Initial Application Part I

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

MAY 31 2019 AM11:26

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
05/31/2019		SWD	pMAM1915741887

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: Percussion Petroleum Operating, LLC **OGRID Number: 371755**
Well Name: Osage Boyd 15 SWD No. 3 **API: 30-015-28945**
Pool: SWD; Cisco-Canyon **Pool Code: 96186**

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

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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.

May 16, 2019
Date

Ramona Hovey – Agent for Percussion Petroleum
Print or Type Name

(512) 600-1777
Phone Number

Ramona K Hovey
Signature

ramona@lonquist.com
e-mail Address

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

May 16, 2019

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

RE: OSAGE BOYD 15 SWD NO. 3 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 Percussion Petroleum Operating, LLC's ("Percussion") Osage Boyd 15 SWD No. 2. 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 Percussion Petroleum Operating, LLC's agent Lonquist & Co., LLC.

Regards,

Ramona K Hovey

Ramona Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
ramona@lonquist.com

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X___Yes _____No

II. OPERATOR: Percussion Petroleum Operating, LLC

ADDRESS: 919 Milam St. Suite 2475, Houston, TX 77002

CONTACT PARTY: Ryan Barber PHONE: (979) 292-6279

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: Ramona K. Hovey TITLE: Consulting Engineer

SIGNATURE: Ramona K Hovey DATE: May 16, 2019

E-MAIL ADDRESS: ramona@lonquist.com

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

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

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Percussion Petroleum Operating, LLC

WELL NAME & NUMBER: Osage Boyd 15 SWD No. 3

WELL LOCATION: 660' FNL & 1980' FWL (FOOTAGE LOCATION) | C (UNIT LETTER) | 15 (SECTION) | 19S (TOWNSHIP) | 25E (RANGE)

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 14-3/4" Casing Size: 9-5/8"

Cemented with: 1075 sacks *or* _____ ft³

Top of Cement: Surface Method Determined: Circulate returns

Intermediate Casing

Hole Size: 8-3/4" Casing Size: 7"

Cemented with: 1215 sacks *or* _____ ft³

Top of Cement: Surface Method Determined: Circulate returns

Production Casing

Hole Size: 6-1/8" Casing Size: 4-1/2"

Cemented with: 250 sacks *or* _____ ft³

Top of Cement: 7,650' Method Determined: CBL_____

Total Depth: 9,345'

Injection Interval

7,550' feet to 8,075 feet

(Perforated Interval)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" L-80, 9.3 lb/ft, Upset from 0' – 7,500'

Lining Material: Internal Plastic Coated (IPC)

Type of Packer: 7" x 2-7/8" non-permanent nickel-plated w/ 3-1/2" to 2-7/8" crossover

Packer Setting Depth: 7,500'

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

Additional Data

1. Is this a new well drilled for injection? _____Yes ___X___No

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

   (1) Dagger Draw; Upper Pennsylvanian, North, oil and gas production from 6/1996 - 12/1998

   (2) Re-entry into Morrow, gas production from 5/2000 - Present

2. Name of the Injection Formation: Cisco-Canyon

3. Name of Field or Pool (if applicable): SWD; Cisco-Canyon (96186)

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.

   7730' - 7810' (Cisco/Canyon): 6/21/1996 w/ 4" gun w/ .42" jet charges, 2 jspf
   9030' - 9032' (Morrow): 5/9/2000 4 jspf,
   9034' - 9048' (Morrow): 5/9/2000 4 jspf,
   9052' - 9058' (Morrow): 5/9/2000 4 jspf,
   9072' - 9086' (Morrow): 5/9/2000 4 jspf,
   9091' - 9106' (Morrow): 5/9/2000 4 jspf,

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

Bone Spring: 3,704'
Wolfcamp: 5,484'
Strawn: 8,312'
Atoka: 8,650'
Morrow: 8,808'

Percussion Petroleum Operating, LLC

Osage Boyd 15 SWD No. 3

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well Information	
Lease Name	Osage Boyd 15 SWD
API	30-015-28945
Well No.	3
Location	S-15 T-19S R-25E
Footage Location	660' FNL & 1,980' FWL

2.

a. Wellbore Description

Casing Information			
Type	Surface	Production	Liner
OD	9-5/8"	7"	4-1/2"
WT	0.352"	0.317", 0.362"	0.290"
ID	8.921"	6.276", 6.366"	3.920"
Drift ID	8.765"	6,151", 6.241"	3.795"
COD	10.625"	7.675", 7.875"	4.935"
Weight	36 lb/ft	23 & 26 lb/ft	13.5 lb/ft
Grade	J-55 STC	N-80/K-55 STC/LTC	N-80 BTC/LTC
Hole Size	14-3/4"	8-3/4"	6-1/8"
Depth Set	1,178'	8,128'	7,570'-9,345'

b. Cementing Program

Cement Information			
Casing String	Conductor	Production	Liner
Cement Type	-	-	Class H
Lead Cement Volume	-	-	250 sx
Total Volume	1,075 sks	1,215 sks	250 sks
TOC	Surface	Surface	7,650'
Method	Circulate to Surface	Circulate to Surface	Logged

3. Tubing Description

Tubing Information	
OD	3.5"
WT	0.254"
ID	2.992"
Drift ID	2.867"
COD	3.75"
Weight	9.3 lb/ft
Grade	L-80 Upset
Depth Set	0-7,500'

Tubing will be Internal Plastic Coated (IPC)

4. Packer Description

7" X 2-7/8" Non-permanent Nickle Plated Packer with 2-7/8" x 3-1/2" crossover

B. Completion Information

1. Injection Formation: Cisco/Canyon

2. Gross Injection Interval: 7,550' - 8,075'

Completion Type: Perforated interval

3. Originally drilled as an oil producer in Cisco/Canyon from 6/2/1996 - 2/22/2000. Cisco/Canyon perfs squeezed on 2/22/2000. Re-entry into Morrow, gas production from 6/8/ - Present

4. See the attached wellbore schematic.

5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Bone Spring	3,704'
Wolfcamp	5,484'
Strawn	8,312'
Atoka	8,650'
Morrow	8,808'

VI. Area of Review

One (1) well within a 1-mile radius penetrates the proposed Cisco-Canyon injection zone. It is an active saltwater disposal well owned by the applicant (Percussion Petroleum). There are no plugged wells in the proposed injection zone within a 1-mile radius. According to the New Mexico Oil Conservation Division, the active well is described below:

- Osage Boyd 15 SWD #001 (API: 30-015-28992)

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

   Average Volume: 8,500 BPD
   Maximum Volume: 10,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

   Average Injection Pressure: 1,133 PSI (surface pressure)
   Maximum Injection Pressure: 1,510 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, Pennsylvanian, and Morrow formations. Attached are produced water sample analyses taken from offset wells that feature samples from the Artesia, Bone Spring, Cisco, Glorieta-Yeso, Grayburg/San Andreas, Morrow, Pennsylvanian, San Andreas/Yeso, and Wolfcamp formations.

5. The disposal interval is non-productive. No water samples are available from the surrounding area within a 1-mile AOR.

VIII. Geological Data

Cisco Formation Lithology

The Cisco Formation is an Upper Pennsylvanian (Virgilian) carbonate reservoir that occurs below the Wolfcamp and above the Strawn formation in the Northwest Shelf of the Permian Basin. Reservoirs formed in the Northwest Shelf were created in shallow-water ramp structures across North Eddy County. Sediments in the Cisco are composed of carbonates and shales. The Northwest Shelf is more dolomitized than the equivalent succession in the rest of the Permian Basin, several beds of dolomite are present in this specific region of the Northwest Shelf. Carbonate facies of this formation include beach grainstones and lagoonal mudstones and packstones. Dolomitized fusulinid and crinoid wackestone-grainstones create reservoirs with optimal porosity and permeability. These characteristics allow for this formation to be a suitable saltwater disposal horizon.

Canyon Formation Lithology

The Canyon Formation is a Pennsylvanian Missourian aged carbonate deposited over preexisting platforms around basin margins. On the Northwest Shelf, the Canyon sequence is characterized by aggradation and progradation as this region of the Permian Basin was known to form in a platform to ramp structure in shallow water. The Canyon formation rests beneath the Cisco formation in the northern region of Eddy County. The Strawn is the lower confining layer for the proposed Osage Boyd 15 SWD No. 3. Facies such as phylloid-algal-dominated bioherms and ooid grainstones create high quality carbonate reservoirs in the Canyon formation. This carbonate reservoir provides an ideal disposal horizon.

A. Injection Zone: Cisco-Canyon Formation

Formation	Depth
San Andreas	700'
Glorieta	2,353'
Bone Spring	3,704'
Wolfcamp	5,484'
Cisco	6,440'
Canyon	7,602'
Strawn	8,312'
Atoka	8,650'
Morrow	8,808'
Mississippian Lime	9,236'

B. Underground Sources of Drinking Water

Two (2) water wells exist within one mile of the proposed well. Across the area, fresh water wells are usually drilled at an average depth of 195 feet. Water is found at an average depth of 87.5 feet generally producing from the Roswell Artesian Basin. Surface casing has previously been set to protect against USDW at 1,075'.

IX. Proposed Stimulation Program

Percussion plans to perforate optimal intervals determined by log analysis and acidize the new perforations with 110 barrels of 15% NEFE acid.

X. Logging and Test Data on the Well

Within the Oil Conservation Division's online files, the OCD possesses the following logs:

1. Compressed Neutron, Litho-Density, NGT
2. Laterolog-Micro CFL, Gamma Ray
3. Natural Spectroscopy, Gamma Ray
4. Three Detector Density, Neutron Compensated
5. Azimuthal Laterolog, Micro-CFL – GR

XI. Chemical Analysis of Fresh Water Wells

Attached is a map of the two (2) water wells that exist within one mile of the well location. Samples from the well will be obtained and analysis results will be provided as soon as possible. A Water Right Summary from the New Mexico Office of the State Engineer is attached for water wells RA-05450 and RA-05900.

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

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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

1. Operator Name and Address	2. OGRID Number
Percussion Petroleum Operating, LLC 919 Milam St., Suite 2475 Houston, TX 77002	371755
	3. API Number 30-015-28945

4. Property Code	5. Property Name	6. Well No.
	Osage Boyd 15 SWD	3

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
C	15	19S	25E		660	N	1980	W	Eddy

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	Pool Code
SWD; Cisco-Canyon	96186

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
				3461
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water

☒ **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
Old Surf.	14-3/4"	9-5/8"	36	1178'	1075 sx	Surface
Old Int.	8-3/4"	7"	26 & 23	8128'	1215 sx	Surface
Old. Liner	6-1/8"	4-1/2"	13.5	9345'	250 sx	7570'

Casing/Cement Program: Additional Comments

Propose to convert to SWD in the Cisco-Canyon interval. Set CIBP above Morrow perfs, perf and acidize Cisco-Canyon, set packer and tubing, and perform SRT.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular & rams	5000 psi	3500 psi	TBD

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: Ryan Barber		OIL CONSERVATION DIVISION	
		Approved By:	
Printed name: Ryan Barber		Title:	
Title: Petroleum Engineer		Approved Date:	Expiration Date:
E-mail Address: ryan@percussionpetroleum.com			
Date: 5/2/19	Phone: 979-292-6279	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, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-28945	96186	SWD; Cisco-Canyon

[4] Property Code	[5] Property Name	[6] Well Number
TBD	Osage Boyd 15 SWD	3

[7] OGRID No.	[8] Operator Name	[9] Elevation
371755	Percussion Petroleum Operating LLC	3461

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	15	19S	25E		660	North	1980	West	Eddy

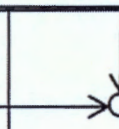
[11] Bottom Hole Location If Different From Surface

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

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]



