

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

**APPLICATION OF OCCIDENTAL PERMIAN LIMITED PARTNERSHIP TO AMEND ORDERS R-4934 AND R-4934-E GOVERNING THE SOUTH HOBBS GRAYBURG-SAN ANDRES PRESSURE MAINTENANCE PROJECT TO ALLOW THE INJECTION OF CARBON DIOXIDE AND PRODUCED GASES, TO MODIFY THE SURFACE INJECTION PRESSURE, TO OBTAIN OTHER RELIEF, AND TO QUALIFY THIS EXPANSION FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE NEW MEXICO ENHANCED OIL RECOVERY ACT, LEA COUNTY, NEW MEXICO.**

**CASE NO. 14981  
ORDER NO. R-4934-F**

**ORDER OF THE COMMISSION**

This case comes before the New Mexico Oil Conservation Commission ("Commission") on the application of Occidental Permian Limited Partnership ("Oxy") to amend Order No. R-4934, as amended. The Commission, having conducted a hearing on May 9 and 10, 2013, at Santa Fe, New Mexico, and having considered the testimony and the record in this case, enters the following findings, conclusions and order.

**THE COMMISSION FINDS THAT:**

1. Due public notice has been given, and the Commission has jurisdiction of this case and its subject matter.
2. Under Order No. R-4934, issued in Case No. 5372 on December 3, 1974, the Commission authorized the injection of water into the Grayburg and San Andres formations and adopted Special Rules and Regulations for the South Hobbs Grayburg-San Andres Pressure Maintenance Project for certain acreage in Townships 18 and 19 South, Range 38 East, Lea County, New Mexico.
3. In May of 1984, under Order No. R-4934-E, the New Mexico Oil Conservation Division ("Division") amended the Special Rules and Regulations governing the South Hobbs Grayburg-San Andres Pressure Maintenance Project to what they are currently today.
4. Occidental Permian Limited Partnership is the current operator of the South Hobbs Grayburg-San Andres Pressure Maintenance Project. The acreage subject to the current waterflood operations consists of the following acreage in Lea County, New Mexico (hereinafter the "South Hobbs Project Area"):

TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM

Section 33: SE/4 SE/4  
Section 34: SW/4 and W/2 NW/4

TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM

Sections 3, 4, and 5: All  
Section 6: N/2 and SE/4  
Section 8: N/2 NW/4, E/2 NE/4, and N/2 SE/4  
Section 9: N/2, N/2 SW/4, and SE/4  
Section 10: All  
Section 11: SW/4 SW/4  
Section 14: W/2 NW/4  
Section 15: All  
Section 16: NE/4 NE/4

5. In April of 2009, under Administrative Order IPI-340, the Division approved Oxy's request to utilize 1100 psi as the maximum surface injection pressure for water in the South Hobbs Project Area.

6. Oxy is also the operator of the North Hobbs Grayburg San Andres Unit, which is adjacent to and to the north of the South Hobbs Project Area. The North Hobbs Grayburg San Andres Unit and the South Hobbs Project Area are collectively referred to as the "Hobbs Field".

7. Under Order No. R-6199-B, entered in Case No. 12722 on October 22, 2001, the Division authorized the conversion of a portion of the North Hobbs Grayburg San Andres Unit (the "Phase I Area") from a waterflood pressure maintenance project to a carbon dioxide gas tertiary recovery injection project in the Grayburg and San Andres formations.

8. Oxy now seeks authority to convert the South Hobbs Project Area to a similar carbon dioxide gas tertiary recovery injection project, and therefore requests the following relief from the Commission:

- (a) to approve the injection of carbon dioxide (CO<sub>2</sub>), and the reinjection of produced CO<sub>2</sub>, water and gases including methane, natural gas liquids and hydrogen sulfide (H<sub>2</sub>S) in the South Hobbs Project Area;
- (b) to provide for a surface injection pressure limit for CO<sub>2</sub>, produced gases and water based on friction pressure losses down the tubing and the lower density of gas as compared to water as follows: 1100 psi for water injection, 1250 psi for CO<sub>2</sub> only injection, and 1770 psi for produced gas injection;
- (c) to the extent that a limiting gas-oil ratio applies to an enhanced oil recovery project, to increase that limit above that allowed by 19.15.20.13 NMAC to 75,000 cubic feet of gas per barrel of oil produced;

