

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

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

CASE NO. 20093

APPLICATION

NGL Water Solutions Permian, LLC ("NGL"). OGRID No. 372338, through its undersigned attorneys, hereby makes this application to the Oil Conservation 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 Thunderbird SWD #1 well at a surface location 190 feet from the South line and 314 feet from the East line of Section 30, Township 25 South, Range 36 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 Devonian formation at a depth of 15,430' – 17,100'.

(3) NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day.

(4) NGL anticipates using an average pressure of 2,314 psi for this well, and it requests that a maximum pressure of 3,086 psi be approved for the well.

(5) A proposed C-108 for the subject well is attached hereto in Attachment A.

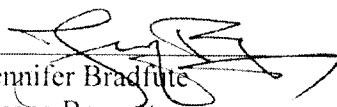
(6) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, NGL requests that this application be set for hearing before an Examiner of the Oil Conservation Division on November 15, 2018; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

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

By: _____

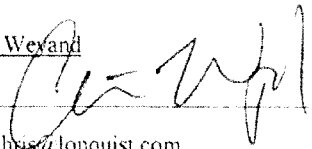

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Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. ~~2006~~ 2013 Application of NGL Water Solutions Permian, LLC for approval of salt water disposal well in Lea County, New Mexico. Applicant seeks an order approving disposal into the Devonian formation through the Thunderbird SWD #1 well at a surface location 190 feet from the South line and 314 feet from the East line of Section 30, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico. The target injection interval is the Devonian formation at a depth of 15,430' – 17,100'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said area is located approximately 6.2 miles west of Jal, New Mexico.

STEWART, LLC

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, TX 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: 10/10/2018
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.

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.

INJECTION WELL DATA SHEET

OPERATOR: NGL WATER SOLUTIONS PERMIAN, LLCWELL NAME & NUMBER: THUNDERBIRD SWD #1WELL LOCATION: 190' FSL & 314' FEL P UNIT LETTER SECTION 30 TOWNSHIP 25S RANGE 36E

FOOTAGE LOCATION

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 24.000" Casing Size: 20.000"

Cemented with: 1,308 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulation

1st Intermediate Casing

Hole Size: 17.500" Casing Size: 13.375"

Cemented with: 3,727 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulation

2nd Intermediate Casing

Hole Size: 12.250" Casing Size: 9.625"

Cemented with: 2,928 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulation

Production Liner

Hole Size: 8,500"

Casing Size: 7,625"

Cemented with: 350 sx.

or _____ ft³

Top of Cement: 10,600'

Method Determined: Calculation

Total Depth: 17,100'

Injection Interval

15,430 feet to 17,100 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 7", 26 lb/ft, P-110, TCPC from 0' - 10,500' and 5,500", 17 lb/ft, P-110 TCPC from 10,500' - 15,400'
 Lining Material: Duoline

Type of Packer: 7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

Packer Setting Depth: 15,400'

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: Devonian, Silurian, Fusselman and Montova (Top 100')

3. Name of Field or Pool (if applicable): SWD; Silurian-Devonian

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:

Yates-Seven Rivers: 3,458'

Delaware: 5,248'

Bone Spring: 7,912'

Wolfcamp: 10,984'

Strawn: 11,406'