[17] OPERATOR CERTIFICATION

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

Ryan 5/2/19
Signature Date

Ryan Barber
Printed Name

ryan@percussionpetroleum.com
E-mail Address

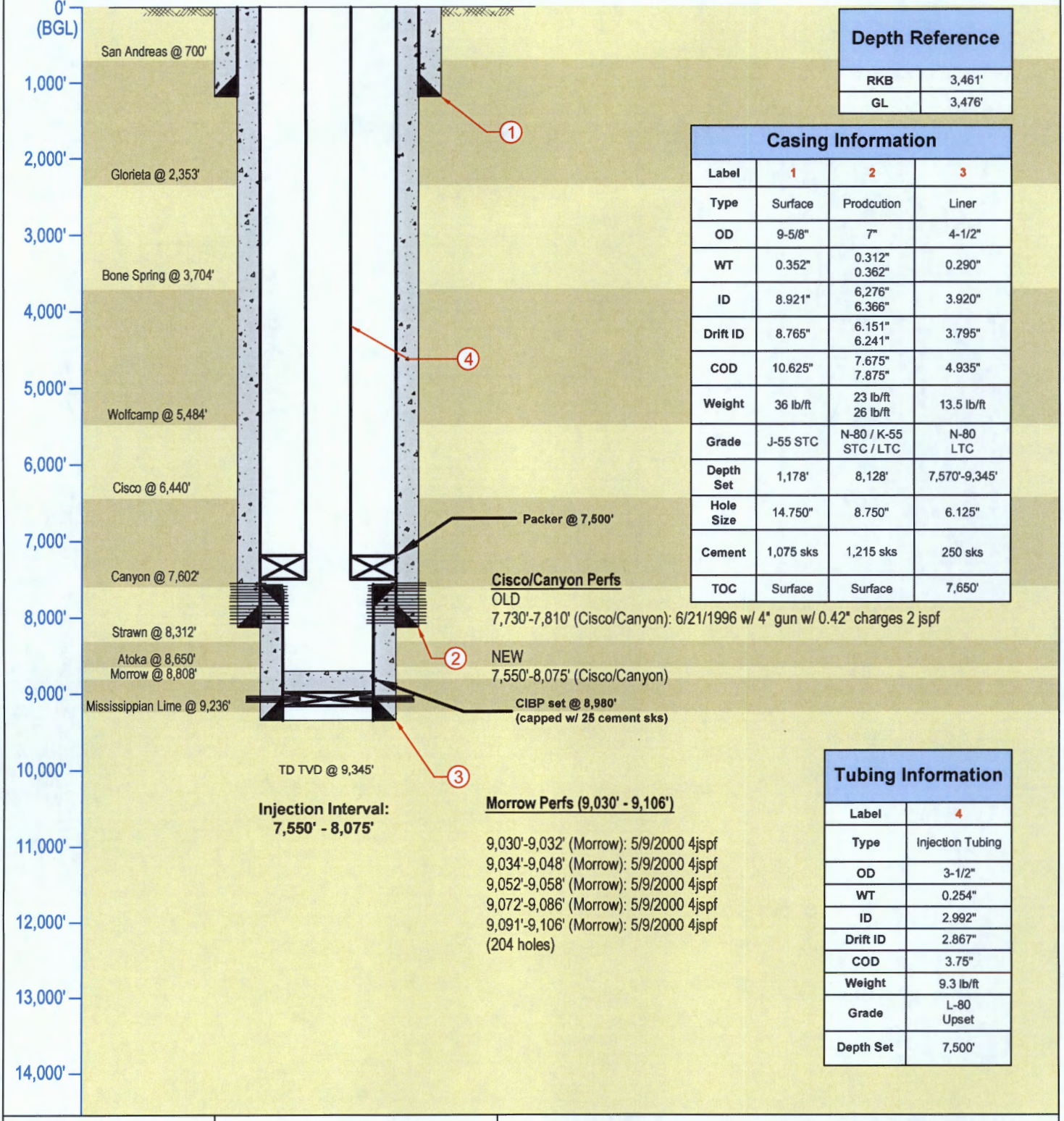
[18] SURVEYOR CERTIFICATION

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

February 25, 1996
Date of Survey

Signature and Seal of Professional Surveyor:
Dan Reddy

NM Cert. No. 5412
Certificate Number



Depth Reference	
RKB	3,461'
GL	3,476'

Casing Information			
Label	1	2	3
Type	Surface	Prodcution	Liner
OD	9-5/8"	7"	4-1/2"
WT	0.352"	0.312" 0.362"	0.290"
ID	8.921"	6.276" 6.366"	3.920"
Drift ID	8.765"	6.151" 6.241"	3.795"
COD	10.625"	7.675" 7.875"	4.935"
Weight	36 lb/ft	23 lb/ft 26 lb/ft	13.5 lb/ft
Grade	J-55 STC	N-80 / K-55 STC / LTC	N-80 LTC
Depth Set	1,178'	8,128'	7,570'-9,345'
Hole Size	14.750"	8.750"	6.125"
Cement	1,075 sks	1,215 sks	250 sks
TOC	Surface	Surface	7,650'

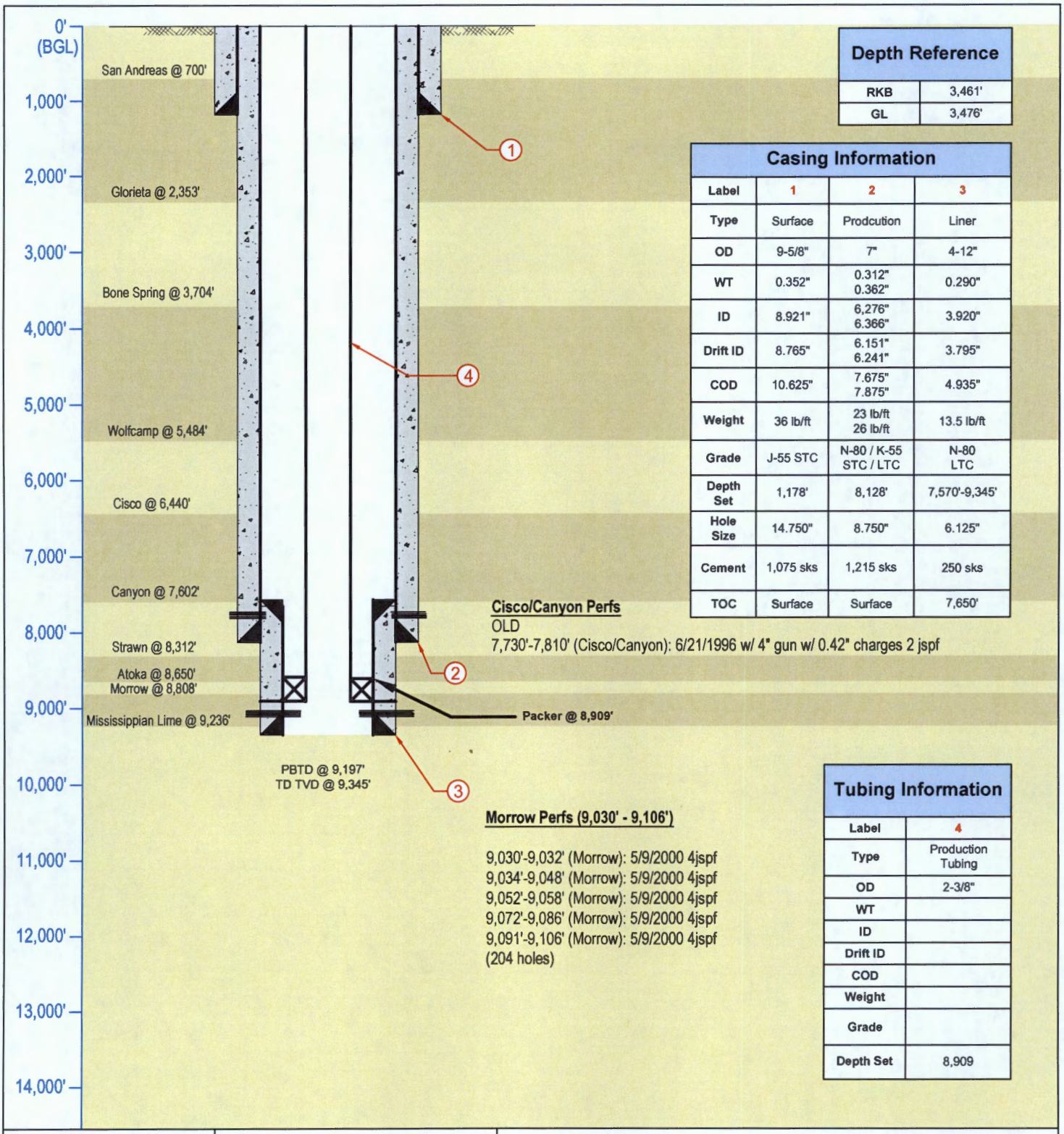
Tubing Information	
Label	4
Type	Injection Tubing
OD	3-1/2"
WT	0.254"
ID	2.992"
Drift ID	2.867"
COD	3.75"
Weight	9.3 lb/ft
Grade	L-80 Upset
Depth Set	7,500'

LONQUIST FIELD SERVICE
AUSTIN | WICHITA
HOUSTON | CALGARY
Texas License F-8952
3345 Bee Cave Road, Suite 201
Austin, Texas 78746
Tel: 512.732.9812
Fax: 512.732.9816

Percussion Petroleum Operating, LLC

Osage Boyd 15 SWD No. 3 (Proposed)

Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy
Location: 660' FNL, 1,980' FWL	**Site:**	**Status:** Morrow Gas Producer
Survey/STR: S-15 T-19S R-25E	**Field:** SWD; Cisco-Canyon (96186)	**Serial No:**
Well API No: 30-015-28945	**Project No:** 2020	**Date:** 5/15/2019
Drawn: TFM	**Reviewed:** RKH	**Approved:**
Rev No: 1	**Notes:** Configuration to change from Morrow gas producer to Cisco-Canyon SWD	



Depth Reference	
RKB	3,461'
GL	3,476'

Casing Information			
Label	1	2	3
Type	Surface	Prodcution	Liner
OD	9-5/8"	7"	4-12"
WT	0.352"	0.312" 0.362"	0.290"
ID	8.921"	6.276" 6.366"	3.920"
Drift ID	8.765"	6.151" 6.241"	3.795"
COD	10.625"	7.675" 7.875"	4.935"
Weight	36 lb/ft	23 lb/ft 26 lb/ft	13.5 lb/ft
Grade	J-55 STC	N-80 / K-55 STC / LTC	N-80 LTC
Depth Set	1,178'	8,128'	7,570'-9,345'
Hole Size	14.750"	8.750"	6.125"
Cement	1,075 sks	1,215 sks	250 sks
TOC	Surface	Surface	7,650'

Cisco/Canyon Perfs
OLD
7,730'-7,810' (Cisco/Canyon): 6/21/1996 w/ 4" gun w/ 0.42" charges 2 jspf

Morrow Perfs (9,030' - 9,106')

9,030'-9,032' (Morrow): 5/9/2000 4jspf
9,034'-9,048' (Morrow): 5/9/2000 4jspf
9,052'-9,058' (Morrow): 5/9/2000 4jspf
9,072'-9,086' (Morrow): 5/9/2000 4jspf
9,091'-9,106' (Morrow): 5/9/2000 4jspf
(204 holes)

Tubing Information	
Label	4
Type	Production Tubing
OD	2-3/8"
WT	
ID	
Drift ID	
COD	
Weight	
Grade	
Depth Set	8,909

LONQUIST FIELD SERVICE
AUSTIN | WICHITA
HOUSTON | CALGARY

Texas License F-8952

3345 Bee Cave Road, Suite 201
Austin, Texas 78746
Tel: 512.732.9812
Fax: 512.732.9816

Percussion Petroleum Operating, LLC	**Osage Boyd 15 Federal No. 6 (Existing)**		
Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy	
Location: 660' FNL, 1,980' FWL	**Site:**	**Status:** Morrow Gas Producer	
Survey/STR: S-15 T-19S R-25E	**Field:** SWD; Cisco-Canyon (96186)	**Serial No:**	
Well API No: 30-015-28945	**Project No:** 2020	**Date:** 5/15/2019	
Drawn: TFM	**Reviewed:** RKH	**Approved:**	
Rev No: 1	**Notes:** Configuration to change from Morrow gas producer to Cisco-Canyon SWD		

AFFIRMATIVE STATEMENT OF EXAMINATION OF GEOLOGIC AND ENGINEERING DATA

Based on the available engineering and geologic data, we find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

