC P. O. Box 1300 Roswell, NM 88202-1300
Graham Family Investments, LLC P. O. Box 1835 Roswell, NM 88202-1835

MLT Land Services, LLC

3001 West Loop North 250, North Ste C105-150, Midland, Texas 79705 | (940)999-4272 | Brad@MLTLandServices.com

April 16, 2019

**RE: Verlander SWD Well – 80 acres being the SW/4 NE/4 and NW/4 SE/4 of Section 12 T21S R36E
Lea County, NM**

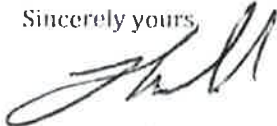
**Tom Schumacher
MidCon Resource Group, LLC
701-400-9909**

Dear Mr. Schumacher,

The active lease for the tracts of land cited above is for the Carter #001 – API # 30-025-04621 well. This well is included in the Eumont Gas Pool as a Non-Standard 80 acre Gas Proration Unit and includes the entire 80 acres of the SW/4 NE/4 and NW/4 SE/4 of Section 12, T21S R36E in the pool. This well was drilled through the Queen Formation to a pool depth of approximately 4,000 feet and the producing zone of this well is in the Queen formation. This well is not producing in the proposed Verlander SWD Well zone. According to the State of New Mexico Records for this well, the operator is Special Energy Corp.

The mineral ownership of these tracts is under leases held by the operator. These leases were filed under V 118, P 66; V118, P 68; V118, P 70; V118, P73; V118, P75; V118, P77; V118, P80 and V118, P83 of the Oil & Gas Records of Lea County, NM, some of which included depth restrictions below 4,000 feet and two of the leases were only for the NW/4 SE/4 of Section 12 T21S R36E. Leases filed under V118, P70 and V118, P83 only lease the acreage to 4,000 feet. Leases filed under V118, P75 and V118, P80 were only for the NW/4 SE4. A list of these mineral owners and their assigns is attached. Therefore, by contacting the operator of the well and the list of attached mineral owners, you would meet the requirements of the State of New Mexico.

Sincerely yours,



Thomas A. Sewall
Senior Right-of-Way Agent and Landman
MLT Land Services, LLC

Private Lease & Mineral Owner Investigation – Attachment XIII-2.1

MINERAL OWNERS FOR NOTIFICATION: SW/4 NE/4 NW/4 SE/4 Sec 12 T21s R36E
Beverly Carter - Trustee of the Powhatan and Beverly T. Carter Revocable Trust P. O. Box 328 <u>Ft. Sumner, NM 88203</u>
LFN Cone Properties 3102 S. Oak Drive <u>Austin, TX 78704</u>
Mildred M. Montgomery 82 April Wind South Drive <u>Montgomery, Texas 77356</u>
Carter Family Minerals 464 East Main Street <u>Fort Sumner, NM 88119</u>
Thomas R. Cone P. O. Box 400 <u>Southwest City, MO 64863</u>
College of the Southwest Foundation 6610 Lovington Highway <u>Hobbs, NM 88240</u>
Cathie Cone McCown as Trustee for the Auvenshine Children's Testamentary Trust P. O. Box 658 <u>Dripping Springs, Texas 78620</u>
Cathie Cone McCown P. O. Box 658 <u>Dripping Springs, Texas 78620</u>
Kayla Cone P. O. Box 746 <u>Fayetteville, AR 72702</u>
Karen Cone P. O. Box 8357 <u>Fayetteville, AR 72703</u>

MLT Land Services, LLC

3001 West Loop North 250, North Ste C105-150, Midland, Texas 79705 | (940)999-4272 | Brad@MLTLandServices.com

April 16, 2019

RE: Verlander SWD Well – 320 acres being the NW/4 NE/4 and E/2 NE/4 and E/2 SE/4 and SW/4 SE/4 and E/2 SW/4 of Section 12 T21S R36E Lea County, NM

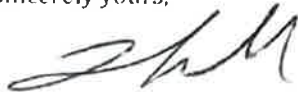
**Tom Schumacher
MidCon Resource Group, LLC
701-400-9909**

Dear Mr. Schumacher,

The active lease for the tracts of land cited above is for the Roy Riddel #003 – API # 30-025-35486 well. This well is included in the Eumont Gas Pool as a Non-Standard 320 acre Gas Proration Unit and includes the entire 320 acres of the NW/4 NE/4 and E/2 NE/4 and E/2 SE/4 and SW/4 SE/4 and E/2 SW/4 of Section 12, T21S R36E in the pool. This well was drilled through the Queen Formation to a pool depth of approximately 4,000 feet and the producing zone of this well is in the Queen formation. This well is not producing in the proposed Verlander SWD Well zone. According to the State of New Mexico Records for this well, the operator is Chevron USA Inc.

The mineral ownership of these tracts is under leases held by the operator. These leases were filed under V 42, P 505; V48, P 311; V48, P 316; V48, P320; V63, P134; V90, P325 of the Oil & Gas Records of Lea County, NM which included no depth restrictions or Pugh Clauses. Leases filed under V104, P280; V104, P282; V104, P293 and V104, P448 only lease the acreage to 4,000 feet. A list of these mineral owners and their assigns is attached. Therefore, by contacting the operator of the well and the list of attached mineral owners, you would meet the requirements of the State of New Mexico.

