MODRALL SPERLING

LAWYERS

August 24, 2018

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

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

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

Case 16443

Dear Ms. Davidson:

Enclosed please find three copies of the following:

1. NGL Water Solutions Permian, LLC's Application – Sidewinder 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. 16443

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 Sidewinder SWD #1 well at a surface location 244 feet from the South line and 1581 feet from East line of Section 10, Township 25 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 Devonian and Silurian formations at a depth of 17,157' – 19,067'.

(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 2,573 psi for this well, and it requests that a maximum pressure of 3,431 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. 16443 : 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 Sidewinder SWD #1 well. NGL proposes to drill this well at a surface location 244 feet from the South line and 1581 feet from East line of Section 10, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico. The target injection interval is the Devonian and Silurian formations at a depth of 17,157' – 19,067'. 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 22 miles west of Jal, New Mexico.

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO

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

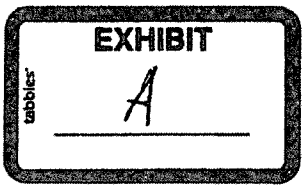
[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[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		Consulting Engineer	
Print or Type Name	Signature	Title	Date

chris@lonquist.com
e-mail Address



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

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: 8/21/2018

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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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: SIDEWINDER SWD #1

WELL LOCATION: 244' FSL & 1,581' FEL | O | 10 | 25S | 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: 1,218 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulation

1st Intermediate Casing

Hole Size: 17.500" Casing Size: 13.375"

Cemented with: 2,600 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulation

2nd Intermediate Casing

Hole Size: 12.250" Casing Size: 9.625"

Cemented with: 2,801 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 364 sx.

or _____ ft^3

Top of Cement: 11,900'

Method Determined: Calculation

Total Depth: 19,067

Injection Interval

17,157 feet to 19,067 feet

(Open Hole)

Side 2

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'- 17,107'
Lining Material: Duoline

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

Packer Setting Depth: 17,107'

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: 5,295'
   Bone Spring: 9,242'
   Wolfcamp: 12,288'
   Atoka: 14,017'
   Morrow: 14,974'

NGL Sidewinder SWD #1
Lea County NM
Vertical Injection - Devonian, Silurian, Fusselman

AFE Number - tbd
Est. Drilling Days - 70

Estimated Drilling Cost - $9.23MM

TD - 19,067'
GL/KB - 3593'/3617'

Directions to Site - Lat/Long 32.132843784/-103.453331886. 23.2 miles west of Jal NM on Hwy 128

Geologic Tops (MD ft)	Section	Problems	Bit/BHA	Mud	Casing	Logging	Cement (HOLD)	Injection String
Triassic - 193 Rustler Anhydrite - 848 **Surface TD - 900**	**Surface** Drill 24" 0' - 920' 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	920' 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	11800' of 7" P110 26# TCPC 5307' of 5-1/2" P110 17# TCPC Duoline Internally Coated Injection Tubing 7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and full Inconel 925 trim
Top Salt - 973 Base of Silicates 1,313' Castile - 2816 Base Salt - 5023 **ECP DV Tool - 5150** **1st Int TD - 5200**	**1st Intermediate** Drill 4300' of 17-1/2" Hole 900' - 5200' Set and Cement 13-3/8" Casing	Seepage Losses Possible H2S Anhydrite Salt Sections	17-1/2" PDC 9-5/8" x 8" MM 9 jts: 8" DC 21 jts: 5" HWDP 5 " DP to surface	8.5 ppg OBM High Vis Sweeps UBD/MPD usig ADA	5M A Section Casing Bowl 5200' 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	
Delaware Mtn Group - 5295 Lamar Limestone - 5298 Bell Canyon - 5334 Cherry Canyon - 6367 Brushy Canyon - 8102 **DV Tool - 9000** Bone Spring - 9242 **3rd Int Liner Top - 11,900** Wolfcamp - 12288 **2nd Int TD - 12,400**	**2nd Intermediate** Drill 7200' of 12-1/4" Hole 5200' - 12400' 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 9jts: 8" DC 8" Drilling Jars 21 jts: 5" HWDP 5" DP to Surface		10M B Section 124000' of 9-5/8" 53.5# P110 BTC **Special Drift to 8.535"** Externally Coat 4000' Between DV Tools DV tool at at 9000' 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 - 13292 Strawn - 13820 Atoka - 14017 Morrow - 14974 Miss Lst - 15022 Woodford - 16980 **Perm Packer - 17107** **3rd Int TD - 17,157**	**3rd Intermediate** Drill 4757' of 8-1/2" Hole 12400' - 17157' Set 7-5/8" Liner and Cement in Single Stage	High Pressure (up to 15ppg) and wellbore instability (fracturing) expected in the Atoka 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	5257' 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 8hr TT 10% Excess 1000psi CSD after 10hrs	
Devonian - 17,157 Silurian - 18116 Fusselman - 18217 Montoya - 18,967' TD - 19,067'	**Injection Interval** Drill 191' of 6-1/2" hole 16,157 to 19,067'	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 Triple Combo with FMI, CBL of 7-5/8"	Displace with 3% KCl (or heavier brine if necessary)	