Name: Ryan Barber

Title: Petroleum Engineer

Signature: Ryan Barber

Date: 5/15/19

CURRENT WELLBORE DIAGRAM - P&A

Well Plugged by: EOG Y RESOURCES 6/27/2016

WELL NAME: Apollo "APU" Fed. #1 **FIELD:** Dagger Draw

LOCATION: 660' FNL & 1,980' FEL of Section 15-19S-25E Eddy Co., NM

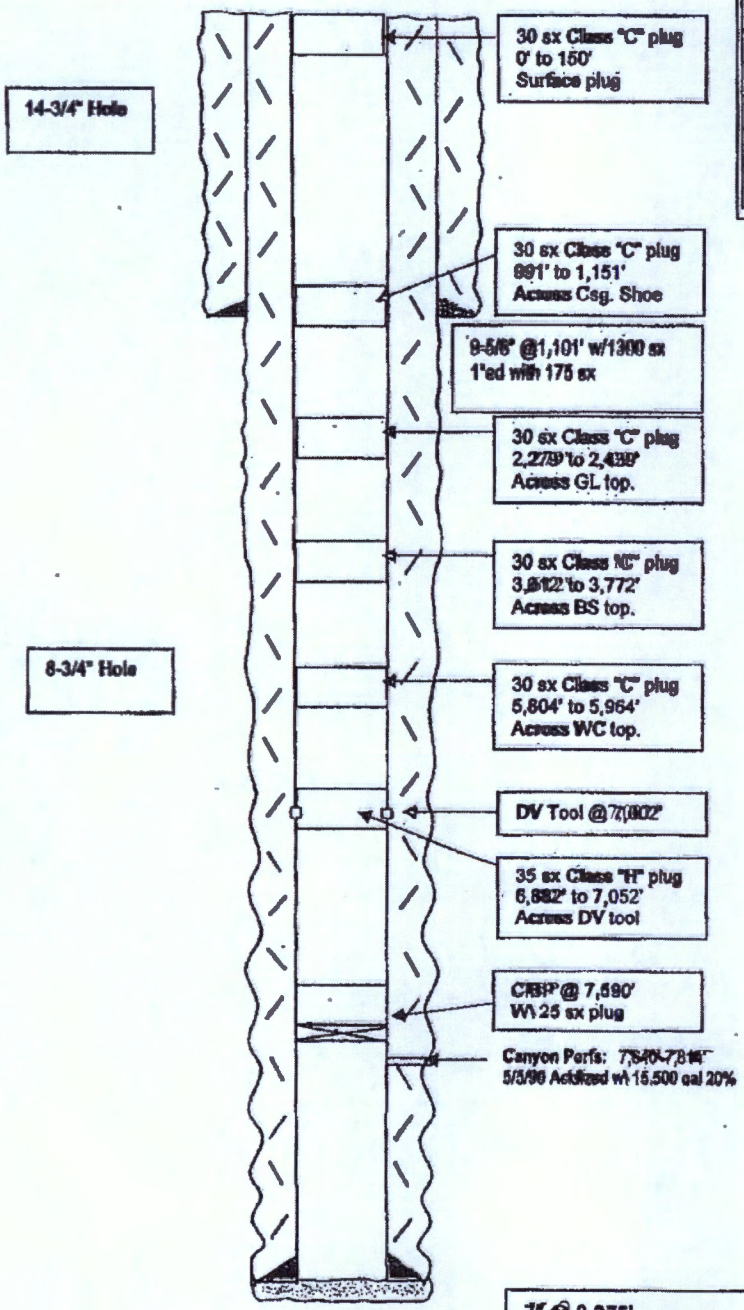
GL: 3,454' **ZERO:** 18' **KB:** 3,472'

SPUD DATE: 3/07/96 **COMPLETION DATE:** 5/04/96

COMMENTS: API No.: 30-015-28840

CASING PROGRAM

9-5/8" 36# J55 STC		1,101'
Surface		
7" 26# J-55 LTC	744'	
7" 23# J-55 LTC	4,730'	
7" 26# J-55 LTC	2,172'	
7" 26# N-80 LTC	635'	8,275'
Bottom		



After

TOPS

SA	782'
Glorieta	2,389'
Yeso	2,478'
BS	3,722'
WC	5,914'
Canyon	7,609'

Not to Scale
7/18/14
JMH

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM023855B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM94490 CA

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
APOLLO APU FED 1

2. Name of Operator
YATES PETROLEUM CORPORATION
Contact: TINA HUERTA
E-Mail: tinah@yatespetroleum.com

9. API Well No.
30-015-28840-00-S1

3a. Address
105 SOUTH FOURTH STREET
ARTESIA, NM 88210

3b. Phone No. (include area code)
Ph: 575-748-4168
Fx: 575-748-4585

10. Field and Pool, or Exploratory
N DAGGER DRAW

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T19S R25E NWNE 660FNL 1980FEL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☒ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Accepted as to plugging of the well bore.
Liability under bond is retained until
Surface restoration is completed.

5/17/16 - RIH with bit and scraper to 7600 ft.
5/18/16 - NU BOP.
6/16/16 - Set a CIBP at 7590 ft.
6/17-19/16 - Tagged CIBP at 7590 ft.
6/20/16 - Loaded hole, pumped 120 bbls mud and tested casing to 500 psi. Spotted 25 sx Class H cement. Calc TOC 7456 ft. Spotted 40 sx Class H cement at 7052 ft. Calc TOC 6838 ft. WOC 4 hrs. Tagged at 6818 ft. Spotted 35 sx Class C cement at 5964 ft. Calc TOC 5751 ft. Spotted 30 sx Class C cement at 3766 ft. Calc TOC 3583 ft.
6/21/16 - Loaded hole and spotted 35 sx Class C cement at 2448 ft. Calc TOC 2235 ft. Spotted 40 sx Class C cement at 1161 ft. Calc TOC 907 ft. WOC 3 hrs. Tagged at 960 ft. BLM ok'd. ND BOP. Pumped 70 sx Class C cement at 150 ft to surface. Filled up to surface.
6/27/16 - Dug out cellar and cut off wellhead. Installed dry hole marker and filled cellar. WELL

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 29 2016
RECEIVED

Reclamation Due 12-27-16

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #343387 verified by the BLM Well Information System
For YATES PETROLEUM CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 06/30/2016 (15MGK0095SE)

Name *(Printed/Typed)* TINA HUERTA — Title REG REPORTING SUPERVISOR

Signature (Electronic Submission) — Date 06/28/2016

Accepted for record
NMOCD

Accepted for Record

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By James A. Amos — Title SAET — Date 7-24-16

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #343387 that would not fit on the form

32. Additional remarks, continued

IS PLUGGED AND ABANDONED.

Well Plugged by: Yates Petroleum Corporation 2/2/2010

WELL NAME: Apollo APU Fed Com #2 **FIELD:** Dagger Draw

LOCATION: 660' FNL & 990' FEL Sec. 15-19S-25E

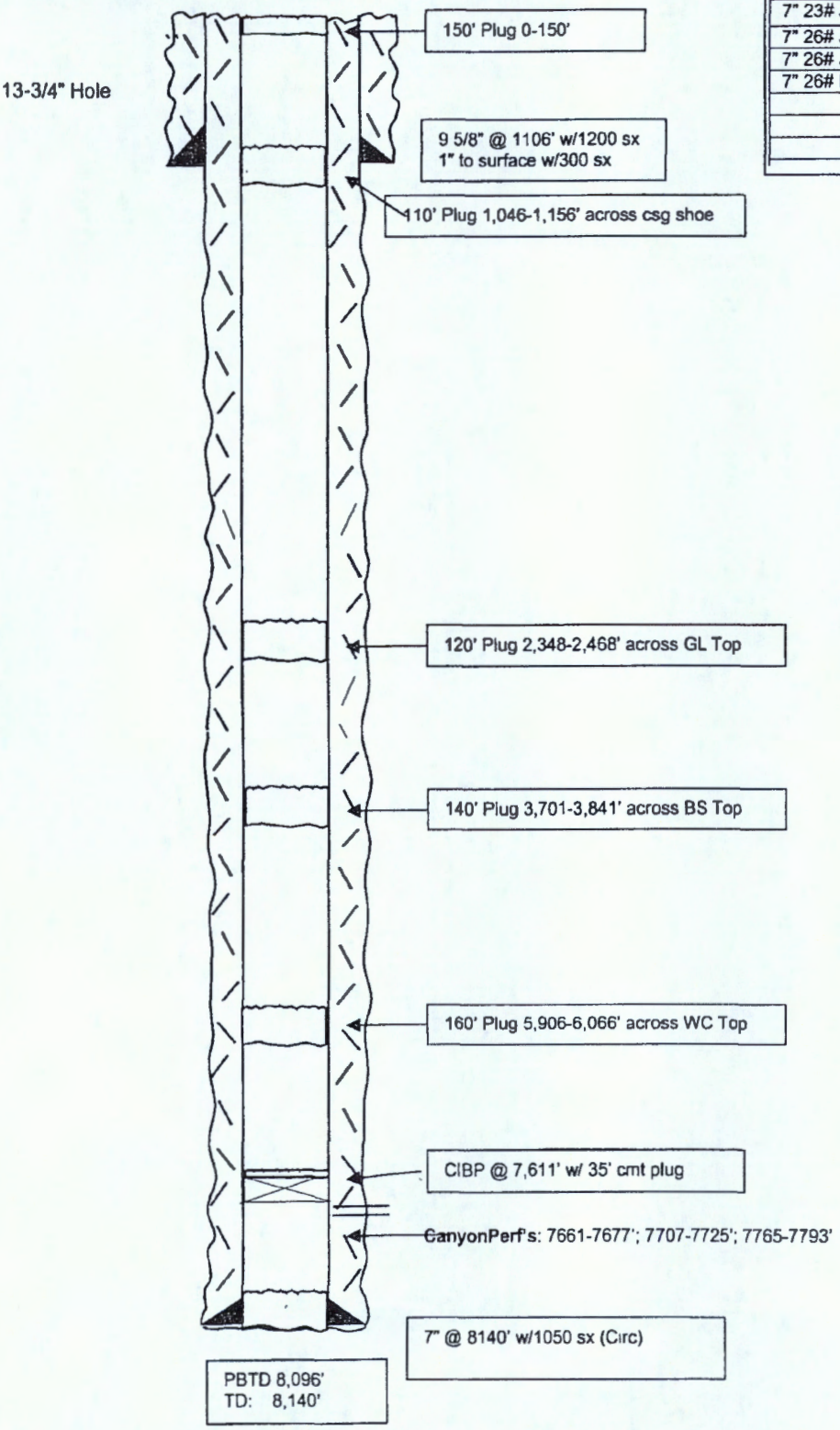
GL: 3452' **ZERO:** 13 **KB:** 3465'

SPUD DATE: 7/24/97 **COMPLETION DATE:** 8/27/97

COMMENTS:

CASING PROGRAM

9 5/8" 36# J-55 ST&C	1106'
7" 26# J-55	(406.41)
7" 23# J-55	(5088')
7" 26# J-55	(1990.25')
7" 26# J-55 SB	(100.30')
7" 26# N-8- SB	(565.45')
	8140'



After

TOPS:

SA	785'
Glorieta	2,418'
BS	3,791'
WC	6,016'
Canyon	7,588'

Not to Scale
10/19/09
DC/M.Hill

RECEIVED
FEB 22 2010
NMOCD ARTESIA

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5 Lease Serial No.
NM-023855-B

6 If Indian, Allottee or Tribe Name
NA

SUBMIT IN TRIPLICATE - Other instructions on page 2.

7 If Unit or CA/Agreement, Name and/or No.
NA

1. Type of Well
[ ] Oil Well [ ] Gas Well [X] Other P&A

8 Well Name and No.
Apollo APU Federal Com #2

2. Name of Operator
Yates Petroleum Corporation

9 API Well No.
30-015-29048

3a. Address
105 S. 4th Str., Artesia, NM 88210

3b Phone No *(include area code)*
575-748-1471

10 Field and Pool or Exploratory Area
Dagger Draw Upper Penn, North

4 Location of Well *(Footage, Sec.,T.,R.,M., OR Survey Description)*
660'FNL & 990'FEL of Section 15-T19S-R25E (Unit A, NENE)

11 County or Pansh, State
Eddy County, New Mexico

12. CHECK APPROPRIATE BOXES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[ ] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[X] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[ ] Change Plans	[X] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed of Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports must be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

1/26/10 NU BOP. Tagged up at 7565'. Called BLM and talked to Darrell Carter, approved to set a CIBP at 7565' instead of 7611'. Set a CIBP at 7565'. Put 2 runs cement on CIBP 35'.
1/27/10 Loaded and tested casing to 500 psi, held good for 15 min. Tagged cement on top of CIBP at 7527'.
1/28/10 Loaded hole with mud. Pumped a 30 sx Class "C" cement plug at 6072'. TOC at 5888'. Did not have to tag. Pumped a 25 sx Class "C" cement plug at 3854'. TOC at 3701'. Did not have to tag. Pumped a 25 sx Class "C" cement plug at 2465'. TOC at 2312'. Did not have to tag. Pumped a 25 sx Class "C" cement plug at 1162'. WOC 2 hrs. Tagged plug at 1031'. Circulated cement to surface from 150'. Topped well off with cement.
2/2/10 Dug out cellar. Cut off wellhead and installed dry hole marker. Filled cement back in. Dug out anchors and cleaned location. **WELL IS PLUGGED AND ABANDONED.**

2/23/2010

Accepted as to plugging of the well bore. Liability under bond is retained until Surface restoration is completed.