Sincerely yours,



Thomas A. Sewall
Senior Right-of-Way Agent and Landman
MLT Land Services, LLC

MINERAL OWNERS FOR NOTIFICATION: NW/4 NE/4 and E/2 NE/4 and E/2 SE/4 and SW/4 SE/4 and E/2 SW/4 Sec 12 T21S R36E
Prosperity Bank, as Trustee of the Williams Trust FOB MMP dated 4-10-1996 Trust Dept. 1401 Avenue O
S. E. Cone, Jr. P. O. Box 10321 Lubbock, TX 79408
Eleanor Christie Corrigan Trust P. O. Box 63869 Colorado Springs, CO 80962
Pat Corrigan, Trustee of the Pat Corrigan Trust uwo Hugh Corrigan II, Hugh Daniels Corrigan, Trustee of the CEC Trust for the benefit of Hugh Daniels Corrigan, and James Patrick Corrigan, Jr., Trustee of the CEC Trust for the benefit of James Patrick Corrigan, Jr. 310 West Wall Street, Suite 1200 Midland, TX 79701
Corrigan Southern Land and Cattle Company, LLC 8117 Preston Road, Suite 610 Dallas, TX 75225
LFN Cone Properties 3102 S. Oak Drive Austin, TX 78704
James Patrick Corrigan, Jr. Trust P. O. Box 69068 Vero Beach, FL 32969
Hugh Corrigan, IV, Power of Appointment Trust, William E. Corrigan, as Trustee 8117 Preston Road Suite 610 Dallas, Texas 75225
C. E. Corrigan Trust P. O. Box 643726 Vero Beach, FL 32964-3726

MLT Land Services, LLC

3001 West Loop North 250, North Ste C105-150, Midland, Texas 79705 | (940)999-4272 | Brad@MLTLandservices.com

April 16, 2019

RE: Verlander SWD Well – Lot 1 (a/k/a the NW/4 NW/4 of Section 7 T21S R37E Lea County, NM)

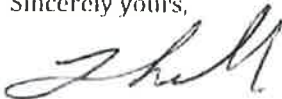
**Tom Schumacher
MidCon Resource Group, LLC
701-400-9909**

Dear Mr. Schumacher,

The active lease for the tract of land cited above is for the Mae F. Curry #003 – API # 30-025-35853 well. This well is an oil and includes the entire area of Lot 1 of Section 7, T21S R37E. This well is in the Hardy; Tubb- Drinkard and the Hardy; Blinbry pool with a total depth of 6,985 feet and a production zone from 5,758 feet to 6,810 feet. This well is not producing in the proposed Verlander SWD Well zone. According to the State of New Mexico Records for this well, the operator is the Apache Corporation.

The mineral ownership of this tract is under a lease held by the operator and is totally held by production. This lease was filed under V 13, P 74 of the Oil & Gas Records of Lea County, NM. The lease did not have any depth restrictions and it did not contain a Pugh Clause. There are no mineral owners that need to be contacted for this tract. Therefore, by contacting the operator of the well you would meet the requirements of the State of New Mexico.

Sincerely yours,



Thomas A. Sewall
Senior Right-of-Way Agent and Landman
MLT Land Services, LLC

MLT Land Services, LLC

3001 West Loop North 250, North Ste C105-150, Midland, Texas 79705 | (940)999-4272 | Brad@MLTLandservices.com

April 16, 2019

**RE: Verlander SWD Well – Lot 2 (aka SW/4 NW/4) and SE/4 NW/4 and NE/4 SW/4 of Section 7
T21S R37E Lea County, NM**

**Tom Schumacher
MidCon Resource Group, LLC
701-400-9909**

Dear Mr. Schumacher,

There are no active wells or leases controlling the common mineral ownership of the above stated tracts of land. These are all open tracts of land.

I have compiled and attached a list of all the known mineral owners of these tracts of land using the records of Lea County, NM. Therefore, by contacting all the mineral owners of these tracts of land, you would meet the requirements of the State of New Mexico.

Sincerely yours,



Thomas A. Sewall
Senior Right-of-Way Agent and Landman
MLT Land Services, LLC

MINERAL ESTATE: Lot 2 (aka SW/4 NW/4) and SE/4 NW/4 and NE/4 SW/4 of Sec 7 T21s R37E
Carol Jo Blake 400 North Main Street Midland, Texas 79701
Carol Jo Blake, Trustee of Trust "A" u/w/o Jack E. Blake, Deceased 400 North Main Street
LML, LLC, a New Mexico limited liability company 6565 Americas Parkway NE Ste 1000 Albuquerque, NM 87110
John T. Hinkle and Linda J. Hinkle, Their Successors in Trust, Under the Hinkle Living Trust dated January 9, 1996 and Amendments thereto 2604 Coronado Drive P. O. Box 1793 Roswell, NM 88202
Mary L. Crockett 43 W. Crockett Road Lovington, NM 88260
Deborah Huntley 4531 Franklin Blvd #94 Eugene, OR 97403
Danglade Speight Family Oil and Gas I, LP, a Texas limited partnership 777 Main Street Suite 3250 Fort Worth, TX 76102
Kristen Hinkle Coomes 265 259th Avenue NE Sammamash, WA 98074
Jenna Hinkle Sartori 5710 Hatchery Court Penngrove, CA 94951
Gary A. Hudson 1127 Roasario Street Davis, CA 95616
Donald M. Norwood 3070 Strolling Hill Road Cameron Park, CA 95682
Janice E. Gilbertson 43345 Canyon Creek Road King City, CA 93930
Steven T. Dunn 105-A Oasis Road King City, CA 93930

