Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
10/22/2018	MAM	SWD	pMAM1829837761

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & Engineering Bureau –
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: OWL SWD OPERATING, LLC **OGRID Number:** 308339
Well Name: CEDAR CANYON SWD #1 **API:** TBD
Pool: SWD; SILURIAN-DEVONIAN **Pool Code:** 97869

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD OCT 22 2018 AM10:56

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☒ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☒ Notification and/or concurrent approval by BLM
F. ☒ Surface owner
G. ☒ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

RAMONA HOVEY
Print or Type Name

Ramona K Hovey
Signature

OCTOBER 18, 2018
Date

512-600-1777
Phone Number

RAMONA@LONQUIST.COM
e-mail Address

LONQUIST & CO. LLC

AUSTIN
HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

WICHITA
CALGARY

www.lonquist.com

OCT 22 2018 AM10:56

October 18, 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: CEDAR CANYON 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 Cedar Canyon 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,

Ramona K. Hovey

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

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X___Yes _____No

II. OPERATOR: OWL SWD Operating, LLC
ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, TX 75255
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. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes ___X___No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Ramona Hovey TITLE: Consulting Engineer – Agent for OWL SWD Operating, LLC

SIGNATURE: Ramona K Hovey DATE: 10/152018

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: OWL SWD Operating, LLC (OGRID 308339)

WELL NAME & NUMBER: Cedar Canyon SWD No. 1

WELL LOCATION:	897' FNL & 1,979' FEL	B	01	24 S	29 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26" Casing Size: 20"

Cemented with: 1,410 sks *or* _____ ft^3

Top of Cement: surface Method Determined: circulation

Intermediate Casing 1

Hole Size: 17-1/2" Casing Size: 13-5/8"

Cemented with: 2,660 sks *or* _____ ft^3

Top of Cement: surface Method Determined: circulation

Intermediate Casing 2

Hole Size: 12-1/4" Casing Size: 9-5/8"

Cemented with: 2,780 sks *or* _____ ft^3

Top of Cement: surface Method Determined: circulation

Production Liner

Hole Size: 8-1/2"

Casing Size: 7-5/8"

Cemented with: 300 sks

or _____ ft^3

Top of Cement: 12,200'

Method Determined: Calculation

Total Depth: 17,450'

Injection Interval

15,356 feet to 17,450 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.500", 20.0 lb/ft, P-110 BTC and UFJ (or equivalent), from 0' – 15,300'
Lining Material: Duoline

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

Packer Setting Depth: 15,300'

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

Additional Data

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

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

   _____

2. Name of the Injection Formation: Silurian-Devonian

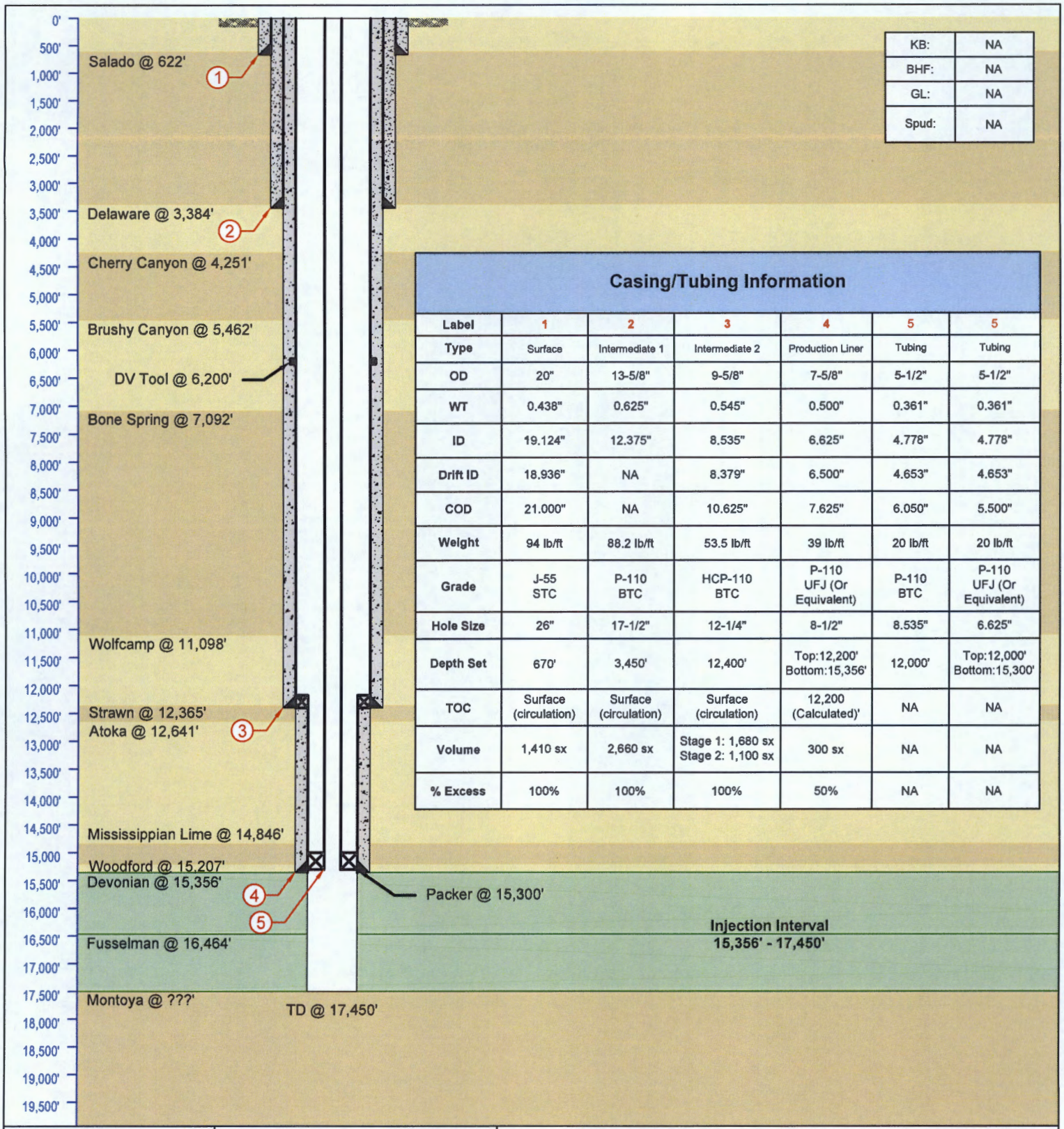
3. Name of Field or Pool (if applicable): _____

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	3,384'
Bone Spring	7,092'
Wolfcamp	11,098'



KB:	NA
BHF:	NA
GL:	NA
Spud:	NA

Casing/Tubing Information

Label	1	2	3	4	5	5
Type	Surface	Intermediate 1	Intermediate 2	Production Liner	Tubing	Tubing
OD	20"	13-5/8"	9-5/8"	7-5/8"	5-1/2"	5-1/2"
WT	0.438"	0.625"	0.545"	0.500"	0.361"	0.361"
ID	19.124"	12.375"	8.535"	6.625"	4.778"	4.778"
Drift ID	18.936"	NA	8.379"	6.500"	4.653"	4.653"
COD	21.000"	NA	10.625"	7.625"	6.050"	5.500"
Weight	94 lb/ft	88.2 lb/ft	53.5 lb/ft	39 lb/ft	20 lb/ft	20 lb/ft
Grade	J-55 STC	P-110 BTC	HCP-110 BTC	P-110 UFJ (Or Equivalent)	P-110 BTC	P-110 UFJ (Or Equivalent)
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	8.535"	6.625"
Depth Set	670'	3,450'	12,400'	Top:12,200' Bottom:15,356'	12,000'	Top:12,000' Bottom:15,300'
TOC	Surface (circulation)	Surface (circulation)	Surface (circulation)	12,200 (Calculated)'	NA	NA
Volume	1,410 sx	2,660 sx	Stage 1: 1,680 sx Stage 2: 1,100 sx	300 sx	NA	NA
% Excess	100%	100%	100%	50%	NA	NA

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
HOUSTON | CALGARY
AUSTIN | WICHITA | DENVER
Texas License F-9147
12912 Hill Country Blvd. Ste F-200
Austin, Texas 78738
Tel: 512.732.9812
Fax: 512.732.9816

Oilfield Water Logistics

Cedar Canyon SWD No. 1

Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy
Location:	**Site:**	**Survey:**
API No: NA	**Field:**	**Well Type/Status:** SWD / New Drill
RRC District No:	**Project No:** 1645	**Date:** 10/4/2018
Drawn: WHG	**Reviewed:** RH	**Approved:** SLP
Rev No: 1	**Notes:**	

OWL SWD Operating, LLC.

Cedar Canyon SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Cedar Canyon SWD
Well No.	1
Location	Unit B S-01 T-24S R-29E
Footage Location	897' FNL & 1,979' FEL

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	0.438"	0.625"	0.545"	0.500"
ID	19.124"	12.375"	8.535"	6.625"
Drift ID	18.936"		8.379"	6.500"
COD	21.000"		10.625"	7.625"
Weight	94 lb/ft	88.2 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55 STC	P-110 BTC (Or Equivalent)	HCP-110 BTC (Or Equivalent)	P-110 UFJ (Or Equivalent)
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"
Depth Set	670'	3,450'	12,400'	12,200' – 15,356'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate 1	Production	Production Liner
Lead Cement	HALCEM	HALCEM	Stage 1: NeoCem Stage 2: NeoCem	
Lead Cement Volume	670 sks	2,115 sks	Stage 1: 1,220 sks Stage 2: 1,000 sks	
Tail Cement	HALCEM	HALCEM	Stage 1: NeoCem Stage 2: HalCem	VERSACEM
Tail Cement Volume	740 sks	545 sks	Stage 1: 460 sks Stage 2: 100 sks	300 sks
Cement Excess	100%	100%	100%	50%
TOC	Surface	Surface	Surface	12200
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Calculate

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	17 lb/ft
Grade	P-110 BTC (Or Equivalent	P-110 UFJ (Or Equivalent
Depth Set	12,000'	12,000'-15,300'

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: 15,356' – 17,450'

   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	3,384'
Bone Spring	7,092'
Wolfcamp	11,098'

VI. Area of Review

No wells drilled within 1 mile of the proposed Cedar Canyon SWD No. 1 well penetrated the 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: 2,303 PSI (surface pressure)
   Maximum Injection Pressure: 3,071 PSI (surface pressure)

4. The injection fluid is to be locally produced water. Attached are produced water sample analyses taken from the closest wells that feature samples from the Bone Spring, Delaware, Brushy Canyon and Devonian formations.

