

AE Order Number Banner

Application Number: pAYH2330035658

SWD-2579

Avant Operating, LLC [330396]

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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



ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: Avant Operating, LLC **OGRID Number:** 330396
Well Name: Cutbow SWD Fed I **API:** 30-025-
Pool: SWD; Devonian-Silurian **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
- 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

- 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

FOR OCD ONLY	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	Application Content Complete

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.

Brian Wood

Print or Type Name

Signature

10-21-23
Date

505 466-8120
Phone Number

brian@permitswest.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ XXX Disposal _____ Storage
Application qualifies for administrative approval? _____ XXX Yes _____ No

II. OPERATOR: AVANT OPERATING, LLC

ADDRESS: 1515 WYNKOOP ST., SUITE 700, DENVER CO 80202

CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120

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 XXX No
If yes, give the Division order number authorizing the project: _____

CUTBOW SWD FED 1
SWD; DEVONIAN-SILURIAN
97869

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: BRIAN WOOD  TITLE: CONSULTANT

SIGNATURE: _____ DATE: 10-17-23

E-MAIL ADDRESS: brian@permitswest.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.

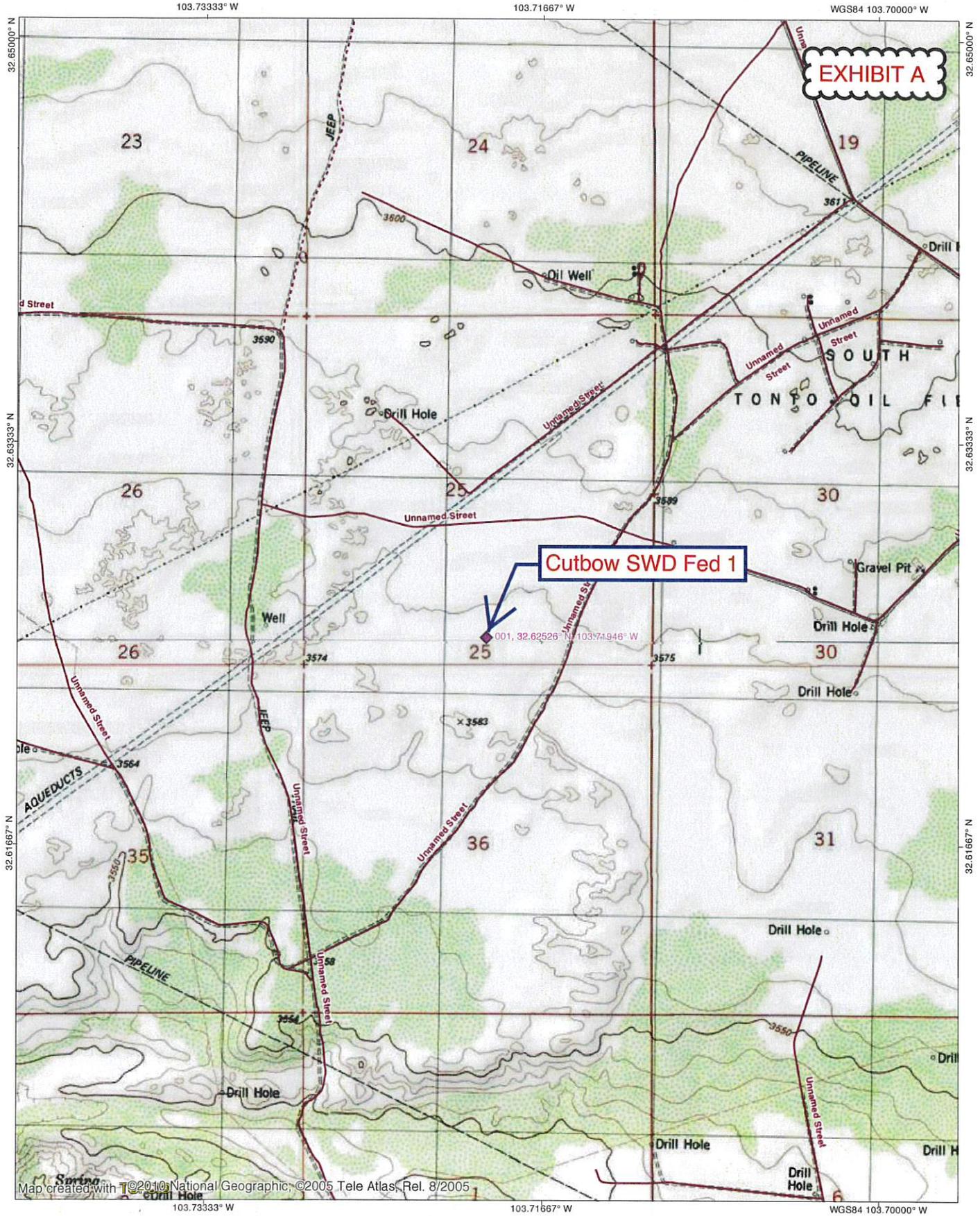
Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (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.

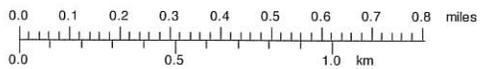
NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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.

TOPOI map printed on 07/15/23 from "Untitled.tpo"



Map created with T©2010 National Geographic, ©2005 Tele Atlas, Rel. 8/2005



DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-8181 Fax: (575) 393-0720

DISTRICT II
611 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals & Natural Resources Department



Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, N.M. 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-		² Pool Code 97869		³ Pool Name SWD;DEVONIAN-SILURIAN	
⁴ Property Code		⁵ Property Name CUTBOW SWD FED			⁶ Well Number 1
⁷ OGRID No. 330396		⁸ Operator Name Avant Operating, LLC			⁹ Elevation 3576

¹⁰ Surface Location

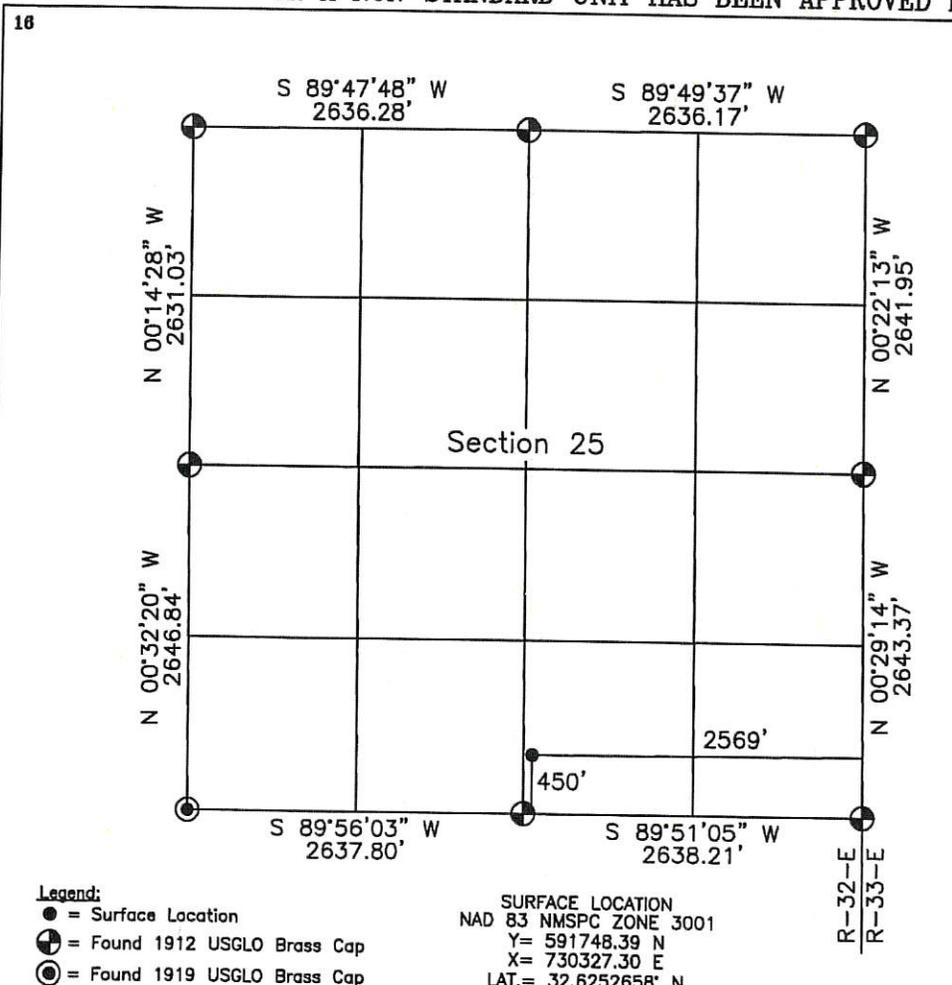
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	25	19 S	32 E		450	South	2569	East	Lea

¹¹ Bottom Hole Location If Different From Surface

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

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

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



- Legend:**
- = Surface Location
 - ⊕ = Found 1912 USGLO Brass Cap
 - ⊙ = Found 1919 USGLO Brass Cap

SURFACE LOCATION
NAD 83 NMSPC ZONE 3001
Y= 591748.39 N
X= 730327.30 E
LAT.= 32.6252658° N
LONG.= 103.7194679° W

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.

Brian Wood

9-3-23
Date

Signature
BRIAN WOOD

Printed Name
brian@permitswest.com

E-mail Address
505 466-8120

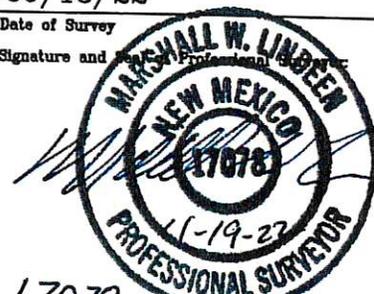
¹⁸ SURVEYOR CERTIFICATION

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

09/13/22

Date of Survey

Signature and Title



17078
Certificate Number

INJECTION WELL DATA SHEET

Tubing Size: 7" Lining Material: IPC

Type of Packer: STAINLESS STEEL OR NICKEL

Packer Setting Depth: 14300'

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

Additional Data

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

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

2. Name of the Injection Formation: DEVONIAN & SILURIAN

3. Name of Field or Pool (if applicable): SWD; DEVONIAN-SILURIAN (97869)

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

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

OVER: YATES (2975'), SEVEN RIVERS (3100'), DELAWARE (5000'),
BONE SPRING (8850'), WOLFCAMP (10910'), & MORROW (13400')

UNDER: NONE

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
September 13, 2023
and ending with the issue dated
September 13, 2023.

LEGAL NOTICE
September 13, 2023

Avant Operating, LLC is applying to drill the Cutbow SWD Fed 1 as a saltwater disposal well. The well is staked at 450' FSL & 2569' FEL, Sec. 25, T. 19 S., R. 32 E., Lea County, NM. This is 16 miles south-southeast of Maljamar, NM. Water will be injected at a maximum pressure of 2865 psi into the Devonian and Silurian formations from 14325' to 15200'. Maximum disposal rate will be 30,000 bwpd. Interested parties must file objections, protests, or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505 or OCD.Engineer@emnrn.nm.gov within 15 days. NM OCD Engineering Bureau phone is 505 476-3441. Additional information can be obtained by contacting: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120.
#00282723


Publisher

Sworn and subscribed to before me this
13th day of September 2023.


Business Manager

My commission expires
January 29, 2027
(Seal)

STATE OF NEW MEXICO
NOTARY PUBLIC
GUSSIE RUTH BLACK
COMMISSION # 1087526
COMMISSION EXPIRES 01/29/2027

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 publication has been made.