NGL Water Solutions Permian, LLC

Sidewinder SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Sidewinder SWD
Well No.	1
Location	S-10 T-25S R-34E
Footage Location	244' FSL & 1,581' 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	18.812"	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	920'	5,200'	12,400'	17,157'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate	Production	Liner
Lead Cement	C	C	H,H,C	H
Lead Cement Volume	416	1,274	Stage 1: 443 sks Stage 2: 521 sks Stage 3: 709 sks	188
Tail Cement	C	C	H,H,C	H
Tail Cement Volume	803	1,327	Stage 1: 414 sks Stage 2: 443 sks Stage 3: 272 sks	176
Cement Excess	25%	10%	10%	10%
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	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'-11,800'	11,800'-17,107'

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: 17,157' – 19,067'

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	5,295'
Bone Spring	9,242'
Wolfcamp	12,288'
Atoka	14,017'
Morrow	14,974'

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: 2,574 PSI (surface pressure)
   Maximum Injection Pressure: 3,431 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 Avalon, Delaware, 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	848'
Salado	1,313'
Delaware	5,295'
Bone Spring	9,242'
Wolfcamp	12,288'
Penn	13,292'
Atoka	14,017'
Morrow	14,974'
Mississippian Lime	16,657'
Woodford	16,980'
Devonian	17,157'

B. Underground Sources of Drinking Water

Within 1-mile of the proposed Sidewinder SWD #1 location, there are two water wells with depths of 175 ft and a water depth of 135 ft. Water wells in the surrounding area have an average depth of 332 ft and an average water depth of 224 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 two water wells that exists within one mile of the well location. A map and Water Right Summary from the New Mexico Office of the State Engineer for water wells C-02314 and C-02315 are attached. Analysis of the water samples is in process and will be provided as soon as it is available.

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

NAME: John C. Webb TITLE: Sr. Geologist

SIGNATURE: _____ DATE: _____

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	[2] OGRID Number
NGL WATER SOLUTIONS PERMIAN, LLC 1509 W WALL ST, STE 306 MIDLAND, TX 79701	372338
	[3] API Number TBD

[4] Property Code	[5] Property Name	[6] Well No.
	SIDEWINDER SWD	1

[7] Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
O	10	25S	34E	N/A	244'	SOUTH	1,581'	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
	-	-	-		-	-	-	-	-

[9] Pool Information

Pool Name	Pool Code
SWD; Silurian-Devonian	96101

Additional Well Information

[11] Work Type	[12] Well Type	[13] Cable/Rotary	[14] Lease Type	[15] Ground Level Elevation
N	SWD	R	Private	3,330'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
N	19,067'	Siluro-Devonian	TBD	ASAP

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
135'	2,303'	> 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	920'	1,236	Surface
Intermediate	17.5"	13.375"	68 lb/ft	5,200'	2,154	Surface
Production	12.25"	9.625"	53.5 lb/ft	12,400'	2,789	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	17,157'	335	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' – 17,107	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: (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	[3] Pool Name
	96101	SWD; Silurian-Devonian

[4] Property Code	[5] Property Name	[6] Well Number
	SIDEWINDER SWD	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
372338	NGL WATER SOLUTIONS PERMIAN, LLC	3330.00'±

[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
O	10	25 S	34 E	N/A	244'	SOUTH	1581'	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.

[16]

SECTION 10

PROPOSED SIDEWINDER SWD 1

NMSP-E (NAD27)
N: 415,227.32'
E: 772,349.70'

NMSP-E (NAD83)
N: 415,285.40'
E: 813,535.80'
Lat: N32°08'19.12"
Long: W103°27'14.15"

244'

1581'

[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

Signature Date

Printed Name

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.

