Initial Application Part I

Received: 06/21/2022

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

Occidental Permian LTD.
A subsidiary of Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110, Houston, Texas 77046-0521
P.O. Box 27570, Houston, Texas 77227-7570
Phone 713.215.7000

May 13, 2022

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

RE: Pressure Maintenance Project
South Hobbs Unit
Well No. 171; API 30-025-28544
Lea County, NM

Occidental Permian Ltd. respectfully requests administrative approval to inject CO2 and produced gas into the above referenced injector in the South Hobbs Unit under Order No. R-4934-F. The well is currently authorized to inject water.

In support of this request, please find the following documentation:

- Administrative Application Checklist
- Form C-108 with required data attached
- Injection Well Data Sheet with Wellbore Schematic
- Form C-102
- Map
- Area of Review statement
- Copy of Order R-4934-F

Per R-4934-F Paragraph 3 on page 11, "*(…) 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.".*

Below are some relevant references to items in R-4934-F:

Item 1: SHU 171 was originally authorized for water injection under Order No. PMX-126 (which references Order No. R-4934) in 1984. Per Item 1 of the current order, the provisions of R-4934 remain applicable where consistent with the current order.

Item 2: SHU 171 is located within the project area as defined in item 2.

Item 6: SHU 171 will be equipped with a pressure control device to limit surface pressure to the specified pressures in item 6.

If you have any questions, please contact me at 832-646-4450 or email Jose_Gago@oxy.com.

Sincerely,

Jose Gago
Engineer, Regulatory

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
06/21/2022					pJZT2218652733

BAB6C-220621-C-1080

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

PMX-318

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☒ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify Additional Injector within approved project area (R-6199-G)

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Jose L Gago		Engineer, Regulatory	05/13/2022
Print or Type Name	Signature	Title	Date

jose_gago@oxy.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery __X__Pressure Maintenance _____Disposal _____Storage
Application qualifies for administrative approval? __X__Yes _____No

II. OPERATOR: OCCIDENTAL PERMIAN LTD

ADDRESS: P.O. Box 4294 Houston, TX 77210-4294

CONTACT PARTY: Jose L Gago PHONE: 832-646-4450

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? __X__Yes _____No
If yes, give the Division order number authorizing the project: R-4934-F

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Roni Mathew TITLE: Regulatory Advisor

SIGNATURE: Roni Mathew DATE: 05/13/2022

E-MAIL ADDRESS: roni_mathew@oxy.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: July 18th 2013 as part of Order No. R-4934-F application

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 2

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

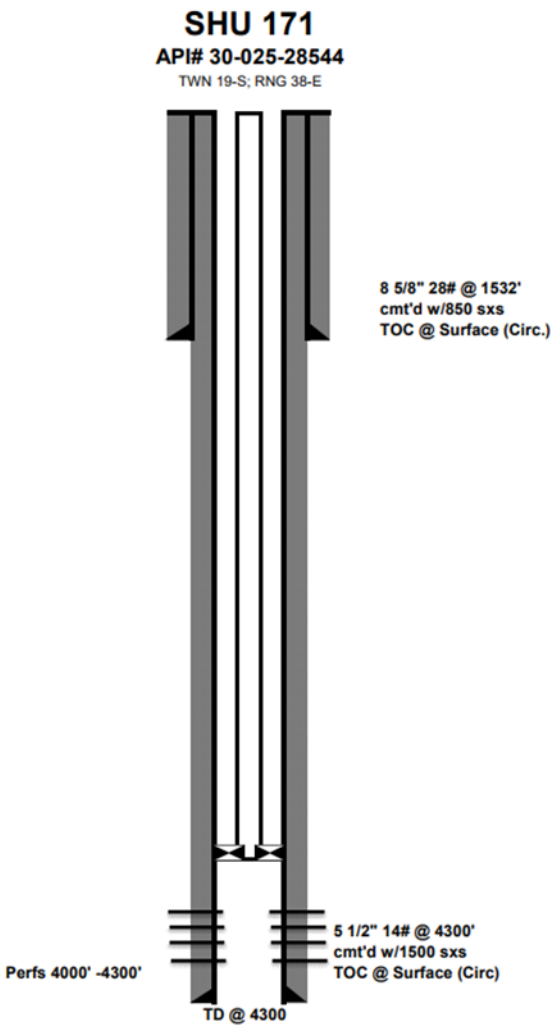
OPERATOR: Occidental Permian LTD.

WELL NAME & NUMBER: SOUTH HOBBS G/SA UNIT #171

WELL LOCATION: 710 FNL x 610 FWL | D | 09 | 19S | 38E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 16” Casing Size: 14”

Cemented with: 8 sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Intermediate Casing

Hole Size: 12-1/4” Casing Size: 8-5/8”

Cemented with: 850 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Production Casing

Hole Size: 7-7/8” Casing Size: 5-1/2”

Cemented with: 1500 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Total Depth: 4300’

Injection Interval

4000’ (Basal Grayburg) feet to 5200’ (Base Unit) – Perforated

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" Lining Material: Plastic Coated Tbg (Duoline)

Type of Packer: Packer (Retrievable) 5 1/2" X 2 3/8" ARROW SET 1-X DBL GRIP

Packer Setting Depth: 3950'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? X Yes No

If no, for what purpose was the well originally drilled?

_____

2. Name of the Injection Formation: San Andres

3. Name of Field or Pool (if applicable): Hobbs; Grayburg-San Andres

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

_____

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

Byers (Queen) @ +/- 3680'

_____

Glorieta @ +/- 5300

_____

_____

C-108 Application Attachment
Occidental Permian Ltd.
South Hobbs G/SA Unit No. 171
Lea County, New Mexico

I. This is a pressure maintenance project. The project qualifies for administrative approval.

II. OCCIDENTAL PERMIAN Ltd.
P.O. Box 4294 Houston, TX 77210-4294
Contact Party: Jose Gago, 832-646-4450

III. Injection well data sheet and wellbore schematic has been attached for SOUTH HOBBS G/SA UNIT No. 171

IV. This is an expansion of an existing project authorized under Order No. R-4934-F.

V. The map with a two mile radius surrounding the injection well and a one half mile radius for area of review is attached.

VI. In accordance to Order No. R-4934-F Section 4 OCCIDENTAL PERMIAN Ltd certifies that: The area of review for well "SOUTH HOBBS G/SA UNIT #171" shows no substantive changes in the information furnished in support of Order No. R-4934-F concerning the status of construction of any well that penetrates the injection interval within the one-half (1/2) mile around the injection well, with the exemption of the wells below:

API	Well Name	Operator	Status after July 2013
30-025-07670	SOUTH HOBBS G/SA UNIT 071	OCCIDENTAL PERMIAN LTD	P & A
30-025-07667	SOUTH HOBBS G/SA UNIT 072	OCCIDENTAL PERMIAN LTD	P & A
30-025-43097	SOUTH HOBBS G/SA UNIT 265	OCCIDENTAL PERMIAN LTD	New Well
30-025-43098	SOUTH HOBBS G/SA UNIT 266	OCCIDENTAL PERMIAN LTD	New Well
30-025-43104	SOUTH HOBBS G/SA UNIT 267	OCCIDENTAL PERMIAN LTD	New Well
30-025-43100	SOUTH HOBBS G/SA UNIT 268	OCCIDENTAL PERMIAN LTD	New Well
30-025-43106	SOUTH HOBBS G/SA UNIT 269	OCCIDENTAL PERMIAN LTD	New Well
30-025-43105	SOUTH HOBBS G/SA UNIT 270	OCCIDENTAL PERMIAN LTD	New Well
30-025-43101	SOUTH HOBBS G/SA UNIT 271	OCCIDENTAL PERMIAN LTD	New Well

The wellbore diagrams and tabulated well data is attached.

VII. The area of review is attached.

1. Average Injection Rate 4,000 BWPD / 15,000 MCFGPD
   Maximum Injection Rate 9,000 BWPD / 20,000 MCFGPD
2. This will be a closed system.
3. Average Surface Injection Pressure 1,100 PSIG
   Maximum Surface Injection Pressure
   - Produced Water 1,100 PSIG
   - CO_2 1,250 PSIG
   - CO_2 w/produced gas 1,770 PSIG

   (In accordance with Order No. R-4934-F, effective 7/18/13)
4. Source Water – San Andres Produced Water
   (Analysis previously provided at hearing, Case No. 14981)

VIII. The information was previously submitted as part of Order No. R-4934-F application

IX. This is an existing well. An NOI to run a liner and re-perforate was submitted on May 5th 2022. The new well configuration is reflected in this application.

