|   | Revised March 23, 2017   |
|---|--|
| RECEIVED:<br>10/25/2018 REVIEWER:   | APP NO:<br>SUD<br>APP NO:<br>DMAM 18248 39239  |
| - Geologia  | CO OIL CONSERVATION DIVISION<br>cal & Engineering Bureau –<br>rancis Drive, Santa Fe, NM 87505   |
|   | RATIVE APPLICATION CHECKLIST   |
|   | LL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND<br>EQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE   |
| pplicant: OWL SWD Operating, LLC  | OGRID Number: <u>308339</u>  |
| ell Name: Czervik SWD #1  | API:   |
| bol: SWD  | Pool Code: 97869   |
| ) TYPE OF APPLICATION: Check those<br>A. Location – Spacing Unit – Simuli   | taneous Dedication   |
| WFX PMX S<br>Other:<br>NOTIFICATION REQUIRED TO: Check<br>A. Offset operators or lease hol<br>B. Royalty, overriding royalty o<br>C. Application requires publish<br>D. Notification and/or concurre<br>E. Notification and/or concurre<br>F. Surface owner | PLC       PC       OLS       OLM         ure Increase - Enhanced Oil Recovery         WD       IPI       EOR       PPR         those which apply.       Image: State of the |
| administrative approval is accurate   | the information submitted with this application for<br>and <b>complete</b> to the best of my knowledge. I also<br>ken on this application until the required information and<br>vision.  |
| Note: Statement must be comple  | eted by an individual with managerial and/or supervisory capacity.   |
|   | October 17, 2018   |
| amona Hovey   | Date   |
| rint or Type Name   | (512) 600-1777   |
|   |  |

Ramora K Hovey Signature

Phone Number

ramona@lonquist.com

e-mail Address

OCT 25 2018 AM08:58

# LONQUIST & CO. LLC

PETROLEUM

AUSTIN HOUSTON

www.tonquist.com

**ADVISORS** 

WICHITA CALGARY

October 15, 2018

New Mexico Energy, Minerals, and Natural Resources Department Oil Conservation Division District IV 1220 South St. Francis Drive Santa Fe, New Mexico 87505 (505) 476-3440

## **RE: CZERVIK SWD NO. 1 AUTHORIZATION TO INJECT**

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for OWL SWD Operating, LLC's Czervik SWD No. 1. In addition, Forms BLM 3160-3 and C-102 have been included with this package. Notices have been sent to offset leaseholders and the surface owner. Proof of notice will be sent to the OCD upon receipt.

Any questions should be directed towards OWL SWD Operating, LLC's agent Lonquist & Co., LLC.

Regards,

amone K Howey

Ramona K. Hovey Sr. Petroleum Engineer Lonquist & Co., LLC (512) 600-1777 ramona@lonquist.com

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

# DAUTHODIZATION TO INIECT

|        | APPLICATION FOR AUTHORIZATION TO INJECT  |
|--------|--|
| I.     | PURPOSE:       Secondary Recovery       Pressure Maintenance       X       Disposal       Storage         Application qualifies for administrative approval?       X       Yes       No  |
| II.    | OPERATOR: OWL SWD Operating, LLC<br>ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, TX 75255<br>CONTACT PARTY: Preston Carr PHONE: (855) 695-7937  |
| III.   | WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.<br>Additional sheets may be attached if necessary.  |
| IV.    | Is this an expansion of an existing project? Yes X No<br>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:  |
|        | <ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> </ol>  |
|        | <ol> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol> |
| *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: Ramona Hovey // TITLE: Consulting Engineer - Agent for OWL SWD Operating, LLC  |
|        | SIGNATURE: Kamora Ktory DATE: 10/11/2018   |
|        |  |

- E-MAIL ADDRESS: <u>ramona@lonquist.com</u> If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \*

Side 2

#### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining material, and setting depth.
  - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

#### XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

# **INJECTION WELL DATA SHEET**

## OPERATOR: OWL SWD Operating, LLC (OGRID 308339)

# WELL NAME & NUMBER: Czervik SWD No. 1

WELL LOCATION: 2,301' FNL & 2,426' FWL FOOTAGE LOCATION

<u>F</u> UNIT LETT

WELLBORE SCHEMATIC

| <u>F</u><br>f letter      | <u>29</u><br>Section | 23 S33 ETOWNSHIPRANCE          |                 |
|---------------------------|----------------------|--------------------------------|-----------------|
|                           | ELL CONSTRUC         | TION DATA                      |                 |
|                           | Surface C            | asing                          |                 |
| Hole Size: <u>26"</u>     |                      | Casing Size: 20"               |                 |
| Cemented with: 3,600 sks  |                      | or                             | ft <sup>3</sup> |
| Top of Cement: surface    |                      | Method Determined: circulation | <u>1</u>        |
|                           | Intermediate         | Casing 1                       |                 |
| Hole Size: <u>17-1/2"</u> |                      | Casing Size: 13-5/8"           |                 |
| Cemented with: 3,640 sks  |                      | or                             | ft <sup>3</sup> |
| Top of Cement: surface    |                      | Method Determined: circulation | <u>n</u>        |
|                           | Intermediate         | Casing 2                       |                 |
| Hole Size: <u>12-1/4"</u> |                      | Casing Size: 9-5/8"            |                 |
| Cemented with: 3,145 sks  |                      | or                             | ft <sup>3</sup> |
| Top of Cement: surface    |                      | Method Determined: circulation | <u>n</u>        |

Side 1

# Production Liner

Hole Size: <u>8-1/2</u>"

Casing Size: 7-5/8"

Cemented with: 315 sks

Top of Cement: <u>13,875'</u>

Method Determined: Calculation

or\_\_\_\_\_

 $ft^3$ 

Total Depth: 18,700'

**Injection Interval** 

17,157 feet to 18,700 feet

(Open Hole)

## **INJECTION WELL DATA SHEET**

Tubing Size: <u>5.500", 23.0 lb/ft, P-110 BTC and UFJ (or equivalent), from 0' – 17,100'</u> Lining Material: <u>Duoline</u>

Type of Packer: 7-5/8" x 5.5" D&L Oil Tools Permapack Packer - Single Bore

Packer Setting Depth: 17,100'

Other Type of Tubing/Casing Seal (if applicable):

# Additional Data

 1. Is this a new well drilled for injection?
 X Yes No

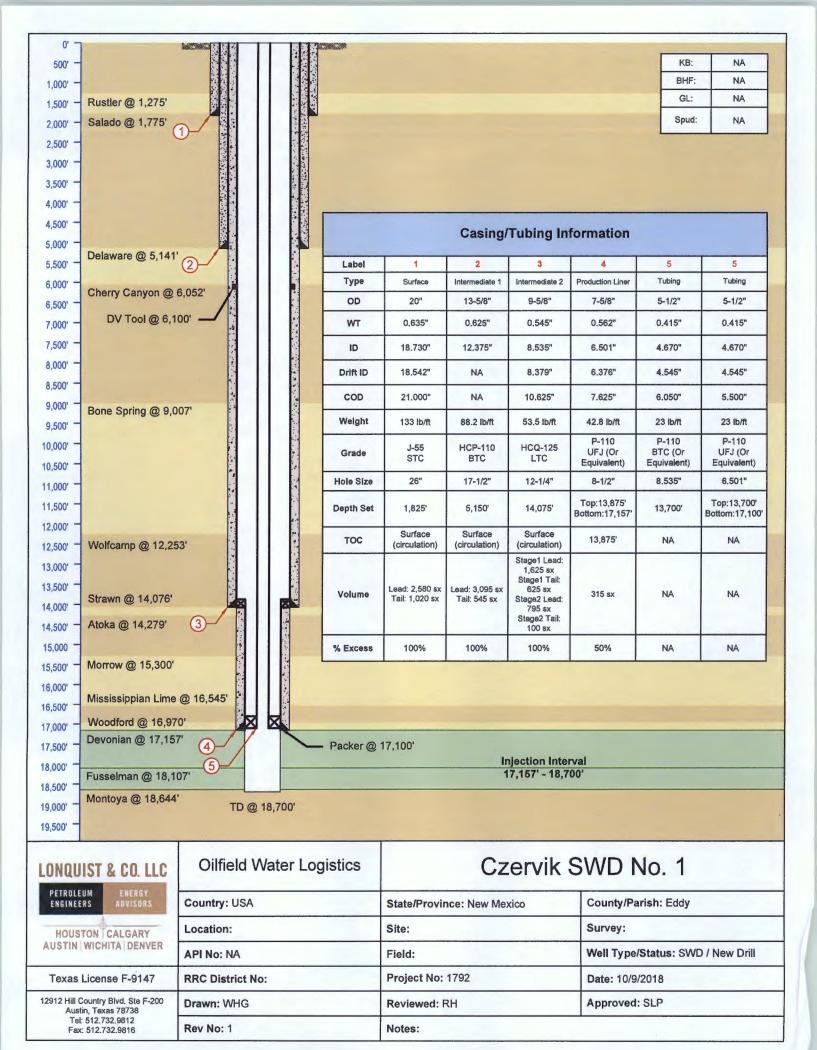
If no, for what purpose was the well originally drilled?

- 2. Name of the Injection Formation: Silurian-Devonian
- 3. Name of Field or Pool (if applicable):
- 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:

| Formation     | Depth   |
|---------------|---------|
| Delaware      | 5,141'  |
| Cherry Canyon | 6,052′  |
| Bone Spring   | 9,007'  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Morrow        | 15,300' |
| Devonian      | 17,157' |



# OWL SWD Operating, LLC.

## Czervik SWD No. 1

## FORM C-108 Supplemental Information

### III. Well Data

A. Wellbore Information

.

1.

| Well information                         |   |  |  |
|--|---|--|--|
| Lease Name Czervik SWD                   |   |  |  |
| Well No.                                 | 1 |  |  |
| Location Unit F S-29 T-23S R-33E         |   |  |  |
| Footage Location 2,301' FNL & 2,426' FWL |   |  |  |

2.

a. Wellbore Description

| Casing Information |           |                                |                            |                              |  |
|--------------------|-----------|--------------------------------|----------------------------|------------------------------|--|
| Туре               | Surface   | Intermediate 1                 | Intermediate 2             | Production Liner             |  |
| OD                 | 20"       | 13-5/8″                        | 9-5/8″                     | 7-5/8″                       |  |
| WT                 | 0.635″    | 0.625″                         | 0.545″                     | 0.562″                       |  |
| ID                 | 18.730"   | 12.375″                        | 8.535″                     | 6.501"                       |  |
| Drift ID           | 18.542″   |                                | 8.379″                     | 6.376″                       |  |
| COD                | 21.000"   |                                | 10.625″                    | 7.625″                       |  |
| Weight             | 133 lb/ft | 88.2 lb/ft                     | 53.5 lb/ft                 | 42.8 lb/ft                   |  |
| Grade              | J-55 STC  | HCP-110 STC (Or<br>Equivalent) | HCQ-125 (Or<br>Equivalent) | P-110 UFJ (Or<br>Equivalent) |  |
| Hole Size          | 26″       | 17-1/2"                        | 12-1/4"                    | 8-1/2"                       |  |
| Depth Set          | 1,825'    | 5,150'                         | 14,075′                    | 13,875' – 17,157'            |  |

# b. Cementing Program

| Cement Information                                   |                          |                                      |                                       |         |  |
|--|--------------------------|--------------------------------------|---------------------------------------|---------|--|
| Casing Surface Intermediate 1                        |                          | Production                           | Production Liner                      |         |  |
| Lead HALCEM HALCEM                                   |                          | Stage 1: NEOCEM<br>Stage 2: NEOCEM   |                                       |         |  |
| Lead<br>Cement<br>Volume                             | ment 2,580 sks 3,095 sks |                                      | Stage 1: 1625 sks<br>Stage 2: 795 sks |         |  |
| Tail HALCEM HALCEM                                   |                          | Stage 1: NEOCEM<br>Stage 2: HALCEM   | VERSACEM                              |         |  |
| TailCement1,020 sks545 sksVolume                     |                          | Stage 1: 625 sks<br>Stage 2: 100 sks | 315 sks                               |         |  |
| Cement<br>Excess100%100%                             |                          | 100%                                 | 50%                                   |         |  |
| тос  | Surface                  | Surface                              | Surface                               | 13,875′ |  |
| MethodCirculate to<br>SurfaceCirculate to<br>Surface |                          | Circulate to Surface                 | Calculation                           |         |  |

3. Tubing Description

| Tubing          |                                      |                             |  |  |
|-----------------|--------------------------------------|-----------------------------|--|--|
| OD              | 5-1/2"                               | 5-1/2"                      |  |  |
| WT              | 0.415″                               | 0.415″                      |  |  |
| ID 4.670"       |                                      | 4.670"                      |  |  |
| Drift ID 4.545" |                                      | 4.545″                      |  |  |
| COD             | 6.050″                               | 5.500"                      |  |  |
| Weight 23 lb/ft |                                      | 23 lb/ft                    |  |  |
| Grade           | P-110 B <b>T</b> C (Or<br>Equivalent | P-110 UFJ (Or<br>Equivalent |  |  |
| Depth Set       | 13,700'                              | 13,700'-17,100'             |  |  |

Tubing will be lined with Duoline.

4. Packer Description

D&L Oil Tools 7-5/8" x 5-1/2" Permapack Packer – Single Bore

- B. Completion Information
  - 1. Injection Formation: Silurian Devonian
  - 2. Gross Injection Interval: 17,157' 18,700'

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      | 5,141'  |  |
| Cherry Canyon | 6,052'  |  |
| Bone Spring   | 9,007′  |  |
| Wolfcamp      | 12,253' |  |
| Strawn        | 14,076' |  |
| Atoka         | 14,279' |  |
| Morrow        | 15,300' |  |
| Devonian      | 17,157' |  |

#### VI. Area of Review

No wells within the one-mile AOR penetrated the proposed injection zone.

#### VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD Maximum Volume: 30,000 BPD

- 2. Closed System
- 3. Anticipated Injection Pressure:

Average Injection Pressure: 2,573 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 Bone Springs and Delaware formations.

5. The Devonian Formation is productive of oil and gas in this 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 in Southeast New Mexico are 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 successful Salt Water Disposal horizon.

| Formation          | Depth           |  |
|--------------------|-----------------|--|
| Rustler            | 1,275′          |  |
| Salado             | 1,775′          |  |
| Delaware           | 5,141'          |  |
| Cherry Canyon      | 6,052'          |  |
| Bone Spring        | 9,007'          |  |
| Wolfcamp           | 12,253'         |  |
| Strawn             | 14,076'         |  |
| Atoka              | 14,279'         |  |
| Morrow             | 15,300'         |  |
| Mississippian Lime | 16,545'         |  |
| Woodford           | <u>16,</u> 970' |  |
| Devonian           | 17,157'         |  |
| Fusselman          | 18,107'         |  |
| Montoya            | 18,644'         |  |

A. Injection Zone: Devonian-Silurian Formation

B. Underground Sources of Drinking Water

Water wells in the one-mile surrounding area for the proposed Czervik SWD No.1 well are at depths ranging from 550 ft to 650 ft. The Rustler may also be another USDW and will be protected through the top of the Salado Formation at 1,775' by setting surface casing at 1,825'.

IX. Proposed Stimulation Program

No proposed stimulation program.

X. Logging and Test Data on the Well

There are no existing 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 (2) fresh water wells within one mile of the well location, per the New Mexico Office of the State Engineer. A list of all the water wells, a map of these wells and their associated Water Right Summaries are attached. Fresh water samples will be obtained from two of the wells and analysis of these samples will be submitted as soon as possible.

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 and any underground sources of drinking water.

# Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated October 14, 2018 and ending with the issue dated October 14, 2018.

nosell

Publisher

Sworn and subscribed to before me this 14th day of October 2018.

Black

**Business Manager** 



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said 67112661

00219437

LONQUIST & CO., LLC 12912 HILL COUNTRY BLVD, STE F200 AUSTIN, TX 78738

# LEGALS

#### LEGAL NOTICE OCTOBER 14, 2018

OWL SWD Operating, LLC, 8214 Westchester Dr., Suite 850, Dallas, Texas 75255, is filling Form C+108 (Application for Authorization to Inject) with the New Mexico Oll Conservation Division for administrative approval for its salt water disposal well Czervik SWD No. 1. The proposed well will be located 2,301' FNL & 2,426' FWL in Section 29, Township 23S, Range 33E in Lea County, New Mexico. Disposal water will be sourced from area production, and will be injected into the Devonian-Silurian Formation (determined by offset log analysis) through an open hole completion between a maximum surface injection pressure will not exceed 3,431 psi with a maximum depth of 18,700 feet. The maximum surface injection pressure will not exceed 3,431 psi with a maximum fate of 30,000 BWPD. Interested parties opposing the action must fille objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. Additional information can be obtained from the applicant's agent, Lonquist & Co., LLC, at (512) 600-1774. WATER WELL SUMMARIES

| and the State Log          | 6 |
|----------------------------|---|
|                            | 1 |
| andres for Street Constant |   |

# New Mexico Office of the State Engineer Water Right Summary

| -              | WR File Number:                                     | C 02277               | Subbasin:                                    | CUB Cross                                      | Reference | :-                                     |
|----------------|---|-----------------------|--|--|-----------|--|
| K-             | Primary Purpose:                                    |                       | MERCIAL                                      |  |           |  |
| get image list | Primary Status:                                     | PMT PERM              |  |  |           |  |
|                | Total Acres:  | 0                     | Subfile:                                     | -  |           |  |
|                | Total Diversion:                                    | 64.5                  | Cause/Cas                                    | e: -   |           |  |
|                | Owner:  | BRININSTOOL           | XL RANCH LLC                                 |  |           |  |
|                | Contact:  | CHRISTINE B           | RININSTOOL, MOR                              | TGAGEE   |           |  |
|                | Owner:  | HUGHES PRO            | PERTIES LLC                                  |  |           |  |
|                | Contact:  | TREY HUGHE            | S  |  |           |  |
| Documen        | nts on File   |                       |  |  |           |  |
| Documen        |   | Sta                   | tus  | From/  |           |  |
|                | Trn # Doc File//                                    |                       | 2 Transaction D                              |  | Acres     | Diversion Consumptive                  |
| images         | 614438 COWNF 20                                     | 17-09-25 CHG          | PRC C 02277                                  | т  | 0         | 0                                      |
|                | 439865 COWNF 20                                     | 09-07-29 CHG          | PRC C 02277                                  | т  | 0         | 0                                      |
|                | 234017 COWNF 20                                     | 02-06-25 CHG          | PRC C 02277                                  | Т  | 0         | 0                                      |
|                | 169243 ADM 1999-                                    | 10-29 PMT             | MTR C 02277                                  | т  | 0         | 48.4                                   |
|                | 198402 DCL 1986-0                                   | 04-07 DCL             | PRC C 02277                                  | т  | 0         | 48.4                                   |
| Current P      | Points of Diversion<br>POD Number<br><u>C 02277</u> | Source 64             | Q Q (1<br>16 4 Sec Tws Rng<br>3 4 20 23S 33E | IAD83 UTM in meters)<br>X Y<br>632663 3572970* |           | Location Desc                          |
|                | *An (*) after northi                                | ng value indicates    | UTM location was deri                        | ved from PLSS - see H                          | ielp      |  |
| Place of L     | Use   |                       |  |  |           |  |
|                | Q Q Q Q<br>256 64 16 4 SecTws                       | <b>Rng Acres</b><br>0 | Diversion CL<br>48.4                         | Use Priority S                                 |           | r Location Desc<br>PLACE OF USE GIVEN. |
| Source         |   |                       |  |  |           |  |
|                | Acres Div<br>0                                      | version Cl<br>48.4    | J Use Priority S<br>COM                      | ource Description<br>GW                        |           |  |