02108485

00282723

BRIAN WOOD
PERMITS WEST
37 VERANO LOOP
SANTA FE, NM 87508



October 17, 2023

BLM
620 E. Greene
Carlsbad NM 88220

TYPICAL NOTICE

Avant Operating, LLC is applying (see attached application) to drill the Cutbow SWD Fed 1 as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposed saltwater disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Cutbow SWD Fed 1 (BLM lease) ID = 15,200'
Proposed Disposal Zones: Devonian & Silurian (14,325' - 15,200')
Location: 450' FSL & 2569' FEL Sec. 25, T. 19 S., R. 32 E., Lea County, NM
Approximate Location: 16 air miles SSE of Maljamar, NM
Applicant Name: Avant Operating, LLC (720) 854-9020
Applicant's Address: 1515 Wynkoop St., Suite 700, Denver CO 80202

Submittal Information: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. NMOCD address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3441. Their e-mail address is: ocd.engineer@emnrd.nm.gov.

Please call me if you have any questions.

Sincerely,

Brian Wood

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Abby Corp
PO Box 10940
Naples FL 34101

Street and Apt. No., or P.O. Box, or Military APO/FPO
Avant Cutbow SWD Fed 1

City, State, ZIP+4® Avant, TX 79705

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

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Apache Corporation
303 Veterans Airpark Lane
Suite 1000

Street and Apt. No., or P.O. Box, or Military APO/FPO
Midland TX 79705

City, State, ZIP+4® Avant, TX 79705

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STE 100

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2000 Post Oak Blvd
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Ard Energy Group LP
222 W 4th Street
PH 5

Street and Apt. No., or P.O. Box, or Military APO/FPO
Fort Worth TX 76102

City, State, ZIP+4® Avant, TX 79705

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PO Box 417
Roswell NM 88202

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Avant, TX 79705

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620 E. Greene
Carlsbad NM 88220

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Avant, TX 79705

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Sent To
BP America Production Co
501 Westlake Park Bldg
Houston TX 77079

Street and Apt. No., or P.O. Box, or Military APO/FPO
Avant, TX 79705

City, State, ZIP+4® Avant, TX 79705

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Sent To
Burlington Resources Oil & Gas Co LP
PO Box 51810
Midland TX 79710

Street and Apt. No., or P.O. Box, or Military APO/FPO
Avant, TX 79705

City, State, ZIP+4® Avant, TX 79705

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Burlington Resources Oil & Gas Co LP
600 W. Illinois Ave
Midland TX 79701

Street and Apt. No., or P.O. Box, or Military APO/FPO
Avant, TX 79705

City, State, ZIP+4® Avant, TX 79705

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500 Commerce Street
STE 600
Fort Worth TX 76102

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EXHIBIT K

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Total Postage and Fees Mack-Chase Trustee
2103 Main Street
Artesia NM 88270

Sent To
Street and Apt. No., or PO Box
PO Box 88270
City, State, ZIP+4®
Avant, NM 88001

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Total Postage and Fees Chevron USA Inc
PO Box 1635
Houston TX 77251

Sent To
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PO Box 1635
City, State, ZIP+4®
Houston, TX 77002

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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 \$

Total Postage and Fees Chevron USA Inc
6301 Deauville
Midland TX 79706

Sent To
Street and Apt. No., or PO Box
6301 Deauville
City, State, ZIP+4®
Midland, TX 79701

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

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 \$

Total Postage and Fees Childress Royalty Co
PO Box 852
Joplin MO 64802

Sent To
Street and Apt. No., or PO Box
PO Box 852
City, State, ZIP+4®
Joplin, MO 64801

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

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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 \$

Total Postage and Fees Chisholm Energy c/o Earthstone
1400 Woodloch Forest
Suite 300
Woodlands TX 77380

Sent To
Street and Apt. No., or PO Box
1400 Woodloch Forest
City, State, ZIP+4®
Avant, TX 77380

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Chisholm Energy Agent Inc
801 Cherry Street STE 1200
Unit 20
Worth TX 76102

Sent To
Street and Apt. No., or PO Box
801 Cherry Street
City, State, ZIP+4®
Avant, TX 76102

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

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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 \$

Total Postage and Fees Chisos LTD
1331 Lamar St
STE 1077
Houston TX 77010

Sent To
Street and Apt. No., or PO Box
1331 Lamar St
City, State, ZIP+4®
Houston, TX 77001

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Chisos Ltd
3355 W. Alabama St
Suite 1200-B
Houston TX 77709B

Sent To
Street and Apt. No., or PO Box
3355 W. Alabama St
City, State, ZIP+4®
Houston, TX 77001

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Cimarex Energy Co. of Colo
600 W. Deauville Blvd.
Suite 300-N
Midland TX 79706

Sent To
Street and Apt. No., or PO Box
600 W. Deauville Blvd
City, State, ZIP+4®
Avant, TX 79706

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees COG Operating LLC
600 W. Illinois Ave
Midland TX 79701

Sent To
Street and Apt. No., or PO Box
600 W. Illinois Ave
City, State, ZIP+4®
Avant, TX 79701

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Collier Energy Inc
PO Box 481
Artesia NM 88210

Sent To
Street and Apt. No., or PO Box
PO Box 481
City, State, ZIP+4®
Artesia, NM 88001

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Conoco Phillips Co
315 S. Johnston
Bartlesville OK 74005

Sent To
Street and Apt. No., or PO Box
315 S. Johnston
City, State, ZIP+4®
Bartlesville, OK 74005

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

EXHIBIT K

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 \$
 Total Postage and Fees **ConocoPhillips Company**
 600 W. Illinois Ave. #111
 Midland TX 79701
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Earthstone Operating**
 1400 Woodloch Forest
 Suite 300
 Midland TX 79701
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Endurance Properties Inc**
 15455 Dallas Pkwy
 Suite 600
 Addison TX 75001
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Cross Borders Resources Inc**
 6334 Maple Ave
 STE 500
 Dallas TX 75252
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

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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 \$
 Total Postage and Fees **EAU Rouge LLC**
 PO Box 823085
 Dallas TX 75382
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Enduro Operating LLC**
 777 Main Street A
 STE 800
 Fort Worth TX 76102
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Devon Energy Co. LP**
 333 W. Sheridan Ave
 Oklahoma City OK 73102
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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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 \$
 Total Postage and Fees **Endeavor Energy Resources LP**
 1100 N. Marfield #200
 Midland TX 79701
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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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 \$
 Total Postage and Fees **EOG Resources Inc**
 1111 Bagby Street
 LBBY 2
 Richardson TX 77002
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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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 \$
 Total Postage and Fees **Dixie Lake Operating LLC**
 PO Box 2109
 Longview TX 75606
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Endurance Properties Inc**
 15455 Dallas Pkwy
 STE 1050
 Addison TX 75001
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$
 Total Postage and Fees **Explora, Petro Corp**
 PO Box 1933
 Roswell NM 88002
 Street and Apt. No., or PO Box, or P.O. Box, or P.O. Box SWD Fed 1
 City, State, ZIP+4®

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

EXHIBIT K

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees F & M Oil & Gas Co

Sent To PO Box 891

Midland TX 79701

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Gross Family LTD

Sent To PO Box 358

Roswell NM 88202

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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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 \$

Total Postage and Fees H & S Drilling Company

Sent To PO Box 201620

Tulsa OK 74170

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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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 \$

Total Postage and Fees Hanesco Inc

Sent To PO Box 2588

Roswell NM 88202

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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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 \$

Total Postage and Fees Headington Royalty Inc

Sent To 1501 N Hardin Blvd

STE 100

Midland TX 79071

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

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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 \$

Total Postage and Fees Kerr-McGee c/o Anagaarko c/o

Sent To P. O. Box 4294

Midland TX 77210

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Lanexco Inc

Sent To PO Box 2730

Midland TX 79702

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

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 \$

Total Postage and Fees Lean Dog Limited Partnership #1

Sent To PO Box 26203

Dallas TX 75225

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Lothian Oil Inc

Sent To 303 W Wall #500

Midland TX 79701

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Mack Energy Corp

Sent To PO Box 960

Artesia NM 88211

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees Magnum Hunter Production Inc

Sent To 600 N Marinfeld Street

Midland TX 79701

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

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 \$

Total Postage and Fees Magnum Hunter c/o Blue

Sent To 122 W John Carpenter Freeway

Suite 300

Midland TX 79039

Street and Apt. No., or P.O. Box, or POA/Avant Cutbow SWD Fed 1

City, State, ZIP+4®

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

EXHIBIT K

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 \$

Total Postage and Fees \$

Sent To: Mammoth Exploration LLC
200 N Lorraine Street
STE 1100
Midland TX 79701
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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 \$

Total Postage and Fees \$

Sent To: Manzano LLC
121 W 3rd Street
Roswell NM 88201
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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 \$

Total Postage and Fees \$

Sent To: Manzano LLC
P. O. Box 1737
Roswell NM 88202
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees \$

Sent To: Manzano Oil Corp
PO Box 2107
Roswell NM 88202
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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 \$

Total Postage and Fees \$

Sent To: Marathon Oil
990 Town & Country Blvd
Floor 11
Houston TX 77024
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To: MEC Development LTD
PO Box 4000
The Woodlands TX 773804
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To: MRC Delaware Resources LLC
5400 LBJ Freeway
STE 1500
Dallas TX 75240
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To: MRC Explorers Resources
5400 LBJ Freeway
STE 1500
Dallas TX 75240
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To: MRC Spiral Resources LLC
5400 LBJ Freeway
STE 1500
Dallas TX 75240
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To: Nuevo Seis, Inc
PO Box 182
Roswell NM 88201
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT
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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 \$

Total Postage and Fees \$

Sent To: Mosaic Potash Carlsbad Inc
PO Box 71
Carlsbad NM 88220
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To: Nadel & Gussman Capital LLC
15 E 5th Street
STE 3200
OK 74103
City, State, ZIP+4®: Avant, Cutbow, SWD, Fed 1

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

EXHIBIT K

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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 \$

Total Postage and Fees \$

Sent To Nadel & Gussman Capitan LLC
15 E 5th Street
STE 3300
Houston TX 77004
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To NM State Land Office
P.O. Box 1148
Santa Fe NM 87504
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Oleum Energy
2955 Dawn Dr.
Suite 104
Borgetown TX 78628
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To OXY USA WTR
P.O. Box 4294
Houston TX 77210
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To OXY Y-1 CO
5 Greenway Plaza
STE 110
Houston TX 77045
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Paper Time Inc
119 N Colorado #505
Midland TX 79701
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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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 \$

Total Postage and Fees \$

Sent To Permian Resources Operating, LLC
1001 17th St
Suite 1800
Denver CO 80202
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Ray Westall Operating Inc
PO Box 4
Loco Hills NM 88255
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Robinson Oil Inc
PO Box 1829
Eunice NM 88231
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Sabine Holdings LP
312 W Sabine Street
Carthage TX 75633
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Tandem Energy Corp
5055 Westheimer Rd
STE 920
Houston TX 77056
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

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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 \$

Total Postage and Fees \$

Sent To Three Lain Corp
2200 Scurry Street
Big Spring TX 79720
Street and Apt. No., or P.O. Box
City, State, ZIP+4® Avant Cutbow SWD Fed 1

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

EXHIBIT K

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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 \$

Total Postage and Fees Tom P Stephens Trust
3707 Camp Bowie Blvd
STE 220
Fort Worth TX 76107
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Tritex Energy A LP
15455 Dallas Pkwy
STE 600
Mableton TX 75001
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Union Production Co
PO Box 2120
Houston TX 77252
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Union TX Petro Corp
PO Box 2120
Houston TX 77252
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Walsh & Watts Inc.
155 Walsh Dr
Aledo TX 76008
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Westall Oil & Gas LLC
PO Box 4
Loco Hills NM 88255
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Westall Oil & Gas LLC
PO Box 417
Loco Hills NM 88255
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees White Rock Royalty Partners No 1
427 S Boston Ave
STE 711
Aledo TX 76008
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees Wm. G Ross & Vee K
Ross Liv. Trust
P. O. Box 86
Midland TX 79702
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

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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 \$

Total Postage and Fees XTO Holdings Inc
22777 Springwoods Village Pkwy
Spring TX 77389
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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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 \$

