

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

**APPLICATION OF NGL WATER  
SOLUTIONS PERMIAN, LLC  
TO APPROVE SALT WATER  
DISPOSAL WELL IN LEA  
COUNTY, NEW MEXICO.**

CASE NO. \_\_\_\_\_

**APPLICATION**

NGL Water Solutions Permian, LLC ("NGL"), OGRID No. 372338, through its undersigned attorneys, hereby makes this application to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Lea County, New Mexico. In support of this application, NGL states as follows:

- (1) NGL proposes to drill the Striker 4 SWD #1 well at a surface location 850 feet from the South line and 174 feet from the West line of Section 24, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.
- (2) NGL seeks authority to inject salt water into the Bell and Cherry Canyon formations at a depth of 5,437 to 7,200'.
- (3) NGL intends to use 5.5 inch tubing and NGL requests that the Division approve a maximum daily injection rate for the well of 20,000 bbls per day.
- (4) NGL anticipates using an average pressure of 815 psi for this well, and it requests that a maximum pressure of 1,087 psi be approved for the well.
- (5) A proposed C-108 for the subject well is attached hereto in Attachment A.
- (6) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, NGL requests that this application be set for hearing before an Examiner of the Oil Conservation Division on December 12, 2019; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS  
& SISK, P.A.

By: Deana M. Bennett  
Deana Bennett  
Post Office Box 2168  
500 Fourth Street NW, Suite 1000  
Albuquerque, New Mexico 87103-2168  
Telephone: 505.848.1800  
*Attorneys for Applicant*

**CASE NO. \_\_\_\_\_: Application of NGL Water Solutions Permian, LLC for approval of salt water disposal well in Lea County, New Mexico.** Applicant seeks an order approving the Striker 4 SWD #1 well, with a surface location 850 feet from the South line and 174 feet from the West line of Section 24, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico. Applicant requests authorization to inject salt water into the into the Bell and Cherry Canyon formations at a depth of 5,437 to 7,200'. Applicant requests that the Division approve a maximum daily injection rate for the well of 20,000 bbls per day. Said location is approximately 15 miles west of Jal, New Mexico.

|           |           |       |         |
|-----------|-----------|-------|---------|
| RECEIVED: | REVIEWER: | TYPE: | APP NO: |
|-----------|-----------|-------|---------|

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:** NGL WATER SOLUTIONS PERMIAN LLC**OGRID Number:** 372338**Well Name:** STRIKER 4 SWD #1**API:** 30-025-TBD**Pool:** SWD; DELAWARE**Pool Code:** 96100

**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.**

CHRIS WEYAND

Print or Type Name

Date

9/25/2019

512-600-1764

Phone Number

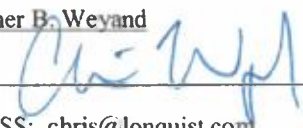
CHRIS@LONQUIST.COM

e-mail Address

Signature



**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: NGL WATER SOLUTIONS PERMIAN, LLC  
ADDRESS: 1509 W WALL ST // STE 306 // MIDLAND, TEXAS 79701  
CONTACT PARTY: SARAH JORDAN PHONE: (432) 685-0005 x1989
- 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: Christopher B. Weyand TITLE: Consulting Engineer  
SIGNATURE:  DATE: 9/25/2019  
E-MAIL ADDRESS: chris@lonquist.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

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

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

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

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

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

Side 1

## INJECTION WELL DATA SHEET

OPERATOR: NGL WATER SOLUTIONS PERMIAN, LLC

WELL NAME & NUMBER: STRIKER 4 SWD #1

WELL LOCATION: 850' FSL & 174' FWL M 24 24S 34E  
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

### WELLBORE SCHEMATIC

### WELL CONSTRUCTION DATA

#### Surface Casing

Hole Size: 17.500"

Casing Size: 13.375"

Cemented with: 907 sx.

*or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: surface

Method Determined: circulation

#### Production Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with: 1,886 sx.

*or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: surface

Method Determined: circulation

#### Injection Interval

5,437 feet to 7,200 feet

(Perforated)

### INJECTION WELL DATA SHEET

Tubing Size: 5.500", 17 lb/ft, L-80, LTC from 0' - 5,390'

Lining Material: NOV TK805 IPC & KC CBR

Type of Packer: Arrowset I-XS 10k mechanical Nickel coated injection packer

Packer Setting Depth: 5,390'

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? N/A

2. Name of the Injection Formation: Bell and Cherry Canyon

3. Name of Field or Pool (if applicable): SWD; Delaware

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

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Bone Spring: 9,231'