08/20/2018

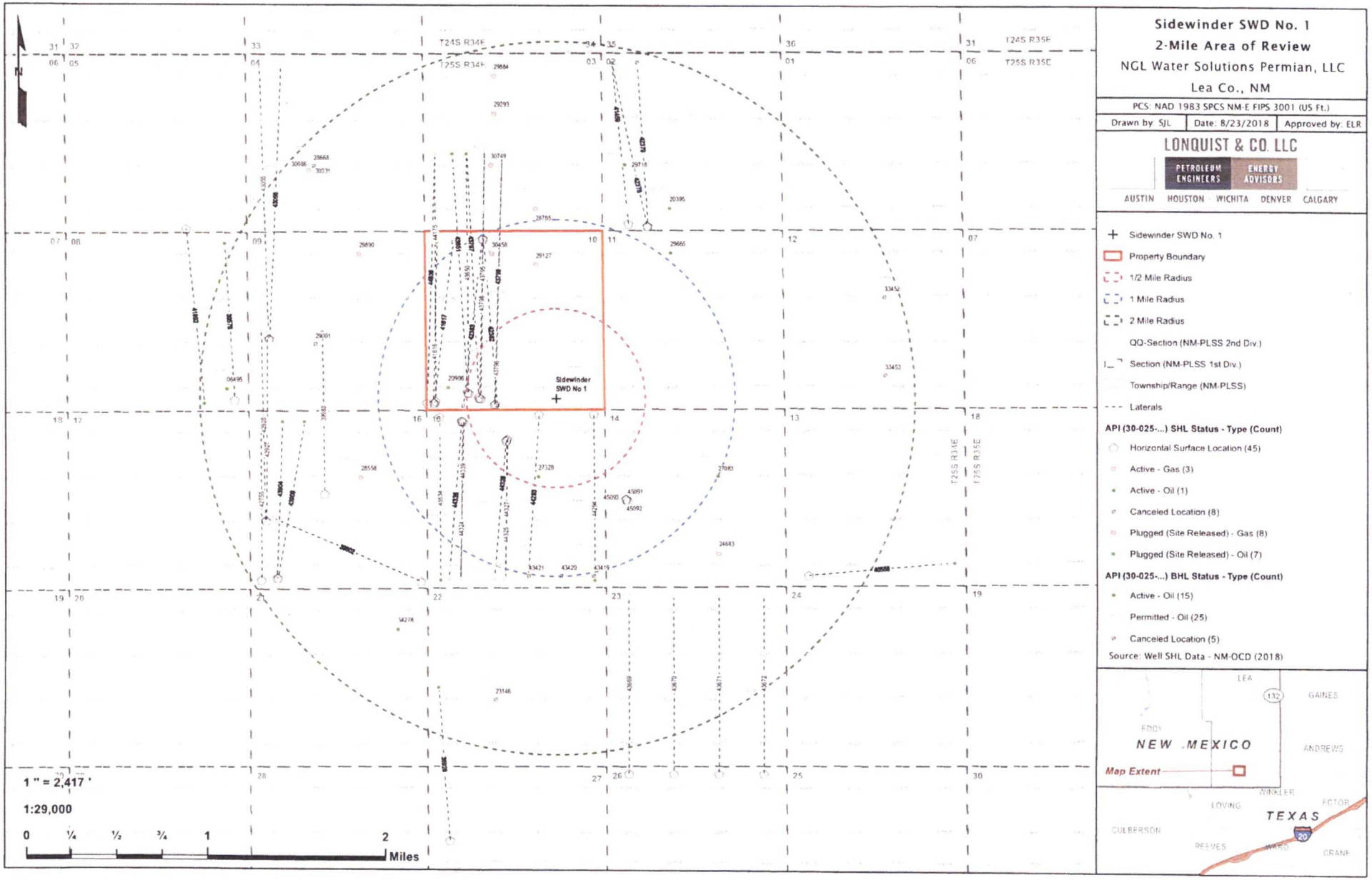
Date of Survey

Signature and Seal of Professional Surveyor:

CODY A. CLARK
NEW MEXICO
23001
PROFESSIONAL SURVEYOR

23001

Certificate Number



Sidewinder 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: SJL	Date: 8/23/2018	Approved by: ELR

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

- Sidewinder SWD No. 1
- Property Boundary
- 1/2 Mile Radius
- 1 Mile Radius
- 2 Mile Radius
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)
- Laterals

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

- Horizontal Surface Location (45)
- Active - Gas (3)
- Active - Oil (1)
- Canceled Location (8)
- Plugged (Site Released) - Gas (8)
- Plugged (Site Released) - Oil (7)