X. Logs were filed at the time of drilling.

XI. There are 2 freshwater wells closest to the subject well, Cochran D-1 and Cochran D-2. Both are just outside of the 1 mile boundary. Please see the location map and chemical water analysis attached (pg. 9 - 11 of application packet).

XII. N/A. This is a pressure maintenance project, not a disposal well.

XIII. Order No. R-4934-F allows the administrative approval, from the Division Director, of additional injection wells without notice and hearing. Notices to producers and surface owners for the water/CO2 flood area were provided at the time of the application and hearing for Order No. R-4934-F.

GSI ENVIRONMENTAL

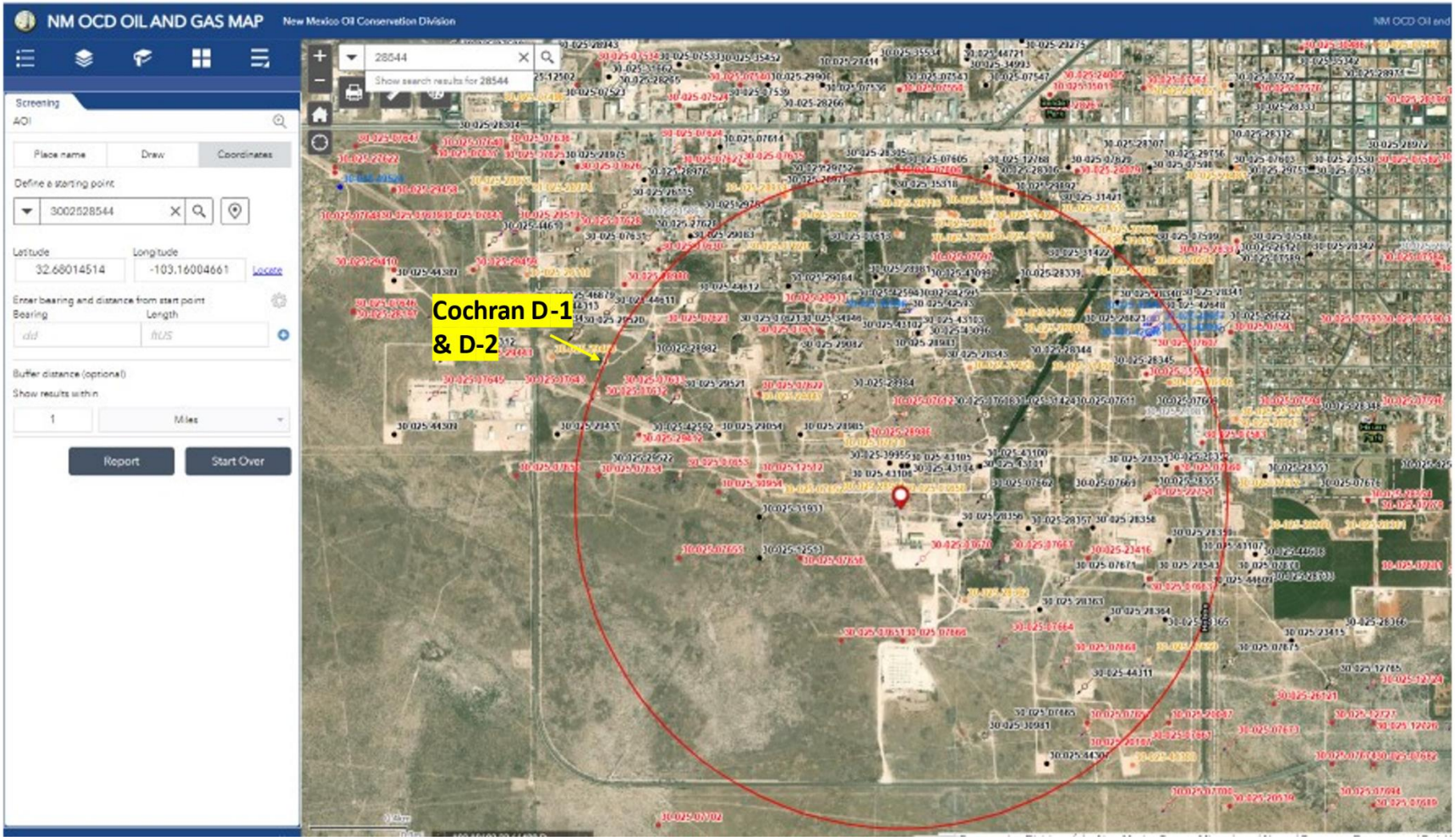
TABLE 1
WATER QUALITY ANALYTICAL RESULTS
Results of Water Supply Well Sampling and Investigation
South Hobbs Grayburg/San Andres Unit, Hobbs, New Mexico
Occidental Petroleum Corporation

						Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
						Location ID:	Aldaz-1	Aldaz-1	Cochran D-1	Cochran D-1	Curtis-1	Dulin-1	IWW-1
						Sample Date:	8/29/2019	10/18/2019	9/3/2019	9/3/2019	9/5/2019	8/30/2019	10/23/2019
						Sample Type:	N	N	N	Dup	N	N	N
		USEPA		NMED		Collected By:	GSI	GSI	GSI	GSI	GSI	GSI	GSI
Analyte Type	Analyte	Screening Limit	Limit Type	Screening Limit	Limit Type	Units							
Coliform	E. Coli	--	NS	--	NS	Unitless	-	-	-	-	-	-	-
Coliform	Fecal Coliforms	--	NS	--	NS	MPN/100 mL	-	-	-	-	-	-	-
Coliform	Total Coliforms	--	NS	--	NS	Unitless	-	-	-	-	-	-	-
Inorganic	Alkalinity, Bicarbonate as CaCO3	--	NS	--	NS	mg/L	242	-	149	102	158	270	-
Inorganic	Alkalinity, Bicarbonate as HCO3	--	NS	--	NS	mg/L	-	-	-	-	-	-	386
Inorganic	Alkalinity, Carbonate as CaCO3	--	NS	--	NS	mg/L	<20	-	<20	<20	<20	<20	-
Inorganic	Alkalinity, Total as CaCO3	--	NS	--	NS	mg/L	242	-	149	102	158	270	316
Inorganic	Chloride	250	SMCL	250	WQS	mg/L	143	-	78.3	77.4	50.5	174	88
Inorganic	Nitrate Nitrite as N	10	MCL	10	WQS	mg/L	1.96	-	1.77	1.76	3.46	5.99	0.031
Inorganic	Sulfate	250	SMCL	600	WQS	mg/L	137	-	53.7	53.2	56.1	62.4	94.6
Inorganic	Sulfide (Total)	--	NS	--	NS	mg/L	-	-	-	-	-	-	<0.01
Inorganic	Sulfide as H2S, Dissolved-Dissolved	--	NS	--	NS	mg/L	0.137	-	<0.00954	<0.00954	<0.00954	<0.00954	-
Inorganic	Total Dissolved Solids (TDS)	500	SMCL	1000	WQS	mg/L	756	-	369	377	355	774	579
Inorganic	Total Organic Carbon	--	NS	--	NS	mg/L	-	-	-	-	-	-	-
Metal	Calcium	--	NS	--	NS	mg/L	111	-	70.5	72.8	72.2	139	48.8
Metal	Iron	0.3	SMCL	1	WQS	mg/L	2.52	-	<0.027	<0.027	<0.027	<0.027	0.71
Metal	Iron, Dissolved	0.3	SMCL	1	WQS	mg/L	-	-	-	-	-	-	0.283
Metal	Magnesium	--	NS	--	NS	mg/L	19.1	-	12.5	12.8	12.1	24.4	11.9
Metal	Manganese	0.05	SMCL	0.2	WQS	mg/L	0.133	-	0.0004 J	0.0005 J	0.0005 J	0.0533	0.161
Metal	Manganese, Dissolved	0.05	SMCL	0.2	WQS	mg/L	-	-	-	-	-	-	0.134
Metal	Potassium	--	NS	--	NS	mg/L	3.61 b	-	2.3	2.36	2.28	3.66 b	4.6 Ja
Metal	Sodium	--	NS	--	NS	mg/L	132 b	-	47.7	48.9	40.9	95.6 b	160
Field Parameter	Dissolved Oxygen	--	NS	--	NS	mg/L	7.73	1.12	8.3	8.3	12.5	2.47	1
Field Parameter	Oxidation-reduction Potential (ORP)	--	NS	--	NS	mV	-35	53	79	79	101	12	-36
Field Parameter	pH, Field	6.5 - 8.5	SMCL	6 - 9	WQS	ph Units	7.41	7.26	7.21	7.21	6.86	7.24	7.59
Field Parameter	Specific Conductance, Field	--	NS	--	NS	mmhos/cm	1.2	1.26	0.671	0.671	0.65	1.24	0.966
Field Parameter	Temperature	--	NS	--	NS	°C	19.83	18.41	19.95	19.95	19.52	20.12	19.96
Field Parameter	Turbidity	--	NS	--	NS	NTU	24.3	0	0	0	0	5.6	0