Kinney, Inc. 106 SW 9th Street Andrews, TX 79714
Mark L. Shidler and wife, Mitzi Shidler 1010 Lamar #500 Houston, TX 77002
Dennis Mitchell P. O. Box 711 Yankton, SD 57078
Ronald E. Slover 3614 Royal Road Amarillo, TX 79109
Zeus Petroleum, Inc. P. O. Box 458 Bellaire, TX 77402-0458
John E. Donnellan and wife Gail Donnellan P. O. Box 1433 Chickasha, OK 73023
Partin Petroleum, Inc. P. O. Box 57425 Houston, TX 77257-2425
Suzanne Thomas 3936 Byron Street Houston, TX 77005
Cynthia Stratton O'Malley 9575 Katy Freeway Suite 440 Houston, TX 77024-1408
Trio Production company, LLC 1601 East 19th Street Edmond, OK 73013
Kathleen P. Henderson 5519 Tupper Lake Houston, TX 77056
Charles E. Hinkle P. O. Box 1030 King City, CA 93930
Lisle Q. Tannehill 2511 Garden Road Suite A-180 Monterey, CA 93940
John W. Tannehill P. O. Box 819 Paso Robles, CA 93447
First United Methodist Church of Amory, Mississippi P. O. Box 147 Amory, MS 38821-0147

Nancy Myers 2119 Ernest Avenue #3 Redondo Beach, CA 90278
Alice Meyers Riley 4 Benton Street Hadleigh, Suffolk, IP75AT England
Collene Alexander, Trustee of the Joe and Paudene Alexander Family Trust, dated April 27, 2000 5206 Saddle Ridge Trail San Angelo, TX 76904
Greg Segovia, Jr. 2 Walker Cane Lane Roswell, NM 88201
Bettianne H. Bowen, Trustee of the Bettianne H. Bowen Living Trust dated April 24, 1996 1902 Ivanhoe Lane Abilene, TX 79605

MLT Land Services, LLC

3001 West Loop North 250, North Ste C105-150, Midland, Texas 79705 | (940)999-4272 | Brad@MLTLandServices.com

April 16, 2019

RE: Verlander SWD Well – Lot 3 (aka NW/4 SW/4) of Section 7 T21S R37E Lea County, NM

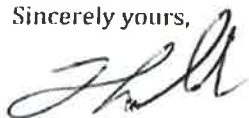
Tom Schumacher
MidCon Resource Group, LLC
701-400-9909

Dear Mr. Schumacher,

The active leases for the tract of land cited above are for the Alexander #001 – API # 30-025-09905 and the Deck Estate 7 #001 – API # 30-025-33677 wells. The operators of these two wells, Upland Production Company for the Alexander #001 well and Penroc Oil Corp for the Deck Estate 7 #001 well control all of the mineral interest for Lot 3 of Section 7, T21S R37E. Neither of these wells are producing in the proposed Verlander SWD Well zone.

The entire mineral ownership of Lot 3 is held by production by these two wells. Therefore, by contacting the operators of the wells, you would meet the requirements of the State of New Mexico.

Sincerely yours,



Thomas A. Sewall
Senior Right-of-Way Agent and Landman
MLT Land Services, LLC

Affected Party Notification List– Attachment XIII-7

Page 1 of 3

Mineral Owners

COMMERCE TRUST COMPANY AGENT FOR
PATTERSON 1976 TRUST INVESTMENTS, LLC
BY FARMERS NATIONAL CO, AGENT
5110 S YALE AVE SUITE 400
TULSA OK 74135