| Thunderbird SWD | | | | | | | | | | | |
|--|---------|--|--|--|--|--|--|--|--|---|--|
| Lea County NM | | | | | | | | | | | |
| Vertical Injection - Devonian, Silurian, Fusselman, Montoya | | | | | | | | | | | |
| Location - Sec 30, Twp 25S, R 36E | | | | | | | | | | | |
| Drilling and Complete Cost - \$10.55MM | | | | | | | | | | | |
| Directions to Site - Travel 5.2 miles from jal along NM 205 - S/Frying Pan Road, continue on to Anthony Road and travel 5.9 miles to location. Lat/Long 32.0946100, -103.2967000 | | | | | | | | | | | |
| Geologic Tops (MD ft) | | Section | | Problems | | Bit/BHA | | Mud | | Casing | |
| | | Surface | | Loss Circulation Hole Cleaning Wellbore stability in the Red Beds Anhydrite in the Rustler | | 24" Tricone 9-5/8" x 8" MM 9 Jts: 8" DC 21 Jts: 5" HWDP 5" DP to surface | | Spud Mud MW< 9.0 | | 1620' of 20" K5S 133ppf STC Centralizers - bottom 2 joints and every 3rd jt thereafter, Cement basket at 200' | |
| Rustler | 1324 | Drill 24" 0' - 1620 Set and Cement 20" Casing | | Anhydrite in the Rustler | | 5" DP to surface | | | | No Logs | |
| Salado Silicastic | 1459 | | | | | | | | | | |
| Surface TD - | 1600 | | | | | | | | | | |
| Top of Salt | 1674 | 1st Intermediate Drill 3600' of 17-1/2" Hole 1600' - 5200' Set and Cement 13-3/8" Casing | | Seepage Losses Possible H2S Anhydrite Salt Sections | | 17-1/2" PDC 9-5/8" x 8" MM 9 Jts: 8" DC 21 Jts: 5" HWDP 5" DP to surface | | | | Lead - 1880 sx of Neocem 12.9ppg, 5hr TT Tail - 1847sx of Halcem, 14.8ppg 60% Excess 1000psi CSD after 10 hrs Cement to Surface | |
| Base of Salt | 3388 | | | | | | | | | | |
| Delaware | 5248 | | | | | | | | | | |
| 1st Int TD - | 5200 | | | | | | | | | | |
| ECP DV Tool - | 5160 | | | | | | | | | | |
| Bell Canyon | 5298 | 2nd Intermediate Drill 5900' of 12-1/4" Hole 5200' - 11,100' Set 9-5/8" Intermediate Casing and Cement in 3 Stages | | Hard Drilling in the Brushy Canyon Seepage to Complete Loss Water Flows Some Anhydrite H2S possible Production in the Bone Spring and Wolfcamp | | 12-1/4" PDC 8" MM 9Jts: 8" DC 8" Drilling Jars 21 Jts: 5" HWDP 5" DP to Surface | | 8.5 ppg OBM High Vis Sweeps UBD/MPD usig ADA | | Lead 663sx Neocem 12.9 ppg Tail 510sx Halcem 14.8ppg 1000psi CSD after 10 hrs Cement to Surface | |
| Cherry Canyon - | 5736 | | | | | | | | | Stage 3: 0% Excess | |
| Brushy Canyon - | 7036 | | | | | | | | | 510sx Halcem 14.8ppg 1000psi CSD after 10 hrs Cement to Surface | |
| DV Tool - | 8000 | | | | | | | | | Stage 2: 25% Excess | |
| Bone Spring - | 7119 | | | | | | | | | Lead 508sx Neocem 12.9 ppg Tail 295sx Halcem 14.8ppg 1000psi CSD after 10 hrs | |
| 3rd Int Liner Top - | 10,600 | | | | | | | | | Stage 1: 25% Excess | |
| Wolfcamp - | 10984 | | | | | | | | | Lead 415sx Neocem 12.9 ppg Tail 537sx Halcem 14.8ppg, 1000psi CSD after 10hrs | |
| 2nd Int TD - | 11,100 | | | | | | | | | | |
| Strawn - | 11406 | 3rd Intermediate Drill 4330' of 8-1/2" Hole 11100' - 15430' Set 7-5/8" Liner and Cement in Single Stage | | High Pressure (up to 15ppg) and wellbore instability (fracturing) expected in the Atoka 150 target radius Hard Drilling in the Morrow Clastic | | 8-1/2" PDC 6-3/4" MM 9 Jts: 6" DC 21 Jts: 5" HWDP 5" DP to Surface | | 12.5 ppg OBM UBD/MPD using ADA | | Lead 249sx Neocem 12.9 ppg Tail 101sx Halcem 14.8ppg, 1000psi CSD after 10hrs 8hr TT 35% Excess 1000psi CSD after 10hrs | |
| Atoka - | 11628 | | | | | | | | | | |
| Morrow - | 12288 | | | | | | | | | | |
| Miss Lst - | 13728 | | | | | | | | | | |
| Woodford - | 15056 | | | | | | | | | | |
| Perm Packer - | 15400 | | | | | | | | | | |
| 3rd Int TD - | 15,430 | | | | | | | | | | |
| Devonian - | 15,409 | | | | | | | | | | |
| Fusselman - | 16468 | Injection Interval Drill 1670' of 6-1/2" hole 15430' - 17,100' | | Chert is possible Loss of Circulation is expected H2S encountered on the Striker 3 well BHT estimated at 280F | | 6-1/2" PDC 4-3/4"MM 9 Jts: 4-3/4" DC 4-3/4" Drilling Jars 18 Jts: 4" FH HWDP 4" FH DP to Surface | | Fresh Water - possible flows | | Displace with 3% KCl (or heavier brine if necessary) | |
| Montoya - | 17,000' | | | | | | | | | Triple Combo with FMI, CBL of 7-5/8" | |
| TD - | 17,100' | | | | | | | | | MWD GR | |

NGL Water Solutions Permian, LLC

Thunderbird SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

| Well information | |
|-------------------------|---------------------|
| Lease Name | Thunderbird SWD |
| Well No. | 1 |
| Location | S-30 T-25S R-36E |
| Footage Location | 190' FSL & 314' FEL |

2.

a. Wellbore Description

| Casing Information | | | | |
|--------------------|-----------|--------------|------------|----------|
| Type | Surface | Intermediate | Production | Liner |
| OD | 20" | 13.375" | 9.625" | 7.625" |
| WT | 0.635" | 0.480" | 0.545" | 0.500" |
| ID | 18.730" | 12.415" | 8.535" | 6.625" |
| Drift ID | 18.542" | 12.259" | 8.535" | 6.500" |
| COD | 21.00" | 14.375" | 10.625" | 7.625" |
| Weight | 133 lb/ft | 68 lb/ft | 53.5 lb/ft | 39 lb/ft |
| Grade | K-55 | HCL-80 | P-110 | Q-125 |
| Hole Size | 24" | 17.5" | 12.25" | 8.5" |
| Depth Set | 1,600' | 5,200' | 11,100' | 15,430' |

b. Cementing Program

| Cement Information | | | | |
|---------------------------|----------------------|----------------------|--|---------|
| Casing String | Surface | Intermediate | Production | Liner |
| Lead Cement | Extenda Cem | Neocem | Neocem, Neocem, Neocem | Neocem |
| Lead Cement Volume | 713 | 1,880 | Stage 1: 415 sks Stage 2: 508 sks Stage 3: 663 sks | 249 |
| Tail Cement | Halcem | Halcem | Versacem C, Halcem, Halcem | Halcem |
| Tail Cement Volume | 595 | 1,847 | Stage 1: 537 sks Stage 2: 295 sks Stage 3: 510 sks | 101 |
| Cement Excess | 25% | 60% | 25%, 25%, 0% | 35% |
| TOC | Surface | Surface | Surface | 10,600' |
| Method | Circulate to Surface | Circulate to Surface | Circulate to Surface | Logged |

