



MODRALL SPERLING

L A W Y E R S

September 21, 2018

Florene Davidson
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Jennifer L. Bradfute
505.848.1845
Fax: 505.848.1882
jlb@modrall.com

**Re: APPLICATION OF NGL WATER SOLUTIONS
PERMIAN, LLC TO APPROVE SALT WATER
DISPOSAL WELLS IN LEA AND EDDY COUNTY, NEW
MEXICO.**

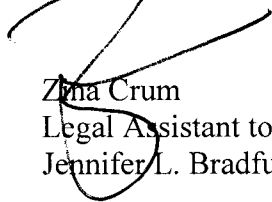
Dear Ms. Davidson:

Enclosed please find three copies of the following:

1. NGL Water Solutions Permian, LLC's Amended Application – McCloy West No. 16440.

Thank you for your assistance. Please contact me if you have any questions.

Sincerely,



Zina Crum
Legal Assistant to
Jennifer L. Bradfute

JLB/zc
Enclosure

Modrall Sperling
Roehl Harris & Sisk
P.A.

Bank of America
Centre
500 Fourth Street
NW
Suite 1000
Albuquerque,
New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico
87103-2168

Tel: 505 848 1800



MODRALL SPERLING

L A W Y E R S

September 18, 2018

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

CASE NO. 16440

Deana M. Bennett
Deana.bennett@modrall.com
505-848-1834

TO: AFFECTED PERSONS

This letter is to advise you that NGL Water Solutions Permian, LLC ("NGL") has filed the enclosed application, which seeks an order approving disposal into the Devonian and Silurian formations through the **McCloy West SWD #1** well. NGL proposes to drill this well at a surface location 1,019 feet from the South line and 2,388 feet from the East line of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico. The target injection interval is the Devonian and Silurian formations at a depth of 17,350' – 18,451'. 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. Also attached to the application is an updated C-108 for the well.

This case is currently set for a hearing before a Division Examiner on October 4, 2018, starting at 8:15 a.m. The hearing will be held in Porter Hall in the Oil Conservation Division's Santa Fe Office located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. As a pooled party who may be affected by this application, we are notifying you of your right to appear at the hearing and participate in the case, including the right to present evidence either in support of or in opposition to the application. Failure to appear at the hearing may preclude you from any involvement in the case at a later date.

You are further notified that if you desire to appear in this case, then you are requested to file a Pre-Hearing Statement with the Division at least four business days in advance of a scheduled hearing before the Division or the Commission, but in no event later than 5:00 p.m. mountain time, on the Thursday preceding the scheduled hearing date, with a copy delivered to the undersigned.

Modrall Sperling
Roehl Harris & Sisk P.A.

500 Fourth Street NW
Suite 1000
Albuquerque,
New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico 87103-2168

Tel: 505.848.1800
www.modrall.com

Sincerely,


Jennifer L. Bradfute, and
Deana M. Bennett

Attorneys for Applicant

**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. 16440

AMENDED 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 McCloy West SWD #1 well at a surface location 1,019 feet from the South line and 2,388 feet from the East line of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.
- (2) NGL seeks authority to inject salt water into the Devonian and Silurian formations at a depth of 17,350' – 18,451'.
- (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 2,620 psi for this well, and it requests that a maximum pressure of 3,470 psi be approved for the well.
- (5) A 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 October 4, 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: 
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. 16440: 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 Devonian and Silurian formations through the McCloy West SWD #1 well. NGL proposes to drill this well at a surface location 1,019 feet from the South line and 2,388 feet from the East line of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico. The target injection interval is the Devonian and Silurian formations at a depth of 17,350' – 18,451'. 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 28 miles west of Jal, New Mexico.

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 LLCOGRID Number: 372338Well Name: MCCLOY WEST SWD #1API: TBDPool: SWD; SILURIAN-DEVONIANPool 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☐ PPR2) **NOTIFICATION REQUIRED TO:** Check those which apply.A. ☒ Offset operators or lease holdersB. ☐ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☐ Notification and/or concurrent approval by SLOE. ☒ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☐ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**☐ Notice Complete☐ Application
Content
Complete3) **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

09/05/2018

Date

512-600-1764

Phone Number

CHRIS@LONQUIST.COM

e-mail Address

Signature

EXHIBIT

tabbles

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: _____

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.