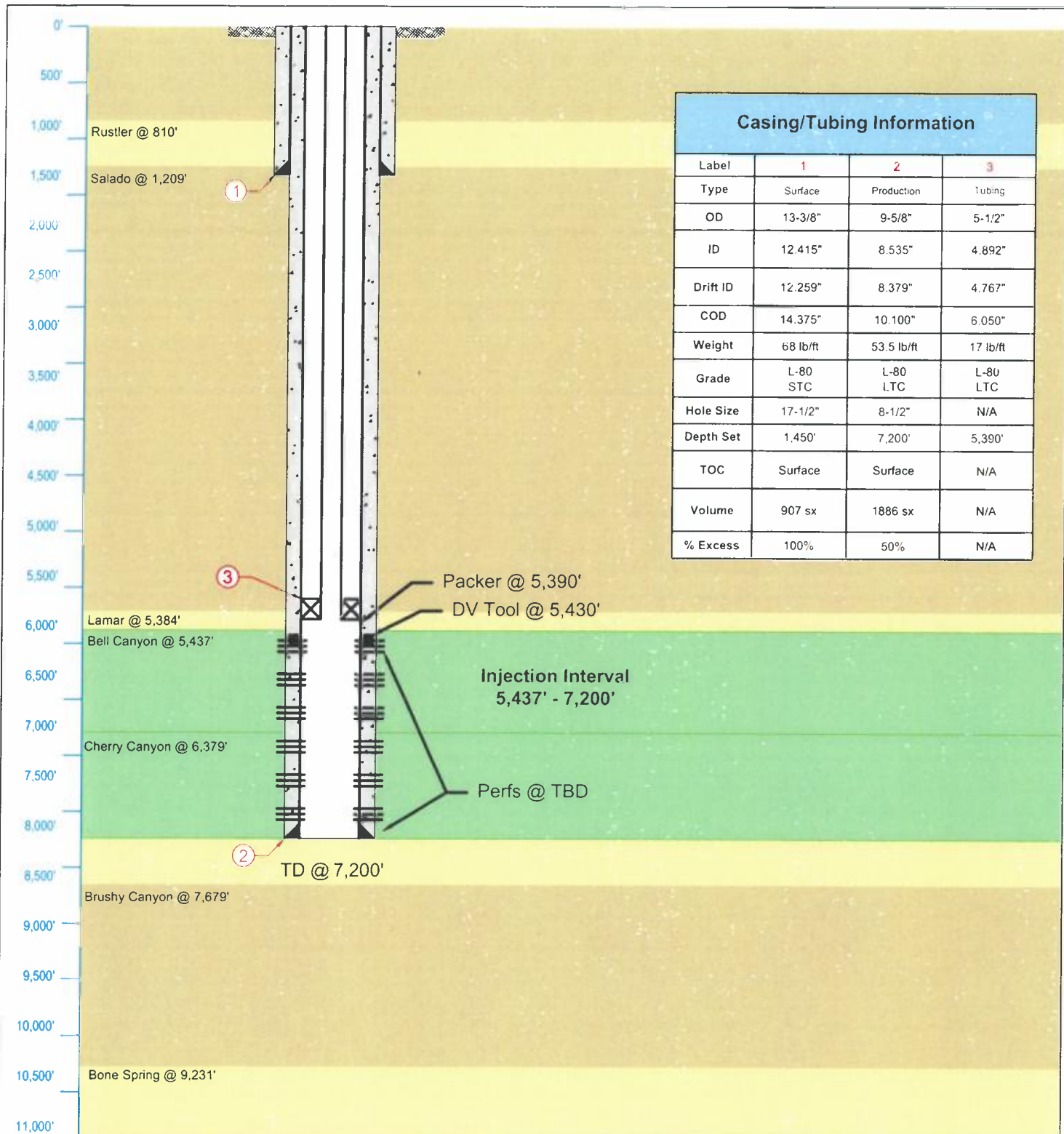
Wolfcamp: 12,280'

Strawn: 12,542'

Atoka: 12,617'

Morrow: 12,796'





|  |                                 |                            |                        |                  |
|--|---------------------------------|----------------------------|------------------------|------------------|
| <div>LONQUIST &amp; CO. LLC</div> <div>PETROLEUM ENGINEERSENERGY ADVISORS</div> <div>HOUSTON   CALGARY<br/>AUSTIN   WICHITA   DENVER</div> | NGL Water Solutions Permian LLC |                            | Striker 4 - SWD No. 1  |                  |
|  | Country: USA                    | State/Province: New Mexico | County/Parish: Eddy    |                  |
|  | Location:                       | Site:                      | Survey/STR: 24-24S-34E |                  |
|  | API No:                         | Field:                     | Well Type/Status: SWD  |                  |
|  | Texas License F-9147            | State ID No:               | Project No: 1470       | Date: 09/24/2019 |
| 12912 Hill Country Blvd. Ste F-200<br>Austin, Texas 78738<br>Tel: 512.732.9812<br>Fax: 512.732.9816  | Drawn: JAM                      | Reviewed: CW               | Approved: CW           |                  |
|  | Rev No: 2                       | Notes:                     |                        |                  |

**NGL Water Solutions Permian, LLC**

**Striker 4 SWD No. 1**

**FORM C-108 Supplemental Information**

**III. Well Data**

**A. Wellbore Information**

1.

| Well information |                     |
|------------------|---------------------|
| Lease Name       | Striker 4 SWD       |
| Well No.         | 1                   |
| County           | Lea                 |
| Location         | S-24 T-24S R-34E    |
| Footage Location | 850' FSL & 174' FWL |

2.

**a. Wellbore Description**

| Casing Information |          |            |
|--------------------|----------|------------|
| Type               | Surface  | Production |
| OD                 | 13.375"  | 9.625"     |
| WT                 | 0.480"   | 0.545"     |
| ID                 | 12.415"  | 8.535"     |
| Drift ID           | 12.259"  | 8.379"     |
| COD                | 14.375"  | 10.100"    |
| Weight             | 68 lb/ft | 53.5 lb/ft |
| Grade              | L-80     | L-80       |
| Hole Size          | 17.5"    | 12.25"     |
| Depth Set          | 1,450'   | 7,200'     |

b. Cementing Program

| Cement Information  |                          |                          |
|---------------------|--------------------------|--------------------------|
| Casing String       | Surface                  | Production               |
| Cement Type         | C                        | C                        |
| Cement Yield        | 2.22 ft <sup>3</sup> /sk | 1.69 ft <sup>3</sup> /sk |
| Total Cement Volume | 907 sks                  | 1886 sks                 |
| Cement Excess       | 100%                     | 50%                      |
| TOC                 | Surface                  | Surface                  |
| Method              | Circulate to Surface     | Circulate to Surface     |

3. Tubing Description

| Tubing Information |            |
|--------------------|------------|
| OD                 | 5.500"     |
| WT                 | 0.304"     |
| ID                 | 4.98"      |
| Drift ID           | 3.875"     |
| COD                | 5.000"     |
| Weight             | 11.6 lb/ft |
| Grade              | L-80       |
| Depth Set          | 0'-5,390'  |

Lining Material: NOV TK805 IPC & KC CBR

4. Packer Description

Arrowset 1-XS 10k mechanical nickel-coated injection packer

B. Completion Information

1. Injection Formation: Bell and Cherry Canyon
2. Gross Injection Interval: 5,437' – 7,200'

Completion Type: Perforated

3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

| Formation   | Depth   |
|-------------|---------|
| Bone Spring | 9,231'  |
| Wolfcamp    | 12,280' |
| Strawn      | 12,542' |
| Atoka       | 12,617' |
| Morrow      | 12,796' |

#### VI. Area of Review

All wells that penetrate the proposed injection interval within the ½-Mile AOR are horizontally completed in deeper formations and have been cemented across the proposed injection interval.

#### VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 10,000 BPD

Maximum Volume: 20,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 815 PSI (surface pressure)

Maximum Injection Pressure: 1,087 PSI (surface pressure)

4. The injection fluid is to be locally produced water. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware, Bone Spring, Wolfcamp, Strawn, Atoka, and Morrow formations.

5. The disposal interval is non-productive. No water samples are available from the surrounding area.

## VIII. Geological Data

The Delaware Mountain Group (DMG) of the Delaware Basin comprises of Guadalupian-age arkosic to subarkosic sandstone, siltstone, and detrital limestone that was deposited in deep water, mainly during lowstand and early transgressive sea-level stages. The basin succession is formally divided into the Brushy Canyon, Cherry Canyon, and Bell Canyon Formations (descending order). Stratigraphic divisions within the Delaware Mountain Group are somewhat uncertain due to lithologic similarity and thus a lack of clear boundaries between the major formational intervals. The Delaware Basin during deposition of the Delaware Mountain Group was a deep-water basin bounded by carbonate-ramp (San Andres and Grayburg) and carbonate-rim (Goat Seep and Capitan) margins that developed on the western edge of the Central Basin Platform, the Northwest Shelf, and the Diablo Platform. The top of the interval is designated by another carbonate, the Lamar limestone included in the Bell Canyon Formation. The Bell Canyon contains carbonaceous silty sandstone along with clean, fine grained, massive friable sand. The Brushy Canyon and Cherry Canyon intervals consist of the following: (1) very fine to fine-grained arkosic to subarkosic sandstones, mostly massive in character, (2) very fine grained sandstones microlaminated with siltstones, (3) dark-colored organic siltstones (lutites), (4) carbonate beds (limestone or dolomite) more prevalent near shelf margins, and (5) black to dark gray, calcareous shales. Shale is notably rare in the section and is virtually absent from the Brushy Canyon Formation. Carbonate units (mainly limestone) are present in the upper Cherry Canyon and, especially, Bell Canyon intervals. Porosities and permeabilities in productive intervals range from 12–25% and 1–5 md, respectively, but occasional “streaks” of permeability of up to 200 md are sometimes present. These good porosities indicate a rock that is capable of taking water injection.

### A. Injection Zone: Bell and Cherry Canyon

| Formation         | Depth   |
|-------------------|---------|
| Rustler Anhydrite | 810'    |
| Salado            | 1,209'  |
| Delaware          | 5,384'  |
| Bell Canyon       | 5,437'  |
| Cherry Canyon     | 6,379'  |
| Brushy Canyon     | 7,679'  |
| Bone Spring       | 9,231'  |
| Wolfcamp          | 12,280' |

### B. Underground Sources of Drinking Water

The most closely offsetting water wells were drilled to 610' or shallower, generally producing from the Santa Rosa. Fresh water depth appears to vary from 40' to 475' (300' on average) in the area in the form of sporadic alluvial sources and the Santa Rosa. In general, any USDWs (i.e. Upper Rustler) would be expected to fall above the salt and will be protected. The top of the Rustler Anhydrite is estimated at approximately 810'.

#### IX. Proposed Stimulation Program

No proposed stimulation program planned at this time.

#### X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

#### XI. Chemical Analysis of Fresh Water Wells

The only fresh water well (C-03580) within one mile of the well location as shown on the attached map could not be located. As a result, fresh water samples were not obtained for analysis purposes.

XII. Affirmative Statement of Examination of Geologic and Engineering Data

Based on the available engineering and geologic data we find no evidence of open faults or any other hydrologic connection between the disposal zone (of the proposed **Striker 4 SWD #1**) and any underground sources of drinking water.

NAME: John C. Webb

TITLE: Sr. Geologist

SIGNATURE: \_\_\_\_\_

John C. Webb

DATE: \_\_\_\_\_

Sept. 24, 2019

**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**

|   |  |
|---|--|
| <sup>1</sup> Operator Name and Address<br>NGL WATER SOLUTIONS PERMIAN, LLC<br>1509 W WALL ST, STE 306<br>MIDLAND, TEXAS 79701 | <sup>2</sup> OGRID Number<br>372338<br><sup>3</sup> API Number<br>30-025-TBD |
| <sup>4</sup> Property Code  | <sup>5</sup> Property Name<br>STRIKER 4 SWD<br><sup>6</sup> Well No.<br>1    |

**<sup>7</sup> Surface Location**

| UL - Lot | Section | Township | Range | Lot Idn | Feet from | N S Line | Feet From | E W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| M        | 24      | 24S      | 34E   |         | 850       | SOUTH    | 174       | WEST     | LEA    |

**<sup>8</sup> Proposed Bottom Hole Location**

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

**<sup>9</sup> Pool Information**

|   |                                 |
|---|---------------------------------|
| <sup>9</sup> Pool Name<br>SWD; Delaware | <sup>9</sup> Pool Code<br>96100 |
|---|---------------------------------|

**Additional Well Information**

|                                |  |  |                                     |  |
|--------------------------------|--|--|-------------------------------------|--|
| <sup>11</sup> Work Type<br>N   | <sup>12</sup> Well Type<br>SWD         | <sup>13</sup> Cable Rotary<br>R                  | <sup>14</sup> Lease Type<br>Private | <sup>15</sup> Ground Level Elevation<br>3,422' |
| <sup>16</sup> Multiple<br>N    | <sup>17</sup> Proposed Depth<br>7,200' | <sup>18</sup> Formation<br>Delaware              | <sup>19</sup> Contractor<br>TBD     | <sup>20</sup> Spud Date<br>ASAP                |
| Depth to Ground water<br><810' |  | Distance from nearest fresh water well<br>2.963' |                                     | Distance to nearest surface water<br>> 1 mile  |

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

**<sup>21</sup> Proposed Casing and Cement Program**

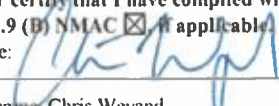
| Type       | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surface    | 17.5"     | 13.375"     | 68 lb/ft         | 1,450'        | 907             | Surface       |
| Production | 12.25"    | 9.625"      | 53.5 lb/ft       | 7,200'        | 1,886           | Surface       |
|            |           |             |                  |               |                 |               |
|            |           |             |                  |               |                 |               |
|            |           |             |                  |               |                 |               |

