



MODRALL SPERLING

L A W Y E R S

August 24, 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:

Case 16439

Enclosed please find three copies of the following:

1. NGL Water Solutions Permian, LLC's Application – McCloy
Central No. _____.

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

**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. 16439

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 Central SWD No. 1 well at a surface location 762 feet from the North line and 383 feet from East line of Section 24, 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 17,424' – 18,533'.

(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 1,900 psi for this well, and it requests that a maximum pressure of 2,750 psi be approved for the well.

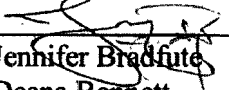
(5) A C-108 for the subject well is attached hereto in Attachments A.

(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. 16439 : 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 Central SWD No. 1 well. NGL proposes to drill the McCloy Central SWD No. 1 well at a surface location 762 feet from the North line and 383 feet from East line of Section 24, 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 17,424' – 18,533'. 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 3 miles east of Loving, New Mexico.

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- 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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]
 [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
- [D] Other: Specify _____
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply
 [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☒ Offset Operators, Leaseholders or Surface Owner
- [C] ☒ Application is One Which Requires Published Legal Notice
- [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or.
- [F] ☐ Waivers are Attached

- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **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.

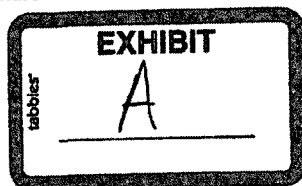
Chris Weyand
 Print or Type Name

Signature

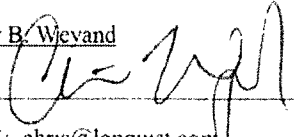
Consulting Engineer
 Title

Date

chris@lonquist.com
 e-mail Address



APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: 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. Wevand TITLE: Consulting Engineer
SIGNATURE:  DATE: 8/20/2018
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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: NGL WATER SOLUTIONS PERMIAN, LLC

WELL NAME & NUMBER: MCCLOY CENTRAL SWD #1

WELL LOCATION (surface hole): <u>762' FNL & 383' FEL</u>	<u>A</u>	<u>24</u>	<u>24S</u>	<u>32E</u>
FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELL LOCATION (bottom hole): <u>762' FNL & 256' FEL</u>	<u>A</u>	<u>24</u>	<u>24S</u>	<u>32E</u>
FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 24.000"

Casing Size: 20.000"

Cemented with: 1,555 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

1st Intermediate Casing

Hole Size: 17.500"

Casing Size: 13.375"

Cemented with: 2,465 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

2nd Intermediate Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with: 2,909 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 391 sx.

or _____ ft³

Top of Cement: 11,800'

Method Determined: Calculation

Total Depth: 17,424'

Injection Interval

17,424 feet to 18,533 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'- 17,380'

Lining Material: Duoline

Type of Packer: 7.625"x5.5" TCPC Permanent Packer with High Temp Elastomer and Full Inconcl

Packer Setting Depth: 17,380'

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:

Bone Spring: 9,023'

Wolfcamp: 12,193'

Strawn: 14,005'



NGL McCloy Central SWD #1

Location -

TD: 18,533

Directions to Site - Lat/Long - 32.208497506001, -103.620315651

Vertical Injection - Devonian, Silurian, Fusselman

Lea County NM

GL / KB: 3595' / 3623'