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* Tina Huerta
Title Regulatory Compliance Supervisor
Signature Tina Huerta
Date February 10, 2010

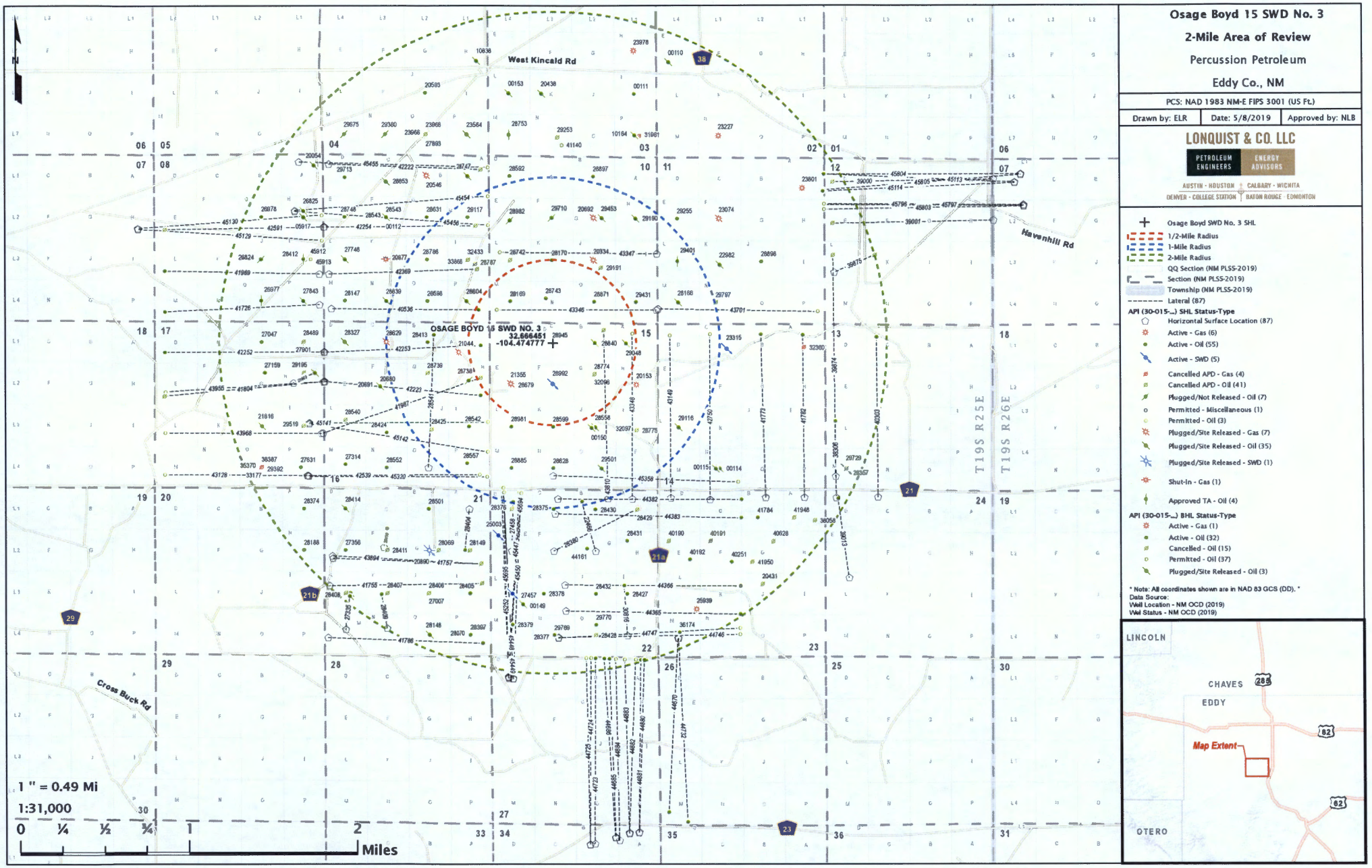
THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
Title
Date FEB 19 2010
Conditions of approval, if any, are attached Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Office

ACCEPTED FOR RECORD
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)



Osage Boyd 15 SWD No. 3

2-Mile Area of Review

Percussion Petroleum

Eddy Co., NM

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

Drawn by: ELR	Date: 5/8/2019	Approved by: NLB

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN · HOUSTON · CALGARY · WICHITA

DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON

- Osage Boyd SWD No. 3 SHL
- 1/2-Mile Radius
- 1-Mile Radius
- 2-Mile Radius
- QQ Section (NM PLSS-2019)
- Section (NM PLSS-2019)
- Township (NM PLSS-2019)
- Lateral (87)

API (30-015-...) SHL Status-Type

- Horizontal Surface Location (87)
- Active - Gas (6)
- Active - Oil (55)
- Active - SWD (5)
- Cancelled APD - Gas (4)
- Cancelled APD - Oil (41)
- Plugged/Not Released - Oil (7)
- Permitted - Miscellaneous (1)
- Permitted - Oil (3)
- Plugged/Site Released - Gas (7)
- Plugged/Site Released - Oil (35)
- Plugged/Site Released - SWD (1)
- Shut-In - Gas (1)
- Approved TA - Oil (4)

API (30-015-...) BHL Status-Type

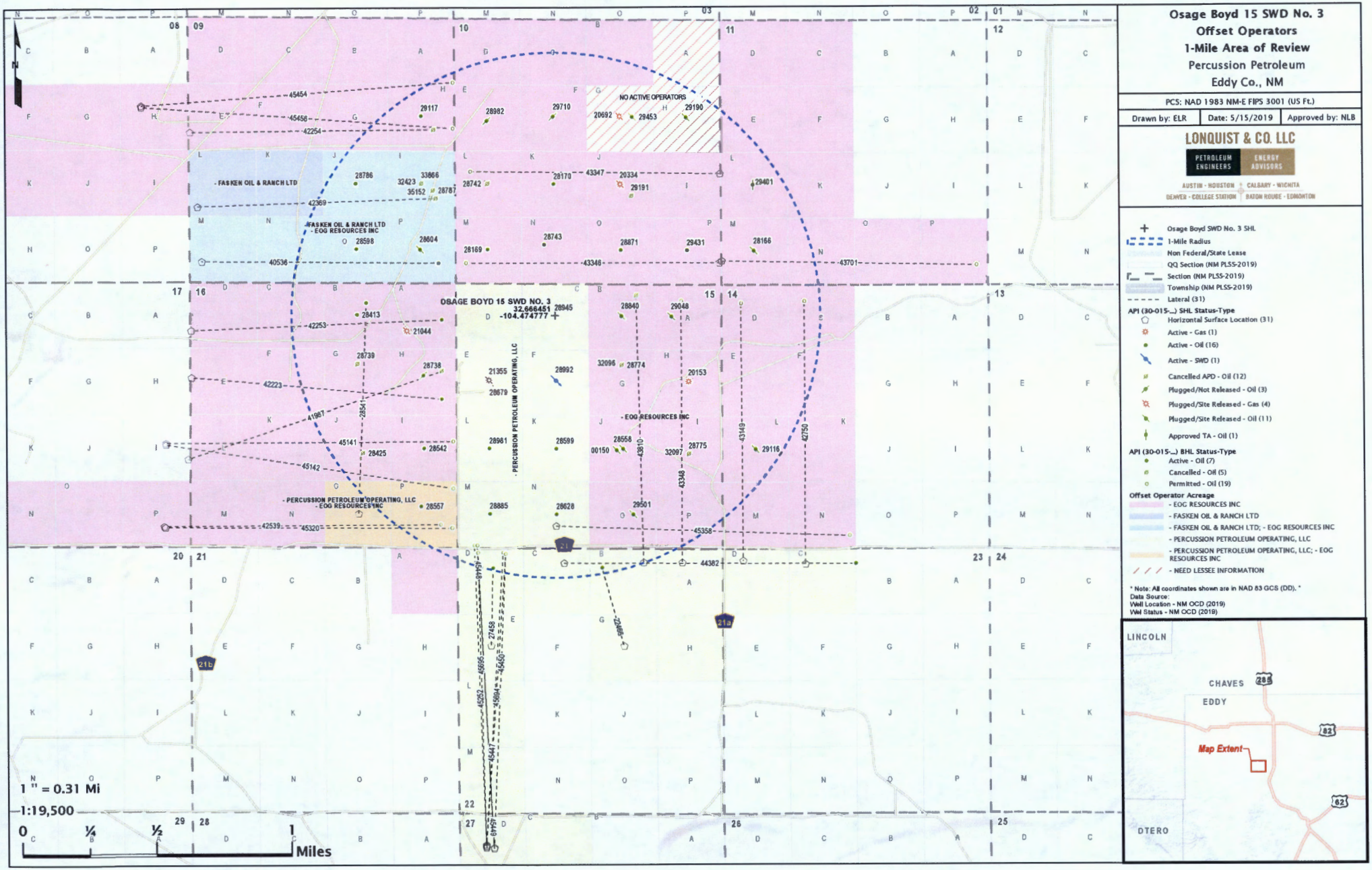
- Active - Gas (1)
- Active - Oil (32)
- Cancelled - Oil (15)
- Permitted - Oil (37)
- Plugged/Site Released - Oil (3)

* Note: All coordinates shown are in NAD 83 GCS (DD). *

Data Source:
Well Location - NM OCD (2019)
Wel Status - NM OCD (2019)