5. Water sample analysis for produced water in the proposed Devonian zone of injection are included in the table below.

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.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Salado	622'
Delaware	3,384'
Cherry Canyon	4,251'
Brushy Canyon	5,462'
Bone Spring	7,092'
Wolfcamp	11,098'
Strawn	12,365'
Atoka	12,641'
Mississippian Lime	14,846'
Woodford	15,207'
Devonian	15,356'
Fusselman	16,464'

B. Underground Sources of Drinking Water

No water wells exist within one mile of the proposed well. Across the area, fresh water wells are usually drilled between 400' and 500' in depth. The Rustler is known to exist in this general area and may also be another USDW and will be protected through the top of the Salado Formation at 622' by setting surface casing at 670'.

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

No fresh water wells exist within one mile of the proposed Cedar Canyon SWD No. 1 well.

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.

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001264294

LONQUIST & CO. LLC
12912 HILL COUNTRY BLVD., SUITE F-200

BEE CAVE TX 78738

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

10/06/18

Legal Clerk

Subscribed and sworn before me this
8th of October 2018.

State of WI, County of Brown
NOTARY PUBLIC

1/12/2021
My Commission Expires

Legal Notice
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 Oil Conservation Division for administrative approval for its salt water disposal well Cedar Canyon SWD No. 1. The proposed well will be located 897' FNL & 1,979' FEL in Section 01, Township 24S, Range 29E in Eddy 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 applied for top of 15,356 feet to a maximum depth of 17,450 feet. The maximum surface injection pressure will not exceed 3,071 psi with a maximum rate of 30,000 BWPD. Interested parties opposing the action must file 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.
October 6, 2018

MELISSA ROME NOTARY PUBLIC STATE OF WISCONSIN

Ad#:0001264294
P O : OWL SWD
# of Affidavits :0.00

Cedar Canyon SWD No. 1

2 Mile Area of Review

Oilfield Water Logistics

Eddy Co., NM

PCS: NAD 1983 NM-E FIPS 3001 (US Feet)

Drawn by: SJL	Date: 10/10/2018	Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

Cedar Canyon SWD No. 1
1/2 Mile Radius
1 Mile Radius
2 Mile Radius
QQ-Section (NM PLSS-2018)
Township/Range (NM PLSS-2018)
Section (NM PLSS-2018)
Laterals

API (30-015-...) SHL Status - Type (Count)

Horizontal Surface Location (102)
Active - Oil (43)
Active - Gas (5)
Active - Salt Water Disposal (1)
Canceled Location (54)
Permitted - Oil (3)
Permitted - Gas (2)
Permitted - Salt Water Disposal (1)
Permitted - Miscellaneous (1)
Plugged (Not Released) - Oil (1)
Plugged (Site Released) - Oil (13)
Plugged (Site Released) - Gas (1)
Plugged (Site Released) - Salt Water Disposal (1)
Plugged (Site Released) - Injection (4)
Shut In - Oil (4)
Approved TA - Oil (5)
Approved TA - Gas (1)

API (30-015-...) BHL Status - Type (Count)

Active - Oil (14)
Active - Gas (1)
Permitted - Oil (54)
Permitted - Gas (25)
Canceled Location (4)
Plugged (Site Released) - Oil (2)
Plugged (Site Released) - Gas (1)
Shut In - Oil (1)

Salt Lake

Cedar Canyon SWD No. 1
32.251452
-103.935991

T023S R029E
T023S R030E
T024S R029E
T024S R030E

1 " = 3,167 '
1:38,000

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

Cedar Canyon SWD No. 1
1 Mile Area of Review List

API (30-015-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
28363	REMUDA BASIN STATE #006	O	C	TEXACO EXPLORATION & PRODUCTION INC	0	32.2557848967	-103.927438251	12/31/9999
28367	REMUDA BASIN STATE #015	O	C	TEXACO EXPLORATION & PRODUCTION INC	0	32.2634080773	-103.927119112	12/31/9999
28369	REMUDA BASIN STATE #016	O	C	TEXACO EXPLORATION & PRODUCTION INC	0	32.2585887331	-103.927439336	12/31/9999
31317	POKER LAKE UNIT #160	O	C	BOPCO, L.P.	0	32.2594225478	-103.922076050	12/31/9999
31318	POKER LAKE UNIT #161	O	A	BOPCO, L.P.	7370	32.2557945000	-103.922111500	9/2/2001
31692	POKER LAKE UNIT #163	O	C	BEPCO, LP	0	32.2485370770	-103.922056803	12/31/9999
31693	PRE-ONGARD WELL #162	O	C	PRE-ONGARD WELL OPERATOR	0	32.2521637262	-103.923141596	1/1/1900
31694	POKER LAKE UNIT #164	O	C	BEPCO, LP	0	32.2448586289	-103.923116965	12/31/9999
31774	REMUDA BASIN 31 STATE COM #001	G	A	BOPCO, L.P.	14175	32.2557831000	-103.927452100	6/10/2001
33137	POKER LAKE UNIT #164	O	A	BOPCO, L.P.	7428	32.2448692000	-103.923149100	8/23/2005
34183	POKER LAKE UNIT #163Q	O	P	BOPCO, L.P.	7535	32.2485352000	-103.921928400	3/4/2006
34946	POKER LAKE UNIT #264	O	A	BOPCO, L.P.	7472	32.2442970000	-103.927413900	9/9/2006
35115	POKER LAKE UNIT #263H	O	A	BOPCO, L.P.	12292	32.2487602000	-103.927383400	10/15/2008
35204	POKER LAKE UNIT #280	O	C	BOPCO, L.P.	0	32.2378578000	-103.930603000	12/31/9999
35387	REMUDA BASIN 36 STATE #001C	G	C	BOPCO, L.P.	0	32.2631398011	-103.931734633	12/31/9999
35388	REMUDA BASIN 36 STATE #002C	G	C	BOPCO, L.P.	0	32.25578907920	-103.93602012500	12/31/9999
35522	POKER LAKE UNIT #162	I	P	BOPCO, L.P.	7410	32.25216290000	-103.92357640000	3/6/2008
35614	POKER LAKE UNIT #265H	O	A	BOPCO, L.P.	14769	32.24121860000	-103.92740630000	4/15/2009
37029	POKER LAKE CVX JV PC #008H	O	A	BOPCO, L.P.	7955	32.2384911000	-103.928398100	3/23/2011
37184	TOMMY'S BOY FEDERAL #001	G	A	DEVON ENERGY PRODUCTION COMPANY, LP	14452	32.2513733000	-103.944580100	8/22/2009
37518	POKER LAKE CVX JV PC #005H	O	A	BOPCO, L.P.	7893	32.2255249000	-103.930229200	2/8/2010
38297	H B 2 STATE #008	G	A	DEVON ENERGY PRODUCTION COMPANY, LP	14250	32.2508545000	-103.948974600	1/6/2011
39292	ALMOST HEROES 1 FEDERAL #004H	O	P	DEVON ENERGY PRODUCTION COMPANY, LP	8257	32.2404938000	-103.945426900	8/30/2011
43138	JESTER BFJ FEDERAL #005H	O	N	EOG Y RESOURCES, INC.	0	32.2385200226	-103.939129047	12/31/9999
43726	DIRTY WORK FEDERAL #003H	O	N	COG OPERATING LLC	0	32.2394397100	-103.940540300	12/31/9999
44211	REMUDA SOUTH 25 STATE #701H	O	N	XTO ENERGY, INC	0	32.27679636000	-103.94460126000	12/31/9999
44321	REMUDA SOUTH 30 STATE #112H	O	N	XTO ENERGY, INC	0	32.2768850000	-103.927497000	12/31/9999
44322	REMUDA SOUTH 30 STATE #702H	O	N	XTO ENERGY, INC	0	32.2768027000	-103.927351600	12/31/9999
44323	REMUDA SOUTH 30 STATE #701H	O	N	XTO ENERGY, INC	0	32.2768029000	-103.927545900	12/31/9999
44342	REMUDA NORTH 31 STATE #703H	O	N	XTO ENERGY, INC	0	32.2603045000	-103.923260800	12/31/9999
44343	REMUDA NORTH 31 STATE #704H	O	N	XTO ENERGY, INC	0	32.26030490000	-103.92306670000	12/31/9999
44344	REMUDA NORTH 31 STATE #904H	O	N	XTO ENERGY, INC	0	32.2603047000	-103.923163700	12/31/9999
44356	REMUDA SOUTH 25 STATE #105H	G	N	XTO ENERGY, INC	0	32.2769096600	-103.936134740	12/31/9999
44357	REMUDA SOUTH 25 STATE #107H	G	N	XTO ENERGY, INC	0	32.2768953300	-103.931864550	12/31/9999
44359	REMUDA SOUTH 25 STATE #103H	G	N	XTO ENERGY, INC	0	32.27692273000	-103.94047631000	3/18/2018
44360	REMUDA SOUTH 25 STATE #122H	G	N	XTO ENERGY, INC	0	32.27693367000	-103.94455199000	12/31/9999
44361	REMUDA SOUTH 25 STATE #121H	G	N	XTO ENERGY, INC	0	32.2769338200	-103.944649260	5/20/2018
44364	REMUDA SOUTH 25 STATE #101H	G	N	XTO ENERGY, INC	0	32.2769341800	-103.944746320	4/17/2018
44389	REMUDA SOUTH 25 STATE #123H	G	N	XTO ENERGY, INC	0	32.2769224900	-103.940279200	4/16/2018
44390	REMUDA SOUTH 25 STATE #124H	G	N	XTO ENERGY, INC	0	32.2769220600	-103.940282050	5/14/2018
44391	REMUDA SOUTH 25 STATE #125H	G	N	XTO ENERGY, INC	0	32.2769094300	-103.936037740	12/31/9999
44392	REMUDA SOUTH 25 STATE #126H	G	N	XTO ENERGY, INC	0	32.2769089100	-103.935940740	12/31/9999
44393	REMUDA SOUTH 25 STATE #127H	G	N	XTO ENERGY, INC	0	32.2768949900	-103.931767460	12/31/9999
44394	REMUDA SOUTH 25 STATE #128H	G	N	XTO ENERGY, INC	0	32.2768947800	-103.931670420	12/31/9999
44403	REMUDA SOUTH 30 STATE #111H	O	N	XTO ENERGY, INC	0	32.2768860000	-103.927692000	12/31/9999
44404	REMUDA SOUTH 30 STATE #121H	O	N	XTO ENERGY, INC	0	32.2768850000	-103.927595000	12/31/9999

