

# Initial Application Part I

Received: 12/05/2019

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

September 9, 2019

West Pearl State No. 1  
Offset Operators/Leaseholders/Surface Owners

Re: Application for Authority to Inject  
West Pearl State No. 1  
Unit Letter A, Section 2, T-20S, R-34E  
Lea County, New Mexico

Gentlemen:

Burns Xpress, LLC is submitting an application to the New Mexico Oil Conservation Division for an Authorization to Inject produced water into the above referenced wellbore which is currently temporarily abandoned.

The full application with all of the details of the proposed operation is included with this letter for your review. Objections to the application should be submitted to the Division Director, Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505 within 15 days of your receipt of this packet.

Questions regarding this proposal may be directed to me at any of the letterhead contacts.

Sincerely,

Burns Xpress, LLC

Kenyon Burns  
Manager

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

J7RX3-191205-C-1080

**APPLICATION FOR AUTHORIZATION TO INJECT**

pBL1933953106

I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_ **XX** \_\_\_\_\_ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ Yes \_\_\_\_\_ No

II. OPERATOR: **Burns Xpress, LLC** \_\_\_\_\_

ADDRESS: **P.O. Box 1244, 701 E. Ave. D, Lovington, NM 88260** \_\_\_\_\_

CONTACT PARTY: **Kenyon Burns** \_\_\_\_\_ PHONE: **(575)973-4850** \_\_\_\_\_

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 \_\_\_\_\_ **XX** \_\_\_\_\_ No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_

SWD-2341

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: **Kenyon Burns** \_\_\_\_\_ TITLE: **Manager** \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

E-MAIL ADDRESS: **kenyonburns1@gmail.com** \_\_\_\_\_

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

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

Side 2

## III. WELL DATA

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

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

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

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

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

## XIV. PROOF OF NOTICE

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

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

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

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

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

## INJECTION WELL DATA SHEET

OPERATOR: **Burns Xpress, LLC**WELL NAME & NUMBER: **West Pearl State No. 1**WELL LOCATION: **660' FNL & 550' FEL**  
FOOTAGE LOCATION**A**  
UNIT LETTER**2**  
SECTION**20S**  
TOWNSHIP**34E**  
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: **17.5"** Casing Size: **13.375"**Cemented with: **1500** sx. **or** ft<sup>3</sup>Top of Cement: **Circulated** Method Determined:Intermediate CasingHole Size: **12.25"** Casing Size: **9.625"**Cemented with: **2575** sx. **or** ft<sup>3</sup>Top of Cement: **Circulated** Method Determined:Production CasingHole Size: **8.5"** Casing Size: **7"**Cemented with: **2325** sx. **or** ft<sup>3</sup>Top of Cement: **9000'** Method Determined: **Estimated**Total Depth: **14,840'**Injection Interval**14,553'** feet To **14,840'** feet(Perforated or **Open Hole**; indicate which)

**INJECTION WELL DATA SHEET**Tubing Size: **4"** \_\_\_\_\_ Lining Material: **Plastic Coated** \_\_\_\_\_Type of Packer: **AS-1X Nickle Pated or Equivalent** \_\_\_\_\_Packer Setting Depth: **14,500'** \_\_\_\_\_

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

**Additional Data**

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes **XX** No

If no, for what purpose was the well originally drilled? **Devonian Production Test** \_\_\_\_\_

2. Name of the Injection Formation: **Devonian** \_\_\_\_\_

3. Name of Field or Pool (if applicable): \_\_\_\_\_

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. **See Schematics** \_\_\_\_\_

**Morrow (13,046'-13,118'), Penn(11,996'-12,024'), Bone Springs (9,528'-9,548'),**  
**Delaware (5,890'-5,970')** \_\_\_\_\_

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: **Bone Springs, Delaware** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**West Pearl State No. 1  
Form C-108 Additional Data**

