

# 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: FEATHERGRASS 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") Feathergrass 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](mailto:chris@lonquist.com)

PO#: 5XY05-200124-C-1080

Revised March 23, 2017

RECEIVED: 1/24/2020	REVIEWER:	TYPE: SWD-2368	APP NO: pJAG2002733407
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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: FEATHERGRASS 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☐ PPR2) **NOTIFICATION REQUIRED TO:** Check those which apply.A. ☒ Offset operators or lease holdersB. ☐ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☒ Notification and/or concurrent approval by SLOE. ☐ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☒ 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: Barry Riley PHONE: 979-575-8802
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes \_\_\_\_\_ ☒ 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.

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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: Feathergrass Fee SWD No. 1WELL LOCATION: 1,590' FSL 220' FWL  
FOOTAGE LOCATIONL  
UNIT LETTER27  
SECTION19S  
TOWNSHIP35E  
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 26"Casing Size: 20"Cemented with: 4,110 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulationIntermediate CasingHole Size: 17.5"Casing Size: 13.375"Cemented with: 1,170 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulationProduction CasingHole Size: 12.250"Casing Size: 9.625"Cemented with: 1,835 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulationLinerHole Size: 8.500"Casing Size: 7.625"Cemented with: 335 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: 11,337'Method Determined: calculationTotal Depth: 15,562'Injection Interval14,044 feet to 15,562 feet

(Open Hole)

**INJECTION WELL DATA SHEET**

Tubing Size: 5.5", 23 lb/ft, P-110, UFJ from 0' - 13,994'

Lining Material: Duoline

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

Packer Setting Depth: 13,994'

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: Siluro-Devonian, 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: 5,788'

Bone Spring: 7,534'

Wolfcamp: 10,143'

Strawn: 11,500'

Morrow: 12,487'



**Blackbuck Resources, LLC**

**Feathergrass Fee SWD No. 1**

**FORM C-108 Supplemental Information**

**III. Well Data**

**A. Wellbore Information**

1.

Well information	
<b>Lease Name</b>	Feathergrass Fee SWD
<b>Well No.</b>	1
<b>Location</b>	S-27 T-19S R-35E
<b>Footage Location</b>	1,590' FSL & 220' FWL

2.

**a. Wellbore Description**

<b>Type</b>	Surface	Intermediate	Production	Liner
<b>OD</b>	20"	13-3/8"	9-5/8"	7-5/8"
<b>WT</b>	0.438"	0.480"	0.545"	0.500"
<b>ID</b>	19.124"	12.415"	8.535"	6.625"
<b>Drift ID</b>	18.936"	12.259"	8.379"	6.5"
<b>COD</b>	21"	14.375"	10.625"	7.625"
<b>Weight</b>	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
<b>Grade</b>	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ
<b>Hole Size</b>	26"	17-1/2"	12-1/4"	8-1/2"
<b>Depth Set</b>	1,768'	5,788'	10,143'	9,843' – 14,044'



## b. Cementing Program

Casing String	Surface	Intermediate	Production	Liner
Lead Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: NeoCem	Versacem
Lead Cement Volume	3070 sks	700 sks	Stage 1: 495 sks Stage 2: 685 sks	335 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	1040 sks	470 sks	Stage 1: 605 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	4,110 sks	1,170 sks	1,835 sks	335 sks
TOC	Surface	Surface	Stage 1: DV Tool @ 5,763' Stage 2: Surface	9,843'
Method	Circulate	Circulate	Circulated	CBL

## 3. Tubing Description

Tubing Information	
OD	5-1/2"
WT	0.415"
ID	4.670"
Drift ID	4.545"
COD	5.5"
Weight	23 lb/ft
Grade	P-110 UFJ
Depth Set	13,994'

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: 14,044' – 15,562'

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	5,788'
Bone Spring	7,534'
Wolfcamp	10,143'
Strawn	11,500'
Morrow	12,487'

## VI. Area of Review

One well penetrates the proposed injection zone. The East Pearl Queen Unit #27 (API: 30-025-12578) was drilled in 1954 to a total depth of 13,950' and is currently plugged, not sight released. The well penetrated the Devonian interval by approximately 63' but was not completed in the Devonian. The well has repeatedly been plugged back to produce from several shallower formations since the well's initial production. There are currently seven (7) cast-iron bridge plugs in the wellbore and cement has been filled to surface. Records and a schematic of the plugged wells are attached in this application. As shown in the attached schematic, this wellbore was cemented and plugged in way that it will not act as a conduit for fluid migration.

## 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: 2,107 PSI (surface pressure)  
Maximum Injection Pressure: 2,809 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, Wolfcamp and Artesia 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 surrounding area.

#### 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	1,768'
Delaware Mountain Group	5,763'
Bone Spring	7,534'
Wolfcamp	10,143'
Strawn	11,500'
Atoka	11,950'
Morrow	12,487'
Devonian	14,044'
Montoya	15,562'

B. Underground Sources of Drinking Water

Seven (7) 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. 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

Chemical analysis of two (2) fresh water wells from Cardinal Laboratories are presented in this application.



**District I**1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720**District II**811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720**District III**1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170**District IV**1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

## State of New Mexico

## Energy Minerals and Natural Resources

## Oil Conservation Division

☐ AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

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

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

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
L	27	19S	35E		1,590	S	220	W	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**

<sup>11</sup> Work Type N	<sup>12</sup> Well Type SWD	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Private	<sup>15</sup> Ground Level Elevation 3,718'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 15,562'	<sup>18</sup> Formation Devonian-Silurian	<sup>19</sup> Contractor TBD	<sup>20</sup> Spud Date ASAP
Depth to Ground water 45'	Distance from nearest fresh water well 2628'		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	1,768'		Surface
Intermediate	17-1/2"	13-3/8"	68 lb/ft	5,788'		Surface
Production	12-1/4"	9-5/8"	53.5 lb/ft	10,143'		Surface
Liner	8-1/2"	7-5/8"	39 lb/ft	9,843' - 14,044'		9,843'

**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

<sup>23</sup> 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 <b>97869</b>	Pool Name <b>DEVONIAN-SILURIAN</b>
Property Code	Property Name <b>FEATHERGRASS FEE SWD</b>	Well Number <b>1</b>
OGRID No. <b>373619</b>	Operator Name <b>BLACKBUCK RESOURCES</b>	Elevation 3718'

### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	27	19-S	35-E		1590	SOUTH	220	WEST	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

220'

1590'

GEODETTIC COORDINATES  
NAD 27 NME  
SURFACE LOCATION  
Y= 593440.3 N  
X= 771188.3 E  
LAT.=32.628381° N  
LONG.=103.452472° W

GEODETTIC COORDINATES  
NAD 83 NME  
SURFACE LOCATION  
Y= 593503.4 N  
X= 812369.2 E  
LAT.=32.628504° N  
LONG.=103.452960° W

### 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 [Signature] Date 1/23/2020

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

Chris @longquist.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 1, 2019

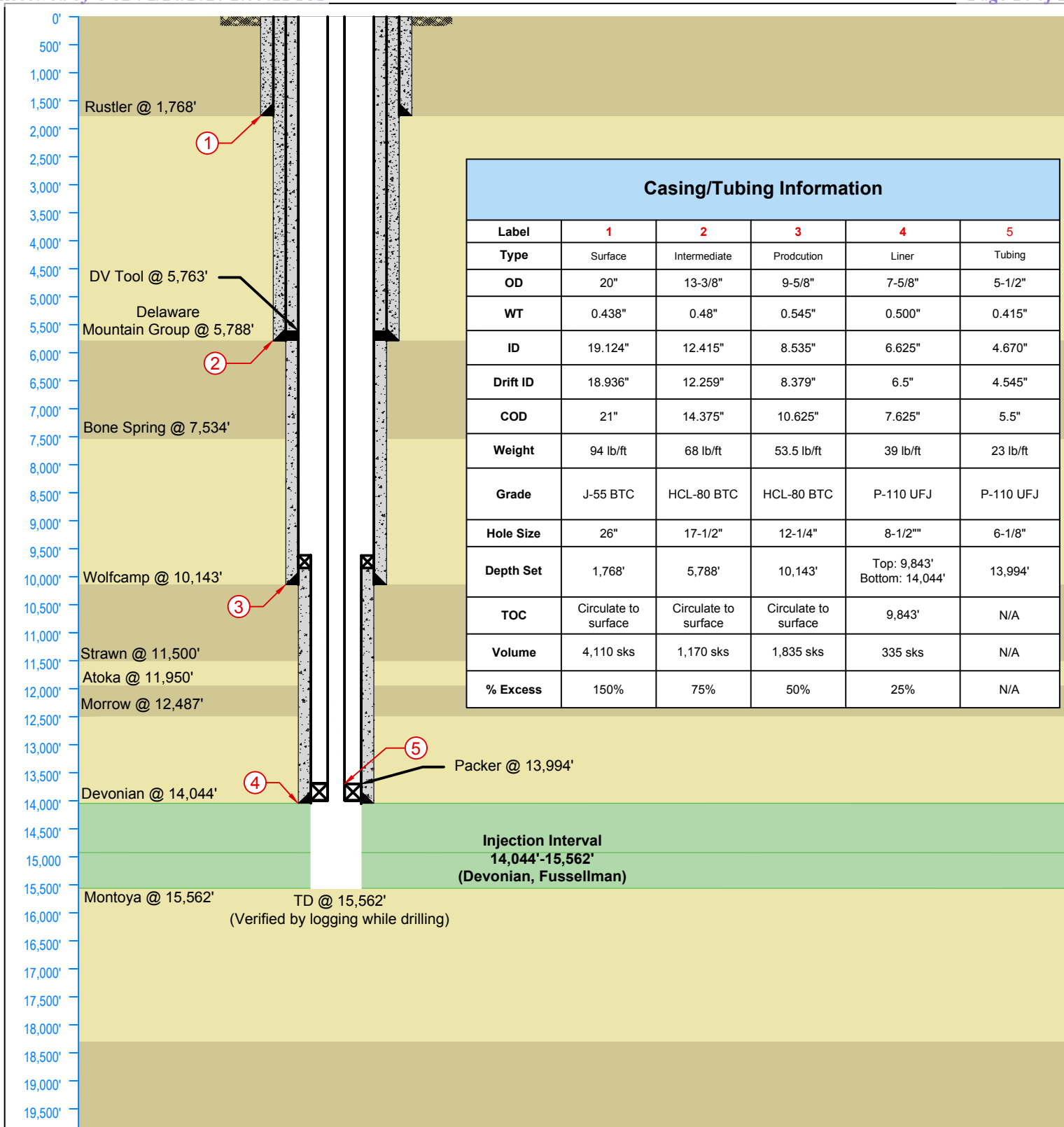
Date of Survey \_\_\_\_\_  
Signature & Seal of Professional Surveyor: \_\_\_\_\_

NEW MEXICO

REGISTERED 3239 SURVEYOR

*Ronald J. Eidson* 7/17/2017  
Certificate Number Gary G. Eidson 42641  
Ronald J. Eidson 3239

LSL JWSC W O : 19.11.0792

**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

**Feathergrass Fee SWD No. 1**

State/Province: New Mexico

Site: 1,590 FSL, 220 FWL

Field: Devonian-Silurian

Project No: 2159

Reviewed:

Notes:

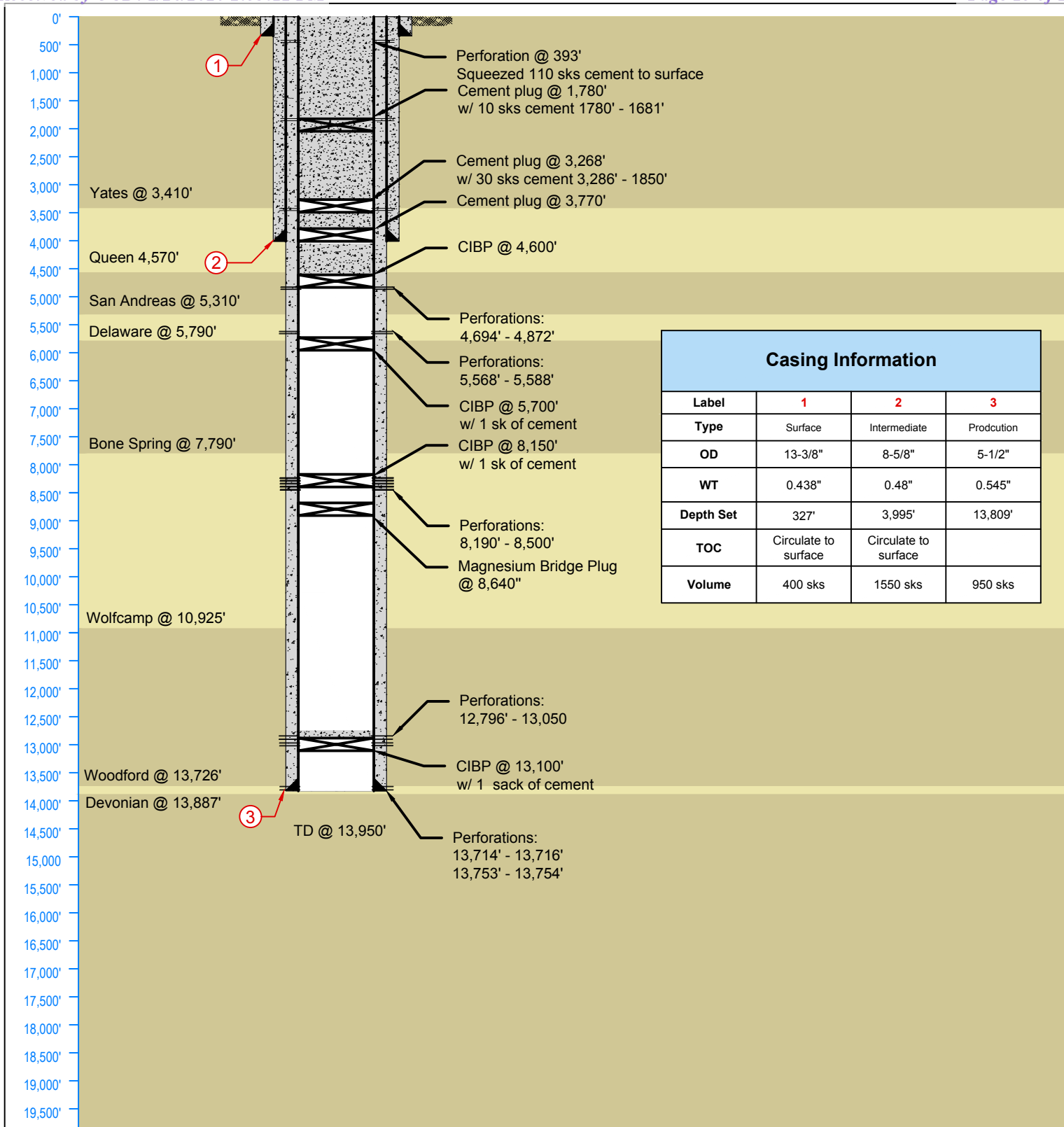
County/Parish: Lea

Survey: S27-T19S-R35E

Well Type/Status: SWD

Date: 08/18/2019

Approved:



Casing Information			
Label	1	2	3
Type	Surface	Intermediate	Production
OD	13-3/8"	8-5/8"	5-1/2"
WT	0.438"	0.48"	0.545"
Depth Set	327'	3,995'	13,809'
TOC	Circulate to surface	Circulate to surface	
Volume	400 sks	1550 sks	950 sks

**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**Xeric Oil & Gas Corp****Country:** USA**Location:****API No:** 30-025-12578**NMOCD District No:** 1**Drawn:** TFM**Rev No:** 1**East Pearl Queen Unit #27****State/Province:** New Mexico**Site:** 1,980 FNL & 1,980 FEL**Field:** Devonian-Silurian**Project No:** 2159**Reviewed:** CBW**Notes:****County/Parish:** Lea**Survey:** G S27-T19S-R35E**Well Type/Status:** SWD**Date:** 9/5/2019**Approved:** CBW



#27 Xeric Oil & Gas Corp  
East Pearl Queen Unit  
Form: Pyramid Ener Inc

27-19-35  
Unit G

OIL POO	<u>2186410</u>	GAS POO	<u>2186430</u>
TRANSPORTER	<u>37480</u>	TRANSPORTER	<u>24650</u>
TRANSPORTER	<u>9121</u>	TRANSPORTER	<u>9121</u>
UNIT POO <u>2186450</u>			

PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Bravos Rd., Aztec, NM 87410  
District IV  
PO Box 2082, Santa Fe, NM 87504-2082

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

Instructions on back  
Submit to Appropriate District Office  
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☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Operator name and Address XERIC OIL & GAS CORPORATION 200 NORTH LORRAINE, SUITE 1111 MIDLAND, TEXAS 79701		OGRID Number 25482
Reason for Filing Code CH-EFFECTIVE 6/15/94		
API Number 30 - 025-12578	Pool Name PEARL QUEEN	Pool Code 49780
Property Code 009435 15432	Property Name EAST PEARL QUEEN Unit	Well Number 27

II. Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
G	27	19S	35E		1980	North	1980	East	LEA

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
G	27	19S	35E		1980	North	1980	East	LEA
Lee Code P	Producing Method Code P	Gas Connection Date	C-129 Permit Number	C-129 Effective Date	C-129 Expiration Date				

III. Oil and Gas Transporters

Transporter OGRID	Transporter Name and Address	POD	O/G	POD ULSTR Location and Description
037480	EOTT OIL PIPELINE CO. PO BOX 4666 HOUSTON, TX 77210-4666	2186410	O	I-21-19S-35E LEA COUNTY, NM
024650	WARREN PETROLEUM CORP. PO BOX 1589 TULSA, OK 74102	2186430	G	I-21-19S-35E LEA COUNTY, NM
9171	GPM 4044 PEN BROOK ODESSA, TX 79762	2186430	G	I-21-19S-35E LEA COUNTY, NM

IV. Produced Water

POD	POD ULSTR Location and Description
2186450	I-21-19S-35E LEA COUNTY, NM

V. Well Completion Data

Spud Date	Ready Date	TD	PBTD	Perforations
Hole Size	Casing & Tubing Size	Depth Set	Sacks Cement	

VI. Well Test Data

Date New Oil	Gas Delivery Date	Test Date	Test Length	Tbg. Pressure	Cog. Pressure
Choke Size	Oil	Water	Gas	AOF	Test Method

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: RANDALL CAPPS  
Title: PRESIDENT  
Date: 3/1/91  
Phone: (915) 683-9152

OIL CONSERVATION DIVISION	
Approved by: ORIGINAL SIGNED BY JERRY SEXTON	
Title: DISTRICT SUPERVISOR	
Approval Date: AUG 05 1991	

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

Previous Operator/Signature  018223	SCOTT GRAEF Printed Name PYRAMID ENERGY, INC.	OPERATIONS MANAGER Title 6-20-94 Date
---	---	--

46

District II  
 50 Dryer DD, Artesia, NM 88211-0719  
 District III  
 1000 Rio Bravo Rd., Aztec, NM 87410  
 District IV  
 PO Box 2088, Santa Fe, NM 87504-2088

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

Revised February 10, 1994  
 Instructions on back  
 Submit to Appropriate District Office  
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☐ AMENDED REPORT

**I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**

Operator name and Address XERIC OIL & GAS CORPORATION 200 NORTH LARRAINE, SUITE 1111 MIDLAND, TEXAS 79701-10		OGRID Number 25482
		Reason for Filing Code CH-EFFECTIVE 6/15/94
API Number 30 - 025-12578	Pool Name PEARL QUEEN	Pool Code 49780
Property Code 009435 15432	Property Name EAST PEARL QUEEN Unit	Well Number 27

**II. Surface Location**

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South Line	Feet from the	East/West line	County
G	27	19S	35E		1980	North	1980	East	LEA

**Bottom Hole Location**

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
G	27	19S	35E		1980	North	1980	East	LEA
Lee Code P	Producing Method Code P	Gas Connection Date	C-129 Permit Number	C-129 Effective Date	C-129 Expiration Date				

**III. Oil and Gas Transporters**

Transporter OGRID	Transporter Name and Address	POD	O/G	POD ULSTR Location and Description
037480	EOTT OIL PIPELINE CO. PO BOX 4666 HOUSTON, TX 77210-4666	2186410	O	I-21-19S-35E LEA COUNTY, NM
024650	WARREN PETROLEUM CORP. PO BOX 1589 TULSA, OK 74102	2186430	G	I-21-19S-35E LEA COUNTY, NM
9171	GPM 4044 PEN BROOK ODESSA, TX 79762	2186430	G	I-21-19S-35E LEA COUNTY, NM

**IV. Produced Water**

POD	POD ULSTR Location and Description
2186450	I-21-19S-35E LEA COUNTY, NM

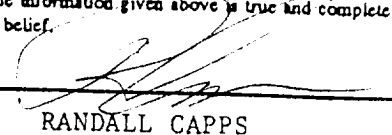
**V. Well Completion Data**

Spud Date	Ready Date	TD	PBTD	Perforations
Hole Size	Casing & Tubing Size	Depth Set	Sacks Cement	

**VI. Well Test Data**

Date New Oil	Gas Delivery Date	Test Date	Test Length	Tbg. Pressure	Csg. Pressure
Choke Size	Oil	Water	Gas	AOF	Test Method

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: RANDALL CAPPS  
 Title: PRESIDENT  
 Date: 3/17/94  
 Phone: (915) 683-9152

**OIL CONSERVATION DIVISION**

Approved by: ORIGINAL SIGNED BY JERRY SEXTON

Title: DISTRICT SUPERVISOR

Approval Date:

AUG 05 1994

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

Previous Operator/Signature  
 018223

SCOTT GRAEF  
 Printed Name  
 PYRAMID ENERGY, INC.

OPERATIONS MANAGER 6-20-94  
 Title Date

16

Submit 5 Copies  
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DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-104  
Revised 1-1-89  
See Instructions  
at Bottom of Page

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

## OIL CONSERVATION DIVISION

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

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

### REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator <b>Pyramid Energy, Inc.</b>		Well API No. <b>30-025-12578</b>
Address <b>10101 Reunion Place, Ste. 210 San Antonio, Texas 78216</b>		
Reason(s) for Filing (Check proper box) New Well <input type="checkbox"/> Change in Transporter of: Recompletion <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Dry Gas <input type="checkbox"/> Change in Operator <input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/> Other (Please explain) <input type="checkbox"/>		
If change of operator give name and address of previous operator _____		

### II. DESCRIPTION OF WELL AND LEASE

Lease Name <b>East Pearl Queen unit</b>	Well No. <b>27</b>	Pool Name, Including Formation <b>Pearl (Queen)</b>	Kind of Lease State, Federal or Fee <input checked="" type="radio"/>	Lease No.
Location Unit Letter <b>G</b> <b>1980</b> Feet From The <b>North</b> Line and <b>1980</b> Feet From The <b>East</b> Line Section <b>27</b> Township <b>19S</b> Range <b>35E</b> , NMPM, Lea County				

### III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <b>EOTT Oil Pipeline Company</b>	<input checked="" type="checkbox"/> or Condensate <input type="checkbox"/>	Effective <b>4-1-91</b> O. Box <b>4666</b> Houston, Texas <b>77210-4666</b> (Give address to which approved copy of this form is to be sent)				
Name of Authorized Transporter of Casinghead Gas <b>Warren Petroleum</b>	<input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent) <b>P.O. Box 1589 Tulsa, OK 74102</b>				
If well produces oil or liquids, give location of tanks.	Unit <b>F</b>	Sec. <b>27</b>	Twp. <b>19S</b>	Rge. <b>35E</b>	Is gas actually connected? <b>Yes</b>	When ?

If this production is commingled with that from any other lease or pool, give commingling order number: \_\_\_\_\_

### IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
Date Spudded	Date Compl. Ready to Prod.		Total Depth		P.B.T.D.			
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay		Tubing Depth			
Perforations					Depth Casing Shoe			
TUBING, CASING AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET		SACKS CEMENT			

### V. TEST DATA AND REQUEST FOR ALLOWABLE

#### OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas- MCF

#### GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pilot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

### VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations 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 Scott Graef  
Printed Name **Scott Graef** Title **Production Engineer**  
Date 11/16/93 (210) 308-8000  
Telephone No.

### OIL CONSERVATION DIVISION

Date Approved NOV 29 1993

By ORIGINAL SIGNED BY JERRY SEXTON  
Title DISTRICT I SUPERVISOR

### INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- 4) Separate Form C-104 must be filed for each pool in multiply completed wells.



Submit 5 Copies  
Appropriate District Office  
**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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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

Form C-104  
Revised 1-1-89  
See Instructions  
at Bottom of Page

**REQUEST FOR ALLOWABLE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS**

Operator <b>Pyramid Energy, Inc.</b>		Well API No. <b>30-025-12578</b>
Address <b>10101 Reunion Place, Ste. 210 San Antonio, Texas 78216</b>		
Reason(s) for Filing (Check proper box) <input type="checkbox"/> Other (Please explain)		
New Well <input type="checkbox"/>	Change in Transporter of:	
Recompletion <input type="checkbox"/>	Oil <input checked="" type="checkbox"/> Dry Gas <input type="checkbox"/>	
Change in Operator <input type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>	
If change of operator give name and address of previous operator		

**II. DESCRIPTION OF WELL AND LEASE**

Lease Name <b>East Pearl Queen Unit</b>	Well No. <b>27</b>	Pool Name, Including Formation <b>Pearl (Queen)</b>	Kind of Lease State, Federal or <b>(Fee)</b>	Lease No.
Location Unit Letter <b>G</b> <b>1980</b> Feet From The <b>North</b> Line and <b>1980</b> Feet From The <b>East</b> Line Section <b>27</b> Township <b>19S</b> Range <b>35E</b> <b>NMPM</b> Lea County				

**III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS**

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> <b>EOTT Oil Pipeline Company</b>	Address (Give address to which approved copy of this form is to be sent) <b>P.O. Box 4666 Houston, Texas 77210-4666</b>					
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> <b>Warren Petroleum</b>	Address (Give address to which approved copy of this form is to be sent) <b>P.O. Box 1589 Tulsa, OK 74102</b>					
If well produces oil or liquids, give location of tanks.	Unit <b>F</b>	Sec. <b>27</b>	Twp. <b>19S</b>	Rge. <b>35E</b>	Is gas actually connected? <b>Yes</b>	When ?

If this production is commingled with that from any other lease or pool, give commingling order number:

**IV. COMPLETION DATA**

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
Date Spudded	Date Compl. Ready to Prod.		Total Depth		P.B.T.D.			
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay		Tubing Depth			
Perforations					Depth Casing Shoe			
<b>TUBING, CASING AND CEMENTING RECORD</b>								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET		SACKS CEMENT			

**V. TEST DATA AND REQUEST FOR ALLOWABLE**

**OIL WELL** (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas- MCF

**GAS WELL**

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pilot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

**VI. OPERATOR CERTIFICATE OF COMPLIANCE**

I hereby certify that the rules and regulations 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 Scott Graef  
Printed Name **Scott Graef** Title **Production Engineer**  
Date 11/16/93 Telephone No. **(210) 308-8000**

**OIL CONSERVATION DIVISION**

Date Approved NOV 29 1993

By ORIGINAL SIGNED BY JERRY SEXTON  
Title DISTRICT I SUPERVISOR

**INSTRUCTIONS:** This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- 4) Separate Form C-104 must be filed for each pool in multiply completed wells.

Submit 5 Copies  
Appropriate District Office  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-104  
Revised 1-1-89  
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OIL CONSERVATION DIVISION

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

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

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

REQUEST FOR ALLOWABLE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

I.

Operator Pyramid Energy, Inc.	Well API No. 30-025-12578
Address 14100 San Pedro, Suite 700 San Antonio, Texas 78232	
Reason(s) for Filing (Check proper box) <input type="checkbox"/> Other (Please explain) Change in operator from Sirgo Operating, Inc. to Pyramid Energy, Inc. effective July 1, 1990.	
New Well <input type="checkbox"/>	Change in Transporter of: <input type="checkbox"/> Dry Gas <input type="checkbox"/>
Recompletion <input type="checkbox"/>	Oil <input type="checkbox"/> Condensate <input type="checkbox"/>
Change in Operator <input checked="" type="checkbox"/>	Casinghead Gas <input type="checkbox"/>

If change of operator give name and address of previous operator Sirgo Operating, Inc. P.O. Box 3531 Midland, Texas 79702

II. DESCRIPTION OF WELL AND LEASE

Lease Name East Pearl Queen Unit	Well No. 27	Pool Name, Including Formation Pearl (Queen)	Kind of Lease State, Federal or Fee	Lease No.
Location Unit Letter G : 1980 Feet From The North Line and 1980 Feet From The East Line Section 27 Township 19S Range 35E , NMPM, Lea County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

PRODUCER - ACTIVE

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> Shell Pipeline Corp.	Address (Give address to which approved copy of this form is to be sent) P.O. Box 1910 Midland, Texas 79702					
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> Warren Petroleum Phillips 66 Natural Gas Co. GPM Gas Corporation	Address (Give address to which approved copy of this form is to be sent) P.O. Box 1589 Tulsa, OK 74102 4001 Penbrook Odessa, TX 79762					
If well produces oil or liquids, give location of tanks.	Unit F	Sec. 27	Twp. 19S	Rge. 35E	Is gas actually connected? Yes	When? February 4, 1959

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
Date Spudded	Date Compl. Ready to Prod.		Total Depth			P.B.T.D.		
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay			Tubing Depth		
Perforations						Depth Casing Shoe		

TUBING, CASING AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

V. TEST DATA AND REQUEST FOR ALLOWABLE

OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas- MCF

GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pilot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations 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 Scott Graef  
Scott Graef Production Engineer  
Printed Name 6/25/90 Title (512) 490-5000  
Date Telephone No.

