

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

**APPLICATION OF OXY U.S.A. INC. FOR  
AUTHORIZATION TO INJECT AND  
CREATION OF AN ENHANCED OIL  
RECOVERY PILOT PROJECT,  
EDDY COUNTY, NEW MEXICO.**

**CASE NO. 25054**

**OXY'S PRE-HEARING STATEMENT**

OXY USA Inc. (OGRID No. 16696) submits this Pre-Hearing Statement, pursuant to the rules of the Oil Conservation Division:

**APPEARANCES**

**APPLICANT**

Oxy USA Inc. ("Oxy")

**ATTORNEY**

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**APPLICANT'S STATEMENT OF THE CASE**

OXY seeks an order authorizing OXY to inject for purposes of an enhanced oil recovery ("EOR") pilot project in the Second Bone Spring Sand interval within the Bone Spring formation ("Pilot Project") in Eddy County, New Mexico. OXY proposes to initiate an Intra-Well Miscibility ("IWM") EOR injection pilot project within a single existing horizontal well completed in the

Second Bone Spring Sand interval within the Bone Spring formation, dedicated to a proposed project area comprised of approximately 960-acres, more or less, in Eddy County, New Mexico (the “Project Area”), as follows:

**NMPM: Township 24 South, Range 31 East**

Section 17: W/2  
Section 18: E/2 W/2; E/2

Intra-well Miscibility (“IWM”) is an Enhanced Oil Recovery (“EOR”) technique that uses miscible gas, produced hydrocarbon gas in this project, as an injectant to sweep the pore space of the depleted reservoir around a single horizontal wellbore that simultaneously serves as both the injection and production well. In this Pilot Project, injection and production are proposed to be conducted at the same time from a single well selected from among the six candidate wells within the Project Area.

While OXY anticipates that injection of produced gas into the selected IWM injection well will enhance hydrocarbon recovery from the same well, this is a new EOR technique. Accordingly, OXY seeks approval of this injection as a Pilot Project.

The interval that will benefit from the proposed EOR injection constitutes the Second Bone Spring Sand interval within the Bone Spring formation being the stratigraphic equivalent of approximately 9,819 true vertical feet (9,824 feet measured depth) to approximately 10,303 true vertical feet (10,308 feet measured depth) at the top of the Third Bone Spring Lime, as identified in the **Patton MDP1 “18” Federal 6H** (API No. 30-015-43854).

OXY requests authority to initiate this proposed Pilot Project to evaluate the feasibility of IWM EOR. Benefits of IWM EOR that OXY anticipates confirming include: (1) not disturbing additional surface; (2) making use of existing infrastructure and wellbores while avoiding waste

and increasing recovery; and (3) avoiding the need for unitization by conducting EOR injection and production operations within a single wellbore.

OXY requests authorization to operate this Pilot Project for a period of five years.

OXY seeks authority to use one of the following six existing horizontal wells within the Project Area to serve as the IWM EOR injection well that will inject produced gas into the Bone Spring formation:

- a. The **Patton MDP1 "18" Federal 5H** (API No. 30-015-44272)<sup>1</sup> with a surface hole location 160 feet FNL and 285 feet FEL (Unit A) in Section 18, Township 24 South, Range 31 East, and a bottom hole location 20 feet FSL and 1,035 feet FEL (Unit P) in Section 18, Township 24 South, Range 31 East, NMPM, Eddy, New Mexico;
- b. The **Patton MDP1 "17" Federal 1H** (API No. 30-015-44459)<sup>‡</sup> with a surface hole location 170 feet FNL and 846 feet FWL (Unit M) in Section 8, Township 24 South, Range 31 East, and a bottom hole location 196 feet FSL and 484 feet FWL (Unit M) in Section 17, Township 24 South, Range 31 East, NMPM, Eddy, New Mexico;
- c. The **Patton MDP1 "18" Federal 3H** (API No. 30-015-44333)<sup>‡</sup> with a surface hole location 170 feet FNL and 1,928 feet FWL (Unit C) in Section 18, Township 24 South, Range 31 East, and a bottom hole location 200 feet FSL

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<sup>1</sup> These wells are currently under an existing Closed-Loop Gas Capture Pilot Project Order (Order No. R-22208). If any one of them is selected as the IWM EOR injection well, OXY will remove it from Order No. R-22208, as a condition of approval and authorization to commence injection under this Pilot Project.

and 2,513 feet FWL (Unit N) in Section 18, Township 24 South, Range 31 East, NMPM, Eddy, New Mexico;

- d. The **Patton MDP1 “18” Federal 7H** (API No. 30-015-44273)<sup>‡</sup> with a surface hole location 150 feet FNL and 255 feet FEL (Unit A) in Section 18, Township 24 South, Range 31 East, and a bottom hole location 51 feet FSL and 402 feet FEL (Unit P) in Section 18, Township 24 South, Range 31 East, NMPM, Eddy, New Mexico;
- e. The **Patton MDP1 “17” Federal 2H** (API No. 30-015-44460) with a surface hole location 170 feet FNL and 906 feet FWL (Unit M) in Section 8, Township 24 South, Range 31 East, and a bottom hole location 26 feet FSL and 1,269 feet FWL (Unit M) in Section 17, Township 24 South, Range 31 East, NMPM, Eddy, New Mexico; and
- f. The **Patton MDP1 “17” Federal 3H** (API No. 30-015-44496) with a surface hole location 432 feet FSL and 2,232 feet FWL (Unit N) in Section 8, Township 24 South, Range 31 East, and a bottom hole location 195 feet FSL and 2,205 feet FWL (Unit N) in Section 17, Township 24 South, Range 31 East, NMPM, Eddy, New Mexico.

The **Patton MDP1 “18” Federal 5H** (API No. 30-015-44272) is the preferred candidate for IWM EOR injection at this time; however, OXY is continuing to evaluate the five other potential candidate injection wells within the Project Area. OXY therefore requests authorization to inject for all six candidate wells even though OXY intends to inject into only one well for purposes of this Pilot Project.

The maximum allowable surface injection pressure (“MASP”) for the Pilot Project is proposed to be 4,590 psi. The proposed average daily injection rate is expected to be approximately 1.5 MMSCF/day with an expected maximum injection rate of 3 MMSCF/day. The estimated maximum injection rate will be limited by the injection assembly in the selected well.

Injection along the horizontal portion of the selected wellbore will be in the Second Bone Spring Sand interval within Bone Spring formation through existing perforations and at the following approximate true vertical depth in one of the following wells:

- a. The **Patton MDP1 “18” Federal 5H** between 9,950 feet and 9,995 feet, within the Cotton Draw, Bone Spring [Pool Code 13367];
- b. The **Patton MDP1 “17” Federal 1H** between 9,982 feet and 9,983 feet, within the Cotton Draw, Bone Spring [Pool Code 13367];
- c. The **Patton MDP1 “18” Federal 3H** between 9,900 feet and 9,997 feet, within the Cotton Draw, Bone Spring [Pool Code 13367];
- d. The **Patton MDP1 “18” Federal 7H** between 10,020 feet and 10,040 feet, within the Corral Draw, Bone Spring [Pool Code 96238];
- e. The **Patton MDP1 “17” Federal 2H** between 9,987 feet and 9,994 feet, within the Cotton Draw, Bone Spring [Pool Code 13367]; and
- f. The **Patton MDP1 “17” Federal 3H** between 10,100 feet and 10,055 feet, within the Cotton Draw, Bone Spring [Pool Code 13367].

The source gas for injection will be from OXY’s Sand Dunes South Corridor Central Tank Battery (“CTB”) and will be comprised of gas produced from the Delaware, Bone Spring, and Wolfcamp pools. All leases and wells producing source gas for injection and the candidate IWM EOR injection wells within the Pilot Project are under a single permit authorizing surface

commingling (PLC-989-A). Additional source wells may be added over time under an approved surface commingling authorization. Each of OXY’s proposed IWM EOR injection wells are operated by OXY.

Approval of this application is in the best interests of conservation, the prevention of waste, and the protection of correlative rights.

**APPLICANT’S PROPOSED EVIDENCE**

<b>WITNESS Name and Expertise</b>	<b>ESTIMATED TIME</b>	<b>EXHIBITS</b>
Stephan Janacek, Petroleum Engineer	Approx. 20 minutes	Approx. 6
Eduardo Seoane, Completions Engineer	Approx. 20 minutes	Approx. 6
Stephanie Noonan, Petroleum Geologist	Approx. 20 minutes	Approx. 6

**PROCEDURAL MATTERS**

Oxy intends to present this case through witnesses and not through self-affirmed statements. Each witness will be available to respond to examination by Division Examiners.

Respectfully submitted,

HOLLAND & HART LLP

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

QUESTIONS

Action 416735

**QUESTIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 416735
	Action Type: [HEAR] Prehearing Statement (PREHEARING)

**QUESTIONS**

<b>Testimony</b>	
<i>Please assist us by provide the following information about your testimony.</i>	
Number of witnesses	<i>Not answered.</i>
Testimony time (in minutes)	<i>Not answered.</i>