

Additional Information

Received 04/20/2021

From: [Montgomery, Kelley A](#)
To: [Goetze, Phillip, EMNRD](#); [Murphy, Kathleen A, EMNRD](#)
Cc: [Lamkin, Baylen, EMNRD](#); [Maxian, Amanda M](#); [Rose-Coss, Dylan H, EMNRD](#)
Subject: [EXT] RE: Hobbs Guzzler SWD No. 1 Application - Revised AOR Submittal
Date: Tuesday, April 20, 2021 4:54:00 PM
Attachments: [image001.png](#)
[Hobbs SWD 1 AOR 4-20-21.pdf](#)
[Hobbs Guzzler AOR Map 4-20-21.pdf](#)

Good afternoon Mr. Goetze and Ms. Murphy,

Please see attached revised AOR Table and Map for the above referenced well. I included 2 wells that were drilled in the same time period (late 2018) - Unit #670 (30-025-44823) and Unit #671 (30-025-44824) to complete the AOR. Both wells are cemented to surface on both surface and production strings. Please let me know if you require anything further on this application.

Thank you, Kelley

From: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Sent: Tuesday, April 13, 2021 3:45 PM
To: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Cc: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>; Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>; Lamkin, Baylen, EMNRD <Baylen.Lamkin@state.nm.us>; Rose-Coss, Dylan H, EMNRD <DylanH.Rose-Coss@state.nm.us>
Subject: [EXTERNAL] Hobbs Guzzler SWD No. 1 Application - Revised AOR Submittal

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

Ms. Maxian:

Good afternoon. I have looked at the recommendations of the technical reviewer and also have completed my review. You will need to provide a revised section of the application for the AOR well results. The second application being used for approval of the San Andres interval, dated 01/07/2019, shows no reference to the Unit #671 which was completed on 12/11/2018. This well was drilled with 7-inch casing set and cemented at a depth of 5955 ft. This well does not penetrate the proposed injection interval within the one-half mile AOR. Please update the two pages from the application, the AOR map and associated AOR well list, to reflect this information and provide this to OCD as a PDF so that it may be included in the application record.

Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Sent: Tuesday, April 06, 2021 9:30 AM
To: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Cc: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>; Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Subject: [EXTERNAL] RE: Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

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

Ms. Maxian:

I have been reviewing the draft order. I am attempting to fit this review within the constraints of other tasks with time limitations but I am attempting to have the recommendations to the Director next week. Your application is being reviewed within the context of several recent events that involve disposal wells, older EOR projects, and injection fluid coming to surface around plugged wells within the EOR project. The Director has requested that review be thorough for such type of situations where injection applications for disposal that penetrate active EOR projects. The Hobbs Guzzler qualifies due to the recompletion in the same lithostratigraphic unit for both disposal and enhanced recovery. Please contact either Ms. Murphy or myself if you do not have a response by the end of next week. Thank you. PRG

From: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Sent: Thursday, April 1, 2021 7:14 AM
To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Cc: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Subject: [EXT] RE: Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

Would you please give us an update on the well applications below or let me know who else can help?

Thank you,

Amanda Maxian

Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Maxian, Amanda M
Sent: Tuesday, March 23, 2021 10:15 AM
To: 'Goetze, Phillip, EMNRD' <Phillip.Goetze@state.nm.us>
Cc: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Subject: FW: Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

Mr. Goetze,

Would you please give us an update on the application for Hobbs Guzzler SWD 1 as well as the applications for North Hobbs Unit 312 and 632 submitted online?

API Numbers:

Hobbs Guzzler SWD 1, 30-025-43703
North Hobbs Unit 312, 30-025-27060
North Hobbs Unit 632, 30-025-37214



PO Number	Type	ID	Status	Fee Amount	Payment Type	Created	Submitter *	Modified
NNAG0-201028-C-1080	C-108	pBL2030732555	Under OCD Review	\$500.00	Credit Card	10/28/2020	Amanda Maxian	11/2/2020

Thank you,

Amanda Maxian

Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Maxian, Amanda M

Sent: Wednesday, March 10, 2021 5:01 PM

To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>

Subject: RE: Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

Would you give me an update on this application?

Thank you,

Amanda Maxian

Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Maxian, Amanda M

Sent: Thursday, March 04, 2021 8:08 AM

To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>

Subject: FW: Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

Mr. Goetze,

Thank you for your feedback. We have discussed the two points and comments are below.

