

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

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 PPR

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

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

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

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

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 X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No

II. OPERATOR: Blackbuck Resources, LLC

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

CONTACT PARTY: Barry Riley

PHONE: 979-575-8802

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

IV. Is this an expansion of an existing project? _____ Yes X No

If yes, give the Division order number authorizing the project: _____

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: Christopher Weyand

TITLE: Consulting Engineer – Agent for Blackbuck Resources

SIGNATURE: _____

DATE: 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: _____

Side 2

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

INJECTION WELL DATA SHEET

OPERATOR: Blackbuck Resources, LLC

WELL NAME & NUMBER: Feathergrass Fee SWD No. 1

WELL LOCATION: 1,590' FSL 220' FWL
FOOTAGE LOCATION

L
UNIT LETTER

27
SECTION

19S
TOWNSHIP

35E
RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26"

Casing Size: 20"

Cemented with: 4,110 sx.

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Intermediate Casing

Hole Size: 17.5"

Casing Size: 13.375"

Cemented with: 1,170 sx.

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Production Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with: 1,835 sx.

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 335 sx.

or _____ ft³

Top of Cement: 11,337'

Method Determined: calculation

Total Depth: 15,562'

Injection Interval

14,044 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	
Lease Name	Feathergrass Fee SWD
Well No.	1
Location	S-27 T-19S R-35E
Footage Location	1,590' FSL & 220' FWL

2.

a. Wellbore Description

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

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

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

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

7. Surface Location

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

¹¹ Work Type N	¹² Well Type SWD	¹³ Cable/Rotary R	¹⁴ Lease Type Private	¹⁵ Ground Level Elevation 3,718'
¹⁶ Multiple N	¹⁷ Proposed Depth 15,562'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ 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' - 10,444'		9,843'

Casing/Cement Program: Additional Comments

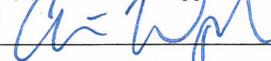
See attached schematic.

22. Proposed Blowout Prevention Program

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

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

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

Signature: 

Printed name: Chris Weyand

Title: Consulting Engineer

E-mail Address: chris@lonquist.com

Date: January 24, 2020

Phone: 512-600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 97869	Pool Name DEVONIAN-SILURIAN
Property Code	Property Name FEATHERGRASS FEE SWD	Well Number 1
OGRID No. 373619	Operator Name BLACKBUCK RESOURCES	Elevation 3718'

Surface Location

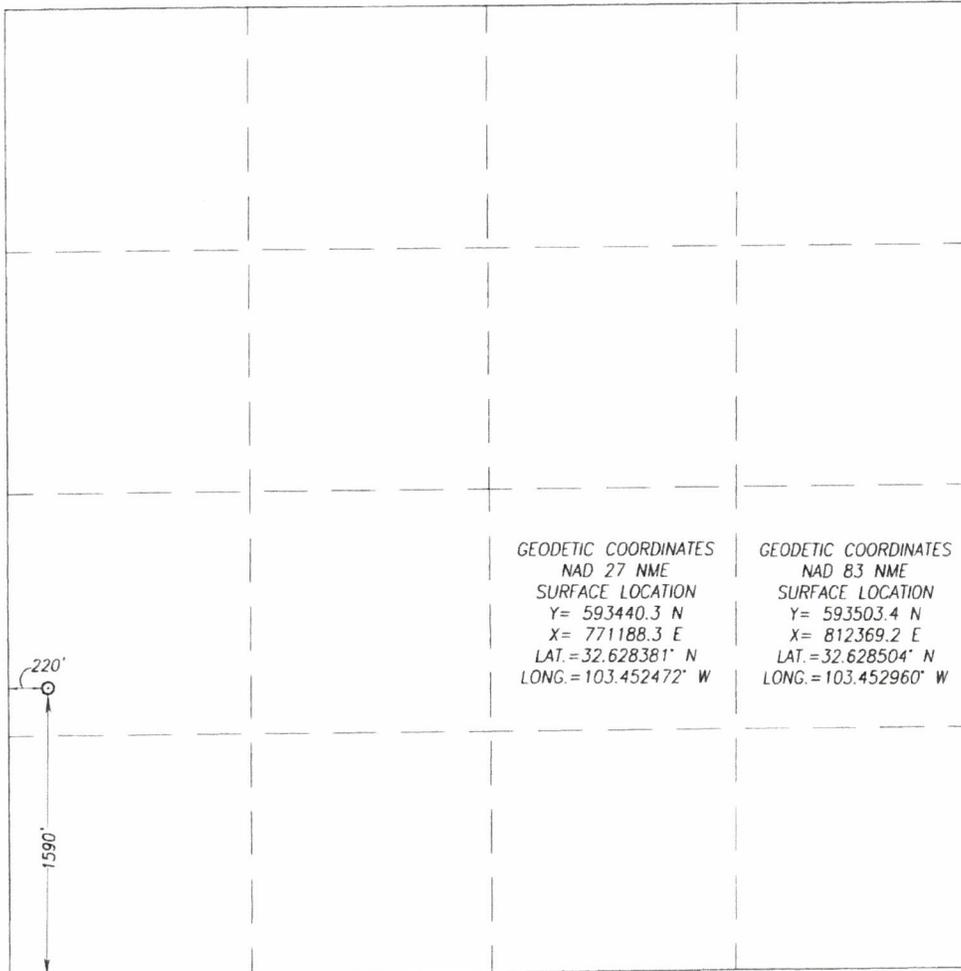
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	27	19-S	35-E		1590	SOUTH	220	WEST	LEA

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



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

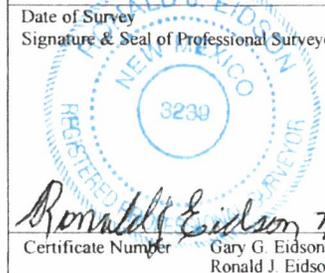
Chris Wayard 1/23/2020
Signature Date
Chris Wayard
Printed Name
Chris @louquist.com
E-mail Address

SURVEYOR CERTIFICATION

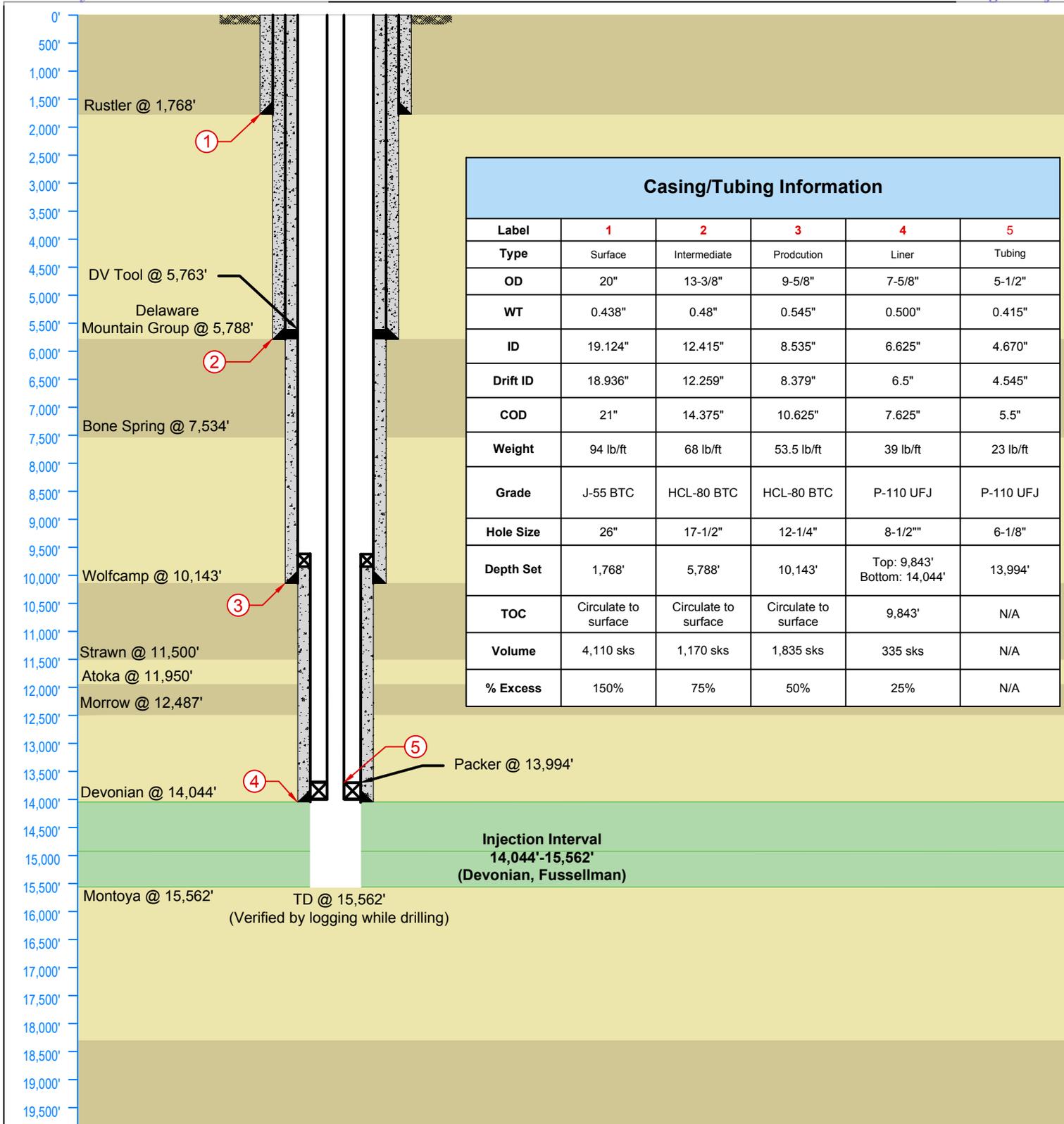
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 1, 2019

Date of Survey
Signature & Seal of Professional Surveyor:

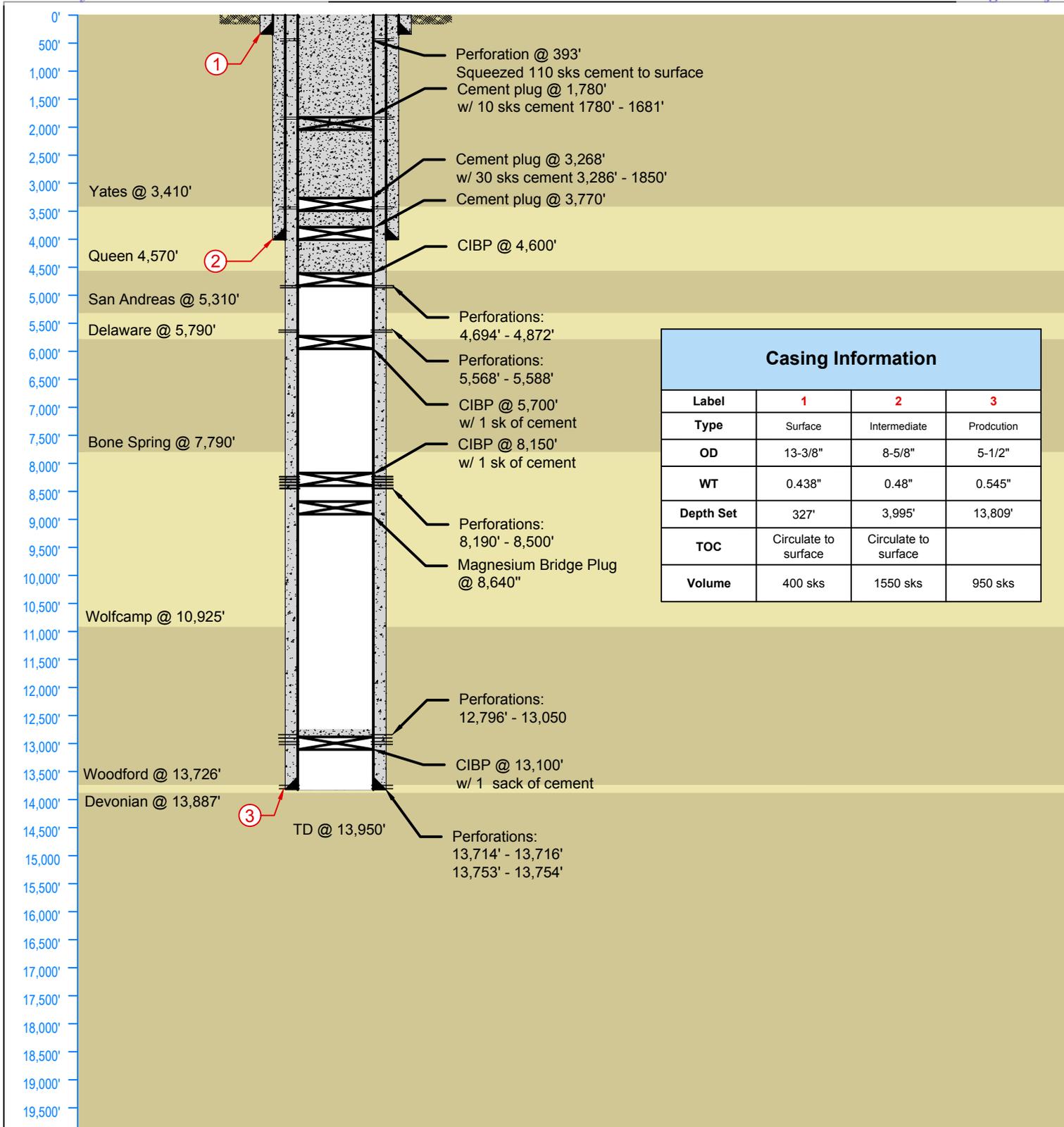


Certificate Number Gary G. Eidson 42641
Ronald J. Eidson 3239



Casing/Tubing Information					
Label	1	2	3	4	5
Type	Surface	Intermediate	Production	Liner	Tubing
OD	20"	13-3/8"	9-5/8"	7-5/8"	5-1/2"
WT	0.438"	0.48"	0.545"	0.500"	0.415"
ID	19.124"	12.415"	8.535"	6.625"	4.670"
Drift ID	18.936"	12.259"	8.379"	6.5"	4.545"
COD	21"	14.375"	10.625"	7.625"	5.5"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft	23 lb/ft
Grade	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	6-1/8"
Depth Set	1,768'	5,788'	10,143'	Top: 9,843' Bottom: 14,044'	13,994'
TOC	Circulate to surface	Circulate to surface	Circulate to surface	9,843'	N/A
Volume	4,110 sks	1,170 sks	1,835 sks	335 sks	N/A
% Excess	150%	75%	50%	25%	N/A

LONQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS HOUSTON CALGARY AUSTIN WICHITA DENVER Texas License F-9147 12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Blackbuck Resources, LLC	Feathergrass Fee SWD No. 1		
	Country: USA	State/Province: New Mexico	County/Parish: Lea	
	Location:	Site: 1,590 FSL, 220 FWL	Survey: S27-T19S-R35E	
	API No: N/A	Field: Devonian-Silurian	Well Type/Status: SWD	
	NMOCD District No: 1	Project No: 2159	Date: 08/18/2019	
	Drawn: TFM	Reviewed:	Approved:	
	Rev No: 1	Notes:		



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 ENGINEERS ENERGY ADVISORS HOUSTON CALGARY AUSTIN WICHITA DENVER Texas License F-9147 12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Xeric Oil & Gas Corp		East Pearl Queen Unit #27	
	Country: USA		State/Province: New Mexico	County/Parish: Lea
	Location:		Site: 1,980 FNL & 1,980 FEL	Survey: G S27-T19S-R35E
	API No: 30-025-12578		Field: Devonian-Silurian	Well Type/Status: SWD
	NMOCD District No: 1		Project No: 2159	Date: 9/5/2019
	Drawn: TFM		Reviewed: CBW	Approved: CBW
	Rev No: 1		Notes:	

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

27-19-35
Unit G

ORL POD	<u>2186410</u>	GAS POD	<u>2186430</u>
TRANSPORTER	<u>37480</u>	TRANSPORTER	<u>24650</u>
TRANSPORTER	<u> </u>	TRANSPORTER	<u>9121</u>

UNITED POD 2186450

NO Dryer DD, Artesia, NM 88211-0719

District III

1000 Rio Bravo 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

Lea 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 2186450	POD ULSTR Location and Description 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: *[Signature]*

Printed name: RANDALL CAPPS

Title: PRESIDENT

Date: *3/11* 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
[Signature]
018223

SCOTT GRAEF
Printed Name
PYRAMID ENERGY, INC.

OPERATIONS MANAGER
Title
6-20-94
Date

86

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

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Submit to Appropriate District Office
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AMENDED REPORT

District II
70 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

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 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

Lea 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 2186450	POD ULSTR Location and Description 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: *[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 <i>[Signature]</i> 018223	SCOTT GRAEF Printed Name PYRAMID ENERGY, INC.	OPERATIONS MANAGER Title 6-20-94 Date
---	---	--

18

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
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 Pyramid Energy, Inc.		Well API No. 30-025-12578
Address 10101 Reunion Place, Ste. 210 San Antonio, Texas 78216		
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 type="checkbox"/>	<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 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

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

I.

Operator Pyramid Energy, Inc.	Well API No. 30-025-12578
Address 10101 Reunion Place, Ste. 210 San Antonio, Texas 78216	
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 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

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

Scott Graef
 Signature
Scott Graef Production Engineer
 Printed Name Title
11/16/93 (210) 308-8000
 Date 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

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**

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)	
New Well <input type="checkbox"/>	Change in Transporter of: Change in operator from Sirgo Operating, Inc. to Pyramid Energy, Inc. effective July 1, 1990.
Recompletion <input type="checkbox"/>	
Change in Operator <input checked="" type="checkbox"/>	
Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>	
Casinghead Gas <input type="checkbox"/> Condensate <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 <input checked="" type="radio"/>	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"/>	Address (Give address to which approved copy of this form is to be sent)
Shell Pipeline Corp.	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)
Warren Petroleum Phillips 66 Natural Gas Co.	P.O. Box 1589 Tulsa, OK 74102 GPM Gas Corporation 4001 Penbrook Odessa, TX 79762
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When?
	F 27 19S 35E Yes 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.

REC'D

JUN 27 1990

6:30

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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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 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. to Sirgo Operating, Inc. effective November 1, 1989
Recompletion <input type="checkbox"/>	Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>
Change in Operator <input checked="" type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>
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 *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.	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 Sec. Twp. Rge. Is gas actually connected? When ? F 27 19S 35E yes 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 (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.

Julie Godfrey
Signature
Julie Godfrey Production Tech.
Printed Name
November 14, 1989 (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.

RECEIVED
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

Form C-104
Revised 10-01-78
Format 08-01-83
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OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

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	GAS	
OPERATOR		
PERMITS OFFICE		

REQUEST 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) <u>EFFECTIVE 01-01-87</u>
<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 <u>East Pearl Queen Unit</u>	Well No. <u>27</u>	Pool Name, including Formation <u>Pearl Queen</u>	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"/> <u>Shell Pipeline Corporation</u>	Address (Give address to which approved copy of this form is to be sent) <u>P. O. Box 1910, Midland, TX 79702</u>
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> <u>Phillips 66 Natural Gas Co. Warren Petroleum Corp.</u>	Address (Give address to which approved copy of this form is to be sent) <u>4001 Penbrook Street, Odessa, TX 79762 P. O. Box 1689, Lovington, NM 88260</u>
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When
<u>No CHANGE</u>	<u>Yes</u>

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

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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MOBILE OFFICE

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 1

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	GAS
OPERATOR	
REGISTRATION OFFICE	

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

Operator Petrus Operating Company, Inc.

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) <u>EFFECTIVE DATE OF CHANGE 07-01-86</u>	
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil		<input type="checkbox"/> Dry Gas
<input checked="" type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas		<input type="checkbox"/> Condensate

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 <u>East Pearl Queen Unit</u>	Well No. <u>27</u>	Pool Name, including Formation <u>Pearl Queen</u>	Kind of Lease <u>State, Federal or Fee</u>	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"/> <u>Shell Pipeline Corporation</u>	Address (Give address to which approved copy of this form is to be sent) <u>P.O. Box 1910, Midland, Texas 79702</u>
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> <u>Phillips Petroleum Company 66 State Street Warren Petroleum Corp.</u>	Address (Give address to which approved copy of this form is to be sent) <u>4001 Pembroke Street, Odessa, Texas 79702</u> <u>P.O. Box 1689, Lovington, New Mexico 88260</u>
If well produces oil or liquids, give location of tanks.	Unit : Sec. : Twp. : Rge. : Is gas actually connected? : When
	<u>NO CHANGE</u> : Yes : 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 Suzann Jourdan
(Signature)

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

NO. OF APPLICANTS	
DISTRICT	
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FILE	
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LAND OFFICE	
TRANSPORTER	OIL
	NATURAL GAS
OPERATOR	
PRODUCTION OFFICE	

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. 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 Change in Transporter of:
 Recompletion Oil Dry Gas
 Change in Ownership Casinthead Gas Condensate

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

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

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, CR, etc.)	Name of Producing Formation		Top Oil/Gas Pay		Tubing Depth			
Perforations					Depth Casinthead			
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)

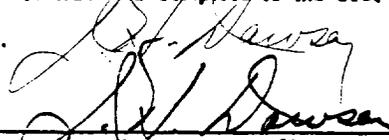
Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MCF	Gravity of Condensate
Testing Method (static, 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, 19
 BY ORIGINAL SIGNED BY JERRY SEXTON
 TITLE DISTRICT 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 deviated tests taken on the well in accordance with RULE 111.
 All sections of this form must be filled out completely for allow able 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.

RECEIVED
JAN 18 1984
O.C.D.
HUMAN OFFICE

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

NEW MEXICO OIL CONSERVATION COMMISSION

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OPERATOR	

5a. Indicate Type of Lease
 State Fee
 5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
DO NOT USE THIS FORM FOR OPERATIONS ON WELLS OR INTERESTS IN WELLS ON A DIFFERENT RESERVOIR.
 USE APPROPRIATE FORM FOR REPORT ON WELLS ON A DIFFERENT RESERVOIR.

1. OIL WELL GAS WELL OTHER

2. Name of Operator
 Shell Oil Company

3. Address of Operator
 P. O. Box 1509, Midland, Texas 79702

4. Location of Well
 UNIT LETTER M 660 FEET FROM THE South LINE AND 660 FEET FROM
 THE West LINE, SECTION 22 TOWNSHIP 19S RANGE 35E NMPM.

15. Elevation (Show whether DF, RT, CR, etc.)
 3730 DF

7. Unit Agreement Name
 8. Form or Lease Name
 East Pearl Queen Unit
 9. Well No.
 27
 10. Field and Pool, or Wildcat
 Pearl Queen

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 JOB <input type="checkbox"/>	OTHER <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 PBD @ 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 _____ TITLE _____ DATE 20 1978

CONDITIONS OF APPROVAL, IF ANY:

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JAN 19 1978
OIL CONSERVATION BOARD
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

5a. Indicate Type of Lease
State Fee
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

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

REMEDIAL WORK
COMMENCE DRILLING OPNS.
CASING TEST AND CEMENT JOB
OTHER Open Additional Pay
ALTERING CASING
PLUG AND ABANDONMENT

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

Orig. Signed by
Joe D. Ramey
Dist. I, Supr.

APPROVED BY _____ TITLE _____ DATE _____

MAR 13 1972

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MAR 13 1972

OIL CONSERVATION COMM.
HOBBS, N. M.

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NEW MEXICO OIL CONSERVATION COMMISSION
 SANTA FE, NEW MEXICO
**CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
 TO TRANSPORT OIL AND NATURAL GAS**

FORM C-110
 (Rev. 7-60)

FILE THE ORIGINAL AND 4 COPIES WITH THE APPROPRIATE OFFICE

Company or Operator: **Shell Oil Company** Lease: **East Pearl Queen Unit** Well No. **2227**

Unit Letter: **G** Section: **27** Township: **19S** Range: **35E** County: **Lea**

Pool: **Pearl-Queen** Kind of Lease (State, Fed, Fee): **Fee**

If well produces oil or condensate give location of tanks: **F** Section: **27** Township: **19S** Range: **35E**

Authorized transporter of oil or condensate
Shell Pipe Line Corporation Address (give address to which approved copy of this form is to be sent):
P. O. Box 1598, Hobbs, New Mexico 88240

Is Gas Actually Connected? Yes No

Authorized transporter of casing head gas or dry gas Date Connected: **9-1-63** Address (give address to which approved copy of this form is to be sent):
Phillips Petroleum Company **Room B2, Phillips Building, Odessa, Texas**

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

REASON(S) FOR FILING (please check proper box)

New Well Change in Ownership
 Change in Transporter (check one) Other (explain below)
 Oil Dry Gas
 Casing head gas Condensate

East Pearl Queen Unit Agreement

Remarks
Effective September 1, 1963. Formerly Shell Hooper # 1
East Pearl Queen Unit as per NMCC Order R-2537, dated August 7, 1963.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.
 Executed this the 21st day of August, 1963.

