

Initial Application Part I

Received: 01/24/2020

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

January 24, 2020

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: WILDRYE 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") Wildrye 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

PO#: 980YQ-200124-C-1080

Revised March 23, 2017

RECEIVED: 1/24/2020	REVIEWER:	TYPE: NSL-2369	APP NO: pJAG2002734367
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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: WILDRYE 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

- 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

- ☐ Notice Complete
☐ 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

January 24, 2020

Date

512-600-1764

Phone Number

CHRIS@LONQUIST.COM

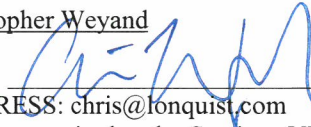
e-mail Address

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 _____ ☒ Disposal _____ Storage
Application qualifies for administrative approval? _____ ☒ Yes _____ No
- II. OPERATOR: Blackbuck Resources, LLC
ADDRESS: 2601 Westheimer Rd, C210, Houston, TX, 77098
CONTACT PARTY: Kevin Burns PHONE: 855-432-1400
- 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 _____ ☒ 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: 1/23/2020
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, LLCWELL NAME & NUMBER: Wildrye Fee SWD No. 1WELL LOCATION: 410' FNL 240' FEL
FOOTAGE LOCATIONA
UNIT LETTER20
SECTION19S
TOWNSHIP35E
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 26"Casing Size: 20"Cemented with: 4,376 sks*or* _____ ft³Top of Cement: surfaceMethod Determined: circulationIntermediate CasingHole Size: 17.5"Casing Size: 13.375"Cemented with: 2,558 sks*or* _____ ft³Top of Cement: surfaceMethod Determined: circulationProduction CasingHole Size: 12.250"Casing Size: 9.625"Cemented with: 1,787 sks*or* _____ ft³Top of Cement: surfaceMethod Determined: circulationLinerHole Size: 8.500"Casing Size: 7.625"Cemented with: 331 sks*or* _____ ft³Top of Cement: 9,791'Method Determined: calculationTotal Depth: 15,660'Injection Interval14,050 feet to 15,660 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 23 lb/ft, P-110, UFJ from 0' - 14,000'

Lining Material: Duoline

Type of Packer: Nickel Plated Double Grip Retrievable Packer or Equivalent

Packer Setting Depth: 14,000'

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: 5,862'

Bone Spring: 7,372'

Wolfcamp: 10,091'

Strawn: 11,110'

Morrow: 12,678'



Blackbuck Resources, LLC

Wildrye Fee SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Wildrye Fee SWD
Well No.	1
Location	S-20 T-19S R-35E
Footage Location	410' FNL & 240' 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	1,890'	5,862'	10,091'	9,791' – 14,050'

b. Cementing Program

Casing String	Surface	Intermediate	Production	Liner
Lead Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: NeoCem	Versacem
Lead Cement Volume	3,339 sks	2,090 sks	Stage 1: 468 sks Stage 2: 692 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: 50 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: 0%	25%
Total Sacks	4,376 sks	2,558 sks	1,787 sks	331 sks
TOC	Surface	Surface	Stage 1: DV Tool @ 5,812' Stage 2: Surface	9,791'
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	14,000'

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, Fusselman
2. Gross Injection Interval: 14,050' – 15,660'

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	5,862'
Bone Spring	7,372'
Wolfcamp	10,091'
Strawn	11,110'
Morrow	12,678'

VI. Area of Review

One (1) well penetrated the injection zone within a one-mile radius of the proposed well. The Toro 21 State Com No. 1Y, an active Wolfcamp Producer operated by WPX Energy Permian, previously penetrated the Devonian. When the well was operated by Louis Dreyfus Natural Gas Corp., the initial well drilled into the Devonian approximately one-hundred (100) feet into the Devonian. The well was drilled to 13,960', and eventually was plugged back on November 1998. Since plugging back the Devonian, the well has three (3) total cast iron bridge plugs set above the Devonian and is now currently producing from the Wolfcamp formation. The plugs and cement behind pipe isolate the proposed injection interval and impede fluid migration out of the injection zone.

A plugging schematic of the Toro 21 State Com. No. 1Y well is attached in this permit packet.

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: 2,108 PSI (surface pressure)

Maximum Injection Pressure: 2,810 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	1,890'
Delaware Mountain Group	5,862'
Bone Spring	7,372'
Wolfcamp	10,091'
Strawn	11,110'
Atoka	11,722'
Morrow	12,678'
Devonian	14,050'
Montoya	15,660'

B. Underground Sources of Drinking Water

Five (5) 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 are drilled at an average depth of 113 feet and the average water depth is 60 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.

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 I1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720District II811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720District III1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170District IV1220 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 30-015-
⁴ Property Code	⁵ Property Name WILD RYE 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	20	19S	35E		410	N	240	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 3,797'
¹⁶ Multiple N	¹⁷ Proposed Depth 15,660'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 60'	Distance from nearest fresh water well 3,203'		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	1,890'	4,376	Surface
Intermediate	17-1/2"	13-3/8"	68 lb/ft	5,862'	2,558	Surface
Production	12-1/4"	9-5/8"	53.5 lb/ft	10,091'	1,787	Surface
Liner	8-1/2"	7-5/8"	39 lb/ft	9,791' - 14,050'	331	9,791'

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: January 24, 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
Phone (575) 393-6161 Fax: (575) 393-0720

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

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

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

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

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

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 97869	Pool Name DEVONIAN-SILURIAN
Property Code	Property Name WILDRYE FEE SWD	Well Number 1
OGRID No. 373619	Operator Name BLACKBUCK RESOURCES	Elevation 3797'

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	20	19-S	35-E		410	NORTH	240	EAST	LEA

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
Dedicated Acres	Joint or Infill	Consolidation Code	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

[illegible]

OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.


Signature Date 01/23/2020
Chris Wayard
Printed Name
chris@louquist.com
E-mail Address

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.

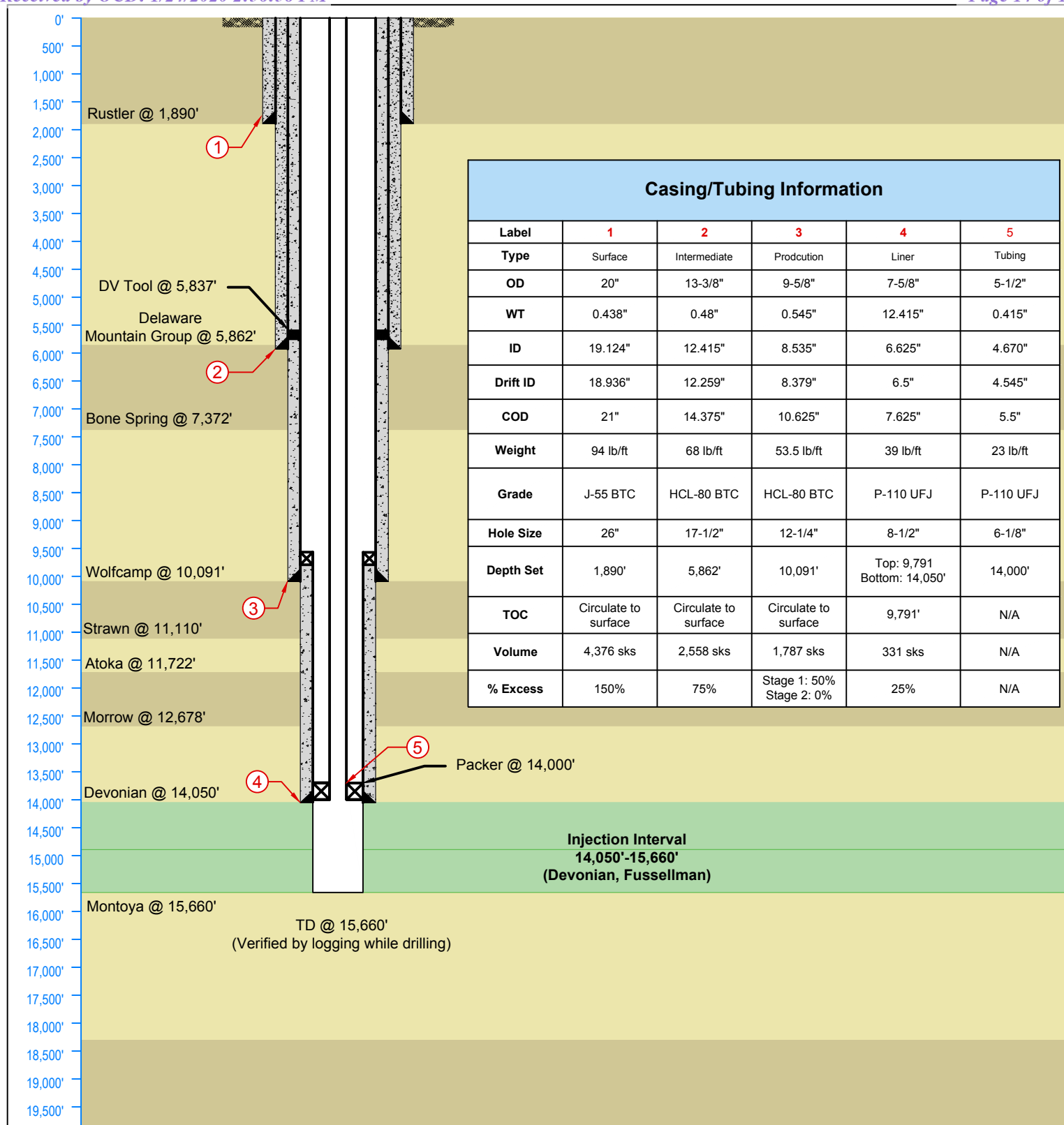
JULY 2, 2019

Date of Survey _____
Signature & Seal of Professional Surveyor: _____



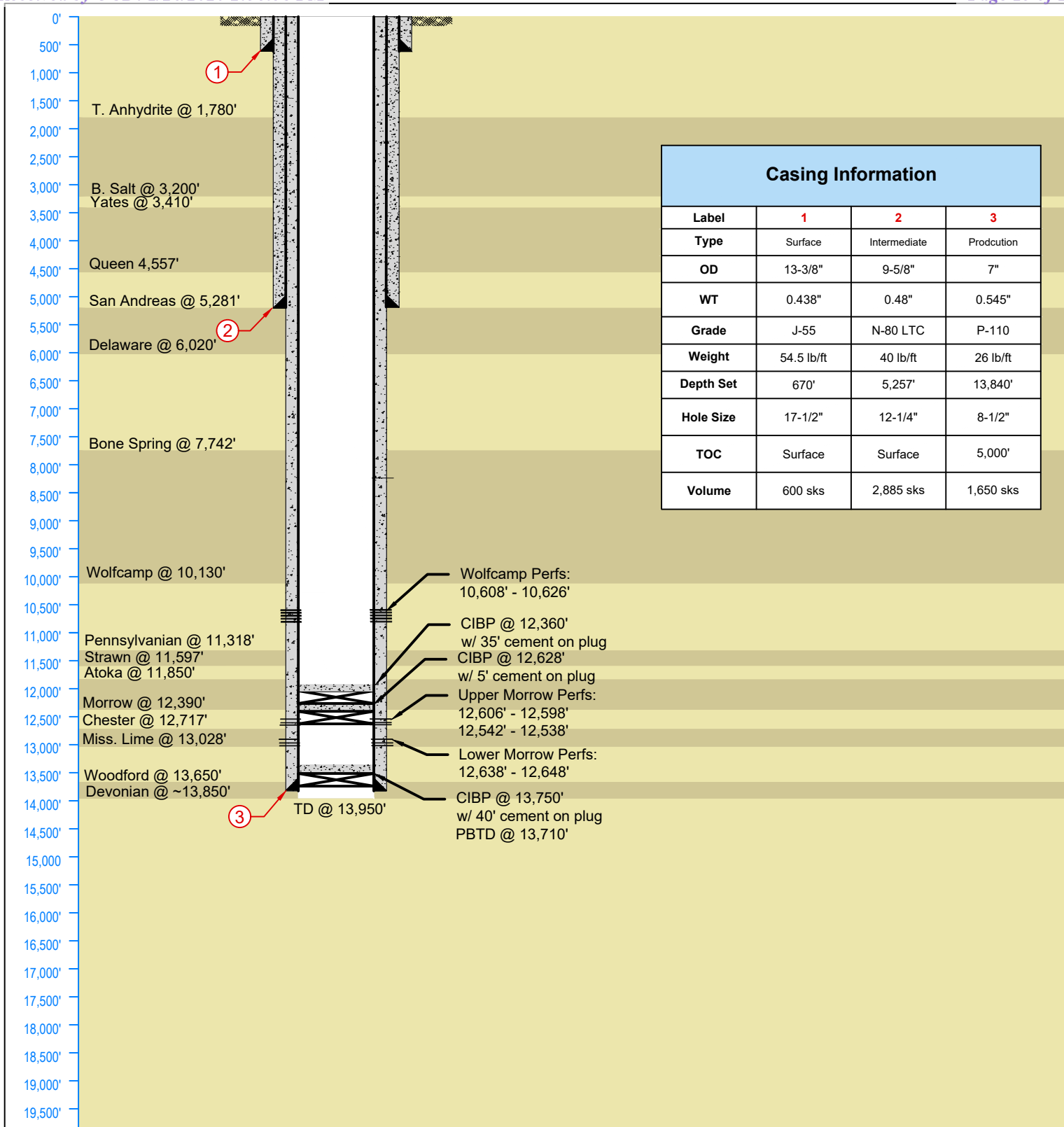
Certificate Number	Gary G. Edison	12641
	Ronald J. Edison	3239

LSL JWSC W.O. 19.11.0788

**LONQUIST & CO. LLC**PETROLEUM
ENGINEERSENERGY
ADVISORSHOUSTON | 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****Country:** USA**Location:****API No:** N/A**NMOCD District No:** 1**Drawn:** TFM**Rev No:** 1**Wildrye Fee SWD No. 1****State/Province:** New Mexico**Site:** 410 FNL & 240 FEL**Field:** Devonian-Silurian**Project No:** 2157**Reviewed:****Notes:****County/Parish:** Lea**Survey:** S20-T19S-R35E**Well Type/Status:** SWD**Date:** 09/25/2019**Approved:**

**LONQUIST & CO. LLC**PETROLEUM
ENGINEERSENERGY
ADVISORSHOUSTON | 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**WPX Energy Permian, LLC****Country:** USA**Location:****API No:** 30-025-34491**NMOCD District No:** 1**Drawn:** TFM**Rev No:** 1**Toro 21 State Com No. 1Y****State/Province:** New Mexico**Site:** 2,310' FNL & 735 FEL**Field:** Devonian-Silurian**Project No:** 2157**Reviewed:** CBW**Notes:****County/Parish:** Lea**Survey:** H-21-19S-35E**Well Type/Status:** Oil/Active**Date:** 1/24/2020**Approved:** CBW

Spartco
B R A N D
FILE FOLDERS
LEGAL SIZE—SP411½
Manufactured in the U.S.A.
for S.P. Richards Co., Atlanta, GA

(H) 21-19s-35e 30-025-34492 LE
Toro 21 State Com #1Y

OPER. OGRID NO. 25773
PROPERTY NO. 23411
POOL CODE _____
EFF. DATE 8-25-98
API NO. 30-025-34492

District I
PO Box 2000, H&Hs, NM 88241-1986

District II
PO Drawer 109, Artesia, NM 88211-0719

District III
1009 Rio Tizcos Rd., Aztec, NM 87410

District IV
PO Box 2008, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-104
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
5 Copies

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

1 Operator name and Address		2 OGRID Number	
Louis Dreyfus Natural Gas 14000 Quail Springs Parkway, #600 Oklahoma City, Oklahoma 73134		025773	
3 Reason for Filing Code		6 Pool Code	
4 API Number		5 Pool Name	
30-0 25-34492		Southeast Scherb	
7 Property Code		8 Property Name	
23411		Undesignated Wolfcamp	
9 Well Number		6 Pool Code	
1Y		55650	

II. 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
H	21	19S	35E		2310	North	735	East	Lea

11 Bottom Hole Location

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

12 Use Code	13 Productive Method Code	14 Gas Connection Date	15 C-129 Permit Number	16 C-129 Effective Date	17 C-129 Expiration Date
P	Flowing	3/8/99			

III. Oil and Gas Transporters

18 Transporter OGRID	19 Transporter Name and Address	20 POD	21 O/G	22 POD ULSTR Location and Description
138648	Amoco 502 NW Avenue Levelland, TX 79336	2822993	O	H Sec. 21-19S-35E Tank Battery
29650	Dynegy Midstream Services 1000 Louisiana, #5800 Houston, TX 77002-5050	2822994	G	H Sec. 21-19S-35E Meter

IV. Produced Water

23 POD	24 POD ULSTR Location and Description
2822995	H Sec. 21-19S-35E Tank Battery

V. Well Completion Data

25 Spud Date	26 Ready Date	27 TD	28 PBTD	29 Perforations
8/27/98	2/28/99	13960'	12325'	10608'-10801'
30 Hole Size	31 Casing & Tubing Size	32 Depth Set	33 Sacks Cement	
17 1/2"	13 3/8" 54.5# J55	670'	600 sx.	
12 1/4"	9 5/8" 403 N80 LTC	5257'	2885 sx.	
8 1/2"	7" 26# P110	13840'	1650 sx.	
6 1/8"		13960'		

VI. Well Test Data

34 Date New Oil	35 Gas Delivery Date	36 Test Date	37 Test Length	38 1hg Pressure	39 Csg. Pressure
2/26/99	3/8/99	2/28/99	24 hrs.	240	N/A
40 Choke Size	41 Oil	42 Water	43 Gas	44 AOF	45 Test Method
22/64	268	-0-	315		F

46 I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature

Printed name

Title

Date

OIL CONSERVATION DIVISION

Approved by

Title

Approval Date

Terrye D. Bryant

Regulatory Technician

3/12/99

Phone (405) 749-5287

47 If this is a change of operator fill in the OGRID number and name of the previous operator			
Previous Operator Signature	Printed Name	Title	Date

Submit to Appropriate
District Office
State Lease - 6 copies
Fee Lease - 5 copies
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

Enr Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL AP NO.

30-025-34492

5. Indicate Type of Lease

STATE ☐FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Toro 21 State Com.

8. Well No.

1Y

9. Pool name or Wildcat

Undesignated Wolfcamp

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:
OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐
b. Type of Completion:
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR ☐ OTHER ☐

2. Name of Operator

Louis Dreyfus Natural Gas Corp.

3. Address of Operator

14000 Quail Springs Parkway, #600, Oklahoma City, OK 73134

4. Well Location

Unit Letter H : 2310 Feet From The North Line and 735 Feet From The East Line
Section 21 Township 19S Range 35E NMPM Lea Country

10. Date Spudded

8/27/98

11. Date T.D. Reached

11/11/98

12. Date Compl. (Ready to Prod.)

2/28/99

13. Elevations (DF & RKB, RT, GR, etc.)

3752' GR, 3781' KB

14. Elev. Casinghead

15. Total Depth

13960'

16. Plug Back T.D.

12325'

17. If Multiple Compl. How Many Zones?

N/A

18. Intervals Drilled By

Rotary Tools

X

Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name

10608'-10801' Undesignated Wolfcamp

20. Was Directional Survey Made

No

21. Type Electric and Other Logs Run

Sonic, Dual Laterlog, FMI, Neutron Density

22. Was Well Cored

No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB/FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	54.5#, J55	670'	17 1/2"	600 sx.	-0-
9 5/8"	40# N80 LTC	5257'	12 1/4"	2885 sx.	-0-
7"	26# P110	13840'	8 1/2"	1650 sx.	-0-
		13960'	6 1/8"	CIBP w/40' cmt. set @ 13750'	
				CIBP w/5' cmt. set @ 12628'; CIBP w/35' cmt. set @ 12360'	

24.

LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8"	10,515'	10,515'

26. Perforation record (interval, size, and number)

10608'-10626', 10652'-10660', 10672'-10676',
10709'-10715', 10736'-10738', 10756'-10764',
10792'-10794', 10799'-10801'
1 SPF, total 61 holes

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
10608'-10801'	3000 gal. 20% NE, 30 bbl. brine w/1400# rock salt, 60 bbl 4% KCL, 40 ball sealers

PRODUCTION

28. Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
3/8/99		Flowing				Producing	
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
2/28/99	24	22/64		268	315	-0-	1.175
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)	
240	N/A		268	315	-0-	39 @ 60°	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

30. List Attachments

Forms C-104, 122, 123

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Terrye D. Bryant Printed Name Terrye D. Bryant Title Regulatory Tech Date 3/12/99

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

Southeastern New Mexico

T. Canyon	11597'
T. Strawn	11850'
T. Atoka	13028'
T. Miss	
T. Devonian	
T. Silurian	
T. Montoya	
T. Simpson	
T. McKee	
T. Ellenburger	
T. Gr. Wash	
T. Delaware Sand	6020'
T. Bone Springs	7742'
T. Morrow	12390'
T. Chester	12717'
T. Woodford	13650'
T.	

Northwestern New Mexico

T. Ojo Alamo _____	T. Penn. "B" _____
T. Kiriland-Fruitland _____	T. Penn. "C" _____
T. Pictured Cliffs _____	T. Penn. "D" _____
T. Cliff House _____	T. Leadville _____
T. Menefee _____	T. Madison _____
T. Point Lookout _____	T. Elbert _____
T. Mancos _____	T. McCracken _____
T. Gallup _____	T. Ignacio Otzte _____
Base Greenhorn _____	T. Granite _____
T. Dakota _____	T. _____
T. Morrison _____	T. _____
T. Todilto _____	T. _____
T. Entrada _____	T. _____
T. Wingate _____	T. _____
T. Chinle _____	T. _____
T. Permain _____	T. _____
T. Penn "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from to No. 3, from to
No. 2, from to No. 4, from to
POTABLE WATER SANDS

..... IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....	to.....	feet.....
No. 2, from.....	to.....	feet.....
No. 3, from.....	to.....	feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology

REFERENCE SHEET FOR UNDESIGNATED WELLS

DATE 4/2/99
OIL/GAS Oil
COUNTY Lea
OPERATOR Louis Dreyfus Nat. Gas Corp
ADDRESS 14000 Quail Springs Parkway #600 Oklahoma City, OK
LEASE NAME, WELL NO. Toro 21 State, Com # 14-H 73134
FOOTAGE LOCATION 2310 FROM THE N LINE AND 735 FROM THE E LINE
SECTION 21 TOWNSHIP 19s RANGE 35e
COMPLETION DATE 2/26/99
NAME OF PRODUCING FORMATION Wolfcamp
TOP OF PERFORATIONS 10608 - 10801
DEPTH TO CASING SHOE _____
C-123 FILED _____
NAME OF POOL FOR WHICH EXTENSION WAS ASKED _____
ADVERTISED FOR _____ HEARING CASE NO. _____
NAME OF POOL FOR WHICH EXTENSION WAS ADVERTISED _____
PLACED IN _____ BY ORDER NO. R- _____
REMARKS Southeast Scharb Wolfcamp

1. gy, Minerals and Natural Resources Department

Form C-122

Revised 4-1-91

Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator <i>Louis Dreyfus</i>						Lease or Unit Name <i>Toro 21. State Com</i>					
Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special						Test Date <i>2-28-99</i>		Well No. <i>17</i>			
Completion Date		Total Depth <i>13222</i>		Plug Back PD <i>12350</i>		Elevation		Unit Lic. - Sec. - TWP - Rge. <i>H-21-19s-35e</i>			
Csg. Size <i>7"</i>		Wt. <i>28</i>		Set At <i>13222</i>		Perforations:		Country <i>Lea</i>			
Tbg. Size <i>2 7/8</i>		Wt. <i>6.7</i>		Set At <i>10515</i>		Perforations:		Pool			
Type Well - Single - Bradenhead - G.G. <input checked="" type="checkbox"/> Multiple						Packer Set At <i>10515</i>		Formation <i>Wolfcamp</i>			
Producing Thru <i>Tbg</i>		Reservoir Temp. °F <i>179.2</i>		Mean Annual Temp. °F <i>60°</i>		Baro. Press - P _a <i>13.2</i>		Connection <i>Air</i>			
L <i>10515</i>	II <i>10515</i>	G _g <i>.907</i>	% CO ₂ <i>.07</i>	% N ₂ <i>2.29</i>	% H ₂ S <i>0</i>	Prover <i>0</i>	Meter Run <i>3.067</i>	Taps <i>F/G</i>			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	3.067 X 1.000		50	30"	62°	1245	N/A	PKR		124 hrs.
2.										
3.										
4.										
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mscf/d
1.	14.789	56.2	63.2	.9987	1.050	1.117	315
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Miscible
1.	1.78	522	1.16	.801	1.175	
2.					39@ 60°	Des.
3.					.907	XXXXXXXXXX
4.					N/A	XXXXXX
5.					663	P.S.I.A. P.S.I.A.
					450	R R

P_c 1258.2 P_c 1583.0

NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1.	64.1	256.3	65.7	1517.4
2.				
3.				
4.				
5.				