Thank you,

Amanda Maxian

Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Restrepo, Carlos E <Carlos_Restrepo@oxy.com>

Sent: Tuesday, March 02, 2021 9:07 AM

To: Maxian, Amanda M <Amanda_Maxian@oxy.com>;

Subject: RE: Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

Amanda, Please find the answer to the NMOC question below, Please let me know what you think and if additional details are needed,

Thanks,

Carlos

"RE: Hobbs Guzzler SWD No. 1; 30-025-43702; Appl. no. pMAM1903249035; application to plugback and dispose in San Andres Fm

Ms. Maxian:

I am currently reviewing the additional information you provided to Ms. Murphy upon her request and the recommendations she has made for the draft permit. There are certain items in the application which I am evaluating along with other members of the technical staff.

One concern is the request to perforate above the shoe of the intermediate casing. The OCD is very cautious of this type of request especially for a disposal well that penetrates an active ER project that includes the use of an acid gas component as part of the recovery operation. Similar completion requests approved in disposal wells using the Delaware Mountain Group as an injection interval resulted in vertical migration of injection fluid due to the recompletion degrading the cement seal behind casing.

There is a ECP (External Casing Packer) just below the DV-TOOL set at 4593' to 4617' between the production casing (7" csg) and the intermediate casing (9-5/8" csg); This ECP is a mechanical packer that will prevent any vertical migration of fluid in this annulus in the event that the acid used during the stimulation of the perfs (shot across the intermediate casing) degrades the cement around that section.

Additionally, there is request for an injection pressure above the administratively-approved gradient of 0.2 psi/ft. OXY is stating that SRTs conducted in shallower intervals of the San Andres are appropriate for evaluating the lower section of the San Andres where disposal is proposed. However, OCD requested that OXY identify a confining zone to demonstrate separation between the two layers: the shallower San Andres ER interval and the deeper San Andres interval proposed for disposal. Since the confining zone differentiates and isolates each of these layers, the use of a SRT in one layer would not be appropriate for justifying a pressure increase in a different layer. The approved pressure for

We agree to adjust our request injection pressure to the standard 0.2 psi/ft gradient. We are also proposing to perform an SRT (Step Rate Test) soon after the well is recompleted and communicate to NMOCD if the test results show that an increase to the requested pressure could be granted.

OCD will attempt to have a final decision on the proposed perforated interval and contact you next week concerning the application and any COAs we may recommend. PRG"

From: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>

Sent: Thursday, February 25, 2021 11:59 AM

To: Maxian, Amanda M <Amanda_Maxian@oxy.com>

Cc: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>

Subject: [EXTERNAL] Disposition of the Hobbs Guzzler SWD No. 1 Application - Additional Information Requirement

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

RE: Hobbs Guzzler SWD No. 1; 30-025-43702; Appl. no. pMAM1903249035; application to plugback and dispose in San Andres Fm

Ms. Maxian:

I am currently reviewing the additional information you provided to Ms. Murphy upon her request and the

recommendations she has made for the draft permit. There are certain items in the application which I am evaluating along with other members of the technical staff.

One concern is the request to perforate above the shoe of the intermediate casing. The OCD is very cautious of this type of request especially for a disposal well that penetrates an active ER project that includes the use of an acid gas component as part of the recovery operation. Similar completion requests approved in disposal wells using the Delaware Mountain Group as an injection interval resulted in vertical migration of injection fluid due to the recompletion degrading the cement seal behind casing.

Additionally, there is request for an injection pressure above the administratively-approved gradient of 0.2 psi/ft. OXY is stating that SRTs conducted in shallower intervals of the San Andres are appropriate for evaluating the lower section of the San Andres where disposal is proposed. However, OCD requested that OXY identify a confining zone to demonstrate separation between the two layers: the shallower San Andres ER interval and the deeper San Andres interval proposed for disposal. Since the confining zone differentiates and isolates each of these layers, the use of a SRT in one layer would not be appropriate for justifying a pressure increase in a different layer. The approved pressure for

OCD will attempt to have a final decision on the proposed perforated interval and contact you next week concerning the application and any COAs we may recommend. PRG

From: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Sent: Thursday, February 25, 2021 7:27 AM
To: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Subject: [EXT] RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Kathleen,

Would you please let me know status of this application for Hobbs Guzzler SWD 1 and when it should be approved? Also, could you let me know same about NNAGO-201028-C-1080 for North Hobbs G/SA Unit 312 and 632?

Thank you,

Amanda Maxian
Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Maxian, Amanda M
Sent: Tuesday, January 05, 2021 6:16 PM
To: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Subject: RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Kathleen,

The plug numbers did get reversed between the diagram and the table, but depths are accurate. The perf interval is planned to be 4790-5898' which is above and below the 9 5/8" casing shoe set at 5020'.