OIL CONSERVATION DIVISION  
JUN 29 1990

Date Approved \_\_\_\_\_  
By ORIGINAL SIGNED BY JERRY SEXTON  
DISTRICT I SUPERVISOR  
Title \_\_\_\_\_

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- 4) Separate Form C-104 must be filed for each pool in multiply completed wells.

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JUN 27 1990  
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State of New Mexico  
Energy, Minerals and Natural Resources Department

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Revised 1-1-89  
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DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

## OIL CONSERVATION DIVISION

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

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

REQUEST FOR ALLOWABLE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

## I.

Operator Sirgo Operating, Inc.		Well API No. 30-025-12578	
Address P.O. Box 3531 Midland, Texas 79702			
Reason(s) for Filing (Check proper box) <input type="checkbox"/> Other (Please explain)			
New Well <input type="checkbox"/>	Change in Transporter of: <input type="checkbox"/> Change in operator from Petrus Oil Co., L.P.		
Recompletion <input type="checkbox"/>	Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>	to Sirgo Operating, Inc. effective	
Change in Operator <input checked="" type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>	November 1, 1989	
If change of operator give name and address of previous operator Petrus Oil Company, L.P. 12201 Merit Dr. Suite 900 Dallas, Texas 75251-2293			

## II. DESCRIPTION OF WELL AND LEASE

Lease Name East Pearl Queen Unit	Well No. 27	Pool Name, Including Formation Pearl (Queen)	Kind of Lease State, Federal or <input checked="" type="radio"/> Fee	Lease No.
Location Unit Letter <u>G</u> : <u>1980</u> Feet From The <u>North</u> Line and <u>1980</u> Feet From The <u>East</u> Line Section <u>27</u> Township <u>19S</u> Range <u>35E</u> , NMPM, Lea County				

## III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> Shell Pipeline Corp.	Address (Give address to which approved copy of this form is to be sent) P.O. Box 1910 Midland, Texas 79702					
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> Warren Petroleum Phillips 66 Natural Gas Co.	Address (Give address to which approved copy of this form is to be sent) P.O. Box 1589 Tulsa, Oklahoma 74102 4001 Penbrook Odessa, Texas 79762					
If well produces oil or liquids, give location of tanks.	Unit F	Sec. 27	Twp. 19S	Rge. 35E	Is gas actually connected? yes	When? 2/4/59

If this production is commingled with that from any other lease or pool, give commingling order number:

## IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
Date Spudded	Date Compl. Ready to Prod.		Total Depth			P.B.T.D.		
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay			Tubing Depth		
Perforations						Depth Casing Shoe		
TUBING, CASING AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET			SACKS CEMENT		

## V. TEST DATA AND REQUEST FOR ALLOWABLE

OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas- MCF

## GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (prior, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

## VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations 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.

Julie Godfrey  
Signature  
Julie Godfrey Production Tech.  
Printed Name  
November 14, 1989 Title  
(915) 685-0878  
Date Telephone No.

OIL CONSERVATION DIVISION  
NOV 21 1989

Date Approved \_\_\_\_\_

By ORIGINAL SIGNED BY JERRY SEXTON  
DISTRICT I SUPERVISOR

Title \_\_\_\_\_

## INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- 4) Separate Form C-104 must be filed for each pool in multiply completed wells.

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ENERGY AND MINERALS DEPARTMENT

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## OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-104  
Revised 10-01-78  
Format 08-01-83  
Page 1REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

**I. Operator**  
Petrus Oil Company, L. P.

**Address**  
12201 Merit Drive, Suite 900 Dallas, Texas 75251-2293

**Reason(s) for filing (Check proper box)**

<input type="checkbox"/> New Well	Change in Transporter of:	Other (Please explain)  EFFECTIVE 01-01-87
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil	
<input checked="" type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Dry Gas <input type="checkbox"/> Condensate	

If change of ownership give name and address of previous owner: Petrus Operating Company, Inc. (Same as above)

## II. DESCRIPTION OF WELL AND LEASE

Lease Name East Pearl Queen Unit	Well No. 27	Pool Name, including Formation Pearl Queen	Kind of Lease State, Federal or Fee Fee	Lease No.
Location Unit Letter <u>G</u> : <u>1980</u> Feet From The <u>North</u> Line and <u>1980</u> Feet From The <u>East</u>				
Line of Section <u>27</u> Township <u>19S</u> Range <u>35E</u> , NMPM, Lea County				

## III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> Shell Pipeline Corporation	Address (Give address to which approved copy of this form is to be sent) P. O. Box 1910, Midland, TX 79702
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> Phillips 66 Natural Gas Co. Warren Petroleum Corp.	Address (Give address to which approved copy of this form is to be sent) 4001 Penbrook Street, Odessa, TX 79762 P. O. Box 1689, Lovington, NM 88260
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. <u>No CHANGE</u>
	Is gas actually connected? Yes When

If this production is commingled with that from any other lease or pool, give commingling order number:

NOTE: Complete Parts IV and V on reverse side if necessary.

## VI. CERTIFICATE OF COMPLIANCE

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

Suzann Jourdan Suzann Jourdan  
(Signature)  
Regulatory Coordinator  
(Title)  
01-01-87  
(Date)

## OIL CONSERVATION DIVISION

APPROVED FEB 23 1987, 19  
BY ORIGINAL SIGNED BY JERRY SEXTON  
TITLE DISTRICT I SUPERVISOR

This form is to be filed in compliance with RULE 1104.  
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.  
All sections of this form must be filled out completely for allowable on new and recompleted wells.  
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter or other such change of condition.  
Separate Forms C-104 must be filed for each pool in multiply completed wells.

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STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

## OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-104  
Revised 10-01-78  
Format 06-01-83  
Page 1REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

Operator <b>Petrus Operating Company, Inc.</b>	
Address <b>12201 Merit Drive, Suite 900 Dallas, Texas 75251-2293</b>	
Reason(s) for filing (Check proper box)	Other (Please explain)
<input type="checkbox"/> New Well <input type="checkbox"/> Recompletion <input checked="" type="checkbox"/> Change in Ownership	Change in Transporter of: <input type="checkbox"/> Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Condensate
EFFECTIVE DATE OF CHANGE 07-01-86	

If change of ownership give name and address of previous owner **Shell Western E&P, Inc. 200 North Dairy Ashford, P. O. Box 991, Houston, Texas 77001**

## II. DESCRIPTION OF WELL AND LEASE

Lease Name <b>East Pearl Queen Unit</b>	Well No. <b>27</b>	Pool Name, including Formation <b>Pearl Queen</b>	Kind of Lease <b>State, Federal or Fee</b>	Lease No.
Location Unit Letter <b>G</b> : <b>1980</b> Feet From The <b>North</b> Line and <b>1980</b> Feet From The <b>East</b> Line of Section <b>27</b> Township <b>19S</b> Range <b>35E</b> , NMPM, Lea County				

## III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> <b>Shell Pipeline Corporation</b>	Address (Give address to which approved copy of this form is to be sent) <b>P.O. Box 1910, Midland, Texas 79702</b>
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> <b>Phillips Petroleum Company 66 Natl. Road Warren Petroleum Corp.</b>	Address (Give address to which approved copy of this form is to be sent) <b>4001 Pembroke Street, Odessa, Texas 79702 P.O. Box 1689, Lovington, New Mexico 88260</b>
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge.
<b>NO CHANGE</b>	Is gas actually connected? Yes When N/A

If this production is commingled with that from any other lease or pool, give commingling order number:

NOTE: Complete Parts IV and V on reverse side if necessary.

## VI. CERTIFICATE OF COMPLIANCE

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

*Suzann Jourdan*  
(Signature) **Suzann Jourdan**

**Regulatory Coordinator**  
(Title)

**06-26-86**  
(Date)

## OIL CONSERVATION DIVISION

APPROVED **JUL 8 1986** , 19

BY **ORIGINAL SIGNED BY JERRY BEXTON**  
TITLE **DISTRICT I SUPERVISOR**

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

## OIL CONSERVATION DIVISION

P. O. BOX 2068

SANTA FE, NEW MEXICO 87501

Form C-104  
Revised 10-1-78

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	NATURAL GAS
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REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator Shell Western E&P, Inc.	
Address 200 North Dairy Ashford, P.O. Box 991, Houston, Texas 77001	
Reason(s) for filing (Check proper box)	
New Well <input type="checkbox"/>	Change in Transporter oil: <input type="checkbox"/>
Recompletion <input type="checkbox"/>	Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>
Change in Ownership <input checked="" type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>
Other (Please explain)	

If change of ownership give name and address of previous owner: Shell Oil Company, P.O. Box 991, Houston, Texas 77001

## II. DESCRIPTION OF WELL AND LEASE

Lease Name East Pearl Queen Unit	Well No. 27	Pool Name, Including Formation Pearl Queen	Kind of Lease State, Federal or Fee	Fee	Lease No.
Location					
Unit Letter <u>G</u> : <u>1980</u> Feet From The <u>North</u> Line and <u>1980</u> Feet From The <u>East</u>					
Line of Section <u>27</u> Township <u>19S</u> Range <u>35E</u> , NMPM, Lea County					

## III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Shell Pipeline Corporation	P.O. Box 1910, Midland, Texas 79702
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Phillips Pipeline Company	4001 Penbrook St, Odessa, Texas 79762
Warren Petroleum Corporation	P.O. Box 1689, Lovington, NM 88260
If well produces oil or liquids, give location of tanks.	Is gas actually connected? When
Unit <u>No Change</u> Sec. <u></u> Twp. <u></u> Rge. <u></u>	Yes <u></u> NA <u></u>

If this production is commingled with that from any other lease or pool, give commingling order number: 

## IV. COMPLETION DATA

Designate Type of Completion - (X)		Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
Date Spudded	Date Compl. Ready to Prod.	Total Depth		P.B.T.D.					
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay		Tubing Depth					
Perforations		Depth Casing Shoe							

## TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

## V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

## GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MCF	Gravity of Condensate
Testing Method (piston, back pr.)	Tubing Pressure (Shut-In)	Casing Pressure (Shut-In)	Choke Size

## VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations 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.

Attorney-in-Fact

December 1, 1983 Effective January 1, 1984

(Date)

## OIL CONSERVATION DIVISION

APPROVED JAN 27 1984, 19BY ORIGINAL SIGNED BY JERRY SEXTONTITLE DISTRICT I SUPERVISOR

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiple completed wells.

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Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

## NEW MEXICO OIL CONSERVATION COMMISSION

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5a. Indicate Type of Lease  
State ☐ Fee ☒

5. State Oil & Gas Lease No.

## SUNDARY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR INFORMATION ON WELLS OR OPERATIONS IN A DIFFERENT RESERVOIR.  
USE APPROPRIATE FORM FOR EACH DIFFERENT RESERVOIR.

1. <input checked="" type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	7. Unit Agreement Name
2. Name of Operator Shell Oil Company	8. Form or Lease Name East Pearl Queen Unit
3. Address of Operator P. O. Box 1509, Midland, Texas 79702	9. Well No. 27
4. Location of Well UNIT LETTER <u>M</u> <u>660</u> FEET FROM THE <u>South</u> LINE AND <u>660</u> FEET FROM THE <u>West</u> LINE, SECTION <u>22</u> TOWNSHIP <u>19S</u> RANGE <u>35E</u> N.M.P.M.	10. Field and Pool, or Wildcat Pearl Queen
15. Elevation (State whether DF, RT, GR, etc.) 3730 DF	12. County Lea

16. 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 checked="" 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"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	

17. 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.

7-25-77: Pulled rods and pump. Installed BOP. Found PBTD @ 4983'.

7-26-77: Pumped 10 BO into tubing. Loaded tubing with oil. Pumped 6 drums HOWCO D-230, flushed with oil. Displaced 104 gals D-230 across perfs.

7-27-77: Tested casing. Spotted 169 gals D-230 across perfs. Pumped 161 gals D-230.

7-28-77: Well shut in to allow to soak.

7-29-77: Swabbed 58 BF in 10 hours, 117 BFUL.

7-30-77: Swabbed 54 BF in 10 hours. Rec: 63 BFUL.

7-31-77: Shut down.

8-01-77: Acidized perfs with 3000 gals 15% NE HCl. Swabbed additional 3 BW in 3 hours.

8-02-77: Swabbed back 40 bbls.

8-03-77: Ran tubing and 25-15-RWBC-16-4-0 pump. Hung well on.

8-04-77: Pumping to battery.

8-05-77: thru 8-09-77: Testing.

8-10-77: Pumped 100 bbls produced water with 2 drums Tretolite SV-191.

8-11-77: Well now producing. Last report.

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

SIGNED G. W. Tullos TITLE G. W. Tullos Senior Production Engineer DATE 1-17-78

APPROVED BY [Signature] TITLE [Signature] DATE 10 20 1978

CONDITIONS OF APPROVAL, IF ANY:

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HOBBS, N. M.

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## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

## 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. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <input type="checkbox"/>	5a. Indicate Type of Lease State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
2. Name of Operator <b>Shell Oil Company</b>	5. State Oil & Gas Lease No.
3. Address of Operator <b>P. O. Box 1509 - Midland, Texas 79701</b>	7. Unit Agreement Name
4. Location of Well UNIT LETTER <b>G</b> , <b>1980</b> FEET FROM THE <b>North</b> LINE AND <b>1980</b> FEET FROM THE <b>East</b> LINE, SECTION <b>27</b> TOWNSHIP <b>19-S</b> RANGE <b>35-E</b> NMPM.	8. Farm or Lease Name <b>East Pearl Queen Unit</b>
	9. Well No. <b>27</b>
	10. Field and Pool, or Wildcat <b>Pearl Queen</b>
15. Elevation (Show whether DF, RT, GR, etc.) <b>3730 DF</b>	12. County <b>Lea</b>

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

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input checked="" type="checkbox"/> <b>Open Additional Pay</b>

17. 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.

**February 1, 1972 to February 17, 1972**

1. Pulled rods, pump and tubing.
2. Perforated 5-1/2" casing w/2 JSPP 4694-4706' (26 holes).
3. Ran 156 jts 2-1/2" tubing, hung at 4917'. Ran 2-1/2" x 1-1/2" x 16' x 4' pump on 190 - 3/4" rods + 6 - 7/8" rods.
4. Acidized 4694-4872 with 1000 gal Terragon acid w/FE agents.
5. Treated 4694-4872 with 1000 gal LSD (Liquid Scale Disintegrator).
6. Treated 4694-4872 with 1500 gal Gypsol.
7. Acidized 4694-4872 with 2500 gal 15% NE-FE.
8. Placed on production.

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

SIGNED R. R. Suckle TITLE Production Engineer DATE 3-10-72  
**R. R. Suckle**  
 APPROVED BY Joe D. Ramey TITLE Dist. I, Supr. DATE MAR 13 1972  
 CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

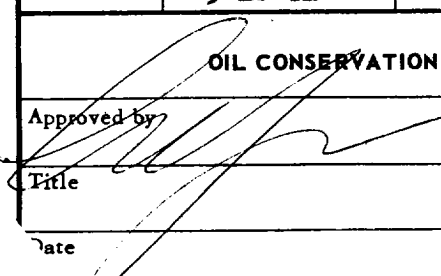
MAR 13 1972

OIL CONSERVATION COMM.  
HOBBS, N. M.

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Name of Company <b>Shell Oil Company</b>			Address <b>P. O. Box 1858, Roswell, New Mexico</b>			
Lease <b>Hooper</b>		Well No. <b>1</b>	Unit Letter <b>G</b>	Section <b>27</b>	Township <b>19S</b>	Range <b>36 37E</b>
Date Work Performed <b>8-23-62 thru 9-28-62</b>		Pool <b>Pearl-Queen</b>			County <b>Lea</b>	
THIS IS A REPORT OF: (Check appropriate block)						
<input type="checkbox"/> Beginning Drilling Operations <input type="checkbox"/> Casing Test and Cement Job <input type="checkbox"/> Other (Explain):						
<input type="checkbox"/> Plugging <input checked="" type="checkbox"/> Remedial Work						
Detailed account of work done, nature and quantity of materials used, and results obtained.						
1. Pulled rods, pump and tubing. 2. Drilled CI cement betainer at 4835', drilled cement to 4870'. Washed to 4983'. 3. Perforated 5 1/2" casing 4851' - 4856', 4862' - 4872' w/1 JSPP. 4. Ran Baker FERC on 3"XL tubing, set packer at 4846' (between old & new perforations) Pressured casing annulus to 800 psi 4 times, no communication. Pressured tubing to 1800 psi, no communication. 5. Unseated packer, lowered tubing to 4876'. Spotted 250 gallons 15% Spearhead acid over perforations 4851' - 4872'. Raised tubing and reset packer at 4846'. 6. Treated perforated interval 4851' - 4872' w/18,000 gallons lease crude containing 1/20# Mark II Adomite/gallon + 19,000# 20-40 Mesh sand. 7. Pulled 3" tubing & packer. 8. Ran 156 jts. (4912') 2 1/2", BUE, tubing & hung at 4924' w/Sawtooth pin collar on bottom, 2 1/2" x 2" tubing coupling w/ 1/8" vent hole below seating nipple at 4893'. 9. Ran pump and rods. 10. In 24 hours pumped 6 BO + 6 BW w/9-64" SP.						
Witnessed by <b>H. B. Leach</b>		Position <b>Production Foreman</b>		Company <b>Shell Oil Company</b>		
FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY						
ORIGINAL WELL DATA						
D F Elev. <b>3730'</b>	T D <b>13,950'</b>	P B T D <b>4845'</b>	Producing Interval <b>4706' - 4842'</b>	Completion Date <b>12-10-56</b>		
Tubing Diameter <b>2 1/2"</b>	Tubing Depth <b>4803'</b>	Oil String Diameter <b>5 1/2"</b>	Oil String Depth <b>13,824'</b>			
Perforated Interval(s) <b>4706', - 4806' - 4830', &amp; 4838' - 4842'</b>						
Open Hole Interval <b>-</b>			Producing Formation(s) <b>Queen</b>			
RESULTS OF WORKOVER						
Test <b>Before Workover</b>	Date of Test <b>7-16-62</b>	Oil Production BPD <b>2</b>	Gas Production MCFPD <b>4.0</b>	Water Production BPD <b>1</b>	GOR Cubic feet/Bbl <b>2000</b>	Gas Well Potential MCFPD <b>-</b>
After Workover	<b>9-28-62</b>	<b>6</b>	<b>not measured</b>	<b>6</b>	<b>not measured</b>	<b>-</b>
OIL CONSERVATION COMMISSION				I hereby certify that the information given above is true and complete to the best of my knowledge.		
Approved by 				Name <b>R. A. Lowery</b>		
Title <b>District Exploitation Engineer</b>				Original Signed By <b>R. A. LOWERY</b>		
Date <b>9-28-62</b>				Company <b>Shell Oil Company</b>		



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(Form C-108)  
(Revised 7/1/52)

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

### MISCELLANEOUS NOTICES

strict Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Niro)	
NOTICE OF INTENTION TO GUN PERFORATE	X	NOTICE OF INTENTION (OTHER) TO FRAC	X	NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Roswell, New Mexico  
(Place)

August 23, 1962  
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the.....

Shell Oil Company                      Hooper                      Well No. 1                      in G  
(Company or Operator)                      Lease                      (Unit)

SW 1/4 NE 1/4 of Sec. 27, T. 19S, R. 35E, NMPM., Pearl-Queen Pool  
(40-acre Subdivision)

Lea County.

### FULL DETAILS OF PROPOSED PLAN OF WORK (FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

#### PROPOSED OPERATION

1. Pull rods, pump and tubing.
2. Drill out CIRC at 4845'.
3. Perforate Zone III at 4851' - 4856' and 4862' - 4872' w/1 JSPP.
4. Run 3" XL tubing and spot 250 gallons 15% acid and frac down tubing w/20,000 gallons lease crude containing FLA.
5. Pull frac tubing, run production string, swab test to check for sand backflow, run rods and pump and place on production.

Approved....., 19.....  
Except as follows:

Approved  
OIL CONSERVATION COMMISSION

By.....  
Title.....

Shell Oil Company

Company or Operator

By..... R. A. Lowery                      Original Signed By  
R. A. LOWERY

Position..... District Exploitation Engineer  
Send Communications regarding well to:

Name..... Shell Oil Company  
Address..... P. O. Box 1858, Roswell, New Mexico

## NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103  
(Rev 3-55)

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

Name of Company <b>Shell Oil Company</b>			Address <b>Box 845, Roswell, New Mexico</b>			
Lease <b>Hooper</b>	Well No. <b>1</b>	Unit Letter <b>G</b>	Section <b>27</b>	Township <b>19S</b>	Range <b>35E</b>	
Date Work Performed <b>2-1 thru 2-17-60</b>	Pool <b>Pearl-Queen</b>			County <b>Lea</b>		

THIS IS A REPORT OF: (Check appropriate block)

- ☐ Beginning Drilling Operations
 ☐ Casing Test and Cement Job
 ☐ Other (Explain):
- ☐ Plugging
 ☒ Remedial Work

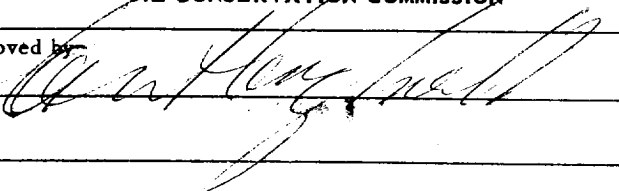
Detailed account of work done, nature and quantity of materials used, and results obtained.

1. Pulled rods, pump & tubing.
2. Perforated 5 1/2" casing @ 4706' w/4 shots. Did not free.
3. Ran 152 jts. (4791') 2 1/2", EUE, 8rd thd, tubing & hung @ 4803'. 2" S. N. @ 4768'.
4. Ran 2" x 1 1/2" x 12' Sargent Pump & rods.
5. In 24 hours pumped 17 BO + 1 BW w/9-54" SPM.

Witnessed by <b>H. B. Leach</b>		Position <b>Production Foreman</b>		Company <b>Shell Oil Company</b>	
FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY					
ORIGINAL WELL DATA					
D F Elev. <b>3730'</b>	TD <b>13,950'</b>	PBTD <b>4845'</b>	Producing Interval <b>4806' - 4842'</b>	Completion Date <b>12-10-56</b>	
Tubing Diameter <b>2 1/2"</b>	Tubing Depth <b>4829'</b>	Oil String Diameter <b>5 1/2"</b>	Oil String Depth <b>13,824'</b>		
Perforated Interval(s) <b>4806' - 4830' &amp; 4838' - 4842'</b>					
Open Hole Interval <b>-</b>			Producing Formation(s) <b>Queen</b>		

## RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover	1-3-60	6	9.0	-	1500	-
After Workover	2-17-60	17	23.0	1	1353	-

OIL CONSERVATION COMMISSION		I hereby certify that the information given above is true and complete to the best of my knowledge.	
Approved by 	Name <b>R. A. Lowery</b>	Original Signed By <b>R. A. LOWERY</b>	
Title <b>District Exploitation Engineer</b>	Position <b>Shell Oil Company</b>		
Date	Company		

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

## MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE	<b>X</b>	NOTICE OF INTENTION (OTHER) SANDFRAC	<b>X</b>	NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Roswell, New Mexico

(Place)

January 27, 1960

(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the.....

Shell Oil Company Hooper Well No. 1 in G  
(Company or Operator) Lease (Unit)  
SW 1/4 NE 1/4 of Sec. 27, T. 19S, R. 35E, NMPM., Pearl-Queen Pool  
(40-acre Subdivision)  
Lea County.

### FULL DETAILS OF PROPOSED PLAN OF WORK

(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

Proposed Operations:

1. Pull rods, pump & tubing. Perforated w/1 1/2" jet shots @ 4706'.
2. Run tubing w/retrievable cementer. Set packer between perforated intervals @ 4750'±.
3. Pump into formation down annulus to test for communication. Do not exceed 2000 psi surface pressure during this test. If communication is indicated, further work will be pending. If communication is not obtained, pull tubing & set retrievable bridge plug @ 4780' ±.
4. Run tubing w/sand-jet tool. Using low fluid loss lease oil and 20-40 mesh sand, perforate six 90 deg. slots at 4702' - 4706'. Check for sand fill and circulate hole clean.
5. Pull tubing & treat formation down casing w/15,000 gallons lease oil containing 2# sand & 1/20# FL-2/gallon.
6. Shut in overnight, then bleed off pressure.
7. Check for fill & clean out if necessary.
8. Pull retrievable bridge plug, run tubing & swab test, & place on production.

Approved....., 19.....  
Except as follows:

Approved  
OIL CONSERVATION COMMISSION

By.....  
Title.....

Shell Oil Company  
Company or Operator

By..... R. A. Lowery Original Signed By R. A. LOWERY

Position..... District Exploitation Engineer  
Send Communications regarding well to:

Name..... Shell Oil Company  
Address..... Box 845, Roswell, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Form C-110  
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

HOBBS OFFICE OCC

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

1959 FEB 9 AM 7:49

Company or Operator Shell Oil Company Lease Hooper

Well No. 1 Unit Letter G S 27 T-19-S R -35-E Pool Pearl-Queen

County Lea Kind of Lease (State, Fed. or Patented) Patented

If well produces oil or condensate, give location of tanks: Unit \* F S 27 T -19-SR -35-E

Authorized Transporter of Oil or Condensate Shell Pipe Line Corporation

Address Box 1598, Hobbs, New Mexico

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas Phillips Petroleum Company

Address Box 758, Hobbs, New Mexico Date Connected 2-4-59

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well ( )

Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head (X) Condensate ( )

Change in Ownership ( ) Other ( )

Remarks: (Give explanation below)

\* Well producing into centralized tank battery.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 6th day of February 19 59

Original Signed By  
Rex C. Cabaniss

By Rex C. Cabaniss

Approved 19

Title District Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil Company

By [Signature]

Address Box 845

Title [Signature]

Roswell, New Mexico



NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Form C-110  
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator Shell Oil Company Lease Hooper  
Well No. 1 Unit Letter G S 27 T-19-S R-35-E Pool Pearl-Queen  
County Lea Kind of Lease (State, Fed. or Patented) Patented  
If well produces oil or condensate, give location of tanks: Unit \* F S 27 T-19-S R-35-E  
Authorized Transporter of Oil or Condensate Shell Pipe Line Corporation  
Address Box 1598, Hobbs, New Mexico  
(Give address to which approved copy of this form is to be sent)  
Authorized Transporter of Gas None  
Address \_\_\_\_\_  
(Give address to which approved copy of this form is to be sent)  
If Gas is not being sold, give reasons and also explain its present disposition:  
Gas being flared, no pipe line connection available.