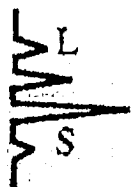
1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.043$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^2 = 1.043$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^2 = .329$

Absolute Open Flow .329 Mscf @ 15.025 Angle of Slope θ 45° Slope, n 1.000

Remarks: *Well made 268 BBLs of 39@ 60° API gravity oil

Approved By Division	Conducted By: Pro Well Testing	Calculated By: M.B.	Checked By: B.M.
----------------------	-----------------------------------	------------------------	---------------------

**Laboratory Services, Inc.**

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
Attention: Mr. Leonard Abney
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE:
IDENTIFICATION: Toro 21 St. #1Y
COMPANY: Louis Dreyfus Natural Gas
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 2/28/99
ANALYSIS DATE: 3/1/99
PRESSURE - PSIG 50
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Lane Thorp
ANALYSIS BY: Vickie Walker

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	2.294	
Carbon Dioxide (CO2)	0.070	
Methane (C1)	55.636	
Ethane (C2)	21.544	5.748
Propane (C3)	14.102	3.877
I-Butane (IC4)	1.358	0.443
N-Butane (NC4)	3.425	1.078
I-Pentane (IC5)	0.542	0.198
N-Pentane (NC5)	0.517	0.187
Hexane Plus (C6+)	0.512	0.210
	100.000	11.741

BTU/CU.FT. - DRY 1521
AT 14.650 DRY 1516
AT 14.650 WET 1490
AT 14.73 DRY 1524
AT 14.73 WET 1498

MOLECULAR WT. 26.2798

SPECIFIC GRAVITY -
CALCULATED 0.907
MEASURED

LOUIS DREYFUS
TORO "21" ST. 541

10,000

5 = 1,000

deg 45.0

PC 21 1883.0

PC 21 1883.0

AOE = 329 367d



10,000

100

Q MCFDAY

10,000

COMPANY: LINDS OPERLS		LEASE: HORD 01 ST		WELL NO: 1		DATE: 02/01/01		TIME: 11:41	
INIT		SECTION: 1		TOWNSHIP: 12N		RANGE: 10E		ZONE: 1	
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
=====									
VOL 1	0.15	PSIA	1558.1	PRESS TEMP		129.1	P01-PW1		15.7.4
VOL 2		PSIA	2.1				P02		ERR
VOL 3		PSIA	3.1	PRESS W TEMP		129.1	P03		ERR
VOL 4		PSIA	4.1				P04		ERR
=====									
		PCP :	563				Q :		1.000
		TCR :	480						
=====									
						P02/(P02-PW2) :		1.041	
LINE	RATE 1		RATE 2		RATE 3		RATE 4		
	1ST	END	1ST	END	1ST	END	1ST	END	
1	QM	315	0.000	0.000	0.000	0.000	0.000	0.000	
2	W	534	534	534	534	534	534	534	P01:P02-PW2]Q = 1.141
3	Is	639.1	639	639.1	639	639.1	639	639.1	ERR
4	T	585.6	585	585.6	585	585.6	585	585.6	ERR
5	PR	0.08	0.00	0.00	0.00	0.00	0.00	0.00	ERR
6	Rest	0.01	0.04	ERR	ERR	ERR	ERR	ERR	
7	TC	537.4	537	537	537	537	537	537	400 = 0 0.321
8	QH	10703	10703	ERR	ERR	ERR	ERR	ERR	ERR
9	ES	048	048	ERR	ERR	ERR	ERR	ERR	ERR
10	Temp	1485	1481	ERR	ERR	ERR	ERR	ERR	ERR
11	Pt	261.0	261	ERR	ERR	ERR	ERR	ERR	
12	At	04.1	04	ERR	ERR	ERR	ERR	ERR	
13	F	010760	010760	ERR	ERR	ERR	ERR	ERR	
14	P	0.051	0.05	ERR	ERR	ERR	ERR	ERR	
15	Prqa	50	50	ERR	ERR	ERR	ERR	ERR	
16	Prqm	0.0	0.0	ERR	ERR	ERR	ERR	ERR	
17	AW	10741.7	10741.7	ERR	ERR	ERR	ERR	ERR	
18	AW	00.7	00	ERR	ERR	ERR	ERR	ERR	
19	Qs	107.9	107	ERR	ERR	ERR	ERR	ERR	
20	Es	107.5	107	ERR	ERR	ERR	ERR	ERR	
21	Q	106.4	106	ERR	ERR	ERR	ERR	ERR	
22	Qs	0.46	0.46	ERR	ERR	ERR	ERR	ERR	
23	TC	0.00	0.00	ERR	ERR	ERR	ERR	ERR	
24	TC	0.004	0.00	ERR	ERR	ERR	ERR	ERR	FORM 0122-0

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-34492	
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name Toro 21 State Com	
8. Well No. 1Y	
9. Pool name or Wildcat Undesignated Wolfcamp	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>
2. Name of Operator Louis Dreyfus Natural Gas Corp.
3. Address of Operator 14000 Quail Springs Parkway, Suite 600 Oklahoma City, OK 73134

4. Well Location Unit Letter <u>H</u> : <u>2310</u> Feet From The <u>North</u> Line and <u>735</u> Feet From The <u>East</u> Line	
Section <u>21</u> Township <u>19S</u> Range <u>35E</u> NMPM <u>Lea</u> County <u></u>	10. Elevation (Show whether DF, RKB, RT, GR, etc.) <u>3752' GR</u>

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data			
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>		CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <u>Plug back</u> <input checked="" type="checkbox"/>	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Work commenced 2/24/99. Set CIBP @ 12,360 w/35' cement on top. Perforated 1 SPF 10608'-10626', 10652'-10660', 10672'-10676', 10709'-10715', 10736'-10738', 10756'-10764', 10792'-10794', 10799'-10801'. Acidized w/1000 gal. acid, 10 bbl brine w/500# rs, 20 bbl 4% KCL, 20 balls, 1st stage. 2nd stage also 1000 gal. acid, 10 bbl brine, 500# rs, 20 bbl 4% KCL, 20 balls. 3rd stage 1000 gal. 20% NE, 10 bbl. brine, 20 bbl. 4% KCL, 400# rs. Tested well. Well turned to sales 3/8/99.

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

SIGNATURE Terrye D. Bryant TITLE Regulatory Technician DATE 3/11/99
TYPE OR PRINT NAME Terrye D. Bryant TELEPHONE NO. (405) 749-5287

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

☒ AMENDED REPORT

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

Operator Name and Address. LOUIS DREYFUS NATURAL GAS CORP. 14000 Quail Springs Parkway, Suite 600 Oklahoma City, OK 73134		OGRID Number 025773
		API Number 30 - 025-34492
Property Code 23411	Property Name TORO 21 STATE COM	Well No. 1Y

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19S	35E		2310	North	735 715	East	Lea

8 Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
Proposed Pool 1 Scharb SE (Wolfcamp) WC					Proposed Pool 2				

Work Type Code P	Well Type Code G	Cable/Rotary R	Lease Type Code P	Ground Level Elevation 3752'
Multiple N	Proposed Depth 12,325' PBTD	Formation Wolfcamp	Contractor	Spud Date 2/25/99

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	54.5#	620'	600	Surface
12 1/4"	9 5/8"	40#	5200'	1200	Surface
8 1/2"	7"	23#	13840'	1650	5000'
6 1/8"			13960'		
CIBP @ 13750' w/40' cmt. CIBP @ 12628' w/5' cmt. Propose CIBP @ 12350' w/35' cmt.					

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Well has been shut in pending evaluation after attempted Morrow completion was not successful. Louis Dreyfus intends to set a CIBP @ 12,350' w/35' cement on top. The Wolfcamp formation will be perforated (approx. 10,608'-10,801') w/68 holes. Formation will be acidized w/20% NEFE. Well will be completed as determined by results of perforation.

Permit Expires 1 Year From Approval
Date Unless Continuing Underway
Plug-Back

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

Signature:

Printed name:

Title:

Date:

2/23/99

Phone:

(405) 749-5287

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

C-101 Instructions

Measurements and dimensions are to be in feet/inches. Well locations will refer to the New Mexico Principal Meridian.

IF THIS IS AN AMENDED REPORT CHECK THE BOX LABELED "AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

- 18 Geologic formation at TD
- 19 Name of the intended drilling company if known.
- 20 Anticipated spud date.
- 21 Proposed hole size ID inches, proposed casing OD inches, casing weight in pounds per foot, setting depth of the casing or depth and top of liner, proposed cementing volume, and estimated top of cement
- 22 Brief description of the proposed drilling program and BOP program. Attach additional sheets if necessary.
- 23 The signature, printed name, and title of the person authorized to make this report. The date this report was signed and the telephone number to call for questions about this report.

- 1 Operator's OGRID number. If you do not have one it will be assigned and filled in by the District office.
- 2 Operator's name and address
- 3 API number of this well. If this is a new drill the OCD will assign the number and fill this in.
- 4 Property code. If this is a new property the OCD will assign the number and fill it in.
- 5 Property name that used to be called 'well name'
- 6 The number of this well on the property.
- 7 The surveyed location of this well New Mexico Principal Meridian NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD Unit Letter.

8 The proposed bottom hole location of this well at TD

9 and 10 The proposed pool(s) to which this well is being drilled.

11 Work type code from the following table:

- N New well
E Re-entry
D Drill deeper
P Plugback
A Add a zone

12 Well type code from the following table:

- O Single oil completion
G Single gas completion
M Multiple completion
I Injection well
S SWD well
W Water supply well
C Carbon dioxide well

13 Cable or rotary drilling code

- C Propose to cable tool drill
R Propose to rotary drill

14 Lease type code from the following table:

- F Federal
S State
P Private
N Navajo
J Jicarilla
U Ute
I Other Indian tribe

15 Ground level elevation above sea level

16 Intend to multiple complete? Yes or No

17 Proposed total depth of this well

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.

30-025-34492

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Toro 21 State Com.

8. Well No.

1Y

9. Pool name or Wildcat

Wildcat Morrow

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

OIL
WELL ☐

GAS
WELL ☒

OTHER

2. Name of Operator

LOUIS DREYFUS NATURAL GAS CORP.

3. Address of Operator

14000 Quail Springs Parkway, #600, Oklahoma City, OK 73134

4. Well Location

Unit Letter H : 2310 Feet From The North Line and 735 Feet From The East Line

Section 21

Township 19S

Range 35E

NMPM

Lea

County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

3752' GR

11.

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

REMEDIAL WORK ☐

ALTERING CASING ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

COMMENCE DRILLING OPNS ☐

PLUG AND ABANDONMENT ☐

PULL OR ALTER CASING ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

OTHER: Plug-Back

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Work commenced 1/19/99. Set CIBP @ 13,750'. Tested csg. & CIBP to 3000 psi. Dump baled 40' of cement on plug, new PBTD 13,710'. Perf Lower Morrow f/12,638'-12,648' w/61 shots. Swabbed well. Perf Upper Morrow f/12,606'-12,598' and 12,542'-12,538' w/4 spf. Set 7" CIBP @ 12,628' over Lower Morrow perfs. Dump baled 5' of cement on CIBP. Swabbed well. Acidized Upper Morrow perfs w/3000 gal 10% acetic acid (25% methanol used to dilute), foamed w/7T CO2 & 75 ball sealers. Well shut in for evaluation on 2/4/99.

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

SIGNATURE

TITLE

Regulatory Technician

DATE 2/23/99

TYPE OR PRINT NAME

Terrye D. Bryant

TELEPHONE NO. (405) 749-5287

(This space for State Use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

2A Wildcat Devonian CT 9/20/99

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

Fee Lease - 5 Copies

☐ AMENDED REPORT

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

Operator Name and Address. LOUIS DREYFUS NATURAL GAS CORP. 14000 Quail Springs Parkway, Suite 600 Oklahoma City, OK 73134		OGRID Number 025773
		API Number 30 - 025-34492
Property Code 23411	Property Name TORO 21 STATE COM	Well No. 1Y

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19S	35E		2310	North	715-755	East	Lea

8 Proposed 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
Proposed Pool 1 Wildcat Morrow					Proposed Pool 2				

Work Type Code P	Well Type Code G	Cable/Rotary R	Lease Type Code P	Ground Level Elevation 3752'
Multiple N	Proposed Depth 13,960'	Formation Morrow	Contractor	Spud Date 1/18/99

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	54.5#	620'	600	Surface
12 1/4"	9 5/8"	40#	5200'	1200	Surface
8 1/2"	7"	23#	13,840'	1650	5000'
6 1/8"			13,960'		
CIBP @ ±13,800' and cap w/20' cement					

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.
Well was drilled to 13,960', packer set @ 13,812'. Well was SI pending evaluation. Decision has been made to abandon the Devonian formation and plug back to the Morrow. A CIBP will be set @ ±13,800' and capped w/20' cement. Interval from 12,638'-12,648' will be perforated w/6 SPF. Well will be swabbed to ± 10,000' and tested.

Permit Expires 1 Year From Approval
Date Unless Drilling Underway

Plug-Back

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

Signature:

Printed name:

Terrye D. Bryant

Title:

Regulatory Technician

Date:

1/18/99

Phone:

(405) 749-5287

OIL CONSERVATION DIVISION

Approved by:

ORIGINAL SIGNATURE: LOUIS WILLIAMS

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
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Fee Lease - 3 Copies

DISTRICT II
P.O. Box 1100, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. Box 2088, Santa Fe, N.M. 87504-2088

OIL CONSERVATION DIVISION P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34492	Pool Code -	Pool Name Wildcat Morrow
Property Code 23411	Property Name TORO 21 STATE COM	Well Number 1Y
GRID No. 025773	Operator Name LOUIS DREYFUS NATURAL GAS CORP.	Elevation 3752'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19 S	35 E		2310	NORTH	735	EAST	LEA

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
Dedicated Acres 320	Joint or Infill N	Consolidation Code	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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained hereth is true and complete to the best of my knowledge and belief.</p> <p><i>Terrye D. Bryant</i> Signature</p> <p>Terrye D. Bryant Printed Name</p> <p>Regulatory Technician Title</p> <p>1/18/99 Date</p>
	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>MAY 29, 1998 Date Surveyed</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Gary Edson</i></p> <p>98-13-1178</p> <p>Certificate No. RONALD J. EDSON 3239 GARY EDSON 2641</p>

District I
PO Box 1980 Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd, Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-104
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
5 Copies

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

1 Operator name and Address
Louis Dreyfus Natural Gas
14000 Quail Springs Parkway, #600
Oklahoma City, Oklahoma 73134

2 OGRID Number
025773

3 Reason for Filing Code
RT - 61 BO Jan 1999

4 API Number
30-025-34492

5 Pool Name
Wildcat Devonian

6 Pool Code
96874

7 Property Code
23411

8 Property Name
Toro 21 State Com

9 Well Number
1Y

II. 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
H	21	19S	35E		2310	North	745 735	East	Lea

11 Bottom Hole Location

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

12 Use Code	13 Producing Method Code	14 Gas Connection Date	15 C-129 Permit Number	16 C-129 Effective Date	17 C-129 Expiration Date
-------------	--------------------------	------------------------	------------------------	-------------------------	--------------------------

III. Oil and Gas Transporters

18 Transporter OGRID	19 Transporter Name and Address	20 POD	21 O/G	22 POD ULSTR Location and Description
138648	Amoco 502 NW Avenue Levelland, TX 79336	2822733	0	21-19S-35E Sec. 32-22S-26E Tank Battery

IV. Produced Water

23 POD	24 POD ULSTR Location and Description
	Sec. 32-22S-26E Tank Battery

V. Well Completion Data

25 Spud Date	26 Ready Date	27 TD	28 PBTD	29 Perforations
8/28/98	11/23/98	13,960'	13,960'	
30 Hole Size	31 Casing & Tubing Size	32 Depth Set	33 Sacks Cement	
17 1 1/2"	13 3/8"	620'	600	
12 1 1/4"	9 5/8"	5200'	1200	
8 1 1/2"	7"	13840'	1650	
6 1 1/8"		13960'		

VI. Well Test Data

34 Date New Oil	35 Gas Delivery Date	36 Test Date	37 Test Length	38 Tbg Pressure	39 Csg Pressure
11/23/98					
40 Choke Size	41 Oil	42 Water	43 Gas	44 AOF	45 Test Method

46 I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.
Signature
Terrye D. Bryant
Printed name
Terrye D. Bryant
Title
Regulatory Technician
Date
1/18/99
Phone
(405) 749-5287

OIL CONSERVATION DIVISION
Approved by
Title
Approval Date

S
47 If this is a change of operator fill in the OGRID number and name of the previous operator

Previous Operator Signature

Printed Name

Title

Date

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-34492
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER	7. Lease Name or Unit Agreement Name Toro 21 State Com.
2. Name of Operator Louis Dreyfus Natural Gas Corp.	8. Well No. 1Y
3. Address of Operator 14000 Quail Springs Parkway, #600, Oklahoma City, OK 73134	9. Pool name or Wildcat Wildcat Devonian/Morrow
4. Well Location Unit Letter <u>H</u> : <u>2310</u> Feet From The <u>North</u> Line and <u>735</u> Feet From The <u>East</u> Line Section <u>21</u> Township <u>19S</u> Range <u>35E</u> NMPM <u>Lea</u> County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) <u>3752' GR</u>	

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
	CASING TEST AND CEMENT JOB <input checked="" type="checkbox"/>
	OTHER: <input type="checkbox"/>

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Drilled 8 1/2" hole to 13,840', TD 8 1/2" on 11/4/98. Ran 7" casing, set @ 13,840'. Used 26 centralizers, DV tool @ 7996' with 2 cement baskets and centralizers. Cemented 1st stage w/900 sx. Class H 50-50 (POZ cement) 2% gel, 1.4% FL62, 3% BA10, 2% CS32, 2% SMS. Dropped bomb, opened stage tool and circulated with rig pump. Cemented 2nd stage w/750 sx. Class C 50-50 (POZ cement) 2% gel, 8% FL62, 3% BA10, 2% C032, 2% SMS.

Drilled 6 1/8" hole to 13,960'. Set retrieval "D" packer @ 13,812'. Rigged down, rig released 11/13/98.

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

SIGNATURE Terrye D. Bryant TITLE Terrye D. Bryant DATE 11/16/98
(405)
TELEPHONE NO. 749-5287

TYPE OR PRINT NAME Terrye D. Bryant

ORIGINAL SIGNED BY

(This space for State Use)

GARY WINK
FIELD REP. II

DEC 04 1998

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
30-025-34492

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
OIL WELL ☐ GAS WELL ☒ OTHER

2. Name of Operator
Louis Dreyfus Natural Gas Corp.

3. Address of Operator
14000 Quail Springs Parkway, #600, Oklahoma City, OK 73134

4. Well Location
Unit Letter H : 2310 Feet From The North Line and 735 Feet From The East Line
Section 21 Township 19S Range 35E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
3752' GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>		CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Approved casing and cement program calls for 4" liner from 13,600' to 14,000'. 7" casing set to 13,840 as per approved plan. Drilled 6 1/8" hole to 13,960' but did not set liner. Completion will be open hole. Packer set @ 13,812'.

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

SIGNATURE Terrye D. Bryant TITLE Regulatory Technician DATE 11/16/98
(405)
TELEPHONE NO. 749-5287

TYPE OR PRINT NAME Terrye D. Bryant

(This space for State Use) ORIGINAL SIGNED BY
GARY WINK
FIELD REP. II

TITLE

DATE

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-101
Revised February 10, 1994
Instructions on back
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State Lease - 6 Copies
Fee Lease - 5 Copies

☒ AMENDED REPORT

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

Operator Name and Address. LOUIS DREYFUS NATURAL GAS CORP. 14000 QUAIL SPRINGS PARKWAY, SUITE 600 OKLAHOMA CITY, OK 73134		OGRID Number 025773
		API Number 30 - 025-34492
Property Code 23411	Property Name TORO 21 STATE COM	Well No. 1Y

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19S	35E		2310	North	735	East	LEA

⁸ Proposed 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
Proposed Pool 1 Wildcat Devonian					Proposed Pool 2 Wildcat Morrow				

Work Type Code	Well Type Code	Cable/Rotary	Lease Type Code	Ground Level Elevation
N	G	R	P	3752'
Multiple	Proposed Depth	Formation	Contractor	Spud Date
Y	14,000'	Devonian	Nabors Drilling Co.	8/26/98

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	54.5#	620'	600	Surface
12 1/4"	9 5/8"	40#	5200'	1200	Surface
8 1/2"	7"	23#	13840'	1700	5000'
6 1/8"	4" Liner	11.6#	13600'-14000'	100	13,600'

¹⁰ Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

1. Drill 17 1/2" hole to $\pm 620'$. Run 13 3/8" casing and cement to surface.
2. Drill 12 1/4" hole to 5200'. Run 9 5/8" casing and cement to surface.
3. Drill 8 1/2" hole to 13,840'. Run 7" casing and cement to 9 5/8" string.
4. Drill 6 1/8" hole to 14,000'. Run 4" flush joint liner from 13,600' to 14,000'. Cement back to 7" string.

¹¹ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name:

Terrye D. Bryant

Title:

Regulatory Technician

Date:

11/6/98

Phone:

(405) 749-5287

OIL CONSERVATION DIVISION

Approved by: ORIGINAL SIGNATURE OF WILLIAMS

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

C-101 Instructions

Measurements and dimensions are to be in feet/inches. Well locations will refer to the New Mexico Principal Meridian.

IF THIS IS AN AMENDED REPORT CHECK THE BOX LABELED "AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

- | | |
|--|--|
| <p>1 Operator's OGRID number. If you do not have one it will be assigned and filled in by the District office.</p> <p>2 Operator's name and address</p> <p>3 API number of this well. If this is a new drill the OCD will assign the number and fill this in.</p> <p>4 Property code. If this is a new property the OCD will assign the number and fill it in.</p> <p>5 Property name that used to be called 'well name'</p> <p>6 The number of this well on the property.</p> <p>7 The surveyed location of this well New Mexico Principal Meridian NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD Unit Letter.</p> <p>8 The proposed bottom hole location of this well at TD</p> <p>9 and 10 The proposed pool(s) to which this well is being drilled.</p> <p>11 Work type code from the following table:
 N New well
 E Re-entry
 D Drill deeper
 P Plugback
 A Add a zone</p> <p>12 Well type code from the following table:
 O Single oil completion
 G Single gas completion
 M Multiple completion
 I Injection well
 S SWD well
 W Water supply well
 C Carbon dioxide well</p> <p>13 Cable or rotary drilling code
 C Propose to cable tool drill
 R Propose to rotary drill</p> <p>14 Lease type code from the following table:
 F Federal
 S State
 P Private
 N Navajo
 J Jicarilla
 U Ute
 I Other Indian tribe</p> <p>15 Ground level elevation above sea level</p> <p>16 Intend to multiple complete? Yes or No</p> <p>17 Proposed total depth of this well</p> | <p>18 Geologic formation at TD</p> <p>19 Name of the intended drilling company if known.</p> <p>20 Anticipated spud date.</p> <p>21 Proposed hole size ID inches, proposed casing OD inches, casing weight in pounds per foot, setting depth of the casing or depth and top of liner, proposed cementing volume, and estimated top of cement</p> <p>22 Brief description of the proposed drilling program and BOP program. Attach additional sheets if necessary.</p> <p>23 The signature, printed name, and title of the person authorized to make this report. The date this report was signed and the telephone number to call for questions about this report.</p> |
|--|--|

Submit 3 Copies
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District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-34492
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Toro 21 State Com.
8. Well No. 1Y
9. Pool name or Wildcat 34 Wildcat Devonian/Morrow
4. Well Location Unit Letter <u>H</u> : <u>2310</u> Feet From The <u>North</u> Line and <u>735</u> Feet From The <u>East</u> Line Section <u>21</u> Township <u>19S</u> Range <u>35E</u> NMPM Lea County
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3752' GR

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
OIL WELL ☐ GAS WELL ☒ OTHER

2. Name of Operator
Louis Dreyfus Natural Gas Corp.

3. Address of Operator
14000 Quail Springs Parkway, #600, Oklahoma City, OK 73134

4. Well Location
Unit Letter H : 2310 Feet From The North Line and 735 Feet From The East Line
Section 21 Township 19S Range 35E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
3752' GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
	CASING TEST AND CEMENT JOB <input checked="" type="checkbox"/>
	OTHER: <input type="checkbox"/>

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Drilled 12 1/4" hole to 5258', TD 12 1/4" hole on 9/8/98. Set 9 5/8" 40# N-80 LTC casing @ 5256.64. Cemented 9/10/98. Lead: 2685 sks. 65/35 poz, Cl. C cement + 6% bentonite + 5# sk. sodium chloride + 0.25# cello flake. 12.5 ppg, 2.03 cf/sk. 11.02 (GPS). Tail: 200 sks. Cl. C + 2% calcium chloride. 14.8 ppg, 1.34 cf/sk. 6.36 (GPS). Calculated displacement 396.45 bbl, displaced 2 bbl over, did not bump plug, shut head in. Plug down 7:10 p.m. Circulated 100 sks. cement. Float held.

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

SIGNATURE Terrye D. Bryant TITLE Regulatory Technician DATE 9/15/98
TYPE OR PRINT NAME Terrye D. Bryant TELEPHONE NO. 405-749-5287

(This space for State Use)

APPROVED BY ORIGINAL SIGNED BY TITLE DATE
CONDITIONS OF APPROVAL, IF ANY:

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-34492
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Toro 21 State Com
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9. Pool name or Wildcat Wildcat Devonian/Morrow
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10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3752' GR

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
OIL WELL ☐ GAS WELL ☒ OTHER ☐

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Section 21 Township 19S Range 35E NMPM Lea County

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data
NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☒
OTHER: ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Drilled 17 1/2" hole to 670'. Ran 13 3/8" csg. (54.50#, J-55, STC) to 670', Texas pattern shoe 670', float insert @ 623'. Lead cement 400 sks. 35/65 Poz "C" + 6% bentonite + 1/4# sk. cello + 2% calcium chloride; 12.5 ppg. Tail 200 sk. "C" + 2% calcium chloride, 14.8 ppg, displace w/97 bbls fresh water. Bumped plug w/400 psi, float did not hold, shut in w/200 psi, circulated 190 sks to reserve. 4 hrs. - WOC. Cut off, weld on head, test head @ 550 psi. Tagged cement @ 610', drill cement & float insert, tested annular and csg. @ 600 psi.

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

SIGNATURE Terrye D. Bryant TITLE Regulatory Technician DATE 8/31/98

TYPE OR PRINT NAME Terrye D. Bryant

TELEPHONE NO. 405-749-5287

(This space for State Use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
30-025-34492

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"
(FORM C-101) FOR SUCH PROPOSALS.)

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2. Name of Operator
Louis Dreyfus Natural Gas Corp.

3. Address of Operator
14000 Quail Springs Parkway, #600, Oklahoma City, OK 73134

7. Lease Name or Unit Agreement Name

Toro 21 State Com

8. Well No.
1Y

9. Pool name or Wildcat
Wildcat Devonian/Morrow

4. Well Location
Unit Letter H : 2310 Feet From The North Line and 735 Feet From The East Line
Section 21 Township 19S Range 35E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
3752' GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☒ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
OTHER: ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Drilled 26" hole, set 20" conductor pipe @ 40' on 8/25/98. Rigged up, well spud
8/27/98 @ 15:30 hrs. MST.

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

SIGNATURE Terrye D. Bryant TITLE Regulatory Technician DATE 8/31/98

TYPE OR PRINT NAME Terrye D. Bryant

TELEPHONE NO. 405-749-5287

(This space for State Use)

ORIGINAL SIGNED BY

APPROVED BY _____ TITLE _____

DATE

CONDITIONS OF APPROVAL, IF ANY:

OCT 06 1998

Jlc

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-101
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

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

Operator Name and Address. Louis Dreyfus Natural Gas Corp. 14000 Quail Springs Parkway, Suite 600 Oklahoma City, OK 73134		OGRID Number 025773
		API Number 30-025-34492
Property Code 23411	Property Name TORO 21 STATE COM	Well No. 1Y

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19S	35E		2310	North	735	East	Lea

8 Proposed 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
Proposed Pool 1 Wildcat Devonian					Proposed Pool 2 Wildcat Morrow				

Work Type Code N	Well Type Code G	Cable/Rotary R	Lease Type Code P	Ground Level Elevation 3752
Multiple Y	Proposed Depth 14,000'	Formation Devonian	Contractor Nabors Drilling Co.	Spud Date 8/26/98

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	54.5#	620'	600	Surface
12 1/4"	9 5/8"	40#	5200'	1200	Surface
8 1/2"	7"	23#	14000'	1100	5000'

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

- Drill 17 1/2" hole to $\pm 620'$. Run 13 3/8" casing and cement to surface with 400 sxs. BJ Lite w/6% gel, 1/4#/sxs. cello flake and 2% calcium chloride. Follow with 200 sxs. class C w/2% calcium chloride.
- Drill 12 1/4" hole to $\pm 5200'$. Run 9 5/8" casing and cement to surface with 1,000 sxs. BJ Lite containing 6% gel, 5 lb/sxs. salt and 1/4/sxs. cello flake. Follow with 200 sxs. class C w/2% calcium chloride.
- Drill 8 1/2" hole to $\pm 14000'$. Set 7" casing and cement to 9 5/8" string. See attached "Exhibit 6" for BOP assembly.

