#### STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

#### APPLICATION OF CHEVRON U.S.A. INC. FOR A CLOSED LOOP GAS CAPTURE PILOT PROJECT, LEA COUNTY, NEW MEXICO

#### CASE NO. 24794 ORDER NO. R-23397

#### <u>ORDER</u>

The Director of the New Mexico Oil Conservation Division ("OCD"), having heard this matter through a Hearing Examiner on September 12, 2024, and after considering the testimony, evidence, and recommendation of the OCD Engineering Bureau staff, issues the following Order.

#### FINDINGS OF FACT

- 1. Due public notice has been given, and the OCD has jurisdiction of this case and its subject matter.
- 2. Chevron USA, Inc. ("Applicant") with this application ("Application") seeks to operate a closed loop gas capture ("CLGC") pilot project ("Project") which shall involve the intermittent injection of produced gas into selected production well(s) for the purpose of temporary storage and recovery during temporary interruptions of gas pipeline services ("CLGC event"). The Project is intended to prevent waste, reduce impacts associated with temporary interruptions of gas pipeline services, and to develop standard practices for similar projects.
- 3. At hearing, Applicant presented through affidavits and expert witness testimony the following evidence in support of the Application.
  - a. Applicant selected one or more producing oil and gas wells ("CLGC Well(s)") identified in Exhibit A in which to intermittently inject gas delivered by a common gas gathering system.
  - b. Applicant provided a statement regarding the CLGC well selection process and how the CLGC Well(s) will be sequenced and utilized in the Project.
  - c. Applicant proposed an area described in Exhibit A in which the Project shall be confined ("Project Area"). The Project Area is comprised of the lease(s) containing each CLGC Well and may include the adjacent lease(s) that are owned or operated by Applicant.
  - d. Applicant provided a general description and timeline of the Project.
  - e. Applicant provided a lease map which depicts the Project Area, lateral(s) of each CLGC Well, and the area which the gathering system incorporates including affected compressor stations.

- f. Applicant proposed a maximum allowable surface pressure ("MASP") of 1,250 pounds per square inch ("psi") for each CLGC Well which will not endanger the mechanical integrity of the well or fracture the formation.
- g. Applicant provided geologic and reservoir information to demonstrate that the injected fluids will enter only the pool(s) from which the CLGC Well(s) produce and will not affect correlative rights or migrate into other formations or protectable waters.
- h. Applicant provided construction details for each CLGC Well and every well with a segment within one-half (½) mile of any segment of a CLGC Well.
- i. The casing and cementing of each CLGC Well is or will be sufficient prior to injection to prevent leakage and prevent movement of formation or injected fluid from the injection zone into another zone or to the surface around the outside of a casing string in accordance with 19.15.26.9 NMAC.
- j. Applicant conducted or intends to conduct a mechanical integrity test ("MIT") upon each CLGC Well prior to injection which consisted of holding a pressure of at least one hundred ten percent (110%) of the proposed MASP or 500 psi, whichever is greater, within the annulus of the production casing.
- k. Applicant provided or intends to provide a cement bond log ("CBL") which demonstrates the placement of cement and cement bond of the production casing and the tie-in of the production casing with the next prior casing for each CLGC Well.
- 1. Applicant provided a summary of its operational plan to ensure safe operation and efficient response in the event of an emergency, including a supervisory control and data acquisition ("SCADA") system to monitor and collect relevant data.
- m. Applicant provided an affirmative statement that it has examined the available geologic and engineering data and found no evidence of open faults or other hydrologic connections between the injection zone and any underground source of drinking water.
- n. Applicant provided an affirmative statement that it has examined the available geologic and engineering data and determined that the total recoverable volume of hydrocarbons from the reservoir will not be adversely affected by the Project.
- o. Applicant identified the source(s) of the gas to be injected during the Project, conducted an analysis of it, and either proposed a corrosion prevention plan to assure the integrity of the CLGC Well(s) ("Corrosion Prevention Plan") or certified that a Corrosion Prevention Plan is unnecessary to assure the integrity of the CLGC Well(s).
- 4. Applicant provided a copy of the Application by certified or registered mail to the surface owner for each CLGC Well surface location and to each leasehold operator and other affected

person(s), as defined in 19.15.2.7(A) NMAC, within any tract wholly or partially contained within one-half ( $\frac{1}{2}$ ) mile of the well, in accordance with 19.15.26.8(B)(2) NMAC.