WELL LOCATION: 1,019 FSL & 2,388' FEL
FOOTAGE LOCATION

WELL CONSTRUCTION DATA
Surface Casing

1st Intermediate Casing

2nd Intermediate Casing

Hole Size: 12.250"
 Cemented with: 2,910 sx.
 Top of Cement: Surface
 Casing Size: 9.625"
or _____ ft³
 Method Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 382 sx.

or _____ ^{ft}³

Top of Cement: 11.700'

Method Determined: Calculation

Total Depth: 18.451'

Injection Interval

17.350 feet to 18.451 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 7", 26 lb/ft, P-110, TCPC from 0'-11,600' and 5,500", 17 lb/ft, P-110 TCPC from 11,600' - 17,300'
 Lining Material: Duoline

Type of Packer: 7.625" x 5.5" TCPC Permanent Packer with High Temp Elastomer and Full Inconel

Packer Setting Depth: 17,300'

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: 4,921'

Bone Spring: 8,941'

Wolfcamp: 12,111'

NGL Water Solutions Permian, LLC

McCloy West SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	McCloy West SWD
Well No.	1
Location	S-14 T-24S R-32E
Footage Location	1,019' FSL & 2,388' FEL

2.

a. Wellbore Description

Casing Information				
Type	Surface	Intermediate	Production	Liner
OD	20"	13.375"	9.625"	7.625"
WT	0.500"	0.480"	0.545"	0.500"
ID	19.000"	12.415"	8.535"	6.625"
Drift ID	18.813"	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	1,250'	4,920'	12,200'	17,350'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate	Production	Liner
Lead Cement	C	C	H, H, C	H
Lead Cement Volume	623	1283	Stage 1: 235 sks Stage 2: 465 sks Stage 3: 532 sks	194
Tail Cement	C	C	H,H,C	H
Tail Cement Volume	931	1158	Stage 1: 656 sks Stage 2: 573 sks Stage 3: 449 sks	188
Cement Excess	25%	10%	10%	10%
TOC	Surface	Surface	Surface	11,700'
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	6.151"	4.767"
COD	7.875"	6.050"
Weight	26 lb/ft	17 lb/ft
Grade	P-110 TCPC	P-110 TCPC
Depth Set	0'-11,600'	11,600'- 17,300'

Tubing will be lined with Duoline.

4. Packer Description

7.625"x5.5" TCPC Permanent Packer with High Temp Elastomer and Full Inconel

B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman, Montoya (Top 100')
2. Gross Injection Interval: 17,350 – 18,451'

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	4,921'
Bone Spring	8,941'
Wolfcamp	12,111'

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: 2,600 PSI (surface pressure)
Maximum Injection Pressure: 3,470 PSI (surface pressure)

4. The injection fluid is to be locally produced water. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware and Bone Spring 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	1,112'
Salado	1,442'
Delaware	4,921'
Bone Spring	8,941'
Wolfcamp	12,111'
Penn	13,569'
Atoka	14,156'
Morrow	14,933'
Mississippian Lime	15,951'
Woodford	17,153'
Devonian	17,342'

B. Underground Sources of Drinking Water

The water wells have an average depth of 400 ft and with water depths ranging from 50' to 575' 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

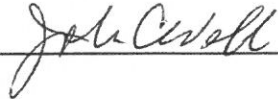
There are no fresh water wells within one mile of the well location.