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

Signature:

Printed name:

Terrye D. Bryant

Title:

Regulatory Technician

Date:

8/21/98

Phone:

(405) 749-5287

OIL CONSERVATION DIVISION

Approved by:

ORIGINAL SIGNATURE OF CHRIS WILLIAMS

Title:

DISTRICT REGULATOR

Approval Date:

AUG 25 1998

Expiration Date:

Conditions of Approval:

Attached ☐

Fermat Expires 1 Year From Approval
Date Unless Drilling Underway

yc
MP.

C-101 Instructions

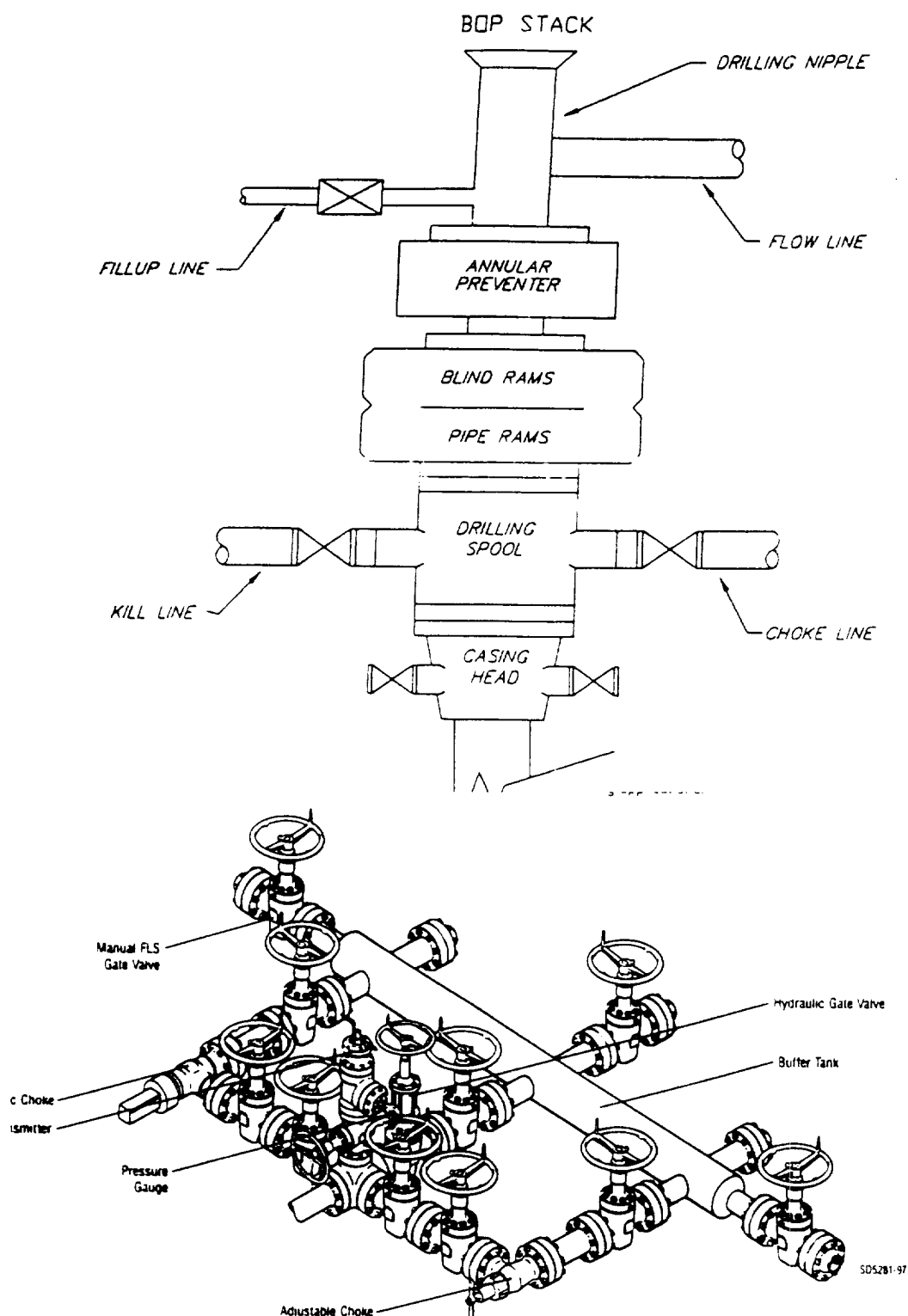
Measurements and dimensions are to be in feet/inches. Well locations will refer to the New Mexico Principal Meridian.

IF THIS IS AN AMENDED REPORT CHECK THE BOX LABELED "AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

- | | |
|--|--|
| <p>1 Operator's OGRID number. If you do not have one it will be assigned and filled in by the District office.</p> <p>2 Operator's name and address</p> <p>3 API number of this well. If this is a new drill the OCD will assign the number and fill this in.</p> <p>4 Property code. If this is a new property the OCD will assign the number and fill it in.</p> <p>5 Property name that used to be called 'well name'</p> <p>6 The number of this well on the property.</p> <p>7 The surveyed location of this well New Mexico Principal Meridian NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD Unit Letter.</p> <p>8 The proposed bottom hole location of this well at TD</p> <p>9 and 10 The proposed pool(s) to which this well is being drilled.</p> <p>11 Work type code from the following table:
 N New well
 E Re-entry
 D Drill deeper
 P Plugback
 A Add a zone</p> <p>12 Well type code from the following table:
 O Single oil completion
 G Single gas completion
 M Multiple completion
 I Injection well
 S SWD well
 W Water supply well
 C Carbon dioxide well</p> <p>13 Cable or rotary drilling code
 C Propose to cable tool drill
 R Propose to rotary drill</p> <p>14 Lease type code from the following table:
 F Federal
 S State
 P Private
 N Navajo
 J Jicarilla
 U Ute
 I Other Indian tribe</p> <p>15 Ground level elevation above sea level</p> <p>16 Intend to multiple complete? Yes or No</p> <p>17 Proposed total depth of this well</p> | <p>18 Geologic formation at TD</p> <p>19 Name of the intended drilling company if known.</p> <p>20 Anticipated spud date.</p> <p>21 Proposed hole size ID inches, proposed casing OD inches, casing weight in pounds per foot, setting depth of the casing or depth and top of liner, proposed cementing volume, and estimated top of cement</p> <p>22 Brief description of the proposed drilling program and BOP program. Attach additional sheets if necessary.</p> <p>23 The signature, printed name, and title of the person authorized to make this report. The date this report was signed and the telephone number to call for questions about this report.</p> |
|--|--|

Exhibit 6

*TYPICAL 5,000 p.s.i.
BLOWOUT PREVENTER & CHOKE MANIFOLD SCHEMATIC*



Typical Choke Manifold Designed for Land Drilling Applications

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

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1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. Box 8088, Santa Fe, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <u>30-025-34492</u>	Pool Code <u>Wildcat-Derron</u>	Pool Name
Property Code <u>23411</u>	Property Name <u>TORO 21 STATE COM</u>	Well Number <u>1Y</u>
OGRID No.	Operator Name <u>LOUIS DREYFUS NATURAL GAS CORP.</u>	Elevation <u>3752'</u>

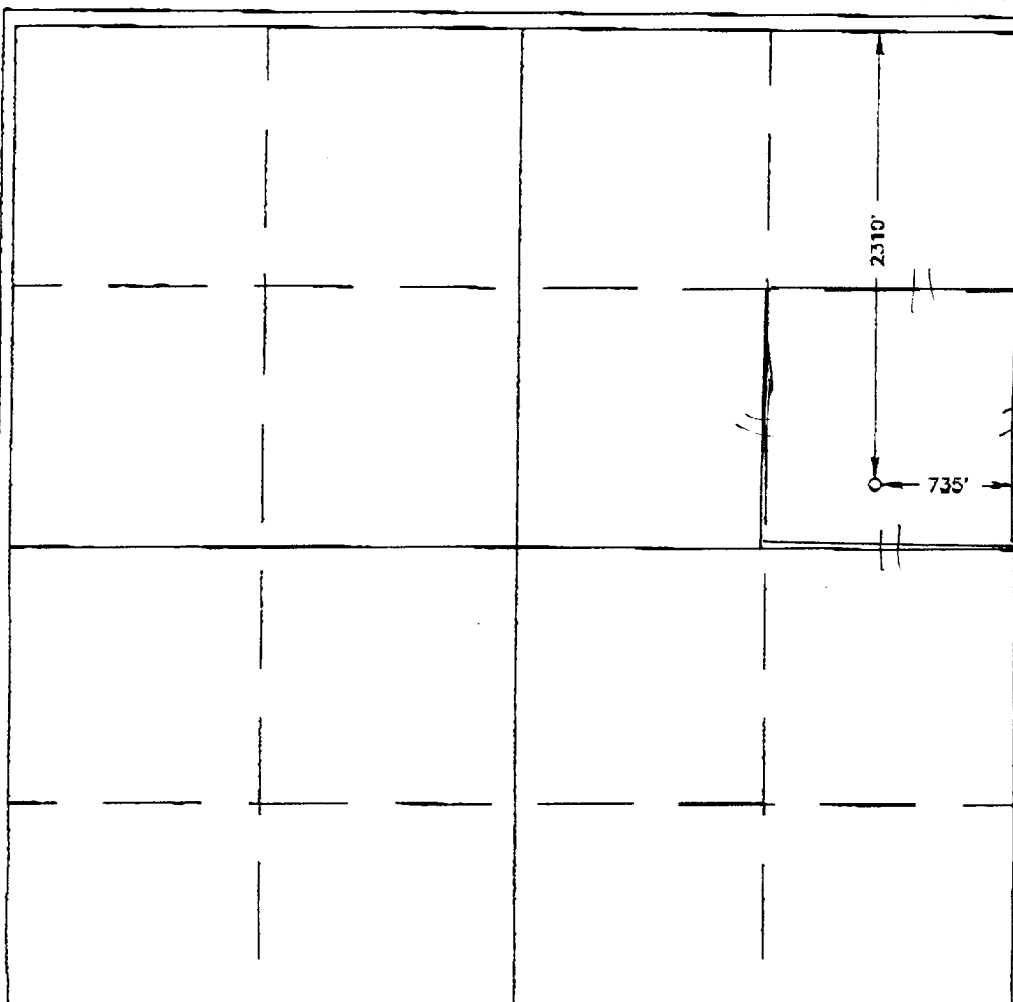
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<u>H</u>	<u>21</u>	<u>19 S</u>	<u>35 E</u>		<u>2310</u>	<u>NORTH</u>	<u>735</u>	<u>EAST</u>	<u>LEA</u>

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
Dedicated Acres <u>40</u>	Joint or Infill	Consolidation Code	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

	OPERATOR CERTIFICATION I hereby certify the information contained herein is true and complete to the best of my knowledge and belief. <u>Calvin C. Daniel</u> Signature <u>Calvin C. DANIEL</u> Printed Name <u>Asst. Foreman</u> Title <u>8-21-98</u> Date
	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. MAY 29, 1998 Date Surveyed Signature <u>Ronald J. Hudson</u> Professional Surveyor NEW MEXICO REGISTRATION NO. <u>18-13-117</u> CDG Certificate No. <u>RONALD J. HUDSON 3239</u>

REPORT NO.
1070338

PAGE NO. 1

TEST DATE:
09-NOV-1998

S T A R

Schlumberger Testing Data Report
Pressure Data Report

Schlumberger

COMPANY: LOUIS DREYFUS

WELL: TORRO 21 ST. COM 1Y

TEST IDENTIFICATION

Test Type OPEN HOLE DST
 Test No. TWO
 Formation DEVONIAN
 Test Interval (ft) 13820 to 13920
 Depth Reference KB

WELL LOCATION

Field WILDCAT
 County LEA
 State NEW MEXICO
 Sec/Twn/Rng S21T19SR2E 35
 Elevation (ft) 3778

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) 13920/13920
 Hole Size (in) 6.125
 Casing/Liner I.D. (in) 7.0 / 26#
 Perf'd Interval/Net Pay (ft) .. / 5
 Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type GEL-PAC
 Mud Weight (lb/gal) 8.4
 Mud Resistivity (ohm.m)
 Filtrate Resistivity (ohm.m) .. 1.588 @ 60F
 Filtrate Chlorides (ppm) 4200

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 6455.75
 Gas Cushion Type
 Surface Pressure (psi)
 Liquid Cushion Type Fresh Water
 Cushion Length (ft) 1000

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 12601 / 2.602
 Collar Length (ft)/I.D. (in) .. 1170 / 2.250
 Packer Depths (ft) 13815, 13820
 Bottomhole Choke Size (in)75
 Gauge Depth (ft)/Type 13799/SLSR-704

NET PIPE RECOVERY

Volume	Fluid Type	Properties
	O&G CUT H2O	
2310 ft	CUSHION	Rw2.184@60F 3000ppm
1163 ft	O&G CUT MUD	API 50.4@60FRw1.275@

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
1.2 cuft	Gas	
1600 cc	Oil	API 50.1@60F
0 cc	Water	
0 cc	Mud	
Pressure: 900		GOR: 119 GLR: 119

INTERPRETATION RESULTS

Model of Behavior
 Fluid Type Used for Analysis..
 Reservoir Pressure (psil)
 Transmissibility (md.ft/cp) ..
 Effective Permeability (md) ..
 Skin Factor/Damage Ratio
 Storativity Ratio, Omega
 Interporos.Flow Coef..Lambda..
 Distance to an Anomaly (ft) ..
 Radius of Investigation (ft) ..
 Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)
 Basic Solids (%)
 Gas Gravity
 GOR (scf/STB)
 Water Cut (%)
 Viscosity (cp)
 Total Compressibility (1/psi)..
 Porosity (%) 8
 Reservoir Temperature (F) 181
 Form.Vol.Factor (bbl/STB)

PRODUCTION RATE DURING TEST: Data Report























COMMENTS:

THIS WAS A MECHANICALLY SUCCESSFUL TEST. THE RECOVERY WAS REVERSED INTO A TEST TANK AND THE VOLUMES WERE AS FOLLOWS. 11.6 BBLs. OF OIL & 9.3 BBLs. OF H2O CUSHION & MUD. THE TANK FLUIDS RELATE TO A DRILL PIPE RECOVERY OF 3473'. THE "SIGHTING"/PULL TO FLUID RECOVERY WAS 4332'.

WELL TEST INTERPRETATION REPORT #:1070338		PAGE: 2,
CLIENT : LOUIS DREYFUS		10-NOV-98
REGION :CSD	SEQUENCE OF EVENTS	FIELD:WILDCAT
DISTRICT:HOBBS		ZONE :DEVONIAN
BASE :MIDLAND TX.		WELL :TORRO 21 ST. C
ENGINEER:KIRK BEASLEY		LOCATION:S21T19sR32e

DATE	TIME (HR:MIN)	DESCRIPTION	ET (MINS)	SHP (PSIA)	WHP (PSIG)
=====					
09-NOV		OPEN TO 1/8" BUBBLE HOSE			
	07:28	HYDROSTATIC MUD	-6	6456	
	07:32	SET PACKER	-2		
	07:34	START FLOW	0	2920	
	07:35	B.O.B. 10" = 5.75 oz	1		
	07:36		2		2.6#
	07:37		3		3.6#
	07:38		4		4.0#
	07:39		5		4.2#
	07:44		10		4.8#
	08:02	CYCLED TOOL	28		
	08:11	END FLOW & START SHUT-IN	37	1486	
	08:22	GAS TO SURFACE	48		
	09:11	END SHUT-IN	97	1510	
	09:12	START FLOW	98	1486	3.4#
	09:13		99		4.0#
	09:14		100		4.6#
	09:16		102		5.2#
	09:17		103		5.6#
	09:27		113		10 #
	09:42		128		16 #
	09:46	OPEN TO 1/4" CHOKE	132		15 #
	10:12		158		10 #
	10:27		173		6.0#
	10:42	END FLOW & START SHUT-IN	188	1513	3.5#
	14:42	END SHUT-IN	428	1712	
	14:51	HYDROSTATIC MUD	437	6440	
	14:55	PULLED LOOSE	441		

LOUIS DREYFUS TORRO 21 ST. COM 1Y TOOL STRING SCHEMATIC

	TOOL DESCRIPTION	OD	ID	LENGTH	DEPTH
	SURFACE FLOWHEAD				0
	DRILL PIPE	3.50	2.801	12601	12601
	DRILL COLLARS	4.75	2.350	983.1	13584.1
	BREAKOFF REVERSING VALVE	4.75	2.44	1.17	13585.27
	DRILL COLLARS	4.75	2.350	186.5	13771.77
	CROSS OVER SUB	4.75	2.80	0.86	13772.63
	CROSS OVER SUB	4.69	2.38	0.67	13773.30
	MPE WPE SUB	4.75	2.31	0.98	13783.28
	MPE OH BYPASS	4.25	2.00	3.54	13786.82
	CROSS OVER SUB	4.69	2.38	1.00	13787.82
	NODE RECORDER MARKER	4.20	2.50	5.91	13793.73
	NODE RECORDER MARKER	4.20	2.50	5.91	13799.64
	30 HYDRAULIC LINE	4.75	2.38	0.64	13806.28
	SAFETY UNIT	4.75	2.38	2.46	13808.74
	SUB TAIL PACKOFF	5.25	2.00	5.91	13814.65
	SUB TAIL PACKOFF	5.25	2.00	5.35	13820
	PERFORATED ANNULUS	4.75	2.250	5.23	13825.23
	CROSS OVER SUB	4.75	2.340	0.86	13826.09
	DRILL COLLARS	4.75	2.350	89.48	13915.57
	CROSS OVER SUB	4.75	2.300	0.77	13916.34
	PERFORATED ANNULUS	4.75	2.250	3.00	13919.34
	BULLNOSE	4.75	4.10	0.66	13920