- 5. Applicant published public notice of the Application in a newspaper of general circulation in the county in which the Project is located, in accordance with 19.15.26.8(C)(1) NMAC.
- 6. Legal counsel for EOG Resources, Inc. appeared at the hearing but did not oppose the Application.
- 7. Applicant proposed a method to allocate gas production during the period in which injected gas is being recovered within the Application and after the hearing proposed an alternative method in its Supplemental Exhibit F. For the method proposed within the Application, a mass balance methodology would be utilized for CLGC events with durations less than seven (7) days and a GOR methodology would be utilized for CLGC events with durations more than seven (7) days. For the method proposed within Applicant's Supplemental Exhibit F, a GOR methodology would be utilized following all CLGC events.

#### **CONCLUSIONS OF LAW**

- 8. OCD does not have in place a process to administratively approve this Application. Accordingly, applications of this type are considered on a case-by-case basis and authorized by means of a hearing order.
- 9. Applicant is in compliance with 19.15.5.9(A) NMAC.
- 10. Applicant provided notice of the hearing in accordance with 19.15.4.9 NMAC.
- 11. Applicant's proposed method of allocation included in its Supplemental Exhibit F and that utilizes a GOR methodology to allocate gas production following all CLGC events is reasonable and shall provide adequate protection of correlative rights ("CLGC Allocation Plan").
- 12. Operation of the Project shall be in compliance with 19.15.26.10 NMAC.
- 13. Having considered the evidence, approval of the Project with specific conditions shall enable the Applicant to prevent waste while protecting correlative rights, public health, and the environment.

### <u>ORDER</u>

- 1. Applicant is authorized to operate a closed loop gas capture pilot project which shall involve the intermittent injection of gas into the production well(s) identified in Exhibit A and which have been approved by the OCD Engineering Bureau to be placed in service for the purpose of temporary storage and recovery to prevent waste, reduce impacts associated with temporary interruptions of gas pipeline services, and to develop standard practices for similar projects.
- 2. Applicant (OGRID No. 4323) is designated as the operator of the Project.
- 3. The Project Area shall comprise the lands described in Exhibit A.

- 4. The authority granted by this Order shall terminate two (2) years after the date of approval, provided however OCD, upon receipt of a written request submitted before the termination date and for good cause shown, may extend the authority granted by this Order. Required to be included with this request is a summary report.
- 5. The MASP for each CLGC Well shall be 1,250 psi. Applicant shall install equipment to limit the production casing pressure to less than or equal to the MASP and incorporate procedures into its operational plan to allow the safe reduction or cessation of injection to prevent the production casing pressure from exceeding the MASP.
- 6. Applicant shall allocate gas production during the period in which injected gas is being recovered as detailed in the CLGC Allocation Plan approved by OCD and that utilizes a GOR methodology following all CLGC events, provided however OCD, upon receipt of a written request from Applicant or upon its own determination that correlative rights may be harmed, may modify the CLGC Allocation Plan.
- 7. OCD has made the following modifications to the allocation method proposed by Applicant:
  - a. If a CLGC Well has had less than twenty-four (24) hours of injection over a seven (7) day period, then Applicant shall dedicate a test separator to the CLGC Well for a period not less than forty-eight (48) hours following the CLGC event.
  - b. If a CLGC Well has had more than twenty-four (24) hours of injection over a seven (7) day period, then Applicant shall dedicate a test separator to the CLGC Well for a period not less than seven (7) days following the CLGC event.
  - c. If one hundred percent (100%) of the injected gas is recovered from a CLGC Well during the above specified time period, then Applicant is no longer required to dedicate a test separator to it.
  - d. Following the above specified time period during which Applicant dedicates a test separator to a CLGC Well and if one hundred percent (100%) of the injected gas has not been recovered, then Applicant shall increase the frequency of well tests conducted on the CLGC Well as much as is feasible until the injected gas is no longer being recovered.
- 8. Applicant shall conduct MITs pursuant to 19.15.26.11 NMAC on each CLGC Well in accordance with the following requirements:
  - a. A MIT shall consist of isolating the production casing from the reservoir by setting a retrievable bridge plug or packer not less than one hundred (100) feet below the top of the upper confining layer identified in Exhibit B, loading the production casing with an inert fluid, and conducting a pressure test with a pressure drop of not more than ten percent (10%) over a thirty (30) minute period.
  - b. The appropriate inspection supervisor shall be notified no less than three (3) business days prior to conducting the MIT.