OIL CONSERVATION COMMISSION	By
	S. B. Deal <i>S.B. Deal</i>
Approved by <i>[Signature]</i>	Title
Title	Division Production Superintendent
Date	Company
	Shell Oil Company
	Address
	P. O. Box 1858, Roswell, New Mexico 88201



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PROPRATION OFFICE	
OPERATOR	

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)

1962 OCT 1 AM 7 57

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

Lease **Hooper** Well No. **1** Unit Letter **G** Section **27** Township **19S** Range **35 37E**

Date Work Performed **8-23-62 thru 9-28-62** Pool **Pearl-Queen** County **Lea**

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 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", EUE, 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" SM.

Witnessed by **H. B. Leach** Position **Production Foreman** Company **Shell Oil Company**

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

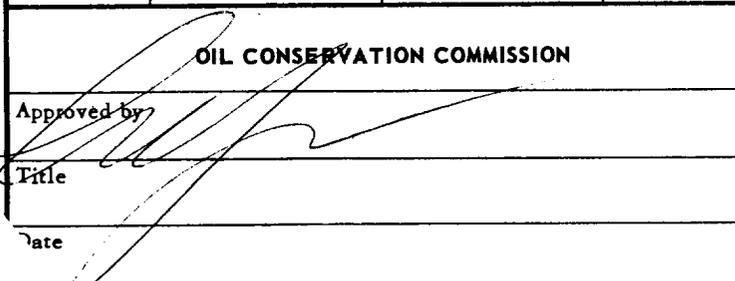
D F Elev.	TD	P BTD	Producing Interval	Completion Date
3730'	13,950'	4845'	4706' - 4842'	12-10-56
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
2 1/2"	4803'	5 1/2"	13,824'	
Perforated Interval(s)	4706', - 4806' - 4830', & 4838' - 4842'			
Open Hole Interval	-	Producing Formation(s)	Queen	

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	7-16-62	2	4.0	1	2000	-
After Workover	9-28-62	6	not measured	6	not measured	-

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

OIL CONSERVATION COMMISSION

Approved by  Name **R. A. Lowery** Original Signed By **R. A. LOWERY**

Title **District Exploitation Engineer** Position **District Exploitation Engineer**

Date **9-28-62** Company **Shell Oil Company**



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

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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 (NITRO)	
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 CIGR 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:

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:

Approved
OIL CONSERVATION COMMISSION

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

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

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

HOOPER'S OFFICE OCC

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

1960 FEB 21 AM 10:42

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

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 2 1/2 hours pumped 17 BO + 1 BW w/9-5 1/4" SPM.

Witnessed by H. B. Leach	Position Production Foreman	Company Shell Oil Company
------------------------------------	---------------------------------------	-------------------------------------

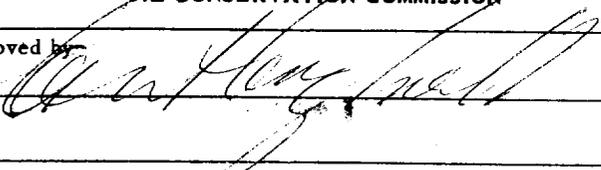
FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

D F Elev. 3730'	T D 13,950'	P B T D 4845'	Producing Interval 4806' - 4842'	Completion Date 12-10-56
Tubing Diameter 2 1/2"	Tubing Depth 4829'	Oil String Diameter 5 1/2"	Oil String Depth 13,824'	
Perforated Interval(s) 4806' - 4830' & 4838' - 4842'				
Open Hole Interval -		Producing Formation(s) Queen		

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 R. A. Lowery	Original Signed By R. A. LOWERY	
Title District Exploitation Engineer	Position Shell Oil Company		
Date	Company		

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

MISCELLANEOUS NOTICES

1960 JAN 28 AM 9:59

Submit this notice in **TRIPPLICATE** 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	X	NOTICE OF INTENTION (OTHER) SANDFRAC	X	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 $\frac{1}{4}$ NE $\frac{1}{4}$ 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:

Shell Oil Company Original Signed By
Company or Operator **R. A. LOWERY**
By..... **R. A. Lowery**

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

Approved
OIL CONSERVATION COMMISSION
By.....
Title.....

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 _____

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 (x) 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. Cabanis Original Signed By Rex C. Cabanis

Approved _____ 19 _____

Title District Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil Company

By E. Fischer

Address Box 845

Title _____

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 11 11 19 20

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 * S T R

Authorized 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 58

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

Approved _____ 19 _____

Title District Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil Company

By E. Fischer

Address Box 845

Title _____

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

Company or Operator Shell Oil Company Lease Keoper

Well No. 1 Unit Letter 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 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)

x 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

Approved _____ 19 _____

OIL CONSERVATION COMMISSION

By E. Fischer

Title _____

By B. Nevill Original signed by B. Nevill

Title Division Exploitation Engineer

Company Shell Oil Company

Address Box 1509

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

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 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
(Place)

December 12, 1956
(Date)

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

Shell Oil Company
(Company or Operator)

Kooper
(Lease)

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

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

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' & 4832' - 4838'

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

OIL CONSERVATION COMMISSION

By: E.J. Fischer

Title: Engineer District

Shell Oil Company
(Company or Operator)

By: B. Nevill
(Signature)

Title: Division Exploitation 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

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 Reoper

Well No. 1 Unit Letter S 27 T-19-4 R-35-2 Pool Undersaturated

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 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 1956

By B. Nevill Original signed by B. Nevill

Title Division Exploitation Engineer

Company Shell Oil Company

Address Box 1957

Hobbs, New Mexico

Approved DEC 17 1956 1956

OIL CONSERVATION COMMISSION

By E. J. Fischer

Title 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 -19-8 R -35-2
DATE WORK PERFORMED 7-20 thru 12-10-56 POOL Undesignated Wildcat

This 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 III
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'.

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 sx. 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 sx. cement. Pumped 10 bbls. cement thru casing perforations @ 4860' & pressure increased to 2000 psi. Finished pumping 100 sx. 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 sx. 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 sx. 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 sx. 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 sx. 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 sx. DOC slurry + 50 BO + 100 sx. 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% NCA & 100 sx. 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 sx. 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% NCA. 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.

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBB'S OFFICE 000

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
(Place)

July 19, 1956
(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 0 (Unit)

SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 27, T. 19-S, R. 35-E, NMPM., Penri 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 & lead hole w/oil. Pull tubing.

Note: Procedure will be changed if unable to circulate.

(See back of page)

Approved..... JUL 20 1956 19.....

Except as follows:

Shell Oil Company

Company or Operator

By B. Nevill

Position Division Exploitation Engineer

Send Communications regarding well to:

Approved
OIL CONSERVATION COMMISSION

By P. M. Lueder

Title District

Name 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 $\frac{1}{2}$ 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 JET 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 JET 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 $\frac{1}{2}$ 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 JET 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 PBD 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
Title _____
Date _____

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

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~~ Shell will recomplate this well
w/ master pay

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 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 (Company or Operator) Hooper (Lease), Well No. 1, in SW 1/4 NE 1/4,
0, Sec. 27, T. -19-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:

		X	

Elevation 3730' Total Depth 13,950' P.B. 8691'
 Top oil/gas pay 8198' Name of Prod. Form Bone 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

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

Remarks: * Permanent plug has 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: [Signature] Engineer District 1
Title

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 GAS

Company or Operator Shell Oil Company Lease Hooper

Well No. 1 Unit Letter G S 27 T -19-SR-35-E Pool Pearl Area Wildcat

County Lee 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 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

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 55

By B. Nevill Original signed by B. Nevill

Approved 1955 19

Title Division Exploitation Engineer

OIL CONSERVATION COMMISSION

Company Shell Oil Company

By [Signature]

Address P. O. Box 1957, Hobbs, New Mexico

Title Engineer District 3

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)

WELLS OFFICE 200C
1955 SEP 15 AM 10:28

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

LEASE Keoper 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 5/2" casing with 2 - 4 way shots (8 holes) at 9500'. Pumped water down casing with no returns at surface. Set Baker nodal 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 5/2" 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 Nodal K cement retainer at 8750'. Pumped down tubing and established circulation around 5/2" 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 5/2" casing 8100' w/ 2 - 4 way shots (8 holes). Ran Baker Nodal 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) _____

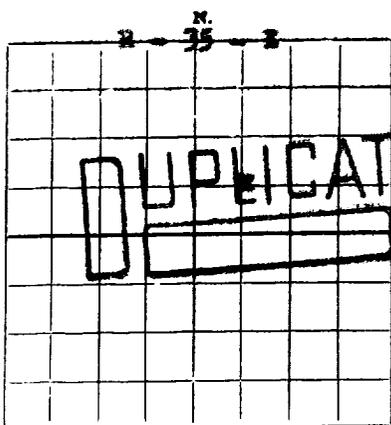
RESULTS OF WORKOVER:

	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 _____		

OIL CONSERVATION COMMISSION
Name *D. C. Meyers*
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 PBD 13,100' in the Pennsylvanian Pay Zone to 8691' in the Bone Springs Pay Zone. P B T D 8691'.



NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

WORDS OFFICE 000

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.

AREA 640 ACRES
LOCATE WELL CORRECTLY

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 Mahoe

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

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% BS&W, thru 1" choke.

279 BO
3410
1000

279 BO
3410
1000

279
1000

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	X	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 **0** (Unit)

NW 1/4 **NE** 1/4 of Sec. **27**, T. **-19-S**, R. **-35-E**, NMPM., **Pearl Area Wildcat** Pool

Lea County.

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

- (1) Spot and laden fluid from PBD 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.

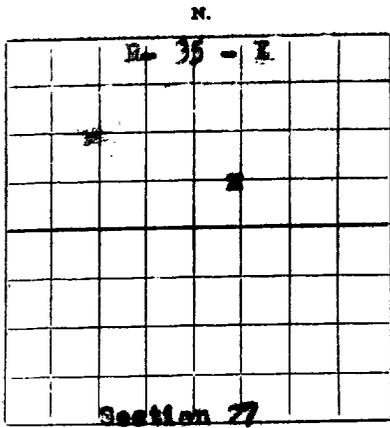
AUG 10 1955

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

Approved
OIL CONSERVATION COMMISSION
By: **Warren Markin**
Title: **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

DUPLICATE

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 Nooper
 (Company or Operator) (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 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 Maboo
 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'	Larkin		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 Qts. or Gals. used, interval treated or shot.)

Washed casing perforations 12,796'-13,050' with 500 gallons mud acid (CP). Treated
thru casing perforations with 500 gallons mud acid (CP).

Result of Production Stimulation On OCT in 24 hours flowed 133 BO, no BSW, thru 1" choke.
FT 75 psi. Gravity 48.6° API.

Depth Cleaned Out

LOG 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 173 barrels of liquid of which 100% 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 Dol. w/sand stringers				
6,400	7,610	1210	Sandy Dol. 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, Dol. & 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

- DST # 1: 5432' - 5490' (58' San Andres dolomite). Tool open 30 minutes thru 5/8" BC & 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 FSIBHP 100 psi. FBHP 100 psi. 30 minutes FSIBHP 120 psi. EHM 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" BC & 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. EHM 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.

10/1/2019 10:00 AM

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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⁻. HMH 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. WPTS 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. HMH est. 8800 psi. Positive Test.

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 QUADRUPPLICATE 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 July 28, 1955
(Place) (Date)

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

Shell Oil Company (Company or Operator) Hooper (Lease), Well No. 1, in SW 1/4 NE 1/4, Sec. 27, T. 19-S, R. 35-E, NMPM, Pearl Area Wildcat Pool, Lea County. Date Spudded 6-12-54, Date Completed 7-19-55

Please indicate location:

Section 27 Unit 0

		X	

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

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

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

Depth to Casing shoe of Prod. String

Natural Prod. Test BOPD

based on bbls. Oil in Hrs. Mins.