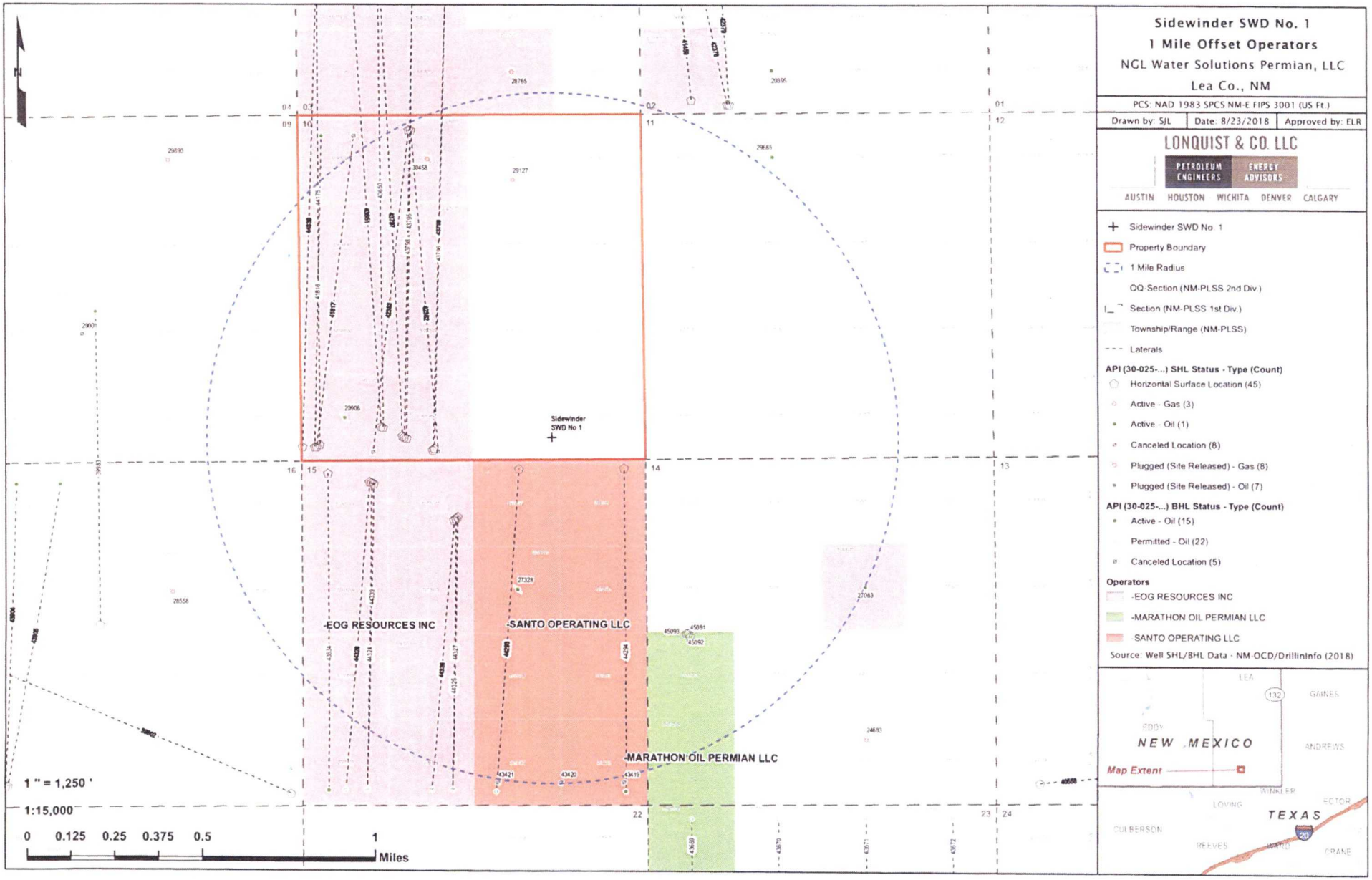
API (30-025-...) BHL Status - Type (Count)