Osage Boyd 15 SWD No. 3
1-Mile Area of Review List

API (30-015-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED	FIELD
00150	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	0	32.6590004	-104.4708328	1/1/1900	
20153	BOYD BN COM #001	G	A	EOG RESOURCES INC	9,416	32.6627655	-104.4661713	7/17/1968	[72840] BOYD, MORROW (GAS)
20334	POLO AOP FEDERAL COM #002	G	P	EOG Y RESOURCES, INC.	9,230	32.6736832	-104.4705276	10/12/1994	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
20892	ARCO 10 FEDERAL #002	G	P	EOG Y RESOURCES, INC.	9,291	32.6774063	-104.4705505	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
21044	NDDUP UNIT #001	G	P	EOG Y RESOURCES, INC.	9,370	32.6655960	-104.4844284	7/6/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
21355	OSAGE BOYD COM #001	G	P	NEARBURG PRODUCING CO	9,256	32.6628494	-104.4790497	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
22466	B & S #001	O	A	PERCUSSION PETROLEUM OPERATING, LLC	9,484	32.6481857	-104.4703903	9/28/2006	[15472] DAGGER DRAW, UPPER PENN, NORTH; [96065] WC, GLORIETA-YESO; [97565] N. SEVEN RIVERS, GLORIETA-YESO
27458	ROSS RANCH 22 #002	O	A	PERCUSSION PETROLEUM OPERATING, LLC	7,330	32.6482239	-104.4789658	10/3/1994	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28166	SERRANO FEDERAL #001	O	P	EOG Y RESOURCES, INC.	8,173	32.6700020	-104.4619217	12/5/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [50270] PENASCO DRAW, SA-YESO (ASSOC); [56405] SHUGART, BONE SPRING, NORTH; [85305] SHUGART, MORROW, NORTH (GAS)
28169	POLO AOP FEDERAL #003	O	A	EOG RESOURCES INC	5,554	32.6701088	-104.4790878	7/15/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH; [98068] WC-015 G-01 S192510M, BONE SPRING
28170	POLO AOP FEDERAL #001	O	A	EOG RESOURCES INC	8,294	32.6737099	-104.4748154	10/5/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28413	APAREJO APA STATE #003	O	A	EOG RESOURCES INC	8,286	32.6865192	-104.4876480	3/31/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28425	BOYD X STATE COM #009	O	C	EOG Y RESOURCES, INC.	0	32.6588620	-104.4873129	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH
28541	BOYD X STATE #010	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,340	32.6555099	-104.4879946	12/23/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28542	AMOLE AMM STATE COM #004	O	A	EOG RESOURCES INC	8,230	32.6591301	-104.4833221	3/4/1998	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28557	BOYD X STATE #011	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,350	32.6559143	-104.4835281	12/14/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28558	BOYD BN #002	O	P	EOG Y RESOURCES, INC.	8,350	32.6590767	-104.4704437	9/1/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH
28598	WARREN ANW FEDERAL #003	O	A	EOG RESOURCES INC	8,300	32.6701469	-104.4876709	8/18/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH; [50270] PENASCO DRAW, SA-YESO (ASSOC)
28599	OSAGE BOYD 15 #002	O	A	PERCUSSION PETROLEUM OPERATING, LLC	9,580	32.6590958	-104.4747391	9/8/1999	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
28604	WARREN ANW FEDERAL #004	O	P	EOG Y RESOURCES, INC.	8,150	32.6701317	-104.4835358	9/12/1997	[15472] DAGGER DRAW, UPPER PENN, NORTH
28628	OSAGE BOYD 15 #004	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,150	32.6554642	-104.4747238	6/6/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28679	OSAGE BOYD 15 FEDERAL COM #003	O	P	NEARBURG PRODUCING CO	8,200	32.6627617	-104.4790115	9/30/1995	[15472] DAGGER DRAW, UPPER PENN, NORTH
28738	BOYD X STATE #012	O	H	EOG RESOURCES INC	8,255	32.6631470	-104.4833450	3/5/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28739	APAREJO APA STATE COM #006	O	C	EOG Y RESOURCES, INC.	0	32.6637960	-104.4876653	12/31/9999	
28742	POLO AOP FEDERAL #005	O	C	EOG Y RESOURCES, INC.	0	32.6737346	-104.4790987	12/31/9999	
28743	POLO AOP FEDERAL #004	O	A	EOG RESOURCES INC	9,450	32.6703606	-104.4754486	1/25/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
28774	BOYD BN COM #003	O	C	EOG Y RESOURCES, INC.	0	32.6637024	-104.4704976	12/31/9999	
28775	BOYD BN COM #004	O	C	EOG Y RESOURCES, INC.	0	32.6587803	-104.4661652	12/31/9999	
28786	WARREN ANW FEDERAL #006	O	A	EOG RESOURCES INC	8,250	32.6737747	-104.4876938	3/22/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [50270] PENASCO DRAW, SA-YESO (ASSOC)
28787	WARREN ANW FEDERAL #005Q	O	C	EOG Y RESOURCES, INC.	0	32.6733700	-104.4826700	12/31/9999	
28840	APOLLO APU FEDERAL COM #001	O	P	EOG Y RESOURCES, INC.	8,275	32.6664238	-104.4704819	3/27/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH
28871	POLO AOP FEDERAL #006	O	A	EOG RESOURCES INC	8,250	32.6700516	-104.4705048	6/17/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [50290] PENASCO, WOLFCAMP; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28885	OSAGE BOYD 15 #005	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,350	32.6554832	-104.4790115	1/8/2008	[15472] DAGGER DRAW, UPPER PENN, NORTH; [96403] WILDCAT, BONE SPRING; [96542] WILDCAT, GRANITE; [97482] WC, GLORIETA-YESO; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28945	OSAGE BOYD 15 FEDERAL COM #006	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,128	32.6664505	-104.4747772	5/15/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [72840] BOYD, MORROW (GAS)
28981	OSAGE BOYD 15 #007	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,170	32.6591148	-104.4790344	5/28/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
28982	PATRICK API #004	O	H	EOG RESOURCES INC	8,250	32.6771851	-104.4791260	6/30/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH
28992	OSAGE BOYD 15 SWD #001	S	A	PERCUSSION PETROLEUM OPERATING, LLC	8,135	32.6628227	-104.4747620	6/18/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH; [96186] SWD, CISCO-CANYON
29048	APOLLO APU FEDERAL COM #002	O	P	EOG Y RESOURCES, INC.	8,140	32.6664009	-104.4672623	7/24/1997	[15472] DAGGER DRAW, UPPER PENN, NORTH
29116	BOYD BN DEEP COM #005	O	P	EOG Y RESOURCES, INC.	8,300	32.6590462	-104.4618683	10/5/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH
29117	PATRICK API #005	O	A	EOG RESOURCES INC	8,247	32.6774788	-104.4834213	9/10/1996	[15472] DAGGER DRAW, UPPER PENN, NORTH
29190	OTTAWA AOW FEDERAL #004	O	P	EOG Y RESOURCES, INC.	80	32.6773796	-104.4662552	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH
29191	POLO AOP FEDERAL COM #007	O	C	EOG Y RESOURCES, INC.	0	32.6730437	-104.4697996	12/31/9999	
29401	SERRANO FEDERAL #002	O	T	EOG RESOURCES INC	8,120	32.6736298	-104.4619446	10/18/1997	[15472] DAGGER DRAW, UPPER PENN, NORTH
29431	APOLLO APU FEDERAL #003	O	A	EOG RESOURCES INC	8,230	32.6700249	-104.4662094	5/28/1997	[15472] DAGGER DRAW, UPPER PENN, NORTH; [97565] N. SEVEN RIVERS, GLORIETA-YESO
29453	OTTAWA AOW FEDERAL #006	O	P	EOG Y RESOURCES, INC.	8,220	32.6774025	-104.4697342	5/4/1997	[15472] DAGGER DRAW, UPPER PENN, NORTH
29501	BOYD BN #006	O	P	EOG Y RESOURCES, INC.	8,218	32.6554413	-104.4697800	12/18/1997	[15472] DAGGER DRAW, UPPER PENN, NORTH
29710	PATRICK API #006	O	H	EOG RESOURCES INC	8,170	32.6774330	-104.4748383	2/12/1998	[15472] DAGGER DRAW, UPPER PENN, NORTH
32096	BOYD BN COM #003Q	O	C	EOG Y RESOURCES, INC.	0	32.6637024	-104.4704976	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH
32097	BOYD BN COM #004Q	O	C	EOG Y RESOURCES, INC.	0	32.6587803	-104.4661652	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH
32423	WARREN ANW FEDERAL #005E	O	C	EOG Y RESOURCES, INC.	0	32.6737567	-104.4834093	12/31/9999	
33866	WARREN ANW FEDERAL #005C	O	C	EOG Y RESOURCES, INC.	0	32.6737567	-104.4834093	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH
35152	WARREN ANW FEDERAL #005C	O	C	EOG Y RESOURCES, INC.	0	32.6737567	-104.4834093	12/31/9999	[15472] DAGGER DRAW, UPPER PENN, NORTH
40536	WARREN ANW FEDERAL #008H	O	A	EOG RESOURCES INC	2,581	32.6694717	-104.4976273	8/10/2012	[50270] PENASCO DRAW, SA-YESO (ASSOC)
41987	AMOLE AMM STATE COM #005C	O	C	EOG RESOURCES INC	0	32.6585350	-104.4985352	12/31/9999	[50270] PENASCO DRAW, SA-YESO (ASSOC)
42223	BOYD X STATE COM #015H	O	A	EOG RESOURCES INC	0	32.6630554	-104.4983292	3/3/2017	[97565] N. SEVEN RIVERS, GLORIETA-YESO
42253	BOYD X STATE COM #014H	O	A	EOG RESOURCES INC	0	32.6656532	-104.4983292	4/12/2014	[97565] N. SEVEN RIVERS, GLORIETA-YESO
42254	PATRICK API #008C	O	C	EOG RESOURCES INC	0	32.6766129	-104.4983215	12/31/9999	
42369	WARREN ANW FEDERAL #005H	O	C	EOG Y RESOURCES, INC.	0	32.6724968	-104.4978867	12/31/9999	[50270] PENASCO DRAW, SA-YESO (ASSOC)
42539	BOYD X STATE COM #013H	O	N	EOG RESOURCES INC	0	32.6548233	-104.5000810	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
42750	ARTEMIS BUA FEDERAL COM #001H	O	N	EOG RESOURCES INC	0	32.3910640	-104.2731570	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
43149	APOLLO APU FEDERAL COM #004H	O	N	EOG RESOURCES INC	0	32.6528738	-104.4626768	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
43346	POLO AOP FEDERAL COM #008H	O	N	EOG RESOURCES INC	0	32.6693502	-104.4641318	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
43347	POLO AOP FEDERAL #007H	O	N	EOG RESOURCES INC	0	32.4027060	-104.2751170	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
43348	APOLLO APU FEDERAL COM #005H	O	N	EOG RESOURCES INC	0	32.3910960	-104.2800200	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
43701	SERRANO FEDERAL COM #004H	O	N	EOG RESOURCES INC	0	32.4009650	-104.2750500	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
43810	APOLLO APU FEDERAL COM #006H	O	C	EOG Y RESOURCES, INC.	0	32.3910910	-104.2809220	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
44382	GOODMAN 22 #001H	O	A	PERCUSSION PETROLEUM OPERATING, LLC	8,355	32.6527590	-104.4742460	9/11/2017	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45141	BOYD X STATE COM #016H	O	N	EOG RESOURCES INC	0	32.6594244	-104.4999567	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45142	BOYD X STATE COM #017H	O	N	EOG RESOURCES INC	0	32.6593419	-104.4999575	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45252	ROSS RANCH 22 #009H	O	N	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6372130	-104.4793240	9/29/2018	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45320	BOYD X STATE COM #018H	O	N	EOG RESOURCES INC	0	32.6547594	-104.4999940	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45358	BADBOY #001H	O	N	EOG RESOURCES INC	0	32.6548109	-104.4747440	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45447	ROSS RANCH 22 #010H	O	N	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6371590	-104.4793250	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45448	ROSS RANCH 22 #011H	O	N	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6370630	-104.4788370	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45449	ROSS RANCH 22 #000	O	C	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6370630	-104.4788370	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45450	ROSS RANCH 22 #012H	O	N	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6370080	-104.4788370	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45454	PEACE #002H	O	N	EOG RESOURCES INC	0	32.6780698	-104.5014063	12/31/9999	[50270] PENASCO DRAW, SA-YESO (ASSOC)
45456	PEACE #003H	O	N	EOG RESOURCES INC	0	32.6779893	-104.5014067	12/31/9999	[50270] PENASCO DRAW, SA-YESO (ASSOC)
45694	ROSS RANCH 22 #013H	O	N	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6371040	-104.4793240	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO
45695	ROSS RANCH 22 #014H	O	N	PERCUSSION PETROLEUM OPERATING, LLC	0	32.6370490	-104.4793240	12/31/9999	[97565] N. SEVEN RIVERS, GLORIETA-YESO



Osage Boyd 15 SWD No. 3
Offset Operators
1-Mile Area of Review
Percussion Petroleum
Eddy Co., NM

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

Drawn by: ELR	Date: 5/15/2019	Approved by: NLB

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
AUSTIN - HOUSTON | CALGARY - WICHITA
DENVER - COLLEGE STATION | BATON ROUGE - EDMONTON

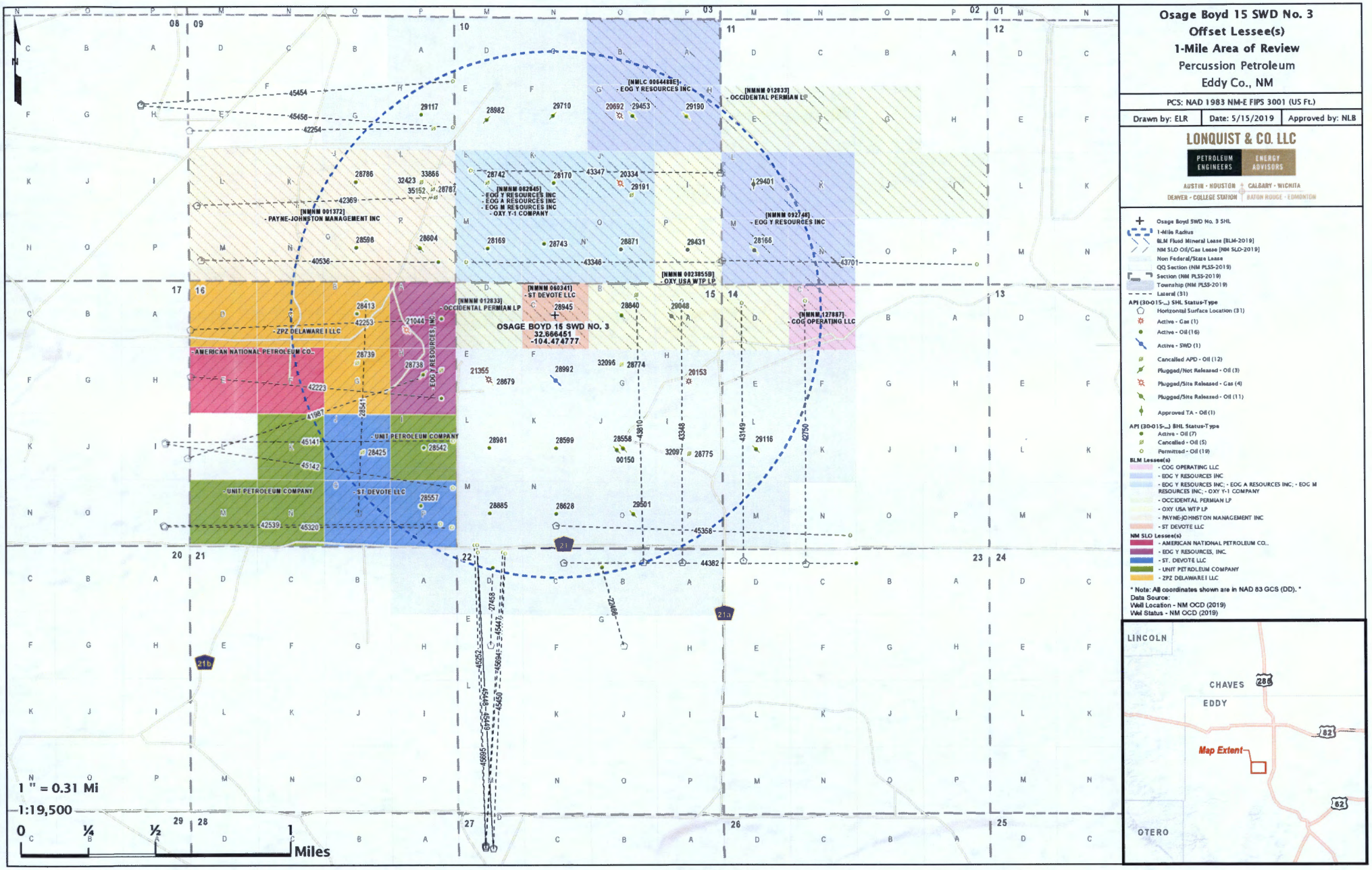
- Osage Boyd SWD No. 3 SHL
- 1-Mile Radius
- Non Federal/State Lease
- QQ Section (NM PLSS-2019)
- Section (NM PLSS-2019)
- Township (NM PLSS-2019)
- Lateral (31)

API (30-015-...) SHL Status-Type
- Horizontal Surface Location (31)
- Active - Gas (1)
- Active - Oil (16)
- Active - SWD (1)
- Cancelled APD - Oil (12)
- Plugged/Not Released - Oil (3)
- Plugged/Site Released - Gas (4)
- Plugged/Site Released - Oil (11)
- Approved TA - Oil (1)