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



# New Mexico Office of the State Engineer Water Right Summary

| -              | WR File Number:                     | C 02270                  |                | Subbasin: (               |                 | ross Referenc  | o.                     |
|----------------|-------------------------------------|--------------------------|----------------|---------------------------|-----------------|----------------|------------------------|
| P              |                                     |                          |                |                           | COB C           | 1033 Reference | 6                      |
| get image list | Primary Purpose:                    |                          |                | JAL                       |                 |                |                        |
|                | Primary Status:                     |                          | PERMIT         | Subfile:                  |                 |                |                        |
|                | Total Acres:                        | 0                        |                | Subfile:<br>Cause/Case    | -               |                |                        |
|                | Total Diversion:                    | 64.5                     |                |                           |                 |                |                        |
|                | Owner:                              |                          |                |                           |                 |                |                        |
|                | Contact:                            |                          |                | ISTOOL, MORT              | IGAGEE          |                |                        |
|                | Owner:                              |                          | PROPER         | TIES LLC                  |                 |                |                        |
|                | Contact:                            | TREY HU                  | JGHES          |                           |                 |                |                        |
| Documen        | ts on File                          |                          |                |                           | -               |                |                        |
|                |                                     |                          | Status         | Trees the De              |                 | om/            | Diversion Concurrently |
| -              | Frn # Doc File//<br>614450 COWNF 20 | а <b>с</b> т<br>17-09-25 | 1 2<br>CHG PRC | Transaction De            |                 | To Acres       | Diversion Consumptiv   |
| images-        |                                     |                          |                |                           |                 |                |                        |
| 4              | 439869 COWNF 20                     | 09-07-29                 | CHG PRC        | C 02279                   |                 | т 0            | 0                      |
| 3              | 234015 COWNF 20                     | 02-06-25                 | CHG PRC        | C 02279                   |                 | т 0            | 0                      |
|                | 169245 ADM 1999-                    | 10-29                    | PMT MTR        | C 02279                   |                 | т 0            | 64.5                   |
|                | 198406 DCL 1986-0                   | 04-07                    | DCL PRC        | C 02279                   |                 | т о            | 64.5                   |
| Current P      | oints of Diversion                  |                          |                |                           |                 |                |                        |
|                |                                     |                          | QQQ            |                           | AD83 UTM in m   |                |                        |
|                | POD Number<br>C 02279               |                          |                | Sec Tws Rng<br>28 23S 33E | X<br>633691 357 |                | Location Desc          |
|                |                                     |                          |                |                           |                 | -              |                        |
|                | *An (*) after northi                | ng value ind             | licates UTM I  | ocation was derive        | ed from PLSS    | - see Help     |                        |
| Place of L     | lse                                 |                          |                |                           |                 |                |                        |
|                | Q Q Q Q<br>256 64 16 4 Sec Tws      | Rng                      | Acres Dive     | rsion CII                 | Use Priority    | Status Oth     | er Location Desc       |
|                | 250 04 10 4 560 148                 | siting 7                 | 0              | 64.5                      | COM             |                | PLACE OF USE GIVEN.    |
| Source         |                                     |                          |                |                           |                 |                | -                      |
| Course         | Acres Div                           | orgion                   | CIL Un         | Priority So               | ource Descrip   | ation          |                        |
|                | Acres Div                           | 64.5                     | COUS           | -                         | GW              | aon -          |                        |
|                |                                     |                          |                |                           |                 |                |                        |

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

# **BLM 3160-3 APPLICATION FOR PERMIT TO DRILL**

| Form 3160-3<br>(June 2015)<br>UNITED STATE   | a s  |   | FORM APPI<br>OMB No. 10<br>Expires: Januar         | 04-0137                |
|--|--|---|--|------------------------|
| DEPARTMENT OF THE<br>BUREAU OF LAND MAN  | INTERIOR   |   | 5. Lease Serial No.                                |                        |
| APPLICATION FOR PERMIT TO  | DRILL OR REENTER                                   |   | 6. If Indian, Allotee or Tr                        | tibe Name              |
|  | REENTER  |   | 7. If Unit or CA Agreeme                           | ent, Name and No.      |
| 1b. Type of Well:     Oil Well     Gas Well       1c. Type of Completion:     Hydraulic Fracturing   | 8. Lease Name and Well<br>Czervik SWD No. 1        | 8. Lease Name and Well No.<br>Czervik SWD No. 1 |  |                        |
| 2. Name of Operator<br>OWL SWD Operating, LLC  |  |   | 9. API Well No.                                    |                        |
| 3a. Address<br>8214 Westchester Drive, Suite 850, Dallas, TX 75255   | 3b. Phone No. (include area of<br>(855) 695-7937   | rode)   | 10. Field and Pool, or Ex<br>Silurian-Devonian     | ploratory              |
| <ul> <li>4. Location of Well (Report location clearly and in accordance<br/>At surface 2,301' FNL and 2,426' FWL<br/>At proposed prod. zone Vertical Well</li> </ul> | e with any State requirements.*)                   |   | 11. Sec., T. R. M. or Blk.<br>Sec 29, T-23S, R-33E | and Survey or Area     |
| 14. Distance in miles and direction from nearest town or post of 28 miles Northwest of Jal, NM   | ffice*   |   | 12. County or Parish<br>LEA                        | 13. State<br>NM        |
| 15. Distance from proposed*<br>location to nearest<br>property or lease line, ft.<br>(Also to nearest drig, unit line, if any)                                       | 16. No of acres in lease                           | 17. Space                                       | ing Unit dedicated to this w                       | ell                    |
| <ol> <li>Distance from proposed location*<br/>to nearest well, drilling, completed,<br/>applied for, on this lease, ft.</li> </ol>                                   | 19. Proposed Depth<br>18,700'                      | 20. BLN   | M/BIA Bond No. in file                             |                        |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3,683' GL   | 22. Approximate date work w<br>ASAP after approval | ill start*                                      | 23. Estimated duration                             |                        |
|  | 24. Attachments                                    |   |  |                        |
| The following, completed in accordance with the requirements (as applicable)   | of Onshore Oil and Gas Order No                    | o. 1, and the                                   | Hydraulic Fracturing rule p                        | er 43 CFR 3162.3-3     |
| <ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>  | 4. Bond to cover<br>Item 20 above                  |   | ons unless covered by an exis                      | ting bond on file (see |

| SUPO must be filed with the appropriate Forest Servi | 6. Such other site specific informat<br>BLM. | tion and/or plans as may be requested by the |
|--|--|--|
| 25. Signature amorell                                | Name (Printed/Typed)<br>Ramona K. Hovey      | Date 10/17/18                                |
| Title  |  |  |

3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification.

| Approved by (Signature)                              | Name (Printed/Typed) | Date |
|--|----------------------|------|
| Title<br>Consulting Agent for OWL SWD Operating, LLC | Office               |      |

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

### INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

#### NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

C-102 WELL LOCATION PLAT

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazon Road, Artec, NM 87410 District IV 1220 S. St Francis Dr., 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

| 17   | API Numbe             | r                |               | <sup>2</sup> Pool Code<br>97869 |                         |                                | <sup>3</sup> Pool Na<br>SWD; Silurian |                        |                                    |
|--|-----------------------|------------------|---------------|---------------------------------|-------------------------|--------------------------------|---------------------------------------|------------------------|------------------------------------|
| <sup>4</sup> Property Code <sup>5</sup> Property Name<br>CZERVIK SWD |                       |                  |               |                                 |                         | <sup>6</sup> Well Number<br>#1 |                                       |                        |                                    |
| <sup>7</sup> OGRID<br>30833  |                       |                  |               |                                 | * Operator<br>OWL SWD O |                                |                                       |                        | <sup>9</sup> Elevation<br>3682.90' |
|  |                       |                  |               |                                 | " Surface               | e Location                     |                                       |                        |                                    |
| UL or lot no.<br>F   | Section 29            | Township<br>23 S | Range<br>33 E | Lot Idn                         | Feet from the 2301      | North/South line NORTH         | Feet from the 2426                    | East/West line<br>WEST | County<br>LEA                      |
|  |                       |                  | "Bo           | ttom H                          | ole Locatio             | on If Differen                 | nt From Su                            | urface                 |                                    |
| UL or lot no.  | Section               | Township         | Range         | Lot Idn                         | Feet from the           | North/South line               | Feet from the                         | East/West line         | County                             |
| <sup>2</sup> Dedicated Acres   | <sup>13</sup> Joint o | or Infill 14 C   | onsolidation  | Code <sup>15</sup> Or           | der No.                 |                                | 1                                     |                        |                                    |

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.

|                                    |   | B   | A | "OPERATOR CERTIFICATION<br>I hereby certify that the information contained<br>herein is true and complete to the best of my<br>knowledge and belief, and that this organization<br>either owns a working interest or unleased mineral<br>interest in the land including the proposed bottom<br>hole location or has a right to drill this well at<br>this location pursuant to a contract with an owner<br>of such a mineral or working interest, or to a<br>voluntary pooling agreement or a compulsory<br>pooling order heretofore entered by the division.<br>Mamora Mark Hore<br>Printed Name Date |
|------------------------------------|---|---|---|--|
| E<br>2426.23'                      | F 1   | G I   | Н | <u>ramona e longuist.com</u><br>Email Address Date   |
|                                    | NAD 83 GF<br>CZERVIK<br>Y= 46<br>X= 76<br>LAT= 3      | TTIC DATA<br>ID - NM EAST<br>SWD NO. 1<br>5161.92 N<br>5513.33 E<br>2.276646 N<br>03.595037 W |   | I hereby certify that the well location<br>shown on thi plat was plotted from<br>field notes of actual surveys made by<br>me or under my supervision, and that<br>the same is true and correct to the<br>best of my belief.  |
| <br> <br> <br> <br> <br> <br> <br> | 1 - Y= 467452.3<br>2 - Y= 467470.5<br>3 - Y= 462194.3 | 9, X= 767069.94<br>9, X= 772355.75<br>17, X= 772387.42<br>4, X= 767108.74<br>1<br>1           | P | Date of Survey Date<br>Signature and Seal of Professional Surveyor:<br><b>PRELIMINARY</b><br>THIS DOCUMENT SHALL NOT BE<br>RECORDED FOR ANY PURPOSE AND<br>SHALL NOT BE USED OR VIEWED<br>OR RELIED UPON AS A FINAL<br>SURVEY DOCUMENT   |
| (4) 1                              |   |   | 3 | Certificate Number   |

 District I

 1625 N. French Dr., Hobbs, NM 88240

 District II

 811 S. First St., Artesia, NM 88210

 District III

 1000 Rio Brazon Road, Artec, NM 87410

 District IV

 1220 S. St Francis Dr., 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 |  |
|------------------------|-------------------------|--|
| <sup>2</sup> Pool Code | <sup>3</sup> Pool Name  |  |

| PI Numbe              | T                        |   | * Pool Code<br>97869  |   |  | SWD; Siluria  |   |  |
|-----------------------|--------------------------|---|---|---|--|---|---|--|
| Code                  |                          |   |   |   |  |   | 6.  | Well Number<br>#1  |
|                       |                          |   |   |   |  |   |   | ' Elevation<br>3682.90'  |
|                       |                          |   |   | "Surface  | e Location   |   |   |  |
| Section 29            | Township<br>23 S         | Range<br>33 E   | Lot Idn   | Feet from the 2301  | North/South line NORTH   | Feet from the 2426  | East/West line<br>WEST  | County<br>LEA  |
|                       |                          | "Bo   | ttom H  | ole Locatio   | on If Differen   | nt From Su  | urface  |  |
| Section               | Township                 | Range   | Lot Idn   | Feet from the   | North/South line   | Feet from the   | East/West line  | County   |
| <sup>13</sup> Joint o | r Infill <sup>14</sup> C | onsolidation  | Code <sup>15</sup> Oi   | rder No.  |  |   |   |  |
|                       | 29<br>Section            | No.<br>9<br>Section Township<br>29 23 S<br>Section Township | No.<br>9<br>Section Township Range<br>29 23 S 33 E<br>"BO<br>Section Township Range | Section Township Range Lot Idn<br>29 23 S 33 E<br>"Bottom H<br>Section Township Range Lot Idn | Sode <sup>3</sup> Property       No.     * Operator       9     OWL SWD O       * Surface       Section     Township       29     23 S       33 E     Lot Idn       * Bottom Hole Locatic       Section     Township       Range     Lot Idn       Feet from the       2301       * Bottom Hole Locatic       Section     Township | Sode <sup>5</sup> Property Name       CZERVIK SWD       No. <sup>1</sup> Operator Name       9     OWL SWD OPERATING       9 <sup>10</sup> Operator Name       9     OWL SWD OPERATING       10     Surface Location       11     Section       29     23 S     33 E       11     Feet from the       20     OWL SWD OPERATING       12     Section       29     23 S     33 E       12     Cot Idn       13     E       14     NORTH       15     Other Hole Location If Different       16     North/South line       17     North/South line       18     Lot Idn       19     Range       10     Feet from the     North/South line | Section     Township     Range     Lot Idn     Feet from the     North/South line     Feet from the       29     23 S     33 E     Lot Idn     Feet from the     North/South line     Feet from the       29     23 S     33 E     Lot Idn     Feet from the     North/South line     Feet from the       29     23 S     33 E     Lot Idn     Feet from the     North/South line     Feet from the       29     23 S     33 E     Lot Idn     Feet from the     NORTH     2426       "Bottom Hole Location If Different From Su       Section       Township     Range     Lot Idn     Feet from the | * Property Name         CZERVIK SWD         No.       * Operator Name         9       OWL SWD OPERATING         Section       Township       Range       Lot Idn       Feet from the       North/South line       Feet from the       East/West line         29       23 S       33 E       Lot Idn       Feet from the       North/South line       Feet from the       East/West line         WEST       ** Bottom Hole Location If Different From Surface       ** Bottom the       North/South line       Feet from the       East/West line |

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.

| 15             |                             |   |   | 2 | "OPERATOR CERTIFICATION<br>I hereby certify that the information contained<br>herein is true and complete to the best of my<br>knowledge and belief, and that this organization<br>either owns a working interest or unleased mineral<br>interest in the land including the proposed bottom<br>hole location or has a right to drill this well at<br>this location pursuant to a contract with an owner |
|----------------|-----------------------------|---|---|---|---|
| D              | C I                         | B   | A |   | of such a mineral or working interest, or to a<br>voluntary pooling agreement or a compulsory<br>pooting order heretofore entered by the division.  |
| <br>           | +<br>                       |   |   |   | RAMONA HOVEY<br>Printed Name Date   |
| E              |                             | G   | Н |   | <u>Vamona Clonquist.com</u><br>Email Address Date   |
| <u> 2426</u> . | 23' =♥                      | 1   |   |   | <b>"SURVEYOR CERTIFICATION</b>  |
| L              | NAD 83 G                    | DETIC DATA<br>RID - NM EAST<br>IK SWD NO. 1<br>65/161.92 N<br>69513.33 E  | 1 |   | I hereby certify that the well location<br>shown on thi plat was plotted from<br>field notes of actual surveys made by<br>me or under my supervision, and that<br>the same is true and correct to the<br>best of my belief.   |
|                | LONG=<br>1 - Y= 467452<br>+ | 32.276646 N<br>103.595037 W<br>1.39, X= 767069.94<br>1.59, X= 772355.75 +<br>1.37, X= 772387.42<br>1.64, X= 767108.74 |   |   | Date of Survey  |
| M              | N                           | 0   | Ρ | 3 | POFESSIONAL SUF   |
| ( <u>)</u>     | I                           | I   |   |   | Certificate Number<br>2055.9  |

**PROOF OF NOTICES SENT** 

|  |   | Lea County, NM                         |   |  |  |  |
|--|---|--|---|--|--|--|
| OWL SWD Operating, LLC                 |   |  |   |  |  |  |
| S/T/R UNIT                             |   | REGULATORY                             | MAILING ADDRESS                                     |  |  |  |
|  |   | SURFACE OWNER                          | MAILING ADDRESS                                     |  |  |  |
|  |   | BUREAU OF LAND MANAGEMENT              | 310 DINOSAUR TRAIL<br>SANTA FE, NM 87502            |  |  |  |
|  |   | MINERAL LESSEE                         | MAILING ADDRESS                                     |  |  |  |
| 19/23S/33E<br>21/23S/33E<br>30/23S/33E | I,O,P<br>L,M,N<br>A,H,I                 | CONOCOPHILLIPS CO                      | PO BOX 7500<br>BARTLESVILLE, OK 74005               |  |  |  |
|  |   | OFFSET OPERATORS                       | MAILING ADDRESS                                     |  |  |  |
| 29/23S/33E<br>30/23S/33E               | ALL<br>P                                | OXY USA INC                            | PO BOX 4294<br>HOUSTON, TX 77210                    |  |  |  |
| 20/23S/33E<br>28/23S/33E<br>33/23S/33E | E,F,K,L,M,N<br>C,D,E,F,K,L,M,N<br>C,D,E | DEVON ENERGY PRODUCTION<br>COMPANY, LP | 20 N BROADWAY<br>OKLAHOMA CITY, OK 73102            |  |  |  |
| 20/23S/33E                             | G,H,I,J,O,P                             | COG OPERATING LLC                      | 550 W TEXAS<br>MIDLAND, TX 79701                    |  |  |  |
| 30/23S/33E                             | B,C,F,G,J,K,O                           | CIMAREX ENERGY CO                      | 202 S. CHEYENNE AVE., SUITE 1000<br>TULSA, OK 74103 |  |  |  |
| 32/23S/33E                             | A,B,C,D,E,F,G,H                         | EOG Y RESOURCES INC                    | 104 S 4TH ST<br>ARTESIA, NM 88210                   |  |  |  |
| 32/23S/33E                             | D,E                                     | EOG RESOURCES INC                      | PO BOX 2267<br>MIDLAND, TX 79702                    |  |  |  |
|  |   | OTHER PARTIES                          | MAILING ADDRESS                                     |  |  |  |

Notices were sent on 10/17/2018 for the Czervik SWD #1 application by mailing them a copy of the Form C-108. Proof of receipt of notice will be submitted to the OCD under separate cover.

Sincerely,

anoulton

Ramona K. Hovey Sr. Petroleum Engineer / Lonquist & Co., LLC For OWL SWD Operating, LLC

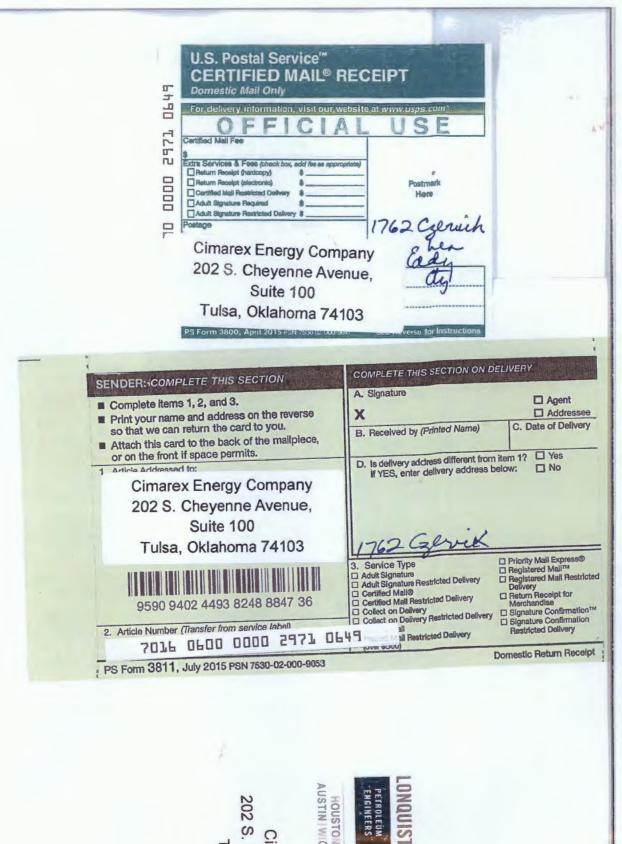
| ם고        | U.S. Postal Service <sup>™</sup><br>CERTIFIED MAIL <sup>®</sup> RECEIPT<br>Domestic Mail Only  |
|-----------|--|
| 06        | For delivery information, visit our website at www.usps.com  |
| 1775 0000 | Certified Mail Fee<br>\$ Extra Services & Fees (check box, add fee as appropriate) Beturn Receipt (inardoopr) Beturn Receipt (inardoopr) Certified Meil Restricted Delivery \$ Cerified Meil Restricted Delivery \$ Certified Meil Restrife Me |
| 7016 0600 | Postage her Caug<br>Bureau of Land Management<br>310 Dinosaur Trail<br>Santa Fe, New Mexico 87502  |
|           | PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions   |

| Complete items 1, 2, and 3.   | COMPLETE THIS SECTION ON  | DELIVERY   |
|---|---|--|
| Print your name and address on the reverse  | A. Signature  |  |
| so that we can return the card to you.  | X   | Agent<br>Addressee   |
| Attach this card to the back of the mailpiece,<br>or on the front if space permits. | B. Received by (Printed Name)   | C. Date of Delivery  |
| 1. Article Addressed to:  | D. Is delivery address different from   | n item 1?  Yes   |
| Bureau of Land Management<br>310 Dinosaur Trail<br>Santa Fe, New Mexico 87502       | If YES, enter delivery address  |  |
| 9590 9402 4493 8248 8847 43   | 3. Service Type<br>Adult Signature<br>Adult Signature Restricted Delivery<br>Certified Mail Restricted Delivery<br>Certified Mail Restricted Delivery | Priority Mail Express®     Registered Mail™     Registered Mail Restricted     Delivery     Return Receipt for |
| Article Alumber (Tree 1   | Collect on Delivery   | Merchandise  |
| 7016 0600 0000 2971 0633  | lait  | □ Signature Confirmation™<br>□ Signature Confirmation  |