Cedar Canyon SWD No. 1
1 Mile Area of Review List

44405	REMUDA SOUTH 30 STATE #122H	O	N	XTO ENERGY, INC	0	32.2768850000	-103.927400000	12/31/9999
44413	REMUDA NORTH 31 STATE #113H	O	N	XTO ENERGY, INC	0	32.2595110000	-103.921933000	12/31/9999
44414	REMUDA NORTH 31 STATE #123H	O	N	XTO ENERGY, INC	0	32.2595110000	-103.922030000	12/31/9999
44415	REMUDA NORTH 31 STATE #124H	O	N	XTO ENERGY, INC	0	32.2595110000	-103.921836000	12/31/9999

Cedar Canyon SWD No. 1

1 Mile Offset Operators

Oilfield Water Logistics

Eddy Co., NM

PCS: NAD 1983 NM-E FIPS 3001 (US Feet)

Drawn by: SJL	Date: 10/11/2018	Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- Cedar Canyon SWD No. 1
- 1 Mile Radius
- QQ-Section (NM PLSS-2018)
- Township/Range (NM PLSS-2018)
- Section (NM PLSS-2018)
- Surface Owner Property Boundary (BLM)
- Laterals

API (30-015-...) SHL Status - Type (Count)

- Horizontal Surface Location (30)
- Active - Oil (5)
- Active - Gas (3)
- Canceled Location (10)
- Plugged (Site Released) - Oil (1)
- Plugged (Site Released) - Injection (1)

API (30-015-...) BHL Status - Type (Count)

- Active - Oil (2)
- Permitted - Oil (15)
- Permitted - Gas (12)
- Plugged (Site Released) - Oil (1)

Operators

- -BOPCO LP
- -BOPCO LP; -XTO ENERGY INC
- -COG OPERATING LLC
- -DEVON ENERGY PRODUCTION COMPANY LP
- -EOG Y RESOURCES INC
- -XTO ENERGY INC

-XTO ENERGY INC

-BOPCO LP
-XTO ENERGY INC

-DEVON ENERGY PRODUCTION COMPANY LP

Cedar Canyon SWD No. 1
32.251452
-103.935991

-COG OPERATING LLC

-BOPCO LP

-EOG Y RESOURCES INC

T023S R029E

T023S R030E

T024S R029E

T024S R030E

1 " = 1,125 '

1:13,500

0 0.125 0.25 0.375 0.5 1 Miles

Cedar Canyon SWD No. 1

1 Mile Offset Lessees

Oilfield Water Logistics

Eddy Co., NM

PCS: NAD 1983 NM-E FIPS 3001 (US Feet)

Drawn by: SJL	Date: 10/10/2018	Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- Cedar Canyon SWD No. 1
- 1 Mile Radius
- QQ-Section (NM PLSS-2018)
- Township/Range (NM PLSS-2018)
- Section (NM PLSS-2018)
- Surface Owner Property Boundary (BLM)
- NM - BLM (Nonleased)
- NM - BLM (Leased)
- NM - SLO
- Laterals

API (30-015-...) SHL Status - Type (Count)

- Horizontal Surface Location (30)
- Active - Oil (5)
- Active - Gas (3)
- Canceled Location (10)
- Plugged (Site Released) - Oil (1)
- Plugged (Site Released) - Injection (1)

API (30-015-...) BHL Status - Type (Count)

- Active - Oil (2)
- Permitted - Oil (15)
- Permitted - Gas (12)
- Plugged (Site Released) - Oil (1)

Lessees

- -BMT O&G NM LLC / BEPCO LP
- -CONOCOPHILLIPS CO
- -CTV OG NM LLC; -SRBI OG NM LLC; -KEYSTONE OG NM LLC; -THRU LINE OG NM LLC; -LMBI OG NM LLC
- -DEVON ENERGY PRODUCTION CO
- -ECHO PROD INC
- -OXY Y-1 COMPANY; -EOG A RESOURCES INC; -EOG M RESOURCES INC; -EOG Y RESOURCES INC

1 " = 1,125 '

1:13,500

0 0.125 0.25 0.375 0.5 1 Miles

Cedar Canyon SWD No. 1
1 Mile Offset Operators and Lessees List

S/T/R	QQ UNIT LETTER(S)	OPERATOR	MINERAL LESSEE	MINERAL OWNER	SURFACE OWNER	ADDRESS 1	ADDRESS 2
35/23S/29E	I,J,O,P	-	ECHO PROD INC	-	-	PO BOX 1210	GRAHAM, TX 76450
	H	-	-	BUREAU OF LAND MANAGEMENT	-	301 DINOSAUR TRAIL	SANTA FE, NM 87508
36/23S/29E	Entire Section	XTO ENERGY INC	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
31/23S/30E	E,F,K,L	XTO ENERGY INC	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
	M	XTO ENERGY INC	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
		BOPCO LP	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
	J,N	BOPCO LP	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
	O	-	CONOCOPHILLIPS CO	-	-	PO BOX 7500	BARTLESVILLE, OK 74005
6/24S/30E	E,G,J,K,L,M,N	BOPCO LP	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
	B,C,D,F	-	CTV OG NM LLC	-	-	201 MAIN ST STE 2700	FORT WORTH, TX 76102
		-	SRBI OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	KEYSTONE OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	THRU LINE OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	LMBI OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
1/24S/29E	C,F,K,N	COG OPERATING LLC	-	-	-	550 W TEXAS	MIDLAND, TX 79701
	D	DEVON ENERGY PRODUCTION COMPANY LP	-	-	-	20 N BROADWAY	OKLAHOMA CITY, OK 73102
	A,H,I,J,O,P	-	CTV OG NM LLC	-	-	201 MAIN ST STE 2700	FORT WORTH, TX 76102
		-	SRBI OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	KEYSTONE OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	THRU LINE OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	LMBI OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
	E,L,M	-	ECHO PROD INC	-	-	PO BOX 1210	GRAHAM, TX 76450
2/24S/29E	A	DEVON ENERGY PRODUCTION COMPANY LP	-	-	-	20 N BROADWAY	OKLAHOMA CITY, OK 73102
	B,G,H,I,J,P	-	DEVON ENERGY PRODUCTION CO	-	-	333 W SHERIDAN	OKLAHOMA CITY, OK 73102
12/24S/29E	B	BOPCO LP	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
	C,D	EOG Y RESOURCES INC	-	-	-	104 S 4TH ST	ARTESIA, NM 88210
	A	-	CTV OG NM LLC	-	-	201 MAIN ST STE 2700	FORT WORTH, TX 76102
		-	SRBI OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	KEYSTONE OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	THRU LINE OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
		-	LMBI OG NM LLC	-	-	201 MAIN ST #2700	FORT WORTH, TX 76102
7/24S/30E	D	BOPCO LP	-	-	-	6401 HOLIDAY HILL ROAD BUILDING #5	MIDLAND, TX 79707
Surface Location	-	-	-	-	BUREAU OF LAND MANAGEMENT	301 DINOSAUR TRAIL	SANTA FE, NM 87508