ETZ OIL PROPERTIES LTD
P O BOX 73406
PHOENIX AZ 85050

GEORGE H ETZ JR TRUSTEE
1105 XANTHISMA
MCALLEN TX 78504

LINCICOME OIL & GAS LLC
7 WOODLAND DRIVE
VIENNA WV 26105

KEOHANE INC
3619 E 2ND STREET
ROSWELL NM 88201

TOLES-COM-LTD LLC
P O BOX 1300
ROSWELL NM 88202-1300

GRAHAM FAMILY
INVESTMENTS LLC
P O BOX 1835
ROSWELL NM 88202-1835

BEVERLY CARTER - TRUSTEE OF THE
POWHATAN AND BEVERLY T CARTER
REVOCABLE TRUST
PO BOX 328
FT. SUMNER NM 88119-0328

LFN CONE PROPERTIES
3102 S OAK DRIVE
AUSTIN TX 78704-6036

MILDRED M MONTGOMERY
82 APRIL WIND SOUTH DRIVE
MONTGOMERY TEXAS 77356-5966

CARTER FAMILY MINERALS
464 EAST MAIN AVE.
FORT SUMNER NM 88119-9238

THOMAS R CONE
PO BOX 400
SOUTHWEST CITY MO 64863-0400

COLLEGE OF THE SOUTHWEST
FOUNDATION
6610 N LOVINGTON HIGHWAY
HOBBS NM 88240

CATHIE CONE MCCOWN AS TRUSTEE FOR
THE AUVENSHINE CHILDREN'S
TESTAMENTARY TRUST
PO BOX 658
DRIPPING SPRINGS TX 78620-0658

CATHIE CONE MCCOWN
PO BOX 658
DRIPPING SPRINGS TX 78620-0658

KAYLA CONE
PO BOX 746
FAYETTEVILLE AR 72702-0746

KAREN CONE
PO BOX 8357
FAYETTEVILLE AR 72703

PROSPERITY BANK, AS TRUSTEE OF THE
WILLIAMS TRUST FOB MMP DATED
4-10-1996 TRUST DEPT
1401 AVENUE Q
LUBBOCK TX 79401-3819

SE CONE JR
PO BOX 10321
LUBBUCK TX 79408-3321

ELEANOR CHRISTIE CORRIGAN
TRUST
PO BOX 63869
COLORADO SPRGS CO 80962-3869

PAT CORRIGAN TRUSTEE OF THE PAT
CORRIGAN TRUST UWO HUGH CORRIGAN II
310 W WALL STREET SUITE 1200
MIDLAND TX 79701-5186

HUGH DANIELS CORRIGAN TRUSTEE OF THE CEC
TRUST FBO HUGH DANIELS CORRIGAN & JAMES
PATRICK CORRIGAN JR TRUSTEE OF THE CEC TRUST
FBO JAMES PATRICK CORRIGAN, JR.
310 W WALL STREET SUITE 1200
MIDLAND TX 79701-5186

CORRIGAN SOUTHERN LAND AND
CATTLE COMPANY LLC
8117 PRESTON ROAD SUITE 610
DALLAS TX 75225-6366

LFN CONE PROPERTIES
3102 S OAK DRIVE
AUSTIN TX 78704-6036

JAMES PATRICK CORRIGAN JR
TRUST
PO BOX 69068
VERO BEACH FL 32969

HUGH CORRIGAN IV POWER OF APPOINTMENT
TRUST WILLIAM E CORRIGAN AS TRUSTEE
8117 PRESTON ROAD SUITE 610
DALLAS TX 75225-6366

CE CORRIGAN TRUST
PO BOX 643726
VERO BEACH FL 32964-3726

Mineral Owners

CAROL JO BLAKE
400 NORTH MAIN STREET
MIDLAND TEXAS 79701

DONALD M NORWOOD
3070 STROLLING HILL ROAD
CAMERON PARK CA 95682

PARTIN PETROLEUM INC
13831 NORTHWEST FWY STE 500
HOUSTON TX 77040

CAROL JO BLAKE, TRUSTEE OF
TRUST "A" U/W/O JACK E BLAKE
400 NORTH MAIN STREET
MIDLAND TEXAS 79701

JANICE E GILBERTSON
43345 CANYON CREEK ROAD
KING CITY CA 93930

SUZANNE THOMAS
3936 BYRON STREET
HOUSTON TX 77005

LML, LLC
6565 AMERICAS PARKWAY NE
STE 1000
ALBUQUERQUE NM 87110

STEVEN T DUNN
105-A OASIS ROAD
KING CITY CA 93930

CYNTHIA STRATTON O'MALLEY
9575 KATY FREEWAY
SUITE 440
HOUSTON TX 77024-1408

JOHN T HINKLE AND LINDA J HINKLE THEIR
SUCCESSORS IN TRUST, UNDER THE HINKLE LIVING
TRUST DATED JANUARY 9, 1996
PO BOX 1793
ROSWELL NM 88202-1793