Geologic Tops (MD ft)	Section	Bit/BHA	Casing	Logging	Cement (HOLD)	Injection String
Triassic - 182' Permian Dewey Lake - 602 Rustler Anhydrite - 1147 Surface TD - 1250'	Surface Drill 24" 0' - 1250 Set and Cement 20" Casing	24" Tricone 9-5/8" x 8" MM 9 jts. 8" DC 21 jts. 5" HWDP 5" DP to surface	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 - 1,555 sks 3hr TT 25% Excess 1000psi CSD after 10hrs	11700' of 7" P110 26# TCPC 5680' of 5-1/2" P110 17# TCPC Duoline Internally Coated Injection Tubing
Base of Silicates 1482 Top Salt - 1,482' Castile - 3412' Base Salt - 4911 ECP DV Tool - 4900' 1st Int TD - 4950	1st Intermediate Drill 3700' of 17-1/2" Hole 1250' - 4950' Set and Cement 13-3/8" Casing	17-1/2" PDC 9-5/8" x 8" MM 9 jts: 8" DC 21 jts: 5" HWDP 5" DP to surface	5M A Section Casing Bowl 4950' 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 - 2,465 sks 4hr TT 10% Excess 1000psi CSD after 10 hrs Cement to Surface	
Delaware Mtn Group - 5003 Lamar Limestone - 5005 Bell Canyon - 5043 Cherry Canyon - 6073 Brushy Canyon - 7803 DV Tool - 8940' Bone Spring - 9023 3rd Int Liner Top - 11,800 Wolfcamp - 12193 2nd Int TD - 12,300	2nd Intermediate Drill 7350' of 12-1/4" Hole 4950' - 12300' Set 9-5/8" Intermediate Casing and Cement in 3 Stages	12-1/4" PDC 8" MM 9jts: 8" DC 8" Drilling Jars 21 jts: 5" HWDP 5" DP to Surface	10M B Section 12300' 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 - 981 sks 5hr TT 10% XS 1000psi CSD after 10 hrs Cement to Surface Stage 2: 13.2 ppg Class H - 1,038 sks 5hr TT 10% XS 1000psi CSD after 10 hrs Cement to Surface Stage 1: 13.2 ppg Class H - 891 sks 6hr TT 10% XS 1000psi CSD after 10 hrs Cement to Surface	
Penn - 13651 Strawn - 14005 Atoka - 14238 Morrow - 15015 Miss Lst - 16863 Woodford - 17235 Perm Packer - 17380 3rd Int TD - 17424'	3rd Intermediate Drill 5124' of 8-1/2" Hole 12300' - 17424' Set 7-5/8" Liner and Cement in Single Stage	8-1/2" PDC 6-3/4" MM 9 jts: 6" DC 21 jts: 5" HWDP 5" DP to Surface	5624' of 7-5/8" 39# Q125 - DTL (FJ4) FJ (Gas Tight) VersaFlex Packer Hanger Centralizers on and 1 jt above shoe jt and then every 2nd jt.	MWD GR Triple combo, CBL of 9-5/8" Casing	15.6 ppg Class H - 391 sks 8hr TT 10% Excess 1000psi CSD after 10hrs	
Devonian - 17,424 Silurian - 17798 Fusselman - 17978 Montoya - 18,433' TD - 18533	Injection Interval Drill 1009' of 6-1/2" hole 17424' - 18533'	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	Openhole completion	MWD GR 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" TCPC Permanent Packer with High Temp Elastomer and full Inconel 925 trim

NGL Water Solutions Permian, LLC - McCloy Central SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	McCloy Central SWD
Well No.	1
Location	S-24 T-24S R-32E
Footage Location (SHL)	762' FNL & 383' FEL
Footage Location (SHL)	762' FNL & 256' FEL

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	19.000"	12.415"	8.535"	6.625"
Drift ID	18.812"	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'	4,950'	12,300'	17,424'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate	Production	Liner
Lead Cement	C	C	H, H, C	H
Lead Cement Volume	623	1,283	Stage 1: 235 sks Stage 2: 465 sks Stage 3: 532 sk	194
Tail Cement	C	C	H,H,C	H
Tail Cement Volume	931	1,182	Stage 1: 656 sks Stage 2: 573 sks Stage 3: 449 sks	197
Cement Excess	25%	10%	10%	10%
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'	11,700-17,380

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

B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman, Montoya (Top 100')
2. Gross Injection Interval: 17,424' – 18,533'

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
Bone Spring	9,023'
Wolfcamp	12,193'

VI. Area of Review

No wells within the area of review (1-mile) 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: 2,614 PSI (surface pressure)
Maximum Injection Pressure: 3,484 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 Bone Spring and Wolfcamp 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	1,147'
Salado	1,482'
Delaware	5,003'
Bone Spring	9,023'
Wolfcamp	12,193'
Penn	13,651'
Atoka	14,238'
Morrow	15,015'
Mississippian Lime	16,863'
Woodford	17,235'
Devonian	17,424'

B. Underground Sources of Drinking Water

There are no fresh water wells within one mile of the well location. Water wells in the surrounding area have an average depth of 410 ft and an average water depth of 246 ft. This is not a know fresh water aquifer, but rather represents a sporadic alluvial source.