Produced Water Analysis - Surrounding Areas
Cedar Canyon SWD #1

wellname	api	latitude	longitude	S	T	R	unit	ftgns	ftgew	county	state	formation	sampledate	ph	tds mgL	resistivity ohm_cm	sodium mgL	calcium mgL	iron_mgl	magnesium mgL	manganese mgl	chloride mgL	bicarbonate mgL	sulfate mgL	co2_mgl
SPUD 16 STATE #009H	3001538059	32.3013306	-103.9873581	16	23S	29E	O	1265S	1905E	EDDY	NM	AVALON UPPER	4/16/2015	7	154164	0.06015	54960.3	797.8	35.2	202.5	0	92020.7	3660	0	1100
SPUD 16 STATE #009H	3001538059	32.3013306	-103.9873581	16	23S	29E	O	1265S	1905E	EDDY	NM	AVALON UPPER	5/11/2011	7	154965		58687.2	719	54	131	1	91118	1671.4	1502	70
H B 11 FEDERAL #008H	3001537900	32.2385559	-103.951973	11	24S	29E	B	330N	1650E	EDDY	NM	AVALON UPPER	6/21/2011	7	174709		64668.1	2184	20	358	0.4	104800	878.4	575	50
REMUDA BASIN UNIT #001	3001503691	32.2886238	-103.9360428	24	23S	29E	J	1980S	1980E	EDDY	NM	BONE SPRING			271010							168800	130	100	
GAINES 21 #001	3001528638	32.1984482	-103.9862366	21	24S	29E	O	990S	1650E	EDDY	NM	BONE SPRING	12/17/1996	8.48	8856		0	601.2	0	72.915		62858.2	260504	0	
KNOLL AOK FEDERAL #001	3001528127	32.2485847	-103.970253	3	24S	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	24S	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	23S	29E	I	2080S	660E	EDDY	NM	BONE SPRING 1ST SAN	4/16/2015	7	152943	0.06013	54183.5	1409.3	16.2	274.9	0	92807.2	2305.8	0	400
SPUD 16 STATE #011H	3001541149	32.3034325	-103.9833145	16	23S	29E	I	2030S	660E	EDDY	NM	BONE SPRING 1ST SAN	4/16/2015	7	153042	0.06026	53895.7	1294.2	0	272.6	0	92918.4	2708.4	0	460
SPUD 16 STATE #012H	3001541150	32.3032951	-103.9833221	16	23S	29E	I	1980S	660E	EDDY	NM	BONE SPRING 1ST SAN	4/16/2015	7	146425	0.06343	55118.3	1444.9	11.4	312.8	0	84786.2	2659.6	0	420
SPUD 16 STATE #008H	3001540038	32.3110275	-103.9960938	16	23S	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	3001510172	32.1136971	-103.9099655	20	25S	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	25S	30E	D	664N	667W	EDDY	NM	DELAWARE	5/17/1966	7	146809							89710	24	346	
HOPP FED #001	3001504738	32.1541061	-103.8926697	4	25S	30E	M	660S	660W	EDDY	NM	DELAWARE			146106							89810	40	403	
HOPP FED #001	3001504738	32.1541061	-103.8926697	4	25S	30E	M	660S	660W	EDDY	NM	DELAWARE			180137							110500	232	1199	
R AND B FEDERAL #001Y	3001504753	32.1358185	-103.9101486	17	25S	30E	D	611N	614W	EDDY	NM	DELAWARE			146130							89700	24	346	
BENNETT FEDERAL #001	3001524071	32.0954132	-103.9184418	30	25S	30E	O	660S	1980E	EDDY	NM	DELAWARE	3/23/1982	6.85	100240		51658	2400	2.5	4000		93000	640	3756	
BENNETT FEDERAL #001	3001524071	32.0954132	-103.9184418	30	25S	30E	O	660S	1980E	EDDY	NM	DELAWARE	6/1/1983	6	103300		53495	3120	10	3080		97000	100		
CONTINENTAL FEDERAL #001	3001510048	32.1210632	-103.9099731	20	25S	30E	D	660N	660W	EDDY	NM	DELAWARE			311052							186800	86	2820	
CONTINENTAL FEDERAL #001	3001510048	32.1210632	-103.9099731	20	25S	30E	D	660N	660W	EDDY	NM	DELAWARE			170607							104300	81	1003	
CONTINENTAL FEDERAL #001	3001510048	32.1210632	-103.9099731	20	25S	30E	D	660N	660W	EDDY	NM	DELAWARE			193989							119700	82	1446	
SUPERIOR STATE #002	3001510181	32.1430664	-103.8969803	8	25S	30E	I	1980S	660E	EDDY	NM	DELAWARE			155173							92820	122	133	
SUPERIOR STATE #002	3001510181	32.1430664	-103.8969803	8	25S	30E	I	1980S	660E	EDDY	NM	DELAWARE			150830										
SPUD 16 STATE #007H	3001536078	32.3099632	-103.995636	16	23S	29E	D	910N	810W	EDDY	NM	DELAWARE-BRUSHY CA	7/14/2014	6.3	298475		74542.2	32307.5	51.6	4723.3	10.04	182394	25	3.4	410
LAGUNA SALADO 22 FEDERAL #0	3001536461	32.294426	-103.9730835	22	23S	29E	C	1240N	2510W	EDDY	NM	DELAWARE-BRUSHY CA	2/25/2015	6.2	297620		71506.6	31763.4	60.5	4690.6	11.03	186000	188	0	300
LAGUNA SALADO 22 FEDERAL #0	3001536738	32.2922592	-103.9752045	22	23S	29E		2030N	1855W	EDDY	NM	DELAWARE-BRUSHY CA	2/25/2015	6.1	288731		69567.3	31995.5	59	4780.6	10.36	179020.5	122	0	300
LAGUNA SALADO 22 FEDERAL #0	3001535073	32.2835922	-103.9787598	22	23S	29E	M	130S	760W	EDDY	NM	DELAWARE-BRUSHY CA	3/10/2015	6.5	108093	0.04824	72995	26487.3	283.7	4547.4	17.1				1430
LAGUNA SALADO 22 FEDERAL #0	3001536461	32.294426	-103.9730835	22	23S	29E	C	1240N	2510W	EDDY	NM	DELAWARE-BRUSHY CA	3/10/2015	6.3	302545	0.04833	72865	32249.2	56.3	4836.7	11.18	188800	36.6	0	420
LAGUNA SALADO 22 FEDERAL #0	3001536738	32.2922592	-103.9752045	22	23S	29E		2030N	1855W	EDDY	NM	DELAWARE-BRUSHY CA	3/10/2015	6.2	294876	0.04844	71940.2	32644.8	53	4969.8	10.75	181883.2	61	0	350
SPUD 16 STATE #007H	3001536078	32.3099632	-103.995636	16	23S	29E	D	910N	810W	EDDY	NM	DELAWARE-BRUSHY CA	4/16/2015	6	303155	0.04979	76907.7	33274.3	61.8	4821.1	10.2	183875.4	610	0	2000
LAGUNA SALADO 22 FEDERAL #0	3001536461	32.294426	-103.9730835	22	23S	29E	C	1240N	2510W	EDDY	NM	DELAWARE-BRUSHY CA	4/16/2015	6.9	292358	0.1431	68893.3	31112	55.4	4508.7	10.57	184250	244	0	360
LAGUNA SALADO 22 FEDERAL #0	3001536738	32.2922592	-103.9752045	22	23S	29E		2030N	1855W	EDDY	NM	DELAWARE-BRUSHY CA	4/16/2015	6.5	292239	0.04954	69172.3	31471.9	52.1	4556.6	10.16	183597.2	122	0	320
HARROUN TRUST 31 #004H	3001540826	32.2551231	-104.0195923	31	23S	29E	O	330S	1345E	EDDY	NM	DELAWARE-BRUSHY CA	4/16/2015	7	297841	0.04949	79092.1	29745.4	70.1	4416.8	8.77	180802.1	85.4	0	2000
HARROUN TRUST 31 #005H	3001540827	32.2551231	-104.0194244	31	23S	29E	P	330S	1295E	EDDY	NM	DELAWARE-BRUSHY CA	4/16/2015	6	295110	0.04941	76800.3	28511.9	59.9	4244.8	8.25	181794.5	73.2	0	2000
HARROUN TRUST 31 30 FEDERAL	3001541963	32.2551956	-104.0280991	31	23S	29E	M	330S	1305W	EDDY	NM	DELAWARE-BRUSHY CA	4/16/2015	6	296788	0.04959	80277.8	29889.4	64.8	4475.1	7.97	178388.3	73.2	0	2000
LAGUNA SALADO 22 FEDERAL #0	3001535073	32.2835922	-103.9787598	22	23S	29E	M	130S	760W	EDDY	NM	DELAWARE-BRUSHY CA	4/26/2007	5	303550		80233.3	27451	49	4197	9	187467	103.7	331	
SPUD 16 STATE #007H	3001536078	32.3099632	-103.995636	16	23S	29E	D	910N	810W	EDDY	NM	DELAWARE-BRUSHY CA	8/29/2008	6.25	273399		77650.2	20696	44	3301	6.5	168200	85	454	440
LAGUNA SALADO 22 FEDERAL #0	3001537371	32.2946129	-103.9730835	22	23S	29E	C	1172N	2510W	EDDY	NM	DELAWARE-BRUSHY CA	7/14/2011	7	279275		78992.3	21728	25	3407	6.5	172189	183	177	250
REMUDA BASIN UNIT #001	3001503691	32.2886238	-103.9360428	24	23S	29E	J	1980S	1980E	EDDY	NM	DEVONIAN			64582							37500	610	1700	
REMUDA BASIN UNIT #001	3001503691	32.2886238	-103.9360428	24	23S	29E	J	1980S	1980E	EDDY	NM	DEVONIAN			56922							29000	1740	4980	

Source: http://octane.nmt.edu/gotech/Water/producedwater.aspx

BLM 3160-3 APPLICATION FOR PERMIT TO DRILL

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☑ Other SWD

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
Cedar Canyon SWD No. 1

2. Name of Operator
OWL SWD Operating, LLC

9. API Well No.

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
8214 Westchester Drive, Suite 850, Dallas, TX 75255	(855) 695-7937	Silurian-Devonian

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface 897' FNL and 1,979' FEL

At proposed prod. zone Vertical Well

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 01, T-24S, R-29E

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
10 miles East/Southeast of Loving, NM	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
897'		N/A

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
	17,450'	

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3,171' GL	ASAP after approval	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Ramona K Hovey	Ramona Hovey	10/18/2018

Title
Consulting Agent for OWL SWD Operating, LLC

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office
Consulting Agent for OWL SWD Operating, LLC	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
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.

(Continued on page 2)

*(Instructions on page 2)

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.

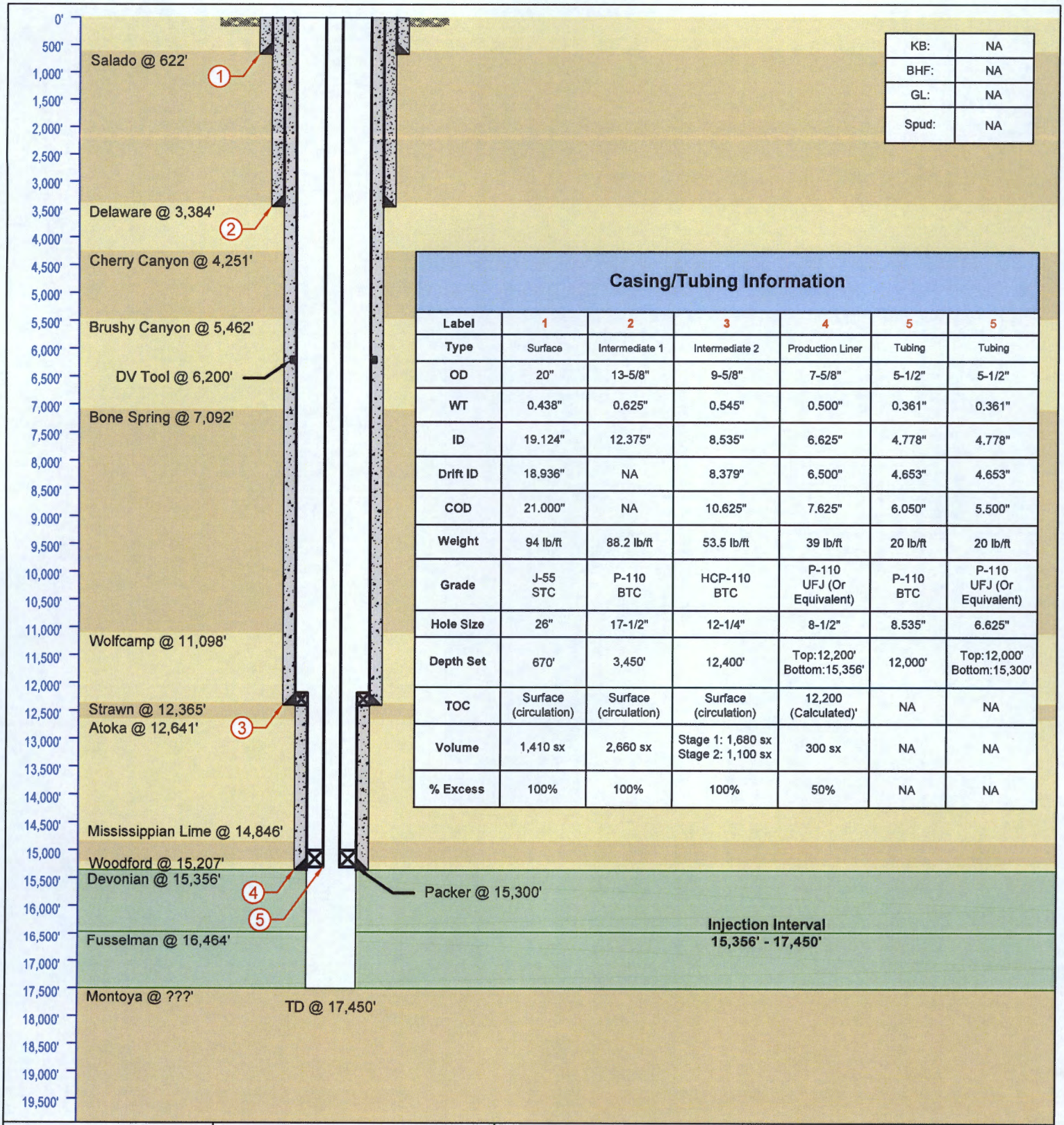
ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information 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.



