

Initial Application Part I

Received on 2/14/20

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

February 14, 2019

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

RE: PRAIRIE SANDREED FEE SWD NO. 1 AUTHORIZATION TO INJECT

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for Blackbuck Resources, LLC's ("Blackbuck") Prairie Sandreed Fee SWD No. 1. In addition, Forms C-101 and C-102 have also been included with this package. Notices have been sent to offset operators, leaseholders and the surface owner. Proof of notice will be sent to the OCD upon receipt.

Any questions should be directed towards Blackbuck Resources, LLC's agent Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

Revised March 23, 2017

S5H9B-200214-C-1080

RECEIVED: 2/14/20	REVIEWER: BLL	TYPE: SWD	APP NO: pBL2005137467
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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: BLACKBUCK RESOURCES LLC **OGRID Number:** 373619
Well Name: PRAIRIE SANDREED FEE SWD NO. 1 **API:** TBD
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

SWD-2373

- 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.

CHRIS WEYAND
 Print or Type Name

Signature

February 7, 2020
 Date

512-600-1764
 Phone Number

CHRIS@LONQUIST.COM
 e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Blackbuck Resources, LLC

ADDRESS: 2601 Westheimer Rd, C210, Houston, TX, 77098

CONTACT PARTY: Barry Riley

PHONE: 979-575-8802

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes X No
If yes, give the Division order number authorizing the project: _____

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: Christopher Weyand

TITLE: Consulting Engineer – Agent for Blackbuck Resources

SIGNATURE: _____

DATE: 2/6/2020

E-MAIL ADDRESS: chris@lonquist.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

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

Side 2

III. WELL DATA

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

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

INJECTION WELL DATA SHEET

OPERATOR: Blackbuck Resources, LLC

WELL NAME & NUMBER: Prairie Sandreed Fee SWD No. 1

WELL LOCATION: 1,000' FNL 200' FEL
FOOTAGE LOCATION

A
UNIT LETTER

22
SECTION

19S
TOWNSHIP

35E
RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26"

Casing Size: 20"

Cemented with: 3,884 sks

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Intermediate Casing

Hole Size: 17-1/2"

Casing Size: 13-3/8"

Cemented with: 2,430 sks

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Production Casing

Hole Size: 12-1/4"

Casing Size: 9-5/8"

Cemented with: 2,126 sks

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Liner

Hole Size: 8-1/2"

Casing Size: 7-5/8"

Cemented with: 309 sks

or _____ ft³

Top of Cement: 9,613'

Method Determined: calculation

Total Depth: 15,388'

Injection Interval

13,588 feet to 15,388 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 23 lb/ft, P-110, UFJ from 0' - 13,538'

Lining Material: Duoline

Type of Packer: 7-5/8" x 5-1/2" Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

Packer Setting Depth: 13,538'

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

Additional Data

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

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

2. Name of the Injection Formation: Devonian, Silurian, Fusselman

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, new drill.

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

Delaware Mountain Group: 5,696'

Bone Spring: 7,557'

Wolfcamp: 9,913'

Strawn: 11,411'



Prairie Sandreed Fee SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Prairie Sandreed Fee SWD
Well No.	1
Location	S-22 T-19S R-35E
Footage Location	1,000' FNL & 200' FEL

2.

a. Wellbore Description

Type	Surface	Intermediate	Production	Liner
OD	20"	13-3/8"	9-5/8"	7-5/8"
WT	0.438"	0.480"	0.545"	0.500"
ID	19.124"	12.415"	8.535"	6.625"
Drift ID	18.936"	12.259"	8.379"	6.5"
COD	21"	14.375"	10.625"	7.625"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"
Depth Set	1,670'	5,696'	9,913'	9,613' – 13,588'

b. Cementing Program

Casing String	Surface	Intermediate	Production	Liner
Lead Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: NeoCem	Versacem
Lead Cement Volume	2,847 sks	1,961 sks	Stage 1: 466 sks Stage 2: 1,008 sks	331 sks
Lead Cement Density	13.7 lbm/gal	11 lbm/gal	Stage 1: 11 lbm/gal Stage 2: 11 lbm/gal	14.5 lbm/gal
Tail Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: HalCem	-
Tail Cement Volume	1,037 sks	468 sks	Stage 1: 577 sks Stage 2: 75 sks	-
Tail Cement Density	14.8 lbm/gal	13.2 lbm/gal	Stage 1: 14.5 lbm/gal Stage 2: 14.8 lbm/gal	-
Cement Excess	150%	75%	Stage 1: 50% Stage 2: 50%	25%
Total Sacks	3,884 sks	2,430 sks	2,126 sks	309 sks
TOC	Surface	Surface	Stage 1: DV Tool @ 5,671' Stage 2: Surface	9,613'
Method	Circulate	Circulate	Circulated	CBL

3. Tubing Description

Tubing Information	
OD	5-1/2"
WT	0.415"
ID	4.670"
Drift ID	4.545"
COD	5.5"
Weight	23 lb/ft
Grade	P-110 UFJ
Depth Set	13,538'

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman
2. Gross Injection Interval: 13,588' – 15,388'

Completion Type: Open Hole

3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Delaware Mountain Group	5,696'
Bone Spring	7,557'
Wolfcamp	9,913'
Strawn	11,411'

VI. Area of Review

No wells penetrate the injection zone

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD
 Maximum Volume: 25,000 BPD

2. Closed System
3. Anticipated Injection Pressure:

Average Injection Pressure: 2,038 PSI (surface pressure)
 Maximum Injection Pressure: 2,718 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Wolfcamp formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Abo, Artesia, Bone Spring, Devonian, Grayburn/San Andreas, Pennsylvanian, Penrose, Queen, and Wolfcamp formations.
5. The disposal interval is non-productive. No water samples are available from the one-mile area of review. However, approximately 6-8 miles from the proposed well, five (5) wells producing water from the Devonian have sample data present. The results of these wells are in the Produced Water Sample list in this application.

VIII. Geological Data

Devonian Formation Lithology:

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

Fusselman Formation Lithology:

The Silurian/Ordovician Fusselman Formation is stratigraphically below the Wristen Group and is above and separated from the Montoya Formation by the Sylvan Shale. The Sylvan Shale is the lower confining layer for the proposed well. Fusselman facies include a laminated skeletal wackestone in the upper part and a buildup complex in the lower part composed of ooid and bryozoan grainstones. These grainstones can also be potentially prolific zones for disposal.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Rustler	1,670'
Salado	1,947'
Tansill	3,065'
Yates	3,253'
Seven Rivers	3,698'
Queen	4,418'
Delaware Mountain Group	5,696'
Bone Spring	7,557'
Wolfcamp	9,913'
Strawn	11,411'
Atoka	11,624'
Miss. Lime	12,769'
Woodford	13,412'
Devonian	13,588'

B. Underground Sources of Drinking Water

Eight (8) water wells exist within a one-mile radius of the proposed well. The water wells in the region are within the Lee County Basin of New Mexico. Water wells within the 1-mile area of review are drilled at an average depth of 63 feet and the average water depth is 23 feet in the surrounding region. The Rustler is known to exist in this general area and may also be another USDW and will be protected by setting the surface casing at the top of the Rustler formation and isolating the formation with intermediate casing set at the top of the Delaware Mountain group. The proposed well is located 5.5 miles NE of the Capitan Reef.

IX. Proposed Stimulation Program

No stimulation program planned at this time.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

A map of the freshwater wells within a one-mile radius of the proposed well has been sent to Cardinal Laboratories in Hobbs, New Mexico. Results of the samples will be provided to the Oil Conservation Division upon completion of the tests.

District I

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

District II

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

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address BLACKBUCK RESOURCES, LLC 2601 WESTHEIMER RD. C210 HOUSTON, TX 77098		² OGRID Number 373619
		³ API Number 30-025-
⁴ Property Code	⁵ Property Name PRAIRIE SANDREED FEE SWD	⁶ Well No. 1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
A	22	19S	35E		1,000	N	200	E	LEA

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
-	-	-	-		-	-	-	-	-

9. Pool Information

Pool Name SWD: DEVONIAN-SILURIAN	Pool Code 97869
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Additional Well Information

¹¹ Work Type N	¹² Well Type SWD	¹³ Cable/Rotary R	¹⁴ Lease Type Private	¹⁵ Ground Level Elevation 3,768.5'
¹⁶ Multiple N	¹⁷ Proposed Depth 15,388'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 22'		Distance from nearest fresh water well 2,718'		Distance to nearest surface water > 1 mile

We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26"	20"	94 lb/ft	1,670'	3,884	Surface
Intermediate	17-1/2"	13-3/8"	68 lb/ft	5,696'	2,430	Surface
Production	12-1/4"	9-5/8"	53.5 lb/ft	9,913'	2,126	Surface
Liner	8-1/2"	7-5/8"	39 lb/ft	9,613' - 13,588'	309	9,613'

Casing/Cement Program: Additional Comments

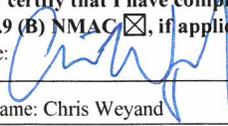
See attached schematic.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	8,000 psi	10,000 psi	TBD - Schaffer/Cameron

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

I further certify that I have complied with 19.15.14.9 (A) NMAC and/or 19.15.14.9 (B) NMAC , if applicable.

Signature: 

Printed name: Chris Weyand

Title: Consulting Engineer

E-mail Address: chris@lonquist.com

Date: February 7, 2020

Phone: 512-600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazon Road, Artec, NM 87410
District IV
1220 S. St Francis Dr., NM 87505
Phone: (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 97869	³ Pool Name SWD; Silurian-Devonian
⁴ Property Code	⁵ Property Name PRAIRIE SANDREED FEE SWD	
⁷ OGRID No. 308339	⁸ Operator Name BLACKBUCK RESOURCES	⁶ Well Number #1
		⁹ Elevation 3768.5'

¹⁰ Surface Location

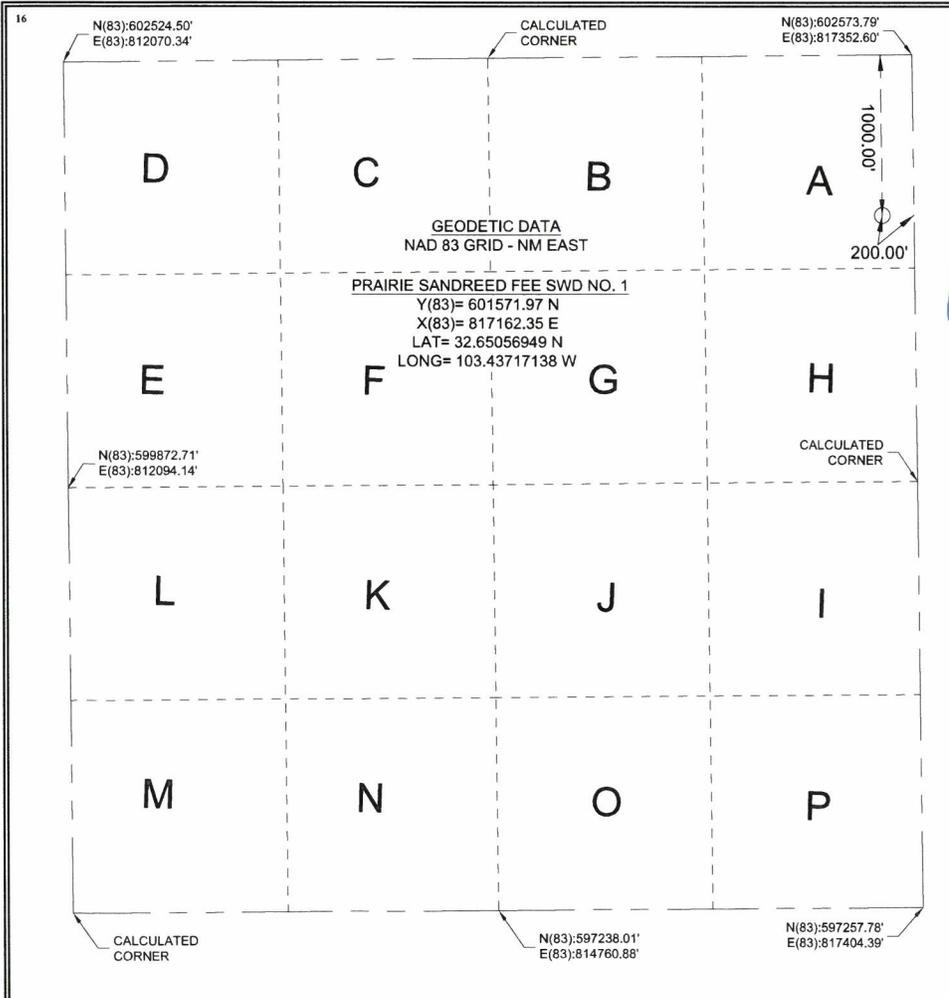
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	19 S	35 E		1000	NORTH	200	EAST	LEA

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.



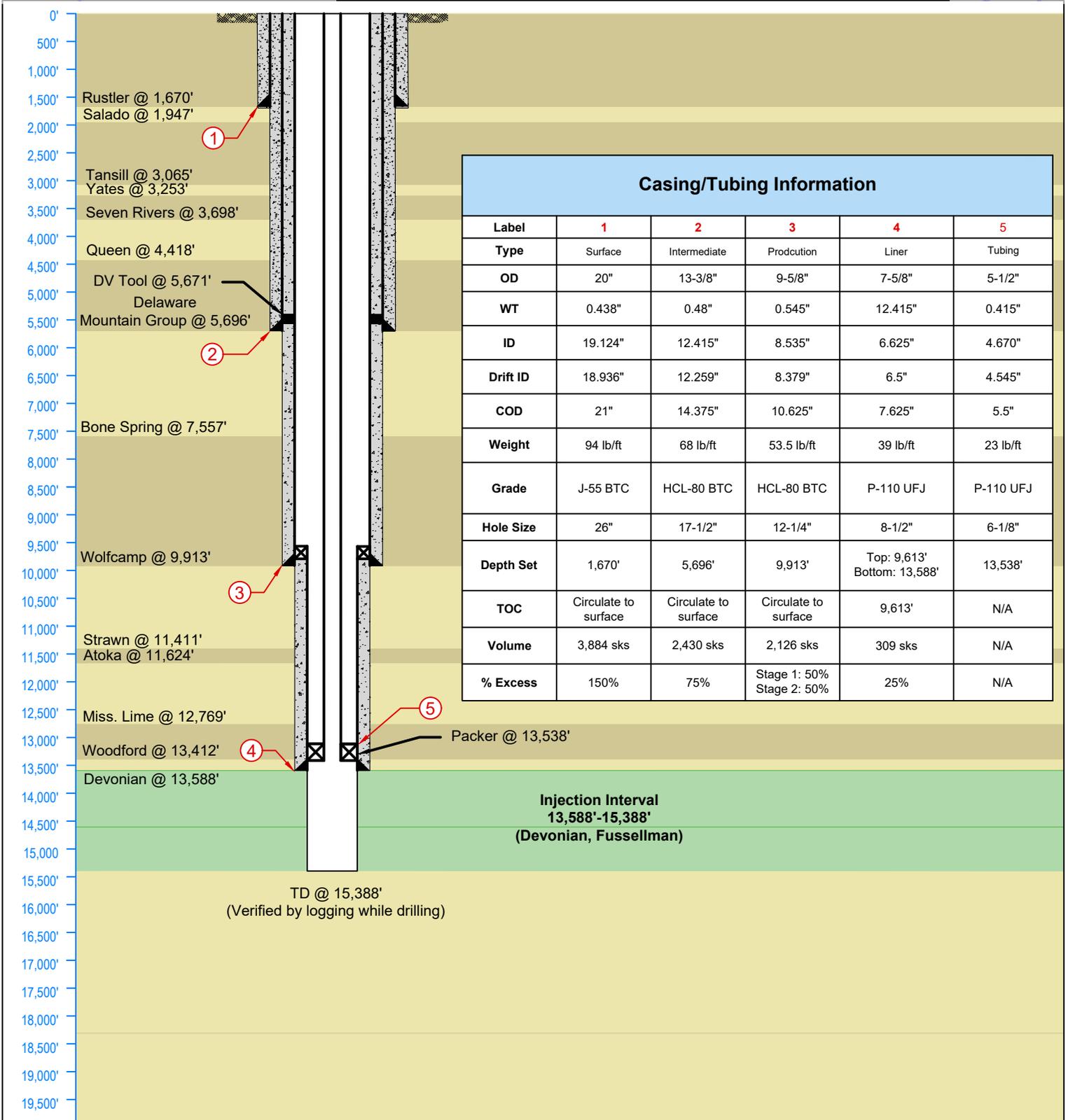
¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Chris Nelund* Date: 2/7/2020
Printed Name: Chris Nelund Date: _____
Email Address: chris@lonquist.com Date: _____

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.

Date of Survey: 09/24/2019 Date: _____
Signature and Seal of Professional Surveyor: *J. Smelker*
NEW MEXICO PROFESSIONAL SURVEYOR 25036 01/13/2020

Certificate Number: _____



Casing/Tubing Information					
Label	1	2	3	4	5
Type	Surface	Intermediate	Production	Liner	Tubing
OD	20"	13-3/8"	9-5/8"	7-5/8"	5-1/2"
WT	0.438"	0.48"	0.545"	12.415"	0.415"
ID	19.124"	12.415"	8.535"	6.625"	4.670"
Drift ID	18.936"	12.259"	8.379"	6.5"	4.545"
COD	21"	14.375"	10.625"	7.625"	5.5"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft	23 lb/ft
Grade	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	6-1/8"
Depth Set	1,670'	5,696'	9,913'	Top: 9,613' Bottom: 13,588'	13,538'
TOC	Circulate to surface	Circulate to surface	Circulate to surface	9,613'	N/A
Volume	3,884 sks	2,430 sks	2,126 sks	309 sks	N/A
% Excess	150%	75%	Stage 1: 50% Stage 2: 50%	25%	N/A

LONQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS HOUSTON CALGARY AUSTIN WICHITA DENVER Texas License F-9147 12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Blackbuck Resources, LLC	Prairie Sandreed Fee SWD No. 1		
	Country: USA	State/Province: New Mexico	County/Parish: Lea	
	Location:	Site: 1,000' FNL & 200 FEL	Survey: S23-T19S-R35E	
	API No: N/A	Field: Devonian-Silurian	Well Type/Status: SWD	
	NMOCD District No: 1	Project No: 2158	Date: 1/22/2020	
	Drawn: TFM	Reviewed: CBW	Approved: CBW	
	Rev No: 1	Notes:		

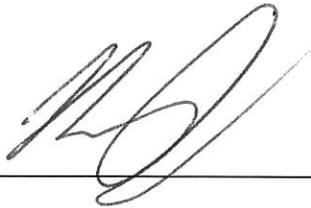
**PETROLEUM
ENGINEERS**

**ENERGY
ADVISORS**

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

INJECTION INTERVAL CONFINING LAYERS – PRAIRIE SANDREED FEE SWD NO. 1

The Devonian-Silurian injection interval for the proposed Prairie Sandreed Fee SWD No. 1 is contained by upper and lower confining layers. The upper confining layer is the Woodford Shale on top of the Devonian Formation. The lower confining layer is the Sylvan Shale equivalent, which serves as a boundary between the Montoya and Fusselman. This shale layer provides a basal region for the injection interval of the Devonian and Fusselman formations. The low permeability nature of both the Woodford and Sylvan Shale equivalent would provide the Devonian and Fusselman formations appropriate confinement for saltwater disposal during the life of the well.



Parker Jesse

Geologist

Lonquist & Co., LLC

February 4, 2020

Project: Blackbuck Resources
 Prairie Sandreed Fee SWD No. 1

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

GEOLOGIC AFFIRMATION

I have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and underground sources of drinking water.



Parker Jessee
Geologist

Project: Blackbuck Resources
Prairie Sandreed Fee SWD No. 1
February 4, 2020

Seismicity and Faults in the Vicinity of the Proposed Solaris Water Midstream, LLC Prairie Sandreed Fee SWD No. 1 Devonian Disposal wells in Lea County, New Mexico

The proposed well is located in Lea County, New Mexico. The proposed Prairie Sandreed Fee SWD No.1 well is located in Township 19 South, Range 35 East, Section 22; Eighteen miles west of Hobbs. The proposed well is located near the Northwest Shelf of the Delaware Basin.