- III. Data sheet is attached as Exhibit 'A'. A schematic of the current wellbore status is attached as Exhibit 'B'. A schematic of the "as completed" disposal well is attached as Exhibit 'C'.
- IV. This is a new project
- V. A State Land Office map is attached as Exhibit 'D1' showing wells and leases surrounding the proposed injection well. An OCD map with API numbers associated with each well is shown as Exhibit 'D2'. A commercial ownership of the entire area is attached as 'D3'.
- VI. No other wells penetrate the proposed injection interval within the area of review.
- VII. Data on the proposed operations:
1. Average daily rate: 7500 bbls.; Maximum daily rate: 15000 bbls.
  2. The system will be closed
  3. Average injection pressure: 300 psig; Maximum injection pressure: 3000 psig
  4. As this is proposed to be a commercial operation the source of injected fluid could be water produced from any of the formations in the vicinity including but not limited to Yates, Sever Rivers, Queen, Grayburg, San Andres, Delaware, Bone Springs and Wolfcamp.
  5. The Lea Devonian field is located approximately 1.5 miles southeast in Sections 11, 12, and 13 of Township 20S, Range 34E. The producing interval is 14,300' to 14,500'. A water analysis published by the Roswell Geological Society for the South Vacuum Devonian field along with a structure map are attached as Exhibits 'E1' and 'E2'.
- VIII. Injection will be into the Devonian horizon in the interval 14,553'-14,840'. The interval consists of limestone and dolomite. Formation characteristics as reported by the Roswell Geological Society are shown in Exhibit 'E2'. As there has been no recent development of this stratum 'E2' is the best available data. A search of the New Mexico State Engineer's Waters database reveals one water well as shown in Exhibit 'F'.
- IX. The open hole interval 14,553'-14,840'' will be stimulated with 5000 gallons 15% HCL-NE-FE acid.
- X. Logs and test data for this wellbore have been previously submitted.
- XI. Please see VIII above.
- XII. I have examined all available geologic and engineering data surrounding this wellbore and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. A list of surface owners, lease holders, and operators is shown in Exhibit 'G'. Proof of notice return receipts are attached.

By: \_\_\_\_\_  
Kenyon Burns

Date: \_\_\_\_\_

Exhibit 'B'  
Existing Temporarily Abandoned Wellbore  
04/11/2019

Elevation: 3692'GL KB: +15'

17-1/2" Hole

1,780' - 13 3/8", J-55, 54.5#, ST&C Casing  
Cemented w/1,500 sxs. Circulated to Surf.

12.25" Hole

5,250' - 9-5/8", C-75, 47#, LT&C Casing.  
Cemented w/2,575 sxs. Circulated to Surface

Top Sqz Perf @ 5,675' ( Sqz volume 290 sxs.)

Delaware Perfs 5,890'-5,910' & 5,947'-70'

CIBP @ 6,015'

Cement Retainer @ 6,078'

Bottom Sqz Perf @ 6,135'

TOC Estimated @ 9,000'

CIBP @ 9,400' w/35' cmt

Bone Spring Perfs 9,528'-48'

CIBP @ 10,880' w/35' cmt

Penn Perfs 11,996'-12,024'

CIBP @ 12,950' w/35' cmt

Morrow Perfs 13,046'-54' & 13,106'-118'

CIBP @ 14,318'

8-1/2" Hole

14,553' - 7", 26#, LT&C Casing.

Cemented w/2325 sx. TOC estimated @ 9,000'

Lop Tops:

Yates 3,588'

Queen 4,590'

Penrose 4,908'

Grayburg 5,060'

San Andres 5,738'

Delaware 6,404'

Bone Spring 8,128'

Wolfcamp 10,892'

Strawn 12,074'

Atoka 12,456'

Morrow 12,621'

Mississippian 13,561'

Barnett Shale 13,612'

Miss Lime 13,775'

Woodford Sh 14,387'

Silurian 14,562'

T.D. @ 14,840'

Burns Xpress

W. Pearl State No. 1

660'FNL & 550'FEL

Sec. 2, T-20S, R-34E

Lea County, N.M.



