

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

**AMENDED APPLICATION OF NGL WATER
SOLUTIONS PERMIAN, LLC
FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO**

CASE NO. 16506 (HARPOON)

**AMENDED APPLICATION OF NGL WATER
SOLUTIONS PERMIAN, LLC
FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO**

CASE NO. 20150 (MAVERICK)

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Exhibit 1

**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. 16506

AMENDED APPLICATION

NGL Water Solutions Permian, LLC ("NGL"), OGRID No. 372338, through its undersigned attorneys, hereby submits this Amended 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 submitted an application to drill the Harpoon SWD #1 well in October 2018. NGL submitted an amended application on November 30, 2018. NGL is providing this amended application to update the proposed location for drilling the well.

(2) NGL proposes to drill the Harpoon SWD #1 well at a surface location 900 feet from the South line and 150 feet from the West line of Section 27, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.

(3) NGL is proposing this change in location to accommodate the operations of an offset oil and gas operator.

(4) Apart from the change in location, NGL makes no further changes to the NGL amended application previously filed with the Division on November 30, 2018.

(5) A revised plat, revised maps of the area of review, and a revised lists of wells and operators within the one-mile area of review are 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.

(7) This case has been continued to the April 18, 2019 docket.

WHEREFORE, NGL requests 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 M. 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. 16506: Amended 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 Silurian-Devonian formation through the Harpoon SWD #1 well at a surface location 900 feet from the South line and 150 feet from the West line of Section 27, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,960' to 18,850'. 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 16.3 miles northwest of Jal, New Mexico.

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: (505) 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 97869		³ Pool Name SWD; Devonian-Silurian	
⁴ Property Code		⁵ Property Name HARPOON SWD			⁶ Well Number 1
⁷ OGRID No. 372338		⁸ Operator Name NGL WATER SOLUTIONS PERMIAN, LLC			⁹ Elevation 3440.00'±

¹⁰ Surface Location

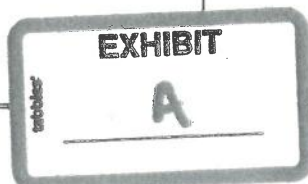
UL or lot no. M	Section 27	Township 24 S	Range 34 E	Lot Idn N/A	Feet from the 900'	North/South line SOUTH	Feet from the 150'	East/West line WEST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

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.			

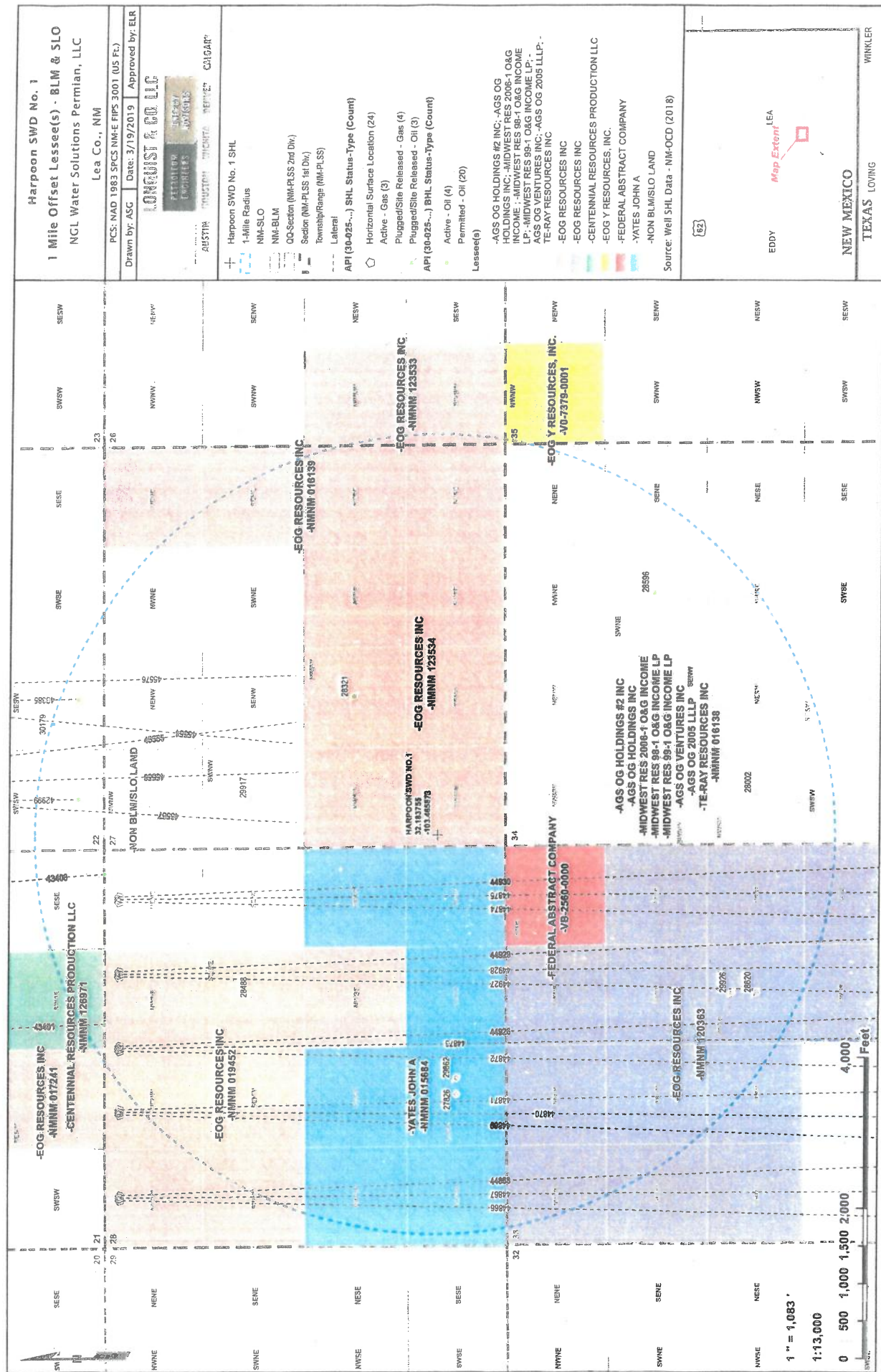
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

SECTION 27 PROPOSED HARPOON SWD 1 NMSP-E (NAD27) N: 431,808.52' E: 768,521.42' NMSP-E (NAD83) N: 431,867.00' E: 809,706.70' Lot: N32°11'01.52" Long: W103°27'57.14"	¹⁷ OPERATOR CERTIFICATION 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. 3/22/2019 Signature Date Chris Weyand Printed Name chris@lonquist.com E-mail Address
	¹⁸ SURVEYOR CERTIFICATION 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. 03/13/2019 Date of Survey Signature and Seal of Professional Surveyor 25114 Certificate Number
	Billy W. Barr Jr. NEW MEXICO 25114 PROFESSIONAL SURVEYOR



Harpoon SWD No. 1
1 Mile Area of Review List

API (30-025-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
27826	MADERA 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15300	32.18309780000	-103.4769690000	6/18/1982
28002	PITCHFORK 34 FEDERAL COM #001	G	A	EOG RESOURCES INC	15435	32.17219160000	-103.46417240000	11/11/1982
28321	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	15530	32.18671420000	-103.45993040000	1/1/1900
28488	PITCHFORK RANCH 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15250	32.19035720000	-103.47274020000	12/2/1983
28596	MOORE 34 COM #001	O	P	JOHNNY G JONES	15376	32.17582320000	-103.45564270000	2/3/1984
28620	MADERA 33 FEDERAL COM #002	G	P	EOG RESOURCES INC	15159	32.17270310000	-103.47270200000	5/9/1984
29862	MADERA 28 FEDERAL COM #002	G	P	EOG RESOURCES INC	13945	32.18309780000	-103.47625730000	3/10/1987
29917	PRE-ONGARD WELL #001	G	P	PRE-ONGARD WELL OPERATOR	15142	32.19034960000	-103.46420290000	1/1/1900
29926	MADERA 33 FEDERAL COM #004	G	P	EOG RESOURCES INC	14000	32.17310330000	-103.47270200000	7/18/1987
30179	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	15500	32.19760510000	-103.46101380000	1/1/1900
42999	ROMEO FEDERAL COM #001H	O	A	CENTENNIAL RESOURCE PRODUCTION, LLC	11210	32.20919210000	-103.46423440000	1/21/2017
43385	JULIET FEDERAL COM #001H	O	A	CENTENNIAL RESOURCE PRODUCTION, LLC	12421	32.20919210000	-103.45996790000	12/3/2017
43401	RAIDER FEDERAL COM #001H	O	A	CENTENNIAL RESOURCE PRODUCTION, LLC	10408	32.20920340000	-103.46850280000	9/10/2018
43408	RAIDER FEDERAL COM #101H	O	A	CENTENNIAL RESOURCE PRODUCTION, LLC	9417	32.20919490000	-103.46850280000	9/13/2018
44866	STONEWALL 28 FEDERAL COM #301H	O	N	EOG RESOURCES INC	0	32.19525230000	-103.48139220000	7/5/2018
44867	STONEWALL 28 FEDERAL COM #302H	O	N	EOG RESOURCES INC	0	32.19525230000	-103.48128550000	7/7/2018
44868	STONEWALL 28 FEDERAL COM #703H	O	N	EOG RESOURCES INC	0	32.19525230000	-103.48117880000	12/31/9999
44869	STONEWALL 28 FEDERAL COM #704H	O	N	EOG RESOURCES INC	0	32.19524920000	-103.47770980000	12/31/9999
44870	STONEWALL 28 FEDERAL COM #705H	O	N	EOG RESOURCES INC	0	32.19524910000	-103.47760310000	12/31/9999
44871	STONEWALL 28 FEDERAL COM #706H	O	N	EOG RESOURCES INC	0	32.19524900000	-103.47749650000	12/31/9999
44872	STONEWALL 28 FEDERAL COM #707H	O	N	EOG RESOURCES INC	0	32.19524680000	-103.47499170000	12/31/9999
44873	STONEWALL 28 FEDERAL COM #708H	O	N	EOG RESOURCES INC	0	32.19524590000	-103.47488510000	12/31/9999
44874	STONEWALL 28 FEDERAL COM #713H	O	N	EOG RESOURCES INC	0	32.19524110000	-103.46861270000	12/31/9999
44875	STONEWALL 28 FEDERAL COM #714H	O	N	EOG RESOURCES INC	0	32.19524100000	-103.46850600000	12/31/9999
44926	STONEWALL 28 FEDERAL COM #709H	O	N	EOG RESOURCES INC	0	32.19524670000	-103.47477840000	12/31/9999
44927	STONEWALL 28 FEDERAL COM #710H	O	N	EOG RESOURCES INC	0	32.19524400000	-103.47181250000	12/31/9999
44928	STONEWALL 28 FEDERAL COM #711H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.47170620000	12/31/9999
44929	STONEWALL 28 FEDERAL COM #712H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.47159960000	12/31/9999
44930	STONEWALL 28 FEDERAL COM #715H	O	N	EOG RESOURCES INC	0	32.19524090000	-103.46839930000	12/31/9999
45554	JULIET FEDERAL COM #503H	O	N	CENTENNIAL RESOURCE PRODUCTION, LLC	0	32.20918800000	-103.45950400000	12/31/9999
45555	JULIET FEDERAL COM #707H	O	N	CENTENNIAL RESOURCE PRODUCTION, LLC	0	32.20919200000	-103.46355400000	12/31/9999
45556	ROMEO FEDERAL COM #706H	O	N	CENTENNIAL RESOURCE PRODUCTION, LLC	0	32.20919200000	-103.46365200000	12/31/9999
45557	ROMEO FEDERAL COM #705H	O	N	CENTENNIAL RESOURCE PRODUCTION, LLC	0	32.20919200000	-103.46374900000	12/31/9999
45576	JULIET FEDERAL COM #504H	O	N	CENTENNIAL RESOURCE PRODUCTION, LLC	0	32.20918800000	-103.45940700000	12/31/9999



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

CASE NO. 16506

AMENDED APPLICATION

NGL Water Solutions Permian, LLC ("NGL"), OGRID No. 372338, through its undersigned attorneys, hereby submits this Amended 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 submitted an application to drill the Harpoon SWD #1 well on 10/01/18. NGL is providing this amended application to update the proposed location for drilling the well. NGL proposes to drill the Harpoon SWD #1 well at a surface location 172 feet from the South line and 2353 feet from the West line of Section 27, 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 Silurian-Devonian formation at a depth of 16,960' to 18,850'.

(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 2,544 psi for this well, and it requests that a maximum pressure of 3,392 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 January 10, 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: Deana M. Bennett

Jennifer Bradfute
Deana Bennett
Post Office Box 2168
Bank of America Centre
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. 16506: 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 Silurian-Devonian formation through the Harpoon SWD #1 well at a surface location 172 feet from the South line and 2353 feet from the West line of Section 27, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,960' to 18,850'. 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 16.3 miles northwest of Jal, New Mexico.

Revised March 23, 2017

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: NGL WATER SOLUTIONS PERMIAN LLC

OGRID Number: 372338

Well Name: HARPOON SWD #1

API: TBD

Pool: SWD; SILURIAN-DEVONIAN

Pool Code: 96101

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 holders

B. ☐ Royalty, overriding royalty owners, revenue owners

C. ☒ Application requires published notice

D. ☒ Notification and/or concurrent approval by SLO

E. ☒ Notification and/or concurrent approval by BLM

F. ☒ Surface owner

G. ☐ For all of the above, proof of notification or publication is attached, and/or,

H. ☐ No notice required

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

Signature

Date

11/21/2018

512-600-1764

Phone Number

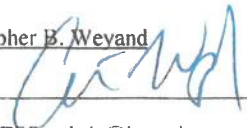
CHRIS@LONQUIST.COM

e-mail Address

EXHIBIT

A

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: 11/21/2010
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: _____

Side 2

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: NGL WATER SOLUTIONS PERMIAN, LLC

WELL NAME & NUMBER: HARPOON SWD #1

WELL LOCATION: 172 FSL & 2.353' FWL N 27 24S 34E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 24.000"

Casing Size: 20.000"

Cemented with: 1.544 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

1st Intermediate Casing

Hole Size: 17.500"

Casing Size: 13.375"

Cemented with: 2.973 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

2nd Intermediate Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with: 3.613 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 409 sx.

or _____ ft³

Top of Cement: 11,800'

Method Determined: Calculation

Total Depth: 18,850'

Injection Interval

16,960 feet to 18,850 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 7", 26 lb/ft, P-110, TCPC from 0'- 11,700' and 5,500", 17 lb/ft, P-110 TCPC from 11,700'- 16,900'

Lining Material: Duoline

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

Packer Setting Depth: 16,900'

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 Montoya (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:

Delaware: 5,370'

Bone Spring: 9,258'

Wolfcamp: 12,259'

Atoka: 13,927'

Strawn: 13,685'

Morrow: 14,738'

Harpoon SWD Revised Location									
Lea County NM									
Vertical Injections: Deadman, Sulman, Fosselman, Montoya									
Location - Sec 27, Twp 24S, R 34E									
Drilling Cost - \$10.73MM									
AFE #									
GL/KB									
18,850									
3,435									
TD									
Directions to Site: Travel E 4.3 miles from 1st NM along NM 128W Turn left (south) on Battle Ave Road and travel 5.9 miles to location 1st/long 12-18174722-103 460000									
Injection String									
Cement									
Logging									
Casing									
Mud									
Bit/BHA									
Problems									
Section									
Surface									
Drill 24"									
0' - 1400'									
Set and Cement									
20" Casing									
1st Intermediate									
Drill 3900' of									
17-1/2" Hole									
1400' - 5300'									
Set and Cement									
13-3/8" Casing									
Loss Circulation									
Hole Cleaning									
Wellbore stability in the Red									
Beds									
Anhydrite in the Rustler									
Seepage Losses									
Possible H2S									
Anhydrite									
Salt Sections									
Hard Drilling in the Brushy									
Canyon									
Seepage to Complete Loss									
Water Flows									
Some Anhydrite									
H2S possible									
Production in the Bone									
Spring and Wolfcamp									
Ballooning is possible in									
Cherry Canyon and Brushy if									
Broken Down									
High Pressure (up to 15ppg)									
and wellbore instability									
(fracturing) expected in the									
Atoka									
150 target radius									
Hard Drilling in the Morrow									
Clastic									
Chert is possible									
Loss of Circulation and or									
Flows are expected									
H2S encountered on the									
Striker 3 well									
BHT estimated at 280F									
Injection Interval									
Drill 1890' of 6-1/2" hole									
16960' - 18850'									
Strawn - 13685									
Atoka - 13927									
Morrow - 14738									
Miss Lst - 14805									
Woodford - 16763									
Perm Packer - 16,900									
3rd Int TD - 16,960									
Devonian - 16,940									
Fosselman - 18000									
Montoya - 18,750'									
TD - 18,850'									
1500									
Salado 1,544'									
Base of Salt 4407									
1st Int TD - 5300									
ECP DV Tool - 5350									
Delaware 5370									
Bell Canyon 5412									
Cherry Canyon - 6460									
Brushy Canyon - 8140									
DV Tool - 9000									
Bone Spring - 9258									
3rd Int Liner Top - 11,800									
Wolfcamp - 12259									
2nd Int TD - 12,400									
5200' of 5-1/2"									
P110 17# TCP									
Duoline Internally Coated Injection Tubing									
MWD GR Triple combo + CBL of 13-3/8" Casing									
Stage 2: 50% Excess 1206sx Halcem 13.7ppg 1000psi CSD after 10 hrs									
Stage 3: 10% Excess 1111sx Halcem 13.7ppg 1000psi CSD after 10 hrs Cement to Surface									
Stage 1: 50% Excess 1307sx Halcem 15.6ppg, 1000psi CSD after 10hrs									
409sx Neocem 12.9 ppg 50% Excess 1000psi CSD after 12hrs									
Displace with 3% KCl (or heavier brine if necessary)									
MWD GR Triple Combo with FMI, CBL of 7-5/8"									
Openhole completion									
5160' of 7-5/8" 39# Q125 - DTL (F14) F (Gas Tight) VersaFlex Packer Hanger Centralizers on and 1 ft above shoe it and then every 2nd ft.									
MWD GR Triple combo, CBL of 9-5/8" Casing									
Triple Combo with FMI, CBL of 7-5/8"									
Displace with 3% KCl (or heavier brine if necessary)									
7-5/8" x 5-1/2" TCP Permanent Packer with High Temp Elastomer and full Inconel 925 trim									

NGL Water Solutions Permian, LLC

Harpoon SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Harpoon SWD
Well No.	1
Location	S-27 T-24S R-34E
Footage Location	172' FSL & 2,353' FWL

2.

a. Wellbore Description

Casing Information				
Type	Surface	Intermediate	Production	Liner
OD	20"	13.375"	9.625"	7.625"
WT	0.438"	0.480"	0.545"	0.500"
ID	19.124"	12.415"	8.535"	6.625"
Drift ID	18.937"	12.259"	8.535"	6.500"
COD	21.00"	14.375"	10.625"	7.625"
Weight	106.5 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55	HCL-80	P-110	Q-125
Hole Size	24"	17.5"	12.25"	8.5"
Depth Set	1,400'	5,300'	12,400'	11,800' - 16,960'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate	Production	Liner
Cement	Lead: Extenda Cem Tail: Halcem	Halcem	Halcem	Neocem
Cement Volume	Lead: 680 Tail: 703	2,973	Stage 1: 1,307 sks Stage 2: 1,206 sks Stage 3: 1,111 sks	409
Cement Excess	25%	30%	10%, 50%, 50%	50%
TOC	Surface	Surface	Surface	11,800'
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"	4.767"
Weight	26 lb/ft	17 lb/ft
Grade	P-110 TCPC	P-110 TCPC
Depth Set	0'-11,700'	11,700'-16,900'

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: 16,960' – 18,850'

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
Delaware	5,370
Bone Spring	9,258
Wolfcamp	12,259
Strawn	13,685
Atoka	13,927
Morrow	14,738

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: 2,544 PSI (surface pressure)

Maximum Injection Pressure: 3,392 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the water will be predominantly sourced 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, 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 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	1,102'
Salado Anhydrite	1,544'
Delaware	5,370'
Bone Spring	9,258'
Wolfcamp	12,259'
Strawn	13,685'
Atoka	13,927'
Morrow	14,738'
Mississippian	15,620'
Woodford	16,763'
Devonian	16,940'
Fusselman	18,000'
Montoya	18,750'

B. Underground Sources of Drinking Water

Within 1-mile of the proposed Harpoon SWD #1 location, there are no fresh water wells. However, water wells in the greater surrounding area have an average depth of 293 ft and an average water depth of 241 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

There are no water wells that exist within one mile of the well location. For this reason, fresh water analysis has not been included with the application.