API (30-015-...) BHL Status-Type
- Active - Oil (7)
- Cancelled - Oil (5)
- Permitted - Oil (19)

Offset Operator Acreage
- EOG RESOURCES INC
- FASKEN OIL & RANCH LTD
- FASKEN OIL & RANCH LTD; - EOG RESOURCES INC
- PERCUSSION PETROLEUM OPERATING, LLC
- PERCUSSION PETROLEUM OPERATING, LLC; - EOG RESOURCES INC
- NEED LESSEE INFORMATION

* Note: All coordinates shown are in NAD 83 GCS (DD). *
Data Source:
Well Location - NM OCD (2019)
Wel Status - NM OCD (2019)



Osage Boyd 15 SWD No. 3
Offset Lessee(s)
1-Mile Area of Review
Percussion Petroleum
Eddy Co., NM

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

Drawn by: ELR	Date: 5/15/2019	Approved by: NLB

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
AUSTIN · HOUSTON · CALGARY · WICHITA
DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON

Osage Boyd SWD No. 3 SHL
1-Mile Radius
BLM Fluid Mineral Lease (BLM-2019)
NM SLO Oil/Gas Lease (NM SLO-2019)
Non Federal/State Lease
QQ Section (NM PLSS-2019)
Section (NM PLSS-2019)
Township (NM PLSS-2019)
Lateral (31)

API (30-015-...) SHL Status-Type
Horizontal Surface Location (31)
Active - Gas (1)
Active - Oil (16)
Active - SWD (1)
Cancelled APD - Oil (12)
Plugged/Not Released - Oil (3)
Plugged/Site Released - Gas (4)
Plugged/Site Released - Oil (11)
Approved TA - Oil (1)

API (30-015-...) BHL Status-Type
Active - Oil (7)
Cancelled - Oil (5)
Permitted - Oil (19)

BLM Lessee(s)
- COG OPERATING LLC
- EOG Y RESOURCES INC
- EOG Y RESOURCES INC; - EOG A RESOURCES INC; - EOG M RESOURCES INC; - OXY Y-1 COMPANY
- OCCIDENTAL PERMIAN LP
- OXY USA WTP LP
- PAYNE-JOHNSTON MANAGEMENT INC
- ST DEVOTE LLC

NM SLO Lessee(s)
- AMERICAN NATIONAL PETROLEUM CO.
- EOG Y RESOURCES, INC.
- ST. DEVOTE LLC
- UNIT PETROLEUM COMPANY
- ZPZ DELAWARE I LLC

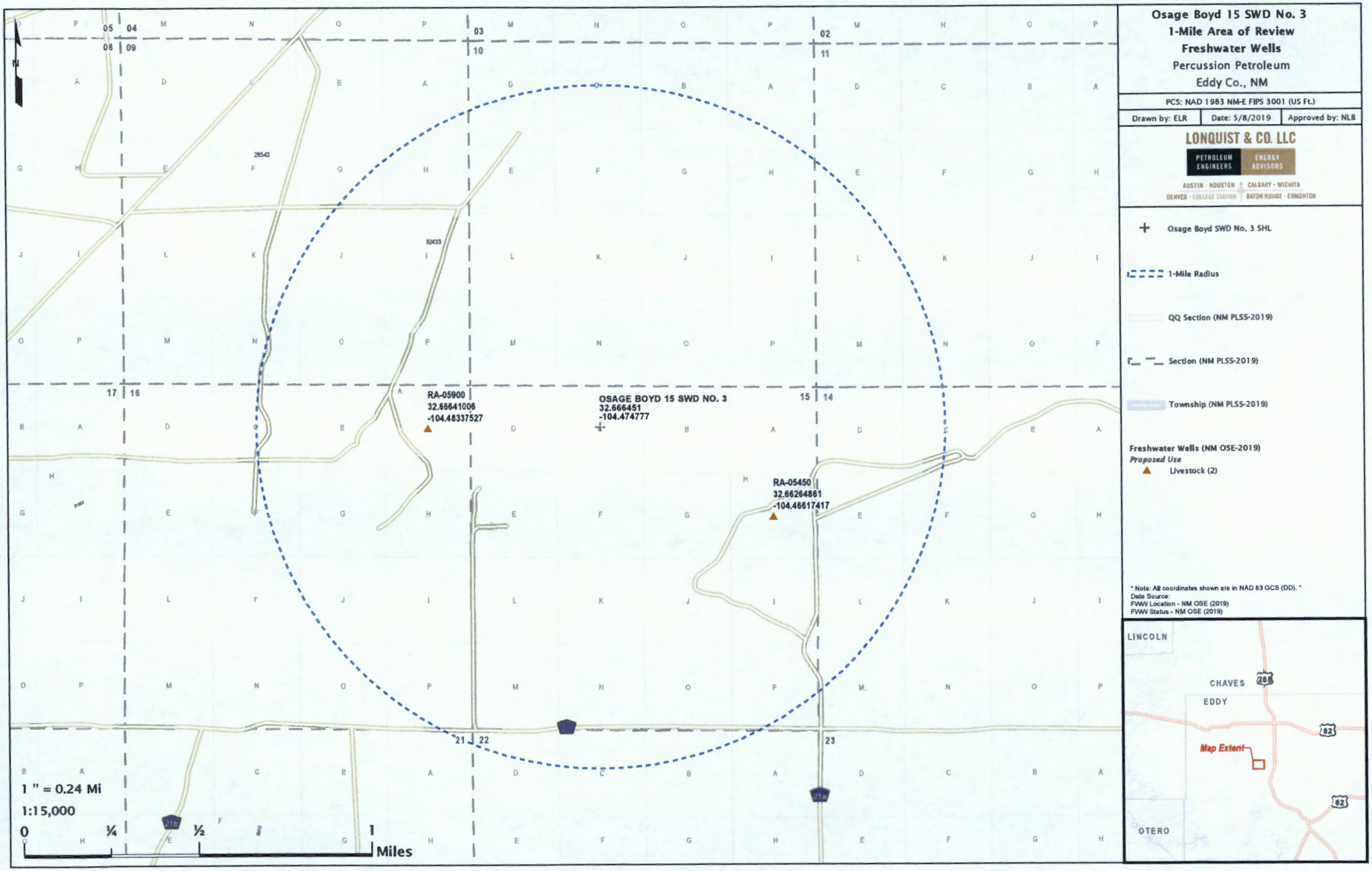
* Note: All coordinates shown are in NAD 83 GCS (DD). *
Data Source:
Well Location - NM OCD (2019)
Wel Status - NM OCD (2019)

Osage Boyd 15 SWD No. 3
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
11/19S/25E	E, K, L, M, N	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
10/19S/25E	B, C, D, E, F, I J, K, L, M, N, O, P	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
10/19S/25E	A, G, H	-	EOG Y RESOURCES INC	-	-	105 S 4TH ST	ARTESIA, NM 88210-2177
9/19S/25E	A, G, H	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
9/19S/25E	I, J, K, N, O, P	FASKEN OIL & RANCH LTD	-	-	-	6101 HOLIDAY HILL ROAD	MIDLAND, TX 79707
	I, J, N, O, P	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
16/19S/25E	A, B, C, F, G, H, I, J, K, O, P	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
	O, P	PERCUSSION PETROLEUM OPERATING LLC	-	-	-	919 MILAM ST SUITE 2475	HOUSTON, TX 77002
15/19S/25E	C, D, E, F, L, K, M, N	PERCUSSION PETROLEUM OPERATING LLC	-	-	-	919 MILAM ST SUITE 2475	HOUSTON, TX 77002
	A, B, G, H, I, J, O, P	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
14/19S/25E	C, D, E, F, L, K, M, N	EOG RESOURCES INC	-	-	-	PO BOX 2267	MIDLAND, TX 79702
22/19S/25E	A, B, C, D	PERCUSSION PETROLEUM OPERATING LLC	-	-	-	919 MILAM ST SUITE 2475	HOUSTON, TX 77002
Surface Hole Location	-	-	ST DEVOTE LLC	BUREAU OF LAND MANAGEMENT	KEVIN & LAURIE (JT) WILBANKS	634 ROCK DAISY ROAD, ARTESIA, NM 88210	EUGENE, OR 97405

Osage Boyd 1S SWD No. 3 - Offsetting Produced Water Analysis

Well Name	API	Section	Township	Range	Unit	Formation	ph	tds_mgL	sodium_mgL	calcium_mgL	iron_mgL	magnesium_mgL	potassium_mgL	chloride_mgL	bicarbonate_mgL	sulfate_mgL
H E WEST A #005	3001505064	4	17S	31E	J	ARTESIA	6.18	92765						58127	59	384
H E WEST B #028	3001510162	9	17S	31E	A	ARTESIA	5.75	258056						157710	132	1964
H E WEST B #028	3001510162	9	17S	31E	A	ARTESIA	5.75	225969						138100	116	1720
DAGGER DRAW #002	3001500116	30	19S	25E	I	CISCO		7622								
JENNY COM #001	3001526469	17	19S	25E	E	CISCO	6			2800	70	1677.7		46850	183	12.5
ANDERSON STATE #001	3001502866	2	17S	29E	L	GRAYBURG/SAN ANDRES	6.95	1406	505	268	0	310		780	10	550
NDDUP UNIT #138	3001521478	28	19S	25E	N	MORROW	8.51	7125.41	1475.25	568.955	0.2014	140.98	246.715	2066.36	737.124	1898.19
NDDUP UNIT #138	3001521478	28	19S	25E	N	MORROW	7.6	10987.6	2935.06	725.18	4.545	121.2	142.41	4295.53	669.63	2194.73
NDDUP UNIT #138	3001521478	28	19S	25E	N	MORROW	8.79	6258.3	1607.17	424.954	0.1007	77.539	31.217	1783.4	384.674	1931.43
RIO PENASCO KD COM #001	3001523227	2	19S	25E	N	MORROW	6.1			2800	50	2187.8		40896	171	50
APOLLO APU FEDERAL COM #001	3001528840	15	19S	25E	B	PENNSYLVANIAN	8.5	7110.22	1850.03	376.244	4.024	98.588	67.402	1978.8	876.226	1889.27
APOLLO APU FEDERAL COM #002	3001529048	15	19S	25E	A	PENNSYLVANIAN	7.7	7248.53	1907.38	367.19	4.527	90.54	78.468	1964.72	896.346	1971.76
APOLLO APU FEDERAL #003	3001529431	10	19S	25E	P	PENNSYLVANIAN	8.7	5856.65	1462.27	363.81	1.5075	91.455	56.28	1613.02	456.27	1829.1
PATRICK API #004	3001528982	10	19S	25E	E	PENNSYLVANIAN	7.2	6518.03	1157.91	544.246	298.782	109.654	51.306	1563.32	876.226	1943.59
NDDUP UNIT #124	3001527098	29	19S	25E	L	PENNSYLVANIAN	7.1	5837.49	911.535	520.59	331.65	98.49	37.185	1179.87	937.665	1838.14
AMOLE AMM STATE COM #002	3001528424	16	19S	25E	K	PENNSYLVANIAN	7.1	7057.31	1225.31	530.162	453.706	112.672	57.342	1828.91	1001.98	1879.21
TACKITT AOT #002	3001528003	28	19S	25E	J	PENNSYLVANIAN	8	5950.66	985.905	756.765	27.135	94.47	49.245	1304.49	749.73	2004.97
NDDUP UNIT #119	3001528053	28	19S	25E	K	PENNSYLVANIAN	7.5	8435.62	1609.19	1085.55	0.5035	106.742	58.406	2758.17	626.354	2239.57
TACKITT AOT #001	3001528150	28	19S	25E	I	PENNSYLVANIAN	8	6929.61	1293.72	873.208	0.9054	80.48	34.204	1835.95	771.602	2072.36
NDDUP UNIT #139	3001528372	28	19S	25E	O	PENNSYLVANIAN	7.5	7777.51	1635.37	854.943	8.056	91.637	45.315	2459.09	709.935	2018.03
THOMAS #001	3001505917	8	19S	25E	H	SAN ANDRES/YESO		13248						5226	1236	2412
THOMAS #001	3001505917	8	19S	25E	H	SAN ANDRES/YESO		49145						31050	354	1656
PENASCO IW SHALLOW #001	3001522174	31	18S	25E	J	SAN ANDRES/YESO	6.15	125250	55436	3611		7784		114000	920	725
PENASCO IW SHALLOW #003	3001523237	31	18S	25E	N	SAN ANDRES/YESO	6.45	130750	51704	4100	0	9800		116000	180	52
BH MATLOCK #001	3001500109	1	19S	25E	N	WOLFCAMP		20306						10360	1829	940



Osage Boyd 15 SWD No. 3
1-Mile Area of Review
Freshwater Wells
Percussion Petroleum
Eddy Co., NM

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

Drawn by: ELR	Date: 5/8/2019	Approved by: NLB

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
AUSTIN · HOUSTON · CALGARY · WICHITA
DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON

- Osage Boyd SWD No. 3 SHL
- 1-Mile Radius
- QQ Section (NM PLSS-2019)
- Section (NM PLSS-2019)
- Township (NM PLSS-2019)

Freshwater Wells (NM OSE-2019)
Proposed Use
- Livestock (2)

* Note: All coordinates shown are in NAD 83 GCS (DD). *
Data Source:
FWW Location - NM OSE (2019)
FWW Status - NM OSE (2019)

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: RA 05450 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: LEATHERWOOD DRILLING CO.