Exhibit 'C'  
Proposed Wellbore as Completed for Injection  
04/11/2019

Elevation: 3692'GL KB: +15'

17-1/2" Hole  
1,780' - 13 3/8", J-55, 54.5#, ST&C Casing  
Cemented w/1,500 sxs. Circulated to Surf.

12.25" Hole  
5,250' - 9-5/8", C-75, 47#, LT&C Casing.  
Cemented w/2,575 sxs. Circulated to Surface

Top Sqz Perf @ 5,675' (Sqz volume 290 sxs.)

Delaware Perfs 5,890'-5,910' & 5,947'-70'

Bottom Sqz Perf @ 6,135'

TOC Estimated @ 9,000'

Bone Spring Perfs 9,528'-48'

All production perforations to be  
squeezed and casing pressure tested  
prior to drillout out into open hole.

Penn Perfs 11,996'-12,024'

Morrow Perfs 13,046'-54' & 13,106'-118'

AS-1X Nickel Plated  
Packer or Equivalent  
Set @ 14,500'

8-1/2" Hole  
14,553' - 7", 26#, LT&C Casing.  
Cemented w/2325 sx. TOC estimated @ 9,000'

Lop Tops:

Yates	3,588'
Queen	4,590'
Penrose	4,908'
Grayburg	5,060'
San Andres	5,738'
Delaware	6,404'
Bone Spring	8,128'
Wolfcamp	10,892'
Strawn	12,074'
Atoka	12,456'
Morrow	12,621'
Mississippian	13,561'
Barnett Shale	13,612'
Miss Lime	13,775'
Woodford Sh	14,387'
Silurian	14,562'

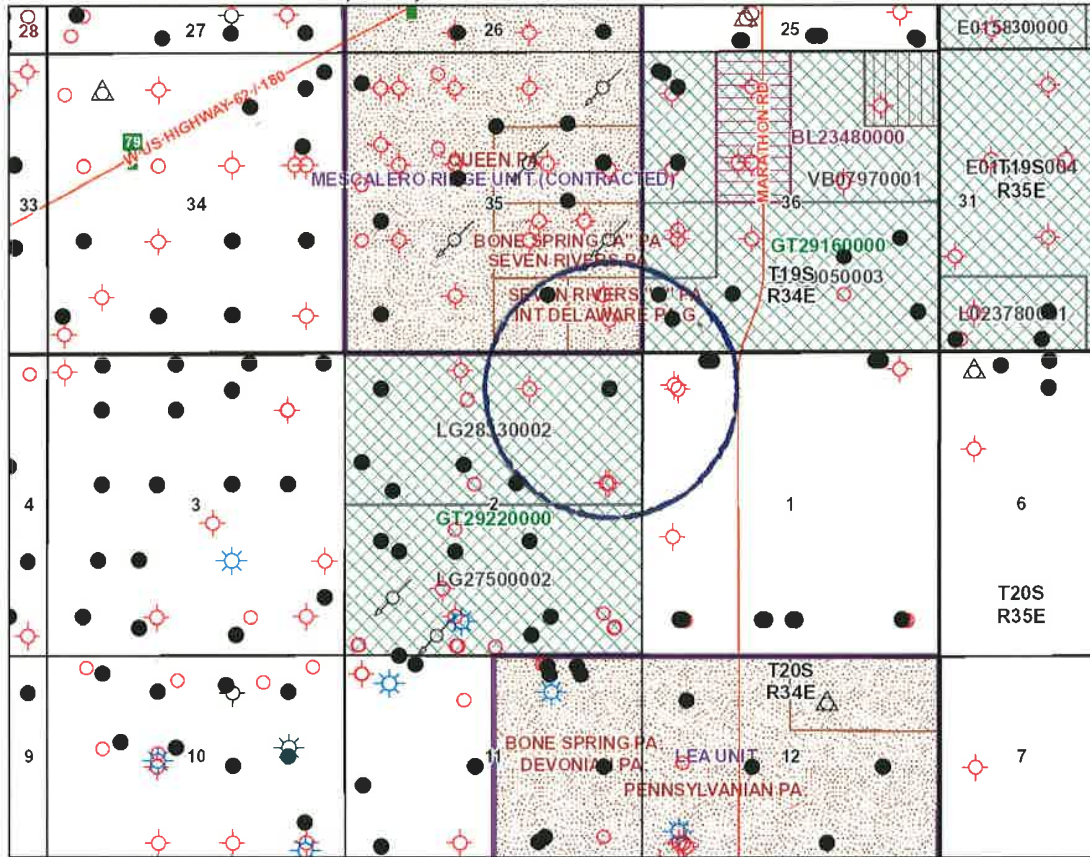
T.D. @ 14,840'