- (d) to allow an exception to the one-year commencement of injection required by 19.15.26.12.C NMAC for the South Hobbs Project Area;
- (e) to provide that for any approved injection well that commences injection operations more than five years after approval of this request, that Oxy submit a statement that there have been no substantive changes to the area-of-review information submitted to the Division with its Application, or a statement describing any substantive changes;
- (f) to provide for a five-year frequency for the mechanical integrity tests required for temporarily-abandoned wells that are equipped with real-time pressure monitoring devices pursuant to 19.15.25.13.E NMAC;
- (g) to modify the packer setting depth required by Rule 10 of the Special Rules for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project to allow for the packer to be set anywhere above the uppermost injection perforations or casing shoe, provided the packer is set below the top of the Grayburg Formation;
- (h) to remove the requirement in Rule 15 of the Special Rules for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project that a cement bond log be run prior to placing a well on injection or at any time the rods and/or tubing are pulled from any producing well;
- (i) to allow for the administrative approval of additional injection wells into the Grayburg and San Andres formations underlying the South Hobbs Project Area; and
- (j) to qualify this expansion of injection authority for the recovered oil tax rate pursuant to the New Mexico Enhanced Oil Recovery Act, NMSA 1978, Sections 7-29A-1 to 7-29A-5 (Laws 1992, Chapter 38, Sections 1 through 5) ("Recovery Act"), and the rules of the Commission, 19.15.6 NMAC ("Rules").

9. The Division appeared at the hearing, examined Oxy's witnesses, and offered a Pre-Hearing Statement with sworn written testimony from Richard Ezeanyim, a registered petroleum engineer and a Bureau Chief within the Division.

10. Malcolm Coombes, a surface owner within the South Hobbs Project Area, submitted a Pre-Hearing Statement and opposed the application because the project would endanger human health and safety and possibly harm the value of his land. Mr. Coombes appeared at the hearing through counsel. After examining Oxy's initial witness, Mr. Coombes, through his counsel, indicated that he had no objection to Oxy's application and did not participate further in the case.

11. Big Al Oil & Gas submitted a letter protesting the application but did not appear at the hearing or offer any testimony or exhibits. The Economic Development Corporation of Lea County submitted a resolution in support of the application.

12. Oxy presented seven witnesses in support of its application: Richard Foppiano, a petroleum engineer employed by Oxy with expertise in oil and gas regulatory matters and health and safety issues; Jerad Brockman, Oxy's project manager for the South Hobbs Project Area with expertise in oil and gas production engineering; Randy Stillwell, a senior geologic advisor for Oxy with expertise in petroleum geology; Scott Hodges, Oxy's operations supervisor for the South Hobbs Project Area; Krishna Chokkarapu, a facilities and construction engineer employed by Oxy with special expertise in the design and engineering of CO<sub>2</sub> and produced gas surface facilities for EOR projects; Kelley Montgomery, Oxy's regulatory consultant with expertise in oil and gas production engineering and environmental engineering; and Pat Sparks, Oxy's petroleum landman who directed a team of brokers to address the notice requirements for the application. These witnesses discussed and presented power-point slides, maps, diagrams, and other material that comprised a total of seventeen exhibits.

13. Oxy's witnesses provided testimony and presented exhibits addressing the following topics:

- (a) Oxy's extensive experience with oil and gas operations, including the handling of H<sub>2</sub>S and CO<sub>2</sub> flooding operations in the Permian Basin;
- (b) How enhanced oil recovery projects utilize the injection of CO<sub>2</sub>, water and produced gases to recover additional oil that is not recovered by primary and secondary recovery operations;
- (c) How enhanced oil recovery projects are designed and implemented;
- (d) How the gas injection operations necessary for enhanced oil recovery projects differ from acid gas disposal operations;
- (e) The capital costs and associated development plans to convert the South Hobbs Project Area from a secondary waterflood project to an enhanced oil recovery project;
- (f) The injection and production well patterns Oxy intends to utilize in the South Hobbs Project Area;
- (g) The location and nature of the additional surface facilities Oxy intends to install in the South Hobbs Project Area;
- (h) The projected timetable for the installation of key components of the enhanced oil recovery project and the anticipated commencement date of CO<sub>2</sub> injection operations;

- (i) The effect that an enhanced oil recovery project has on the gas-oil ratio over time;
- (j) How step rate tests were utilized to determine the appropriate surface injection pressure limits for water, CO<sub>2</sub> and produced gases;
- (k) The injection pressure control devices Oxy intends to utilize on its injection wells;
- (l) The redundant pressure controls Oxy intends to utilize in the South Hobbs Project Area;
- (m) Oxy's supervisory control and data acquisition (SCADA) system, and how it will be utilized to provide constant monitoring of temperature, water content, pressures, H<sub>2</sub>S levels and gas content in the South Hobbs Project Area;
- (n) How Oxy intends to monitor the reservoir pressure to ensure that it remains just above the miscibility pressure;
- (o) The need for additional flexibility in the packer setting depth than what is currently allowed by Rule 10 of the Special Rules for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project;
- (p) The geology underlying the South Hobbs Project Area, the location of the fresh water zones and the impermeable barriers that exist between the injection interval and the fresh water zones;
- (q) That a Division approved H<sub>2</sub>S contingency plan is in place that includes the South Hobbs Project Area;
- (r) Oxy's downhole corrosion mitigation efforts, including the use of corrosion resistant tubing, packers and inert packer fluid in the annulus;
- (s) Oxy's mechanical integrity program for the design, engineering, construction and maintenance of CO<sub>2</sub> and produced gas injection facilities for enhanced oil recovery projects;
- (t) The NACE Standard MRO175 set forth in NMAC 19.15.11.14 and Oxy's compliance with that standard for the injection facilities in the South Hobbs Project Area;
- (u) The additional corrosion inhibition and mitigation efforts Oxy will utilize for the installation, construction and maintenance of the injection facilities in the South Hobbs Project Area;
- (v) The production history of the South Hobbs Project Area and the forecasted additional oil, gas and water production;

(w) The condition of the existing injection wells and design plans for additional injection wells in the South Hobbs Project Area;

(x) Oxy's plans to obtain additional information and address, as necessary, the cementing condition of the Herradura Well No. 3 (API No. 30-022-35933), a Chevron operated well in the southeast corner of the South Hobbs Project Area;

(y) The extensive knowledge of the wells within the area of review, the amount of time and effort devoted to the area of review analysis, and the absence of a need to update the area of review analysis for any injection wells that commence injection over the next five years;

(z) The time frame for mechanical integrity tests for temporarily-abandoned wells under NMAC 19.15.25.12 and the absence of a need for more frequent testing for wells equipped with real-time pressure monitoring devices;

(aa) The extensive knowledge concerning the cementing conditions for wells within the South Hobbs Project Area, the current cement bond log requirements under Rule 15 of the Special Rules for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project, and the absence of a need to run cement bond logs any time the rods and/or tubing are pulled from any producing well in the project area;

(bb) The methodology, time frame and effort involved to ascertain the parties entitled to notice of the hearing on Oxy's application;

(cc) The number and identification of the parties notified of the hearing either by certified mail or by newspaper publication; and

(dd) Oxy's meetings with the City of Hobbs concerning its proposed tertiary recovery project in the South Hobbs Project Area.

14. The Division's Environmental Bureau has approved a hydrogen sulfide contingency plan that covers the South Hobbs Project Area.

15. The geologic evidence established the following with respect to the Grayburg and San Andres formations underlying the South Hobbs Project Area and the adjacent North Hobbs Grayburg San Andres Unit :

(a) These formations consist of a layered, anticlinal structure that acts as a natural trapping mechanism for oil, as well as any injected fluids.

(b) These formations are separated from the fresh water zones by over 3,500 feet.

(c) The upper portion of the Grayburg formation consists of 150 to 200 feet of impermeable anhydrite and limestone.

(d) Various additional layers of impermeable anhydrite, salt, shale and limestone exist between these injection formations and the fresh water zones.

(e) No geologic faults or other natural means exist in this area by which injected fluids could communicate with the shallower fresh water zones.

16. With respect to the proposed injection wells and the existing wells within the area of review for the South Hobbs Project Area, the evidence established that:

(a) The existing injection wells in the South Hobbs Project Area are sufficiently cased and cemented to prevent the migration of injection fluids out of the proposed injection interval.

(b) Oxy's design for additional injection wells in the South Hobbs Project Area will provide sufficient casing and cement to prevent the migration of injection fluids out of the proposed injection interval.

(c) With the possible exception of the Chevron operated Herradura Well No. 3 (API No. 30-022-35933), the remaining wells within the area of review are sufficiently cased and cemented to prevent migration of the injection fluids out of the proposed injection interval.

(d) Oxy does not intend to commence injection within one-half mile of the Chevron operated Herradura Well No. 3 (API No. 30-022-35933) until further evaluation of the cement in this well and Oxy is able to demonstrate to the Division that sufficient casing and cement exists to prevent migration of the injection fluids out of the proposed injection interval.

17. The Division has reviewed Oxy's application and found the proposed tertiary recovery project will prevent waste, protect correlative rights, is in the interest of conservation, and will provide a reasonable level of protection to human health and the environment.

18. The evidence demonstrates it is prudent to implement tertiary recovery operations in the Grayburg and San Andres formations underlying the South Hobbs Project Area and that implementing this project will result in the recovery of additional oil that may otherwise not be recovered and wasted.

19. The evidence presented to the Commission over the course of two days demonstrates that Oxy's proposed tertiary recovery operations in the Grayburg and San

Andres formations underlying the South Hobbs Project Area will not pose an unreasonable threat to groundwater, the public health or the environment.

20. Oxy's request to implement a tertiary recovery project utilizing the injection of CO<sub>2</sub> from outside sources, and produced water and produced gases from the Hobbs Field should be approved.

21. With respect to Oxy's requested maximum surface injection pressures for water, CO<sub>2</sub> and produced gases, the evidence demonstrates:

(a) Division Order IPI-340 approved a maximum surface injection pressure of 1100 psi for water after an evaluation of step rate tests performed by Oxy in 2008.

(b) Water is more dense than CO<sub>2</sub> and produced gases, thereby justifying higher surface injection pressures for these gases than that allowed for water.

(c) Oxy's proposed maximum surface injection pressures of 1250 psi for CO<sub>2</sub> and 1770 psi for produced gases are based on the step rate tests performed in 2008 and take into account the hydrostatic pressure differences between the substances.

(d) Oxy's proposed maximum surface injection pressures of 1250 psi for CO<sub>2</sub> and 1770 psi for produced gases will allow injection operations to be conducted well below the bottomhole parting pressures evidenced by the step-rate tests performed in 2008.

(e) Oxy's requested maximum surface injection pressures for water, CO<sub>2</sub> and produced gases should be approved.

22. With respect to Oxy's request for an exception to the limiting gas-oil ratio set forth in NMAC 19.15.20.13, Oxy provided testimony that Rules 19.15.20.12 (Depth Bracket Allowables) and 19.15.20.13 (Gas Oil Ratio Limitation) should not apply to enhanced oil recovery projects.

23. With respect to Oxy's request for an exception to the one-year commencement of injection required by NMAC 19.15.26.12.C, the evidence establishes that due to the time frames associated with the design, procurement and construction of the necessary facilities, injection operations in the South Hobbs Project Area are not expected to commence before September of 2015. Accordingly, it is reasonable to allow for a three year period of time to commence injection operations.

24. Based on the extensive area of review analysis performed by Oxy, as well as the low level of activity in the subject area by other operators, the Commission finds it is unnecessary to update the existing area of review analysis for a period of five years.



However, if any well commences injection operations more than five years after the date of this order, Oxy should submit a statement to the Division that there have been no substantive changes to the area-of-review information submitted, or a statement describing any substantive changes.

25. Pursuant to NMAC 19.15.25.13.E, and based on the evidence presented on Oxy's SCADA system and proposed real time pressure monitoring devices, the Commission finds it is appropriate to conduct mechanical integrity tests on temporarily-abandoned wells equipped with real-time pressure monitoring devices once every five years.

26. Pursuant to NMAC 19.15.25.14, and based on the evidence presented on Oxy's SCADA system and proposed real-time pressure monitoring devices, the Commission finds it is appropriate to conduct mechanical integrity tests on injection wells in the South Hobbs Project Area once every two years as recommended by the Division.

27. The geologic and other evidence presented demonstrates Oxy should be allowed to set packers in injection wells in the South Hobbs Project Area anywhere above the uppermost injection perforations or casing shoes, so long as the packer is set below the top of the Grayburg formation.

28. With respect to Oxy's request to modify the cement bond log requirements under Rule 15 of the Special Rules for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project, the Commission finds that a cement bond log should be run prior to placing a well on injection, but agrees there is no need to run a cement bond log on a producing well each time the rods and/or tubing are pulled.

29. The Commission further finds that the remaining four additional requirements proposed by the Division in its prehearing statement are appropriate for the South Hobbs Project Area.

30. With respect to Oxy's request that its proposed expanded injection authority qualify for the recovered oil tax rate pursuant to the Recovery Act, the evidence establishes that:

- (a) Oxy's planned enhanced oil recovery project in the South Hobbs Project Area should result in the recovery of an additional 33.2 million barrels of oil that may otherwise not be recovered, thereby preventing waste.
- (b) The South Hobbs Project Area has been so depleted that it is prudent to apply enhanced recovery techniques to maximize the ultimate recovery of crude oil;
- (c) The application is economically and technically reasonable and has not been prematurely filed; and

(d) The proposed tertiary recovery project meets all of the criteria for certification as a qualified "enhanced recovery project" under the Recovery Act and the Rules. NMSA 1978, Section 7-29A-4; 19.15.6.8.E NMAC.

31. The proposed tertiary recovery project will prevent waste, protect correlative rights, and should be approved with certain conditions.

**THE COMMISSION CONCLUDES THAT:**

1. The Commission is empowered to regulate the injection of natural gas or of any other substance into any pool in this state for the purpose of repressuring, cycling, pressure maintenance, secondary or any other enhanced recovery operations and to regulate the disposition of water produced or used in connection with drilling for or producing of oil or gas, and to regulate the disposition of nondomestic waste resulting from the treatment of natural gas or the refinement of crude oil to protect public health and the environment. NMSA 1978 § 70-2-12(B)(14, 15, 22). The Commission has a statutory duty to prevent waste and protect correlative rights. NMSA 1978 § 70-2-11(A).

2. Oxy has provided substantial evidence to support the approval of the authority to inject CO<sub>2</sub>, and produced water and produced gases into the South Hobbs Project Area subject to the conditions provided in this Order, which conditions are necessary to prevent waste and protect correlative rights and public health and the environment.

3. The Commission concludes Rules 19.15.20.12 (Depth Bracket Allowables) and 19.15.20.13 (Gas Oil Ratio Limitation) do not apply to enhanced oil recovery projects, and therefore, neither a limiting gas-oil ratio nor an oil allowable shall apply to this tertiary recovery project.

4. Rule 19.15.26.12(C) allows an extension of the one year deadline for injection authority for good cause. Oxy has provided substantial evidence concerning the size and complexity of the project to show good cause and to support the Commission extension of the deadline for initial injection to three years.

5. The Commission and the Division have the authority to certify "enhanced recovery projects" that are eligible for a "recovered oil tax rate" under the Enhanced Oil Recovery Act, NMSA 1978, Sections 7-29A-1 to -5 (1992) and under the Rules, 19.15.6 NMAC. The South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project, as expanded by this Order, meets the requirements for certification as an enhanced recovery project and a tertiary recovery project under the Recovery Act and the Rules. The South Hobbs Project Area shall be designated as the area to be affected by the enhanced recovery project.

**IT IS THEREFORE ORDERED THAT:**

1. The provisions of this order shall govern the tertiary recovery project described herein. The provisions of Orders Nos. R-4934 and R-4934-E remain applicable to the ongoing waterflood operations for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project, except to the extent that the governing provisions are inconsistent with this order.

2. Oxy is authorized to implement a tertiary recovery project by the injection of CO<sub>2</sub>, and produced water and produced gases from the Hobbs Field into the Grayburg and San Andres formations underlying the following acreage, which shall be known as the South Hobbs Project Area:

**TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM**

Section 33: SE/4 SE/4  
Section 34: SW/4 and W/2 NW/4

**TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM**

Sections 3, 4, and 5: All  
Section 6: N/2 and SE/4  
Section 8: N/2 NW/4, E/2 NE/4, and N/2 SE/4  
Section 9: N/2, N/2 SW/4, and SE/4  
Section 10: All  
Section 11: SW/4 SW/4  
Section 14: W/2 NW/4  
Section 15: All  
Section 16: NE/4 NE/4

3. The injection of CO<sub>2</sub>, water and produced gases is initially authorized for the 30 existing injection wells and 23 additional injection wells listed on Exhibit "A" attached to this order. Application for approval of additional injection wells in the South Hobbs Project Area shall be filed in accordance with NMAC 19.15.26.8 and may be approved administratively by the Division Director without notice and hearing.

4. The injection authority granted herein for the wells shown on Exhibit "A" shall terminate three years after the date of this order if the operator has not commenced tertiary injection operations in the South Hobbs Project Area; provided, however, the Division, upon written request by the operator, may grant an extension for good cause. Furthermore, in accordance with NMAC 19.15.26.12.C (Abandonment of Injection Operations), whenever there is a one-year period of non-injection into all wells in the project area, the Division shall consider the project abandoned and the authority to inject shall automatically terminate.

5. For any injection well shown on Exhibit "A" in which tertiary injection operations commence more than five years after the date of this order, the operator shall submit to the Division either: (i) a statement certifying that there have been no

no substantive changes in the information furnished in support of the subject application concerning the status or construction of any well that penetrates the injection interval within the one half (1/2) mile area of review around the injection well; or (ii) a statement describing any substantive changes. This statement shall be submitted to the Division's Santa Fe office within a period no more than twelve months and no less than sixty days before injection operations commence in the well.

6. The injection wells or pressurization system within the South Hobbs Project Area shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than:

1100 psig for injection of water only;  
1250 psig for injection of CO<sub>2</sub> only; and  
1770 psig for injection of produced gases.

7. The Division Director may administratively authorize an increase in surface injection pressure upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

8. The operator shall take all necessary steps to ensure that the injected gases and fluids enter only the Grayburg and/or San Andres formations and are not permitted to escape to other formations or to the surface from injection, production, or plugged and abandoned wells.

9. A one-way automatic safety valve shall be installed at the surface of all injection wells to prevent flow-back of the injected gas during an emergency, start-up or shut-down operations.

10. Injection shall be accomplished through fiberglass-lined tubing and a nickel plated packer. The packer shall be set as close as practical to the uppermost injection perforations or casing shoe (of any open hole completion), so long as the packer set point remains below the top of the Grayburg formation.

11. The casing-tubing annulus shall be filled with an inert packer fluid containing biocide and corrosion inhibitors. A gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

12. The operator shall use a special type of cement on all new injection wells that is designed to withstand the corrosive environment. The cement design shall contain more than three percent (3%) tricalcium aluminate (C3A) in this High Sulfate Resistance (HSR) environment.

13. The operator is no longer required to run a cement bond log on a producing well each time the rods and/or tubing are pulled from the well. However, prior to placing any well on injection, a cement bond log shall be run on said well and copies of all cement bond logs shall be sent to the Division's Hobbs District Office. If any well

is found to have inadequate casing cement bond, such measures as may be necessary to prevent leakage or migration of fluids within the wellbore shall be taken before placing the well on injection.

14. Prior to commencing injection operations, the casing in each of the injection wells within the South Hobbs Project Area shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

15. A mechanical integrity test shall be conducted on all injection wells once every two years.

16. Pursuant to NMAC 19.15.25.13.E, a mechanical integrity test shall be conducted on all temporarily-abandoned wells equipped with real-time pressure monitoring devices once every five years.

17. Injection operations shall be conducted in a closed loop system, and the trucking of fluids is not allowed.

18. Oxy shall not commence injection operations anywhere within one-half (1/2) mile of the Chevron operated Herradura Well No. 3 (API No. 30-022-35933) until Oxy provides a cement bond log to the Division's Hobbs District Office demonstrating that adequate cement exists in this well to prevent migration of the injection fluids out of the proposed injection interval.

19. The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in any of the injection wells, or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the project area, and shall promptly take all steps necessary to correct such failure or leakage.

20. Oxy shall maintain recorded data from its SCADA system for the South Hobbs Project Area for inspection by the Division for a reasonable period of time to be determined and agreed upon through consultation between Oxy and the Division's Hobbs District Office.

21. No limiting gas-oil ratio or oil allowable applies to this enhanced oil recovery project.

22. The hydrogen sulfide contingency plan for the South Hobbs Project Area shall be reviewed and amended as necessary pursuant to 19.15.11.9.F NMAC.

23. The South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project is hereby certified as an enhanced recovery project and as a tertiary recovery project pursuant to the Recovery Act and the Rules. The South Hobbs Project Area is designated as the area to be affected by the enhanced recovery project. To be eligible for

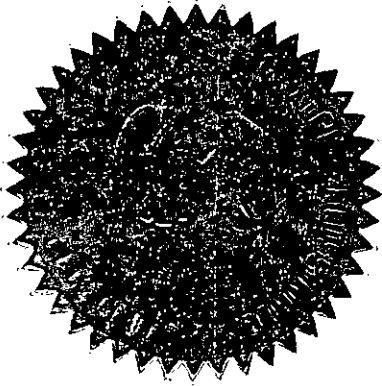
the recovered oil tax rate, the operator shall advise the Division of the date and time CO2 injection commences within the project area. At that time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

24. At such time as a positive production response occurs, and within seven years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response pursuant to the Recovery Act, NMSA 1978 Section 7-29A-3, and the Rules, 19.15.6.E NMAC. This application shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the recovered oil tax rate. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the recovered oil tax rate. Oxy must also report annually to the Division to confirm that the project is still a viable EOR project as approved. 19.15.6.F NMAC.

25. Jurisdiction of this case is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on this 18<sup>th</sup> day of July, 2013.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



SEAL

  
ROBERT BALCH, Member

  
TERRY WARNELL, Member

  
JAMI BAILEY, Chair

Exhibit "A"

**List of Injectors in South Hobbs Unit Project**  
**53 Total Injectors**

No.	API Number	Section	Unit Letter	Township & Range	Footage Location	Proposed Injectants Purchased CO2/Water or Produced Gas/CO2/Water	Current Status
SHU 128	30-025-28332	3	D	19-S ; 38-E	335 FNL & 520 FWL	Purchased CO2/Water	Active Injector
SHU 240	30-025-35342	34	M	18-S ; 38-E	571 FSL & 1302 FWL	Purchased CO2/Water	Active Producer
SHU 36	30-025-07588	3	F	19-S ; 38-E	1980 FNL & 1980 FWL	Purchased CO2/Water	Active Injector
SHU 37	30-025-07584	3	G	19-S ; 38-E	1980' FNL & 2310' FEL	Purchased CO2/Water	P&A'd Injector
SHU 188	30-025-28982	5	K	19-S ; 38-E	1493 FSL & 1802 FWL	Produced Gas/CO2/Water	Active Producer
SHU 189	30-025-29085	5	J	19-S ; 38-E	1685 FSL & 2475 FEL	Produced Gas/CO2/Water	Active Producer
SHU 190	30-025-29082	5	I	19-S ; 38-E	1568 FSL & 1105 FEL	Produced Gas/CO2/Water	Active Producer
SHU 191	30-025-28983	4	L	19-S ; 38-E	1585 FSL & 395 FWL	Produced Gas/CO2/Water	Active Producer
SHU 140	30-025-28343	4	L	19-S ; 38-E	1485 FSL & 1245 FWL	Produced Gas/CO2/Water	Active Producer
SHU 141	30-025-28344	4	K	19-S ; 38-E	1478 FSL & 2595 FWL	Produced Gas/CO2/Water	Active Producer
SHU 142	30-025-28345	4	O	19-S ; 38-E	1310 FSL & 1370 FEL	Produced Gas/CO2/Water	Active Producer
SHU 145	30-025-28348	3	N	19-S ; 38-E	577 FSL & 1984 FWL	Purchased CO2/Water	Active Producer
SHU 71	30-025-07670	9	E	19-S ; 38-E	1650 FNL & 990 FWL	Produced Gas/CO2/Water	TA'd Injector
SHU 63	30-025-07662	9	C	19-S ; 38-E	660 FNL & 1980 FWL	Produced Gas/CO2/Water	Active Injector
SHU 154	30-025-28357	9	B	19-S ; 38-E	1163 FNL & 2600 FEL	Produced Gas/CO2/Water	Active Producer
SHU 155	30-025-28358	9	B	19-S ; 38-E	1158 FNL & 1568 FEL	Produced Gas/CO2/Water	Active Producer
SHU 156	30-025-28359	9	H	19-S ; 38-E	1370 FNL & 330 FEL	Produced Gas/CO2/Water	Active Producer
SHU 83	30-025-07668	9	J	19-S ; 38-E	1980 FSL & 1980 FEL	Produced Gas/CO2/Water	TA'd Injector
SHU 91	30-025-20047	9	P	19-S ; 38-E	990 FSL & 330 FEL	Produced Gas/CO2/Water	TA'd Producer
COOP 2	30-025-28305	4	D	19-S ; 38-E	645 FNL & 453 FWL	Purchased CO2/Water	Active Injector
COOP 3	30-025-28306	4	C	19-S ; 38-E	645 FNL & 2045 FWL	Purchased CO2/Water	Active Injector
COOP 4	30-025-28307	4	A	19-S ; 38-E	494 FNL & 1025 FEL	Purchased CO2/Water	Active Injector
COOP 5	30-025-28308	34	L	18-S ; 38-E	1980 FSL & 646 FWL	Purchased CO2/Water	Active Injector
COOP 6	30-025-28309	34	E	18-S ; 38-E	1950 FNL & 535 FWL	Purchased CO2/Water	Active Injector
COOP 9	30-025-28968	34	A	18-S ; 38-E	717 FNL & 651 FWL	Purchased CO2/Water	Active Injector
COOP 10	30-025-28969	34	L	18-S ; 38-E	2564 FSL & 1607 FWL	Purchased CO2/Water	Active Injector
11	30-025-28970	34	L	18-S ; 38-E	2500 FSL & 1660 FWL	Purchased CO2/Water	Active Injector
COOP 12	30-025-28971	34	N	18-S ; 38-E	636 FSL & 2348 FWL	Purchased CO2/Water	Active Injector
COOP 13	30-025-28972	3	B	19-S ; 38-E	505 FNL & 2560 FEL	Purchased CO2/Water	Active Injector
SHU 209	30-025-29522	8	D	19-S ; 38-E	265 FNL & 1090 FEL	Produced Gas/CO2/Water	Active Injector
SHU 92R	TBD	10	M	19-S ; 38-E	660 FSL & 600 FWL	Produced Gas/CO2/Water	Proposed New Drill - Vertical
SHU 95R	TBD	10	O	19-S ; 38-E	990 FSL & 2310 FEL	Produced Gas/CO2/Water	Proposed New Drill - Vertical
VP1	TBD	6	G	19-S ; 38-E	TBD	Purchased CO2/Water	Proposed New Drill - Vertical
VP2	TBD	6	F	19-S ; 38-E	TBD	Purchased CO2/Water	Proposed New Drill - Vertical
VSR2	TBD	15	G	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Vertical
VSR3	TBD	15	F	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Vertical
DSR1	TBD	4	J	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR2	TBD	4	J	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR3	TBD	4	J	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR4	TBD	4	K	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR5	TBD	4	K	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR6	TBD	4	K	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR7	TBD	4	K	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR8	TBD	5	L	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR9	TBD	5	L	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR10	TBD	5	L	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR11	TBD	5	L	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR12	TBD	10	O	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR13	TBD	10	O	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
DSR14	TBD	10	O	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
203	TBD	5	L	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
143	TBD	4	J	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional
P144	TBD	4	J	19-S ; 38-E	TBD	Produced Gas/CO2/Water	Proposed New Drill - Directional