KB:	NA
BHF:	NA
GL:	NA
Spud:	NA

Casing/Tubing Information

Label	1	2	3	4	5	5
Type	Surface	Intermediate 1	Intermediate 2	Production Liner	Tubing	Tubing
OD	20"	13-5/8"	9-5/8"	7-5/8"	5-1/2"	5-1/2"
WT	0.438"	0.625"	0.545"	0.500"	0.361"	0.361"
ID	19.124"	12.375"	8.535"	6.625"	4.778"	4.778"
Drift ID	18.936"	NA	8.379"	6.500"	4.653"	4.653"
COD	21.000"	NA	10.625"	7.625"	6.050"	5.500"
Weight	94 lb/ft	88.2 lb/ft	53.5 lb/ft	39 lb/ft	20 lb/ft	20 lb/ft
Grade	J-55 STC	P-110 BTC	HCP-110 BTC	P-110 UFJ (Or Equivalent)	P-110 BTC	P-110 UFJ (Or Equivalent)
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	8.535"	6.625"
Depth Set	670'	3,450'	12,400'	Top:12,200' Bottom:15,356'	12,000'	Top:12,000' Bottom:15,300'
TOC	Surface (circulation)	Surface (circulation)	Surface (circulation)	12,200 (Calculated)'	NA	NA
Volume	1,410 sx	2,660 sx	Stage 1: 1,680 sx Stage 2: 1,100 sx	300 sx	NA	NA
% Excess	100%	100%	100%	50%	NA	NA

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

Texas License F-9147

12912 Hill Country Blvd. Ste F-200
Austin, Texas 78738
Tel: 512.732.9812
Fax: 512.732.9816

Oilfield Water Logistics

Cedar Canyon SWD No. 1

Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy
Location:	**Site:**	**Survey:**
API No: NA	**Field:**	**Well Type/Status:** SWD / New Drill
RRC District No:	**Project No:** 1645	**Date:** 10/4/2018
Drawn: WHG	**Reviewed:** RH	**Approved:** SLP
Rev No: 1	**Notes:**	

20	surface csg in a	26	inch hole.		Design Factors		SURFACE	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	94.00	J 55	ST&C	12.43	1.49	1.12	670	62,980
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,185			Tail Cmt	does not	circ to sfc.		Totals:	670	62,980

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
26	1.5053	1410	2101	1088	93	10.00	1123	2M	2.50

13 5/8	casing inside the	20			Design Factors		INTERMEDIATE	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	88.20	P 110	BUTT	7.11	2.43	1.11	3,450	304,290
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	3,450	304,290
The cement volume(s) are intended to achieve a top of			0	ft from surface or a			670	overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6578	2660	4388	2524	74	10.50	5195	10M	8.75

MASP is within 10% of 5000psig, need

9 5/8	casing inside the	13 5/8			Design Factors		PRODUCTION	
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	Weight
"A"	53.50	HCP 110	BUTT	2.58	1.12	1.52	12,400	663,400
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,728							Totals:	12,400	663,400
The cement volume(s) are intended to achieve a top of			0	ft from surface or a			3450	overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	2780	6811	3959	72	12.30	3801	5M	0.81

Class 'H' tail cmt yld > 1.20

Tail cmt

7 5/8	Liner w/top @				Design Factors		LINER	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	39.00	P 110	U F Joint	8.83	1.54	1.76	3,156	123,084
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 3,378							Totals:	3,156	123,084
The cement volume(s) are intended to achieve a top of			12200	ft from surface or a			200	overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 1/2	0.0770	300	367	244	51	9.00			0.418

Class 'H' tail cmt yld > 1.20 Capitan Reef est top XXXX.

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	97869	SWD; Silurian-Devonian

[4] Property Code	[5] Property Name	[6] Well Number
	CEDAR CANYON SWD	#1

[7] OGRID No.	[8] Operator Name	[9] Elevation
308339	OWL SWD OPERATING	3171.32'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	1	24 S	29 E		897	NORTH	1979	EAST	EDDY

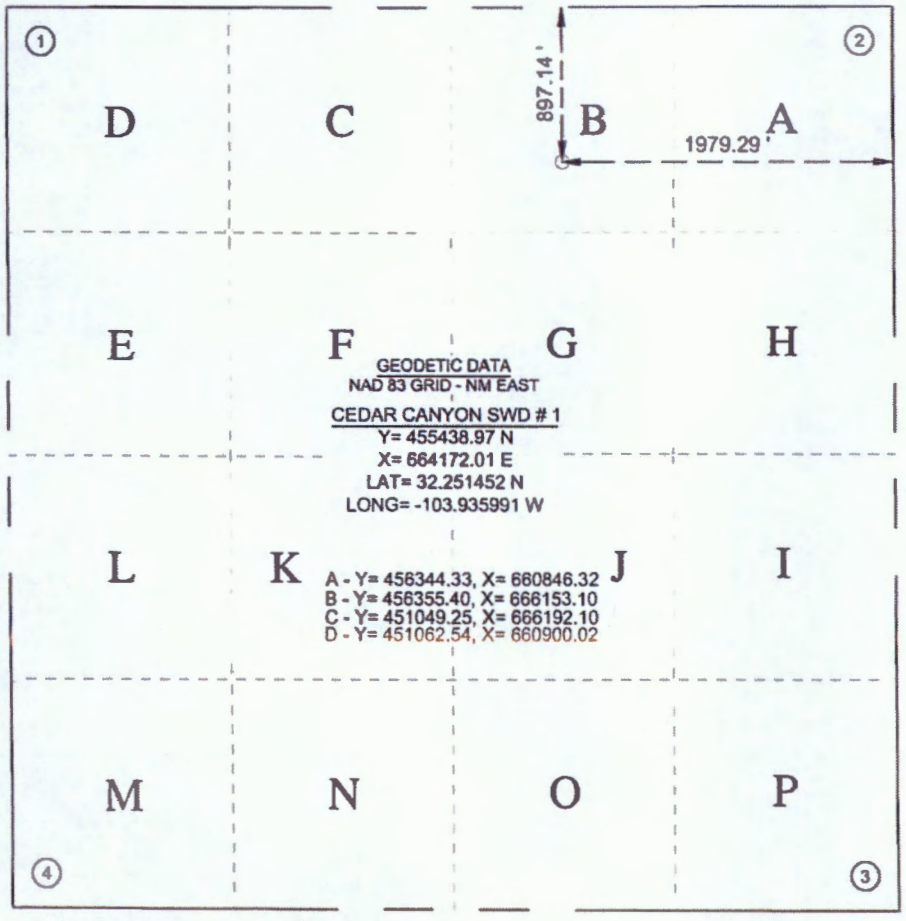
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

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

[16]



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Ramona L Hovey
Signature Date

RAMONA L HOVEY 10/18/18
Printed Name Date

ramona@longuist.com
Email Address Date

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on thi plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Aug 31, 2018
Date of Survey Date