Burns Xpress
W. Pearl State No. 1
660'FNL & 550'FEL
Sec. 2, T-20S, R-34E
Lea County, N.M.



New Mexico State Land Office

## Oil, Gas, and Minerals Leases and Wells



- Plugged / Dry / Abandoned
- Cancelled / Not Drilled
- Highway Mileposts
- Detailed Roads
- Unit Agreement Boundaries
- Participating Areas in Units
- Commercial Leases
- Minerals Leases
- Oil and Gas Leases
- Agricultural Leases
- Energy Leases
- Potash District
- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

## Disclaimer:

The New Mexico State Land Office assumes no responsibility or liability for, or in connection with the accuracy, reliability or use of the information provided herein with respect to State Land Office data or data from other sources.

Data pertaining to New Mexico State Trust Lands are provisional and subject to revision, and do not constitute an official record of title. Official records may be reviewed at the New Mexico State Land Office in Santa Fe, New Mexico.

Created: 5/13/2019



West Pearl State #1  
Form C-108  
Additional Data  
Exhibit D1

## OCD Well Locations



5/13/2019, 11:36:34 AM

## Well Locations - Small Scale

- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

## Well Locations - Large Scale

- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2 Plugged
- CO2 Temporarily Abandoned

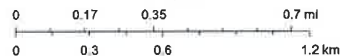
- Gas Active
- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active

- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled

- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New

- Salt Water Injection, Plugged
- Salt Water Injection Temporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged

1:18,056



Sources: Esri, HERE, Garmin, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBasis, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, OCD,

New Mexico Oil Conservation Division  
NM OCD Oil and Gas Map <http://nm-oil-and-gas.maps.arcgis.com/apps/webappviewer/> New Mexico Oil Conservation Division

West Pearl State #1  
Form C-108  
Additional Data  
Exhibit D2



West Pearl State #1  
Form C-108  
Additional Data  
Exhibit D3

## ROSWELL GEOLOGICAL SOCIETY SYMPOSIUM

Author: R. McDuffie and N. Barker  
 Affiliation: Marathon  
 Date: April 15, 1966

Field Name: Lea Unit Devonian  
 Location: T-20-S, R-34 & 35-E  
 County & State: Lea County, New Mexico

Discovery Well: The Ohio Oil Company #1 Lea Unit, NW/4 SW/4, Section 12, T-20-S, R-34-E  
 IPF AA 516.36 BOPD + 9.74 BAWPD, GOR 321-1, 7/8/60.

Exploration Method Leading to Discovery: Geophysical, reflection seismograph

## Pay Zone:

Formation Name: Siluro-Devonian Depth & Datum Discovery Well: 3774' KB, TD 14,735'  
 Lithology Description: Dolomite, fine-medium crystalline, sucrosic tan-gray

Approximate average pay: 215 gross 124 net Productive Area 1440 acres

Type Trap: Structural closure

## Reservoir Data:

6.5 % Porosity, 50 Md Permeability, 25 % Sw, 12 % So

Oil: X

Gas:

Water: 10,023 Na+K, 1520 Ca, 282 Mg, 18,200 Cl, 950 SO<sub>4</sub>, 183 CO<sub>2</sub>, or HCO<sub>3</sub>, Nil Fe

Specific Gravity 1.027 Resistivity .156 ohms @ 84 °F

Initial Field Pressure: 6046 psi @ -10,744 datum Reservoir Temp. 200 °F

Type of Drive: Strong water drive

Normal Completion Practices: Drill to TD & DST, set 4 1/2" liner through pay and perforate  
 4 SPF, 4500 gal. acid.