Test after acid 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. L. Berry (Signature) For: E. Nevill

OIL CONSERVATION COMMISSION

By: Warren Mankin

Title: Division Exploitation Engineer

Send Communications regarding well to:

Title: Engineer District

Name: Shell Oil Company

Address: P. O. Box 1957, Hobbs, New Mexico

DUPLICATE

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 GAS

Company or Operator Shell Oil Company Lease Lease

Well No. 1 Unit Letter S 27 T 19 R 35 Pool Pearl Area Wildcat

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 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 ()

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 55

Approved AUG -2 1955 _____ 19 _____

OIL CONSERVATION COMMISSION

By W. W. Marken
Title Engineer District I

By J. R. Berry For: B. Nevill
Title Division Exploitation Engineer
Company Shell Oil Company

Address P. O. Box 1957, Hobbs, New Mexico

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 T19-S R 35-E
Date work performed July 1, 1955 POOL Pearl Area Wildest

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	I hereby certify that the information given above is true and complete to the best of my knowledge.	
Name <u>S J STANLEY</u>	Name <u>D. C. Meyers</u>	Original signed by <u>D. C. Meyers</u>
Title <u>ENGINEER-DIST.</u>	Position <u>Division Mechanical Engineer</u>	
Date <u>JUL - 1 1955</u>	Company <u>Shell Oil Company</u>	

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS
(Submit to appropriate District Office as per Commission Rule 1f06)

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

Lease Keeper Well No. 1 Unit "0" S 27 T 19-S R 35-B

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

Position Division Mechanical Engineer

Company Shell Oil Company

Original signed by
D. C. Meyers

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 6 S 27 T 19-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 Wells

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:

	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	I hereby certify that the information given above is true and complete to the best of my knowledge.	
Name <u>S. J. STANLEY</u>	Name <u>D. C. Meyers</u>	Original signed by <u>D. C. Meyers</u>
Title <u>ENGINEER-DIST.</u>	Position <u>Division Mechanical Engineer</u>	
Date <u>JUN 20 1955</u>	Company <u>Shell Oil Company</u>	

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 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 17,316' 5 1/2" casing and cemented to 17,832' w/850 ex. 4 1/2" col + 100 ex. neat cement. After 24 hours hung casing w/197,500# on clips. 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

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

Name S. W. STANLEY

Name D. C. Meyers

Original signed by

Title ENGINEER-DIST.

Position Division Mechanical Engineer

D. C. Meyers

Date June 17, 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 G 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. STANLEY

Title 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. Meyers Original signed by D. C. Meyers
Original signed by D. C. Meyers

Position Division Mechanical Engineer

Company Shell Oil Company

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

MISCELLANEOUS REPORTS ON WELLS

JUN 30 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 (xxx) (was not) submitted on Form C-102 on _____, 19____, and approval of the proposed plan (xxx) (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

J. G. Stanley (Name)

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

Name F. D. Leigh Original signed by F. D. Leigh

Position Division Mechanical Engineer

Representing Shell Oil Company

Address Box 1957, Hobbs, New Mexico

(Title)

(Date)

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 $\frac{1}{4}$ NE $\frac{1}{4}$ 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....., and approval of the proposed plan (~~was~~) obtained.
(Cross out incorrect words)

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

F. D. Leigh
(Name)

Oil & Gas Inspector
(Title)

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

Name F. D. Leigh Original signed by 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

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) ~~submitted~~ submitted on Form C-103 on June 1, 1954,
(Cross out incorrect words)

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

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

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

Witnessed by R. B. Flournoy Shell Oil Company Drilling Foreman
(Name) (Company) (Title)

Approved: F. D. Leigh
OIL CONSERVATION COMMISSION
(Name)

Oil & Gas Inspector 6/18/1954
(Title) (Date)

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

Original signed by F. D. Leigh
Name 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 RECOMPLETE

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 all changes will be returned to the sender. Submit this notice in **QUINTUPLICATE**. 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. Hooper
(Lease)

Well No. **1**

in **G** (Unit)

The well is

located **1980** 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. Hooper**

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 Maboo 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
17"	13 3/8"	48#	New	350	350
11"	8 5/8"	32#	New	4000	3000
7 7/8"	5 1/2"	17# 15.5#	New	13,100	2200

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)

G. R. Palmer
By **D. Nevill**

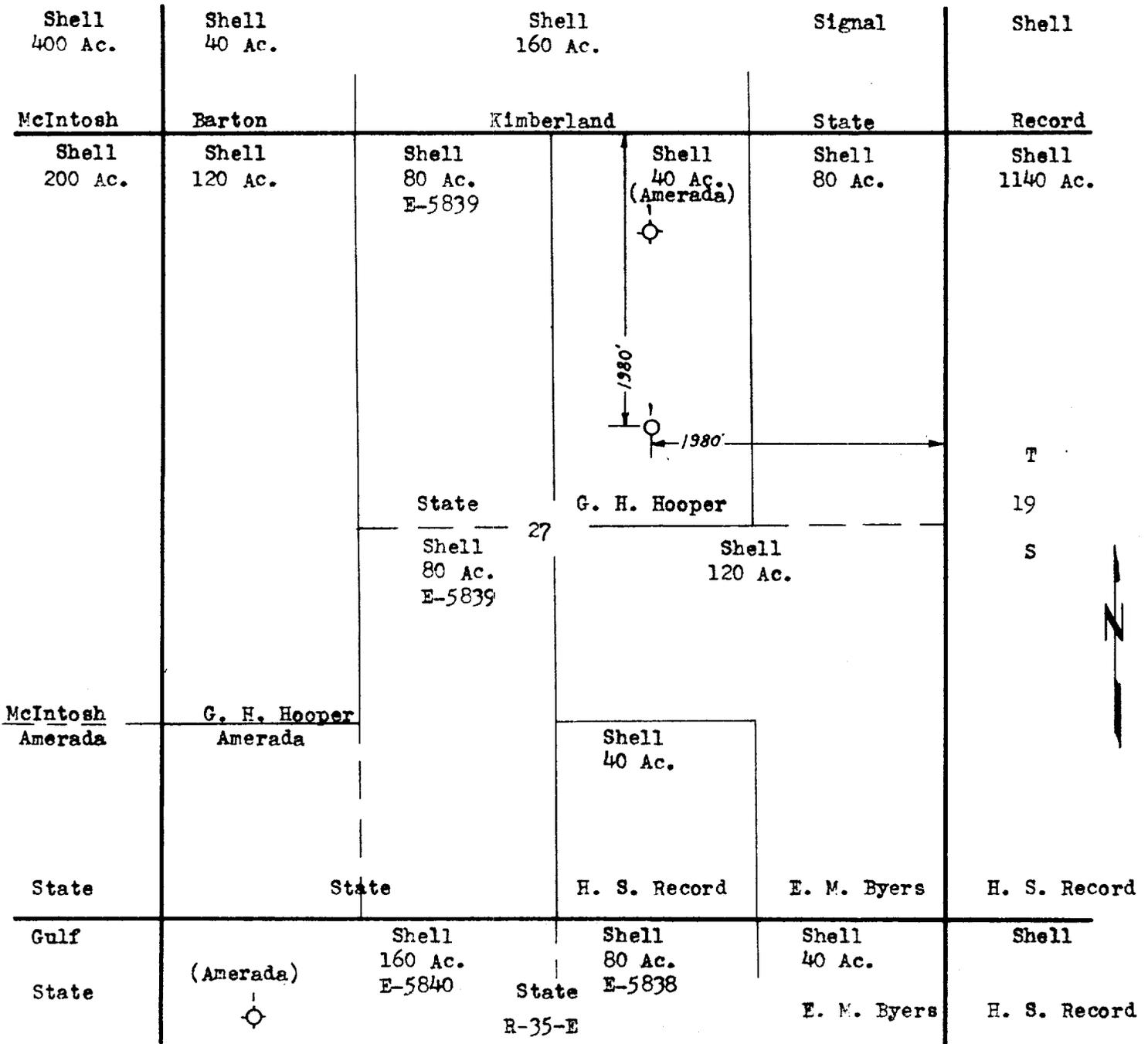
Position **Division Exploitation Engineer**
Send Communications regarding well to

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

OIL CONSERVATION COMMISSION

By *J. G. Stanley*
Title **.....**

Shell G. H. Hooper 1



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

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

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

Harold B. Davis
 Notary Public
 Lea County, New Mexico

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'

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		CLASS <i>OWDF</i> EL 
Re-Cmp 2-17-72	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 Office
District 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

HOBBS OCD
DEC 07 2012
RECEIVED

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

Form C-103
Revised August 1, 2011

WELL API NO. 30-025-12578
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name 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 & 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

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

NOTICE OF INTENTION TO:

- PERFORM REMEDIAL WORK
- TEMPORARILY ABANDON
- PULL OR ALTER CASING
- DOWNHOLE COMMINGLE
- PLUG AND ABANDON
- CHANGE PLANS
- MULTIPLE COMPL

SUBSEQUENT REPORT OF:

- REMEDIAL WORK
- COMMENCE DRILLING OPNS.
- CASING/CEMENT JOB
- ALTERING CASING
- P AND A

OTHER:

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&A PROCEDURE

Spud Date:

[Empty box for Spud Date]

Rig Release Date:

[Empty box for 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 _____

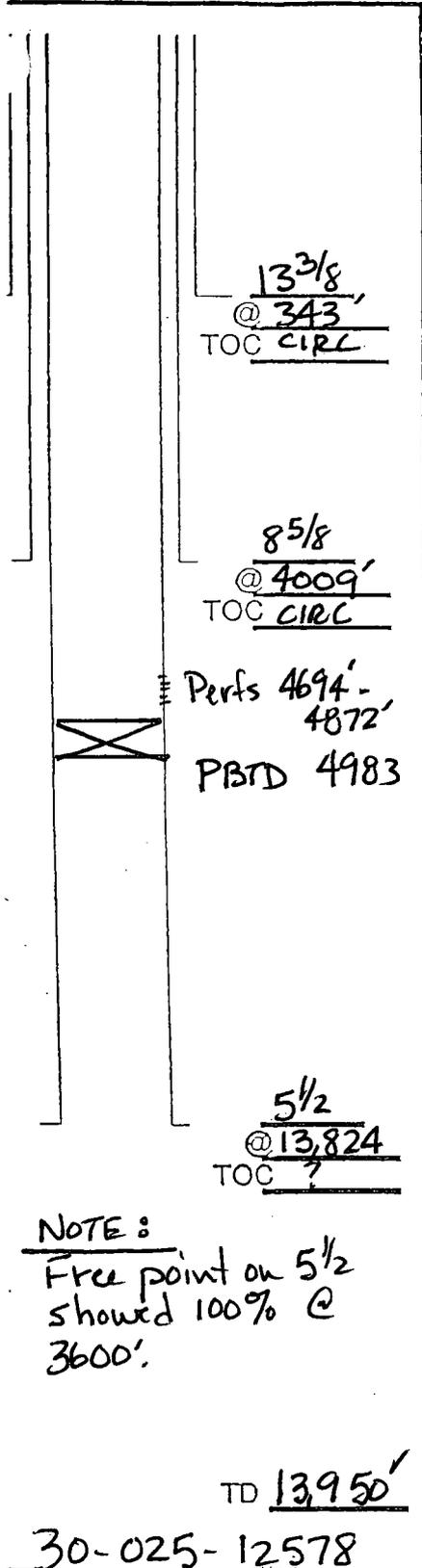
Conditions of Approval (if any):

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
 PBD: 4983' FORMATION @ PBD QUEEN



	SIZE	SET @	TOC	TOC DETERMINED BY
SURFACE	13 3/8	343'	SUR.	CIRC.
INTMED 1	8 5/8	4009'	SUR.	CIRC.
INTMED 2	5 1/2	13,824'	?	
PROD				

	SIZE	TOP	BOT	TOC	DETERMINED BY
LINER 1					
LINER 2					

	CUT & PULL @	TOP - BOTTOM
INTMED 1		PERFS 4694' - 4872'
INTMED 2		OPENHOLE -
PROD		

* REQUIRED PLUGS DISTRICT I

RUTLER (ANGYD)	
YATES	3410'
QUEEN	4570'
GRAYBURG	
SAN ANDRES	
CANTIAN REEF	
DELAWARE	
BELL CANYON	
CHERRY CANYON	
BIGGEST CANYON	
BONE SPRING	
LOUISIANA	
BURNSEY	
TUES	
ORISKANY	
ARO	
WY	
PENN	
STRAWN	
ATOKA	
MOORE	
SMITH	
OKYORCAN	

PLUG	TYPE	SACKS	DEPTH
	PLUG	CMNT	
EXAMPLES			
PLUG #1	OH	25 SXS	9850'
PLUG #2	SHOE	50 SXS	8700'-8800'
PLUG #3	CIBP/35'		5300'
PLUG #4	CIBP	25 SXS	5300'
PLUG #5	STUB	50 SXS	4600'-4700'
PLUG #6	RETRN 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			

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

TD 13,950'

30-025-12578

Submit 1 Copy To Appropriate District Office
District 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
August 1, 2011

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

WELL API NO. 30-025-12578
5. Indicate Type of Lease STATE [] FEE [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 [X] Gas Well [] Other []
2. Name of Operator State of New Mexico formerly Xeric Oil and 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 19-S Range 35-E 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 []
TEMPORARILY 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 [X]
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.