PLACE ST CKED AT



7016 0600 0000 





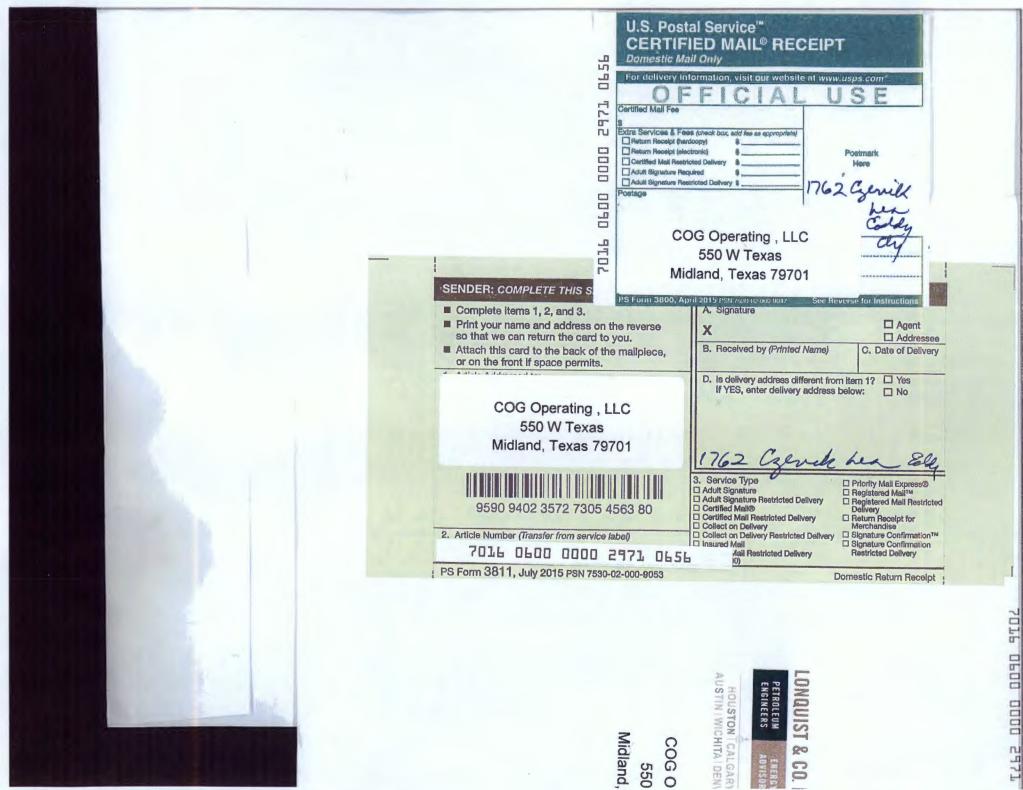


| SENDER: COMPLETE THIS SECTION   | COMPLETE THIS SECTION ON DI   | ELIVERY  |
|---|---|--|
| <ul> <li>Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse</li> </ul>                           | A. Signature  | Agent<br>Addressee   |
| so that we can return the card to you.<br>Attach this card to the back of the mailplece,<br>or on the front if space permits. | B. Received by (Printed Name)   | C. Date of Delivery  |
| D. Is delivery address different from Iter<br>If YES, enter delivery address before   |   | Item 1? Yes<br>No  |
| Conoco Phillips Company   | 1762 Gebriek her Elly   |  |
| P. O. Box 7500<br>Bartlesville, Oklahoma 74005  | 1762 Cabriek  | her Ely  |
|   | 3. Service Type<br>Adult Signature<br>Adult Signature Restricted Delivery<br>Certified Mail®<br>Certified Mail Restricted Delivery<br>Collect on Delivery   | Priority Mail Express® Registered Mail <sup>™</sup> Registered Mail <sup>™</sup> Registered Mail Restricte Delivery Return Receipt for Merchandise |
| Bartlesville, Oklahoma 74005  | 3. Service Type<br>Adult Signature<br>Adult Signature Restricted Delivery<br>Certified Mail®<br>Certified Mail® | □ Priority Mall Express®<br>□ Registered Mail™<br>□ Registered Mail Restricte<br>Delivery<br>□ Return Receipt for                                  |

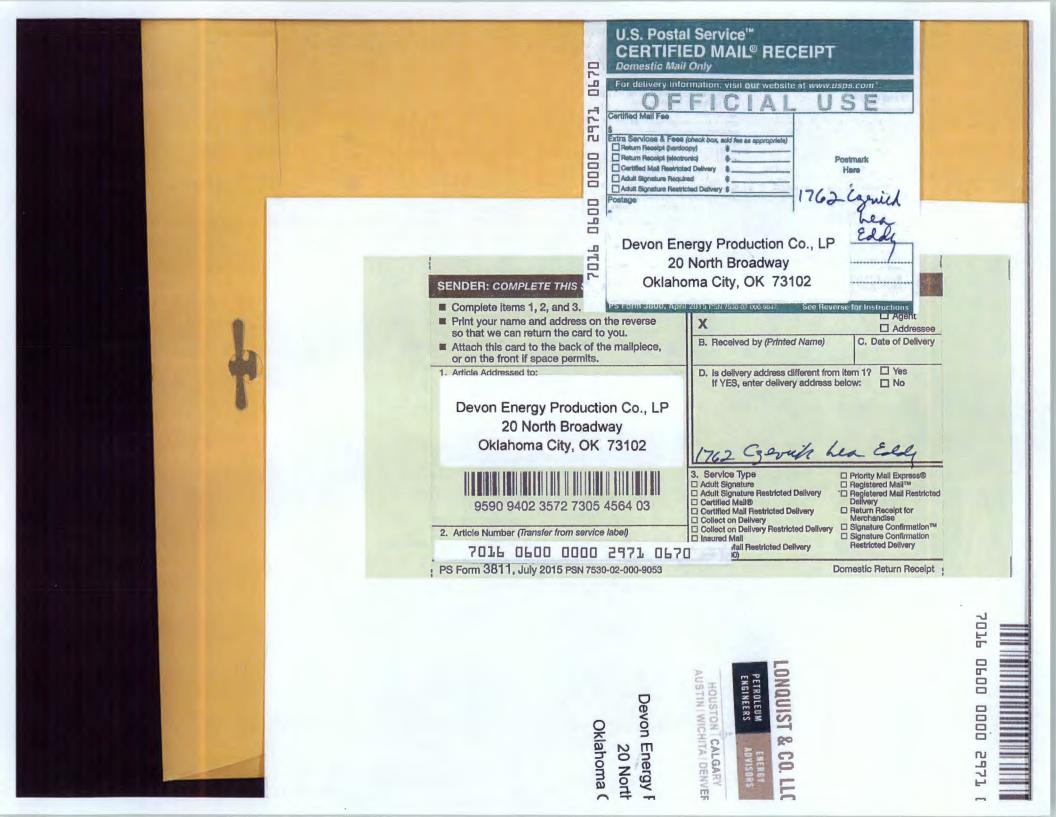
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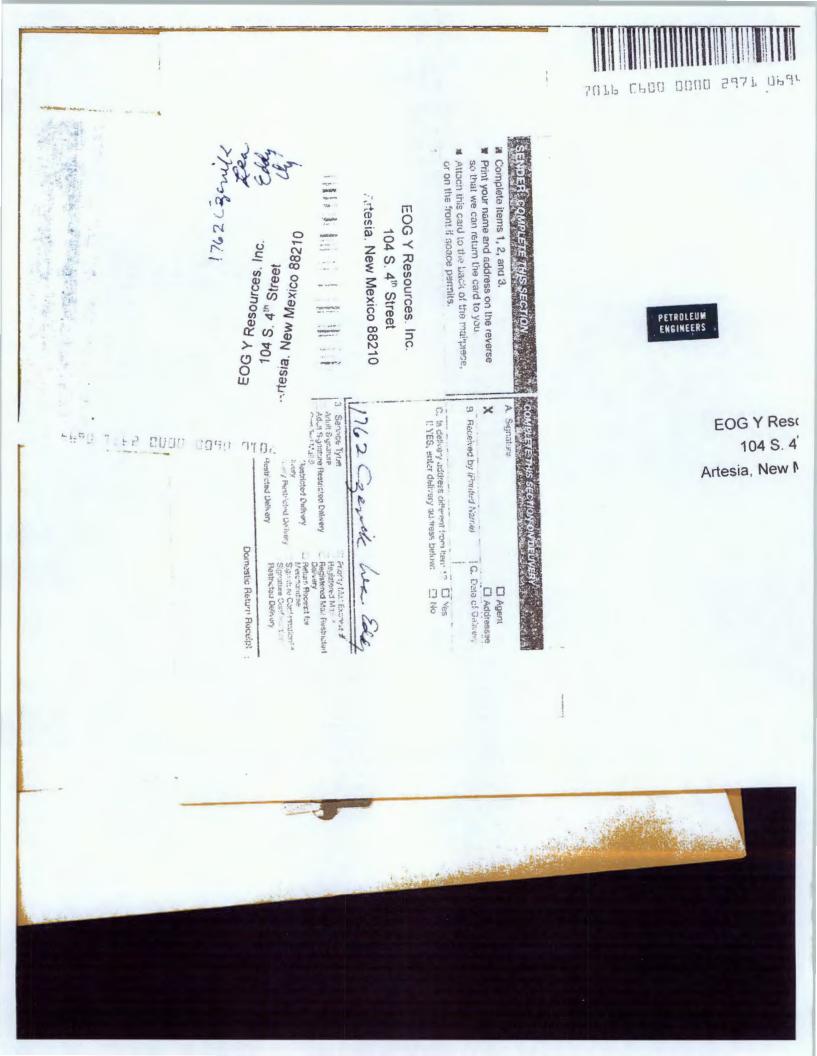
| 4 | Building and drages on the reactions         Building and reactions drag |
|---|---|
|   | 2. Article Number (Transfer from service label)       □ Certified Mail Restricted Delivery       □ Return Receipt for Merchandise         7016       0600       2971       0687       1ail Restricted Delivery       □ Signature Confirmation ™   |
|   | PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt  |



Midland, Texas 79702



Bee Cave, Texas 78738 USA 12912 Hill Country Blvd





OXY USA, Inc. P. O. Box 4294 Houston, Texas 77210

12912 Hill Country Blvd Suite F-200 Bee Cave, Texas /8/38 USA

PETROLEUM

# LONQUIST & CO. LLC

PETROLEUM

ENGINEERS

AUSTIN HOUSTON ENERGY ADVISORS WICHITA CALGARY

www.lonquist.com

October 10, 2018

BUREAU OF LAND MANAGEMENT 310 DINOSAUR TRAIL SANTA FE, NM 87502

Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for OWL SWD Operating, LLC's Czervik SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application.

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Any questions should be directed towards OWL SWD Operating, LLC's agent, Lonquist & Co., LLC.

Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

(512) 600-1774 steve@longuist.com

# LONQUIST & CO. LLC

ENERGY

**ADVISORS** 

AUSTIN HOUSTON PETROLEUM Engineers WICHITA CALGARY

www.lonquist.com

October 10, 2018

CIMAREX ENERGY CO 202 S. CHEYENNE AVE., SUITE 1000 TULSA, OK 74103

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AUSTIN HOUSTON PETROLEUM ENERGY ENGINEERS ADVISORS WICHITA CALGARY

www.lonquist.com

October 10, 2018

COG OPERATING LLC 550 W TEXAS MIDLAND, TX 79701

Subject: Czervik SWD No. 1 Authorization to Inject

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AUSTIN HOUSTON PETROLEUM ENERG Engineers Adviso WICHITA CALGARY

ww.longuist.cem

October 10, 2018

CONOCOPHILLIPS CO PO BOX 7500 BARTLESVILLE, OK 74005

Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Longuist & Co., LLC

www.longuist.com

ADVISORS

AUSTIN HOUSTON WICHITA

PETROLEUM

October 10, 2018

DEVON ENERGY PRODUCTION COMPANY, LP 20 N BROADWAY OKLAHOMA CITY, OK 73102

#### Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

PETROLEUM

ENGINEERS

AUSTIN HOUSTON ENERGY

WICHITA CALGARY

www.longuist.com

October 10, 2018

EOG RESOURCES INC PO BOX 2267 MIDLAND, TX 79702

#### Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON PETROLEUM ENI ENGINEERS ADVI WICHITA

www.tonquist.com

October 10, 2018

EOG Y RESOURCES INC 104 S 4TH ST ARTESIA, NM 88210

Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON PETROLEUM ENE Engineers Advis WICHITA

www.lonquist.com

October 10, 2018

OXY USA INC PO BOX 4294 HOUSTON, TX 77210

#### Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT Oil Conservation Division 1220 South St. Francis Dr. Santa Fc, New Mexico 87505

### APPLICATION FOR AUTHORIZATION TO INJECT

| 1.     | PURPOSE:Secondary RecoveryPressure MaintenanceX_DisposalStorage<br>Application qualifies for administrative approval?YesNo  | •         |
|--------|---|-----------|
| II.    | DPERATOR: <u>OWL SWD Operating, LLC</u><br>ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, TX 75255<br>CONTACT PARTY: Preston Carr PHONE: (855) 695-7937  |           |
| III.   | WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.<br>Additional sheets may be attached if necessary.   |           |
| IV.    | Is this an expansion of an existing project?YesX_No<br>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. Suc<br>data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schemati<br>of any plugged well illustrating all plugging detail.  | h         |
| VII.   | Attach data on the proposed operation, including:   |           |
|        | <ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol> | L         |
| *VIII. | Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and dept<br>Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total<br>dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known<br>be immediately underlying the injection interval.   |           |
| IX.    | Describe the proposed stimulation program, if any.  |           |
| *Х.    | Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted   | 1).       |
| *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 drinking water.   | ita<br>of |
| 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 a belief.  | nd        |
|        | NAME: Ramona Hovey // TITLE: Consulting Engineer - Agent for OWL SWD Operating. LLC   |           |
|        | SIGNATURE: DATE: 10/11/2018   |           |
| *      | E-MAIL ADDRESS: ramona@lonquist.com<br>If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.  |           |

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.

#### INJECTION WELL DATA SHEET

### OPERATOR: OWL SWD Operating, LLC (OGRID 308339)

### WELL NAME & NUMBER: Czervik SWD No. 1

WELL LOCATION: 2,301' FNL & 2,426' FWL FOOTAGE LOCATION

<u>F</u> UNIT LETTER

WELLBORE SCHEMATIC

| <u>F</u><br>t letter      | <u>29</u><br>SECTION | <u>23 S</u><br>TOWNSHIP RANGE  |                  |
|---------------------------|----------------------|--------------------------------|------------------|
| WE                        | ELL CONSTRU          | CTION DATA                     |                  |
|                           | Surface (            | Casing                         |                  |
| Hole Size: <u>26"</u>     |                      | Casing Size: 20"               |                  |
| Cemented with: 3,600 sks  |                      | or                             | _ft³             |
| Top of Cement: surface    |                      | Method Determined: circulation |                  |
|                           | Intermediate         | e Casing 1                     |                  |
| Hole Size: <u>17-1/2"</u> |                      | Casing Size: 13-5/8"           |                  |
| Cemented with: 3,640 sks  |                      | or                             | _ft <sup>3</sup> |
| Top of Cement: surface    |                      | Method Determined: circulation |                  |
|                           | Intermediate         | e Casing 2                     |                  |
| Hole Size: <u>12-1/4"</u> | ~                    | Casing Size: 9-5/8"            |                  |
| Cemented with: 3,145 sks  |                      | 0r                             | _ft³             |
| Top of Cement: surface    |                      | Method Determined: circulation |                  |
|                           |                      |                                |                  |

Side 1

### Production Liner

Hole Size: <u>8-1/2"</u>

Casing Size: 7-5/8" or \_\_\_\_\_

Cemented with: 315 sks

Top of Cement: <u>13,875'</u>

Method Determined: Calculation

ft<sup>3</sup>

Total Depth: 18,700'

Injection Interval

17,157 feet to 18,700 feet

(Open Hole)

#### **INJECTION WELL DATA SHEET**

Tubing Size: <u>5.500", 20.0 lb/ft, P-110 BTC and UFJ (or equivalent), from 0' – 17,100'</u> Lining Material: <u>Duoline</u>

Type of Packer: 7-5/8" x 5.5" D&L Oil Tools Permapack Packer - Single Bore

Packer Setting Depth: 17,100'

Other Type of Tubing/Casing Seal (if applicable):

### Additional Data

1. Is this a new well drilled for injection? <u>X</u> Yes No

If no, for what purpose was the well originally drilled?

- 2. Name of the Injection Formation: Silurian-Devonian
- 3. Name of Field or Pool (if applicable):
- 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:

| Formation     | Depth   |
|---------------|---------|
| Delaware      | 5,141'  |
| Cherry Canyon | 6,052′  |
| Bone Spring   | 9,007'  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Моггоw        | 15,300' |
| Devonian      | 17,157' |

### OWL SWD Operating, LLC.

Czervik SWD No. 1

### FORM C-108 Supplemental Information

### III. Well Data

A. Wellbore Information

1.

| Well information |                         |  |  |
|------------------|-------------------------|--|--|
| Lease Name       | Czervik SWD             |  |  |
| Well No.         | 1                       |  |  |
| Location         | Unit F S-29 T-23S R-33E |  |  |
| Footage Location | 2,301' FNL & 2,426' FWL |  |  |

2.

a. Wellbore Description

| Casing Information |           |                                |                            |                              |  |  |
|--------------------|-----------|--------------------------------|----------------------------|------------------------------|--|--|
| Type Surface       |           | Intermediate 1                 | Intermediate 2             | Production Liner             |  |  |
| OD                 | 20"       | 13-5/8"                        | 9-5/8"                     | 7-5/8″                       |  |  |
| WT                 | 0.635″    | 0.625″                         | 0.545″                     | 0.562"                       |  |  |
| ID                 | 18.730"   | 12.375″                        | 8.535″                     | 6.501″                       |  |  |
| Drift ID           | 18.542″   |                                | 8.379″                     | 6.376″                       |  |  |
| COD                | 21.000"   |                                | 10.625″                    | 7.625″                       |  |  |
| Weight             | 133 lb/ft | 88.2 lb/ft                     | 53.5 lb/ft                 | 42.8 lb/ft                   |  |  |
| Grade              | J-55 STC  | HCP-110 STC (Or<br>Equivalent) | HCQ-125 (Or<br>Equivalent) | P-110 UFJ (Or<br>Equivalent) |  |  |
| Hole Size          | 26"       | 17-1/2"                        | 12-1/4"                    | 8-1/2"                       |  |  |
| Depth Set          | 1,825'    | 5,150'                         | 14,075'                    | 13,875' - 17,157'            |  |  |

#### b. Cementing Program

|                          | Cement Information      |                         |                                       |                  |  |  |  |  |
|--------------------------|-------------------------|-------------------------|---------------------------------------|------------------|--|--|--|--|
| Casing<br>String         | Surface                 | Intermediate 1          | Production                            | Production Liner |  |  |  |  |
| Lead<br>Cement           | HALCEM                  | HALCEM                  | Stage 1: NEOCEM<br>Stage 2: NEOCEM    |                  |  |  |  |  |
| Lead<br>Cement<br>Volume | 2,580 sks               | 3,095 sks               | Stage 1: 1625 sks<br>Stage 2: 795 sks |                  |  |  |  |  |
| Tail<br>Cement           | HALCEM                  | HALCEM                  | Stage 1: NEOCEM<br>Stage 2: HALCEM    | VERSACEM         |  |  |  |  |
| Tail<br>Cement<br>Volume | 1,020 sks               | 545 sks                 | Stage 1: 625 sks<br>Stage 2: 100 sks  | 315 sks          |  |  |  |  |
| Cement<br>Excess         | 100%                    | 100%                    | 100%                                  | 50%              |  |  |  |  |
| тос                      | Surface                 | Surface                 | Surface                               | 13,875'          |  |  |  |  |
| Method                   | Circulate to<br>Surface | Circulate to<br>Surface | Circulate to Surface                  | Calculation      |  |  |  |  |

### 3. Tubing Description

|           | Tubing                      |                             |
|-----------|-----------------------------|-----------------------------|
| OD        | 5-1/2"                      | 5-1/2"                      |
| WT        | 0.361″                      | 0.361"                      |
| ID        | 4.778″                      | 4.778″                      |
| Drift ID  | 4.653″                      | 4.653″                      |
| COD       | 6.050"                      | 5.500"                      |
| Weight    | 20 lb/ft                    | 20 lb/ft                    |
| Grade     | P-110 BTC (Or<br>Equivalent | P-110 UFJ (Or<br>Equivalent |
| Depth Set | 13,700′                     | 13,700'-17,100'             |

Tubing will be lined with Duoline.