Notes

1. NS = No standard; "-" = not analyzed.
2. "<" = concentration below the Minimum Detection Limit (MDL); "J" = estimated concentration above the MDL but below the quantitation limit; "b" = compound was found in the blank and the sample.
3. mg/L = milligrams per liter; MPN/100 mL = Most Probable Number of viable cells in 100 milliliters of sample.
3. Samples analyzed at Eurofins TestAmerica, Houston, Texas and Cardinal Laboratories, Hobbs, New Mexico.
4. MCL = Maximum Contaminant Level; SMCL = Secondary Maximum Contaminant Level. These standards are set by the U.S. Environmental Protection Agency (U.S. EPA).
5. WQS = Water quality standards for groundwater presented in 20.6.2 NMAC New Mexico Water Quality Control Comission Regulations, New Mexico Environment Department (NMED).
6. The Levey-1 sample was comprised of water actively expelled from the wellhead at the time of sampling.


Curtis Machine
W Humble St
ChampionX Norris Sucker Rods
W Midwest St
W Texas St
S Grimes St
S W County Rd
W Aster Rd
Cochran D1
Cochran D2
Wilbanks Trucking Inc (Hobbs Yard)
W Stanolind Rd
SHOU-171
Oxy South Hobbs RCF
S Bypass
Google Earth


NM OCD OIL AND GAS MAP
New Mexico Oil Conservation Division
Screening
AOI
Place name
Draw
Coordinates
Define a starting point
3002528544
Latitude
32.68014514
Longitude
-103.16004661
Locate
Enter bearing and distance from start point
Bearing
Length
dd
ft/US
Buffer distance (optional)
Show results within
1
Miles
Report
Start Over
28544
Show search results for 28544
Cochran D-1
& D-2

NE EXICO OIL CONSERVATION COMMISSI

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
AMOCO PRODUCTION CO.	SOUTH HOBBS-GRAYBURG SAN ANDRES UNIT	171

Unit Letter	Section	Township	Range	County
D	9	18S	38E	LEA

Actual Footage Location of Well:
710 feet from the NORTH line and 640 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3599.4	Grayburg San Andres	Hobbs GSA	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

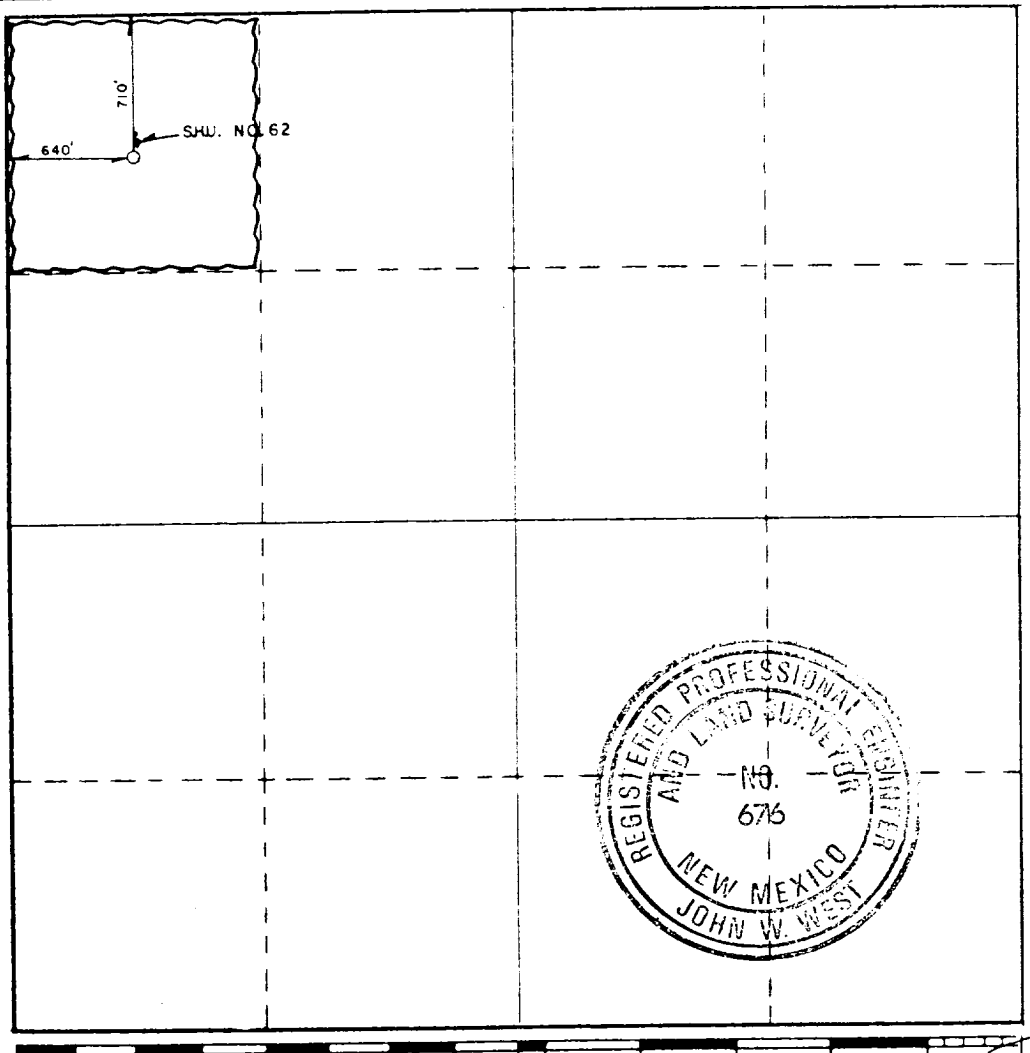
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: Carla M. Herring