KINNEY INC
106 SW 9TH STREET
ANDREWS TX 79714

TRIO PRODUCTION COMPANY LLC
1601 EAST 19TH STREET
EDMOND OK 73013

MARY L CROCKETT
43 W CROCKETT ROAD
LOVINGTON NM 88260

MARK L SHIDLER
1313 CAMPBELL RD
BUILDING "D"
HOUSTON TX 77055

KATHLEEN P HENDERSON
5519 TUPPER LAKE
HOUSTON TX 77056

DEBORAH HUNTLEY
4531 FRANKLIN BLVD SPC 94
EUGENE OR 97403-2460

MITZI SHIDLER
11727 FOREST GLEN ST
HOUSTON TX 77024

CHARLES E HINKLE
PO BOX 1030
KING CITY CA 93930

DANGLADE SPEIGHT FAMILY OIL
AND GAS I LP A TEXAS LP
777 MAIN ST SUITE 3250
FORT WORTH TX 76102

DENNIS MITCHELL
PO BOX 711
YANKTON SD 57078

LISLE Q TANNEHILL
2511 GARDEN ROAD
SUITE A-180
MONTEREY CA 93940

KRISTEN HINKLE COOMES
265 259TH AVENUE NE
SAMMAMASH WA 98074

RONALD E SLOVER
3614 ROYAL ROAD
AMARILLO TX 79109

JOHN W TANNEHILL
PO BOX 819
PASO ROBLES CA 93447

JENNA HINKLE SARTORI
5710 HATCHERY COURT
PENNGROVE CA 94951

ZEUS PETROLEUM INC
PO BOX 458
BELLAIRE TX 77402-0458

FIRST UNITED METHODIST CHURCH
OF AMORY MISSISSIPPI
PO BOX 147
AMORY MS 38821-0147

GARY A HUDSON
1127 ROSARIO STREET
EL MACERO CA 95618

JOHN E & GAIL DONNELLAN
PO BOX 1433
CHICKASHA OK 73023

NANCY MYERS
2119 ERNEST AVENUE #3
REDONDO BEACH CA 90278

Mineral Owners

ALICE MEYERS RILEY
4 BENTON STREET
HADLEIGH SUFFOCK IP75AT
ENGLAND

COLLENE ALEXANDER, TRUSTEE OF THE JOE
& PAUDENE ALEXANDER FAMILY TRUST
DATED APRIL 27 2000
5206 SADDLE RIDGE TRAIL
SAN ANGELO TX 76904

GREG SEGOVIA JR
2 WALKING CANE LN
ROSWELL NM 88201

BETTIANNE H BOWEN, TRUSTEE OF THE
BETTIANNE H BOWEN LIVING TRUST DATED
APRIL 24 1996
1902 IVANHOE LANE
ABILENE TX 79605

Operators/Lessees

CHEVRON USA INC
6301 DEAUVILLE BLVD
MIDLAND TX 79706

PENROC OIL CORP
P O BOX 2769
HOBBS NM 88241-2769

SPECIAL ENERGY CORP
PO DRAWER 369
STILLWATER OK 74076

FULFER OIL & CATTLE LLC
PO BOX 1224
JAL NM88252

PENROC OIL CORP.
PO BOX 2769
HOBBS NM 88241-2769

APACHE CORP
303 VETERANS AIRPARK LN
#1000
MIDLAND TX 79705

CONOCOPHILIPS CO
PO BOX 2197
OFFICE EC3-10-W285
HOUSTON TX 77252

PETROLEUM EXPLORATION CO LTD
LIMITED P
PO BOX 548
BRECKENRIDGE TX 76424

STATE OF NEW MEXICO
OIL, GAS AND MINERALS DIVISION
310 OLD SANTA FE TRAIL
SANTA FE NM 87501

NMSLO
PO BOX 1148
SANTA FE NM 87504

UPLAND PRODUCTION CO
PO BOX 481
MIDLAND TX 79702

Surface Owner

DASCO CATTLE CO LLC
PO BOX 727
HOBBS NM 88241

July 26, 2019

NOTIFICATION TO INTERESTED PARTIES

Via U.S. Certified Mail – Return Receipt Requested

To whom it may concern:

This letter is to advise you that Goodnight Midstream Permian, LLC, 5910 N Central Expressway Suite 850, Dallas, TX 75206 is applying for authorization to inject into the San Andres and Glorieta Formations at the VERLANDER SWD #1. The attached Form C-108 is being filed with the New Mexico Oil Conservation Division in Santa Fe, NM and is included with this letter as part of the application process.

The VERLANDER SWD #1 will be located at 2,482' FNL and 1,277' FEL, Unit H of Section 12, T21S, R36E, Lea County, New Mexico which is approximately three miles east of Oil Center, New Mexico. Produced water from area oil & gas production will be commercially disposed into the San Andres and Glorieta Formations at a proposed interval depth of 4,251' to 5,550', a maximum surface pressure of 850 psi, and a rate limited only by such pressure.

This letter is a notice only. No action is needed unless you have questions or objections. You are entitled to a full copy of this application. For general inquiries or to receive a PDF file copy of the complete application, you may call the applicant's agent, MidCon Resource Group, LLC, at (701) 400-9909 or email tom@midcongroup.com.

Interested parties wishing to object to the application or request a hearing must file with the New Mexico Oil Conservation Division at 1220 South St. Francis Dr., Santa Fe, NM 87505 within fifteen days.

Sincerely,



Thomas Schumacher
MidCon Resource Group, LLC
Agent for Goodnight Midstream Permian, LLC

Cc: Form C-108

MidCon Resource Group, LLC | 1515 Burnt Boat Dr | Suite C # 337 | Bismarck, ND 58503
(701) 400-9909



Certified Mail Receipts of Notification– Attachment XIII-9
Page 1 of 7

7018 1130 0001 9786 6651

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com™

TULSA, OK 74133

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
07/26/2019

COMMERCE TRUST COMPANY
5110 S YALE AVE SUITE 400
TULSA OK 74135

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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PARTIN PETROLEUM INC
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LLC
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COUNTY OF LEA

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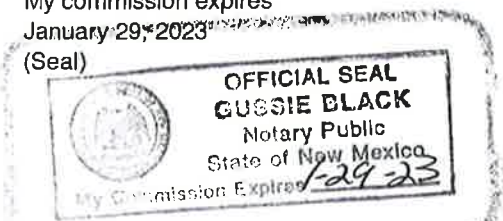
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July 26, 2019
and ending with the issue dated
July 26, 2019.