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
253529	72121	1968-07-15	PMT	LOG	RA 05450	T			3

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Other Location Desc
RA 05450		Shallow		4	2	15	19S	25E	550057	3614015*	

***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

get image list

WR File Number: RA 05900 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: JAMES H AND BETTY R HOWELL REVOCABLE TRUST

Contact: ALAN R HOWELL

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	507618	72121	2012-07-18	PMT	APR	RA 05900	T			3
get images	507613	COWNF	2012-07-11	CHG	PRC	RA 05900	T			0
	247729	72121	1974-03-19	PMT	LOG	RA 05900	T			3

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Other Location Desc
RA 05900		Shallow	2	2		16	19S	25E	548442	3614424*	

***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.

Affected Parties - Osage Boyd 15 SWD No. 3						
Percussion Petroleum Operating, LLC						
TRACT ID	**COUNTY CLERK**	**MAILING ADDRESS**	**PHONE**	**TRACKING #**	**DATE SHIPPED**	**DATE RECEIVED**
	OIL CONSERVATION DIVISION DISTRICT II	811 S. FIRST ST., ARTESIA, NM 88210		USPS - 7018 3090 0002 2009 8858	5/17/2019	
	OIL CONSERVATION DIVISION DISTRICT IV	1220 S ST FRANCIS DR, SANTA FE NM 87505		FEDEX - 7752 4847 1593	5/17/2019	
	SURFACE LANDOWNER	**MAILING ADDRESS**				
	KEVIN & LAURIE (JT) WILBANKS	634 ROCK DAISY ROAD, ARTESIA, NM 88210		USPS - 7018 3090 0002 2009 8865	5/17/2019	
	OFFSET OPERATORS	**MAILING ADDRESS**				
	NEW MEXICO STATE LAND OFFICE	310 Old Santa Fe Trail, Santa Fe, NM 87501		USPS - 7018 3090 0002 2009 8872	5/17/2019	
	BUREAU OF LAND MANAGEMENT	620 E Greene St Carlsbad, NM 88220		USPS - 7018 3090 0002 2009 8889	5/17/2019	
	OFFSET OPERATORS	**MAILING ADDRESS**				
	EOG RESOURCES INC.	P.O. BOX 2267, MIDLAND, TX 79702		USPS - 7018 3090 0002 2009 8896	5/17/2019	
	EOG Y RESOURCES INC	10S S 4TH ST, ARTESIA, NM 88210		USPS - 7018 3090 0002 2009 8902	5/17/2019	
	FASKEN OIL & RANCH LTD	6101 HOLIDAY HILL ROAD, MIDLAND, TX 79707		USPS - 7018 3090 0002 2009 8919	5/17/2019	

Notices were sent for the Osage Boyd 15 SWD No. 3 application by mailing them a copy of Form C-108 on 5/17/2019



Tyler F. Moehlman
Petroleum Engineer / Lonquist & Co., LLC
Agent for Percussion Petroleum

CARLSBAD CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001286017

LONQUIST FIELD SERVICE
1001 MCKINNEY ST., SUITE 1650

HOUSTON TX 77002

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

05/15/19

Legal Clerk

Subscribed and sworn before me this
15th of May 2019.

State of WI, County of Brown
NOTARY PUBLIC

11/9/22
My Commission Expires

KAZOUA YANG
NOTARY PUBLIC
STATE OF WISCONSIN

Percussion Petroleum Operating, LLC, 919 Milam St. Suite 2475, Houston, TX 77002, 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 Osage Boyd 15 SWD No. 3. The proposed well will be located at 660' FNL & 1,980' FWL in Section 15, Township 19S, Range 25E in Eddy County, New Mexico. Disposal water will be sourced from area production, and will be injected into the Cisco-Canyon Formation (determined by log analysis) through a perforated interval completion between an applied for top of 7,550' feet to a maximum depth of 8,075' feet. The maximum surface injection pressure will not exceed 1,510 psi with a maximum rate of 10,000 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) 600-1774.
Pub: May 15, 2019

Ad#:0001286017
P O : Osage Boyd 15
# of Affidavits :0.00

SENDER: COMPLETE THIS SECTION

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OIL CONSERVATION DIVISION
DISTRICT II
811 S FIRST STREET
ARTESIA NM 88210
2020-OSAGE BOYD 15 SWD #3

9590 9402 4809 8344 2995 30

2. Article Number *(Transfer from service label)*
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X ☐ Agent ☐ Addressee

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- ☐ Adult Signature Required
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OIL CONSERVATION DIVISION
DISTRICT II
811 S FIRST STREET
ARTESIA NM 88210
2020-OSAGE BOYD 15 SWD #3

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

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KEVIN & LAURIE (JT) WILBANKS
634 ROCK DAISY ROAD
ARTESIA NM 88210

2020-OSAGE BOYD 15 SWD #3

9590 9402 4809 8344 2995 23

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KEVIN & LAURIE (JT) WILBANKS
634 ROCK DAISY ROAD
ARTESIA NM 88210

2020-OSAGE BOYD 15 SWD #3

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

2020-OSAGE BOYD 15 SWD #3

9590 9402 4809 8344 2995 16

2. Article Number *(Transfer from service label)*
7018 3090 0002 2009 8872

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A. Signature
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D. Is delivery address different from item 1? ☐ Yes
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NEW MEXICO STATE LAND OFFICE
310 OLD SANTA FE TRAIL
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BUREAU OF LAND MGMT
620 E GREENE STREET
CARLSBAD NM 88220

2020-OSAGE BOYD 15 SWD #3

9590 9402 4809 8344 2979 87

2. Article Number *(Transfer from service label)*
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D. Is delivery address different from item 1? ☐ Yes
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BUREAU OF LAND MGMT
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EOG RESOURCES INC
PO BOX 2267
MIDLAND TX 79702

2020-OSAGE BOYD 15 SWD #3

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EOG Y RESOURCES INC
105 S 4TH STREET
ARTESIA NM 88210

2020-OSAGE BOYD 15 SWD #3

9590 9402 4809 8344 2979 63

2 Article Number *(Transfer from service label)*
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☐ Agent
☐ Addressee

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EOG Y RESOURCES INC
105 S 4TH STREET
ARTESIA NM 88210

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FASKEN OIL & RANCH LTD
6101 HOLIDAY HILL RD
MIDLAND TX 79707

2020-OSAGE BOYD 15 SWD #3

9590 9402 4809 8344 2979 56

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LONQUIST & CO. LLC

AUSTIN
HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

WICHITA
CALGARY

www.lonquist.com

May 17, 2019

BUREAU OF LAND MANAGEMENT
620 E Greene St Carlsbad, NM 88220

Subject: **Osage Boyd 15 SWD No. 3 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 Percussion Petroleum Operating LLC's Osage Boyd 15 SWD No. 3 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius

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

Any questions should be directed towards Percussion Petroleum LLC's agent, Lonquist & Co., LLC.

Regards,

Ramona K Hovey

Ramona K. Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
steve@lonquist.com

May 17, 2019

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P.O. BOX 2267, MIDLAND, TX 79702

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LONQUIST & CO. LLC

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May 17, 2019

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May 17, 2019

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6101 HOLIDAY HILL ROAD, MIDLAND, TX 79707

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Sr. Petroleum Engineer
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(512) 600-1777
steve@lonquist.com

LONQUIST & CO. LLC

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HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

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May 17, 2019

KEVIN & LAURIE (JT) WILBANKS
634 ROCK DAISY ROAD, ARTESIA, NM 88210

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(512) 600-1777
steve@lonquist.com

LONQUIST & CO. LLC

AUSTIN
HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

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May 17, 2019

NEW MEXICO STATE LAND OFFICE
310 Old Santa Fe Trail, Santa Fe, NM 87501

Subject: **Osage Boyd 15 SWD No. 3 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 Percussion Petroleum Operating LLC's Osage Boyd 15 SWD No. 3 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius

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

Any questions should be directed towards Percussion Petroleum LLC's agent, Lonquist & Co., LLC.

Regards,

Ramona K Hovey

Ramona K. Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
steve@lonquist.com

May 17, 2019

OIL CONSERVATION DIVISION DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210

Subject: **Osage Boyd 15 SWD No. 3 Authorization to Inject**

To Whom It May Concern:

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steve@lonquist.com

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X___Yes _____No

II. OPERATOR: Percussion Petroleum Operating, LLC

ADDRESS: 919 Milam St. Suite 2475, Houston, TX 77002

CONTACT PARTY: Ryan Barber PHONE: (979) 292-6279

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: Ramona K. Hovey TITLE: Consulting Engineer

SIGNATURE: Ramona K Hovey DATE: May 16, 2019

E-MAIL ADDRESS: ramona@lonquist.com

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

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

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Percussion Petroleum Operating, LLC

WELL NAME & NUMBER: Osage Boyd 15 SWD No. 3

WELL LOCATION: 660' FNL & 1980' FWL | C | 15 | 19S | 25E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 14-3/4"

Casing Size: 9-5/8"

Cemented with: 1075 sacks *or* _____ ft^3

Top of Cement: Surface

Method Determined: Circulate returns

Intermediate Casing

Hole Size: 8-3/4"

Casing Size: 7"

Cemented with: 1215 sacks *or* _____ ft^3

Top of Cement: Surface

Method Determined: Circulate returns

Production Casing

Hole Size: 6-1/8"

Casing Size: 4-1/2"

Cemented with: 250 sacks *or* _____ ft^3

Top of Cement: 7,650'

Method Determined: CBL_____

Total Depth: 9,345'

Injection Interval

7,550' feet to 8,075 feet

(Perforated Interval)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" L-80, 9.3 lb/ft, Upset from 0' – 7,500'

Lining Material: Internal Plastic Coated (IPC)

Type of Packer: 7" x 2-7/8" non-permanent nickel-plated w/ 3-1/2" to 2-7/8" crossover

Packer Setting Depth: 7,500'

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

Additional Data

1. Is this a new well drilled for injection? _____Yes ___X___No

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

   (1) Dagger Draw; Upper Pennsylvanian, North, oil and gas production from 6/1996 - 12/1998

   (2) Re-entry into Morrow, gas production from 5/2000 - Present

2. Name of the Injection Formation: Cisco-Canyon

3. Name of Field or Pool (if applicable): SWD; Cisco-Canyon (96186)

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.

   7730' - 7810' (Cisco/Canyon): 6/21/1996 w/ 4" gun w/ .42" jet charges, 2 jspf
   9030' - 9032' (Morrow): 5/9/2000 4 jspf,
   9034' - 9048' (Morrow): 5/9/2000 4 jspf,
   9052' - 9058' (Morrow): 5/9/2000 4 jspf,
   9072' - 9086' (Morrow): 5/9/2000 4 jspf,
   9091' - 9106' (Morrow): 5/9/2000 4 jspf,

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

Bone Spring: 3,704'
Wolfcamp: 5,484'
Strawn: 8,312'
Atoka: 8,650'
Morrow: 8,808'

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, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-28945	96186	SWD; Cisco-Canyon

[4] Property Code	[5] Property Name	[6] Well Number
TBD	Osage Boyd 15 SWD	3

[7] OGRID No.	[8] Operator Name	[9] Elevation
371755	Percussion Petroleum Operating LLC	3461

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	15	19S	25E		660	North	1980	West	Eddy

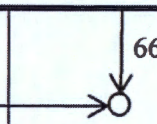
[11] Bottom Hole Location If Different From Surface

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

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]



[17] OPERATOR CERTIFICATION

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

Ryan 5/2/19
Signature Date

Ryan Barber
Printed Name

ryan@percussionpetroleum.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

February 25, 1996
Date of Survey

Signature and Seal of Professional Surveyor:
Dan Reddy

NM Cert. No. 5412
Certificate Number

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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811 S. First St., Artesia, NM 88210
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Phone: (505) 334-6178 Fax: (505) 334-6170
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Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

1. Operator Name and Address	2. OGRID Number
Percussion Petroleum Operating, LLC 919 Milam St., Suite 2475 Houston, TX 77002	371755
	3. API Number 30-015-28945

4. Property Code	5. Property Name	6. Well No.
	Osage Boyd 15 SWD	3

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
C	15	19S	25E		660	N	1980	W	Eddy

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	Pool Code
SWD; Cisco-Canyon	96186

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
				3461
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water

☒ **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
Old Surf.	14-3/4"	9-5/8"	36	1178'	1075 sx	Surface
Old Int.	8-3/4"	7"	26 & 23	8128'	1215 sx	Surface
Old. Liner	6-1/8"	4-1/2"	13.5	9345'	250 sx	7570'