- c. A chart recorder with a maximum two (2) hour clock and an appropriate maximum pound spring and which has been calibrated within the six (6) months prior to conducting the test shall be used during each MIT. Copies of the chart shall be submitted to OCD with a Form C-103 within thirty (30) days following the test date.
- d. No more than one (1) year prior to submission of the Application, a MIT shall be conducted to a pressure of at least one hundred ten percent (110%) of the MASP or 500 psi, whichever is greater.
- e. No later than six (6) months after the Project has terminated, a MIT shall be conducted to a pressure of at least 500 psi.
- f. Additional MITs shall be conducted as directed by OCD.
- 9. For any CLGC Well that the Applicant intends to inject via the tubing, Applicant shall submit a Form C-103 for review and approval by OCD with a detailed summary of their downhole configuration prior to commencement of injection.
- 10. Applicant shall install and maintain a SCADA system approved by OCD. The information collected during the active Project shall be maintained and made available to OCD upon request for no less than five (5) years after the cessation of the project, including:
  - a. for each CLGC Well, the oil and gas production and injection flow rates, tubing pressure, and annulus pressure for all casing strings; and
  - b. for each well required by OCD as described in Exhibit B, the oil and gas production and injection flow rates and production casing pressure.
- 11. Prior to initially placing each CLGC Well into service and available for injection, Applicant shall submit a notice of intent on Form C-103, notify the OCD Engineering Bureau at ocd.engineer@emnrd.nm.gov, and await approval from the OCD Engineering Bureau to place the CLGC Well into service. The notice of intent shall include the following content:
  - a. The results of the most recent MIT conducted upon the CLGC Well.
  - b. Confirmation that OCD has on record a CBL that demonstrates the placement of cement and cement bond of the production casing and the tie-in of the production casing with the next prior casing.
  - c. Confirmation that equipment is installed to limit the injection pressure to less than or equal to the MASP.
  - d. Confirmation that equipment to monitor the casing annulus pressure(s) and injection rate is installed.
- 12. For each CLGC Well, Applicant shall submit a Form C-115 in accordance with 19.15.7.24 NMAC and 19.15.26.13 NMAC or as otherwise directed by OCD.