Publisher

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Business Manager

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(Seal)



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LEGALS

LEGAL NOTICE
JULY 26, 2019

Notice is hereby given of the application by Goodnight Midstream Permian, LLC, 5910 N Central Expressway Suite 860, Dallas, TX 75206 for authorization to inject into the San Andres and Glorieta Formations at the proposed VERLANDER SWD #1 well.

The VERLANDER SWD #1 will be located at 2,482' FNL and 1,277' FEL, Unit H of Section 12, T21S, R36E, Lea County, New Mexico which is approximately three miles east of Oil Center, New Mexico. Produced water from area oil & gas production will be commercially disposed into the San Andres and Glorieta Formations at a proposed interval depth of 4,251' to 5,550', a maximum surface pressure of 850 psi, and a rate limited only by such pressure.

Interested parties wishing to object to the application must file with the New Mexico Oil Conservation Division at 1220 South St. Francis Drive, Santa Fe, NM 87505 within fifteen days. Other inquiries regarding this application should be directed to the applicant's agent, MidCon Resource Group, LLC, at (701) 400-9909 or by email at tom@midcongroup.com. #34497

67115619

00231314

TOM SCHUMACHER
MIDCON RESOURCE GROUP LLC,
1730 CONTESSA DR
BISMARCK, ND 58503

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF GOODNIGHT
MIDSTREAM PERMIAN, LLC FOR
APPROVAL OF A SALT WATER DISPOSAL
WELL, LEA COUNTY NEW MEXICO.**

CASE NOS. 20825

AFFIDAVIT OF STEVE ALLEN DRAKE

I, Steve Allen Drake, of lawful age and being first duly sworn, declares as follows:

1. My name is Steve Allen Drake. I work for Goodnight Midstream Permian, LLC (“Goodnight Midstream”) as Vice President of Geology and Reservoir Engineering.

2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum geology. My credentials as an expert in petroleum geology have been accepted by the Division and made a matter of record.

3. I am familiar with the application filed by Goodnight Midstream in this case, and I am familiar with the status of the lands and geology in the subject area.

4. The proposed injection disposal interval will be within the San Andres-Glorieta formation [SWD; San Andres-Glorieta (Pool Code 96127)] between 4,251 feet and 5,550 feet below the ground through a perforated completion.

5. Exhibit 1, pages 35-36, contain an overview of the geology, including details on the lithology, thickness, and depths of all formations within the area of the proposed well. The geologic description also includes a discussion and overview of the San Andres injection interval, which consists of alternating layers of porous dolomite and limestone, which ranges from 8% to 15% porosity with excellent fluid transmissivity properties in the top portion of the injection interval, to porous dolomite and limestone with porosities from 3% to 8% at the bottom

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. B

Submitted by: **Goodnight Midstream Permian, LLC**

Hearing Date: November 14, 2019

Case No. 20825

of the injection interval. The injection interval has a net thickness of 280 feet out of a gross thickness of approximately 950 feet.

6. Exhibit 1, page 39, is a cross-section consisting of logs from three representative wells in the area that depict the stratigraphic intervals above and below the proposed injection interval. The top 100 feet of the San Andres is predominantly anhydrite which serves as a stratigraphic seal to contain the injection fluid from upward migration. The lower San Andres lithologic unit consists of approximately 80-100 feet of limestone with porosity values of between 1%-3%, which presents an effective basal seal and barrier between the San Andres and Glorieta reservoirs against downward fluid migration. In addition, below the underlying Paddock interval, the Blinberry interval consists of approximately 750 feet of tight dolomite, which functions as an excellent and exceptionally thick barrier to downward migration. Based on my examination and study of the geology in the area, it is my opinion that these geologic seals will effectively contain the injected fluids within the target injection zone.

7. Exhibit 1, page 45, is a statement I prepared confirming that I have reviewed the available geologic and engineering data and have found no evidence of a hydrological connection between the proposed injection interval and any underground sources of drinking water.

8. Injection will not impair correlative rights and will not adversely affect the production of hydrocarbons because the proposed injection will remain within the target injection zone. The proposed injection interval is not prospective for hydrocarbons within the area of the proposed injection well. The Roy Riddle No. 3 Well (API 30-025-35486) is approximately 2,250 feet to the south-southeast of the proposed injection well but was never completed within the San Andres formation. The Alexander No. 1 Well (API 30-025-09905) is approximately 2,100 feet to the east-southeast from the proposed injection well and produces

from the overlying Grayburg formation. Below the proposed injection interval, the Blinebry formation is prospective and the Deck State 7 No. 1 well (API 30-025-33677) produces from that formation. The geologic seals identified above and below the injection interval will serve to isolate the disposal fluids from offsetting zones capable of producing hydrocarbons.