3. Tubing Description

| Tubing Information | | |
|--------------------|------------|------------------|
| OD | 7" | 5.5" |
| WT | 0.362" | 0.304" |
| ID | 6.276" | 4.892" |
| Drift ID | 7.875" | 6.050" |
| COD | 6.151" | 4.653" |
| Weight | 26 lb/ft | 17 lb/ft |
| Grade | P-110 TCPC | P-110 TCPC |
| Depth Set | 0'-10,500' | 10,500' -15,400' |

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman, Montoya (Top 100')
2. Gross Injection Interval: 15,430' – 17,100'

Completion Type: Open Hole

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

| Formation | Depth |
|--------------------|---------|
| Yates-Seven Rivers | 3,458' |
| Delaware | 5,248' |
| Bone Spring | 7,912' |
| Wolfcamp | 10,984' |
| Strawn | 11,406' |

VI. Area of Review

No wells within the area of review penetrate the proposed injection zone.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 40,000 BPD

Maximum Volume: 50,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 2,314 PSI (surface pressure)

Maximum Injection Pressure: 3,086 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Wolfcamp formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware, Bone Spring, Wolfcamp, and Strawn formations.
5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

A. Injection Zone: Siluro-Devonian Formation

| Formation | Depth |
|--------------------|---------|
| Rustler Anhydrite | 1,324' |
| Yates-Seven Rivers | 3,458' |
| Delaware | 5,248' |
| Bone Spring | 7,912' |
| Wolfcamp | 10,984' |
| Penn | 11,108' |
| Atoka | 11,628' |
| Morrow | 12,288' |
| Mississippian Lime | 12,318' |
| Woodford | 15,056' |
| Devonian | 15,409' |
| Fusselman | 16,468' |
| Montoya | 17,000' |

B. Underground Sources of Drinking Water

Within 1-mile of the proposed Thunderbird SWD #1 location, there are eight water wells. Only one water well has been reported of having a depth of 600 ft and a depth to water of 282 ft. Water wells in the surrounding area have an average depth of 495ft and an average water depth of 295 ft generally producing from the Santa Rosa. The upper Rustler may also be another USDW and will be protected.

IX. Proposed Stimulation Program

Stimulate with up to 50,000 gallons of acid.

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

Attached is a map of all water wells that exist within one mile of the well location. If samples can be obtained, analysis results will be provided as soon as possible. A Water Right Summary from the New Mexico Office of the State Engineer is attached for water well CP-00858POD2.

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 (in the proposed Thunderbird SWD #1) and any underground sources of drinking water.

NAME: John C. Webb

TITLE: Sr. Geologist

SIGNATURE: John C. Webb

DATE: 9/24/2018

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) 476-3160 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
Revised July 18, 2013

Oil Conservation Division

☐ AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

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

| | | |
|--|--|-------------------------------------|
| ¹ Operator Name and Address NGL WATER SOLUTIONS PERMIAN, LLC 1509 W WALL ST. STE 306 MIDLAND, TX 79701 | | ² OGRID Number 372338 |
| ⁴ Property Code | | ³ API Number TBD |
| ⁵ Property Name THUNDERBIRD SWD | | 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 |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| P | 30 | 25S | 36E | N/A | 190' | SOUTH | 314' | EAST | LEA |

*** Proposed Bottom Hole Location**

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

*** Pool Information**

| | |
|-------------------------------------|--------------------|
| Pool Name SWD; Silurian-Devonian | Pool Code 96101 |
|-------------------------------------|--------------------|

Additional Well Information

| | | | | |
|-------------------------------|---|--|-------------------------------------|--|
| ¹¹ Work Type N | ¹² Well Type SWD | ¹³ Cable/Rotary R | ¹⁴ Lease Type Private | ¹⁵ Ground Level Elevation 3,040' |
| ¹⁶ Multiple N | ¹⁷ Proposed Depth 17,100' | ¹⁸ Formation Siluro-Devonian | ¹⁹ Contractor TBD | ²⁰ Spud Date ASAP |
| Depth to Ground water 295' | | Distance from nearest fresh water well 127' | | Distance to nearest surface water 2,317' |

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

21. Proposed Casing and Cement Program

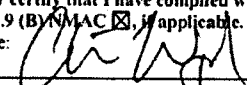
| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|--------------|-----------|-------------|------------------|-------------------|-----------------|---------------|
| Surface | 24" | 20" | 133 lb/ft | 1,600' | 1,308 | Surface |
| Intermediate | 17.5" | 13.375" | 68 lb/ft | 5,200' | 3,727 | Surface |
| Production | 12.25" | 9.625" | 53.5 lb/ft | 11,100' | 2,928 | Surface |
| Prod. Liner | 8.5" | 7.625" | 39 lb/ft | 15,430' | 350 | 10,600' |
| Tubing | N/A | 7" | 26 lb/ft | 0' - 10,500' | N/A | N/A |
| Tubing | N/A | 5.5" | 17 lb/ft | 10,500' - 15,400' | N/A | N/A |

Casing/Cement Program: Additional Comments

See attached schematic.