Seismicity:

Historically, the area near the proposed Devonian disposal wells has not seen any major seismic activity. A search of the USGS Earthquake Hazards Program Earthquake Catalog revealed the nearest event to be located 27 miles south of the proposed location, where a magnitude 3.3 earthquake was recorded on June 2, 2001 at a depth of 5 kilometers. Review of the USGS Earthquake Hazard map indicates a very low risk of seismic activity. The USGS surface geologic map of the area shows no Quaternary-aged faulting, also indicating no recent tectonic activity. In addition to a search of the USGS Earthquake Hazards Program Earthquake Catalog, a seismic event research was conducted on the Bureau of Economic Geology's Seismic Monitoring Program, TexNet. TexNet's seismic history dates from January 1, 2017 to present date. A 15-kilometer radius of investigation detected no seismic events during this time period.

Faulting:

The USGS surface geologic map, a USGS published Devonian structure map, and subscription Geomap regional subsurface structure maps at the Yates, Strawn Lime and Devonian levels were reviewed for faults. The nearest faults mapped at the Devonian level was approximately 1.25 miles from the proposed well as the Siluro-Devonian level. However, at the Strawn Lime level of the structure map, this fault is nonexistent. Furthermore, no evidence of faulting is present in the Yates level of the structure map.

The Snee and Zoback paper "State of Stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity" was also reviewed to evaluate the presence of faults and fault slip potential risk. These regional maps show faulting within 2.6 miles of the proposed well. Faulting in the New Mexico portion of the Delaware Basin generally shows less than a 10% probability of fault slip movement.

The distance from the proposed wells to the closest mapped faults show evidence of faulting in the Siluro-Devonian subsurface, however, termination of these faults is evident in higher strata in the subsurface and the probability these faults will become critically stressed by injection is extremely low.

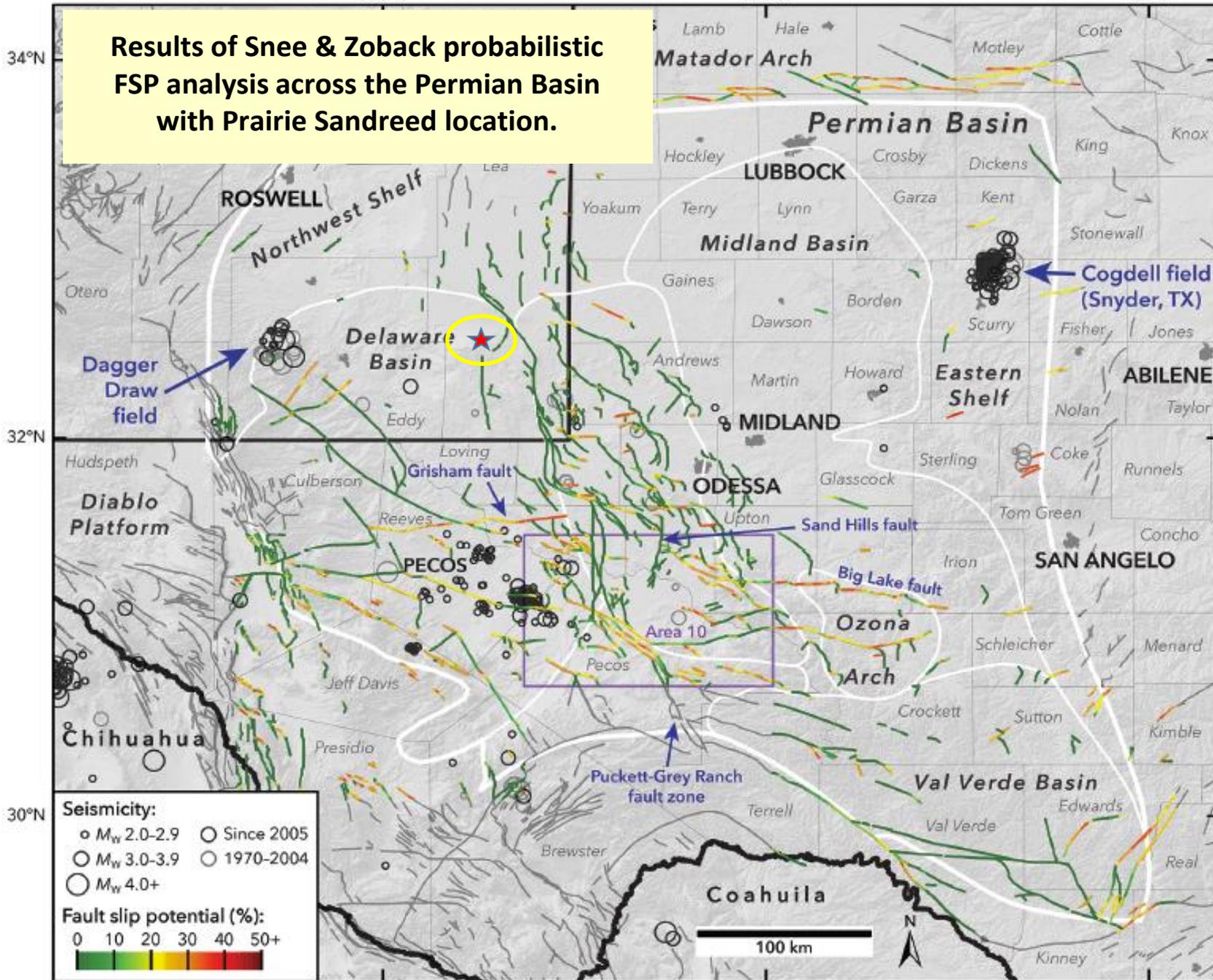


Parker Jessee

Geologist, Lonquist & Co. LLC

SNEE AND ZOBACK REVIEW

**Results of Snee & Zoback probabilistic
FSP analysis across the Permian Basin
with Prairie Sandreed location.**



USGS 15 KILOMETER REVIEW

Magnitude

- 2.5+
- 4.5+
- Custom

Minimum

Maximum

Date & Time

- Past 7 Days
- Past 30 Days
- Custom

Start (UTC)

End (UTC)

Geographic Region

- World
- Conterminous U.S.¹
- Custom

Custom Circle

- 32.65056949 Latitude
- -103.43717138 Longitude
- 15 Radius (km)

Draw Rectangle on Map

- Advanced Options

Geographic Region

Decimal degree coordinates. North must be greater than South. East must be greater than West.

North

West

East

South

Circle

Center Latitude

Center Longitude

Outer Radius (km)

Depth (km)

Minimum

Maximum

Azimuthal Gap

Minimum

Maximum

Review Status

- Any
- Automatic
- Reviewed

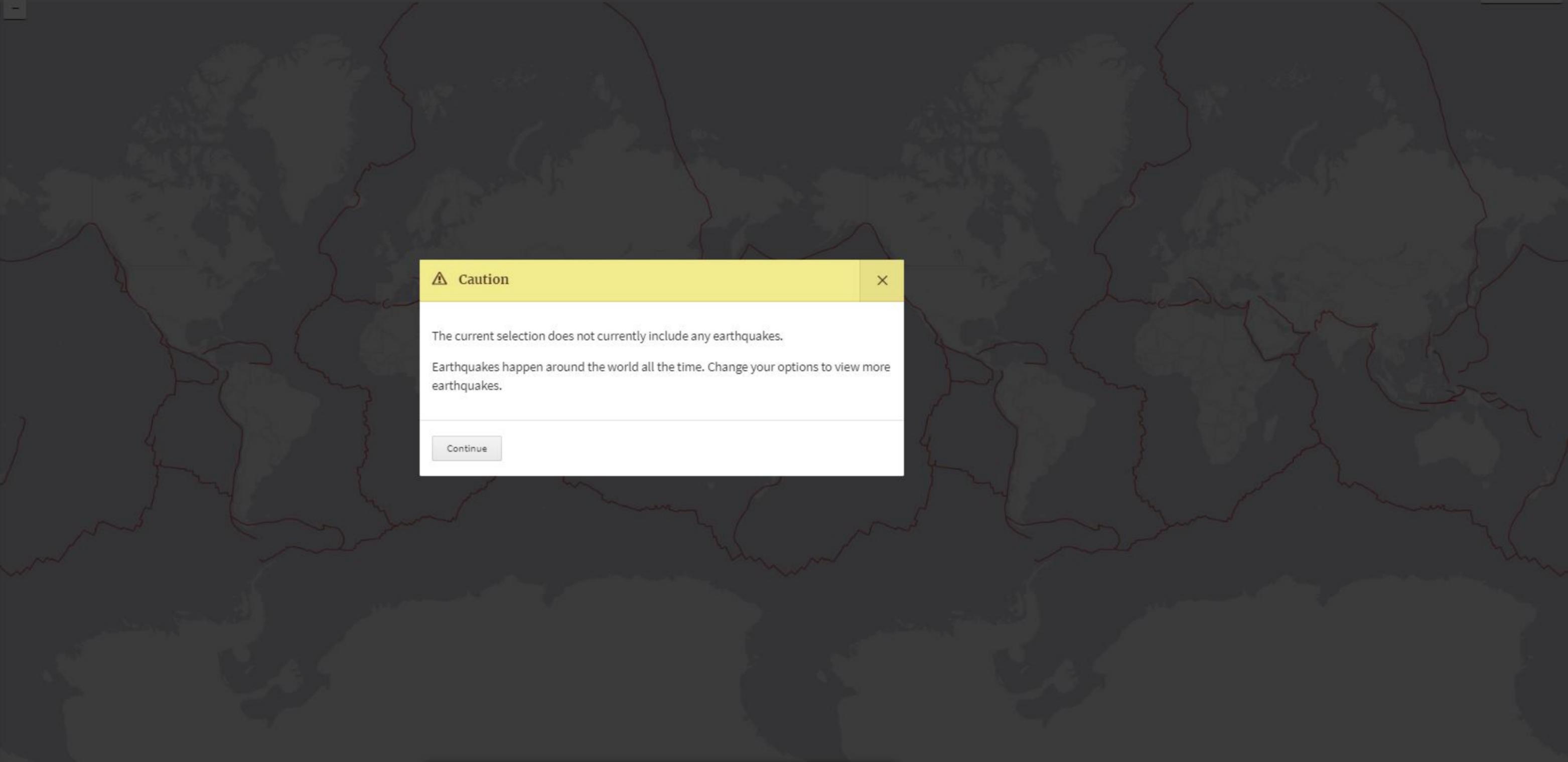
Search Results

0 of - earthquakes in map area.

There are no events in the current feed.

Didn't find what you were looking for?

- Check your [Settings](#).
- [Which earthquakes are included on the map and list?](#)
- [Felt something not shown - report it here.](#)



⚠ **Caution** ✕

The current selection does not currently include any earthquakes.

Earthquakes happen around the world all the time. Change your options to view more earthquakes.



Earthquakes loading
✕

USGS 25 KILOMETER REVIEW

Magnitude

2.5+

4.5+

Custom

Minimum

Maximum

Date & Time

Past 7 Days

Past 30 Days

Custom

Start (UTC)

End (UTC)

Geographic Region

World

Conterminous U.S.¹

Custom

Custom Circle

- 32.65066949 Latitude
- -103.43717138 Longitude
- 25 Radius (km)

Advanced Options

Geographic Region

Decimal degree coordinates. North must be greater than South. East must be greater than West.

North

West East

South

Depth (km)

Minimum Maximum

Azimuthal Gap

Minimum Maximum

Circle

Center Latitude Center Longitude

Outer Radius (km)

Review Status

Any

Automatic

Reviewed

Search Results

0 of - earthquakes in map area.

Click for more information

There are no events in the current feed.

Didn't find what you were looking for?

- Check your [Settings](#).
- [Which earthquakes are included on the map and list?](#)
- [Felt something not shown - report it here.](#)



⚠ **Caution** ✕

The current selection does not currently include any earthquakes.

Earthquakes happen around the world all the time. Change your options to view more earthquakes.

Continue

Earthquakes loading ✕

USGS 35 KILOMETER REVIEW

Search Results

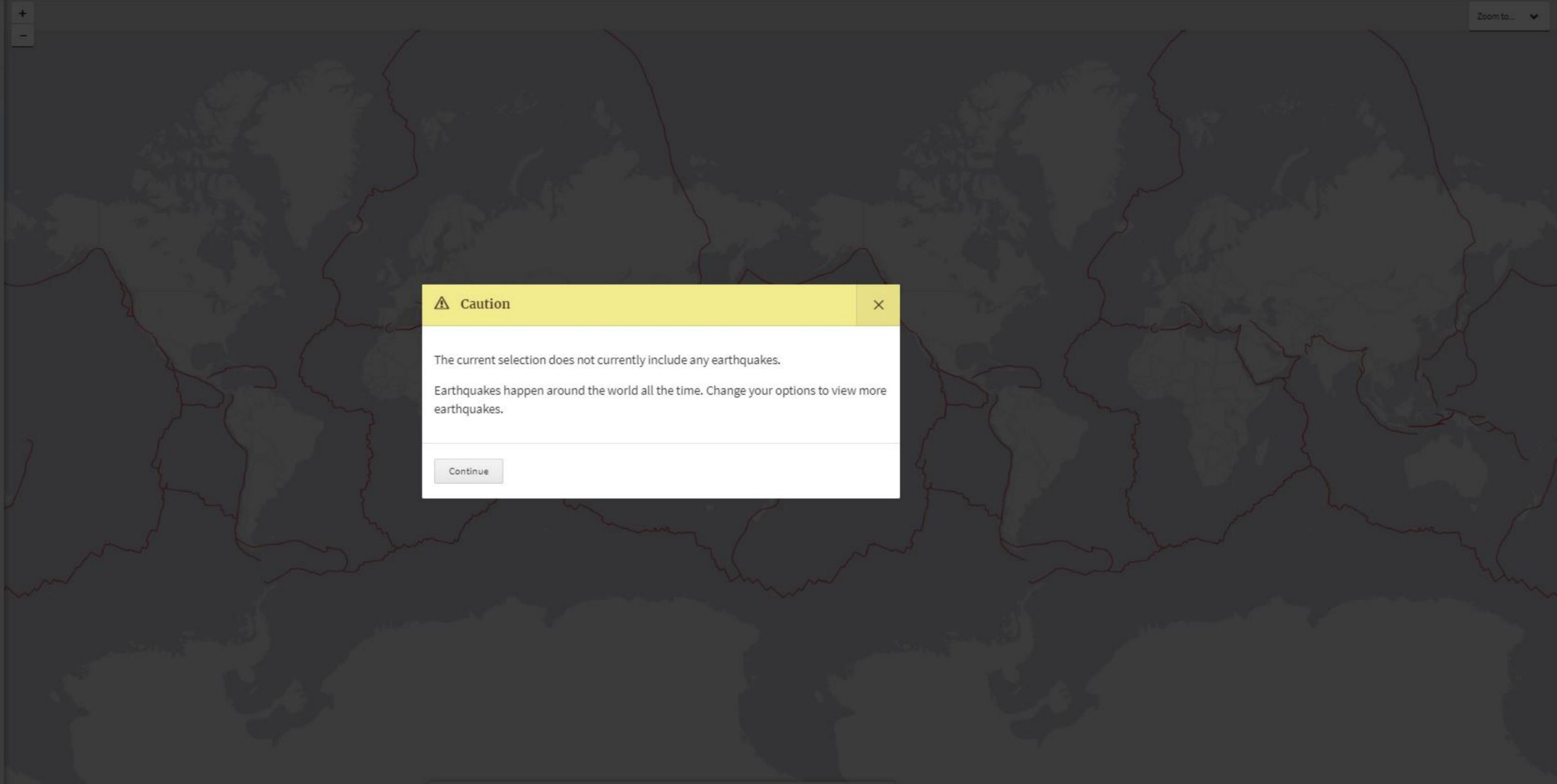
0 of – earthquakes in map area.

Click for more information

There are no events in the current feed.

Didn't find what you were looking for?

- Check your [Settings](#).
- [Which earthquakes are included on the map and list?](#)
- [Felt something not shown - report it here.](#)



⚠ Caution ✕

The current selection does not currently include any earthquakes.

Earthquakes happen around the world all the time. Change your options to view more earthquakes.



Earthquakes loading ✕

USGS 45 KILOMETER REVIEW

Magnitude

- 2.5+
- 4.5+
- Custom

Minimum

Maximum

Date & Time

- Past 7 Days
- Past 30 Days
- Custom

Start (UTC)

End (UTC)

Geographic Region

- World
- Conterminous U.S.¹
- Custom

Custom Circle

- 32.65066949 Latitude
- -103.43717138 Longitude
- 45 Radius (km)

Draw Rectangle on Map

- Advanced Options

Geographic Region

Decimal degree coordinates. North must be greater than South. East must be greater than West.

	North		
	<input type="text"/>		
West	<input type="text"/>	<input type="text"/>	East
	South		
	<input type="text"/>		

Circle

Center Latitude

Center Longitude

Outer Radius (km)

Depth (km)

Minimum

Maximum

Azimuthal Gap

Minimum

Maximum

Review Status

- Any
- Automatic
- Reviewed

Search Results

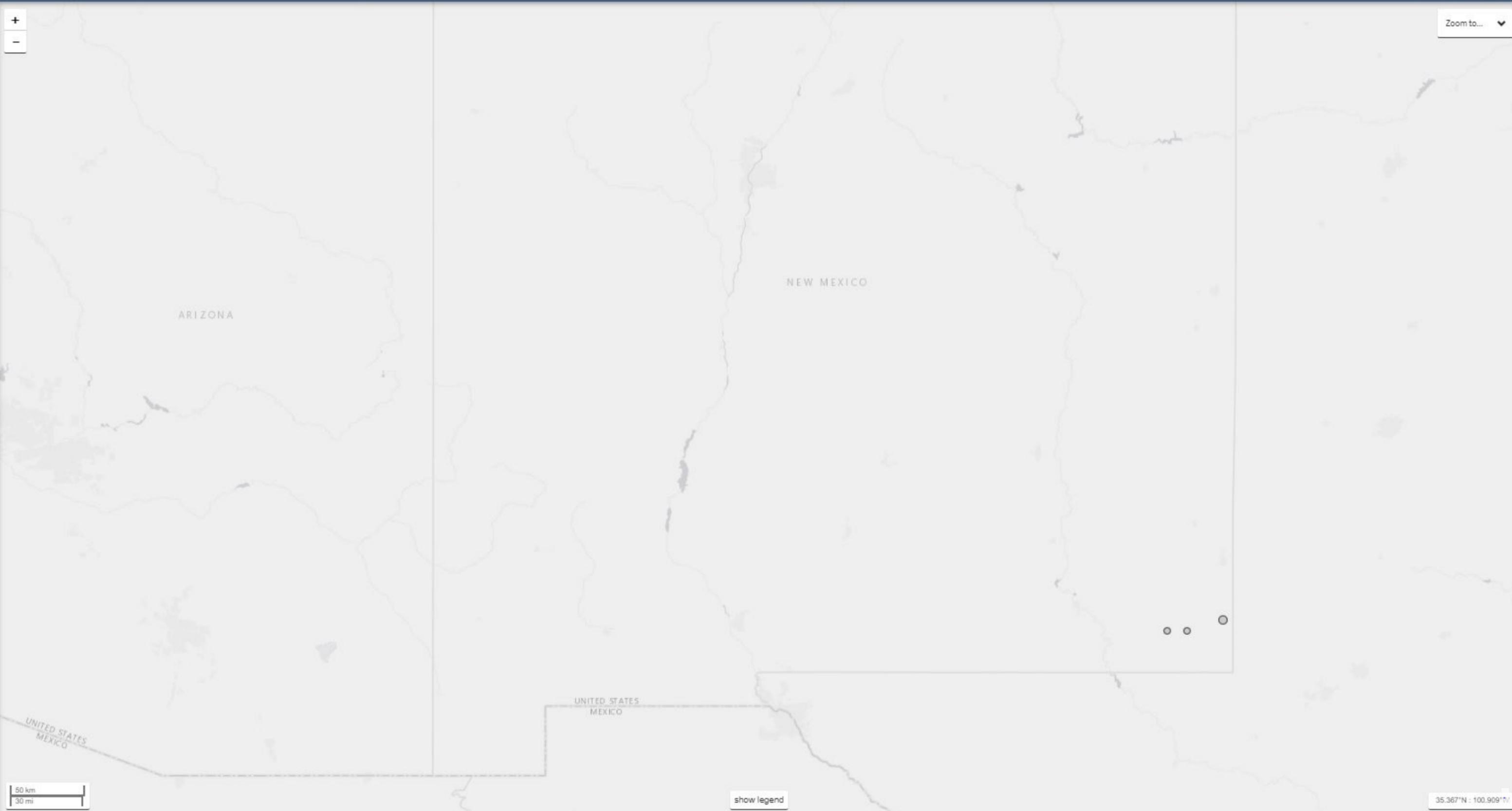
3 of 3 earthquakes in map area.