Casing/Cement Program: Additional Comments

Propose to convert to SWD in the Cisco-Canyon interval. Set CIBP above Morrow perfs, perf and acidize Cisco-Canyon, set packer and tubing, and perform SRT.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular & rams	5000 psi	3500 psi	TBD

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: Ryan Barber	OIL CONSERVATION DIVISION Approved By:
Printed name: Ryan Barber	Title:
Title: Petroleum Engineer	Approved Date: / Expiration Date:
E-mail Address: ryan@percussionpetroleum.com	
Date: 5/2/19 / Phone: 979-292-6279	Conditions of Approval Attached

Percussion Petroleum Operating, LLC

Osage Boyd 15 SWD No. 3

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well Information	
Lease Name	Osage Boyd 15 SWD
API	30-015-28945
Well No.	3
Location	S-15 T-19S R-25E
Footage Location	660' FNL & 1,980' FWL

2.

a. Wellbore Description

Casing Information			
Type	Surface	Production	Liner
OD	9-5/8"	7"	4-1/2"
WT	0.352"	0.317", 0.362"	0.290"
ID	8.921"	6.276", 6.366"	3.920"
Drift ID	8.765"	6,151", 6.241"	3.795"
COD	10.625"	7.675", 7.875"	4.935"
Weight	36 lb/ft	23 & 26 lb/ft	13.5 lb/ft
Grade	J-55 STC	N-80/K-55 STC/LTC	N-80 BTC/LTC
Hole Size	14-3/4"	8-3/4"	6-1/8"
Depth Set	1,178'	8,128'	7,570'-9,345'

b. Cementing Program

Cement Information			
Casing String	Conductor	Production	Liner
Cement Type	-	-	Class H
Lead Cement Volume	-	-	250 sx
Total Volume	1,075 sks	1,215 sks	250 sks
TOC	Surface	Surface	7,650'
Method	Circulate to Surface	Circulate to Surface	Logged

3. Tubing Description

Tubing Information	
OD	3.5"
WT	0.254"
ID	2.992"
Drift ID	2.867"
COD	3.75"
Weight	9.3 lb/ft
Grade	L-80 Upset
Depth Set	0-7,500'

Tubing will be Internal Plastic Coated (IPC)

4. Packer Description

7" X 2-7/8" Non-permanent Nickle Plated Packer with 2-7/8" x 3-1/2" crossover

B. Completion Information

1. Injection Formation: Cisco/Canyon

2. Gross Injection Interval: 7,550' - 8,075'

Completion Type: Perforated interval

3. Originally drilled as an oil producer in Cisco/Canyon from 6/2/1996 - 2/22/2000. Cisco/Canyon perfs squeezed on 2/22/2000. Re-entry into Morrow, gas production from 6/8/ - Present

4. See the attached wellbore schematic.

5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Bone Spring	3,704'
Wolfcamp	5,484'
Strawn	8,312'
Atoka	8,650'
Morrow	8,808'

VI. Area of Review

One (1) well within a 1-mile radius penetrates the proposed Cisco-Canyon injection zone. It is an active saltwater disposal well owned by the applicant (Percussion Petroleum). There are no plugged wells in the proposed injection zone within a 1-mile radius. According to the New Mexico Oil Conservation Division, the active well is described below:

- Osage Boyd 15 SWD #001 (API: 30-015-28992)

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

   Average Volume: 8,500 BPD
   Maximum Volume: 10,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

   Average Injection Pressure: 1,133 PSI (surface pressure)
   Maximum Injection Pressure: 1,510 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, Pennsylvanian, and Morrow formations. Attached are produced water sample analyses taken from offset wells that feature samples from the Artesia, Bone Spring, Cisco, Glorieta-Yeso, Grayburg/San Andreas, Morrow, Pennsylvanian, San Andreas/Yeso, and Wolfcamp formations.

5. The disposal interval is non-productive. No water samples are available from the surrounding area within a 1-mile AOR.

VIII. Geological Data

Cisco Formation Lithology

The Cisco Formation is an Upper Pennsylvanian (Virgilian) carbonate reservoir that occurs below the Wolfcamp and above the Strawn formation in the Northwest Shelf of the Permian Basin. Reservoirs formed in the Northwest Shelf were created in shallow-water ramp structures across North Eddy County. Sediments in the Cisco are composed of carbonates and shales. The Northwest Shelf is more dolomitized than the equivalent succession in the rest of the Permian Basin, several beds of dolomite are present in this specific region of the Northwest Shelf. Carbonate facies of this formation include beach grainstones and lagoonal mudstones and packstones. Dolomitized fusulinid and crinoid wackestone-grainstones create reservoirs with optimal porosity and permeability. These characteristics allow for this formation to be a suitable saltwater disposal horizon.

Canyon Formation Lithology

The Canyon Formation is a Pennsylvanian Missourian aged carbonate deposited over preexisting platforms around basin margins. On the Northwest Shelf, the Canyon sequence is characterized by aggradation and progradation as this region of the Permian Basin was known to form in a platform to ramp structure in shallow water. The Canyon formation rests beneath the Cisco formation in the northern region of Eddy County. The Strawn is the lower confining layer for the proposed Osage Boyd 15 SWD No. 3. Facies such as phylloid-algal-dominated bioherms and ooid grainstones create high quality carbonate reservoirs in the Canyon formation. This carbonate reservoir provides an ideal disposal horizon.

A. Injection Zone: Cisco-Canyon Formation

Formation	Depth
San Andreas	700'
Glorieta	2,353'
Bone Spring	3,704'
Wolfcamp	5,484'
Cisco	6,440'
Canyon	7,602'
Strawn	8,312'
Atoka	8,650'
Morrow	8,808'
Mississippian Lime	9,236'

B. Underground Sources of Drinking Water

Two (2) water wells exist within one mile of the proposed well. Across the area, fresh water wells are usually drilled at an average depth of 195 feet. Water is found at an average depth of 87.5 feet generally producing from the Roswell Artesian Basin. Surface casing has previously been set to protect against USDW at 1,075'.

IX. Proposed Stimulation Program

Percussion plans to perforate optimal intervals determined by log analysis and acidize the new perforations with 110 barrels of 15% NEFE acid.

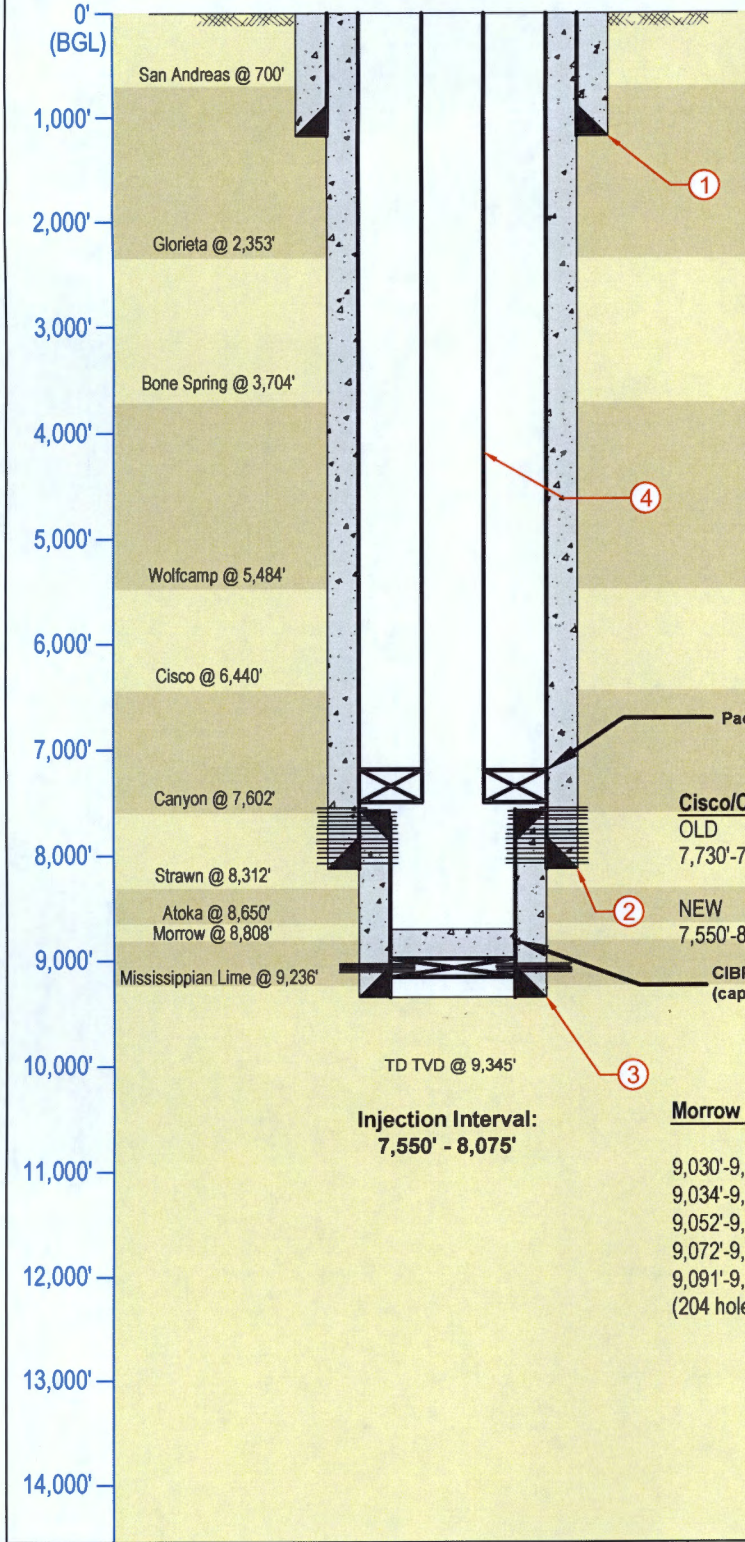
X. Logging and Test Data on the Well

Within the Oil Conservation Division's online files, the OCD possesses the following logs:

1. Compressed Neutron, Litho-Density, NGT
2. Laterolog-Micro CFL, Gamma Ray
3. Natural Spectroscopy, Gamma Ray
4. Three Detector Density, Neutron Compensated
5. Azimuthal Laterolog, Micro-CFL – GR

XI. Chemical Analysis of Fresh Water Wells

Attached is a map of the two (2) water wells that exist within one mile of the well location. Samples from the well will be obtained and analysis results will be provided as soon as possible. A Water Right Summary from the New Mexico Office of the State Engineer is attached for water wells RA-05450 and RA-05900.



Depth Reference	
RKB	3,461'
GL	3,476'

Casing Information			
Label	1	2	3
Type	Surface	Prodcution	Liner
OD	9-5/8"	7"	4-1/2"
WT	0.352"	0.312" 0.362"	0.290"
ID	8.921"	6,276" 6.366"	3.920"
Drift ID	8.765"	6.151" 6.241"	3.795"
COD	10.625"	7.675" 7.875"	4.935"
Weight	36 lb/ft	23 lb/ft 26 lb/ft	13.5 lb/ft
Grade	J-55 STC	N-80 / K-55 STC / LTC	N-80 LTC
Depth Set	1,178'	8,128'	7,570'-9,345'
Hole Size	14.750"	8.750"	6.125"
Cement	1,075 sks	1,215 sks	250 sks
TOC	Surface	Surface	7,650'

Cisco/Canyon Perfs
OLD
7,730'-7,810' (Cisco/Canyon): 6/21/1996 w/ 4" gun w/ 0.42" charges 2 jspf

NEW
7,550'-8,075' (Cisco/Canyon)

Injection Interval:
7,550' - 8,075'

Morrow Perfs (9,030' - 9,106')

9,030'-9,032' (Morrow): 5/9/2000 4jspf
9,034'-9,048' (Morrow): 5/9/2000 4jspf
9,052'-9,058' (Morrow): 5/9/2000 4jspf
9,072'-9,086' (Morrow): 5/9/2000 4jspf
9,091'-9,106' (Morrow): 5/9/2000 4jspf
(204 holes)

Tubing Information	
Label	4
Type	Injection Tubing
OD	3-1/2"
WT	0.254"
ID	2.992"
Drift ID	2.867"
COD	3.75"
Weight	9.3 lb/ft
Grade	L-80 Upset
Depth Set	7,500'

LONQUIST FIELD SERVICE
AUSTIN WICHITA
HOUSTON CALGARY
Texas License F-8952
3345 Bee Cave Road, Suite 201
Austin, Texas 78746
Tel: 512.732.9812
Fax: 512.732.9816

Percussion Petroleum Operating, LLC	**Osage Boyd 15 SWD No. 3 (Proposed)**		
Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy	
Location: 660' FNL, 1,980' FWL	**Site:**	**Status:** Morrow Gas Producer	
Survey/STR: S-15 T-19S R-25E	**Field:** SWD; Cisco-Canyon (96186)	**Serial No:**	
Well API No: 30-015-28945	**Project No:** 2020	**Date:** 5/15/2019	
Drawn: TFM	**Reviewed:** RKH	**Approved:**	
Rev No: 1	**Notes:** Configuration to change from Morrow gas producer to Cisco-Canyon SWD		