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 Harpoon 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) 476-3460 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

Operator Name and Address NGL WATER SOLUTIONS PERMIAN, LLC 1509 W WALL ST, STE 306 MIDLAND, TX 79701		OGRID Number 372338
		API Number TBD
Property Code	Property Name HARPOON SWD	Well No. 1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
N	27	24S	34E	N/A	172'	SOUTH	2,353'	WEST	LEA

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; Silurian-Devonian	Pool Code 96101
-------------------------------------	--------------------

Additional Well Information

Work Type N	Well Type SWD	Cable/Rotary R	Lease Type Private	Ground Level Elevation 3,435'
Multiple N	Proposed Depth 18,850'	Formation Siluro-Devonian	Contractor TBD	Spud Date ASAP
Depth to Ground water 241'	Distance from nearest fresh water well > 1 mile		Distance to nearest surface water 3,015	

☐ 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"	106.5 lb/ft	1,400'	1,544	Surface
Intermediate	17.5"	13.375"	68 lb/ft	5,300'	2,973	Surface
Production	12.25"	9.625"	53.5 lb/ft	12,400'	3,613	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	11,800' - 16,960'	409	11,800'
Tubing	N/A	7"	26 lb/ft	0' - 11,700'	N/A	N/A
Tubing	N/A	5.5"	17 lb/ft	11,700' - 16,900'	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

Title: Consulting Engineer

E-mail Address: chris@lonquist.com

Date: 11/20/2018

Phone: (512) 600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

District I
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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 HARPOON SWD			⁶ Well Number 1
⁷ OGRD No. 372338		⁸ Operator Name NGL WATER SOLUTIONS PERMIAN, LLC			⁹ Elevation 3435.00'±

" Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	24 S	34 E	N/A	172'	SOUTH	2353'	WEST	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	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.

SECTION 27 PROPOSED HARPOON SWD 1 NMSP-E (NAD27) N: 430,892.67' E: 770,341.63' NMSP-E (NAD83) N: 430,951.15' E: 811,526.98' Lot: N32°10'54.29" Long: W103°27'36.03"	" OPERATOR CERTIFICATION 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 Signature: Date: 11/21/2018 Chris Weyand Printed Name chris@lonquist.com E-mail Address
	"SURVEYOR CERTIFICATION 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. Date of Survey: 10/23/18 Signature and Seal of Professional Surveyor: Certificate Number: 23001

Harpoon SWD No. 1
2 Mile Area of Review
NGL Water Solutions Permian, LLC
Lea Co., NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US FL)
Drawn by: ASG Date: 11/1/2018 Approved by: ELR

LONGQUEST & CO. LLC



AUSTIN HOUSTON WICHITA DENVER CALGARY

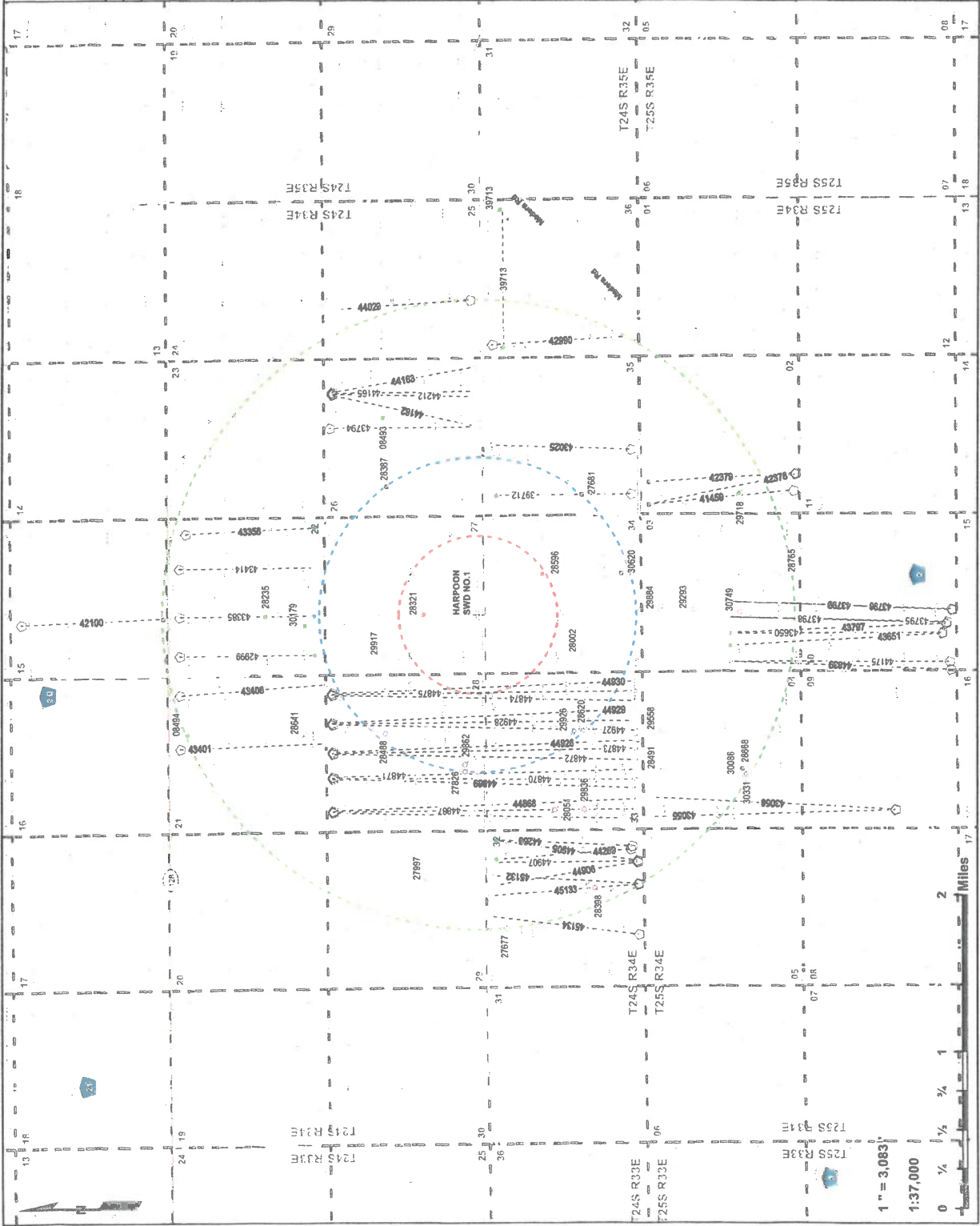
Harpoon SWD No. 1 SHL

- 1/2-Mile
- 1-Mile
- 2-Mile
- QD Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)
- Lateral

API (30-425-...) SHL Status-Type (Count)

- Horizontal Surface Location (53)
- Active - Gas (9)
- Cancelled/Abandoned Location (4)
- Plugged/Sealed - Gas (12)
- Plugged/Sealed - Oil (8)
- API (30-425-...) SHL Status-Type (Count)
- Active - Oil (10)
- Cancelled/Abandoned - Oil (3)
- Permitted - Gas (3)
- Permitted - Oil (37)
- Plugged/Sealed - Oil (1)

Source: Well SHL Data - NM-OCED (2018)



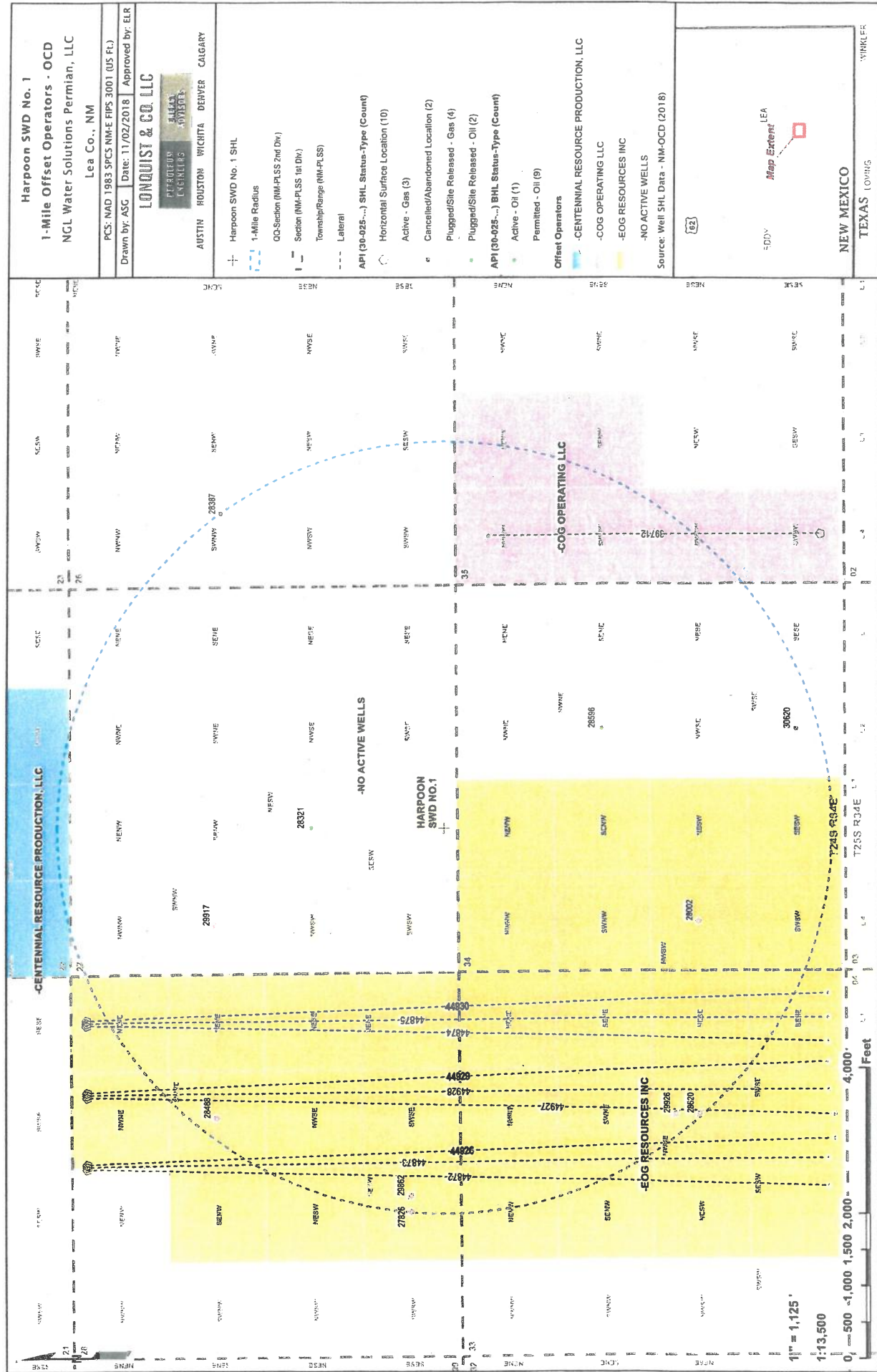
EDN Map Extent LEA

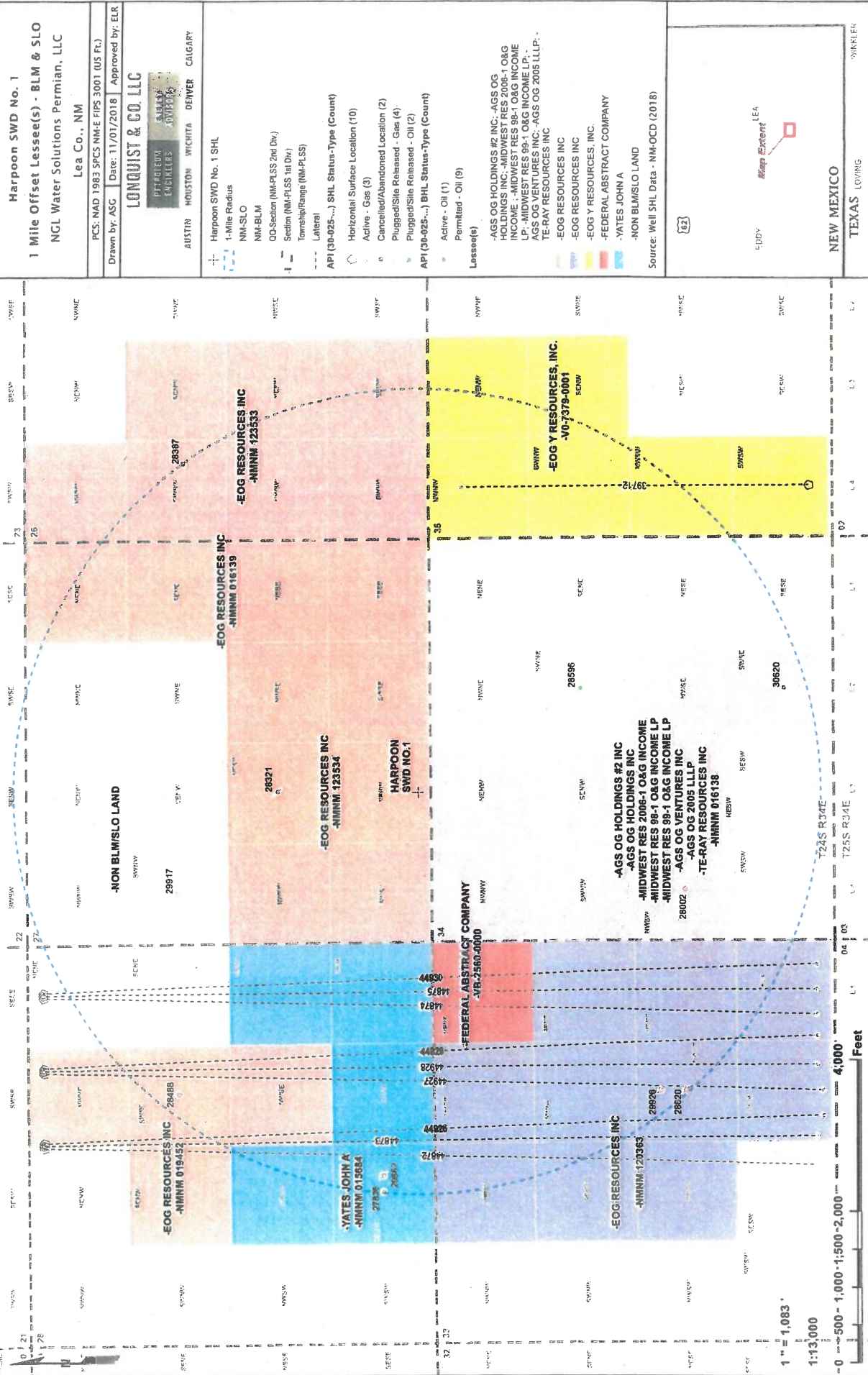
NEW MEXICO
TEXAS

285 285

Harpoon SWD No. 1
1 Mile Area of Review List

API (30-025-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
27826	MADERA 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15300	32.18309780000	-103.4769690000	6/18/1982
28002	PITCHFORK 34 FEDERAL COM #001	G	A	EOG RESOURCES INC	15435	32.17219160000	-103.46417240000	11/11/1982
28321	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	15530	32.18671420000	-103.45993040000	1/1/1900
28387	PRE-ONGARD WELL #001	O	C	PRE-ONGARD WELL OPERATOR	0	32.19005347080	-103.44604207900	12/31/9999
28488	PITCHFORK RANCH 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15250	32.19035720000	-103.47274020000	12/2/1983
28596	MOORE 34 COM #001	O	P	JOHNNY G JONES	15376	32.17582320000	-103.45564270000	2/13/1984
28620	MADERA 33 FEDERAL COM #002	G	P	EOG RESOURCES INC	15159	32.17220310000	-103.47270200000	5/9/1984
29862	MADERA 28 FEDERAL COM #002	G	P	EOG RESOURCES INC	13945	32.18309780000	-103.47625730000	3/10/1987
29917	PRE-ONGARD WELL #001	G	P	PRE-ONGARD WELL OPERATOR	15142	32.19034960000	-103.46420290000	1/1/1900
29926	MADERA 33 FEDERAL COM #004	G	P	EOG RESOURCES INC	14000	32.17310330000	-103.47270200000	7/18/1987
30620	PITCHFORK 34 FEDERAL COM #002	O	C	EOG RESOURCES INC	0	32.16854643100	-103.45566780300	12/31/9999
39712	ORANGE RAIDER BPV STATE #001H	O	A	COG OPERATING LLC	9453	32.16764070000	-103.44710540000	4/1/2010
44872	STONEWALL 28 FEDERAL COM #707H	O	N	EOG RESOURCES INC	0	32.19524680000	-103.47495170000	12/31/9999
44873	STONEWALL 28 FEDERAL COM #708H	O	N	EOG RESOURCES INC	0	32.19524590000	-103.47488510000	12/31/9999
44874	STONEWALL 28 FEDERAL COM #713H	O	N	EOG RESOURCES INC	0	32.19524110000	-103.46861270000	12/31/9999
44875	STONEWALL 28 FEDERAL COM #714H	O	N	EOG RESOURCES INC	0	32.19524100000	-103.46850600000	12/31/9999
44926	STONEWALL 28 FEDERAL COM #709H	O	N	EOG RESOURCES INC	0	32.19524670000	-103.47477840000	12/31/9999
44927	STONEWALL 28 FEDERAL COM #710H	O	N	EOG RESOURCES INC	0	32.19524400000	-103.47181290000	12/31/9999
44928	STONEWALL 28 FEDERAL COM #711H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.47170620000	12/31/9999
44929	STONEWALL 28 FEDERAL COM #712H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.47159960000	12/31/9999
44930	STONEWALL 28 FEDERAL COM #715H	O	N	EOG RESOURCES INC	0	32.19524090000	-103.46839930000	12/31/9999