### 4. Packer Description

D&L Oil Tools 7-5/8" x 5-1/2" Permapack Packer -- Single Bore

- B. Completion Information
  - 1. Injection Formation: Silurian Devonian
  - 2. Gross Injection Interval: 17,157' 18,700'

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      | 5,141'  |
| Cherry Canyon | 6,052'  |
| Bone Spring   | 9,007'  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Morrow        | 15,300' |
| Devonian      | 17,157' |

#### VI. Area of Review

No wells within the one-mile AOR penetrated the proposed injection zone.

#### VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD Maximum Volume: 30,000 BPD

- 2. Closed System
- 3. Anticipated Injection Pressure:

Average Injection Pressure: 2,573 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 Bone Springs and Delaware formations.

5. The Devonian Formation is productive of oil and gas in this 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 near Jal are 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 successful Salt Water Disposal horizon.

| Formation          | Depth   |
|--------------------|---------|
| Rustler            | 1,275'  |
| Salado             | 1,775'  |
| Delaware           | 5,141'  |
| Cherry Canyon      | 6,052′  |
| Bone Spring        | 9,007′  |
| Wolfcamp           | 12,253' |
| Strawn             | 14,076′ |
| Atoka              | 14,279' |
| Morrow             | 15,300' |
| Mississippian Lime | 16,545' |
| Woodford           | 16,970' |
| Devonian           | 17,157′ |
| Fusselman          | 18,107' |
| Montoya            | 18,644' |

A. Injection Zone: Devonian-Silurian Formation

#### B. Underground Sources of Drinking Water

Water wells in the one-mile surrounding area for the proposed Czervik SWD No.1 well are at depths ranging from 550 ft to 650 ft. The Rustler may also be another USDW and will be protected through the top of the Salado Formation at 1,775' by setting surface casing at 1,825'.

| 20   | surface   | csg in a   | 26   | inch hole.   |   | Design F  |   | SUR  |   |
|--|---|--|--|--|---|---|---|--|---|
| Segment  | #/ft  | Grade  |  | Coupling   | Joint   | Collapse  | Burst   | Length   | Weight  |
| "A"  | 133.00  | J  | 55   | ST&C   | 4.91  | 1.72  | 1.24  | 1,825  | 242,725   |
| "B"  |   |  |  |  |   |   |   | 0  | 0   |
|  | mud, 30min Sfo  |  |  | Tail Cmt   | does not  | circ to sfc.  | Totals:   | 1,825  | 242,725   |
|  |   |  |  | ment Volume  |   | the land is in  |   |  |   |
| Hole   | Annular   | 1 Stage  | 1 Stage  | Min  | 1 Stage   | Drilling  | Calc  | Req'd  | Min Dist  |
| Size   | Volume  | Cmt Sx   | CuFt Cmt   | Cu Ft  | % Excess  | Mud Wt  | MASP  | BOPE   | Hole-Cplg   |
| 26   | 1.5053  | 3600   | 5652   | 2824   | 100   | 9.20  | 1328  | 2M   | 2.50  |
| 13 578   | casing in   | side the   | 20   |  |   | Design F  | actors  | INTERA   | <b>NEDIATE</b>  |
| Segment  | #/ft  | Grade  |  | Coupling   | Joint   | Collapse  | Burst   | Length   | Weight  |
| "A"  | 88.20   | HCP  | 110  | BUTT   | 4.76  | 2.41  | 1.26  | 5,150  | 454,230   |
| "B"  | 00.20   | nor  | 110  | DOTT   | 4.10  | 2.71  | 1.2.0   | 0,100  | 0   |
| and the second sec | mud, 30min Sfe  | c Csg Test osig  | -  |  |   |   | Totals:   | 5,150  | 454,230   |
|  | ement volum   |  |  | ieve a top of  | 0   | ft from su  |   | 1825   | overlap.  |
| Hole   | Annular   | 1 Stage  | 1 Stage  | Min  | 1 Stage   | Drilling  | Calc  | Req'd  | Min Dist  |
| Size   | Volume  | Cmt Sx   | CuFt Cmt   | Cu Ft  | % Excess  | Mud Wt  | MASP  | BOPE   | Hole-Cplg   |
| 17 1/2   | 0.6578  | 3640   | 6092   | 3868   | 57  | 9.20  | 3923  | 5M   | 1.56  |
|  |   |  |  |  |   |   |   |  |   |
| 95/8   | casing in   | side the   | 13 5/8   |  |   | Design Fa   | ctors   | PROD   | UCTION  |
| 95/8<br>Segment  | casing in<br>#/ft   |  | 13 5/8   | Coupling   | Joint   | Design Fac  | a second s |  |   |
|  | #/ft  | Grade  | an F   | Coupling   | Joint<br>2.51   | Collapse  | Burst   | Length   | Weight  |
| Segment  |   | Grade  | <b>13 5/8</b>  | and a second sec | Joint<br>2.51   |   |   |  | Weight  |
| Segment<br>"A"<br>"B"  | #/ft  | Grade<br>HCC   | 125  | and a second sec |   | Collapse  | Burst   | Length<br>14,075<br>0  | Weight<br>753,013<br>0  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g  | <b>#/ft</b> 53.50   | Grade<br>HCC   | 125  | BUTT   |   | Collapse  | Burst<br>1.07<br>Totals:  | Length<br>14,075   | Weight<br>753,013<br>0  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g  | #/ft<br>53.50<br>; mud, 30min Sf  | Grade<br>HCC   | 125  | BUTT   | 2.51  | Collapse<br>1.26  | Burst<br>1.07<br>Totals:  | Length<br>14,075<br>0<br>14,075<br>5150  | Weight<br>753,013<br>0<br>753,013<br>overlap.   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c   | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum  | Grade<br>HCC<br>c Csg Test psig<br>ne(\$) are inte   | 125<br>: 3,097<br>ended to ach   | BUTT<br>leve a top of  | 2.51<br>0   | Collapse<br>1.26<br>ft from su  | Burst<br>1.07<br>Totals:<br>Inface or a   | Length<br>14,075<br>0<br>14,075  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole   | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage   | 125<br>: 3,097<br>anded to ach<br>1 Stage  | BUTT<br>leve a top of<br>Min   | 2.51<br>0<br>1 Stage  | Collapse<br>1.26<br>ft from su<br>Drilling  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc   | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd   | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size   | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular<br>Volume   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx   | 125<br>: 3,097<br>ended to ach<br>1 Stage<br>CuFt Cmt<br>7375  | BUTT<br>leve a top of<br>Min<br>Cu Ft  | 2.51<br>0<br>1 Stage<br>% Excess<br>63  | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE   | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cplg  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt   | #/ft<br>53.50<br>mud, 30min Sfi<br>tement volum<br>Annular<br>Volume<br>0.3132  | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145   | 125<br>: 3,097<br>ended to ach<br>1 Stage<br>CuFt Cmt<br>7375  | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512  | 2.51<br>0<br>1 Stage<br>% Excess<br>63  | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cply<br>0.81  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8  | #/ft<br>53.50<br>mud, 30min Sfi<br>tement volum<br>Annular<br>Volume<br>0.3132  | Grade<br>HCC<br>c Csg Test psig<br>he(s) are inte<br>1 Stage<br>Cmt Sx<br>3145   | 125<br>: 3,097<br>ended to ach<br>1 Stage<br>CuFt Cmt<br>7375  | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need                                      | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment   | #/ft<br>53.50<br>mud, 30min Sfi<br>tement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>/top @<br>Grade  | a 125<br>3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with  | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint                             | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse                                  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst   | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"  | #/ft<br>53.50<br>mud, 30min Sfi<br>tement volum<br>Annular<br>Volume<br>0.3132  | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>/top @<br>Grade  | 125<br>: 3,097<br>ended to ach<br>1 Stage<br>CuFt Cmt<br>7375  | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need                                      | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"   | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>7/top @<br>Grade<br>F  | a 125<br>3,097<br>Inded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110                                   | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint                             | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse                                  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,470<br>0   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g   | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>7/top @<br>Grade<br>F<br>c Csg Test psig                             | 125<br>3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110<br>3,775                            | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint   | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74                     | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2                           | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:  | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M<br>Length<br>3,282<br>0<br>3,282                 | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,47<br>0<br>140,47  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c  | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sfi<br>ement volum            | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>//top @<br>Grade<br>F<br>c Csg Test psig<br>ne(s) are inte           | 125<br>3,097<br>Inded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110<br>3,775<br>anded to ach            | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint   | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74                     | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2<br>ft from su             | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:<br>Inface or a   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,47<br>0<br>140,47<br>overlap.                                |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole  | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sfi<br>ement volum<br>Annular | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>(top @<br>Grade<br>F<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage | 125<br>3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110<br>3,775<br>anded to ach<br>1 Stage | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint<br>leve a top of<br>Min   | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74<br>13875<br>1 Stage | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2<br>ft from su<br>Drilling | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:<br>Inface or a<br>Calc   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M<br>Length<br>3,282<br>0<br>3,282<br>200<br>Req'd | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weight<br>140,470<br>0<br>140,470<br>0<br>140,470<br>overlap.<br>Min Dist |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c  | #/ft<br>53.50<br>mud, 30min Sfi<br>ement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sfi<br>ement volum            | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>//top @<br>Grade<br>F<br>c Csg Test psig<br>ne(s) are inte           | 125<br>3,097<br>Inded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110<br>3,775<br>anded to ach            | BUTT<br>leve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint   | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74                     | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2<br>ft from su             | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:<br>Inface or a   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M  | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |

5-10040

PETROLEUM ENERGY ENGINEERS **ADVISORS** 

WICHITA

CALGARY

www.longuist.com

November 1, 2018

**AUSTIN** 

HOUSTON

New Mexico Energy, Minerals, and Natural Resources Department Oil Conservation Division District IV 1220 South St. Francis Drive Santa Fe, New Mexico 87505 (505) 476-3440

#### CZERVIK SWD NO. 1 AUTHORIZATION TO INJECT; PROOF OF RE: NOTICE

To Whom It May Concern:

Attached for your review, as part of the Form C-108, Application for Authorization to Inject for OWL SWD Operating, LLC's Czervik SWD No. 1, are the proofs of notice of the identified affected parties having received notice as attached. In the interest of minimizing printing, one full version of the notice is included plus the cover letters for each party, the sent receipts and the proof of delivery.

Any questions should be directed towards OWL SWD Operating, LLC's agent Longuist & Co., LLC.

Regards. Kamore Kttoney

> Ramona K. Hovey Sr. Petroleum Engineer Longuist & Co., LLC (512) 600-1777 ramona@longuist.com

| Lea County, NM                         |   |  |   |  |  |  |  |
|--|---|--|---|--|--|--|--|
| OWL SWD Operating, LLC                 |   |  |   |  |  |  |  |
| S/T/R                                  | UNIT                                    | REGULATORY                             | MAILING ADDRESS                                     |  |  |  |  |
|  |   | SURFACE OWNER                          | MAILING ADDRESS                                     |  |  |  |  |
|  |   | BUREAU OF LAND MANAGEMENT              | 310 DINOSAUR TRAIL<br>SANTA FE, NM 87502            |  |  |  |  |
|  |   | MINERAL LESSEE                         | MAILING ADDRESS                                     |  |  |  |  |
| 19/23S/33E<br>21/23S/33E<br>30/23S/33E | I,O,P<br>L,M,N<br>A,H,I                 | CONOCOPHILLIPS CO                      | PO BOX 7500<br>BARTLESVILLE, OK 74005               |  |  |  |  |
|  |   | OFFSET OPERATORS                       | MAILING ADDRESS                                     |  |  |  |  |
| 29/23S/33E<br>30/23S/33E               | ALL<br>P                                | OXY USA INC                            | PO BOX 4294<br>HOUSTON, TX 77210                    |  |  |  |  |
| 20/23S/33E<br>28/23S/33E<br>33/23S/33E | E,F,K,L,M,N<br>C,D,E,F,K,L,M,N<br>C,D,E | DEVON ENERGY PRODUCTION<br>COMPANY, LP | 20 N BROADWAY<br>OKLAHOMA CITY, OK 73102            |  |  |  |  |
| 20/23S/33E                             | G,H,I,J,O,P                             | COG OPERATING LLC                      | 550 W TEXAS<br>MIDLAND, TX 79701                    |  |  |  |  |
| 30/23S/33E                             | B,C,F,G,J,K,O                           | CIMAREX ENERGY CO                      | 202 S. CHEYENNE AVE., SUITE 1000<br>TULSA, OK 74103 |  |  |  |  |
| 32/23S/33E                             | A,B,C,D,E,F,G,H                         | EOG Y RESOURCES INC                    | 104 S 4TH ST<br>ARTESIA, NM 88210                   |  |  |  |  |
| 32/23S/33E                             | D,E                                     | EOG RESOURCES INC                      | PO BOX 2267<br>MIDLAND, TX 79702                    |  |  |  |  |
|  |   | OTHER PARTIES                          | MAILING ADDRESS                                     |  |  |  |  |

Notices were sent on 10/17/2018 and 10/29/2018 for the Czervik SWD #1 application by mailing them a copy of the Form C-108.

Sincerely,

29

Ramona K. Hovey Sr. Petroleum Engineer / Lonquist & Co., LLC For OWL SWD Operating, LLC

| For delivery information, visit our website at www.usps.com         OFFICIALUSE         OFFICIALUSE         Certified Mail Fee         Extra Services & Fees (check box, add fee as appropriate)       Postmark         Batum Receivide Mail Restricted Delivery       Postmark         Aduit Signature Restricted Delivery &       Postmark         Aduit Signature Restricted Delivery &       Postmark         Postage       Postmark         Bureau of Land Management       Eday         310 Dinosaur Trail       Santa Fe, New Mexico 87502 | 32   | U.S. Postal Service <sup>™</sup><br>CERTIFIED MAIL <sup>®</sup> RECEIPT<br>Domestic Mail Only   |
|---|------|---|
| Beturn Receipt (discronic)       Postmark         Cortified Mail Reprinted Delivery #       Postmark         Adult Signature Restricted Delivery #       1762 Cynnick         Postage       Edday         Bureau of Land Management       Edday         310 Dinosaur Trail       Edday         Santa Fe, New Mexico 87502       Post  | 90   | For delivery information, visit our website at www.usps.com   |
| Bureau of Land Management<br>310 Dinosaur Trail<br>Santa Fe, New Mexico 87502   |      | Services & Fees (check box, add fee as appropriate)     Astum Receipt (techcopy)     S     Patum Receipt (electronic)     S     Certified Mell Rechtoted Delivery |
| 310 Dinosaur Trail<br>Santa Fe, New Mexico 87502  |      | Postage (10 2 gentuce<br>Postage Eddy   |
|   | 2016 | 310 Dinosaur Trail<br>Santa Fe, New Mexico 87502  |

| SENDER: COMPLETE THIS SECTION  | COMPLETE THIS SECTION ON DELIVERY   |
|--|---|
| <ul> <li>Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse<br/>so that we can return the card to you.</li> </ul> | A. Signature<br>X Agent<br>Addressee  |
| Attach this card to the back of the mallplece,<br>or on the front if space permits.  | B. Received by (Printed Name) C. Date of Delivery   |
| 1. Article Addressent to:  | D. Is delivery address different from item 1?  Yes If YES, enter delivery address below:  No  |
| Bureau of Land Management<br>310 Dinosaur Trail<br>Santa Fe, New Mexico 87502  | 1762 Crepnik  |
| 9590 9402 4493 8248 8847 43  | 3. Service Type       Priority Mail Express®         Adult Signature Restricted Delivery       Registered Mail <sup>™M</sup> Certified Mail®       Delivery         Cortified Mail Restricted Delivery       Registered Mail Restricted Delivery         Collect on Delivery       Return Receipt for Merchandise |
| 2. Article Number (Transfer from service label)  | Collect on Delivery Restricted Delivery   |
| 7016 0600 0000 2971 063  | 2 fail Restricted Delivery Restricted Delivery  |

PLACE



7016 0600 0000





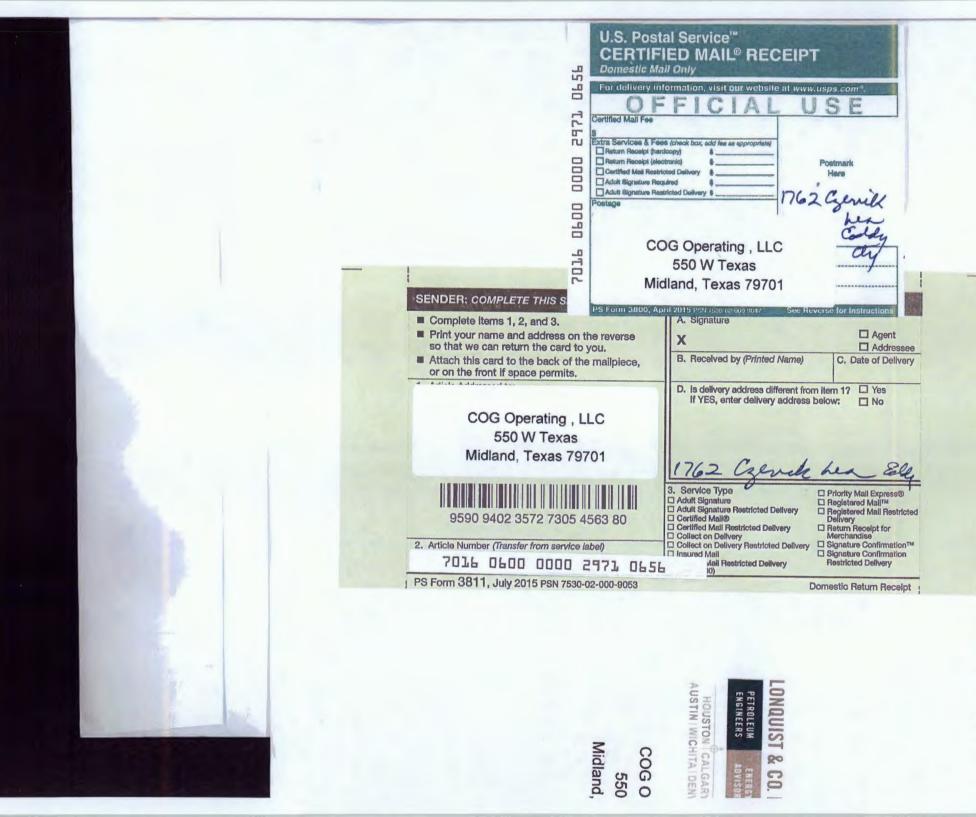


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PETRO

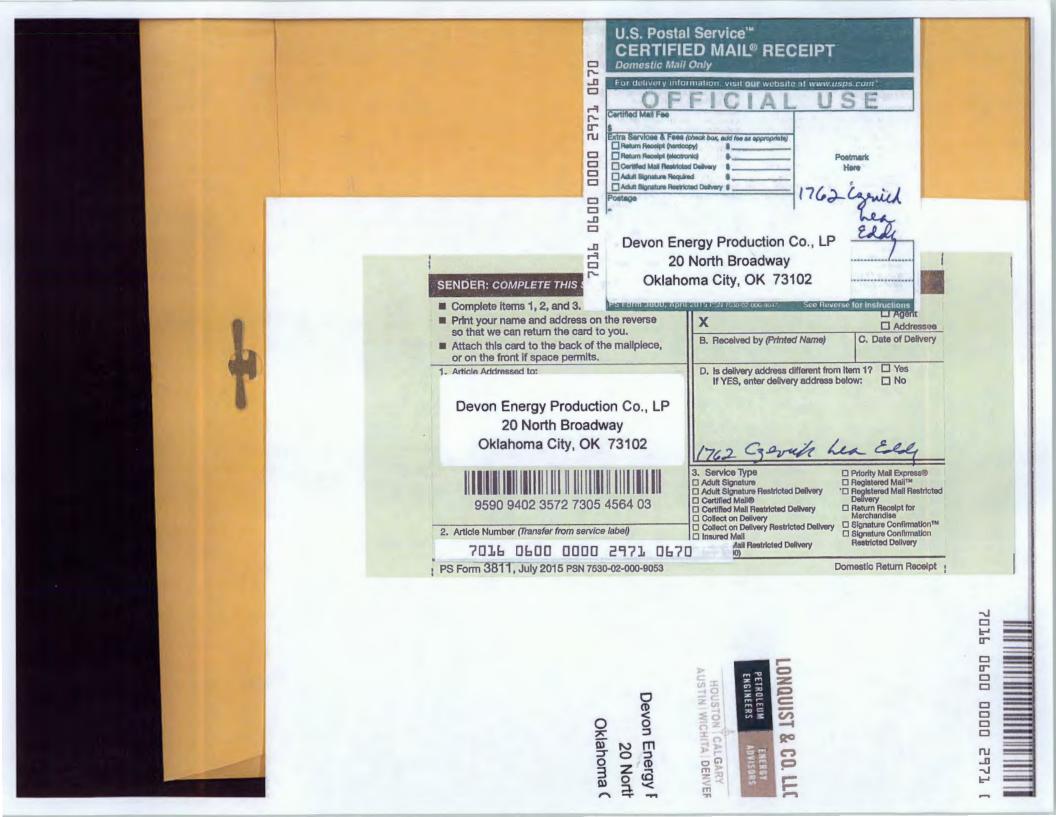
AUSTII

| SENDER: COMPLETE THIS SECTION   | COMPLETE THIS SECTION ON D  | ELIVERY   |
|---|---|---|
| <ul> <li>Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse</li> </ul>                           | A. Signature  | Agent<br>Addressee  |
| so that we can return the card to you.<br>Attach this card to the back of the mailpiece,<br>or on the front if space permits. | B. Received by (Printed Name)   | C. Date of Delivery   |
|   | D. Is delivery address different from<br>If YES, enter delivery address b   | Item 1? Yes<br>elow: No   |
| Conoco Phillips Company<br>P. O. Box 7500<br>Bartlesville, Oklahoma 74005   | 1762 Cabriek  | her Elly  |
| 9590 9402 3572 7305 4563 97   | 3. Service Type<br>Adult Signature<br>Adult Signature Restricted Delivery<br>Certified Mail®<br>Certified Mail Restricted Delivery<br>Collect on Delivery | <ul> <li>□ Priority Mail Express®</li> <li>□ Registered Mail™</li> <li>□ Registered Mail Restricte<br/>Delivery</li> <li>□ Return Receipt for<br/>Merchandise</li> <li>□ Signature Confirmation™</li> </ul> |
| 2. Article Number (Transfer from service label)   | Collect on Delivery Restricted Delivery   | Signature Confirmation<br>Restricted Delivery   |
| 2016 0000 0000 5921 066   | 101   |   |
| PS Form 3811, July 2015 PSN 7530-02-000-9053  | E   | omestic Return Receipt  |