XII. Affirmative Statement of Examination of Geologic and Engineering Data

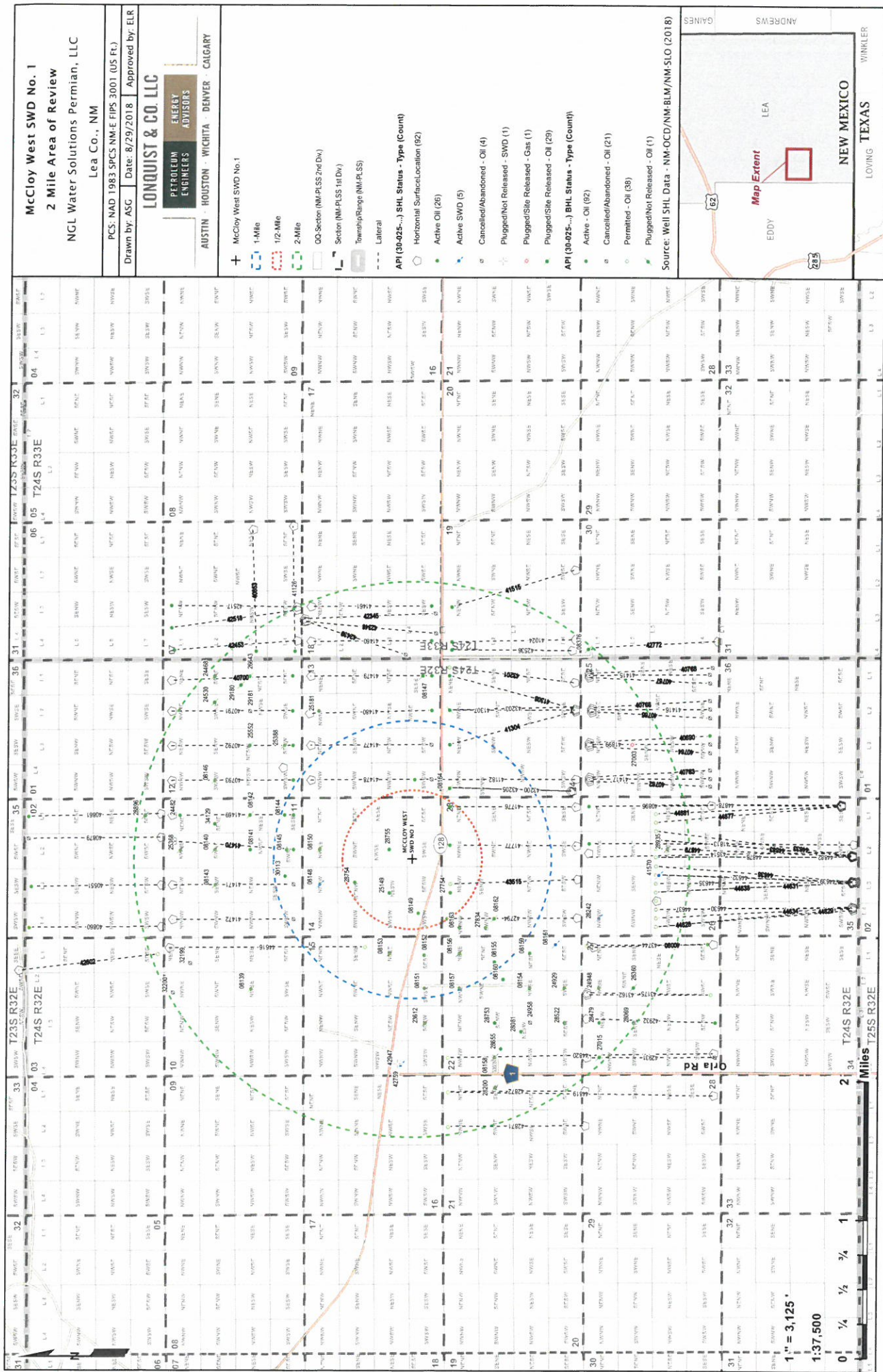
Based on the available engineering and geologic data we find no evidence of open faults or any other hydrologic connection between the disposal zone (in the proposed **McCloy West SWD #1**) and any underground sources of drinking water.

NAME: John C. Webb

TITLE: Sr. Geologist

SIGNATURE: 

DATE: 8/22/2018



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

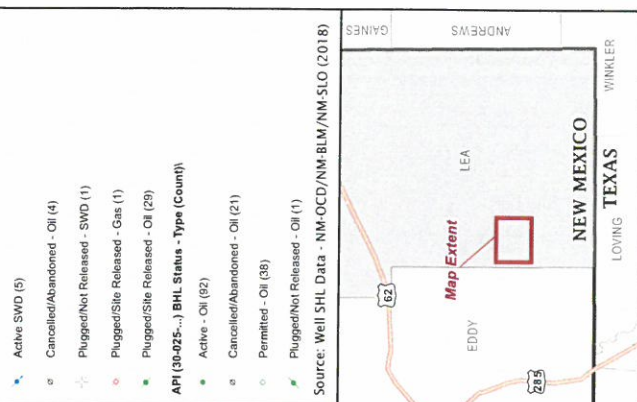
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: ASG Date: 8/29/2018 Approved by: ELR

LONGQUEST & CO. LLC
PETROLEUM
ENGINEERS
AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- McClay West SWD No. 1
- 1-Mile
 - 1/2-Mile
 - 2-Mile
- QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (NM-PLSS)