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 perms and held 500 psi. WOC. Tagged plug @ 3268. Perf'd csg @ 1800'. Spotted 30 sx @ 1850'. Set packer @ 10' and Sqz'd cement into perms. 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. Rigged 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 MB TITLE DATE

Type or print name For State Use Only E-mail address: PHONE:

APPROVED BY: [Signature] TITLE Dist MGR DATE 3-11-2013
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 & 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.

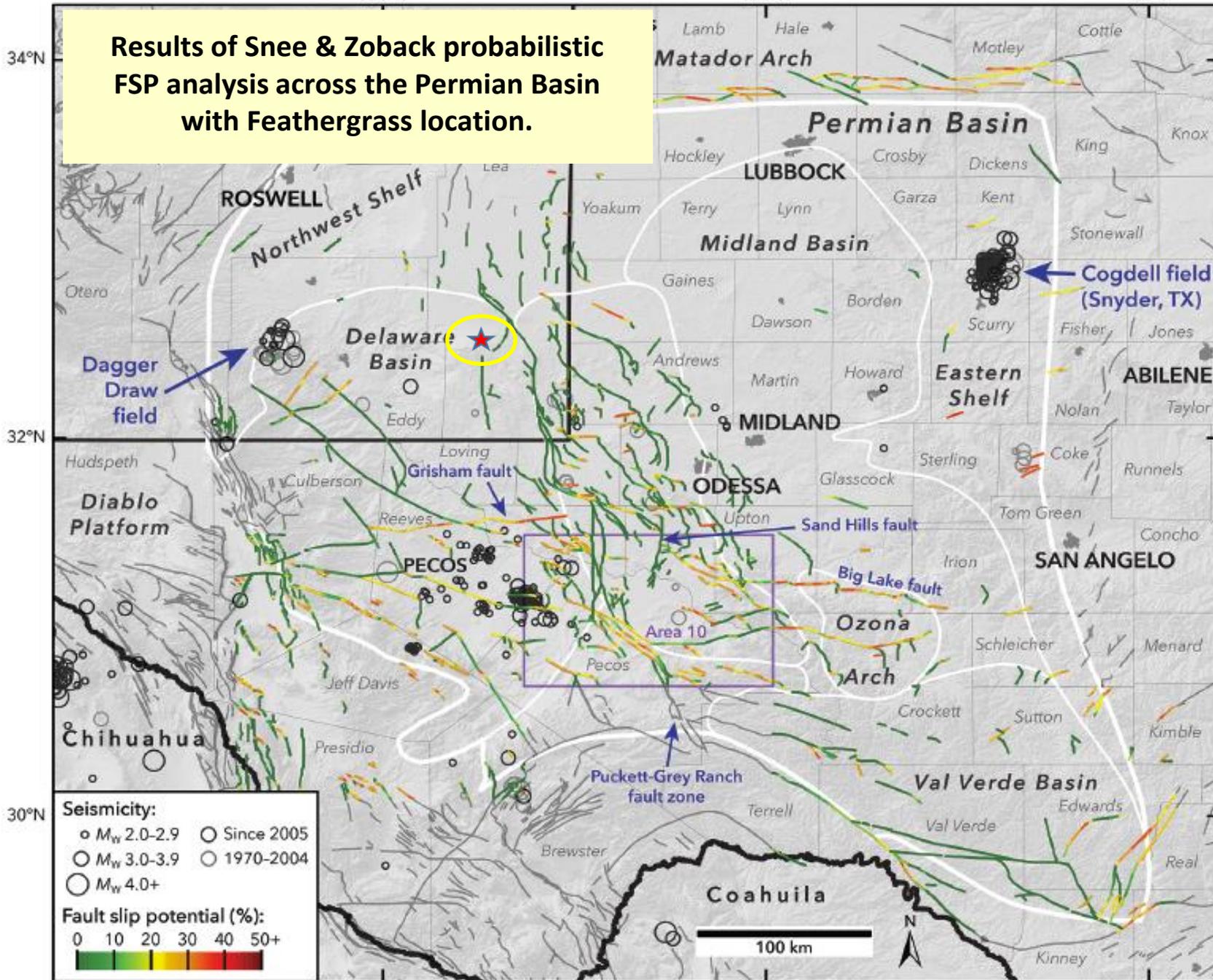
The distance from the proposed wells to the closest mapped faults show evidence of faulting in the Siluro-Devonian subsurface, however, termination of these faults is evident in higher strata in the subsurface and the probability these faults will become critically stressed by injection is extremely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

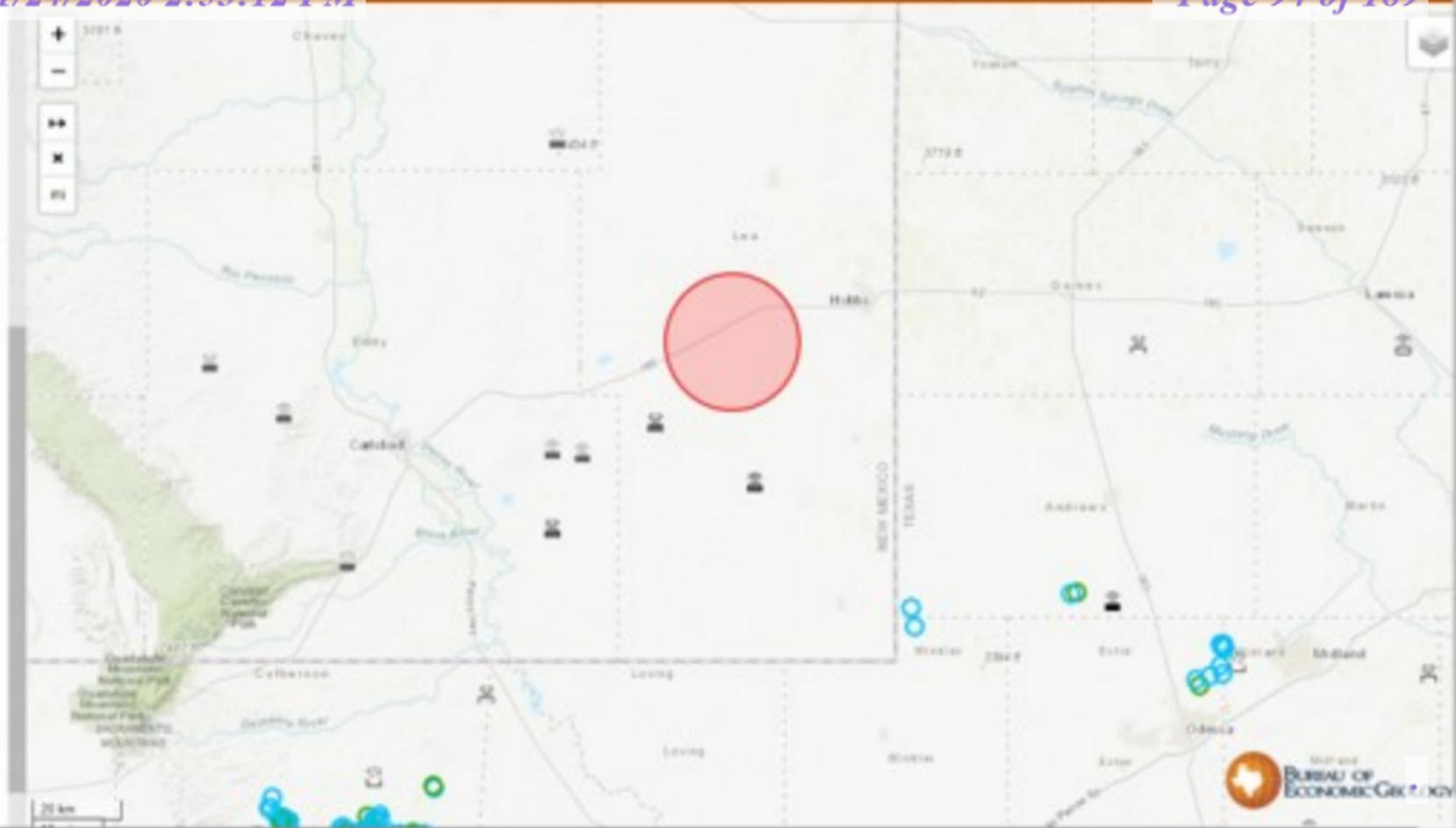
Lock Magnitude

Date Range

SELECT DATE RANGE

Earliest Date

Latest Date



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

Las: 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.¹ 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

Outer Radius (km)

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.
- Check if earthquakes are included on the map and list.
- Try something else please - email 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

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

Minimum

2

Maximum

.

Date & Time

Past 7 Days

Past 30 Days

Custom

Start (UTC)

1900-01-01 00:00:00

End (UTC)

2020-01-24 23:59:59

Geographic Region

World

Conterminous U.S.¹

Custom

Custom Circle

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

Draw Rectangle on Map

Geographic Region

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

North

West

East

South

Circle

Center Latitude

Center Longitude

Outer Radius (km)

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 this 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 main and feed.
- Not something we show - report it to us.



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.¹
- Custom

Custom Circle

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

Draw Rectangle on Map

Geographic Region

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

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

Circle

Center Latitude	Center Longitude
<input type="text" value="32.628504"/>	<input type="text" value="-103.45296"/>
Outer Radius (km)	
<input type="text" value="50"/>	

Depth (km)

Minimum	Maximum
<input type="text"/>	<input type="text"/>

Azimuthal Gap

Minimum	Maximum
<input type="text"/>	<input type="text"/>

Review Status

- Any
- Automatic
- Reviewed

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 11:45:35 (UTC)	5.0 km
2.9	New Mexico 1984-12-04 20:38:38 (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.](#)