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

NAME: John C. Webb

TITLE: Sr. Geologist

SIGNATURE: _____

A handwritten signature in black ink, appearing to read "John C. Webb", written over a horizontal line.

DATE: _____

8/22/2018

District I1625 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) 334-6176 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 CENTRAL 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
A	24	24S	32E	N/A	762'	NORTH	383'	EAST	LEA

⁸ Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
A	24	24S	32E	N/A	762'	NORTH	256'	EAST	EDDY

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 3,565'
¹⁶ Multiple N	¹⁷ Proposed Depth 17,809'	¹⁸ Formation Siluro-Devonian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 374'		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'	1.555	Surface
Intermediate	17.5"	13.375"	68 lb/ft	4,950'	2.465	Surface
Production	12.25"	9.625"	53.5 lb/ft	12,300'	2.909	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	17,424'	391	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' - 17,380'	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, 8/20/2018

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

District II
811 S. First St. Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 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 96101	³ Pool Name SWD, Silurian-Devonian
⁴ Property Code	⁵ Property Name McCLOY CENTRAL SWD	⁶ Well Number 1
⁷ OGRID No. 372338	⁸ Operator Name NGL WATER SOLUTIONS PERMIAN, LLC	⁹ Elevation 3565.00'±

¹⁰ Surface Location

U.L. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	24	24 S	32 E	N/A	762'	NORTH	383'	EAST	LEA

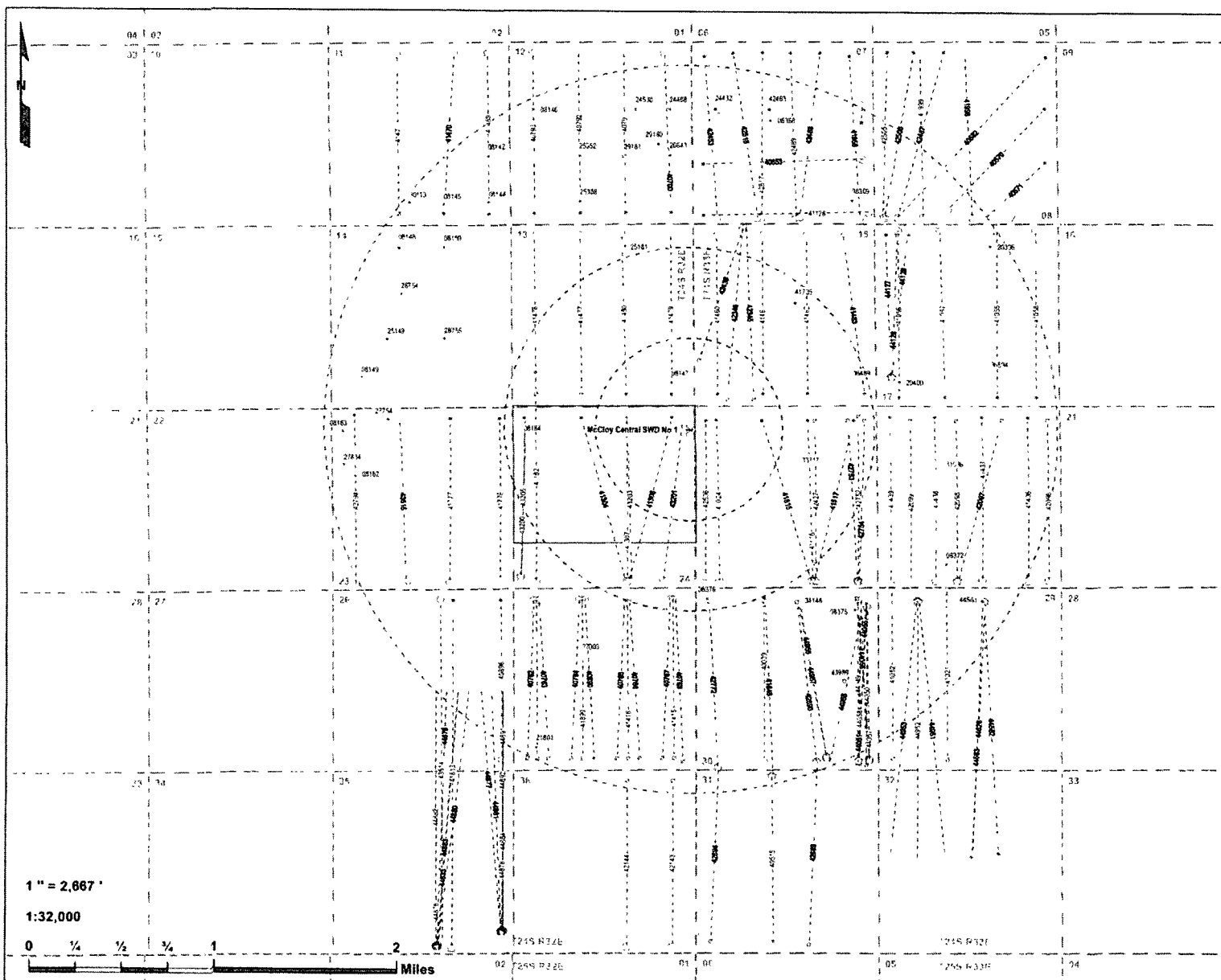
¹¹ Bottom Hole Location If Different From Surface