Report Number: M700008

Test Number: TMO

Test Date: 10-NOV-1995

Schlumberger

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 1070338

COMPANY : LOUIS DREYFUS NATURAL GAS

INSTRUMENT NO. SLSR-704

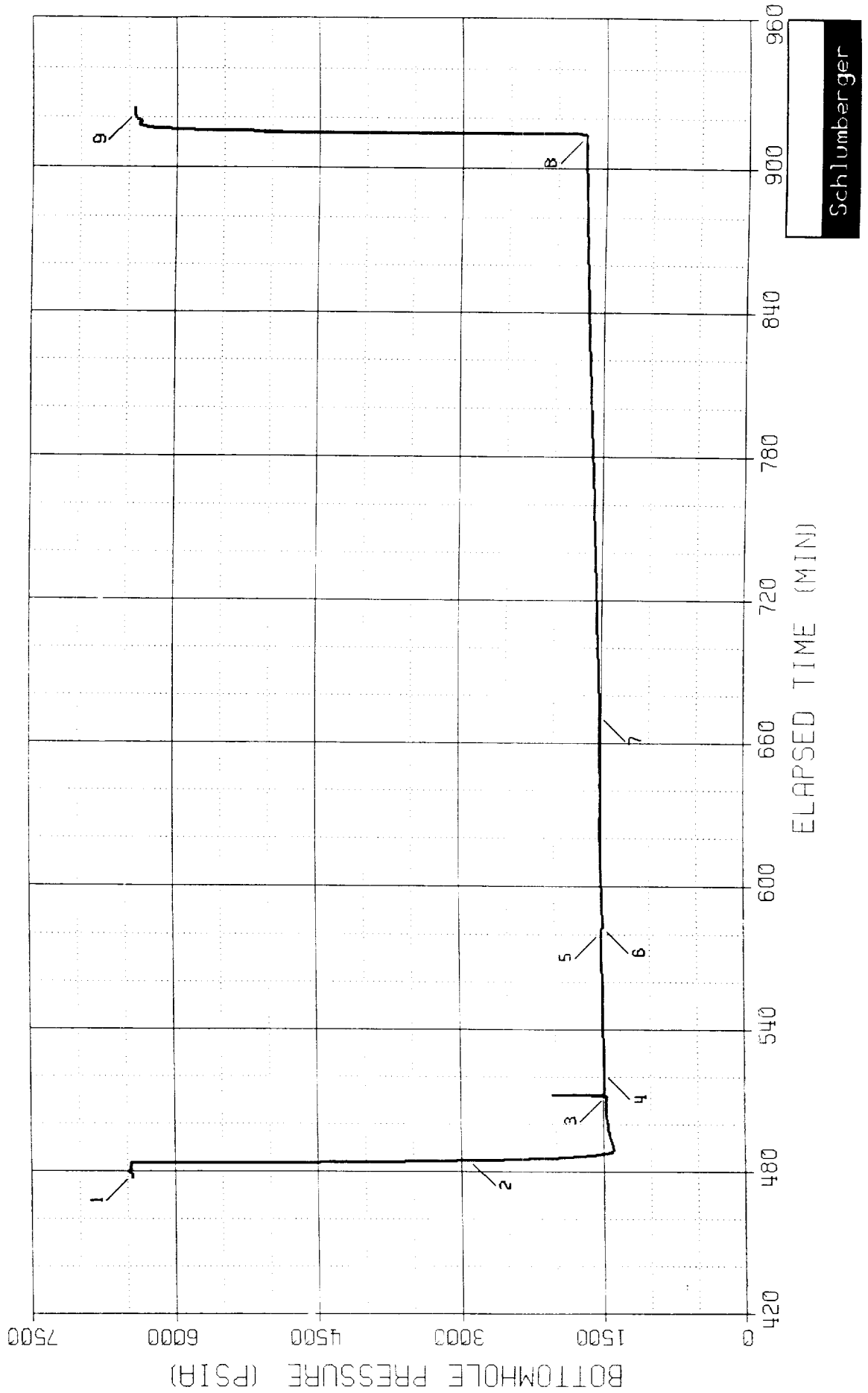
WELL : TORRO 21 ST. COM 1Y, DST #2

DEPTH : 13799 FT

CAPACITY : 10000 PSI

Electronic Pressure Data

PORT OPENING : INSIDE



BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 1070338

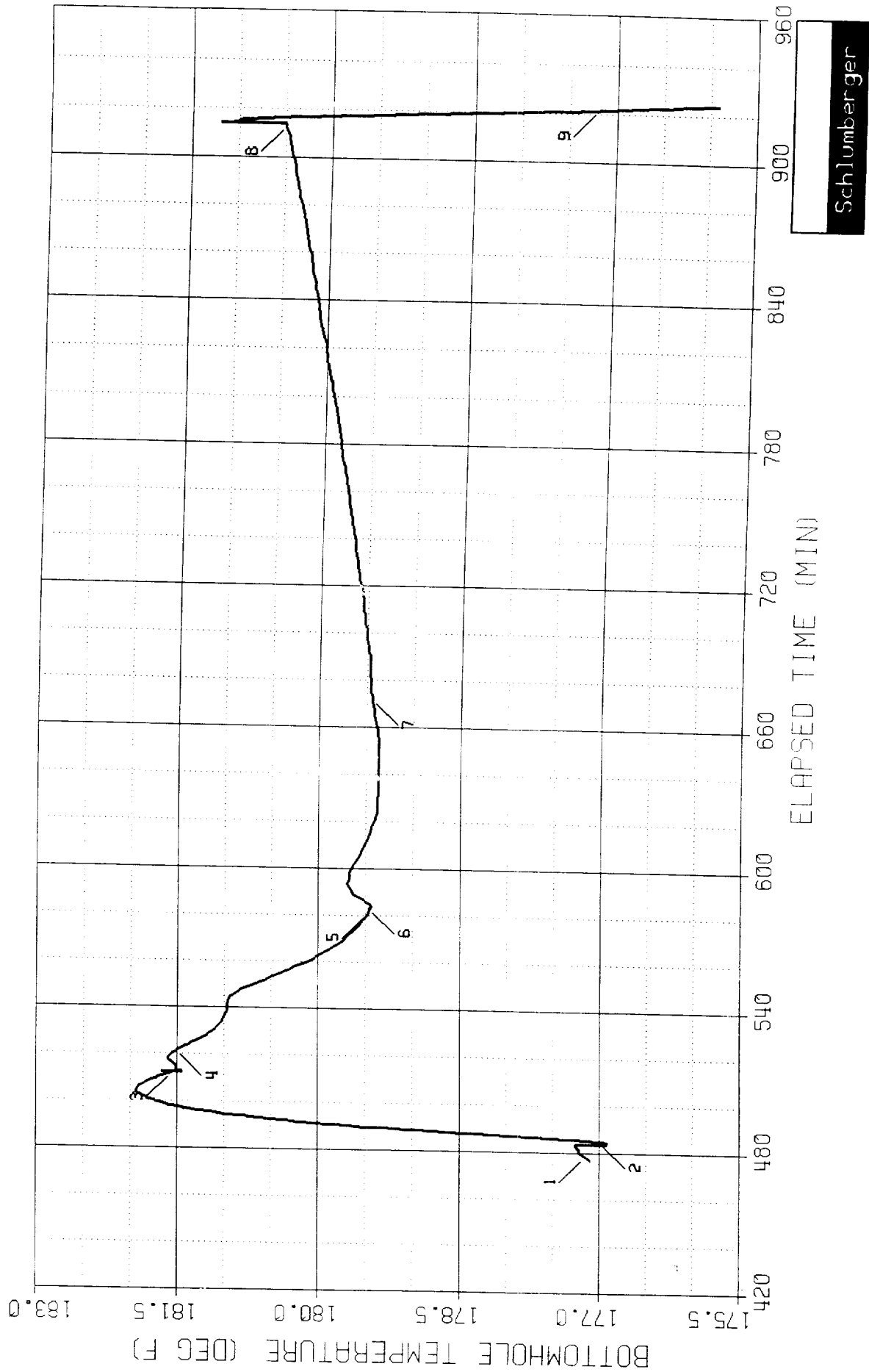
COMPANY : LOUIS DREYFUS NATURAL GAS

INSTRUMENT NO. SLSR-704

WELL : TORRO 21 ST. COM 1Y, DST #2

DEPTH : 13799 FT

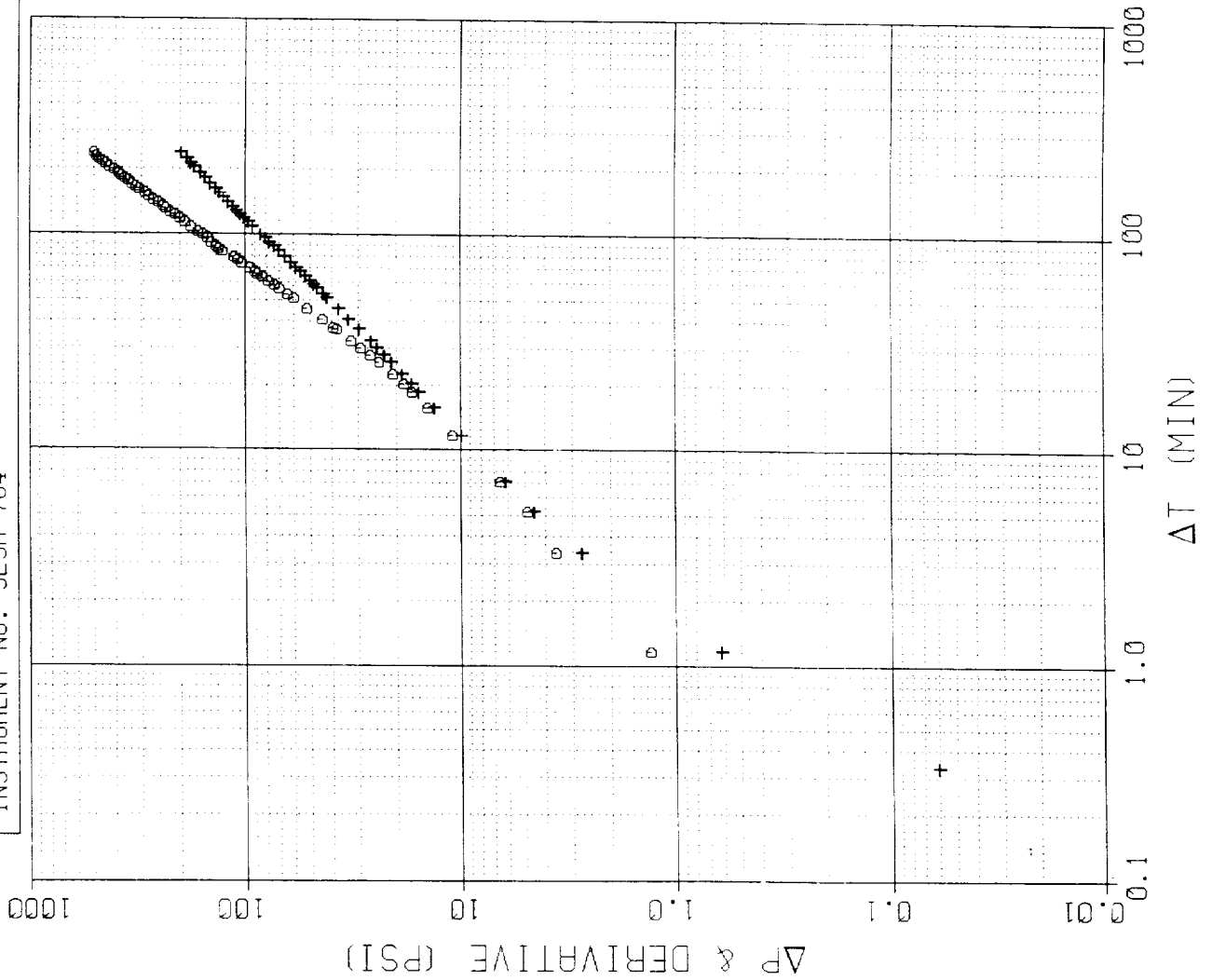
Electronic Temperature Data



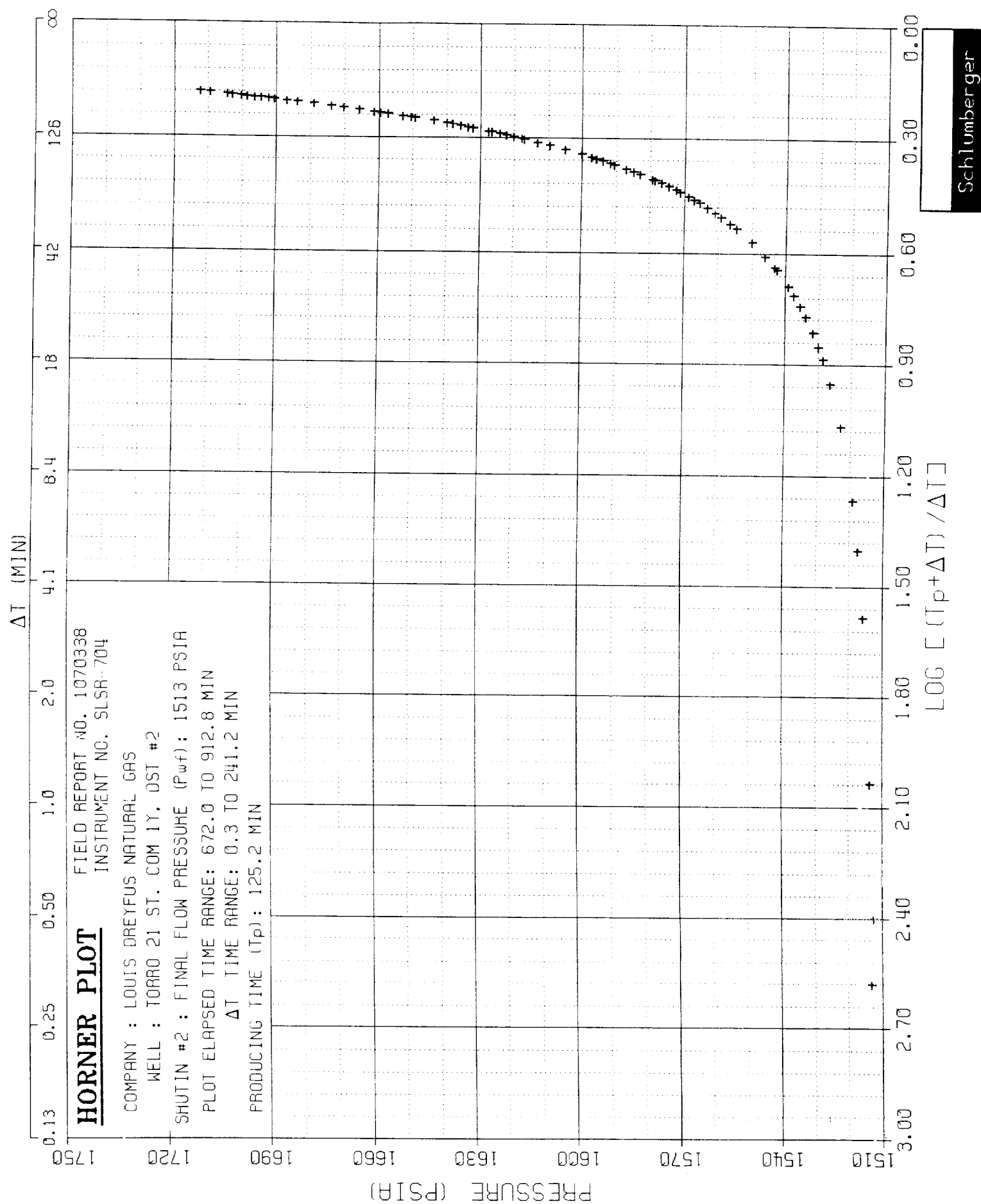
LOG LOG PLOT

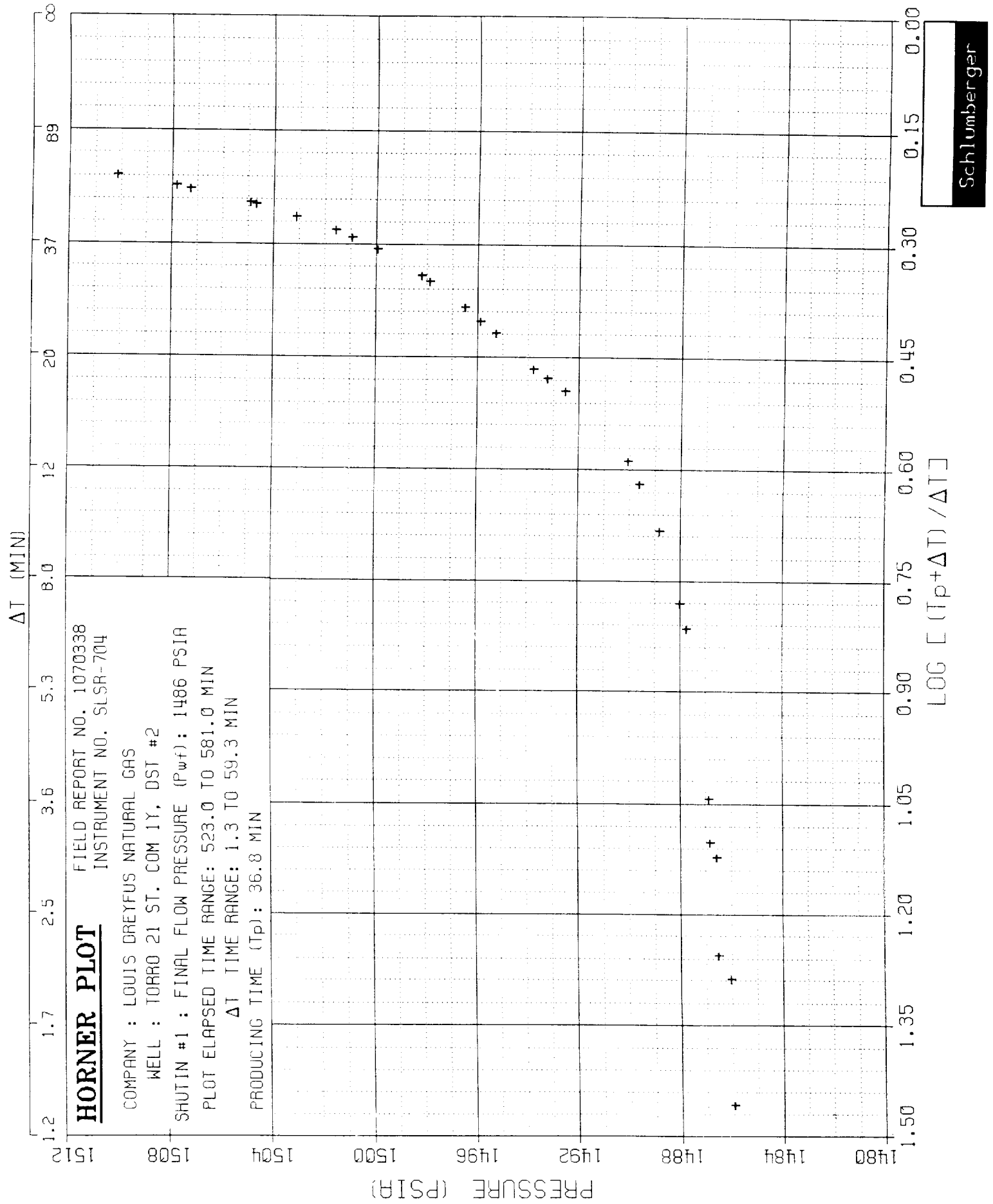
COMPANY : LOUIS DREYFUS NATURAL GAS
 WELL : TORRO 21 ST. COM 1Y, DST #2
 FIELD REPORT NO. 1070338
 INSTRUMENT NO. SLSR-704

SHUTIN #2 : PRODUCING TIME (Tp): 125.2 MIN
 FINAL FLOW PRESSURE (Pwf): 1513 PSIA
 PLOT ELAPSED TIME RANGE: 672.0 TO 912.8 MIN
 ΔT TIME RANGE: 0.3 TO 241.2 MIN



Schlumberger





 ** WELL TEST DATA PRINTOUT **

COMPANY: LOUIS DREYFUS NATURAL GAS
 WELL: TORRO 21 ST. COM 1Y, DST #2

FIELD REPORT NO. 1070338
 INSTRUMENT NO. SLSR-704

RECORDER CAPACITY: 10000 PSI PORT OPENING: INSIDE DEPTH: 13799 FT

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MMM	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
1	7:28:17	9-SEP	HYDROSTATIC MUD	478.28	6455.75	177.15
2	7:34:47	9-SEP	START FLOW	484.78	2919.84	176.99
3	8:02:07	9-SEP	CYCLED TOOL	512.12	1469.98	181.56
4	8:11:37	9-SEP	END FLOW & START SHUT-IN	521.62	1485.78	181.51
5	9:10:57	9-SEP	END SHUT-IN	580.95	1510.12	179.47
6	9:13:17	9-SEP	START FLOW	583.28	1485.73	179.46
7	10:41:37	9-SEP	END FLOW & START SHUT-IN	671.62	1512.97	179.44
8	14:42:47	9-SEP	END SHUT-IN	912.78	1712.22	180.50
9	14:51:37	9-SEP	HYDROSTATIC MUD	921.62	6439.66	177.19

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	484.78	521.62	36.84	2919.84	1485.78	2919.84
2	583.28	671.62	88.34	1485.73	1512.97	1485.73

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	521.62	580.95	59.33	1485.78	1510.12	1485.78	36.84
2	671.62	912.78	241.16	1512.97	1712.22	1512.97	125.18

FIELD REPORT # 1070338 INSTRUMENT # SLSR-704

PAGE 2

TEST PHASE: FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
7:34:47	9-SEP	484.78	0.00	176.99	2919.84
7:49:47	9-SEP	499.78	15.00	181.71	1449.71
8:04:47	9-SEP	514.78	30.00	181.51	1486.91
8:11:37	9-SEP	521.62	36.84	181.51	1485.78

TEST PHASE: SHUTIN PERIOD # 1 FINAL FLOW PRESSURE = 1485.78 PSIA
 PRODUCING TIME = 36.84 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
8:11:37	9-SEP	521.62	0.00	181.51	1485.78	0.00	
8:12:57	9-SEP	522.95	1.33	181.45	1485.95	0.17	1.4579
8:14:37	9-SEP	524.62	3.00	181.36	1486.58	0.80	1.1232
8:18:17	9-SEP	528.28	6.66	181.18	1487.74	1.96	0.8150
8:21:17	9-SEP	531.28	9.66	181.09	1488.79	3.01	0.6825
8:23:17	9-SEP	533.28	11.66	181.04	1489.61	3.83	0.6190
8:28:57	9-SEP	538.95	17.33	180.97	1492.54	6.76	0.4950
8:34:17	9-SEP	544.28	22.66	180.95	1495.26	9.48	0.4193
8:37:27	9-SEP	547.45	25.83	180.84	1496.47	10.69	0.3849
8:41:17	9-SEP	551.28	29.66	180.61	1497.85	12.07	0.3507
8:47:27	9-SEP	557.45	35.83	180.27	1499.93	14.15	0.3071
8:55:47	9-SEP	565.78	44.16	179.87	1503.11	17.33	0.2635
9:05:17	9-SEP	575.28	53.66	179.58	1507.27	21.49	0.2270
9:10:57	9-SEP	580.95	59.33	179.47	1510.12	24.34	0.2098

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
9:13:17	9-SEP	583.28	0.00	179.46	1485.73
9:30:47	9-SEP	600.78	17.50	179.64	1502.77
9:47:27	9-SEP	617.45	34.17	179.44	1512.28
10:08:47	9-SEP	638.78	55.50	179.37	1511.97
10:27:57	9-SEP	657.95	74.67	179.38	1512.59
10:41:37	9-SEP	671.62	88.34	179.44	1512.97

TEST PHASE: SHUTIN PERIOD # 2 FINAL FLOW PRESSURE = 1512.97 PSIA
 PRODUCING TIME = 125.18 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:41:37	9-SEP	671.62	0.00	179.44	1512.97	0.00	
10:42:47	9-SEP	672.78	1.16	179.44	1513.58	0.61	2.0371
10:44:57	9-SEP	674.95	3.33	179.46	1515.68	2.71	1.5865
10:46:47	9-SEP	676.78	5.16	179.46	1517.47	4.50	1.4024

FIELD REPORT # 1070338

INSTRUMENT # SLSR-704

PAGE 3

TEST PHASE: SHUTIN PERIOD # 2

FINAL FLOW PRESSURE = 1512.97 PSIA
PRODUCING TIME = 125.18 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:48:47	9-SEP	678.78	7.16	179.46	1519.13	6.16	1.2668
10:53:17	9-SEP	683.28	11.66	179.47	1522.87	9.90	1.0695
10:57:17	9-SEP	687.28	15.66	179.47	1526.20	13.23	0.9539
11:00:17	9-SEP	690.28	18.66	179.47	1528.55	15.58	0.8870
11:04:17	9-SEP	694.28	22.66	179.49	1531.66	18.69	0.8145
11:07:07	9-SEP	697.12	25.50	179.51	1533.86	20.89	0.7715
11:09:17	9-SEP	699.28	27.66	179.51	1535.55	22.58	0.7424
11:11:37	9-SEP	701.62	30.00	179.51	1537.36	24.39	0.7137
11:18:07	9-SEP	708.12	36.50	179.53	1542.55	29.58	0.6464
11:27:17	9-SEP	717.28	45.66	179.56	1550.03	37.06	0.5731
11:32:47	9-SEP	722.78	51.16	179.60	1554.58	41.61	0.5374
11:38:07	9-SEP	728.12	56.50	179.62	1559.07	46.10	0.5073
11:45:37	9-SEP	735.62	64.00	179.65	1565.49	52.52	0.4707
11:52:17	9-SEP	742.28	70.66	179.67	1571.26	58.29	0.4427
11:58:27	9-SEP	748.45	76.83	179.69	1576.63	63.66	0.4198
12:05:37	9-SEP	755.62	84.00	179.73	1582.87	69.90	0.3962
12:13:57	9-SEP	763.95	92.33	179.76	1590.42	77.45	0.3721
12:19:57	9-SEP	769.95	98.33	179.78	1595.65	82.68	0.3566
12:25:07	9-SEP	775.12	103.50	179.82	1600.14	87.17	0.3443
12:30:37	9-SEP	780.62	109.00	179.83	1604.99	92.02	0.3321
12:35:47	9-SEP	785.78	114.16	179.85	1609.42	96.45	0.3215
12:44:27	9-SEP	794.45	122.83	179.89	1616.91	103.94	0.3052
12:50:37	9-SEP	800.62	129.00	179.92	1622.26	109.29	0.2946
12:55:47	9-SEP	805.78	134.16	179.94	1626.69	113.72	0.2862
13:02:17	9-SEP	812.28	140.66	179.98	1632.19	119.22	0.2764
13:09:17	9-SEP	819.28	147.66	180.01	1638.09	125.12	0.2666
13:16:07	9-SEP	826.12	154.50	180.05	1643.83	130.86	0.2577
13:22:37	9-SEP	832.62	161.00	180.09	1649.29	136.32	0.2498
13:32:07	9-SEP	842.12	170.50	180.12	1657.16	144.19	0.2391
13:37:17	9-SEP	847.28	175.66	180.14	1661.40	148.43	0.2337
13:42:27	9-SEP	852.45	180.83	180.18	1665.59	152.62	0.2285
13:59:07	9-SEP	869.12	197.50	180.25	1678.96	165.99	0.2132
14:16:07	9-SEP	886.12	214.50	180.34	1692.33	179.36	0.1996
14:31:37	9-SEP	901.62	230.00	180.43	1704.22	191.25	0.1887
14:42:47	9-SEP	912.78	241.16	180.50	1712.22	199.25	0.1816

WELL TEST INTERPRETATION REPORT #:1070338		PAGE: 12,
CLIENT : LOUIS DREYFUS		10-NOV-98
REGION :CSD	DISTRIBUTION OF REPORTS	FIELD:WILDCAT
DISTRICT:HOBBS		ZONE :DEVONIAN
BASE :MIDLAND TX.		WELL :TORRO 21 ST. C
ENGINEER:KIRK BEASLEY		LOCATION:S21T19sR32e

SCHLUMBERGER has sent copies of this report to the following:

=====

LOUIS DREYFUS NAT. GAS
14000 QUAIL SPRING
PARKWAY STE.600
OKLAHOMA CITY, OK 73134
Attn: DALE SHIPLEY
(2 copies)

SANTA FE ENERGY RESOURCES
550 W. TX. SUITE 1330
MIDLAND, TX 79701
Attn: TOM TINNEY
(3 copies)

CHI ENERGY INC.
P.O. BOX 1799
MIDLAND , TX 79702
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12222 MERIT DR.
SUITE 1500
DALLAS, TX 75251
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P.O. BOX 7454
MIDLAND, TX 79708
(1 copy)

Any interpretations or recommendations are opinions and necessarily based on inferences and empirical factors and assumptions, which are not infallible. Accordingly, Schlumberger (Flopetrol Johnston) cannot and does not warrant the accuracy of correctness of any interpretation or measurement. Under no circumstances should any interpretation or measurement be relied upon as the sole basis for any drilling, completion, well treatment or production decision or any procedure involving risk to the safety of any drilling venture, drilling rig or its crew or any other individual. The Customer has full responsibility for all drilling, completion, well treatment, and production procedure, and all other activities relating to the drilling or production operation.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34492	Pool Code 55650	Property Name <i>Southeast</i> UNDESIGNATED WOLFCAMP
Property Code 23411	Property Name TORO 21 STATE COM	Well Number 1Y
OGRID No. 025773	Operator Name LOUIS DREYFUS NATURAL GAS CORP.	Elevation 3752'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19 S	35 E		2310	NORTH	735	EAST	LEA

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
Dedicated Acres 160 40	Joint or Infill N	Consolidation Code	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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Terry D. Bryant</i> Signature Terry D. Bryant Printed Name Regulatory Technician Title March 11, 1999 Date
	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. MAY 29, 1998 Date Surveyed Signature & Seal of Professional Surveyor <i>Gary Edson</i> 98-13-1176
	Certificate No. RONALD J. EDSON 3239 GARY EDSON 12641

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
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DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION P.O. Box 2088

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Wildcat Devonian / Wildcat Morrow
Property Code	Property Name	Well Number
	TORO 21 STATE COM	1Y
OGRID No. 025773	Operator Name	Elevation
	LOUIS DREYFUS NATURAL GAS CORP.	3752'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	21	19 S	35 E		2310	NORTH	735	EAST	LEA

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
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
320	N								

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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained heretn is true and complete to the best of my knowledge and belief.</p> <p><i>Terry D. Bryant</i> Signature</p> <p>Terrye D. Bryant Printed Name</p> <p>Regulatory Technician Title</p> <p>August 25, 1998 Date</p>	
	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>MAY 29, 1998</p> <p>Date Surveyed</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Ronald J. Edson</i> 98-13-1176</p> <p>Certificate No. RONALD J. EDSON 3239 GARY EDSON 12641</p>	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720
District II
1301 W. Grand Ave., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9720

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

Form C-145
Permit 44829

Change of Operator

Previous Operator Information


OGRID: 25773
Name: DOMINION OKLAHOMA TEXAS
EXPL. & PROD INC
Address: 14000 QUAIL SPRINGS PKWY
Address: STE 600
City, State, Zip: OKLAHOMA CITY, OK 731342600

New Operator Information

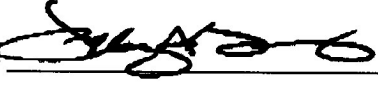
Effective Date: 12/31/2006
OGRID: 246289
Name: RKI EXPLORATION & PRODUCTION, LLC
Address: 3817 NW EXPRESSWAY
Address: SUITE 950
City, State, Zip: OKLAHOMA CITY, OK 73112

I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information on this form and the certified list of wells is true to the best of my knowledge and belief.

Previous Operator

Signature: 
Printed Name: Jason Garner
Title: General Manager
Permian Asset Team
Date: 1/12/07 Phone: 405-749-5208

New Operator

Signature: 
Printed Name: Jeffrey A. Bonney
Title: Vice President
Date: 01/223/07 Phone: 405-949-2221

NMOCD Approval

Electronic Signature: Chris Williams, District 1
Electronic Signature: Carmen Reno, District 2
Date: January 24, 2007

District I

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

District II

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

District III

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

District IV

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

State of New Mexico

Energy, Minerals and Natural Resources

Form C-146
Revised August 1, 2011

Permit

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

(505) 476-3440

Change of Operator Name

OGRID: 246289

Effective Date: 10/9/18

Previous Operator Name and Information

New Operator Name and Information

Name: RKI Exploration & Production, LLC Name: PX Energy Permian, LLC

Address: 3500 One Williams Center MD-35 Address: 3500 One Williams Center MD-35

Address: Address:

City, State, Zip: Tulsa, OK 74172 City, State, Zip: Tulsa, OK 74172

I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given on this form and the certified list of wells is true to the best of my knowledge and belief.

Signature

Printed Name:

Title:

Date: 10/9/18

Phone: 539-573-0108

NMOCDA Approval

Date: October 09, 2018
Regulatory Team Lead

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Comments

Permit 258318

NAMECHANGE COMMENTS

Operator: WPX Energy Permian, LLC 3500 One Williams Center Tulsa, OK 74172	OGRID: 246289
	Permit Number: 258318
	Permit Type: NameChange

Comments

Created By	Comment	Comment Date
jwalker	Address remains the same: 3500 One Williams Center MD-35 Tulsa, OK 74172	10/9/2018

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: Solaris Water Midstream, LLC
Wildyre Fee SWD No. 1
January 24, 2020

LONQUIST & CO. LLC**PETROLEUM
ENGINEERS****ENERGY
ADVISORS**

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INJECTION INTERVAL CONFINING LAYERS – WILDRYE FEE SWD NO. 1

The Devonian-Silurian injection interval for the proposed Wildrye 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

January 24, 2020

Project: Blackbuck Resources
 Wildrye Fee SWD No. 1

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

The proposed well is located in Lea County, New Mexico. The proposed Wildrye Fee SWD No.1 well is located in Township 19 South, Range 35 East, Section 20; Twenty miles west of Hobbs, NM. 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 southeast 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 0.5 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 3.5 miles of the proposed wells. 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.