show legend

35 147°W 108 347°W

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

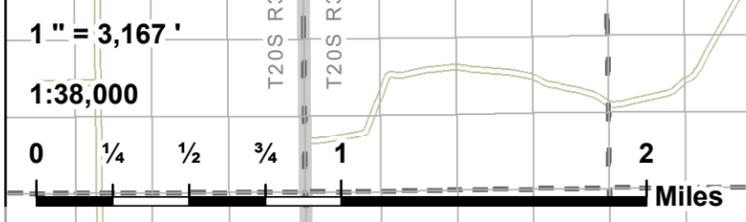
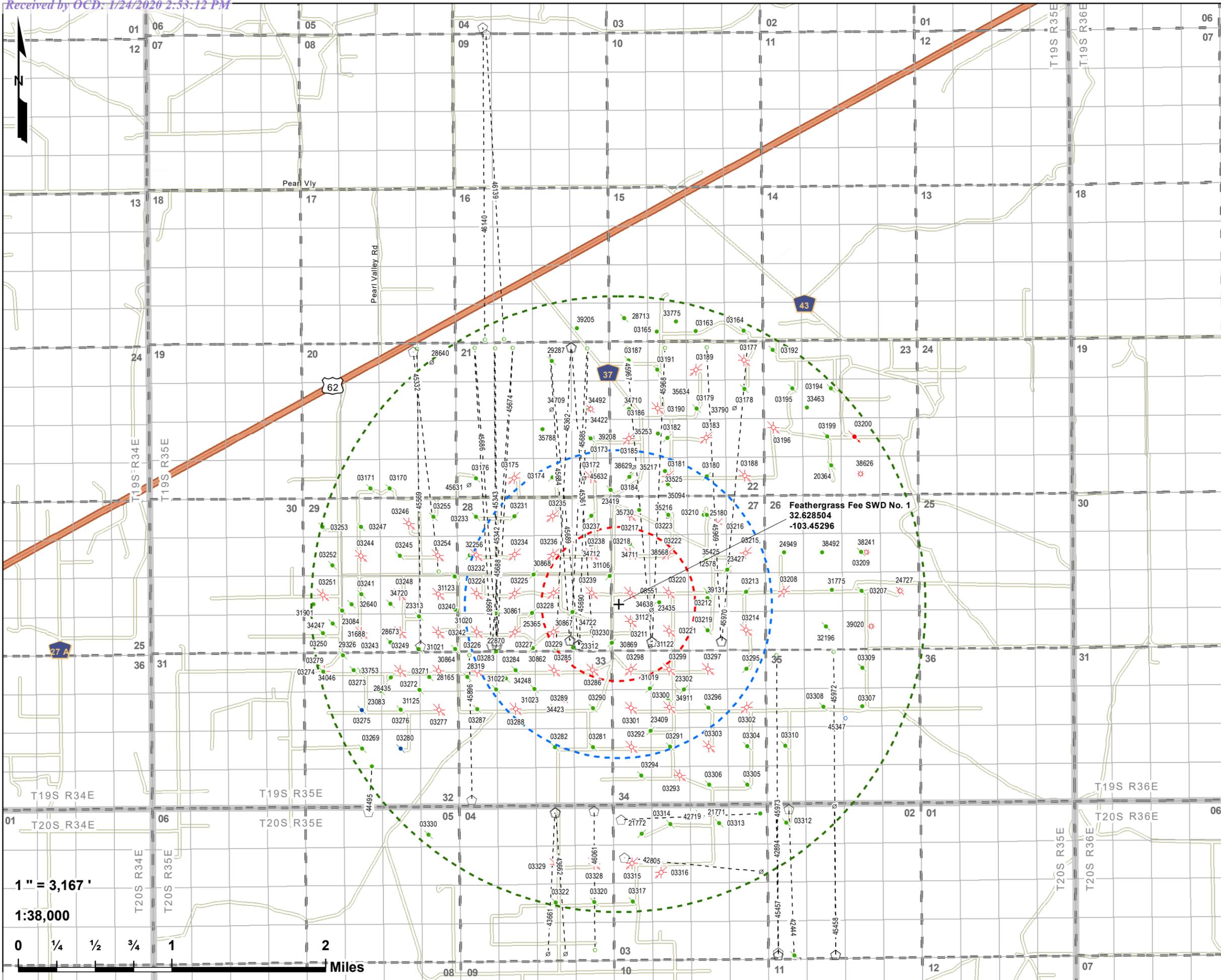
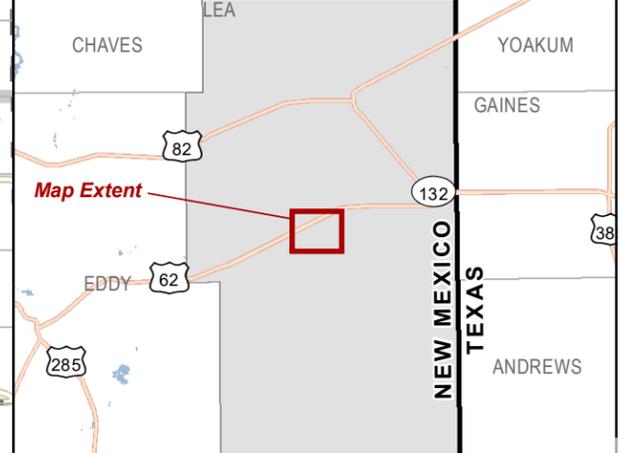
API (30-025...) SHL Status - Type (Count)

- 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

Feathergrass Fee SWD No. 1

1 Mile Offset Lessees

Blackbuck Resources

Lea County, NM

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

Drawn by: SJL | Date: 8/19/2019 | 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 Mile Radius

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

Section (NM-PLSS 1st Div.)

Township/Range (T19S R35E)

Surface Owner (L & K RANCH LLC)

NM - BLM (O&G Leases)

NM - SLO (O&G Leases)

Laterals

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

- Horizontal Surface Location (16)
- Active - Oil (8)
- Plugged (Not Released) - Oil (20)
- Plugged (Not Released) - Injection (12)
- Plugged (Site Released) - Oil (19)
- Plugged (Site Released) - Gas (1)
- Plugged (Site Released) - Injection (21)
- Canceled Location (7)

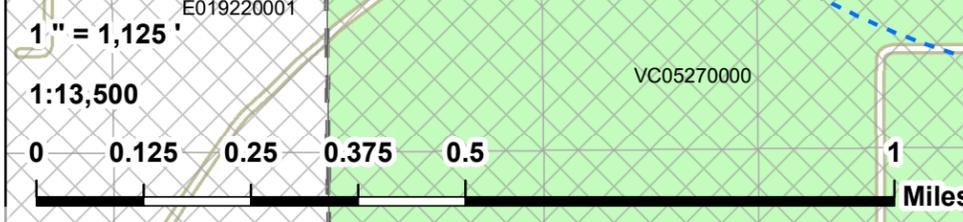
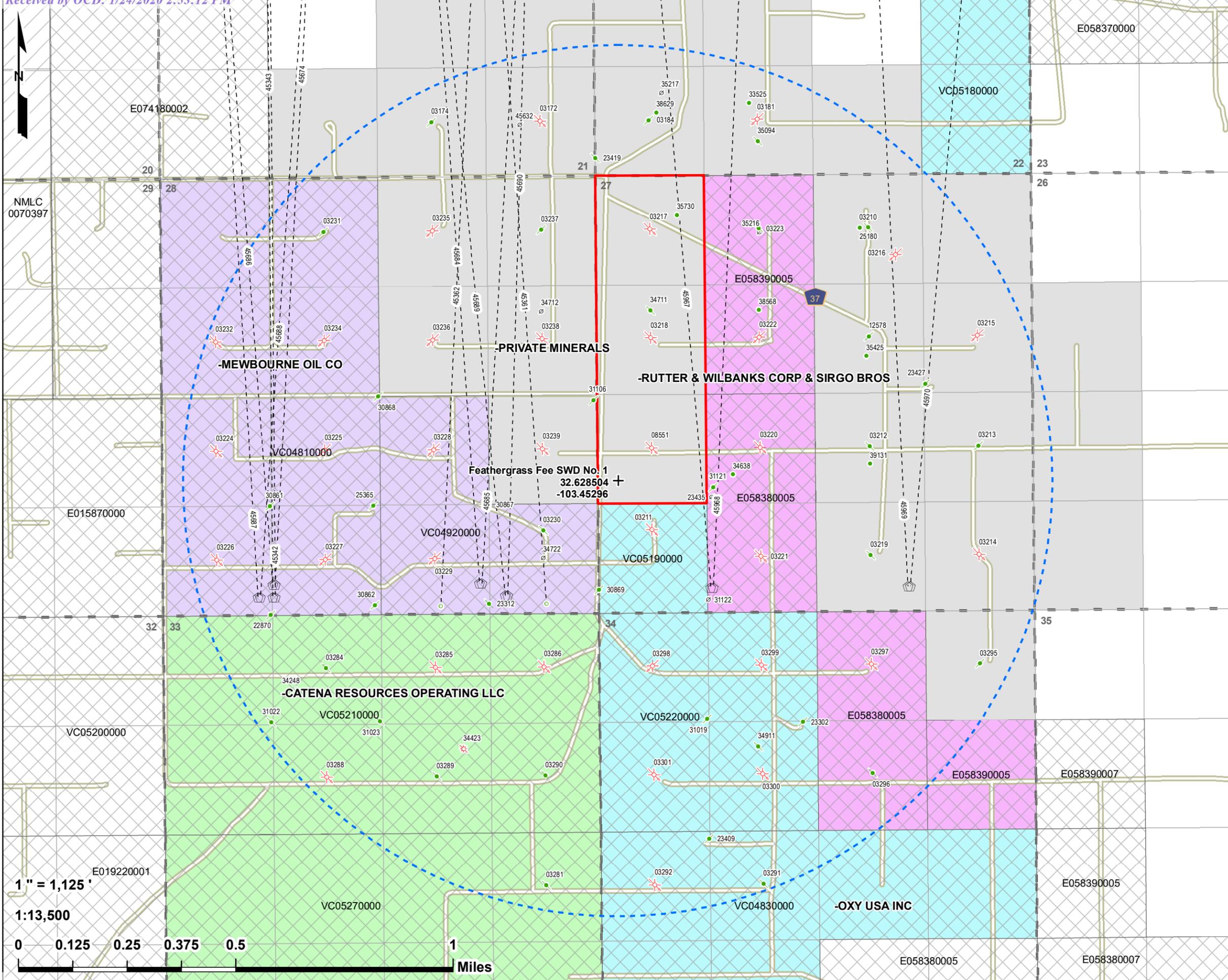
API (30-025-...) BHL Status - Type (Count)

- Permitted - Oil (13)
- Permitted - Gas (3)

Lessees

- CATENA RESOURCES OPERATING LLC
- MEWBOURNE OIL CO
- OXY USA INC
- RUTTER & WILBANKS CORP & SIRGO BROS
- PRIVATE MINERALS

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



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

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
TOTALS FOR MINERAL OWNERSHIP	N/A	N/A	

LEASEHOLD OWNERSHIP

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

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

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 Latner 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

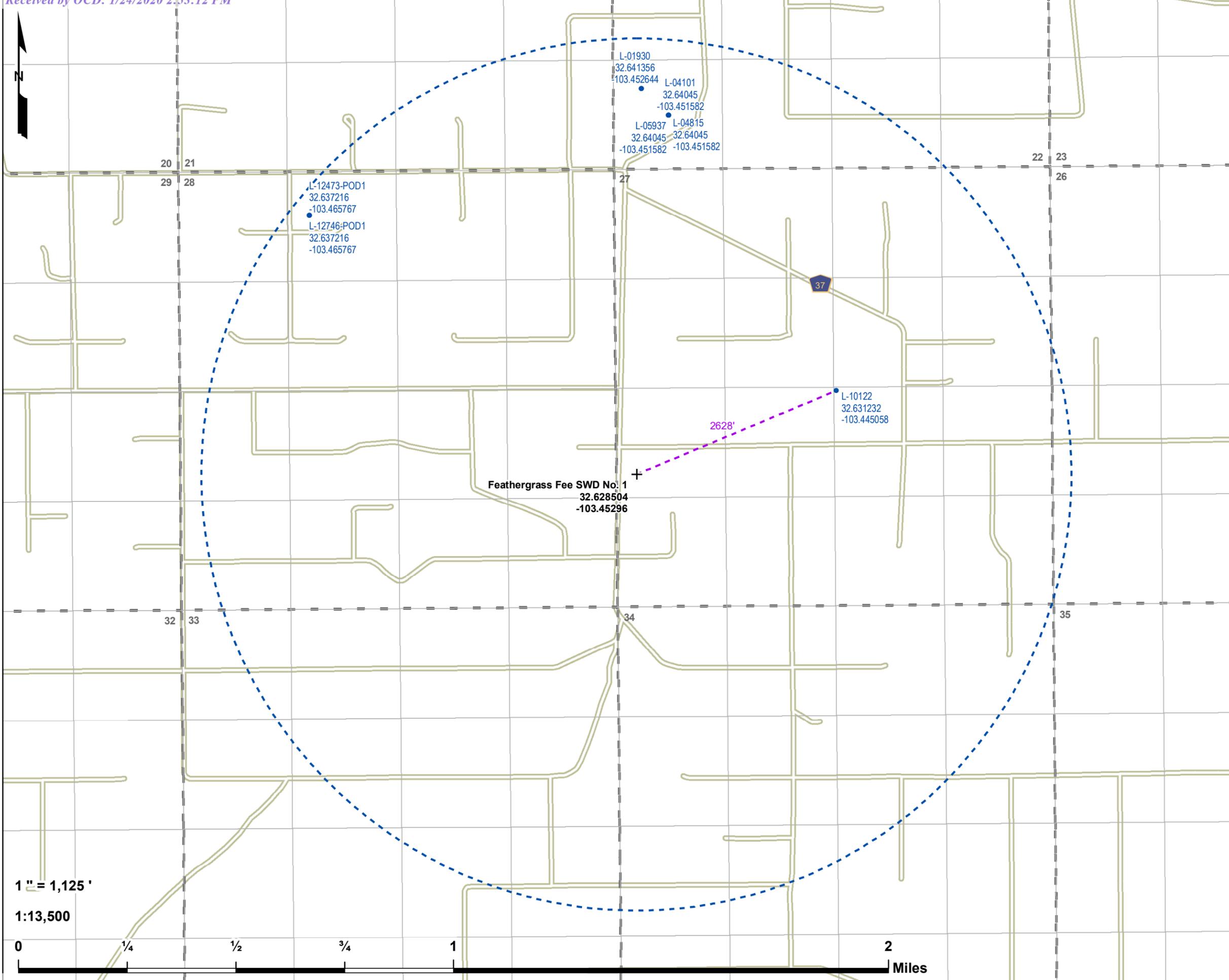
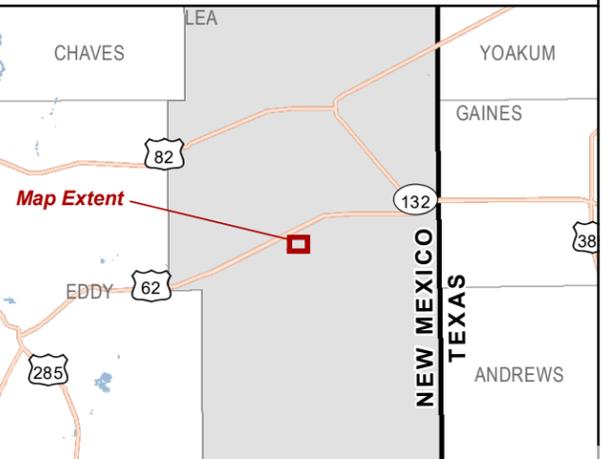
⊞ 1 Mile Radius

□ QQ-Section (NM-PLSS 2nd Div.)