Position: Administrative Analyst

Company: Amoco Production Company

Date: December 19, 1983

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

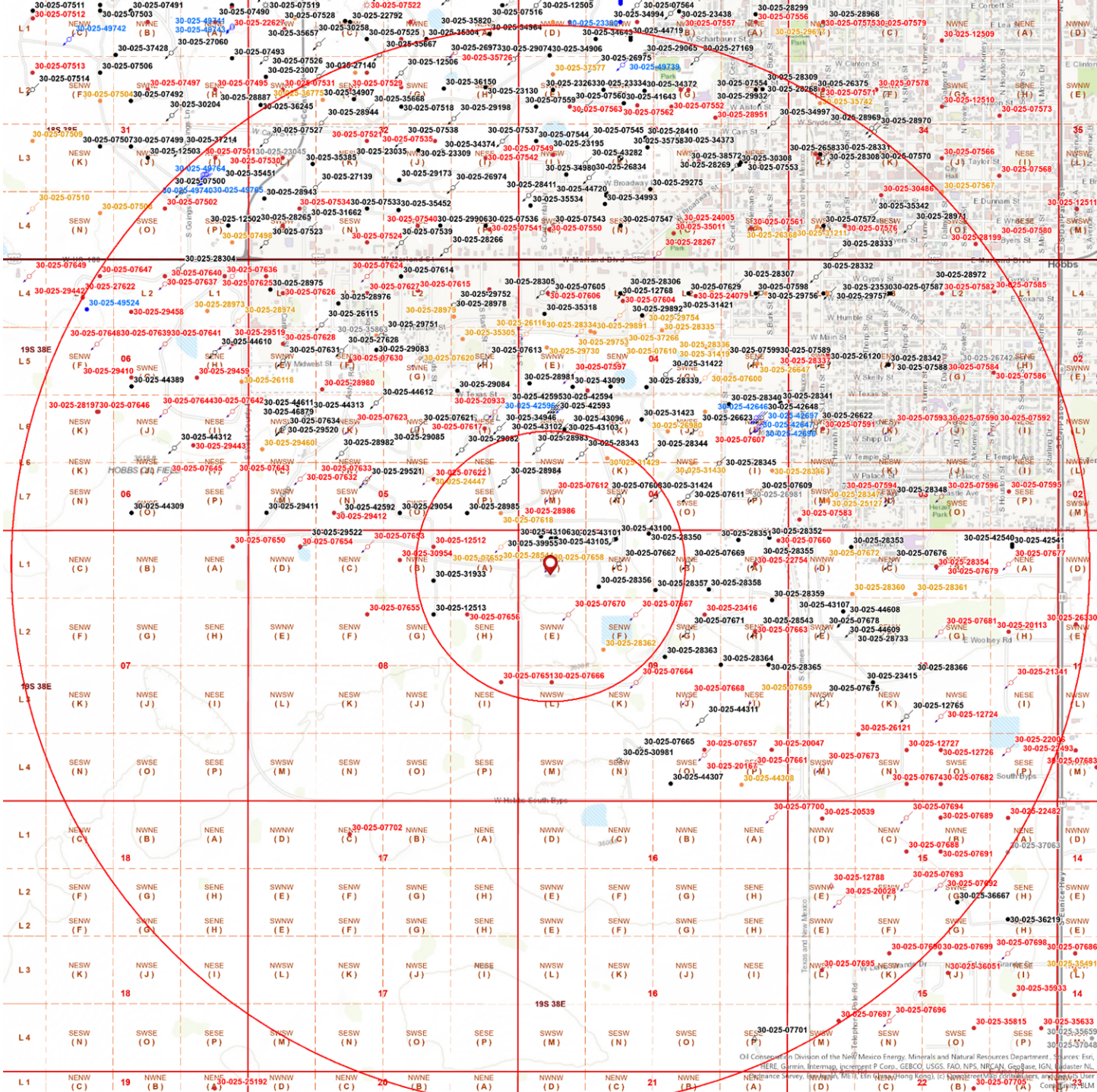
Date Surveyed: 12/15/83

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. 676

South Hobbs G/SA Unit 171 AOR



Oil and Gas Wells

Wells - Large Scale

- Miscellaneous
- CO2, Active
- CO2, Cancelled
- CO2, New
- CO2, Plugged
- CO2, Temporarily Abandoned
- Gas, Active
- Gas, Cancelled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New
- Salt Water Injection, Plugged
- Salt Water Injection, Temporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged
- Water, Temporarily Abandoned
- ? undefined

OCD Districts and Offices

OCD District Offices

★

Public Land Survey System

PLSS Second Division

PLSS First Division

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-07670	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	071	Injection	Plugged, Site Released	1650	N	990	W	E	9	19S	38E	1/0/1900	4310		8.625 5.5	302 4309	150 420	Surf 3095	Circ Calc	3999'-4243' GRAYBURG-SAN ANDRES	Well Plugged on 02/27/2014

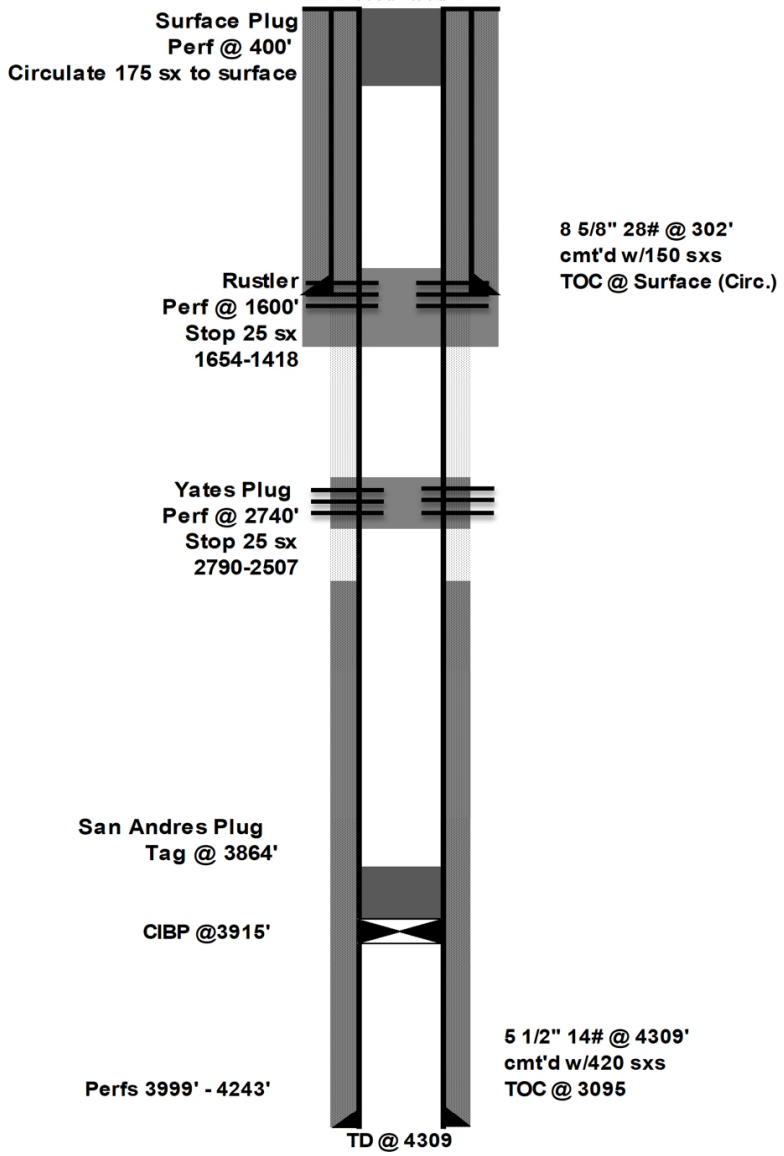
Occidental Petroleum Corporation

SHU 71

API# 30-025-07670

TWN 19-S; RNG 38-E

Prod- TA'd



API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-07667	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	072	Injection	Plugged, Not Released	1650	N	2310	W	F	9	19S	38E	7/29/1953	4310		8.625 5.5	304 4309	140 420	Surf 3100	Circ Calc	3993'-4220' GRAYBURG-SAN ANDRES	Well Plugged on 12/11/2019