Click for more information

2.7	26km NW of Jal, New Mexico 2019-10-21 11:58:56 (UTC)	5.0 km
3.3	New Mexico 2001-06-02 01:55:53 (UTC)	5.0 km
2.9	New Mexico 1984-12-04 20:36:36 (UTC)	5.0 km

Didn't find what you were looking for?

- Check your [Settings](#).
- [Which earthquakes are included on the map and list?](#)
- [Felt something not shown - report it here.](#)



+
-

Zoom to... ▼

50 km
30 mi

show legend

35.367°N : 100.909°W

TEXNET 15 KILOMETER REVIEW

Earthquakes

- Final Preliminary
- ◆ 1.5 < Magnitude <= 2.0
- ◇ 2.0 < Magnitude <= 2.5
- ◇ 2.5 < Magnitude <= 3.0
- ◇ 3.0 < Magnitude <= 3.5
- ◇ 3.5 < Magnitude <= 4
- ◇ 4 < Magnitude <= 5.5
- ◇ Magnitude > 5.5

Stations

- TexNet Permanent
- TexNet Portable
- Temporary
- Other Networks

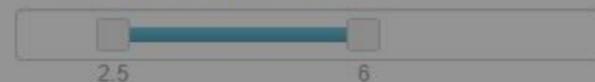
Seismic Regions



Require Focal Mechanism?



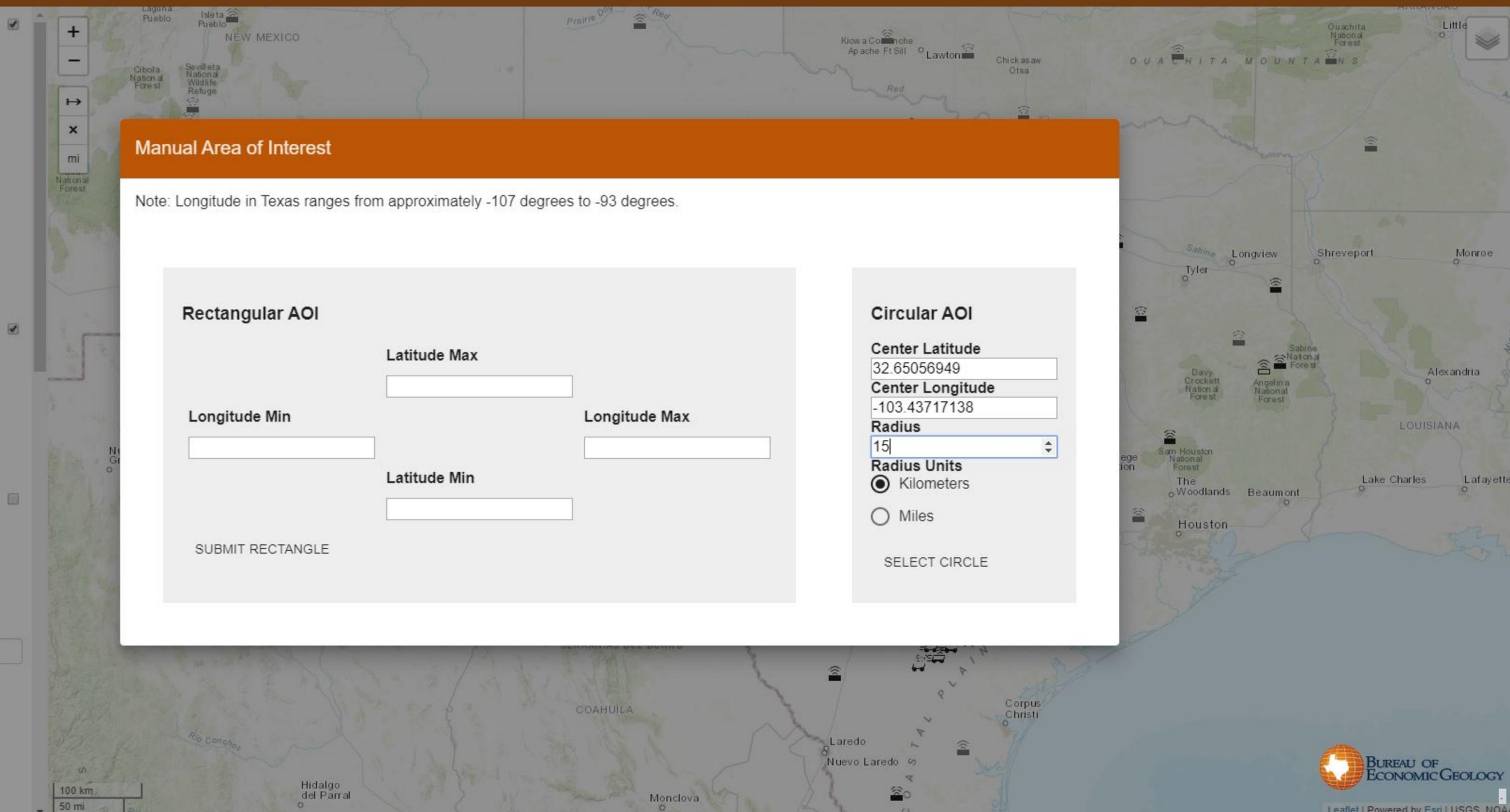
Earthquake Magnitude



Lock Magnitude

Date Range

SELECT DATE RANGE...



Manual Area of Interest

Note: Longitude in Texas ranges from approximately -107 degrees to -93 degrees.

Rectangular AOI

	Latitude Max	<input type="text"/>
Longitude Min		Longitude Max
<input type="text"/>		<input type="text"/>
	Latitude Min	<input type="text"/>

SUBMIT RECTANGLE

Circular AOI

Center Latitude

Center Longitude

Radius

Radius Units

Kilometers

Miles

SUBMIT CIRCLE

Earthquakes

- Final Preliminary
- ◆ 1.5 < Magnitude <= 2.0
 - ◇ 2.0 < Magnitude <= 2.5
 - ◇ 2.5 < Magnitude <= 3.0
 - ◇ 3.0 < Magnitude <= 3.5
 - ◇ 3.5 < Magnitude <= 4
 - ◇ 4 < Magnitude <= 5.5
 - ◇ Magnitude > 5.5

- Stations**
-  TexNet Permanent
 -  TexNet Portable
 -  Temporary
 -  Other Networks

Seismic Regions



Require Focal Mechanism?

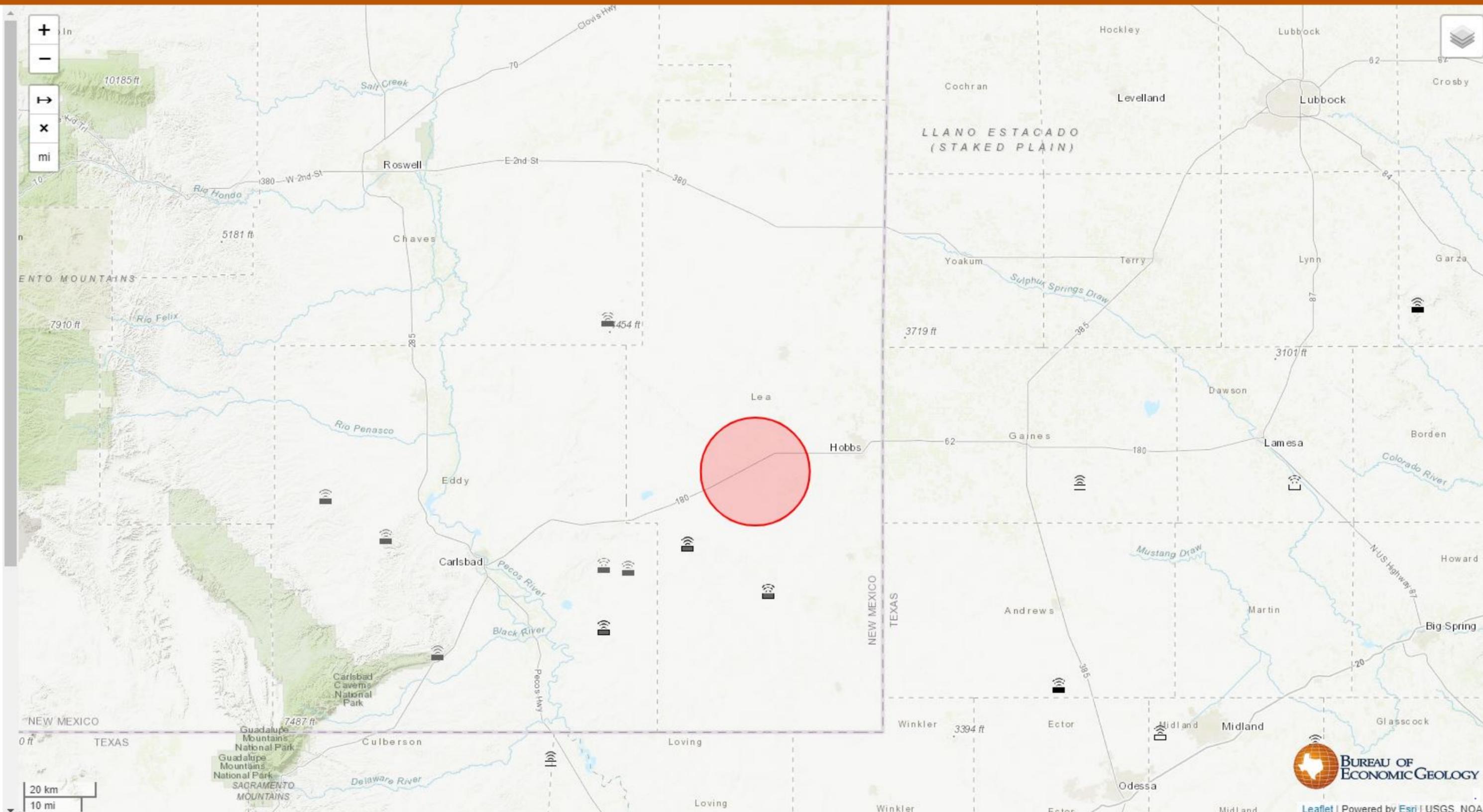


Earthquake Magnitude

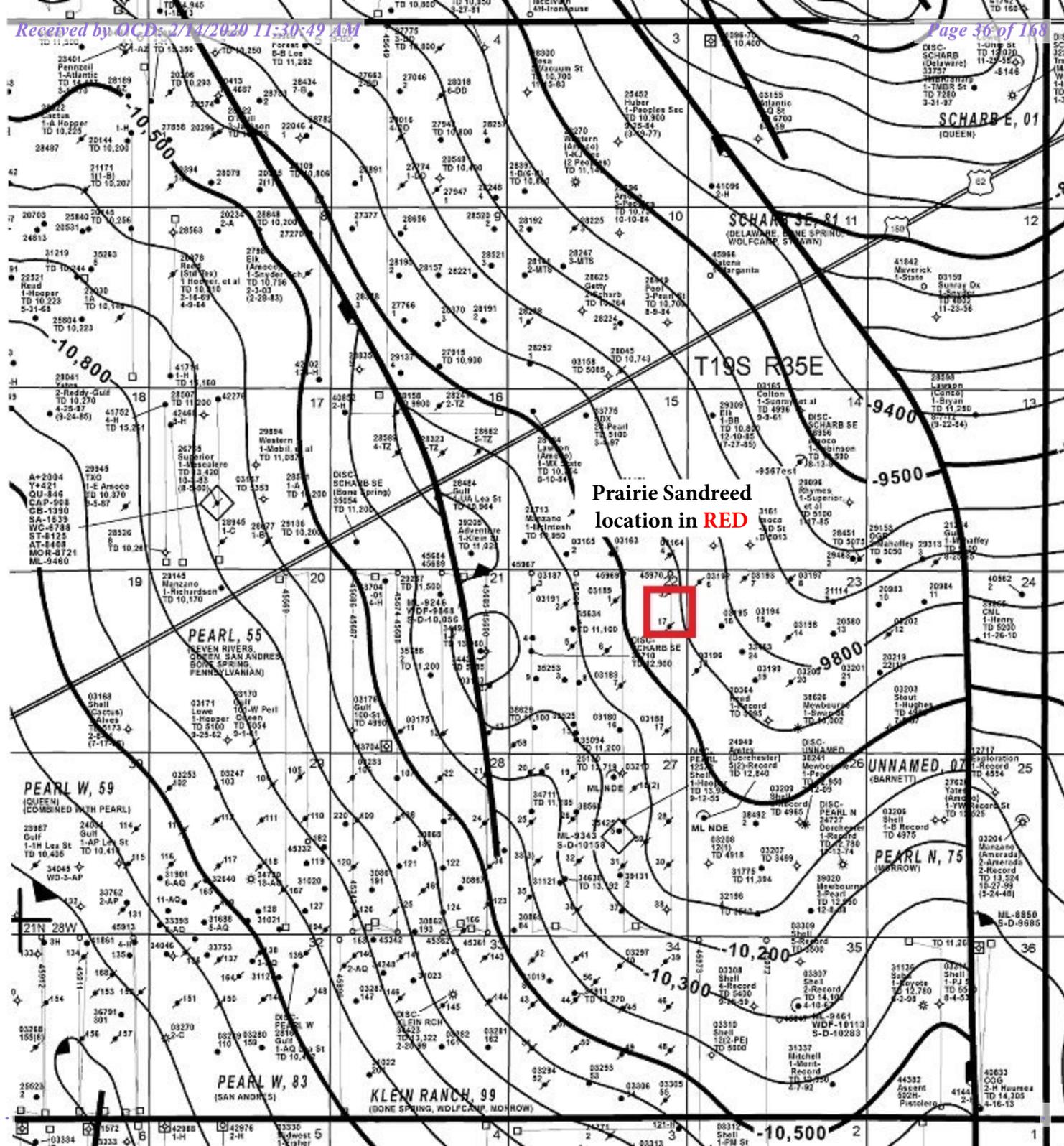


Date Range

SELECT DATE RANGE...



GEOMAP DEVONIAN LEVEL REVIEW



Prairie Sandred
location in RED



GEOMAP STRAWN LEVEL REVIEW

GEOMAP YATES LEVEL REVIEW

Prarie Sandreed SWD No. 1
2 Mile Area of Review
Blackbuck Resources LLC
Lea Co., NM

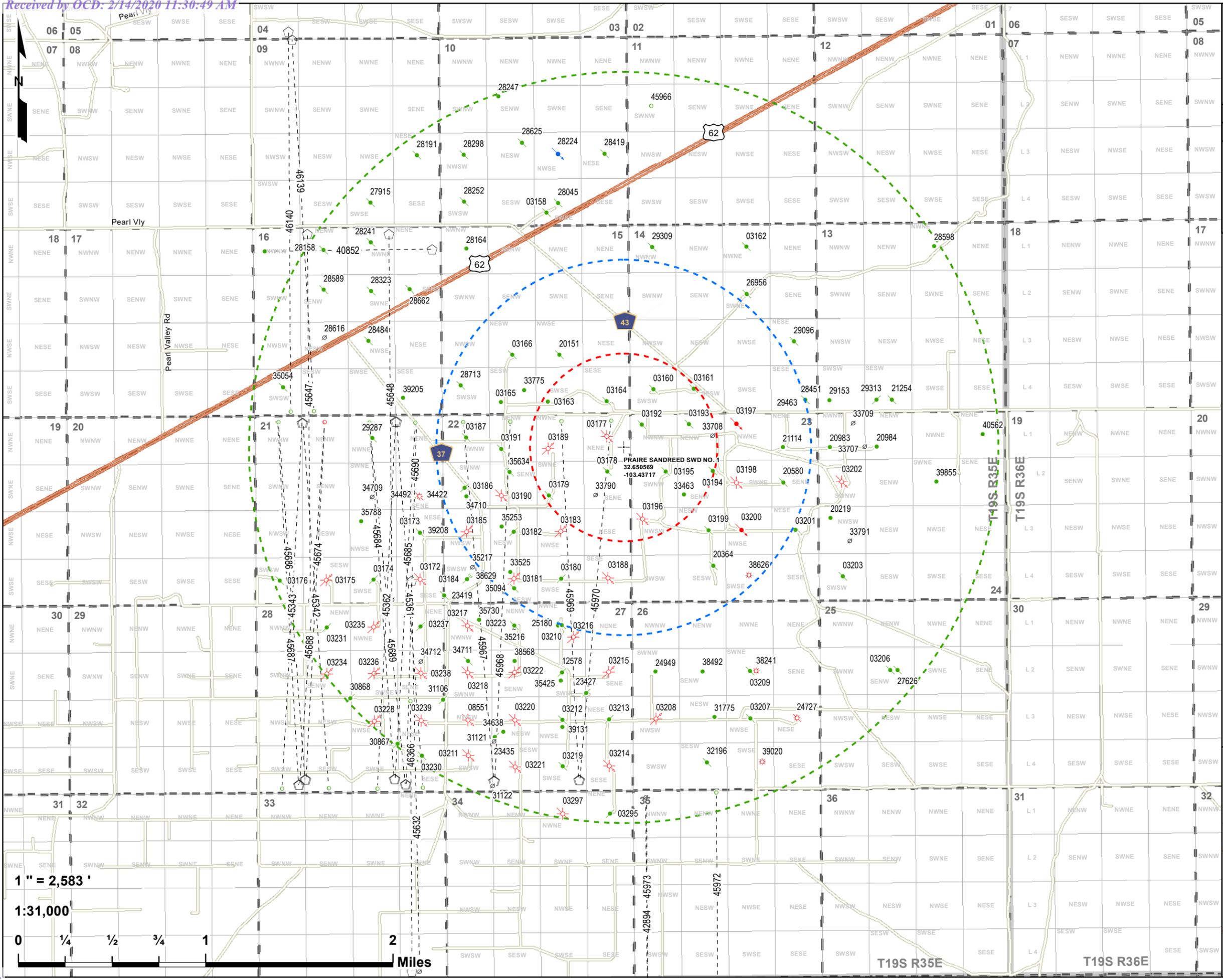
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)

Drawn by: ASG | Date: 1/15/2020 | Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | **ENERGY ADVISORS**

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- ⊕ Prarie Sandreed SWD No. 1 SHL
- ⊠ 1/2-Mile
- ⊡ 1-Mile
- ⊣ 2-Mile
- QQ-Section (NM-PLSS 2nd Div.)
- ▭ Section (NM-PLSS 1st Div.)
- ▭ Township/Range (NM-PLSS)
- - - Lateral

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

- ⬠ Horizontal Surface Location (26)
- ⊗ Active - Gas (3)
- ⊗ Active - Injection (2)
- Active - Oil (31)
- ⊗ Active - SWD (1)
- ⊘ Cancelled/Abandoned Location (12)
- ⊗ Plugged/Not Released - Injection (13)
- ⊗ Plugged/Not Released - Oil (16)
- Permitted - Oil (1)
- ⊗ Plugged/Site Released - Gas (2)
- ⊗ Plugged/Site Released - Injection (17)
- ⊗ Plugged/Site Released - Oil (57)

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

- Active - Oil (1)
- ⊘ Cancelled/Abandoned Location (4)
- Permitted - Gas (3)
- Permitted - Oil (18)

Source: Well SHL Data - NM-OCD (2020)