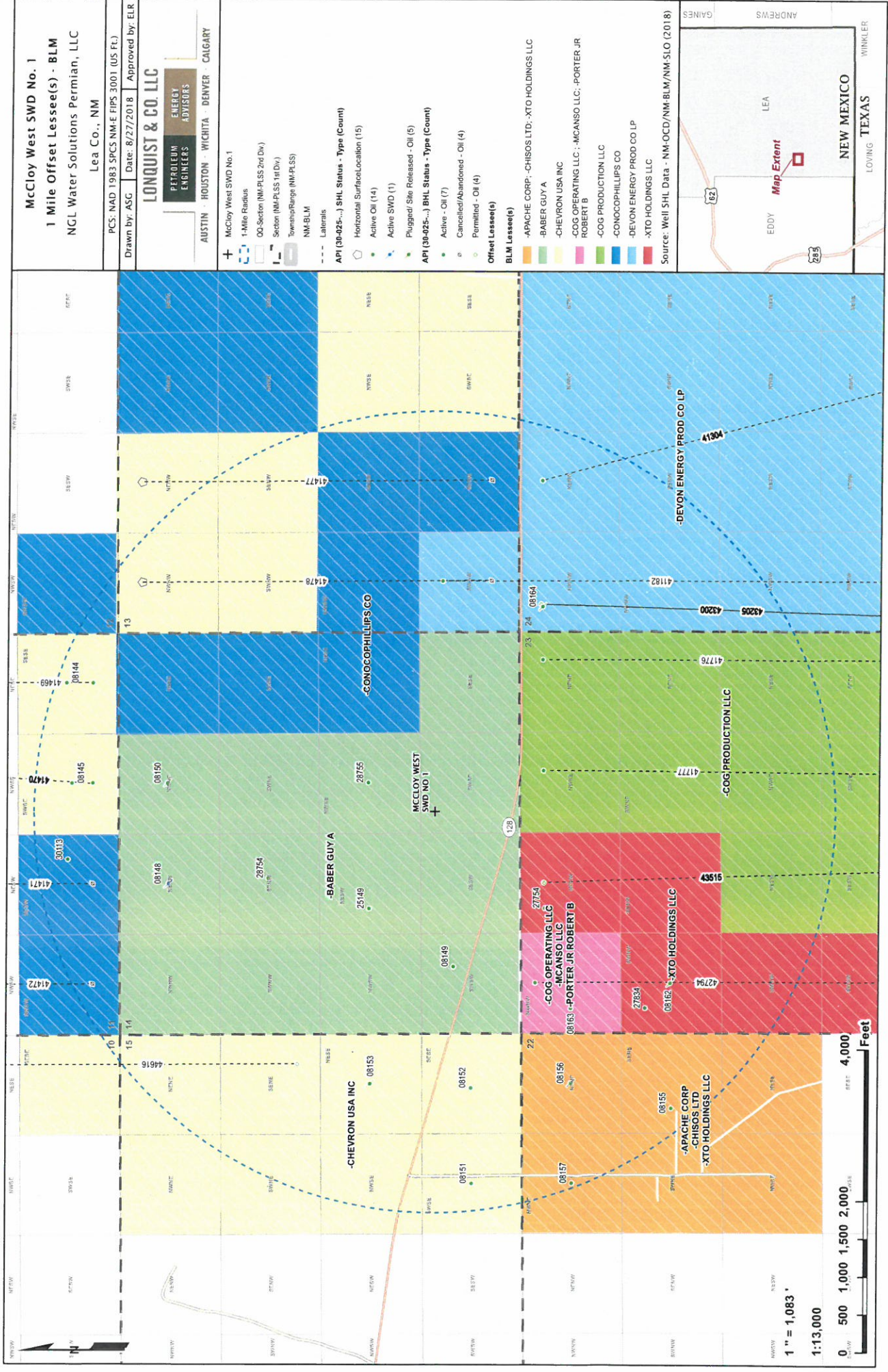
- API (30-025-...) SHL Status - Type (Count)
- Horizontal Surface/Location (92)
 - Active Oil (26)
 - Active SWD (5)
 - Cancelled/Abandoned - Oil (4)
 - Plugged/Not Released - SWD (1)
 - Plugged/Not Released - Gas (1)
 - Plugged/Not Released - Oil (29)
- API (30-025-...) SHL Status - Type (Count)
- Active - Oil (92)
 - Cancelled/Abandoned - Oil (21)
 - Permitted - Oil (38)
 - Plugged/Not Released - Oil (1)

Source: Well SHL Data - NM-OCO/NM-BLM/NM-SLO (2018)