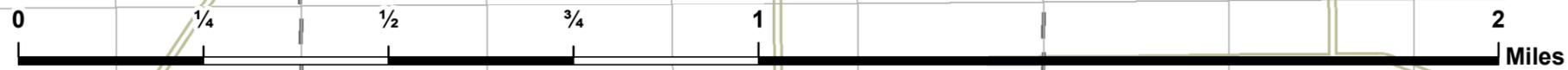
⊞ Section (NM-PLSS 1st Div.)

▭ 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_mg/L	sodium_mg/L	calcium_mg/L	iron_mg/L	magnesium_mg/L	manganese_mg/L	chloride_mg/L	bicarbonate_mg/L	sulfate_mg/L	co2_mg/L
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 MAVETEY #007	30-025-21886	35	19S	36E	G	GRAYBURG/SAN ANDRES	7.8	7092						3499	320	660	
SELBY MAVETEY #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



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					
get images 508425	COWNF	1958-04-22	CHG	PRC	L-1930	T	0	0	
get images 508277	APPRO	1953-05-21	CAN	FIN	L-1930	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	Q	Q	Sec	Tws	Rng	X	Y	Other Location Desc
L 01930			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	L 01930	

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	0	0		IRR	01/29/1953	CAN	
				4	21	19S	0	0		IRR	01/29/1953	CAN	

Source

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

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



New Mexico Office of the State Engineer

Water Right Summary



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

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
491992	72121	1959-04-02	PMT	LOG	L 04101	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	Q	Q	6416	4	Sec	Tws	Rng	X	Y	Other Location Desc
L 04101		Shallow	3	3	22	19S	35E				645238	3612487*	

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

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



New Mexico Office of the State Engineer

Water Right Summary



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

Trn #	Doc	File/Act	Status		Transaction Desc.	From/To	Acres	Diversion	Consumptive
			1	2					
get images	504497	APPRO	1962-07-05	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			
L 04815			3	3	22	19S 35E	645238 3612487*	

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 L 04815	

Place of Use

Q	Q	Q	Q	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

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



New Mexico Office of the State Engineer

Water Right Summary



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/	Acres	Diversion	Consumptive
			1	2		To			
get images 505091	72121	1967-11-06	EXP	EXP	L 05937 (T EXPIRED)	T			3
get images 505085	72121	1966-05-23	EXP	EXP	L 05937 (T EXPIRED)	T			3

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	Q	Q	6416	4	Sec	Tws	Rng	X	Y	Other Location Desc
L 05937			3	3	22	19S	35E				645238	3612487*	

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

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



New Mexico Office of the State Engineer

Water Right Summary



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/	Acres	Diversion	Consumptive
			1	2		To			
get images	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
L 12473 POD1		Shallow	2	1	2	27	19S	38E	643913	3612109	

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



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

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.

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

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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
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#1 32.624600-103.453668
H903230-01 (Water)

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

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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
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**#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
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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 & 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 & 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 & 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 & Analyzed: 13-Sep-19								
Chloride	ND	4.00	mg/L							

LCS (9091309-BS1)		Prepared & Analyzed: 13-Sep-19								
Chloride	100	4.00	mg/L	100		100	80-120			

LCS Dup (9091309-BSD1)		Prepared & Analyzed: 13-Sep-19								
Chloride	100	4.00	mg/L	100		100	80-120	0.00	20	

Batch 9091611 - Filtration

Blank (9091611-BLK1)		Prepared: 13-Sep-19 Analyzed: 16-Sep-19								
TDS	ND	5.00	mg/L							

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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
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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

LCS (9091611-BS1) Prepared: 13-Sep-19 Analyzed: 16-Sep-19

TDS	532		mg/L	527		101	80-120			
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Duplicate (9091611-DUP1) Source: H903145-01 Prepared: 13-Sep-19 Analyzed: 16-Sep-19

TDS	371	5.00	mg/L		372			0.269	20	
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Batch 9091903 - General Prep - Wet Chem

LCS (9091903-BS1) Prepared & Analyzed: 19-Sep-19

Conductivity	91300		uS/cm	100000		91.3	80-120			
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Duplicate (9091903-DUP1) Source: H903224-01 Prepared & Analyzed: 19-Sep-19

Conductivity	155000	1.00	uS/cm		152000			1.95	20	
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Resistivity	0.0644		Ohms/m		0.0657			1.95	20	
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Batch 9091904 - General Prep - Wet Chem

LCS (9091904-BS1) Prepared & Analyzed: 19-Sep-19

pH	7.06		pH Units	7.00		101	90-110			
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Duplicate (9091904-DUP1) Source: H903230-01 Prepared & Analyzed: 19-Sep-19

pH	8.65	0.100	pH Units		8.60			0.580	20	
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Batch 9091905 - General Prep - Wet Chem

Blank (9091905-BLK1) Prepared & Analyzed: 19-Sep-19

Sulfate	ND	10.0	mg/L							
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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
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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 & 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 & 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 & 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 & Analyzed: 19-Sep-19

Sulfide, total	ND	0.0100	mg/L							
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Duplicate (9091913-DUP1) Source: H903230-01 Prepared & 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
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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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Celey D. Keene, Lab Director/Quality Manager

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.
@ 140 F. | -0.273
+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

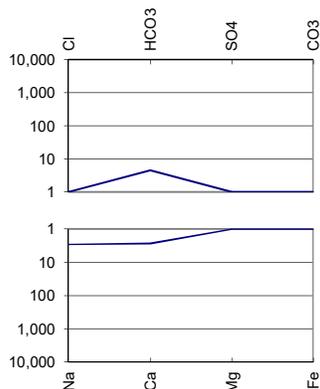
Anions

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. CaCO3 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

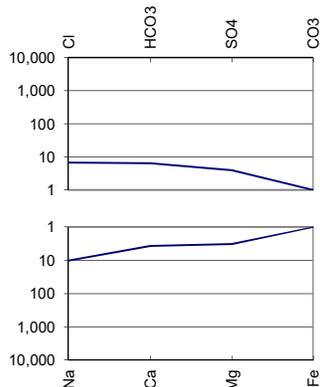
Anions

11. Hydroxyl (OH-)	0	/	17.0	=	0.00
12. Carbonate (CO3=)	0	/	30.0	=	0.00
13. Bicarbonate (HCO3-)	390	/	61.1	=	6.38
14. Sulfate (SO4=)	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 CaCO3	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(HCO3)2	81.04	X	3.67	=	298
CaSO4	68.07	X	0.00	=	0
CaCl2	55.50	X	0.00	=	0
Mg(HCO3)2	73.17	X	2.71	=	198
MgSO4	60.19	X	0.00	=	0
MgCl2	47.62	X	0.56	=	27
NaHCO3	84.00	X	0.00	=	0
NaSO4	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.



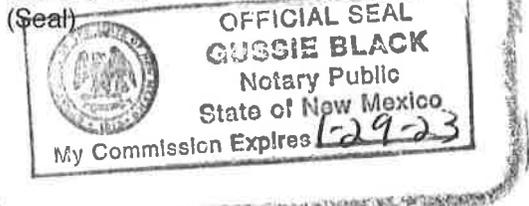
Publisher

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



Business Manager

My commission expires
January 29, 2023



**LEGAL NOTICE
AUGUST 15, 2019**
Blackbuck Resources LLC, located at 2801 Westheimer Road, C210, Houston, TX, 77098, is filling Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for administrative approval for its salt water disposal well 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

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

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.

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

Regards,



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

(512) 600-1764
chris@lonquist.com

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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Staff Engineer
Lonquist & Co., LLC

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chris@lonquist.com

AUSTIN
HOUSTON

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

WICHITA
CALGARY

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

(512) 600-1764
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

To Whom It May Concern:

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AUSTIN
HOUSTON

PETROLEUM
ENGINEERS

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ADVISORS

WICHITA
CALGARY

www.lonquist.com

January 24, 2020

CHAP EXPLORATION, LLC
P.O. BOX 3445
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

January 24, 2020

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

Subject: Feathergrass Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



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

(512) 600-1764
chris@lonquist.com

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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Regards,



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

(512) 600-1764
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

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

(512) 600-1764
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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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
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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Regards,



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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
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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Regards,



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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

January 24, 2020

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

Subject: Feathergrass Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Regards,



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

(512) 600-1764
chris@lonquist.com

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

To Whom It May Concern:

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Regards,



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

(512) 600-1764
chris@lonquist.com

January 24, 2020

OXY USA INC
PO BOX 4294
HOUSTON, TX 77210

Subject: Feathergrass Fee SWD No. 1 Authorization to Inject

To Whom It May Concern:

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Staff Engineer
Lonquist & Co., LLC

(512) 600-1764
chris@lonquist.com

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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Staff Engineer
Lonquist & Co., LLC

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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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Lonquist & Co., LLC

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chris@lonquist.com

AUSTIN
HOUSTON

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

WICHITA
CALGARY

www.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,



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Staff Engineer
Lonquist & Co., LLC

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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

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

January 24, 2020

XERIC OIL & GAS CORP
PO BOX 7288
ODESSA, TX 79760

Subject: Feathergrass Fee SWD No. 1 Authorization to Inject

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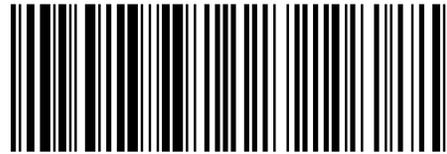
Regards,



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

(512) 600-1764
chris@lonquist.com

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)

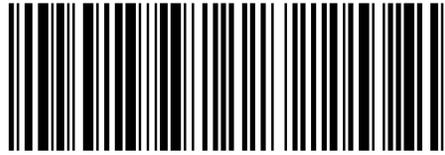


Total Postage: \$6.25

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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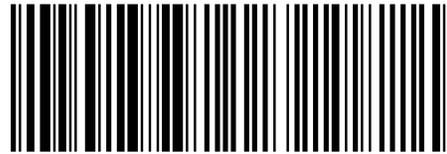


Total Postage: \$6.25

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

RETURN RECEIPT (ELECTRONIC)



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

RETURN RECEIPT (ELECTRONIC)



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



9314 8699 0430 0068 0226 28

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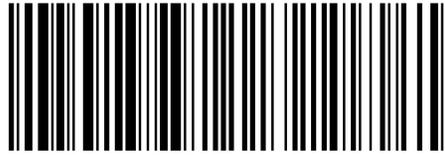


Total Postage: \$6.25

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



9314 8699 0430 0068 0226 35

RETURN RECEIPT (ELECTRONIC)



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

RETURN RECEIPT (ELECTRONIC)



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



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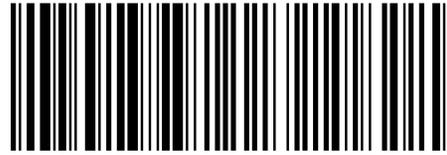