Harpoon SWD #1: Offsetting Produced Water Analysis

wellname	api	section	township	range	unit	county	formation	ph	tds_mgl	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl
BELL LAKE UNIT #002	3002508489	30	235	34E	N	LEA	DELAWARE		52115						32200	451	529	
BELL LAKE UNIT A #007	3002508367		1 245	33E	A	LEA	DELAWARE		87686						53970	391	749	
BELL LAKE UNIT #009	3002520261	18	235	34E	K	LEA	BONE SPRING		204652						130000	512	260	
CORIANDE AOC STATE #002	3002533574	1	235	32E	H	LEA	BONE SPRING	5.2				24176	0	3815	167962	61.1	165	
THISTLE UNIT #071H	3002542425	27	235	33E	A	Lea	BONE SPRING 1ST SAND	5.6	171476.3		55363.2	9140	40.4	1023	104576.4	244	560	770
BELL LAKE 19 STATE #002H	3002541515	19	245	33E	O	Lea	BONE SPRING 2ND SAND	6.2			47148	6419	15	854	86572	232	670	240
BELL LAKE 19 STATE #004H	3002541517	19	245	33E	O	Lea	BONE SPRING 2ND SAND	6.3			47537	6950	11	886	88389	171	650	210
SALADO DRAW 6 FEDERAL #001H	3002541293	6	265	34E	IM	Lea	BONE SPRING 3RD SAND	6.5	99612.7		34586.5	3244	10.3	0.39	59986.5	158.6	820	50
GAUCHO UNIT #011H	3002541184	17	225	34E	O	Lea	BONE SPRING 3RD SAND	6.5			48879	6182	11	802	88836	122	1240	70
SNAPPING 2 STATE #004H	3001542688	2	265	31E	P	EDDY	WOLF CAMP	7.3	81366.4		26319.4	2687.4	26.1	326.7	50281.2		399.7	100
BELLOQ 2 STATE #002H	3001542895	2	235	31E	C	EDDY	WOLF CAMP	6.8	119471.8		37359.2	5659.1	22.4	746.1	73172.5		1035.5	250
PRONGHORN AHO FEDERAL #001	3002526496	6	235	33E	G	LEA	STRAWN	5.5				20.1	0	12.2	35.5	61.1	48.8	
ANTELOPE RIDGE UNIT #002	3002520444	4	245	34E	B	LEA	ATOKA	6.7	51475						31000	317	340	
CUSTER MOUNTAIN UNIT #001	3002520756	9	245	35E	K	LEA	MORROW		282741						176800	161	650	

Exhibit 2

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

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

CASE NO. 20150

AMENDED APPLICATION

NGL Water Solutions Permian, LLC ("NGL"), OGRID No. 372338, through its undersigned attorneys, hereby makes this amended 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 submitted an application to drill the Maverick SWD #1 well on November 16, 2018.
- (2) NGL is providing this amended application to update the proposed location for drilling the well.
- (3) NGL proposes to drill the Maverick SWD #1 well at a surface location 1086 feet from the South line and 151 feet from the East line of Section 29, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.
- (4) NGL is proposing this change in location to accommodate the operations of an offset oil and gas operator.
- (5) Apart from the change in location, NGL makes no further changes to the NGL application previously filed with the Division.

(6) A revised plat, revised maps of the area of review, and a revised lists of wells and operators within the one-mile area of review are attached hereto in Attachment A.

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

(8) This case has been continued to the April 18, 2019 docket.

WHEREFORE, NGL requests 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 M. 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. 20150: Amended 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 Silurian-Devonian formation through the Maverick SWD #1 well at a surface location 1086 feet from the South line and 151 feet from the East line of Section 29, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,615' to 18,265'. 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 18 miles northwest of Jal, NM.

District I
1625 N. French Dr., Hobbs, NM 88240
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Phone: (575) 748-1283 Fax: (575) 748-9720
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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

Location & Pool Code

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 97869	³ Pool Name SWD; Devonian-Silurian
⁴ Property Code	⁵ Property Name MAVERICK SWD	⁶ Well Number 1
⁷ OGRID No. 372338	⁸ Operator Name NGL WATER SOLUTIONS	⁹ Elevation 3495'±

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
P	29	24 S	34 E	N/A	1086'	SOUTH	151'	EAST	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.

SECTION 29	PROPOSED MAVERICK SWD 1 NMSP-E (NAD27) N: 431,753.34' E: 763,944.70' NMSP-E (NAD83) N: 431,811.76' E: 804,128.85' Lat: N32°11'03.39" Long: W103°29'02.02"	¹⁷ OPERATOR CERTIFICATION 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 leased 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. <i>[Signature]</i> 3/28/2019 Signature Date Chris Weyand Printed Name chris@lonquist.com E-mail Address
	151' 1086' 1554'	¹⁸ SURVEYOR CERTIFICATION 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. 03/13/2019 Date of Survey Signature and Seal of Professional Surveyor
	25114 Certificate Number	Bill W. Barr Jr. NEW MEXICO 25114 PROFESSIONAL SURVEYOR
	EXHIBIT A	

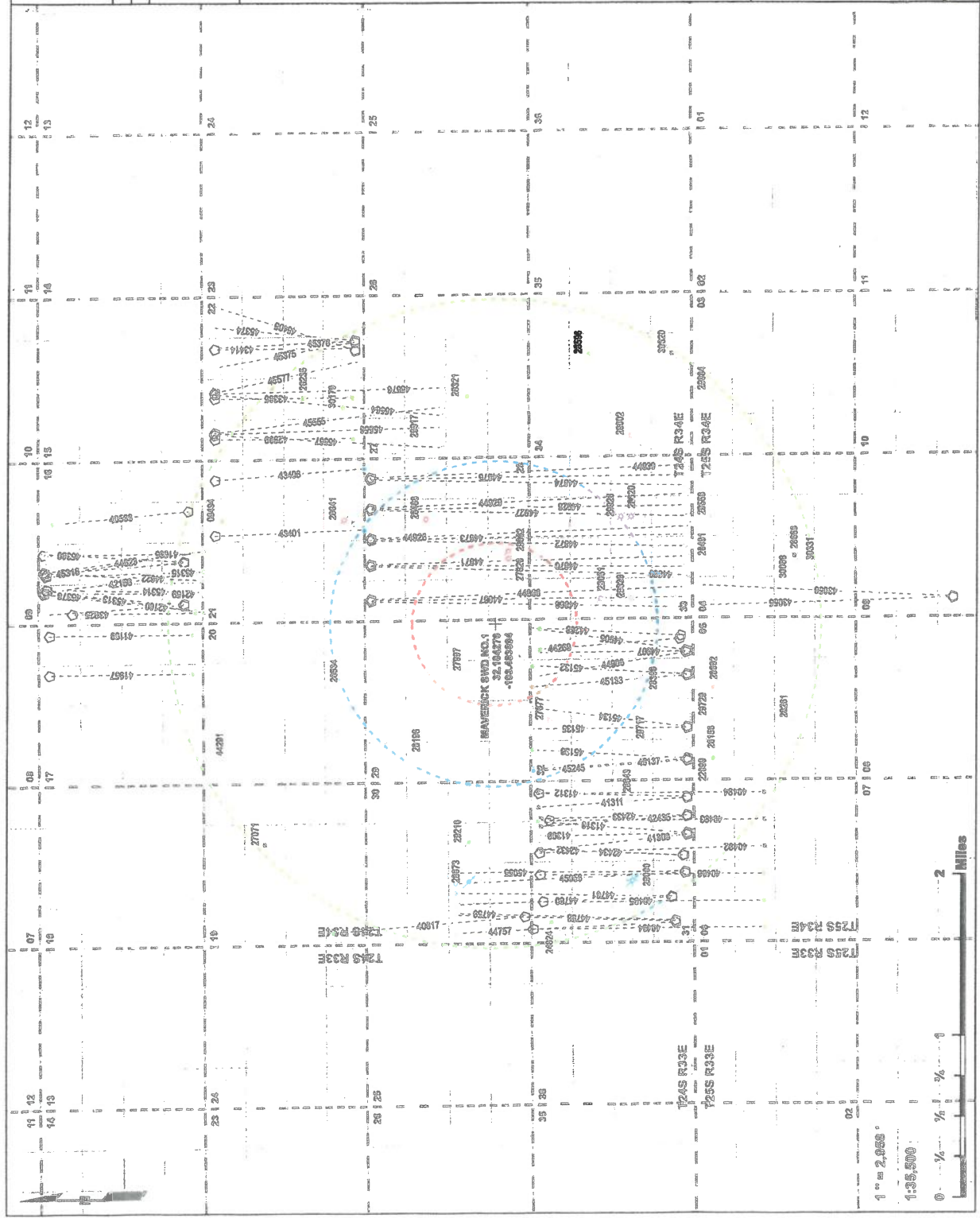
Maverick SWD No. 1
2 Mile Area of Review
NGL Water Solutions Permian, LLC
Lea Co., NM

PCS: NAD 1983 SPCS NM-E FPS 3001 (US FL)
 Drawn by: ASC Date: 3/22/2019 Approved by: ELR

LONGHORN & CO. LLC
 PERIODIC SURVEY ADVISORY

AUSTIN HOUSTON VICTORIA DENVER CALGARY

- Maverick SWD No. 1 SHL
 - 1/2-Mile
 - 1-Mile
 - 2-Mile
 - CO-Station (NGL-PLS 2nd Thk)
 - CO-Station (NGL-PLS 1st Thk)
 - Tomlinson (NGL-PLS)
 - Leased
 - API (94-955-...) SHL Station-Type (Count)
 - Horizontal Surface Location (SH)
 - Active - Gas (G)
 - Active - SWD (1)
 - Cancelled/Abandoned Location (S)
 - Plugged/Not Released (1)
 - Permitted - SWD (1)
 - Plugged/Not Released - Gas (1G)
 - Plugged/Not Released - Oil (O)
 - Plugged/Not Released - SWD (1)
 - API (94-955-...) SHL Station-Type (Count)
 - Active - Oil (O)
 - Cancelled/Abandoned Location (S)
 - Permitted - Oil (O)
- Source: Well SHL Data - NIM-OCDC (2019)

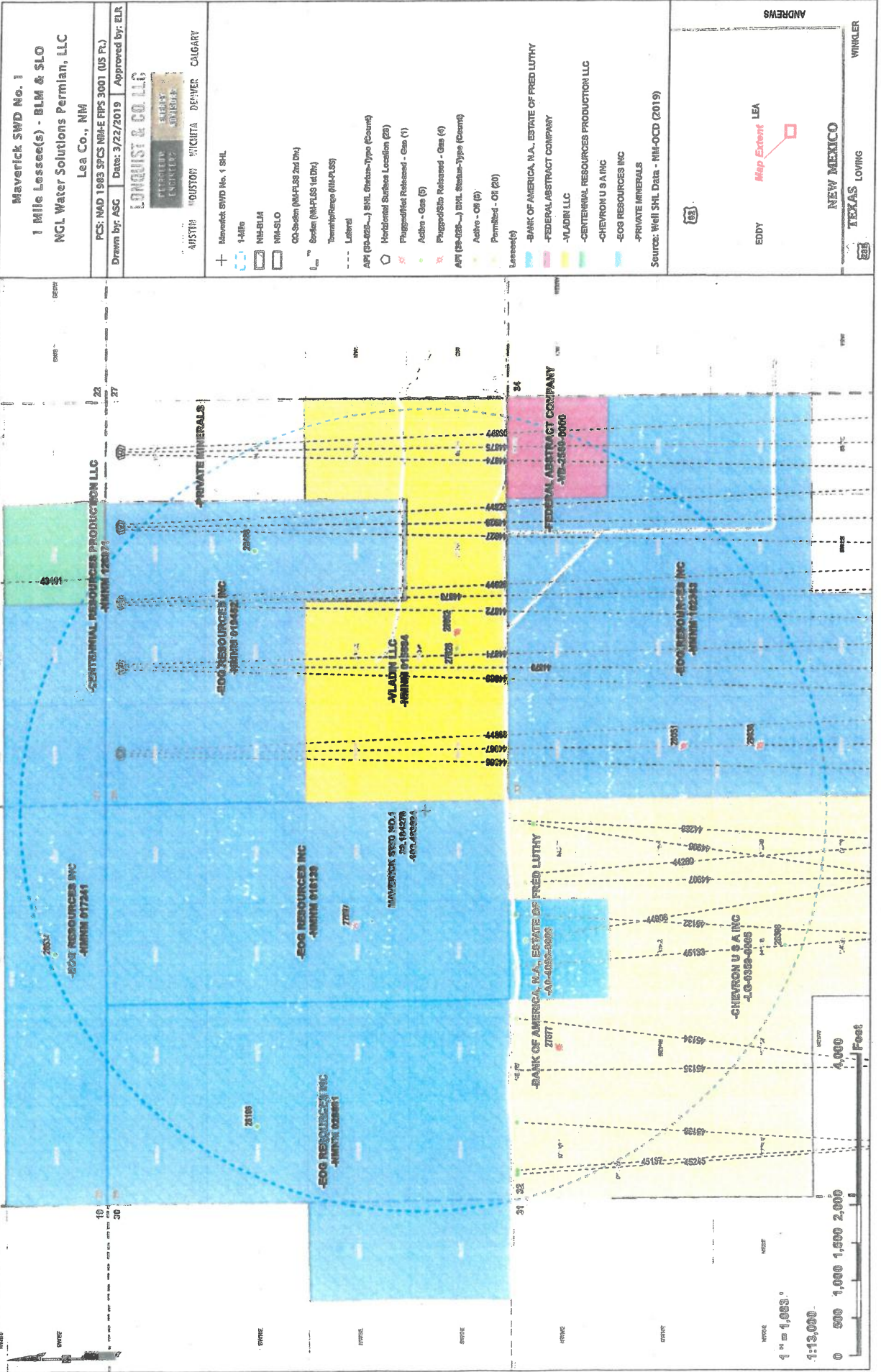


EDDY
Map Extent
LEA

ADAMS
NEW MEXICO
TEXAS
LOVING
WINKLER

Maverick SWD No. 1
1 Mile Area of Review List

API (#0-025--)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
3002527677	MADERA 32 STATE COM #001	G	H	EOG RESOURCES INC	15400	32.17945530000	-103.49401090000	12/24/1981
3002528534	VACA RIDGE 20 FEDERAL #001	G	A	EOG RESOURCES INC	15136	32.19762800000	-103.48979190000	12/30/1983
3002528398	MADERA 32 STATE #002	G	A	EOG RESOURCES INC	15160	32.17131040000	-103.48975370000	10/5/1983
3002528488	PITCHFORK RANCH 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15250	32.19035720000	-103.47274020000	12/21/1983
3002527997	MADERA 29 FEDERAL #001	G	P	EOG RESOURCES INC	15290	32.18673730000	-103.48870850000	1/21/1983
3002529662	MADERA 28 FEDERAL COM #002	G	P	EOG RESOURCES INC	13945	32.18309730000	-103.47625730000	3/10/1987
3002528196	MARSHALL 29 FEDERAL #001	G	A	EOG RESOURCES INC	15300	32.19037250000	-103.49722900000	6/19/1983
3002528051	MADERA 33 FEDERAL COM #001	G	P	EOG RESOURCES INC	15130	32.17493820000	-103.48122410000	2/18/1982
3002527826	MADERA 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15300	32.18309780000	-103.47696690000	6/18/1982
3002529836	MADERA 33 FEDERAL COM #003	G	P	EOG RESOURCES INC	13960	32.17221070000	-103.48122410000	7/19/1987
3002544868	STONEWALL 28 FEDERAL COM #703H	O	N	EOG RESOURCES INC	0	32.19525210000	-103.48117880000	12/31/1999
3002544871	STONEWALL 28 FEDERAL COM #706H	O	N	EOG RESOURCES INC	0	32.19524900000	-103.47749650000	12/31/1999
3002544874	STONEWALL 28 FEDERAL COM #713H	O	N	EOG RESOURCES INC	0	32.19524100000	-103.46861270000	12/31/1999
3002544906	COBALT 32 STATE #202H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.48705070000	12/31/1999
3002544929	STONEWALL 28 FEDERAL COM #712H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.47159860000	12/31/1999
3002544867	STONEWALL 28 FEDERAL COM #705H	O	N	EOG RESOURCES INC	0	32.19524910000	-103.47760310000	12/31/1999
3002544873	STONEWALL 28 FEDERAL COM #708H	O	N	EOG RESOURCES INC	0	32.19524590000	-103.47488510000	12/31/1999
3002544928	STONEWALL 28 FEDERAL COM #711H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.47170620000	12/31/1999
3002544269	COBALT 32 STATE #702H	O	A	EOG RESOURCES INC	12291	32.16802350000	-103.48569420000	1/26/2018
3002545137	COBALT 32 STATE #708H	O	A	EOG RESOURCES INC	12314	32.16734000000	-103.49832630000	11/2/2018
3002544872	STONEWALL 28 FEDERAL COM #707H	O	N	EOG RESOURCES INC	0	32.19524680000	-103.47499210000	12/31/1999
3002544875	STONEWALL 28 FEDERAL COM #714H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.46850600000	12/31/1999
3002544907	COBALT 32 STATE #301H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.48694410000	12/31/1999
3002544905	COBALT 32 STATE #201H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.48683750000	12/31/1999
3002544866	STONEWALL 28 FEDERAL COM #301H	O	N	EOG RESOURCES INC	0	32.19525230000	-103.48139220000	7/5/2018
3002544869	STONEWALL 28 FEDERAL COM #704H	O	N	EOG RESOURCES INC	0	32.19524920000	-103.47770980000	12/31/1999
3002544927	STONEWALL 28 FEDERAL COM #710H	O	N	EOG RESOURCES INC	0	32.19524400000	-103.47181290000	12/31/1999
3002544930	STONEWALL 28 FEDERAL COM #715H	O	N	EOG RESOURCES INC	0	32.19524090000	-103.46839930000	12/31/1999
3002545132	COBALT 32 STATE COM #709H	O	A	EOG RESOURCES INC	12304	32.16733400000	-103.48937420000	10/30/2018
3002545135	COBALT 32 STATE #706H	O	N	EOG RESOURCES INC	0	32.16733710000	-103.49500110000	12/31/1999
3002544926	STONEWALL 28 FEDERAL COM #709H	O	N	EOG RESOURCES INC	0	32.19524670000	-103.47477840000	12/31/1999
3002545133	COBALT 32 STATE #704H	O	A	EOG RESOURCES INC	12273	32.16733400000	-103.48948080000	10/31/2018
3002545136	COBALT 32 STATE #701H	O	A	EOG RESOURCES INC	12284	32.16734000000	-103.49821970000	10/14/2018
3002544268	COBALT 32 STATE #701H	O	A	EOG RESOURCES INC	12285	32.16786990000	-103.48527900000	1/24/2018
3002545134	COBALT 32 STATE #705H	O	N	EOG RESOURCES INC	0	32.16733700000	-103.49489450000	12/31/1999
3002545245	COBALT 32 STATE #709H	O	A	EOG RESOURCES INC	12306	32.16733670000	-103.49843310000	11/3/2018
3002543401	RAIDER FEDERAL #301H	O	A	CENTENNIAL RESOURCES PRODUCTION, LLC	10408	32.20920340000	-103.47431920000	9/10/2018



**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. 20150

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 Maverick SWD #1 well at a surface location 1246 feet from the South line and 1627 feet from the East line of Section 29, 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 Silurian-Devonian formation at a depth of 16,615' to 18,265'.