U.L. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	24	24 S	32 E	N/A	762'	NORTH	256'	EAST	LEA

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.

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>
PROPOSED McCLOY CENTRAL SWD 1 NMSP-E (NAD27) N: 440,280.0' E: 720,592.5' NMSP-E (NAD83) N: 440,338.7' E: 761,777.0' Lot: N32°12'30.81" Long: W103°37'14.16"	PROPOSED McCLOY CENTRAL BHL SWD 1 NMSP-E (NAD27) N: 440,280.02' E: 720,719.52' NMSP-E (NAD83) N: 440,338.70' E: 761,904.00' Lot: N32°12'30.80" Long: W103°37'12.68"	Signature _____ Date _____ Chris Weyand Printed Name chris@lonquist.com E-mail Address
SECTION 24		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> 08/18/2018 Date of Survey Signature and Seal of Professional Surveyor
		Certificate Number 23001



McCloy Central 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: 8/20/2018 Approved by: ELR

LONQUIST & CO. LLC



AUSTIN HOUSTON WICHITA DENVER CALGARY

- McCloy Central SWD No. 1 SHL
- McCloy SWD No. 1 BHL
- McCloy Central SWD No. 1 Property Boundary
- 1/2 Mile
- 1 Mile
- 2 Mile
- QD Section (NM PLSS 2nd Div.)
- Section (NM PLSS 1st Div.)
- Township/Range (NM PLSS)
- Latent

API (30-025) - SHL Status-Type (Count)

Horizontal Surface Location (179)

Active - Gas (1)

Active - Oil (1)

Active - SWD (4)

Canceled - Oil (1)

Permitted - Miscellaneous (1)

Permitted - Oil (1)

Plugged/Sealed Released Gas (3)

Plugged/Sealed Released Oil (20)

API (30-025) - BHL Status-Type (Count)

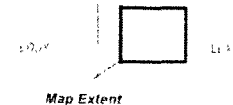
Active - Oil (57)

Canceled/Abandoned - Oil (37)

Permitted - Oil (13)

Plugged/Sealed Released - Oil (1)

Source: Well SHL Data - NM OCD (2018)