Reasons for Filing: (Please check proper box) New Well \_\_\_\_\_ ( )  
Change in Transporter of (Check One): Oil ( ☒ ) Dry Gas ( ) C'head ( ) Condensate ( )  
Change in Ownership \_\_\_\_\_ ( ) Other \_\_\_\_\_ ( )  
Remarks: \_\_\_\_\_ (Give explanation below)

**X Effective July 1, 1958.**

**\* Well producing into centralized tank battery.**

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 26th day of June 19 58

By Rex C. Cabaniss Original Signed By Rex C. Cabaniss

Approved [Signature] 19 58

Title District Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil Company

By [Signature]

Address Box 845

Title \_\_\_\_\_

Roswell, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICOForm C-110  
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GASCompany or Operator Shell Oil Company Lease HooperWell No. 1 Unit Letter G S 27 T-19-S R-35-E Pool Pearl-QueenCounty Lea Kind of Lease (State, Fed. or Patented) PatentedIf well produces oil or condensate, give location of tanks: Unit \* S T RAuthorized Transporter of Oil or Condensate Cactus Petroleum, Inc.Address 201 Crafa Building, Midland, Texas

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas none

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Gas being flared, no pipe line connection available.Reasons for Filing: (Please check proper box) New Well ( )Change in Transporter of (Check One): Oil (☒) Dry Gas ( ) C'head ( ) Condensate ( )Change in Ownership ( ) Other ( )

Remarks: \_\_\_\_\_ (Give explanation below)

\* Well now producing into temporary storage facilities.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 10th day of February 19 58Original Signed By  
Rex C. CabanissBy Rex C. CabanissApproved \_\_\_\_\_ 19 \_\_\_\_\_ Title District Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil CompanyBy E. J. Fisher Address Box 845Title \_\_\_\_\_ Roswell, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Form C-110  
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator Shell Oil Company Lease Hooper

Well No. 1 Unit Letter S 27 T 19-S R 35-S Pool Pearl-Queen

County Lea Kind of Lease (State, Fed. or Patented) Patented

If well produces oil or condensate, give location of tanks: Unit S T R

Authorized Transporter of Oil or Condensate Shell Oil Company (Trucks)

Address Box 1509, Midland, Texas

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas none

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Gas being flared, no pipe line connection available.

Reasons for Filing: (Please check proper box) New Well ( )

Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )

Change in Ownership ( ) Other ( )

Remarks: \_\_\_\_\_ (Give explanation below)

☒ Change in Pool designation.

☒ Well now producing into temporary storage facilities.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 20th day of March 19 57

MAR 22 1957

By B. Nevill Original signed by B. Nevill

Approved \_\_\_\_\_ 19 \_\_\_\_\_

Title Division Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil Company

By E. Fischer

Address Box 1957

Title \_\_\_\_\_

Hobbs, New Mexico

## OIL CONSERVATION COMMISSION

P. O. BOX 2045

HOBBS, NEW MEXICO

DATE March 14, 1957

TO:

Shell Oil CompanyBox 1957Hobbs, New Mexico

Gentlemen:

In accordance with the provisions of Commission Order No. R ~~958~~,  
your Hooper #1-G Sec. 27-19-35, which  
Lease Well No. S-T-R  
is currently listed in the undesignated section of the oil proration  
schedule, will appear in the Pearl-Queen Pool in  
the April proration schedule.

Please file Form C-110 showing the change in pool designation of  
this well.

Yours very truly,

OIL CONSERVATION COMMISSION

R. F. Montgomery  
Proration Manager

RFM/hs

(Form C-101)  
(Revised 7/1/52)NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

## REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well  
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-101 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Hobbs, New Mexico

December 12, 1956

(Place)

(Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Shell Oil Company

Hooper

Well No. 1, in SV 1/4, NE 1/4,

(Company or Operator)

(Lease)

G, Sec. 27, T. 19-S, R. 35-E, NMPM, Undesignated Pool

(Unit)

Lea

Operation Started 7-20-56, Date Completed 12-10-56

Please indicate location:

		X	

Elevation 3730' Total Depth 13,950' P.B. 4845'

Top oil/sax pay 4806 Name of Prod. Form Queen

Casing Perforations: 4806' - 4830' &amp; 4832' - 4838' or

Depth to Casing shoe of Prod. String 13,809'

Natural Prod. Test - BOPD

based on - bbls. Oil in - Hrs. - Mins.

Test after acid 61 BOPD

Based on 61 bbls. Oil in 24 Hrs. - Mins.

Gas Well Potential -

Size choke in inches Pump 11-64" SPM

Date first oil run to tanks or gas to Transmission system: 12-10-56

Transporter taking Oil or Gas: Shell Oil Company (Trucks)

Section 27, Unit G

Casing and Cementing Record

Size Feet Sax

13 3/8	327	400
8 5/8	3,995	1550
5 1/2	13,809	950

Remarks: \*Treated thru casing perforations w/2000 gallons 10% MCA. Loaded casing annulus w/76 BO. Pumped 20 BO into formation. Treated thru casing perforations via 2 1/2" tubing w/20,000 gallons gelled lease crude (Control-free) containing 1/20th/gallon fluid-loss additive & 1/2 gal. sand. Overflushed w/140 BO.

Request cancellation of Bone Spring pay. Plug back from Bone Spring to Queen.

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

Approved DEC 17 1956, 19

Shell Oil Company

(Company or Operator)

Original signed by

OIL CONSERVATION COMMISSION

By: B. Nevill

B. Nevill

(Signature)

Division Exploitation Engineer

By: E. J. Fischer

Title

Send Communications regarding well to:

Title Engineer District

Name Shell Oil Company

Address Box 1957, Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICOForm C-110  
Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GASCompany or Operator Shell Oil Company Lease RooperWell No. 1 Unit Letter Q S 27 T-19-4 R-35-2 Pool UndersaturatedCounty Lea Kind of Lease (State, Fed. or Patented) PatentedIf well produces oil or condensate, give location of tanks: Unit S T RAuthorized Transporter of Oil or Condensate Shell Oil Company (Trucks)Address P. O. Box 1509, Midland, Texas

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas \_\_\_\_\_

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Gas being flared, no pipe line connection available.Reasons for Filing: (Please check proper box) New Well ( )Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )Change in Ownership ( ) Other Recompletion (X)Remarks: \_\_\_\_\_  
(Give explanation below)

\* Well now producing into temporary storage facilities.

x Well has been recompleted from the Bone Spring to the Queen.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 12th day of December 1956By B. Nevill Original signed by B. NevillTitle Division Exploitation EngineerCompany Shell Oil CompanyAddress Box 1957Hobbs, New MexicoApproved DEC 17 1956 1956

OIL CONSERVATION COMMISSION

By E. J. FischerTitle Engineer District L



Form C-103  
(Revised 3-55)NEW MEXICO OIL CONSERVATION COMMISSION  
MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Shell Oil Company Box 1957, Hobbs, New Mexico  
(Address)LEASE Nooper WELL NO. 1 UNIT 0 S 27 T -19-S R -35-R  
DATE WORK PERFORMED 7-20 thru 12-10-56 POOL Undesignated WildcatThis is a Report of: (Check appropriate block) ☐ Results of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☒ Other Recompletion

Detailed account of work done, nature and quantity of materials used and results obtained.

(See Attachment)

## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl Date \_\_\_\_\_  
Tbng. Dia \_\_\_\_\_ Tbng Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_  
Perf Interval (s) \_\_\_\_\_  
Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

## RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test

Oil Production, bbls. per day

Gas Production, Mcf per day

Water Production, bbls. per day

Gas-Oil Ratio, cu. ft. per bbl.

Gas Well Potential, Mcf per day

Witnessed by \_\_\_\_\_

(Company)

OIL CONSERVATION COMMISSION

Name E. Fischer  
Title Engineer District I  
Date DEC 17 1956

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

Name Shell Oil Company Original signed by  
Position B. Nevill B. Nevill  
Company Division Exploitation Engineer

Attachment for Form G-103

Hooper # 1  
Pearl AreaRecompleted from Bone Spring to Queen.

Set 5 1/2" CI bridge plug @ 8150' & capped w/ 1 sx. cement.  
 Set 5 1/2" CI bridge plug @ 5700' & capped w/1 sx. cement.  
 Perforated 5 1/2" casing 5650' - 5652' w/4 jet shots per foot.  
 Set Baker Model K Cement retainer @ 5619'. Pumped 5 BO down tubing followed by 30 sx. DOC. Pumped oil into formation @ 2000 psi. With 3 barrels DOC in formation pressure 2200 psi. Pressure gradually increased to 2400 psi. With 6 bbls. DOC in formation. Pumping at rate of 2 1/2 b/m. 1 minute SIP 2000 psi. After WOC 30 hours tubing on vacuum. Pumped 15 BO in casing perforations @ 5650' @ 2200 psi @ 2 b/m. Pulled tubing. Perforated @ 5200' w/4 holes. Ran Baker stinger sub on 2 1/2" tubing. Set into cement retainer. Pumped 100 BW down casing annulus thru perforations @ 5200' @ 2000 psi @ 2 b/m. No returns thru tubing. Pumped down tubing into perforations @ 5650' & obtained returns in annulus from perforations 5200' w/200 BW @ 1200 psi @ 3 b/m. Washed behind casing w/1000 gallons 15% MCA thru casing perforations @ 5650' - 5200' followed w/235 BW. Mixed 100 sx. regular cement & pumped down tubing into perforations @ 5650' @ 1200 psi. Pulled 2 1/2" tubing. Ran Worth Well temperature survey which indicated cement @ 505' outside casing & hit bridge @ 5187'. No indication of cement inside casing @ 5187'. Cleaned out to 5615'. Found cement retainer @ 5615'. Displaced water w/oil. Ran Worth Well temperature survey which indicated cement from 5200' - 5615' outside 5 1/2" casing. Perforated 5 1/2" casing 5568' - 5588' w/4 jet shots per foot. Pumped 35 BO into formation. Treated formation down 2 1/2" tubing thru casing perforations 5568' - 5588' w/10,000 gallons Control-frac containing 1# sand/gallon & 500# F-3, fluid loss control additive. Overflushed w/163 BO. Pumped 28 BW into casing perforations @ 5200' at rate of 2 1/2 b/m @ 1900 psi. Pulled 2 1/2" tubing. Set Baker Model K-2A bridge plug @ 5250'. Perforated @ 4200' w/4 jet shots per foot. Ran casing scraper on 1 joint 2 1/2" tubing on sand line. Failed to get past 4200'. Ran 5 jts. 2 1/2" tubing, jars & sinker bar on sand line. Scraped 4200' - TD. Encountered tight places last 700'. Ran full-bore cementer on 2 1/2" tubing & set cementer @ 4567'. Pumped down casing-tubing annulus thru perforations @ 4200' w/8 BW @ 1200 psi @ 3 1/2 b/m. Failed to circulate. Pumped 54 BW down tubing thru casing perforations @ 5200' @ 1900 psi @ 2 b/m. Failed to circulate. Pulled tubing & cementer. Perforated @ 5040' w/4 holes. Set full-bore cementer @ 4567'. Pumped 25 BW down tubing thru casing perforations @ 5040'. Failed to circulate. Pumped down casing-tubing annulus thru casing perforations @ 4200'. Circulated thru Bradenhead. Circulated 125 BW. Pumped down tubing w/30 BW thru casing perforations @ 5040'. Failed to circulate from 5040' - 4200'. Pumped 70 BW down casing annulus thru perforations @ 4200' @ 3 1/2 b/m @ 2600 psi. Failed to circulate. Pumped 50 BW down tubing thru casing perforations @ 5040'. Failed to circulate. Pumped 50 BW down casing annulus thru perforations @ 4200'. Failed to circulate. Pumped 245 BW down tubing thru casing perforations @ 5040'. Failed to circulate. Flowed back approximately all water pumped into well. Pulled tubing & retrievable cementer. Perforated 5 1/2" casing @ 4860' w/4 jet shots. Set retrievable cementer @ 4497'. Pumped 80 BW down tubing thru casing perforations @ 4860'. Failed to circulate. Pumped 80 BW down casing annulus thru perforations @ 4200'. Failed to circulate. Pumped 60 BW down tubing thru perforations @ 4860'. Failed to circulate. Added 14 jts. 2 1/2" tubing & set packer @ 4938'. Pumped 60 BW down tubing thru casing perforations @ 5040'. Failed to circulate. Pumped 60 BW down casing annulus thru perforations @ 4860'. Failed to circulate. Pumped 60 BW down tubing thru perforations @ 5040'. Failed to circulate. Pulled 14 jts. 2 1/2" tubing. Set packer @ 4497'. Pumped 60 BW down tubing thru casing perforations @ 4860'. Failed to circulate. Pumped 50 BW down casing annulus thru perforations @ 4200'. Failed to circulate. Pumped 40 BW down tubing @ 5 b/m @ 2000 psi. Failed to circulate. Flowed all water back. Pulled 2 1/2" tubing & retrievable cementer. Set 5 1/2" Baker 2-A CI bridge plug @ 5060' & capped w/1 sx. cement. Ran retrievable cementer on 2 1/2" tubing. Set packer @ 4938'. Pumped down tubing w/100 BW thru perforations 5040' - 4860'. Pulled 14 jts. 2 1/2" tubing. Set packer @ 4497'. Pumped 30 BW down tubing thru perforations @ 4860'. Mixed 1000 gallons Form-gel. Pumped gel down tubing & displaced w/49 BW. After shut in 15 minutes pumped 346 BW down tubing. Failed to circulate. Pumped 60 BW down casing annulus thru perforations @ 4200'. Failed to circulate. Pumped 70 BW down tubing thru perforations @ 4860'. Failed to circulate. Pumped 70 BW down casing thru perforations @ 4200'. Failed to circulate. Pulled 2 1/2" tubing & retrievable cementer. Set Baker 2-A CI bridge plug & capped w/1 sx. cement. Ran retrievable cementer on 2 1/2" tubing, set @ 4497'. Pumped 100 BW down tubing thru casing perforations @ 4860'. Failed to circulate. Pumped 100 BW down casing annulus thru perforations @ 4200'. Failed to circulate. Spotted 1000 gallons MCA thru casing perforations @ 4860'. Flushed down tubing w/31 BW. After waiting on acid 24 hours pumped 100 BW down casing thru perforations @ 4200'. Failed to circulate. Pumped 150 BW down tubing thru casing perforations @ 4860'.

1. The above information was obtained from the following sources:

01-0 not yet identified

100% of this Gross Profit is allocated

[illegible]

Page # 2 Hooper # 1

Failed to circulate. Pumped 135 BW down casing thru perforations @ 4200'. Failed to circulate. Pumped 120 BW down tubing thru casing perforations @ 4860'. Failed to circulate. Shut in.

Pulled 2 1/2" tubing & packer. Rigged up casing pullers. Welded 5 1/2" x 2" lift nipple to casing. Pulled w/30,000# but failed to move casing. Pulled 287,000# on casing. Worked slips free & removed same. Ran Dia-Log free point indicator, found casing free down to 3600'. 11 point drop @ 4618', 34 point drop @ 4625', zero reading @ 4700'. 5 1/2" casing weight 180,000#. Obtained 9" stretch w/290,000# pull (including weight of casing). Ran 4 joints 2 1/2" tubing w/retrievable cementer. Set @ 4475'. Pumped 150 BW down tubing while moving casing up & down. Failed to circulate between perforations 4200' & 4860'. Shut well in.

Pulled tubing & 5 1/2" nipple & retrievable cementer. Set 5 1/2" CI Baker 2-A cement retainer @ 4845'. Ran 2 1/2" tubing & engaged cement retainer. Pumped into casing perforations @ 4860' w/water. Mixed 400 ex. cement. Pumped 15 bbls. cement thru casing perforations @ 4860'. Pressure increased to 2000 psi. Pumped 5 bbls. cement @ 2000 psi. Cleared perforations w/10 BW. After WOC 24 hours pumped into casing perforations @ 4860' @ 1800 psi & 2 3/4 b/m w/water. Mixed 100 ex. cement. Pumped 10 bbls. cement thru casing perforations @ 4860' & pressure increased to 2000 psi. Finished pumping 100 ex. cement @ 2000 psi. Cleared perforations w/10 BW. After WOC 24 hours pumped water into casing perforations @ 2 b/m w/2200 psi. Mixed 100 ex. cement. With 7 bbls. cement in formation pressure dropped 2200 - 1400 psi. With 13 bbls. in formation pressure gradually increased to 2600 psi. Final pressure 2600 psi. Cleared perforations w/10 BW. After WOC 24 hours pumped into casing perforations w/water @ 1 3/4 b/m w/2900 psi. Mixed 100 ex. cement. With 4 bbls. in formation pressure decreased to 2200 psi. With 9 bbls. in formation pressure dropped to 3300 psi. With 16 bbls. in formation pressure built up to 4400 psi. With 20 bbls. in formation pressure 3400 psi. Final pressure 3400 psi. Cleared perforations w/10 BW. After WOC 24 hours pumped water into casing perforations @ 4860' @ 1.5 b/m w/3200 psi. Mixed 100 ex. cement. With 5 bbls in formation pressure decreased to 2100 psi. With 20 bbls. in formation pressure increased to 2800 psi. Cleared perforations w/10 BW. After WOC 48 hours pumped into casing perforations @ 4860' w/water @ 3300 psi & 1 1/2 b/m. Mixed 100 ex. cement. With 7 bbls. cement in formation pressure bled to 2200 psi. Pressure gradually increased to 3200 psi w/20 bbls. in formation. Final pressure 3200 psi. Cleared all perforations w/10 BW. After WOC 72 hours pumped into casing perforations @ 4860' w/water @ 1 1/2 b/m w/3200 psi. Pumped 10 BO down tubing followed by 50 ex. DOC slurry + 50 BO + 100 ex. regular cement. DOC on formation @ 2900 psi. With 6 bbls. cement in formation pressure decreased to 2300 psi. Pressure gradually increased to 4000 psi w/20 bbls. cement in formation. Final pressure 4000 psi. Ran junk basket to 4830'. Perforated @ 4615' w/4 holes. Ran Baker cement retainer & set @ 4600'. Pumped into formation thru casing perforations @ 4615' w/water @ 2600 psi & 2 1/4 b/m followed by 250 gallons 10% MCA & 100 ex. cement. With 4 bbls in formation pressure 3400 psi, broke to 1000 psi. With 11 bbls. in formation recovered returns thru Bradenhead. With 20 bbls. in formation pressure 2400 psi. Final pressure 2400 psi. Pulled tubing & stinger. After WOC 48 hours drilled cement to 4634'. Perforated 5 1/2" casing 4621' - 4622' w/4 jet shots per foot. Set 5 1/2" Baker 2-A CI cement retainer @ 4595'. Pumped into casing perforations @ 4621' w/water @ 2500 psi @ 2 1/4 b/m. Mixed 100 ex. cement. With 4 bbls. in formation pressure decreased to 1600 psi. Gradually increased to 2800 psi w/20 bbls. in formation. Final pressure 2800 psi. Pulled tubing. Drilled cement to 4845'. Perforated 5 1/2" casing 4806' - 4830' & 4838' - 4832' w/4 jet shots per foot. Treated perforations w/2000 gallons 10% MCA. Loaded casing annulus w/76 BO. Pumped 20 BO into formation. Treated thru casing perforations via 2 1/2" tubing w/20,000 gallons gelled lease crude (Control-frac) containing 1/20#/gallon fluid-loss additive & 1#/gallon sand. Overflushed w/140 BO.

After recovering load pumped 61 BOPD + 75 BW w/11-64" SPM. GOR 511.



ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK	X	NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE	X	NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE	X	NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER) Acidize & Fracture	X

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Hobbs, New Mexico

July 19, 1956

(Place)

(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the HeeperShell Oil Company

(Company or Operator)

Well No. 1 in 0

(Unit)

SW 1/4 NE 1/4 of Sec. 27, T. 19-S, R. 35-E, NMPM., Pearl Pool

(40-acre Subdivision)

Lea

County.

FULL DETAILS OF PROPOSED PLAN OF WORK  
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)PROPOSED WORK:

1. Pull rods and tubing.
2. Set C.I. bridge plug capped w/cement @ 8150'.
3. Set C.I. bridge plug capped w/cement @ 5700'.
4. Perforate casing w/8 holes @ 5650'.
5. Run tubing w/cement retainer. Set retainer @ 5600' & attempt to circulate behind 5 1/2" casing. If able to circulate at surface, displace mud behind casing w/180 barrels water then 1000 gallons MGA followed by 200 barrels water. Then cement thru perforations w/400 sacks neat cement. Pull tubing out of retainer & load hole w/oil. Pull tubing.

Note: Procedure will be changed if unable to circulate.

(See back of page)

Approved JUL 20 1956, 19 1956  
Except as follows:Shell Oil Company

Company or Operator

By B. NevillPosition Division Exploitation Engineer

Send Communications regarding well to:

Approved  
OIL CONSERVATION COMMISSIONBy P. M. LeederTitle District EngineerName Shell Oil Company  
Box 1957, Hobbs, New Mexico

Address

**PROPOSED WORK (Cont'd):**

6. After WOC 24 hours jet perforate 5568' - 5588'.
7. Treat down casing w/10,000 gallons gelled lease crude containing 1# sand/gallon & fluid loss additive as required.
8. Run tubing w/packer & swab test well. If satisfactory production is indicated pull tubing & perforate w/4 JHPF in the interval 5375' - 5392'. Run retrievable bridge plug on wire line & set at 5500'. Treat down casing w/10,000 gallons gelled lease crude as Step 7 and run tubing & packer & test. Pull tubing, packer, & retrievable bridge plug & proceed w/Step 9. If production not satisfactory then pull tubing & set C.I. bridge plug @ 5000' & cap w/cement.
9. Perforate 5 1/2" casing w/4 JHPF in the interval 4806' - 4866'.
10. Run retrievable bridge plug on wire line & set @ 4900'. Treat down casing w/20,000 gallons gelled lease crude w/1# sand/gallon & F.L. additive as required.
11. Run tubing & packer & swab test. Pull tubing, packer & retrievable bridge plug.
12. Perforate 5 1/2" casing w/4 JHPF in the interval 4694' - 4706'.
13. Run retrievable bridge plug on wire line & set @ 4750'. Treat down casing w/10,000 gallons gelled lease crude as in Step 7.
14. Run tubing & packer & swab test well.
15. Dependent upon results of tests, pull tubing, packer & retrievable bridge plug & place well on production.



Form C-103  
(Revised 3-55)

# NEW MEXICO OIL CONSERVATION COMMISSION

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106) 9:42

COMPANY Shell Oil Company Box 1957 Hobbs, New Mexico  
(Address)

LEASE Hooper WELL NO. 1 UNIT "G" S -27 T -19-S R -35-E

DATE WORK PERFORMED Oct. 3 thru 17, 1955 POOL PEARL AREA WILDCAT

This is a Report of: (Check appropriate block) ☐ Results of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☒ Other PLUG BACK

Detailed account of work done, nature and quantity of materials used and results obtained.  
**TO COMPLETE WELL - REPAIR CASING LEAK AND PLUG BACK IN BONE SPRINGS PAY ZONE**  
 Dumped 5 gallons pea gravel on bottom at PBTD 8691' with bailer. P B T D 8640'. Ran tubing, packer, and side door choke then loaded casing with water and tested for leaks. Found hole in casing between 7785' - 7800'. Set Baker magnesium bridging plug on wire line at 7820' and Baker Model H magnesium cement retainer with wire line at 7760'. Ran tubing and cemented through hole in casing at 7792' with 100 sacks sle-set cement. After WOC 48 hours ran tubing with bit. Broke circulation and drilled 2' cement and retainer at 7760' and fell through to 7796'. Tested casing with 1500 psi for 30 minutes. Test OK. Drilled cement to 7821' and hit bridge plug. Drilled and pushed plug to 7878'. Knocked bridge plug loose and pushed to 8640'. Pulled bit. Ran tubing and hung at 8520' with tubing perforations 8480' - 8488', seating nipple at 8479'. Ran pump and rods and hooked up test pumping unit.

### FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl Date \_\_\_\_\_

Tbng. Dia \_\_\_\_\_ Tbng Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_

Perf Interval (s) \_\_\_\_\_

Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

### RESULTS OF WORKOVER:

	BEFORE	AFTER
Date of Test	_____	_____
Oil Production, bbls. per day	_____	_____
Gas Production, Mcf per day	_____	_____
Water Production, bbls. per day	_____	_____
Gas-Oil Ratio, cu. ft. per bbl.	_____	_____
Gas Well Potential, Mcf per day	_____	_____

Witnessed by A. K. Palmer Production Foreman Shell Oil Company  
(Company)

OIL CONSERVATION COMMISSION

Name *C. M. Linder*  
 Title \_\_\_\_\_  
 Date \_\_\_\_\_

I hereby certify that the information given above is true and complete to the best of my knowledge.  
 Original signed by  
 Name D. C. Meyers  
 Position Division Mechanical Engineer  
 Company Shell Oil Company

Operator Shell Oil Co. Hooper #1  
Lease Hooper Well No. 1 Unit G  
Location 1980 ft. from N line and 1980 ft. from the E line of  
Section 27 Township 19 Range 35  
Completion Date 7/19 Recomp. 9/12  
Name of producing formation Atoka Bone Springs  
Top Perforations 12,796 8198  
Depth to casing shoe \_\_\_\_\_  
Date C-123 filed 9/21  
Name of pool for which extension is requested Pearl - Bone Springs  
Area Requested \_\_\_\_\_

Advertised for \_\_\_\_\_ Hearing

Placed in \_\_\_\_\_ pool by Order No. R \_\_\_\_\_

Remarks

Shell will recomplate this well  
in master pool

**NEW MEXICO OIL CONSERVATION COMMISSION**  
**Santa Fe, New Mexico**

(Form C-104)  
 (Revised 7/1/52)

**REQUEST FOR (OIL) - (GAS) ALLOWABLE**

**New Well**  
**Recompletion**

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

..... **Hobbs, New Mexico** ..... **September 15, 1955** .....  
 (Place) (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

**Shell Oil Company** ..... **Hooper** ..... Well No. **1** ..... in **SW**  $\frac{1}{4}$  **NE**  $\frac{1}{4}$  .....  
 (Company or Operator) (Lease)  
**0** ..... Sec. **27** ..... T. **-12-S** ..... R. **-35-E** ..... NMPM, **Pearl Area Wildcat** ..... Pool  
 (Unit)  
**Lea** ..... County. Date Spudded **6-12-54** ..... Date Completed **9-12-55**

Please indicate location:

**R - 27 - S**

		<b>X</b>	

Elevation **3730'** ..... Total Depth **13.950'** ..... P.B. **8691'** .....  
 Top oil/gas pay **8198'** ..... Name of Prod. Form **Rose Springs** .....  
 Casing Perforations: **8198'-8272'**, **8450'-8510'** ..... or  
 Depth to Casing shoe of Prod. String **-** .....  
 Natural Prod. Test ..... BOPD  
 based on ..... bbls. Oil in ..... Hrs. .... Mins.  
 Test after acid or shot **272** ..... BOPD  
 Based on **151** ..... bbls. Oil in **13** ..... Hrs. .... Mins.  
 Gas Well Potential **-** .....  
 Size choke in inches **1"** .....  
 Date first oil run to tanks or gas to Transmission system: **9-12-55** .....  
 Transporter taking Oil or Gas: **Shell Oil Company (Trucks)** .....

**Section 27, Unit 0**

**Casing and Cementing Record**  
 Size Feet Sax

<b>13 3/8"</b>	<b>327'</b>	<b>400</b>
<b>8 5/8"</b>	<b>3,995'</b>	<b>1550</b>
<b>5 1/2"</b>	<b>13,809'</b>	<b>950</b>

Remarks: **\* Permanent plug set to 8691'.**  
**\*\* Temporary bridge plug @ 8330' and well presently producing from perforations 8198'-8272' only.**

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

Approved **SEP 16 1955** ..... 19.....

**OIL CONSERVATION COMMISSION**

By: *C. M. [Signature]* .....  
 Title **Engineer District 1** .....

**Shell Oil Company** .....  
 (Company or Operator)  
 Original signed by **B. Nevill** .....  
 (Signature)

Title **Division Exploitation Engineer** .....  
 Send Communications regarding well to:

Name **Shell Oil Company** .....  
 Address **P. O. Box 1957, Hobbs, New Mexico** .....

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GASCompany or Operator Shell Oil Company Lease HooperWell No. 1 Unit Letter G S 27 T -19-SR-35-E Pool Pearl Area WildcatCounty Lee Kind of Lease (State, Fed. or Patented) PatentedIf well produces oil or condensate, give location of tanks: Unit S T RAuthorized Transporter of Oil or Condensate Shell Oil Company (Trucks)Address P. O. Box 1509, Midland, Texas  
(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas \_\_\_\_\_

Address \_\_\_\_\_  
(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Gas being flared, no pipe line connection available.Reasons for Filing: (Please check proper box) New Well ( )Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )Change in Ownership ( ) Other Recompletion (X)

Remarks: (Give explanation below)

• Well now producing into temporary storage facilities.

x Well has been recompleted from the Pennsylvanian to the Bone Springs.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 16th day of September 19 55By B. Nevill Original signed by B. NevillApproved 1955 19Title Division Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil CompanyBy C. M. LinderAddress P. O. Box 1957, Hobbs, New MexicoTitle Engineer District 1

Form C-103

(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION  
MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Shell Oil Company Box 1957 Hobbs, New Mexico  
(Address)

LEASE Hooper WELL NO. 1 UNIT "G" S -27 T -19-S R -35-E

DATE WORK PERFORMED 8-5-55 thru 9-14-55 POOL PEARL AREA WILDCAT

This is a Report of: (Check appropriate block) ☐ Results of Test of Casing Shut-off

☐ Beginning Drilling Operations

☐ Remedial Work

☐ Plugging

☒ Other PLUG BACK

Detailed account of work done, nature and quantity of materials used and results obtained.