9. Freshwater water in this area is found to a depth of about 400 feet or less below the surface. No underground sources of drinking water exist below the injection interval in this area. The Ogallala aquifer is approximately two miles north of the proposed injection well and will not be impacted by this injection.

10. Based on this review and analysis of freshwater, the geologic seals above and below the injection interval, and the significant vertical offset between the injection zone and shallow zones containing freshwater, it is my opinion that the proposed injection will not threaten any drinking water sources or zones of freshwater.

11. The proposed injection fluids will be from production in various formations, including the Yates, Seven Rivers, Queen, Grayburg, San Andres, Delaware, Blinebry, Drinkard, Tubb, Bone Spring, Wolfcamp, Strawn, Pennsylvanian, and Morrow formations. Water chemistry analyses of representative samples of produced water that are expected to be injected are located at pages 20-25 in Exhibit 1. In addition, water samples from the injection formation are located at pages 26-34 in Exhibit 1. Based on this water chemistry analysis and prior experience, I do not expect there will be a compatibility issue between the injection fluids and the fluids within the injection interval.

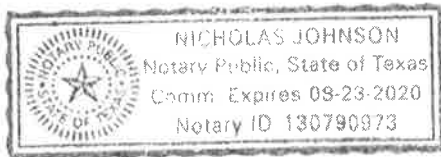
12. In my opinion, granting this application will help conserve resources, avoid waste, and protect correlative rights.

FURTHER AFFIANT SAYETH NOT.

Steve R Drake
Steve Allen Drake

STATE OF TEXAS)
COUNTY OF Dallas)

SUBSCRIBED and SWORN to before me this 8th day of November 2019 by
Steve Allen Drake.



[Signature]
NOTARY PUBLIC

My Commission Expires:

8-23-2020

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF GOODNIGHT
MIDSTREAM PERMIAN, LLC FOR
APPROVAL OF A SALT WATER DISPOSAL
WELL, LEA COUNTY NEW MEXICO.**

CASE NOS. 20825

AFFIDAVIT OF THOMAS E. TOMASTIK

I, Thomas E. Tomastik, of lawful age and being first duly sworn, declares as follows:

1. My name is Thomas E. Tomastik. I work for ALL Consulting as a senior geologist and regulatory specialist. I have been retained by Goodnight Midstream Permian, LLC ("Goodnight Midstream").
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum engineering and petroleum geology. My credentials as an expert have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by Goodnight Midstream in this case, and I have conducted an engineering study of the proposed injection and the area of review surrounding the proposed injection well.
4. The proposed well is the Verlander SWD No. 1 Well (API No. pending). It will be located 2,482 feet from the north line and 1,277 feet from the east line (Unit H), Section 12, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico.
5. All the well data and operational information required by the C-108 is included in the application within Exhibit 1. The proposed well design is contained in the Injection Well Data Sheet at pages 5-6 of the C-108 in Exhibit 1. A description of the proposed well design may

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. C
Submitted by: **Goodnight Midstream Permian, LLC**
Hearing Date: November 14, 2019
Case No. 20825

be found at page 7 of the C-108 in Exhibit 1. The disposal interval will be a perforated completion from approximately 4,251 feet to 5,550 feet in the San Andres-Glorieta formation [SWD; San Andres-Glorieta (Pool Code 96127)].

6. The well's cement job on the seven-inch production casing will be confirmed with a cement bond log or an equivalent cement integrity log, to establish the top of the cement and the quality of the bonding to the casing.

7. The well's annular space will be filled with an inert packer fluid to protect both the casing and the tubing and it will be monitoring surface pressure at the wellhead to confirm the integrity of the well during injection.

8. The well design and cement plan will be protective of freshwater and underground sources of drinking water in the area and protective of correlative rights.

9. The estimated average surface injection pressure is expected to be approximately 600 psi. The maximum surface injection pressure will be 850 psi, based on the Division's guideline limiting surface injection pressures to 0.2 psi per foot of depth to the top-most injection interval. The proposed injection volumes can be achieved without exceeding the maximum surface injection pressure. Injection pressures and volumes will be continuously monitored through an electronic SCADA system.

10. An acid job will be performed to clean up the perforations prior to commencement of injection operations.

11. Page 11 of the C-108 in Exhibit 1 depicts a map of oil and gas wells with a two-mile radius around the proposed well, as well as all wells within the half-mile area of review.

12. Eight wells are located within the half-mile area of review. Three of those wells are active producers, three have been plugged and abandoned, and one is a cancelled APD,

which was never drilled. Information on each of the wells within the half-mile area of review is tabulated at page 14 of Exhibit 1. Of the four wells identified that may penetrate the injection interval, the wellbore schematics are included at pages 15-18 of Exhibit 1.

13. None of the wells within a half-mile area of review require corrective action to contain injection fluids within the injection interval. Additionally, none of the existing wells within the half-mile area of review create a potential conduit for the migration of injection fluids out of the injection zone.