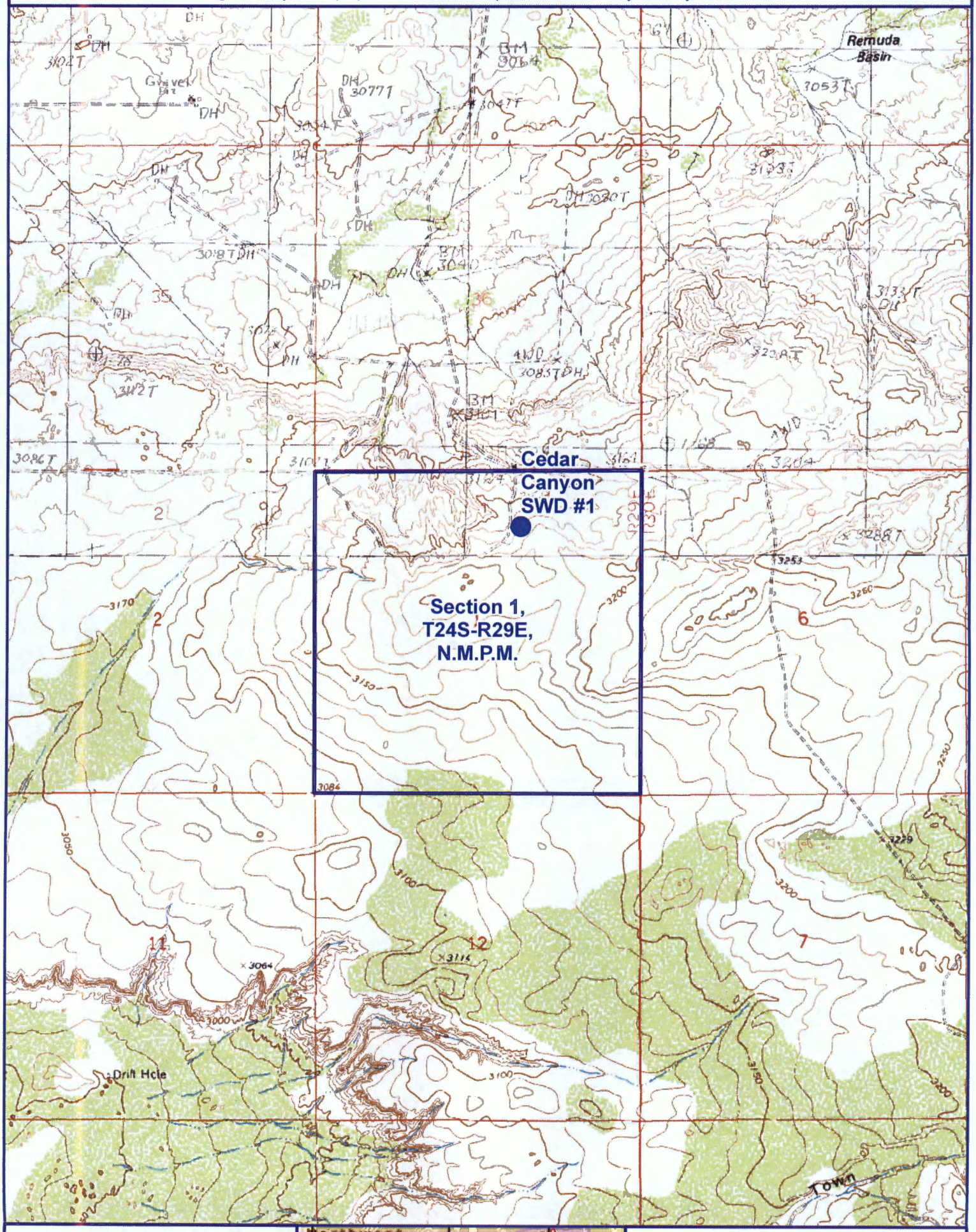
Signature and Seal of Professional Surveyor:

JEFFREY E. HUDSON
NEW MEXICO
20559
PROFESSIONAL SURVEYOR

Certificate Number
20559

LOCATION VERIFICATION MAP

Section one (1), Township twenty four (24) South,
Range twenty-nine (29) East of the Principal Meridian, Eddy County, New Mexico



0.2 0.1 0 0.2 0.4 Miles

1,000 500 0 1,000 2,000 Feet

CEDAR CANYON SWD #1

SHL Location & Penetration Point

AERIAL MAP

Section one (1), Township twenty four (24) South,
Range twenty-nine (29) East of the Principal Meridian, Eddy County, New Mexico

Miles
0.2 0.1 0 0.2 0.4

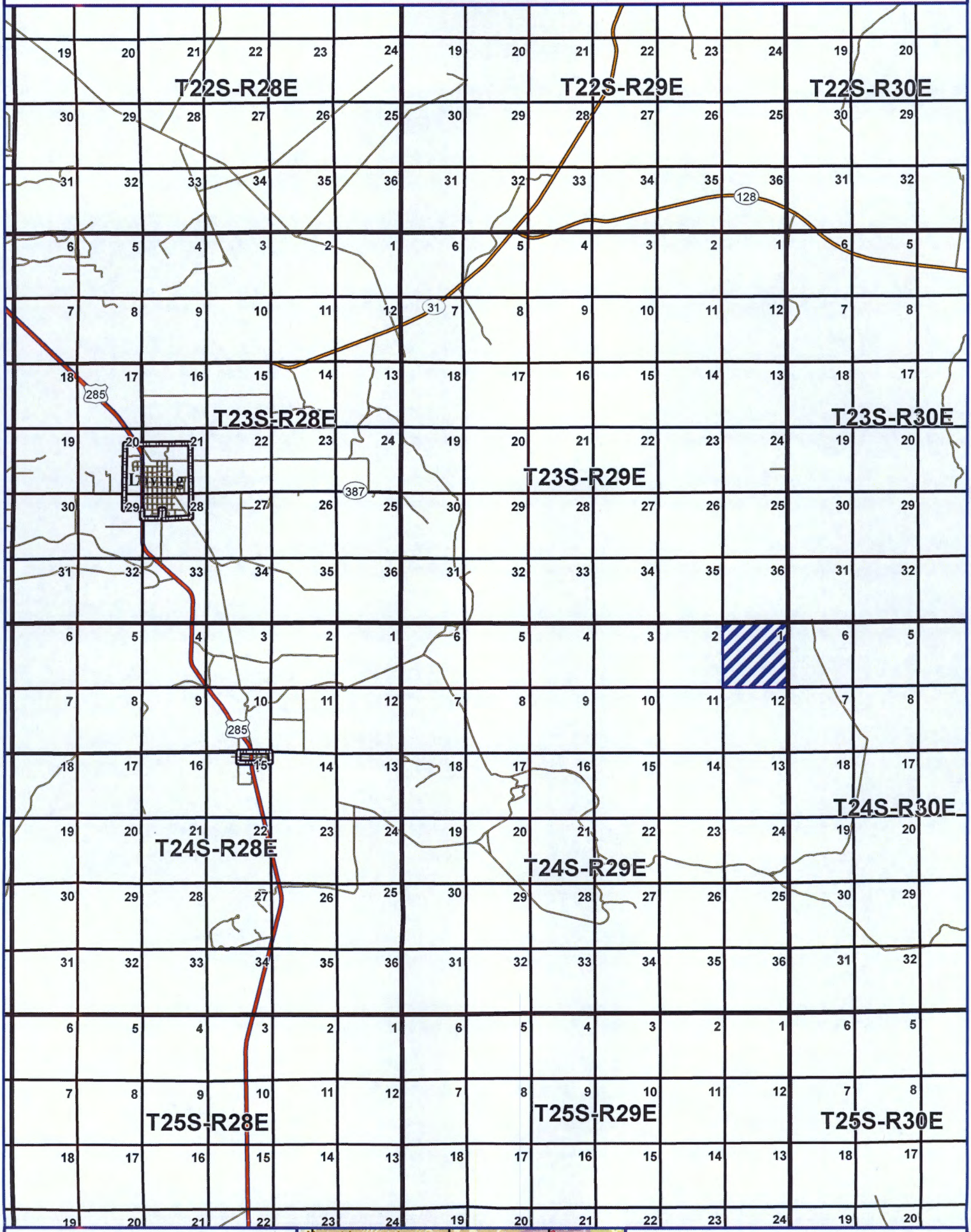
Feet
1,000 500 0 1,000 2,000

CEDAR CANYON SWD #1

SHL Location & Penetration Point:

VICINITY MAP

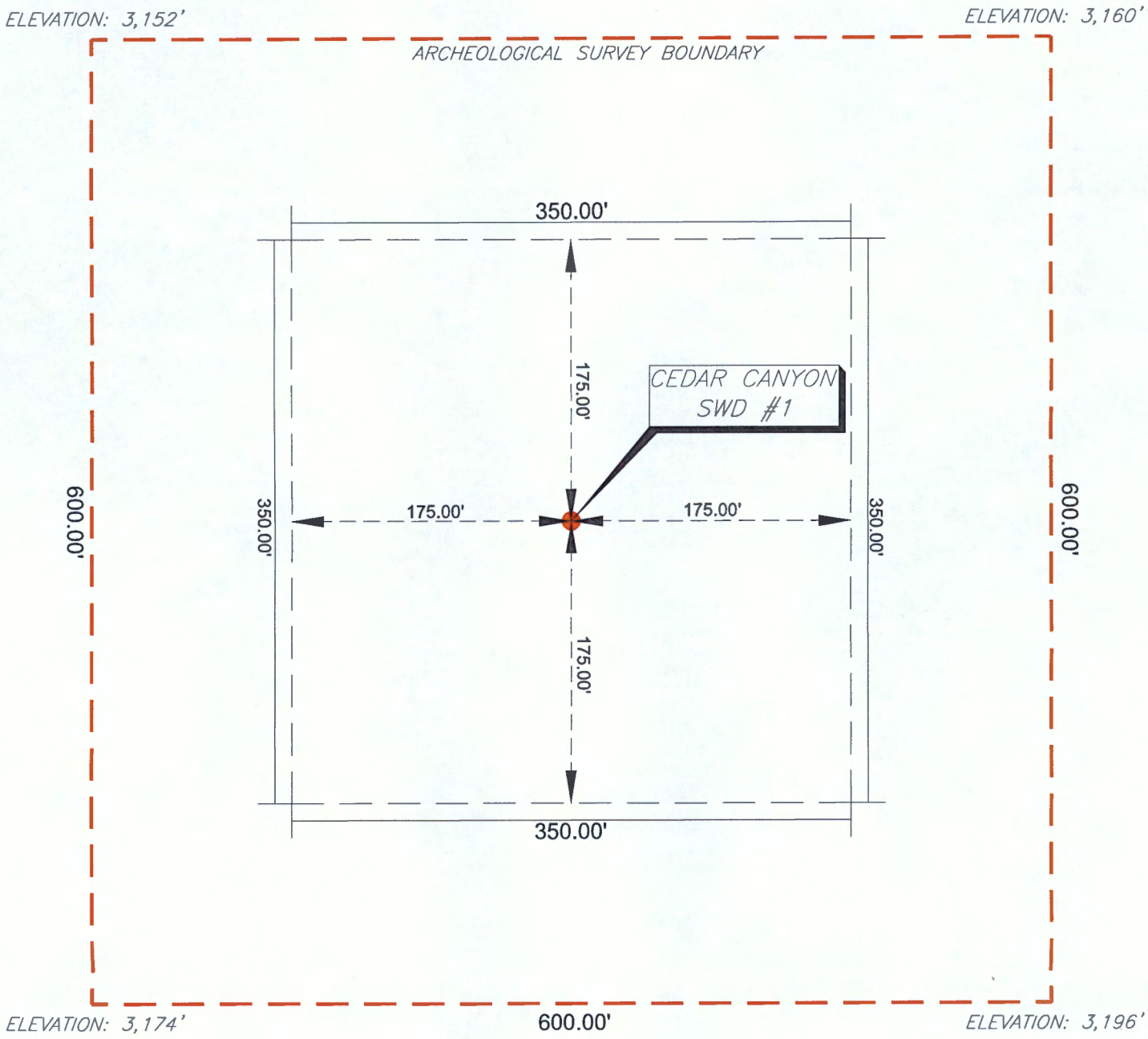
Section one (1), Township twenty four (24) South,
Range twenty-nine (29) East of the Principal Meridian, Eddy County, New Mexico