**TO COMPLETE WELL - PLUG BACK, PERFORATE, AND TEST BONE SPRINGS PAY Zone**

Loaded hole with water and spotted 75 barrels mud from bottom to 9900'. Set Baker cast iron bridge plug at 9807'. Perforated 5 1/2" casing with 2 - 4 way shots (8 holes) at 9500'. Pumped water down casing with no returns at surface. Set Baker model K cement retainer at 9450'. Cemented through perforations at 9500' with 125 sacks neat cement. Ran temperature survey which indicated top of cement at 9325'. Perforated 5 1/2" casing at 8800' with 2 - 4 way shots (8 holes). Pumped 25 barrels water down casing through perforations at 8800'. No returns at surface. Perforated 5-1/2" casing at 7792' with 2 - 4 way jet shots (8 holes). Set Baker Model K cement retainer at 8750'. Pumped down tubing and established circulation around 5 1/2" casing between perforations 8800'-7792'. After washing with acid washed with 175 barrels water. Cemented through retainer w/ 160 sacks neat also set cement. Ran temperature survey which indicated top of cement at 8200'. Checked top of cement at 8691'. Perforated 5 1/2" casing 8180' w/ 2 - 4 way shots (8 holes). Ran Baker Model K cement retainer and set at 7865'. Cemented thru retainer w/ 125 sacks also-set cement. Found top of cement at 7400'. Drilled cement to 7820'. Tested casing with 1000 psi for 30 minutes. Test OK. Drilled cement 7820' - 7865'. Drilled up magnesium retainer and washed to P B T D 8691' without encountering additional cement in casing. (SEE BOTTOM OF PAGE)

**FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY**

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl Date \_\_\_\_\_

Tbng. Dia \_\_\_\_\_ Tbng Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_

Perf Interval (s) \_\_\_\_\_

Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

**RESULTS OF WORKOVER:**

	BEFORE	AFTER
Date of Test	_____	_____
Oil Production, bbls. per day	_____	_____
Gas Production, Mcf per day	_____	_____
Water Production, bbls. per day	_____	_____
Gas-Oil Ratio, cu. ft. per bbl.	_____	_____
Gas Well Potential, Mcf per day	_____	_____
Witnessed by _____	_____	_____

(Company)

OIL CONSERVATION COMMISSION

Name C. M. Linder

Title Engineer

Date SEP 16 1955

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

Name D. C. Meyers Original signed by D. C. Meyers

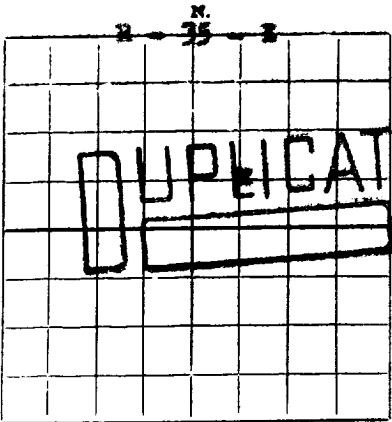
Position Division Mechanical Engineer

Company Shell Oil Company

Perforated 5-1/2" casing opposite the Bone Springs Pay Zone from 8450' - 8510' with 4 Du Pont 26-A jet shots per foot. Ran Baker retrievable bridge plug and set at 8330'. Perforated 5-1/2" casing from 8198' - 8272' with 4 Du Pont 26-A jet shots per foot. Plugged back from P B T D 13,100' in the Pennsylvania Pay Zone to 8691' in the Bone Springs Pay Zone. P B T D 8691'.



(Revised 7/1/88)  
(Form C-105)



NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

1985 SEP 16 PM 1:33  
WELL RECORD

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPLICATE.

Shell Oil Company (Company or Operator) Hooper (Lease)

Well No. 1, in SW 1/4 of NE 1/4, of Sec. 27, T. 19-S, R. 35-E, NMPM.

Pearl Area Wildcat Pool, Lea County.

Well is 1980 feet from north line and 1980 feet from east line of Section. If State Land the Oil and Gas Lease No. is.

Drilling Commenced June 12, 1954 Drilling was Completed June 28, 1955

Name of Drilling Contractor Guy Mahon

Address Odessa, Texas

Elevation above sea level at Top of Tubing Head 3716' The information given is to be kept confidential until Not confidential, 19.

OIL SANDS OR ZONES

No. 1, from to No. 4, from to

No. 2, from to No. 5, from to

No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

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.

No. 4, from to feet.

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13 3/8"	48#	New	327'				Surface string
8 5/8"	32#	New	3,995'	Baker			Salt string
5 1/2"	17,20,23#	New	13,809'	Lark-in		*	Oil string

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17"	13 3/8"	343'	400	Pump & plug		
11"	8 5/8"	4,009'	1550	Pump & plug		
7 7/8"	5 1/2"	13,824'	950	Pump & plug		

RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

See attachment.

\* Oil string perforated 8198'-8272' and 8450'-8510'. Temporary bridge plug set at 8330'. Well presently producing from upper perforated interval only.

Result of Production Stimulation

Depth Cleaned Out

WORD OF DRILL-STEM AND SPECIAL T

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from 0 feet to 13,950 feet, and from feet to feet.  
Cable tools were used from feet to feet, and from feet to feet.

PRODUCTION

Put to Producing 9-12, 1955  
OIL WELL: The production during the first 24 hours was 151 barrels of liquid of which 97% was oil; 3% was emulsion; % water; and % was sediment. A.P.I. Gravity 32.7  
GAS WELL: The production during the first 24 hours was M.C.F. plus barrels of liquid Hydrocarbon. Shut in Pressure lbs.  
Length of Time Shut in

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy		T. Devonian 13,887' (-10,157')	T. Ojo Alamo
T. Salt		T. Silurian	T. Kirtland-Fruitland
B. Salt		T. Montoya	T. Farmington
T. Yates 3410' (-1320')		T. Simpson	T. Pictured Cliffs
T. 7 Rivers		T. McKee	T. Menefee
T. Queen 4570' (-800')		T. Ellenburger	T. Point Lookout
T. Grayburg		T. Gr. Wash	T. Mancos
T. San Andres 5310' (-1580')		T. Granite	T. Dakota
T. Glorieta		T. Delaware Mt. 5790' (-2060')	T. Morrison
T. Drinkard		T. Bone Spring 7790' (-4060')	T. Penn
T. Tubbs		T. Wolfcamp 10,925' (-7195')	
T. Abo		T. Woodford 13,726' (-9996')	
T. Penn 11,455' (-7725')			
T. Miss 13,074' (-9344')			

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	3,000	3000	No samples taken				
3,000	3,220	220	Salt				
3,220	3,550	330	Anhydrite				
3,550	6,400	2850	Sandy Dolomite w/sand stringers				
6,400	7,610	1210	Sandy Dolomite w/sand and shale stringers				
7,610	7,650	40	Shaly Limestone				
7,650	7,800	150	Shaly Sand				
7,800	9,320	1520	Cherty Lime w/shale stringers				
9,320	10,120	800	Shale, Dolomite & Sand stringers				
10,120	10,500	380	Sandy Shale w/chert stringers				
10,500	10,630	130	Shaly Lime				
10,630	10,900	270	Sandy & Cherty Dolomite				
10,900	11,200	300	Sandy & Cherty Limestone				
11,200	13,100	1900	Sand, Shale & Limestone stringers				
13,100	13,550	450	Cherty Limestone				
13,550	13,900	350	Shaly Limestone				
13,900	13,950	50	Dolomite				

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

September 16, 1955 (Date)  
Company or Operator Shell Oil Company Address P. O. Box 1957, Hobbs, New Mexico  
Original signed by B. Nevill Position or Title Division Exploitation Engineer  
Name B. Nevill



Attachment for C-105

Pearl Area Wildcat  
Hooper 1

Perforated 5 1/2" casing 8450'-8510' with 4 jet shots per foot.

Washed casing perforations 8450'-8510' with 500 gallons MCA.

Treated thru casing perforations 8450'-8510' with 500 gallons MA and 1000 gallons 15% LST non-swelling, non-emulsion acid.

Treated thru casing perforations 8450'-8510' with 5,000 gallons (CP) Type J acid.

Perforated 5 1/2" casing with 4 jet shots per foot from 8198'-8272'.

Set retrievable Bridge plug @ 8330'.

Washed casing perforations 8198'-8272' with 500 gallons MCA.

Treated thru casing perforations 8198'-8272' with 500 gallons MCA and 1000 Gallons 15% LST acid.

Treated thru casing perforations 8198'-8272' with 5000 gallons 15% Type J acid. (CP).

Treated thru casing perforations 8198'-8272' with 2000 gallons Channel acid followed by 10,000 gallons 15% LST non-swelling, non-emulsifying acid.

Treated thru casing perforations 8198'-8272' with 10,000 gallons Dowell acid Petrofrac containing 1 pound sand per gallon.

On OPT in 24 hours flowed 279 BO, cut 3 1/2 BS&W, thru 1" choke.

279 BO  
3 1/2 BS&W  
1" choke

279  
3 1/2  
1"

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**DUPLICATE**NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico**MISCELLANEOUS NOTICES**

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

**Indicate Nature of Notice by Checking Below**

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK	<b>X</b>	NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO**Hobbs, New Mexico**

(Place)

**August 8, 1955**

(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the

**Hooper****Shell Oil Company**

(Company or Operator)

Well No. **1** in **8**

(Unit)

**SW** **NE** **27** **T-19-S** **R-35-E** **NMPM.** **Pearl Area Wildcat** Pool

(40-acre Subdivision)

**Lea**

County.

**FULL DETAILS OF PROPOSED PLAN OF WORK**  
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

- (1) Spot and laden fluid from PBTD to 9800'.
- (2) Set Oil Bridge Plug @ 9800'.
- (3) Protect interval 7800' - 8800' w/cement.
- (4) Perforate 5 1/2" casing 8440' - 8500' and test.
- (5) Perforate 5 1/2" casing 8190' - 8264' and test.

**AUG 10 1955**Approved....., 19.....  
Except as follows:Approved  
OIL CONSERVATION COMMISSIONBy **Warren M. Markin**Title **Assistant District 1****Shell Oil Company**

Company or Operator

By **D. C. Meyers** Original signed by**D. C. Meyers**Position **Division Mechanical Engineer**

Send Communications regarding well to:

Name **Shell Oil Company**Address **Box 1957, Hobbs, New Mexico**

NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
WELL RECORD. 37

AREA 640 ACRES  
LOCATE WELL CORRECTLY

**Shell Oil Company**  
(Company of Operator)

**Flopper**.....  
(Lease)

Well No. 1, in SW  $\frac{1}{4}$  of NE  $\frac{1}{4}$ , of Sec. 27, T. 19-S, R. 35-E, NMPM.

Pearl Area Wildcat Pool, Lea County.

Well is 1980 feet from north line and 1980 feet from east line  
of Section 27. If State Land the Oil and Gas Lease No. is •

Drilling Commenced.....June 12....., 1954... Drilling was Completed.....June 28....., 1955...

Name of Drilling Contractor.....**Guy Kabee**.....

Address.....Odessa, Texas.....

Elevation above sea level at Top of Tubing Head.....3716..... The information given is to be kept confidential until  
~~Not confidential~~..... 19.....

No. 1, from.....to..... No. 4, from.....to.....  
No. 2, from.....to..... No. 5, from.....to.....  
No. 3, from.....to..... No. 6, from.....to.....

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. ....

No. 4, from ..... to ..... feet. ....

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13 3/8"	484	New	327'	-			Surface string
8 5/8"	324	New	3,995'	Baker			Salt string
5 1/2"	17,20,23 1/2	New	13,809'	Lar-in		12,796'-12,810'	Oil string
						12,860'-12,866'	
						12,866'-12,880'	

**MUDDING AND CEMENTING RECORD 12,920'-13,050'**

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17"	13 3/8"	343'	400	Pump & Plug	-	-
11"	8 5/8"	4,009'	1550	Pump & Plug	-	-
7 7/8"	5 1/2"	13,824'	950	Pump & Plug		

### RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Ots. or Gals. used, interval treated or shot.)

Washed casing perforations 12.796'-12.050' with 500 gallons mud acid (CP). Treated thru casing perforations with 500 gallons mud acid (CP).

Result of Production Stimulation..... On OBT in 24 hours flowed 133 BO, no BS&W, thru 1" choke.

FTC 75 ml. Gravity 48.6° API.

**...Depth Cleaned Out.....**

CORD OF DRILL-STEM AND SPECIAL TESTS

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from 0 feet to 13,950 feet, and from feet to feet.  
Cable tools were used from feet to feet, and from feet to feet.

PRODUCTION

Put to Producing 7-19, 1955  
OIL WELL: The production during the first 24 hours was 177 barrels of liquid of which 100% was  
was oil; % was emulsion; % water; and % was sediment. A.P.I.  
Gravity 48.6°  
GAS WELL: The production during the first 24 hours was M.C.F. plus barrels of  
liquid Hydrocarbon. Shut in Pressure lbs.  
Length of Time Shut in

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy		T. Devonian 13,887' (-10,157')	T. Ojo Alamo
T. Salt		T. Silurian	T. Kirtland-Fruitland
B. Salt		T. Montoya	T. Farmington
T. Yates 3410' (-4320')		T. Simpson	T. Pictured Cliffs
T. 7 Rivers		T. McKee	T. Menefee
T. Queen 4570' (-840')		T. Ellenburger	T. Point Lookout
T. Grayburg		T. Gr. Wash	T. Mancos
T. San Andres 5310' (-1580')		T. Granite	T. Dakota
T. Glorieta		T. Delaware Mt. 5790' (-2060')	T. Morrison
T. Drinkard		T. Bone Spring 7790' (-4060')	T. Penn.
T. Tubbs		T. Wolfcamp 10,925' (-7195')	
T. Abo		T. Woodford 13,726' (-9006')	
T. Penn 11,455' (-7725')			
T. Miss 13,074' (-9344')			

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	3,000	3000	No samples taken				
3,000	3,220	220	Salt				
3,220	3,550	330	Anhydrite				
3,550	6,400	2850	Sandy Dolo. w/sand stringers				
6,400	7,610	1210	Sandy Dolo. w/sand & shale stringers				
7,610	7,650	40	Shaly Limestone				
7,650	7,800	150	Shaly Sand				
7,800	9,320	1520	Cherty Lime w/shale stringers				
9,320	10,120	800	Shale, Dolo. & sand stringers				
10,120	10,500	380	Sandy Shale w/chert stringers				
10,500	10,630	130	Shaly Limestone				
10,630	10,900	270	Sandy & Cherty Dolomite				
10,900	11,200	300	Sandy & Cherty Limestone				
11,200	13,100	1900	Sand, Shale & Limestone stringers				
13,100	13,550	450	Cherty Limestone				
13,550	13,900	350	Shaly Limestone				
13,900	13,950	50	Dolomite				

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far  
as can be determined from available records.

July 28, 1955 (Date)  
Company of Operator Shell Oil Company Address P. O. Box 1957, Hobbs, New Mexico  
Name J. R. Curry For: B. Nevill Position or Title Division Exploitation Engineer

Attachment for State Form C-105

State PA-1

Sec. 27-19S-35-E

DST # 1: 5432' - 5490' (58' San Andres dolomite). Tool open 30 minutes thru 5/8" EC & 1" TC on 3 1/2" DS. Immediate very weak blow that died in 3 minutes. By-passed tool & re-opened w/very weak blow that continued throughout test. NOTS. Recovered 95' (0.46 bbls.) mud w/no show. 30 minutes ISIBHP 100 psi. FBHP 100 psi. 30 minutes FSIBHP 120 psi. EMH 3140 psi. Maximum BHT 138 deg. F. Conclusive Test. (Cook)

DST # 2: 5635' - 5695' (60' San Andres dolomite & anhydrite). Tool open 45 minutes thru 5/8" EC & 1" TC on 3 1/2" DS. Tool opened w/few air bubbles & died. Dropped another bar which resulted w/5 bubbles & died. By-passed packers. Tool re-opened w/very weak blow which lasted throughout test. NOTS. Recovered 190' (0.94 bbl.) SOCM. FBHP 120 - 160 psi. 30 minutes FSIBHP 400 psi. EMH 3300 psi. Maximum temperature 141 deg. F. Conclusive Test. (Cook)



## Attachment For C-105

Pearl Area Wildcat  
Hooper 1

- DST #1: 4676'-4706' (30' Sand & Dolomite). Tool open 1 hour thru 1" TC & 1" BC on 4" DP. Immediate weak blow air increasing to strong in 10 minutes, remaining strong thru out test. NGTS. Rec. 130' (0.65 bbls.) slightly mud cut, heavily gas cut oil. FBHP 60-120 psi. 30 min. SIBHP 230 psi. HMH 2340 psi. Mud 3,000 ppm. Test Cl- 5000 ppm. Positive Test.
- DST #2: 4793'-4868' (75' Sand & Dolomite). Tool open 2 hours thru 1" TC & 1" BC on 4" DP. Immediate weak blow which lasted thru out test. NGTS. Rec. 90' (0.45 bbls.) slightly gas cut mud & 180' (0.9 bbls) heavily gas & slightly oil cut mud. FBHP 80-205 psi. 30 min. SIBHP 260 psi. HMH 2519-2490 psi. Positive test.
- DST #3: 7494'-7521' (27' Dolomite). Tool open 2 hours thru 1" TC & 3/4" BC on 4" DP. Immediate weak blow air increasing to fair in 5 mins. and remaining fair thru out test. NGTS. Rec. an est. 700' salt water cut mud. FBHP 30-250 psi. HMH 3950 psi. No SIBHP. Mud Cl- 2400 ppm. Test Cl- 162,000 ppm. Positive Test.
- DST #4: 7627'-7665' (38' Sand). Tool open 2 hours thru 1" TC & 5/8" BC on 4" DP. Immediate weak blow of air increasing to good in 30 minutes and remaining good thru out test. NGTS. Rec. 200' (1 bbl.) fluid, being 20' (0.1 bbl.) mud, 150' (0.75 bbl.) SG&SWCM, 30' (0.15 bbl.) salt water titrating 85,000 ppm Cl- w/140,250 ppm Cl-. Mud titrated 4,000 ppm Cl-. FBHP 100-150 psi. No SIBHP. HMH 3975-3900 psi. Positive Test.
- DST #5: 7726'-7750' (24' Sand). Tool open 1 hour thru 1" TC & 1" BC on 4" DP. Immediate weak blow air increasing to moderate in 15 mins. Remained moderate thru out test. NGTS. Rec. 30' (0.15 bbl.) mud. FBHP 20 psi. Same SIBHP. Mud Cl- 4700 ppm. Test Cl- 5000 ppm. HMH 3850-3820 psi. Positive Test.
- DST #6: 8238'-8270' (32' Limestone). Tool open 2 hours thru 1" TC & 3/4" BC on 4" DP. Immediate strong blow air. GTS in 5 mins. Est. total Rec. 5850' (50 bbls) oil & gas. HMH 4275-4125 psi. FBHP 300-750 psi. 30 min. SIBHP 1650 psi. Positive Test.
- DST #7: 8440'-8563' (123' Limestone). Tool open 2 hours thru 1" TC & 5/8" BC on 4" DP. Immediate strong air blow. GTS in 12 mins. Rec. 560' (5.6 bbls.) clean oil & 500' (5 bbls.) mud cut oil. HMH 4250 psi. FBHP 475-725 psi. 30 min. SIBHP 2250 psi. Positive Test.
- DST #8: 8570'-8623' (53' Limestone & Shale). Tool open 2 hours thru 1" TC & 3/4" BC on 4" DP. Moderate blow of air thru out test. NGTS. Rec. 60' (0.3 bbl) slightly oil cut mud. No water. HMH 4325 psi. FBHP 30-55 psi. SIBHP 725 psi. Mud Cl- 2800 ppm. Test Cl- 2000 ppm. Positive Test.
- DST #9: 9330'-9455' (125' Sand). Tool open 1 hour thru 1" TC & 5/8" BC on 4" DP. Weak blow air thru out test. Died in 60 mins. Rec. 150' (0.75 bbl.) mud. Titrated 1800 ppm Cl-. HMH 4675-4625 psi. FBHP 150 psi. 30 min. SIBHP 250 psi. Positive Test.
- DST#10: 10,636'-10,696' (60' Dolomite). Tool open 2 hours thru 1" TC & 1" BC on 4" DP. Immediate weak blow of air. GTS in 72 minutes. Moderate blow thru out test. Rec. 210' (1 bbl.) fluid, being 30' mud, 90' heavily oil cut mud, 90' clean oil. No water. HMH 5210-5180 psi. FBHP 80-110 psi. 30 min. SIBHP 760 psi. Positive Test.
- DST #11: 12,408'-12,500' (92' Sand & Shale). Tool open 1 hour thru 1/4" TC & 3/4" BC on 4" DP. Immediate weak blow of air increasing to moderate in 5 mins. Died in 15 mins. Ran 4500' WB. Rec. 180' WB & 60' mud which titrated 3300 ppm Cl-. FBHP 2075 psi. 30 min. SIBHP 2165 psi. Positive Test.
- DST#12: 12,390'-12,556' (166' Sand & Shale). Tool open 2 hours 20 mins. thru 1/4" TC & 1" BC on 4" DP. Moderate blow of air thru out test. NGTS. Ran 4500' WB. Rec. WB plus 630' (6.44 bbls.) slightly GCM & 270' (1.35 bbls.) salt water titrating 195,000 ppm Cl-. FBHP 2207-2543 psi. 15 min. SIBHP 5407 psi. HMH 8410-8384 psi. Positive Test.



1. The first part of the document is a list of names and their corresponding page numbers. The names are listed in a single column, and the page numbers are listed in a single column to the right of the names. The names are: "The first part of the document is a list of names and their corresponding page numbers."

DATE rec'd \_\_\_\_\_

1. The first of these is the fact that the majority of the population of the United States is now living in urban areas. This is a result of the process of urbanization, which has been going on since the beginning of the 20th century. The process of urbanization is the movement of people from rural areas to urban areas. This movement is caused by a number of factors, including the search for better living conditions, the desire for education, and the need for employment. The process of urbanization has led to the growth of large cities and the decline of small towns. This has had a significant impact on the economy and society. The majority of the population now lives in urban areas, which are characterized by high population density, a high level of economic activity, and a high level of social organization. This has led to the development of a new type of society, which is based on the city. The city is now the center of economic and social life. The majority of the population now lives in urban areas, which are characterized by high population density, a high level of economic activity, and a high level of social organization. This has led to the development of a new type of society, which is based on the city. The city is now the center of economic and social life.

1. The following information was obtained from the records of the Federal Bureau of Investigation, Department of Justice, dated 10/10/50, and 10/11/50, and 10/12/50, and 10/13/50, and 10/14/50, and 10/15/50, and 10/16/50, and 10/17/50, and 10/18/50, and 10/19/50, and 10/20/50, and 10/21/50, and 10/22/50, and 10/23/50, and 10/24/50, and 10/25/50, and 10/26/50, and 10/27/50, and 10/28/50, and 10/29/50, and 10/30/50, and 10/31/50, and 11/1/50, and 11/2/50, and 11/3/50, and 11/4/50, and 11/5/50, and 11/6/50, and 11/7/50, and 11/8/50, and 11/9/50, and 11/10/50, and 11/11/50, and 11/12/50, and 11/13/50, and 11/14/50, and 11/15/50, and 11/16/50, and 11/17/50, and 11/18/50, and 11/19/50, and 11/20/50, and 11/21/50, and 11/22/50, and 11/23/50, and 11/24/50, and 11/25/50, and 11/26/50, and 11/27/50, and 11/28/50, and 11/29/50, and 11/30/50, and 12/1/50, and 12/2/50, and 12/3/50, and 12/4/50, and 12/5/50, and 12/6/50, and 12/7/50, and 12/8/50, and 12/9/50, and 12/10/50, and 12/11/50, and 12/12/50, 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1. Immediate and flow air inspection in this is 2 miles in perimeter.  
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On June 27, 1968, at Miami Beach, Florida, I was advised by [redacted] that he had been contacted by [redacted] who stated that he had information regarding the activities of [redacted] in the Miami area. [redacted] stated that he had been contacted by [redacted] who stated that he had information regarding the activities of [redacted] in the Miami area. [redacted] stated that he had been contacted by [redacted] who stated that he had information regarding the activities of [redacted] in the Miami area.

1. The first part of the document is a letter from the Director of the Central Intelligence Agency to the President, dated 10/10/50. The letter discusses the results of a recent meeting with the British Prime Minister, Winston Churchill, and the implications for the United States' foreign policy. The Director notes that Churchill's views on the Soviet Union are in line with those of the United States, and that the meeting has resulted in a strengthened alliance between the two nations. The letter also mentions the importance of maintaining a strong military presence in Europe and the need for continued cooperation with the British government.

[illegible]

1. The first group of people (1945-1950) were the ones who were born in the United States and who were the first to be born in the United States. They were the ones who were born in the United States and who were the first to be born in the United States.

1. The following information was obtained from the records of the Bureau of the Census, Department of Commerce, for the years 1940 through 1949:

[illegible][illegible]

1. The first part of the document is a letter from the author to the editor of the journal, dated 1961. The letter discusses the author's interest in the journal and the author's work on the subject of the journal.

Attachment for C-105

Pearl Area Wildcat  
Hooper 1

DST #13A: 13,824'-13,950' (126' Shale, Lime & Dolomite). Unable to hold mud level in annulus. Pulled DP to redress HW packer. Negative Test.

DST#13: 13,824'-13,950' (126' Shale, Limes & Dolomite). Tool open 2 1/2 hours thru 1" TC & 1/2" BC on 2 7/8" DP. Immediate strong blow of air which died in 2 hours. NGTS. Ran 2000' WB. Recovered WB plus 9000' (40 bbls.) sulfur water which titrated 20,000 ppm Cl<sup>-</sup>. HME 6235-6125 psi. FBHP 3420-5580 psi. 30 min. SIBHP 5940 psi. Positive Test.

DST#14: Thru casing perforations 13,796'-12,810', 12,860'-12,880' and 12,920'-13,050' (254'/164' Lower Penn. Sands & Shale). Ran 2000' WB. Tool open 24 hours thru 1" TC & 1/2" BC on 2 7/8" DP. Immediate strong air blow. OTS in 1 3/4 hours. WOTS in 1 hour 50 mins. MTS in 2 hours. Flowing clean oil & gas in 2 1/2 hours. FBHP 875-4250 psi. SIBHP 5275 psi. HME est. 8800 psi. Positive Test.

January 24, 2020  
Dear Sir:

Re: [REDACTED]

Enclosed for the [REDACTED] is a copy of the [REDACTED] dated [REDACTED] and [REDACTED] dated [REDACTED].

The [REDACTED] dated [REDACTED] is a copy of the [REDACTED] dated [REDACTED] and [REDACTED] dated [REDACTED]. The [REDACTED] dated [REDACTED] is a copy of the [REDACTED] dated [REDACTED] and [REDACTED] dated [REDACTED].

The [REDACTED] dated [REDACTED] is a copy of the [REDACTED] dated [REDACTED] and [REDACTED] dated [REDACTED]. The [REDACTED] dated [REDACTED] is a copy of the [REDACTED] dated [REDACTED] and [REDACTED] dated [REDACTED].

(Form C-104)  
(Revised 7/1/52)NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

## REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well  
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-104 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Hobbs, New Mexico  
(Place)

July 28, 1955

(Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Shell Oil Company  
(Company or Operator)Hooper  
(Lease)

Well No. 1, in 3/4 NE 1/4,

0, Sec. 27, T. 19-S, R. 15-E, NMPM, Pearl Area Wildcat Pool  
(Unit)

Leon

County. Date Spudded 6-12-54, Date Completed 7-19-55

Please indicate location:

		X	

Elevation 3730' Total Depth 13,950', P.B. 13,100'

Top oil/gas pay 12,796' Name of Prod. Form Atoka

19 Casing Perforations: 12,796'-12,810', 12,860'-12,866', 12,866'-12,880', 12,920'-13,050'.

8 Depth to Casing shoe of Prod. String

Natural Prod. Test BOPD

based on bbls. Oil in Hrs. Mins.

Test after acid<sup>4</sup> or shot 133 BOPD

Based on bbls. Oil in Hrs. Mins.

Gas Well Potential

Size choke in inches 1"

Date first oil run to tanks or gas to Transmission system 7-19-55

Transporter taking Oil or Gas: Shell Oil Company (Trucks)

Remarks: \* Washed perforations with 500 gallons (GP) mud acid and treated with 500 gallons mud acid.