22. Proposed Blowout Prevention Program

| Type | Working Pressure | Test Pressure | Manufacturer |
|-------------------------------|------------------|---------------|-------------------------|
| Double Hydraulic/Blinds, Pipe | 10,000 psi | 8,000 psi | TBD - Schaeffer/Cameron |

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: Christopher B. Weyand | | OIL CONSERVATION DIVISION | |
| Title: Consulting Engineer | | Approved By: | |
| E-mail Address: chris@lonquist.com | | Title: | |
| Date: 10/9/2018 | Phone: (512) 600-1764 | Approved Date: | Expiration Date: |
| | | Conditions of Approval Attached | |

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
111 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) 476-3450 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

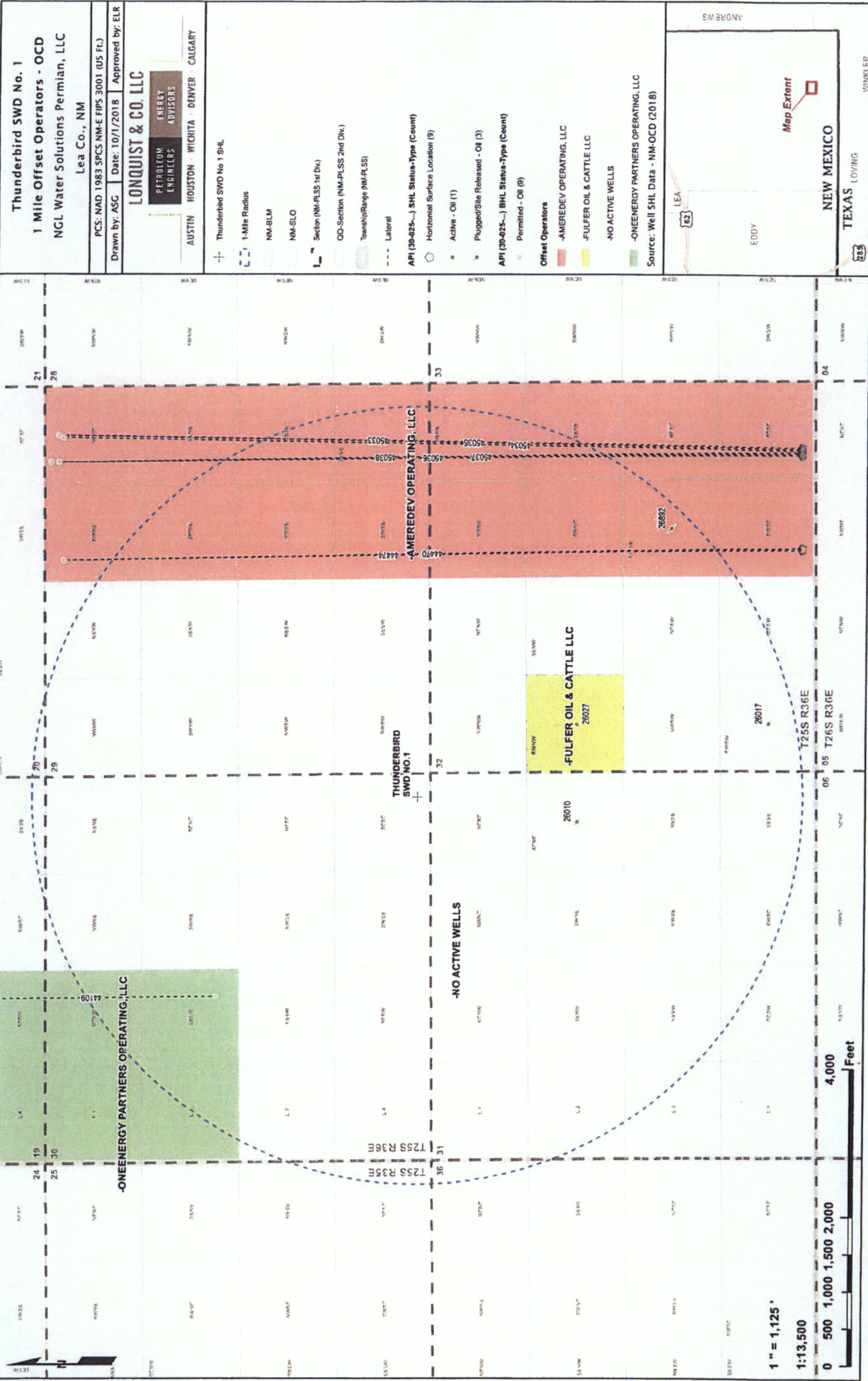
| | | | | | | | | | |
|---|---------------|--|---------------|--|-----------------------|---------------------------|-----------------------|-------------------------------------|---------------|
| ¹ API Number | | ² Pool Code 96101 | | ³ Pool Name SWD; Silurian-Devonian | | | | | |
| ⁴ Property Code | | ⁵ Property Name THUNDERBIRD SWD | | | | | | ⁶ Well Number 1 | |
| ⁷ OGRID No. 372338 | | ⁸ Operator Name NGL WATER SOLUTIONS PERMIAN, LLC | | | | | | ⁹ Elevation 3040.00'± | |
| " Surface Location | | | | | | | | | |
| UL or lot no. P | Section 30 | Township 25 S | Range 36 E | Lot Idn N/A | Feet from the 190' | North/South line SOUTH | Feet from the 314' | East/West line EAST | County LEA |
| " 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 |
| ¹¹ Dedicated Acres | | ¹² Joint or Infill | | ¹³ Consolidation Code | | ¹⁴ 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>SECTION 30</p> <p>PROPOSED THUNDERBIRD SWD 1</p> <p>NWSP-E (NAD27) N: 399,642.70' E: 821,172.60'</p> <p>NWSP-E (NAD83) N: 399,700.80' E: 882,360.20' Lat: N32°05'40.61" Long: W103°17'48.10"</p> <p>190' 314'</p> | <p>" 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 hereinafter entered by the division.</p> <p><i>[Signature]</i> 10/10/2018 Signature Date</p> <p>Chris Weyand Printed Name</p> <p>chris@lonquist.com E-mail Address</p> |
| | <p>" 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 belief.</p> <p>9/18/2018 Date of Survey</p> <p><i>[Signature]</i> Signature and Seal of Professional Surveyor</p> <p>COODY A. CLARK NEW MEXICO 23001 PROFESSIONAL SURVEYOR</p> <p>23001 Certificate Number</p> |