(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 2,492 psi for this well, and it requests that a maximum pressure of 3,323 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 January 10, 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: Deana M. Bennett

Jennifer Bradfute

Deana Bennett

Post Office Box 2168

Bank of America Centre

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 disposal into the Silurian-Devonian formation through the Maverick SWD #1 well at a surface location 1246 feet from the South line and 1627 feet from the East line of Section 29, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 16,615' to 18,265'. 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 18 miles northwest of Jal, NM.

Revised March 23, 2017

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: NGL WATER SOLUTIONS PERMIAN LLC

OGRID Number: 372338

Well Name: MAVERICK SWD #1

API: TBD

Pool: SWD: SILURIAN-DEVONIAN

Pool Code: 96101

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 holders

B. ☐ Royalty, overriding royalty owners, revenue owners

C. ☒ Application requires published notice

D. ☒ Notification and/or concurrent approval by SLO

E. ☒ Notification and/or concurrent approval by BLM

F. ☒ Surface owner

G. ☐ For all of the above, proof of notification or publication is attached, and/or,

H. ☐ No notice required

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

Signature

Date

11/12/2018

512-600-1764

Phone Number

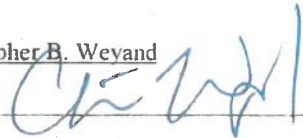
CHRIS@LONQUIST.COM

e-mail Address

EXHIBIT

A

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: 11/12/2018
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: MAVERICK SWD #1WELL LOCATION: 1,246' FSL & 1,627' FEL
FOOTAGE LOCATIONUNIT LETTER O SECTION 29 TOWNSHIP 24S RANGE 34EWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 24.000"Casing Size: 20.000"Cemented with: 1,407 sx.or _____ ft³Top of Cement: SurfaceMethod Determined: Circulation1st Intermediate CasingHole Size: 17.500"Casing Size: 13.375"Cemented with: 3,856 sx.or _____ ft³Top of Cement: SurfaceMethod Determined: Circulation2nd Intermediate CasingHole Size: 12.250"Casing Size: 9.625"Cemented with: 3,295 sx.or _____ ft³Top of Cement: SurfaceMethod Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 318 sx.

or _____ ft³

Top of Cement: 11,900'

Method Determined: Calculation

Total Depth: 18,265'

Injection Interval

16,615 feet to 18,265 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 7", 26 lb/ft, P-110, TCPC from 0' - 11,800' and 5,500", 17 lb/ft, P-110 TCPC from 11,800' - 16,590'
 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: 16,590'

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 Montoya (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:

Delaware: 5,313'

Bone Spring: 9,236'

Wolfcamp: 12,240'

Strawn: 13,400'

Atoka: 13,700'

Morrow: 14,076'

 Maverick SWD Lee County NM Vertical Injection: Devonian, Silurian, Frasnian, Monks Location: Sec 29, T24S, R34E Drilling and Complete Cost \$10.65MM AEE # GL/KB TD 18,265 3,515 Directions to Site - 21.4m NW from Jct NM lat/long - 37.19464, 103.48848									
Geologic Tops (MD ft)		Section	Problems	Bit/BHA	Mud	Casing	Logging	Cement (HOLD)	Injection String
Rustler Anhydrite	1122	Surface Drill 24" 0' - 1670 Set and Cement 20" Casing	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	1670' of 20" K55 133ppf STC Centralizers - bottom 2 joints and every 3rd jt thereafter, Cement basket at 200'	No Logs	Lead - 499 sx of HES Extenda Cem, 13.7ppg, 4.5hrs TT Tail - 506sx of Halcem 3hr TT 25% Excess 1000psi CSD after 10hrs	
Surface TD -	1650								
Salado	1672								
Stage tool at top of salt - 1680		1st Intermediate Drill 3650' of 17-1/2" Hole 1650' - 5300' 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		SM A Section Casing Bowl. Stage tool positioned at top of salt 5300' of 13-3/8" 68# HCL80 BTC Centralizers - bottom jt, every 3rd joint in open hole and 2 jt inside the surface casing	Mudlogger on site by 1650'	Stage 2 - 1015 sx of Halcem 13.7ppg (60% XS) Stage 1 - 2841 sx of Halcem 13.7ppg (60% XS)	11,800' of 7" P110 26# TCPC
1st Int TD -	5300								
ECP DV Tool -	5260								
Delaware	5313		Hard Drilling in the Brushy Canyon Seepage to Complete Loss Water Flows		8.5 ppg OBM High Vis Sweeps	10M B Section 12400' of 9-5/8" 53.5# P110 BTC Special Drift to 8.535"		Lead 663sx Neocem 12.9 ppg Tail 534sx Halcem 14.8ppg 1000psi CSD after 10 hrs Cement to Surface	4790 of 5-1/2" P110 17# TCPC
Cherry Canyon -	6299								
Brushy	7982	2nd Intermediate Drill 7100' of 12-1/4" Hole 5300' - 12,400' Set 9-5/8" Intermediate Casing and Cement in 3 Stages	Some Anhydrite H2S possible Production in the Bone Spring and Wolfcamp Ballooning is possible in Cherry Canyon and Brushy if Broken Down	12-1/4" PDC 8" MM 9 Jts: 8" DC 8" Drilling Jars 21 Jts: 5" HWDP 5" DP to Surface	UBD/MPD using ADA	Externally Coat Between DV Tools DV tool at at 9200' ECP DV Tool 40' Inside Previous Casing	MWD GR Triple combo + CBL of 13- 3/8" Casing	Stage 2: 25% Excess Lead 480sx Neocem 12.9 ppg Tail 650sx Halcem 14.8ppg 1000psi CSD after 10 hrs	Duoline Internally Coated Injection Tubing
DV Tool -	9200								
Bone Spring -	9236								
3rd Int Liner Top -	11,900								
Wolfcamp -	12240								
2nd Int TD -	12,400								
Strawn -	13400	3rd Intermediate Drill 4215' of 8-1/2" Hole 12400 - 16615' 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	4715' of 7-5/8" 39# Q125 - DTL (PJA) FJ (Gas Tight) VersaFlex Packer Hanger Centralizers on and 1 jt above shoe it and then every 2nd jt.	MWD GR Triple combo, CBL of 9-5/8" Casing	318 sx of Halcem 13.7ppg Cement (30% XS)	7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and full Inconel 925 trim
Atoka -	13700								
Morrow -	14076								
Miss Lst -	16021								
Woodford -	16378								
Perm Packer -	16,590								
3rd Int TD -	16,615								
Devonian -	16,595								
Fusselman -	17600	Injection Interval Drill 1650' of 6-1/2" hole 16615' - 18265'	Chert is possible Well flows or LC 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	Openhole completion	MWD GR Triple Combo with FMI, CBL of 7-5/8"	Displace with Brine Water	
Montoya -	18,165'								
TD -	18,265'								

NGL Water Solutions Permian, LLC

Maverick SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Maverick SWD
Well No.	1
Location	S-29 T-24S R-34E
Footage Location	1,246' FSL & 1,627' 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	1,650'	5,300'	12,400'	16,615'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate	Production	Liner
Lead Cement	Extenda Cem	-	Neocem, Neocem, Neocem	-
Lead Cement Volume	499	-	Stage 1: 498 sx Stage 2: 480 sx Stage 3: 663 sx	-
Tail Cement	Halcem	Halcem	Versacem C, Halcem, Halcem	Halcem
Tail Cement Volume	908	Stage 1: 1,015 sx Stage 2: 2,841 sx	Stage 1: 471 sx Stage 2: 650 sx Stage 3: 534 sx	318
Cement Excess	25%	60%	25%, 25%, 0%	35%
TOC	Surface	Surface	Surface	11,900'
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'-11,800'	11,800' -16,590

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: 16,615' – 18,265'

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
Delaware	5,313'
Bone Spring	9,236'
Wolfcamp	12,240'
Strawn	13,400'
Atoka	13,700'
Morrow	14,076'

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: 2,492 PSI (surface pressure)

Maximum Injection Pressure: 3,323 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, 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 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	1,122'
Salado	1,672'
Delaware	5,313'
Cherry Canyon	6,299'
Brushy Canyon	7,982'
Bone Spring	9,236'
Wolfcamp	12,240'
Strawn	13,400'
Atoka	13,700'
Morrow	14,076'
Mississippian Lime	16,021'
Woodford	16,378'
Devonian	16,595'
Fusselman	17,600'
Montoya	18,165'

B. Underground Sources of Drinking Water

One water well exists within one mile of the proposed Maverick SWD #1 location. Total depth and depth to water have not been reported for this well. Water wells in the surrounding area have an average depth of 296 ft and an average water depth of 235 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 was not available for any wells within one mile.

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 **Maverick SWD #1**) and any underground sources of drinking water.

NAME: John C. Webb

TITLE: Sr. Geologist

SIGNATURE: _____



DATE: _____

Nov. 1, 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) 476-3460 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 15, 2013

☐ AMENDED REPORT

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 ³ API Number TBD
⁴ Property Code	⁵ Property Name Maverick SWD	⁶ Well No. 1

7. Surface Location

U/L - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
O	29	24S	34E	N/A	1,246'	SOUTH	1,627'	EAST	LEA

8. Proposed Bottom Hole Location

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

9. 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 3,495'
¹⁶ Multiple N	¹⁷ Proposed Depth 18,265'	¹⁸ Formation Siluro-Devonian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 235'		Distance from nearest fresh water well 755'		Distance to nearest surface water 3,485'

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

21. Proposed Casing and Cement Program

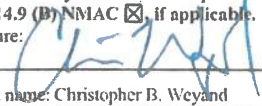
Type	Hole Size	Casing Size	Casing Weight/lb	Setting Depth	Sacks of Cement	Estimated TOC
Surface	24"	20"	133 lb/ft	1,650'	1,407	Surface
Intermediate	17.5"	13.375"	68 lb/ft	5,300'	3,856	Surface
Production	12.25"	9.625"	53.5 lb/ft	12,400'	3,295	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	11,900' - 16,615'	318	11,900'
Tubing	N/A	7"	26 lb/ft	0' - 11,800'	N/A	N/A
Tubing	N/A	5.5"	17 lb/ft	11,800' - 16,590'	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 - Schaffer/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

Title: Consulting Engineer

E-mail Address: chris@lonquist.com

Date: 11/13/2018

Phone: (512) 600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

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
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811 S First St., Artesia, NM 88210
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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

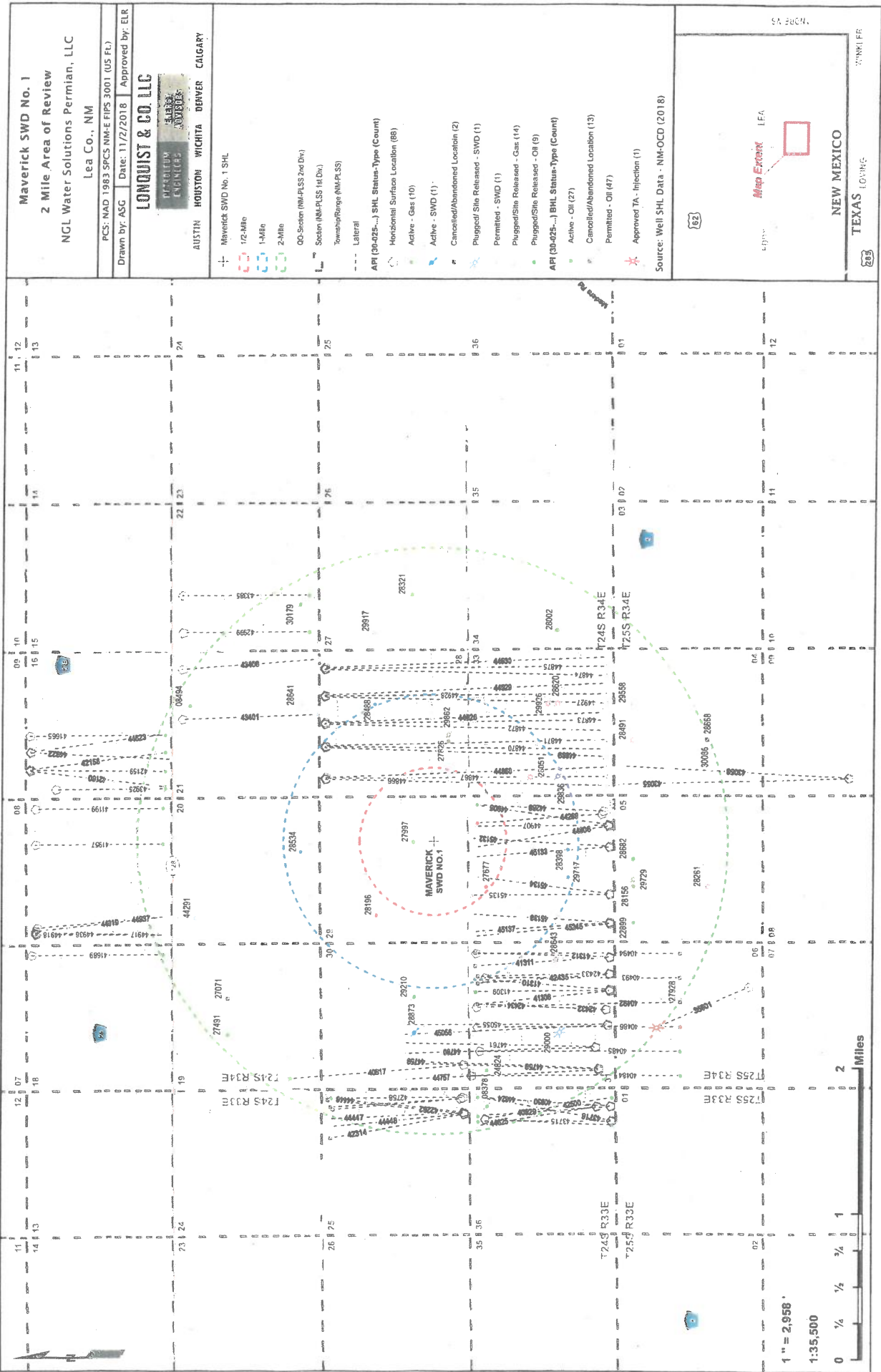
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 96101		³ Pool Name SWD; Silurian-Devonian					
⁴ Property Code		⁵ Property Name MAVERICK SWD						⁶ Well Number 1	
⁷ OGRID No. 372338		⁸ Operator Name NGL WATER SOLUTIONS PERMIAN, LLC						⁹ Elevation 3495'±	
¹⁰ Surface Location									
UL or lot no. O	Section 29	Township 24 S	Range 34 E	Lot Idn N/A	Feet from the 1246'	North/South line SOUTH	Feet from the 1627'	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.

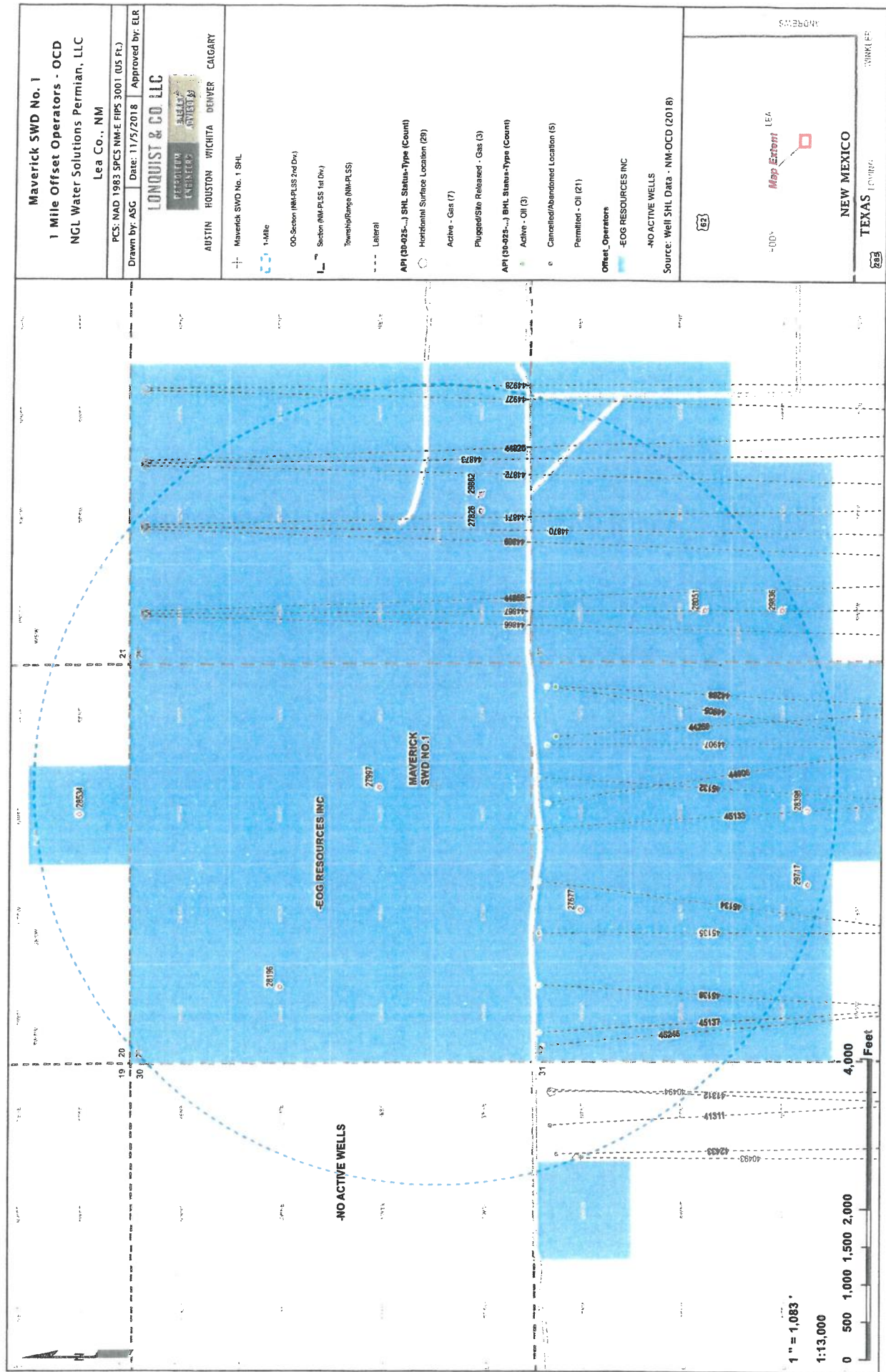
¹⁰ SECTION 29 PROPOSED MAVERICK SWD 1 NMSP-E (NAD27) N: 431,903.34 E: 761,467.73' NMSP-E (NAD83) N: 431,961.76' E: 802,652.84' Lat: N32°11'04.99" Long: W103°29'19.19" 1394' 1246' 1627'				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best 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. <i>[Signature]</i> 11/13/2018 Signature Date Chris Weyand Printed Name chris@lonquist.com E-mail Address	
				¹⁸ SURVEYOR CERTIFICATION 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. 11/2/2018 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor COBYA. CLARK NEW MEXICO 23001 PROFESSIONAL SURVEYOR 23001 Certificate Number	