- 13. Applicant shall monitor the production casing pressure and injection rate while injecting into a CLGC Well during each CLGC event. If any indication that a leak in the production casing occurs, then Applicant shall:
  - a. immediately cease injection into the CLGC Well;
  - b. within twenty-four (24) hours notify the OCD Engineering Bureau at ocd.engineer@emnrd.nm.gov;
  - c. within thirty (30) days perform a MIT or other test approved by OCD demonstrating the well integrity of the CLGC Well and submit the results on Form C-103 to the OCD Engineering Bureau; and
  - d. not recommence injection into the CLGC Well until OCD grants approval.
- 14. Applicant shall monitor the casing annulus pressure(s) while injecting into a CLGC Well during each CLGC event. For casings other than the production casing whenever the pressure increases over normal operational conditions:
  - a. more than 50 psi within the surface casing annulus or 100 psi within any intermediate casing annulus, Applicant shall notify the OCD Engineering Bureau at ocd.engineer@emnrd.nm.gov within twenty-four (24) hours; and
  - b. more than 200 psi within the surface casing anulus or 500 psi within any intermediate casing annulus, Applicant shall:
    - i. immediately cease injection into the CLGC Well;
    - ii. within thirty (30) days, submit a Form C-103 to the OCD Engineering Bureau containing a summary of the event that includes the cause for the pressure increase, description of any remedial actions and a revised operational plan to reduce and maintain the pressure below the thresholds described in Subparagraph b of this Ordering Paragraph; and
    - iii. not recommence injection into the CLGC Well until OCD has approved the revised operational plan.
- 15. For each CLGC Well, production shall occur via the tubing.
- 16. Applicant shall follow the approved Corrosion Prevention Plan if applicable. If the composition of the injectant being injected into a CLGC Well becomes inherently more corrosive than the composition approved by OCD, Applicant shall:
  - a. immediately cease injection into the CLGC Well;
  - b. within twenty-four (24) hours, notify the OCD Engineering Bureau at ocd.engineer@emnrd.nm.gov;
  - c. within thirty (30) days, submit a Form C-103 to the OCD Engineering Bureau describing the alteration to the injectant's composition and a revised Corrosion

Prevention Plan which addresses the effect of the alteration or a certification from a qualified person that no revision to the Corrosion Prevention Plan is required; and

- d. not recommence injection into the CLGC Well until OCD has approved the revised Corrosion Prevention Plan or certification that no revision to the Corrosion Prevention Plan is required.
- 17. If the casing of a CLGC Well fails or fluids leak from or around the CLGC Well or any well with a segment within one-half (½) mile of any segment of a CLGC Well, Applicant shall:
  - a. immediately cease injection into every well with a segment within one-half (½) mile of any segment of the well from which fluids are leaking from or around;
  - b. immediately notify the OCD Engineering Bureau Chief at the emergency contact number;
  - c. within twenty-four (24) hours, notify the OCD Engineering Bureau at ocd.engineer@emnrd.nm.gov; and
  - d. take all necessary steps and actions required and approved by OCD to correct the failure or leakage.
- 18. Applicant shall provide to the OCD Engineering Bureau at ocd.engineer@emnrd.nm.gov, project status updates every three (3) months after the approval of this Order and a summary report no later than three (3) months after the cessation of the Project or upon request from OCD. Status updates shall include a summary of actions taken that are related to the Project and a summary of any identified problems and the corresponding mitigations or remedial actions. Status updates may but are not required to include summaries of individual CLGC events that are not related to an identified problem. The summary report(s) shall include:
  - a. a summary of all project-related activity;
  - b. a review and supporting data regarding any identified problems and the solutions implemented to solve or mitigate them;
  - c. for each CLGC event, a summary of the results, including for each CLGC Well in which injection occurred ("involved CLGC Well"):
    - i. average and maximum injection flow rates;
    - ii. injection duration; and
    - iii. total injected volume.
  - d. for each CLGC event, the following data graphed and tabulated with a resolution of at least: one (1) data point per hour beginning twenty-four (24) hours before the injection, four (4) data points per hour during the injection, and one (1) data point per hour ending twenty-four (24) hours after the injection:

- i. for each involved CLGC Well, the oil and gas production and injection flow rates and annulus pressure of all casing strings; and
- ii. for each offset well to each involved CLGC Well as described in Exhibit B, the oil and gas production and injection flow rates and production casing pressure.
- e. for each CLGC event, a recovery profile for each involved CLGC Well and for each offset well of a CLGC Well described in Exhibit B which experienced a change in production casing pressure or production during or immediately following the CLGC event. The volume of recovered gas shall be determined by taking the difference between the gas production following the injection and baseline production. The baseline production shall be determined by using production history to plot a production curve that estimates what the production would have been had injection not occurred. The recovery profile shall include:
  - i. a summary of the results, including the volume and percent of total production recovered and the duration of time required to achieve that recovery; and
  - ii. a tabulation of daily oil and gas production and baseline production totals; beginning a week before the CLGC event and ending when either the gas production is near equal to its baseline production or another CLGC event occurs for an involved CLGC Well.
- 19. Based on Applicant's allocation of production to leases and pools related to the Project, the following modifications shall be part of this Order provided that Applicant has demonstrated an effort to comply with the original requirements:
  - a. Applicant is exempt from providing data points for oil and gas production from CLGC Wells for time prior to a CLGC event which it is unable to measure but shall provide its best estimate for production and an explanation for why the production was unable to be measured.
  - b. Applicant is exempt from providing data points for oil and gas production from offset wells it is unable to measure but shall provide its best estimate for production and an explanation for why the production was unable to be measured.
- 20. This Order does not grant an exception to 19.15.12.9 NMAC. Applicant shall not commingle oil or gas production from different pools or leases or transport oil or gas production from a lease until approval to do so has been granted by OCD in accordance with 19.15.12.10 NMAC or 19.15.23.9 NMAC, as applicable.
- 21. Applicant shall comply with all applicable OCD rules and any other state, federal, or local law or regulation and if the Project causes any harm or damage or threat of harm or damage to protectable fresh water, public health, or the environment.
- 22. OCD retains jurisdiction of this case for the entry of such further orders as may be deemed necessary.

CASE NO. 24794 ORDER NO. R-23397

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

2. Froralo

**DATE:** 10/28/2024

GERASIMOS RAZATOS DIRECTOR (ACTING)

# **Exhibit A**

Case Number: 24794 Order Number: R-23397 Operator: Chevron USA, Inc. (4323)

## **Project Pools**

Pool Name	Pool Code
<b>RED TANK; BONE SPRING, EAST</b>	51687
WILDCAT G-06 S223322J; BONE SPRING	97846

## **Project Area (NMPM)**

UL or Q/Q	S-T-R
All	33-21S-33E
All	3-22 <b>S</b> -33E
All	4-22S-33E
All	9-22S-33E
All	10-22S-33E
All	15-22S-33E
<b>E/2</b>	16-22S-33E
All	22-22S-33E

### **CLGC Wells**

Well API	Well Name	UL or Q/Q	S-T-R	Pool
30-025-46644	DL 4 33 FEDERAL COM #004H	<b>E/2</b>	33-21S-33E	51687
30-023-40044	DL 4 55 FEDERAL COM #004H	<b>E/2</b>	E/2 4-22S-33E 510	51007
30-025-46645	DL 4 33 FEDERAL COM #005H	<b>E/2</b>	33-21S-33E	51687
30-023-40043	DE 4 55 TEDERAL COM #00511	<b>E/2</b>	4-22S-33E	51007
30-025-46646	DL 4 33 FEDERAL COM #006H	<b>E/2</b>	33-21S-33E	51687
30-023-40040	DE 4 55 TEDERAL COM #00011	E/2	4-22S-33E	51007
30-025-46647	DL 9 16 FEDERAL COM #016H	<b>E/2</b>	9-22S-33E	51687
30-023-40047	DL 9 16 FEDERAL COM #016H	<b>E/2</b>	16-22S-33E	2100/
30-025-46648	DL 9 16 FEDERAL COM #017H	<b>E/2</b>	9-22S-33E	51687
30-023-40040	DE / 10 FEDERAL COM #01/II	<b>E/2</b>	16-22S-33E	51007
30-025-46649	DL 9 16 FEDERAL COM #018H	<b>E/2</b>	9-22S-33E	51687
30-023-4004/	DE 7 10 FEDERAL COM #01011	<b>E/2</b>	16-22S-33E	51007
30-025-49078	DL 10 3 KRAKEN FEDERAL COM	<b>W</b> /2	3-22S-33E	97846
30-023-47070	#207H	<b>W</b> /2	10-22S-33E	77040
30-025-49079	DL 10 3 KRAKEN FEDERAL COM	<b>W</b> /2	3-22S-33E	97846
30-023-49079	#208H	<b>W</b> /2	10-22S-33E	77040
30-025-49080	DL 10 3 KRAKEN FEDERAL COM	<b>W</b> /2	3-22S-33E	97846
30-023-47000	#209H	<b>W</b> /2	10-22S-33E	77040
30-025-49081	DL 15 22 NARWHAL FEDERAL COM	<b>W</b> /2	15-22S-33E	97846
50-025-47001	#219H	<b>W</b> /2	22-22S-33E	27040
30-025-49082	DL 15 22 NARWHAL FEDERAL COM	<b>W</b> /2	15-22S-33E	97846
30-023-49082	#220H	<b>W</b> /2	22-22S-33E	7/040