CEDAR CANYON SWD #1

EDDY COUNTY, NEW MEXICO

SECTION ONE (1), TOWNSHIP TWENTY-FOUR (24) SOUTH, RANGE TWENTY-NINE (29) EAST OF THE PRINCIPAL MERIDIAN



COORDINATE TABLE				
WELL NAME	NORTHING (N.A.D. 27)	EASTING (N.A.D. 27)	NORTHING (N.A.D. 83)	EASTING (N.A.D. 83)
CEDAR CANYON SWD #1 SURFACE LOCATION & PENETRATION POINT	*455379.82*	*622988.36*	*455438.97*	*664172.01*
ELEVATION	LATITUDE (N.A.D. 27)	LONGITUDE (N.A.D. 27)	LATITUDE (N.A.D. 83)	LONGITUDE (N.A.D. 83)
3,171.32'	*32.251329*	*-103.935502*	*32.251452*	*-103.935991*

THE CEDAR CANYON SWD #1 IS LOCATED APPROXIMATELY 8 MILES NORTHEAST OF MALAGA, NEW MEXICO

100' 0' 100' 200 FEET

SCALE: 1" = 100'

NOTES:

1.) BEARINGS & COORDINATES SHOWN HEREON ARE REFERENCED TO THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, N.A.D. 27 & 83 DATUM (NEW MEXICO EAST ZONE) DERIVED FROM GPS OBSERVATIONS AND ARE BASED REFERENCE STATIONS - "E 148" - MALJAMAR NE (1985)

2.) LATITUDE & LONGITUDE ARE NAD 83 & 27 GEOGRAPHIC.

3.) THIS IS AN WELL PLAT AND DOES NOT REPRESENT A TRUE BOUNDARY SURVEY. THIS SURVEY IS BASED ON OWNERSHIP AND EASEMENT INFORMATION PROVIDED BY APACHE CORPORATION. SURVEYOR DID NOT ABSTRACT SUBJECT TRACT AND THERE MAY BE EASEMENTS OR OTHER ENCUMBRANCES THAT AFFECT THE SUBJECT TRACT THAT ARE NOT SHOWN HEREON.

TRANSGLOBAL SERVICES LLC

1100 Macon Street
Fort Worth, Texas 76102
(817) 529-1180 ~ Fax (817) 529-1181

OILFIELD WATER LOGISTICS

Location of

CEDAR CANYON SWD #1

Surface Location & Penetration Point: 897' FNL & 1979' FEL

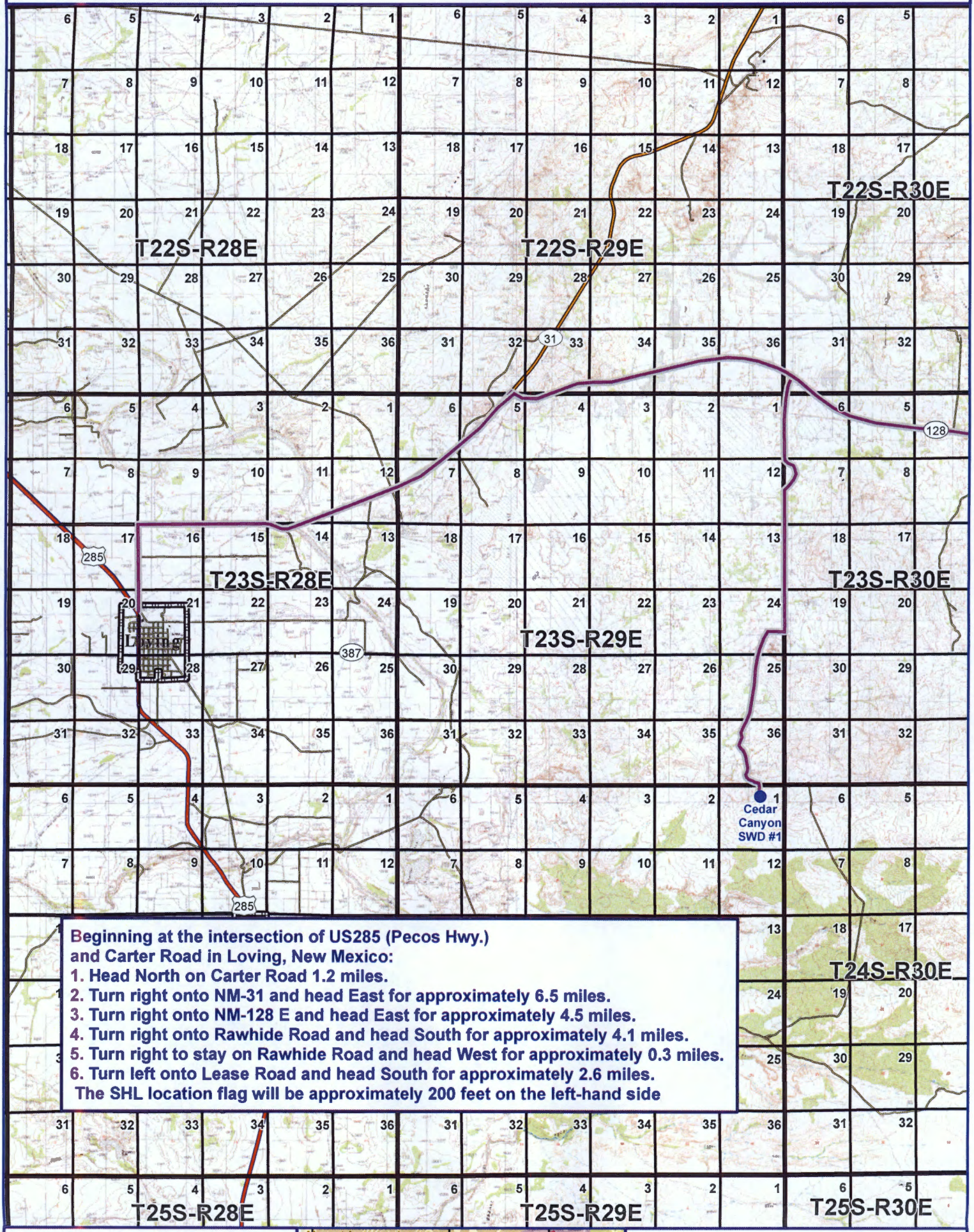
Section 1, Township 24 South, Range 29 East of P.M.

Eddy County, New Mexico

DRAWN BY: JWP	DATE: 9-27-18	DWG. NO. D:\Dropbox (Tide Resources)\Tide Resources Team Folder\Lonquist\18080330_Cedar Canyon SWD No 1\Site Location PAGE 1 OF 1	REV. 0
CHECKED BY: JLW	DATE: 9-27-18		
SCALE: 1" = 100'	APP.:		

ROAD ROUTE MAP

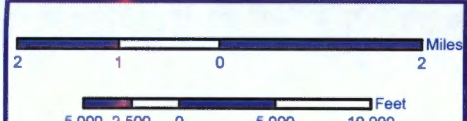
Section one (1), Township twenty four (24) South,
Range twenty-nine (29) East of the Principal Meridian, Eddy County, New Mexico



Beginning at the intersection of US285 (Pecos Hwy.) and Carter Road in Loving, New Mexico:

1. Head North on Carter Road 1.2 miles.
2. Turn right onto NM-31 and head East for approximately 6.5 miles.
3. Turn right onto NM-128 E and head East for approximately 4.5 miles.
4. Turn right onto Rawhide Road and head South for approximately 4.1 miles.
5. Turn right to stay on Rawhide Road and head West for approximately 0.3 miles.
6. Turn left onto Lease Road and head South for approximately 2.6 miles.

The SHL location flag will be approximately 200 feet on the left-hand side



CEDAR CANYON SWD #1

PROOF OF NOTICES SENT

Cedar Canyon SWD #1 Notice List			
Lea County, NM			
OWL SWD Operating, LLC			
S/T/R	**UNIT**	**REGULATORY**	**MAILING ADDRESS**
		SURFACE OWNER	**MAILING ADDRESS**
		BUREAU OF LAND MANAGEMENT	301 DINOSAUR TRAIL SANTA FE, NM 87508
		MINERAL LESSEE	**MAILING ADDRESS**
35/23S/293 1/24S/29E	I,J,O,P E,L,M	ECHO PROD INC.	PO BOX 1210 GRAHAM, TX 76450
31/23S/30E	O	CONOCOPHILLIPS CO	PO BOX 7500 BARTLESVILLE, OK 74005
6/24S/30E 1/24S/29E 12/24S/29E	B,C,D,F A,H,I,J,O,P A	CTV OG NM LLC SRBI OG NM LLC KEYSTONE OG NM LLC TRU LINE OG NM LLC LMBI OG NM LLC	201 MAIN ST STE 2700 FORT WORTH, TX 76102
		OFFSET OPERATORS	**MAILING ADDRESS**
36/23S/29E 31/23S/30E	ALL E,F,K,L,M	XTO ENERGY INC.	6401 HOLIDAY HILL ROAD BUILDING #5 MIDLAND, TX 79707
1/24S/29E	D	DEVON ENERGY PRODUCTION COMPANY, LP	20 N BROADWAY OKLAHOMA CITY, OK 73102
1/24S/29E	C,F,K,N	COG OPERATING LLC	550 W TEXAS MIDLAND, TX 79701
12/24S/29E	C,D	EOG Y RESOURCES INC.	104 S 4TH ST ARTESIA, NM 88210
31/23S/30E 12/24S/29E 6/24S/30E 7/24S/30E	M,J,N B E,G,J,K,L,M,N D	BOPCO LP	6401 HOLIDAY HILL ROAD BUILDING #5 MIDLAND, TX 79707
		OTHER PARTIES	**MAILING ADDRESS**

Notices were sent on 10/17/2018 for the Cedar Canyon 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,

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL®

7016 0600 0000 2971 0793

7016 0600 0000 2971 0793

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com*®.