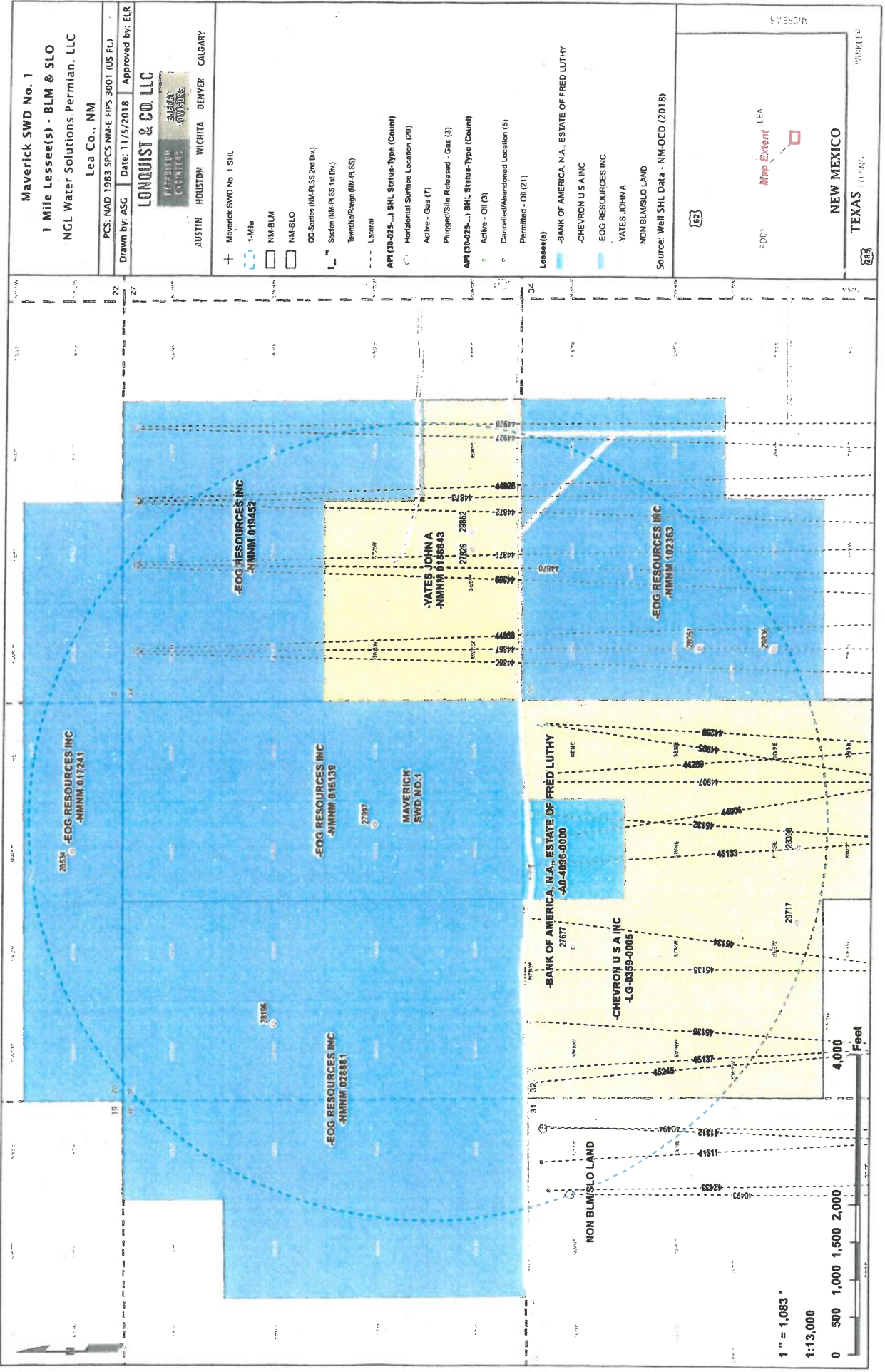




Maverick SWD No. 1
1 Mile Area of Review List

API (30-025-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
27677	MADERA 32 STATE COM #001	G	A	EOG RESOURCES INC	15400	32.17948530000	-103.49401090000	12/24/1981
27826	MADERA 28 FEDERAL COM #001	G	A	EOG RESOURCES INC	15300	32.18309780000	-103.476966900	6/18/1982
27997	MADERA 29 FEDERAL #001	G	A	EOG RESOURCES INC	15290	32.18673710000	-103.488708500	1/21/1983
28051	MADERA 33 FEDERAL COM #001	G	P	EOG RESOURCES INC	15130	32.17493820000	-103.481224100	2/18/1982
28196	MARSHALL 29 FEDERAL #001	G	A	EOG RESOURCES INC	15300	32.19037250000	-103.4972229000	6/19/1983
28398	MADERA 32 STATE #002	G	A	EOG RESOURCES INC	15160	32.17131040000	-103.489753700	10/5/1983
28534	VACA RIDGE 20 FEDERAL #001	G	A	EOG RESOURCES INC	15136	32.19762800000	-103.48979190000	12/30/1983
29717	MADERA 32 STATE #003	G	A	EOG RESOURCES INC	14100	32.17131420000	-103.49294280000	12/6/1986
29836	MADERA 33 FEDERAL COM #003	G	P	EOG RESOURCES INC	13960	32.17221070000	-103.481224100	7/19/1987
29862	MADERA 28 FEDERAL COM #002	G	P	EOG RESOURCES INC	13945	32.18309780000	-103.476257300	3/10/1987
40493	DILLON 31 FEDERAL COM #003C	O	C	EOG RESOURCES INC	0	32.17967990000	-103.504646300	12/31/1999
40494	DILLON 31 FEDERAL COM #004C	O	C	EOG RESOURCES INC	0	32.18061450000	-103.501800500	12/31/1999
41311	DILLON 31 #004C	O	C	EOG RESOURCES INC	0	32.16738890000	-103.502372700	12/31/1999
41312	DILLON 31 #005C	O	C	EOG RESOURCES INC	0	32.16738890000	-103.502273600	12/31/1999
42433	DILLON 31 #502H	O	C	EOG RESOURCES INC	0	32.16740911300	-103.504202200	12/31/1999
44268	COBALT 32 STATE #701H	O	A	EOG RESOURCES INC	12285	32.16786990000	-103.485279000	1/24/2018
44269	COBALT 32 STATE #702H	O	A	EOG RESOURCES INC	12291	32.16802350000	-103.485634200	1/26/2018
44866	STONEWALL 28 FEDERAL COM #301H	O	N	EOG RESOURCES INC	0	32.19525230000	-103.48139220000	7/5/2018
44867	STONEWALL 28 FEDERAL COM #302H	O	N	EOG RESOURCES INC	0	32.19525230000	-103.481285500	7/7/2018
44868	STONEWALL 28 FEDERAL COM #703H	O	N	EOG RESOURCES INC	0	32.19524921000	-103.477709800	12/31/1999
44869	STONEWALL 28 FEDERAL COM #704H	O	N	EOG RESOURCES INC	0	32.19524910000	-103.477603100	12/31/1999
44870	STONEWALL 28 FEDERAL COM #705H	O	N	EOG RESOURCES INC	0	32.19524900000	-103.477496500	12/31/1999
44871	STONEWALL 28 FEDERAL COM #706H	O	N	EOG RESOURCES INC	0	32.19524680000	-103.474991700	12/31/1999
44872	STONEWALL 28 FEDERAL COM #707H	O	N	EOG RESOURCES INC	0	32.19524590000	-103.474885100	12/31/1999
44873	STONEWALL 28 FEDERAL COM #708H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.486837500	12/31/1999
44905	COBALT 32 STATE #201H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.487050700	12/31/1999
44906	COBALT 32 STATE #202H	O	N	EOG RESOURCES INC	0	32.16741620000	-103.486944100	12/31/1999
44907	COBALT 32 STATE #301H	O	N	EOG RESOURCES INC	0	32.19524670000	-103.47477840000	12/31/1999
44926	STONEWALL 28 FEDERAL COM #709H	O	N	EOG RESOURCES INC	0	32.19524400000	-103.471812900	12/31/1999
44927	STONEWALL 28 FEDERAL COM #710H	O	N	EOG RESOURCES INC	0	32.19524390000	-103.471706200	12/31/1999
44928	STONEWALL 28 FEDERAL COM #711H	O	N	EOG RESOURCES INC	0	32.16733400000	-103.489374200	12/31/1999
45132	COBALT 32 STATE #703H	O	N	EOG RESOURCES INC	0	32.16733400000	-103.489480800	12/31/1999
45133	COBALT 32 STATE #704H	O	N	EOG RESOURCES INC	0	32.16733400000	-103.49489450000	12/31/1999
45134	COBALT 32 STATE #705H	O	N	EOG RESOURCES INC	0	32.16733710000	-103.495001100	12/31/1999
45135	COBALT 32 STATE #706H	O	N	EOG RESOURCES INC	0	32.16734000000	-103.498219700	12/31/1999
45136	COBALT 32 STATE #707H	O	N	EOG RESOURCES INC	0	32.16734000000	-103.498326300	12/31/1999
45137	COBALT 32 STATE #708H	O	N	EOG RESOURCES INC	0	32.16733870000	-103.498433100	12/31/1999
45245	COBALT 32 STATE #709H	O	N	EOG RESOURCES INC	0			

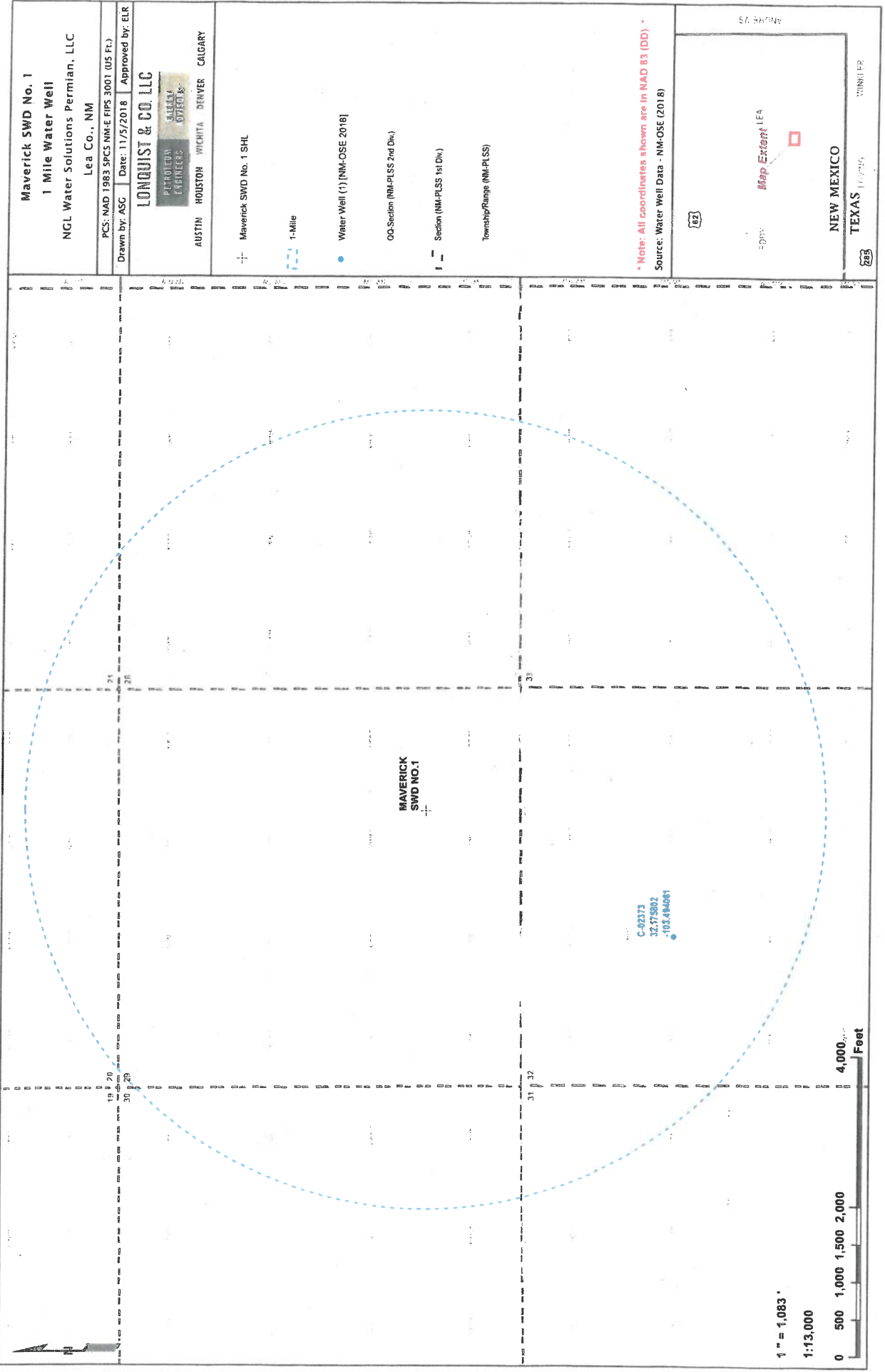




Maverick SWD No. 1
1 Mile Offset Operators and Lessees List

S/R	Q UNIT LETTER(S)	OPERATOR	MINERAL LESSEE	MINERAL OWNER	ADDRESS 1	ADDRESS 2
20724SR34E	O	EOG RESOURCES INC		PRIVATE	P.O. BOX 2267	MIDLAND, TX 79702
21724SR34E	M,N,O,P		EOG RESOURCES INC	BLM	PO BOX 4362	HOUSTON TX 772104362
28724SR34E	M,N		EOG RESOURCES INC	BLM	PO BOX 4362	HOUSTON TX 772104362
	B,C,D,E,F,G,H,I,K,L,M,N,O	EOG RESOURCES INC		PRIVATE	P.O. BOX 2367	MIDLAND, TX 79702
	B,C,D,E,F,G,J		EOG RESOURCES INC	BLM	PO BOX 4362	HOUSTON TX 772104362
	K,L,M,N,O		YATES JOHN A	BLM	105 S 4TH ST	ARTESIA NM 88210
29724SR34E	ENTIRE SECTION	EOG RESOURCES INC		PRIVATE	P.O. BOX 2267	MIDLAND, TX 79702
	A,B,G,H,I,J,O,P		EOG RESOURCES INC	BLM	PO BOX 4362	HOUSTON TX 772104362
	C,D,E,F,K,M,N		EOG RESOURCES INC	BLM	333 CLAY ST #4200	HOUSTON TX 77002
30724SR34E	A,G,H,I,J,O,P		EOG RESOURCES INC	BLM	333 CLAY ST #4200	HOUSTON TX 77002
31724SR34E	B	EOG RESOURCES INC		PRIVATE	P.O. BOX 2267	MIDLAND, TX 79702
32724SR34E	A,B,C,D,E,F,G,H,I,J,K,L,O,P	EOG RESOURCES INC		PRIVATE	P.O. BOX 2267	MIDLAND, TX 79702
	A,C,D,E,F,G,H,I,J,K,L,O,P		CHEVRON U S A INC	SLO	6301 DEALVILLE BLVD	MIDLAND, TX 79706
	B		BANK OF AMERICA, N.A. ESTATE OF FRED LUTHY	SLO	2100 SOUTH UTICA AVE., SUITE 150	TULSA, OK 74114
33724SR34E	B,C,D,E,F,G,K,L	EOG RESOURCES INC		PRIVATE	P.O. BOX 2267	MIDLAND, TX 79702
	B,C,D,E,F,G,K,L		EOG RESOURCES INC	BLM	PO BOX 4362	HOUSTON TX 772104362

Maverick SMD #1: Offsetting Produced Water Analysis																		
wellname	api	section	township	range	unit	county	formation	ph	tds_mgl	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl
BELL LAKE UNIT #002	3002508489	30	23S	34E	N	LEA	DELAWARE		52115						32920	37200	451	529
BELL LAKE UNIT A #007	3002508367	1	24S	33E	A	LEA	DELAWARE		87686						53900	491	391	749
BELL LAKE UNIT #009	3002520261	18	23S	34E	K	LEA	BONE SPRING		204652						260	512	260	130000
CORLANDER AOC STATE #002	3002533574	1	23S	32E	H	LEA	BONE SPRING	5.2						3815	167962	61.1	165	
THISTLE UNIT #071H	3002542425	27	23S	33E	A	Lea	BONE SPRING 1ST SAND	5.6	17476.3	55363.2	24176	0			9140	1023	244	580
BELL LAKE 19 STATE #002H	3002541515	19	24S	33E	O	Lea	BONE SPRING 2ND SAND	6.2		47148	6419	15	854		0	86572	670	240
BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	O	Lea	BONE SPRING 2ND SAND	6.3		47537	6950	11	886		0	88389	171	650
BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	O	Lea	BONE SPRING 2ND SAND	6.3		47537	6950	11	886		0	88389	171	650
BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	O	Lea	BONE SPRING 2ND SAND	6.3		47537	6950	11	886		0	88389	171	650
BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	O	Lea	BONE SPRING 2ND SAND	6.3		47537	6950	11	886		0	88389	171	650
BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	O	Lea	BONE SPRING 2ND SAND	6.3		47537	6950	11	886		0	88389	171	650
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BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	O	Lea	BONE SPRING 2											



Maverick SWD No. 1
1 Mile Water Well
NGL Water Solutions Permian, LLC
Lea Co., NM

PCS: NAD 1983 SPCS NM-8 FIPS 3001 (US FL)
Drawn by: ASG Date: 11/5/2018 Approved by: ELR

LONGQUIST & CO LLC
PETROLEUM ENGINEERS
AUSTIN HOUSTON WICHITA DENVER CALGARY

Maverick SWD No. 1 SHL

1-Mile

Water Well (1) (NM-OSE 2018)

OO Section (NM-PLSS 2nd Div.)

Section (NM-PLSS 1st Div.)

Township/Range (NM-PLSS)

* Note: All coordinates shown are in NAD 83 (DD).
Source: Water Well Data - NM-OSE (2018)

Map Extent LEA

NEW MEXICO
TEXAS

82 83

WINNER

Exhibit 3

Exhibits of Chris Weyand
On Behalf of NGL Water Solutions Permian, LLC

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

**AMENDED APPLICATION OF NGL WATER
SOLUTIONS PERMIAN, LLC
FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO**

CASE NO. 16506 (HARPOON)

**AMENDED APPLICATION OF NGL WATER
SOLUTIONS PERMIAN, LLC
FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO**

CASE NO. 20150 (MAVERICK)

AFFIDAVIT OF CHRIS WEYAND

STATE OF TEXAS)
) ss.
COUNTY OF TRAVIS)

I, Chris Weyand, make the following affidavit based upon my own personal knowledge.

1. I am over eighteen (18) years of age and am otherwise competent to make the statements contained herein.

2. I am a Staff Engineer at Lonquist & Co., LLC. My responsibilities at Lonquist & Co., LLC include saltwater disposal well permitting efforts in New Mexico as well as other states and jurisdictions.