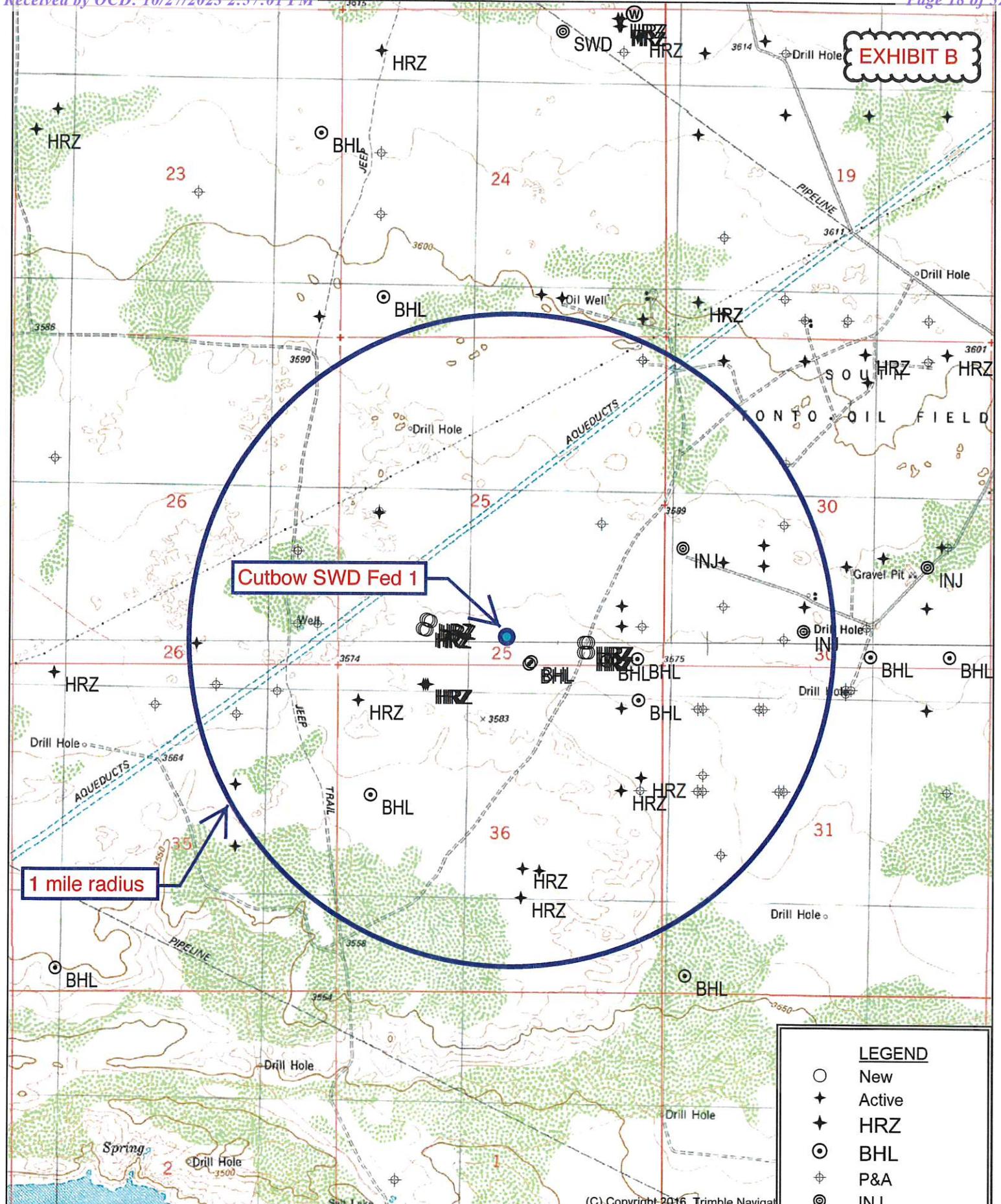
Postage \$

Total Postage and Fees ZPZ Delaware I LLC
2000 Post Oak Blvd
STE 100
Houston TX 77056
Street and Apt. No., or PO Box
City, State, ZIP+4® Avant.Cutbow.SWD.Fed.1

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

EXHIBIT K

EXHIBIT B



Cutbow SWD Fed 1

1 mile radius

LEGEND	
○	New
+	Active
✦	HRZ
⊙	BHL
⊕	P&A
⊗	INJ
⊖	SWD
⊙	Brine
⊗	Water

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Quad: LAGUNA GATUNA NW
 Scale: 1 inch = 2,000 ft.

WELLS WITHIN 1 MILE RADIUS OF CUTBOW SWD FED 1 - SORTED BY DISTANCE FROM CUTBOW SWD FED 1

API	OPERATOR	WELL	TYPE	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM CUTBOW SWD FED 1
3002545006	Earthstone	Diamondback 24 25 Fed Com 2BS 001H	O	A-24	10020	Bone Spring	428
3002548037	Earthstone	Diamondback 24 25 Fed Com 1BS 004H	O	A-24	9886	Bone Spring	1054
3002551651	Avant	Cutbow 36 1 Federal Com 503H	O	N-25	plan 9800	Bone Spring	1243
3002551650	Avant	Cutbow 36 1 Federal Com 502H	O	N-25	plan 9800	Bone Spring	1275
3002551648	Avant	Cutbow 36 1 Federal Com 303H	O	N-25	plan 9000	Bone Spring	1279
3002551649	Avant	Cutbow 36 1 Federal Com 501H	O	N-25	plan 9800	Bone Spring	1308
3002551647	Avant	Cutbow 36 1 Federal Com 302H	O	N-25	plan 9000	Bone Spring	1310
3002551499	Avant	Cutbow 36 1 Federal Com 304H	O	P-25	plan 9000	Bone Spring	1310
3002551035	Avant	Cutbow 36 1 Federal Com 604H	O	P-25	plan 11300	Bone Spring	1311
3002551500	Avant	Cutbow 36 1 Federal Com 305H	O	P-25	plan 9000	Bone Spring	1342
3002551498	Avant	Cutbow 36 1 Federal Com 301H	O	N-25	plan 9000	Bone Spring	1343
3002551187	Avant	Cutbow 36 1 Federal Com 605H	O	P-25	plan 11300	Bone Spring	1344
3002551501	Avant	Cutbow 36 1 Federal Com 306H	O	P-25	plan 9000	Bone Spring	1376
3002551036	Avant	Cutbow 36 1 Federal Com 606H	O	P-25	plan. 11300	Bone Spring	1377
3002550635	Avant	Cutbow 36 1 Federal Com 603H	O	C-36	plan 11300	Bone Spring	1462
3002550674	Avant	Cutbow 36 1 Federal Com 602H	O	C-36	plan 11300	Bone Spring	1491

EXHIBIT B

WELLS WITHIN 1 MILE RADIUS OF CUTBOW SWD FED 1 - SORTED BY DISTANCE FROM CUTBOW SWD FED 1

API	OPERATOR	WELL	TYPE	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM CUTBOW SWD FED 1
3002550701	Avant	Cutbow 36 1 Federal Com 601H	O	C-36	plan 11300	Bone Spring	1519
3002531327	Walsh & Watts	Andaway 25 Federal 001	O	P-25	7920	Bone Spring	1911
3002534679	Earthstone	Diamondback 25 Federal Com 001	G	P-25	13850	Morrow	1972
3002545007	Earthstone	Diamondback 24 25 Fed Com 1BS 003H	O	A-24	9147	Bone Spring	2145
3002548038	Earthstone	Diamondback 24 25 Fed Com 2BS 005H	O	A-24	9901	Bone Spring	2189
3002531803	Marathon	State HH Delaware 002	P&A	A-36	7900	Bone Spring	2207
3002526028	Grace	Hi Yo Silver Federal 001	P&A	P-25	3304	Seven Rivers	2240
3002526712	Wallen	Wallen Cleary 001	P&A	I-25	3140	Yates	2425
3002539887	Cimarex of CO	State HH 003H	O	D-36	9900	Bone Spring	2578
3002527740	Mewbourne	McKamey Federal 001Y	O	L-25	13850	Morrow	2864
3002527574	Grace	West Tonto A Federal 001	O	L-25	4950	Delaware	2885
3002531172	Burlington	Federal AW 003	P&A	P-26	5600	Delaware	3045
3002527417	Cimarex of CO	State HH 001	G	H-36	13800	Mississippian	3095
3002525420	Robinson	Tonto 002	I	L-30	3095	Seven Rivers	3242
3002531950	BC	State HH Delaware 012	P&A	H-36	7911	Delaware	3296
3002531174	COG	Geronimo Federal 003	P&A	D-31	3250	Yates	3347
3002500921	Culbertson	Bowman 001	P&A	P-26	3117	Yates	3376
3002530645	COG	Geronimo Federal 001	O	D-31	10564	Bone Spring	3418
3002525590	Robinson	Tonto 004	P&A	M-30	3129	Yates	3597
3002535600	EOG	Lusk 26 Federal Com 001	P&A	I-26	13750	Mississippian	3647