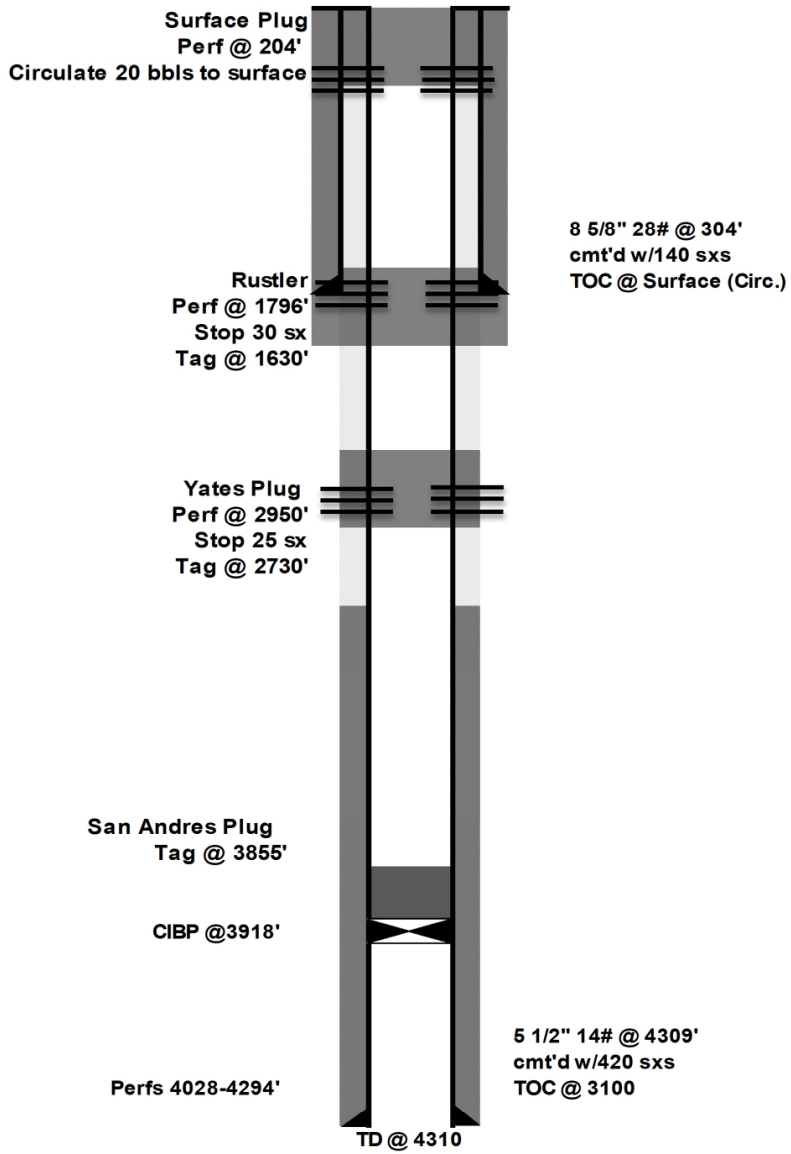
Occidental Petroleum Corporation

SHU 72

API# 30-025-07667

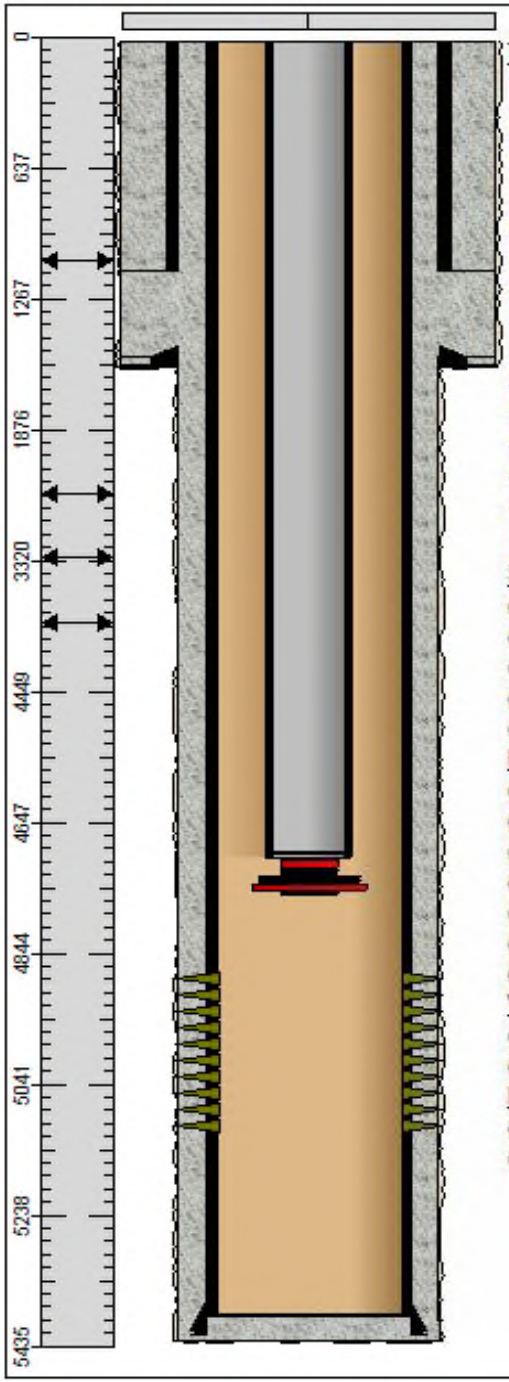
TWN 19-S; RNG 38-E

Prod- TA'd



API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43097	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	265	Oil	Active	1791	S	841	W	L	4	19S	38E	6/5/2016	5228	12.625 8.750	9.625 7.000	1544 5429	630 1080	Surf 4066	0 0	4872'-5106' GRAYBURG-SAN ANDRES	

Wellbore Diagram : SHOU-265



Tubing String Quantity (Top-Bottom Depth) Desc
1 @(16-22) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift- - R...
1 @(16-109) ESP Cable (Part#SLB CONSIGN, AWG 4, Type CELF, GALV.)- - Us...
1 @(109-4665) ESP Cable (Centrilift-Part#C1030CBLYCUS, AWG 4, Type CELF...
147 @(22-4691) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Dri...
1 @(4691-4693) Seat Nipple - Standard (2.875") Cup Type- - New
1 @(4693-4699) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Dri...
1 @(4699-4699) ESP Bolt on Discharge (Centrilift-Part#C63030, Model 400, B/...
1 @(4699-4714) ESP Pump (Centrilift-C023052855, 164 STG, Type P6, Model 4...
1 @(4714-4721) ESP Pump (Centrilift-Part#10522890, 35 STG, FLEX17.5, 400P...
1 @(4721-4723) ESP Gas Separator (Centrilift-Part#C323005, GASSEP, Model ...
1 @(4723-4729) ESP Seal (Centrilift-Part#10492077, FSC3U PFSA CL5 FER H...
1 @(4665-4735) ESP-Motor Flat Cable (Centrilift-Part#C78450M-70, AWG 5, Typ...
1 @(4735-4735) ESP Motor Pothead- - New
1 @(4729-4735) ESP Seal (Centrilift-PartC313017048, FSB3DB H6 FER SSCV ...
1 @(4735-4749) ESP Motor (Centrilift-Part#C1030YCUS, FMH450, HP 77, Volt 1...
1 @(4749-4751) ESP Downhole Sensor (Centrillift-Part#C1030YCUS, WELL LI...

Surface Casing (Top-Bottom Depth) Desc
@(17-1127) J-55 9.625 OD/ 36.00# Round Short 8.921 ID 8.764 Drift - N/A - N/...
@(1544-1545) Float Collar Nominal - 9.625" OD-10.630" Drillout ID- 8.865" - N...
@(1545-1587) SHOE JT/Guide Shoe Nominal - 9.625" OD-10.630" Drillout ID-...
@(17-1589) Cement (behind Casing)- - N/A
@(1587-1589) Float Shoe/Guide Shoe Nominal - 9.625" OD-10.630" Drillout I...

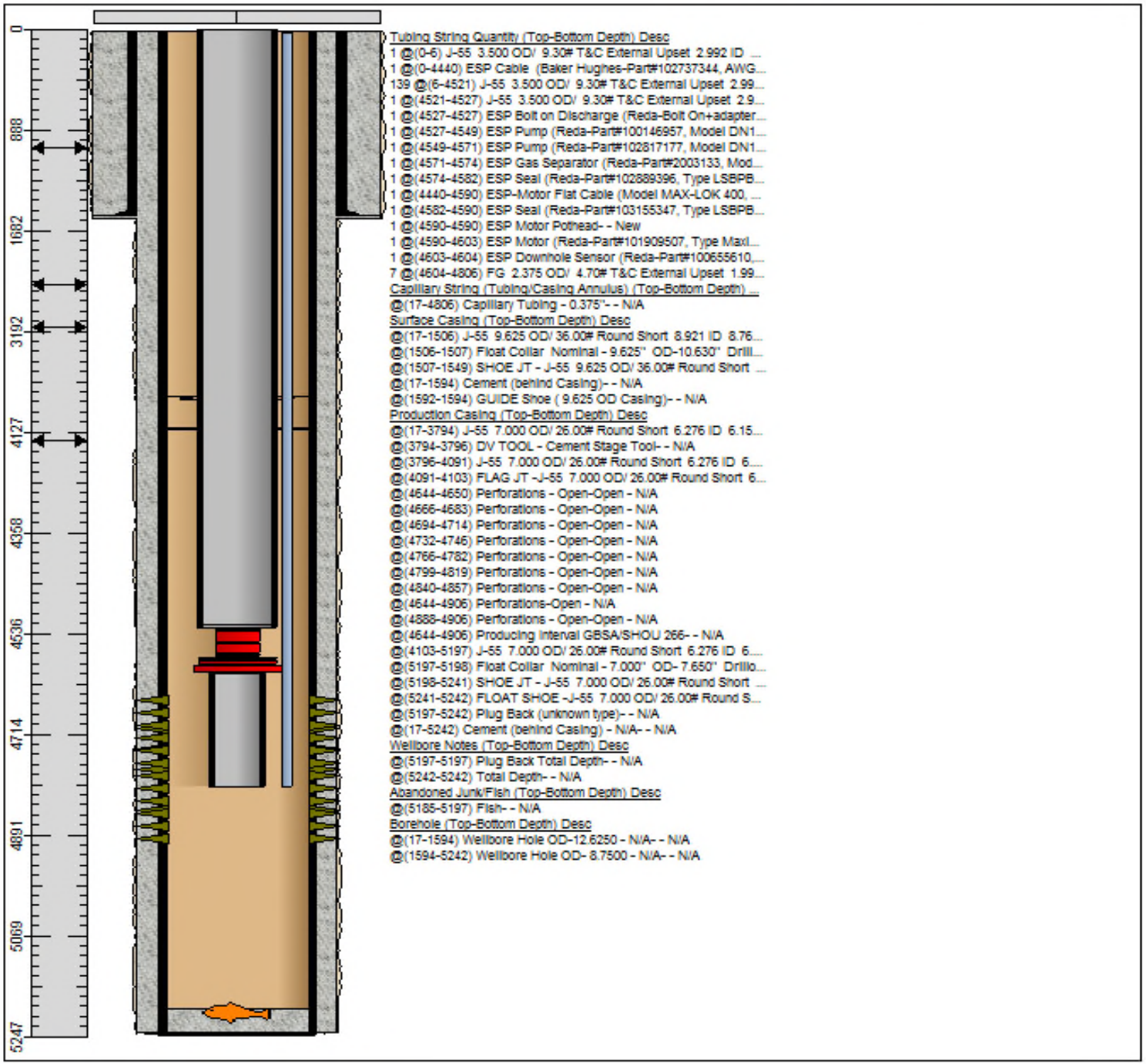
Production Casing (Top-Bottom Depth) Desc
@(4872-5106) Perforations-Open - N/A
@(4872-5106) Producing Interval (Completion)- - N/A
@(17-5384) J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift- - N/A
@(5384-5386) Float Collar Nominal - 7.000" OD- 7.650" Drillout ID- 6.351" - N/...
@(5386-5428) Casing Shoe (7.000 OD Casing)- - N/A
@(17-5429) Cement (behind Casing)- - N/A
@(5428-5429) FLOAT Shoe (7.000 OD Casing)- - N/A