3. I graduated from Texas A&M University in 2010 with an engineering degree.

4. I am familiar with the amended applications that NGL Water Solutions Permian, LLC ("NGL") has filed in these matters.

5. In Case No. 16506, NGL (OGRID No. 372338) seeks an order approving the Harpoon SWD #1 well, which is a salt water disposal well.

6. In Case No. 20150, NGL (OGRID No. 372338) seeks an order approving the Maverick SWD #1 well, which is a salt water disposal well.

7. I prepared revised C-102s for both the Harpoon and Maverick wells, attached as Exhibits A and B to this affidavit.

8. I compiled a list of all parties entitled to notice within a one-mile area of review. I reviewed County and Division records to determine the parties entitled to notice, including the owner of the surface (NGL) and leasehold operators or other affected person. With respect to affected parties, I determined whether there was an operator, as shown in the Division records, or a designated unit operator, and if not, whether there were any working interests whose interest is evidenced by a written conveyance document either of record; and as to any tract or interest not subject to an existing oil and gas lease, whether there were mineral interest owner whose interest is evidenced by a written conveyance document either of record; and whether the United States or state of New Mexico owns the mineral estate in the spacing unit or identified tract or any part thereof, the BLM or state land office, as applicable.

9. The area of review was evaluated for offset wellbores penetrating the injection formation and to determine notice parties as part of the C-108 Application.

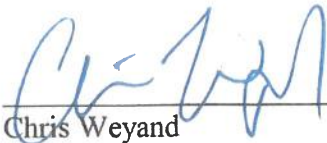
10. Based on my review of those records, the change in location for the Harpoon well did not result in any additional parties entitled to notification.

11. For the Maverick well, I updated the notice list based on the changed location and provided those additional names to counsel for NGL so that notice could be sent to the new notice parties.

12. It is my understanding that the State Land Office has entered an appearance in Case No. 20150, Maverick SWD #1. The Maverick SWD #1 well is approximately 1,086 feet away from State Lands (located in Sec. 32-T24S-R34E). Based on my review of the information available to me, the Maverick SWD #1 well is located approximately 1,086 feet from State minerals (located in Sec. 32-T24S-R34E).

13. I attest that the information provided herein is correct and complete to the best of my knowledge and belief.

[Signature page follows]


Chris Weyand

SUBSCRIBED AND SWORN to before me this 30 th day of April, 2019 by Chris Weyand.



My commission expires: 9/16/2019


Notary Public

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 97869	³ Pool Name SWD; Devonian-Silurian
⁴ Property Code	⁵ Property Name HARPOON SWD	⁶ Well Number 1
⁷ OGRID No. 372338	⁸ Operator Name NGL WATER SOLUTIONS PERMIAN, LLC	⁹ Elevation 3440.00'±

¹⁰ Surface Location

UL or lot no. M	Section 27	Township 24 S	Range 34 E	Lot Idn N/A	Feet from the 900'	North/South line SOUTH	Feet from the 150'	East/West line WEST	County LEA
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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.

	¹⁷ OPERATOR CERTIFICATION 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. <i>Chris Weyand</i> 3/22/2019 Signature Date Chris Weyand Printed Name chris@lonquist.com E-mail Address
	¹⁸ SURVEYOR CERTIFICATION 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. 03/13/2019 Date of Survey Signature and Seal of Professional Surveyor 25114 Certificate Number <i>Billy W. Barr Jr.</i> BILLY W. BARR JR. NEW MEXICO 25114 PROFESSIONAL SURVEYOR



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1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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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
Location & Pool Code

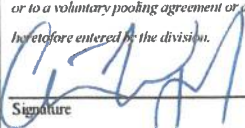
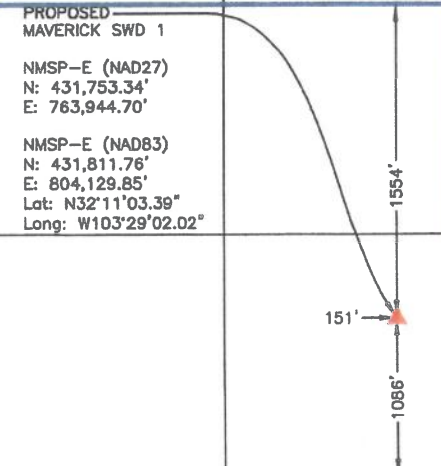
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 97869		³ Pool Name SWD; Devonian-Silurian	
⁴ Property Code		⁵ Property Name MAVERICK SWD			⁶ Well Number 1
⁷ OGRID No. 372338		⁸ Operator Name NGL WATER SOLUTIONS			⁹ Elevation 3495'±

¹⁰ Surface Location									
UL or lot no. P	Section 29	Township 24 S	Range 34 E	Lot Idn N/A	Feet from the 1086'	North/South line SOUTH	Feet from the 151'	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.

SECTION 29	¹⁶	¹⁷ OPERATOR CERTIFICATION <i>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.</i>  Signature Chris Weyand Printed Name chris@lonquist.com E-mail Address
	¹⁸ SURVEYOR CERTIFICATION <i>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.</i> 03/13/2019 Date of Survey Signature and Seal of Professional Surveyor	 25114 Certificate Number
		

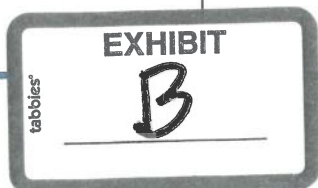


Exhibit 4

Exhibits of Scott Wilson
On Behalf of NGL Water Solutions Permian, LLC

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

**AMENDED APPLICATION OF NGL WATER
SOLUTIONS PERMIAN, LLC
FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO**

**CASE NO. 16506
(HARPOON)**

AFFIDAVIT OF SCOTT J. WILSON

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, Scott J. Wilson, make the following affidavit based upon my own personal knowledge.

1. I am over eighteen (18) years of age and am otherwise competent to make the statements contained herein.

2. I am the Senior Vice President for Ryder Scott Company in Denver, Colorado. My responsibilities at Ryder Scott Company include the performance of reserve appraisals, technical evaluations, and reservoir analysis.

3. I have obtained a bachelor's degree in petroleum engineering from the Colorado School of Mines, and a master's degree business from the University of Colorado. I have worked as a petroleum engineer since 1983.

4. I am familiar with the amended application that NGL Water Solutions Permian, LLC ("NGL") has filed in this matter, and I have conducted a nodal analysis and reservoir study

related to the area which is the subject matter of the application. A copy of my study is attached hereto as Exhibit A.

5. The applicant, NGL (OGRID No. 372338), seeks an order approving the Harpoon SWD #1 well (Case No. 16506) which is a salt water disposal well.

6. The well will be spaced out and will not be located closer than approximately 1 mile from other disposal wells, approved for injection into the Devonian and Silurian formations.

7. The approved injection zone for the wells is located below the base of the Woodford Shale formation and above the Ordovician formation, which consists of significant shale deposits.

8. The wells will primarily be injecting fluids into the Wristen Group and Fusselman formations, with some fluids potentially being injected into the Upper Montoya Group. Each of these sub-formations or zones are located within what is commonly referred to by operators and the Division as the "Devonian Silurian" formations. These zones consist of a very thick sequence of limestone and dolostone which has significant primary and secondary porosity and permeability that is collectively between 800 to 1,800 feet thick.

9. I have reviewed step rate tests for similar disposal wells drilled within the area and conducted a nodal analysis. It is my opinion that a large percentage of surface pressure it was encountering using smaller diameter tubing was a result of friction pressure. In Case No. 15720 evidence had been presented to the Division showing that up to 85% of this surface pressure was due to friction. Increasing the tubing size would reduce friction and would conserve pump horsepower, fuel, and reduce emissions.

10. My nodal analysis indicates that increasing the tubing size to 7" by 5 ½" would not significantly increase reservoir pressures over a twenty-year time period. The injection zone is located within a reservoir with significant thickness which consists of high permeability rocks,

which results in only very small pressure increases even when injection is increased to a rate of 40,000 barrels per day over a 20 year period.

11. It is my opinion that increasing the tubing size will not cause fractures in the formation. Wellhead pressures are set at a maximum that is below the formation fracture pressure and, as a result, it is impossible to get above the formation fracture pressure while honoring wellhead pressure constraints. Consequently, it is highly unlikely that increasing the tubing size in the wells would result in fractures to the formation.

12. I have also studied the potential impact on pore pressures and put together a simulation of the radial influence that the wells would have if larger tubing is used for a period of time. A copy of this study is included within Exhibit A to this affidavit. This study shows that it is anticipated that there will be a minimal impact on reservoir pressures and that the majority of fluids will not travel greater than 1 mile in 20 years.

13. My studies further indicate that additional injection wells located one mile away from the wells, will not create any materially adverse pressures in the formation.

14. I attest that the information provided herein is correct and complete to the best of my knowledge and belief.

15. The granting of these applications is in the interests of conservation and the prevention of waste.

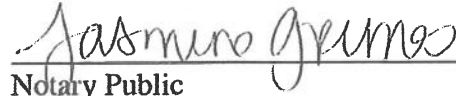
[Signature page follows]

JASMINE GRIMES
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20194004439
MY COMMISSION EXPIRES FEB 5, 2023



Scott J. Wilson

SUBSCRIBED AND SWORN to before me this 26th day of April, 2019 by Scott J. Wilson.



Notary Public

My commission expires: 2 | 5 | 23

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

**AMENDED APPLICATION OF NGL WATER
SOLUTIONS PERMIAN, LLC
FOR APPROVAL OF SALT WATER
DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO**

**CASE NO. 20150
(MAVERICK)**

AFFIDAVIT OF SCOTT J. WILSON

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, Scott J. Wilson, make the following affidavit based upon my own personal knowledge.

1. I am over eighteen (18) years of age and am otherwise competent to make the statements contained herein.

2. I am the Senior Vice President for Ryder Scott Company in Denver, Colorado. My responsibilities at Ryder Scott Company include the performance of reserve appraisals, technical evaluations, and reservoir analysis.

3. I have obtained a bachelor's degree in petroleum engineering from the Colorado School of Mines, and a master's degree business from the University of Colorado. I have worked as a petroleum engineer since 1983.

4. I am familiar with the amended application that NGL Water Solutions Permian, LLC ("NGL") has filed in this matter, and I have conducted a nodal analysis and reservoir study

related to the area which is the subject matter of the application. A copy of my study is attached hereto as Exhibit A.

5. The applicant, NGL (OGRID No. 372338), seeks an order approving the Maverick SWD #1 well (Case No. 20150) which is a salt water disposal well.

6. The well will be spaced out and will not be located closer than approximately 1 mile from other disposal wells, approved for injection into the Devonian and Silurian formations.

7. The approved injection zone for the wells is located below the base of the Woodford Shale formation and above the Ordovician formation, which consists of significant shale deposits.

8. The wells will primarily be injecting fluids into the Wristen Group and Fusselman formations, with some fluids potentially being injected into the Upper Montoya Group. Each of these sub-formations or zones are located within what is commonly referred to by operators and the Division as the "Devonian Silurian" formations. These zones consist of a very thick sequence of limestone and dolostone which has significant primary and secondary porosity and permeability that is collectively between 800 to 1,800 feet thick.

9. I have reviewed step rate tests for similar disposal wells drilled within the area and conducted a nodal analysis. It is my opinion that a large percentage of surface pressure it was encountering using smaller diameter tubing was a result of friction pressure. In Case No. 15720 evidence had been presented to the Division showing that up to 85% of this surface pressure was due to friction. Increasing the tubing size would reduce friction and would conserve pump horsepower, fuel, and reduce emissions.

10. My nodal analysis indicates that increasing the tubing size to 7" by 5 1/2" would not significantly increase reservoir pressures over a twenty-year time period. The injection zone is located within a reservoir with significant thickness which consists of high permeability rocks,

which results in only very small pressure increases even when injection is increased to a rate of 40,000 barrels per day over a 20 year period.

11. It is my opinion that increasing the tubing size will not cause fractures in the formation. Wellhead pressures are set at a maximum that is below the formation fracture pressure and, as a result, it is impossible to get above the formation fracture pressure while honoring wellhead pressure constraints. Consequently, it is highly unlikely that increasing the tubing size in the wells would result in fractures to the formation.

12. I have also studied the potential impact on pore pressures and put together a simulation of the radial influence that the wells would have if larger tubing is used for a period of time. A copy of this study is included within Exhibit A to this affidavit. This study shows that it is anticipated that there will be a minimal impact on reservoir pressures and that the majority of fluids will not travel greater than 1 mile in 20 years.

13. My studies further indicate that additional injection wells located one mile away from the wells, will not create any materially adverse pressures in the formation.

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[Signature page follows]

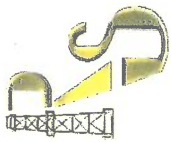
JASMINE GRIMES
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20194004439
MY COMMISSION EXPIRES FEB 5, 2023

Scott J. Wilson
Scott J. Wilson

SUBSCRIBED AND SWORN to before me this 26th day of April, 2019 by Scott J. Wilson.

Jasmine Grimes
Notary Public

My commission expires: 2/5/23



NGL Water Solutions, LLC

Exh. 1

Typical Wellbore Hydraulics Models predict a 30% increase in maximum injection rate between 5.5 tubing and 7x5.5 tubing.

Alpha2

Reservoir Data

Pressure = 5974.00 psia

kh = 11900.0

Skin = 0.00

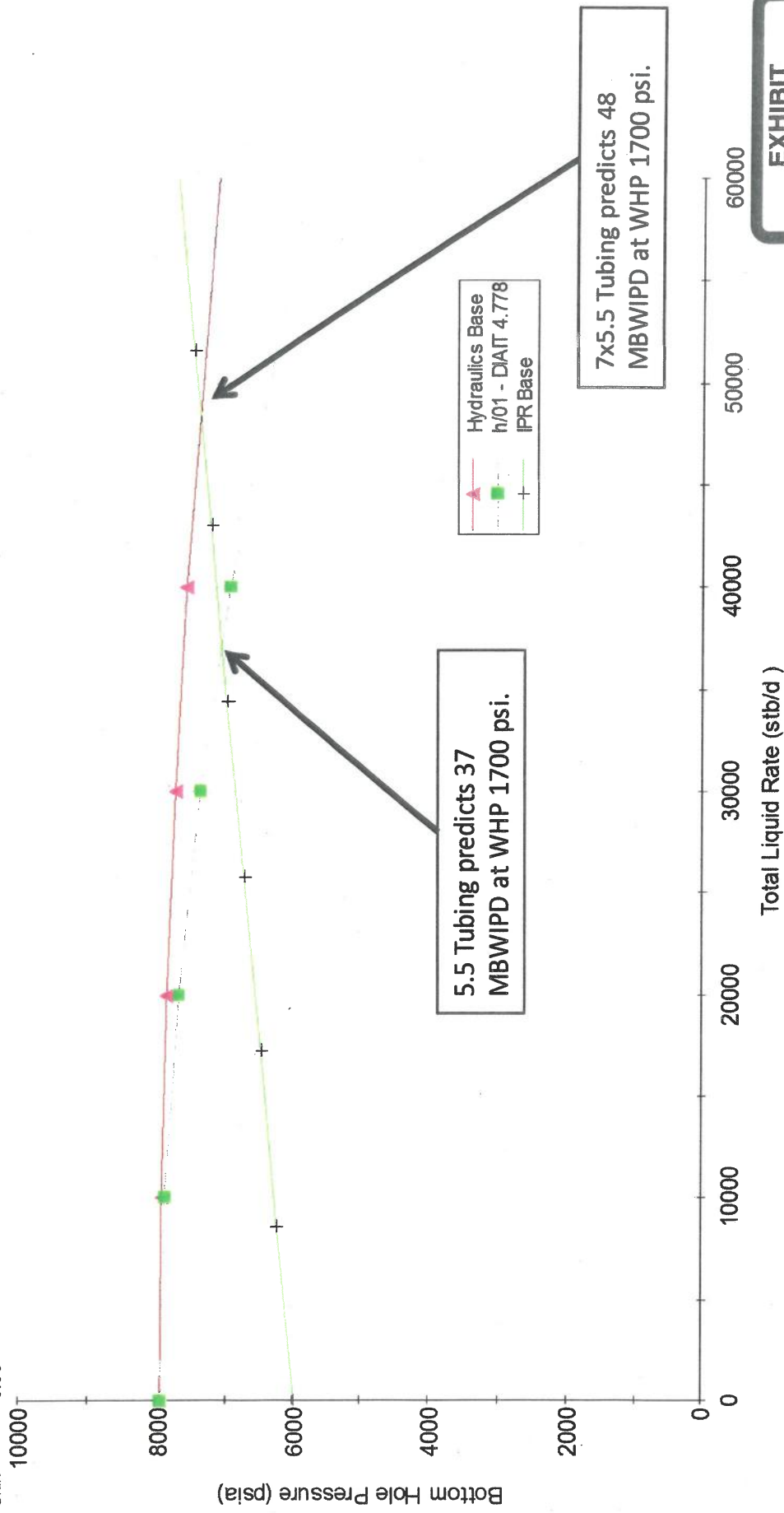
Alpha 2 WellboreSize Sensitivity.snp

Rate vs. Pressure 25-Sep-18 14:50:13

WB Depth (MD ft) = 13870

WHPres (psia) = 1700.00

Tubing I.D. = 6.276 (s1)

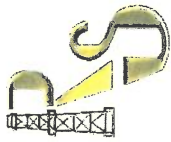


EXHIBIT

A

tabbles

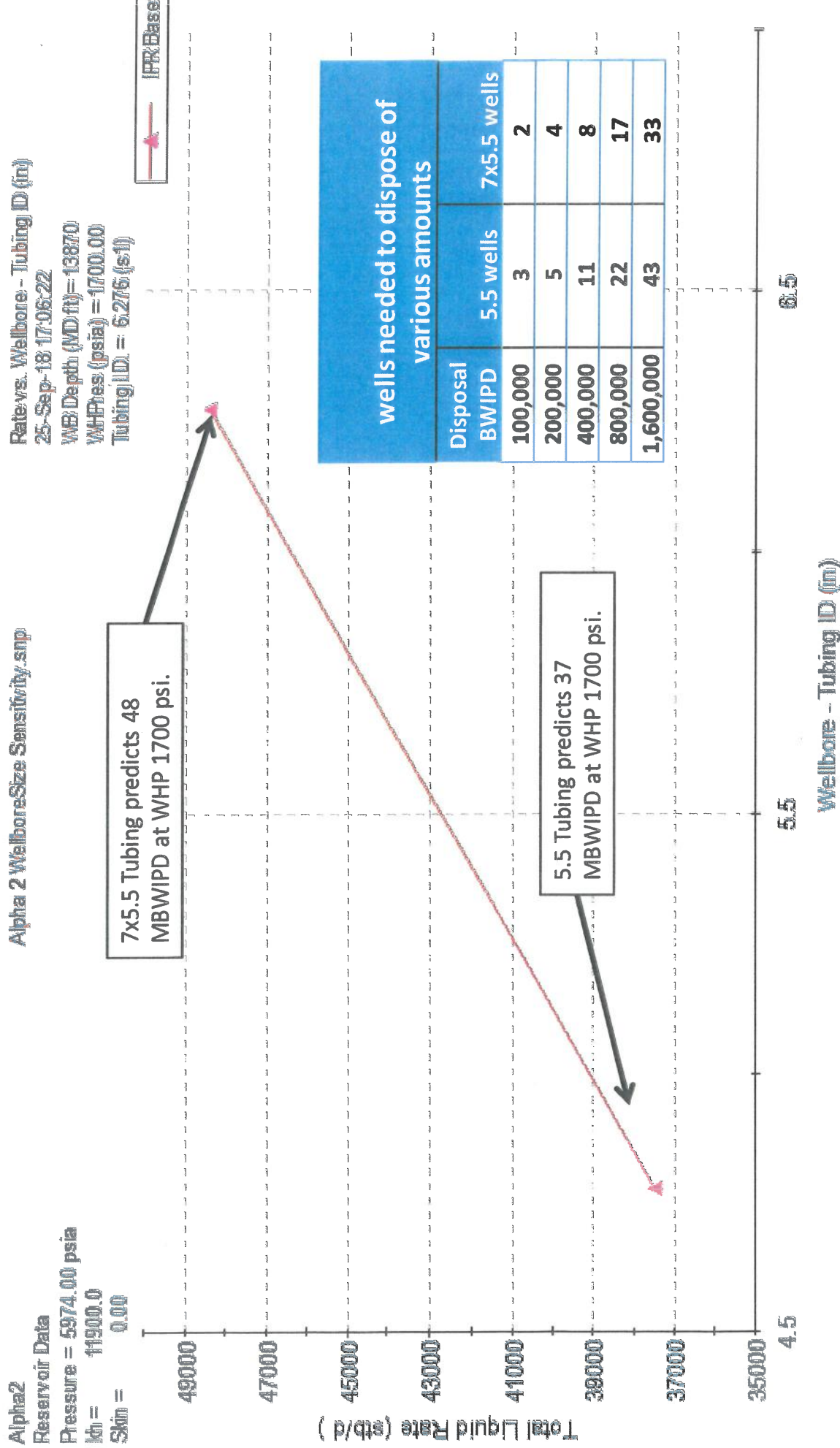
4/29/2019

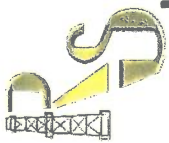


NGL Water Solutions, LLC

Exh. 2

Increased injection rate per well equates to fewer injectors.





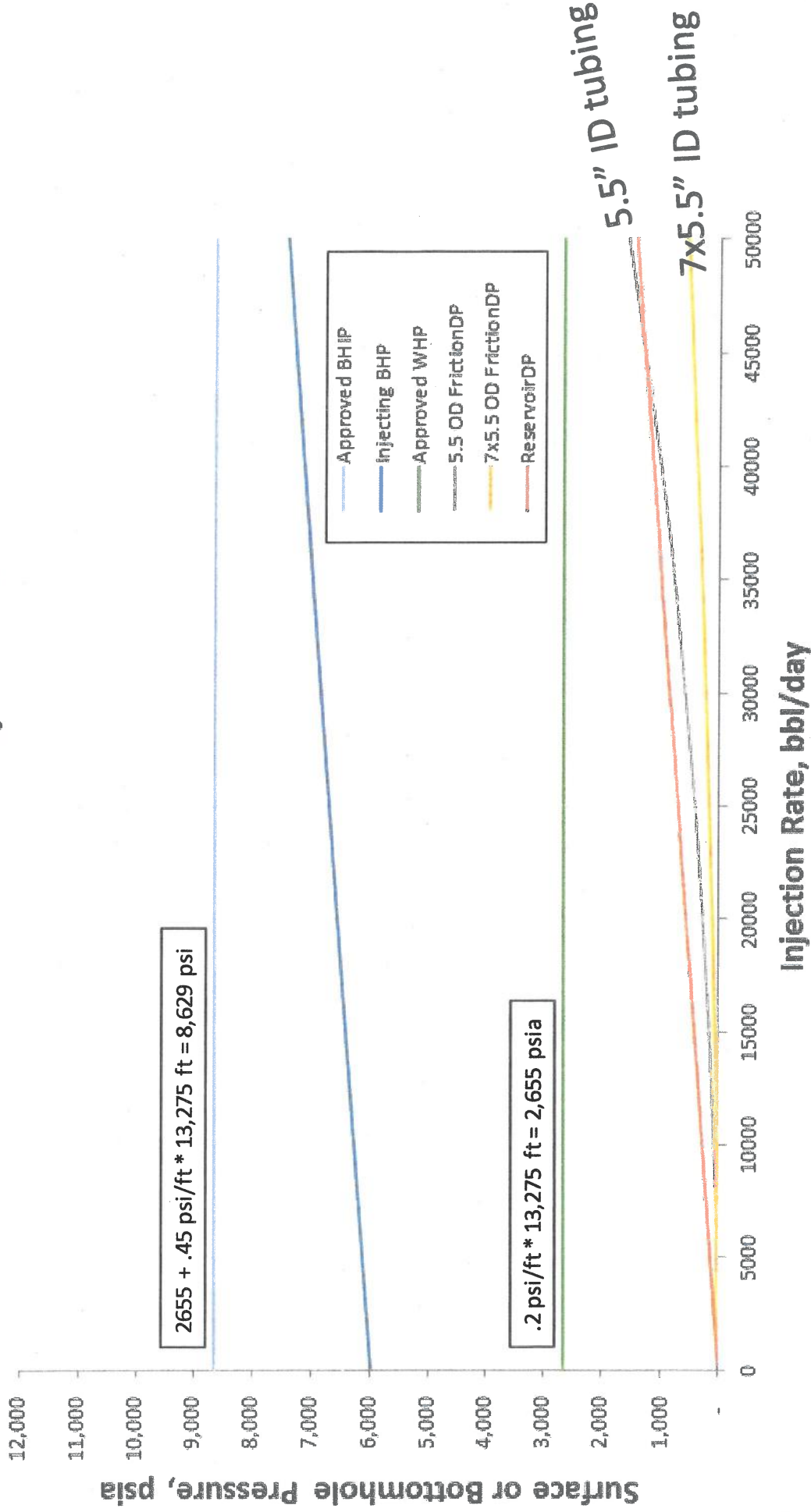
NGL Water Solutions, LLC

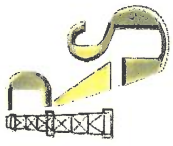
Exh. 3

Increasing tubing size will decrease friction losses and conserve horsepower.

2 example tubing sizes and their impact on friction losses.

Pressure losses at various injection rates

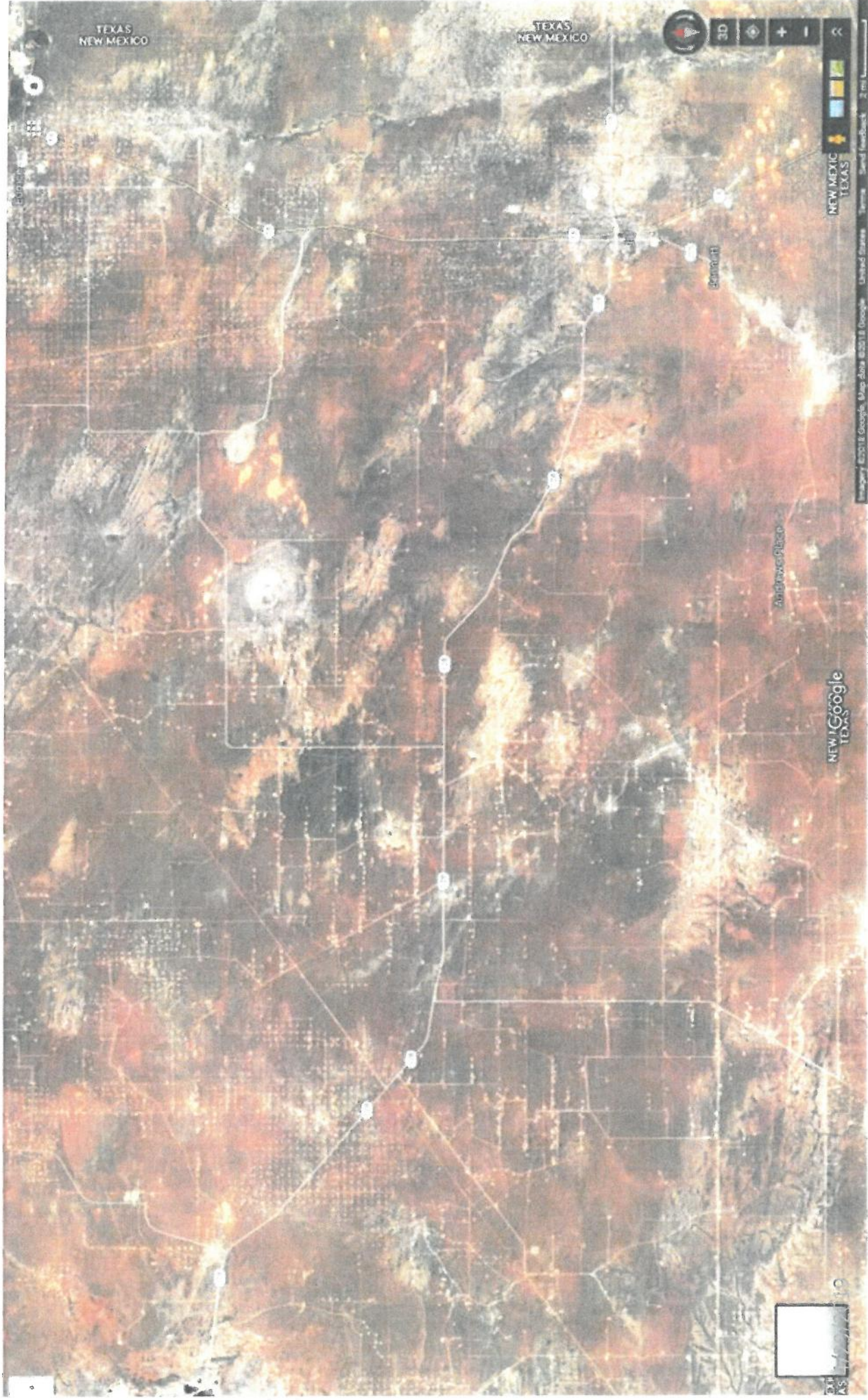




NGL Water Solutions, LLC

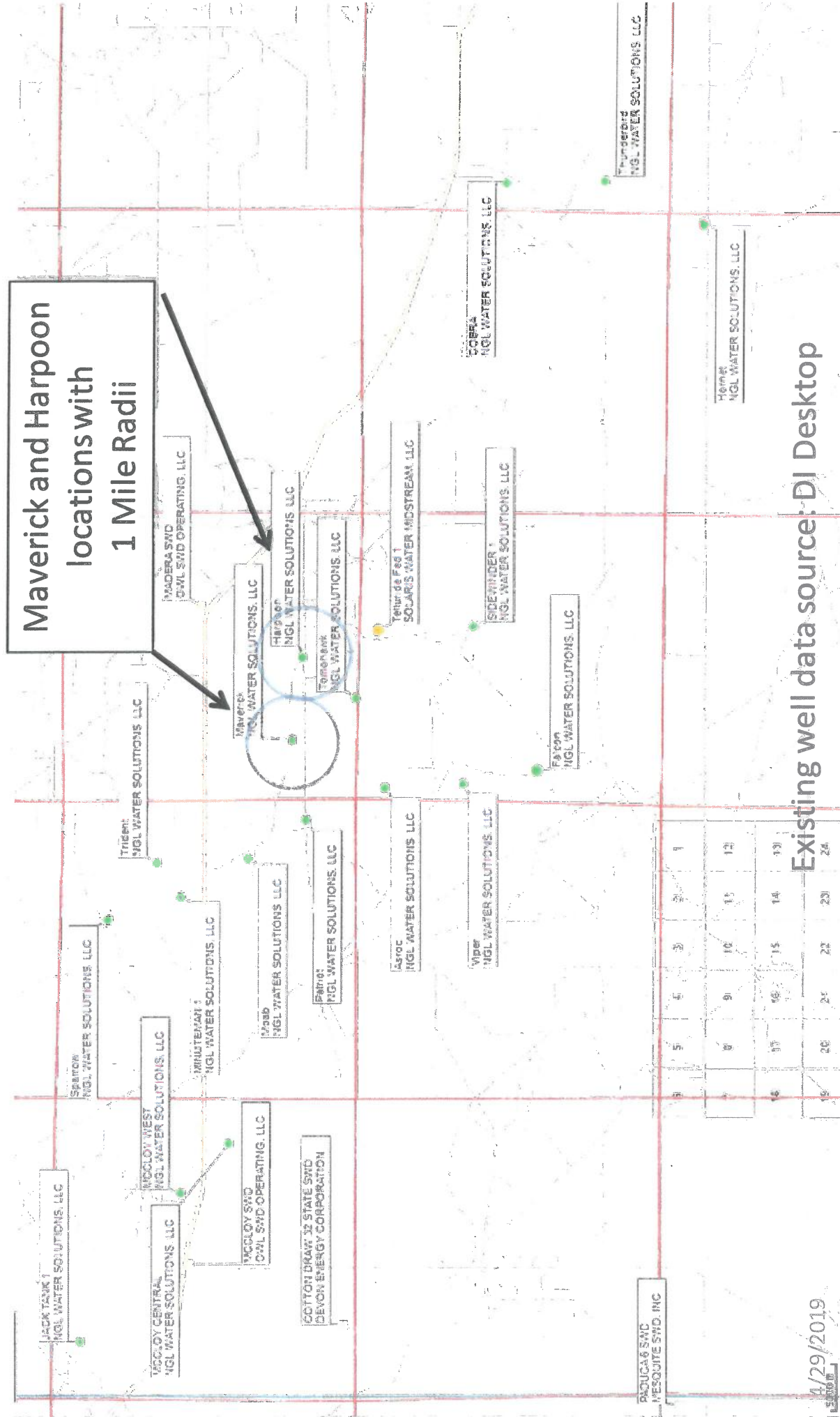
Terrain is level and infrastructure is plentiful.

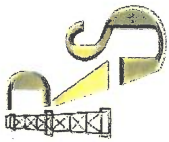
Exh. 4





Wells injecting water into the Devonian formation in the area.
Area is roughly 30 miles (E-W) by 20 miles (N-S)



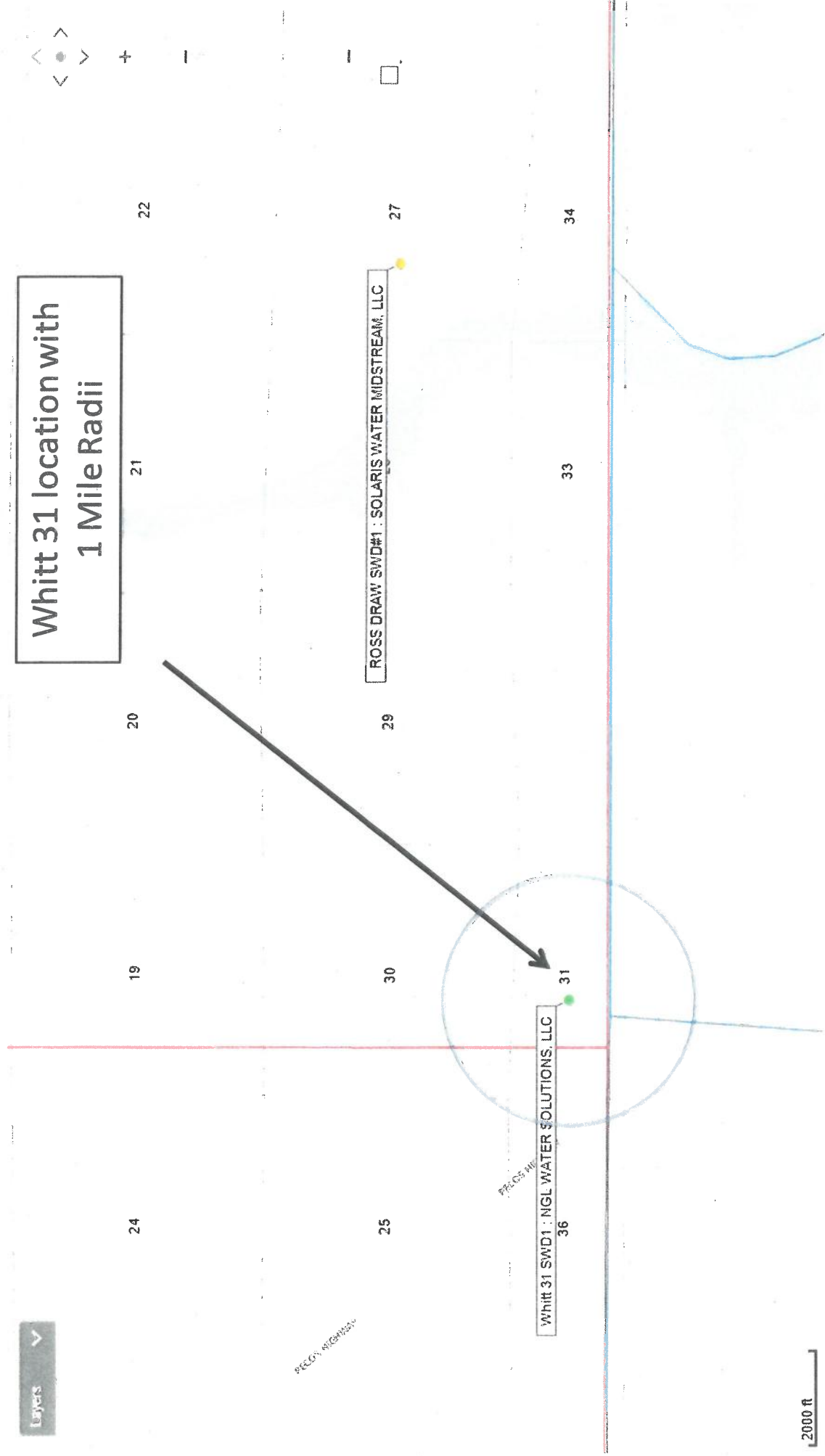


NGL Water Solutions, LLC

Exh. 6

Wells injecting water into the Devonian formation in the area.

Area is roughly 36 miles (E-W) by 20 miles (N-S).