1" = 3,125'
1:37,500

0 1/4 1/2 3/4 1 Miles



API (30-025-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
41777	TREASURE ISLAND FEDERAL #002H	O	A	COG PRODUCTION, LLC	10961	32.19637300000	-103.64295960000	6/30/2014
41776	TREASURE ISLAND FEDERAL #001H	O	A	COG PRODUCTION, LLC	10722	32.19639590000	-103.63814540000	8/9/2014
43205	BELL LAKE 24 FEDERAL #009H	O	N	DEVON ENERGY PRODUCTION COMPANY, LP	0	32.19679660000	-103.63622580000	12/31/9999
08144	GULF HANAGAN FEDERAL #001	O	A	MARKS AND GARNER PRODUCTION LTD CO	5065	32.22675700000	-103.63896940000	12/31/9999
08163	ERNEST FEDERAL #001	O	A	MARKS AND GARNER PRODUCTION LTD CO	4992	32.20852280000	-103.65292360000	12/31/9999
08156	BRADLEY FEDERAL #003	O	P	MARKS AND GARNER PRODUCTION LTD CO	4980	32.20851140000	-103.65612030000	12/31/9999
43200	BELL LAKE 24 FEDERAL #005H	O	N	DEVON ENERGY PRODUCTION COMPANY, LP	0	32.19693420000	-103.63622540000	12/31/9999
41304	BELL LAKE 24 FEDERAL #004H	O	A	DEVON ENERGY PRODUCTION COMPANY, LP	11056	32.19645690000	-103.62644960000	4/12/2014
41182	BELL LAKE 24 FEDERAL #001H	O	A	DEVON ENERGY PRODUCTION COMPANY, LP	10991	32.19643400000	-103.63478090000	9/8/2013
44616	MODELO 10 FEDERAL COM #528H	O	N	DEVON ENERGY PRODUCTION COMPANY, LP	0	32.23884350000	-103.65524770000	7/31/2018
27834	EXXON 23 FEDERAL #002	O	A	ROBERT H FORREST JR OIL LLC	5013	32.20580290000	-103.65292360000	12/31/9999
27754	EXXON 23 FEDERAL #001	O	A	ROBERT H FORREST JR OIL LLC	4985	32.20944980000	-103.64865110000	2/25/1982
30113	WIMBERLY #006	O	A	ROVER OPERATING, LLC	5075	32.22671890000	-103.64648440000	12/31/9999
08151	HANAGAN B FEDERAL #001	O	A	MCI OPERATING OF NM, LLC	4955	32.21212390000	-103.66038510000	12/31/9999
08157	U S SMELTING FEDERAL #001	O	A	MCI OPERATING OF NM, LLC	5014	32.20849610000	-103.66039280000	12/31/9999
25149	JENNINGS FEDERAL #004	O	A	MCI OPERATING OF NM, LLC	5000	32.21580120000	-103.64863590000	12/31/9999
08155	BRADLEY FEDERAL #002	O	A	MCI OPERATING OF NM, LLC	4976	32.20487980000	-103.65719600000	12/31/9999
08145	GULF HANAGAN FEDERAL #002	O	A	MCI OPERATING OF NM, LLC	5046	32.22657010000	-103.64324190000	5/1/1962
08148	JENNINGS FEDERAL #001	S	A	MCI OPERATING OF NM, LLC	5019	32.22308350000	-103.64755250000	12/31/9999
28755	JENNINGS FEDERAL #006	O	A	MCI OPERATING OF NM, LLC	4933	32.21582410000	-103.64326480000	12/31/9999
08149	JENNINGS FEDERAL #002	O	A	MCI OPERATING OF NM, LLC	5000	32.21277240000	-103.65113070000	12/31/9999
08152	HANAGAN B FEDERAL #002	O	A	MCI OPERATING OF NM, LLC	4990	32.21213910000	-103.65631100000	12/31/9999
28754	JENNINGS FEDERAL #005	O	A	MCI OPERATING OF NM, LLC	4950	32.21945570000	-103.64732360000	12/31/9999
42794	CHARRO FEDERAL COM #001H	O	A	COG OPERATING LLC	10972	32.19630200000	-103.65184500000	10/13/2015
08162	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	5020	32.20489880000	-103.65186310000	1/1/1900
08150	PRE-ONGARD WELL #003	O	P	PRE-ONGARD WELL OPERATOR	5030	32.22310640000	-103.64324950000	1/1/1900
08153	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	4970	32.21576690000	-103.65610500000	1/1/1900
08164	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	5080	32.20950700000	-103.63581090000	1/1/1900
41470	DOS EQUIS 11 FEDERAL COM #002H	O	A	CIMAREX ENERGY CO.	10893	32.23855590000	-103.64215850000	8/31/2014
41478	DOS EQUIS 13 FEDERAL COM #004H	O	C	CIMAREX ENERGY CO.	0	32.22404860000	-103.63470460000	12/31/9999
41469	DOS EQUIS 11 FEDERAL COM #001H	O	C	CIMAREX ENERGY CO.	10925	32.23857120000	-103.63895420000	2/16/2014
41472	DOS EQUIS 11 FEDERAL COM #004H	O	C	CIMAREX ENERGY CO.	0	32.23850630000	-103.65180210000	12/31/9999
41471	DOS EQUIS 11 FEDERAL COM #003H	O	C	CIMAREX ENERGY CO.	0	32.23852920000	-103.64753720000	12/31/9999
41477	DOS EQUIS 13 FEDERAL COM #003H	O	C	CIMAREX ENERGY CO.	0	32.22405620000	-103.63043980000	12/31/9999
43515	TREASURE ISLAND FEDERAL COM #003H	O	N	COG PRODUCTION, LLC	0	32.19625100000	-103.64710000000	12/31/9999