2079 0P00 297 H

0000



| Complete liters 1, 2, and 3.     Complete liters 3, 2, and 3.     Complete liters 4, 2, and 4, and | Domestic Return Receipt |  | Production       Control Control         Control       Control |  |
|---|-------------------------|--|--|--|
|---|-------------------------|--|--|--|



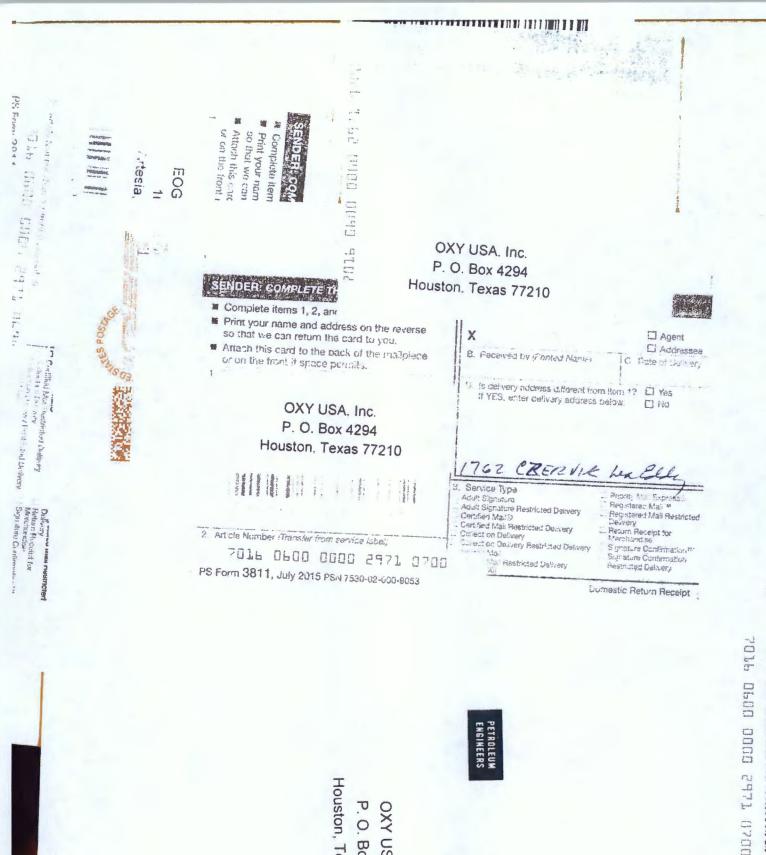
Midland, Texas 79702

P. O. Box 2267

12912 Hill Country Blvd Suite F-200 Bee Cave, Texas 78738 USA

LONQUIST & CO. LLC

| FRO THE DOOD | 1762 Gurrier<br>1762 Gurrier<br>1763 Gurrier<br>17 | EOG Y Resources. Inc.<br>104 S. 4 <sup>th</sup> Street<br>Artesia. New Mexico 88210<br>1762 Czerick her Elez | <ul> <li>A Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>A Attach this card to the maiphese, or on the front if space parmits.</li> <li>A Attach this card to the maiphese, or on the front if space parmits.</li> <li>A Attach this card to parmits.</li> <li>A Attach this pace pa</li></ul> |          |
|--------------|--|--|--|----------|
|              |  |  |  | <image/> |



OXY USA, Inc. P. O. Box 4294 Houston, Texas 77210

12912 Hill Country Blvd Suite F-200 Bee Cave Texas 78738 USA



#### **Shipment Receipt**

Ship from:

**STE 1650** HOUSTON, TX

770026423

7135599956

US

Steve Pattee

**1001 MCKINNEY ST** 

Address Information Ship to: BUREAU OF LAND MGMT

**301 DINOSAUR TRAIL** 

SANTA FE, NM 87508 US 5059542000

Shipment Information: Tracking no.: 773587066736 Ship date: 10/29/2018 Estimated shipping charges: 13.91 USD

Package Information

Pricing option: FedEx Standard Rate Service type: FedEx Ground Package type: Your Packaging Number of packages: 1 Total weight: 2 LBS Declared Value: 0.00 USD Special Services: Direct signature required Pickup/Drop-off: Use an already scheduled pickup at my location

**Billing Information:** Bill transportation to: MyAccount-089

Your reference 1645, 1646, 1792, 1793 - LEGAL NOTICES, RESEND Invoice no.: Department no .:

#### Thank you for shipping online with FedEx ShipManager at fedex.com.

#### **Please Note**

Please Note FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1000, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits; consult the applicable FedEx Service Guide for details. The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are csiculated.

ENERGY

ADVISORS

AUSTIN HOUSTON PETROLEUM Engineers WICHITA CALGARY

www.lonquist.com

October 10, 2018

BUREAU OF LAND MANAGEMENT 310 DINOSAUR TRAIL SANTA FE, NM 87502

Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for OWL SWD Operating, LLC's Czervik SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application.

According to the New Mexico Oil Conservation Division, surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date in which this application was mailed to them.

Any questions should be directed towards OWL SWD Operating, LLC's agent, Lonquist & Co., LLC.

Regards,

At 1

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON PETROLEUM ENERGY ENGINEERS ADVISORS WICHITA CALGARY

www.lonquist.com

October 10, 2018

CIMAREX ENERGY CO 202 S. CHEYENNE AVE., SUITE 1000 TULSA, OK 74103

Subject: Czervik SWD No. 1 Authorization to Inject

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AUSTIN HOUSTON PETROLEUM ENERGY ENGINEERS ADVISORS WICHITA CALGARY

www.lonquist.com

October 10, 2018

COG OPERATING LLC 550 W TEXAS MIDLAND, TX 79701

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To Whom It May Concern:

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Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON PETROLEUM ENER ENGINEERS ADVIS WICHITA CALGARY

www.longuist.com

October 10, 2018

CONOCOPHILLIPS CO PO BOX 7500 BARTLESVILLE, OK 74005

#### Subject: Czervik SWD No. 1 Authorization to Inject

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Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

ENERGY

PETROLEUM

ENGINEERS

AUSTIN HOUSTON WICHITA

www.longuist.com

October 10, 2018

DEVON ENERGY PRODUCTION COMPANY, LP 20 N BROADWAY OKLAHOMA CITY, OK 73102

Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON

PETROLEUM ENERGY Engineers advisors

montrainnelw

WICHITA

October 10, 2018

EOG RESOURCES INC PO BOX 2267 MIDLAND, TX 79702

#### Subject: Czervik SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON

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ENERGY

WICHITA

PETROLEUM

ENGINEERS

October 10, 2018

EOG Y RESOURCES INC 104 S 4TH ST ARTESIA, NM 88210

#### Subject: Czervik SWD No. 1 Authorization to Inject

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Lonquist & Co., LLC

AUSTIN HOUSTON PETROLEUM ENER Engineers advis WICHITA

ww.lenguist.com

October 10, 2018

OXY USA INC PO BOX 4294 HOUSTON, TX 77210

Subject: Czervik SWD No. 1 Authorization to Inject

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Regards,

Stephen L. Pattee, P.G. Regulatory Manager Longuist & Co., LLC

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

## APPLICATION FOR AUTHORIZATION TO INJECT

| l.     | PURPOSE:       Secondary Recovery       Pressure Maintenance       X       Disposal       Storage         Application qualifies for administrative approval?       X       Yes       No   |
|--------|---|
| II.    | OPERATOR: OWL SWD Operating, LLC<br>ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, TX 75255<br>CONTACT PARTY: Preston Carr PHONE: (855) 695-7937   |
| [[].   | WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.<br>Additional sheets may be attached if necessary.   |
| IV.    | Is this an expansion of an existing project?YesNo<br>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:   |
|        | <ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol> |
| *VIII. | Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth.<br>Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total<br>dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to<br>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<br>and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of<br>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: Ramona Hovey // TITLE: Consulting Engineer - Agent for OWL SWD Operating, LLC   |
|        | SIGNATURE: DATE: 10/11/2018   |
| *      | E-MAIL ADDRESS: <u>ramona@lonquist.com</u><br>If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.<br>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.

### INJECTION WELL DATA SHEET

#### OPERATOR: OWL SWD Operating, LLC (OGRID 308339)

## WELL NAME & NUMBER: Czervik SWD No. 1

WELL LOCATION: 2,301' FNL & 2,426' FWL FOOTAGE LOCATION

<u>F</u> UNIT LETT

WELLBORE SCHEMATIC

| <u>F</u><br>T LETTER            | <u>29</u><br>SECTION | <u>23 S</u><br>TOWNSHIP | <u>33 E</u><br>RANGE |      |  |  |
|---------------------------------|----------------------|-------------------------|----------------------|------|--|--|
| WELL CONSTRUCTION DATA          |                      |                         |                      |      |  |  |
| Surface Casing                  |                      |                         |                      |      |  |  |
| Hole Size: 26"                  |                      | Casing Size: 20"        |                      |      |  |  |
| Cemented with: <u>3,600 sks</u> |                      | 0r                      |                      | _ft³ |  |  |
| Top of Cement: surface          |                      | Method Determined:      | <u>circulation</u>   |      |  |  |
|                                 | Intermediate         | Casing 1                |                      |      |  |  |
| Hole Size: <u>17-1/2"</u>       |                      | Casing Size: 13-5/8"    |                      |      |  |  |
| Cemented with: 3,640 sks        |                      | or                      | ······               | _ft³ |  |  |
| Top of Cement: surface          |                      | Method Determined:      | <u>circulation</u>   |      |  |  |
|                                 | Intermediate         | Casing 2                |                      |      |  |  |
| Hole Size: <u>12-1/4"</u>       | •                    | Casing Size: 9-5/8"     |                      |      |  |  |
| Cemented with: <u>3,145 sks</u> |                      | 0r                      |                      | _ft³ |  |  |
|                                 |                      |                         |                      |      |  |  |

Top of Cement: surface

Method Determined: circulation

Side 1

## Production Liner

Hole Size: <u>8-1/2"</u>

Cemented with: 315 sks

Top of Cement: <u>13,875'</u>

Casing Size: 7-5/8"

*or*\_\_\_\_\_ft<sup>3</sup>

Method Determined: Calculation

Total Depth: 18,700'

Injection Interval

17,157 feet to 18,700 feet

(Open Hole)

#### **INJECTION WELL DATA SHEET**

Tubing Size: <u>5.500<sup>°</sup></u>, <u>20.0 lb/ft</u>, <u>P-110 BTC and UFJ (or equivalent)</u>, from <u>0' – 17,100'</u> Lining Material: <u>Duoline</u>

Type of Packer: 7-5/8" x 5.5" D&L Oil Tools Permapack Packer - Single Bore

Packer Setting Depth: 17,100'

Other Type of Tubing/Casing Seal (if applicable):

#### Additional Data

1. Is this a new well drilled for injection? <u>X</u> Yes <u>No</u>

If no, for what purpose was the well originally drilled?

2. Name of the Injection Formation: Silurian-Devonian

3. Name of Field or Pool (if applicable):

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:

.

•

| Formation     | Depth   |
|---------------|---------|
| Delaware      | 5,141'  |
| Cherry Canyon | 6,052′  |
| Bone Spring   | 9,007′  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Могтоw        | 15,300' |
| Devonian      | 17,157' |

## OWL SWD Operating, LLC.

Czervik SWD No. 1

## FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

.

1.

| Well information |                         |  |  |  |
|------------------|-------------------------|--|--|--|
| Lease Name       | Czervik SWD             |  |  |  |
| Well No.         | 1                       |  |  |  |
| Location         | Unit F S-29 T-23S R-33E |  |  |  |
| Footage Location | 2,301' FNL & 2,426' FWL |  |  |  |

2.

a. Wellbore Description

| Casing Information |           |                                |                            |                              |  |  |  |
|--------------------|-----------|--------------------------------|----------------------------|------------------------------|--|--|--|
| Туре               | Surface   | Intermediate 1                 | Intermediate 2             | Production Liner             |  |  |  |
| OD                 | 20"       | 13-5/8"                        | 9-5/8"                     | 7-5/8″                       |  |  |  |
| WT                 | 0.635"    | 0.625″                         | 0.545″                     | 0.562"                       |  |  |  |
| ID                 | 18.730"   | 12.375"                        | 8.535″                     | 6.502"                       |  |  |  |
| Drift ID           | 18.542"   |                                | 8.379"                     | 6.376"                       |  |  |  |
| COD                | 21.000"   | and the second                 | 10.625″                    | 7.625″                       |  |  |  |
| Weight             | 133 lb/ft | 88.2 lb/ft                     | 53.5 lb/ft                 | 42.8 lb/ft                   |  |  |  |
| Grade              | J-55 STC  | HCP-110 STC (Or<br>Equivalent) | HCQ-125 (Or<br>Equivalent) | P-110 UFJ (Or<br>Equivalent) |  |  |  |
| Hole Size          | 26"       | 17-1/2"                        | 12-1/4"                    | 8-1/2"                       |  |  |  |
| Depth Set          | 1,825'    | 5,150'                         | 14,075′                    | 13,875' - 17,157'            |  |  |  |

b. Cementing Program

|                          | •                       | Cement                  | Information                           |                  |  |
|--------------------------|-------------------------|-------------------------|---------------------------------------|------------------|--|
| Casing<br>String         | Surface                 | Intermediate 1          | Production                            | Production Liner |  |
| Lead<br>Cement           | HALCEM                  | HALCEM                  | Stage 1: NEOCEM<br>Stage 2: NEOCEM    |                  |  |
| Lead<br>Cement<br>Volume | 2,580 sks               | 3,095 sks               | Stage 1: 1625 sks<br>Stage 2: 795 sks |                  |  |
| Tail<br>Cement           | HALCEM HALCEM           |                         | Stage 1: NEOCEM<br>Stage 2: HALCEM    | VERSACEM         |  |
| Tail<br>Cement<br>Volume | 1,020 sks               | 545 sks                 | Stage 1: 625 sks<br>Stage 2: 100 sks  | 315 sks          |  |
| Cement<br>Excess         | 100%                    | 100%                    | 100%                                  | 50%              |  |
| тос                      | Surface                 | Surface                 | Surface                               | 13,875'          |  |
| Method                   | Circulate to<br>Surface | Circulate to<br>Surface | Circulate to Surface                  | Calculation      |  |

3. Tubing Description

| Tubing    |                             |                             |  |  |  |  |  |
|-----------|-----------------------------|-----------------------------|--|--|--|--|--|
| OD        | 5-1/2"                      | 5-1/2"                      |  |  |  |  |  |
| WT        | 0.361"                      | 0.361"                      |  |  |  |  |  |
| ID        | 4.778"                      | 4.778"                      |  |  |  |  |  |
| Drift ID  | 4.653"                      | 4.653"                      |  |  |  |  |  |
| COD       | 6.050"                      | 5.500"                      |  |  |  |  |  |
| Weight    | 20 lb/ft                    | 20 lb/ft                    |  |  |  |  |  |
| Grade     | P-110 BTC (Or<br>Equivalent | P-110 UFJ (Or<br>Equivalent |  |  |  |  |  |
| Depth Set | 13,700'                     | 13,700'-17,100'             |  |  |  |  |  |

Tubing will be lined with Duoline.

4. Packer Description

D&L Oil Tools 7-5/8" x 5-1/2" Permapack Packer - Single Bore

- B. Completion Information
  - 1. Injection Formation: Silurian Devonian
  - 2. Gross Injection Interval: 17,157' 18,700'

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      | 5,141'  |
| Cherry Canyon | 6,052'  |
| Bone Spring   | 9,007'  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Morrow        | 15,300' |
| Devonian      | 17,157' |

## VI. Area of Review

No wells within the one-mile AOR penetrated the proposed injection zone.

#### VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD Maximum Volume: 30,000 BPD

- 2. Closed System
- 3. Anticipated Injection Pressure:

Average Injection Pressure: 2,573 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 Bone Springs and Delaware formations.