EXHIBIT B

WELLS WITHIN 1 MILE RADIUS OF CUTBOW SWD FED 1 - SORTED BY DISTANCE FROM CUTBOW SWD FED 1

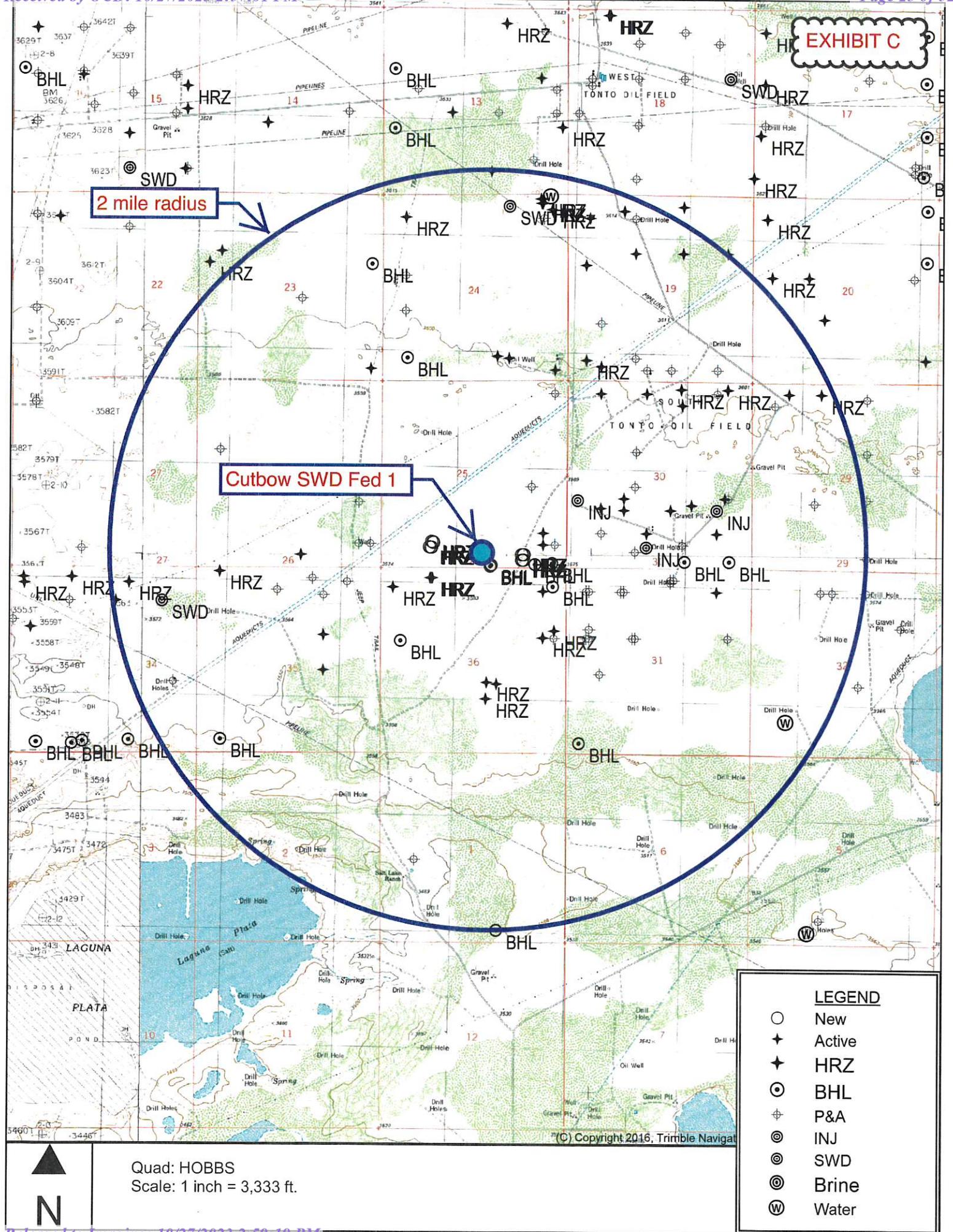
API	OPERATOR	WELL	TYPE	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM CUTBOW SWD FED 1
3002538389	Cimarex of CO	State HH 002	G	J-36	13840	Barnett	3753
3002527371	Robinson	Tonto 011	O	L-30	3088	Seven Rivers	3766
3002531314	EOG Y	Lusk AHB Federal 006	P&A	A-35	7900	Bone Spring	3801
3002531376	Wagner	Geronimo Federal 006	P&A	E-31	7900	Bone Spring	3900
3002531391	COG	Geronimo Federal 007	P&A	E-31	3250	Yates	3989
3002530992	COG	Geronimo Federal 002	P&A	E-31	13770	Morrow	4049
3002540827	Marathon	Maroon Bells Fed. Com 16 32 SB 1H	O	J-36	10009	Bone Spring	4143
3002531533	Wagner	Geronimo Federal 010	P&A	C-31	3250	Seven Rivers	4297
3002531312	COG	Geronimo Federal 005	P&A	C-31	10500	Bone Spring	4369
3002525589	Robinson	Tonto 003	O	K-30	3073	Seven Rivers	4384
3002526290	Robinson	Tonto 010	O	K-30	3100	Yates	4484
3002530808	EOG Y	Lusk AHB Federal 001	P&A	B-35	13936	Mississippian	4535
3002531591	Robinson	Tonto 012	P&A	N-30	9450	Bone Spring	4553
3002531151	EOG	Lusk AHB Federal 005	P&A	B-35	7940	Bone Spring	4757
3002527190	Robinson	Tonto 009Y	I	N-30	3086	Seven Rivers	4886
3002526343	Wallen	Wallen Tonto 009	P&A	N-30	570	Quaternary	4886
3002527671	Kaiser-Francis	Federal 30 002	P&A	K-30	13802	Morrow	4911
3002525371	Robinson	Tonto 001	O	N-30	3077	Seven Rivers	4912
3002532133	Wagner	Geronimo Federal 009	P&A	L-31	8200	Bone Spring	4949
3002531042	EOG	Lusk AHB Federal 002	O	G-35	10600	Bone Spring	4965
3002500920	Kewanee	Big Circle Federal 001	P&A	A-25	3172	Yates	5009

EXHIBIT B

WELLS WITHIN 1 MILE RADIUS OF CUTBOW SWD FED 1 - SORTED BY DISTANCE FROM CUTBOW SWD FED 1

API	OPERATOR	WELL	TYPE	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM CUTBOW SWD FED 1
3002530975	EOG	Federal AW 002	P&A	O-26	7806	Delaware	5028
3002531532	COG	Geronimo Federal 008	P&A	F-31	3150	Seven Rivers	5103
3002531315	Devon	Geronimo Federal 004	P&A	F-31	10295	Bone Spring	5170
3002501695	Hudson	Signal Ross Federal 002	P&A	F-30	3173	Yates	5381

EXHIBIT B



CUTBOW SWD FED 1 AREA OF REVIEW LEASES

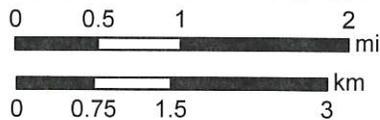
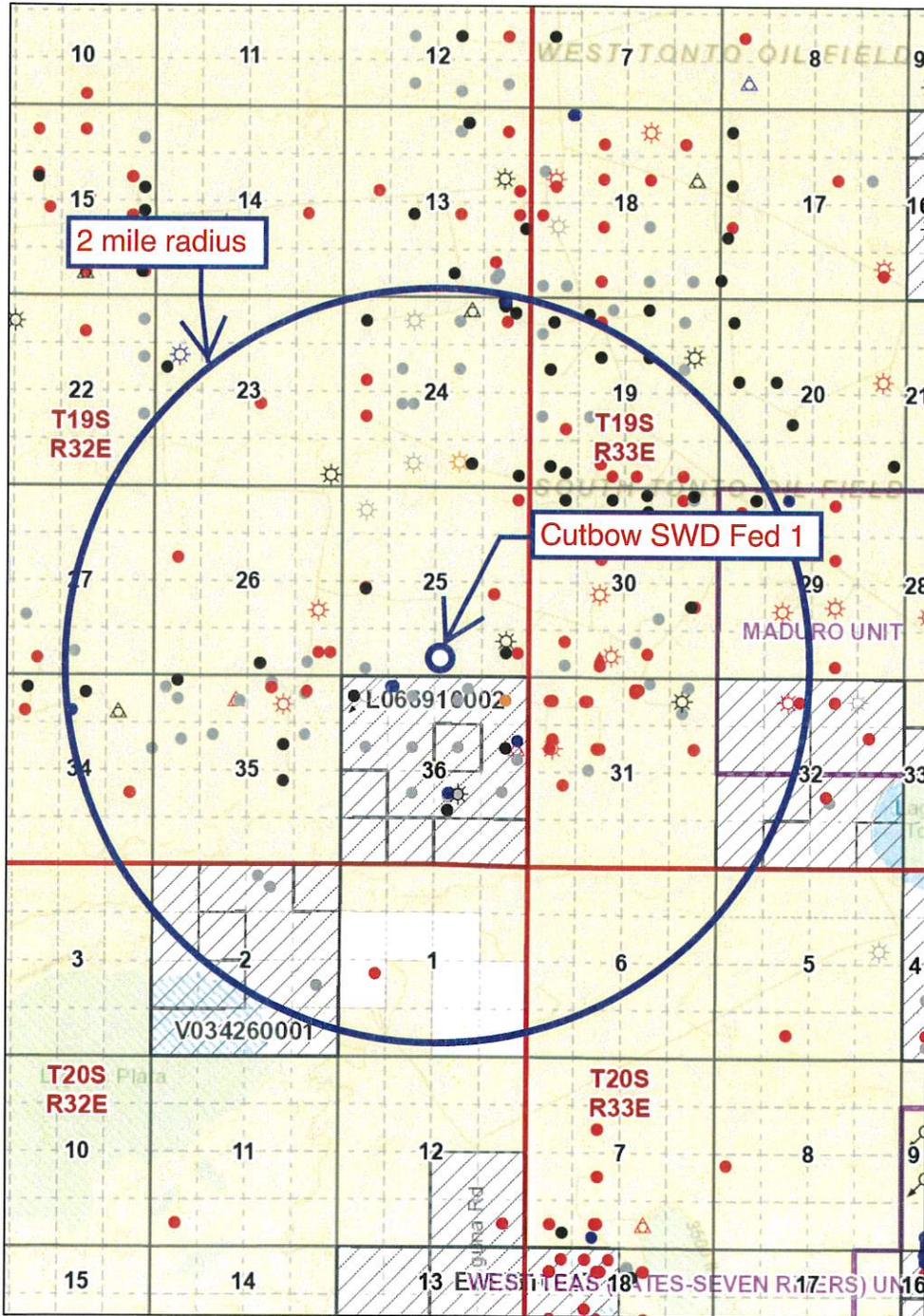
Aliquot Parts in Area of Review	Lessor	Lease	Lessee(s) of Record	Well Operators (all shallower than Devonian)
S2SW4 24-19s-32e	BLM	NMNM-012413	EOG, Mammoth, Chisholm	Cimarex Energy Co. of Colo.
S2SE4 24-19s-32e	BLM	NMNM-0077006	Collier	Earthstone & Oleum
NE4 25-19s-32e	BLM	NMNM-0077006	Collier	Earthstone
NW4 & SE4 25-19s-32e	BLM	NMNM-012413	EOG, Mammoth, Chisholm	Avant, Earthstone, Walsh & Watts
SW4 25-19s-32e	BLM	NMNM-014790	Samson	Avant, Mewbourne
E2NE4, SWNE, & SE4 26-19s-32e	BLM	NMNM-012412	White Rock, H and S, Lean Dog, Headington, Sabine Holdings, Dixie Lake	none
NE4 & N2SE4 35-19s-32e	BLM	NMNM-059392	OXY Y-1 & EOG	EOG Resources
N2, S2NW4, SENE, N2SE4, NESW, & SWSW 36-19s-32e	NMSLO	LO-6691-0002	Magnum Hunter	Avant, Cimarex, Marathon
SWNE & S2SE4 36-19s-32e	NMSLO	B0-1482-0012	Magnum Hunter	Avant, Cimarex, Marathon Oil Permian
NWSW 36-19s-32e	NMSLO	B0-1565-0012	Chevron USA	Avant
SESW 36-19s-32e	NMSLO	B0-1482-0011	OXY USA WTP	Avant
W2 & SWSE 30-19s-33e	BLM	NMNM-0073240	ConocoPhillips, MRC Delaware, XTO Holdings	Matador Production, Oleum Energy, Robinson Oil
NWNE 31-19s-33e	BLM	NMNM-067110	Chevron USA	N/A
NW4, N2SW4, & SWSW 31-19s-33e	BLM	NMNM-067111	Campeche	COG Operating

EXHIBIT D



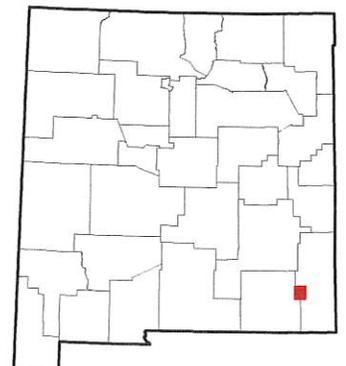
New Mexico State Land Office

EXHIBIT E



Disclaimer:
 The New Mexico State Land Office assumes no responsibility or liability for, or in connection with the accuracy, reliability, or use of the information provided herein with respect to State Land Office data or data from other sources.