30-025-49083 DL 15	DL 15 22 NARWHAL FEDERAL COM	W/2	15-22S-33E	
	#221H	<b>W</b> /2	22-22S-33E	97846
30-025-49906 <sup>1</sup>	DL 10 15 OGOPOGO FEDERAL COM	<b>E/2</b>	15-22S-33E	97846
	# <b>422H</b>	<b>E/2</b>	22-22S-33E	7/040
30-025-49907 D	DL 10 15 OGOPOGO FEDERAL COM	<b>E/2</b>	15-22S-33E	97846
	# <b>423</b> H	<b>E/2</b>	22-22S-33E	9/040
30-025-49908	DL 10 15 OGOPOGO FEDERAL COM	<b>E/2</b>	15-22S-33E	97846
	#424H	<b>E/2</b>	22-22S-33E	7/040

# **Exhibit B**

Case Number: 24794 Order Number: R-23397 Operator: Chevron USA, Inc. (4323)

	CLGC	Wells and Offset Wells
Well API	Well Name	MASP: 1,250 psi
30-025-46644	DL 4 33 FEDERAL COM	#004H
	Upper Confining Layer:	The Upper Avalon 2, tight carbonate interbedded with Silica-
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-46645	DL 4 33 FEDERAL COM #005H
Well API	Well Name	MASP: 1,250 psi
30-025-46645	DL 4 33 FEDERAL COM	#005H
	<b>Upper Confining Layer:</b>	The Upper Avalon 2, tight carbonate interbedded with Silica-
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-46644	DL 4 33 FEDERAL COM #004H
	30-025-46646	DL 4 33 FEDERAL COM #006H
Well API	Well Name	MASP: 1,250 psi
30-025-46646	DL 4 33 FEDERAL COM	
	<b>Upper Confining Layer:</b>	The Upper Avalon 2, tight carbonate interbedded with Silica-
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-46645	DL 4 33 FEDERAL COM #005H
	30-025-49078	DL 10 3 KRAKEN FEDERAL COM #207H
Well API	Well Name	MASP: 1,250 psi
30-025-46647	DL 9 16 FEDERAL COM	
		The Upper Avalon 2, tight carbonate interbedded with Silica-
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name

Well API	Well Name	MASP: 1,250 psi	
30-025-46648	DL 9 16 FEDERAL COM	И #017Н	
	Upper Confining Layer: The Upper Avalon 2, tight carbonate interbedded with Silica		
		rich mudstone found from approximately 9,116 ft TVD to	
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).	
	Offset Well API	Offset Well Name	
	30-025-46647	DL 9 16 FEDERAL COM #016H	
	30-025-46649	DL 9 16 FEDERAL COM #018H	
Well API	Well Name	MASP: 1,250 psi	
30-025-46649	DL 9 16 FEDERAL CON	И #018Н	
	Upper Confining Layer: The Upper Avalon 2, tight carbonate interbedded with Silica		
		rich mudstone found from approximately 9,116 ft TVD to	
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).	
	Offset Well API	Offset Well Name	
	30-025-46648	DL 9 16 FEDERAL COM #017H	
	30-025-49078	DL 10 3 KRAKEN FEDERAL COM #207H	
	30-025-49081	DL 15 22 NARWHAL FEDERAL COM #219H	
Well API	Well Name	MASP: 1,250 psi	
30-025-49078	DL 10 3 KRAKEN FEDH		
	Upper Confining Layer	: The Upper Avalon 2, tight carbonate interbedded with Silics	
		rich mudstone found from approximately 9,116 ft TVD to	
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).	
	Offset Well API	Offset Well Name	
	30-025-46646	DL 4 33 FEDERAL COM #006H	
	30-025-49079	DL 10 3 KRAKEN FEDERAL COM #208H	
	30-025-46649	DL 9 16 FEDERAL COM #018H	
Well API	Well Name	MASP: 1,250 psi	
30-025-49079	DL 10 3 KRAKEN FEDH		
	Upper Confining Layer: The Upper Avalon 2, tight carbonate interbedded with Silica-		
		rich mudstone found from approximately 9,116 ft TVD to	
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).	
	Offset Well API	Offset Well Name	
	Offset Well API 30-025-49078 30-025-49080	Offset Well Name DL 10 3 KRAKEN FEDERAL COM #207H DL 10 3 KRAKEN FEDERAL COM #209H	

Well API	Well Name	MASP: 1,250 psi
30-025-49080	DL 10 3 KRAKEN FEDI	
	Upper Confining Layer	: The Upper Avalon 2, tight carbonate interbedded with Silic
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-49079	DL 10 3 KRAKEN FEDERAL COM #208H
Well API	Well Name	MASP: 1,250 psi
30-025-49081	DL 15 22 NARWHAL FI	EDERAL COM #219H
	Upper Confining Layer	: The Upper Avalon 2, tight carbonate interbedded with Silic
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-46649	DL 9 16 FEDERAL COM #018H
	30-025-49082	DL 15 22 NARWHAL FEDERAL COM #220H
Well API	Well Name	MASP: 1,250 psi
30-025-49082	DL 15 22 NARWHAL FI	EDERAL COM #220H
	Upper Confining Layer	: The Upper Avalon 2, tight carbonate interbedded with Silic
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-49081	DL 15 22 NARWHAL FEDERAL COM #219H
	30-025-49083	DL 15 22 NARWHAL FEDERAL COM #221H
Well API	Well Name	MASP: 1,250 psi
30-025-49083	DL 15 22 NARWHAL FI	EDERAL COM #221H
	Upper Confining Layer	: The Upper Avalon 2, tight carbonate interbedded with Silic
		rich mudstone found from approximately 9,116 ft TVD to
		9,416 ft TVD at the Merchant 8 Federal #1 (30-025-36318).
	Offset Well API	Offset Well Name
	30-025-49082	DL 15 22 NARWHAL FEDERAL COM #220H
Well API	Well Name	MASP: 1,250 psi
30-025-49906	DL 10 15 OGOPOGO FI	
	Upper Confining Layer	: The First Bone Spring Lower, tight calcareous mudstone w
		silica-rich mudstone found from approximately 10,080 ft
		TVD to 10,450 ft TVD at the Merchant 8 Federal #1 (30-02)
		36318).
	Offset Well API	Offset Well Name
	30-025-49907	DL 10 15 OGOPOGO FEDERAL COM #423H

Well API	Well Name	MASP: 1,250 psi
30-025-49907	DL 10 15 OGOPOGO FE	EDERAL COM #423H
	Upper Confining Layer	The First Bone Spring Lower, tight calcareous mudstone with silica-rich mudstone found from approximately 10,080 ft
		TVD to 10,450 ft TVD at the Merchant 8 Federal #1 (30-025-
		36318).
	Offset Well API	Offset Well Name
	30-025-49906	DL 10 15 OGOPOGO FEDERAL COM #422H
	30-025-49908	DL 10 15 OGOPOGO FEDERAL COM #424H
Well API	Well Name	MASP: 1,250 psi
30-025-49908	DL 10 15 OGOPOGO FE	EDERAL COM #424H
	Upper Confining Layer	: The First Bone Spring Lower, tight calcareous mudstone wit
		silica-rich mudstone found from approximately 10,080 ft
		TVD to 10,450 ft TVD at the Merchant 8 Federal #1 (30-025-
		36318).
	Offset Well API	Offset Well Name
	30-025-49907	DL 10 15 OGOPOGO FEDERAL COM #423H