5. The Devonian Formation is productive of oil and gas in this 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 near Jal are 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 successful Salt Water Disposal horizon.

| Formation          | Depth   |
|--------------------|---------|
| Rustler            | 1,275'  |
| Salado             | 1,775′  |
| Delaware           | 5,141'  |
| Cherry Canyon      | 6,052′  |
| Bone Spring        | 9,007'  |
| Wolfcamp           | 12,253' |
| Strawn             | 14,076' |
| Atoka              | 14,279' |
| Morrow             | 15,300' |
| Mississippian Lime | 16,545' |
| Woodford           | 16,970' |
| Devonian           | 17,157' |
| Fusselman          | 18,107' |
| Montoya            | 18,644' |

A. Injection Zone: Devonian-Silurian Formation

B. Underground Sources of Drinking Water

Water wells in the one-mile surrounding area for the proposed Czervik SWD No.1 well are at depths ranging from 550 ft to 650 ft. The Rustler may also be another USDW and will be protected through the top of the Salado Formation at 1,775' by setting surface casing at 1,825'.

| 20  | surface   | csg in a   | 26   | inch hole.   |   | Design F  |   | SURI  |   |
|---|---|--|--|--|---|---|---|---|---|
| Segment   | #/ft  | Grade  |  | Coupling   | Joint   | Collapse  | Burst   | Length  | Weight  |
| "A"   | 133.00  | J  | 55   | ST&C   | 4.91  | 1.72  | 1.24  | 1,825   | 242,725   |
| "B"   |   |  |  |  |   |   |   | 0   | 0   |
|   | mud, 30min Sfc  |  |  | Tail Cmt<br>ment Volume  |   | circ to sfc.  | Totals:   | 1,825   | 242,725   |
| Hole  | Annular   | 1 Stage  | 1 Stage  | Min  | 1 Stage   | Drilling  | Calc  | Req'd   | Min Dist  |
| Size  | Volume  | Cmt Sx   | CuFt Cmt   | Cu Ft  | % Excess  | Mud Wt  | MASP  | BOPE  | Hole-Cplg   |
| 26  | 1.5053  | 3600   | 5652   | 2824   | 100   | 9.20  | 1328  | 2M  | 2.50  |
|   |   |  |  |  |   |   |   |   |   |
| 13 5/8  | casing in   | side the   | 20   |  |   | Design I  | actors  | INTERN  | NEDIATE   |
| Segment   | #/ft  | Grade  |  | Coupling   | Joint   | Collapse  | Burst   | Length  | Weight  |
| "A"   | 88.20   | HCP  | 110  | BUTT   | 4.76  | 2.41  | 1.26  | 5,150   | 454,230   |
| "B"   |   |  |  |  |   |   |   | 0   | 0   |
|   | mud, 30min Sfe  |  |  |  |   |   | Totals:   | 5,150   | 454,230   |
|   | ement volum   |  |  | and the second second  | 0   | ft from su  |   | 1825  | overlap.  |
| Hole  | Annular   | 1 Stage  | 1 Stage  | Min  | 1 Stage   | Drilling  | Calc  | Req'd   | Min Dist  |
| Size  | Volume  | Cmt Sx   | CuFt Cmt   | Cu Ft  | % Excess  | Mud Wt  | MASP  | BOPE  | Hole-Cplg   |
| 17 1/2  | 0.6578  | 3640   | 6092   | 3868   | 57  | 9.20  | 3923  | 5M  | 1.56  |
| 95/8  | casing in   | cide the   | 13 5/8   |  |   |   |   |   |   |
|   |   |  |  |  |   | Design Fa   | CIOFS   | PROD  | UCTION  |
|   |   |  | 13 3/0   | Counling   | loint   | Design Fa   |   |   | Weight  |
| Segment   | #/ft  | Grade  | 1.   | Coupling   | Joint   | Collapse  | Burst   | Length  | Weight  |
| Segment<br>"A"  |   | Grade  | 125  | Coupling<br>BUTT   | Joint<br>2.51   |   |   | Length<br>14,075  | Weight  |
| Segment<br>"A"<br>"B"   | <b>#/ft</b> 53.50   | Grade<br>HCC   | 125  | the second se    |   | Collapse  | Burst<br>1.07   | Length<br>14,075<br>0   | Weight<br>753,013<br>0  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g   | #/ft<br>53.50<br>mud, 30min Sf  | Grade<br>HCC   | 125<br>: 3,097   | BUTT   |   | Collapse  | Burst<br>1.07<br>Totals:  | Length<br>14,075  | Weight<br>753,013<br>0  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g   | #/ft<br>53.50<br>mud, 30min Sf<br>cement volum  | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte  | 125<br>: 3,097<br>anded to ach   | the second se    | 2.51<br>0   | Collapse<br>1.26  | Burst<br>1.07<br>Totals:  | Length<br>14,075<br>0<br>14,075<br>5150                         | Weight<br>753,013<br>0<br>753,013<br>overlap.   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c  | #/ft<br>53.50<br>mud, 30min Sf  | Grade<br>HCC   | 125<br>: 3,097   | BUTT   | 2.51  | Collapse<br>1.26<br>ft from su  | Burst<br>1.07<br>Totals:<br>Inface or a   | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd                | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole  | #/ft<br>53.50<br>mud, 30min Sf<br>ement volum<br>Annular  | Grade<br>HCC<br>c Csg Test psig<br>1e(s) are inte<br>1 Stage   | 125<br>: 3,097<br>anded to ach<br>1 Stage  | BUTT<br>lieve a top of<br>Min  | 2.51<br>0<br>1 Stage  | Collapse<br>1.26<br>ft from su<br>Drilling  | Burst<br>1.07<br>Totals:<br>urface or a<br>Calc   | Length<br>14,075<br>0<br>14,075<br>5150                         | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size  | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx   | a 125<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375   | BUTT<br>lieve a top of<br>Min<br>Cu Ft   | 2.51<br>0<br>1 Stage<br>% Excess<br>63  | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60  | Burst<br>1.07<br>Totals:<br>unface or a<br>Calc<br>MASP   | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE        | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt  | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145   | a 125<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375   | BUTT<br>lieve a top of<br>Min<br>Cu Ft<br>4512   | 2.51<br>0<br>1 Stage<br>% Excess<br>63  | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812   | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8   | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145   | a 125<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375   | BUTT<br>Neve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need                                      | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors  | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment  | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft  | Grade<br>HCC<br>c Csg Test psig<br>he(s) are into<br>1 Stage<br>Cmt Sx<br>3145   | a 125<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with   | BUTT<br>Neve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint                             | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br><u>Design</u><br>Collapse                           | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst   | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"                                     | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132   | Grade<br>HCC<br>c Csg Test psig<br>he(s) are into<br>1 Stage<br>Cmt Sx<br>3145   | a 125<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375   | BUTT<br>Neve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need                                      | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design  | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors  | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,470  |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"                              | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80   | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are into<br>1 Stage<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145<br>Cmt Sx<br>Grade<br>F   | a 125<br>a 3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>2 110                                 | BUTT<br>Neve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint                             | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br><u>Design</u><br>Collapse                           | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22                                   | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,470<br>0   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g                  | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sf                            | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are ints<br>1 Stage<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145<br>Cmt Sx<br>Grade<br>F   | 2 125<br>3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110<br>2 110<br>3,775                   | BUTT<br>lieve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint                          | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74                     | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br><u>Design</u><br>Collapse                           | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:                        | Length<br>14,075<br>0<br>14,075<br>5150<br>Reg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,470<br>0   |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c         | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sf<br>sement volum            | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145   | a 125<br>a 3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>a 110<br>a 3,775<br>anded to ach      | BUTT<br>Neve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling  | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74                     | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2<br>ft from su             | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:<br>Unface or a         | Length<br>14,075<br>0<br>14,075<br>5150<br>Røg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,47<br>0<br>140,47<br>overlap.                              |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sf<br>sement volum<br>Annular | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>Cmt Sx<br>315<br>Cmt Sx<br>31 | a 125<br>3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>110<br>3,775<br>anded to ach<br>1 Stage | BUTT<br>lieve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint<br>lieve a top of<br>Min | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74<br>13875<br>1 Stage | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2<br>ft from su<br>Drilling | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:<br>Unface or a<br>Calc | Length<br>14,075<br>0<br>14,075<br>5150<br>Req'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weigh<br>140,470<br>0<br>140,470<br>0<br>140,470<br>overlap.<br>Min Dis |
| Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c<br>Hole<br>Size<br>12 1/4<br>Tail cmt<br>7 5/8<br>Segment<br>"A"<br>"B"<br>w/8.4#/g<br>The c         | #/ft<br>53.50<br>mud, 30min Sf<br>sement volum<br>Annular<br>Volume<br>0.3132<br>Liner w<br>#/ft<br>42.80<br>mud, 30min Sf<br>sement volum            | Grade<br>HCC<br>c Csg Test psig<br>ne(s) are inte<br>1 Stage<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145<br>Cmt Sx<br>3145   | a 125<br>a 3,097<br>anded to ach<br>1 Stage<br>CuFt Cmt<br>7375<br>MASP is with<br>a 110<br>a 3,775<br>anded to ach      | BUTT<br>lieve a top of<br>Min<br>Cu Ft<br>4512<br>thin 10% of 50<br>Coupling<br>U F Joint<br>lieve a top of<br>Min | 2.51<br>0<br>1 Stage<br>% Excess<br>63<br>00psig, need<br>Joint<br>7.74                     | Collapse<br>1.26<br>ft from su<br>Drilling<br>Mud Wt<br>9.60<br>exrta equip?<br>Design<br>Collapse<br>1.2<br>ft from su<br>Drilling | Burst<br>1.07<br>Totals:<br>Inface or a<br>Calc<br>MASP<br>7812<br>Factors<br>Burst<br>1.22<br>Totals:<br>Unface or a         | Length<br>14,075<br>0<br>14,075<br>5150<br>Røg'd<br>BOPE<br>10M | Weight<br>753,013<br>0<br>753,013<br>overlap.<br>Min Dist<br>Hole-Cpl<br>0.81<br>NER<br>Weight<br>140,470<br>0<br>140,470                                       |

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

## **PPLICATION FOR AUTHORIZATION TO INJECT**

|       | APPLICATION FOR AUTHORIZATION TO INJECT   |
|-------|---|
| I.    | PURPOSE:       Secondary Recovery       Pressure Maintenance       X       Disposal       Storage         Application qualifies for administrative approval?       X       Yes       No   |
| II.   | OPERATOR: OWL SWD Operating, LLC<br>ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, TX 75255<br>CONTACT PARTY: Preston Carr PHONE: (855) 695-7937   |
| III.  | WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.<br>Additional sheets may be attached if necessary.   |
| IV.   | Is this an expansion of an existing project? Yes X No<br>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:   |
|       | <ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol> |
| *VIII | Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth.<br>Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total<br>dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to<br>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<br>and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of<br>drinking water.  |
| XIII. | Applicants must complete the "Proof of Notice" section on the reverse side of this form   |
| XIV.  | Certification: 1 hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.  |
|       | NAME: Ramona Hoyey // TITLE: Consulting Engineer - Agent for OWL SWD Operating. LLC   |
|       | SIGNATURE: DATE: 10/11/2018   |
| *     | E-MAIL ADDRESS: ramona@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.

## **INJECTION WELL DATA SHEET**

## OPERATOR: OWL SWD Operating, LLC (OGRID 308339)

## WELL NAME & NUMBER: Czervik SWD No. 1

WELL LOCATION: 2,301'<u>FNL & 2,426' FWL</u> FOOTAGE LOCATION

<u>t</u> UNIT LET

WELLBORE SCHEMATIC

| <u>F</u><br>t letter            | <u>29</u><br>SECTION | 23 S33 ETOWNSHIPRANGE          | E                 |  |  |  |
|---------------------------------|----------------------|--------------------------------|-------------------|--|--|--|
| WELL CONSTRUCTION DATA          |                      |                                |                   |  |  |  |
| Surface Casing                  |                      |                                |                   |  |  |  |
| Hole Size: <u>26"</u>           |                      | Casing Size: 20"               |                   |  |  |  |
| Cemented with: 3,600 sks        |                      | or                             | _ft <sup>3</sup>  |  |  |  |
| Top of Cement: surface          |                      | Method Determined: circulation |                   |  |  |  |
|                                 | Intermediate         | Casing 1                       |                   |  |  |  |
| Hole Size: <u>17-1/2"</u>       |                      | Casing Size: 13-5/8"           |                   |  |  |  |
| Cemented with: <u>3,640 sks</u> |                      | 0r                             | _ ft <sup>3</sup> |  |  |  |
| Top of Cement: surface          |                      | Method Determined: circulation |                   |  |  |  |
|                                 | Intermediate         | Casing 2                       |                   |  |  |  |
| Hole Size: <u>12-1/4"</u>       |                      | Casing Size: 9-5/8"            |                   |  |  |  |
| Cemented with: <u>3,145 sks</u> |                      | or                             | _ft <sup>3</sup>  |  |  |  |
| Top of Cement: surface          |                      | Method Determined: circulation |                   |  |  |  |

Side 1

### Production Liner

Hole Size: <u>8-1/2</u>"

Cemented with: 315 sks

Top of Cement: <u>13,875'</u>

Casing Size: 7-5/8"

*or*\_\_\_\_\_ft<sup>3</sup>

Method Determined: Calculation

Total Depth: 18,700'

Injection Interval

17,157 feet to 18,700 feet

(Open Hole)

### **INJECTION WELL DATA SHEET**

Tubing Size: <u>5.500", 20.0 lb/ft, P-110 BTC and UFJ (or equivalent), from 0' – 17,100'</u> Lining Material: <u>Duoline</u>

Type of Packer: 7-5/8" x 5.5" D&L Oil Tools Permapack Packer – Single Bore

Packer Setting Depth: 17,100'

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?

2. Name of the Injection Formation: Silurian-Devonian

3. Name of Field or Pool (if applicable):

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:

| Formation     | Depth   |
|---------------|---------|
| Delaware      | 5,141'  |
| Cherry Canyon | 6,052′  |
| Bone Spring   | 9,007′  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Morrow        | 15,300' |
| Devonian      | 17,157' |

## OWL SWD Operating, LLC.

#### Czervik SWD No. 1

## FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

| Well information       |                         |  |  |  |  |  |  |  |
|------------------------|-------------------------|--|--|--|--|--|--|--|
| Lease Name Czervik SWD |                         |  |  |  |  |  |  |  |
| Well No.               | 1                       |  |  |  |  |  |  |  |
| Location               | Unit F S-29 T-23S R-33E |  |  |  |  |  |  |  |
| Footage Location       | 2,301' FNL & 2,426' FWL |  |  |  |  |  |  |  |

2.

a. Wellbore Description

|           | Casing Information |                                |                            |                              |  |  |  |  |  |  |  |  |
|-----------|--------------------|--------------------------------|----------------------------|------------------------------|--|--|--|--|--|--|--|--|
| Туре      | Surface            | Intermediate 1                 | Intermediate 2             | Production Liner             |  |  |  |  |  |  |  |  |
| OD        | 20"                | 13-5/8″                        | 9-5/8″                     | 7-5/8"                       |  |  |  |  |  |  |  |  |
| WT        | 0.635″             | 0.625″                         | 0.545"                     | 0.562″                       |  |  |  |  |  |  |  |  |
| ID        | 18.730″            | 12.375"                        | 8.535"                     | 6.501"                       |  |  |  |  |  |  |  |  |
| Drift ID  | 18.542"            |                                | 8.379"                     | 6.376"                       |  |  |  |  |  |  |  |  |
| COD       | 21.000"            |                                | 10.625″                    | 7.625″                       |  |  |  |  |  |  |  |  |
| Weight    | 133 lb/ft          | 88.2 lb/ft                     | 53.5 lb/ft                 | 42.8 lb/ft                   |  |  |  |  |  |  |  |  |
| Grade     | J-55 STC           | HCP-110 STC (Or<br>Equivalent) | HCQ-125 (Or<br>Equivalent) | P-110 UFJ (Or<br>Equivalent) |  |  |  |  |  |  |  |  |
| Hole Size | 26"                | 17-1/2"                        | 12-1/4"                    | 8-1/2"                       |  |  |  |  |  |  |  |  |
| Depth Set | 1,825'             | 5,150′                         | 14,075'                    | 13,875' – 17,157'            |  |  |  |  |  |  |  |  |

## b. Cementing Program

|                          |                         | Cement                  | Information                           |                  |  |  |  |
|--------------------------|-------------------------|-------------------------|---------------------------------------|------------------|--|--|--|
| Casing<br>String         | Surface                 | Intermediate 1          | Production                            | Production Liner |  |  |  |
| Lead<br>Cement           | HALCEM                  | HALCEM                  | Stage 1: NEOCEM<br>Stage 2: NEOCEM    |                  |  |  |  |
| Lead<br>Cement<br>Volume | 2,580 sks               | 3,095 sks               | Stage 1: 1625 sks<br>Stage 2: 795 sks |                  |  |  |  |
| Tail<br>Cement           | HALCEM                  | HALCEM                  | Stage 1: NEOCEM<br>Stage 2: HALCEM    | VERSACEM         |  |  |  |
| Tail<br>Cement<br>Volume | 1,020 sks               | 545 sks                 | Stage 1: 625 sks<br>Stage 2: 100 sks  | 315 sks          |  |  |  |
| Cement<br>Excess         | 100%                    | 100%                    | 100%                                  | 50%              |  |  |  |
| тос                      | Surface                 | Surface                 | Surface                               | 13,875′          |  |  |  |
| Method                   | Circulate to<br>Surface | Circulate to<br>Surface | Circulate to Surface                  | Calculation      |  |  |  |

## 3. Tubing Description

|           | Tubing                      |                             |  |  |
|-----------|-----------------------------|-----------------------------|--|--|
| OD        | 5-1/2"                      | 5-1/2"                      |  |  |
| WT        | 0.361″                      | 0.361″                      |  |  |
| ID        | 4.778″                      | 4.778″                      |  |  |
| Drift ID  | 4.653″                      | 4.653″                      |  |  |
| COD       | 6.050"                      | 5.500"                      |  |  |
| Weight    | 20 lb/ft                    | 20 lb/ft                    |  |  |
| Grade     | P-110 BTC (Or<br>Equivalent | P-110 UFJ (Or<br>Equivalent |  |  |
| Depth Set | 13,700'                     | 13,700'-17,100'             |  |  |

Tubing will be lined with Duoline.

## 4. Packer Description

D&L Oil Tools 7-5/8" x 5-1/2" Permapack Packer – Single Bore

- B. Completion Information
  - 1. Injection Formation: Silurian Devonian
  - 2. Gross Injection Interval: 17,157' 18,700'

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      | 5,141'  |
| Cherry Canyon | 6,052′  |
| Bone Spring   | 9,007′  |
| Wolfcamp      | 12,253' |
| Strawn        | 14,076' |
| Atoka         | 14,279' |
| Morrow        | 15,300' |
| Devonian      | 17,157′ |

#### VI. Area of Review

No wells within the one-mile AOR penetrated the proposed injection zone.

#### VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD Maximum Volume: 30,000 BPD

- 2. Closed System
- 3. Anticipated Injection Pressure:

Average Injection Pressure: 2,573 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 Bone Springs and Delaware formations.

5. The Devonian Formation is productive of oil and gas in this 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 near Jal are 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 successful Salt Water Disposal horizon.

| Formation          | Depth          |
|--------------------|----------------|
| Rustler            | <b>1,2</b> 75' |
| Salado             | 1,775'         |
| Delaware           | 5,141'         |
| Cherry Canyon      | 6,052'         |
| Bone Spring        | 9,007'         |
| Wolfcamp           | 12,253'        |
| Strawn             | 14,076'        |
| Atoka              | 14,279'        |
| Morrow             | 15,300'        |
| Mississippian Lime | 16,545'        |
| Woodford           | 16,970'        |
| Devonian           | 17,157'        |
| Fusselman          | 18,107'        |
| Montoya            | 18,644'        |

A. Injection Zone: Devonian-Silurian Formation

B. Underground Sources of Drinking Water

Water wells in the one-mile surrounding area for the proposed Czervik SWD No.1 well are at depths ranging from 550 ft to 650 ft. The Rustler may also be another USDW and will be protected through the top of the Salado Formation at 1,775' by setting surface casing at 1,825'.

IX. Proposed Stimulation Program

No proposed stimulation program.

X. Logging and Test Data on the Well

There are no existing 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 (2) fresh water wells within one mile of the well location, per the New Mexico Office of the State Engineer. A list of all the water wells, a map of these wells and their associated Water Right Summaries are attached. Fresh water samples will be obtained from two of the wells and analysis of these samples will be submitted as soon as possible.

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 and any underground sources of drinking water.



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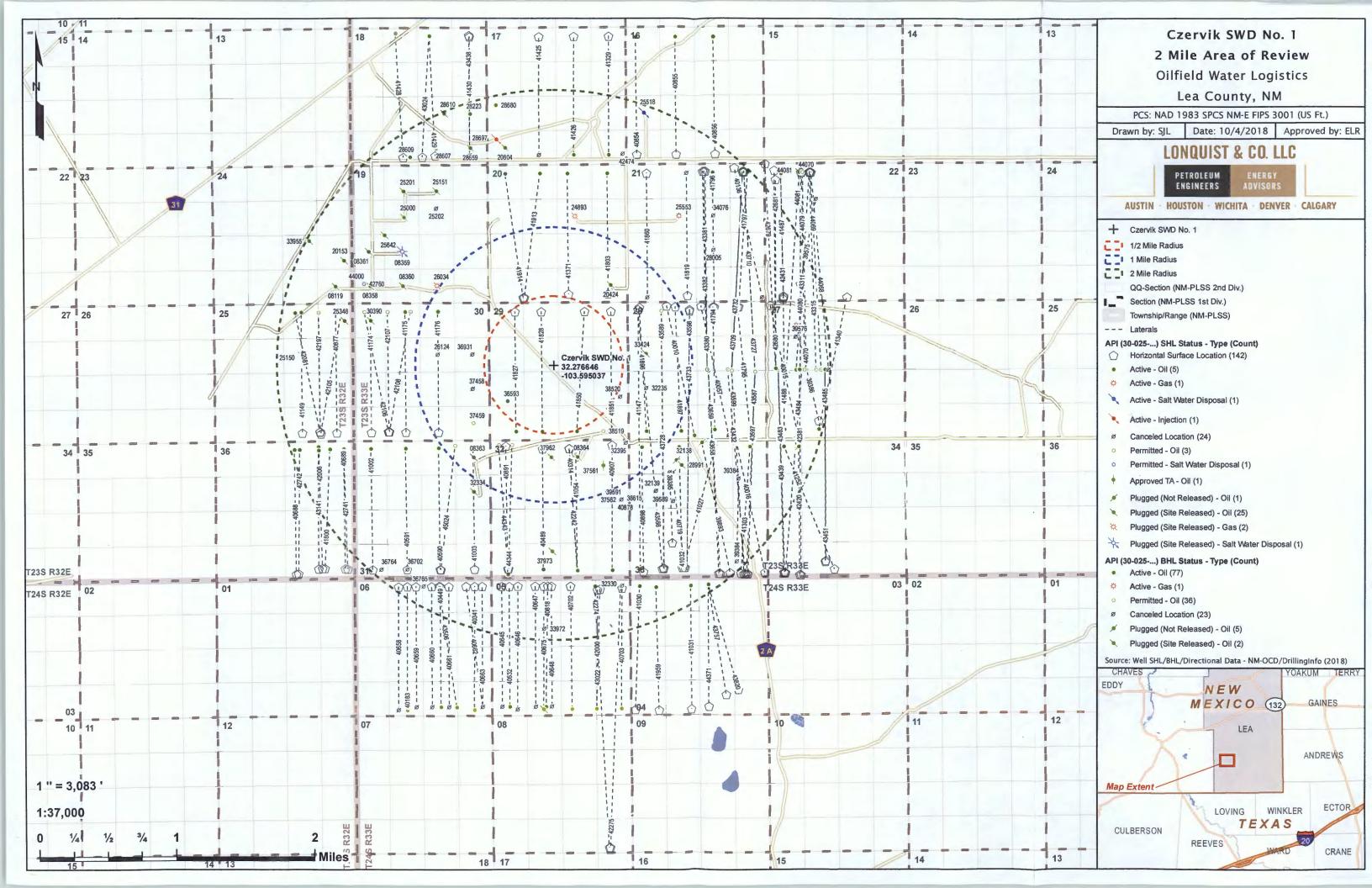
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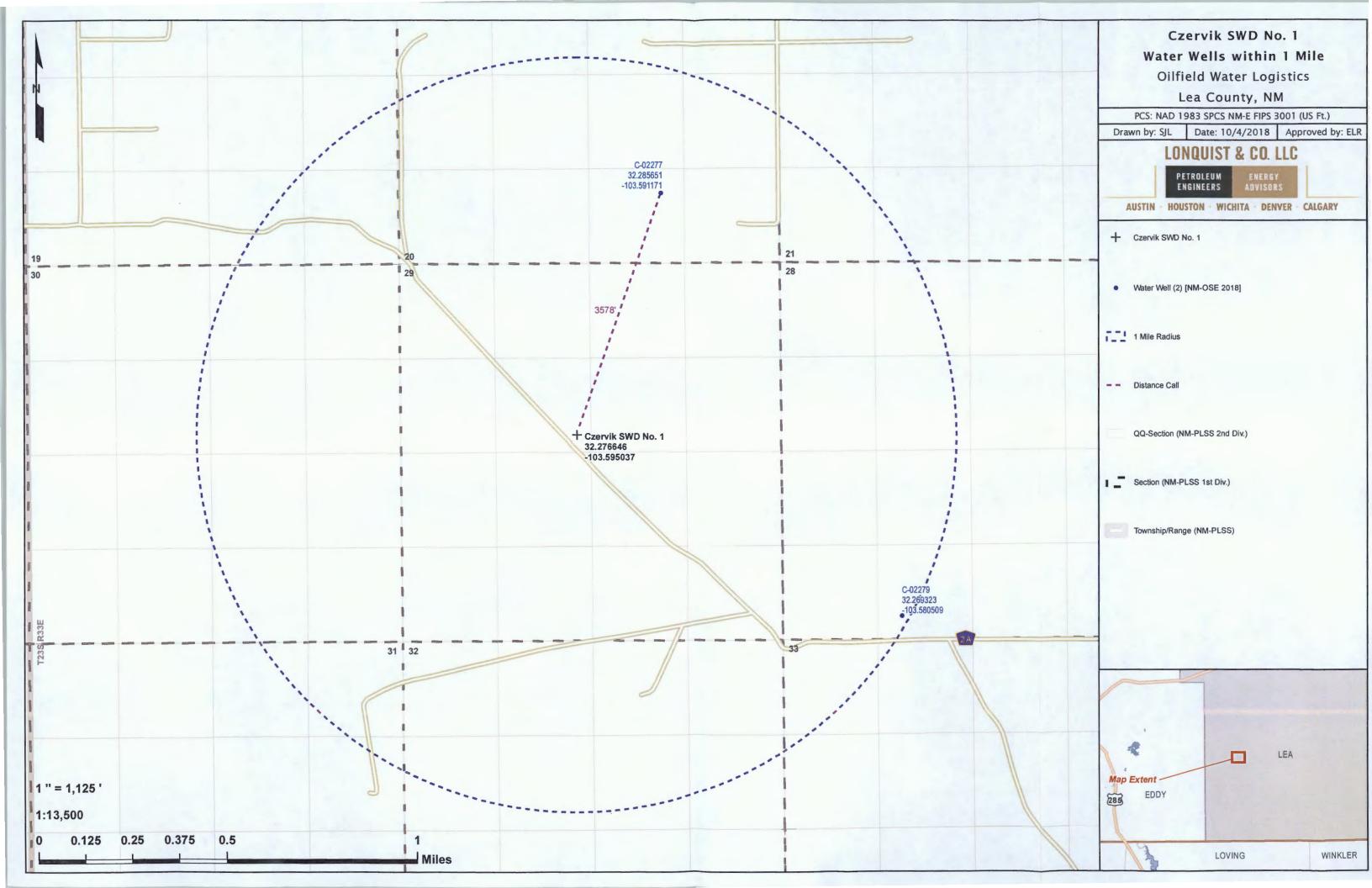
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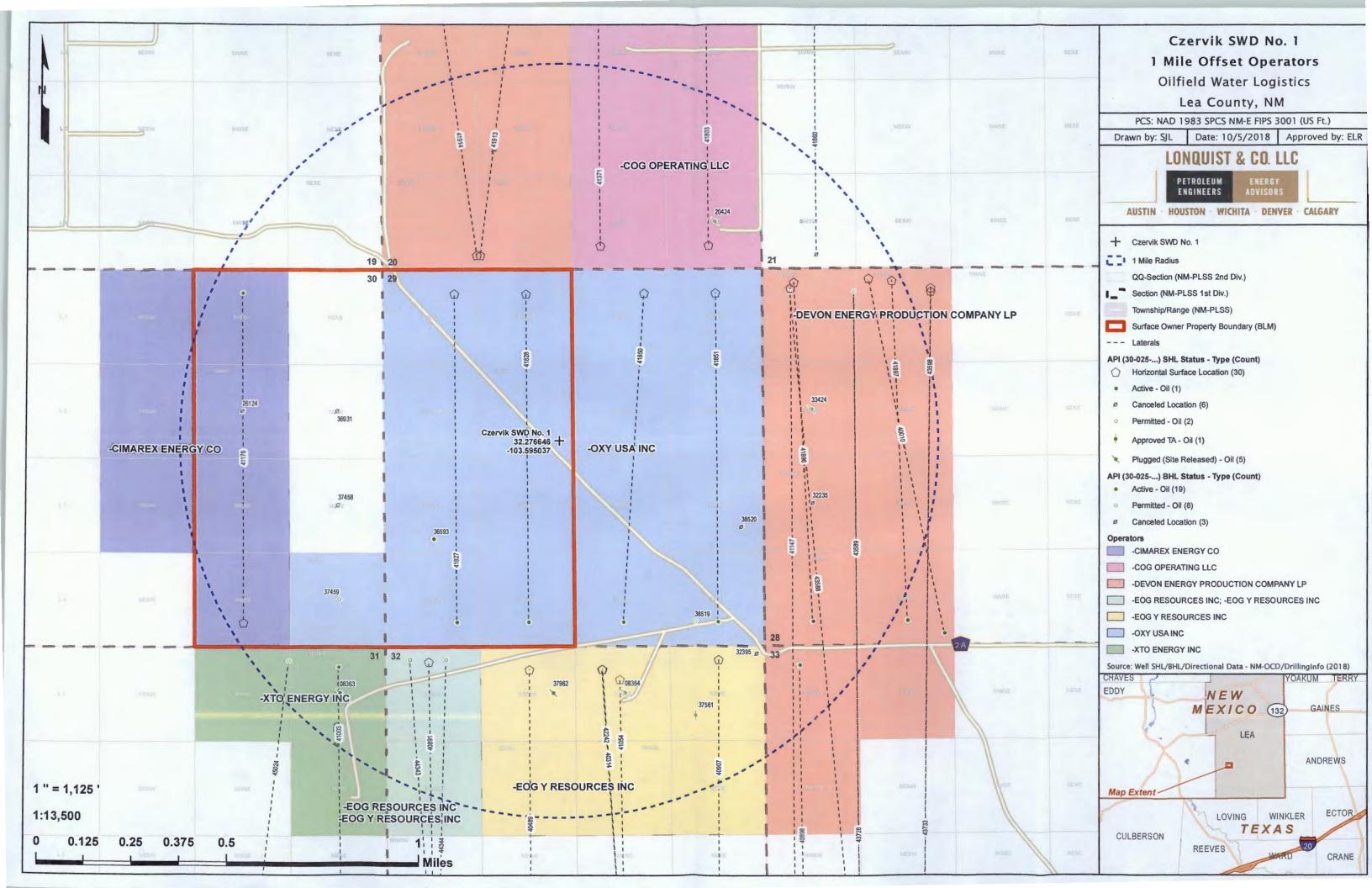
## Czervik SWD No. 1 1 Mile Area of Review List

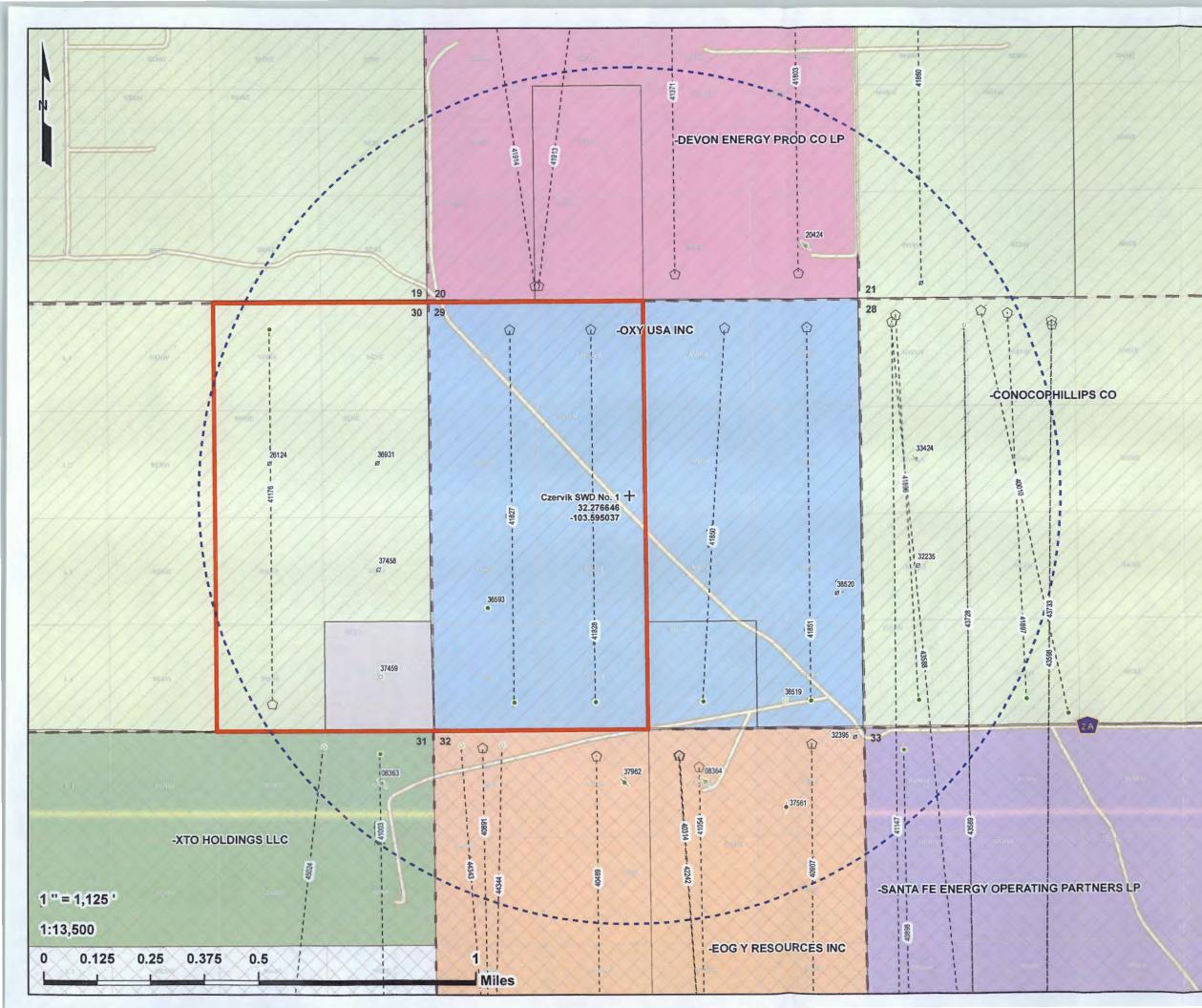
| API (30-025) | WELL NAME                         | WELL TYPE | STATUS | OPERATOR                               | TVD (FT.) | LATITUDE (NAD83 DD) | LONGITUDE (NAD83 DD) | DATE DRILLED |
|--------------|-----------------------------------|-----------|--------|--|-----------|---------------------|----------------------|--------------|
| 08363        | PRE-ONGARD WELL #001              | 0         | Р      | PRE-ONGARD WELL OPERATOR               | 5236      | 32.2666893000       | -103.604995700       | 1/1/1900     |
| 08364        | PRE-ONGARD WELL #001              | 0         | Р      | PRE-ONGARD WELL OPERATOR               | 5360      | 32.26666260000      | -103.59218600000     | 1/1/1900     |
| 20424        | PRE-ONGARD WELL #001              | 0         | Р      | PRE-ONGARD WELL OPERATOR               | 5344      | 32.2847900000       | -103.587936400       | 1/1/1900     |
| 26124        | 5 THISTLE UNIT 28 FEDERAL #001    |           | С      | PRE-ONGARD WELL OPERATOR               | 0         | 32.2775698417       | -103.609314965       | 12/31/9999   |
| 32235        | THISTLE UNIT 28 FEDERAL #001      |           | С      | SANTA FE ENERGY OPERATING PARTNERS L P | 9200      | 32.2739087826       | -103.583643703       | 12/31/9999   |
| 32395        | 32395 SALADO #003                 |           | С      | SALADO BRINE SALES                     | 0         | 32.2681247715       | -103.586213043       | 12/31/9999   |
| 33424        | THISTLE UNIT #002                 | 0         | Р      | C W TRAINER                            | 15850     | 32.2775269000       | -103.583656300       | 5/27/1996    |
| 36593        | FOXGLOVE 29 FEDERAL #001          | 0         | A      | OXY USA INC                            | 15850     | 32.2726212000       | -103.600738500       | 11/12/2004   |
| 36931        | FOXGLOVE 30 FEDERAL #001          | 0         | С      | POGO PRODUCING CO                      | 0         | 32.2775649350       | -103.605023370       | 12/31/9999   |
| 37458        | FOXGLOVE 30 FEDERAL #003          | 0         | С      | POGO PRODUCING COMPANY LLC             | 0         | 32.2739506128       | -103.605018512       | 12/31/9999   |
| 37459        | FOXGLOVE 30 FEDERAL #002          | 0         | N      | OXY USA INC                            | 0         | 32.2703171000       | -103.605003400       | 12/31/9999   |
| 37561        | YARROW BHY STATE #001             | 0         | Т      | EOG Y RESOURCES, INC.                  | 9140      | 32.2657509000       | -103.588981600       | 2/20/2006    |
| 37962        | FOXGLOVE 32 STATE #001            | 0         | Р      | OXY USA INC                            | 40        | 32.2666702000       | -103.595390300       | 6/30/2006    |
| 38519        | FOXGLOVE 29 FEDERAL #002          | 0         | N      | OXY USA INC                            | 0         | 32.2693787000       | -103.588989300       | 12/31/9999   |
| 38520        | FOXGLOVE 29 FEDERAL #003          | 0         | С      | POGO PRODUCING COMPANY LLC             | 0         | 32.27300538770      | -103.58686151500     | 12/31/9999   |
| 40010        | THISTLE UNIT #018H                | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 8942      | 32.2825584000       | -103.581039400       | 9/5/2011     |
| 40314        | YARROW BHY STATE #003C            | 0         | С      | EOG Y RESOURCES, INC.                  | 0         | 32.26757430000      | -103.59316250000     | 12/31/9999   |
| 40489        | HEMLOCK BSH STATE #001H           | 0         | A      | EOG Y RESOURCES, INC.                  | 11096     | 32.2675819000       | -103.596458400       | 5/30/2012    |
| 40891        | HEMLOCK BSH STATE #002H           | 0         | A      | EOG Y RESOURCES, INC.                  | 11156     | 32.26789090000      | -103.60099030000     | 1/26/2013    |
| 40898        | THISTLE UNIT #043H                | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 11128     | 32.2545166000       | -103.584152200       | 3/1/2013     |
| 40907        | YARROW BHY STATE #005H            | 0         | A      | EOG Y RESOURCES, INC.                  | 11159     | 32.2679176000       | -103.587921100       | 1/3/2014     |
| 41003        | MIS AMIGOS STATE #002H            | 0         | A      | XTO ENERGY, INC                        | 11083     | 32.2549133000       | -103.604980500       | 6/25/2013    |
| 41054        | YARROW BHY STATE #004H            | 0         | A      | EOG Y RESOURCES, INC.                  | 11156     | 32.2671738000       | -103.592392000       | 11/30/2013   |
| 41147        | THISTLE UNIT #030H                | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 9684      | 32.2821999000       | -103.584564200       | 12/21/2015   |
| 41176        | TRISTE DRAW 30 FEDERAL #003H      | 0         | A      | CIMAREX ENERGY CO.                     | 11019     | 32.26941680000      | -103.60927580000     | 11/16/2014   |
| 41371        | BRINNINSTOOL UNIT #003H           | 0         | A      | COG OPERATING LLC                      | 11044     | 32.2838898000       | -103.593109100       | 11/3/2013    |
| 41803        | BRINNINSTOOL UNIT #004H           | 0         | A      | COG OPERATING LLC                      | 11027     | 32.2838821000       | -103.588233900       | 12/15/2014   |
| 41827        | FOXGLOVE 29 FEDERAL #004H         | 0         | A      | OXY USA INC                            | 11138     | 32.2820625000       | -103.599708600       | 11/15/2014   |
| 41828        | FOXGLOVE 29 FEDERAL #005H         | 0         | A      | OXY USA INC                            | 11154     | 32.2820549000       | -103.596473700       | 9/14/2014    |
| 41850        | FOXGLOVE 29 FEDERAL #006H         | 0         | A      | OXY USA INC                            | 11150     | 32.2820473000       | -103.591171300       | 12/11/2014   |
| 41851        | FOXGLOVE 29 FEDERAL #007H         | 0         | A      | OXY USA INC                            | 11159     | 32.2820396000       | -103.587936400       | 10/16/2014   |
| 41860        | BRINNINSTOOL UNIT #005C           | 0         | С      | COG OPERATING LLC                      | 0         | 32.2965698000       | -103.583374000       | 12/31/9999   |
| 41896        | THISTLE UNIT #051H                | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 11189     | 32.2824211000       | -103.584404000       | 9/13/2014    |
| 41897        | THISTLE UNIT #052H                | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 11229     | 32.2824745000       | -103.579986600       | 10/17/2014   |
| 41913        | HORNED VIPER 20 FEDERAL COM #001H | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 11042     | 32.2835426000       | -103.598518400       | 2/1/2015     |
| 41914        | HORNED VIPER 20 FEDERAL COM #002H | 0         | A      | DEVON ENERGY PRODUCTION COMPANY, LP    | 11044     | 32.2835426000       | -103.598678600       | 1/4/2015     |
| 42242        | YARROW BHY STATE #003C            | 0         | С      | EOG Y RESOURCES, INC.                  | 0         | 32.26757620270      | -103.59319494600     | 12/31/9999   |
| 43588        | THISTLE UNIT #152H                | 0         | N      | DEVON ENERGY PRODUCTION COMPANY, LP    | 0         | 32.2548475000       | -103.581824400       | 12/31/9999   |
| 43589        | THISTLE UNIT #153H                | 0         | N      | DEVON ENERGY PRODUCTION COMPANY, LP    | 0         | 32.2549296000       | -103.581662800       | 12/31/9999   |
| 43598        | THISTLE UNIT #154H                | 0         | N      | DEVON ENERGY PRODUCTION COMPANY, LP    | 0         | 32.2820599000       | -103.578241600       | 12/31/9999   |
| 43728        | THISTLE UNIT #157H                | 0         | N      | DEVON ENERGY PRODUCTION COMPANY, LP    | 0         | 32.2548472000       | -103.581662700       | 12/31/9999   |
| 43733        | THISTLE UNIT #158H                | 0         | N      | DEVON ENERGY PRODUCTION COMPANY, LP    | 0         | 32.2821973000       | -103.578245150       | 12/31/9999   |
| 44343        | HEMLOCK 32 STATE #701H            | 0         | N      | EOG RESOURCES INC                      | 0         | 32.2549505000       | -103.600855300       | 5/15/2018    |
| 44344        | HEMLOCK 32 STATE #702H            | 0         | N      | EOG RESOURCES INC                      | 0         | 32.2549503000       | -103.600748500       | 5/16/2018    |
| 45024        | MIS AMIGOS STATE #706H            | 0         | N      | XTO ENERGY, INC                        | 0         | 32.55487700000      | -103.60914600000     | 12/31/9999   |