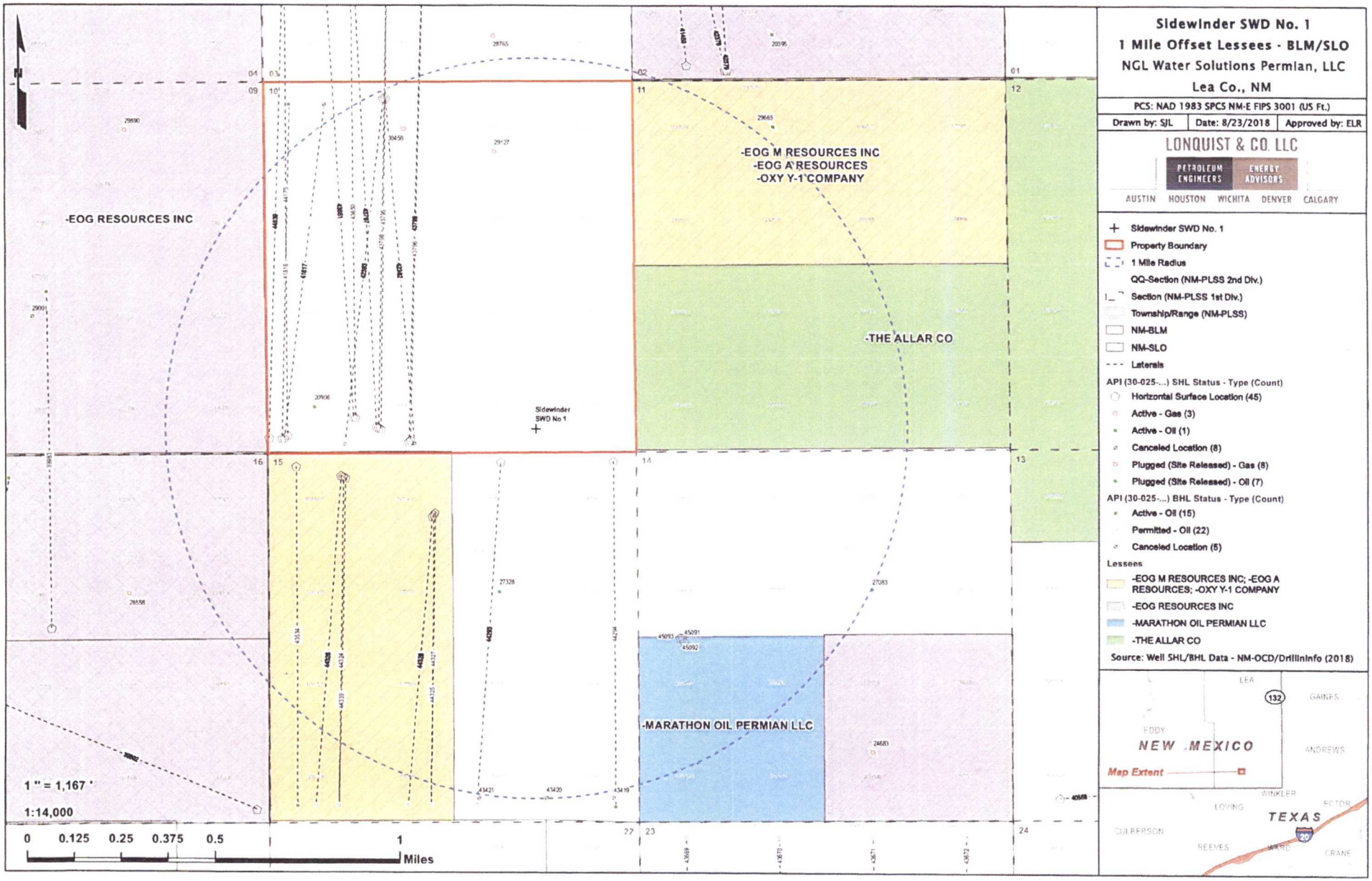
- Active - Oil (15)
- Permitted - Oil (25)
- Canceled Location (5)

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

Sidewinder 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
20906	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	5481	32.13954160000	-103.46416470000	1/1/1900
27328	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	400	32.13226700000	-103.45565800000	1/1/1900
29127	PRE-ONGARD WELL #001	G	P	PRE-ONGARD WELL OPERATOR	15440	32.14951320000	-103.45567320000	1/1/1900
30458	PITCHFORK 10 #001	G	P	BURLINGTON RESOURCES OIL & GAS CO	15027	32.15042880000	-103.45988460000	10/9/1988
41816	OSPREY 10 #601H	O	A	EOG RESOURCES INC	12092	32.13833620000	-103.46568300000	11/16/2014
41817	OSPREY 10 #002C	O	C	EOG RESOURCES INC	0	32.13833620000	-103.46558380000	12/31/9999
42382	OSPREY 10 #702C	O	C	EOG RESOURCES INC	0	32.15163105500	-103.46071659000	12/31/9999
42383	OSPREY 10 #701C	O	C	EOG RESOURCES INC	0	32.15163123700	-103.46081399000	12/31/9999
43420	OCOTILLO SUNRISE 15 #002C	O	C	SANTO OPERATING LLC	0	32.12416850000	-103.45355640000	12/31/9999
43534	PISTOLERO 15 FEDERAL #701H	O	A	EOG RESOURCES INC	12612	32.13723070000	-103.46504520000	4/28/2017
43650	OSPREY 10 #602H	O	A	EOG RESOURCES INC	12027	32.13910780000	-103.46226830000	4/7/2017
43651	OSPREY 10 #701H	O	A	EOG RESOURCES INC	12405	32.13915390000	-103.46236750000	4/6/2017
43795	OSPREY 10 #603H	O	N	EOG RESOURCES INC	0	32.13867580000	-103.46110560000	12/31/9999
43796	OSPREY 10 #604H	O	N	EOG RESOURCES INC	0	32.13823000000	-103.45974210000	12/31/9999
43797	OSPREY 10 #702H	O	N	EOG RESOURCES INC	0	32.13876800000	-103.46130410000	12/31/9999
43798	OSPREY 10 #703H	O	N	EOG RESOURCES INC	0	32.13872190000	-103.46120480000	12/31/9999
43799	OSPREY 10 #704H	O	N	EOG RESOURCES INC	0	32.13815870000	-103.45981800000	12/31/9999
44175	OSPREY 10 #705H	O	A	EOG RESOURCES INC	12837	32.13844170000	-103.46543340000	11/30/2017
44293	OCOTILLO SUNRISE 15 WA BO FEE #001H	O	N	SANTO OPERATING LLC	0	32.13735900000	-103.45555400000	12/31/9999
44294	OCOTILLO SUNRISE 15 WA AP FEE #002H	O	A	SANTO OPERATING LLC	12571	32.13735300000	-103.45036900000	3/23/2018
44324	PISTOLERO 15 FEDERAL COM #601H	O	N	EOG RESOURCES INC	0	32.13682170000	-103.46286980000	12/31/9999
44325	PISTOLERO 15 FEDERAL COM #603H	O	N	EOG RESOURCES INC	0	32.13529450000	-103.45866980000	12/31/9999
44326	PISTOLERO 15 FEDERAL COM #702H	O	N	EOG RESOURCES INC	0	32.13686600000	-103.46297010000	12/31/9999
44327	PISTOLERO 15 FEDERAL COM #707H	O	N	EOG RESOURCES INC	0	32.13536410000	-103.45859190000	12/31/9999
44328	PISTOLERO 15 FEDERAL COM #706H	O	N	EOG RESOURCES INC	0	32.13522480000	-103.45874780000	12/31/9999
44339	PISTOLERO 15 FEDERAL COM #703H	O	N	EOG RESOURCES INC	0	32.13677730000	-103.46276940000	12/31/9999
44839	OSPREY 10 #301H	O	N	EOG RESOURCES INC	0	32.13835130000	-103.46628760000	6/25/2018


Sidewinder SWD No. 1
1 Mile Offset Operators
NGL Water Solutions Permian, LLC
Lea Co., NM
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: SJL
Date: 8/23/2018
Approved by: ELR
LONQUIST & CO. LLC
PETROLEUM ENGINEERS
ENERGY ADVISORS
AUSTIN HOUSTON WICHITA DENVER CALGARY
Sidewinder SWD No. 1
Property Boundary
1 Mile Radius
QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (NM-PLSS)
Laterals
API (30-025-...) SHL Status - Type (Count)
Horizontal Surface Location (45)
Active - Gas (3)
Active - Oil (1)
Canceled Location (8)
Plugged (Site Released) - Gas (8)
Plugged (Site Released) - Oil (7)
API (30-025-...) BHL Status - Type (Count)
Active - Oil (15)
Permitted - Oil (22)
Canceled Location (5)
Operators
-EOG RESOURCES INC
-MARATHON OIL PERMIAN LLC
-SANTO OPERATING LLC
Source: Well SHL/BHL Data - NM OCD/DrillingInfo (2018)
Sidewinder SWD No 1
EOG RESOURCES INC
SANTO OPERATING LLC
MARATHON OIL PERMIAN LLC
1 " = 1,250 '
1:15,000
0 0.125 0.25 0.375 0.5 1
Miles
LEA
GAINES
EDDY
NEW MEXICO
ANDREWS
Map Extent
WINKLER
LOVING
TEXAS
CULBERSON
REEVES
WARD
CRANE



Sidewinder SWD No. 1
1 Mile Offset Lessees - BLM/SLO
NGL Water Solutions Permian, LLC
Lea Co., NM

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

Drawn by: SJL	Date: 8/23/2018	Approved by: ELR

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

- Sidewinder SWD No. 1
- Property Boundary
- 1 Mile Radius
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)
- NM-BLM
- NM-SLO
- Laterals

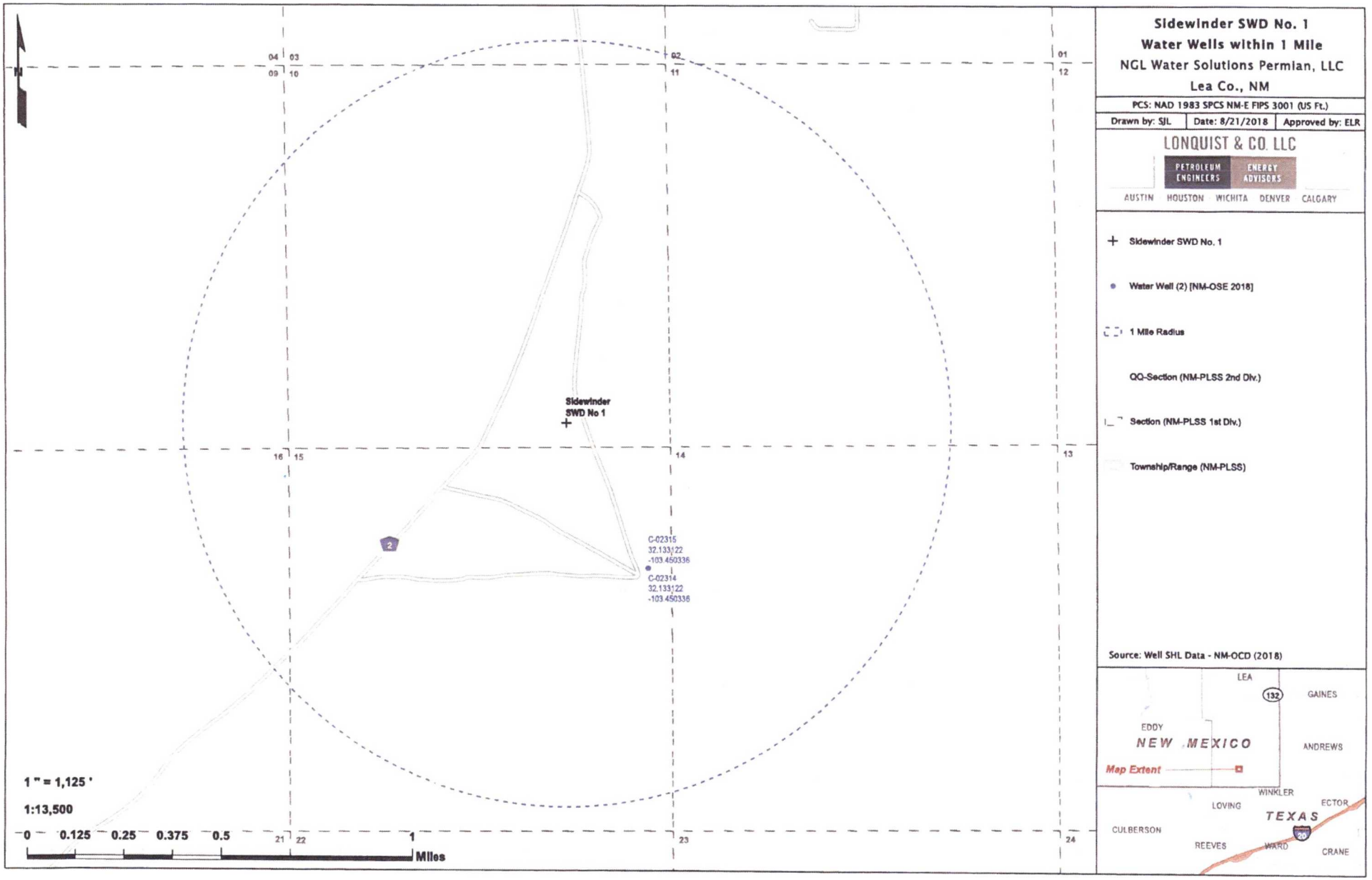
API (30-025-...) SHL Status - Type (Count)
- Horizontal Surface Location (45)
- Active - Gas (3)
- Active - Oil (1)
- Canceled Location (8)
- Plugged (Site Released) - Gas (8)
- Plugged (Site Released) - Oil (7)

API (30-025-...) BHL Status - Type (Count)
- Active - Oil (15)
- Permitted - Oil (22)
- Canceled Location (5)

Lessees
- -EOG M RESOURCES INC; -EOG A RESOURCES; -OXY Y-1 COMPANY
- -EOG RESOURCES INC
- -MARATHON OIL PERMIAN LLC
- -THE ALLAR CO

Source: Well SHL/BHL Data - NM-OCD/DrillingInfo (2018)