14. In my opinion, granting this application will help conserve resources, avoid waste, and protect correlative rights.

FURTHER AFFIANT SAYETH NOT.

Thomas E. Tomastik
Thomas E. Tomastik

STATE OF OHIO)
COUNTY OF Delaware)

SUBSCRIBED and SWORN to before me this 5th day of November 2019 by
Thomas E. Tomastik.

Nolan Donegan
NOTARY PUBLIC

My Commission Expires:

03/28/2023



NOLAN DONEGAN
Notary Public, State of Ohio
My Comm. Expires 03/28/2023

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

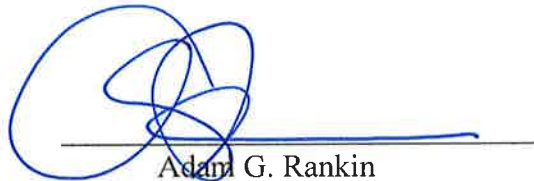
**APPLICATION OF GOODNIGHT
MIDSTREAM PERMIAN, LLC FOR
APPROVAL OF A SALT WATER DISPOSAL
WELL, LEA COUNTY NEW MEXICO.**

CASE NO. 20825

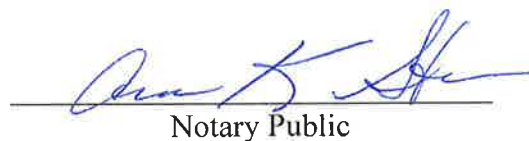
AFFIDAVIT

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

Adam G. Rankin, attorney in fact and authorized representative of Goodnight Midstream Permian, LLC -, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Applications have been provided under the notice letters and proof of receipts attached hereto.

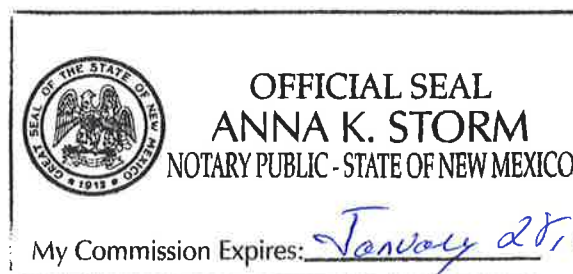

Adam G. Rankin

SUBSCRIBED AND SWORN to before me this 13th day of November, 2019 by Adam G. Rankin.


Notary Public

My Commission Expires:

January 28, 2023



BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. 2

Submitted by: **Goodnight Midstream Permian, LLC**

Hearing Date: November 14, 2019

Case No. 20825



Adam G. Rankin
Phone (505) 988-4421
Fax (505) 983-6043
agrarkin@hollandhart.com

October 21, 2019

VIA CERTIFIED MAIL
CERTIFIED RECEIPT REQUESTED

TO: AFFECTED PARTIES

Re: Application of Goodnight Midstream Permian, LLC for Approval of a Salt Water Disposal Well, Lea County, New Mexico.
Verlander SWD No. 1 Well

Ladies & Gentlemen:

This letter is to advise you that Goodnight Midstream Permian, LLC has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Examiner on November 14, 2019 and the status of the hearing can be monitored through the Division's website at <http://www.emnrd.state.nm.us/ocd/>. Division hearings will commence at 8:15 a.m. in Porter Hall at the Oil Conservation Division's Santa Fe Offices located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter please contact ALL Consulting, LLC, at (918) 382-7581 or nalleman@all-llc.com.

Sincerely,
A handwritten signature in blue ink, appearing to read 'AG Rankin'.

Adam G. Rankin
**ATTORNEY FOR GOODNIGHT MIDSTREAM
PERMIAN, LLC**

Goodnight Midstream - Verlander SWD No. 1
Case No. 20825
CM# 101374.0001

Tracking Number Recipient

921489019403839590519 New Mexico State Land Office PO BOX 1148 Santa Fe NM 87504-1148

Status

Delivered Signature Received

\$7.00



Shipment Confirmation
Acceptance Notice

A. Mailer Action

Note to Mailer: The labels and volume associated to this form online, **must** match the labeled packages being presented to the USPS® employee with this form.

Goodnight Midstream - Verlander SWD No. 1
Case No. 20825
CM# 101374.0001

Shipment Date: 10/21/2019
Shipped From:
Name: HOLLAND & HART LLP
Address: 110 N GUADALUPE ST # 1
City: SANTA FE
State: NM ZIP+4® 87501

Type of Mail	Volume
Priority Mail Express®*	
Priority Mail®	0
First-Class Package Service®	
Returns	
International*	
Other	1
Total	1

*Start time for products with service guarantees will begin when mail arrives at the local Post Office™ and items receive individual processing and acceptance scans.

B. USPS Action

- Note to RSS Clerk:
1. Home screen > Mailing/Shipping > More
 2. Select Shipment Confirm
 3. Scan or enter the barcode/label number from PS Form 5630
 4. Confirm the volume count message by selecting Yes or No
 5. Select Pay and End Visit to complete transaction

USPS EMPLOYEE: Please scan upon pickup or receipt of mail.
Leave form with customer or in customer's mail receptacle.

USPS SCAN AT ACCEPTANCE



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