Wellbore Notes (Top-Bottom Depth) Desc
@(5384-5384) Plug Back Total Depth- - N/A
@(5429-5429) Total Depth- - N/A

Borehole (Top-Bottom Depth) Desc
@(17-1589) Wellbore Hole OD-12.6250- - N/A
@(1589-5429) Wellbore Hole OD- 8.7500- - N/A

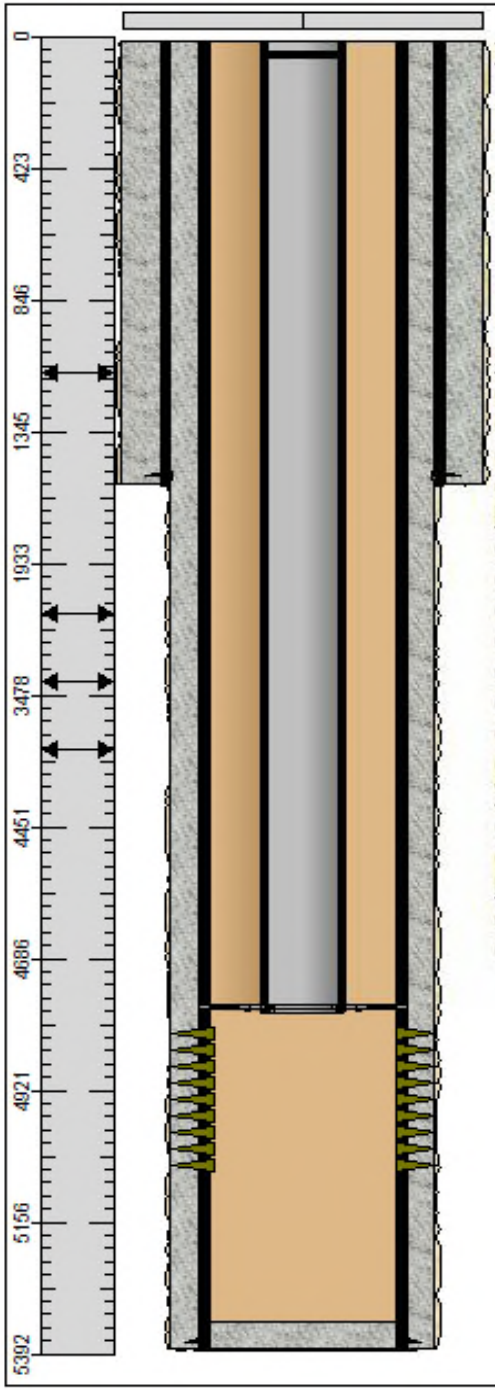
API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43098	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	266	Oil	Active	1794	S	891	W	L	4	19S	38E	6/9/2016	5243	12.625 8.750	9.625 7.000	1549 5242	630 1040	Surf 3796	0 0	4644'-4906' GRAYBURG-SAN ANDRES	

Wellbore Diagram : SHOU-266



API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43104	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	267	Injection	Active	165	N	667	W	D	9	19S	38E	4/30/2016	5239	12.625 8.750	9.625 7.000	1534 5374	970 1080	Surf 3921	Circ 0	'-' GRAYBURG-SAN ANDRES	

Wellbore Diagram : SHOU-267



Tubing String Quantity (Top-Bottom Depth) Desc
1 @(16-46) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift - Du...
1 @(46-54) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift - Du...
1 @(54-62) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift - Du...
1 @(62-63) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift - Du...
150 @(63-4766) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift ...
1 @(4766-4767) On-Off Tool (Tubing) 2.875" OD "T-2"- - New
1 @(4767-4767) Profile Nipple - F 2.875" / 1.875" ID- - New
1 @(4767-4775) Packer Mandrel 7.000"-7" X 2 7/8" 17-26# ARROWSET 1-X DOU...
1 @(4775-4775) Pump-Out Plug (2.875")-W/ALUMINUM SLUG W/7 pins@370#pi...

Surface Casing (Top-Bottom Depth) Desc
@(1530-1532) Float Collar Nominal - 9.625" OD-10.630" Drillout ID- 8.865" - N/...
@(1579-1580) Float Shoe/Guide Shoe Nominal - 9.625" OD-10.630" Drillout ID-...
@(16-1580) Cement (behind Casing) - N/A- - N/A
@(16-1580) J-55 9.625 OD/ 36.00# Round Short 8.921 ID 8.764 Drift - N/A- - N/A

Production Casing (Top-Bottom Depth) Desc
@(4767-4775) Packer (Retrievable)7.000"-7" X 2 7/8" 17-26# ARROWSET 1-X D...
@(4808-5052) Producing Interval (Completion)- - N/A
@(4808-5052) Perforations-Open - N/A
@(5332-5333) Float Collar Nominal - 7.000" OD- 7.650" Drillout ID- 6.351" - N/A...
@(16-5385) J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift - N/A- - N/A
@(16-5385) Cement (behind Casing) - N/A- - N/A
@(5332-5385) Plug Back (unknown type)- - N/A
@(5384-5385) Casing Shoe (7.000 OD Casing) - N/A- - N/A

Wellbore Notes (Top-Bottom Depth) Desc
@(5332-5332) Plug Back Total Depth- - N/A
@(5385-5385) Total Depth- - N/A

Borehole (Top-Bottom Depth) Desc
@(16-1580) Wellbore Hole OD-12.1250 - N/A- - N/A
@(1580-5385) Wellbore Hole OD- 8.7500 - N/A- - N/A

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43100	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	268	Injection	Active	179	N	1840	W	C	9	19S	38E	5/10/2016	5238	12.625 8.750	9.625 7.000	1578 5377	630 1065	Surf 3933	Circ 0	4805'-5078' GRAYBURG-SAN ANDRES	

WELLBORE DIAGRAM

(updated: 04/19/2022 CER)

Revision 0

WELL# SOUTH HOBBS G/SA UNIT #268
API# 30-025-43100

Zone: San Andres
Spud: 5/10/2016

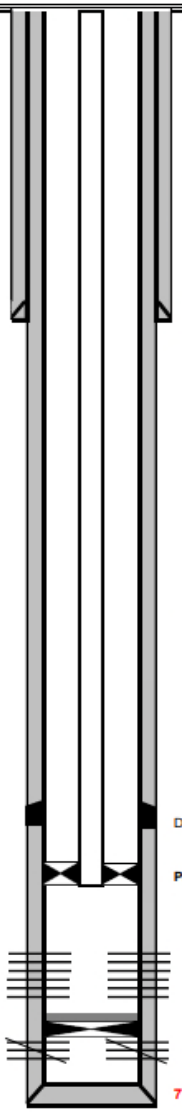
GL elev 3599'

SOUTH HOBBS G/SA UNIT #268

CEMENT

DEVIATION SURVEYS

DEPTH DEGREE



Surface Casing
Cement with 970 sx Class C, Yield 1.34

CIRCULATED 111 sx TO SURFACE

12-5/8" hole

9-5/8" 36# J-55 set at 1578'

Production Casing
Cement with 415 sx Class C lead and 650 sx Class C tail

CIRCULATED 147 sx FIRST STAGE TO SURFACE
CIRCULATED 210 sx SENCOND STAGE TO SURFACE

8-3/4" Hole

DV-Tool @ 3,931'

Packer @ 4743'

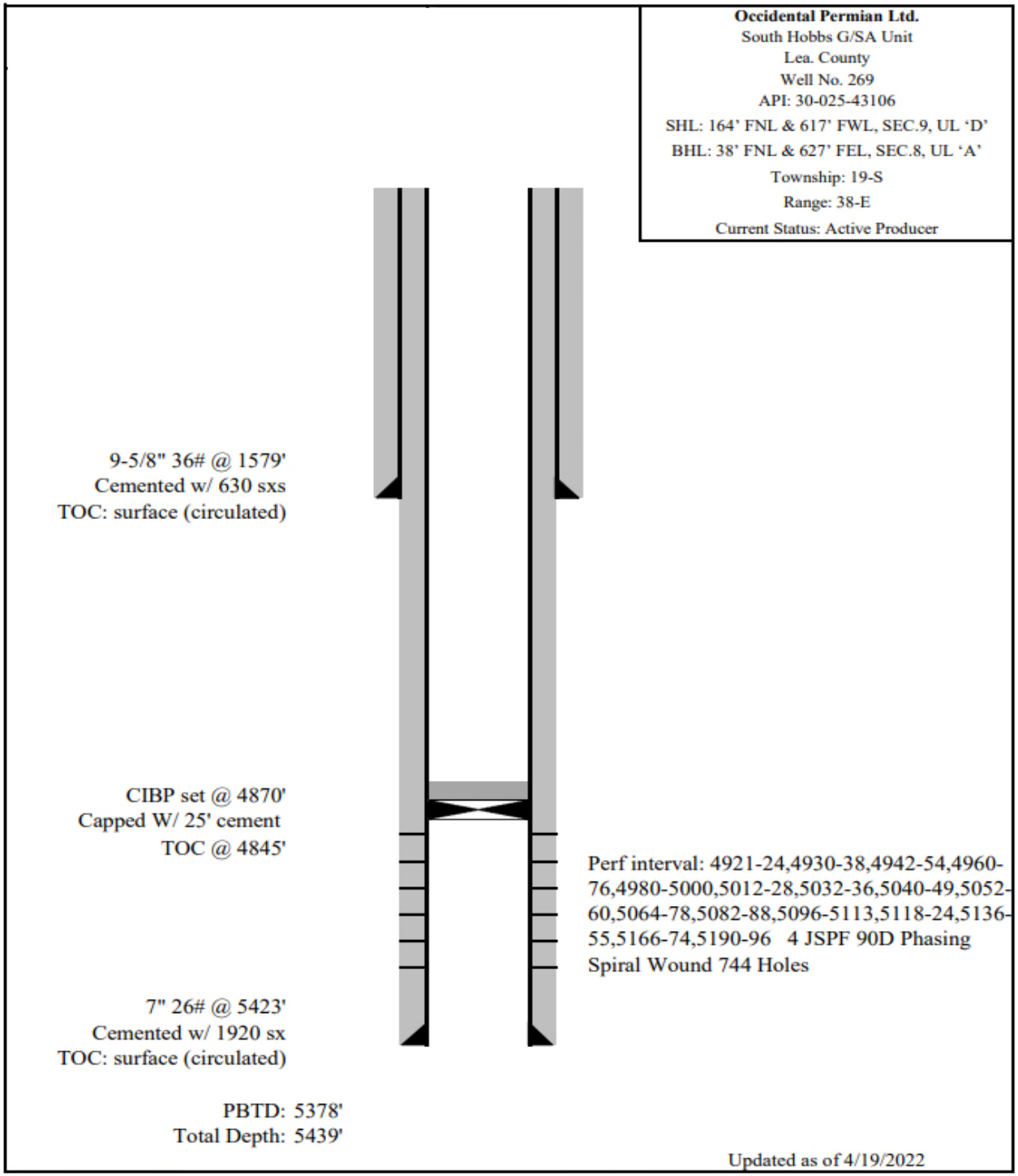
Exisiting Perfs: 4988'-5000',4972'-4984',4957'-4963',4940'-4952',4928'-4936',4909'-4924,4895'-4904',4878'-4886',4858'-4868',4839'-4855',4825'-4832', and 4805'-4822'.

Isolated Perfs: 5068'-5078', 5054'-5058',5042'-5050',5030'-5036',5020'-5026',

CIBP @ 5013'
Cap it w/ 8 sx of Cmt

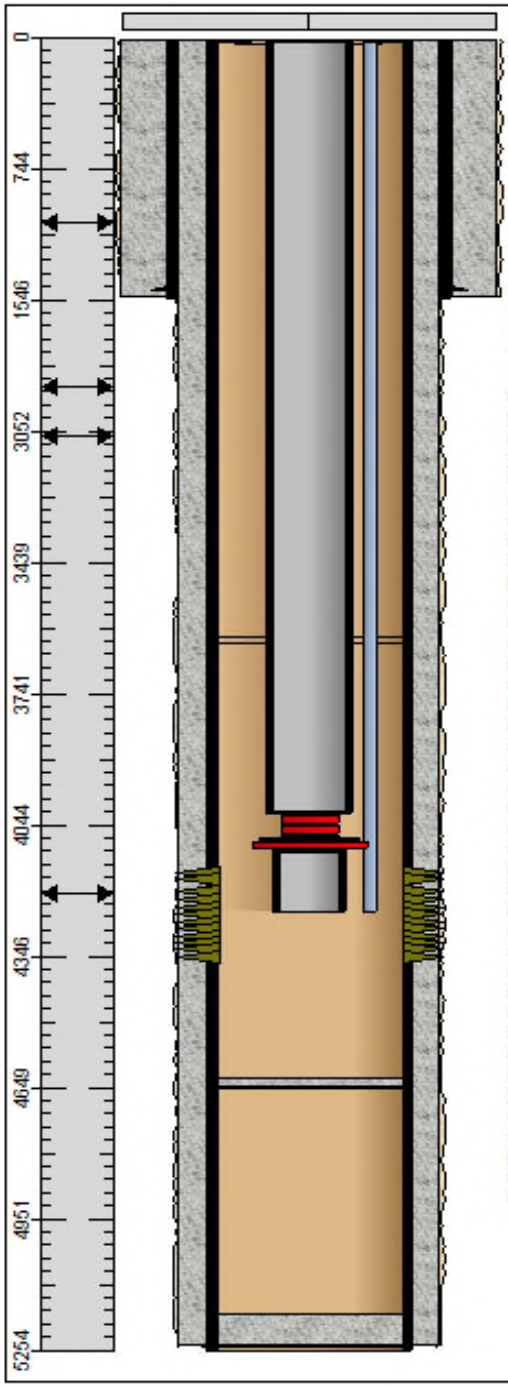
7" 26# J-55 set at 5377'

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43106	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	269	Oil	Active	164	N	617	W	D	9	19S	38E	4/25/2016	5220	12.250 8.750	9.625 7.000	1534 5403	630 342	Surf Surf	Circ 0	4921'-5196' GRAYBURG-SAN ANDRES	



API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43105	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	270	Oil	Active	165	N	717	W	D	9	19S	38E	5/5/2016	5238	12.625 8.750	9.625 7.000	1537 5245	630 1085	Surf 3803	Circ 0	4139'-4969' GRAYBURG-SAN ANDRES	