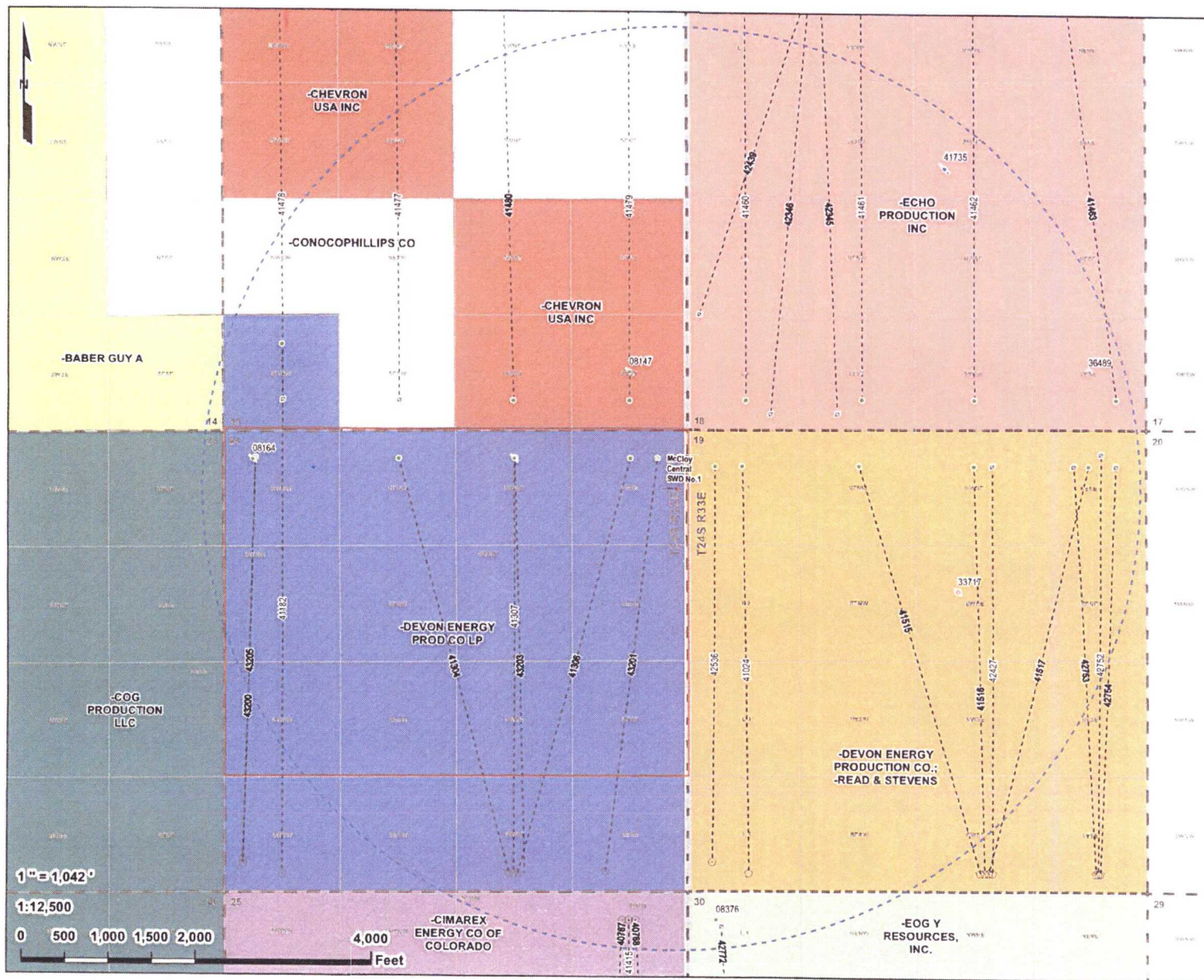


NEW MEXICO

TEXAS

McCloy Central 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
08147	PRE-ONGARD WELL #001	Oil	Plugged	PRE-ONGARD WELL OPERATOR	5063	32 2122650	-103 6219711	1/1/1900
08164	PRE-ONGARD WELL #001	Oil	Plugged	PRE-ONGARD WELL OPERATOR	5080	32 2095070	-103 6358109	1/1/1900
08376	PRE-ONGARD WELL #001	Oil	Plugged	PRE-ONGARD WELL OPERATOR	5108	32 1950150	-103 6188202	1/1/1900
33717	STATE 19 #001	Gas	Plugged	DEVON ENERGY PRODUCTION COMPANY, LP	15966	32 2053223	-103 6099014	1/31/1997
36489	COPPERHEAD 18 STATE #001	Gas	Active	OXY USA INC	14627	32 2122612	-103 6050262	1/1/2004
40767	DOUBLE X 25 FEDERAL #007C	Oil	Cancelled/Abandoned	CIMAREX ENERGY CO.	0	32 1950111	-103 6222610	12/31/9999
40768	DOUBLE X 25 FEDERAL #008C	Oil	Cancelled/Abandoned	CIMAREX ENERGY CO.	0	32 1950111	-103 6217804	12/31/9999
41024	BELL LAKE 19 STATE #001H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	11054	32 1964722	-103 6176224	5/12/2013
41182	BELL LAKE 24 FEDERAL #001H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	10991	32 1964340	-103 6347809	9/8/2013
41304	BELL LAKE 24 FEDERAL #004H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	11056	32 1964569	-103 6264496	4/12/2014
41306	BELL LAKE 24 FEDERAL #002H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	11082	32 1964569	-103 6261215	2/12/2014
41307	BELL LAKE 24 FEDERAL #003H	Oil	Plugged/Site Released	DEVON ENERGY PRODUCTION COMPANY, LP	11064	32 1964569	-103 6262817	3/15/2014
41415	DOUBLE X 25 FEDERAL #012C	Oil	Cancelled/Abandoned	CIMAREX ENERGY CO	0	32 1950111	-103 6220245	12/31/9999
41460	COPPERHEAD 18 STATE #002H	Oil	Active	OXY USA INC	11060	32 2240486	-103 6176758	41676
41461	COPPERHEAD 18 STATE #003H	Oil	Active	OXY USA INC	11076	32 2240448	-103 6134033	3/18/2014
41462	COPPERHEAD 18 STATE #004H	Oil	Active	OXY USA INC	10980	32 2240410	-103 6092911	4/16/2014
41463	COPPERHEAD 18 STATE #005H	Oil	Active	OXY USA INC	11109	32 2239838	-103 6058502	6/11/2014
41477	DOS EQUIS 13 FEDERAL COM #003H	Oil	Cancelled/Abandoned	CIMAREX ENERGY CO	0	32 2240562	-103 6304398	12/31/9999
41478	DOS EQUIS 13 FEDERAL COM #004H	Oil	Cancelled/Abandoned	CIMAREX ENERGY CO	0	32 2240486	-103 6347046	12/31/9999
41479	DOS EQUIS 13 FEDERAL COM #001H	Oil	Active	CIMAREX ENERGY CO	10988	32 2240753	-103 6219406	3/14/2014