McClary West SWD #1 Offsetting Produced Water Analysis																		
wellname	api	section	township	range	county	state	formation	ph	tds_mgl	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl
BELL LAKE 19 STATE #001H	3002541024	19	24S	33E	Lea	NM	BONE SPRING 2ND SAND	6.77	134649.2	44572.9	6215	37.9	759.3	0.93	81681.6	244	765	200
BELL LAKE 19 STATE #002H	3002541515	19	24S	33E	Lea	NM	BONE SPRING 2ND SAND	7.01	128413.3	44272.6	4207	41.9	705.9	0.78	77482.5	366	910	300
BELL LAKE 19 STATE #003H	3002541516	19	24S	33E	Lea	NM	BONE SPRING 2ND SAND	6.57	138617.2	46646.4	5778	41.1	731.5	1.1	84081	244	710	300
BELL LAKE 19 STATE #004H	3002541517	19	24S	33E	Lea	NM	BONE SPRING 2ND SAND	6.68	133460.5	44483.1	5917	30.5	718.2	0.83	80981.7	244	675	300
BELL LAKE 24 FEDERAL #001H	3002541182	24	24S	32E	Lea	NM	BONE SPRING 2ND SAND	6.8	49221	49221	8660	63	113	1.9	95000	195	113	330
BELL LAKE 24 FEDERAL #002H	3002541306	24	24S	32E	Lea	NM	BONE SPRING 2ND SAND	6.8	48200	48200	7820	171	38	0.8	91000	1081	436	330
BELL LAKE 24 FEDERAL #004H	3002541304	24	24S	32E	Lea	NM	BONE SPRING 2ND SAND	6.7	44730	44730	12294	38	1595	1	95000	122	586	264
BELLOO 2 STATE #002H	3001542895	2	23S	31E	ESQD	NM	WOLF CAMP	6.8	119471.8	37359.2	5659.1	22.4	746.1		73172.5		1035.5	250
HANAGAN B FEDERAL #001	3002508151	15	24S	32E	Lea	NM	DELAWARE		229878						142200	168	491	
HANAGAN B FEDERAL #001	3002508151	15	24S	32E	Lea	NM	DELAWARE		229709						142100	168	491	
HANAGAN B FEDERAL #001	3002508151	15	24S	32E	Lea	NM	DELAWARE	7.1	229813	65198	18727		3040		142188	168	491	

 NGL McCloy West SWD #1 Vertical Injection - Devonian, Silurian, Fusselman									
Geologic Tops (MD ft)			Location - Eddy County NM		TD		17650'		Directions to Site -
Section			Problems	Bit/BHA	Mud	Casing	Logging	Cement (HOLD)	Injection String
Triassic - 182' Permian Dewey Lake - 582' Rustler Anhydrite - 1112' Surface TD - 1250' Top Salt - 1442' Castile - 3342' Base Salt - 4829' Delaware Mtn Group - 4921' ECP DV Tool - 4900' 1st Int TD - 4920'	Surface Drill 24" 0' - 1250' 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 MWK- 9.0	1250' of 20" 106.5# J55 BTC Centralizers - bottom 2 joints and every 3rd jt thereafter, Cement basket 5th jt from surface	No Logs	Thixotropic Cement 13.2 ppg Class C 3hr TT 25% Excess 1000psi CSD after 10hrs	11600' of 7" P110 26# TCPC
	1st Intermediate Drill 3670' of 17-1/2" Hole 1250' - 4920' 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 4920' 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 1250'	13.2 ppg Class C 4hr TT 10% Excess 1000psi CSD after 10 hrs Cement to Surface	
	2nd Intermediate Drill 7280' of 12-1/4" Hole 4920' - 12200' Set 9-5/8" Intermediate Casing and Cement in 3 Stages		Hard Drilling in the Brushy Canyon Seepage to Complete Loss Water Flows Some Anhydrite H2S possible Production in the Bone Spring and Wolfcamp 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	8.5 ppg OBM High Vis Sweeps UBD/MPD usig ADA	10M B Section 12200' of 9-5/8" 53.5# P110 BTC Special Drift to 8.535" Externally Coat 4000' Between DV Tools DV tool at at 8940' ECP DV Tool 15' Inside Previous Casing Centralizers - bottom jt, 100' aside of DV tool, every 3rd joint in open hole and 5 within the surface casing	MWD GR Triple combo + CBL of 13-3/8" Casing	Stage 3: 13.2 ppg Class C 5hr TT 10% XS 1000psi CSD after 10 hrs Cement to Surface Stage 2: 13.2 ppg Class H 5hr TT 10% XS 1000psi CSD after 10 hrs Cement to Surface Stage 1: 13.2 ppg Class H 6hr TT 10% XS 1000psi CSD after 10 hrs Cement to Surface	
Penn - 13569' Strawn - 13923' Atoka - 14156' Morrow - 14933' Miss Lst - 16781' Woodford - 17153' Perm Packer - 17300' 3rd Int TD - 17350' Devonian - 17342' Silurian - 17716' Fusselman - 17896' Montoya - 18351' TD - 18451'	3rd Intermediate Drill 5150' of 8-1/2" Hole 12200' - 17350' Set 7-5/8" Liner and Cement in Single Stage		High Pressure (up to 15ppg) and wellbore instability (fracturing) expected in the Wolfcamp Production in the Wolfcamp Atoka and Morrow 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	5650' of 7-5/8" 39# Q125 - DTL (F14) FJ (Gas Tight) VersaFlex Packer Hanger Centralizers on and 1 ft above shoe jt and then every 2nd jt.	MWD GR Triple combo, CBL of 9-5/8" Casing	15.6 ppg Class H 8hr TT 10% Excess 1000psi CSD after 10hrs	7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and full Inconel 925 trim
	Injection Interval Drill 1100' of 6-1/2" hole 17350' - 18451'		Chert is possible Loss of Circulation is expected H2S encountered on the Striker 3 well BHT estimated at 280F	6-1/2" PDC 4-3/4" MM 9 Jts: 4-3/4" DC 4-3/4" Drilling Jars 18 Jts: 4" FH HWDP 4" FH DP to Surface	Fresh Water - possible flows	Openhole completion	MWD GR	Displace with 3% KCl (or heavier brine if necessary)	