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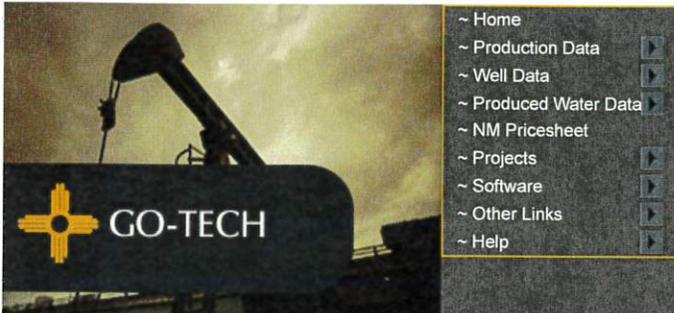
PARAMETERS IN MG/L

WELL	API	SECTION	U/L	FORMATION	TDS	SODIUM	CHLORIDE	BICARBONATE	SULFATE
BONDURANT FED. #001	3002500895	13	I	ARTESIA	239594		145300	271	820
PLAINS #006	3002520769	21	E	ARTESIA	135266		84150	144	290
PLAINS #006	3002520769	21	E	ARTESIA	137149		84930	290	521
PLAINS #006	3002520769	21	E	ARTESIA	163755		101000	195	300
BOWMAN FED. #001	3002500923	28	D	ARTESIA	15821		7812	1502	655
JENNINGS FED. #001	3002524836	15	F	BONE SPRING	164916		101031	452	1308
LUSK 16 STATE #002	3002520904	16	K	BONE SPRING	148331		91520	188	506
TAYLOR DRAW 7 FED. #001H	3002541146	7	I	BONE SPRING 2ND SAND		86621	154922	207	840
TAYLOR DRAW 7 FED. #001H	3002541146	7	I	BONE SPRING 2ND SAND	184810	55568	114300	122	0
HAWKEYE 7 FED. #001	3002500892	7	M	BONE SPRING 2ND SAND	91689	34070	54988	366	560
TONTO FED. #001	3002500922	27	D	DELAWARE	143221		86881	215	1070
TONTO FED. #001	3002500922	27	D	DELAWARE	87665		53600	55	1800
LUSK W. DEL. UNIT #908	3002500925	29	H	DELAWARE	4304		1600	647	595
FED. USA J #001	3002520367	30	P	DELAWARE	131700		81020	174	276
POLEWSKI FED. #001	3002520161	31	D	DELAWARE	25908		12546	457	3662
POLEWSKI FED. #001	3002520161	31	D	DELAWARE	29793		17950	390	454
POLEWSKI FED. #001	3002520161	31	D	DELAWARE	26318				
POLEWSKI FED. #001	3002520161	31	D	DELAWARE	61165		36500	380	1230
NEW MEXICO CR STATE #003	3002520959	32	L	DELAWARE	111710		69200	160	200
NEW MEXICO CR STATE #003	3002520959	32	L	DELAWARE	127100		78480	104	286
PLAINS UNIT FED. #007	3002520770	33	D	DELAWARE	250653		159500	488	425
PLAINS FED. UNIT #009	3002523121	33	F	DELAWARE	257806		162000	0	120
LUSK AHB FED. #006	3002531314	35	A	DELAWARE	20582		11997	635	0
LUSK AHB FED. #006	3002531314	35	A	DELAWARE	125179		74983	220	2900

EXHIBIT F

PARAMETERS IN MG/L

WELL	API	SECTION	U/L	FORMATION	TDS	SODIUM	CHLORIDE	BICARBONATE	SULFATE
LUSK AHB FED. #006	3002531314	35	A	DELAWARE	125396		69984	303	7400
LUSK AHB FED. #006	3002531314	35	A	DELAWARE	124441		69984	400	6750
LUSK AHB FED. #006	3002531314	35	A	DELAWARE	121459		69984	400	5000
LUSK AHB FED. #006	3002531314	35	A	DELAWARE	127100		74983	273	3500
LUSK AHB FED. #006	3002531314	35	A	DELAWARE			59986	415	5000
LUSK AHB FED. #005	3002531151	35	B	DELAWARE	172408		104976	146	1800
LUSK AHB FED. #005	3002531151	35	B	DELAWARE	187800		114974	156	1400
LUSK AHB FED. #005	3002531151	35	B	DELAWARE	193757		121973	137	700
LUSK AHB FED. #005	3002531151	35	B	DELAWARE			114974	171	950
LUSK AHB FED. #002	3002531042	35	G	DELAWARE	220235		136969	122	450
LUSK AHB FED. #002	3002531042	35	G	DELAWARE	248495		154965	98	500
LUSK AHB FED. #002	3002531042	35	G	DELAWARE	253165		160964	103	150
LUSK AHB FED. #002	3002531042	35	G	DELAWARE			36	61	49
LUSK AHB FED. #001	3002530808	35	B	MORROW	128189		74983	195	3900
LUSK AHB FED. #001	3002530808	35	B	MORROW	158447		91979	303	6100
LUSK AHB FED. #001	3002530808	35	B	MORROW	164047		96978	225	4250
LUSK AHB FED. #001	3002530808	35	B	MORROW			86980	244	2350
LUSK AHB FED. #001	3002530808	35	B	MORROW			74983	259	2800
MIDDELTON A FED. #001	3002508104	18	H	STRAWN	147995		93600	300	140
MIDDELTON A FED. #001	3002508104	18	H	STRAWN	136947				
MIDDELTON A FED. #001	3002508104	18	H	STRAWN	146300		92500	320	140
ELLIOTT HALL A #001	3002520104	30	A	STRAWN	38680		22980	620	310



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NYMEX LS O
Henry Hub
Updated: 10/12/2023
State Land Office Data Access
OCD well/log image files
PRRC NM-TECH NM-BGMR

~ Home>>~ Produced Water Data>>Produced Water Quality

EXHIBIT F

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 - Older Data
 - Production Summaries
- Well Data
 - Well Activity
 - First Production
- Produced Water Data
 - Produced Water Quality**
 - Produced/Injected Water Volume
- NM Priceshet
- Projects
 - SLO
- Software
 - C-115 Filing
 - Decline Curve Plotting
- Other Links
 - NM O and G Links
 - Other States
- Help
 - Land Unit Description
 - Acknowledgements

PRODUCED WATER QUALITY DATA SEARCH

Data in the New Mexico Produced Water Quality Database v.2 was updated in 2016 for the first time in many years. Data should be used for general informational purposes only. The uncertainties in data collection procedures, analysis quality and specific sample sources make it unsuitable as basis for any significant business or policy decisions. Data was gathered from many sources and about 5400 distinct wells in NM are represented. **More data exists for most samples than is provided by the results screen; the downloadable spreadsheet contains more information including field, formation, sample source (where available), and latitude/longitude.**

Funding for the database was provided by the U.S. DOE, various New Mexico State agencies, NMT, and WRRRI.

SEARCH PANEL

API NUMBER Example: 3004511439

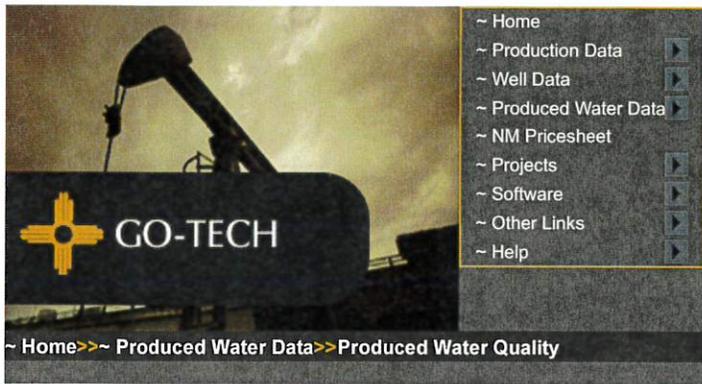
WELL NAME TOWNSHIP RANGE SECTION

Too many or not enough results? Change your search criteria and press the **Submit** button to improve results. There may be more information for these samples. For all available data including lat/long location, press **EXPORT to EXCEL** to create a downloadable file.

RESULT PANEL

WELLNAME	API	TOWNSHIP	RANGE	SECTION	TDS(mg/L)	Chlorides(mg/L)	Sample Year	Field	Formation
LEA UNIT #008	3002502431	20S	34E	12	44800	25320		LEA	PENNSYLVANIAN
LEA UNIT #008	3002502431	20S	34E	12	35094	19020		LEA	PENNSYLVANIAN
LEA UNIT #008	3002502431	20S	34E	12	33414	18570		LEA	DEVONIAN
LEA UNIT #008	3002502431	20S	34E	12	42216	24000		LEA	PENNSYLVANIAN
LEA UNIT #008	3002502431	20S	34E	12	147229	89640		LEA	BONE SPRING

PETROLEUM RECOVERY RESEARCH CENTER, SOCORRO, NM-87801



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NYMEX LS O
Henry Hub
Updated : 10/12/2023
State Land Office Data Access
OCD well/log image files
PRRC NM-TECH NM-BGMR

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 - First Production
- Produced Water Data
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SEARCH PANEL

API NUMBER Example: 3004511439

WELL NAME TOWNSHIP RANGE

SECTION

Too many or not enough results? Change your search criteria and press the **Submit** button to improve results. There may be more information for these samples. For all available data including lat/long location, press **EXPORT to EXCEL** to create a downloadable file.

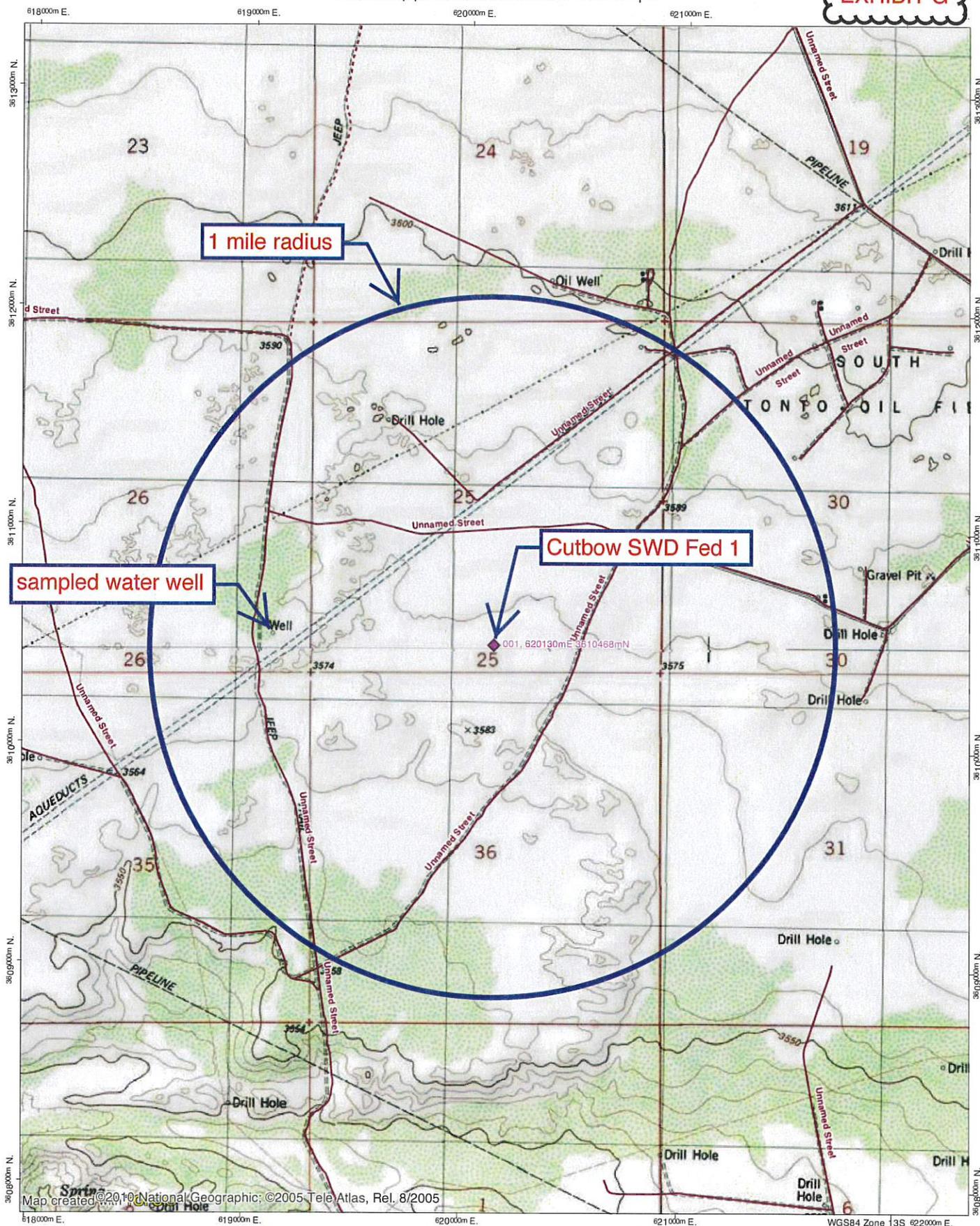
RESULT PANEL

WELLNAME	API	TOWNSHIP	RANGE	SECTION	TDS(mg/L)	Chlorides(mg/L)	Sample Year	Field	Formation
LEA UNIT #009	3002502432	20S	34E	13	45778	26440		LEA	DEVONIAN

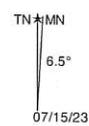
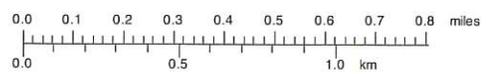
PETROLEUM RECOVERY RESEARCH CENTER, SOCORRO, NM-87801

TOPOI map printed on 07/15/23 from "Untitled.tpo"

EXHIBIT G



Map created ©2010 National Geographic; ©2005 Tele Atlas, Rel. 8/2005





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

EXHIBIT G

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
CP 00075	O	CP	LE	2	4	34	19S	32E		617502	3609301	2875	575		
L 07023		L	LE	2	3	3	32	19S	33E	622840	3609047*	3059	262	185	77
CP 01967 POD1		CP	LE	2	2	2	24	19S	32E	620720	3613546	3134	110		

Average Depth to Water: **185 feet**

Minimum Depth: **185 feet**

Maximum Depth: **185 feet**

Record Count: 3

UTM NAD83 Radius Search (in meters):

Easting (X): 620130

Northing (Y): 3610468

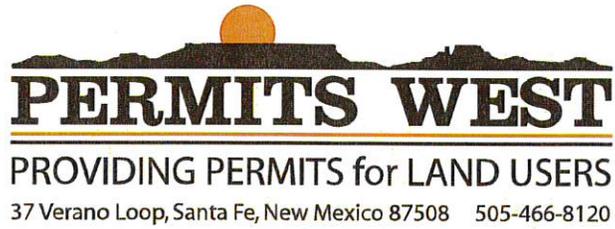
Radius: 3220

*UTM location was derived from PLSS - see Help

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.