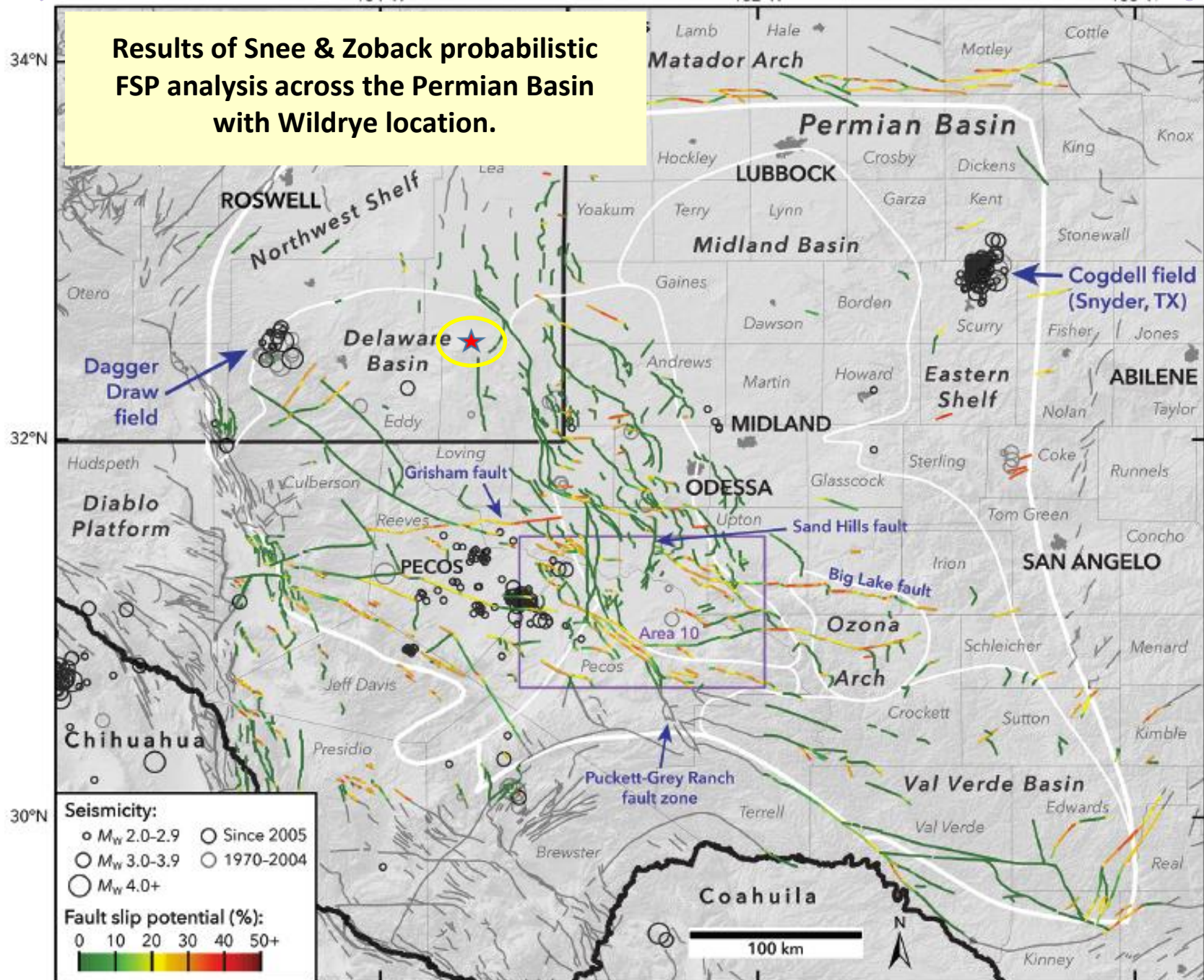
The distance from the proposed wells to the closest mapped faults yields an extremely low probability that the faults will become critically stressed by injection into the referenced wells.



Tyler F. Moehlman

Petroleum Engineer, Lonquist & Co. LLC

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



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	<input type="text" value="32.652154"/>
Center Longitude	<input type="text" value="-103.471636"/>
Radius	<input type="text" value="15"/>
Radius Units	<input checked="" type="radio"/> Kilometers
	<input type="radio"/> Miles

SELECT CIRCLE

Received by OCD: 1/24/2020 2:56:58 PM

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Require Focal Mechanism?



Earthquake Magnitude



☒ Lock Magnitude

Date Range

SELECT DATE RANGE

Earliest Date

1/1/2017

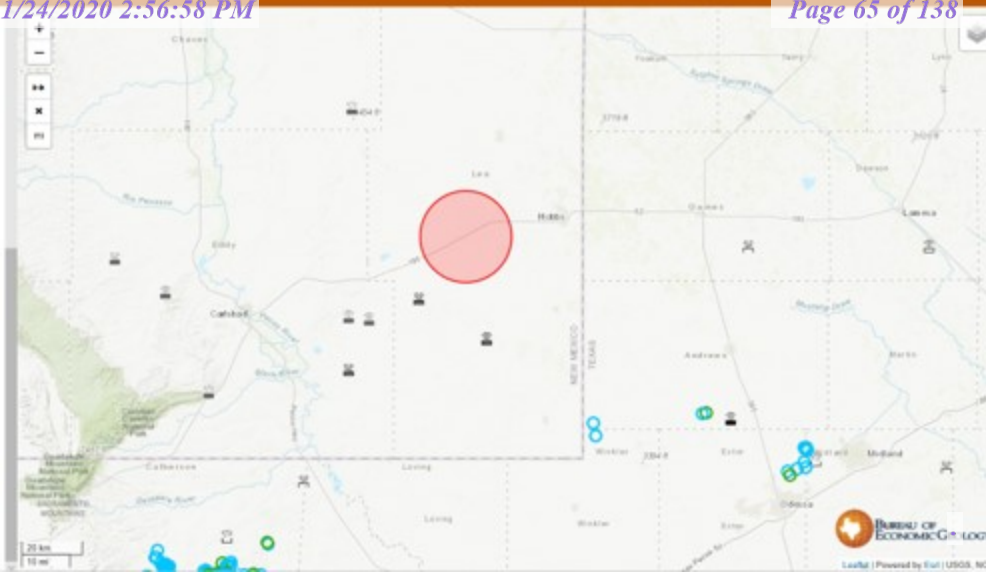
Latest Date

1/24/2020

Did you feel an earthquake? You can report it to USGS [here](#).

Last Earthquake Added: 2020-01-24 17:06:37 (UTC)

Selected Events (Total 0)



Search results are limited to 20,000 events. To get URL for a search, click the search button, then copy the URL from the browser address bar.

- [Help](#)
- [ANSS Comprehensive Earthquake Catalog \(ComCat\) Documentation](#)
- [Developer's Corner - bulk access to catalog, tools for obtaining specific products](#)
- [Significant Earthquakes Archive](#)

Basic Options

Magnitude

- ☐ 2.5+
- ☐ 4.5+
- ☒ Custom

Minimum

2

Maximum

.

Date & Time

- ☐ Past 7 Days
- ☐ Past 30 Days
- ☒ Custom

Start (UTC)

1900-01-01 00:00:00

End (UTC)

2020-01-24 23:59:59

Geographic Region

- ☐ World
- ☐ Conterminous U.S.¹
- ☒ Custom

Custom Circle

- 32.652154 Latitude
- -103.471636 Longitude
- 15 Radius (km)

Draw Rectangle on Map



Advanced Options

Received by OCD: 1/24/2020 2:56:58 PM

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Geographic Region

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

North

West

East

South

Circle

Center Latitude

32.652154

Center Longitude

-103.471636

Outer Radius (km)

15

Depth (km)

Minimum

Maximum

Azimuthal Gap

Minimum

Maximum

Review Status



Any



Automatic



Reviewed



Event Type

Search results

0 of 0 earthquakes in map area

[Click for more information](#)

There are no events in the current
level.

Didn't find what you were looking
for?

- Check your settings
- Which earthquakes are included on the map and list?
- Put something out there... 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](#)

Search results are limited to 20,000 events. To get URI for a search, click the search button, then copy the URI from the browser address bar.

- [Help](#)
- [ANSS Comprehensive Earthquake Catalog \(ComCat\) Documentation](#)
- [Developer's Corner - bulk access to catalog, tools for obtaining specific products](#)
- [Significant Earthquakes Archive](#)

Basic Options

Magnitude

- ☐ 2.5+
- ☐ 4.5+
- ☒ Custom

Minimum

2

Maximum

.

Date & Time

- ☐ Past 7 Days
- ☐ Past 30 Days
- ☒ Custom

Start (UTC)

1900-01-01 00:00:00

End (UTC)

2020-01-24 23:59:59

Geographic Region

- ☐ World
- ☐ Conterminous U.S.¹
- ☒ Custom

Custom Circle

- 32.652154 Latitude
- -103.471636 Longitude
- 25 Radius (km)

Draw Rectangle on Map

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)

+ Event Type

Depth (km)

Minimum

Maximum

Azimuthal Gap

Minimum

Maximum

Review Status



Any



Automatic



Reviewed

Received by OCD: 1/24/2020 2:56:58 PM

Page 71 of 138

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.](#)
- [What earthquakes are included on the map and feed?](#)
- [Let 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](#)

Earthquake loading



Search results are limited to 20,000 events. To get URL for a search, click the search button, then copy the URL from the browser address bar.

- [Help](#)
- [ANSS Comprehensive Earthquake Catalog \(ComCat\) Documentation](#)
- [Developer's Corner - bulk access to catalog, tools for obtaining specific products](#)
- [Significant Earthquakes Archive](#)

Basic Options

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

- 32.652154 Latitude
- -103.471636 Longitude
- 50 Radius (km)

Draw Rectangle on Map

Geographic Region

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

North

West

East

South

Circle

Center Latitude

32.652154

Center Longitude

-103.471636

Outer Radius (km)

50

Depth (km)

Minimum

Maximum

Azimuthal Gap

Minimum

Maximum

Review Status

☒ Any

☐ Automatic

☐ Reviewed

+ Event Type

+ Impact (PAGER, ShakeMap, DYFI)

Received by OCD: 1/24/2020 2:56:58 PM

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Search Results

4 of 4 earthquakes in map area.

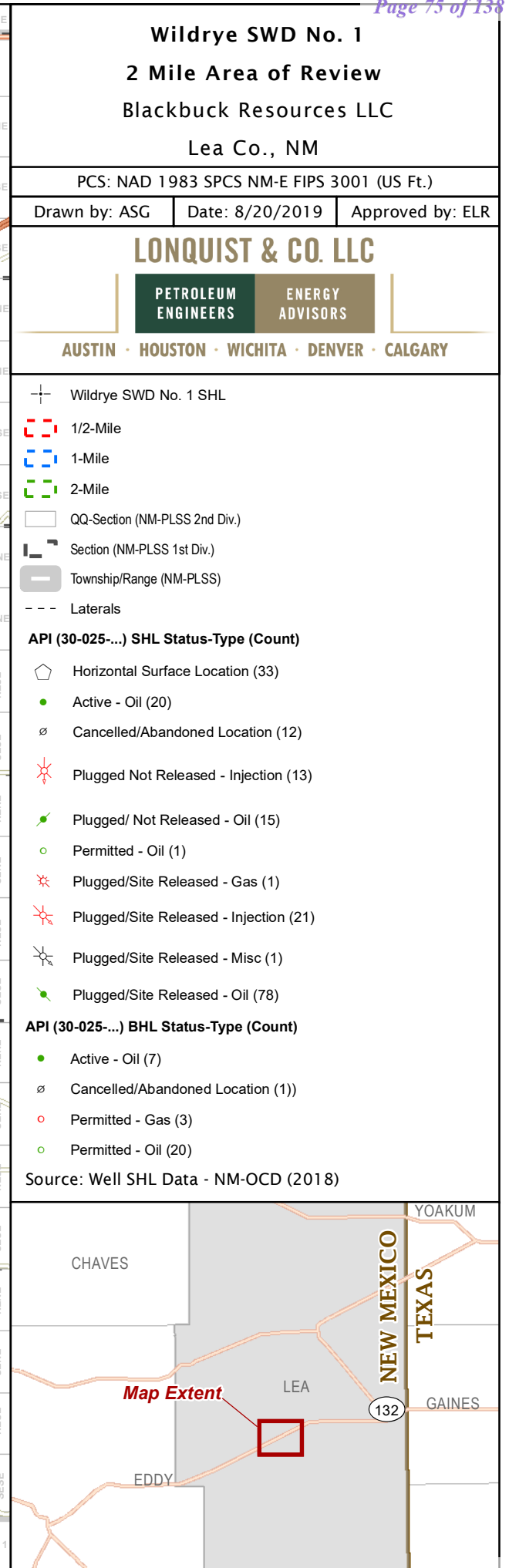
Click for more information

2.7	26km NW of Jal, New Mexico 2009-10-21 11:58:56 (UTC)	5.0 km
3.3	New Mexico 2001-06-02 01:58:53 (UTC)	5.0 km
4.6	New Mexico 1992-01-02 11:46:35 (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.](#)



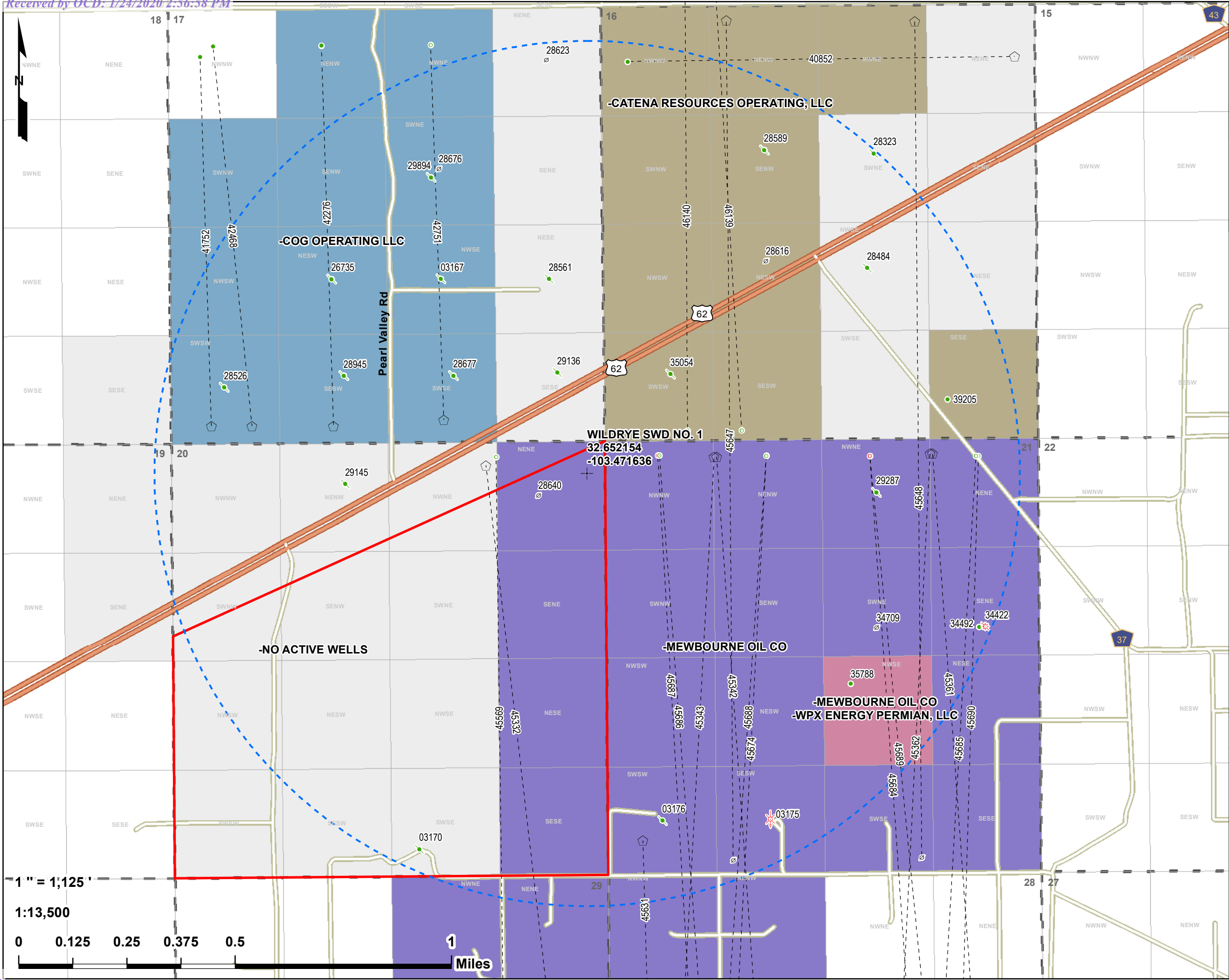


Wildrye SWD No. 1
1 Mile Offset Operators and Lessees List

S/T/R	QQ UNIT LETTER(S)	OPERATOR	MINERAL LESSEE	MINERAL OWNER	SURFACE OWNER	ADDRESS 1	ADDRESS 2
16/19S/35E	B,C,D,E,F,K,L,M,N,P	CATENA RESOURCES OPERATING, LLC	-	-	-	18402 US Hwy 281 N Suite 258	San Antonio, TX 78259
	ENTIRE SECTION	-	CATENA RESOURCES OPERATING, LLC	-	-	18402 US Hwy 281 N, Suite 258	San Antonio, TX 78259
17/19S/35E	B,C,E,F,G,J,K,L,M,N,O	COG OPERATING LLC	-	-	-	600 W Illinois Ave	Midland, TX 79701
	A,H,I	-	-	CATENA RESOURCES OPERATING, LLC	-	18402 US Hwy 281 N, Suite 258	San Antonio, TX 78259
	P	-	-	STATE LAND OFFICE	-	-	-
20/19S/35E	A,H,I,P	MEWBOURNE OIL CO	-	-	-	P.O. BOX 5270	HOBBS, NM 88241
	L,M	-	CHEVRON U S A INC	-	-	6301 DEAUVILLE BLVD	MIDLAND, TX 79706
	I,P	-	SHELL PIPELINE & CORTEZ	-	-	PO BOX 2648, ATTN: LAND	HOUSTON, TX 77252
	A,B,G,H,J	-	MEWBOURNE OIL CO (BLM)	-	-	500 W TEXAS ST #1020	MIDLAND TX 79701
	C,D,E,F	-	BP America Production Company	-	-	P.O. Box 3092	Houston, TX 77253
	J	-	PYRAMID ENERGY INC (Operating Rights)	-	-	14100 SAN PEDRO #700	SAN ANTONIO TX 78232
	J	-	RUTTER & WILBANKS (Operating Rights)	-	-	PO BOX 3186	MIDLAND TX 79702
	J	-	XERIC OIL & GAS CORP (Operating Rights)	-	-	PO BOX 352	MIDLAND TX 797020352
	O	-	COG OPERATING LLC (BLM)	-	-	600 W ILLINOIS AVE	MIDLAND TX 797014882
	A,B,G,H,J,O	-	MEWBOURNE OIL CO	-	-	P.O. BOX 5270	HOBBS, NM 88241
21/19S/35E	ENTIRE SECTION	MEWBOURNE OIL CO	-	-	-	P.O. BOX 5270	HOBBS, NM 88241
	J	WPX ENERGY PERMIAN, LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
28/19S/35E	ENTIRE SECTION	MEWBOURNE OIL CO	-	-	-	P.O. BOX 5270	HOBBS, NM 88241
29/19S/35E	A	MEWBOURNE OIL CO	-	-	-	P.O. BOX 5270	HOBBS, NM 88241
Surface Location	-	-	-	-	L & K RANCH LLC	PO BOX 1503	HOBBS, NM 88241

Wildrye 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 DATE	FIELD
03167	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	5353	32.6587219000	-103.477378800	1/1/1900	-
03170	WEST PEARL QUEEN UNIT #101	O	P	XERIC OIL & GAS CORP	5051	32.6396027000	-103.478416400	7/27/1961	[49780] PEARL, QUEEN
03175	EAST PEARL QUEEN UNIT #011	I	H	XERIC OIL & GAS CORP	4960	32.6405029000	-103.464485200	3/22/1958	[49780] PEARL, QUEEN
03176	WEST PEARL QUEEN UNIT #100	O	P	GULF OIL CORP	4990	32.6404991000	-103.468772900	1/1/1900	[49780] PEARL, QUEEN
26735	MESCALERO RIDGE #001	O	P	SOUTHWEST ROYALTIES INC	13420	32.6587486000	-103.481720000	3/17/1980	[55610] SCHARB, BONE SPRING
28323	PRE-ONGARD WELL #003	O	P	PRE-ONGARD WELL OPERATOR	9800	32.6628151000	-103.460182200	1/1/1900	[55610] SCHARB, BONE SPRING
28484	LEA UA STATE #001	O	P	MARKS AND GARNER PRODUCTION LTD CO	10864	32.6589775000	-103.460479700	11/17/1983	[55650] SCHARB, WOLFCAMP, SOUTHEAST
28526	MESCALERO RIDGE #008	O	P	FOREST OIL CORPORATION	10267	32.6551437000	-103.486000100	1/1/1900	[55610] SCHARB, BONE SPRING
28561	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	11191	32.6586952000	-103.473091100	1/1/1900	[55610] SCHARB, BONE SPRING
28589	PRE-ONGARD WELL #004	O	P	PRE-ONGARD WELL OPERATOR	10940	32.66295620000	-103.46452330000	1/1/1900	[55610] SCHARB, BONE SPRING
28616	PRE-ONGARD WELL #002	O	C	PRE-ONGARD WELL OPERATOR	0	32.6592390124	-103.464484075	-	-
28623	PRE-ONGARD WELL #003	O	C	PRE-ONGARD WELL OPERATOR	0	32.66603734450	-103.47311916800	-	-
28640	PRE-ONGARD WELL #009	O	C	PRE-ONGARD WELL OPERATOR	0	32.6514365860	-103.473576261	-	-
28676	PRE-ONGARD WELL #004	O	C	PRE-ONGARD WELL OPERATOR	0	32.6624166761	-103.477420473	-	-
28677	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	10100	32.6554756000	-103.476913500	1/1/1900	[55610] SCHARB, BONE SPRING
28945	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	10142	32.6555023000	-103.481254600	1/1/1900	[55610] SCHARB, BONE SPRING
29136	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	10200	32.6555519000	-103.472793600	1/1/1900	[55610] SCHARB, BONE SPRING
29145	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	10170	32.6518707000	-103.481239300	1/1/1900	[55610] SCHARB, BONE SPRING
29287	MCINTOSH #001	O	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	11500	32.6514473000	-103.460189800	6/15/1985	[55650] SCHARB, WOLFCAMP, SOUTHEAST
29894	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	11097	32.6621323000	-103.477737400	1/1/1900	-
34422	TORO 21 STATE COM #001	G	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	4276	32.6469193000	-103.455902100	8/3/1998	[96838] DRY AND ABANDONED
34492	TORO 21 STATE COM #001Y	O	A	WPX Energy Permian, LLC	13960	32.6469154000	-103.456146200	8/27/1998	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [96874] WILDCAT G-10 S193521H, DEVONIAN
34709	TORO 21 #002	O	C	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	0	32.6469052562	-103.460218480	-	-
35054	TORO 16 STATE #001	O	P	MARSHALL & WINSTON INC	11200	32.65547180000	-103.46830750000	6/27/2000	[55610] SCHARB, BONE SPRING; [96666] PEARL, SAN ANDRES, NORTH
35788	TORO 21 #002	O	A	WPX Energy Permian, LLC	11200	32.6450424000	-103.461257900	12/26/2001	[49680] PEARL, BONE SPRING; [55650] SCHARB, WOLFCAMP, SOUTHEAST
39205	KLEIN 16 STATE #001	O	A	Catena Resources Operating, LLC	11019	32.6545486000	-103.457328800	7/28/2009	[55650] SCHARB, WOLFCAMP, SOUTHEAST
40852	KLEIN 16 STATE #002H	O	A	Catena Resources Operating, LLC	9517	32.6660271000	-103.454559300	12/4/2012	[55610] SCHARB, BONE SPRING
41752	CUATRO HIJOS FEE #004H	O	A	COG OPERATING LLC	10833	32.6538544000	-103.486518900	6/21/2014	[55610] SCHARB, BONE SPRING
42276	CUATRO HIJOS FEE #003H	O	A	COG OPERATING LLC	10797	32.6538208490	-103.481675271	1/10/2015	[55610] SCHARB, BONE SPRING
42468	CUATRO HIJOS FEE #008H	O	A	COG OPERATING LLC	9785	32.6538399370	-103.484907580	4/2/2015	[55610] SCHARB, BONE SPRING
42751	CUATRO HIJOS FEE #002H	O	C	COG OPERATING LLC	0	32.6539987000	-103.477302600	-	[55610] SCHARB, BONE SPRING
45332	HEREFORD 20 29 B2AH STATE COM #001H	O	N	MEWBOURNE OIL CO	0	32.6524584000	-103.475647000	-	[55610] SCHARB, BONE SPRING
45342	CHAROLAIS 28 21 B2NC STATE COM #001H	O	N	MEWBOURNE OIL CO	10130	32.6247153000	-103.466506400	4/4/2019	[49680] PEARL, BONE SPRING
45343	CHAROLAIS 28 21 B1MD STATE COM #002H	O	N	MEWBOURNE OIL CO	9487	32.62471560000	-103.46660390000	5/7/2019	[49680] PEARL, BONE SPRING
45361	CHAROLAIS 28 21 B2PA STATE COM #001H	O	C	MEWBOURNE OIL CO	0	32.6527362000	-103.457943000	-	[49680] PEARL, BONE SPRING
45362	CHAROLAIS 28 21 B2OB STATE COM #001H	O	C	MEWBOURNE OIL CO	0	32.6527360000	-103.458040400	-	[49680] PEARL, BONE SPRING
45569	HEREFORD 29 20 B3PA STATE COM #002H	O	N	MEWBOURNE OIL CO	0	32.6247222000	-103.475079500	-	[55610] SCHARB, BONE SPRING
45631	ANCHOR 193528 STATE COM #001C	O	C	Catena Resources Operating, LLC	0	32.6398336000	-103.469546100	-	[96989] KLEIN RANCH, WOLFCAMP
45647	CABLE 19 35 16 STATE #001C	O	C	Catena Resources Operating, LLC	0	32.6673106000	-103.465976700	-	[55650] SCHARB, WOLFCAMP, SOUTHEAST
45648	CABLE 19 35 16 STATE #002C	O	C	Catena Resources Operating, LLC	0	32.6672417000	-103.458504700	-	[49680] PEARL, BONE SPRING; [55610] SCHARB, BONE SPRING
45674	CHAROLAIS 28 21 B1NC STATE COM #002H	O	N	MEWBOURNE OIL CO	0	32.6251276000	-103.466506100	-	[49680] PEARL, BONE SPRING
45684	CHAROLAIS 28 21 B1OB STATE COM #002H	O	C	MEWBOURNE OIL CO	0	32.6251168000	-103.458440600	-	[49680] PEARL, BONE SPRING
45685	CHAROLAIS 28 21 B1PA STATE COM #002H	O	C	MEWBOURNE OIL CO	0	32.6251166000	-103.458343000	-	[49680] PEARL, BONE SPRING
45686	CHAROLAIS 28 21 B2MD STATE COM #001H	O	N	MEWBOURNE OIL CO	0	32.6251277000	-103.466603500	-	[49680] PEARL, BONE SPRING
45687	CHAROLAIS 28 21 W1MD STATE COM #001H	G	N	MEWBOURNE OIL CO	0	32.6247162000	-103.467188600	-	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [96989] KLEIN RANCH, WOLFCAMP
45688	CHAROLAIS 28 21 W1NC STATE COM #001H	G	N	MEWBOURNE OIL CO	0	32.62471610000	-103.46709100000	-	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [96989] KLEIN RANCH, WOLFCAMP
45689	CHAROLAIS 28 21 W1OB STATE COM #001H	G	C	MEWBOURNE OIL CO	0	32.6247032000	-103.457433400	-	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [96989] KLEIN RANCH, WOLFCAMP
45690	CHAROLAIS 28 21 W1PA STATE COM #001H	O	C	MEWBOURNE OIL CO	0	32.6247030000	-103.457336000	-	[55650] SCHARB, WOLFCAMP, SOUTHEAST; [96989] KLEIN RANCH, WOLFCAMP
46139	CABLE 19 35 9 STATE COM #002H	O	N	Catena Resources Operating, LLC	0	32.6822941200	-103.467230700	-	[55610] SCHARB, BONE SPRING
46140	CABLE 19 35 9 STATE COM #001H	O	N	Catena Resources Operating, LLC	10967	32.6829411000	-103.467555400	7/16/2019	[55640] SCHARB, WOLFCAMP