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

District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

¹ Operator Name and Address 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 MCCLOY WEST SWD	⁶ Well No. 1

⁷ Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
O	14	24S	32E	N/A	1019'	SOUTH	2388'	EAST	EDDY

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
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Additional Well Information

¹¹ Work Type N	¹² Well Type SWD	¹³ Cable/Rotary R	¹⁴ Lease Type Private	¹⁵ Ground Level Elevation
¹⁶ Multiple N	¹⁷ Proposed Depth 18,451'	¹⁸ Formation Siluro-Devonian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 32'		Distance from nearest fresh water well >1-mile		Distance to nearest surface water >1-mile

☐ 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	1,250'	1,554	Surface
Intermediate	17.5"	13.375"	68 lb/ft	4,920'	2,441	Surface
Production	12.25"	9.625"	53.5 lb/ft	12,200'	2,910	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	17,350'	382	11,700
Tubing	N/A	7"	26 lb/ft	0' – 11,600'	N/A	N/A
Tubing	N/A	5.5"	17 lb/ft	11,600' – 17,300'	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: 9/6/2018

Phone: (512) 600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

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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-10
Revised August 1
201

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 MCCLOY WEST SWD	⁶ Well Number 1
⁷ OGRID No. 372338	⁸ Operator Name NGL Water Solutions Permian, LLC	⁹ Elevation 3578.00"±

¹⁰ Surface Location

UL or lot no. O	Section 14	Township 24 S	Range 32 E	Lot Idn N/A	Feet from the 1019'	North/South line SOUTH	Feet from the 2388'	East/West line EAST	County Lea
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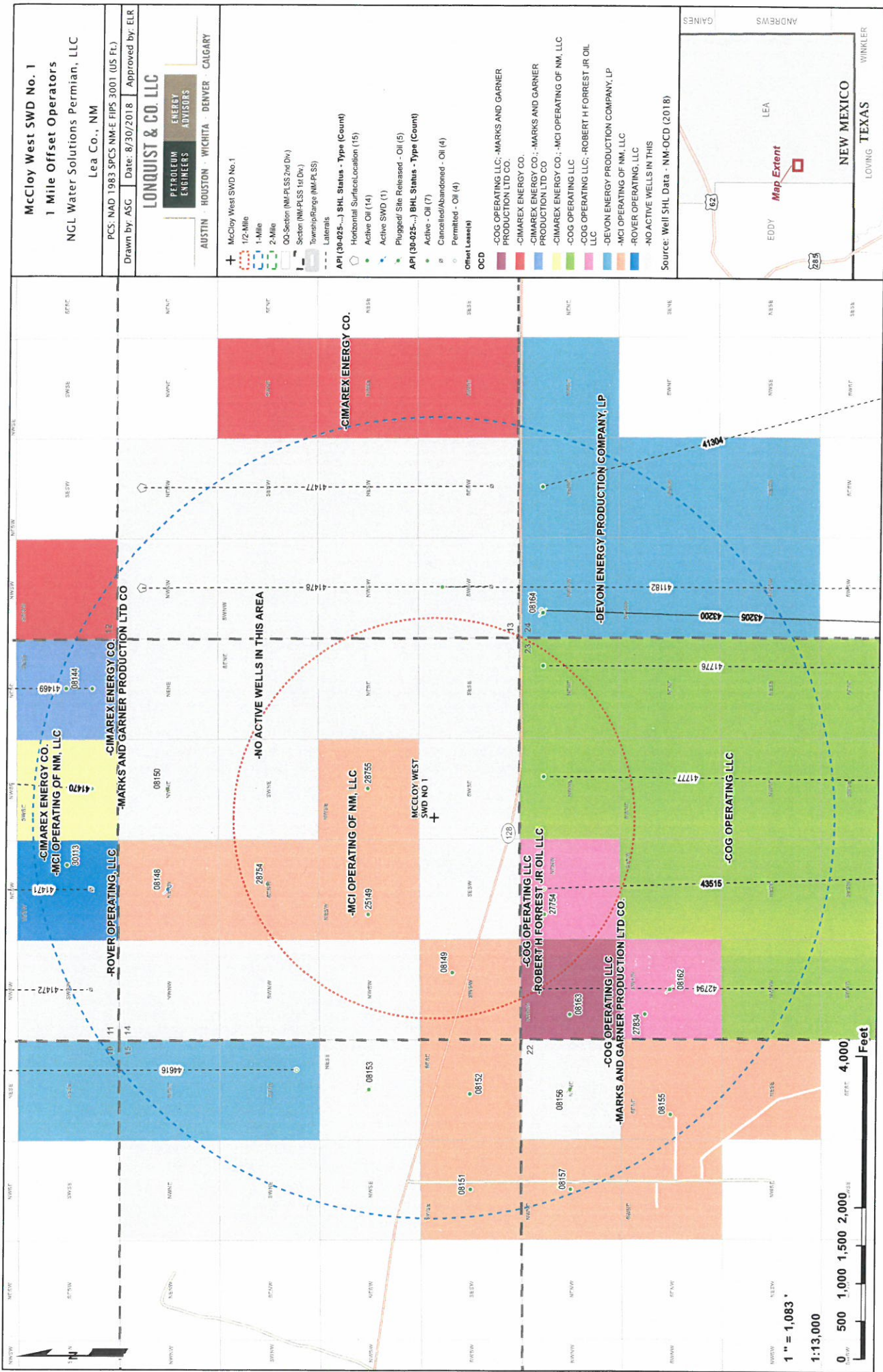
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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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 14		¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete the best of my knowledge and belief, and that this organization either owns 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 _____ Date _____ Printed Name _____ 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> 8/17/18 Date of Survey Signature and Seal of Professional Surveyor
		PROPOSED MCCLOY WEST SWD 1 NMSP-E (NAD27) N: 442,004.00' E: 713,174.84' NMSP-E (NAD83) N: 442,062.70' E: 754,359.23' Lot: N32°12'48.35" Long: W103°38'40.37"
		295' 1019' 2388' Cody A. Clark NEW MEXICO 23001 23001 Certificate Number