9/17/23 9:26 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



NM Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Re: Geology Statement
Avant Operating, LLC
Cutbow SWD Fed #1
Section 25, T. 19S, R. 32E
Lea County, New Mexico

To whom it may concern:

Publicly available geologic and engineering data related to the proposed well have been thoroughly reviewed, and no evidence for open faults or any other hydrologic connection between the proposed Devonian-Silurian injection zone and any underground sources of drinking water has been found. Please see the attached seismic risk assessment for additional information.

Sincerely,

Cory Walk
Geologist



Seismic Risk Assessment
Avant Operating, LLC
Cutbow SWD Fed No. 1
Section 25, Township 19 South, Range 32 East
Lea County, New Mexico

Cory Walk, M.S.

A handwritten signature in black ink that reads "Cory Walk".

Geologist

Permits West Inc.

October 16, 2023



GENERAL INFORMATION

Cutbow SWD Fed No. 1 is located in the SE 1/4, section 25, T.19S, R.32E, about 16 miles south-southeast of Maljamar, NM in the Permian Basin. Avant Operating, LLC proposes to drill the Cutbow SWD Fed #1 well and dispose within the Devonian-Silurian formations through an open hole from 14,325'-15,200' below ground surface. This report assesses any potential concerns relating to induced seismicity along deep penetrating Precambrian faults or the connection between the injection zone and known underground potable water sources.

SEISMIC RISK ASSESSMENT

Historical Seismicity

Searching the USGS earthquake catalog resulted in no (0) earthquakes above a magnitude 2.5 within 6 miles (9.7 km) of the proposed deep disposal site since 1970 (Fig. 1). The nearest earthquake occurred on November 13, 2021 about 16.4 miles (~26.4 km) southeast of the proposed SWD site and had a magnitude of 3.2.

Basement Faults and Subsurface Conditions

A structure contour map (Fig. 1) of the Precambrian basement shows the Cutbow SWD Fed #1 is approximately 7.8 miles (12.5 km) from the nearest basement-penetrating fault inferred by Ewing et al (1990). **Information about known nearby faults based on GIS data from Ruppel et al. (2009) is listed in Table 1.**

Snee and Zoback (2018) state, "In the western part of Eddy County, New Mexico, S_{Hmax} is ~north-south (consistent with the state of stress in the Rio Grande Rift; Zoback and Zoback, 1980) but rotates to ~east-northeast-west-southwest in southern Lea County, New Mexico and the northernmost parts of Culberson and Reeves counties, Texas." **Around the Cutbow SWD Fed #1 site, Snee and Zoback indicate a S_{Hmax} direction of N060°E and an A_ϕ of 0.65, indicating an extensional (normal) stress regime.**

Induced seismicity is a growing concern of deep SWD wells. Software developed by the Stanford Center for Induced and Triggered Seismicity allows for the probabilistic screening of deeply penetrating faults near the proposed injection zone (Walsh et al., 2016; Walsh et al., 2017). This software uses parameters such as stress orientations, fault strike/dip, injection rates, fault friction coefficients, etc. to estimate the potential for fault slip. Using the best available data as input parameters (Table 2) including the subject well injecting at the proposed maximum of 30,000 bbls/day and all other existing SWDs within a 6 mile radius injecting at their individual historical peak annual volume and 3 pending SWDs injecting at 30,000 bbls/day (6 total SWD wells), the Fault Slip Potential (FSP) models suggest an eleven (0.11) percent chance of slip on a nearby fault, inferred by Frenzel et al (1988) and Ewing et al. (1990), through the year 2043 (Fig. 2; Table 1). **This model also suggests a pore pressure increase of 24.8 psi on the nearest publicly known fault (Fault 8; Fig. 3; Table 1) by the year 2044.** Geomechanical modeling shows that the primary fault of concern (fault 11) would need a pressure increase of 2167 psi to reach a 100% probability of slip on the fault. A 50% probability requires an increase of 430 psi which is 17x greater than the modeled increase of 24.8 psi (Fig. 3).



GROUNDWATER SOURCES

Three principal aquifers are used for potable groundwater in southern Lea County; these geologic units include the Triassic Santa Rosa formation, Tertiary Ogallala formation, and Quaternary alluvium. Nicholson and Clebsch (1961) state, "Potable ground water is not available below the Permian and Triassic unconformity but, because this boundary is not easily defined, the top of the Rustler anhydrite formation is regarded as the effective lower limit of 'potable' ground water." Around the Cutbow SWD Fed #1, the top of the Rustler Formation lies at a depth of approximately 1,150' bgs.

VERTICAL MIGRATION OF FLUIDS

Permeability barriers exist above (Woodford shale; 110 ft thick) and below (Simpson Group; 330 ft thick) the targeted Devonian-Silurian injection zone (Plate 2, Comer et al., 1991; Fig. 8, Frenzel et al., 1988). Precambrian structure contours (Ruppel, 2009) show the basement to be at a depth of approximately 16,360' in this area. Therefore, the injection zone lies approximately 1,160' above the Precambrian basement and approximately 13,175' below the previously stated lower limit of potable water at the top of the Rustler Formation.

CONCLUDING STATEMENTS

After examination of publicly available geologic and engineering data, there is no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

EXHIBIT H

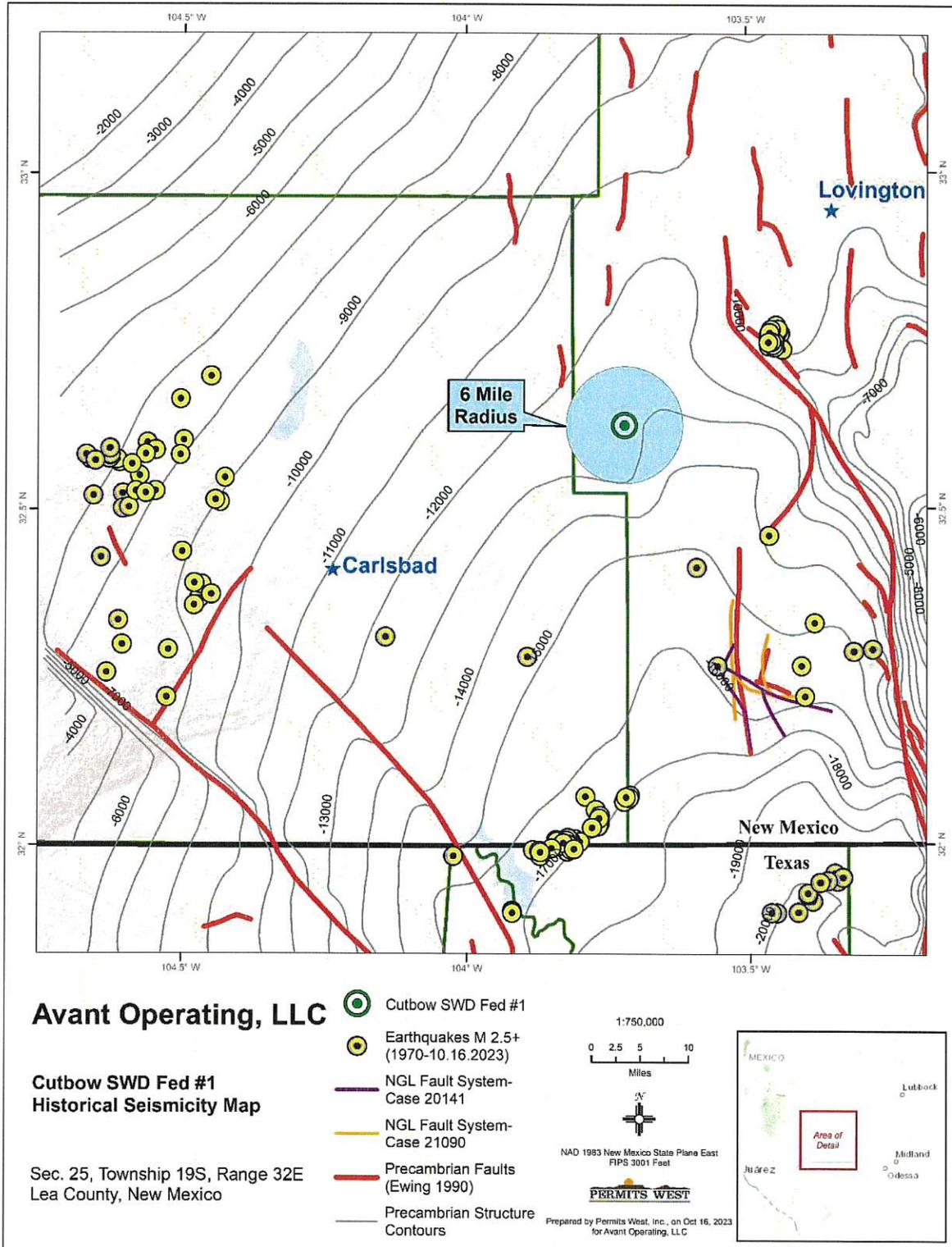


Figure 1. Structural contour map of the Precambrian basement in feet below sea level. Red lines represent the locations of Precambrian basement-penetrating faults (Ewing et al., 1990). Cutbow SWD Fed #1 well lies ~7.8 miles southeast of the closest deeply penetrating fault and ~16.4 miles northwest from the closest historic earthquake.