Type completion:

Normal Well Spacing 160 Acres

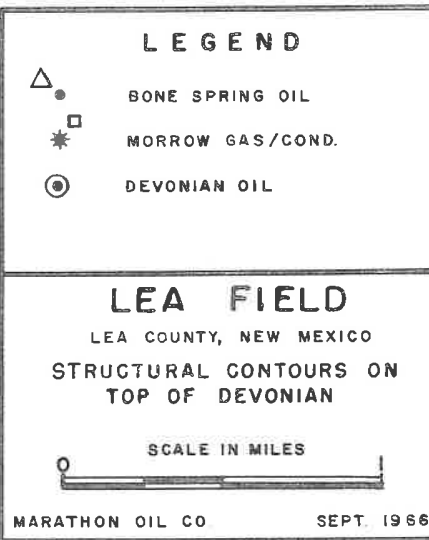
Deepest Horizon Penetrated & Depth: Siluro-Devonian 450' penetration @ 14,735'

Other Producing Formations in Field: Bone Springs Dolo @ 9500 & 10,200'  
 Morrow Sands @ 12,800' & 13,100'

## Production Data:

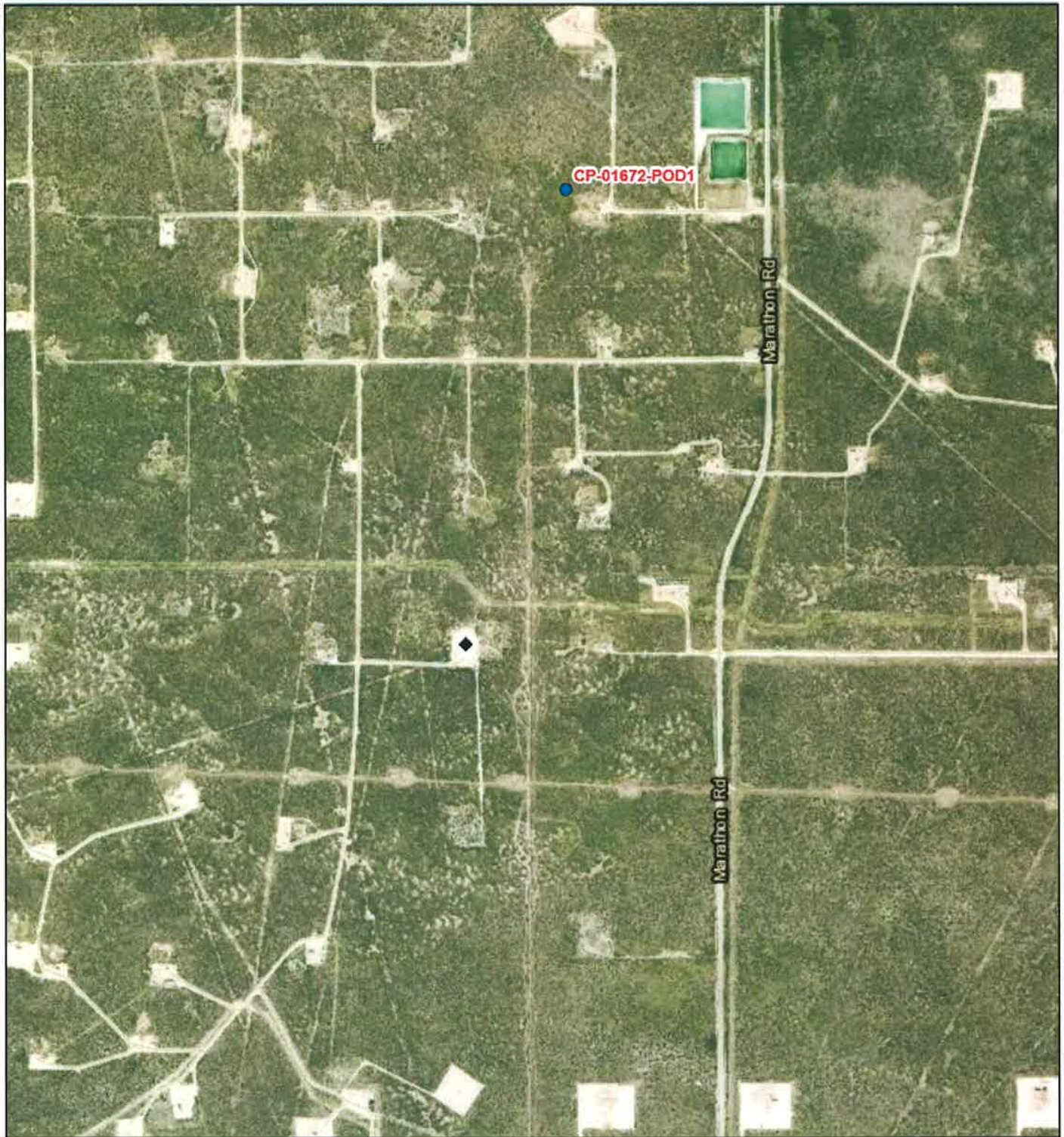
YEAR	TYPE	No. of wells @ yr. end		PRODUCTION OIL IN BARRELS GAS IN MMCF		YEAR	TYPE	No. of wells @ yr. end		PRODUCTION OIL IN BARRELS GAS IN MMCF	
		Prod.	S.I. or Abd.	ANNUAL	CUMULATIVE			Prod.	S.I. or Abd.	ANNUAL	CUMULATIVE
1960	OIL	1		46,960	46,960	1964	OIL	9		724,907	2,615,334
	GAS						GAS				
1961	OIL	5		384,774	431,734	1965	OIL	9		553,086	3,168,866
	GAS						GAS				
1962	OIL	6		700,398	1,132,132		OIL			West Pearl State #1 Form C-108 Additional Data Exhibit E1	
	GAS						GAS				
1963	OIL	9		758,295	1,890,427		OIL				
	GAS						GAS				