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

Approved AUG -2 1955, 19

Shell Oil Company

(Company or Operator)

By:

J. R. Berry

(Signature)

Per: B. Merrill

Title:

Division Exploitation Engineer

Send Communications regarding well to:

Name:

Shell Oil Company

Address:

P. O. Box 1957, Hobbs, New Mexico

OIL CONSERVATION COMMISSION

By: Warren Mankin

Title Engineer District

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

(File the original and 4 copies with the appropriate district office)

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GASCompany or Operator Shell Oil Company Lease HooperWell No. 1 Unit Letter 6 S 27 T 19 R 35 Pool Pearl Area WildcatCounty Lea Kind of Lease (State, Fed. or Patented) PatentedIf well produces oil or condensate, give location of tanks: Unit • S T RAuthorized Transporter of Oil or Condensate Shell Oil Company (Trucks)Address P. O. Box 1509, Midland, Texas

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas \_\_\_\_\_

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Gas being flared, no pipe line connection available.Reasons for Filing: (Please check proper box) New Well (x)

Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )

Change in Ownership ( ) Other ( )

Remarks: (Give explanation below)

\* Well now producing into temporary storage facilities.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 28 day of July 19 55Approved AUG -2 1955 19By J. R. Curry For: B. NevillTitle Division Exploitation EngineerCompany Shell Oil CompanyAddress P. O. Box 1957, Hobbs, New Mexico

OIL CONSERVATION COMMISSION

By W. A. W. MarkenTitle Engineer District I

Form C-103  
(Revised 3-55)

**NEW MEXICO OIL CONSERVATION COMMISSION**  
**MISCELLANEOUS REPORTS ON WELLS**  
 (Submit to appropriate District Office as per Commission Rule 1106)

Company Shell Oil Company Box 1957 Hobbs, New Mexico  
 (Address)  
 Lease Hooper Well No. 1 Unit "8" S 27 T 19-S R 35-E  
 Date work performed July 1, 1955 POOL Pearl Area Wildcat

This is a Report of (Check appropriate block) ☐ Result of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☒ Other PLUG BACK

Detailed account of work done, nature and quantity of materials used and results obtained.

**Plugged back from TD 13,950' in the lower Pennsylvanian Pay Zone by setting a Baker cast iron bridge plug at 13,100' and capped with one sack cement. P B T D 13,100'.**

**FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY**

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl. Date \_\_\_\_\_  
 Tbng. Dia. \_\_\_\_\_ Tbng. Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_  
 Perf. Interval (s) \_\_\_\_\_  
 Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

**RESULTS OF WORKOVER:**

	BEFORE	AFTER
Date of Test	_____	_____
Oil Production, bbls. per day	_____	_____
Gas Production, Mcf per day	_____	_____
Water Production, bbls. per day	_____	_____
Gas-Oil Ratio, cu. ft. per bbl.	_____	_____
Gas Well Potential, Mcf per day	_____	_____
Witnessed by _____		

(Company)

Oil Conservation Commission

Name S. J. STANLEY

Title ENGINEER-DIST.

Date JUL - 1 1955

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

Name D. C. Meyers Original signed by D. C. Meyers

Position Division Mechanical Engineer

Company Shell Oil Company

Form C-103  
(Revised 3-55)

**NEW MEXICO OIL CONSERVATION COMMISSION**  
**MISCELLANEOUS REPORTS ON WELLS**  
 (Submit to appropriate District Office as per Commission Rule 1406)

Company Shell Oil Company Box 1957 Hobbs, New Mexico  
 (Address)

Lease Keeper Well No. 1 Unit "0" S 27 T 19-S R 34-S

Date work performed July 2, 3, & 4, 1955 POOL Pearl Area Wildcat

This is a Report of (Check appropriate block) ☐ Result of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☒ Other PERFORATING

Detailed account of work done, nature and quantity of materials used and results obtained.

**Perforated 5-1/2" casing opposite the lower Pennaylvanian Pay Zone from 12,796' - 12,810', 12,860' - 12,880', and 12,920' - 13,050' with 4 Type "E" bullets per foot.**

**FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY**

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl. Date \_\_\_\_\_  
 Tbng. Dia. \_\_\_\_\_ Tbng. Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_  
 Perf. Interval (s) \_\_\_\_\_  
 Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

**RESULTS OF WORKOVER:**

	BEFORE	AFTER
Date of Test	_____	_____
Oil Production, bbls. per day	_____	_____
Gas Production, Mcf per day	_____	_____
Water Production, bbls. per day	_____	_____
Gas-Oil Ratio, cu. ft. per bbl.	_____	_____
Gas Well Potential, Mcf per day	_____	_____
Witnessed by _____		

(Company)

Oil Conservation Commission

Name S. J. STANLEY

Title ENGINEER - DIST.

Date JUL - 7 1955

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

Name D. C. Meyers

Original signed by  
D. C. Meyers

Position Division Mechanical Engineer

Company Shell Oil Company



Form C-103  
(Revised 3-55)NEW MEXICO OIL CONSERVATION COMMISSION  
MISCELLANEOUS REPORTS ON WELLS  
(Submit to appropriate District Office as per Commission Rule 1106)

Company Shell Oil Company Box 1057, Hobbs, New Mexico  
(Address)  
Lease Hooper Well No. 1 Unit 6 S 27 T 12-S R 35-1  
Date work performed June 16, 1955 POOL Pearl Area Wildcat

This is a Report of (Check appropriate block) ☐ Result of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☒ Other PERFORATING

Detailed account of work done, nature and quantity of materials used and results obtained.

To Complete Well:

Perforated 5 1/2" casing w/4-way lance wells squeeze gun @ 13,750' w/8-1/2" holes.

## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl. Date \_\_\_\_\_  
Tbng. Dia. \_\_\_\_\_ Tbng. Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_  
Perf. Interval (s) \_\_\_\_\_  
Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

## RESULTS OF WORKOVER:

Date of Test

Oil Production, bbls. per day

Gas Production, Mcf per day

Water Production, bbls. per day

Gas-Oil Ratio, cu. ft. per bbl.

Gas Well Potential, Mcf per day

Witnessed by \_\_\_\_\_

BEFORE

AFTER

(Company)

Oil Conservation Commission

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

Name S. J. STANLEY

Name D. C. Meyers

Original signed by  
D. C. Meyers

Title ENGINEER-IN-CHARGE

Position Division Mechanical Engineer

Date JUN 20 1955

Company Shell Oil Company

Form C-103  
(Revised 3-55)NEW MEXICO OIL CONSERVATION COMMISSION  
MISCELLANEOUS REPORTS ON WELLS  
(Submit to appropriate District Office as per Commission Rule 1106)

Company Shell Oil Company Box 1957, Hobbs, New Mexico  
(Address)  
Lease Hooper Well No. 1 Unit 0 S 27 T -19-S R -35-E  
Date work performed June 17, 1955 POOL Pearl Area Wildcat

This is a Report of (Check appropriate block) ☒ Result of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☐ Other \_\_\_\_\_

Detailed account of work done, nature and quantity of materials used and results obtained.

Ran 13,316' 5 1/2" casing and cemented to 13,332' w/850 ex. 4 1/2" col + 100 ex. neat cement. After 24 hours hung casing w/197,500# on slips. Tested Welding flange w/6000 psi. Test OK. Tested casing & cement w/2000 psi for 30 minutes before & after drilling plug. Tests OK.

## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl. Date \_\_\_\_\_  
Tbng. Dia. \_\_\_\_\_ Tbng. Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_  
Perf. Interval (s) \_\_\_\_\_  
Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

## RESULTS OF WORKOVER:

	BEFORE	AFTER
Date of Test	_____	_____
Oil Production, bbls. per day	_____	_____
Gas Production, Mcf per day	_____	_____
Water Production, bbls. per day	_____	_____
Gas-Oil Ratio, cu. ft. per bbl.	_____	_____
Gas Well Potential, Mcf per day	_____	_____
Witnessed by _____		

(Company)

Oil Conservation Commission

Name S. J. STANLEYTitle ENGINEER-DIST.Date JUL 10 1955

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

Name D. C. Meyers

Original signed by

Position Division Mechanical EngineerCompany Shell Oil Company

Form C-103  
(Revised 3-55)NEW MEXICO OIL CONSERVATION COMMISSION  
MISCELLANEOUS REPORTS ON WELLS  
(Submit to appropriate District Office as per Commission Rule 1106)

Company Shell Oil Company Box 1957, Hobbs, New Mexico  
(Address)  
Lease Hooper Well No. 1 Unit 0 S 27 T -19-S R -35-E  
Date work performed June 23, 1955 POOL Pearl Area Wildcat

This is a Report of (Check appropriate block) ☐ Result of Test of Casing Shut-off  
☐ Beginning Drilling Operations ☐ Remedial Work  
☐ Plugging ☒ Other PERFORATING

Detailed account of work done, nature and quantity of materials used and results obtained.

**To Complete Well:**

Perforated 5 1/2" casing w/lane Wells 4-way squeeze gun @ 13,716'  
w/16-1/2" jet shots.

## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

## Original Well Data:

DF Elev.          TD          PBD          Prod. Int.          Compl. Date           
Tbng. Dia.          Tbng. Depth          Oil String Dia          Oil String Depth           
Perf. Interval (s)           
Open Hole Interval          Producing Formation (s)         

## RESULTS OF WORKOVER:

	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		
Witnessed by <u>        </u>		

(Company)

Oil Conservation Commission

Name J. STANLEYTitle ENGINEER-DIST.Date JUN 24 1955

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

Name D. C. MeyersPosition Division Mechanical EngineerCompany Shell Oil Company

Original signed by

D. C. Meyers

Original signed by

D. C. Meyers

(Form C-103)  
(Revised 7/1/52)

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

## MISCELLANEOUS REPORTS ON WELLS

JUN 27 AM 10:34

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

## Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF	<input checked="" type="checkbox"/>	REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL		REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

June 29, 1954

(Date)

Hobbs, New Mexico

(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

Shell Oil Company

(Company or Operator)

Hooper

(Lease)

Mabee Drilling Company

(Contractor)

Well No. 1 in the SW 1/4 NE 1/4 of Sec. 27

T. 19-S, R. 35-E, NMPM, Pearl Area Wildcat Pool, Lea County.

The Dates of this work were as follows: June 27, 1954

Notice of intention to do the work (~~was~~) (was not) submitted on Form C-102 on \_\_\_\_\_, 19\_\_\_\_,

(Cross out incorrect words)

and approval of the proposed plan (~~was~~) (was not) obtained.

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Ran 3995' of 8 5/8" casing and cemented at 4009' with 1400 sacks 4% gel and 150 sacks neat cement. Circulated out an estimated 240 sacks cement. After WOC 36 hours tested casing with 1000 psi for 30 minutes. Test OK. Drilled shoe and tested cement with 800 psi for 30 minutes. Test OK.

Witnessed by F. W. Stewart (Name) Shell Oil Company (Company) Drilling Foreman (Title)

Approved: OIL CONSERVATION COMMISSION

*F. D. Stanley*  
(Name)

(Title)

(Date)

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

Original signed by  
F. D. Leigh

Name F. D. Leigh

Position Division Mechanical Engineer

Representing Shell Oil Company

Address Box 1957, Hobbs, New Mexico

(Form C-103)  
(Revised 7/1/52)

DUPLICATE

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

## MISCELLANEOUS REPORTS ON WELLS 15 AM 9:55

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

## Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF	<input checked="" type="checkbox"/>	REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL		REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

June 15, 1954

(Date)

Hobbs, New Mexico

(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

Shell Oil Company

(Company or Operator)

Hooper

(Lease)

Mabee Drilling Company

(Contractor)

Well No. 1 in the SW 1/4 NE 1/4 of Sec. 27

T. 19-S, R. 35-E, NMPM, Pearl Area Wildcat Pool, Lea County.

The Dates of this work were as follows: June 13, 1954

Notice of intention to do the work (~~was~~) submitted on Form C-102 on \_\_\_\_\_, 19\_\_\_\_,

(Cross out incorrect words)

and approval of the proposed plan (~~was~~) obtained.

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Ran 327' of 13-3/8" casing and cemented at 343' with 400 sacks regular cement. Circulated cement. After WOC 24 hours tested casing with 500 psi for 30 minutes. Test OK.

Witnessed by F. W. Stewart Shell Oil Company Drilling Foreman

(Name)

(Company)

(Title)

Approved:

OIL CONSERVATION COMMISSION

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

Original signed by

Name F. D. Leigh F. D. LeighPosition Division Mechanical EngineerRepresenting Shell Oil CompanyAddress Box 1957, Hobbs, New Mexico

F. A. Johnson

(Name)

Oil & Gas Inspector

(Title)

(Date)

(Form C-103)  
(Revised 7/1/52)**DUPLICATE**

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

**MISCELLANEOUS REPORTS ON WELLS** 1954 JUN 15 AM 9:28

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

## Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS	<input checked="" type="checkbox"/>	REPORT ON RESULT OF TEST OF CASING SHUT-OFF	<input type="checkbox"/>	REPORT ON REPAIRING WELL	<input type="checkbox"/>
REPORT ON RESULT OF PLUGGING WELL	<input type="checkbox"/>	REPORT ON RECOMPLETION OPERATION	<input type="checkbox"/>	REPORT ON (Other)	<input type="checkbox"/>

June 14, 1954

(Date)

Hobbs, New Mexico

(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

Shell Oil Company

(Company or Operator)

Hooper

(Lease)

Mabee Drilling Company

(Contractor)

Well No. 1 in the SW 1/4 NE 1/4 of Sec. 27

T. 19-S, R. 35-E, NMPM, Pearl Area Wildcat Pool, Lea County.

The Dates of this work were as follows: June 12, 1954

Notice of intention to do the work (was) ~~XXXXXX~~ submitted on Form C-103 on June 1, 1954, 1954, (Cross out incorrect words)

and approval of the proposed plan (was) ~~XXXXXX~~ obtained.

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Spudded 1:00 P.M. 6-12-54

Witnessed by R. B. Flournoy  
(Name)

Shell Oil Company  
(Company)

Drilling Foreman  
(Title)

Approved:

OIL CONSERVATION COMMISSION

*F. G. L. Lanson*  
(Name)

Oil &amp; Gas Inspector JUN 18 1954

(Title)

(Date)

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

Original signed by

Name F. D. Leigh F. D. Leigh

Position Division Mechanical Engineer

Representing Shell Oil Company

Address Box 1957, Hobbs, New Mexico



**DUPLICATE**

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

**NOTICE OF INTENTION TO DRILL OR RECOMPLETION**

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing the changes will be returned to the sender. Submit this notice in **QUINTUPPLICATE**. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

**Hobbs, New Mexico**

(Place)

**June 1, 1954**

(Date)

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the (Drilling) (~~Recompletion~~) of a well to be known as**Shell Oil Company**

(Company or Operator)

**G. H. Heeper**

(Lease)

Well No. **1**, in **G** (Unit) The well islocated **1960** feet from the **north** line and **1980** feet from the**east** line of Section **27**, T. **19N**, R. **35E**, NMPM.(GIVE LOCATION FROM SECTION LINE) **Wildcat** Pool, **Lee** County**R-35-E**

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

**Section 27**If State Land the Oil and Gas Lease is No. **-**If patented land the owner is **G. H. Heeper**Address **-**

We propose to drill well with drilling equipment as follows:

**Conventional Rotary Rig**The status of plugging bond is **Blanket Bond**Drilling Contractor **Guy Mabey Drig. Co.****Odessa, Texas**We intend to complete this well in the **Devonian**formation at an approximate depth of **13,100** feet.**CASING PROGRAM**

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
<b>17"</b>	<b>13 3/8"</b>	<b>48#</b>	<b>New</b>	<b>350</b>	<b>350</b>
<b>11"</b>	<b>8 5/8"</b>	<b>32#</b>	<b>New</b>	<b>4000</b>	<b>3000</b>
<b>7 7/8"</b>	<b>5 1/2"</b>	<b>17# 15.5#</b>	<b>New</b>	<b>13,100</b>	<b>2200</b>

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

Approved **JUN 2 1954**, 19.....  
Except as follows:

Sincerely yours,

**Shell Oil Company**

(Company or Operator)

By **G. H. Heeper****D. Nevill**Position **Division Exploitation Engineer**

Send Communications regarding well to

Name **Shell Oil Company**Address **Box 1957****Hobbs, New Mexico**

OIL CONSERVATION COMMISSION

By **S. G. Stanley**Title **Assistant Engineer**

Shell C. H. Hooper 1

Shell 400 Ac.	Shell 40 Ac.	Shell 160 Ac.		Signal	Shell
McIntosh	Barton	Kimberland		State	Record
Shell 200 Ac.	Shell 120 Ac.	Shell 80 Ac. E-5839	Shell 40 Ac. (Amerada) 1980' 1980'	Shell 80 Ac.	Shell 1140 Ac.
		State 27 Shell 80 Ac. E-5839	G. H. Hooper Shell 120 Ac.		T 19 S
McIntosh Amerada	G. H. Hooper Amerada		Shell 40 Ac.		
State	State	H. S. Record	E. M. Byers	H. S. Record	
Gulf State	(Amerada) 1980'	Shell 160 Ac. E-5840 State R-35-E	Shell 80 Ac. E-5838	Shell 40 Ac. E. M. Byers	Shell H. S. Record

I, B. Nevill, do hereby certify that the foregoing plat is true and correct.

B. Nevill  
Division Exploitation Engineer  
Shell Oil Company  
Hobbs, New Mexico

Subscribed and sworn to before  
me this 1st day of June 1954.

OPERATOR: Shell Oil Company  
FIELD: Pearl Area (Undesignated)  
LOCATION: SW/4 NE/4 of Section 27-19S-35E  
NMPM Survey, Lea County, New  
Mexico  
SCALE: 1" = 1000'

Notary Public  
Lea County, New Mexico

OWWO

COUNTY	LEA	FIELD	Pearl	STATE	NM MN 12578
OPR	SHELL OIL CO.			MAP	
	27 East Pearl Queen Unit				
	Sec 27, T-19-S, R-35-E			CO-ORD	
	1980' FNL, 1980' FEL of Sec				
	Re-Spd 2-1-72				
	Re-Cmp 2-17-72		CLASS	OWOF EL [REDACTED]	
		FORMATION	DATUM	FORMATION	DATUM
CSG & SX - TUBING					
13 3/8" at 343' w/400 sx					
8 5/8" at 4009' w/1550 sx					
5 1/2" at 13,824' w/950 sx					
LOGS EL GR RA IND HC A					
	TD 13,950'; PRD 4983'				
(Queen) Perfs 4694-4872' NO NEW POTENTIAL					

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CONT.	PROP DEPTH	4706'	TYPE	WO
DATE				

F.R.C. 3-25-72; Opr's Elev. 3730' DF  
 PD 4706' WO (Queen)  
 (Orig. #1 Hooper, comp 7-19-55 thru (Atoka)  
 Perfs 12,796-13,050', OTD 13,950', OPB 13,100';  
 OWWO & Re-Cmp 9-12-55 thru (Bone Spring) Perfs  
 8198-8272', CPB 8330'; OWWO & Re-Cmp 12-10-56  
 thru (Queen) Perfs 4806-38', OPB 4845'; OWWO &  
 Re-Cmp 9-28-62 thru (Queen) Perfs 4806-72',  
 OPB 4983')  
 3-20-72 TD 13,950'; PRD 4983'; COMPLETE  
 Perf 4694-4706' w/2 SPF  
 Acid (4694-4872') 3500 gals  
 3-25-72 COMPLETION REPORTED

Submit 1 Copy To Appropriate District  
OfficeDistrict I - (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240

District II - (575) 748-1283

811 S. First St., Artesia, NM 88210

District III - (505) 334-6178

1000 Rio Brazos Rd., Aztec, NM 87410

District IV - (505) 476-3460

1220 S. St. Francis Dr., Santa Fe, NM

87505

State of New Mexico

Energy, Minerals and Natural Resources

Form C-103

Revised August 1, 2011

HOBBS OCD

DEC 07 2012

RECEIVED

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO. 30-025-12578
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> X
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name EAST PEARL QUEEN UNIT
8. Well Number #27
9. OGRID Number 25482
10. Pool name or Wildcat PEARL QUEEN
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

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

STATE OF NEW MEXICO formerly Xeric Oil &amp; Gas Corp

3. Address of Operator

1625 N. French Drive Hobbs, NM 88240

4. Well Location

Unit Letter\_G\_\_\_\_\_: 1980\_\_\_\_ feet from the \_N\_\_\_\_ line and \_1980\_\_\_\_ feet from the \_E\_\_\_\_ line

Section 27

Township 19S

Range 35E

NMPM

County LEA

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

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

## NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☒ XTEMPORARILY ABANDON ☐ CHANGE PLANS ☒PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐DOWNHOLE COMMINGLE ☐OTHER: ☐

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐ P AND A ☐CASING/CEMENT JOB ☐OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

SEE ATTACHED P&amp;A PROCEDURE

Spud Date:

Rig Release Date:

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

SIGNATURE Mark Whitaker Title COMPLIANCE OFFICER DATE 12/07/2012

Type or print name MARK WHITAKER

E-mail address: Marka.Whitaker@state.nm.us

PHONE: 575-393-6161

For State Use Only

APPROVED

BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any):

State of New Mexico formerly Xeric Oil & Gas Corp  
East Pearl Queen Unit No. 27

Set CIBP at 4600' and cap w/ 25 sx cmt. Pressure test csg.  
Circulate hole w/ 9.5 ppg brine w/ 25 sx salt gel per 100 bbls.  
Spot 25 sx cmt at 4059'. WOC and Tag.  
Perf at 3400'. Attempt to sqz w/ 25 sx cmt. WOC and Tag.  
Perf at 1800'. Attempt to sqz w/ 25 sx cmt. WOC and Tag.  
Perf at 393'. Attempt to circulate cmt to surface.  
Cut off wellhead and install dry hole marker.

# PLUGGING & ABANDONMENT WORKSHEET (3 STRING CSNG)

OPERATOR St. of NM formerly XERIC OIL & GAS

LEASENAME EAST PEARL QUEEN UNIT

WELL # 27

SECT 27 TWN 19S RNG 35E

FROM 1980 (N) S L 1980 (E) W L

TD: 13,950' FORMATION @ TD

PBTD: 4983' FORMATION @ PBTD QUEEN

13 3/8  
@ 343'  
TOC CIRC

8 5/8  
@ 4009'  
TOC CIRC

Perfs 4694'-4872'  
PBTD 4983

5 1/2  
@ 13,824  
TOC ?

## NOTE:

Free point on 5 1/2  
showed 100% @  
3600'

TD 13,950'

30-025-12578

	SIZE	SET @	TOC	TOC DETERMINED BY
SURFACE	<u>13 3/8</u>	<u>343'</u>	<u>SUR.</u>	<u>CIRC.</u>
INTMED 1	<u>8 5/8</u>	<u>4009'</u>	<u>SUR.</u>	<u>CIRC.</u>
INTMED 2	<u>5 1/2</u>	<u>13,824'</u>	<u>?</u>	
PROD				
	SIZE	TOP	BOT	TOC DETERMINED BY
LINER 1				
LINER 2				
	CUT & PULL @		TOP - BOTTOM	
INTMED 1			PERFS	<u>4694' - 4872'</u>
INTMED 2			OPENHOLE	-
PROD				

## \* REQUIRED PLUGS DISTRICT I

RUTLER (ANGVD)	
YATES	<u>3410'</u>
QUEEN	<u>4570'</u>
GRAYBORG	
SAN ANDRES	
CANTAN REEF	
DELAWARE	
BELL CANYON	
CHERRY CANYON	
BURNEY CANYON	
BONE SPRING	
OLONETA	
BURNERY	
TUES	
ORISKANY	
ARO	
WIC	
PERCH	
STRAWN	
ATOKA	
WATERLOO	
SUN	
OKMORCAN	

PLUG	TYPE	SACKS	DEPTH
PLUG	PLUG	CMNT	
EXAMPLES			
PLUG #1	OH	25 SXS	9850'
PLUG #2	SHOE	50 SXS	8700'-8800'
PLUG #3	CIEP/35'		5300'
PLUG #4	CIEP	25 SXS	5300'
PLUG #5	STUB	50 SXS	4600'-4700'
PLUG #6	REINR SQZ	200 SXS	400'
PLUG #7	SURF	10 SXS	0-10'
PLUG #8			
PLUG #9			
PLUG #10			
PLUG #11			
PLUG #12			
PLUG #13			
PLUG #14			
PLUG #15			
PLUG #16			
PLUG #17			
PLUG #18			
PLUG #19			
PLUG #20			
PLUG #21			
PLUG #22			
PLUG #23			
PLUG #24			
PLUG #25			
PLUG #26			
PLUG #27			
PLUG #28			
PLUG #29			
PLUG #30			



Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161  
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1000 Rio Brazos Rd., Aztec, NM 87410  
District IV - (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

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

Form C-103

August 1, 2011

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.)		WELL API NO. <b>30-025-12578</b>
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator <b>State of New Mexico formerly Xeric Oil and Gas Corp</b>		6. State Oil & Gas Lease No.
3. Address of Operator <b>1625 N. French Drive, Hobbs, NM 88240</b>		7. Lease Name or Unit Agreement Name <b>East Pearl Queen Unit</b>
4. Well Location Unit Letter <b>G</b> : <b>1980</b> feet from the <b>N</b> line and <b>1980</b> feet from the <b>E</b> line Section <b>27</b> Township <b>19-S</b> Range <b>35-E</b> NMPM County <b>Lea</b>		8. Well Number <b>27</b>
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number <b>25482</b>
10. Pool name or Wildcat <b>Pearl Queen</b>		

## 12. 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"/>	P AND A <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

02/27/13 MIRU plugging equipment. POH w/ rods and pump. ND Wellhead and NU BOP.  
 02/28/13 POH w/ tbg. RIH w/ gauge ring to 4650'. RIH w/ 5 1/2 CIBP and set @ 4600'. Circulated hole w/ mud laden fluid. Pressured tested casing. Held. Spotted 25 sx cement @ 4600-4353. POH to 4059'. Spotted 25 sx cement @ 4059-3812. POH to 1800'. 03/01/13 Tagged plug @ 3770'. Pressured tested casing. Held. POH w/ tbg. Perf'd csg @ 3400'. Spotted 30 sx cement @ 3300'. POH w/ tbg. Set packer @ 10'. Sqz'd cement into perfs and held 500 psi. WOC. Tagged plug @ 3268. Perf'd csg @ 1800'. Spotted 30 sx @ 1850'. Set packer @ 10' and Sqz'd cement into perfs. WOC.  
 03/04/13 Tagged plug @ 1780'. Spotted 10 sx cement @ 1780-1681. POH. ND BOP. Perf'd csg @ 393'. Set packer @ 6'. Loaded hole w/ mud laden fluid and Sqz'd 110 sx cement and circulated to surface.. WOC. Verified cement to surface. Riggd down moved off.  
 03/07/13 Moved in welder and backhoe. Dug out cellar. cut off wellhead. Welded on Above Ground Dry Hole Marker. Backfilled cellar. removed deadmen. Cleaned location and moved off.

Spud Date:

02/27/13

Rig Release Date:

03/07/13

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

SIGNATURE

TITLE

DATE

Type or print name

E-mail address:

PHONE:

For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):

**LONQUIST & CO. LLC****PETROLEUM  
ENGINEERS****ENERGY  
ADVISORS****AUSTIN • HOUSTON • WICHITA • DENVER • CALGARY****INJECTION INTERVAL CONFINING LAYERS – FEATHERGRASS 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 &amp; Co., LLC

January 24, 2020

Project:       Blackbuck Resources  
                  Feathergrass Fee SWD No. 1

# LONQUIST & CO. LLC

PETROLEUM  
ENGINEERS

ENERGY  
ADVISORS

AUSTIN • HOUSTON • WICHITA • DENVER • CALGARY

## GEOLOGIC AFFIRMATION

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



Parker Jessee  
Geologist

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

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

The proposed well is located in Lea County, New Mexico. The proposed Feathergrass Fee SWD No.1 well is located in Township 19 South, Range 35 East, Section 27; Twenty miles west of Hobbs. The proposed well is located near the Northwest Shelf of the Delaware Basin.

### **Seismicity:**

Historically, the area near the proposed Devonian disposal wells has not seen any major seismic activity. A search of the USGS Earthquake Hazards Program Earthquake Catalog revealed the nearest event to be located 27 miles 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 3.3 miles of the proposed well. Faulting in the New Mexico portion of the Delaware Basin generally shows less than a 10% probability of fault slip movement.