1" = 2,583'
1:31,000
0 1/4 1/2 3/4 1 2 Miles

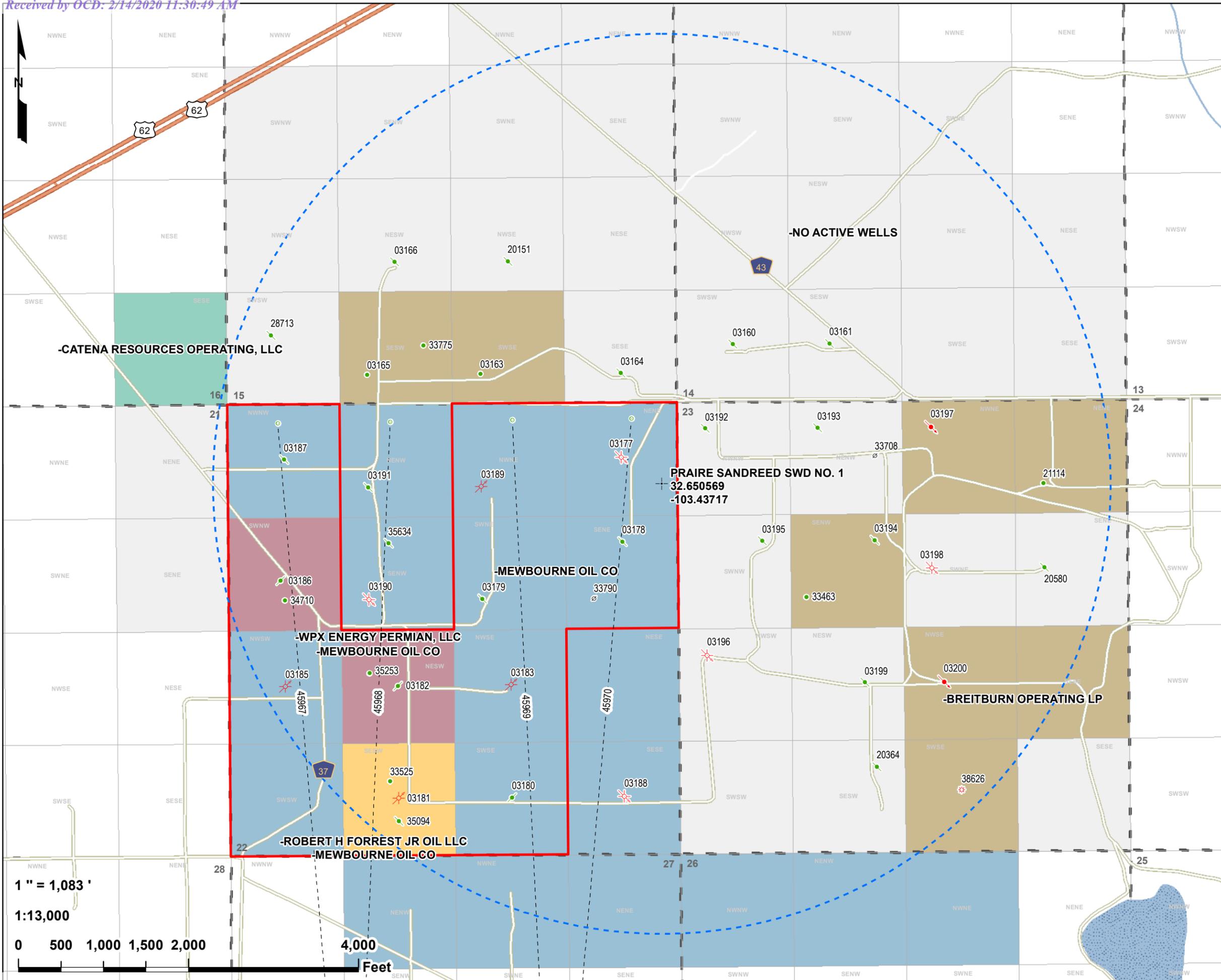


**Prarie Sandreed SWD No. 1
1 Mile Offset Operators and Lessees List**

S/T/R	QQ UNIT LETTER(S)	OPERATOR	MINERAL LESSEE	MINERAL OWNER	SURFACE OWNER	ADDRESS 1	ADDRESS 2
14/T19S/R35E	M,N,O,P	-	OXY USA INC (BLM)	-	-	PO BOX 4294	HOUSTON, TX 77210
	I,J,K,L	-	SCOTT MARGARET L (SLO)	-	-	2837 WESTVIEW TRL	PARK CITY UT 840986251
	I,J,K,L	-	COMEY CAROL JACOBS (SLO)	-	-	1081 JADE CV	OAK POINT TX 750682262
	I,J,K,L	-	JACOBS LAURIE LYNN (SLO)	-	-	15796 I AND GN RD	COLLEGE STATION TX 778456835
			MRC PERMIAN COMPANY			5400 LBJ FWY, SUITE 1500	DALLAS, TX 75240
	C,D,E,F		FEATHERSTONE DEVELOPMENT CORPORATION			1801 W 2ND ST.	ROSWELL, NM 88201
	G		WALLACE FAMILY PARTNERSHIP, LP			508 W. WALL ST., SUITE 1200	MIDLAND, TX 79701
			COLLINS PERMIAN, LP			P.O. BOX 27	MIDLAND, 79702
			WBA RESOURCES, LTD			P.O. BOX 50468	MIDLAND, TX 79701
			JWD RESOURCES, LLC			P.O. BOX 51908	MIDLAND, TX 79710
			CTH ROYALTIES , LLC			P.O. BOX 52521	MIDLAND, TX 79710
			NM ROYALTY, LLC			P.O. BOX 51908	MIDLAND, TX 79710
15/T19S/R35E	C,D,N,O	BREITBURN OPERATING LP	-	-	-	1675 Broadway, 28th Floor	Denver, CO 80202
	A,B	-	SLASH EXPLORATION LP AND ARMSTRONG ENERGY COR	-	-	P.O. BOX 1973	ROSWELL, NM 88202
	E,F,G,H,I,J,K,L	-	MAGNUM HUNTER PRODUCTION, INC.	-	-	600 N MARIENFELD STREET, SUITE 600	MIDLAND, TX 79701
	M		Catena Resources Operating, LLC			18402 US Hwy 281 N Suite 258	San Antonio, TX 78259
						SHERRY KALONICH	164 HUDLOW ROAD
						BENAJMIN C. RUSHING	55 CALDWELL DRIVE
						BRANDY J. HENDERSON	P.O. BOX 4442
						GRETCHEN J. MCKENDRY	116 LONDON AVE.
						VATEX HOLDINGS, LLC	3535 W. 7TH STREET
						FOUNDATION MINERALS, LLC	P.O. BOX 50820
						MAVROS MINERAL II, LLC	P.O. BOX 50820
						OAK VALLEY MINERAL AND LAND, LP	P.O. BOX 50820
	O,P	-	PETRO-GUARD COMPANY	-	-	2450 FONDREN RD., SUITE 105	HOUSTON, TX 77063
16/T19S/R35E	P	Catena Resources Operating, LLC	-	-	-	18402 US Hwy 281 N Suite 258	San Antonio, TX 78259
21/T19S/R35E	NO ACTIVE WELLS	-	-	-	-	-	-
22/T19S/R35E	ENTIRE SECTION	MEWBOURNE OIL CO	-	-	-	P.O. Box 5270	Hobbs, NM 88241
	N	ROBERT H FORREST JR OIL LLC	-	-	-	609 Elora Dr.	Carlsbad, NM 88220
	E,K	WPX Energy Permian, LLC	-	-	-	3500 One Williams Center	Tulsa, OK 74172
23/T19S/R35E	A,B,F,J,I,O	BREITBURN OPERATING LP	-	-	-	1675 Broadway, 28th Floor	Denver, CO 80202
	C,D,E,F	-	PETRO-GUARD COMPANY	-	-	2450 FONDREN RD., SUITE 105	HOUSTON, TX 77063
	I,J,K,L,O,P	-	CHEVRON U S A INC	-	-	6301 Deauville Blvd	Midland, TX 79706
	G,H		WILLIAM J SAVAGE			1345 EAGLE BEND	SOUTHLAKE, TX 76092
			CEVRON U S A INC			6301 DEAUVILLE BLVD	MIDLAND, TX 79706
			RIDGE RUNNER RESOURCES OPERATING, LLC			1004 N. BIG SPRING, SUITE 325	MIDLAND, TX 79701
			CHAP EXPLORATION LLC			P. O. BOX 3445	MIDLAND, TX 79702
			MARK A. TRIEB			1900 MCKINNEY AVE. APT 2109	DALLAS, TX 75201
			MICHELLE P. TRIEB			4621 EVERGREEN ST.	BELLAIRE, TX 77401
	M,N		BRIETBURN OPERATING LP			1111 BAGBY ST., SUITE 1600	HOUSTON, TX 77002
26/T19S/R35E	B,C,D	MEWBOURNE OIL CO	-	-	-	P.O. Box 5270	Hobbs, NM 88241
27/T19S/R35E	A,B,C	MEWBOURNE OIL CO	-	-	-	P.O. Box 5270	Hobbs, NM 88241
Surface Location	-	-	-	-	L & K RANCH LLC	PO BOX 1503	HOBBS, NM 88241

Prairie Sandreed SWD No. 1
1 Mile Area of Review List

API (30-025-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	SPUD/PLUG DATE	FIELD
45967	BEEFMASTER 27 22 B2MD STATE COM #001H	O	N	MEWBOURNE OIL CO	0	32.6249162000	-103.449315500	-	[49680] PEARL, BONE SPRING
38626	SWAN 23 STATE COM #001	G	A	MEWBOURNE OIL CO	13000	32.6406174000	-103.425804100	3/8/2008	[49680] PEARL, BONE SPRING; [82680] PEARL, MORROW, NORTH (GAS); [97623] PEARL, BARNETT, NORTH (GAS)
45970	BEEFMASTER 27 22 B2PA STATE COM #001H	O	N	MEWBOURNE OIL CO	0	32.6249132000	-103.441447900	-	[49680] PEARL, BONE SPRING
45969	BEEFMASTER 27 22 B2OB FEE #001H	O	N	MEWBOURNE OIL CO	0	32.6249132000	-103.441545200	-	[49680] PEARL, BONE SPRING
45968	BEEFMASTER 27 22 B2NC STATE COM #001H	O	N	MEWBOURNE OIL CO	0	32.6249162000	-103.449218200	-	[49680] PEARL, BONE SPRING
03179	EAST PEARL QUEEN UNIT #006	O	H	XERIC OIL & GAS CORP	4875	32.6469078000	-103.444068900	9/19/2003	[49780] PEARL, QUEEN
03182	EAST PEARL QUEEN UNIT #008	O	P	XERIC OIL & GAS CORP	4912	32.6441345000	-103.447319000	8/5/1994	[49780] PEARL, QUEEN
03185	EAST PEARL QUEEN UNIT #009	I	H	XERIC OIL & GAS CORP	4880	32.6441383000	-103.451614400	8/5/1994	[49780] PEARL, QUEEN
03188	EAST PEARL QUEEN UNIT #017	I	H	XERIC OIL & GAS CORP	4850	32.6404953000	-103.438705400	10/13/2003	[49780] PEARL, QUEEN
03180	EAST PEARL QUEEN UNIT #016	O	P	XERIC OIL & GAS CORP	5483	32.64049910000	-103.44299320000	8/5/1994	[49780] PEARL, QUEEN
03183	EAST PEARL QUEEN UNIT #007	I	P	XERIC OIL & GAS CORP	4910	32.6441307000	-103.442993200	8/5/1994	[49780] PEARL, QUEEN
03186	EAST PEARL QUEEN UNIT #004	O	P	XERIC OIL & GAS CORP	4910	32.64755250000	-103.45177460000	8/5/1994	[49780] PEARL, QUEEN
03189	EAST PEARL QUEEN UNIT #001	I	H	XERIC OIL & GAS CORP	4811	32.6505356000	-103.444068900	5/27/1960	[49780] PEARL, QUEEN
03181	EAST PEARL QUEEN UNIT #015	I	P	XERIC OIL & GAS CORP	4900	32.6405067000	-103.447326700	8/5/1994	[49780] PEARL, QUEEN
33525	OYSTER #001	O	A	ROBERT H FORREST JR OIL LLC	6475	32.6410561000	-103.447647100	8/13/1996	[96666] PEARL, SAN ANDRES, NORTH
28713	MCINTOSH #001	O	P	MANZANO OIL CORP	10950	32.6554718000	-103.452064500	4/30/1984	[49780] PEARL, QUEEN
20580	NORTHEAST PEARL QUEEN UNIT #013	O	P	QUANTUM RESOURCES MANAGEMENT, LLC	5076	32.6477776000	-103.422584500	6/16/1963	[49780] PEARL, QUEEN
03192	NORTHEAST PEARL QUEEN UNIT #006	O	P	QUANTUM RESOURCES MANAGEMENT, LLC	4995	32.6523399000	-103.435493500	9/22/1961	[49780] PEARL, QUEEN
03195	NORTHEAST PEARL QUEEN UNIT #016	O	P	QUANTUM RESOURCES MANAGEMENT, LLC	5050	32.6487045000	-103.433349600	9/5/1962	[49780] PEARL, QUEEN
03198	NORTHEAST PEARL QUEEN UNIT #014	I	P	QUANTUM RESOURCES MANAGEMENT, LLC	5104	32.6477852000	-103.426872300	6/10/1962	[49780] PEARL, QUEEN
03193	NORTHEAST PEARL QUEEN UNIT #007	O	P	QUANTUM RESOURCES MANAGEMENT, LLC	5046	32.6523285000	-103.431205700	11/5/1961	[49780] PEARL, QUEEN
03199	NORTHEAST PEARL QUEEN UNIT #019	O	P	QUANTUM RESOURCES MANAGEMENT, LLC	5069	32.6441116000	-103.429481500	9/14/1962	[49780] PEARL, QUEEN
03194	NORTHEAST PEARL QUEEN UNIT #015	O	P	QUANTUM RESOURCES MANAGEMENT, LLC	5038	32.6486969000	-103.429054300	8/8/1962	[49780] PEARL, QUEEN
35634	TORO 22 STATE #004	O	P	WPX Energy Permian, LLC	11100	32.64872740000	-103.44764710000	8/3/2001	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [97098] SCHARB, DELAWARE, SOUTHEAST
35094	TORO 22 STATE COM #002	O	P	WPX Energy Permian, LLC	11200	32.6397629000	-103.447326700	7/24/2000	[55650] SCHARB, WOLFCAMP, SOUTHEAST
34710	TORO 22 #001	O	A	WPX Energy Permian, LLC	12900	32.6469193000	-103.451614400	11/14/1999	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [97098] SCHARB, DELAWARE, SOUTHEAST
35253	TORO 22 #003	O	A	WPX Energy Permian, LLC	11016	32.6445465000	-103.448394800	11/29/2000	[96989] KLEIN RANCH, WOLFCAMP
33775	NORTHEAST PEARL QUEEN UNIT #028	O	A	BREITBURN OPERATING LP	5100	32.6551018000	-103.446243300	1/28/1997	[49780] PEARL, QUEEN
03190	EAST PEARL QUEEN UNIT #005	I	P	PYRAMID ENERGY INC	4923	32.6469154000	-103.448394800	9/21/1959	[49780] PEARL, QUEEN
03165	NORTHEAST PEARL QUEEN UNIT #002	O	A	BREITBURN OPERATING LP	5020	32.6541710000	-103.448394800	1/18/1961	[49780] PEARL, QUEEN
03163	NORTHEAST PEARL QUEEN UNIT #003	O	A	BREITBURN OPERATING LP	5044	32.6541672000	-103.444068900	5/11/1961	[49780] PEARL, QUEEN
21114	NORTHEAST PEARL QUEEN UNIT #009	O	A	BREITBURN OPERATING LP	5097	32.6504974000	-103.422584500	6/15/1964	[49780] PEARL, QUEEN
33463	NORTHEAST PEARL QUEEN UNIT #024	O	A	BREITBURN OPERATING LP	5100	32.6468887000	-103.431686400	6/21/1996	[49780] PEARL, QUEEN
03177	NORTHEAST PEARL QUEEN UNIT #005	I	H	SDX RESOURCES INC	5050	32.65143590000	-103.43870540000	5/16/1991	[49780] PEARL, QUEEN
03196	NORTHEAST PEARL QUEEN UNIT #018	I	P	SDX RESOURCES INC	5210	32.6450272000	-103.435493500	9/1/1961	[49780] PEARL, QUEEN
03197	NORTHEAST PEARL QUEEN UNIT #008	I	A	BREITBURN OPERATING LP	5066	32.6523209000	-103.426872300	7/1/1962	[49780] PEARL, QUEEN
03200	NORTHEAST PEARL QUEEN UNIT #020	I	A	BREITBURN OPERATING LP	5100	32.6441078000	-103.426452600	11/11/1962	[49780] PEARL, QUEEN
33790	NORTHEAST PEARL QUEEN UNIT #029	O	C	SDX RESOURCES INC	0	32.6468987775	-103.439794673	-	-
33708	NORTHEAST PEARL QUEEN UNIT #026	O	C	SDX RESOURCES INC	0	32.6514143017	-103.429022679	-	-
20364	PRE-ONGARD WELL #001	O	H	PRE-ONGARD WELL OPERATOR	5095	32.6413918000	-103.429054300	1/1/1900	-
20151	PRE-ONGARD WELL #001	O	H	PRE-ONGARD WELL OPERATOR	5013	32.6577911000	-103.442993200	1/1/1900	-
03161	PRE-ONGARD WELL #002	O	H	PRE-ONGARD WELL OPERATOR	5013	32.6550522000	-103.430717500	1/1/1900	-
03191	PRE-ONGARD WELL #002	O	P	PRE-ONGARD WELL OPERATOR	4930	32.6505432000	-103.448394800	1/1/1900	[49780] PEARL, QUEEN
03187	PRE-ONGARD WELL #003	O	H	PRE-ONGARD WELL OPERATOR	4950	32.6514549000	-103.451606800	1/1/1900	[49780] PEARL, QUEEN
03160	PRE-ONGARD WELL #001	O	H	PRE-ONGARD WELL OPERATOR	5025	32.6550560000	-103.434417700	1/1/1900	-
03166	PRE-ONGARD WELL #001	O	H	PRE-ONGARD WELL OPERATOR	4966	32.65779880000	-103.44731900000	1/1/1900	[49780] PEARL, QUEEN
03164	PRE-ONGARD WELL #004	O	H	PRE-ONGARD WELL OPERATOR	5040	32.6541595000	-103.438705400	1/1/1900	[49780] PEARL, QUEEN
03178	PRE-ONGARD WELL #017	O	H	PRE-ONGARD WELL OPERATOR	5084	32.6487160000	-103.438705400	1/1/1900	[49780] PEARL, QUEEN



Prairie Sandreed SWD No. 1
1 Mile Offset Operators - OCD
 Blackbuck Resources LLC
 Lea Co., NM

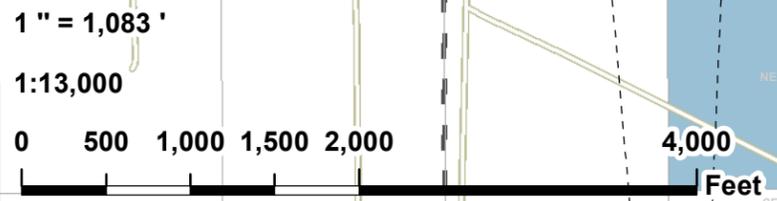
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
 Drawn by: ASG | Date: 1/16/2020 | Approved by: ELR

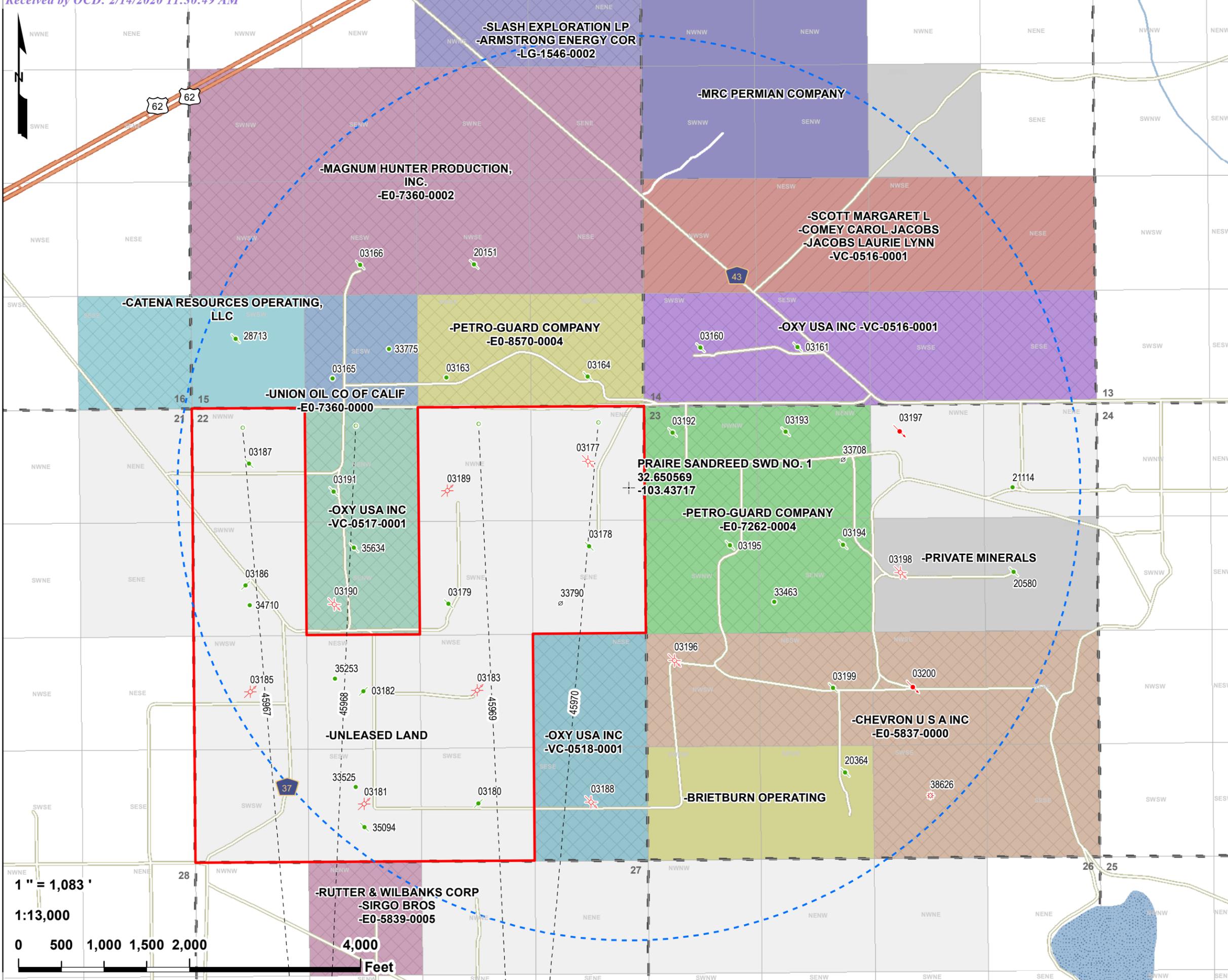
LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- ⊕ Prairie Sandreed SWD No. 1 SHL
 - ⊖ 1-Mile Radius
 - QQ-Section (NM-PLSS 2nd Div.)
 - ▬ Section (NM-PLSS 1st Div.)
 - ▭ Township/Range (NM-PLSS)
 - - - Lateral
- API (30-025-...) SHL Status-Type (Count)**
- ⬡ Horizontal Surface Location (4)
 - ⊗ Active - Gas (1)
 - ⊗ Active - Injection (2)
 - Active - Oil (8)
 - ⊘ Cancelled/Abandoned Location (2)
 - ⊗ Plugged/Not Released - Injection (4)
 - ⊗ Plugged/Not Released - Oil (3)
 - ⊗ Plugged/Site Released - Injection (5)
 - ⊗ Plugged/Site Released - Oil (19)
- API (30-025-...) BHL Status-Type (Count)**
- Permitted - Oil (4)
- Offset Operators**
- -BREITBURN OPERATING LP
 - -Catena Resources Operating, LLC
 - -MEWBOURNE OIL CO
 - -ROBERT H FORREST JR OIL LLC; -MEWBOURNE OIL CO
 - -WPX Energy Permian, LLC; -MEWBOURNE OIL CO
 - -NO ACTIVE WELLS
- Surface Owner**
- ▭ L K RANCH LLC
- Source: Well SHL Data - NM-OCD (2019)