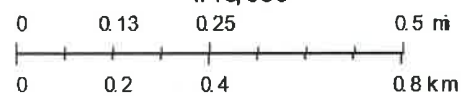
West Pearl State #1  
Form C-108  
Additional Data  
Exhibit E2

## OSE PUBLIC PRINT



9/8/2019, 11:14:38 AM

1:18,056



West Pearl State #1  
Form C-108  
Additional Data  
Exhibit F

Garmin  
SE GIS  
S/Arbus

Printed from Public Web Map  
Unofficial Map from OSE POD Locations Web Application

**WEST PEARL STATE NO. 1**

**Offset Operators/Leasholders/Surface Owners**

Armstrong Energy  
P.O. Box 1973  
Roswell, NM 88202

Cimarex Energy  
600 N. Marienfeld St.  
Midland, TX 79701

COG Operating, LLC  
600 W. Illinois Ave.  
Midland, TX 79701

Legacy Reserves Inc.  
303 Wall St., Suite 1800  
Midland, TX 79701

Linn Operating, Inc.  
600 Travis, Suite 1400  
Houston, TX 77002

Mack Energy Corp.  
11344 Lovington, Hwy  
Artesia, NM 88210

Magnum Hunter Production, Inc.  
600 N. Marienfeld St., Suite 600  
Midland, TX 79701

Matador Production Co.  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240

Pogo Oil & Gas Operating, Inc.  
1515 W. Calle Sur, Suite 174  
Hobbs, NM 88240

Rubicon Oil & Gas II, L. P.  
500 W. Wall, # 500  
Midland, TX 79701

Tandem Energy Corp.  
200 N. Lorraine St., Suite 400  
Midland, TX 79701

Tipton & Denton  
1008 W. Broadway  
Hobbs, NM 88240

XTO Holdings, LLC  
22777 Springwoods Village Pkwy  
Spring, TX 77389-1425

West Pearl State #1  
Form C-108  
Additional Data  
Exhibit G