EXHIBIT H

Table 1: Nearby Basement Fault Model Results

Fault Number	Distance to proposed SWD (mi)	Strike (°)	Dip (°)	FSP (2044)	Δ Pore Pressure after 20 years (psi)	Δ Pore Pressure needed for 100% FSP (psi)	Δ Pore Pressure needed for 50% FSP (psi)
Fault 8	7.8	169	50-90	0.00	24.8	5220	2924
Fault 11	18.5	42	50-90	0.11	3.8	2167	430

Table 2: Fault Slip Potential model input parameters

Faults	Value	Notes
Friction Coefficient	0.58	Ikari et al. (2011)
Dip Angle (deg)	70	Snee and Zoback (2018)
Stress		
Vertical stress gradient (psi/ft)	1.1	Hurd and Zoback (2012)
Max Horizontal Stress Direction (deg)	60	Snee and Zoback (2018)
Depth for calculations (ft)	15200	Proposed injection zone
Initial Reservoir Pressure Gradient (psi/ft)	0.7	calculated from mud wt (ppg) used in drilling at these depths
A Phi Parameter	0.65	Snee and Zoback (2018)
Reference Friction Coefficient	0.58	Ikari et al. (2011)
Hydrology		
Aquifer thickness (ft)	900	Proposed injection zone
Porosity (%)	6	
Permeability (mD)	150	
Injection Rate (bbl/day)	30000	Maximum proposed injection rate

EXHIBIT H

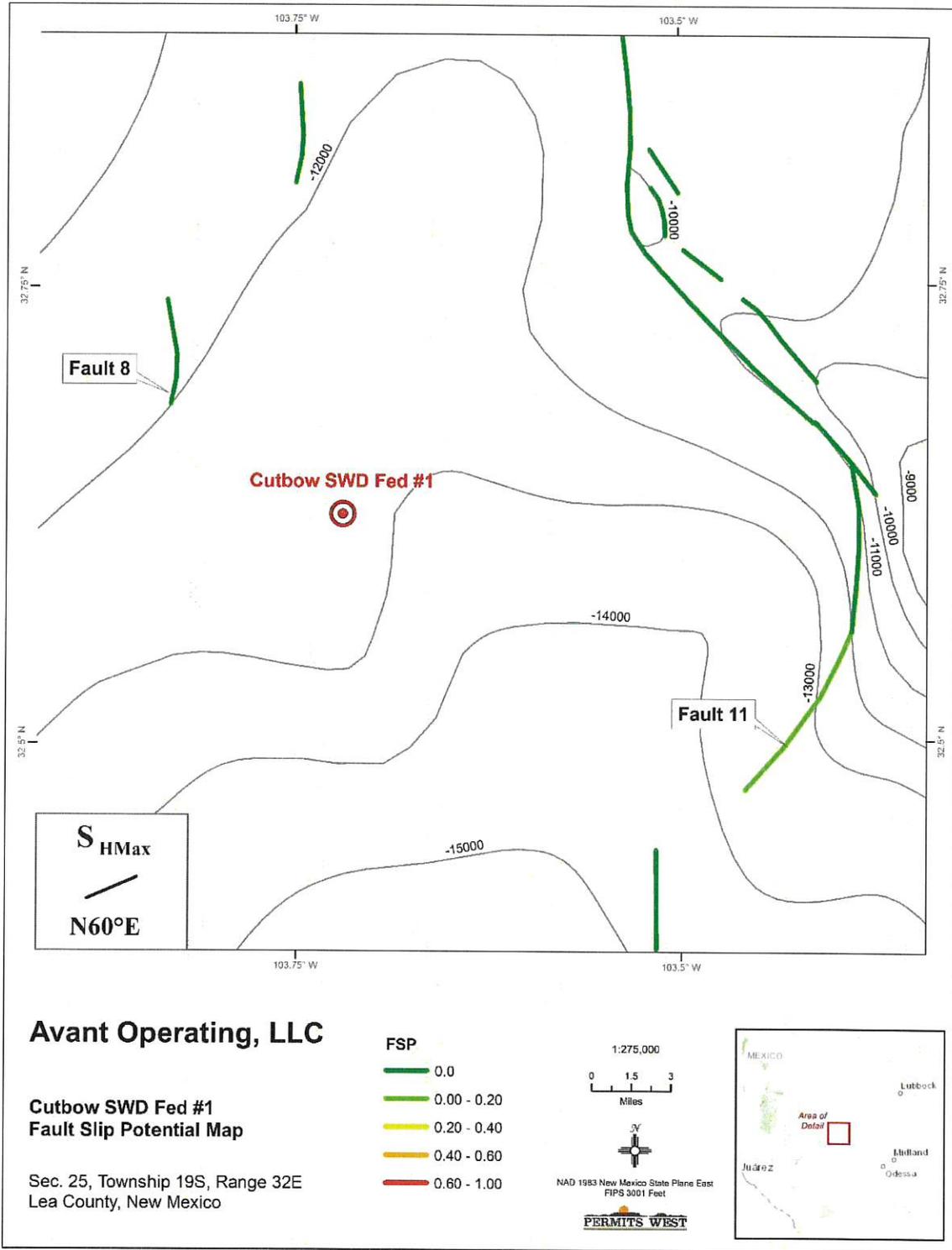


Figure 2. Precambrian fault map of the Cutbow SWD Fed area as mapped by Ewing et al. (1990). Faults are colored based on probability of fault slip as modeled using Fault Slip Potential software (Walsh and Zoback, 2016). Labeled values represent the calculated fault slip potential using the parameters indicated in Table 2. Contours show the top of the Precambrian basement in feet below sea level.

EXHIBIT H

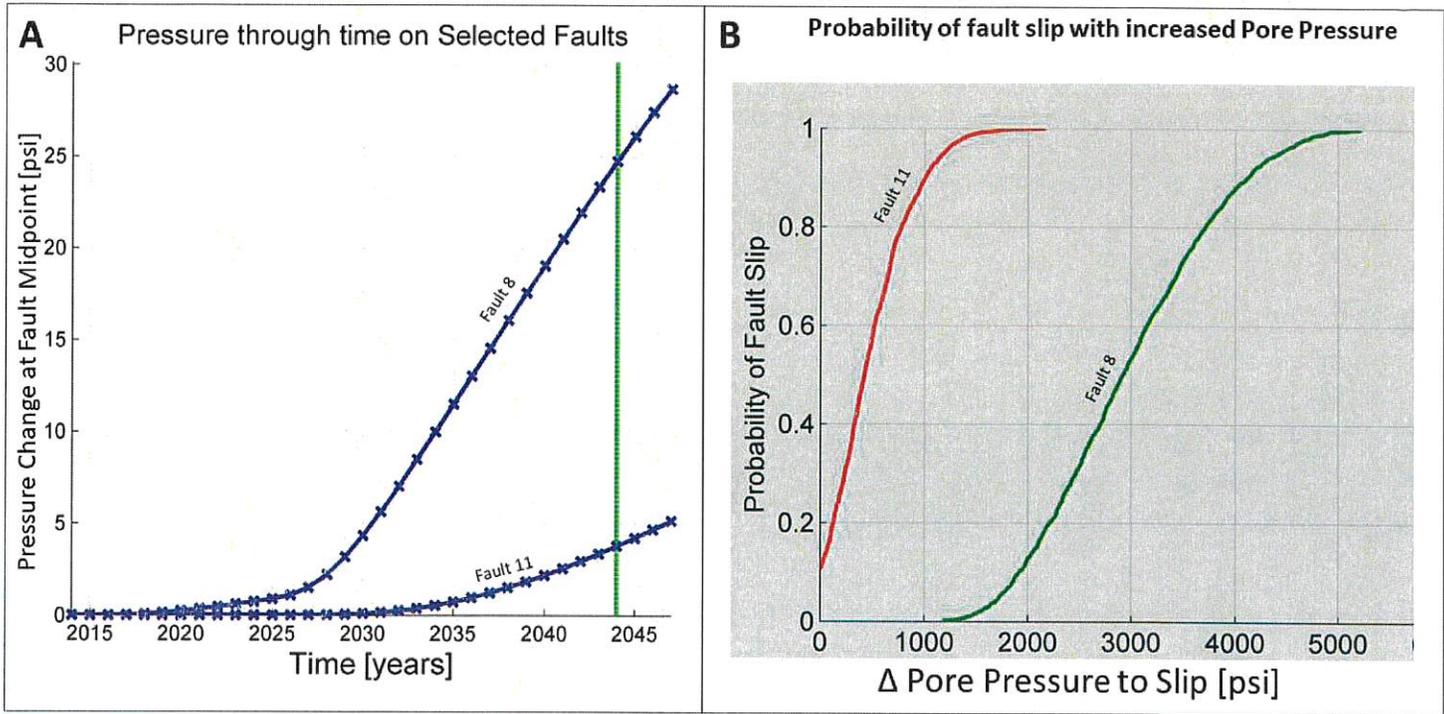


Figure 3. A) Plot showing the modeled change of pore pressure on nearby faults through time as a response to the proposed SWD well. B) Plot showing the required pore pressure increase needed to produce specific probabilities of fault slip on nearby faults.

EXHIBIT H**References Cited**

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AVANT OPERATING, LLC
CUTBOW SWD FED 1
450' FSL & 2569' FEL
SEC. 25, T. 19 S., R. 32 E., LEA COUNTY, NM

PAGE 1

I. Goal is to drill a 15,200' deep saltwater disposal well. Proposed disposal interval will be 14,325' – 15,200' in the SWD; Devonian-Silurian (97869). See Exhibit A for C-102 and map. The well is on BLM surface and BLM minerals.

II. Operator: Avant Operating, LLC [OGRID 330396]
Operator phone number: (720) 746-5045
Operator address: 1515 Wynkoop St., Suite 700, Denver CO 80202
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease name: Cutbow (BLM NMNM-012413)
Lease area: SW4 Sec. 24 and NW4 & SE4 Sec. 25, T. 19 S., R. 32 E.
Well name and number: Cutbow Fed SWD 1
Location: 450' FSL & 2569' FEL Section 25, T. 19 S., R. 32 E.

A. (2) Surface casing (26", 202.4#, X-56, XLF) will be set at 1,200' in a 30" hole and cemented to GL (>20% excess) with 1,310 sacks.

Intermediate casing 1 (20", 133#, K-55, BTC) will be set at 2,950' in a 24" hole and cemented to GL (>20% excess) with 2,130 sacks.

Intermediate casing 2 (13.375", 68#, HCL-80, BTC) will be set at 4,850' in a 17.5" hole and cemented to GL (>20% excess) with 2,610 sacks. DV tool and packer @ 3700'.

Intermediate casing 3 (9.625", 40#, HCP-110, LTC) will be set at 11,110' in a 12.25" hole and cemented to GL (>20% excess) with 1,720 sacks.

Liner (7.625", 39#, HCP-110, LTC) will be set from 10,810' to 14,325' and will be cemented 10,810' (20% excess) with 350 sacks.

A. (3) IPC 7" 29# HCP-110 Ultra FJ injection string will be run from GL to 10,710'.
IPC 5.5" 20# HCP-110 Ultra FJ injection string will be run from 10,710' to 14,300'. (Disposal interval will be 14,325' to 15,200').

AVANT OPERATING, LLC
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450' FSL & 2569' FEL
SEC. 25, T. 19 S., R. 32 E., LEA COUNTY, NM

PAGE 2

- A. (4) A stainless-steel or nickel-plated packer will be set at 14,300'. (Top of the open hole will be 14,325'.)
 - B. (1) Disposal zone will be the Devonian and Silurian (SWD; Devonian-Silurian (97869) pool). Estimated fracture gradient is ≈ 0.65 psi per foot.
 - B. (2) Disposal interval will be open hole from 14,325' to 15,200'.
 - B. (3) Well will be drilled as SWD; Devonian-Silurian well.
 - B. (4) No perforated intervals are in the well. Well will be completed open hole from 14,325' to 15,200'.
 - B. (5) Potentially productive zones in the area of review and above the Devonian (14,300') are the Yates (2,975'), Seven Rivers (3,100'), Delaware (5,000'), Bone Spring (8,850'), Wolfcamp (10,910'), and Morrow (13,400'). No oil or gas zone is below the Silurian in the area of review.
- IV. This is not an expansion of an existing injection project. It is disposal only.
- V. Exhibit B shows and tabulates the 60 existing, or approved but not yet drilled, wells within a one-mile radius. Twenty-five of the wells are P&A. Two are water injection wells. Deepest of the 60 wells is 13,936' TVD. Exhibit C shows all 135 existing wells (69 oil or gas + 58 P&A + 3 WIW + 3 water + 2 SWD) within a two-mile radius. One of the SWD wells is Yates-Seven Rivers. The other SWD well is Delaware. The 3 water injectors are Yates-Seven Rivers.
- All leases within a one-mile radius are BLM or NMSLO. Exhibit D shows and tabulates all leases within a one-mile radius. Two-mile radius leases are BLM, fee, or NMSLO (Exhibit E).
- VI. No Devonian penetrator is within a mile. Deepest (13,936' TVD) well within a mile bottomed in the Mississippian, 364' above the Devonian (14,300'). An estimated 20' of

AVANT OPERATING, LLC
 CUTBOW SWD FED 1
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Woodford shale is between the bottom of the Mississippian and top of the Devonian. No active or pending Devonian or Silurian SWD well is within 3-1/2 miles according to the NMOCD SWD Applications Map dated 2-14-22.