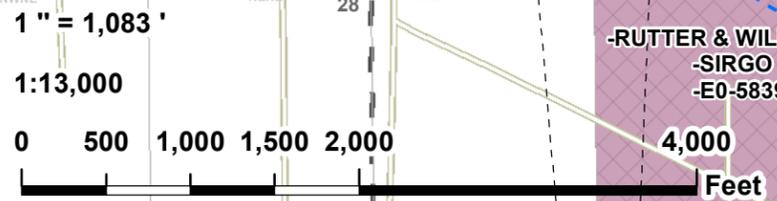
Prarie Sandreed SWD No. 1
1 Mile Lessee(s) - BLM/SLO
 Blackbuck Resources LLC
 Lea Co., NM

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

Drawn by: ASG Date: 2/6/2020 Approved by: ELR

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

+ Prarie Sandreed SWD No. 1 SHL
 1-Mile Radius
 NM-SLO
 NM-BLM
 QQ-Section (NM-PLSS 2nd Div.)
 Section (NM-PLSS 1st Div.)
 Township/Range (NM-PLSS)
 - Lateral
API (30-025-...) SHL Status-Type (Count)
 Horizontal Surface Location (4)
 Active - Gas (1)
 Active - Injection (2)
 Active - Oil (8)
 Cancelled/Abandoned Location (2)
 Plugged/Not Released - Injection (4)
 Plugged/Not Released - Oil (3)
 Plugged/Site Released - Injection (5)
 Plugged/Site Released - Oil (19)
API (30-025-...) BHL Status-Type (Count)
 Permitted - Oil (4)
Lessee
 -Brietburn Operating
 -CHEVRON U S A INC; -E0-5837-0000
 -Catena Resources Operating, LLC
 -MAGNUM HUNTER PRODUCTION, INC.; -E0-7360-0002
 -MRC Permian Company
 -OXY USA INC -VC-0516-0001
 -OXY USA INC; -VC-0517-0001
 -OXY USA INC; -VC-0518-0001
 -PETRO-GUARD COMPANY; -E0-7262-0004
 -PETRO-GUARD COMPANY; -E0-8570-0004
 -RUTTER & WILBANKS CORP; -SIRGO BROS; -E0-5839-0005
 -SCOTT MARGARET L; -COMEY CAROL JACOBS; -JACOBS LAURIE LYNN; -VC-0516-0001
 -SLASH EXPLORATION LP; -ARMSTRONG ENERGY COR; -LG-1546-0002
 -UNION OIL CO OF CALIF; -E0-7360-0000
 -UNLEASED LAND
 -PRIVATE MINERALS
Surface Owner
 L K RANCH LLC
 Source: Well SHL Data - NM-OCD (2019)



CURSORY REPORT

PROSPECT: Prarie Sandreed SWD No. 1

REPORT DATE: 1/28/2020

RECORD DATE: 1/1/1981 – 1/8/2020

COUNTY OF: Lea

STATE OF: New Mexico

DESCRIPTION

NW/4 and SW/4NE/4 of Section 14
T19S-R35E, NMPM

DESCRIPTION: The NW/4 of Section 14, Township 19 South, Range 35 East, NMPM, 160 acres

CURSORY OWNERSHIP

Name of Mineral Owners	Interest	Net Acres	Leasehold and Expiration Date
The New Mexico Baptist Foundation, Inc., Trustee for New Mexico Baptist Children's Home, Inc.	N/A	N/A	LEASED Lease Date: 5/25/2017 V/P: OG 2115/145 Lessor: Featherstone Development Corporation
TOTALS FOR MINERAL OWNERSHIP	N/A	N/A	

LEASEHOLD OWNERSHIP

Interest Owners	W.I.	N.R.I.	Net Acres	Comments
MRC Permian Company 5400 LBJ Fwy, Suite 1500 Dallas, TX 75240	N/A	N/A	N/A	OGL 2115/145
WORKING INTEREST TOTALS	N/A	N/A	N/A	



DESCRIPTION: The SW/4NE/4 of Section 14, Township 19 South, Range 35 East, NMPM, 40 acres

MINERAL OWNERSHIP

Interest Owners	M.I.	Net Acres	Comments
Wallace Family Partnership, LP 508 W. Wall St., Suite 1200 Midland, TX 79701	N/A	N/A	APPEARS OPEN
Collins Permian, LP P.O. Box 27 Midland, TX 79702	N/A	N/A	APPEARS OPEN
WBA Resources, Ltd. P.O. Box 50468 Midland, TX 79710	N/A	N/A	APPEARS OPEN
JWD Resources, LLC P.O. Box 51908 Midland, TX 79710	N/A	N/A	APPEARS OPEN
CTH Royalties, LLC P.O. Box 52521 Midland, TX 79710	N/A	N/A	APPEARS OPEN
NM Royalty, LLC P.O. Box 51908 Midland, TX 79710	N/A	N/A	APPEARS OPEN
MINERAL INTEREST TOTALS	N/A	N/A	



INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
OGL	OPR	1433/743	2/1/2006	3/24/2006	The New Mexico Baptist Foundation, Inc., Trustee for New Mexico Baptist Children's Home, Inc.	Lyle D. Cannon	OGL for the NW/4 of Sec. 14, 19S-35E 3 years
OGL	OPR	1744/737	8/15/2011	9/12/2011	The New Mexico Baptist Foundation, Inc., Trustee for New Mexico Baptist Children's Home, Inc.	Peregrine Production, LLC	OGL for the NW/4 of Sec. 14, 19S-35E 3 years
Amend OGL	OPR	1904/960	8/15/2011	7/18/2014	The New Mexico Baptist Foundation, Inc., Trustee for New Mexico Baptist Children's Home, Inc.	MRC Permian Company	Amends term to 6 years, expiring 8/16/2017
OGL	OPR	2115/145	5/25/2017 but Eff. 8/12/2017	7/11/2017	The New Mexico Baptist Foundation, Inc., Trustee for New Mexico Baptist Children's Home, Inc.	Featherstone Development Corporation	OGL for the NW/4 of Sec. 14, 19S-35E 3 years **Top Lease
AOGL	OPR	2132/775	4/19/2018	4/23/2018	Featherstone Development Corporation	MRC Permian Company	Assigns ARTI in and to OGL 2115/145
OGL	OPR	2156/720	9/1/2019 but Eff. 8/13/2020	10/2/2019	The New Mexico Baptist Foundation, Inc., Trustee for New Mexico Baptist Children's Home, Inc.	Featherstone Development Corporation	OGL for the NW/4 of Sec. 14, 19S-35E 3 years **Top Lease

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
ROGL	OG	357/914	1/12/1983	2/4/1983	Amoco Production Company	Daisie E. Buck	Release of OGL 308/422
OGL	OG	362/836	6/8/1983	8/2/1983	Daisie Buck et vir O. V. Buck	MTS Limited Partnership	OGL for the NE/4 of Section 14, 19S-35E, 160 acres 5 years Other Lands: S/2SE/4 Sec. 11, 19S-35E
PRO	PB	D-506-PB-2016-00041	12/6/1998	4/18/2016	The Estate of Daisie Elizabeth Buck, Deceased	The Public	Decedent died testate Mark Emery Buck was appointed as PR of her estate
AOH	OPR	933/136	1/16/1999	1/25/1999	Nancy Kaye Buck	The Public	Daisie Elizabeth Buck died 12/6/1998 She was survived by Nancy Kaye Buck
OGL	OPR	1468/684	8/14/2006	9/13/2006	Nancy Kaye Buck, SSP	Baroshel Properties	OGL for the NE/4 of Section 14, 19S-35E, 160 acres 3 years
MD	OPR	1670/858	3/10/2010	3/16/2010	Nancy Kaye Buck	Mark Emery Buck	Conveys all UDMI in and under the NE/4 of Section 14, 19S-35E
OGL	OPR	1674/325	3/15/2010	4/9/2010	Mark Emery Buck, SSP	Marshall & Winston, Inc.	OGL for the NE/4 of Section 14, 19S-35E, 160 acres 3 years + 2 year ext Other Lands: S/2SE/4 Sec. 11, 19S-35E
OGL Ext	OPR	1803/403	3/15/2010	11/2/2012	Mark Emery Buck, SSP	Marshall & Winston, Inc.	Extends OGL 1674/325 to 5 years, expiring 3/15/2015
OGL	OPR	1952/373	4/1/2015	4/7/2015	Mark Emery Buck, SSP	O'Brien Oil & Gas, Inc.	OGL for the NE/4 of Section 14, 19S-35E, 160 acres 3 years Other Lands: S/2SE/4 Sec. 11, 19S-35E
MD	OPR	2040/534	3/31/2016	7/25/2016	Mark Emery Buck, PR of the Estate of Daisie Elizabeth Buck, Deceased	Mark Emery Buck	Conveys all UDMI in and under the NE/4 of Section 14, 19S-35E
MD	OPR	2040/536	4/1/2016	7/25/2016	Mark Emery Buck, SSP	Wallace Family Partnership, LP - 37.5% Ted Collins, Jr. - 37.5% WBA Resources, Ltd. - 6.25% JWD Resources, LLC - 6.25% Hanlon Resources, Inc. - 6.25% NM Royalty, LLC - 6.25%	Conveys all UDMI in and under the NE/4 of Section 14, 19S-35E
MD	OPR	2058/91	3/1/2016	10/17/2016	Hanlon Resources, Inc.	CTH Royalties, LLC	Conveys all UDMI in and under the NE/4 of Section 14, 19S-35E

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
Blanket Conveyance	OPR	2126/676	1/1/2018	12/19/2017	Ted Collins, Jr.	Collins Permian, LP	Conveys all UDMI in Lea Co.

CURSORY REPORT

PROSPECT: Prairie Sandreed SWD No. 1

REPORT DATE: 2/5/2020

RECORD DATE: 1/1/1981 – 1/8/2020

COUNTY OF: Lea

STATE OF: New Mexico

DESCRIPTION

SW/4SW/4 of Section 15
T19S-R35E, NMPM

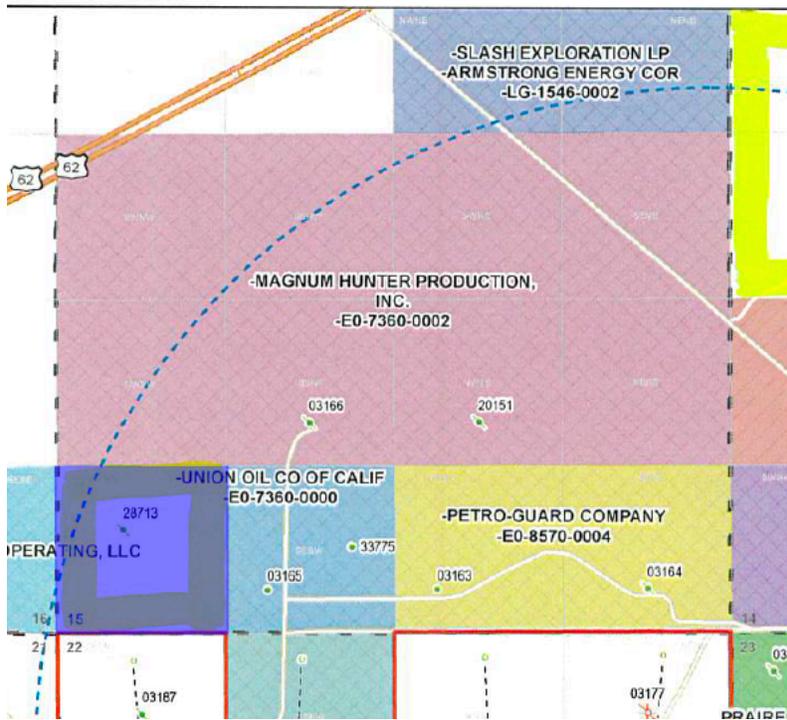
DESCRIPTION: The SW/4SW/4 of Section 15, Township 19 South, Range 35 East, NMPM, 40 acres

CURSORY OWNERSHIP

Name of Mineral Owners	Interest	Net Acres	Leasehold and Expiration Date
Samuel A. Rushing et al.	N/A	N/A	LEASED
Sherry Kalonich 164 Hudlow Road Dunlap, TN 37327	N/A	N/A	APPEARS UNLEASED
Benjamin C. Rushing 55 Caldwell Drive Pikeville, KY 41506	N/A	N/A	APPEARS UNLEASED
Brandy J. Henderson P.O. Box 4442 Pensacola, FL 32507	N/A	N/A	APPEARS UNLEASED
Gretchen J. McKendry 116 London Ave. Fort Walton, FL 32548	N/A	N/A	APPEARS UNLEASED
James Alfred Rushing No Address Ravalli County, MT	N/A	N/A	APPEARS UNLEASED
VATEX Holdings, L.L.C. 3535 W. 7 th Street Fort Worth, TX 76107	N/A	N/A	APPEARS UNLEASED
Foundation Minerals, LLC P.O. Box 50820 Midland, TX 79710	N/A	N/A	APPEARS UNLEASED
Mavros Minerals II, LLC P.O. Box 50820 Midland, TX 79710	N/A	N/A	APPEARS UNLEASED
Oak Valley Mineral and Land, LP P.O. Box 50820 Midland, TX 79710	N/A	N/A	APPEARS UNLEASED
TOTALS FOR MINERAL OWNERSHIP	N/A	N/A	

LEASEHOLD OWNERSHIP

Interest Owners	W.I.	N.R.I.	Net Acres	Comments
Cantena Resources, LLC and Cantena Resources Operating, LLC 18402 US HWY 281, Suite 258 San Antonio, TX 78259	N/A	N/A	N/A	
WORKING INTEREST TOTALS	N/A	N/A	N/A	



INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
QCD	DR	420/466	4/30/1979	7/5/1985	Lucia G. Rushing	Wylie Rushing	Quitclaims ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
MD	DR	402/269	12/28/1982	1/20/1983	John Lee Rushing	Willie Rushing	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
OGL	OG	367/564	1/16/1984	1/23/1984	Bobby G. Parks et ux Gail Parks Lester A. Parks	C. W. Trainer and David M. Trainer	OGL for the SW/4SW/4 of Section 15, 19S-R35E 6 months
RDO	MISC	448/699	1/16/1984	7/10/1985	Bobby G. Parks et ux Gail Parks Lester A. Parks	C. W. Trainer and David M. Trainer	Owens 13/160 UDMI
OGL	OG	367/802	1/24/1984	2/1/1984	J. E. Simmons Trust A-JSS J. E. Simmons Trust B-MJH Beulah H. Simmons Trust A-JSS Beulah H. Simmons Trust B-MJH	John T. Echols	OGL for the SW/4SW/4 of Section 15, 19S-R35E 2 years
OGL	OG	368/180	5/2/1984	2/16/1984	Bill Rushing aka William Rushing	Jerry L. Hooper	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OG	368/182	5/2/1984	2/16/1984	Lennie Rushing widow of Ben Rushing	Jerry L. Hooper	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OG	368/184	5/2/1984	2/16/1984	Benny R. Rushing	Jerry L. Hooper	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OG	368/186	5/2/1984	2/16/1984	Ida Jo Breaux	Jerry L. Hooper	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OG	368/765	5/2/1984	3/8/1984	Wylie Rushing et ux Lucia Rushing, JTWROS	Jerry L. Hooper	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MD	DR	412/708	6/8/1984	6/13/1984	Mary Ann Jenkins	R. F. Fort et ux Juaneil Fort	Conveys a 3/640 UDMI in and under the SW/4SW/4 of Section 15, 19S-35E
MD	DR	414/898	9/20/1984	10/5/1984	Estate of Jay Bert Leck, Deceased	Velta Jean Daigneault Jay Bertrum Leck	Conveys a 1/640 UDMI in and under the SW/4SW/4 of Section 15, 19S-35E