**Casing/Cement Program: Additional Comments**

|                         |
|-------------------------|
| See attached schematic. |
|-------------------------|

**<sup>22</sup> Proposed Blowout Prevention Program**

| Type                          | Working Pressure | Test Pressure | Manufacturer            |
|-------------------------------|------------------|---------------|-------------------------|
| Double Hydraulic Blinds, Pipe | 5,000 psi        | 8,000 psi     | TBD -- Schaffer Cameron |

|  |   |
|--|---|
| <sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify that I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.<br>Signature: <br>Printed name: Chris Weyand<br>Title: Consulting Engineer<br>E-mail Address: chris@lonquist.com<br>Date: 9/24/2019      Phone: 512-600-1764 | <b>OIL CONSERVATION DIVISION</b><br>Approved By:<br>Title:<br>Approved Date:      Expiration Date:<br>Conditions of Approval Attached |
|--|---|



District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
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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


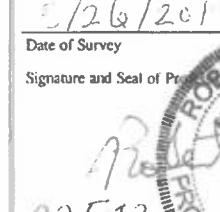
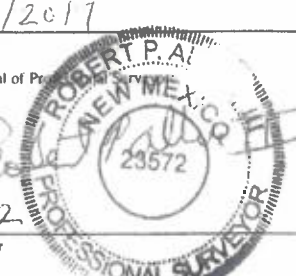
WELL LOCATION AND ACREAGE DEDICATION PLAT

|                       |  |   |  |                              |                       |
|-----------------------|--|---|--|------------------------------|-----------------------|
| 1 API Number          |  | 2 Pool Code<br>96100                                  |  | 3 Pool Name<br>SWD; Delaware |                       |
| 4 Property Code       |  | 5 Property Name<br>STRIKER 4 SWD                      |  |                              | 6 Well Number<br>1    |
| 7 OGRID No.<br>372338 |  | 8 Operator Name<br>NGL WATER SOLUTIONS PERMIAN, L.L.C |  |                              | 9 Elevation<br>3,422' |

| 10 Surface Location |         |          |       |         |               |                  |               |                |        |
|---------------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no.       | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| M                   | 24      | 24 S     | 34 E  |         | 850           | SOUTH            | 174           | WEST           | IEA    |

| 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><b>GEODETIC DATA</b><br/>NAD 83 GRID - NM EAST</p> <p>STRIKER 4 SWD #1<br/>Y=436968.84 N<br/>X=820253.39 E<br/>LAT=32.198090 N<br/>LONG=-103.431642 W</p> <p><b>CORNER DATA</b><br/>NAD 83 GRID - NM EAST</p> <p>A - Y=441397.13, X=820042.54<br/>B - Y=441440.74, X=825311.37<br/>C - Y=436159.03, X=825360.01<br/>D - Y=436117.61, X=820086.73</p> <p>STRIKER 4<br/>SWD #1</p> <p>174'</p> <p>850'</p> | <p><b>16 OPERATOR CERTIFICATION</b></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 undivided 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> 9/25/2019<br/>Signature Date</p> <p>Chris Weyand<br/>Printed Name</p> <p>chris@lonquist.com<br/>E-mail Address</p> <p><b>17 SURVEYOR CERTIFICATION</b></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 belief.</p> <p>9/26/2017<br/>Date of Survey</p> <p> 23512<br/>Signature and Seal of Professional Surveyor Certificate Number</p> <p></p> |
|---|---|

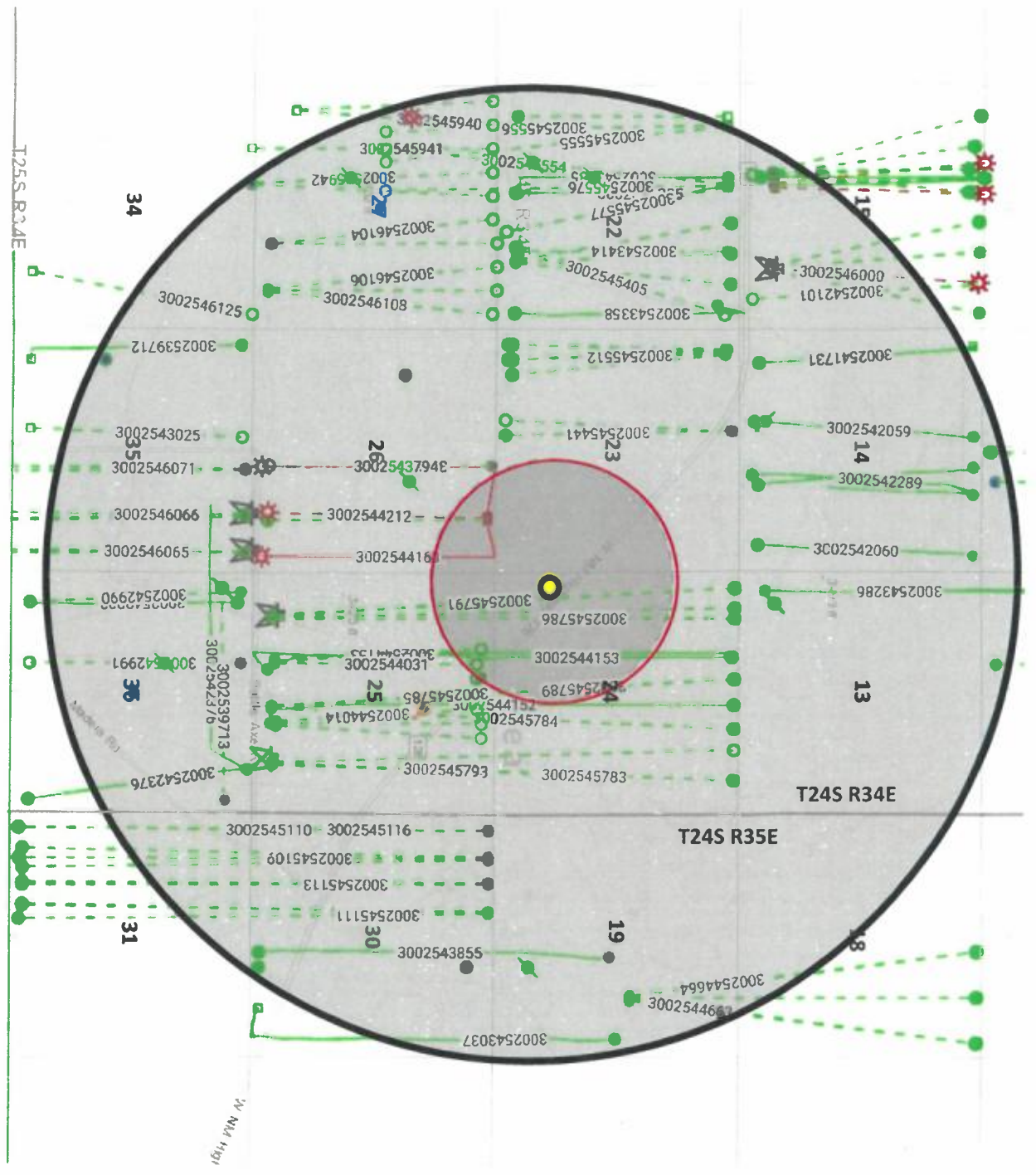
# Striker 4 SWD #1 2 mile Area of Review Lea County, NM NGL Water Solutions Permian, LLC