OFFICIAL USE

Certified Mail Fee
$

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Postmark Here

1645 Cedar Canyon

Bureau of Land Management
310 Dinosaur Trail
Santa Fe, New Mexico 87502

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bureau of Land Management
310 Dinosaur Trail
Santa Fe, New Mexico 87502

9590 9402 3572 7305 4570 66

2. Article Number *(Transfer from service label)*
7016 0600 0000 2971 0793

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

1645 Cedar Canyon SWD #1

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Mail
- ☐ Mail Restricted Delivery
- ☐ Integrity Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

RIGHT LINE®

0809 0809

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com*®.

OFFICIAL USE

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7016 0600 0000 2971 0816

7016 0600 0000 2971 0816

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee
$

Extra Services & Fees (check box, add fee as appropriate)
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
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Postage
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1645 Cedar Canyon Dual Lease Line

COG Operating , LLC
550 W Texas
Midland, Texas 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

COG Operating , LLC
550 W Texas
Midland, Texas 79701

9590 9402 3572 7305 4570 80

2. Article Number *(Transfer from service label)*

7016 0600 0000 2971 0816

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

1645 Cedar Canyon Dual

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

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VELOPE TO THE RIGHT
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For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

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- ☐ Return Receipt (hardcopy) $

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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7016 0600 0000 2971 0830

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Domestic Mail Only

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OFFICIAL USE

Certified Mail Fee
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Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
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- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

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1645 Cedar Canyon Dual

CTV OG NM LLC, SRBI OG NM LLC, Keystone OG NM LLC, True Line OG NM, LMBI OG NM LLC
201 Main Street, Suite 2700
Fort worth, Texas 76102

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CTV OG NM LLC, SRBI OG NM LLC, Keystone OG NM LLC, True Line OG NM, LMBI OG NM LLC
201 Main Street, Suite 2700
Fort worth, Texas 76102

9590 9402 4493 8248 3601 48

2. Article Number *(Transfer from service label)*

7016 0600 0000 2971 0830

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

1645 Cedar Canyon Dual

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
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- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

THE RIGHT TTED LINE IL®

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7014 1820 0000 3203 9516

7014 1820 0000 3203 9516

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Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark Here

1645 Cedar Canyon Dual

Echo Prod., Inc.
P. O. Box 1210
Graham, Texas 76450

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Echo Prod., Inc.
P. O. Box 1210
Graham, Texas 76450

9590 9402 4493 8248 3601 62

2. Article Number *(Transfer from service label)*

7014 1820 0000 3203 9516

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

1645 Cedar Canyon Dual

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ [illegible]ail
- ☐ [illegible]ail Restricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

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[illegible]ED LINE
[illegible]L®

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3 9523

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
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For delivery information, visit our website at www.usps.com®.

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PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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Certified Fee

Return Receipt Fee (Endorsement Required)

Restricted Delivery Fee (Endorsement Required)

Postmark Here

1645 Cedar Canyon Dr

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

or Instructions

SENDER: COMPLETE THIS SECTION

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- Print your name and address on the reverse so that we can return the card to you.
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OXY USA, Inc.
P. O. Box 4294
Houston, Texas 77210

9590 9402 4493 8248 3601 86

2. Article Number (Transfer from service label)

7014 1820 0000 3203 9530

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

1645 Cedar Canyon Dr

3. Service Type

☐ Adult Signature
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☐ Certified Mail®
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☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

October 15, 2018

XTO ENERGY INC.
6401 HOLIDAY HILL ROAD BUILDING #5
MIDLAND, TX 79707

Subject: **Cedar Canyon 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 Cedar Canyon 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,

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

(512) 600-1774
steve@lonquist.com

October 15, 2018

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

Subject: **Cedar Canyon SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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

(512) 600-1774
steve@lonquist.com

October 15, 2018

ECHO PROD INC.
PO BOX 1210
GRAHAM, TX 76450

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Regards,

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

(512) 600-1774
steve@lonquist.com

October 15, 2018

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

Subject: **Cedar Canyon SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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Regulatory Manager
Lonquist & Co., LLC

(512) 600-1774
steve@lonquist.com

October 15, 2018

CTV OG NM LLC, SRBI OG NM LLC, KEYSTONE OG NM LLC
TRU LINE OG NM LLC, LMBI OG NM LLC
201 MAIN ST STE 2700
FORT WORTH, TX 76102

Subject: **Cedar Canyon SWD No. 1 Authorization to Inject**

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Regards,

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

(512) 600-1774
steve@lonquist.com

October 15, 2018

CONOCOPHILLIPS CO
PO BOX 7500
BARTLESVILLE, OK 74005

Subject: **Cedar Canyon SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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

(512) 600-1774
steve@lonquist.com

October 15, 2018

COG OPERATING LLC
550 W TEXAS
MIDLAND, TX 79701

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To Whom It May Concern:

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Regards,

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

(512) 600-1774
steve@lonquist.com

October 15, 2018

BOPCO LP
6401 HOLIDAY HILL ROAD BUILDING #5
MIDLAND, TX 79707

Subject: **Cedar Canyon 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

(512) 600-1774
steve@lonquist.com

October 15, 2018

BUREAU OF LAND MANAGEMENT
301 DINOSAUR TRAIL
SANTA FE, NM 87508

Subject: **Cedar Canyon 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 Cedar Canyon 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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Regards,

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

(512) 600-1774
steve@lonquist.com

RESOURCES DEPARTMENT Santa Fe, New Mexico 87505

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
ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, TX 75255
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. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes ___X___No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Ramona Hovey TITLE: Consulting Engineer – Agent for OWL SWD Operating, LLC

SIGNATURE: Ramona K Hovey DATE: 10/152018

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

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

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

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: OWL SWD Operating, LLC (OGRID 308339)

WELL NAME & NUMBER: Cedar Canyon SWD No. 1

WELL LOCATION:	897' FNL & 1,979' FEL	B	01	24 S	29 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26" Casing Size: 20"

Cemented with: 1,410 sks *or* _____ ft

Top of Cement: surface Method Determined: circulation

Intermediate Casing 1

Hole Size: 17-1/2" Casing Size: 13-5/8"

Cemented with: 2,660 sks *or* _____ ft

Top of Cement: surface Method Determined: circulation

Intermediate Casing 2

Hole Size: 12-1/4" Casing Size: 9-5/8"

Cemented with: 2,780 sks *or* _____ ft

Top of Cement: surface Method Determined: circulation

Production Liner

Hole Size: 8-1/2"

Casing Size: 7-5/8"

Cemented with: 300 sks

or _____ ft

Top of Cement: 12,200'

Method Determined: Calculation

Total Depth: 17,450'

Injection Interval

15,356 feet to 17,450 feet

(Open Hole)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 5.500", 20.0 lb/ft, P-110 BTC and UFJ (or equivalent), from 0' – 15,300'
Lining Material: Duoline

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

Packer Setting Depth: 15,300'

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

Additional Data

1. Is this a new well drilled for injection? ___X___Yes _____No

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

   _____

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	3,384'
Bone Spring	7,092'
Wolfcamp	11,098'

OWL SWD Operating, LLC.

Cedar Canyon SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Cedar Canyon SWD
Well No.	1
Location	Unit B S-01 T-24S R-29E
Footage Location	897' FNL & 1,979' FEL

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	0.438"	0.625"	0.545"	0.500"
ID	19.124"	12.375"	8.535"	6.625"
Drift ID	18.936"		8.379"	6.500"
COD	21.000"		10.625"	7.625"
Weight	94 lb/ft	88.2 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55 STC	P-110 BTC (Or Equivalent)	HCP-110 BTC (Or Equivalent)	P-110 UFJ (Or Equivalent)
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"
Depth Set	670'	3,450'	12,400'	12,200' – 15,356'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate 1	Production	Production Liner
Lead Cement	HALCEM	HALCEM	Stage 1: NeoCem Stage 2: NeoCem	
Lead Cement Volume	670 sks	2,115 sks	Stage 1: 1,220 sks Stage 2: 1,000 sks	
Tail Cement	HALCEM	HALCEM	Stage 1: NeoCem Stage 2: HalCem	VERSACEM
Tail Cement Volume	740 sks	545 sks	Stage 1: 460 sks Stage 2: 100 sks	300 sks
Cement Excess	100%	100%	100%	50%
TOC	Surface	Surface	Surface	12200
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Calculate

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	17 lb/ft
Grade	P-110 BTC (Or Equivalent	P-110 UFJ (Or Equivalent
Depth Set	12,000'	12,000'-15,300'

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: 15,356' – 17,450'

   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	3,384'
Bone Spring	7,092'
Wolfcamp	11,098'

VI. Area of Review

No wells drilled within 1 mile of the proposed Cedar Canyon SWD No. 1 well penetrated the 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: 2,303 PSI (surface pressure)
   Maximum Injection Pressure: 3,071 PSI (surface pressure)

4. The injection fluid is to be locally produced water. Attached are produced water sample analyses taken from the closest wells that feature samples from the Bone Spring, Delaware, Brushy Canyon and Devonian formations.

5. Water sample analysis for produced water in the proposed Devonian zone of injection are included in the table above.

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.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Salado	622'
Delaware	3,384'
Cherry Canyon	4,251'
Brushy Canyon	5,462'
Bone Spring	7,092'
Wolfcamp	11,098'
Strawn	12,365'
Atoka	12,641'
Mississippian Lime	14,846'
Woodford	15,207'
Devonian	15,356'
Fusselman	16,464'

B. Underground Sources of Drinking Water

No water wells exist within one mile of the proposed well. Across the area, fresh water wells are usually drilled between 400' and 500' in depth. The Rustler is known to exist in this general area and may also be another USDW and will be protected through the top of the Salado Formation at 622' by setting surface casing at 670'.

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

No fresh water wells exist within one mile of the proposed Cedar Canyon SWD No. 1 well.

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.