Total Postage: \$6.25

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



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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



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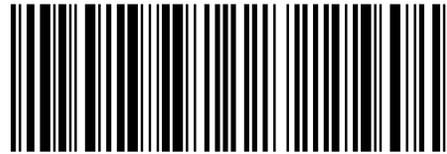


Total Postage: \$6.25

MEWBOURNE OIL CO
PO BOX 5270
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



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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



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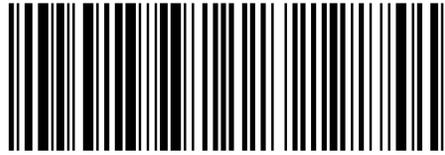


Total Postage: \$6.25

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



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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



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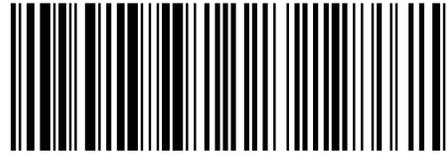


Total Postage: \$6.25

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



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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



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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



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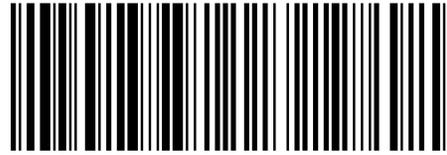


Total Postage: \$6.25

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



9314 8699 0430 0068 0227 65

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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 X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No

II. OPERATOR: Blackbuck Resources, LLC

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

CONTACT PARTY: Barry Riley

PHONE: 979-575-8802

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

IV. Is this an expansion of an existing project? _____ Yes X No

If yes, give the Division order number authorizing the project: _____

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: Christopher Weyand

TITLE: Consulting Engineer – Agent for Blackbuck Resources

SIGNATURE: _____

DATE: 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: _____

Side 2

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

INJECTION WELL DATA SHEET

OPERATOR: Blackbuck Resources, LLC

WELL NAME & NUMBER: Feathergrass Fee SWD No. 1

WELL LOCATION: 1,590' FSL 220' FWL
FOOTAGE LOCATION

L
UNIT LETTER

27
SECTION

19S
TOWNSHIP

35E
RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26"

Casing Size: 20"

Cemented with: 4,110 sx.

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Intermediate Casing

Hole Size: 17.5"

Casing Size: 13.375"

Cemented with: 1,170 sx.

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Production Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with: 1,835 sx.

or _____ ft³

Top of Cement: surface

Method Determined: circulation

Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 335 sx.

or _____ ft³

Top of Cement: 11,337'

Method Determined: calculation

Total Depth: 15,562'

Injection Interval

14,044 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

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

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

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

7. Surface Location

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

¹¹ Work Type N	¹² Well Type SWD	¹³ Cable/Rotary R	¹⁴ Lease Type Private	¹⁵ Ground Level Elevation 3,718'
¹⁶ Multiple N	¹⁷ Proposed Depth 15,562'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ 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' - 10,444'		9,843'

Casing/Cement Program: Additional Comments

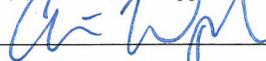
See attached schematic.

22. Proposed Blowout Prevention Program

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

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

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

Signature: 

Printed name: Chris Weyand

Title: Consulting Engineer

E-mail Address: chris@lonquist.com

Date: January 24, 2020

Phone: 512-600-1764

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date:

Expiration Date:

Conditions of Approval Attached

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 97869	Pool Name DEVONIAN-SILURIAN
Property Code	Property Name FEATHERGRASS FEE SWD	Well Number 1
OGRID No. 373619	Operator Name BLACKBUCK RESOURCES	Elevation 3718'

Surface Location

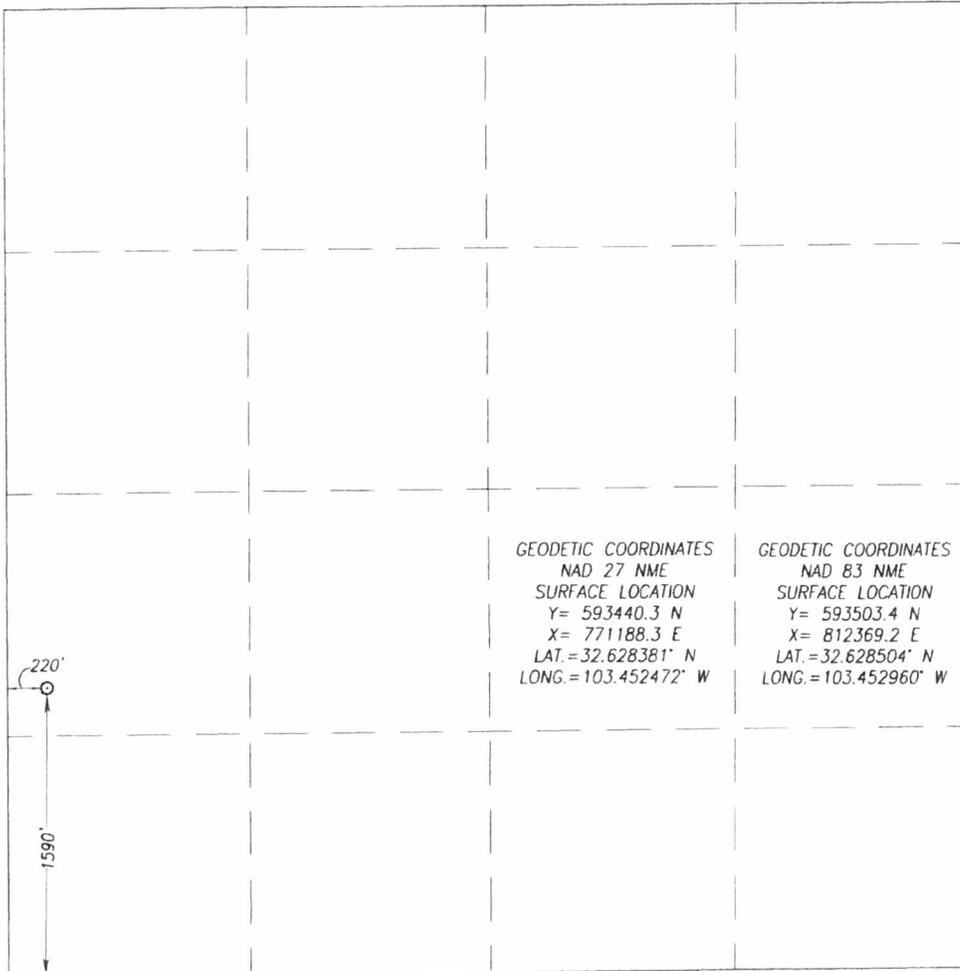
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	27	19-S	35-E		1590	SOUTH	220	WEST	LEA

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



OPERATOR CERTIFICATION

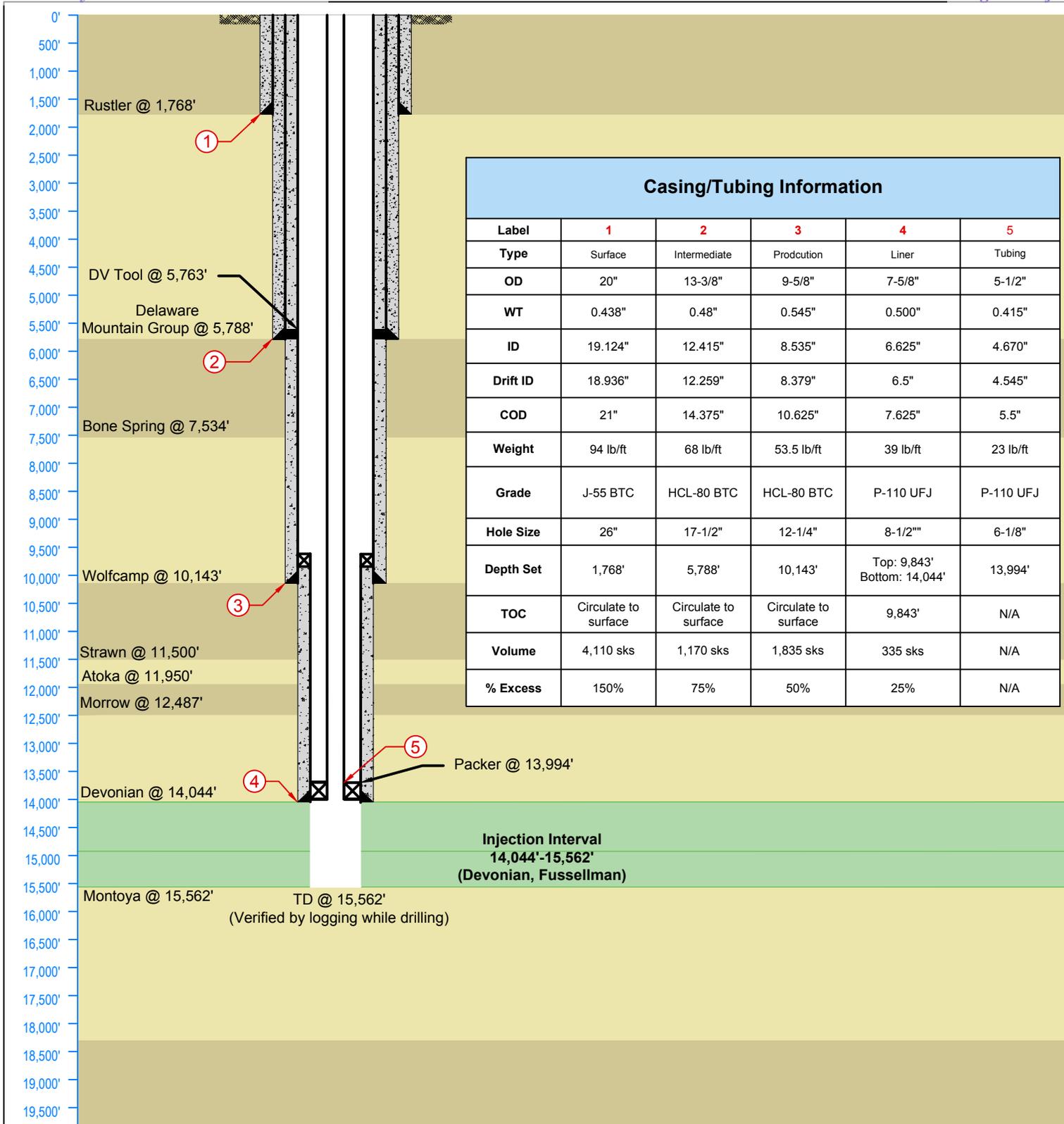
I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant 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: *Chris Wayard* Date: 1/23/2020
Printed Name: Chris Wayard
E-mail Address: Chris@louquist.com

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



Casing/Tubing Information					
Label	1	2	3	4	5
Type	Surface	Intermediate	Production	Liner	Tubing
OD	20"	13-3/8"	9-5/8"	7-5/8"	5-1/2"
WT	0.438"	0.48"	0.545"	0.500"	0.415"
ID	19.124"	12.415"	8.535"	6.625"	4.670"
Drift ID	18.936"	12.259"	8.379"	6.5"	4.545"
COD	21"	14.375"	10.625"	7.625"	5.5"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft	23 lb/ft
Grade	J-55 BTC	HCL-80 BTC	HCL-80 BTC	P-110 UFJ	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	6-1/8"
Depth Set	1,768'	5,788'	10,143'	Top: 9,843' Bottom: 14,044'	13,994'
TOC	Circulate to surface	Circulate to surface	Circulate to surface	9,843'	N/A
Volume	4,110 sks	1,170 sks	1,835 sks	335 sks	N/A
% Excess	150%	75%	50%	25%	N/A

LONQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS HOUSTON CALGARY AUSTIN WICHITA DENVER	Blackbuck Resources, LLC	Feathergrass Fee SWD No. 1		
	Country: USA	State/Province: New Mexico	County/Parish: Lea	
Location:	API No: N/A	Site: 1,590 FSL, 220 FWL	Survey: S27-T19S-R35E	
Texas License F-9147	NMOCD District No: 1	Field: Devonian-Silurian	Well Type/Status: SWD	
12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Drawn: TFM	Project No: 2159	Date: 08/18/2019	
Rev No: 1	Notes:	Reviewed:	Approved:	



Blackbuck Resources, LLC

Feathergrass Fee SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

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

2.

a. Wellbore Description

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

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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

LONQUIST & CO. LLC

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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