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
MD	DR	417/181	2/14/1985	1/29/1985	Jay Bertrum Leck	R. F. Fort et ux Juanell Fort	Conveys a 1/1280 UDMI in and under the SW/4SW/4 of Section 15, 19S-35E
Interest Agreement	MISC	447/887	6/4/1985	6/18/1985	William P. McIntosh et al.	William P. McIntosh et al.	The 1/2 UDMI is owned as follows: William P. McIntosh - 33/80 Lester Parks - 13/640 Estate of Clara Parks - 13/640 Bobby Parks et ux - 13/320 Velta Jean Daignault - 1/1280 R. F. Fort et ux - 7/1280
AOH	MISC	467/539	8/5/1986	8/26/1986	Ida Jo Breaux	The Public	Ben T. Rushing was survived by his wife Lennie Daniel Rushing and children Ida Jo Breaux and Benny Ross Rushing
QCD	DR	429/661	8/15/1986	8/26/1986	Benny Ross Rushing	Lennie Rushing	Quitclaims ARTI in and to the SW/4SW/4 of Section 15, 19S-35E, from Ben T. Rushing
QCD	DR	429/662	8/26/1986	8/26/1986	Ida Jo Breaux	Lennie Rushing	Quitclaims ARTI in and to the SW/4SW/4 of Section 15, 19S-35E, from Ben T. Rushing
AOH	MISC	473/468	9/9/1986	1/9/1987	Alfred J. Rushing et al.	The Public	William Rushing's interest is owned by the following: Alfred J. Rushing John L. Rushing Wylie Rushing Harry J. Rushing Ida Jo Breaux Benny Rushing Linnie Rushing
PR Deed	OPR	704/537	1/18/1996	1/24/1996	Estate of Harry J. Rushing	John L. Rushing Estate of Alfred J. Rushing	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
MD	OPR	734/242	6/6/1996	6/25/1996	Mary Ann Jenkins	Jenkins Family Living Trust dated 11/18/1992	Conveys a 1/320 UDMI in and under the SW/4SW/4 of Section 15, 19S-35E
QCMD	OPR	987/710	9/9/1999	11/15/1999	Mary Ann Jenkins	R. F. Fort et ux Juanell Fort	Conveys a 3/640 UDMI in and under the SW/4SW/4 of Section 15, 19S-35E
DD	OPR	983/576	10/21/1999	10/21/1999	Estate of John Lee Rushing	Ida Jo Breaux James Alfred Rushing	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
QCMD	OPR	993/41	11/12/1999	12/9/1999	Jenkins Family Living Trust dated 11/18/1992	R. F. Fort et ux Juanell Fort	Conveys a 3/640 UDMI in and under the SW/4SW/4 of Section 15, 19S-35E
PR Deed	OPR	1014/529	4/28/2000	5/1/2000	Estate of Alfred Jeff Rushing	Helen Jean Rushing Brillon James Alfred Rushing	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
TR Deed	OPR	1089/685	7/13/2001	7/16/2001	The William P. And Amolene McIntosh Trust	William P. McIntosh Merry A. McIntosh Dave C. McIntosh Condy A. Polk Marcia M. Tidwell	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
PR Deed	OPR	1120/374	12/17/2001	12/21/2001	Estate of Wylie Rushing, Deceased Estate of Lucia Rushing, Deceased	Stephen W. Rushing Samuel A. Rushing	Conveys all UDMI in Lea Co.
AOH	OPR	1494/464	1/29/2007	1/31/2007	Dawn L. Lehan	The Public	Benny Rushing was survived by Sherry Kalonich, Benjamin C. Rushing, Brandy J. Henderson, Gretchen J. McKendry
MD	OPR	2095/106	1/1/2017	4/6/2017	Estate of Bobby G. Parks	Janet J. Tidwell Diana K. Hammonds Nancy B. Parks	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
MD	OPR	2102/156	4/13/2017	5/3/2017	Helen Jean Rushing Brillon	Foundation Minerals, LLC Mavros Minerals II, LLC Oak Valley Mineral and Land, LP	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E
AOH	OPR	2127/820	1/12/2018	1/12/2018	Kathey Breaux Pope	The Public	Ida Jo Breaux was survived by Kathey Pope, Billy J. Breaux, Mark A. Breaux and Teresa A. Teel
MOGL	OPR	2134/793	2/20/2018	6/1/2018	Samuel A. Rushing	Resonance Resources, LLC, dba Resonance Resources Energy, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2134/792	3/19/2018	6/1/2018	Stephen W. Rushing	Resonance Resources, LLC, dba Resonance Resources Energy, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
AOGL	OPR	2143/893	12/12/2018	12/21/2018	Resonance Resources, LLC, dba Resonance Resources Energy, LLC	Catena Resources Operating, LLC	Assigns ARTI in and to OGL 2134/792 and 2134/793
OGL	OPR	2147/653	2/20/2019	3/10/2019	Marcia M. Tidwell	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2147/656	2/20/2019	3/10/2019	Cindy A. Polk	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2148/375	2/20/2019	3/29/2019	William P. McIntosh	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
OGL	OPR	2148/376	2/20/2019	3/29/2019	Dave C. McIntosh	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2148/378	2/20/2019	3/29/2019	Janet J. Tidwell	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2149/388	2/20/2019	4/18/2019	Merry A. McIntosh Living Trust dated 1/4/2004	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2147/652	2/22/2019	3/10/2019	Teresa A. Breaux Teel	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2149/386	2/22/2019	4/18/2019	Mark A. Breaux	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2149/387	2/22/2019	4/18/2019	Kathy Breaux Pope	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2150/237	2/22/2019	5/7/2019	Billy J. Breaux	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2147/655	2/26/2019	3/10/2019	Beulah H. Simmons Trust FBO MJ Hand TUA 2/27/75 James E. Simmons Trust FBO MJ Hand TUA 2/27/75	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2150/236	4/2/2019	5/7/2019	Randall R. Fort and Rfort Mineral Properties, LLC Tommy L. Fort Margi Fort Bruns Robert Mitchell Raindl Brent M. Raindl Brandi Raindl Burns Brady Lynn Raindl	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2150/543	4/2/2019	5/14/2019	Margi Fort Bruns	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2150/544	4/2/2019	5/14/2019	Tommy L. Fort	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2150/545	4/2/2019	5/14/2019	Randall R. Fort and Rfort Mineral Properties, LLC	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years

INSTR. TYPE	RECORD	VOL/Pg or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
MOGL	OPR	2150/546	4/2/2019	5/14/2019	Robert Mitchell Raindl	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2150/547	4/2/2019	5/14/2019	Brent M. Raindl	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2150/548	4/2/2019	5/14/2019	Brandi Raindl Burns	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MOGL	OPR	2150/549	4/2/2019	5/14/2019	Brady Lynn Raindl	Catena Resources Operating, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2151/14	4/22/2019	5/23/2019	Nancy B. Parks	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
OGL	OPR	2151/15	4/22/2019	5/23/2019	Diana K. Hammonds	Catena Resources, LLC	OGL for the SW/4SW/4 of Section 15, 19S-R35E 3 years
MD	OPR	2155/787	7/1/2019	9/10/2019	Velta Jean Daigneault	Vatex Holdings, L.L.C.	Conveys ARTI in and to the SW/4SW/4 of Section 15, 19S-35E

CURSORY REPORT

PROSPECT: Prairie Sandreed SWD No. 1

REPORT DATE: 1/30/2020

RECORD DATE: 1/1/1981 – 1/8/2020

COUNTY OF: Lea

STATE OF: New Mexico

DESCRIPTION

S/2SW/4 and S/2NE/4 of Section 23
T19S-R35E, NMPM

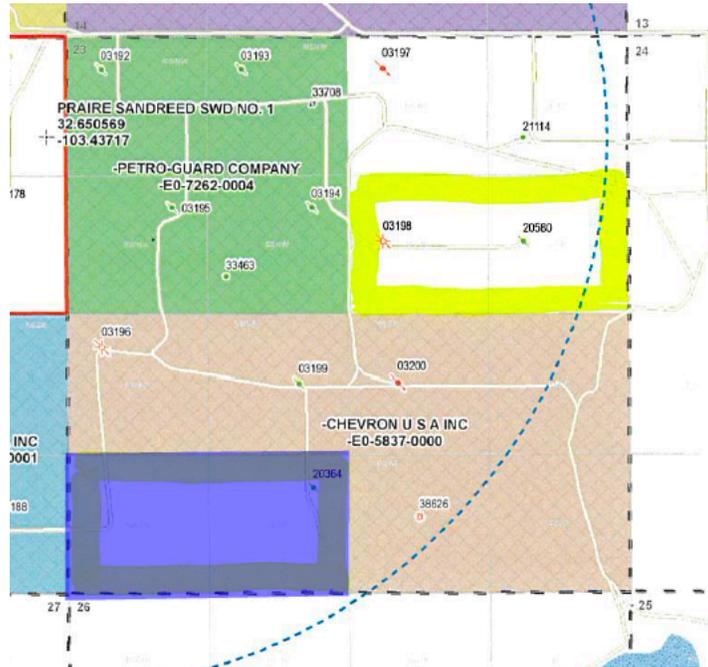
DESCRIPTION: The S/2SW/4 of Section 23, Township 19 South, Range 35 East, NMPM, 80 acres

CURSORY OWNERSHIP

Name of Mineral Owners	Interest	Net Acres	Leasehold and Expiration Date
H. S. Record, et al.	N/A	N/A	HBP Lease Date: 10/16/1951 V/P: OG 97/21 Lessor: Reese Cleveland
TOTALS FOR MINERAL OWNERSHIP	N/A	N/A	

LEASEHOLD OWNERSHIP

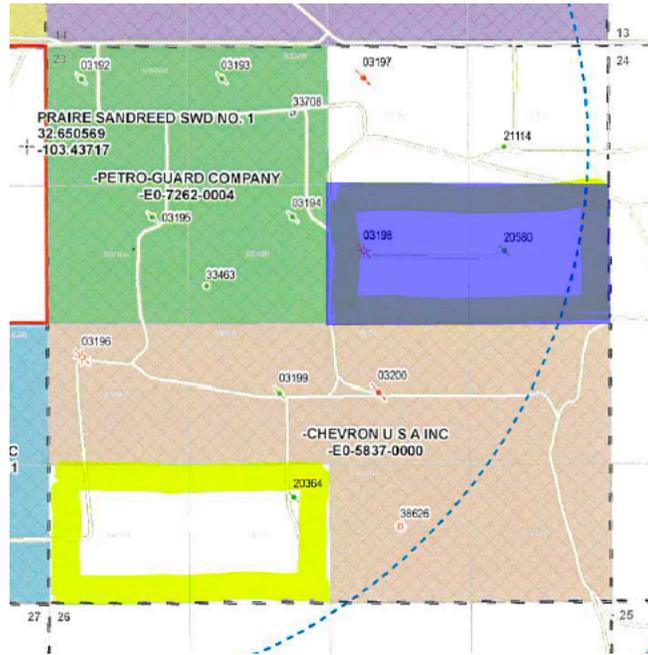
Interest Owners	W.I.	N.R.I.	Net Acres	Comments
William J. Savage 1345 Eagle Bend Southlake, TX 76092	N/A	N/A	N/A	
Chevron U.S.A. Inc. 6301 Deauville Blvd. Midland, TX 79706	N/A	N/A	N/A	
Ridge Runner Resources Operating, LLC 1004 N. Big Spring, Suite 325 Midland, TX 79701	N/A	N/A	N/A	
Chap Exploration, LLC P.O. Box 3445 Midland, TX 79702	N/A	N/A	N/A	
Mark A. Trieb 1900 McKinney Ave. Apt. 2109 Dallas, TX 75201	N/A	N/A	N/A	
Michelle P. Trieb 4621 Evergreen St. Bellaire, TX 77401	N/A	N/A	N/A	
WORKING INTEREST TOTALS	N/A	N/A	N/A	



DESCRIPTION: The S/2NE/4 of Section 23, Township 19 South, Range 35 East, NMPM, 80 acres

LEASEHOLD OWNERSHIP

Interest Owners	W.I.	N.R.I.	Net Acres	Comments
Breitburn Operating LP 1111 Bagby St., Ste. 1600 Houston, TX 77002	N/A	N/A	N/A	*S/2NE/4 is included in the Northeast Pearl Queen Unit. Owner is the unit operator.
WORKING INTEREST TOTALS	N/A	N/A	N/A	



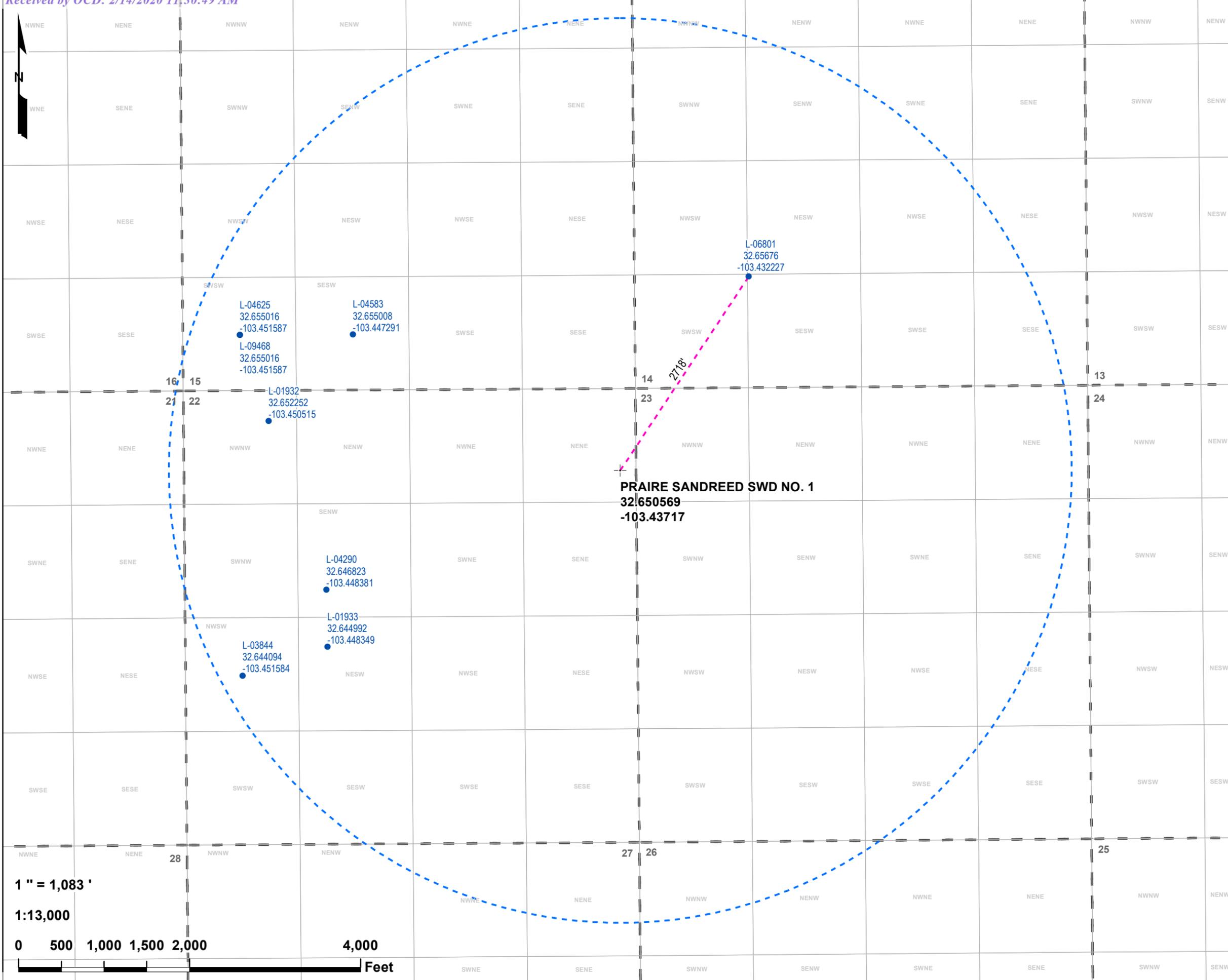
INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
Assignment and Conveyance	OG	401/451	5/1/1986	7/28/1986	Shell Western E&P Inc.	Petrus Oil Company	Assigns ARTI in and to OGL 97/21 covering the S/2SW/4 of Sec. 23, 19S-R35E
Name Change	M	522/27	1/3/1990	1/5/1990	Petrus Oil Company	Bridge Oil Company, L.P.	Name Change
A/BOS	OG	456/138	11/1/1990	11/2/1990	Bridge Oil Company, L.P.	Merit Energy Partners, L.P. Merit Energy Partners, II, L.P. Merit Energy Partners, III, L.P.	Assigns ARTI in and to OGL 97/21
AOGL	OG	480/766	8/1/1992	10/13/1992	Merit Energy Partners, L.P. Merit Energy Partners, II, L.P. Merit Energy Partners, III, L.P. Merit Energy Company	Amtex Energy, Inc.	Assigns ARTI in and to OGL 97/21
AOGL	OG	483/565	12/30/1992	12/31/1992	Amtex Energy, Inc.	John C. Oxley dba Oxley Petroleum - 1/4 Walter F. Brown - 3/20 McRae Exploration & Production, Inc. - 1/10 Gunn Mineral Trust - 1/20 C.C.G. Enterprises, Inc. - 1/20 Triad Energy Corporation - 1/20 Piper Petroleum - 7/200 MVC, Inc. - 3/100 William J. Savage - 213/1000 Joe F. Mills - 9/500 Raymond G. Clanin - 9/500 Mark A. Trieb - 9/500 Philip C. Vogel - 9/500	Assigns ARTI in and to OGL 97/21
AOGL	OPR	758/242	9/1/1996	10/30/1996	Triad Energy Corporation	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	768/268	12/31/1996	12/27/1996	John C. Oxley	John C. Oxley, L.L.C.	Assigns ARTI in and to OGL 97/21
Correction AOGL	OPR	932/373	12/31/1996	1/22/1999	John C. Oxley et ux Debby M. Oxley	John C. Oxley, L.L.C.	Corrects 768/268
AOGL	OPR	782/738	1/1/1997	3/7/1997	C.C.G. Enterprises Inc.	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	782/741	1/1/1997	3/7/1997	Curtis C. Gunn, Inc.	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	782/744	1/1/1997	3/7/1997	Gunn Mineral Trust	William J. Savage	Assigns ARTI in and to OGL 97/21

S/2SW/4 Section 23, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico
80 acres

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
AOGL	OPR	1023/351	6/1/2000	6/22/2000	McRae Exploration & Production, Inc.	William J. Savage	Assigns ARTI in and to OGL 97/21
Merger	OPR	1426/542	1/30/2006	2/10/2006	John C. Oxley, L.L.C.	Chesapeake Exploration Ltd. Partnership	Merger
Term Assignment	OPR	1478/259	5/1/2006	11/6/2006	William J. Savage et ux Amy M. Savage Walter F. Brown et ux Lenora P. Brown Piper Petroleum Company MVC, Inc. Joe F. Mills et ux Janet C. Mills Raymond G. Clanin et ux Carolyn T. Clanin Mark A. Trieb et ux Shauna J. Trieb Michelle P. Trieb Phillip C. Vogel et ux Martha D. Vogel	Mewbourne Oil Company	Term Assignment of ARTI in and to OGL 97/21
PAOGL	OPR	1578/223	2/11/2008	5/1/2008	Mewbourne Oil Company	McCombs Energy, Ltd.	Assigns an undivided 25% interest in and to OGL 97/21
PAOGL	OPR	1641/371	3/8/2008	7/27/2009	Mewbourne Oil Company	3MG Corporation	Assigns an undivided 15% interest in and to OGL 97/21
PAOGL	OPR	1641/374	3/8/2008	7/27/2009	Mewbourne Oil Company	CWM 200-B, Ltd.	Assigns an undivided 20.75% interest in and to OGL 97/21
PAOGL	OPR	1641/377	3/8/2008	7/27/2009	Mewbourne Oil Company	Mewbourne Energy Partners 07-A, L.P.	Assigns an undivided 35% interest in and to OGL 97/21
PAOGL	OPR	1641/380	3/8/2008	7/27/2009	Mewbourne Oil Company	Mewbourne Development Corporation	Assigns an undivided 15% interest in and to OGL 97/21
A/BOS	OPR	1804/464	7/1/2012	11/8/2012	Chesapeake Exploration, L.L.C.	Chevron U.S.A. Inc.	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2056/920	11/1/2015	10/7/2016	Joe F. Mills et ux Janet C. Mills	William J. Savage	Assigns ARTI in and to OGL 97/21
Assignment	OPR	2145/500	5/20/2016	2/1/2019	Raymond G. Clanin	Ramond G. Clanin and Diana R. Clanin, as Trustees of The Clanin Trust dtd 9/20/1989	Assigns ARTI in and to all interest in Lea Co.

S/2SW/4 Section 23, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico
80 acres

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
A/BOS	OPR	2146/94	11/1/2018	2/14/2019	Diana R. Clanin, Trustee of The Clanin Trust dtd 9/20/1989	William J. Savage	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2148/644	12/31/2018	4/4/2019	Mewbourne Energy Partners 07-A, L.P.	Mewbourne Development Corporation P.O. Box 7698 Tyler, TX 75711	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2147/922	1/1/2019	3/22/2019	Walter F. Brown, Jr., IE and Trustee u/w/o Walter F. Brown, Deceased Lenora P. Brown, widow and Trustee u/w/o Walter F. Brown Janet Lattner Brown, fka Janet Brown Barnes, as Trustee u/w/o Walter F. Brown J&W Interests, Ltd.	William J. Savage 1345 Eagle Bend Southlake, TX 76092	Assigns ARTI in and to OGL 97/21
Reassignment of Int in OGL	OPR	2146/552	2/13/2019	2/25/2019	Mewbourne Oil Company, et al.	William J. Savage et ux Amy M. Savage - 49.9% Piper Petroleum Company - 3.5% MVC, Inc. - 3% Philip C. Vogel et ux Martha D. Vogel - 1.8% Mark A. Trieb et ux Shauna J. Trieb - 0.9% Michelle P. Trieb - 0.9% Walter F. Brown, Jr., Independent Executor of the Estate of Walter F. Brown, Deceased - 7.5% Lenora P. Brown, widow - 7.5%	Reassignment of ARTI in and to OGL 97/21 as it covers the S/2SW/4 of Sec. 23
A/BOS	OPR	2149/451	3/1/2019	4/22/2019	Philip C. Vogel et ux Martha D. Vogel	Chap Exploration, LLC P.O. Box 3445 Midland, TX 79702	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2152/428	4/1/2019	6/25/2019	MVC, Inc.	Chap Exploration, LLC P.O. Box 3445 Midland, TX 79702	Assigns ARTI in and to OGL 97/21
AOGL	OPR	2152/667	6/1/2019	7/1/2019	Piper Petroleum Company	Ridge Runner Resources Operating, LLC 1004 N. Big Spring, Suite 325 Midland, TX 79701	Assigns ARTI in and to OGL 97/21



Prarie Sandreed SWD No. 1
1 Mile Water Wells
 Blackbuck Resources LLC
 Lea Co., NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
 Drawn by: ASG | Date: 1/16/2020 | Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | **ENERGY ADVISORS**

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- Prarie Sandreed SWD No. 1 SHL
- Water Wells (7)
- 1-Mile Radius
- Distance call
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)

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



1" = 1,083'

1:13,000





New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: L 03844 Subbasin: L Cross Reference: -
 Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
 Primary Status: PMT PERMIT
 Total Acres: Subfile: - Header: -
 Total Diversion: 0 Cause/Case: -
 Owner: MORAN OIL PRODUCING AND DRILLING CORP

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
489660	72121	1958-05-23	PMT	LOG	L 03844	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q					(NAD83 UTM in meters)		Other Location Desc
			64Q16Q4Sec	Tws	Rng	X	Y			
L 03844		Shallow	1	3	22	19S	35E	645232	3612891*	

An () after northing value indicates 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.