Closest (3-1/2 miles) Devonian or Silurian well is the proposed Kodak SWD 1 (30-015-45391). It has an approved C-108 but does not have an approved APD. Closest (4-3/4 miles) active Devonian or Silurian well is the Halfway SWD Federal 1 (30-025-42545).

- VII. 1. Average injection rate will be $\approx 25,000$ bwpd. Maximum injection rate will be 30,000 bwpd.
- 2. System will be open and closed. Water will both be trucked and piped.
- 3. Average injection pressure will be $\approx 2,500$ psi. Maximum injection pressure will be 2,865 psi (= 0.2 psi/ft x 14,325' (top of open hole)).
- 4. Disposal water will be produced water, mainly Bone Spring, but also Delaware, Morrow, Strawn, Wolfcamp, et al. Avant has 15 approved Bone Spring wells in T. 19 S., R. 32 E. Abstracts from the NM Produced Water Quality Database v.2 for wells in T. 19 S., R. 32 E. are in Exhibit F. A table of TDS ranges from those wells is below. Devonian samples (Exhibit F) from T. 20 S., R. 34 E. found TDS at 33,414 mg/l and 45,778 mg/l.

Formation	TDS range (mg/l)
Artesia	15,821 – 239,594
Bone Spring	91.689 – 257,806
Delaware	4,304 – 257,806
Morrow	128,189 – 164,047
Strawn	38,680 – 147,995

No compatibility problems have been reported from the closest (4-3/4 miles southwest) Devonian; SWD well. At least 18,035,987 barrels have been disposed in 30-025-42545 since 2016. Nor have any compatibility problems been reported from the closest (10 miles southeast) Devonian-Silurian; SWD well. At least 24,295,585 barrels have been disposed in 30-025-45344 since 2019.

- 5. No Devonian or Silurian oil or gas well is within 5 miles.

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VIII. The Devonian-Silurian interval ($\approx 1,200'$ thick) is limestone and dolomite. Confining strata are the Woodford shale above and Sylvan shale below. Closest possible underground source of drinking water above the proposed disposal interval are the red beds above the Rustler anhydrite. According to State Engineer records (Exhibit G), closest water well is 1.78 miles southwest. Deepest water well within 2-miles is 575'. A water well, not in State Engineer records, was found 3400' west and sampled. Ogallala aquifer is 10 miles northeast. No underground source of drinking water is below the proposed disposal interval.

Estimated formation tops are:

Quaternary = 0'
 Rustler = 1,150'
 Salt = 1,300'
 Capitan = 3,300'
 Cherry Canyon = 5,000'
 3rd Bone Spring = 10,500'
 Wolfcamp = 10,910'
 Strawn = 12,130'
 Mississippian Limestone = 13,200'
 Woodford Shale = 14,250'
 Devonian = 14,300'
top disposal interval = 14,325'
 Silurian = 14,450'
bottom disposal interval = 15,200'
 TD = 15,200'
 Fusselman = 15,500'

According to State Engineer records (Exhibit G), the deepest water well within 2-miles is 575'. There will be $>13,000'$ of vertical separation including multiple layers of shale and anhydrite between the bottom of the only likely underground water source (red beds) and the top of the Devonian.

IX. Well will be stimulated with acid as needed.

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CUTBOW SWD FED 1
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X. GR log will be run in the intermediate casing interval. Triple combo (TCOM) and CMR logs will be run from 5,000' to 11,110'. TCOM log will be run from 12,130' to TD.

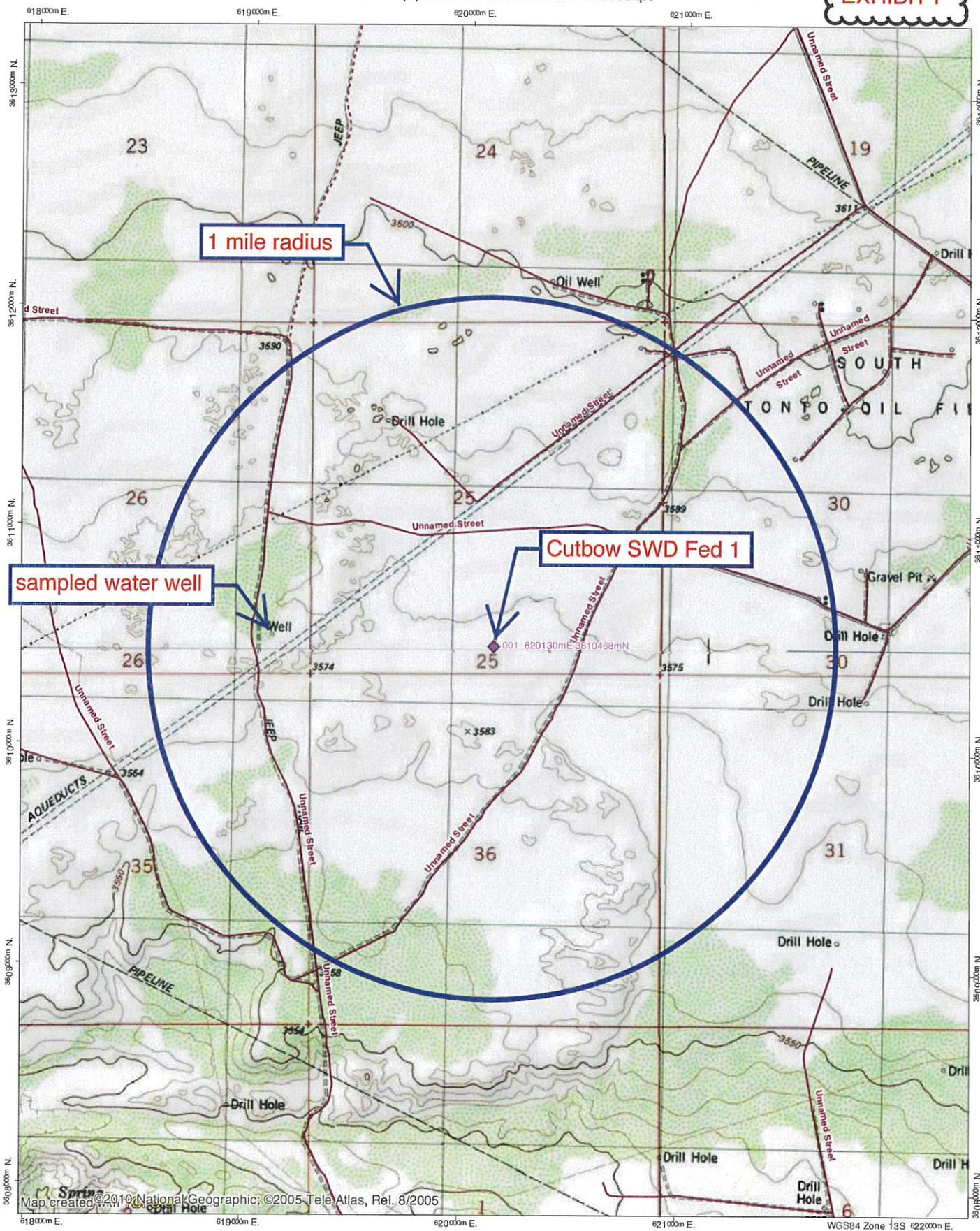
XI. According to State Engineer records (Exhibit G), 3 water wells are within a 2-mile radius, closest of which is 1.78 miles southwest. A water well not in the State records was found 3400' west and was sampled. Its location and analyses are in Exhibit I.

XII. Avant Operating, LLC (Exhibit H) is not aware of any geologic or engineering data that may indicate the Devonian or Silurian is in hydrologic connection with any underground sources of water. The only water well within a mile radius was sampled. Map and analyses are in Exhibit I. Deepest water well within a 2-mile radius is 575'. There are 26 active Devonian-Silurian SWD wells in New Mexico.

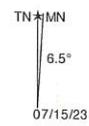
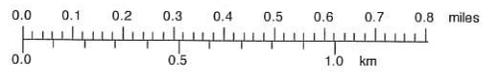
XIII. A legal ad (Exhibit J) was published on September 13, 2023. Notice (Exhibit K) and this application has been sent to the surface owner (BLM), all well operators regardless of depth, government lessors, lessees, and operating right holders within a mile.

TOPOI map printed on 07/15/23 from "Untitled.tpo"

EXHIBIT I



Map created ©2010 National Geographic; ©2005 Tele Atlas, Rel. 8/2005





Analytical Report
 Lab Order 2307931
 Date Reported: 8/16/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West

Client Sample ID: Cut

Project: Cut Alpha

Collection Date: 7/19/2023 11:30:00 AM

Lab ID: 2307931-001

Matrix: AQUEOUS

Received Date: 7/20/2023 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B							Analyst: ejn
N-Hexane Extractable Material	ND	9.81		mg/L	1	8/7/2023 3:14:00 PM	76694
EPA METHOD 300.0: ANIONS							Analyst: SNS
Chloride	54	10		mg/L	20	7/20/2023 3:56:47 PM	R98395
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JAG
Total Dissolved Solids	343	50.0		mg/L	1	7/24/2023 3:35:00 PM	76375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.



Analytical Report
 Lab Order 2307931
 Date Reported: 8/16/2023

CLIENT: Permits West
Project: Cut Alpha
Lab ID: 2307931-002

Matrix: AQUEOUS

Client Sample ID: Alpha
Collection Date: 7/19/2023 1:05:00 PM
Received Date: 7/20/2023 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B							Analyst: ejn
N-Hexane Extractable Material	ND	9.77		mg/L	1	8/7/2023 3:14:00 PM	76694
EPA METHOD 300.0: ANIONS							Analyst: SNS
Chloride	50	10		mg/L	20	7/20/2023 4:21:28 PM	R98395
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JAG
Total Dissolved Solids	341	50.0		mg/L	1	7/24/2023 3:35:00 PM	76375

(This page not applicable to Cutbow Fed SWD 1 application.)

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.



WO#: 2307931

16-Aug-23

Client: Permits West

Project: Cut Alpha

Sample ID: MB-76694	SampType: MBLK	TestCode: EPA Method 1664B								
Client ID: PBW	Batch ID: 76694	RunNo: 98776								
Prep Date: 8/7/2023	Analysis Date: 8/7/2023	SeqNo: 3598139	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10.0								

Sample ID: LCS-76694	SampType: LCS	TestCode: EPA Method 1664B								
Client ID: LCSW	Batch ID: 76694	RunNo: 98776								
Prep Date: 8/7/2023	Analysis Date: 8/7/2023	SeqNo: 3598140	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	37.2	10.0	40.00	0	93.0	78	114			

Sample ID: LCSD-76694	SampType: LCSD	TestCode: EPA Method 1664B								
Client ID: LCSS02	Batch ID: 76694	RunNo: 98776								
Prep Date: 8/7/2023	Analysis Date: 8/7/2023	SeqNo: 3598141	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	39.0	10.0	40.00	0	97.5	78	114	4.72	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Above Quantitation Range/Estimated Value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of standard limits. If undiluted results may be estimated. | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.



WO#: 2307931

16-Aug-23

Client: Permits West

Project: Cut Alpha

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581614	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581615	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.5	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581660	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581661	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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

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

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

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 280461

CONDITIONS

Operator: Avant Operating, LLC 1515 Wynkoop Street Denver, CO 80202	OGRID: 330396
	Action Number: 280461
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
anthony.harris	None	10/27/2023