Thunderbird SWD No. 1
1 Mile Area of Review List

| API (30-025-...) | WELL NAME | WELL TYPE | STATUS | OPERATOR | TVL (FT.) | LATITUDE (NAD83 DD) | LONGITUDE (NAD83 DD) | DATE DRILLED |
|------------------|----------------------------------|-----------|--------|-----------------------------------|-----------|---------------------|----------------------|--------------|
| 26010 | PRE-ONGARD WELL #001 | O | P | PRE-ONGARD WELL OPERATOR | 3336 | 32.08861920000 | -103.29783630000 | 1/1/1900 |
| 26017 | PRE-ONGARD WELL #001 | O | P | PRE-ONGARD WELL OPERATOR | 3379 | 32.08138280000 | -103.29358670000 | 1/1/1900 |
| 26027 | SITTING BULL A #001 | O | A | FUIFER OIL & CATTLE LLC | 3368 | 32.08861540000 | -103.29357910000 | 7/22/1978 |
| 26892 | PRE-ONGARD WELL #002 | O | P | PRE-ONGARD WELL OPERATOR | 3746 | 32.08501050000 | -103.28504180000 | 1/1/1900 |
| 44109 | CONVERT FEE WCB #001H | O | N | ONEENERGY PARTNERS OPERATING, LLC | 0 | 32.12934600000 | -103.30542500000 | 12/31/9999 |
| 44470 | RED BUD 25 36 32 STATE COM #105H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012800000 | -103.28594790000 | 5/20/2018 |
| 44471 | RED BUD 25 36 32 STATE COM #115H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012850000 | -103.28601200000 | 5/24/2018 |
| 45033 | RED BUD 25 36 32 STATE COM #077H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012860000 | -103.28156470000 | 12/31/9999 |
| 45034 | RED BUD 25 36 32 STATE COM #087H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012850000 | -103.28169390000 | 12/31/9999 |
| 45035 | RED BUD 25 36 32 STATE COM #097H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012860000 | -103.28162930000 | 12/31/9999 |
| 45036 | RED BUD 25 36 32 STATE COM #107H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012850000 | -103.28188760000 | 12/31/9999 |
| 45037 | RED BUD 25 36 32 STATE COM #117H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012850000 | -103.28182300000 | 12/31/9999 |
| 45038 | RED BUD 25 36 32 STATE COM #127H | O | N | AMEREDEV OPERATING, LLC | 0 | 32.08012850000 | -103.28175840000 | 12/31/9999 |



FILED
11th JUDICIAL DISTRICT COURT
San Juan County
10/11/2018 2:22 PM
WELDON J. NEFF
CLERK OF THE COURT
Jennifer Dean

STATE OF NEW MEXICO
COUNTY OF SAN JUAN
ELEVENTH JUDICIAL DISTRICT COURT

No. D-1116-CV-2017-01234

PINGORA LOAN SERVICING, LLC,

Plaintiff.

vs.

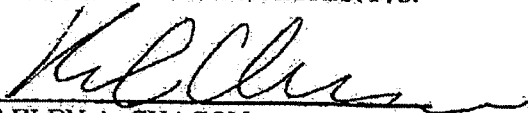
GARY MONTOYA AKA GARY LEON MONTOYA
AND LUCILLE B. MONTOYA.

Defendants.

NOTICE OF FILING AFFIDAVIT OF PUBLICATION

COMES NOW Rose L. Brand & Associates, P.C. (Kaelen A. Chacon), and hereby gives notice of filing of the Affidavit of Publication of the Notice of Sale, a copy of which is attached hereto as Exhibit "A."

ROSE L. BRAND & ASSOCIATES, P.C.




KAELEN A. CHACON
Attorneys for Plaintiff
7430 Washington Street, NE
Albuquerque, NM 87109
Telephone: (505) 833-3036
Facsimile: (505) 833-3040
E-mail: Kaelen.Chacon@roselbrand.com

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was electronically filed, and mailed to the below *pro se* party, on this 11th day of October, 2018. I further certify that this filing caused a copy to be electronically served, consistent with the courts electronic service procedures, on below counsel:

Gary Montoya
704 1st St
Bloomfield, NM 87413

Jennifer D. Yoder
Attorney for Defendant Lucille B. Montoya
3751 N. Butler Ave., Ste 105
Farmington, NM 81401
Telephone: (505) 325-7888
Email: jennifer@jdyoderlaw.com



AMY A. CAMPBELL, Paralegal

Exhibit A ^{THE} DAILY TIMES 5020-538-F ✓

AFFIDAVIT OF PUBLICATION

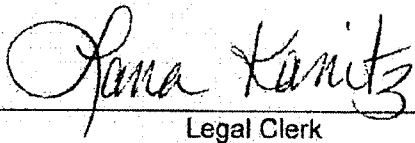
Ad No.
0001258310

ROSE L. BRAND - FARMINGTON
7430 WASHINGTON ST NE

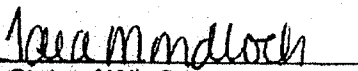
ALBUQUERQUE NM 87109


I, being duly sworn say: THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the internet at The Daily Times web site on the following days(s):

08/17/18, 08/24/18, 08/31/18, 09/07/18


Legal Clerk

Subscribed and sworn before me this
7th of September 2018.