Drawn by KAS Date: 8/30/2019 Approved by CBM

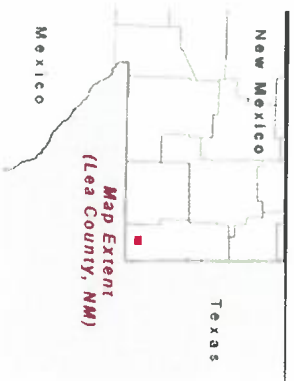
LONQUIST & CO. LLC

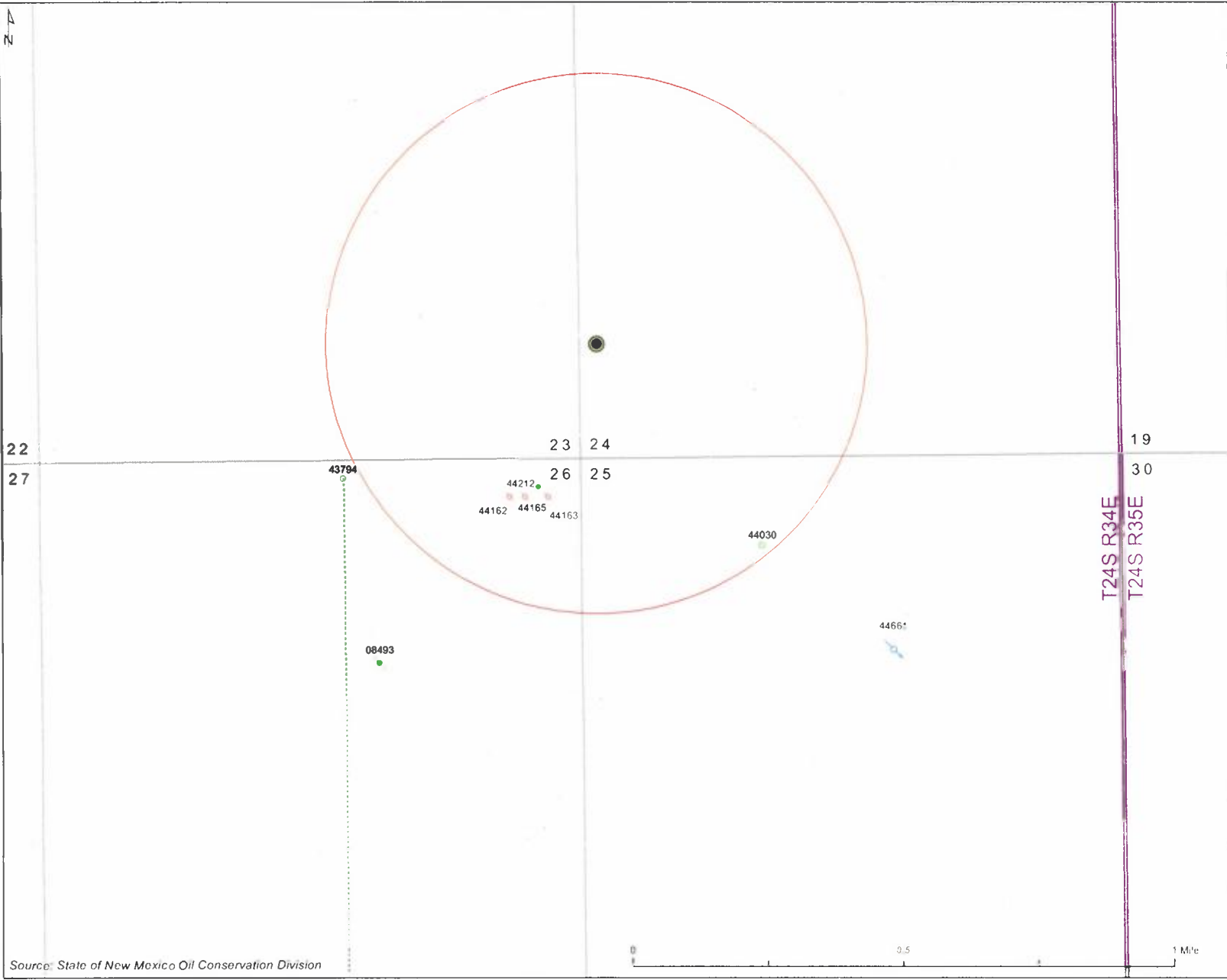
PERMIAN ENGINEER ADVISORS

AUSTIN HOUSTON DENTON DOWNEY CAGNEY



- Production Type**
  - OIL (Green)
  - GAS (Red)
  - DISPOSAL (Orange)
  - Striker 4 SWD #1 (Yellow)
- Well Symbols**
  - Gas (Sun symbol)
  - Gas Abandoned (Sun with X symbol)
  - Injection (Circle with X symbol)
  - Location (Circle with dot symbol)
  - Oil (Circle with dot symbol)
  - Oil Abandoned (Circle with X symbol)
- Radius**
  - 1/2 mile Radius (Thin line)
  - 2 mile Radius (Thick line)





**Striker 4 SWD #1**  
**1/2 mile Area of Review**  
Lea County, NM  
NGL Water Solutions Permian, LLC

Projection: NAD 1983 State Plane NM East FIPS 3001

Drawn by: KAS    Date: 8/30/2019    Approved by: CBW

**LONQUIST & CO. LLC**  
PETROLEUM ENGINEERS    ENERGY ADVISORS  
AUSTIN   HOUSTON   WICHITA   DENVER   CALGARY

Striker 4 SWD #1

Gas Well

Oil Well

Permitted Oil Well

Plugged Oil Well

SWD Well

1/2 mile Radius

2 mile Radius

Section Boundary

Township Boundary

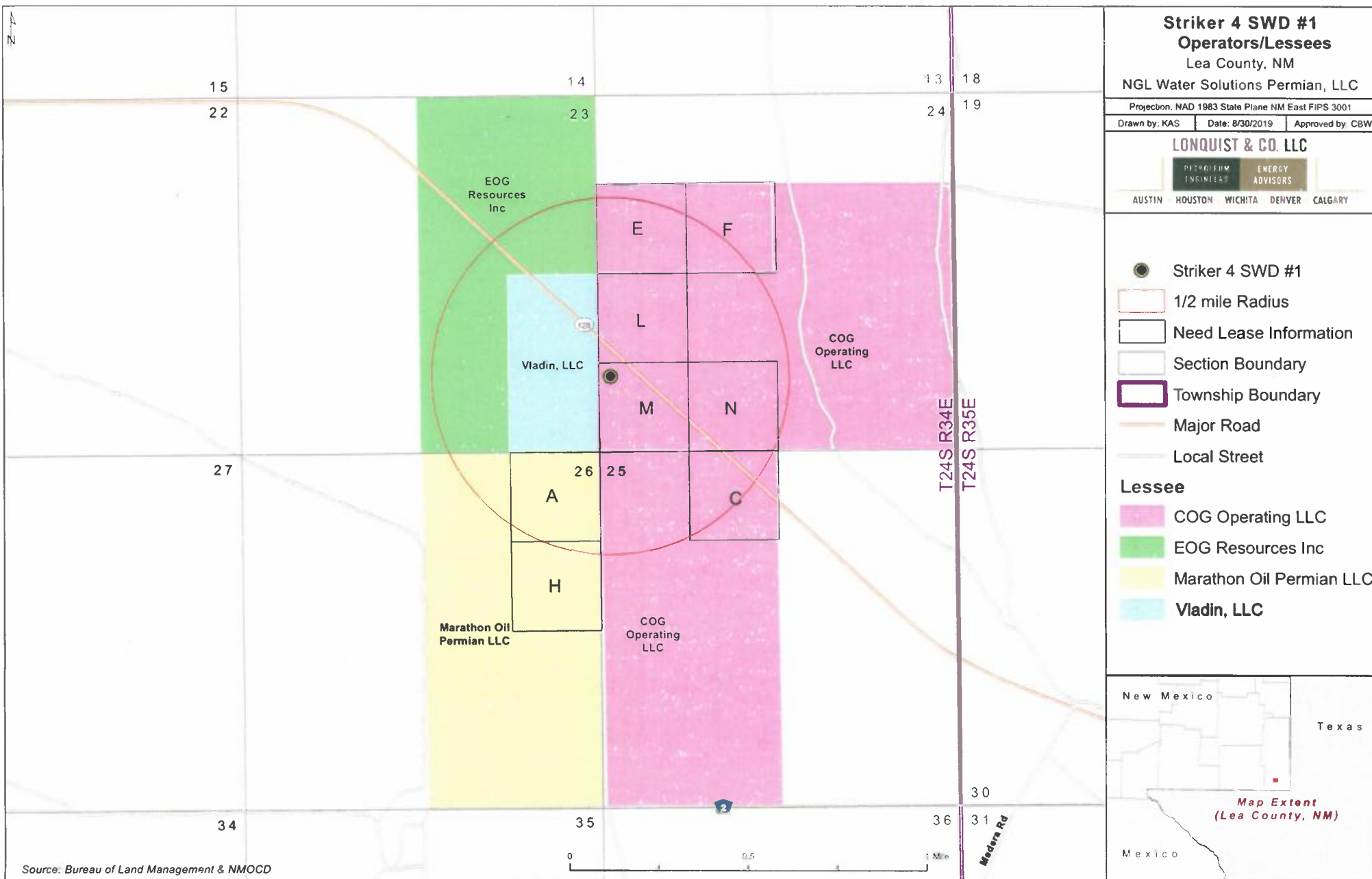
New Mexico    Texas

Map Extent  
(Lea County, NM)