Thanks,

Amanda Maxian
Regulatory Lead | Occidental Petroleum Corp
832-289-6336

From: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Sent: Tuesday, January 05, 2021 6:03 PM
To: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Subject: [EXTERNAL] RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

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Amanda,

I have the following questions on the revised well bore diagram.

I believe the plug depth, formation and measured depth matched with the numbers 1-7 are reversed.

Also, the perf interval is 4790 to 5898, but the intermediate casing was set at 5020 so the perfs would not go thru 2 casing strings I believe. Did the perf depths change with the setting of the intermediate casing to 5020? Or am I reading this incorrectly.

Thanks,

Kathleen Murphy

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

Email: kathleena.murphy@state.nm.us

** Please use email during this stressful time**



From: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Sent: Monday, December 21, 2020 8:40 AM
To: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Subject: [EXT] FW: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Hi Kathleen,

Attached is the diagram showing proposed configuration. The plug numbers were reversed but depths are from 10603' to 5898' to isolate zones from Woodford up to Glorieta.

If you need anything else, just let me know!

Thanks,

Amanda Maxian

Regulatory Lead | EOR & Midland Basin
(832) 289-6336

From: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Sent: Thursday, December 17, 2020 8:37 AM
To: Maxian, Amanda M <Amanda_Maxian@oxy.com>; Restrepo, Carlos E <Carlos_Restrepo@oxy.com>
Subject: Fwd: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Can you guys respond to this? Thanks

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From: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Sent: Wednesday, December 16, 2020 4:37:17 PM
To: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Subject: [EXTERNAL] RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

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Kelley,

I am working on the Hobbs Guzzler SWD #1 order. Is there a revised well bore diagram to reflect the plug back to the San Andres formation? Thanks

Kathleen

Kathleen Murphy

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

Email: kathleena.murphy@state.nm.us

** Please use email during this stressful time**



From: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Sent: Wednesday, November 18, 2020 12:26 PM

To: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Cc: Maxian, Amanda M <Amanda_Maxian@oxy.com>
Subject: [EXT] FW: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Kathy,

This is the link to the administrative order. Let me know if you need anything further.

I found this: http://ocdimage.emnrd.state.nm.us/Imaging/FileStore/santafe/wf/307960/30025437030000_3_wf.pdf

From: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Sent: Wednesday, November 18, 2020 11:51 AM
To: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Subject: [EXTERNAL] RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

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Kelley,

I cannot find a SWD number or a Order number in any of the documents I have been given recently for the Hobbs Guzzler SWD #1. I also could not find it in the GIS layer. Is there any data you can give me so I can look up and see the history on this? None of this has an API, location, nothing. thanks

From: Murphy, Kathleen A, EMNRD
Sent: Friday, September 18, 2020 12:35 PM
To: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Subject: RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Kelley, I talked to Phil and I will work on an Order for this for you.

From: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Sent: Thursday, September 17, 2020 4:35 PM
To: Murphy, Kathleen A, EMNRD <KathleenA.Murphy@state.nm.us>
Subject: [EXT] FW: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Hi Kathleen,

Thank you for the quick reply. Below is the last submittal we sent to the NMOCD regarding the Guzzler SWD application replying to a request for more information. Please let me know if you need additional information.

Regards,

Kelley
O: 713-366-5716
C: 832-454-8137

From: Montgomery, Kelley A
Sent: Friday, May 01, 2020 11:24 AM
To: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Subject: RE: Hobbs Guzzler SWD No. 1 - Additional Information Requirement

Hi Phil,

I hope you are doing well during these crazy times. We have finally pulled together answers to your questions below in a few attachments:

- The revised C108 with highlighted changes
- The 'Reference Support to summary under Section VII' which answers each question below
- Two step rate tests on nearby wells to support our injection pressure request

I appreciate your help! Take care and stay safe.

Regards,

Kelley Montgomery, PE

Regulatory Director
Occidental Oil and Gas
Office - 713.366.5716
Cell: 832.454.8137
kelley_montgomery@oxy.com

From: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>
Sent: Tuesday, August 13, 2019 11:27 AM
To: Montgomery, Kelley A <Kelley_Montgomery@oxy.com>
Cc: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>; Hood, April <April_Hood@oxy.com>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Subject: [EXTERNAL] Hobbs Guzzler SWD No. 1 - Additional Information Requirement

RE: Hobbs Guzzler SWD No. 1; 30-025-43702; Appl. no. pMAM1903249035; application to plugback and dispose in San Andres Fm

Kelley:

Per our conversation yesterday regarding this application, I have reviewed the content and find that additional geologic information will be required. It seems my memory of this application was incorrect and that a supplemental effort will be required. Mike first identified an issue with the submittal of the application in January and I concur that the information contained in the application does not satisfy the unique situation for this well (see attachment). Since the well is within a statutory unit established by Commission Order R-6198 with a defined "unitized interval" and Oxy has proposed to utilize the lower San Andres formation for disposal, the supporting documentation should be more comprehensive as to ensure that the injection will not impact the North Hobbs ER project. A few lines on page one of the C-108 application would not stand at Commission and the Division does not have access to the data used to assess these findings. Therefore, Division is requesting an expanded effort to support the summary found under Section VIII of the C-108 application. Please provide a geological and engineering summary by a qualified person that includes, at a minimum:

1. Correlation of the type log to logs in the immediate area of the Hobbs Guzzler (or if there is a log for the Guzzler that is shallower than the log submitted to the Division) summarized in a cross-section showing the injection zone is not within the "unitized interval";
2. That a confining layer, or other means of vertically isolating the migration of injection fluids, is present;
3. More detail of the content of the reservoir analysis referenced in the application; and
4. Examples of the IP tests used for the assessment.

Additionally, Oxy needs to address the conflict in the application for the proposed lower limit of the injection interval. The re-completion well diagram shows seven plugs with the shallowest being 5898 feet deep, also the depth of the deepest perforation. It references the plug location as isolation for the Glorieta Formation. Yet, the mud log provided in the Division well record has a formation top for the Glorieta as 5486 feet (TVD). If the lower limit of the San Andres is 5486 feet, then the order can only be issued for the San Andres interval with a total depth 5486 feet and not the application's proposed depth of 5900 feet. This would also require a modification of the well design to include a CIBP with cement cap that is no

deeper than 100 feet from 5486 feet (or less than or equal to 5586 feet).

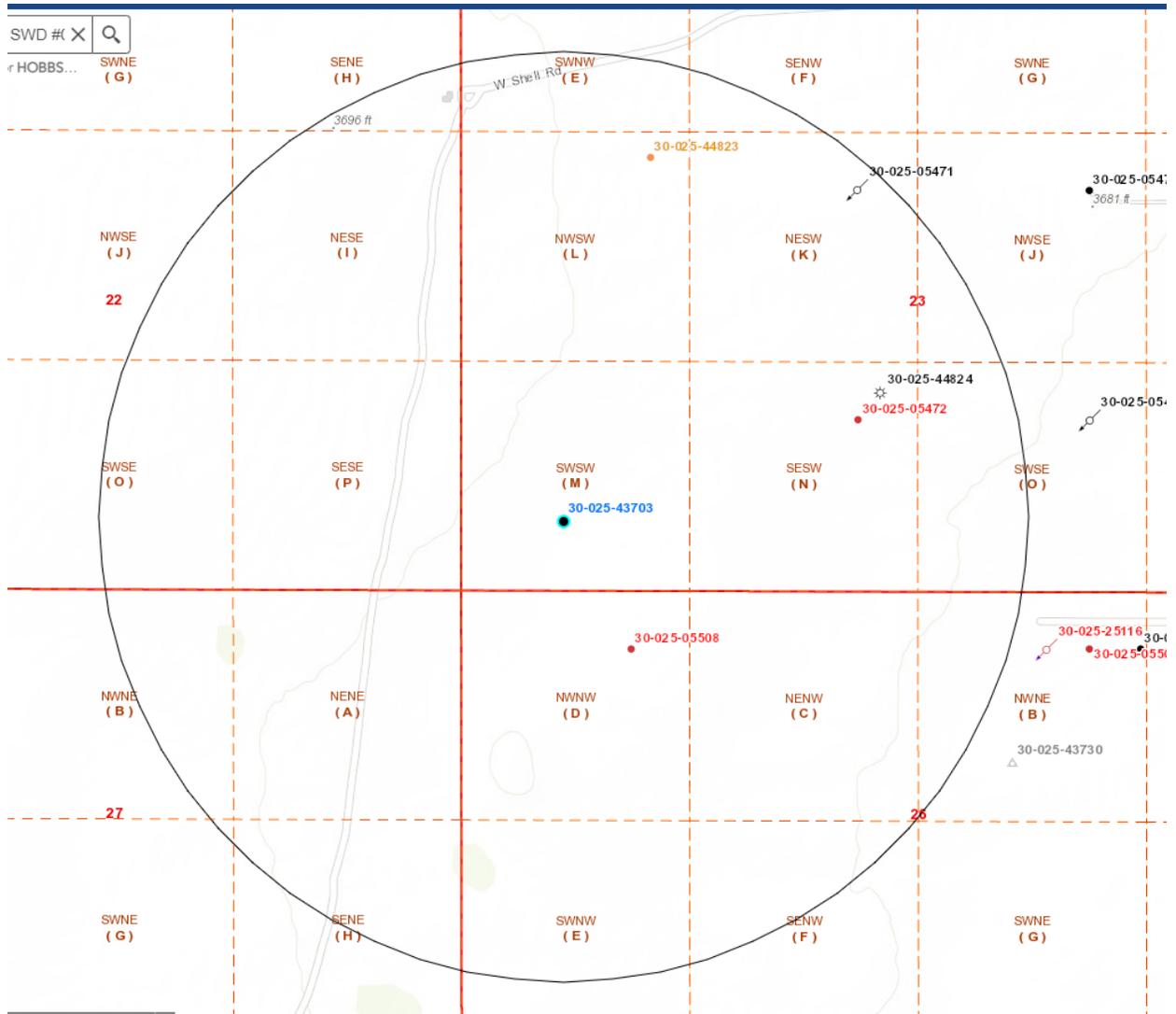
Other items are noted about the application:

- Section X of the C-108 states that logs will be filed after the well has been drilled and completed. Is this a fact or an oversight?
- The proposed MSIP is 2000 psi. The method to determine the MSIP for administrative orders is 0.2 psi/ft, thus making the MSIP 956 psi (0.2 psi x 4780 ft).
- The well construction shows the 9 5/8-inch casing set at 5020 feet and the 7-inch production casing set to 10650 feet. Is Oxy proposing perforating the shoe of the 9 5/8-inch casing as well as the location of the DV tool at 5098 feet in the 7-inch casing?

Take some time and review this request. Please contact me with any questions you may have concerning the content of this e-mail. PRG

Phillip Goetze, PG
Engineering Bureau, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive, Santa Fe, NM 87505
Direct: 505.476.3466
E-mail: phillip.goetze@state.nm.us





Hobbs Guzzler AOR Map

Hobbs Guzzler SWD No. 1

Area of Review

MAP LEGEND NUMBER	API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG N/S	FTG E/W	UNIT	SEC	TSHIP.	RNG.	DATE DRILLED	TOTAL TVD	TOTAL MD	HOLE SIZE	CSG SIZE	SET AT	SX CMT	CMT TOP	MTD	CURRENT COMPLETION	REMARKS	
1	30-025-05471	Occidental Permian LTD	North Hobbs G/SA Unit	231	I	Active	2310 S	2310 W	K	23	18 S	37 E	5/20/1959	4500	4500	12 1/4" 8 3/8"	8 5/8" 5 1/2"	310' 4330'	350 300	Surface 2630'	Circ Temp Survey	4120' - 4256' 4330' - 4500'	Perforations Open Hole	WELL DOES NOT PENETRATE 4,780' to 5,900' INTERVAL
2	30-025-05508	Cactus Drilling Company	Pan American State	1		PA	335 N	990 W	D	26	18 S	37 E		4359	4359									WELL DOES NOT PENETRATE 4,780' to 5,900' INTERVAL
3	30-025-05472	Occidental Permian LTD	North Hobbs G/SA Unit	241		PA	990 S	2310 W	N	23	18 S	37 E	6/19/1959	4390	4390									WELL DOES NOT PENETRATE 4,780' to 5,900' INTERVAL
4	30-025-44824	Occidental Permian LTD	North Hobbs G/SA Unit	671	P	Active	1139 S	2424 W	N	23	18 S	37 E	12/1/2018	5971	5971	13 1/2" 8 3/4"	9 5/8" 7"	1683' 5955'	980 1220	Surface Surface	Circ Circ	4324' - 4511'	Perforations	PBTD 4580' DV Tool @ 4039'
5	30-025-44823	Occidental Permian LTD	North Hobbs G/SA Unit	670	P	TA	2493 S	1094 W	L	23	18 S	37 E	1/30/2019	5169	5180	13 1/2" 8 3/4"	9 5/8" 7"	1558' 5180'	1025 1300	Surface Surface	Circ Circ	4470' - 4524'	Perforations	DV Tool @ 4052' PBTD 5122'

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 Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS
 Action 314026

CONDITIONS

Operator: NEW MEXICO ENERGY MINERALS & NATURAL RESOURCE 1220 S St Francis Dr Santa Fe , NM 87504	OGRID: 264235
	Action Number: 314026
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
pgoetze	None	2/13/2024