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

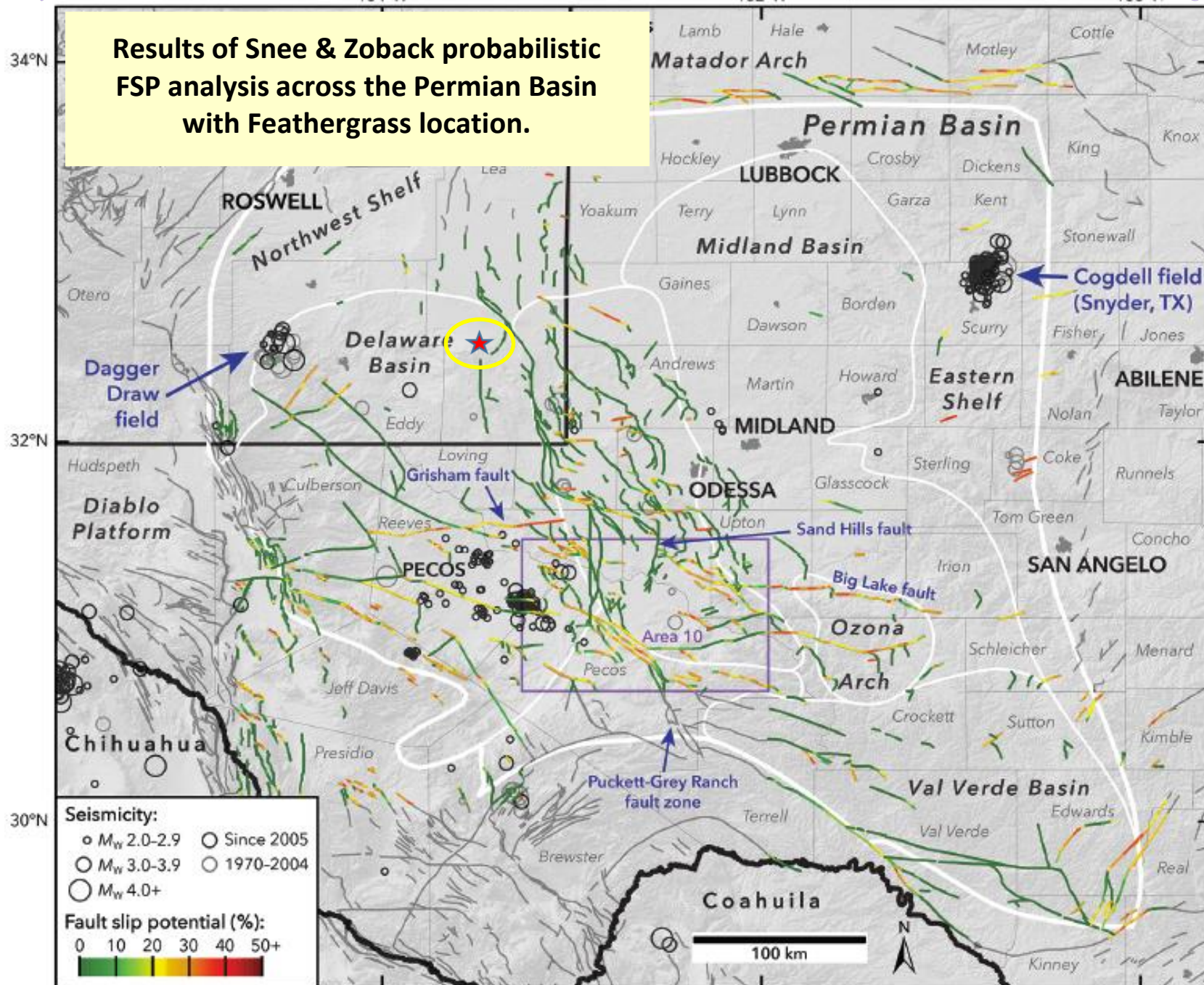


Tyler F. Moehlman

Petroleum Engineer, Lonquist & Co. LLC



**Results of Snee & Zoback probabilistic  
FSP analysis across the Permian Basin  
with Feathergrass 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="32.628504"/>
Center Longitude	<input type="text" value="-103.452960"/>
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 2:53:12 PM*

*Page 94 of 189*

☐ Other Networks

Seismic Regions

Require Focal Mechanism?

☐

Earthquake Magnitude



☒ Lock Magnitude

Date Range

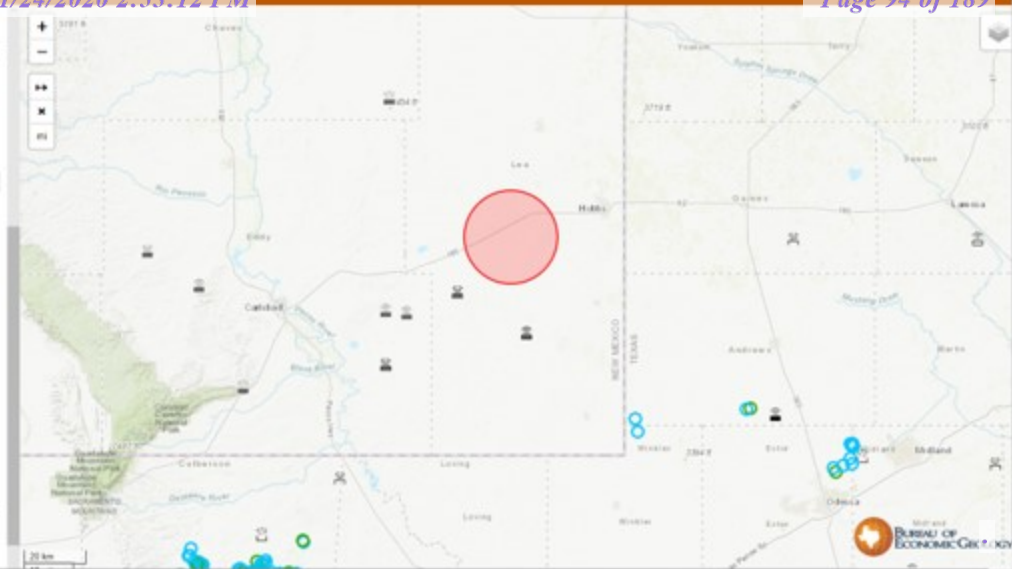
SELECT DATE RANGE

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)



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.<sup>1</sup>☒ Custom

Custom Circle

- 32.628504 Latitude
- -103.45256 Longitude
- 15 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

32.628504

-103.45296

Outer Radius (km)

15

## Depth (km)

Minimum

Maximum

## Azimuthal Gap

Minimum

Maximum

## Review Status



Any



Automatic



Reviewed

## + Event Type

## + Impact (PAGER, ShakeMap, DYFI)

## Search Results

0 of 0 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](#).
- [Why 0 earthquakes are included on the map and list?](#)
- [If a 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](#)[Close](#)  
[Close](#)

Earthquakes loading

[Close](#)

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

### Date & Time

☐ Past 7 Days☐ Past 30 Days☒ Custom

### Geographic Region

☐ World☐ Conterminous U.S.<sup>1</sup>☒ Custom

Minimum

Start (UTC)

Custom Circle

- 32.628504 Latitude
- -103.45296 Longitude
- 25 Radius (km)

Maximum

End (UTC)

[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



Impact (PAGER, ShakeMap, DYFI)

**Depth (km)**

Minimum

Maximum

**Azimuthal Gap**

Minimum

Maximum

**Review Status**

Any



Automatic



Reviewed



## Search Results

0 of 0 earthquakes in map area.

[Click for more information.](#)

There are no events in the current feed.

Didn't find what you were looking for?

- [Check your settings.](#)
- [Which earthquakes are included on the map and feed?](#)
- [Not 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](#)

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.<sup>1</sup>
- ☒ Custom

Custom Circle

- 32.628504 Latitude
- -103.45296 Longitude
- 50 Radius (km)

Draw Rectangle on Map



## Advanced Options

*Received by OCD: 1/24/2020 2:53:12 PM*

*Page 102 of 189*

### Geographic Region

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

North

West

East

South

### Circle

Center Latitude

Center Longitude

Outer Radius (km)

### Depth (km)

Minimum

Maximum

### Azimuthal Gap

Minimum

Maximum

### Review Status

☒ Any

☐ Automatic

☐ Reviewed



Event Type

Received by OCD: 1/24/2020 2:53:12 PM

Page 103 of 189

## Search Results

4 of 4 earthquakes in map area.

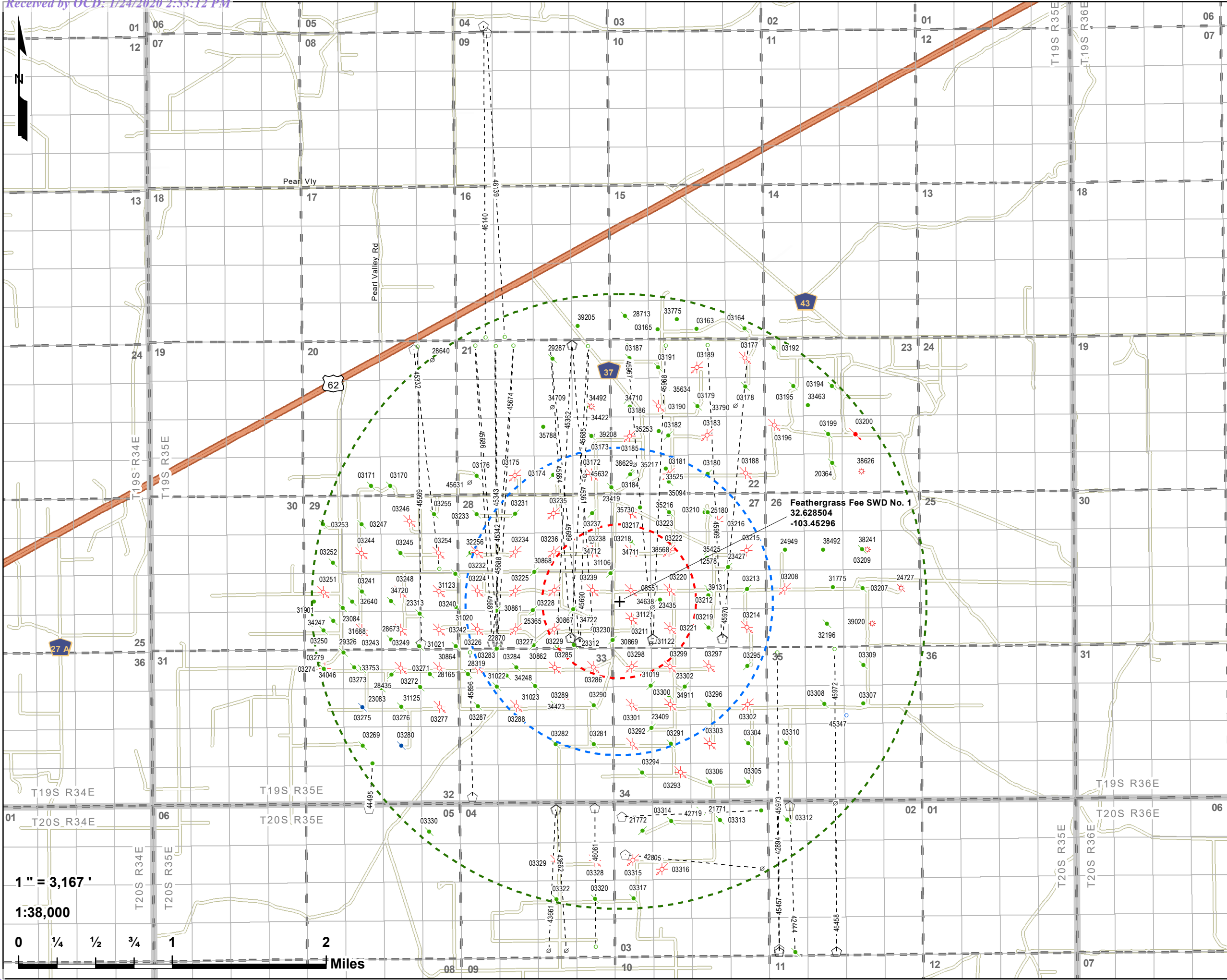
Click for more information

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 20:38:36 (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.](#)





## Feathergrass Fee SWD No. 1

### 2 Mile Area of Review

Blackbuck Resources

Lea County, NM

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

Drawn by: SJL

Date: 8/14/2019

Approved by: CBW

**LONQUIST & CO. LLC**

PETROLEUM  
ENGINEERS

ENERGY  
ADVISORS

AUSTIN • HOUSTON • CALGARY • WICHITA  
DENVER • COLLEGE STATION • BATON ROUGE • EDMONTON

+ Feathergrass Fee SWD No. 1

1/2 Mile Radius

1 Mile Radius

2 Mile Radius

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

Section (NM-PLSS 1st Div.)

Township/Range (NM-PLSS)

--- Laterals

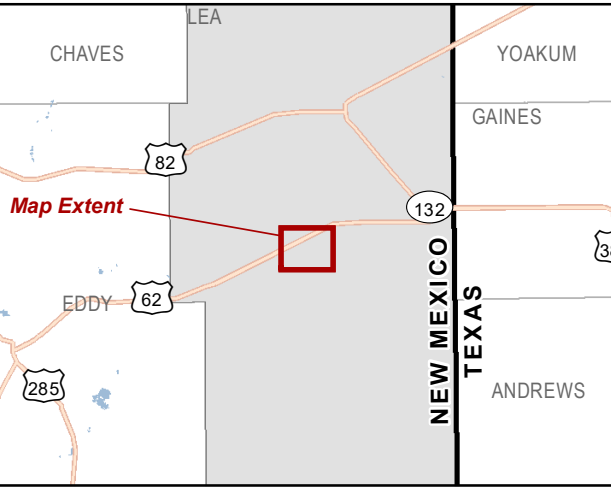
#### API (30-025-...) SHL Status - Type (Count)

- Horizontal Surface Location (33)
- Active - Oil (23)
- Active - Gas (3)
- Active - Injection (1)
- Permitted - Salt Water Disposal (1)
- Plugged (Not Released) - Oil (26)
- Plugged (Not Released) - Injection (20)
- Plugged (Site Released) - Oil (85)
- Plugged (Site Released) - Gas (3)
- Plugged (Site Released) - Injection (43)
- Plugged (Site Released) - Water Source (2)
- Canceled Location (12)

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

- Active - Oil (2)
- Permitted - Oil (21)
- Permitted - Gas (3)
- Plugged (Site Released) - Oil (1)
- Canceled Location (6)

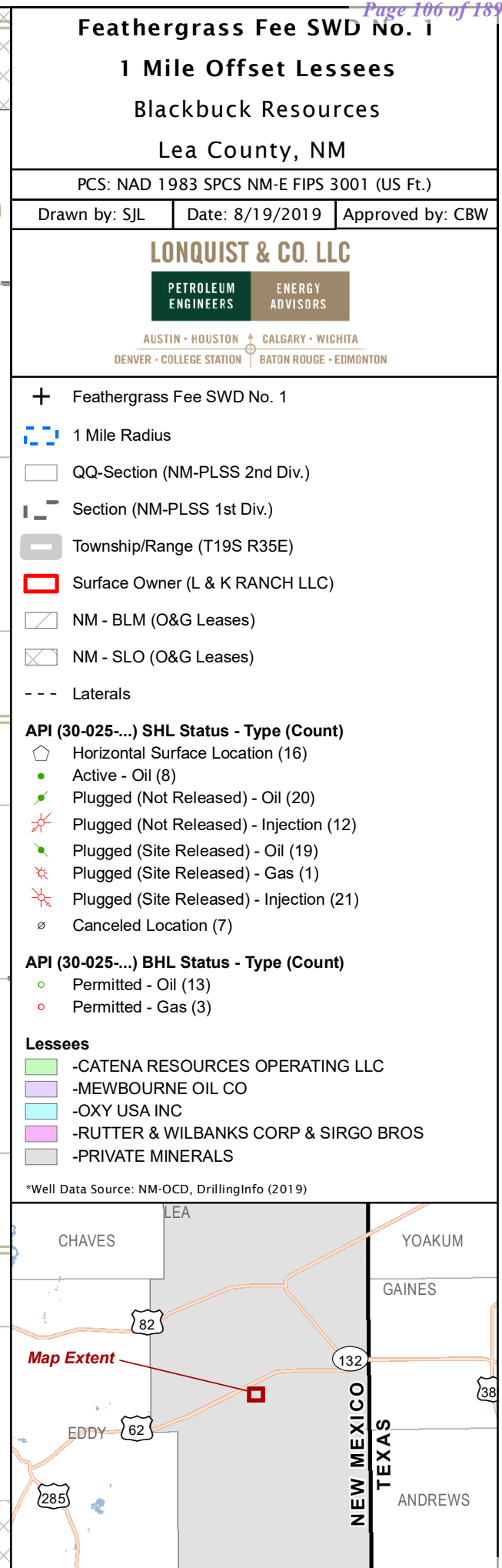
\*Well Data Source: NM-OCD, DrillingInfo (2019)



Feathergrass Fee 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
21/19S/35E	I,P	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	J	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	N,O	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
22/19S/35E	K	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
		XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	L,M,O	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	N	ROBERT H FORREST JR OIL LLC	-	-	-	609 ELORA DR	CARLSBAD, NM 88220
		XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	P	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
26/19S/35E	E	AMTEX ENERGY INC	-	-	-	PO BOX 470158	FT. WORTH, TX 76147
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	L	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
	M		WILLIAM J SAVAGE	-	-	1345 EAGLE BEND	SOUTHLAKE, TX 76092
	-		CHEVRON U.S.A INC.	-	-	6301 DEAUVILLE BLVD	MIDLAND, TX 79706
	-		RIDGE RUNNER RESOURCES OPERATING, LLC	-	-	1001 N. BIG SPRING, SUITE 325	MIDLAND, TX 79701
	-		CHAP EXPLORATION, LLC	-	-	P.O. BOX 3445	MIDLAND, TX 79702
	-		MARK A. TRIEB	-	-	1900 MCKINNEY AVE, APT 2109	DALLAS, TX 75201
	-		MICHELLE P. TRIEB	-	-	4621 EVERGREEN ST.	BELLAIRE, TX 77401
27/19S/35E	A,C,E,J,L,N,O,P	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	B,F,H,I,M	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	D	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	G,K	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
		XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
28/19S/35E	A,B,C,E,F,G,I,J,K,M,N,O	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	D,H,L,P	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
33/19S/35E	D	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
		CATENA RESOURCES OPERATING LLC	-	-	-	18402 US HWY 281 N SUITE 258	SAN ANTONIO, TX 78259
	E	CATENA RESOURCES OPERATING LLC	-	-	-	18402 US HWY 281 N SUITE 258	SAN ANTONIO, TX 78259
	A,B,C,F,G,H,I,J,K	-	CATENA RESOURCES OPERATING LLC	-	-	18402 US HWY 281 N SUITE 258	SAN ANTONIO, TX 78259
34/19S/35E	A	-	ALPHA ENERGY PARTNER LLC	-	-	508 W. WALL ST., SUITE 1200	MIDLAND, TX 79701
	D,F,H,K	XERIC OIL & GAS CORP	-	-	-	PO BOX 7288	ODESSA, TX 79760
	B,G	-	RUTTER & WILBANKS CORP & SIRGO BROS	-	-	PO BOX 3186	MIDLAND, TX 79702
	C,E,J,K,L	-	OXY USA INC	-	-	PO BOX 4294	HOUSTON, TX 77210
Surface Location	-	-	-	-	L & K RANCH LLC	PO BOX 1503	HOBBS, NM 88241





**CURSORY REPORT**

PROSPECT: Feathergrass Fee SWD No. 1

REPORT DATE: 10/8/2019

RECORD DATE: 1/1/1981 – 9/6/2019

COUNTY OF: Lea

STATE OF: New Mexico

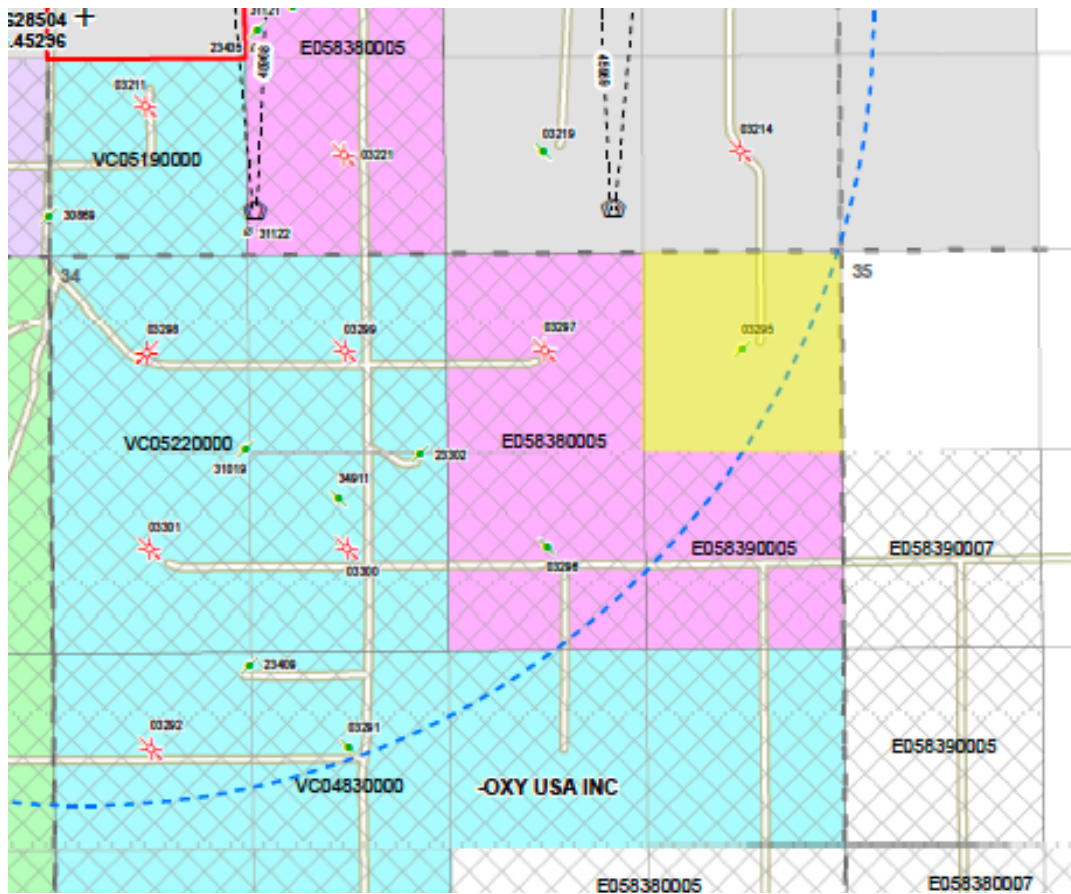
**DESCRIPTION**

NE/4NE/4 of Section 34  
T19S-R35E, NMPM  
40 acres

DESCRIPTION: The NE/4NE/4 of Section 34, Township 19 South, Range 35 East, NMPM, 40 acres

**LEASEHOLD OWNERSHIP**

Interest Owners	W.I.	N.R.I.	Net Acres	Comments
Mewbourne Oil Company P.O. Box 7698 Tyler, TX 75711	N/A	N/A	N/A	
Alpha Energy Partners, LLC 508 W. Wall St., Suite 1200 Midland, TX 79701	N/A	N/A	N/A	
<b>WORKING INTEREST TOTALS</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	





**CURSORY REPORT**

PROSPECT: Feathergrass Fee SWD No. 1

REPORT DATE: 9/4/2019

RECORD DATE: 1/1/1981 – 8/6/2019

COUNTY OF: Lea

STATE OF: New Mexico

**DESCRIPTION**

SW/4SW/4 of Section 26  
T19S-R35E, NMPM  
40 acres

DESCRIPTION: The SW/4SW/4 of Section 26, Township 19 South, Range 35 East, NMPM, 40 acres

**CURSORY OWNERSHIP**

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

**LEASEHOLD OWNERSHIP**

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

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
Assignment	OG	401/451	5/1/1986	7/28/1986	Shell Western E&P Inc.	Petrus Oil Company	Assigns ARTI in and to the following: OGL 97/21 - W/2 Sec. 26 - 100% WI OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34 - 100% WI
Assignment	OG	444/604	8/1/1989	11/9/1989	Petrus Oil Company	Sirgo Brothers, Inc.	Assigns ARTI in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34
Assignment	OG	446/646	1/1/1990	1/24/1990	Sirgo Brothers, Inc.	Rutter and Wilbanks Corporation	Assigns an und 50% interest in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34
Assignment	OG	448/80	1/1/1990	3/7/1990	Sirgo Brothers, Inc.	Rutter and Wilbanks Corporation	Assigns ARTI in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34 INSOFAR as to the Queen formation
Term Assignment	OPR	876/355	12/15/1997	4/27/1998	Rutter and Wilbanks Corp. - 50% Brian M. Sirgo - 16.6667% M. A. Sirgo, III - 16.6667% Victor J. Sirgo - 16.6667%	Louis Dreyfus Natural Gas Corp.	Assigns ARTI in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34 All depths except Queen formation
PAOGL	OPR	898/329	8/3/1998	8/10/1998	Louis Dreyfus Natural Gas Corp.	Santa Fe Energy Resources, Inc. - 30% Chi Energy, Inc. - 10%	Assigns 40% interest of Term Assignment 876/355
Assignment	OPR	1002/586	1/31/2000	2/14/2000	M. A. Sirgo, III et ux Kay Sirgo	Charles R. Wiggins	Assigns ARTI in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34 All depths except Queen formation
Assignment	OPR	1361/267	2/1/2005	3/14/2005	Brian M. Sirgo et ux Suzanne M. Sirgo	Enerlex, Inc.	Assigns ARTI in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34 All depths except Queen formation
Assignment	OPR	1388/753	6/1/2005	7/28/2005	Rutter and Wilbanks Corporation	Charles R. Wiggins	Assigns ARTI in and to the following: OGL 97/21 - NW/4SW/4 Sec. 26 OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34 All depths except Queen formation
Term Assignment	OPR	2143/876	12/1/2018	12/21/2018	Enerlex, Inc.	Mewbourne Oil Company	See 2144/873
Term Assignment	OPR	2143/878	12/1/2018	12/21/2018	Charles R. Wiggins et ux Deborah A. Wiggins	Mewbourne Oil Company	See 2144/872
Amend Term Assignment	OPR	2144/872	11/15/2018	1/17/2019	Charles R. Wiggins et ux Deborah A. Wiggins	Mewbourne Oil Company	Assigns ARTI in and to the following: OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34
Amend Term Assignment	OPR	2144/873	11/15/2018	1/17/2019	Enerlex, Inc.	Mewbourne Oil Company	Assigns ARTI in and to the following: OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34
Term Assignment	OPR	2144/490	12/1/2018	1/9/2019	Rutter and Wilbanks Corp.	Ridge Runner Resources Operating, LLC	Assigns ARTI in and to the following: OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34
Term Assignment	OPR	2146/773	2/22/2019	3/1/2019	Victor J. Sirgo et ux Sharla K. Sirgo	Mewbourne Oil Company	Assigns ARTI in and to the following: OGL 97/442, 97/305, 99/371, 98/503 - NE/4NE/4 Sec. 34
AOGL	OPR	2153/726	6/1/2019	7/25/2019	Ridge Runner Resources Operating, LLC	Alpha Energy Partners, LLC	Assigns ARTI in and to Term Assignment 2144/498
Assignment	OPR	2153/731	7/15/2019	7/25/2019	Alpha Energy Partners, LLC 508 W. Wall St., Suite 1200 Midland, TX 79701	Mewbourne Oil Company P.O. Box 7698 Tyler, TX 75711	Assigns an und 50% of Assignor's interest in and to OGL 97/442, 97/305, 99/371, 98/503