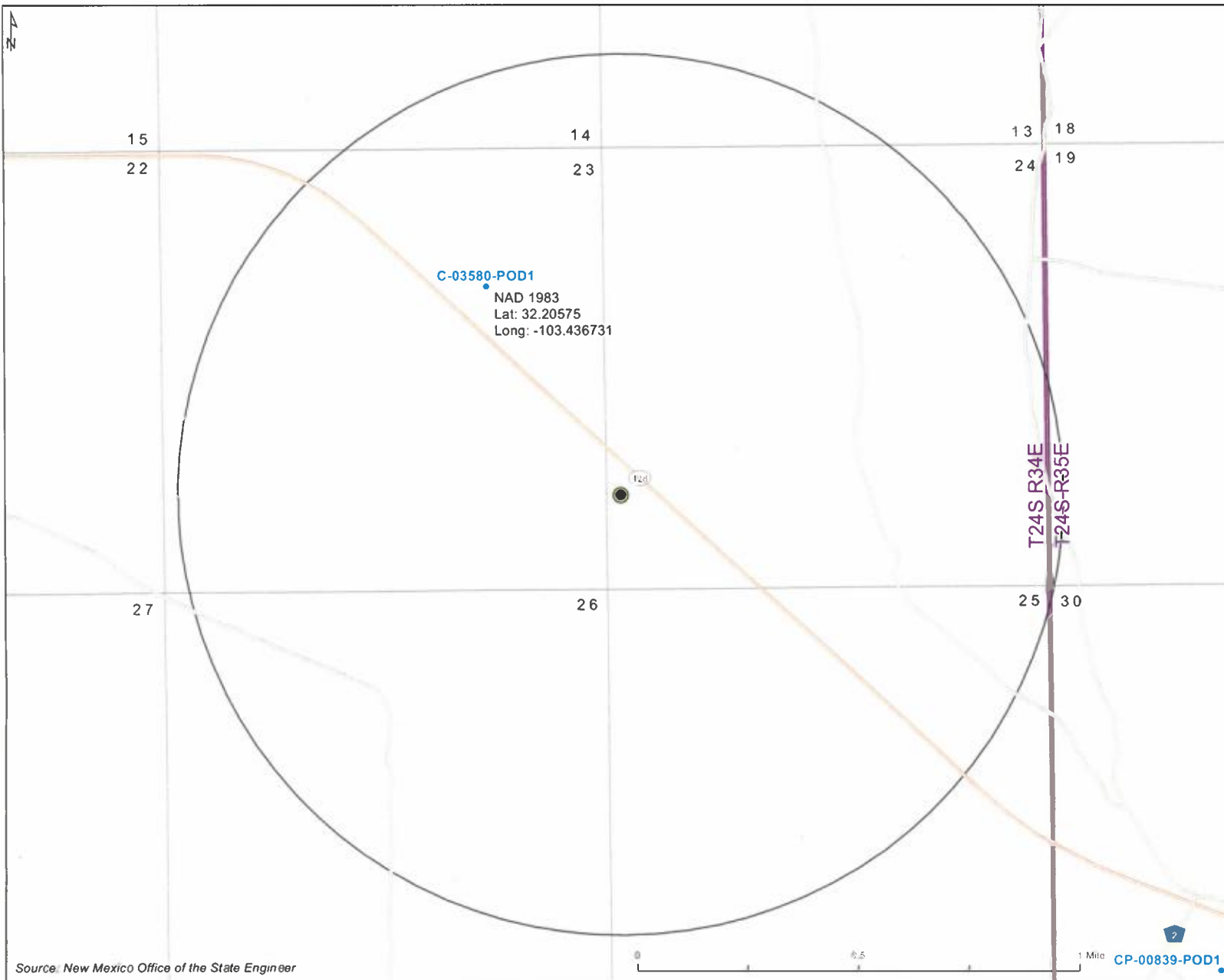
Mexico

Striker 4 SWD No. 1  
1/2 Mile Area of Review List

| API (30-025-) | WELL NAME                       | WELL TYPE | STATUS | OPERATOR                 | TVL (FT.) | LATITUDE (NAD83 DD) | LONGITUDE (NAD83 DD) | SPUD DATE | FIELD  |
|---------------|---------------------------------|-----------|--------|--------------------------|-----------|---------------------|----------------------|-----------|--|
| 3002544212    | DIE BOOT FEE 24 34 26 WA R006H  | G         | A      | MARATHON OIL PERMIAN LLC | 12729     | 32.1950208700       | -103.436004320       | 4/6/2018  | [2220] ANTELOPE RIDGE, WOLF CAMP; [70415] ANTELOPE RIDGE, WOLF CAMP, N (GAS)     |
| 3002544165    | DIE BOOT FEE 24 34 26 TB R007H  | D         | A      | MARATHON OIL PERMIAN LLC | 12434     | 32.19502018000      | -103.4359075000      | 4/1/2018  | [96434] RED HILLS, BONE SPRING, NORTH  |
| 3002544163    | DIE BOOT FEE 24 34 26 WXY R010H | G         | A      | MARATHON OIL PERMIAN LLC | 12671     | 32.1950194900       | -103.435810370       | 3/29/2010 | [2220] ANTELOPE RIDGE, WOLF CAMP   |
| 3002544162    | DIE BOOT FEE 24 34 26 WXY R003H | G         | A      | MARATHON OIL PERMIAN LLC | 12583     | 32.1950215600       | -103.436101290       | 3/26/2018 | [2220] ANTELOPE RIDGE, WOLF CAMP; [98254] WC-025 S253402N, LOWER WOLF CAMP (GAS) |
| 3002544011    | SUPER FEE WXY R001H             | D         | N      | COG OPERATING LLC        | 0         | 32.1823440000       | -103.425817000       |           | [98116] WC-025 G-09 S253402N, WOLF CAMP  |
| 3002544153    | BASEBALL CAP FEDERAL COM R026H  | D         | A      | COG OPERATING LLC        | 12615     | 32.1819080000       | -103.425374000       | 12/9/2017 | [98116] WC-025 G-09 S253402N, WOLF CAMP  |
| 3002544030    | SUPER FEE WCA R003H             | D         | N      | COG OPERATING LLC        | 0         | 32.1947080000       | -103.424803000       |           | [98116] WC-025 G-09 S253402N, WOLF CAMP  |
| 3002544029    | SUPER FEE WCA R003H             | D         | N      | COG OPERATING LLC        | 0         | 32.1823440000       | -103.425978000       |           | [98116] WC-025 G-09 S253402N, WOLF CAMP  |
| 3002545785    | BASEBALL CAP FEDERAL COM R605H  | D         | N      | COG OPERATING LLC        | 0         | 32.1821830000       | -103.422811000       |           | [96434] RED HILLS, BONE SPRING, NORTH  |
| 3002545787    | BASEBALL CAP FEDERAL COM R608H  | D         | N      | COG OPERATING LLC        | 0         | 32.1821150000       | -103.429106000       |           | [96434] RED HILLS, BONE SPRING, NORTH  |
| 3002545790    | BASEBALL CAP FEDERAL COM R707H  | D         | N      | COG OPERATING LLC        | 0         | 32.1821330000       | -103.429009000       |           | [98116] WC-025 G-09 S253402N, WOLF CAMP  |
| 3002545786    | BASEBALL CAP FEDERAL COM R607H  | D         | N      | COG OPERATING LLC        | 0         | 32.1821330000       | -103.428933000       |           | [96434] RED HILLS, BONE SPRING, NORTH  |
| 3002545789    | BASEBALL CAP FEDERAL COM R705H  | D         | N      | COG OPERATING LLC        | 0         | 32.1821810000       | -103.422794000       |           | [96434] RED HILLS, BONE SPRING, NORTH; [98116] WC-025 G-09 S253402N, WOLF CAMP   |
| 3002545791    | BASEBALL CAP FEDERAL COM R708H  | D         | N      | COG OPERATING LLC        | 0         | 32.1821360000       | -103.429203000       |           | [98116] WC-025 G-09 S253402N, WOLF CAMP  |