McClay West



Zina Crum
Modrall Sperling
500 4th Street NW
Suite 1000
Albuquerque NM 87102

PS Form 3877
Type of Mailing: CERTIFIED
09/18/2018



Firm Mailing Book ID: 151687

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
1	9314 8699 0430 0050 9136 82	BABER GUY A PO BOX 1772 Hobbs NM 88240	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
2	9314 8699 0430 0050 9136 99	BUREAU OF LAND MGMT 301 Dinosaur Trail Santa Fe Santa Fe NM 87508	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
3	9314 8699 0430 0050 9137 05	CHEVRON USA INC 6301 DEAVILLE Midland TX 79706	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
4	9314 8699 0430 0050 9137 12	CIMAREX ENERGY CO. OF COLORADO 1700 LINCOLN ST STE 1800 Denver CO 80203	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
5	9314 8699 0430 0050 9137 29	COG PRODUCTION LLC 600 W. ILLINOIS AVENUE Midland TX 79701	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
6	9314 8699 0430 0050 9137 36	CONOCOPHILLIPS CO PO BOX 7500 Bartlesville OK 74005	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
7	9314 8699 0430 0050 9137 43	DEVON ENERGY PRODUCTION COMPANY, LP 20 N Broadway Oklahoma City OK 73102	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
8	9314 8699 0430 0050 9137 50	DEVON ENERGY PRODUCTION COMPANY, LP 1700 LINCOLN ST STE 1800 Denver CO 80203	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
9	9314 8699 0430 0050 9137 67	EOG Y RESOURCES 104 S. FOURTH STREET Denver CO 80203	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
10	9314 8699 0430 0050 9137 74	NEW MEXICO STATE LAND OFFICE P.O. Box 1148 Santa Fe NM 87504	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
11	9314 8699 0430 0050 9137 81	NGL WATER SOLUTIONS PERMIAN, LLC 1509 W Wall St., Ste. 306 Midland TX 79701	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
12	9314 8699 0430 0050 9137 98	Oil Conservation Division District I - Hobbs 1625 N. French Drive Hobbs NM 88240	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
13	9314 8699 0430 0050 9138 04	Oil Conservation Division District IV 1220 South St. Francis Drive Santa Fe NM 87505	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
14	9314 8699 0430 0050 9138 11	OXY USA INC P.O. BOX 4294 HOUSTON TX 77210	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice
15	9314 8699 0430 0050 9138 28	ROVER OPERATING, LLC 55 Old Sante Fe Trail, Second Floor Santa Fe NM 87501	\$1.42	\$3.45	\$1.50	87806-0003	\$0.00 Notice

Zina Crum
 Modrall Sperling
 500 4th Street NW
 Suite 1000
 Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED
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Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
Totals:			\$21.30	\$51.75	\$22.50		\$0.00
						Grand Total:	\$95.55

List Number of Pieces
 Listed by Sender

Total Number of Pieces
 Received at Post Office

Postmaster:
 Name of receiving employee

Dated: