

**From:** [Montgomery, Kelley A](#)  
**To:** [Murphy, Kathleen A, EMNRD](#)  
**Cc:** [Gago, Jose L](#)  
**Subject:** [EXT] RE: OXY PMXs  
**Date:** Wednesday, June 9, 2021 1:37:05 PM

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Will do.

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**From:** Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>  
**Sent:** Wednesday, June 9, 2021 2:35 PM  
**To:** Montgomery, Kelley A <Kelley\_Montgomery@oxy.com>  
**Cc:** Gago, Jose L <Jose\_Gago@oxy.com>  
**Subject:** [EXTERNAL] RE: OXY PMXs

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.**

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So is there someplace in previous NHU case exhibits where the water wells are discussed, and samples taken of wells in the unit, or a discussion of the wells being on city water systems? This would be similar to how you reference the geology section. I just don't know specifically where to find this and it would be useful for the review of the rest of the PMXs.

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**From:** Montgomery, Kelley A <[Kelley\\_Montgomery@oxy.com](mailto:Kelley_Montgomery@oxy.com)>  
**Sent:** Wednesday, June 9, 2021 1:30 PM  
**To:** Murphy, Kathleen A, EMNRD <[KathleenA.Murphy@state.nm.us](mailto:KathleenA.Murphy@state.nm.us)>  
**Cc:** Gago, Jose L <[Jose\\_Gago@oxy.com](mailto:Jose_Gago@oxy.com)>  
**Subject:** [EXT] RE: OXY PMXs

Hi Kathleen,

We pulled all of the historical water wells within 1 mile on the engineering website and attached two excel files. There is a lot of overlap between the two wells as they are located near each other. The majority of these wells are within the city limits or very close and the residents are all on city water. A 2014 city ordinance (below) required all domestic water wells within the city and those residences on city water to be P&A'd. I spoke with our operations personnel and they do not know of any active water wells within 1 mile of the wells. I found two wells on the list (highlighted) that were drilled after 2014 that could potentially still be active. I can have our operations folks check on these two if necessary? Please let me know. Kelley

## Chapter 13.28 - WATER WELLS

### 13.28.010 - Restrictions upon drilling of water wells within the City limits.

A.

It shall be unlawful for any person, firm, or entity to drill, deepen, or cause to be drilled, any water well or any well capable of producing water within the City of Hobbs without written consent of the Hobbs City Commission for good and sufficient cause shown.

B.

Pursuant to the Safe Drinking Water Act (SDWA) and applicable State and Federal rules and regulations governing cross connections, cross contamination, and physical separation of conflicting water systems, all water wells located on premises or property connected to the City's water distribution system shall be properly



**Subject:** [EXT] RE: OXY PMXs

Hi Kathleen,

We pulled up the GIS map and did not see any active water wells. Can you tell how you pulled up water well information?

Thank you for your help.

Kelley

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**From:** Murphy, Kathleen A, EMNRD <[KathleenA.Murphy@state.nm.us](mailto:KathleenA.Murphy@state.nm.us)>

**Sent:** Monday, June 7, 2021 4:22 PM

**To:** Montgomery, Kelley A <[Kelley\\_Montgomery@oxy.com](mailto:Kelley_Montgomery@oxy.com)>

**Subject:** [EXTERNAL] RE: OXY PMXs

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.**

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Kelly,

I am reviewing PMX 294 which are the NHU SA/G 632 and 312 wells, and applied for in October 2020.

Questions thus far:

On P 9 of the application, the 632 well will need to be edited that it is located in unit J, not B.

Also, the application states (pages 4, 8) there are no fresh water wells within a mile of the injection wells per field personnel. When I look on GIS at the OSE pods there are many wells within a mile, and several that are domestic. Please review this and advise.

Sincerely,

Kathleen Murphy

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**From:** Murphy, Kathleen A, EMNRD

**Sent:** Thursday, June 3, 2021 1:40 PM

**To:** Montgomery, Kelley A <[Kelley\\_Montgomery@oxy.com](mailto:Kelley_Montgomery@oxy.com)>

**Subject:** OXY PMXs

Kelly,

I am going to start working on the OXY PMXs—there are 10 I believe. I will do the NHU 312 and 632 first—PMX-294— as it was submitted in October of last year. Is there any preferred order of the batch that you submitted in April, I believe.

thanks

Kathleen Murphy

Petroleum Specialist- Advanced  
Geologist/GIS Analyst  
New Mexico Oil Conservation Division  
1200 South St Francis Drive  
Santa Fe, New Mexico 87505

505-365-3161

Email: [kathleena.murphy@state.nm.us](mailto:kathleena.murphy@state.nm.us)

\*\* Please use email during this stressful time\*\*



## ENSURING INJECTION IN TARGET INTERVAL

This letter is in response to the question from Phillip Goetze asking, *"how we will know that the well is injecting into the proper interval, since the wells are all at various angles to the formation tops"*.

All proposed injectors will be drilled and completed in a very well-known area with abundance of logs and well top data.

The following steps will be taken to ensure injection on the target formation:

- Casing will be run using centralizers to make sure the casing offsets the drill-hole
- Wells will be fully cemented to surface per NMOCD
- Prior to perforating the injection interval, the following cased-hole logs will be run:
  - CBL to ensure good cement and zonal isolation was achieved
  - GR/SGR for correlation and top identification
  - CNL for porosity and perf interval selection
- Once the well is completed and injection started, periodic Injection Profile Logs (IPLs) will be run to ensure injectant is staying in the desired interval

I will be happy to provide any additional information if needed.

Regards,

Dmitri Pistoun  
Senior Geological Advisor

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

API Number	Pool Code	Pool Name
Property Code	Property Name	Well Number
	NORTH HOBBS G/SA UNIT	979
OGRID No.	Operator Name	Elevation
	OCCIDENTAL PERMIAN LTD.	3639.6'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	31	18 SOUTH	38 EAST, N.M.P.M.		740'	NORTH	328'	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	32	18 SOUTH	38 EAST, N.M.P.M.		1459'	NORTH	720'	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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

	<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><u>Jose L. Gago</u> 01/20/2022 Signature Date</p> <p>Jose L. Gago Printed Name jose_gago@oxy.com E-mail Address</p>
<p>SURFACE LOCATION NEW MEXICO EAST NAD 1927 Y=623550.61 US FT X=854818.14 US FT LAT.: N 32.7089318° LONG.: W 103.1798082° NAD 1983 Y=623610.87 US FT X=895998.23 US FT LAT.: N 32.7090460° LONG.: W 103.1802933°</p>	<p>BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 Y=622845.00 US FT X=855876.00 US FT LAT.: N 32.7069610° LONG.: W 103.1763947° NAD 1983 Y=622905.18 US FT X=897056.11 US FT LAT.: N 32.7070750° LONG.: W 103.1768797°</p> <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from the notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p><u>ERRY J. AB</u> 15079 OCTOBER 5, 2021 Date of Survey</p> <p><u>ERRY J. AB</u> Professional Surveyor</p> <p><u>ERRY J. AB</u> 10/22/2021 Certificate Number 15079</p> <p>WO# 211005WL-h (KA)</p>



## C-108 APPLICATION FOR AUTHORIZATION TO INJECT ADMINISTRATIVE COMPLETENESS FORM

Well Name: \_\_\_\_\_

Applicant: \_\_\_\_\_

PO Number: \_\_\_\_\_

Admin. App. No: \_\_\_\_\_

C-108 Item	Description of Required Content	Yes	No
<b>I. PURPOSE</b>	Selection of proper application type.		
<b>II. OPERATOR</b>	Name; address; contact information.		
<b>III. WELL DATA</b>	Well name and number; STR location; footage location within section.		
	Each casing string to be used, including size, setting depth, sacks of cement, hole size, top of cement, and basis for determining top of cement.		
	Description of tubing to be used including size, lining material, and setting depth.		
	Name, model, and setting depth of packer to be used, or description of other seal system or assembly to be used.		
	Well diagram: Existing (if applicable).		
	Well diagram: Proposed (either Applicant's template or Division's Injection Well Data Sheet).		
<b>IV. EXISTING PROJECT</b>	For an expansion of existing well, Division order number authorizing existing well (if applicable).		
<b>V. LEASE AND WELL MAP</b>	AOR map identifying all wells and leases within 2 mile radius of proposed well, and depicting a 1/2 mile radius circle around any another projected injection well and a 1 mile radius circle around any other projected injection well in the Devonian formation.		
<b>VI. AOR WELLS</b>	Tabulation of data for all wells of public record within AOR which penetrate the proposed injection zone, including well type, construction, date drilled, location, depth, and record of completion.		
	Schematic of each plugged well within AOR showing all plugging detail.		
<b>VII. PROPOSED OPERATION</b>	Proposed average and maximum daily rate and volume of fluids to be injected.		
	Statement that the system is open or closed.		
	Proposed average and maximum injection pressure.		
	Sources and analysis of injection fluid, and compatibility with receiving formation if injection fluid is not produced water.		
	A chemical analysis of the disposal zone formation water if the injection is for disposal and oil or gas is not produced or cannot be produced from the formation within 1 mile of proposed well. Chemical analysis may be based on sample, existing literature, studies, or nearby well.		
<b>VIII. GEOLOGIC DATA</b>	Proposed injection interval, including appropriate lithologic detail, geologic name, thickness, and depth.		
	USDW of all aquifers overlying the proposed injection interval, including geologic name and depth to bottom.		
	USDW of all aquifers underlying the proposed injection interval, including the geologic name and depth to bottom.		





## C-108 (SWD) APPLICATION FOR AUTHORIZATION TO INJECT ADMINISTRATIVE COMPLETENESS FORM

Well Name: \_\_\_\_\_

Applicant: \_\_\_\_\_

PO Number: \_\_\_\_\_

Admin. App. No: \_\_\_\_\_

C-108 Item	Description of Required Content	Yes	No
<b>IX. PROPOSED STIMULATION</b>	Description of stimulation process or statement that none will be conducted.		
<b>X. LOGS/WELL TESTS</b>	Appropriate logging and test data on the proposed well or identification of well logs already filed with OCD.		
<b>XI. FRESH WATER</b>	Chemical analysis of fresh water from two or more fresh water wells (if available and producing) within 1 mile of the proposed well, including location and sampling date(s).		
<b>XII. AFFIRMATION STATEMENT</b>	Statement of qualified person endorsing the application, including name, title, and qualifications.		
<b>XIII. PROOF OF NOTICE</b>	Identify of all " <i>affected persons</i> " identified on AOR map in Section V, including all affected persons within 1/2 mile radius circle around any another projected injection well and a 1 mile radius circle around any other projected injection well in the Devonian formation.		
	Identification and notification of all surface owners.		
	BLM and/or NMSLO notified per 19.15.2.7(A)(8)(d) NMAC.		
	Notice of publication in local newspaper in county where proposed well is located with the following specific content:		
	<ul style="list-style-type: none"> <li>Name, address, phone number, and contact party for Applicant;</li> </ul>		
	<ul style="list-style-type: none"> <li>Intended purpose of proposed injection well, including exact location of a single well, or the section, township, and range location of multiple wells;</li> </ul>		
	<ul style="list-style-type: none"> <li>Formation name and depth, and expected maximum injection rates and pressures; and</li> </ul>		
<b>XIV. CERTIFICATION</b>	<ul style="list-style-type: none"> <li>Notation that interested parties shall file objections or requests for hearing with OCD no later than 15 days after the admin completeness determination.</li> </ul>		
	Signature by operator or designated agent, including date and contact information.		

Review Date\*:

Reviewer:

☐ Administratively COMPLETE

☐ Administratively INCOMPLETE

NOTES:

\* The Review Date is the date of administrative completeness determination that commences the 15 day protest period in 19.15.26.8 (C)(2) NMAC.





# FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V17]

PMX-311

DATE RECORD: First Rec: 11-4-21 Admin Complete: \_\_\_\_\_ or Suspended: \_\_\_\_\_ Add. Request/Reply: \_\_\_\_\_

ORDER TYPE: PMX Number: 311 Order Date: \_\_\_\_\_ Legacy Permits/Orders: R-6199

Well No. 979 Well Name(s): NH 6/SA Unit

API: 30-025-Pending Spud Date: New Drill New or Old (EPA): \_\_\_\_\_ (UIC Class II Primacy 03/07/1982)

Footages 740 FNL 328 FEL Lot \_\_\_\_\_ or Unit A Sec 31 Tsp 18S Rge 38E County Lea

Latitude: 32.709046 Longitude 103.1802933 Pool: Hobbs/Graybg-SA- Pool No.: 31920

Operator: OXY OGRID: 157984 Contact: K. Montgomery Email: \_\_\_\_\_

COMPLIANCE RULE 5.9: Total Wells: 606 Inactive: 0 Fincl Assur: ☒ Compl. Order? ☐ IS 5.9 OK? ☒ Date: 12-29-21

WELL FILE REVIEWED ☐ Current Status: new drill-diagonal

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☐ Logs in Imaging: \_\_\_\_\_