Wildrye SWD No. 1

1 Mile - Offset Operators

Blackbuck Resources LLC

Lea Co., NM

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

Drawn by: ASG

Date: 8/20/2019

Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- Wildrye 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 (23)
- Active - Oil (3)
- Cancelled/Abandoned Location (5)
- Plugged Not Released - Injection (1)
- Permitted - Oil (1)
- Plugged/Site Released - Gas (1)
- Plugged/Site Released - Oil (16)

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

- Active - Oil (4)
- Cancelled/Abandoned Location (3)
- Permitted - Gas (3)
- Permitted - Oil (14)

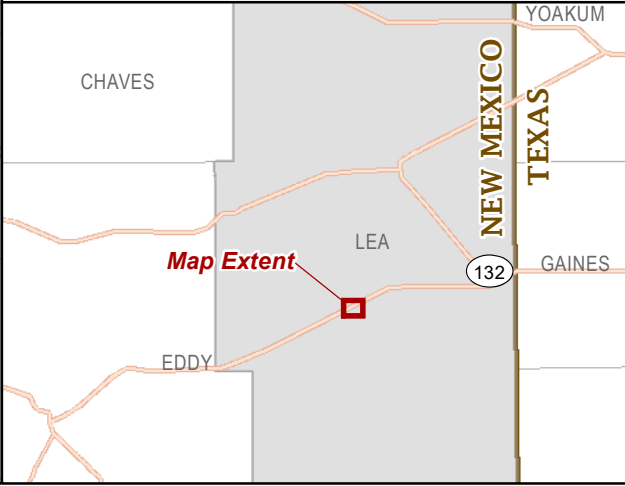
Offset Operator

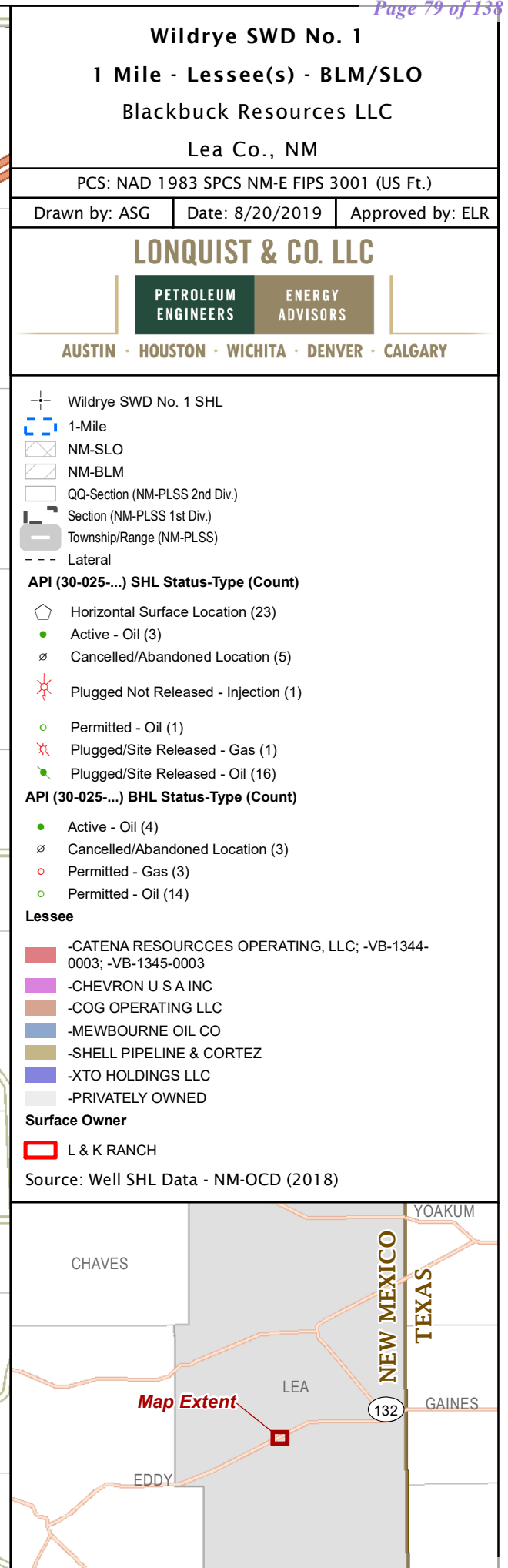
- CATENA RESOURCES OPERATING, LLC
- COG OPERATING LLC
- MEWBOURNE OIL CO
- MEWBOURNE OIL CO; -WPX ENERGY PERMIAN, LLC
- NO ACTIVE WELLS

Surface Owner

- L & K RANCH

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





CURSORY REPORT

PROSPECT: Wildrye SWD No. 1

REPORT DATE: 10/3/2019

RECORD DATE: 1/1/1981 – 9/6/2019

COUNTY OF: Lea

STATE OF: New Mexico

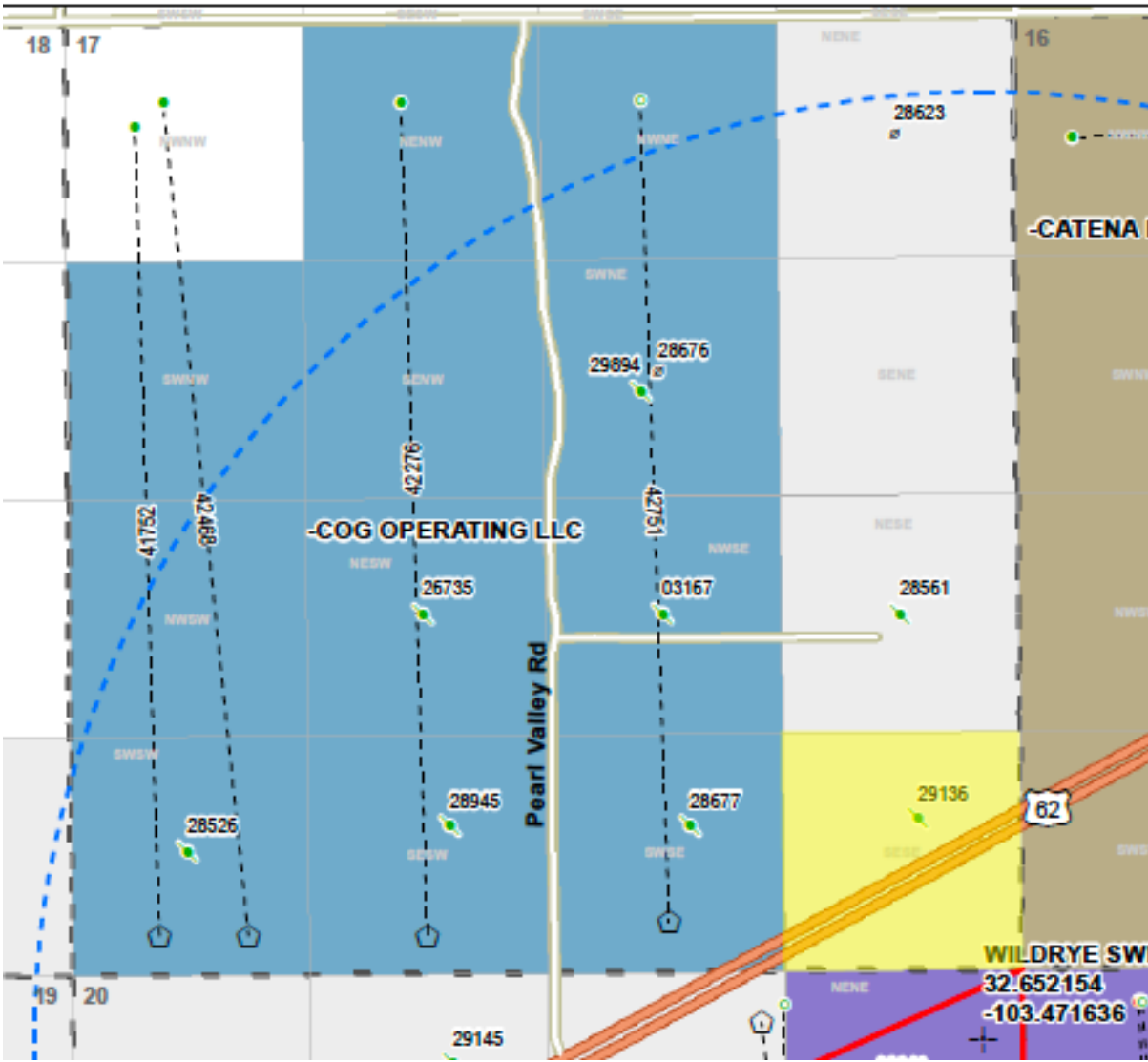
DESCRIPTION

E/2E/2 of Section 17
NW/4, W/2NE/4, E/2SW/4 of Section 20
T19S-R35E, NMPM

DESCRIPTION: The SE/4SE/4 of Section 17, Township 19 South, Range 35 East, NMPM, 40 acres

CURSORY OWNERSHIP

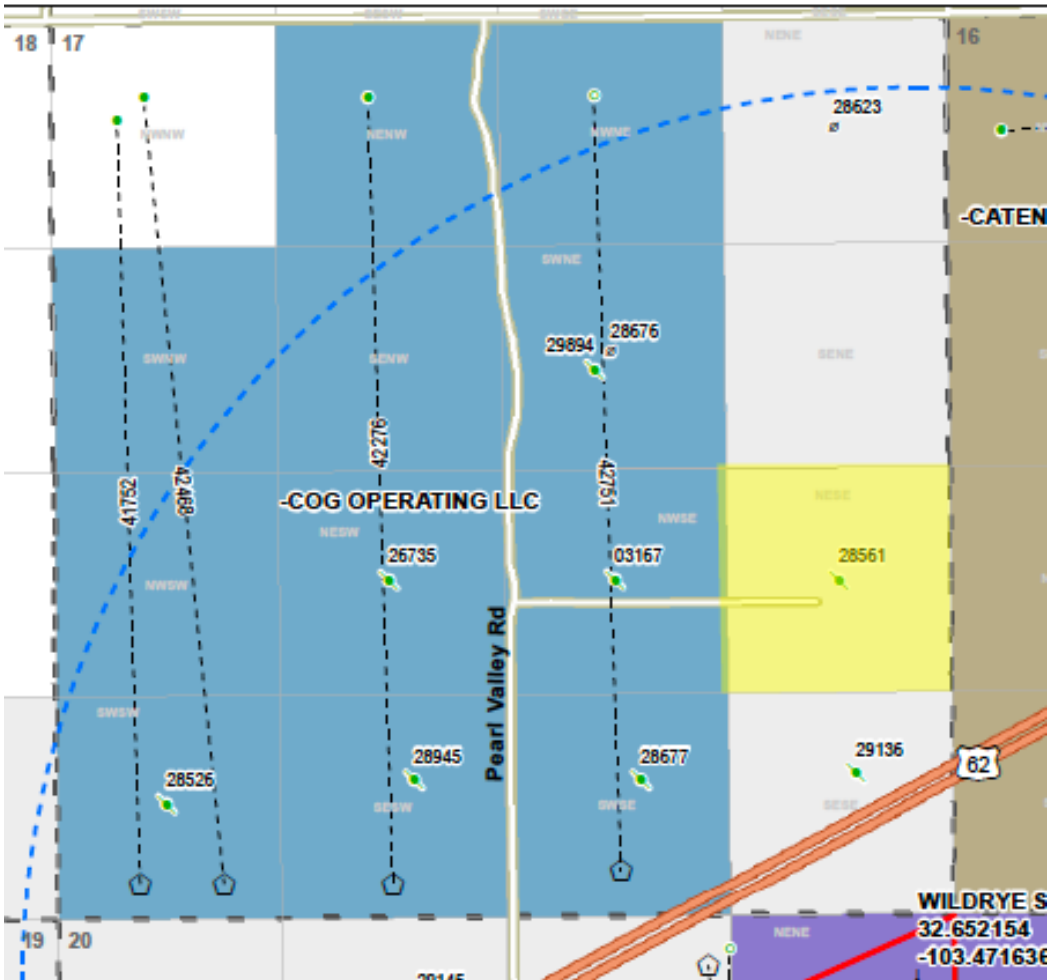
Name of Mineral Owners	Interest	Net Acres	Leasehold and Expiration Date
State of New Mexico	1.00	40.00	UNLEASED
TOTALS FOR MINERAL OWNERSHIP	1.00	40.00	



DESCRIPTION: The NE/4SE/4 of Section 17, Township 19 South, Range 35 East, NMPM, 40 acres

LEASEHOLD OWNERSHIP

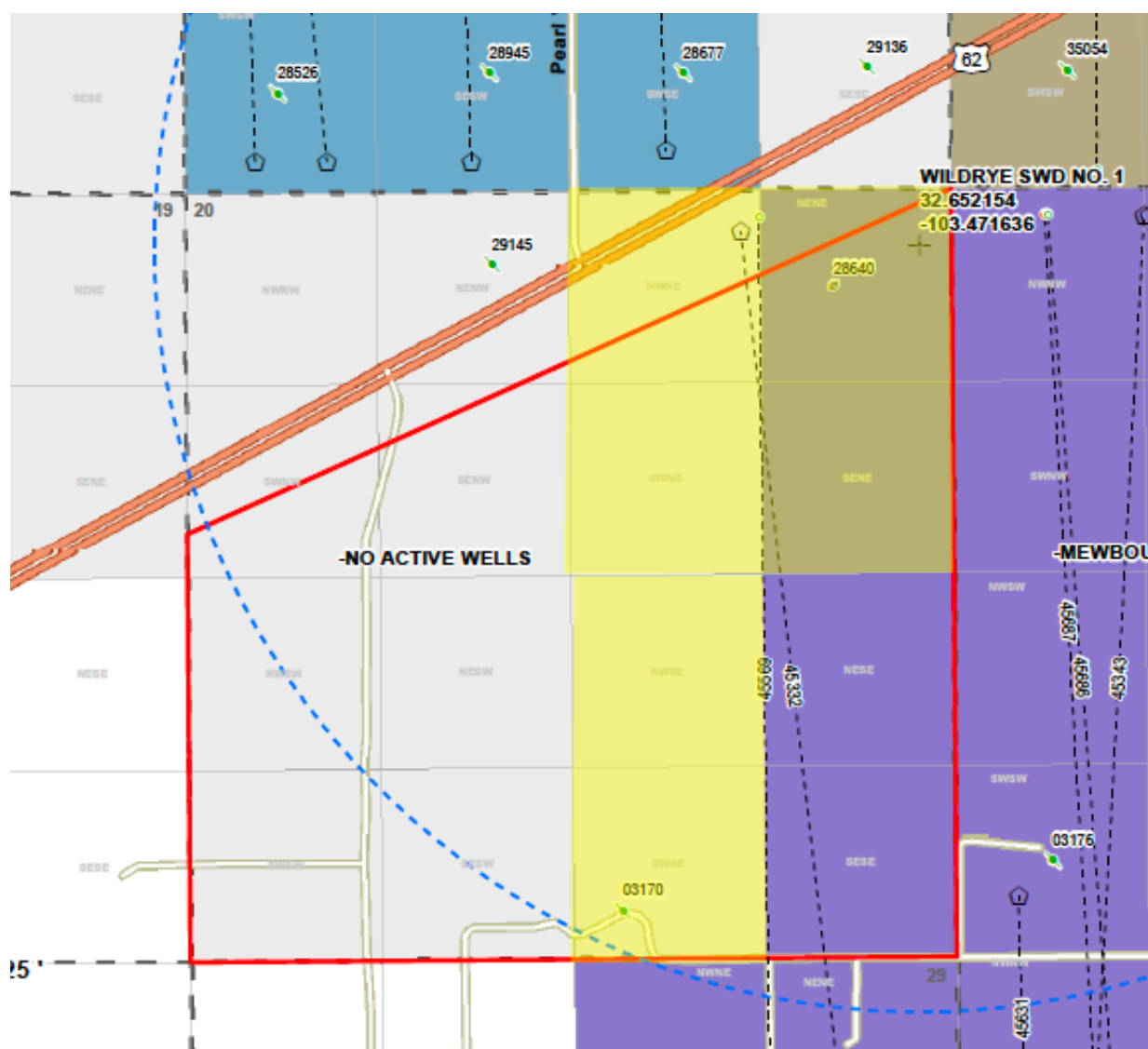
Interest Owners	W.I.	N.R.I.	Net Acres	Comments
Catena Resources Operating, LLC 18402 US HWY 281 N, Suite 258 San Antonio, TX 78259	N/A	N/A	N/A	LEASED OGL 2142/128, 2142/135, 2142/247, 2142/123, and 2144/248
WORKING INTEREST TOTALS	N/A	N/A	N/A	



DESCRIPTION: The NE/4 and E/2SW/4 of Section 20, Township 19 South, Range 35 East, NMPM, 240 acres

LEASEHOLD OWNERSHIP

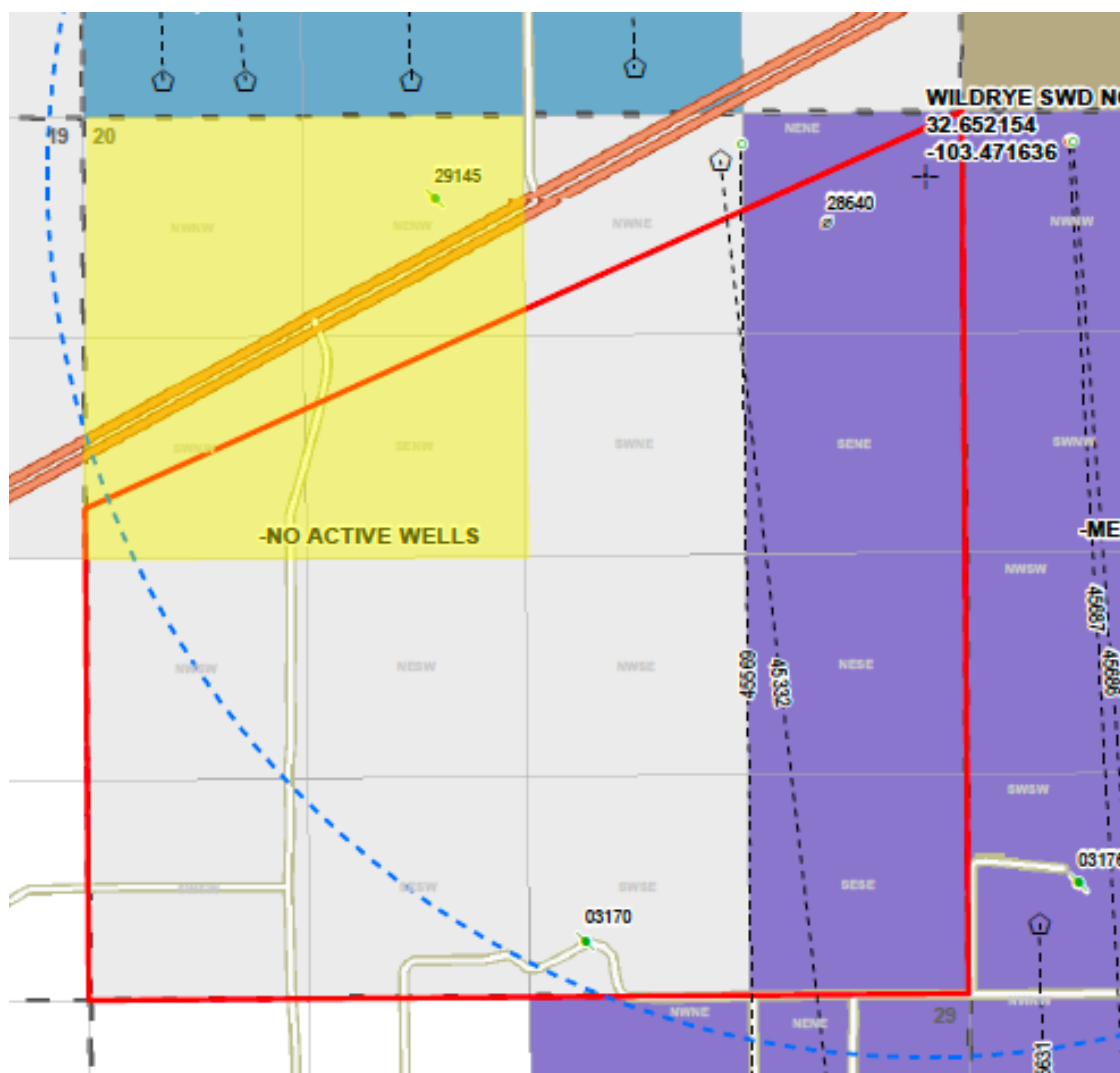
Interest Owners	W.I.	N.R.I.	Net Acres	Comments
Mewbourne Oil Company 500 West Texas, Suite 1020 Midland, TX 79701	N/A	N/A	N/A	LEASED – See runsheet for full list of OGLs
WORKING INTEREST TOTALS	N/A	N/A	N/A	



DESCRIPTION: The NW/4 of Section 20, Township 19 South, Range 35 East, NMPM, 160 acres

CURSORY OWNERSHIP

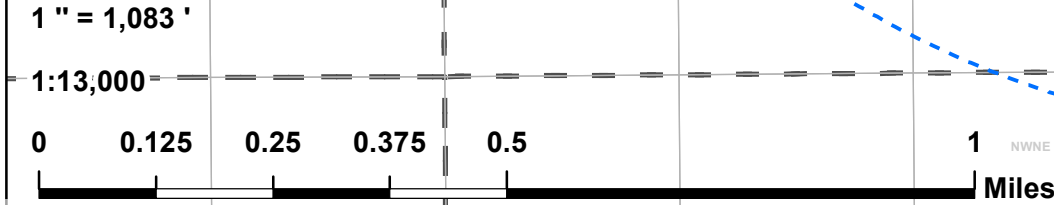
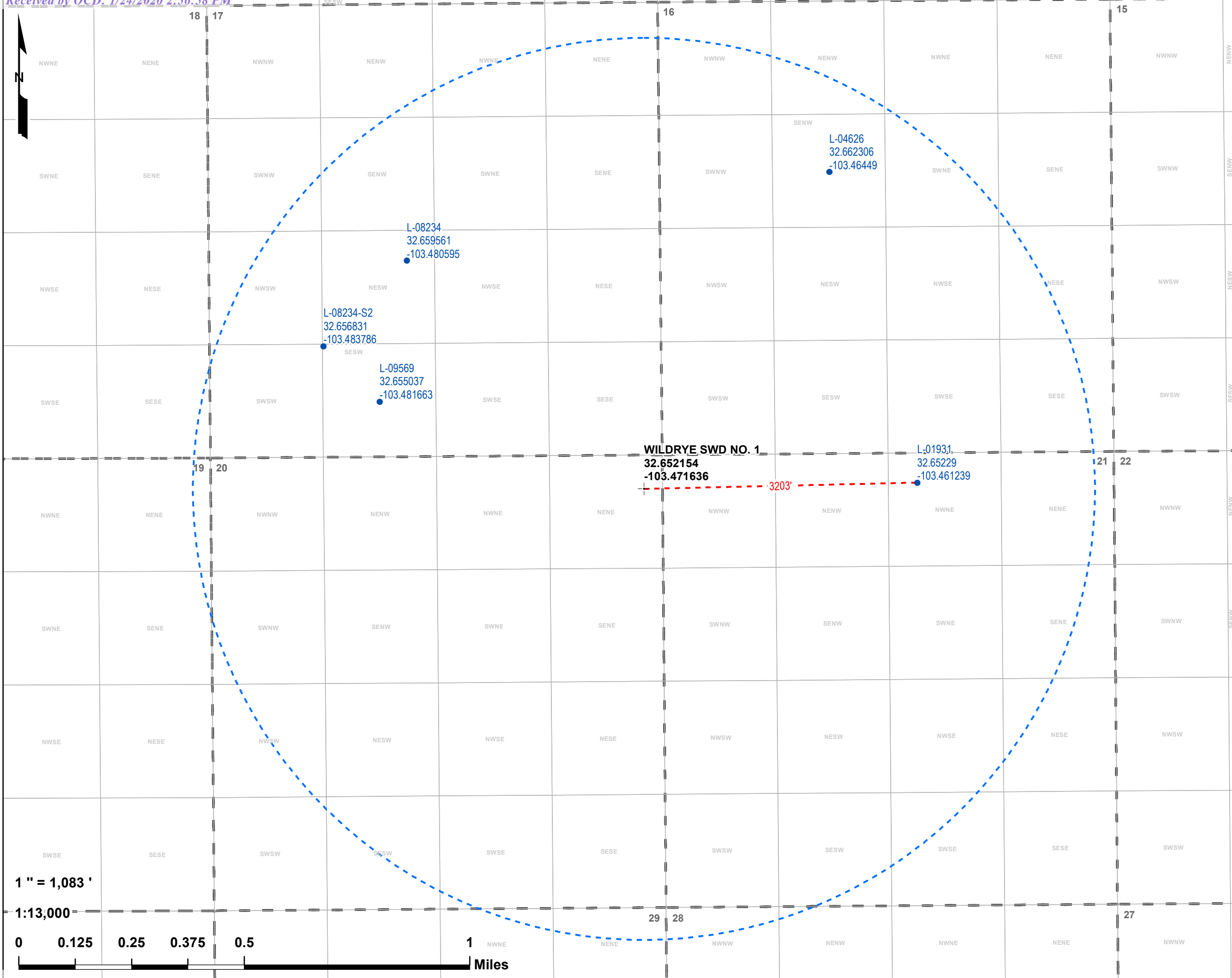
Name of Mineral Owners	Interest	Net Acres	Leasehold and Expiration Date
BP America Production Company P.O. Box 3092 Houston, TX 77253	N/A	N/A	UNLEASED
TOTALS FOR MINERAL OWNERSHIP	N/A	N/A	



INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
OGL	OG	305/492	8/18/1977	9/23/1977	Peoples Securities Company	Gulf Oil Corp.	OGL for the NW/4 of Sec. 20
OGL	OG	350/497	5/12/1982	6/11/1982	Peoples Security Company	Gulf Oil Corp.	OGL for the NW/4 of Sec. 20
CC Probate	OPR	998/546	10/12/1982	1/13/2000	The Estate of Clara Pauline Parks, Deceased	The Public	All interest was devised to the trust
Conveyance	DR	409/625	12/31/1983	1/6/1984	Peoples Securities Company	Amoco Production Company	Conveys all UDMI in Sec. 20
CC Probate	OPR	998/538	4/9/1990	6/13/1990	The Estate of Lester A. Parks, Deceased	The Public	All interest was devised to the trust
MD	OPR	1000/453	1/25/2000	1/28/2000	Bobby Parks, Ind and as Trustee under the LWT of Clara Parks and Lester A. Parks	Nancy B. Parks Janet J. Tidwell Diana K. Hammonds	Conveys all UDMI in Sec. 20
DD	OPR	1009/476	3/16/2000	3/31/2000	Bobby Parks, DFPR of the Estate of Clara Pauline Parks	Bobby G. Parks, Trustee uwo Clara Pauline Parks	Conveys all UDMI in Sec. 20
Merger	OPR	2153/152	1/16/2002	7/12/2019	Amoco Production Company	BP America Production Company P.O. Box 3092 Houston, TX 77253	Merger
OGL	OPR	1741/659	7/5/2011	8/19/2011	Hooper & Sons, LLC	Peregrine Production, LLC	OGL for the NE/4 and E/2SW/4
OGL	OPR	1741/662	7/5/2011	8/19/2011	The Jeannine Hooper Byron Trust UTA dtd 6/18/2003	Peregrine Production, LLC	OGL for the NE/4 and E/2SW/4
OGL	OPR	1741/666	7/5/2011	8/19/2011	Margaret A. Hooper Family Estate Trust	Peregrine Production, LLC	OGL for the NE/4 and E/2SW/4
OGL	OPR	1766/336	2/21/2012	2/29/2012	Marcia M. Tidwell	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1772/391	2/21/2012	4/10/2012	Merry A. McIntosh Living Trust dtd 1/13/2004	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1766/343	2/22/2012	2/29/2012	William P. McIntosh	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1772/394	2/22/2012	4/10/2012	Janet J. Tidwell	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1772/400	2/22/2012	4/10/2012	David C. McIntosh	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1776/208	2/22/2012	5/3/2012	Nancy B. Parks	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1776/211	2/22/2012	5/3/2012	Diana K. Hammonds	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1766/346	2/27/2012	2/29/2012	Cindy A. Polk	Featherstone Development Corporation	OGL for the NE/4 and E/2SW/4
OGL	OPR	1827/239	12/20/2012	3/25/2013	Bobby Parks, Ind and as IE of the Estate of Lester A. Parks and Clara Parks	Adventure Exploraiton Partners II, LLC	OGL for the NE/4 and E/2SW/4
MD	OPR	1945/473	2/18/2015	3/2/2015	Marcia M. Tidwell	William D. Polk Cindy A. Polk	Conveys all UDMI in Sec. 20

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
MD	OPR	1978/811	3/17/2015	9/8/2015	Margaret A. Hooper Family Estate Trust	Michael T. Hooper GST Trust Deborah H. Wachsmuth GST Trust Robert G. Hooper GST Trust Jack P. Hooper GST Trust	Conveys all UDMI in Sec. 20
MD	OPR	1954/378	4/13/2015	4/17/2015	Marcia M. Tidwell	William D. Polk Cindy A. Polk	Conveys all UDMI in Sec. 20
OGL	OPR	1982/418	8/21/2015	9/24/2015	The Jeannine Hooper Byron Trust UTA dtd 6/18/2003	COG Operating LLC	OGL for the NE/4 and E/2SW/4 40 months
OGL	OPR	1982/436	8/21/2015	9/24/2015	Hooper & Sons, LLC	COG Operating LLC	OGL for the NE/4 and E/2SW/4 40 months
OGL	OPR	1982/448	8/21/2015	9/24/2015	Margaret A. Hooper Family Estate Trust	COG Operating LLC	OGL for the NE/4 and E/2SW/4 40 months
OGL	OPR	2100/486	3/13/2017	4/27/2017	Nancy B. Parks	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2100/491	3/13/2017	4/27/2017	Diana P. Hammonds	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2106/83	3/13/2017	5/24/2017	Janet J. Tidwell	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2094/766	3/15/2017	4/5/2017	Cindy A. Polk et vir William D. Polk	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2094/768	3/15/2017	4/5/2017	Merry A. McIntosh Living Trust dtd 1/13/2004	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2094/770	3/15/2017	4/5/2017	William P. McIntosh	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2094/772	3/15/2017	4/5/2017	David C. McIntosh	Scratch Properties, LLC	OGL for the NE/4 and E/2SW/4 3 years
AOGL	OPR	2111/266	5/31/2017	6/20/2017	Scratch Properties, LLC	Ameredev New Mexico, LLC	Assigns ARTI in and to all OGLs covering the NE/4 and E/2SW/4
AOGL	OPR	2141/906	11/1/2018	11/8/2018	Ameredev New Mexico, LLC	Mewbourne Oil Company 500 West Texas, Suite 1020 Midland, TX 79701	Assigns ARTI in and to all OGLs covering the NE/4 and E/2SW/4
OGL	OPR	2142/125	11/2/2018	11/13/2018	Robert G. Hooper GST Trust	KLMC, Inc.	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2142/127	11/2/2018	11/13/2018	Deborah H. Wachsmuth GST Trust	KLMC, Inc.	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2142/131	11/2/2018	11/13/2018	The Robert and Jeannine Byron Revocable Trust uta dtd 6/18/2003	KLMC, Inc.	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2142/136	11/2/2018	11/13/2018	Hooper & Sons, LLC	KLMC, Inc.	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2144/246	11/2/2018	1/2/2019	The Jeannine Hooper Byron Trust UTA dtd 6/18/2003	KLMC, Inc.	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2144/249	11/9/2018	1/2/2019	Jack P. Hooper GST Trust	KLMC, Inc.	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2145/397	12/29/2018	1/30/2019	Michael T. Hooper GST Trust	Boss Hog Royalties, LLC	OGL for the NE/4 and E/2SW/4 3 years

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
AOGL	OPR	2149/569	2/1/2019	4/23/2019	KLMC, Inc.	Catena Resources Operating LLC	Assigns ARTI in and to all OGLs covering the NE/4 and E/2SW/4
MOGL	OPR	2147/655	2/26/2019	3/18/2019	Beulah H. Simmons Trust FBO MJ Hand TUA 2/27/1975 James E. Simmons Trust FBO MJ Hand TUA 2/27/75	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
OGL	OPR	2150/236	4/2/2019	5/7/2019	Randall R. Fort Rfort Mineral Properties, LLC Tommy L. Fort Margi Fort Bruns	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/543	4/2/2019	5/14/2019	Margi Fort Bruns	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/544	4/2/2019	5/14/2019	Tommy L. Fort	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/545	4/2/2019	5/14/2019	Randall R. Fort Rfort Mineral Properties, LLC	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/546	4/2/2019	5/14/2019	Robert Mitchell Raindl	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/547	4/2/2019	5/14/2019	Brent Raindl	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/548	4/2/2019	5/14/2019	Brandi Raindl Burns	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
MOGL	OPR	2150/549	4/2/2019	5/14/2019	Brady Lynn Raindl	Catena Resources Operating LLC	OGL for the NE/4 and E/2SW/4 3 years
AOGL	OPR	2151/718	4/9/2019	6/11/2019	Boss Hog Royalties, LLC	Catena Resources Operating LLC	Assigns ARTI in and to OGL 2145/397
AOGL	OPR	2153/716	6/1/2019	7/25/2019	Catena Resources Operating LLC	Mewbourne Oil Company 500 West Texas, Suite 1020 Midland, TX 79701	Assigns ARTI in and to all OGLs covering the NE/4 and E/2SW/4



Wildrye 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: 8/20/2019 | Approved by: ELR

LONQUIST & CO. LLC

PETROLEUM ENGINEERS

ENERGY ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

Wildrye SWD No. 1 SHL

Water Wells (5)

1-Mile

Distance Call

QQ-Section (NM-PLSS 2nd Div.)

Section (NM-PLSS 1st Div.)

Township/Range (NM-PLSS)

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

CHAVES

LEA

YOAKUM

GAINES

EDDY

NEW MEXICO

TEXAS

132

Map Extent



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 01931

Subbasin: L

Cross Reference: -

Primary Purpose: IRR IRRIGATION

Primary Status: CAN CANCELLED

Total Acres:

Subfile: -



Header: -

Total Diversion: 0


Cause/Case: -

Owner: VIRGIL LINAM

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
 get images	508465	COWNF	1958-04-22	CHG	PRC	L-1931	T	0	0	
 get images	508462	APPRO	1953-02-21	CAN	FIN	L-1931	T	0	0	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			Sec	Tws	Rng	X	Y	Other Location Desc
			1	2	3						
L 01931			64	16	4	21	19S	35E	644314	3613786*	

(NAD83 UTM in meters)

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number	Source
01/29/1953	CAN	0	0	L 01931	

Place of Use

Q Q Q Q				Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64	16	4										
	2	21	19S	35E			0	0		IRR	01/29/1953	CAN	
	4	21	19S	35E			0	0		IRR	01/29/1953	CAN	

Source

Acres	Diversion	CU	Use	Priority	Source Description
0	0		IRR	01/29/1953	GW

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



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 04626

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/ To	Acres	Diversion	Consumptive
				1	2					
 get images	495904	72121	1961-04-13	PMT	APR	L 04626	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc
			64	16	4	Sec	Tws Rng	
L 04626			4	1	16	19S	35E	643993 3614892* 

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 08234

Subbasin: L

Cross Reference: -

Primary Purpose: COM COMMERCIAL

Primary Status: CAN CANCELLED

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: SNYDER RANCHES INC

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
get images	488829	SUPPL	1983-01-12	CAN	FIN	L 08234 S2	T		0	
get images	488821	SUPPL	1982-12-09	CAN	FIN	L 08234 S	T		0	
get images	486389	APPRO	1981-09-03	CAN	FIN	L 08234	T		0	
get images	486291	72121	1980-03-17	PMT	LOG	L 08234	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			X	Y	Other Location Desc
			64	16	4			
L 08234		Shallow	2	2	3	17 19S 35E	642487 3614566*	MESCALERO RIDGE #1
L 08234 S		Shallow	4	4	1	18 19S 35E	640871 3614751*	
L 08234 S2		Shallow			3	17 19S 35E	642192 3614259*	N1/2

(NAD83 UTM in meters)

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number	Source
03/11/1981	CAN		0	L 08234	Shallow
				L 08234 S	Shallow
				L 08234 S2	Shallow

Place of Use

Q Q Q Q			Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64	16										
			20	19S	35E		0		COM		CAN	1/2 MILE SOUTH OF WELL

Source

Acres	Diversion	CU	Use	Priority	Source Description
	0		COM		GW

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



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 08234

Subbasin: L

Cross Reference: -

Primary Purpose: COM COMMERCIAL

Primary Status: CAN CANCELLED

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: SNYDER RANCHES INC

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
get images	488829	SUPPL	1983-01-12	CAN	FIN	L 08234 S2	T		0	
get images	488821	SUPPL	1982-12-09	CAN	FIN	L 08234 S	T		0	
get images	486389	APPRO	1981-09-03	CAN	FIN	L 08234	T		0	
get images	486291	72121	1980-03-17	PMT	LOG	L 08234	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			X	Y	Other Location Desc
			64	16	4			
L 08234		Shallow	2	2	3	17 19S 35E	642487 3614566*	MESCALERO RIDGE #1
L 08234 S		Shallow	4	4	1	18 19S 35E	640871 3614751*	
L 08234 S2		Shallow			3	17 19S 35E	642192 3614259*	N1/2

(NAD83 UTM in meters)

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number	Source
03/11/1981	CAN		0	L 08234	Shallow
				L 08234 S	Shallow
				L 08234 S2	Shallow

Place of Use

Q Q Q Q			Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64	16										
			20	19S	35E		0		COM		CAN	1/2 MILE SOUTH OF WELL

Source

Acres	Diversion	CU	Use	Priority	Source Description
	0		COM		GW

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



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 09569

Subbasin: L

Cross Reference: -

Primary Purpose: DOL 72-12-1 DOMESTIC AND LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: KLEIN RANCH

Contact: FAYE L. KLEIN

Documents on File


[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
516389	72121	1984-10-03	PMT	LOG	L 09569	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			Sec	Tws	Rng	X	Y	Other Location Desc
			64	16	4						
L 09569		Shallow	4	3	17	19S	35E	642394	3614063*		1971'FWL, 756'FSL

(NAD83 UTM in meters)

An () after northing value indicates UTM location was derived from PLSS - see Help



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 17, 2019

TYLER MOEHLMAN

Lonquist Field Services, LLC

12912 HILL COUNTRY BLVD., SUITE F-200

Austin, TX 78738

RE: WILDRIE SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 10/09/19 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILDRIE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
L - 04626	H903436-01	Water	09-Oct-19 13:49	09-Oct-19 16:00
32.642500 - 103.503759	H903436-02	Water	09-Oct-19 14:20	09-Oct-19 16:00

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILDRIE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

L - 04626**H903436-01 (Water)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories**Inorganic Compounds**

Alkalinity, Bicarbonate	278		5.00	mg/L	1	9092417	AC	10-Oct-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9092417	AC	10-Oct-19	310.1	
Chloride*	140		4.00	mg/L	1	9101005	AC	10-Oct-19	4500-Cl-B	
Conductivity*	777		1.00	uS/cm	1	9101007	AC	10-Oct-19	120.1	
pH*	7.52		0.100	pH Units	1	9101008	AC	10-Oct-19	150.1	
Resistivity	12.9			Ohms/m	1	9101007	AC	10-Oct-19	120.1	
Specific Gravity @ 60° F	0.9998		0.000	[blank]	1	9101006	AC	10-Oct-19	SM 2710F	
Sulfate*	40.2		10.0	mg/L	1	9101102	AC	11-Oct-19	375.4	
TDS*	511		5.00	mg/L	1	9100312	AC	11-Oct-19	160.1	
Alkalinity, Total*	228		4.00	mg/L	1	9092417	AC	10-Oct-19	310.1	
Sulfide, total	<0.0100		0.0100	mg/L	1	9101011	AC	10-Oct-19	376.2	

Green Analytical Laboratories**Total Recoverable Metals by ICP (E200.7)**

Barium*	0.133		0.050	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Calcium*	84.3		0.100	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Iron*	0.227		0.050	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Magnesium*	18.6		0.100	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Potassium*	1.68		1.00	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Sodium*	62.9		1.00	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILDRIE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

32.642500 - 103.503759**H903436-02 (Water)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Alkalinity, Bicarbonate	132		5.00	mg/L	1	9092417	AC	10-Oct-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9092417	AC	10-Oct-19	310.1	
Chloride*	48.0		4.00	mg/L	1	9101005	AC	10-Oct-19	4500-Cl-B	
Conductivity*	358		1.00	uS/cm	1	9101007	AC	10-Oct-19	120.1	
pH*	8.06		0.100	pH Units	1	9101008	AC	10-Oct-19	150.1	
Resistivity	27.9			Ohms/m	1	9101007	AC	10-Oct-19	120.1	
Specific Gravity @ 60° F	0.9982		0.000	[blank]	1	9101006	AC	10-Oct-19	SM 2710F	
Sulfate*	55.7		10.0	mg/L	1	9101102	AC	11-Oct-19	375.4	
TDS*	225		5.00	mg/L	1	9100312	AC	11-Oct-19	160.1	
Alkalinity, Total*	108		4.00	mg/L	1	9092417	AC	10-Oct-19	310.1	
Sulfide, total	0.0107		0.0100	mg/L	1	9101011	AC	10-Oct-19	376.2	

Green Analytical Laboratories**Total Recoverable Metals by ICP (E200.7)**

Barium*	<0.050		0.050	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Calcium*	25.2		0.100	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Iron*	5.14		0.050	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Magnesium*	9.10		0.100	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Potassium*	2.30		1.00	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	
Sodium*	33.1		1.00	mg/L	1	B910150	JDA	16-Oct-19	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILDRIE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 9092417 - General Prep - Wet Chem**Blank (9092417-BLK1)**

Prepared: 24-Sep-19 Analyzed: 27-Sep-19

Alkalinity, Carbonate	ND	1.00	mg/L						
Alkalinity, Bicarbonate	5.00	5.00	mg/L						
Alkalinity, Total	4.00	4.00	mg/L						

LCS (9092417-BS1)

Prepared: 24-Sep-19 Analyzed: 27-Sep-19

Alkalinity, Carbonate	ND	2.50	mg/L			80-120			
Alkalinity, Bicarbonate	292	12.5	mg/L			80-120			
Alkalinity, Total	240	10.0	mg/L	250		96.0	80-120		

LCS Dup (9092417-BSD1)

Prepared: 24-Sep-19 Analyzed: 27-Sep-19

Alkalinity, Carbonate	ND	2.50	mg/L			80-120		20	
Alkalinity, Bicarbonate	305	12.5	mg/L			80-120	4.18	20	
Alkalinity, Total	250	10.0	mg/L	250	100	80-120	4.08	20	

Batch 9100312 - Filtration**Blank (9100312-BLK1)**

Prepared: 03-Oct-19 Analyzed: 07-Oct-19

TDS	ND	5.00	mg/L						
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LCS (9100312-BS1)

Prepared: 03-Oct-19 Analyzed: 07-Oct-19

TDS	525		mg/L	527		99.6	80-120		
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Duplicate (9100312-DUP1)

Source: H903373-01

Prepared: 03-Oct-19 Analyzed: 07-Oct-19

TDS	261	5.00	mg/L		248		5.11	20	
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Batch 9101005 - General Prep - Wet Chem**Blank (9101005-BLK1)**

Prepared & Analyzed: 10-Oct-19

Chloride	ND	4.00	mg/L						
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILDRIE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9101005 - General Prep - Wet Chem**LCS (9101005-BS1)**

Prepared & Analyzed: 10-Oct-19

Chloride	108	4.00	mg/L	100	108	80-120
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LCS Dup (9101005-BSD1)

Prepared & Analyzed: 10-Oct-19

Chloride	104	4.00	mg/L	100	104	80-120	3.77	20
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Batch 9101006 - General Prep - Wet Chem**Duplicate (9101006-DUP1)**

Source: H903436-01

Prepared & Analyzed: 10-Oct-19

Specific Gravity @ 60° F	1.002	0.000	[blank]	0.9998	0.240	20
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Batch 9101007 - General Prep - Wet Chem**LCS (9101007-BS1)**

Prepared & Analyzed: 10-Oct-19

Conductivity	463		uS/cm	500	92.6	80-120
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Duplicate (9101007-DUP1)

Source: H903436-01

Prepared & Analyzed: 10-Oct-19

Conductivity	777	1.00	uS/cm	777	0.00	20
Resistivity	12.9		Ohms/m	12.9	0.00	20

Batch 9101008 - General Prep - Wet Chem**LCS (9101008-BS1)**

Prepared & Analyzed: 10-Oct-19

pH	7.09		pH Units	7.00	101	90-110
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Duplicate (9101008-DUP1)

Source: H903429-01

Prepared & Analyzed: 10-Oct-19

pH	7.14	0.100	pH Units	7.11	0.421	20
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILDRIE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9101011 - General Prep - Wet Chem**Blank (9101011-BLK1)**

Prepared & Analyzed: 10-Oct-19

Sulfide, total	ND	0.0100	mg/L
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Duplicate (9101011-DUP1)

Source: H903429-01

Prepared & Analyzed: 10-Oct-19

Sulfide, total	5.49	0.0100	mg/L	5.62	2.47	20
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Batch 9101102 - General Prep - Wet Chem**Blank (9101102-BLK1)**

Prepared & Analyzed: 11-Oct-19

Sulfate	ND	10.0	mg/L
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LCS (9101102-BS1)

Prepared & Analyzed: 11-Oct-19

Sulfate	22.8	10.0	mg/L	20.0	114	80-120
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LCS Dup (9101102-BSD1)

Prepared & Analyzed: 11-Oct-19

Sulfate	20.8	10.0	mg/L	20.0	104	80-120	9.18	20
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Analytical Results For:

Lonquist Field Services, LLC
12912 HILL COUNTRY BLVD., SUITE F-200
Austin TX, 78738

Project: WILD RYE SWD #1
Project Number: 32.652154 -103.471636
Project Manager: TYLER MOEHLMAN
Fax To: (512) 732-9816

Reported:
17-Oct-19 16:34

Total Recoverable Metals by ICP (E200.7) - Quality Control**Green Analytical Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B910150 - Total Rec. 200.7/200.8/200.2**Blank (B910150-BLK1)**

Prepared: 15-Oct-19 Analyzed: 16-Oct-19

Iron	ND	0.050	mg/L							
Potassium	ND	1.00	mg/L							
Barium	ND	0.050	mg/L							
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							

LCS (B910150-BS1)

Prepared: 15-Oct-19 Analyzed: 16-Oct-19

Sodium	3.22	1.00	mg/L	3.24		99.4	85-115			
Potassium	8.01	1.00	mg/L	8.00		100	85-115			
Magnesium	20.1	0.100	mg/L	20.0		101	85-115			
Iron	3.93	0.050	mg/L	4.00		98.2	85-115			
Calcium	3.94	0.100	mg/L	4.00		98.6	85-115			
Barium	1.94	0.050	mg/L	2.00		97.2	85-115			

LCS Dup (B910150-BSD1)

Prepared: 15-Oct-19 Analyzed: 16-Oct-19

Magnesium	19.7	0.100	mg/L	20.0		98.3	85-115	2.26	20	
Potassium	7.97	1.00	mg/L	8.00		99.7	85-115	0.508	20	
Calcium	3.92	0.100	mg/L	4.00		98.0	85-115	0.561	20	
Sodium	3.18	1.00	mg/L	3.24		98.1	85-115	1.26	20	
Barium	1.92	0.050	mg/L	2.00		95.8	85-115	1.41	20	
Iron	3.87	0.050	mg/L	4.00		96.9	85-115	1.37	20	

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in cursive script, appearing to read "Celey D. Keene", written in black ink.

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

+ Cardinal cannot verbal change. Please for written change to (K75) 202,2226

CARDINAL LABORATORIES **SCALE INDEX WATER ANALYSIS REPORT**

Company :	LONQUIST FIELD SERVICES	Date Sampled :	10/09/19
Lease Name :	WILDRIYE SWD #1	Company Rep. :	TYLER MOEHLMAN
Well Number :	L-04626 (H903436-01)		
Location :	32.652154 -103.471636		

ANALYSIS

1. pH	7.52	
2. Specific Gravity @ 60/60 F.	0.9998	
3. CaCO ₃ Saturation Index @ 80 F.	-0.078	
	@ 140 F.	+0.622

'Calcium Carbonate Scale Possible'

Dissolved Gasses

4. Hydrogen Sulfide	0.000	PPM
5. Carbon Dioxide	ND	PPM
6. Dissolved Oxygen	ND	PPM

Cations

		/	Eq. Wt.	=	MEQ/L
7. Calcium (Ca++)	84.30	/	20.1	=	4.19
8. Magnesium (Mg++)	18.60	/	12.2	=	1.52
9. Sodium (Na+)	63	/	23.0	=	3.60
10. Barium (Ba++)	0.133	/	68.7	=	0.00

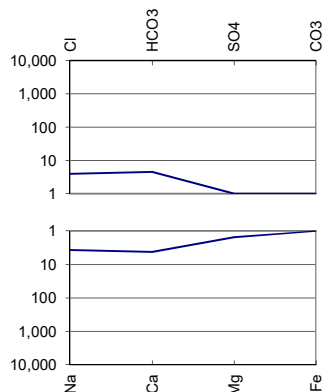
Anions

11. Hydroxyl (OH-)	0	/	17.0	=	0.00
12. Carbonate (CO ₃ =)	0	/	30.0	=	0.00
13. Bicarbonate (HCO ₃ -)	278	/	61.1	=	4.55
14. Sulfate (SO ₄ =)	40	/	48.8	=	0.82
15. Chloride (Cl-)	140	/	35.5	=	3.94

Other

16. Total Iron (Fe)	0.227	/	18.2	=	0.01
17. Total Dissolved Solids	511				
18. Total Hardness As CaCO ₃	287.0				
19. Calcium Sulfate Solubility @ 90 F.	1,405				
20. Resistivity (Measured)	12.900	Ohm/Meters	@ 77	Degrees (F)	

Logarithmic Water Pattern



PROBABLE MINERAL COMPOSITION

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO ₃) ₂	81.04	X	4.19	=	340
CaSO ₄	68.07	X	0.00	=	0
CaCl ₂	55.50	X	0.00	=	0
Mg(HCO ₃) ₂	73.17	X	0.36	=	26
MgSO ₄	60.19	X	0.00	=	0
MgCl ₂	47.62	X	1.17	=	56
NaHCO ₃	84.00	X	0.00	=	0
NaSO ₄	71.03	X	0.82	=	59
NaCl	58.46	X	2.77	=	162

ND = Not Determined

CARDINAL LABORATORIES SCALE INDEX WATER ANALYSIS REPORT

Company	:	LONQUIST FIELD SERVICES
Lease Name	:	WILDRYE SWD #1
Well Number	:	32.642500 -103.503759 (H903436-02)
Location	:	32.652154 -103.471636

Date Sampled : 10/09/19
Company Rep. : TYLER MOEHLMAN

ANALYSIS

1. pH	8.06
2. Specific Gravity @ 60/60 F.	0.9982
3. CaCO3 Saturation Index @ 80 F.	-0.925
@ 140 F.	-0.225

Dissolved Gasses

4. Hydrogen Sulfide	0.011	PPM
5. Carbon Dioxide	ND	PPM
6. Dissolved Oxygen	ND	PPM

Cations

Cations		/	Eq. Wt.	=	MEQ/L
7. Calcium (Ca++)	25.20	/	20.1	=	1.25
8. Magnesium (Mg++)	9.10	/	12.2	=	0.75
9. Sodium (Na+)	33	/	23.0	=	2.65
10. Barium (Ba++)	0.000	/	68.7	=	0.00

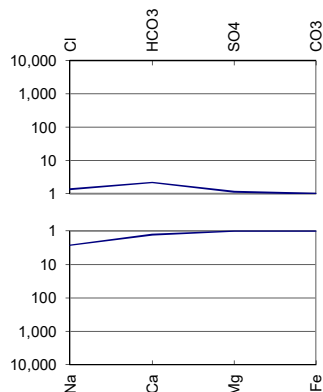
Anions

11. Hydroxyl (OH-)	0	/	17.0	=	0.00
12. Carbonate (CO3=)	0	/	30.0	=	0.00
13. Bicarbonate (HCO3-)	132	/	61.1	=	2.16
14. Sulfate (SO4=)	56	/	48.8	=	1.14
15. Chloride (Cl-)	48	/	35.5	=	1.35

Other

16. Total Iron (Fe)	5.140	/	18.2	=	0.28
17. Total Dissolved Solids	225				
18. Total Hardness As CaCO3	100.0				
19. Calcium Sulfate Solubility @ 90 F.	1,513				
20. Resistivity (Measured)	27.900	Ohm/Meters	@ 77	Degrees (F)	