Sidewinder SWD #1: Offsetting Produced Water Analysis																			
wellname	api	section	township	range	county	state	formation	sampledate	ph	tds_mgL	sodium_m	calcium_m	iron_mgL	magnesiun	manganes	chloride_n	bicarbonat	sulfate_m	co2_mgL
COTTON DRAW 33 4 FEDERAL COM #001H	3002541263	33	24S	32E	Lea	NM	DELAWARE-BRUSHY CANYON	10/8/2015	6.6	253483	72811.5	15695.3	47.4	2581.4		159430.7		401.8	200
COTTON DRAW 33 4 FEDERAL COM #002H	3002541264	33	24S	32E	Lea	NM	DELAWARE-BRUSHY CANYON	10/8/2015	6.6	249333	71579.8	16716	38.7	2758.3		155226.8		405.7	300
COTTON DRAW UNIT #114	3001537410	34	24S	31E	EDDY	NM	DELAWARE-BRUSHY CANYON	3/11/2015	6	268137.4	79525.2	19507.6	122.9	3261.8	4.54	161607.2	861	0	7.8
COTTON DRAW UNIT #115H	3001537898	34	24S	31E	EDDY	NM	AVALON LOWER	1/23/2014	6.2	247257.5	65970	15480	31	2650	3	160100	122	0	250
COTTON DRAW UNIT #117H	3001538434	34	24S	31E	EDDY	NM	BONE SPRING 2ND SAND	11/15/2014	6.5	172327.9	49944.5	10509.8	72.9	1477.8	2.29	108042.8	122	0	150
COTTON DRAW UNIT #122H	3001538453	35	24S	31E	EDDY	NM	BONE SPRING 2ND SAND	6/30/2014	6.3	158456.6	51198.9	8177.8	28.5	1001.2	1.14	95601	122	0	200
COTTON DRAW UNIT #150H	3001538536	34	24S	31E	EDDY	NM	DELAWARE-BRUSHY CANYON	1/23/2014	6.2	246404.5	64243	14216	89	2449	5	162500	122	0	300
COTTON DRAW UNIT #152H	3001538609	35	24S	31E	EDDY	NM	DELAWARE-BRUSHY CANYON	2/25/2015	6	258919.1	76040.7	19025.4	82.8	3087.5	4.56	157593.1	122	0	350
COTTON DRAW UNIT #155H	3001538607	35	24S	31E	EDDY	NM	DELAWARE-BRUSHY CANYON	2/25/2015	6	250734.8	73645	16781	50.9	2758	3.27	154666.1	122	0	250
COTTON DRAW UNIT #156H	3001538557	35	24S	31E	EDDY	NM	DELAWARE-BRUSHY CANYON	1/23/2014	6.4	235618.5	66963	13881	34	2456	2.5	149500	122	0	300
COTTON DRAW UNIT #211H	3001541941	34	24S	31E	EDDY	NM	BONE SPRING 2ND SAND	1/27/2015	6.4	155270.6	50208.1	8326.3	38.3	1039.4	1.07	93359.6	122	0	200
COTTON DRAW UNIT #213H	3001541869	35	24S	31E	EDDY	NM	BONE SPRING 2ND SAND	10/6/2014	6	150530.4	45890.2	7802.5	62.3	982.6	1.55	93209.1	244	0	250
SNAPPING 2 STATE #014H	3001542688	2	26S	31E	EDDY	NM	WOLFCAMP	10/7/2015	7.3	81366.4	26319.4	2687.4	26.1	326.7		50281.2		399.7	100



Sidewinder SWD No. 1
Water Wells within 1 Mile
NGL Water Solutions Permian, LLC
Lea Co., NM

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

Drawn by: SJL	Date: 8/21/2018	Approved by: ELR

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

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 02314	2	4	2	15	25S	34E	646170	3556243*

Driller License:		Driller Company:			
Driller Name:	UNKNOWN				
Drill Start Date:	01/01/1918	Drill Finish Date:	12/31/1917	Plug Date:	
Log File Date:		PCW Rcv Date:		Source:	
Pump Type:		Pipe Discharge Size:		Estimated Yield:	40 GPM
Casing Size:	8.63	Depth Well:	175 feet	Depth Water:	135 feet

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	C 02315	2	4	2	15	25S	34E	646170	3556243*

Driller License:		Driller Company:			
Driller Name:	UNKNOWN				
Drill Start Date:	01/01/1918	Drill Finish Date:	12/31/1917	Plug Date:	
Log File Date:		PCW Rcv Date:		Source:	
Pump Type:		Pipe Discharge Size:		Estimated Yield:	40 GPM
Casing Size:	8.63	Depth Well:	175 feet	Depth Water:	135 feet

*UTM location was derived from PLSS - see Help