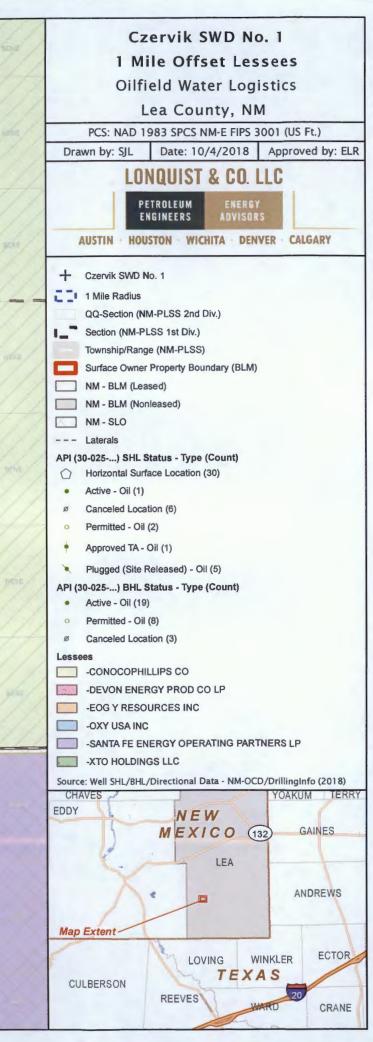


## Czervik SWD No. 1 Water Wells Within 1 Mile List

| POD<br>BASIN | POD # | т   | R   | s  | WELL<br>DEPTH | WATER<br>DEPTH | WELL USE          | POD<br>STATUS | USE | OWNER LAST NAME          | ADDRESS                              | LAT            | LONG             | EASTING  | NORTHING  | DATUM |
|--------------|-------|-----|-----|----|---------------|----------------|-------------------|---------------|-----|--------------------------|--------------------------------------|----------------|------------------|----------|-----------|-------|
| С            | 02277 | 235 | 33E | 20 | 550           | 400            | State Contraction | PMT           | COM | BRININSTOOL XL RANCH LLC | 1523 BUTLER RD, SAN ANGELO, TX 76904 | 32.28565135910 | -103.59117100000 | 632663.0 | 3572970.0 | NAD83 |
| С            | 02279 | 235 | 33E | 28 | 650           | 400            |                   | PMT           | СОМ | BRININSTOOL XL RANCH LLC | 1523 BUTLER RD, SAN ANGELO, TX 76904 | 32.26932260140 | -103.58050937500 | 633691.0 | 3571173.0 | NAD83 |







#### Czervik SWD No. 1 1 Mile Offset Operators and Lessees List

| S/T/R QQ UNIT LETTER(S) OPERATOR       |                 | OPERATOR                           | MINERAL LESSEE   | MINERAL OWNER          | SURFACE OWNER             | ADDRESS 1                          | ADDRESS 2               |  |  |
|--|-----------------|------------------------------------|--|------------------------|---------------------------|------------------------------------|-------------------------|--|--|
| 19/23S/33E                             | I,O,P           | -                                  | CONOCOPHILLIPS CO  | -                      | -                         | PO BOX 7500                        | BARTLESVILLE, OK 74005  |  |  |
| 20/23S/33E                             | E,F,K,L,M,N     | DEVON ENERGY PRODUCTION COMPANY LP |  | -                      | -                         | 20 N BROADWAY                      | OKLAHOMA CITY, OK 73102 |  |  |
|  | G,H,I,J,O,P     | COG OPERATING LLC                  | SAME AND AND A SUMMER OF   | re man sistem - a same |                           | 550 W TEXAS                        | MIDLAND, TX 79701       |  |  |
| 21/23S/33E                             | L,M,N           | -                                  | CONOCOPHILLIPS CO  | -                      | -                         | PO BOX 7500                        | BARTLESVILLE, OK 74005  |  |  |
| 28/23S/33E                             | C,D,E,F,K,L,M,N | DEVON ENERGY PRODUCTION COMPANY LP |  |                        |                           | 20 N BROADWAY                      | OKLAHOMA CITY, OK 73102 |  |  |
| 29/23S/33E                             | Entire Section  | OXY USA INC                        | -  | -                      | -                         | PO BOX 4294                        | HOUSTON, TX 77210       |  |  |
| 30/23S/33E B,C,F,G,J,K,O<br>P<br>A,H,I | B,C,F,G,J,K,O   | CIMAREX ENERGY CO                  |  |                        |                           | 202 S. CHEYENNE AVE. SUITE 1000    | TULSA, OK 74103         |  |  |
|  | P               | OXY USA INC                        | -  |                        |                           | PO BOX 4294                        | HOUSTON, TX 77210       |  |  |
|  | A,H,I           |                                    | CONOCOPHILLIPS CO  |                        |                           | PO BOX 7500                        | BARTLESVILLE, OK 74005  |  |  |
| 31/23S/33E                             | A,B,H           | XTO ENERGY INC                     | -  | -                      | -                         | 6401 HOLIDAY HILL ROAD BUILDING #5 | MIDLAND, TX 79707       |  |  |
| 32/23S/33E                             | D,E             | EOG RESOURCES INC                  |  | -                      |                           | PO BOX 2267                        | MIDLAND, TX 79702       |  |  |
|  |                 | EOG Y RESOURCES INC                | -  | -                      |                           | 104 S 4TH ST                       | ARTESIA, NM 88210       |  |  |
|  | A,B,C,F,G,H     | EOG Y RESOURCES INC                | -  |                        |                           | 104 S 4TH ST                       | ARTESIA, NM 88210       |  |  |
| 33/23S/33E                             | C,D,E           | DEVON ENERGY PRODUCTION COMPANY LP |  | -                      | -                         | 20 N BROADWAY                      | OKLAHOMA CITY, OK 73102 |  |  |
| Surface Location                       |                 |                                    | the second s |                        | BUREAU OF LAND MANAGEMENT | 301 DINOSAUR TRAIL                 | SANTA FE, NM 87502      |  |  |

#### Produced Water Analysis - Surrounding Areas Czervik SWD #1

|                               |            |   |              |        |     |      |       |       | 1      |       |                     |            |      |         | resistivity |            |             |          |  |        |          | bicarbonate | sulfate |         |
|-------------------------------|------------|---|--------------|--------|-----|------|-------|-------|--------|-------|---------------------|------------|------|---------|-------------|------------|-------------|----------|--|--------|----------|-------------|---------|---------|
| wellname                      | api        | latitude  | longitude    | S T    | R   | unit | ftgns | ftgew | county | state | formation           | sampledate | ph   | tds mgL | ohm_cm      | sodium mgL | calcium mgL | iron_mgl | magnesium mgL  |        |          | mgL         | mgL     | co2_mgl |
| SPUD 16 STATE #009H           | 3001538059 | 32.3013306  | -103.9873581 | 16 235 | 29E | 0    | 1265S | 1905E | EDDY   | NM    | AVALON UPPER        | 4/16/2015  | 7    | 154164  | 0.06015     | 54960.3    | 797.8       | 35.2     | 202.5  |        | 92020.7  | 3660        | 0       | 1100    |
| SPUD 16 STATE #009H           | 3001538059 | 32.3013306  | -103.9873581 | 16 235 | 29E | 0    | 1265S | 1905E | EDDY   |       | AVALON UPPER        | 5/11/2011  | 7    | 154965  |             | 58687.2    | 719         | 54       | 131  |        | 91118    | 1671.4      | 1502    |         |
| H B 11 FEDERAL #008H          | 3001537900 | 32.2385559  | -103.951973  | 11 245 | 29E | В    | 330N  | 1650E | EDDY   | NM    | AVALON UPPER        | 6/21/2011  | 7    | 174709  |             | 64668.1    | 2184        | 20       | 358  | 0.4    |          | 878.4       | 575     | 50      |
| REMUDA BASIN UNIT #001        | 3001503691 | 32.2886238  | -103.9360428 | 24 235 | 29E | J    | 1980S | 1980E | EDDY   | NM    | BONE SPRING         |            |      | 271010  |             |            |             |          |  |        | 168800   | 130         | 100     |         |
| GAINES 21 #001                | 3001528638 | 32.1984482  | -103.9862366 | 21 245 | 29E | 0    | 990S  | 1650E | EDDY   | NM    | BONE SPRING         | 12/17/1996 | 8.48 | 8856    |             | 0          | 601.2       | 0        | 72.915   | i l    | 62858.2  | 260504      | 0       |         |
| KNOLL AOK FEDERAL #001        | 3001528127 | 32.2485847  | -103.970253  | 3 245  | 29E | G    | 1980N | 1980E | EDDY   | NM    | BONE SPRING         | 11/27/2000 | 6.15 |         |             |            | 2162        | 0        | 775  |        | 84981    | 381         | 600     |         |
| CORRAL DRAW AQH FEDERAL #0    | 3001529396 | 32.2166748  | -103.9455948 | 13 245 | 29E | L    | 2310S | 330W  | EDDY   | NM    | BONE SPRING         | 12/27/2000 | 5.59 |         |             |            | 25552       | 175      | 4471   |        | 164963   | 73          | 190     |         |
| SPUD 16 STATE #010H           | 3001541148 | 32.3035698  | -103.9833145 | 16 235 | 29E | 1    | 20805 | 660E  | EDDY   | NM    | BONE SPRING 1ST SAN | 4/16/2015  | 7    | 152943  | 0.06013     | 54183.5    | 1409.3      | 16.2     | 274.9  |        | 92807.2  | 2305.8      | 0       | 400     |
| SPUD 16 STATE #011H           | 3001541149 | 32.3034325  | -103.9833145 | 16 235 | 29E | 1    | 20305 | 660E  | EDDY   | NM    | BONE SPRING 1ST SAN | 4/16/2015  | 7    | 153042  | 0.06026     | 53895.7    | 1294.2      | 0        | 272.6  | S C    | 92918.4  | 2708.4      | 0       | 460     |
| SPUD 16 STATE #012H           | 3001541150 | 32.3032951  | -103.9833221 | 16 23S | 29E | 1    | 1980S | 660E  | EDDY   | NM    | BONE SPRING 1ST SAN | 4/16/2015  | 7    | 146425  | 0.06343     | 55118.3    | 1444.9      | 11.4     | 312.8  | 3 0    | 84786.2  | 2659.6      | 0       | 420     |
| SPUD 16 STATE #008H           | 3001540038 | 32.3110275  | -103.9960938 | 16 235 | 29E | D    | 523N  | 665W  | EDDY   | NM    | BONE SPRING 1ST SAN | 6/28/2012  | 6.7  | 153751  |             | 57590.8    | 1198        | 10       | 244  | 0.3    | 91697    | 951.6       | 755     | 60      |
| GUY A REED #001               | 3001510872 | 32.2050591  | -104.0471802 | 24 24S | 28E | E    | 1980N | 660W  | EDDY   | NM    | DELAWARE            | 10/26/1966 | 6.1  | 130273  |             |            |             |          |  |        | 78600    | 14          | 605     |         |
| MALAGA UNIT #001              | 3001502494 | 32.2241287  | -104.0375977 | 13 24S | 28E | B    | 330N  | 1650E | EDDY   | NM    | DELAWARE            |            |      | 148288  |             |            |             |          |  |        | 91050    | 182         | 400     |         |
| CONTINENTAL FED #002          |            | 32.1136971  | -103.9099655 | 20 255 | 30E | L    | 1980S | 660W  | EDDY   | NM    | DELAWARE            | 10/8/1959  |      | 157068  |             |            |             |          |  |        | 97030    | 68          | 510     |         |
| R & B FED FED A #001          | 3001504752 | 32.1356773  | -103.9099731 | 17 255 | 30E | D    | 664N  | 667W  | EDDY   | NM    | DELAWARE            | 5/17/1966  | 7    | 146809  |             |            |             |          |  |        | 89710    | 24          | 346     |         |
| HOPP FED #001                 | 3001504738 | 32.1541061  | -103.8926697 | 4 255  | 30E | M    | 660S  | 660W  | EDDY   | NM    | DELAWARE            |            |      | 146106  |             |            |             |          |  |        | 89810    | 40          | 403     |         |
| HOPP FED #001                 | 3001504738 |   | -103.8926697 | 4 255  | 30E | M    | 660S  | 660W  | EDDY   |       | DELAWARE            |            |      | 180137  |             |            |             |          |  |        | 110500   | 232         | 1199    |         |
| R AND B FEDERAL #001Y         | 3001504753 | 32.1358185  | -103.9101486 | 17 255 | 30E | D    | 611N  | 614W  | EDDY   |       | DELAWARE            |            | -    | 146130  |             |            |             |          | the second s |        | 89700    | 24          | 346     |         |
| BENNETT FEDERAL #001          | 3001524071 | 32.0954132  | -103.9184418 | 30 255 | 30E | 0    | 6605  | 1980E | EDDY   | -     | DELAWARE            | 3/23/1982  | 6.85 | 100240  |             | 51658      | 2400        | 2.5      | 4000   |        | 93000    | 640         | 3756    |         |
| BENNETT FEDERAL #001          | 3001524071 | 32.0954132  | -103.9184418 | 30 255 | 30E | 0    | 6605  | 1980E | EDDY   |       | DELAWARE            | 6/1/1983   | 6    | 103300  |             | 53495      | 3120        | 10       | 3080   |        | 97000    | 100         |         |         |
| CONTINENTAL FEDERAL #001      | 3001510048 | 32.1210632  | -103.9099731 | 20 255 | 30E | D    | 660N  | 660W  | EDDY   |       | DELAWARE            |            |      | 311052  |             |            |             |          |  |        | 186800   | 86          | 2820    |         |
| CONTINENTAL FEDERAL #001      |            | 32.1210632  | -103.9099731 | 20 255 | 30E | D    | 660N  | 660W  | EDDY   | _     | DELAWARE            |            | 1    | 170607  |             |            |             |          |  |        | 104300   | 81          | 1003    |         |
| CONTINENTAL FEDERAL #001      |            | 32.1210632  | -103.9099731 | 20 255 |     | D    | 660N  | 660W  | EDDY   | -     | DELAWARE            |            | 1    | 193989  |             |            |             |          |  |        | 119700   | 82          | 1446    |         |
| SUPERIOR STATE #002           | 3001510181 | 32.1430664  |              | 8 255  | 30E | 1    | 19805 | 660E  | EDDY   | _     | DELAWARE            |            | -    | 155173  |             |            |             |          |  |        | 92820    | 122         | 133     |         |
| SUPERIOR STATE #002           | 3001510181 | 32.1430664  | -103.8969803 | 8 255  | 30E | - li | 19805 | 660E  | EDDY   |       | DELAWARE            |            | -    | 150830  |             |            |             |          |  |        |          |             |         |         |
| SPUD 16 STATE #007H           | 3001536078 | 32.3099632  |              | 16 235 | 29E | 0    | 910N  | 810W  | EDDY   |       | DELAWARE-BRUSHY CA  | 7/14/2014  | 6.3  |         |             | 74542.2    | 32307.5     | 51.6     | 4723.3   | 10.04  | 182394   | 25          | 3.4     | 410     |
|                               | 3001536461 | 32.294426   |              | 22 235 | 29E | C    | 1240N | 2510W | EDDY   |       | DELAWARE-BRUSHY CA  | 2/25/2015  |      |         |             | 71506.6    | 31763.4     | 60.5     | 4690.6   | 11.03  |          | 188         | 0       | 300     |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.2922592  |              | 22 235 | 29E |      | 2030N | 1855W | EDDY   | _     | DELAWARE-BRUSHY CA  | 2/25/2015  |      | 288731  |             | 69567.3    | 31995.5     | 59       | 4780.6   |        |          | 122         | 0       | 30      |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.2835922  |              | 22 235 | 29E | M    | 1305  | 760W  | EDDY   |       | DELAWARE-BRUSHY C   | 3/10/2015  | -    | 108093  | 0.04824     | 72995      | 26487.3     | 283.7    | 4547.4   | 1 17.1 |          |             |         | 1430    |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.294426   |              | 22 235 | 29E | C    | 1240N | 2510W | EDDY   |       | DELAWARE-BRUSHY C   | 3/10/2015  |      | 302545  | 0.04833     | 72865      | 32249.2     | 56.3     | 4836.7   | 11.18  |          | 36.6        | 0       | 42      |
|                               |            | 32.294420   | -103.9752045 | 22 235 | 29E | L    | 2030N | 1855W | EDDY   | -     | DELAWARE-BRUSHY C   | 3/10/2015  | -    |         | 0.04844     | 71940.2    | 32644.8     | 53       | 4969.8   | 10.75  |          | 61          | 0       | 35      |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.3099632  | -103.9752045 | 16 235 | 29E | 0    | 910N  | 810W  | EDDY   | NM    |                     | 4/16/2015  |      | 303155  | 0.04979     |            | 33274.3     | 61.8     | 4821.1   | 10.2   |          | 610         | 0       | 200     |
| SPUD 16 STATE #007H           | 3001536078 | the second |              | 22 235 | 29E | 10   | 1240N | 2510W | EDDY   |       | DELAWARE-BRUSHY C   | 4/16/2015  | -    |         | 0.1431      | 68893.3    | 31112       | 55.4     | 4508.7   | 10.57  |          | 244         | 0       | 36      |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.294426   | -103.9730835 | 22 235 |     | C    | 2030N | 1855W | EDDY   |       | DELAWARE-BRUSHY C   | 4/16/2015  | -    | 292239  | 0.04954     | 69172.3    | 31471.9     | 52.1     | 4556.6   |        |          | 122         | 0       | 320     |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.2922592  | -103.9752045 | 31 235 | 29E | -    | 3305  | 1345E | EDDY   |       | DELAWARE-BRUSHY C   | 4/16/2015  |      | 292239  | 0.04934     | 79092.1    | 29745.4     | 70.1     | 4330.0   |        |          | 85.4        | 0       | 200     |
| HARROUN TRUST 31 #004H        | 3001540826 | 32.2551231  | -104.0195923 |        | _   | 0    |       |       |        | NM    |                     | 4/16/2015  |      | 297841  | 0.04949     |            | 28511.9     | 59.9     | 4244.8   | 8.25   |          | 73.2        | 0       | 200     |
| HARROUN TRUST 31 #005H        | 3001540827 | 32.2551231  | -104.0194244 | 31 235 |     | P    | 3305  | 1295E | EDDY   |       | DELAWARE-BRUSHY CA  | 4/16/2015  |      | 295110  | 0.04941     | 80277.8    | 29889.4     | 64.8     | 4244.0   | 7.97   |          | 73.2        | 0       | 200     |
| HARROUN TRUST 31 30 FEDERA    |            | 32.2551956  |              | 31 235 |     | M    | 3305  | 1305W | EDDY   |       |                     | 4/16/2015  | -    | 303550  | 0.04959     | 80277.8    | 29889.4     | 49       | 4473.3   |        | 1/8388.3 | 103.7       | 331     |         |
| LAGUNA SALADO 22 FEDERAL #    |            | 32.2835922  | -103.9787598 | 22 235 | _   | M    | 130S  | 760W  | EDDY   |       | DELAWARE-BRUSHY C   |            |      |         |             |            |             |          |  |        |          | 103.7       | 454     |         |
| SPUD 16 STATE #007H           | 3001536078 | 32.3099632  | -103.995636  | 16 235 | _   | D    | 910N  | 810W  | EDDY   |       | DELAWARE-BRUSHY C   | 8/29/2008  |      | 273399  |             | 77650.2    | 20696       | 44       | 3301   |        |          |             |         |         |
|                               | 3001537371 | 32.2946129  |              | 22 235 |     | C    | 1172N | 2510W | EDDY   | NM    |                     | 7/14/2011  | 1 7  | 279275  |             | 78992.3    | 21728       | 25       | 3407   | 6.5    |          | 183         | 177     |         |
| REMUDA BASIN UNIT #001        | 3001503691 | 32.2886238  | -103.9360428 | 24 235 |     | 1    | 1980S | 1980E | EDDY   | NM    |                     |            | -    | 64582   |             |            |             |          |  |        | 37500    | 610         | 1700    |         |
| <b>REMUDA BASIN UNIT #001</b> | 3001503691 | 32.2886238  | -103.9360428 | 24 235 | 29E | J    | 1980S | 1980E | EDDY   | NM    | DEVONIAN            |            | 1    | 56922   |             |            |             |          |  |        | 29000    | 1740        | 4980    |         |