2/4/20 10:48 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: L 04583 Subbasin: L Cross Reference: -
 Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
 Primary Status: PMT PERMIT
 Total Acres: Subfile: - Header: -
 Total Diversion: 0 Cause/Case: -
 Owner: GACKLE DRILLING COMPANY

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
get images 495299 72121 1962-02-15			PMT	APR	L 04583	T		3	
get images 495295 72121 1962-01-18			PMT	APR	L 04583 (T EXPIRE)	T		3	
get images 495289 72121 1961-01-16			PMT	LOG	L 04583	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q					(NAD83 UTM in meters)		Other Location Desc
			64	Q16	Q4	Sec	Tws	Rng	X	
L 04583		Shallow	4	3	15	19S	35E	645617	3614107*	

An () after northing value indicates 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.

2/4/20 10:45 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: L 04625 Subbasin: L Cross Reference: -
 Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
 Primary Status: PMT PERMIT
 Total Acres: Subfile: - Header: -
 Total Diversion: 3 Cause/Case: -
 Owner: THELMA A. LINAM

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
495901	72121	1961-04-13	PMT	APR	L 04625	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q					(NAD83 UTM in meters)		Other Location Desc
			64Q16Q4Sec	Tws	Rng	X	Y			
L 04625			3	3	15	19S	35E	645214	3614102*	

An () after northing value indicates 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.

2/4/20 10:51 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: L 06801 Subbasin: L Cross Reference: -
 Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
 Primary Status: PMT PERMIT
 Total Acres: Subfile: - Header: -
 Total Diversion: 3 Cause/Case: -
 Owner: CLARA FOWLER

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
511032	72121	1971-05-10	PMT	LOG	L 06801	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q				(NAD83 UTM in meters)		Other Location Desc
			64Q16Q4Sec	Tws	Rng	X	Y		
L 06801			3	14	19S	35E	647027	3614322*	S/2

An () after northing value indicates 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.

2/4/20 10:50 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: L 09468 Subbasin: L Cross Reference: -
 Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
 Primary Status: PMT PERMIT
 Total Acres: Subfile: - Header: -
 Total Diversion: 3 Cause/Case: -
 Owner: VIRGIL LINAM ESTATE
 Contact: FAYE L. KLEIN

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/To	Acres	Diversion	Consumptive
			1	2					
get images 516760_72121_1986-03-24			PMT	APR	L 09468	T		3	
get images 516757_72121_1985-02-21			EXP	EXP	L 09468 (T) EXPIRED	T		3	
get images 516755_COWNF_1985-02-21			CHG	PRC	L 09468	T		0	
get images 516753_72121_1984-04-25			PMT	LOG	L 09468 (T) EXPIRED	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q				(NAD83 UTM in meters)		Other Location Desc
			64Q16Q4Sec	Tws	Rng	X	Y		
L.09468		Shallow	3	3	15	19S	35E	645214	3614102* 400'FSL, 600'FWL

An () after northing value indicates 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.

2/4/20 10:49 AM

WATER RIGHT SUMMARY

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
January 23, 2020
and ending with the issue dated
January 23, 2020.



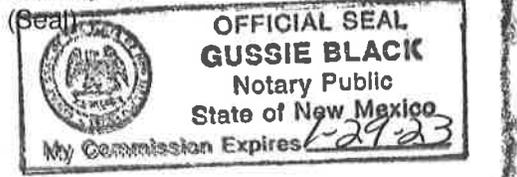
Publisher

Sworn and subscribed to before me this
23rd day of January 2020.



Business Manager

My commission expires
January 29, 2023



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

LEGALS

**LEGAL NOTICE
JANUARY 23, 2020**

Blackbuck Resources LLC, located at 2601 Westheimer Road, C210, Houston, TX, 77098, is filing Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for administrative approval for its salt water disposal well Prairie Sandreed Fee SWD No. 1. The proposed well will be located at 1,000' FNL and 200' FEL in Section 22, Township 19S, Range 35E in Lea County, New Mexico. Disposal water will be sourced from area production, and will be injected into the Devonian-Silurian Formation (determined by offset log analysis) through an open hole completion between an applied for top of 13,588 feet to a maximum depth of 15,388 feet. The maximum surface injection pressure will not exceed 2,718 psi with a maximum rate of 25,000 BWPD. Interested parties opposing the action must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. Additional information can be obtained from the applicant's agent, Lonquist & Co., LLC, at (512) 600-1764.
#35112

67112661

00238608

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

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

DETERMINATION AND NOTICE OF AFFECTED PARTIES – NEW MEXICO

If an operator or mineral lessee has legal acreage or leases within one mile of the proposed salt water disposal well, their contact information is collected for notification purposes. Legal acreage of offset operators is gathered from the New Mexico Oil Conservation District's Permitting website. Minerals leased from the federal government are determined by referencing the Bureau of Land Management's Land and Mineral System Reports database. Minerals leased from the state government are determined by referencing the New Mexico State Land Office's Data Access database. Contact information for the affected parties is then extracted from the reports that were filed with the appropriate regulatory agency. Should any private minerals that are not public information fall within the one-mile radius, a title search was performed to discover the current lessee of those minerals or identifying the mineral owner of the acreage.

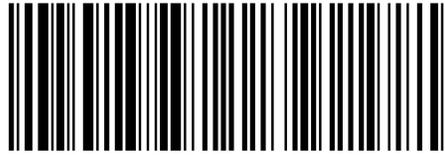
Notices were sent for the Prairie Sandreed Fee SWD No. 1 application by mailing them a copy of Form C-108 on 2/7/2020. The individual tracking numbers are attached in the following pages of this application. Receipt of each application will be monitored and presented to the Oil Conservation Division upon request.



Tyler Moehlman
Petroleum Engineer

Project: Blackbuck Resources, LLC
 Prairie Sandreed Fee SWD No. 1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5700 51

RETURN RECEIPT (ELECTRONIC)



Total Postage: \$6.85

BENJAMIN C RUSHING
55 CALDWELL DRIVE
2158-PRAIRIE SANDREED FEE SWD #1
PIKEVILLE, KY 41506

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5700 68

RETURN RECEIPT (ELECTRONIC)



Total Postage: \$6.85

BRANDY J HENDERSON
PO BOX 4442
2158-PRAIRIE SANDREED FEE SWD #1
PENSACOLA, FL 32507

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5700 75

RETURN RECEIPT (ELECTRONIC)

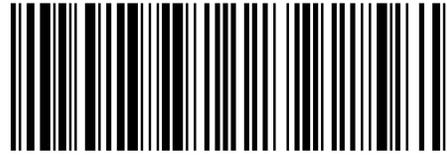


Total Postage: \$6.85

BREITBURN OPERATING LP
1675 BROADWAY
28TH FLOOR
2158-PRAIRIE SANDREED FEE SWD #1
DENVER, CO 80202

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5700 82

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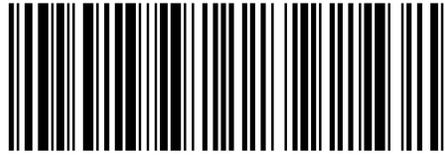


Total Postage: \$6.85

BREITBURN OPERATING LP
1111 BAGBY ST
SUITE 1600
2158-PRAIRIE SANDREED FEE SWD #1
HOUSTON, TX 77002

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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BUREAU OF LAND MGMT
301 DINOSAUR TRAIL
2158-PRAIRIE SANDREED FEE SWD #1
SANTA FE, NM 87508

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 05

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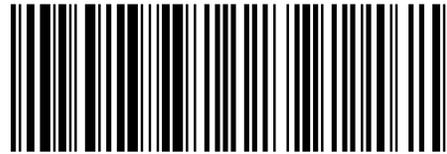


Total Postage: \$6.85

CATENA RESOURCES OPERATING LLC
18402 US HWY 281 N
SUITE 258
2158-PRAIRIE SANDREED FEE SWD #1
SAN ANTONIO, TX 78259

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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CHEVRON USA INC
6301 DEAUVILLE BLVD
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79706

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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CHAP EXPLORATION LLC
PO BOX 3445
SUITE 206
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79702

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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COLLINS PERMIAN LP
PO BOX 27
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79702

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 43

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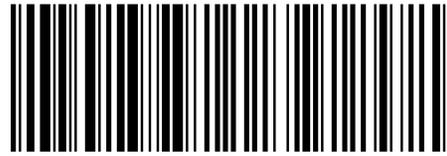


Total Postage: \$6.85

COMEY CAROL JACOBS
1081 JADE CV
2158-PRAIRIE SANDREED FEE SWD #1
OAK POINT, TX 75068-2262

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 50

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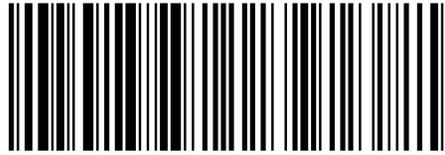


Total Postage: \$6.85

CTH ROYALTIES LLC
PO BOX 52521
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79710

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 67

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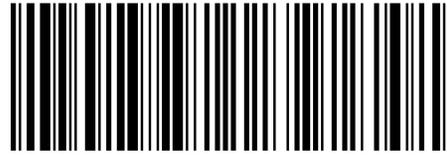


Total Postage: \$6.85

FEATHERSTONE DEVELOPMENT CORP
1801 W 2ND ST
2158-PRAIRIE SANDREED FEE SWD #1
ROSWELL, NM 88201

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 74

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Total Postage: \$6.85

FOUNDATION MINERALS LLC
OAK VALLEY MINERAL AND LAND LP
PO BOX 58020
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79710

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 81

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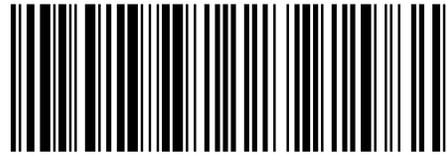


Total Postage: \$6.85

GRETCHEN J MCKENDRY
116 LONDON AVE
2158-PRAIRIE SANDREED FEE SWD #1
FT WALTON, FL 32548

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5701 98

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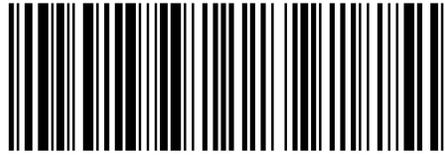


Total Postage: \$6.85

JACOBS LAURIE LYNN (SLO)
15796 I AND GN ROAD
2158-PRAIRIE SANDREED FEE SWD #1
COLLEGE STATION, TX 77845-6835

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 04

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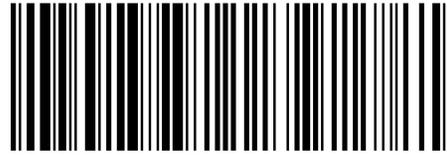


Total Postage: \$6.85

JWD RESOURCES LLC
NM ROYALTY LLC
PO BOX 51908
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79710

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 11

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Total Postage: \$6.85

L&K RANCH LLC
PO BOX 1503
2158-PRAIRIE SANDREED FEE SWD #1
HOBBS, NM 88241

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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MAGNUM HUNTER PRODUCTION INC
600 N MARIENFELD STREET
SUITE 600
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79701

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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Total Postage: \$6.85

MARK A TRIEB
1900 MCKINNEY AVE
APT 2109
2158-PRAIRIE SANDREED FEE SWD #1
DALLAS, TX 75201

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 42

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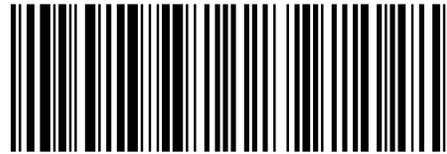


Total Postage: \$6.85

MAVROS MINERAL II LLC
PO BOX 50820
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79710

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 59

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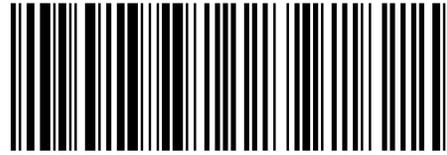


Total Postage: \$6.85

MEWBOURNE OIL CO
PO BOX 5270
2158-PRAIRIE SANDREED FEE SWD #1
HOBBS, NM 88241

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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MICHELLE P TRIEB
4621 EVERGREEN STREET
2158-PRAIRIE SANDREED FEE SWD #1
BELLAIRE, TX 77401

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 73

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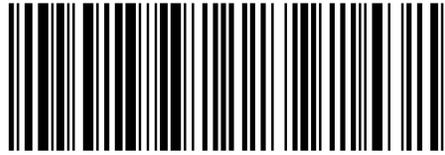


Total Postage: \$6.85

MRC PERMIAN COMPANY
5400 LBJ FREEWAY
SUITE1500
2158-PRAIRIE SANDREED FEE SWD #1
DALLAS, TX 75240

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 80

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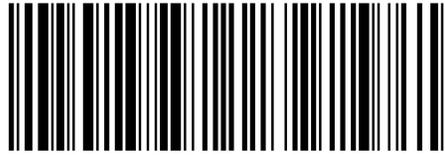


Total Postage: \$6.85

NEW MEXICO STATE LAND OFFICE
310 OLD SANTA FE TRAIL
2158-PRAIRIE SANDREED FEE SWD #1
SANTA FE, NM 87501

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5702 97

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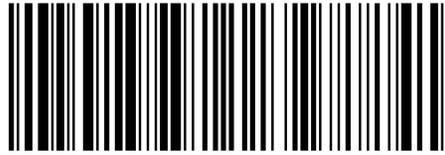


Total Postage: \$6.85

OIL CONSERVATION DIVISION
DISTRICT I
1625 N FRENCH DRIVE
2158-PRAIRIE SANDREED FEE SWD #1
HOBBS, NM 88240

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5703 03

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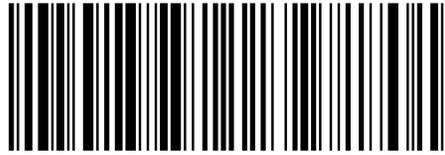


Total Postage: \$6.85

OXY USA INC
PO BOX 4294
2158-PRAIRIE SANDREED FEE SWD #1
HOUSTON, TX 77210

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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Total Postage: \$6.85

PETRO-GUARD COMPANY
2450 FONDREN RD
SUITE 105
2158-PRAIRIE SANDREED FEE SWD #1
HOUSTON, TX 77063

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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RIDGE RUNNER RESOURCES OPERATING LLC
1004 N BIG SPRING
SUITE 325
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79701

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5703 34

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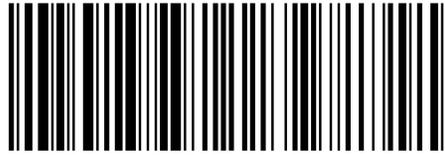


Total Postage: \$6.85

ROBERT H FORREST JR OIL LLC
609 ELORA DR
2158-PRAIRIE SANDREED FEE SWD #1
CARLSBAD, NM 88220

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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MARGARET L SCOTT
2837 WESTVIEW TRL
2158-PRAIRIE SANDREED FEE SWD #1
PARK CITY , UT 84098-6251

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5703 58

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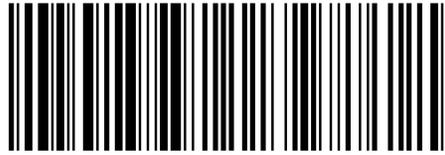


Total Postage: \$6.85

SHERRY KALONICH
164 HUDLOW ROAD
2158-PRAIRIE SANDREED FEE SWD #1
DUNLAP, TN 37327

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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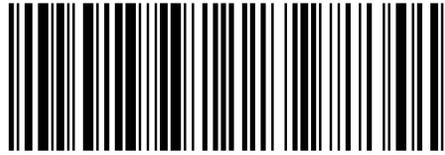


Total Postage: \$6.85

SLASH EXPLORATION LP
ARMSTRONG ENERGY COR
PO BOX 1973
2158-PRAIRIE SANDREED FEE SWD #1
ROSWELL, NM 88202

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5703 72

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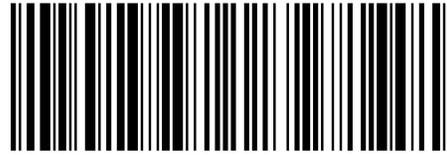


Total Postage: \$6.85

VATEX HOLDINGS LLC
3535 W 7TH STREET
2158-PRAIRIE SANDREED FEE SWD #1
FT WORTH, TX 76107

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5703 89

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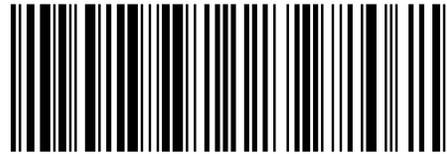


Total Postage: \$6.85

WALLACE FAMILY PARTNERSHIP LP
508 W WALL STREET
SUITE 1200
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79701

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5703 96

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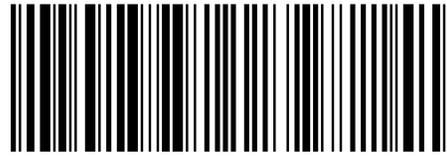


Total Postage: \$6.85

WBA RESOURCES LTD
PO BOX 50468
2158-PRAIRIE SANDREED FEE SWD #1
MIDLAND, TX 79701

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0068 5704 02

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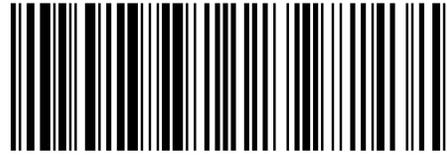


Total Postage: \$6.85

WILLIAM J SAVAGE
1345 EAGLE BEND
2158-PRAIRIE SANDREED FEE SWD #1
SOUTHLAKE, TX 76092

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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Total Postage: \$6.85

WPX ENERGY PERMIAN LLC
3500 ONE WILLIAMS CENTER
2158-PRAIRIE SANDREED FEE SWD #1
TULSA, OK 74172

Reference Number: 2158-PRAIRIE SANDREED FEE SWD #1

February 14, 2020

BENAJMIN C. RUSHING
55 CALDWELL DRIVE
PIKEVILLE, KY 41506

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

BRANDY J. HENDERSON
P.O. BOX 4442
PENSACOLA, FL 32507

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

BREITBURN OPERATING LP
1675 Broadway, 28th Floor
Denver, CO 80202

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

BRIETBURN OPERATING LP
1111 BAGBY ST., SUITE 1600
HOUSTON, TX 77002

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

BUREAU OF LAND MANAGEMENT
301 Dinosaur Trail
Santa Fe, NM 87508

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

Catena Resources Operating, LLC
18402 US Hwy 281 N Suite 258
San Antonio, TX 78259

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

CEVRON U S A INC
6301 DEAUVILLE BLVD
MIDLAND, TX 79706

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

CHAP EXPLORATION LLC
P. O. BOX 3445
MIDLAND, TX 79702

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

COLLINS PERMIAN, LP
P.O. BOX 27
MIDLAND, 79702

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

COMEY CAROL JACOBS
1081 JADE CV
OAK POINT TX 750682262

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

CTH ROYALTIES , LLC
P.O. BOX 52521
MIDLAND, TX 79710

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

FAITH CROSBY
OGMD/WATER
NEW MEXICO STATE LAND OFFICE
310 OLD SANTA FE TRAIL
SANTA FE, NM 87501

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

FEATHERSTONE DEVELOPMENT CORPORATION
1801 W 2ND ST.
ROSWELL, NM 88201

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

FOUNDATION MINERALS, LLC
P.O. BOX 50820
MIDLAND, TX 79710

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

GRETCHEN J. MCKENDRY
116 LONDON AVE.
FORT WALTON, FL 32548

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

JACOBS LAURIE LYNN (SLO)
15796 I AND GN RD
COLLEGE STATION TX 778456835

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

JWD RESOURCES, LLC
P.O. BOX 51908
MIDLAND, TX 79710

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

L & K RANCH LLC
PO BOX 1503
HOBBS, NM 88241

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

MAGNUM HUNTER PRODUCTION, INC.
600 N MARIENFELD STREET, SUITE 600
MIDLAND, TX 79701

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

MARK A. TRIEB
1900 MCKINNEY AVE. APT 2109
DALLAS, TX 75201

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

MAVROS MINERAL II, LLC
P.O. BOX 50820
MIDLAND, TX 79710

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

MEWBOURNE OIL CO
P.O. Box 5270
Hobbs, NM 88241

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

MICHELLE P. TRIEB
4621 EVERGREEN ST.
BELLAIRE, TX 77401

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

MRC PERMIAN COMPANY
5400 LBJ FWY, SUITE 1500
DALLAS, TX 75240

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

NEW MEXICO STATE LAND OFFICE
310 OLD SANTA FE TRAIL
SANTA FE, NM 87501

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

NM ROYALTY, LLC
P.O. BOX 51908
MIDLAND, TX 79710

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

OAK VALLEY MINERAL AND LAND, LP
P.O. BOX 50820
MIDLAND, TX 79710

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

OIL CONSERVATION DIVISION DISTRICT I
1625 N. French Drive
Hobbs, New Mexico 88240

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

OIL CONSERVATION DIVISION DISTRICT IV
1220 S ST FRANCIS DR
SANTA FE, NM 87505

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

OXY USA INC
PO BOX 4294
HOUSTON, TX 77210

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

PETRO-GUARD COMPANY
2450 FONDREN RD., SUITE 105
HOUSTON, TX 77063

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

RIDGE RUNNER RESOURCES OPERATING, LLC
1004 N. BIG SPRING, SUITE 325
MIDLAND, TX 79701

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

ROBERT H FORREST JR OIL LLC
609 Elora Dr.
Carlsbad, NM 88220

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

SCOTT MARGARET L
2837 WESTVIEW TRL
PARK CITY UT 840986251

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

SHERRY KALONICH
164 HUDLOW ROAD
DUNLAP, TN 37327

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

SLASH EXPLORATION LP AND
ARMSTRONG ENERGY COR
P.O. BOX 1973
ROSWELL, NM 88202

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

VATEX HOLDINGS, LLC
3535 W. 7TH STREET
FORT WORTH, TX 76107

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

WALLACE FAMILY PARTNERSHIP, LP
508 W. WALL ST., SUITE 1200
MIDLAND, TX 79701

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

WBA RESOURCES, LTD
P.O. BOX 50468
MIDLAND, TX 79701

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

WILLIAM J SAVAGE
1345 EAGLE BEND
SOUTHLAKE, TX 76092

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

February 14, 2020

WPX Energy Permian, LLC
3500 One Williams Center
Tulsa, OK 74172

Subject: Prairie Sandreed Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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

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

Any questions should be directed towards Blackbuck Resources LLC's agent, Lonquist & Co., LLC.