Logarithmic Water Pattern



PROBABLE MINERAL COMPOSITION

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO ₃) ₂	81.04	X	1.25	=	102
CaSO ₄	68.07	X	0.00	=	0
CaCl ₂	55.50	X	0.00	=	0
Mg(HCO ₃) ₂	73.17	X	0.75	=	55
MgSO ₄	60.19	X	0.00	=	0
MgCl ₂	47.62	X	0.00	=	0
NaHCO ₃	84.00	X	0.16	=	14
NaSO ₄	71.03	X	1.14	=	81
NaCl	58.46	X	1.35	=	79

ND = Not Determined

Produced Water Samples Wildrye Fee SWD No. 1																	
Well Name	API	Section	Township	Range	Unit	Formation	ph	tds_mgL	sodium_mgL	calcium_mgL	iron_mgL	magnesium_mgL	manganese_mgL	chloride_mgL	bicarbonate_mgL	sulfate_mgL	co2_mgL
MONUMENT 12 STATE #025	30-025-34470	12	19S	36E	D	ABO	6.7	56387	20461.9	1468.85	5.205	365.391		35220.2	689.142	26.025	
MONUMENT 12 STATE #014	30-025-34191	12	19S	36E	C	ABO	6.91	57619.4	19538.5	2328.87	0.4168	507.454	0.1042	33819.2	597.066	2738.38	
MONUMENT 1 STATE #020	30-025-34310	1	19S	36E	N	ABO	7.34	54511.6	18350.7	2288.12	1.5615	475.737		31938.9	626.682	2557.74	
MONUMENT 11 STATE #030	30-025-34778	11	19S	36E	P	ABO	6.69	84094.8	27213.9	5045.49	386.232	1000.16		52487.1	529.872	2468.48	
LEA 403 STATE #004	30-025-20378	17	18S	35E	D	ABO	7.37	39874						22440	545	1529	
FEDERAL PT #001	30-025-04023	20	19S	36E	K	ARTESIA		257353						158500	187	1108	
NORTHWEST EUMONT UNIT #156	30-025-04099	33	19S	36E	H	ARTESIA		68631						38110	405	4317	
RIMFIRE STATE #001	30-025-03124	22	18S	35E	P	ARTESIA		27668						14560	1221	1888	
RIMFIRE STATE #001	30-025-03124	22	18S	35E	P	ARTESIA		202925						127900	357	737	
STATE NPA #001	30-025-03156	6	19S	35E	L	BONE SPRING	7.7	25800						14100	830	1120	
STATE NPA #001	30-025-03156	6	19S	35E	L	BONE SPRING		53622						30550	1123	2280	
STATE NPA #001	30-025-03156	6	19S	35E	L	BONE SPRING	6.6	195200						118000	220	1030	
SHOOTING STAR STATE SWD #001	30-025-29805	11	18S	35E	J	BONE SPRING	6.2			15600	2.5	981.9		148248	244	650	
HAMON STATE #001	30-025-03140	27	18S	35E	K	BONE SPRING		154510						96360	430	1210	
LEA 403 STATE #001	30-025-03126	22	18S	35E	D	BONE SPRING	6.72	255451						156699	327	779	
IRONHOUSE 19 STATE COM #001H	30-025-40676	19	18S	35E	N	BONE SPRING 2ND SAND	6.4	182863.9	58171	4944.4	49	1892.6	1.38	113954	195.2	0	30
IRONHOUSE 19 STATE COM #004H	30-025-41245	19	18S	35E	M	BONE SPRING 2ND SAND	6.2	189029.2	64016.2	5319.3	38.8	2044.4	1.48	113566	158.6	0	20
IRONHOUSE 19 STATE COM #001H	30-025-40676	19	18S	35E	N	BONE SPRING 2ND SAND	6.2	178799	62014	4341	39	1978	1	109565	2440	1890	190
IRONHOUSE 19 STATE COM #002H	30-025-41094	19	18S	35E	P	BONE SPRING 2ND SAND	6	205332	72646	4828	39	2316	2	130450	488	1503	180
IRONHOUSE 20 STATE COM #001	30-025-40611	20	18S	35E	O	BONE SPRING 2ND SAND	6.07	186865	65638	4698	16	1700	1	116510	1098	1804	180
IRONHOUSE 20 STATE #002H	30-025-40748	20	18S	35E	P	BONE SPRING 2ND SAND	6.6	196865	66738	4631	23	1790	1	116580	1298	1894	130
IRONHOUSE 19 STATE COM #003H	30-025-41050	19	18S	35E	O	BONE SPRING 2ND SAND	6.15	178457	56874	6125	22	1457	1	125412	845	849	190
LEA 4011 STATE #001	30-025-20173	8	18S	35E	N	DEVONIAN	8.3	101057						58100	732	3050	
LEA 403 STATE #005	30-025-20404	17	18S	35E	F	DEVONIAN	7.02	142213						84200	769	2350	
NIX C #001	30-025-03114	13	18S	35E	M	DEVONIAN		28813						16520	1207	362	
LEA J FEDERAL #002	30-025-03118	14	18S	35E	P	DEVONIAN		27719						14870	392	1956	
REEVES 26 #002	30-025-03135	26	18S	35E	N	DEVONIAN		8788						3180	550	2000	
NORTH MONUMENT G/SA UNIT #016	30-025-04063	25	19S	36E	P	GRAYBURG	6.6		2394	601		122		4577	463	312	
NORTH MONUMENT G/SA UNIT #016	30-025-04063	25	19S	36E	P	GRAYBURG	8.6		2777	237		228		4799	592	352	
NORTH MONUMENT G/SA UNIT #016	30-025-04063	25	19S	36E	P	GRAYBURG	7.3		3035	482		204		5326	1065	352	
W B MAVEETY #007	30-025-21886	35	19S	36E	G	GRAYBURG/SAN ANDRES	7.8	7092						3499	320	660	
SELBY MAVEETY #001Y	30-025-04129	35	19S	36E	N	GRAYBURG/SAN ANDRES	8.24	17294						9760	921	0	
NORTH MONUMENT G/SA UNIT #014	30-025-04053	25	19S	36E	N	GRAYBURG/SAN ANDRES		148449						87540	587	5531	
NORTH MONUMENT G/SA UNIT #016	30-025-04063	25	19S	36E	P	GRAYBURG/SAN ANDRES		10464						5326	1065	352	
NORTH MONUMENT G/SA UNIT #016	30-025-04063	25	19S	36E	P	GRAYBURG/SAN ANDRES		8469						4577	463	312	
REEVES ADQ STATE #002	30-025-03115	14	18S	35E	H	PENNSYLVANIAN		10202						4060	561	2598	
STATE KW 23 #001	30-025-03130	23	18S	35E	A	PENNSYLVANIAN		28417						15910	560	1244	
WEST PEARL QUEEN UNIT #117	30-025-03241	29	19S	35E	K	PENROSE	5.8										
WEST PEARL QUEEN UNIT #127	30-025-03242	29	19S	35E	P	PENROSE	5.8										
WEST PEARL QUEEN UNIT #112	30-025-03244	29	19S	35E	F	PENROSE	5.8										
WEST PEARL QUEEN UNIT #124	30-025-03229	28	19S	35E	O	PENROSE	6.7		69960	15974		4606		149248	352	711	
WEST PEARL QUEEN UNIT #103	30-025-03247	29	19S	35E	C	QUEEN	6.5		65212	19975		5522		151575	141	940	
WEST PEARL QUEEN UNIT #103	30-025-03247	29	19S	35E	C	QUEEN	6.7		78188	8394		7165		154968	65	1432	
WEST PEARL QUEEN UNIT #118	30-025-03248	29	19S	35E	J	QUEEN	5		64824	15418		7662		149504	35	257	
WEST PEARL QUEEN UNI #141	30-025-03284	33	19S	35E	C	QUEEN	6.4		59508	15080		6914		138040	38	418	
RECORD #002	30-025-03307	35	19S	35E	G	SAN ANDRES		66415						39600	313	993	
RECORD #002	30-025-03307	35	19S	35E	G	SAN ANDRES		73409						43880	450	865	
GRAHAM STATE NCT F #003	30-025-12476	36	19S	36E	J	SAN ANDRES	6.5			3454		1192		16406	611		
NORTHWEST EUMONT UNIT #156	30-025-04099	33	19S	36E	H	SAN ANDRES	7		22745	2211		848		38119	405	4317	
GRAHAM STATE NCT F #003	30-025-12476	36	19S	36E	J	SAN ANDRES	6.5		4687	3454		1192		16406	611		
GRAHAM STATE NCT F #003	30-025-12476	36	19S	36E	J	SAN ANDRES		26344									
CENTRAL VACUUM UNIT #117	30-025-20954	6	18S	35E	O	SAN ANDRES		168780						101000	360	3000	
SINCLAIR STATE #002	30-025-03123	21	18S	35E	A	WOLFCAMP	7.08	60950						33568	1087	3049	

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
August 15, 2019
and ending with the issue dated
August 15, 2019.



Publisher

Sworn and subscribed to before me this
15th day of August 2019.

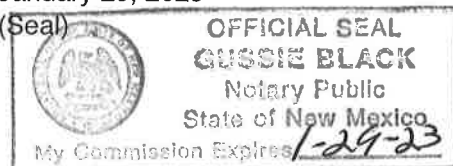


Business Manager

My commission expires

January 29, 2023

(Seal)



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 AUGUST 15, 2019

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 Wildrye Fee SWD No. 1. The proposed well will be located at 410' FNL and 240' FEL in Section 20, 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 14,050 feet to a maximum depth of 15,660 feet. The maximum surface injection pressure will not exceed 2,810 psi with a maximum rate of 25,000 BWP. 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) 600-1777. #34571

67112661

00232186

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.

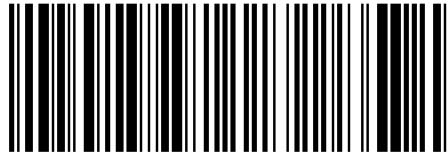
Notices were sent for the Wildrye Fee SWD No. 1 application by mailing them a copy of Form C-108 on 1/24/2020. The individual tracking numbers are attached in the following pages of this application. Receipt of each application will be monitored and presented to the Oil Conservation Division upon request.



Tyler Moehlman
Petroleum Engineer

Project: Blackbuck Resources, LLC
 Wildrye Fee SWD No. 1

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



9314 8699 0430 0068 0169 93

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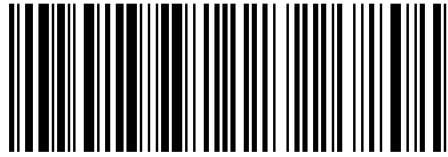


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OIL CONSERVATION DIVISION
DISTRICT I
1625 N FRENCH DRIVE
2157 - WILD RYE FEE #1
HOBBS, NM 88240

Reference Number: 2157 - WILD RYE FEE #1

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



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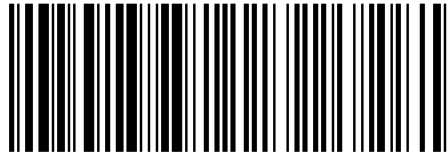


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BUREAU OF LAND MGMT
301 DINOSAUR TRAIL
2157 - WILD RYE FEE #1
SANTA FE, NM 87508

Reference Number: 2157 - WILD RYE FEE #1

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



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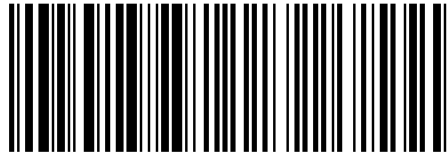


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FAITH CROSBY OGMD/WATER
NEW MEXICO LAND OFFICE
310 OLD SANTA FE TRAIL
2157 - WILD RYE FEE #1
SANTA FE, NM 87501

Reference Number: 2157 - WILD RYE FEE #1

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



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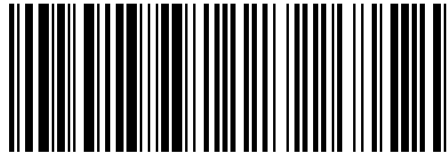


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L&K RANCH LLC
PO BOX 1503
2157 - WILD RYE FEE #1
HOBBS, NM 88241

Reference Number: 2157 - WILD RYE FEE #1

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



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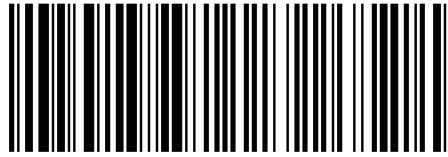


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CATENA RESOURCES OPERATING LLC
18402 US HWY 281 N
SUITE 258
2157 - WILDRYE FEE #1
SAN ANTONIO, TX 78259

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



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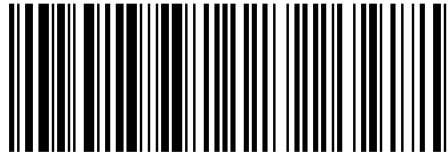


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BP AMERICA PRODUCTION COMPANY
PO BOX 3092
2157 - WILD RYE FEE #1
HOUSTON, TX 77253

Reference Number: 2157 - WILD RYE FEE #1

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



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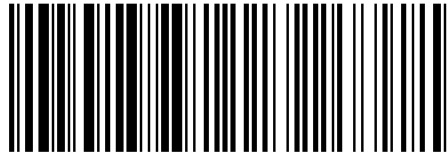


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CHEVRON USA INC
6301 DEAUVILLE BLVD
2157 - WILDRIYE FEE #1
MIDLAND , TX 79706

Reference Number: 2157 - WILDRIYE FEE #1

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



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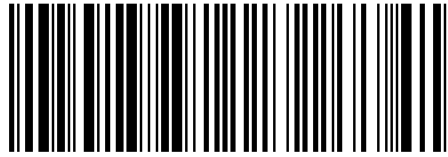


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COG OPERATING LLC
COG OPERATING LLC (BLM)
600 W ILLINOIS AVE
2157 - WILDRYE FEE #1
MIDLAND , TX 79701-4882

Reference Number: 2157 - WILDRYE FEE #1

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



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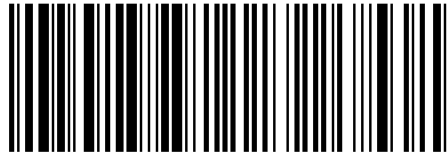


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MEWBOURNE OIL CO
500 W TEXAS ST
STE 1020
2157 - WILDRYE FEE #1
MIDLAND , TX 79701

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



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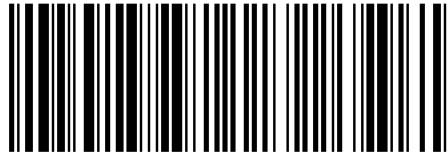


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MEWBOURNE OIL CO
PO BOX 5270
2157 - WILD RYE FEE #1
HOBBS, NM 88241

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



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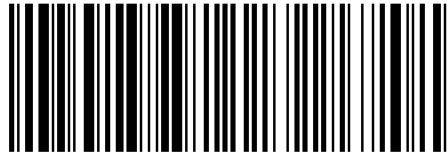


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PYRAMID ENERGY INC
(OPERATING RIGHTS)
14100 SAN PEDRO
STE 700
2157 - WILDRYE FEE #1
SAN ANTONIO, TX 78232

Reference Number: 2157 - WILDRYE FEE #1

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



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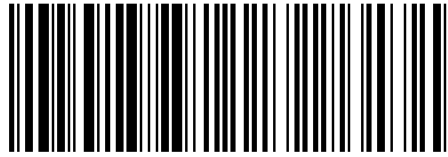


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RUTTER & WILBANKS
(OPERATING RIGHTS)
PO BOX 3186
2157 - WILDRIYE FEE #1
MIDLAND , TX 79702

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



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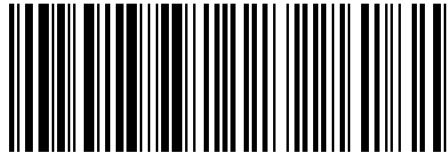


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SHELL PIPELINE & CORTEZ
ATTN: LAND
PO BOX 2648
2157 - WILDRYE FEE #1
HOUSTON, TX 77252

Reference Number: 2157 - WILDRYE FEE #1

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



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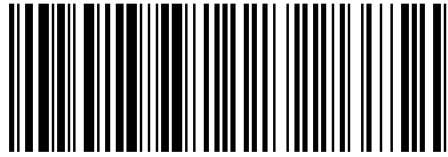


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WPX ENERGY PERMIAN LLC
3500 ONE WILLIAMS CENTER
2157 - WILD RYE FEE #1
TULSA, OK 74172

Reference Number: 2157 - WILD RYE FEE #1

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



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XERIC OIL & GAS CORP
(OPERATING RIGHTS)
PO BOX 352
2157 - WILDRIE FEE #1
MIDLAND , TX 79702-0352

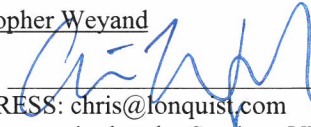
Reference Number: 2157 - WILDRIE FEE #1

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 _____ ☒ Disposal _____ Storage
Application qualifies for administrative approval? _____ ☒ Yes _____ No
- II. OPERATOR: Blackbuck Resources, LLC
ADDRESS: 2601 Westheimer Rd, C210, Houston, TX, 77098
CONTACT PARTY: Kevin Burns PHONE: 855-432-1400
- 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 _____ ☒ 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: 1/23/2020
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, LLCWELL NAME & NUMBER: Wildrye Fee SWD No. 1WELL LOCATION: 410' FNL 240' FEL
FOOTAGE LOCATIONA
UNIT LETTER20
SECTION19S
TOWNSHIP35E
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 26"Casing Size: 20"Cemented with: 4,376 sks*or* _____ ft³Top of Cement: surfaceMethod Determined: circulationIntermediate CasingHole Size: 17.5"Casing Size: 13.375"Cemented with: 2,558 sks*or* _____ ft³Top of Cement: surfaceMethod Determined: circulationProduction CasingHole Size: 12.250"Casing Size: 9.625"Cemented with: 1,787 sks*or* _____ ft³Top of Cement: surfaceMethod Determined: circulationLinerHole Size: 8.500"Casing Size: 7.625"Cemented with: 331 sks*or* _____ ft³Top of Cement: 9,791'Method Determined: calculationTotal Depth: 15,660'Injection Interval14,050 feet to 15,660 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 23 lb/ft, P-110, UFJ from 0' - 14,000'

Lining Material: Duoline

Type of Packer: Nickel Plated Double Grip Retrievable Packer or Equivalent

Packer Setting Depth: 14,000'

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: 5,862'

Bone Spring: 7,372'

Wolfcamp: 10,091'

Strawn: 11,110'

Morrow: 12,678'

District I1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720District II811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720District III1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170District IV1220 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 30-015-
⁴ Property Code	⁵ Property Name WILD RYE 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	20	19S	35E		410	N	240	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 3,797'
¹⁶ Multiple N	¹⁷ Proposed Depth 15,660'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 60'	Distance from nearest fresh water well 3,203'		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	1,890'	4,376	Surface
Intermediate	17-1/2"	13-3/8"	68 lb/ft	5,862'	2,558	Surface
Production	12-1/4"	9-5/8"	53.5 lb/ft	10,091'	1,787	Surface
Liner	8-1/2"	7-5/8"	39 lb/ft	9,791' - 14,050'	331	9,791'

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: January 24, 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
Phone (575) 393-6161 Fax. (575) 393-0720

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

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

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

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

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

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 97869	Pool Name DEVONIAN-SILURIAN
Property Code	Property Name WILDRYE FEE SWD	Well Number 1
OGRID No. 373619	Operator Name BLACKBUCK RESOURCES	Elevation 3797'

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	20	19-S	35-E		410	NORTH	240	EAST	LEA

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
Dedicated Acres	Joint or Infill	Consolidation Code	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

[illegible]

OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.


Signature Date 01/23/2020
Chris Wayard
Printed Name
chris@louquist.com
E-mail Address

SURVEYOR CERTIFICATION

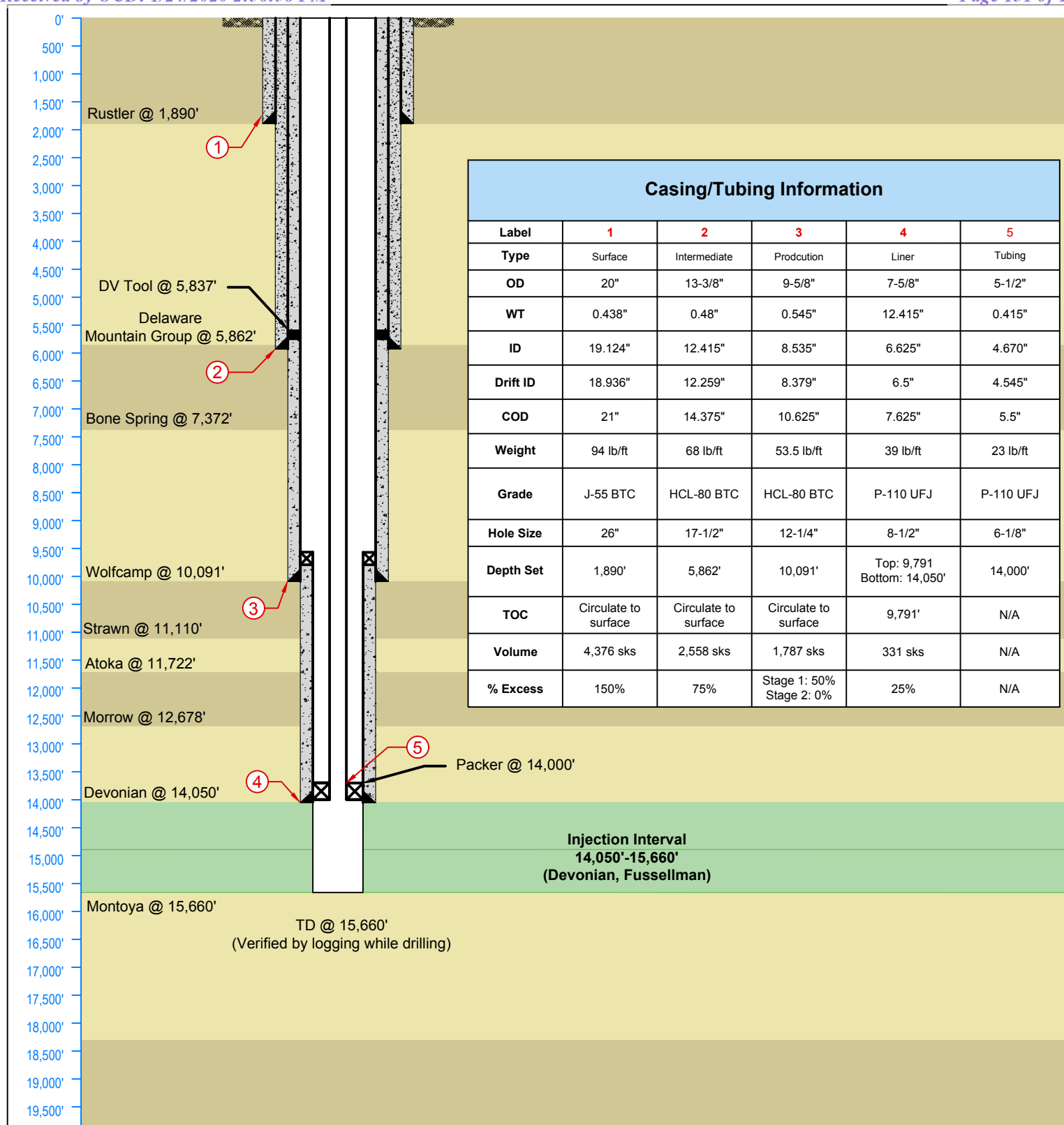
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 2, 2019

Date of Survey _____
Signature & Seal of Professional Surveyor: _____



Certificate Number	Gary G Eidson	12641
	Ronald J Eidson	3239
LSL	JWSC W O	19.11.0788

**LONQUIST & CO. LLC**PETROLEUM
ENGINEERSENERGY
ADVISORSHOUSTON | 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

Country: USA

Location:

API No: N/A

NMOCD District No: 1

Drawn: TFM

Rev No: 1

Wildrye Fee SWD No. 1

State/Province: New Mexico

Site: 410 FNL & 240 FEL

Field: Devonian-Silurian

Project No: 2157

Reviewed:

Notes:

County/Parish: Lea

Survey: S20-T19S-R35E

Well Type/Status: SWD

Date: 09/25/2019

Approved:



Blackbuck Resources, LLC

Wildrye Fee SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Wildrye Fee SWD
Well No.	1
Location	S-20 T-19S R-35E
Footage Location	410' FNL & 240' 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	1,890'	5,862'	10,091'	9,791' – 14,050'

b. Cementing Program

Casing String	Surface	Intermediate	Production	Liner
Lead Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: NeoCem	Versacem
Lead Cement Volume	3,339 sks	2,090 sks	Stage 1: 468 sks Stage 2: 692 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: 50 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: 0%	25%
Total Sacks	4,376 sks	2,558 sks	1,787 sks	331 sks
TOC	Surface	Surface	Stage 1: DV Tool @ 5,812' Stage 2: Surface	9,791'
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	14,000'

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, Fusselman
2. Gross Injection Interval: 14,050' – 15,660'

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	5,862'
Bone Spring	7,372'
Wolfcamp	10,091'
Strawn	11,110'
Morrow	12,678'

VI. Area of Review

One (1) well penetrated the injection zone within a one-mile radius of the proposed well. The Toro 21 State Com No. 1Y, an active Wolfcamp Producer operated by WPX Energy Permian, previously penetrated the Devonian. When the well was operated by Louis Dreyfus Natural Gas Corp., the initial well drilled into the Devonian approximately one-hundred (100) feet into the Devonian. The well was drilled to 13,960', and eventually was plugged back on November 1998. Since plugging back the Devonian, the well has three (3) total cast iron bridge plugs set above the Devonian and is now currently producing from the Wolfcamp formation. The plugs and cement behind pipe isolate the proposed injection interval and impede fluid migration out of the injection zone.

A plugging schematic of the Toro 21 State Com. No. 1Y well is attached in this permit packet.

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: 2,108 PSI (surface pressure)

Maximum Injection Pressure: 2,810 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	1,890'
Delaware Mountain Group	5,862'
Bone Spring	7,372'
Wolfcamp	10,091'
Strawn	11,110'
Atoka	11,722'
Morrow	12,678'
Devonian	14,050'
Montoya	15,660'

B. Underground Sources of Drinking Water

Five (5) 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 are drilled at an average depth of 113 feet and the average water depth is 60 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.

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.

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: Solaris Water Midstream, LLC
Wildyre Fee SWD No. 1
January 24, 2020

LONQUIST & CO. LLC**PETROLEUM
ENGINEERS****ENERGY
ADVISORS**

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INJECTION INTERVAL CONFINING LAYERS – WILDRYE FEE SWD NO. 1

The Devonian-Silurian injection interval for the proposed Wildrye 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
January 24, 2020

Project: Blackbuck Resources
 Wildrye Fee SWD No. 1