41480	DOS EQUIS 13 FEDERAL COM #002H	Oil	Active	CIMAREX ENERGY CO	10937	32 2242012	-103 6265335	10/9/2014
41515	BELL LAKE 19 STATE #002H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	11105	32 1964722	-103 6091080	7/10/2014
41516	BELL LAKE 19 STATE #003H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	11114	32 1964722	-103 6089478	6/13/2014
41517	BELL LAKE 19 STATE #004H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	11088	32 1964722	-103 6087875	5/11/2014
41735	COPPERHEAD 18 STATE SWD #001	SWD	Active	OXY USA INC	6800	32 2186279	-103 6103592	6/13/2014
42345	COPPERHEAD 18 CN STATE #001C	Oil	Cancelled/Abandoned	OXY USA INC	0	32 2247391	-103 6148897	12/31/9999
42346	COPPERHEAD 18 DM STATE #002C	Oil	Cancelled/Abandoned	OXY USA INC	0	32 2247393	-103 6152131	12/31/9999
42427	BELL LAKE 19 STATE #005C	Oil	Cancelled/Abandoned	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1964634	-103 6086541	12/31/9999
42439	COPPERHEAD 18 DM CN STATE #001C	Oil	Cancelled/Abandoned	OXY USA INC	0	32 2245330	-103 6152076	12/31/9999
42536	BELL LAKE 19 STATE #006H	Oil	Active	DEVON ENERGY PRODUCTION COMPANY, LP	9716	32 1968232	-103 6189568	5/23/2015
42752	BELL LAKE 19 STATE #011C	Oil	Cancelled/Abandoned	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1964680	-103 6047188	12/31/9999
42753	BELL LAKE 19 STATE #009C	Oil	Cancelled/Abandoned	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1964680	-103 6047998	12/31/9999
42754	BELL LAKE 19 STATE #007C	Oil	Cancelled/Abandoned	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1964680	-103 6046380	12/31/9999
42772	MAMBA BON STATE COM #005C	Oil	Cancelled/Abandoned	EOG Y RESOURCES, INC	0	32 1815690	-103 6178720	12/31/9999
43200	BELL LAKE 24 FEDERAL #005H	Oil	Permitted	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1969342	-103 6362254	12/31/9999
43201	BELL LAKE 24 FEDERAL #006H	Oil	Permitted	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1965410	-103 6228970	12/31/9999
43205	BELL LAKE 24 FEDERAL #009H	Oil	Permitted	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1967966	-103 6362258	12/31/9999
43203	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Permitted	DEVON ENERGY PRODUCTION COMPANY, LP	0	32 1813820	-103 4039750	12/31/9999