Planned Rehab Work to Well: new drill-diagonal well

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface		<u>13 1/2 → 9 3/8</u>	<u>1600</u>	<u>515</u>	<u>Circ to surface</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod		<u>8 3/4 → 7</u>	<u>4375</u>	<u>775</u>	<u>Circ to surface</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod					
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner					
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner					
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> OH / PERF			<u>4225-4739</u>		

Injection Lithostratigraphic Units	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho <input type="checkbox"/> Struc <input type="checkbox"/> Por. <input type="checkbox"/>			
Confining Unit: Litho <input type="checkbox"/> Struc <input type="checkbox"/> Por. <input type="checkbox"/>			
Proposed Inj Interval TOP: <u>See geology and</u>			
Proposed Inj Interval BOTTOM: <u>write up - injection</u>			
Confining Unit: Litho <input type="checkbox"/> Struc <input type="checkbox"/> Por. <input type="checkbox"/>			
Adjacent Unit: Litho <input type="checkbox"/> Struc <input type="checkbox"/> Por. <input type="checkbox"/>			

Completion/Operation Details:	
Drilled TD <u>4739</u>	PBTD <u>NEW PBTD</u>
NEW TD <u>4739</u>	NEW PBTD <u>NEW PBTD</u>
NEW Open Hole <input type="radio"/>	NEW Perfs <input checked="" type="radio"/>
Tubing Size <u>2 7/8</u> in.	Inter Coated? <input checked="" type="checkbox"/>
Proposed Packer Depth <u>4175</u> ft	
Min. Packer Depth <u>4125</u> (100-ft limit)	
Proposed Max. Surface Press. <u>1100</u> psi	
Admin. Inj. Press. <u>order</u> (0.2 psi per ft)	

**AOR: Hydrologic and Geologic Information**

POTASH: R-111-P ☒ Noticed? ☐ BLM Sec Ord ☐ WIPF ☐ Noticed? ☐ Salt/Salado T: \_\_\_\_\_ B: \_\_\_\_\_ NW: Cliff House fm \_\_\_\_\_

USDW: Aquifer(s) \_\_\_\_\_ Max Depth \_\_\_\_\_ HYDRO AFFIRM STATEMENT By Qualified Person ☐

NMOSE Basin: NW Shelf CAPITAN REEF: thru NE adj ☐ NA ☐ No. GW Wells in 1-Mile Radius? \_\_\_\_\_ FW Analysis? \_\_\_\_\_

Disposal Fluid: Formation Source(s) SA core 14981 Analysis? ☒ On Lease ☐ Operator Only ☐ Commercial ☒

Disposal Interval: Inject Rate (Avg/Max BWPD): \_\_\_\_\_ Protectable Waters? \_\_\_\_\_ Source: \_\_\_\_\_ System: Closed ☐ or Open ☐

HC Potential: Producing Interval? ☒ Formerly Producing? \_\_\_\_\_ Method: Logs ☒ DST ☐ P&A ☐ Other \_\_\_\_\_ 2-Mi Radius Pool Map ☐

AOR Wells: 1/2-M ☒ or ONE-M \_\_\_\_\_ RADIUS MAP/WELL LIST: Total Penetrating Wells: \_\_\_\_\_ [AOR Hor: \_\_\_\_\_ AOR SWDs: \_\_\_\_\_]

Penetrating Wells: No. Active Wells \_\_\_\_\_ No. Corrective? \_\_\_\_\_ on which well(s)? \_\_\_\_\_ Diagrams? \_\_\_\_\_

Penetrating Wells: No. P&A Wells 2 No. Corrective? \_\_\_\_\_ on which well(s)? P&A Diagrams? ☒

Induced-Seismicity Risk Assess: analysis submitted ☐ historical/catalog review ☐ fault-slip model ☐ probability \_\_\_\_\_

NOTICE: 1/2-M ☐ or ONE-M ☐ : Newspaper Date \_\_\_\_\_ Mineral Owner\* \_\_\_\_\_ Surface Owner \_\_\_\_\_ N. Date \_\_\_\_\_

RULE 26.7(A): Identified Tracts? ☐ Affected Persons\*: orig order R-6199F N. Date \_\_\_\_\_

\* new definition as of 12/28/2018 [any the mineral estate of United States or state of New Mexico; SWD operators within the notice radius]

Order Conditions: Issues: \_\_\_\_\_

Additional COAs: \_\_\_\_\_

Central Basin Platform, EQ - none, Faults - many NW-SE - E of S 31, in S 27