State of WI, County of Brown
NOTARY PUBLIC


My Commission Expires

Ad#:0001258310
P O : 5613-037-F
of Affidavits :0.00

TARA MONDLOCH
Notary Public
State of Wisconsin

666.82 ✓

Exhibit A

STATE OF NEW MEXICO
COUNTY OF SAN JUAN
ELEVENTH JUDICIAL DISTRICT COURT

No. D-1116-CV-2017-01234

PINGORA LOAN SERVICING, LLC,

Plaintiff,

vs.

GARY MONTOYA AKA GARY LEON MONTOYA
AND LUCILLE B. MONTOYA,

Defendants.

NOTICE OF SALE

NOTICE IS HEREBY GIVEN that on September 19, 2018, at the hour of 12:30 PM, the undersigned Special Master, or his designee, will, at the front entrance of the San Juan County Courthouse, at 851 Andrea Dr., Farmington, NM 87401, sell all of the rights, title, and interests of the above-named Defendants, in and to the hereinafter described real property to the highest bidder for cash. The property to be sold is located at 217 Arnold Drive, Aztec, New Mexico 87410, and is more particularly described as follows:

LOT 15, OF THE MORNING VIEW ADDITION, IN THE CITY OF AZTEC, SAN JUAN COUNTY, NEW MEXICO, AS SHOWN ON THE PLAT OF SAID SUBDIVISION FILED FOR RECORD APRIL 30, 1975,

including any improvements, fixtures, and attachments, such as, but not limited to, mobile homes, (hereinafter the "Property"). If there is a conflict between the legal description and the street address, the legal description shall control.

The foregoing sale will be made to satisfy a foreclosure judgment rendered by this Court in the above-entitled and numbered cause on July 6, 2018, being an action to foreclose a mortgage on the Property. Plaintiff's judgment is in the amount of \$190,881.04, and the same bears interest at the rate of 4.2500% per annum, accruing at the rate of \$22.23 per diem. The Court reserves entry of final judgment against Defendants, Gary Montoya and Lucille B. Montoya, for the amount due after foreclosure sale, including interest, costs, and fees as may be assessed by the Court. Plaintiff has the right to bid at the foregoing sale in an amount equal to its judgment, and to submit its bid either verbally or in writing. Plaintiff may apply all or any part of its judgment to the purchase price in lieu of cash.

In accordance with the Court's decree, the proceeds of sale are to be applied first to the costs of sale, including the Special Master's fees, and then to satisfy the above-described judgment, including interest, with any remaining balance to be paid unto the registry of the Court in order to satisfy any future adjudication of priority lienholders.

NOTICE IS FURTHER GIVEN that in the event that the Property is not sooner redeemed, the undersigned Special Master will, as set forth

Exhibit A

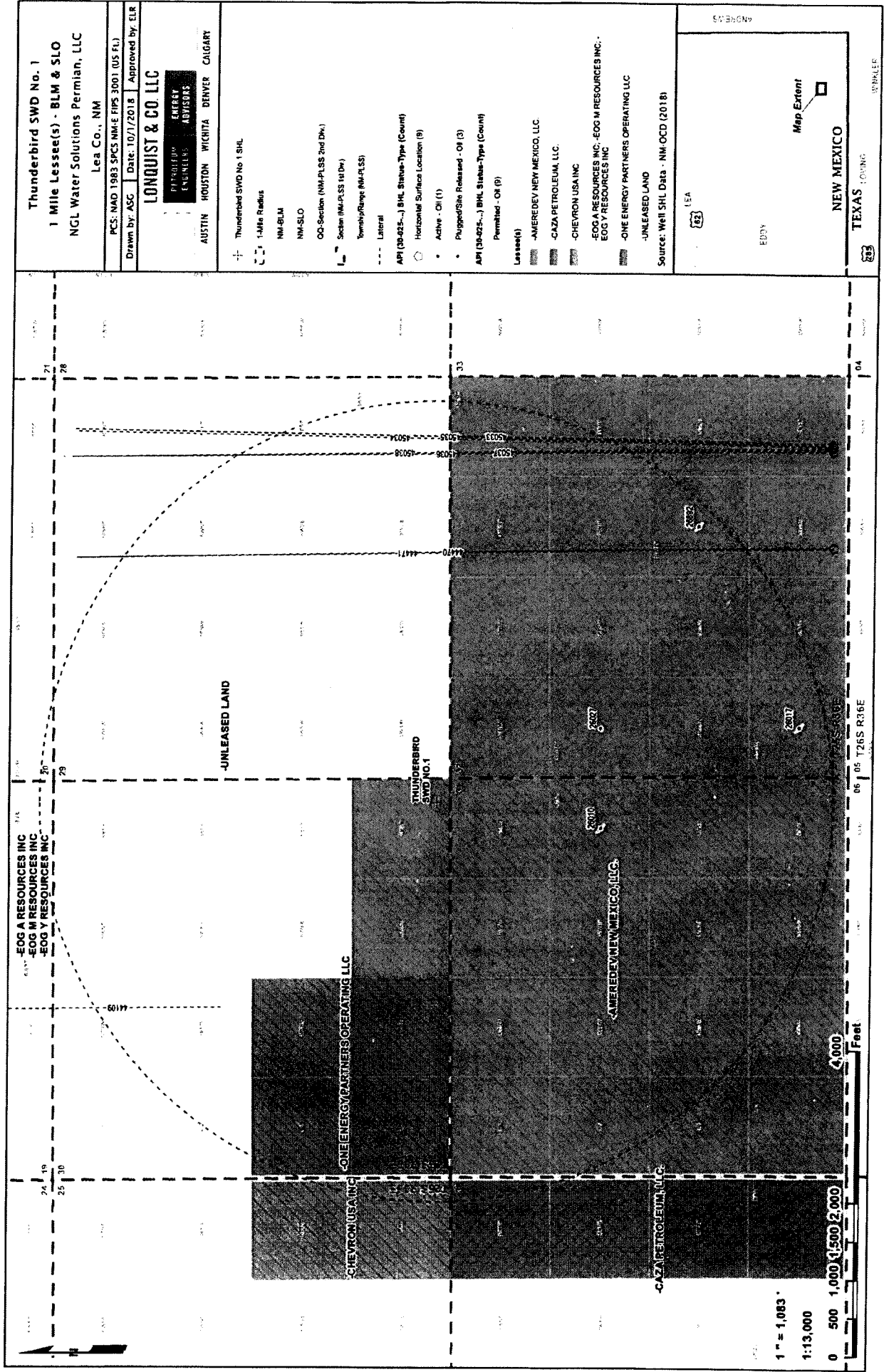
above, offer for sale and sell the Property to the highest bidder for cash or equivalent, for the purpose of satisfying, in the adjudged order of priorities, the judgment and decree of foreclosure described herein, together with any additional costs and attorney's fees, including the costs of advertisement and publication for the foregoing sale, and, reasonable receiver and Special Master's fees in an amount to be fixed by the Court. The amount of the judgment due is \$190,881.04, plus interest to and including date of sale in the amount of \$3,134.43, for a total judgment of \$194,015.47.

The foregoing sale may be postponed and rescheduled at the discretion of the Special Master, and is subject to all taxes, utility liens and other restrictions and easements of record, and subject to a one (1) month right of redemption held by the Defendants upon entry of an order approving sale, and subject to the entry of an order of the Court approving the terms and conditions of sale.

Witness my hand this 15th day of August, 2018.

/s/ David Washburn
DAVID WASHBURN, Special Master
8100 Wyoming Blvd NE
Suite M-4, Box 272
Albuquerque, NM 87113
Telephone: (505) 318-0300
E-mail: sales@nsi.legal

Legal No. 1258310 published in The Daily Times
on Aug. 7, 24, 31, Sept. 7, 2018



| Thunderbird SWD #1: Offsetting Produced Water Analysis | | | | | | | | | | | | | | | | | | |
|--|------------|---------|----------|-------|------|----------------------|-----------|-----|----------|------------|-------------|----------|---------------|---------------|--------------|-----------------|-------------|---------|
| wellname | api | section | township | range | unit | county | formation | ph | ids_mgl | sodium_mgl | calcium_mgl | iron_mgl | magnesium_mgl | manganese_mgl | chloride_mgl | bicarbonate_mgl | sulfate_mgl | co2_mgl |
| BELL LAKE UNIT #009 | 3002520261 | 18 235 | 34E | K | LEA | BONE SPRING | | 5.6 | 204652 | | | | | | | | | |
| THISTLE UNIT #071H | 3002542425 | 27 235 | 33E | A | LEA | BONE SPRING 1ST SAND | | 5.6 | 171476.3 | 55363.2 | 9140 | 40.4 | | 1023 | | 512 | 260 | |
| BELL LAKE 19 STATE #004H | 3002541517 | 19 245 | 33E | O | LEA | BONE SPRING 2ND SAND | | 6.3 | | 76378 | 6238 | 11 | 834 | | 0 | 104576.4 | 244 | 560 |
| BELL LAKE 19 STATE #003H | 3002541516 | 19 245 | 33E | O | LEA | BONE SPRING 2ND SAND | | 6.7 | | 59599 | 7326 | 11 | 942 | | 0 | 131397 | 159 | 570 |
| SALADO DRAW 6 FEDERAL #001H | 3002541293 | 6 265 | 34E | M | LEA | BONE SPRING 3RD SAND | | 6.7 | 95604 | 31066 | 3196 | 10 | 394 | | 0.5 | 108190 | 171 | 580 |
| SALADO DRAW 6 FEDERAL #003H | 3002541293 | 6 265 | 34E | M | LEA | BONE SPRING 3RD SAND | | 7 | | | | | | | 0.38 | 59071 | 183 | 0 |
| NORTH EL MAR UNIT #057 | 3002508440 | 31 265 | 33E | F | LEA | DELAWARE | | | 259554 | | | 3289 | 474.5 | | | 219.6 | | 300 |
| GOEDEKE #002 | 3002508407 | 10 265 | 33E | G | LEA | DELAWARE | | | 203925 | | | | | | | 163000 | 61 | 253 |
| PRONGHORN AHO FEDERAL #001 | 3002526496 | 6 235 | 33E | G | LEA | STRAWN | | 5.5 | | | 20.1 | 0 | 12.2 | | | 184000 | 85 | 210 |
| SNAPPING 2 STATE #014H | 3001542688 | 7 265 | 31E | P | EDDY | WOLF CAMP | | 7.3 | 81366.4 | 26319.4 | 2687.4 | 26.1 | 326.7 | | | 35.5 | 48.8 | |
| | | | | | | | | | | | | | | | | 50281.2 | 399.7 | 100 |