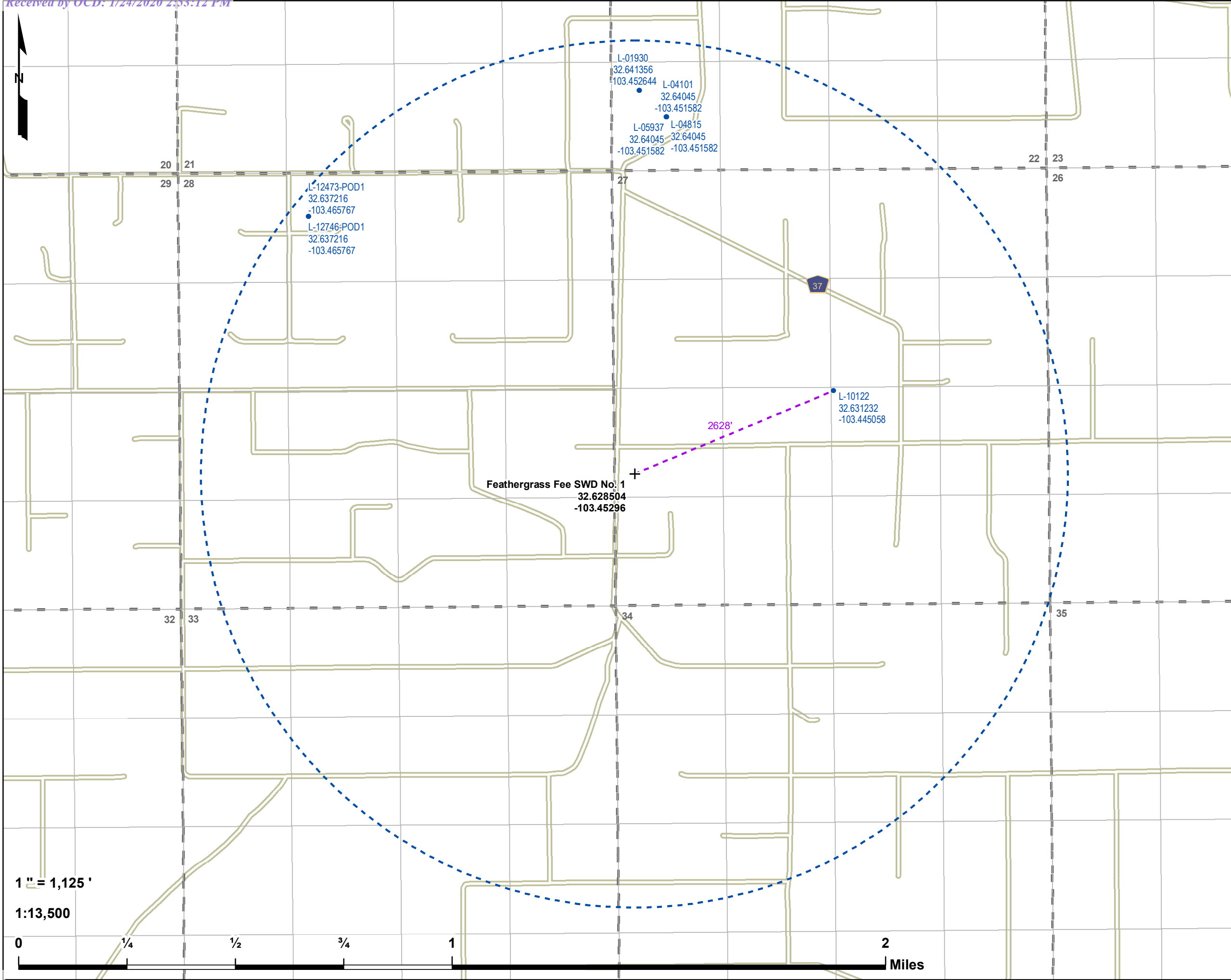


SW/4SW/4 Section 26, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico  
40 acres

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
Assignment and Conveyance	OG	401/451	5/1/1986	7/28/1986	Shell Western E&P Inc.	Petrus Oil Company	Assigns ARTI in and to OGL 97/21 as to the SW/4SW/4 of Sec. 26, INSOFAR as to depths from the surface down to 100' below the base of the Queen formation and also all depths below 12,727'
Name Change	M	522/27	1/3/1990	1/5/1990	Petrus Oil Company	Bridge Oil Company, L.P.	Name Change
A/BOS	OG	456/138	11/1/1990	11/2/1990	Bridge Oil Company, L.P.	Merit Energy Partners, L.P. Merit Energy Partners, II, L.P. Merit Energy Partners, III, L.P.	Assigns ARTI in and to OGL 97/21 as to the SW/4SW/4 of Sec. 26, INSOFAR as to depths from the surface down to 100' below the base of the Queen formation and also all depths below 12,727'
AOGL	OG	480/766	8/1/1992	10/13/1992	Merit Energy Partners, L.P. Merit Energy Partners, II, L.P. Merit Energy Partners, III, L.P. Merit Energy Company	Amtex Energy, Inc.	Assigns ARTI in and to OGL 97/21
AOGL	OG	483/565	12/30/1992	12/31/1992	Amtex Energy, Inc.	John C. Oxley dba Oxley Petroleum - 1/4 Walter F. Brown - 3/20 McRae Exploration & Production, Inc. - 1/10 Gunn Mineral Trust - 1/20 C.C.G. Enterprises, Inc. - 1/20 Triad Energy Corporation - 1/20 Piper Petroleum - 7/200 MVC, Inc. - 3/100 William J. Savage - 213/1000 Joe F. Mills - 9/500 Raymond G. Clanin - 9/500 Mark A. Trieb - 9/500 Philip C. Vogel - 9/500	Assigns ARTI in and to OGL 97/21
AOGL	OPR	758/242	9/1/1996	10/30/1996	Triad Energy Corporation	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	768/268	12/31/1996	12/27/1996	John C. Oxley	John C. Oxley, L.L.C.	Assigns ARTI in and to OGL 97/21
Correction AOGL	OPR	932/373	12/31/1996	1/22/1999	John C. Oxley et ux Debby M. Oxley	John C. Oxley, L.L.C.	Corrects 768/268
AOGL	OPR	782/738	1/1/1997	3/7/1997	C.C.G. Enterprises Inc.	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	782/741	1/1/1997	3/7/1997	Curtis C. Gunn, Inc.	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	782/744	1/1/1997	3/7/1997	Gunn Mineral Trust	William J. Savage	Assigns ARTI in and to OGL 97/21
AOGL	OPR	1023/351	6/1/2000	6/22/2000	McRae Exploration & Production, Inc.	William J. Savage	Assigns ARTI in and to OGL 97/21
Merger	OPR	1426/542	1/30/2006	2/10/2006	John C. Oxley, L.L.C.	Chesapeake Exploration Ltd. Partnership	Merger

SW/4SW/4 Section 26, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico  
40 acres

INSTR. TYPE	RECORD	VOL/PG or INSTR. NO.	EFFECTIVE DATE	FILING DATE	GRANTOR	GRANTEE	RESEARCHER'S REMARKS
Term Assignment	OPR	1478/259	5/1/2006	11/6/2006	William J. Savage et ux Amy M. Savage Walter F. Brown et ux Lenora P. Brown Piper Petroleum Company MVC, Inc. Joe F. Mills et ux Janet C. Mills Raymond G. Clanin et ux Carolyn T. Clanin Mark A. Trieb et ux Shauna J. Trieb Michelle P. Trieb Phillip C. Vogel et ux Martha D. Vogel	Mewbourne Oil Company	Term Assignment of ARTI in and to OGL 97/21 as it covers the SW/4SW/4 of Sec. 26
A/BOS	OPR	1804/464	7/1/2012	11/8/2012	Chesapeake Exploration, L.L.C.	Chevron U.S.A. Inc.	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2056/920	11/1/2015	10/7/2016	Joe F. Mills et ux Janet C. Mills	William J. Savage	Assigns ARTI in and to OGL 97/21
Assignment	OPR	2145/500	5/20/2016	2/1/2019	Raymond G. Clanin	Ramond G. Clanin and Diana R. Clanin, as Trustees of The Clanin Trust dtd 9/20/1989	Assigns ARTI in and to all interest in Lea Co.
A/BOS	OPR	2146/94	11/1/2018	2/14/2019	Diana R. Clanin, Trustee of The Clanin Trust dtd 9/20/1989	William J. Savage	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2147/922	1/1/2019	3/22/2019	Walter F. Brown, Jr., IE and Trustee u/w/o Walter F. Brown, Deceased Lenora P. Brown, widow and Trustee u/w/o Walter F. Brown Janet Lattner Brown, fka Janet Brown Barnes, as Trustee u/w/o Walter F. Brown J&W Interests, Ltd.	William J. Savage 1345 Eagle Bend Southlake, TX 76092	Assigns ARTI in and to OGL 97/21
Reassignment of Int in OGL	OPR	2146/552	2/13/2019	2/25/2019	Mewbourne Oil Company, et al.	William J. Savage et ux Amy M. Savage - 49.9% Piper Petroleum Company - 3.5% MVC, Inc. - 3% Philip C. Vogel et ux Martha D. Vogel - 1.8% Mark A. Trieb et ux Shauna J. Trieb - 0.9% Michelle P. Trieb - 0.9% Walter F. Brown, Jr., Independent Executor of the Estate of Walter F. Brown, Deceased - 7.5% Lenora P. Brown, widow - 7.5%	Reassignment of ARTI in and to OGL 97/21 as it covers the SW/4SW/4 of Sec. 26
A/BOS	OPR	2149/451	3/1/2019	4/22/2019	Philip C. Vogel et ux Martha D. Vogel	Chap Exploration, LLC P.O. Box 3445 Midland, TX 79702	Assigns ARTI in and to OGL 97/21
A/BOS	OPR	2152/428	4/1/2019	6/25/2019	MVC, Inc.	Chap Exploration, LLC P.O. Box 3445 Midland, TX 79702	Assigns ARTI in and to OGL 97/21
AOGL	OPR	2152/667	6/1/2019	7/1/2019	Piper Petroleum Company	Ridge Runner Resources Operating, LLC 1004 N. Big Spring, Suite 325 Midland, TX 79701	Assigns ARTI in and to OGL 97/21



**Feathergrass Fee SWD No. 1**

**1 Mile Offset Water Wells**

Blackbuck Resources

Lea County, NM

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

Drawn by: SJL

Date: 8/14/2019

Approved by: CBW

**LONQUIST & CO. LLC**

PETROLEUM  
ENGINEERS

ENERGY  
ADVISORS

AUSTIN • HOUSTON • CALGARY • WICHITA  
DENVER • COLLEGE STATION • BATON ROUGE • EDMONTON

+ Feathergrass Fee SWD No. 1

• Water Wells (9)

- - - Distance Call

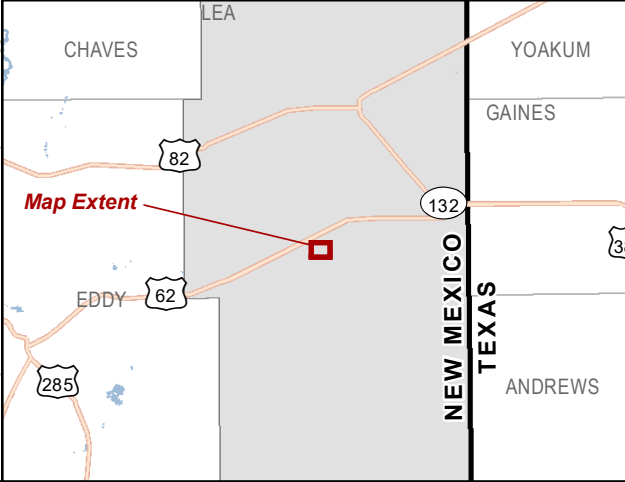
- - - 1 Mile Radius

□ QQ-Section (NM-PLSS 2nd Div.)

▬ Section (NM-PLSS 1st Div.)

▬ Township/Range (T19S R35E)

\*Well Data Source: NM-OCD, DrillingInfo (2019)



1" = 1,125'

1:13,500



**Produced Water Samples  
Feathergrass 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 MAVETTY #007	30-025-21886	35	19S	36E	G	GRAYBURG/SAN ANDRES	7.8	7092						3499	320	660	
SELBY MAVETTY #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	



# New Mexico Office of the State Engineer

## Water Right Summary


[get image list](#)

WR File Number: L 01930

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					
 <a href="#">get images</a>	508425	COWNF	1958-04-22	CHG	PRC	L-1930	T	0	0	
 <a href="#">get images</a>	508277	APPRO	1953-05-21	CAN	FIN	L-1930	T	0	0	

### 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	
<a href="#">L 01930</a>			1	3	3	22	19S	35E	645137 3612586* 

\*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	<a href="#">L 01930</a>	

### 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

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# New Mexico Office of the State Engineer

## Water Right Summary


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WR File Number: L 04101

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: VIRGIL LINAM

### Documents on File


[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
<a href="#">491992</a>	<a href="#">72121</a>	<a href="#">1959-04-02</a>	PMT	LOG	L 04101	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	X		Y	
<a href="#">L 04101</a>		Shallow	3	3	22	19S	35E	645238	3612487*	

\*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 04815

Subbasin: L

Cross Reference: -

Primary Purpose: IRR IRRIGATION

Primary Status: CAN CANCELLED

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: VIRGIL LINAM ESTATE

### Documents on File


[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
<a href="#">504497</a>	<a href="#">APPRO</a>	<a href="#">1962-07-05</a>	CAN	FIN	L 04815	T	14.6	43.8	

### Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			X	Y	Other Location Desc
			64	16	4			
<a href="#">L 04815</a>			3	3	22	19S 35E	645238 3612487*	

(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
02/19/1962	CAN			0 <a href="#">L 04815</a>	

### Place of Use

Q	Q	Q	Q	4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
				3	22	19S	35E	0	0		IRR	02/19/1962	CAN	
				4	22	19S	35E	0	0		IRR		CAN	ACREAGE AND DIVERSION AMOUNTS PREVIOUSLY DESCRIBED

### Source

Acres	Diversion	CU	Use	Priority	Source Description
0	0		IRR	02/19/1962	GW



# New Mexico Office of the State Engineer

## Water Right Summary


[get image list](#)

WR File Number: L 05937

Subbasin: L

Cross Reference: -

Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

Primary Status: PMT PERMIT

Total Acres:

Subfile: -



Header: -

Total Diversion: 0

Cause/Case: -

Owner: THELMA A LINAM

### Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
 <a href="#">get images</a>	505091	72121	1967-11-06	EXP	EXP	L 05937 (T EXPIRED)	T		3	
 <a href="#">get images</a>	505085	72121	1966-05-23	EXP	EXP	L 05937 (T EXPIRED)	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	
<a href="#">L 05937</a>			3	3	22	19S	35E	645238	3612487*

\*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 10122

Subbasin: L

Cross Reference: -

Primary Purpose: EXP EXPLORATION

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: SIRGO OPERATING, INC.

### Documents on File


[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
<a href="#">485069</a>	<a href="#">EXPL</a>	<a href="#">1990-05-04</a>	PMT	APR	L 10122	T	0	0	

### Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc
			64	16	4	X	Y	
<a href="#">L 10122</a>			27	19S	35E	645865	3611474*	SECTIONS 27-34

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

### Source

Acres	Diversion	CU	Use	Priority	Source Description
0	0		EXP		GW



# New Mexico Office of the State Engineer

## Water Right Summary


[get image list](#)

WR File Number: L 12473

Subbasin: L

Cross Reference: -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -


Total Diversion: 1

Cause/Case: -

Owner: YADIRA ALVIDREZ


Owner: RENE NAVARRETE

### Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
 <a href="#">get images</a>	487732	72121	2009-09-16	PMT	LOG	L 12473	T		1	

### Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q Q Q			Sec	Tws	Rng	X	Y	Other Location Desc
			64	16	4						
<a href="#">L 12473 POD1</a>		Shallow	2	1	2	27	19S	38E	643913	3612109	

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# New Mexico Office of the State Engineer

## Water Right Summary


[get image list](#)

WR File Number: L 12746

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: RAMON PONCE


Owner: CELIA ARMENDARIZ

### Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
 <a href="#">get images</a>	485856	72121	2011-04-13	PMT	LOG	L 12746	T		3	

### Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q Q Q			Sec	Tws	Rng	X	Y	Other Location Desc
			64	16	4						
<a href="#">L 12746 POD1</a>		Shallow	4	2	4	27	19S	38E	643913	3612109	

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

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September 25, 2019

TYLER MOEHLMAN

Lonquist Field Services, LLC

12912 HILL COUNTRY BLVD., SUITE F-200

Austin, TX 78738

RE: FEATHER GRASS SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 15:50.

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](http://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: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
#1 32.624600-103.453668	H903230-01	Water	18-Sep-19 15:05	18-Sep-19 15:50
#2 32.618592-103.470985	H903230-02	Water	18-Sep-19 14:30	18-Sep-19 15:50

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence or any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

**#1 32.624600-103.453668**  
**H903230-01 (Water)**

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

Alkalinity, Bicarbonate	278		5.00	mg/L	1	9081902	AC	19-Sep-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9081902	AC	19-Sep-19	310.1	
Chloride*	32.0		4.00	mg/L	1	9091309	AC	19-Sep-19	4500-Cl-B	
Conductivity*	407		1.00	uS/cm	1	9091903	AC	19-Sep-19	120.1	
pH*	8.60		0.100	pH Units	1	9091904	AC	19-Sep-19	150.1	
Resistivity	24.6			Ohms/m	1	9091903	AC	19-Sep-19	120.1	
Specific Gravity @ 60° F	0.9989		0.000	[blank]	1	9091906	AC	19-Sep-19	SM 2710F	
Sulfate*	44.5		10.0	mg/L	1	9091905	AC	19-Sep-19	375.4	
TDS*	288		5.00	mg/L	1	9091611	AC	20-Sep-19	160.1	
Alkalinity, Total*	228		4.00	mg/L	1	9081902	AC	19-Sep-19	310.1	
Sulfide, total	<0.0100		0.0100	mg/L	1	9091913	AC	19-Sep-19	376.2	

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

Barium*	0.067	0.005	0.250	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	J
Calcium*	53.7	0.071	0.500	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	
Iron*	<0.087	0.087	0.250	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	
Magnesium*	9.49	0.113	0.500	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	
Potassium*	2.50	0.339	5.00	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	J
Sodium*	31.6	2.41	5.00	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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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: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

#2 32.618592-103.470985

H903230-02 (Water)

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

Alkalinity, Bicarbonate	390		5.00	mg/L	1	9081902	AC	19-Sep-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9081902	AC	19-Sep-19	310.1	
Chloride*	240		4.00	mg/L	1	9091309	AC	19-Sep-19	4500-Cl-B	
Conductivity*	1400		1.00	uS/cm	1	9091903	AC	19-Sep-19	120.1	
pH*	7.57		0.100	pH Units	1	9091904	AC	19-Sep-19	150.1	
Resistivity	7.13			Ohms/m	1	9091903	AC	19-Sep-19	120.1	
Specific Gravity @ 60° F	1.001		0.000	[blank]	1	9091906	AC	19-Sep-19	SM 2710F	
Sulfate*	193		50.0	mg/L	5	9091905	AC	19-Sep-19	375.4	
TDS*	987		5.00	mg/L	1	9091611	AC	20-Sep-19	160.1	
Alkalinity, Total*	320		4.00	mg/L	1	9081902	AC	19-Sep-19	310.1	
Sulfide, total	<0.0100		0.0100	mg/L	1	9091913	AC	19-Sep-19	376.2	

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

Barium*	0.028	0.005	0.250	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	J
Calcium*	73.8	0.071	0.500	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	
Iron*	<0.087	0.087	0.250	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	
Magnesium*	39.9	0.113	0.500	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	
Potassium*	2.72	0.339	5.00	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	J
Sodium*	198	2.41	5.00	mg/L	5	B909206	AES	24-Sep-19	EPA200.7	

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**Analytical Results For:**

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

Project: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

**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 9081902 - General Prep - Wet Chem****Blank (9081902-BLK1)**

Prepared &amp; Analyzed: 19-Aug-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 (9081902-BS1)**

Prepared &amp; Analyzed: 19-Aug-19

Alkalinity, Carbonate	ND	1.00	mg/L			80-120
Alkalinity, Bicarbonate	132	5.00	mg/L			80-120
Alkalinity, Total	108	4.00	mg/L	100	108	80-120

**LCS Dup (9081902-BSD1)**

Prepared &amp; Analyzed: 19-Aug-19

Alkalinity, Carbonate	ND	1.00	mg/L			80-120		20
Alkalinity, Bicarbonate	142	5.00	mg/L			80-120	7.30	20
Alkalinity, Total	116	4.00	mg/L	100	116	80-120	7.14	20

**Batch 9091309 - General Prep - Wet Chem****Blank (9091309-BLK1)**

Prepared &amp; Analyzed: 13-Sep-19

Chloride	ND	4.00	mg/L
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**LCS (9091309-BS1)**

Prepared &amp; Analyzed: 13-Sep-19

Chloride	100	4.00	mg/L	100	100	80-120
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**LCS Dup (9091309-BSD1)**

Prepared &amp; Analyzed: 13-Sep-19

Chloride	100	4.00	mg/L	100	100	80-120	0.00	20
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**Batch 9091611 - Filtration****Blank (9091611-BLK1)**

Prepared: 13-Sep-19 Analyzed: 16-Sep-19

TDS	ND	5.00	mg/L
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\*=Accredited Analyte

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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: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

**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 9091611 - Filtration**

<b>LCS (9091611-BS1)</b>				Prepared: 13-Sep-19 Analyzed: 16-Sep-19					
TDS	532		mg/L	527	101	80-120			

<b>Duplicate (9091611-DUP1)</b>				Source: H903145-01 Prepared: 13-Sep-19 Analyzed: 16-Sep-19					
TDS	371	5.00	mg/L	372		0.269	20		

**Batch 9091903 - General Prep - Wet Chem**

<b>LCS (9091903-BS1)</b>				Prepared & Analyzed: 19-Sep-19					
Conductivity	91300		uS/cm	100000	91.3	80-120			

<b>Duplicate (9091903-DUP1)</b>				Source: H903224-01 Prepared & Analyzed: 19-Sep-19					
Conductivity	155000	1.00	uS/cm	152000		1.95	20		
Resistivity	0.0644		Ohms/m	0.0657		1.95	20		

**Batch 9091904 - General Prep - Wet Chem**

<b>LCS (9091904-BS1)</b>				Prepared & Analyzed: 19-Sep-19					
pH	7.06		pH Units	7.00	101	90-110			

<b>Duplicate (9091904-DUP1)</b>				Source: H903230-01 Prepared & Analyzed: 19-Sep-19					
pH	8.65	0.100	pH Units	8.60		0.580	20		

**Batch 9091905 - General Prep - Wet Chem**

<b>Blank (9091905-BLK1)</b>				Prepared & Analyzed: 19-Sep-19					
Sulfate	ND	10.0	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: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

**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 9091905 - General Prep - Wet Chem****LCS (9091905-BS1)**

Prepared &amp; Analyzed: 19-Sep-19

Sulfate	18.4	10.0	mg/L	20.0	91.9	80-120				
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**LCS Dup (9091905-BSD1)**

Prepared &amp; Analyzed: 19-Sep-19

Sulfate	18.9	10.0	mg/L	20.0	94.5	80-120	2.79	20		
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**Batch 9091906 - General Prep - Wet Chem****Duplicate (9091906-DUP1)**

Source: H903230-01

Prepared &amp; Analyzed: 19-Sep-19

Specific Gravity @ 60° F	0.9991	0.000	[blank]	0.9989			0.0200	20		
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**Batch 9091913 - General Prep - Wet Chem****Blank (9091913-BLK1)**

Prepared &amp; Analyzed: 19-Sep-19

Sulfide, total	ND	0.0100	mg/L							
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**Duplicate (9091913-DUP1)**

Source: H903230-01

Prepared &amp; Analyzed: 19-Sep-19

Sulfide, total	0.00330	0.0100	mg/L	0.00330			0.00	20		
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**Analytical Results For:**

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

Project: FEATHER GRASS SWD #1  
Project Number: 32.628504-103.452960  
Project Manager: TYLER MOEHLMAN  
Fax To: (512) 732-9816

Reported:  
25-Sep-19 16:40

**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 B909206 - Total Rec. 200.7/200.8/200.2****Blank (B909206-BLK1)**

Prepared: 23-Sep-19 Analyzed: 24-Sep-19

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

**LCS (B909206-BS1)**

Prepared: 23-Sep-19 Analyzed: 24-Sep-19

Sodium	3.26	1.00	mg/L	3.24		101	85-115			
Potassium	7.62	1.00	mg/L	8.00		95.3	85-115			
Magnesium	20.0	0.100	mg/L	20.0		100	85-115			
Iron	4.01	0.050	mg/L	4.00		100	85-115			
Calcium	4.04	0.100	mg/L	4.00		101	85-115			
Barium	1.97	0.050	mg/L	2.00		98.3	85-115			

**LCS Dup (B909206-BSD1)**

Prepared: 23-Sep-19 Analyzed: 24-Sep-19

Magnesium	20.1	0.100	mg/L	20.0		100	85-115	0.204	20	
Barium	1.95	0.050	mg/L	2.00		97.5	85-115	0.868	20	
Potassium	7.67	1.00	mg/L	8.00		95.9	85-115	0.652	20	
Calcium	4.06	0.100	mg/L	4.00		102	85-115	0.461	20	
Sodium	3.26	1.00	mg/L	3.24		100	85-115	0.210	20	
Iron	4.00	0.050	mg/L	4.00		100	85-115	0.220	20	

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### Notes and Definitions

J	Estimated concentration. Analyte concentration between MDL and RL.
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".

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Celey D. Keene, Lab Director/Quality Manager

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

[illegible]

# **CARDINAL LABORATORIES** **SCALE INDEX WATER ANALYSIS REPORT**

Company :	LONQUIST FIELD SERVICES	Date Sampled :	09/18/19
Lease Name :	FEATHER GRASS SWD #1	Company Rep. :	TYLER MOEHLMAN
Well Number :	#1 (H903230-01)		
Location :	32.624600 -103.453668		

## **ANALYSIS**

- |                                   |          |        |
|-----------------------------------|----------|--------|
| 1. pH                             | 8.6      |        |
| 2. Specific Gravity @ 60/60 F.    | 0.9989   |        |
| 3. CaCO3 Saturation Index @ 80 F. | -0.273   |        |
|                                   | @ 140 F. | +0.427 |
- '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++)   | 53.70 | / | 20.1    | = | 2.67  |
| 8. Magnesium (Mg++) | 9.49  | / | 12.2    | = | 0.78  |
| 9. Sodium (Na+)     | 32    | / | 23.0    | = | 2.91  |
| 10. Barium (Ba++)   | 0.067 | / | 68.7    | = | 0.00  |

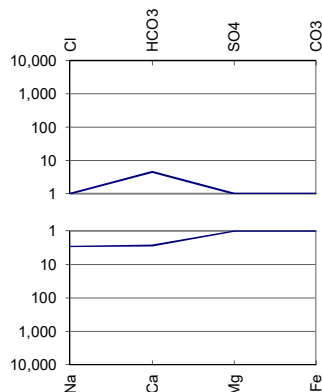
## **Anions**

- |                         |     |   |      |   |      |
|-------------------------|-----|---|------|---|------|
| 11. Hydroxyl (OH-)      | 0   | / | 17.0 | = | 0.00 |
| 12. Carbonate (CO3=)    | 0   | / | 30.0 | = | 0.00 |
| 13. Bicarbonate (HCO3-) | 278 | / | 61.1 | = | 4.55 |
| 14. Sulfate (SO4=)      | 45  | / | 48.8 | = | 0.91 |
| 15. Chloride (Cl-)      | 32  | / | 35.5 | = | 0.90 |

## **Other**

- |  |        |            |      |             |      |
|--|--------|------------|------|-------------|------|
| 16. Total Iron (Fe)                    | 0.000  | /          | 18.2 | =           | 0.00 |
| 17. Total Dissolved Solids             | 288    |            |      |             |      |
| 18. Total Hardness As CaCO3            | 173.0  |            |      |             |      |
| 19. Calcium Sulfate Solubility @ 90 F. | 1,457  |            |      |             |      |
| 20. Resistivity (Measured)             | 24.600 | Ohm/Meters | @ 77 | Degrees (F) |      |

Logarithmic Water Pattern



## **PROBABLE MINERAL COMPOSITION**

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO3)2	81.04	X	2.67	=	217
CaSO4	68.07	X	0.00	=	0
CaCl2	55.50	X	0.00	=	0
Mg(HCO3)2	73.17	X	0.78	=	57
MgSO4	60.19	X	0.00	=	0
MgCl2	47.62	X	0.00	=	0
NaHCO3	84.00	X	1.10	=	92
NaSO4	71.03	X	0.91	=	65
NaCl	58.46	X	0.90	=	53

ND = Not Determined

# **CARDINAL LABORATORIES** **SCALE INDEX WATER ANALYSIS REPORT**

Company : LONQUIST FIELD SERVICES	Date Sampled : 09/18/19
Lease Name : FEATHER GRASS SWD #1	Company Rep. : TYLER MOEHLMAN
Well Number : #2 (H903230-02)	
Location : 32.618592 -103.470985	

## **ANALYSIS**

- |   |        |                                    |
|---|--------|------------------------------------|
| 1. pH   | 7.57   |                                    |
| 2. Specific Gravity @ 60/60 F.                | 1.0010 |                                    |
| 3. CaCO <sub>3</sub> Saturation Index @ 80 F. | +0.012 | 'Calcium Carbonate Scale Possible' |
| @ 140 F.                                      | +0.712 | '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++)   | 73.80 | / | 20.1    | = | 3.67  |
| 8. Magnesium (Mg++) | 39.90 | / | 12.2    | = | 3.27  |
| 9. Sodium (Na+)     | 198   | / | 23.0    | = | 10.16 |
| 10. Barium (Ba++)   | 0.028 | / | 68.7    | = | 0.00  |

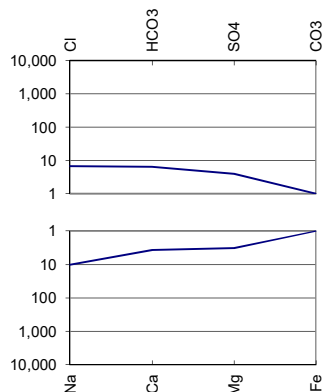
## **Anions**

- |                                      |     |   |      |   |      |
|--------------------------------------|-----|---|------|---|------|
| 11. Hydroxyl (OH-)                   | 0   | / | 17.0 | = | 0.00 |
| 12. Carbonate (CO <sub>3</sub> =)    | 0   | / | 30.0 | = | 0.00 |
| 13. Bicarbonate (HCO <sub>3</sub> -) | 390 | / | 61.1 | = | 6.38 |
| 14. Sulfate (SO <sub>4</sub> =)      | 193 | / | 48.8 | = | 3.95 |
| 15. Chloride (Cl-)                   | 240 | / | 35.5 | = | 6.76 |

## **Other**

- |   |       |            |      |             |      |
|---|-------|------------|------|-------------|------|
| 16. Total Iron (Fe)                     | 0.000 | /          | 18.2 | =           | 0.00 |
| 17. Total Dissolved Solids              | 987   |            |      |             |      |
| 18. Total Hardness As CaCO <sub>3</sub> | 349.0 |            |      |             |      |
| 19. Calcium Sulfate Solubility @ 90 F.  | 1,505 |            |      |             |      |
| 20. Resistivity (Measured)              | 7.130 | Ohm/Meters | @ 77 | Degrees (F) |      |

Logarithmic Water Pattern



## **PROBABLE MINERAL COMPOSITION**

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	X	3.67	=	298
CaSO <sub>4</sub>	68.07	X	0.00	=	0
CaCl <sub>2</sub>	55.50	X	0.00	=	0
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	X	2.71	=	198
MgSO <sub>4</sub>	60.19	X	0.00	=	0
MgCl <sub>2</sub>	47.62	X	0.56	=	27
NaHCO <sub>3</sub>	84.00	X	0.00	=	0
NaSO <sub>4</sub>	71.03	X	3.95	=	281
NaCl	58.46	X	6.20	=	363

ND = Not Determined

# 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.



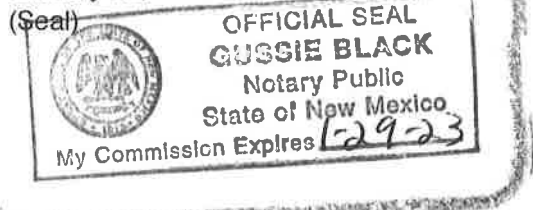
Publisher

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



Business Manager

My commission expires  
January 29, 2023



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

## LEGAL NOTICE AUGUST 15, 2019

Blackbuck Resources LLC, located at 2801 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 Feathergrass Fee SWD No. 1. The proposed well will be located at 1,590' FSL and 220' FWL in Section 27, 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 14,044 feet to a maximum depth of 15,562 feet. The maximum surface injection pressure will not exceed 2,809 psi with a maximum rate of 25,000 BWPD. Interested parties opposing the action must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. Additional information can be obtained from the applicant's agent, Lonquist & Co., LLC, at (512) 600-1777. #34570

67112661

00232185

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 Feathergrass 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  
                      Feathergrass Fee SWD No. 1

January 24, 2020

ALPHA ENERGY PARTNER LLC  
508 W. WALL ST., SUITE 1200  
MIDLAND, TX 79701

**Subject: Feathergrass 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 Feathergrass Fee SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius.