McCloy SWD No. 1 Offset Leases

NGL Water Solutions Permian, LLC
Lea Co., NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)

Drawn by: ASG Date: 8/20/2018 Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS ENERGY ADVISORS

AUSTIN HOUSTON WICHITA DENVER CALGARY

- McCloy Central SWD No. 1 SHL
 - McCloy SWD No. 1 BHL
 - McCloy Central SWD No. 1 Property Boundary
 - 1 Mile
 - SLO
 - BLM
 - OO Section (NM PLSS 2nd Div.)
 - Section (NM PLSS 1st Div.)
 - Township Range (NM PLSS)
 - Lateral

API (30-025-...) SHL Status-Type (Count)
 - Horizontal Surface Location (31)
 - Active - Gas (1)
 - Active - SWD (1)
 - Plugged/Site Released Gas (1)
 - Plugged/Site Released Oil (3)

API (30-025-...) BHL Status-Type (Count)
 - Active - Oil (14)
 - Cancelled/Abandoned - Oil (13)
 - Permitted - Oil (4)
 - Plugged/Site Released - Oil (1)

McCloy Lessee
 Lessee(s)
 - BABER GUY A
 - CHEVRON USA INC
 - CIMAREX ENERGY CO OF COLORADO
 - COG PRODUCTION LLC
 - CONOCOPHILLIPS CO
 - DEVON ENERGY PROD CO LP
 - DEVON ENERGY PRODUCTION CO., READ & STEVENS
 - ECHO PRODUCTION INC
 - EOG Y RESOURCES, INC.

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

EDDY LEA
 Map Extent

NEW MEXICO
 TEXAS
 LOVING

McCloy Central SWD #1 Offsetting Produced Water Analysis																		
wellname	api	section	township	range	county	state	formation	ph	tds mg/L	sodium mg/L	calcium mg/L	iron mg/L	magnesium mg/L	manganese mg/L	chloride mg/L	bicarbonate mg/L	sulfate mg/L	co2 mg/L
BELL LAKE 19 STATE #001H	3002141024	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	44427.6	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	6.67	138617.2	46048.4	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	3002541187	24	24S	32E	Lea	NM	BONE SPRING 2ND SAND	6.8		49221	8660	63	1324	1.9	95000	195	111	430
BELL LAKE 24 FEDERAL #002H	3002541306	24	24S	32E	Lea	NM	BONE SPRING 2ND SAND	6.8		48200	7820	38	1081	0.8	91000	171	436	330
BELL LAKE 24 FEDERAL #004H	3002541304	24	24S	32E	Lea	NM	BONE SPRING 2ND SAND	6.7		44730	12294	38	1595	1	95000	122	586	744
BELLOC 2 STATE #002H	3001542895	2	21S	31E	LOU	NM	WOLF CAMP	6.8	119473.8	37359.2	5659.1	22.4	746.1		73172.5		1035.5	250