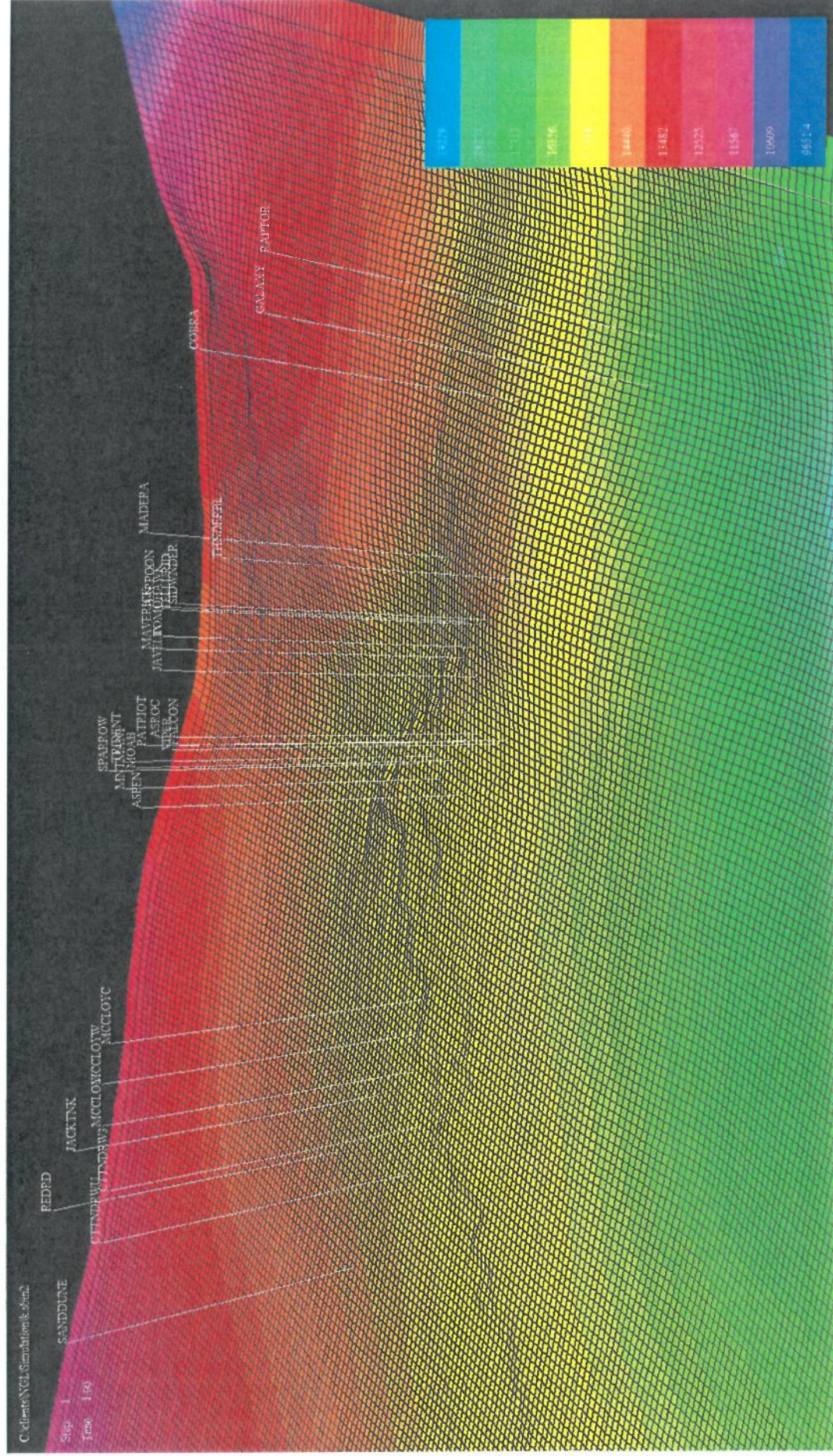
Existing well data source: DI Desktop

4/29/2019

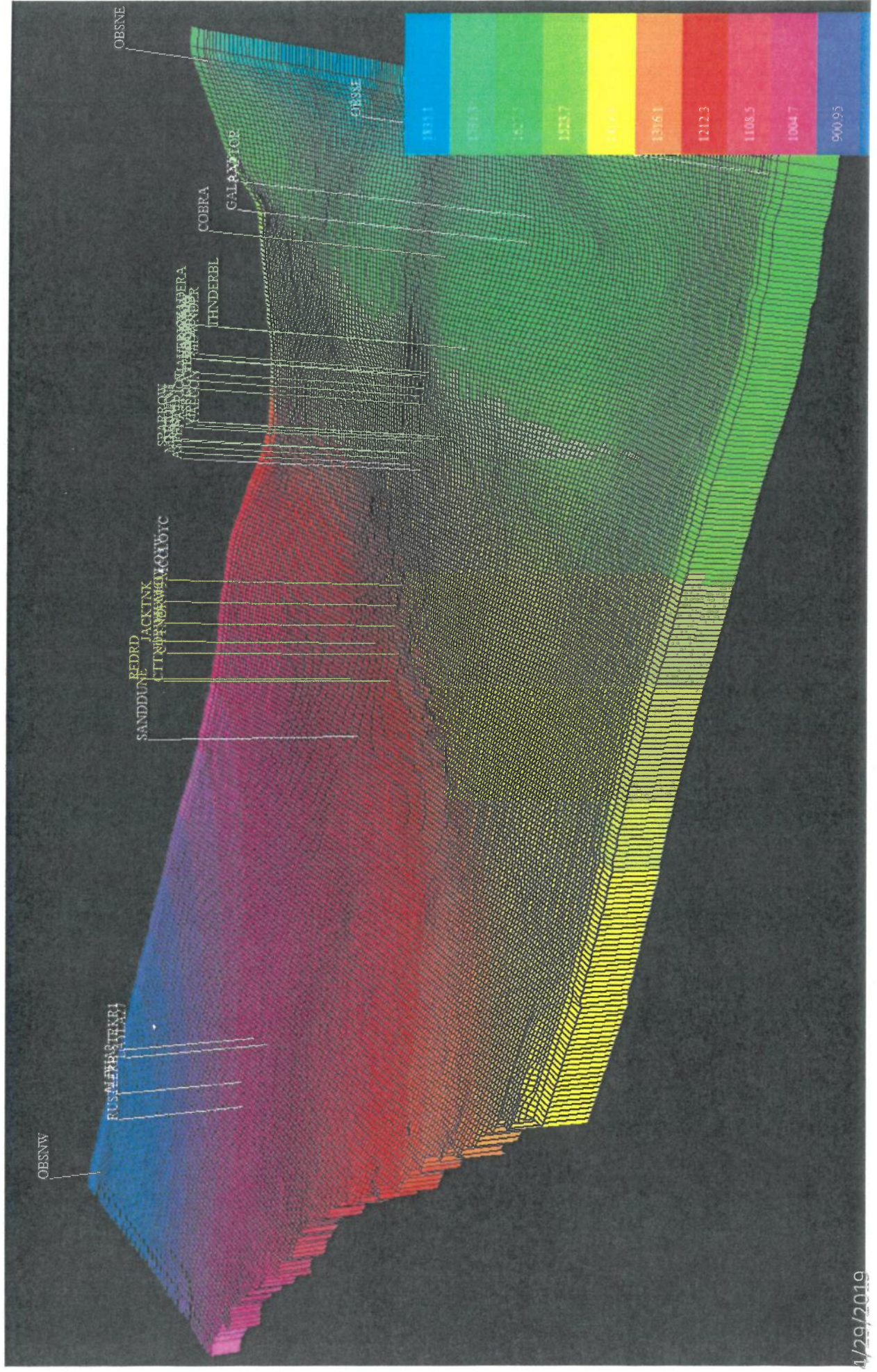


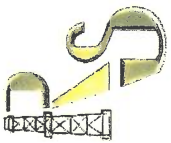
7. $\frac{1}{2}$

Reservoir Simulation grid incorporates the NGL proposed wells and the close offsets. Observation wells are placed in grid corners to monitor the large scale pressure distribution.





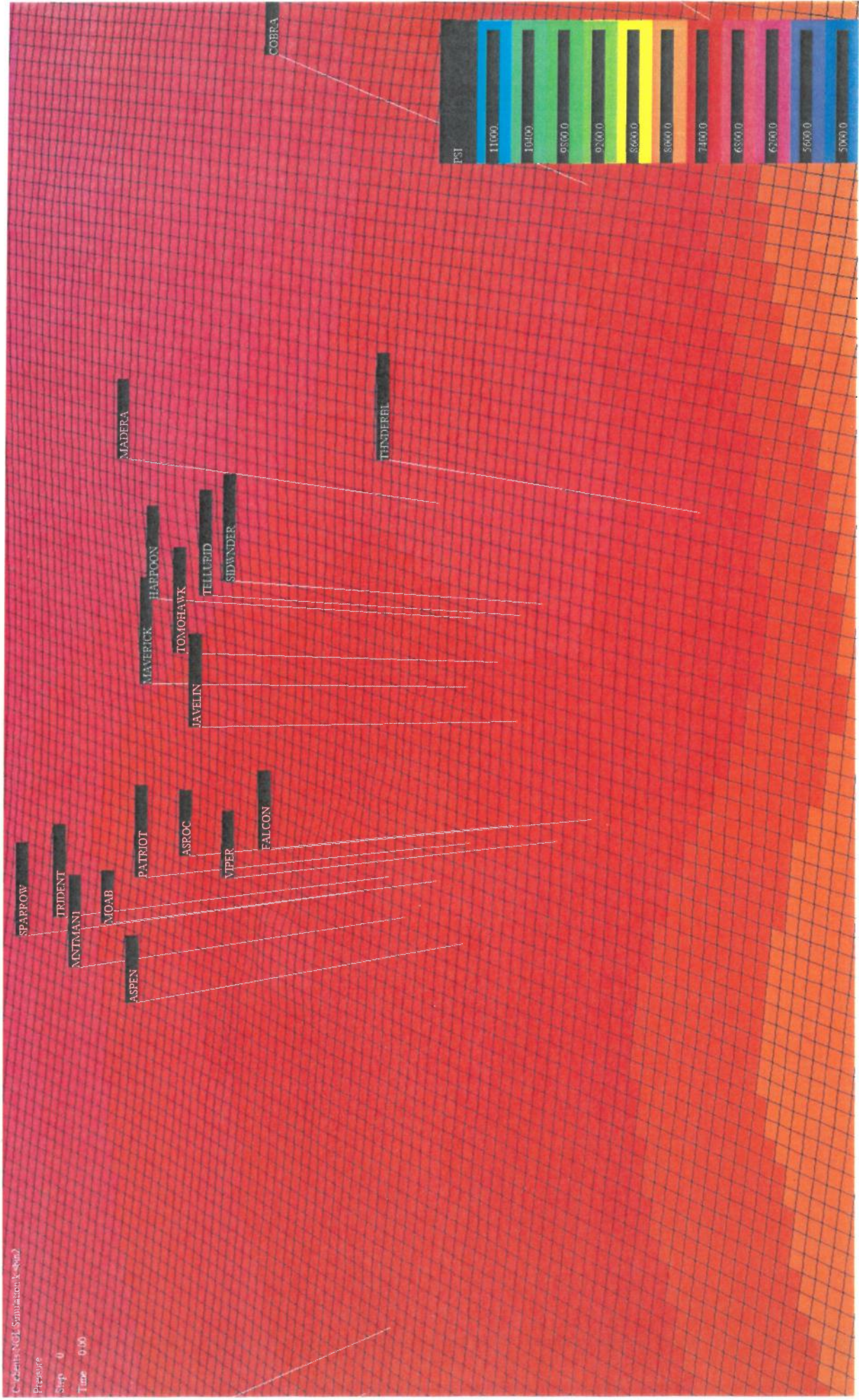




NGL Water Solutions, LLC

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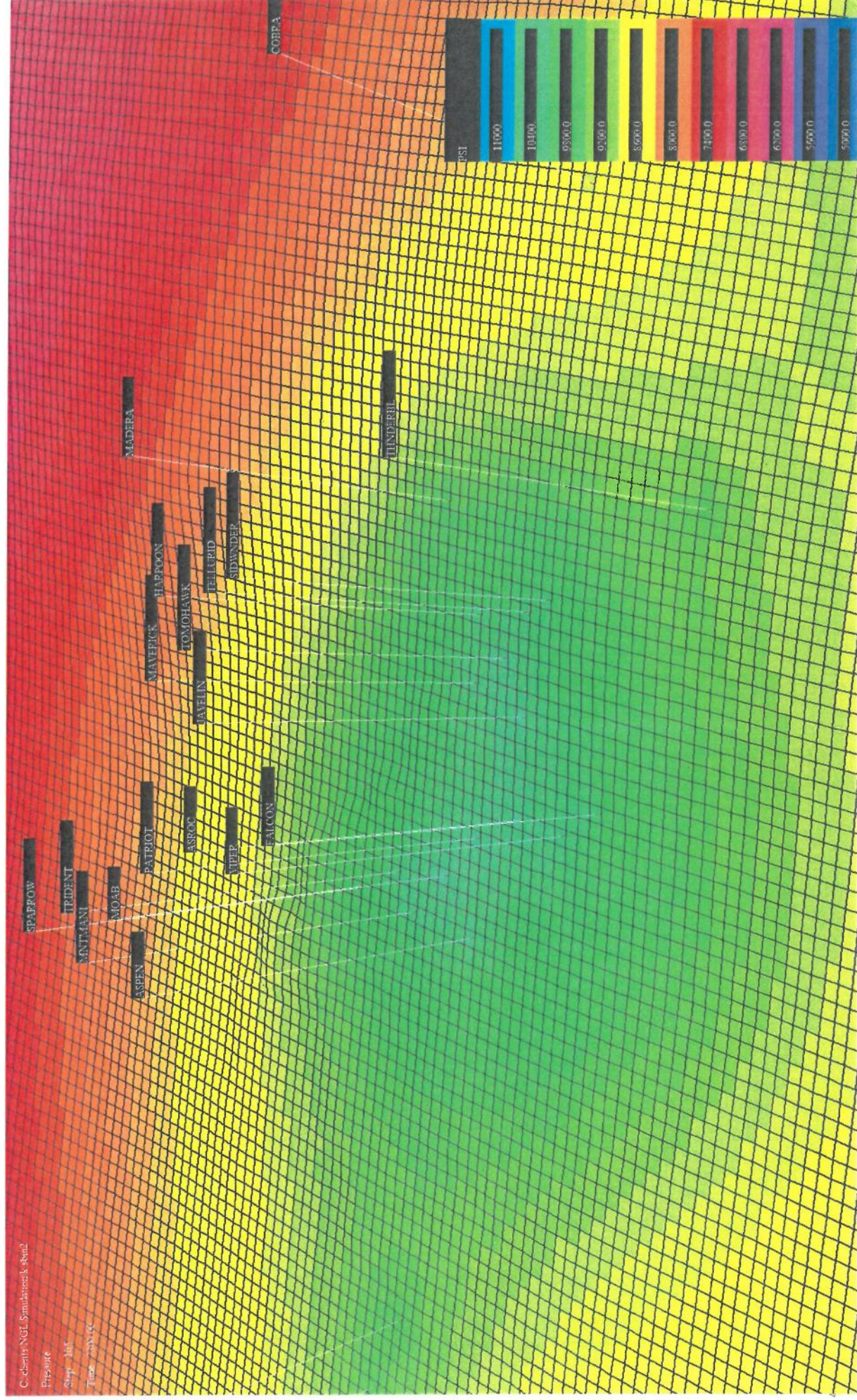
Initial pressure is equilibrated by the model based on grid cell depth, fluids(water) and capillary pressure.

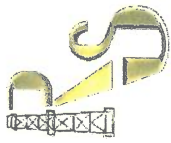




NGL Water Solutions, LLC

Pressure at 20 years is affected by original pressure, injected volumes, and the ability of the reservoir to dissipate pressure.





NGL Water Solutions, LLC

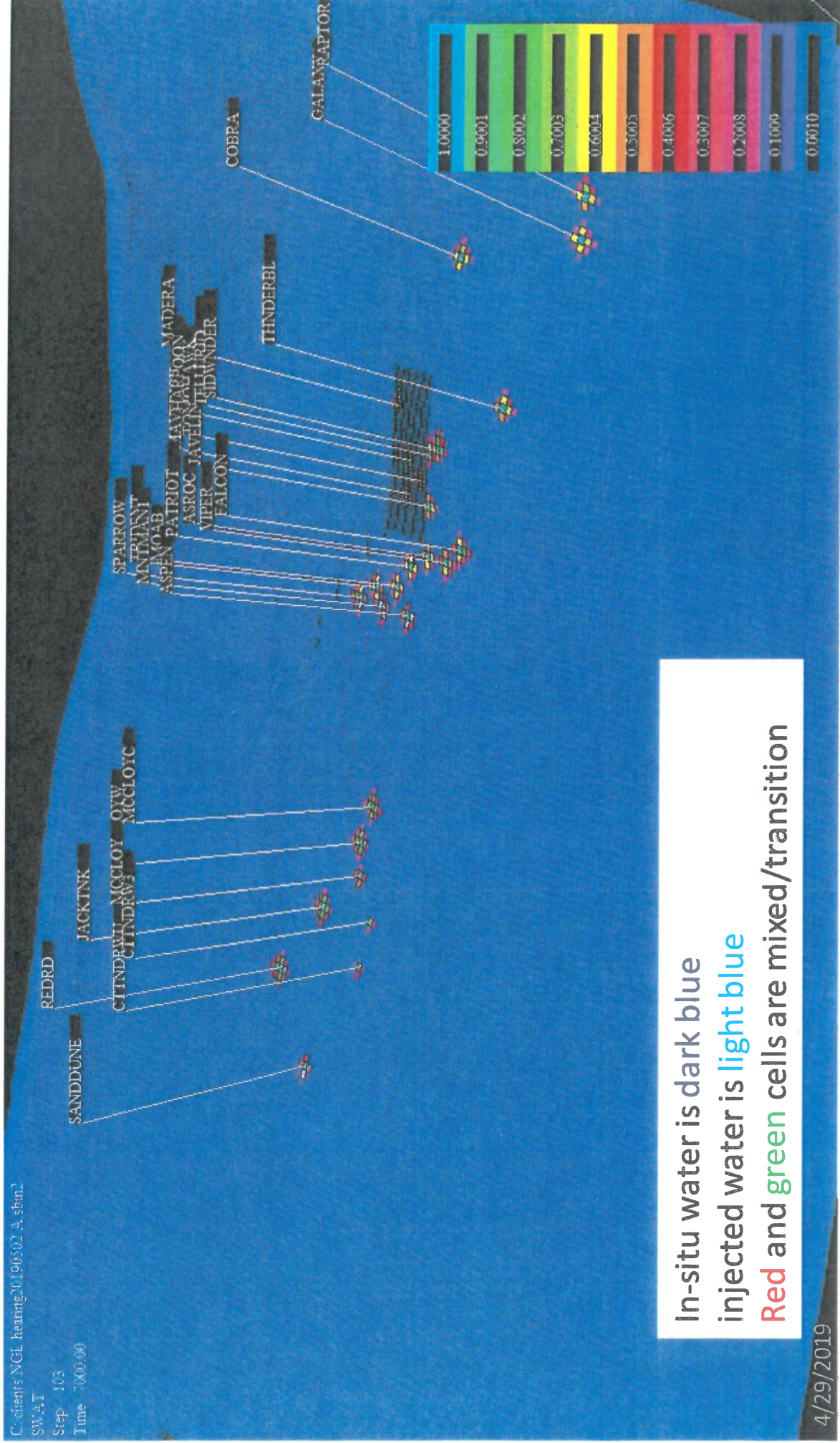
Large scale saturation profiles after 20 years of injection.

C:\clients\NGL heating\20190502_A.sbat2

SWAT

Step 103

Time 7000.00



In-situ water is dark blue
injected water is light blue
Red and green cells are mixed/transition



NGL Water Solutions, LLC

Detailed saturation profiles after 20 years of injection.
Maverick, Harpoon, Tomahawk, Madera wells in refined grid
with 610' Cells. Other Cells are 1320' on each side.