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

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

Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)



January 24, 2020

AMTEX ENERGY INC  
PO BOX 470158  
FT. WORTH, TX 76147

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

CATENA RESOURCES OPERATING LLC  
18402 US HWY 281 N SUITE 258  
SAN ANTONIO, TX 78259

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

CHEVRON U.S.A INC.  
6301 DEAUVILLE BLVD  
MIDLAND, TX 79706

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)



January 24, 2020

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

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

MEWBOURNE OIL CO  
PO BOX 5270  
HOBBS, NM 88241

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

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Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

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

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

OXY USA INC  
PO BOX 4294  
HOUSTON, TX 77210

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

RIDGE RUNNER RESOURCES OPERATING, LLC  
1001 N. BIG SPRING, SUITE 325  
MIDLAND, TX 79701

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)



January 24, 2020

ROBERT H FORREST JR OIL LLC  
609 ELORA DR  
CARLSBAD, NM 88220

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

RUTTER & WILBANKS CORP & SIRGO BROS  
PO BOX 3186  
MIDLAND, TX 79702

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

WILLIAM J SAVAGE  
1345 EAGLE BEND  
SOUTHLAKE, TX 76092

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Regards,



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

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

WPX ENERGY PERMIAN LLC  
3500 ONE WILLIAMS CENTER  
TULSA, OK 74172

**Subject: Feathergrass Fee SWD No. 1 Authorization to Inject**

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Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

January 24, 2020

XERIC OIL & GAS CORP  
PO BOX 7288  
ODESSA, TX 79760

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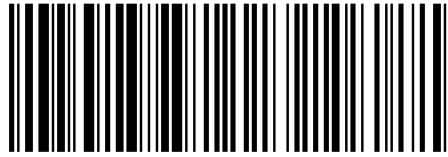
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Christopher B. Weyand  
Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

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



**9314 8699 0430 0068 0225 74**

RETURN RECEIPT (ELECTRONIC)

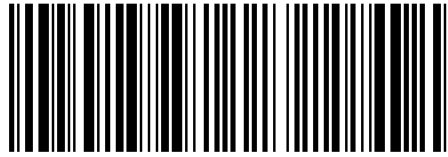


Total Postage: \$6.25

OIL CONSERVATION DIVISION  
DISTRICT I  
1625 N FRENCH DRIVE  
2159 - FEATHERGRASS FEE SWD #1  
HOBBS, NM 88240

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0225 81**

RETURN RECEIPT (ELECTRONIC)



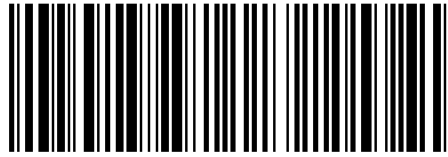
Total Postage: \$6.25

BUREAU OF LAND MGMT  
301 DINOSAUR TRAIL  
2159 - FEATHERGRASS FEE SWD #1  
SANTA FE, NM 87508

Reference Number: 2159 - FEATHERGRASS FEE SWD #1



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



**9314 8699 0430 0068 0225 98**

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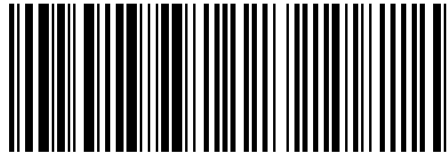


Total Postage: \$6.25

FAITH CROSBY OGMD/WATER  
NEW MEXICO LAND OFFICE  
310 OLD SANTA FE TRAIL  
2159 - FEATHERGRASS FEE SWD #1  
SANTA FE, NM 87501

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0226 04**

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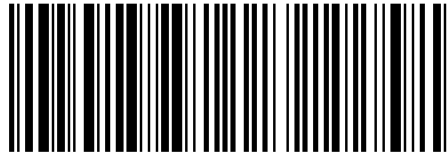


Total Postage: \$6.25

L&K RANCH LLC  
PO BOX 1503  
2159 - FEATHERGRASS FEE SWD #1  
HOBBS, NM 88241

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0226 11**

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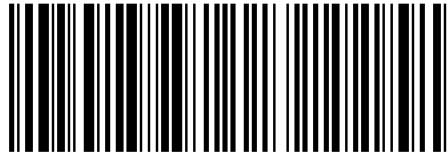


Total Postage: \$6.25

ALPHA ENERGY PARTNER LLC  
508 W WALL STREET  
SUITE 1200  
2159 - FEATHERGRASS FEE SWD #1  
MIDLAND , TX 79701

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



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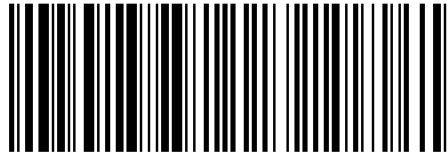


Total Postage: \$6.25

AMTEX ENERGY INC  
PO BOX 470158  
2159 - FEATHERGRASS FEE SWD #1  
FT WORTH, TX 76147

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



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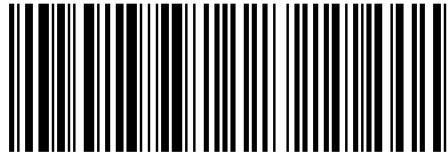


Total Postage: \$6.25

CATENA RESOURCES OPERATING LLC  
18402 US HWY 281  
STE 258  
2159 - FEATHERGRASS FEE SWD #1  
SAN ANTONIO, TX 78259

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0226 42**

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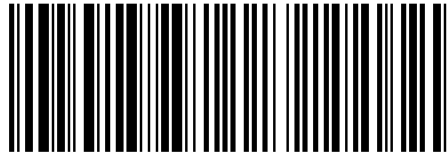


Total Postage: \$6.25

CHAP EXPLORATION LLC  
PO BOX 3445  
2159 - FEATHERGRASS FEE SWD #1  
MIDLAND , TX 79702

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0226 59**

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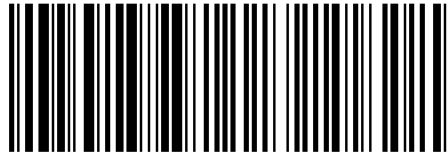
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CHEVRON USA INC  
6301 DEAUVILLE BLVD  
2159 - FEATHERGRASS FEE SWD #1  
MIDLAND , TX 79706

Reference Number: 2159 - FEATHERGRASS FEE SWD #1



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



**9314 8699 0430 0068 0226 66**

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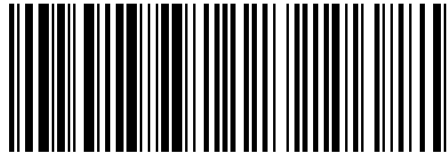


Total Postage: \$6.25

MARK A TRIEB  
1900 MCKINNEY AVE  
APT 2109  
2159 - FEATHERGRASS FEE SWD #1  
DALLAS, TX 79706

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0226 73**

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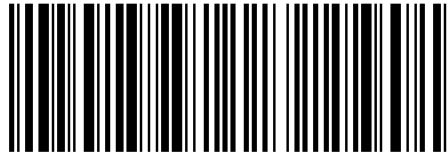


Total Postage: \$6.25

MEWBOURNE OIL CO  
PO BOX 5270  
2159 - FEATHERGRASS FEE SWD #1  
HOBBS, NM 88241

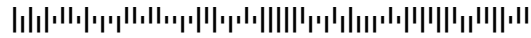
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Lonquist & CO LLC  
1001 McKinney Street  
Ste 1650  
Houston, TX 77002



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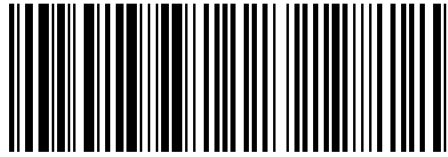


Total Postage: \$6.25

MICHELLE P TRIEB  
4621 EVERGREEN STREEET  
STE 700  
2159 - FEATHERGRASS FEE SWD #1  
BELLAIRE, TX 77401

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0227 03**

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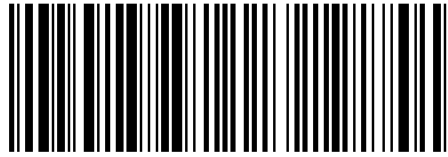


Total Postage: \$6.25

OXY USA INC  
PO BOX 4294  
2159 - FEATHERGRASS FEE SWD #1  
HOUSTON, TX 77210

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0227 10**

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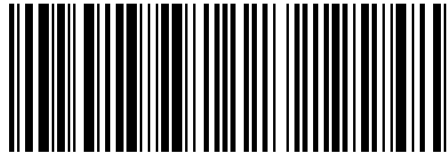


Total Postage: \$6.25

RIDGE RUNNER RESOURCES OPERATING LLC  
ATTN: LAND  
1001 N BIG SPRING  
SUITE 325  
2159 - FEATHERGRASS FEE SWD #1  
MIDLAND , TX 79701

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0227 27**

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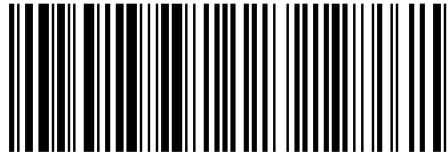


Total Postage: \$6.25

ROBERT H FORREST JR OIL LLC  
609 ELORA DRIVE  
2159 - FEATHERGRASS FEE SWD #1  
CARLSBAD , NM 88220

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0227 34**

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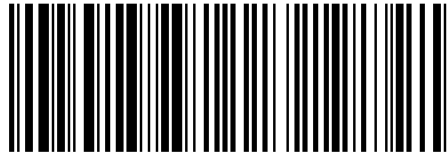
Total Postage: \$6.25

RUTTER & WILBANKS CORP  
SIRGIO BROS  
PO BOX 3186  
2159 - FEATHERGRASS FEE SWD #1  
MIDLAND , TX 79702

Reference Number: 2159 - FEATHERGRASS FEE SWD #1



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



**9314 8699 0430 0068 0227 41**

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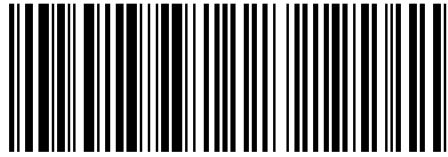


Total Postage: \$6.25

WILLIAM J SAVAGE  
1345 EAGLE BEND  
2159 - FEATHERGRASS FEE SWD #1  
SOUTHLAKE, TX 74172

Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



**9314 8699 0430 0068 0227 58**

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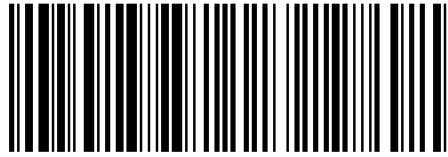


Total Postage: \$6.25

WPX ENERGY PERMIAN LLC  
3500 ONE WILLIAMS CENTER  
2159 - FEATHERGRASS FEE SWD #1  
TULSA, OK 73172

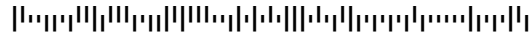
Reference Number: 2159 - FEATHERGRASS FEE SWD #1

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



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Total Postage: \$6.25

XERIC OIL & GAS CORP  
PO BOX 7288  
2159 - FEATHERGRASS FEE SWD #1  
ODESSA, TX 79760

Reference Number: 2159 - FEATHERGRASS FEE SWD #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: Barry Riley PHONE: 979-575-8802
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes \_\_\_\_\_ ☒ 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: Feathergrass Fee SWD No. 1WELL LOCATION: 1,590' FSL 220' FWL  
FOOTAGE LOCATIONL  
UNIT LETTER27  
SECTION19S  
TOWNSHIP35E  
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 26"Casing Size: 20"Cemented with: 4,110 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulationIntermediate CasingHole Size: 17.5"Casing Size: 13.375"Cemented with: 1,170 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulationProduction CasingHole Size: 12.250"Casing Size: 9.625"Cemented with: 1,835 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulationLinerHole Size: 8.500"Casing Size: 7.625"Cemented with: 335 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: 11,337'Method Determined: calculationTotal Depth: 15,562'Injection Interval14,044 feet to 15,562 feet

(Open Hole)

**INJECTION WELL DATA SHEET**

Tubing Size: 5.5", 23 lb/ft, P-110, UFJ from 0' - 13,994'

Lining Material: Duoline

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

Packer Setting Depth: 13,994'

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: Siluro-Devonian, 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: 5,788'

Bone Spring: 7,534'

Wolfcamp: 10,143'

Strawn: 11,500'

Morrow: 12,487'



**District I**1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720**District II**811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720**District III**1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170**District IV**1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

## State of New Mexico

## Energy Minerals and Natural Resources

## Oil Conservation Division

☐ AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

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

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

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
L	27	19S	35E		1,590	S	220	W	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**

<sup>11</sup> Work Type N	<sup>12</sup> Well Type SWD	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Private	<sup>15</sup> Ground Level Elevation 3,718'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 15,562'	<sup>18</sup> Formation Devonian-Silurian	<sup>19</sup> Contractor TBD	<sup>20</sup> Spud Date ASAP
Depth to Ground water 45'	Distance from nearest fresh water well 2628'		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	1,768'		Surface
Intermediate	17-1/2"	13-3/8"	68 lb/ft	5,788'		Surface
Production	12-1/4"	9-5/8"	53.5 lb/ft	10,143'		Surface
Liner	8-1/2"	7-5/8"	39 lb/ft	9,843' - 14,044'		9,843'

**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

<sup>23</sup> 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 <b>97869</b>	Pool Name <b>DEVONIAN-SILURIAN</b>
Property Code	Property Name <b>FEATHERGRASS FEE SWD</b>	Well Number <b>1</b>
OGRID No. <b>373619</b>	Operator Name <b>BLACKBUCK RESOURCES</b>	Elevation <b>3718'</b>

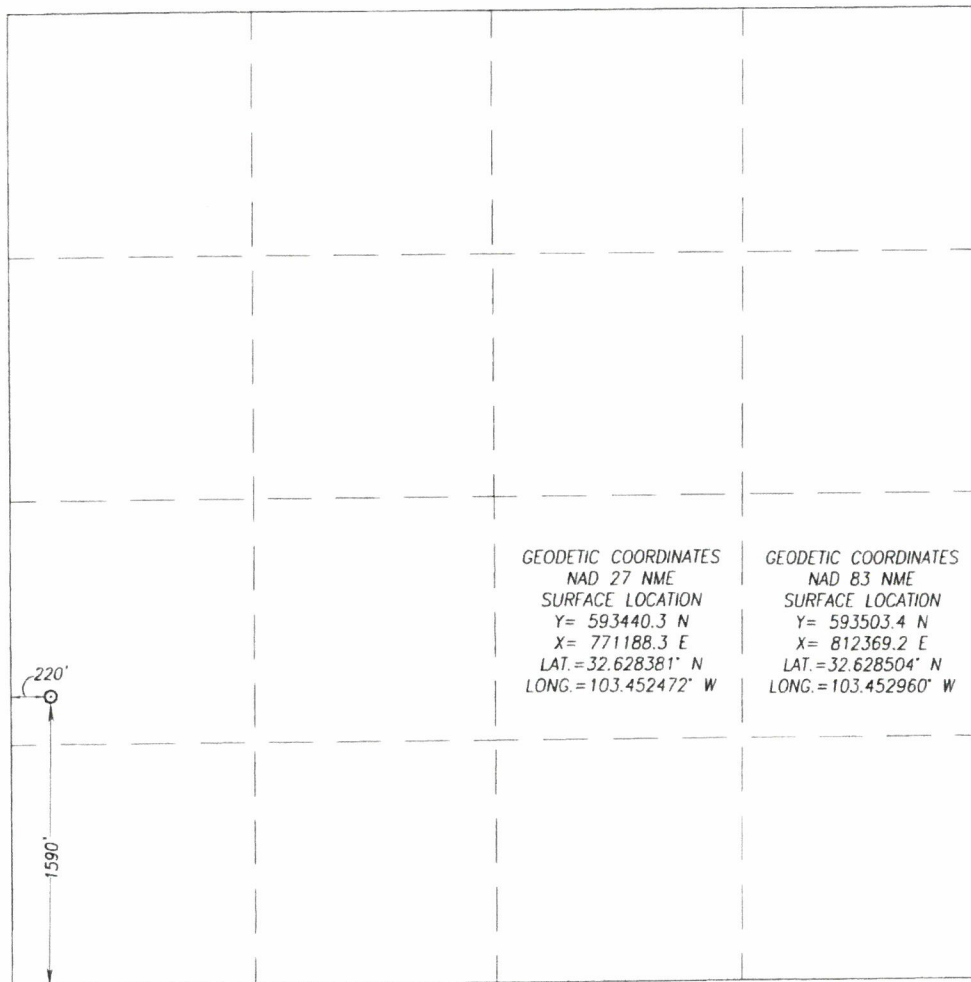
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>L</b>	<b>27</b>	<b>19-S</b>	<b>35-E</b>		<b>1590</b>	<b>SOUTH</b>	<b>220</b>	<b>WEST</b>	<b>LEA</b>

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



**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.

*Chris Wayland* 1/23/2020  
Signature Date  
Chris Wayland  
Printed Name  
Chris @louquist.com  
E-mail Address

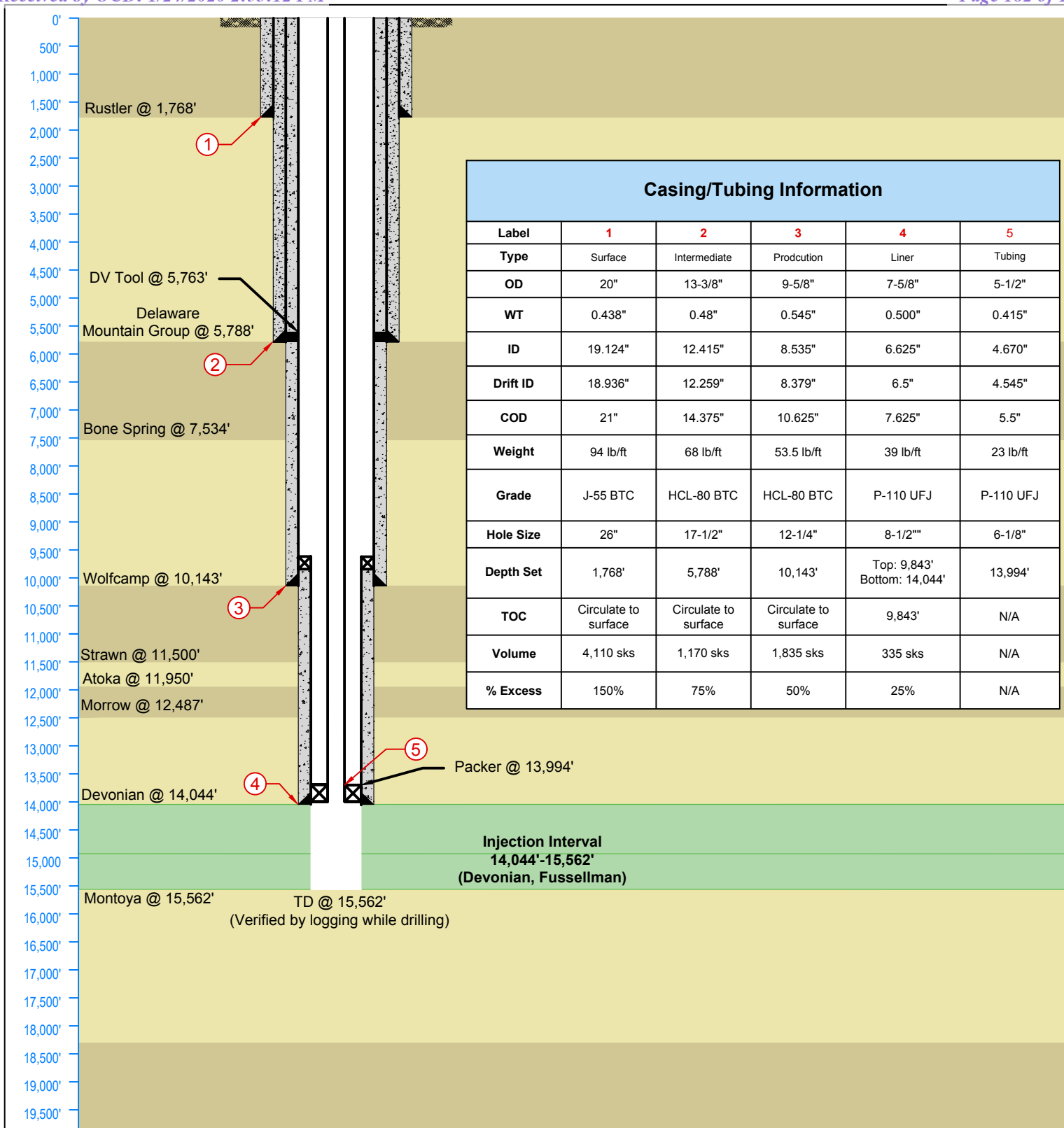
**SURVEYOR CERTIFICATION**

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 1, 2019

Date of Survey  
Signature & Seal of Professional Surveyor:

*Ronald J. Eidson* 7/17/2019  
Certificate Number Gary G. Eidson 42641  
Ronald J. Eidson 3239  
LSL JWSC W O - 19.11.0792

**LONQUIST & CO. LLC**PETROLEUM  
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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

**Feathergrass Fee SWD No. 1**

State/Province: New Mexico

Site: 1,590 FSL, 220 FWL

Field: Devonian-Silurian

Project No: 2159

Reviewed:

Notes:

County/Parish: Lea

Survey: S27-T19S-R35E

Well Type/Status: SWD

Date: 08/18/2019

Approved:



**Blackbuck Resources, LLC**

**Feathergrass Fee SWD No. 1**

**FORM C-108 Supplemental Information**

**III. Well Data**

**A. Wellbore Information**

1.

Well information	
<b>Lease Name</b>	Feathergrass Fee SWD
<b>Well No.</b>	1
<b>Location</b>	S-27 T-19S R-35E
<b>Footage Location</b>	1,590' FSL & 220' FWL

2.

**a. Wellbore Description**

<b>Type</b>	Surface	Intermediate	Production	Liner
<b>OD</b>	20"	13-3/8"	9-5/8"	7-5/8"
<b>WT</b>	0.438"	0.480"	0.545"	0.500"
<b>ID</b>	19.124"	12.415"	8.535"	6.625"
<b>Drift ID</b>	18.936"	12.259"	8.379"	6.5"
<b>COD</b>	21"	14.375"	10.625"	7.625"
<b>Weight</b>	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
<b>Grade</b>	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ
<b>Hole Size</b>	26"	17-1/2"	12-1/4"	8-1/2"
<b>Depth Set</b>	1,768'	5,788'	10,143'	9,843' – 14,044'

## b. Cementing Program

Casing String	Surface	Intermediate	Production	Liner
Lead Cement	HalCem	NeoCem	Stage 1: NeoCem Stage 2: NeoCem	Versacem
Lead Cement Volume	3070 sks	700 sks	Stage 1: 495 sks Stage 2: 685 sks	335 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	1040 sks	470 sks	Stage 1: 605 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	4,110 sks	1,170 sks	1,835 sks	335 sks
TOC	Surface	Surface	Stage 1: DV Tool @ 5,763' Stage 2: Surface	9,843'
Method	Circulate	Circulate	Circulated	CBL

## 3. Tubing Description

Tubing Information	
OD	5-1/2"
WT	0.415"
ID	4.670"
Drift ID	4.545"
COD	5.5"
Weight	23 lb/ft
Grade	P-110 UFJ
Depth Set	13,994'

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: 14,044' – 15,562'

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	5,788'
Bone Spring	7,534'
Wolfcamp	10,143'
Strawn	11,500'
Morrow	12,487'

## VI. Area of Review

One well penetrates the proposed injection zone. The East Pearl Queen Unit #27 (API: 30-025-12578) was drilled in 1954 to a total depth of 13,950' and is currently plugged, not sight released. The well penetrated the Devonian interval by approximately 63' but was not completed in the Devonian. The well has repeatedly been plugged back to produce from several shallower formations since the well's initial production. There are currently seven (7) cast-iron bridge plugs in the wellbore and cement has been filled to surface. Records and a schematic of the plugged wells are attached in this application. As shown in the attached schematic, this wellbore was cemented and plugged in way that it will not act as a conduit for fluid migration.

## 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: 2,107 PSI (surface pressure)

Maximum Injection Pressure: 2,809 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, Wolfcamp and Artesia 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 surrounding area.

## 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	1,768'
Delaware Mountain Group	5,763'
Bone Spring	7,534'
Wolfcamp	10,143'
Strawn	11,500'
Atoka	11,950'
Morrow	12,487'
Devonian	14,044'
Montoya	15,562'

B. Underground Sources of Drinking Water

Seven (7) 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. 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

Chemical analysis of two (2) fresh water wells from Cardinal Laboratories are presented in this application.



**LONQUIST & CO. LLC****PETROLEUM  
ENGINEERS****ENERGY  
ADVISORS****AUSTIN • HOUSTON • WICHITA • DENVER • CALGARY****INJECTION INTERVAL CONFINING LAYERS – FEATHERGRASS 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  
                  Feathergrass Fee SWD No. 1



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## GEOLOGIC AFFIRMATION

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



Parker Jessee  
Geologist

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