Beckham Ranch

Proposed SWD Locations

Lea County, NM

4) THUNDERBIRD

LAT: -103.296695

LONG: 32.094615

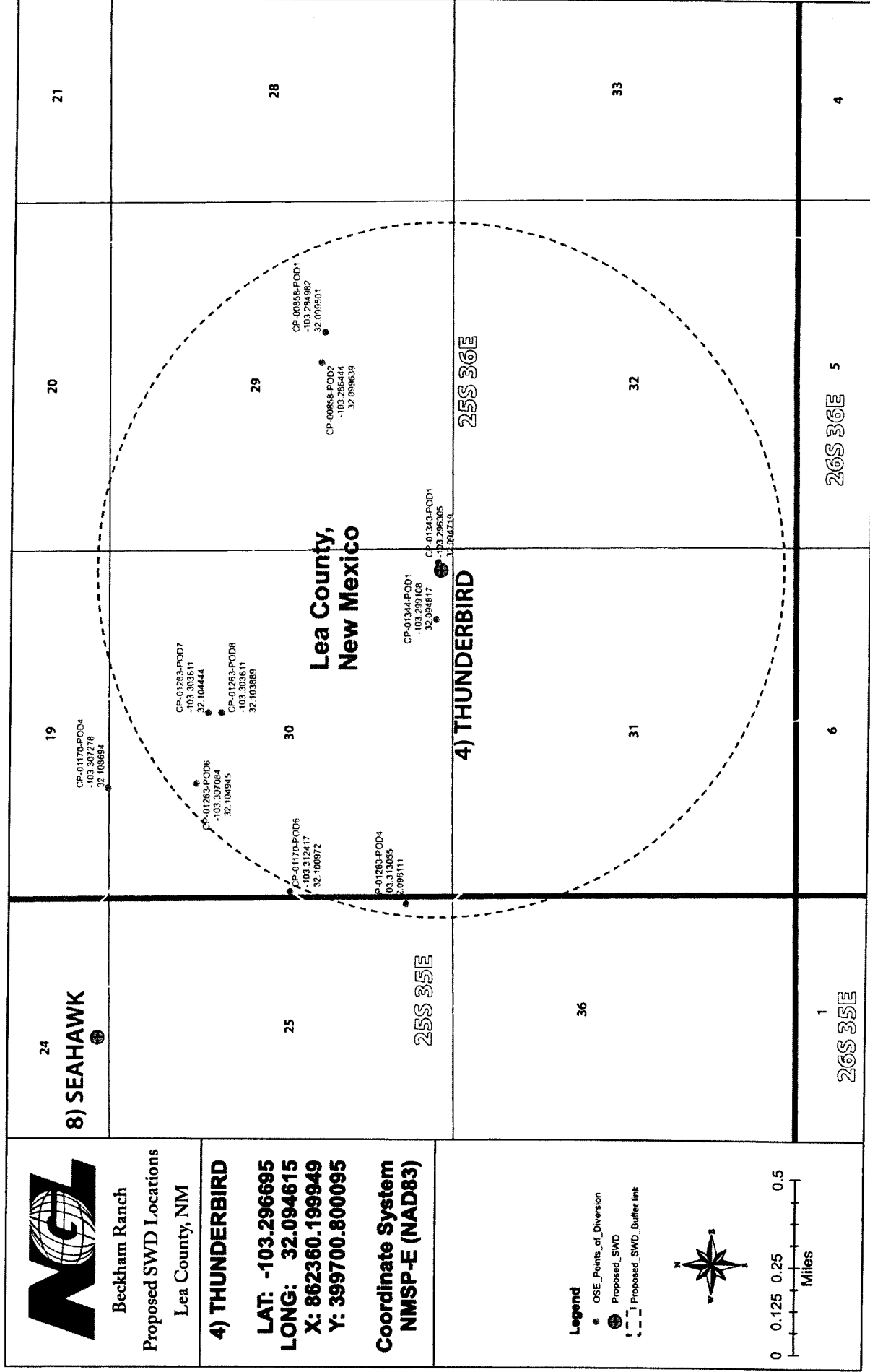
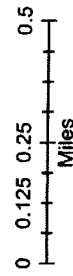
X: 862360.199949

Y: 399700.800095

Coordinate System
NMSP-E (NAD83)

Legend

- OSE_Points_of_Diversion
- ⊕ Proposed_SWD
- Proposed_SWD_Buffer_Link





New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

| | | | | | | | |
|-----------------|-------------------|-------------------|------------|------------|------------|----------|----------|
| Well Tag | POD Number | Q64 Q16 Q4 | Sec | Tws | Rng | X | Y |
| CP 00858 | POD2 | 1 1 4 | 29 | 25S | 36E | 661690 | 3552765 |

Driller License: 331 **Driller Company:** SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.
Driller Name: PHILLIP D. STEWART

Drill Start Date: 04/07/2014 **Drill Finish Date:** 04/12/2014 **Plug Date:**
Log File Date: 04/21/2014 **PCW Rcv Date:** **Source:** Shallow
Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 30 GPM
Casing Size: 6.13 **Depth Well:** 600 feet **Depth Water:** 282 feet

| | | | |
|---------------------------------------|------------|---------------|-------------------------------|
| Water Bearing Stratifications: | Top | Bottom | Description |
| | 280 | 290 | Shallow Alluvium/Basin Fill |
| | 290 | 370 | Shale/Mudstone/Siltstone |
| | 370 | 530 | Other/Unknown |
| | 530 | 560 | Sandstone/Gravel/Conglomerate |

| | | |
|-----------------------------|------------|---------------|
| Casing Perforations: | Top | Bottom |
| | 260 | 580 |