| Striker 4 SWD #1: Offsetting Produced Water Analysis |            |        |                        |     |          |            |             |          |               |               |              |                 |             |         |
|--|------------|--------|------------------------|-----|----------|------------|-------------|----------|---------------|---------------|--------------|-----------------|-------------|---------|
| wellname   | api        | county | formation              | ph  | tds_mgl  | sodium_mgl | calcium_mgl | iron_mgl | magnesium_mgl | manganese_mgl | chloride_mgl | bicarbonate_mgl | sulfate_mgl | co2_mgl |
| ANTELOPE RIDGE UNIT #002                             | 3002520444 | LEA    | ATOKA                  | 6.7 | 51475    |            |             |          |               |               | 31000        | 317             | 340         |         |
| BELL LAKE UNIT #009                                  | 3002520261 | LEA    | BONE SPRING            |     | 204652   |            |             |          |               |               | 130000       | 512             | 260         |         |
| THISTLE UNIT #071H                                   | 3002542425 | Lea    | BONE SPRING 1ST SAND   | 5.6 | 171476.3 | 55363.2    | 9140        | 40.4     | 1023          | 1.1           | 104576.4     | 244             | 560         | 770     |
| BELL LAKE 19 STATE #002H                             | 3002541515 | Lea    | BONE SPRING 2ND SAND   | 6.2 |          | 47148      | 6419        | 15       | 854           | 0             | 86572        | 232             | 670         | 240     |
| BELL LAKE 19 STATE #004H                             | 3002541517 | Lea    | BONE SPRING 2ND SAND   | 6.3 |          | 47537      | 6950        | 11       | 886           | 0             | 88389        | 171             | 650         | 210     |
| BELL LAKE 19 STATE #001H                             | 3002541024 | Lea    | BONE SPRING 2ND SAND   | 7   |          | 60725      | 8703        | 52       | 1020          | 0.88          | 113193       | 145             | 700         | 100     |
| BELL LAKE UNIT A #007                                | 3002508367 | LEA    | DELAWARE               |     | 87686    |            |             |          |               |               | 53920        | 391             | 749         |         |
| BELL LAKE UNIT #002                                  | 3002508489 | LEA    | DELAWARE               |     | 52115    |            |             |          |               |               | 32200        | 451             | 529         |         |
| MARSHALL #001  | 3002508358 | LEA    | DELAWARE               |     | 238931   |            |             |          |               |               | 148600       | 127             | 156         |         |
| THISTLE UNIT #017H                                   | 3002539893 | Lea    | DELAWARE-BRUSHY CANYON | 6   |          | 89832      | 22107       | 15       | 4443          | 3             | 189304       | 73              | 200         | 350     |
| THISTLE UNIT #018H                                   | 3002540010 | Lea    | DELAWARE-BRUSHY CANYON | 5.7 |          | 93485      | 22643       | 31       | 4570          | 3.2           | 195932       | 73              | 270         | 390     |
| CUSTER MOUNTAIN UNIT #001                            | 3002520756 | LEA    | MORROW                 |     | 282741   |            |             |          |               |               | 176800       | 161             | 650         |         |
| PRONGHORN AHO FEDERAL #001                           | 3002526496 | LEA    | STRAWN                 | 5.5 |          |            | 20.1        | 0        | 12.2          |               | 35.5         | 61.1            | 48.8        |         |
| BELLOQ 2 STATE #002H                                 | 3001542895 | EDDY   | WOLFCAMP               | 6.8 | 119471.8 | 37359.2    | 5659.1      | 22.4     | 746.1         |               | 73172.5      |                 | 1035.5      | 250     |



Source: New Mexico Office of the State Engineer

### Striker 4 SWD #1 Offset Water Wells

Lea County, NM  
NGL Water Solutions Permian, LLC

Projection: NAD 1983 State Plane NM East FIPS 3001  
 Drawn by: SAH    Date: 9/6/2017    Approved by: NLB

**LONQUIST & CO. LLC**  
 PETROLEUM ENGINEERS    ENERGY ADVISORS  
 AUSTIN   HOUSTON   WICHITA   DENVER   CALGARY

- Striker 4 SWD #1
- Water Well
- Major Road
- Local Street
- 1 mile Radius
- Section Boundary
- Township Boundary

New Mexico    Texas

Map Extent  
(Lea County, NM)

Mexico





# New Mexico Office of the State Engineer

## Water Right Summary



WR File Number: C 03580

Subbasin: -

Cross Reference: -

Primary Purpose: EXP EXPLORATION

Primary Status:

Total Acres:

Subfile: -


Total Diversion: 0

Cause/Case: -



Owner: INTERCONTINENTAL POTASH CORP

Contact: TOM COPE

### Documents on File

| Trn #  | Doc                  | File/Act                   | Status |     | Transaction Desc.              | From/ |  | Acres | Diversion | Consumptive |
|--|----------------------|----------------------------|--------|-----|--------------------------------|-------|--|-------|-----------|-------------|
|  |                      |                            | 1      | 2   |                                | To    |  |       |           |             |
|  <a href="#">515225</a> | <a href="#">EXPL</a> | <a href="#">2012-10-17</a> | PMT    | APR | C 03580 (2 BOREHOLES-MIN EXPL) | T     |  | 0     | 0         |             |

### Current Points of Diversion

| POD Number                   | Source | Q Q Q |    |    | Sec | Tws | Rng | (NAD83 UTM in meters) |         | Other Location Desc   |
|------------------------------|--------|-------|----|----|-----|-----|-----|-----------------------|---------|---|
|                              |        | 64    | 16 | 4  |     |     |     | X                     | Y       |   |
| <a href="#">C 03580 POD1</a> |        | 3     | 2  | 23 | 24S | 34E |     | 647336                | 3564313 |  ICP-011 |
| <a href="#">C 03580 POD2</a> |        | 3     | 1  | 24 | 24S | 33E |     | 638123                | 3563932 |  ICP-097 |