Regards,



Christopher B. Weyand
Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Blackbuck Resources, LLC

ADDRESS: 2601 Westheimer Rd, C210, Houston, TX, 77098

CONTACT PARTY: Barry Riley

PHONE: 979-575-8802

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes X No
If yes, give the Division order number authorizing the project: _____

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: Christopher Weyand

TITLE: Consulting Engineer – Agent for Blackbuck Resources

SIGNATURE: _____

DATE: 2/6/2020

E-MAIL ADDRESS: chris@lonquist.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

Side 2

III. WELL DATA

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

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

INJECTION WELL DATA SHEET

OPERATOR: Blackbuck Resources, LLC

WELL NAME & NUMBER: Prairie Sandreed Fee SWD No. 1

WELL LOCATION: 1,000' FNL 200' FEL
FOOTAGE LOCATION

A
UNIT LETTER

22
SECTION

19S
TOWNSHIP

35E
RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26"

Casing Size: 20"

Cemented with: 3,884 sks

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Intermediate Casing

Hole Size: 17-1/2"

Casing Size: 13-3/8"

Cemented with: 2,430 sks

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Production Casing

Hole Size: 12-1/4"

Casing Size: 9-5/8"

Cemented with: 2,126 sks

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Liner

Hole Size: 8-1/2"

Casing Size: 7-5/8"

Cemented with: 309 sks

or _____ ft³

Top of Cement: 9,613'

Method Determined: calculation

Total Depth: 15,388'

Injection Interval

13,588 feet to 15,388 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 23 lb/ft, P-110, UFJ from 0' - 13,538'

Lining Material: Duoline

Type of Packer: 7-5/8" x 5-1/2" Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

Packer Setting Depth: 13,538'

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

Additional Data

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

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

2. Name of the Injection Formation: Devonian, Silurian, Fusselman

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, new drill.

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

Delaware Mountain Group: 5,696'

Bone Spring: 7,557'

Wolfcamp: 9,913'

Strawn: 11,411'

District I

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

District II

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

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address BLACKBUCK RESOURCES, LLC 2601 WESTHEIMER RD. C210 HOUSTON, TX 77098		² OGRID Number 373619
		³ API Number 30-025-
⁴ Property Code	⁵ Property Name PRAIRIE SANDREED FEE SWD	⁶ Well No. 1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
A	22	19S	35E		1,000	N	200	E	LEA

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
-	-	-	-		-	-	-	-	-

9. Pool Information

Pool Name SWD: DEVONIAN-SILURIAN	Pool Code 97869
-------------------------------------	--------------------

Additional Well Information

¹¹ Work Type N	¹² Well Type SWD	¹³ Cable/Rotary R	¹⁴ Lease Type Private	¹⁵ Ground Level Elevation 3,768.5'
¹⁶ Multiple N	¹⁷ Proposed Depth 15,388'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 22'		Distance from nearest fresh water well 2,718'		Distance to nearest surface water > 1 mile

We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26"	20"	94 lb/ft	1,670'	3,884	Surface
Intermediate	17-1/2"	13-3/8"	68 lb/ft	5,696'	2,430	Surface
Production	12-1/4"	9-5/8"	53.5 lb/ft	9,913'	2,126	Surface
Liner	8-1/2"	7-5/8"	39 lb/ft	9,613' - 13,588'	309	9,613'

Casing/Cement Program: Additional Comments

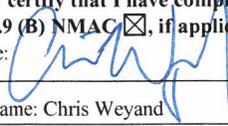
See attached schematic.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	8,000 psi	10,000 psi	TBD - Schaffer/Cameron

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

I further certify that I have complied with 19.15.14.9 (A) NMAC and/or 19.15.14.9 (B) NMAC , if applicable.

Signature: 

Printed name: Chris Weyand

Title: Consulting Engineer

E-mail Address: chris@lonquist.com

Date: February 7, 2020

Phone: 512-600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazon Road, Artec, NM 87410
District IV
1220 S. St Francis Dr., NM 87505
Phone: (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 97869		³ Pool Name SWD; Silurian-Devonian	
⁴ Property Code		⁵ Property Name PRAIRIE SANDREED FEE SWD			⁶ Well Number #1
⁷ OGRID No. 308339		⁸ Operator Name BLACKBUCK RESOURCES			⁹ Elevation 3768.5'

¹⁰ Surface Location

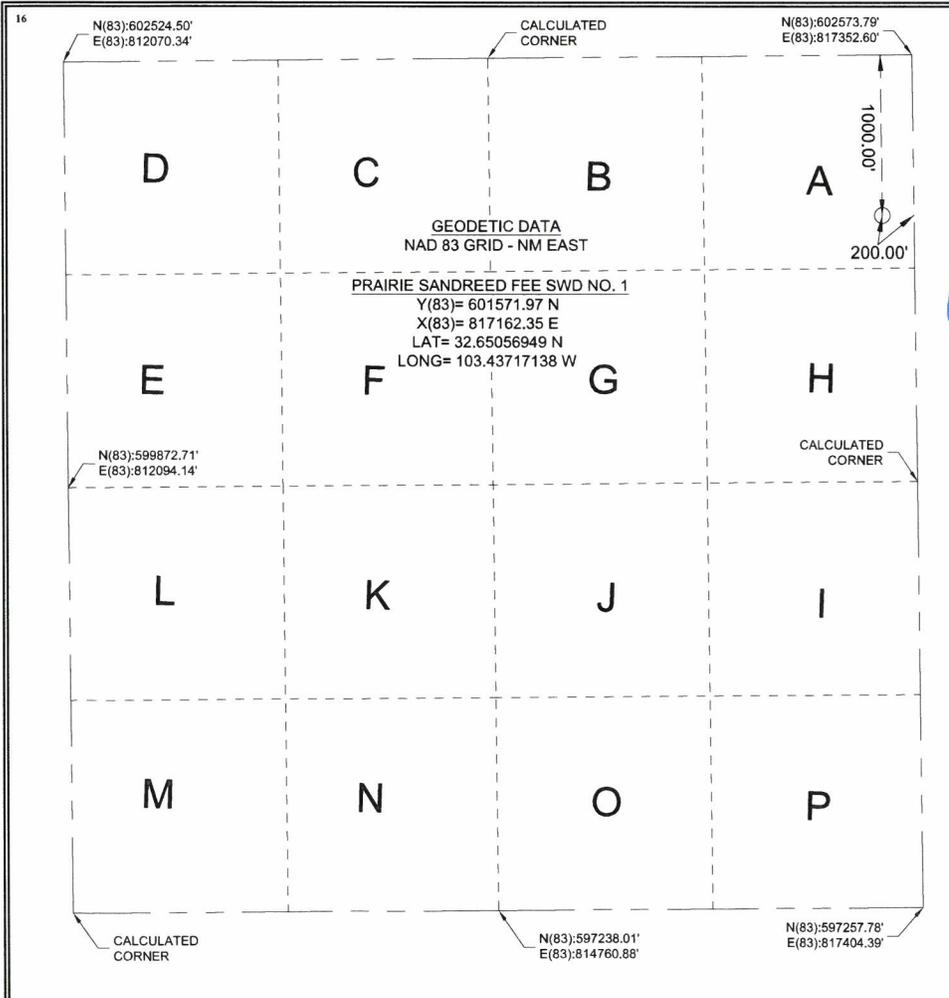
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	19 S	35 E		1000	NORTH	200	EAST	LEA

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.



¹⁷ OPERATOR CERTIFICATION

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

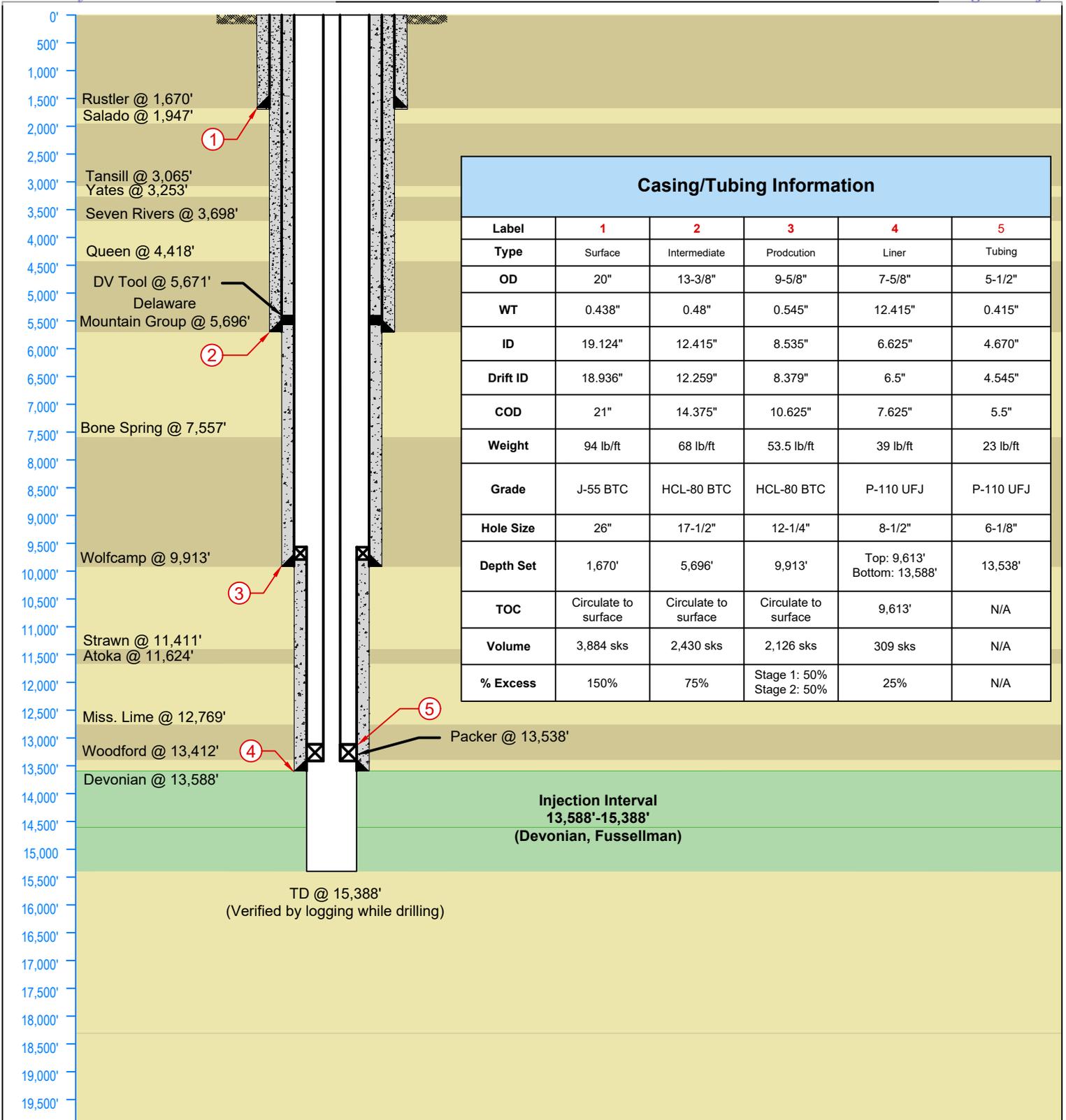
Signature: *Chris Nelund* Date: *2/7/2020*
 Printed Name: *Chris Nelund* Date: _____
 Email Address: *Chris@lonquist.com* Date: _____

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.

Date of Survey: *09/24/2019* Date: _____
 Signature and Seal of Professional Surveyor: *J. Smelker*

 Certificate Number: _____



Casing/Tubing Information					
Label	1	2	3	4	5
Type	Surface	Intermediate	Production	Liner	Tubing
OD	20"	13-3/8"	9-5/8"	7-5/8"	5-1/2"
WT	0.438"	0.48"	0.545"	12.415"	0.415"
ID	19.124"	12.415"	8.535"	6.625"	4.670"
Drift ID	18.936"	12.259"	8.379"	6.5"	4.545"
COD	21"	14.375"	10.625"	7.625"	5.5"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft	23 lb/ft
Grade	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	6-1/8"
Depth Set	1,670'	5,696'	9,913'	Top: 9,613' Bottom: 13,588'	13,538'
TOC	Circulate to surface	Circulate to surface	Circulate to surface	9,613'	N/A
Volume	3,884 sks	2,430 sks	2,126 sks	309 sks	N/A
% Excess	150%	75%	Stage 1: 50% Stage 2: 50%	25%	N/A

LONQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS HOUSTON CALGARY AUSTIN WICHITA DENVER Texas License F-9147 12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Blackbuck Resources, LLC	Prairie Sandreed Fee SWD No. 1		
	Country: USA	State/Province: New Mexico	County/Parish: Lea	
	Location:	Site: 1,000' FNL & 200 FEL	Survey: S23-T19S-R35E	
	API No: N/A	Field: Devonian-Silurian	Well Type/Status: SWD	
	NMOCD District No: 1	Project No: 2158	Date: 1/22/2020	
	Drawn: TFM	Reviewed: CBW	Approved: CBW	
	Rev No: 1	Notes:		



Prairie Sandreed Fee SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Prairie Sandreed Fee SWD
Well No.	1
Location	S-22 T-19S R-35E
Footage Location	1,000' FNL & 200' FEL

2.

a. Wellbore Description

Type	Surface	Intermediate	Production	Liner
OD	20"	13-3/8"	9-5/8"	7-5/8"
WT	0.438"	0.480"	0.545"	0.500"
ID	19.124"	12.415"	8.535"	6.625"
Drift ID	18.936"	12.259"	8.379"	6.5"
COD	21"	14.375"	10.625"	7.625"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"
Depth Set	1,670'	5,696'	9,913'	9,613' – 13,588'

b. Cementing Program

Casing String	Surface	Intermediate	Production	Liner
Lead Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: NeoCem	Versacem
Lead Cement Volume	2,847 sks	1,961 sks	Stage 1: 466 sks Stage 2: 1,008 sks	331 sks
Lead Cement Density	13.7 lbm/gal	11 lbm/gal	Stage 1: 11 lbm/gal Stage 2: 11 lbm/gal	14.5 lbm/gal
Tail Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: HalCem	-
Tail Cement Volume	1,037 sks	468 sks	Stage 1: 577 sks Stage 2: 75 sks	-
Tail Cement Density	14.8 lbm/gal	13.2 lbm/gal	Stage 1: 14.5 lbm/gal Stage 2: 14.8 lbm/gal	-
Cement Excess	150%	75%	Stage 1: 50% Stage 2: 50%	25%
Total Sacks	3,884 sks	2,430 sks	2,126 sks	309 sks
TOC	Surface	Surface	Stage 1: DV Tool @ 5,671' Stage 2: Surface	9,613'
Method	Circulate	Circulate	Circulated	CBL

3. Tubing Description

Tubing Information	
OD	5-1/2"
WT	0.415"
ID	4.670"
Drift ID	4.545"
COD	5.5"
Weight	23 lb/ft
Grade	P-110 UFJ
Depth Set	13,538'

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman
2. Gross Injection Interval: 13,588' – 15,388'

Completion Type: Open Hole

3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Delaware Mountain Group	5,696'
Bone Spring	7,557'
Wolfcamp	9,913'
Strawn	11,411'

VI. Area of Review

No wells penetrate the injection zone

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD
 Maximum Volume: 25,000 BPD

2. Closed System
3. Anticipated Injection Pressure:

Average Injection Pressure: 2,038 PSI (surface pressure)
 Maximum Injection Pressure: 2,718 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Wolfcamp formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Abo, Artesia, Bone Spring, Devonian, Grayburn/San Andreas, Pennsylvanian, Penrose, Queen, and Wolfcamp formations.
5. The disposal interval is non-productive. No water samples are available from the one-mile area of review. However, approximately 6-8 miles from the proposed well, five (5) wells producing water from the Devonian have sample data present. The results of these wells are in the Produced Water Sample list in this application.

VIII. Geological Data

Devonian Formation Lithology:

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

Fusselman Formation Lithology:

The Silurian/Ordovician Fusselman Formation is stratigraphically below the Wristen Group and is above and separated from the Montoya Formation by the Sylvan Shale. The Sylvan Shale is the lower confining layer for the proposed well. Fusselman facies include a laminated skeletal wackestone in the upper part and a buildup complex in the lower part composed of ooid and bryozoan grainstones. These grainstones can also be potentially prolific zones for disposal.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Rustler	1,670'
Salado	1,947'
Tansill	3,065'
Yates	3,253'
Seven Rivers	3,698'
Queen	4,418'
Delaware Mountain Group	5,696'
Bone Spring	7,557'
Wolfcamp	9,913'
Strawn	11,411'
Atoka	11,624'
Miss. Lime	12,769'
Woodford	13,412'
Devonian	13,588'

B. Underground Sources of Drinking Water

Eight (8) water wells exist within a one-mile radius of the proposed well. The water wells in the region are within the Lee County Basin of New Mexico. Water wells within the 1-mile area of review are drilled at an average depth of 63 feet and the average water depth is 23 feet in the surrounding region. The Rustler is known to exist in this general area and may also be another USDW and will be protected by setting the surface casing at the top of the Rustler formation and isolating the formation with intermediate casing set at the top of the Delaware Mountain group. The proposed well is located 5.5 miles NE of the Capitan Reef.

IX. Proposed Stimulation Program

No stimulation program planned at this time.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

A map of the freshwater wells within a one-mile radius of the proposed well has been sent to Cardinal Laboratories in Hobbs, New Mexico. Results of the samples will be provided to the Oil Conservation Division upon completion of the tests.

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ADVISORS

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GEOLOGIC AFFIRMATION

I have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and underground sources of drinking water.



Parker Jessee
Geologist

Project: Blackbuck Resources
Prairie Sandreed Fee SWD No. 1
February 4, 2020