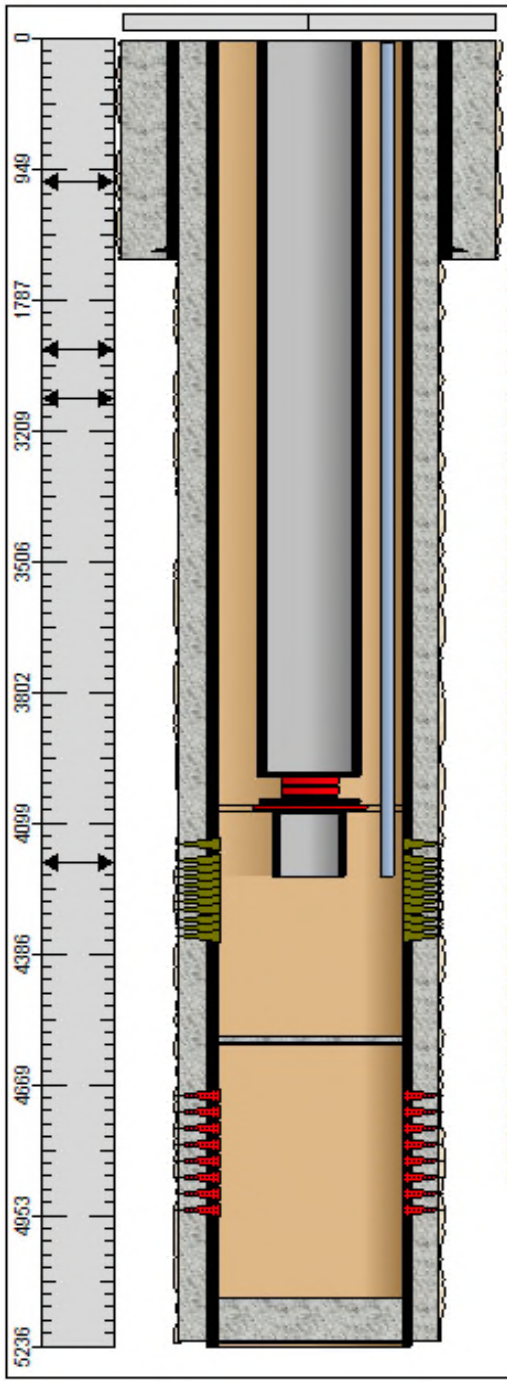
Wellbore Diagram : SHOU-270



Tubing String Quantity (Top-Bottom Depth) Desc
1 @(14-20) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift- - Rerun
1 @(14-319) ESP Cable (Part#C1030CBLYCUS, AWG 2, Type CELF, Galv.)- - Used & Inspected
1 @(319-3969) ESP Cable (Part#C1030CBLYCUS, AWG 2, Type CELF, Galv.)- - Used & Inspected
124 @(20-4009) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift - Bare- - Rerun
1 @(4009-4010) Seat Nipple - Standard (2.875") Cup Type- - Rerun
1 @(4010-4016) J-55 2.875 OD/ 6.50# T&C External Upset 2.441 ID 2.347 Drift- - Rerun
1 @(4016-4017) ESP Bolt on Discharge (Centrilift-Part#C63029, Model 400, Type B/O CS)- - New
1 @(4017-4040) ESP Pump (Centrilift-Part#105075379, 134 STG, Type FLEXER, Model 400SSD)- - New
1 @(4040-4064) ESP Pump (Centrilift-Part#105075379, 134 STG, Type FLEXER, Model 400SSD)- - New
1 @(4064-4066) ESP Gas Separator (Centrilift-Part#500008463, Type GASSEP, Model GM2HVV)- - New
1 @(4066-4072) ESP Seal (Centrilift-Part#105159255_C, Model FSC3 UT FER CL5E HL PFSA H6)- - Used & Inspected
1 @(4072-4079) ESP Seal (Centrilift-Part#C313017048_C, Model FSB3DB H6 FER SSCV SB/SB PFSA CL-5E)- - Used & Inspec...
1 @(3969-4079) ESP-Motor Flat Cable (Part#105166563-110, AWG 6, Type CL 12 T-IN, Monel)- - New
1 @(4078-4079) ESP Motor Pothead- - New
1 @(4079-4096) ESP Motor (Centrilift-Part#105106629, Model 450SP, HP 110, Volt 1550, AMP 46)- - New
1 @(4096-4099) ESP Downhole Sensor (Centrilift-Part#C902634_C, Type Centinel 3, Model ASM 5000 C 450)- - Used & Inspected
5 @(4099-4244) FG 2.375 OD/ 4.70# T&C External Upset 1.995 ID 1.901 Drift- - New
Capillary String (Tubing/Casing Annulus) (Top-Bottom Depth) Desc
@(17-4244) Capillary Tubing - 0.375" Stainless Steel- - New
Surface Casing (Top-Bottom Depth) Desc
@(17-1494) J-55 9.625 OD/ 36.00# Round Short 8.921 ID 8.764 Drift- - New
@(1494-1496) Float Collar Nominal - 9.625" OD-10.630" Drillout ID- 8.865"- - N/A
@(1496-1537) SHOE JT - J-55 9.625 OD/ 36.00# Round Short 8.921 ID 8.764 Drift- - New
@(17-1539) Cement (behind Casing)- - N/A
@(1537-1539) GUIDE Shoe (9.625 OD Casing)- - N/A
Production Casing (Top-Bottom Depth) Desc
@(17-21) Casing Hanger- - New
@(21-3611) J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift - Bare- - New
@(3611-3624) FLAG JT -J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift- - New
@(4139-4147) Perforations - Open-OPEN - N/A
@(4155-4163) Perforations - Open-OPEN - N/A
@(4179-4189) Perforations - Open-OPEN - N/A
@(4199-4209) Perforations - Open-OPEN - N/A
@(4219-4227) Perforations - Open-OPEN - N/A
@(4235-4243) Perforations - Open-OPEN - N/A
@(4251-4259) Perforations - Open-OPEN - N/A
@(4267-4275) Perforations - Open-OPEN - N/A
@(4283-4291) Perforations - Open-OPEN - N/A
@(4299-4307) Perforations - Open-OPEN - N/A
@(4315-4323) Perforations - Open-OPEN - N/A
@(4331-4339) Perforations - Open-OPEN - N/A
@(4625-4650) Plug - Cement on Top of CIBP- - N/A
@(4650-4654) Bridge Plug Cast Iron 7.000"- - New
@(4139-4969) Producing Interval (Completion)- - N/A
@(3624-5200) J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift- - New
@(5200-5201) Float Collar Nominal - 7.000" OD- 7.650" Drillout ID- 6.351"- - N/A
@(5201-5244) SHOE JT - J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift- - New
@(17-5245) Cement (behind Casing)- - N/A
@(5244-5245) FLOAT SHOE -J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.151 Drift- - New
@(5168-5245) Plug Back (unknown type)- - N/A
Wellbore Notes (Top-Bottom Depth) Desc
@(4625-4625) Plug Back Total Depth- - N/A
@(5245-5245) Total Depth- - N/A
Borehole (Top-Bottom Depth) Desc
@(17-1539) Wellbore Hole OD-12.6250- - N/A
@(1539-5245) Wellbore Hole OD- 8.7500- - N/A

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION	REMARKS
30-025-43101	OCCIDENTAL PERMIAN LTD	SOUTH HOBBS G/SA	271	Oil	Active	180	N	1890	W	C	9	19S	38E	5/16/2016	5237	12.625 8.750	9.625 7.000	1535 5228	630 700	Surf Surf	Circ 0	4681'-4934' GRAYBURG-SAN ANDRES	

Wellbore Diagram : SHOU-271



Tubing String Quantity (Top-Bottom Depth) Desc
1 @(16-22) J-55 3.500 OD/ 10.30# T&C External Upset 2.922 I...
1 @(16-3916) ESP Cable (Reda-Part#102737344, AWG 4, Mod...
123 @(22-3983) J-55 3.500 OD/ 10.30# T&C External Upset 2....
1 @(3983-3984) Seat Nipple - Heavy Duty (3.500") Cup Type- - ...
1 @(3984-3990) J-55 3.500 OD/ 10.30# T&C External Upset 2....
1 @(3990-3990) ESP Bolt on Discharge (Reda-Part#1289800, T...
1 @(3990-4012) ESP Pump (Reda-Part#102817344, Model DN1...
1 @(4012-4034) ESP Pump (Reda-Part#102817344, Model DN1...
1 @(4034-4037) ESP Gas Separator (Reda-Part#101876828, M...
1 @(4037-4045) ESP Seal (Reda-Part#102889396, Type LSLSL-...
1 @(4045-4053) ESP Seal (Reda-Part#103155347, Type LSBSB...
1 @(3916-4053) ESP-Motor Flat Cable- (Model Mazlok-456 KE...
1 @(4053-4053) ESP Motor Pothead- - New
1 @(4053-4069) ESP Motor (Reda-Part#101909511, Type MAXI...
1 @(4069-4071) ESP Downhole Sensor (Reda-Part#100655610,...
1 @(4071-4072) FG 2.375 OD/ 4.70# T&C External Upset 1.99...
5 @(4072-4217) FG 2.375 OD/ 4.70# T&C External Upset 1.99...
Capillary String (Tubing/Casing Annulus) (Top-Bottom Depth) ...
@(17-4217) Capillary Tubing - 0.375" Stainless Steel- - N/A
Surface Casing (Top-Bottom Depth) Desc
@(17-1492) J-55 9.625 OD/ 36.00# Round Short 8.921 ID 8.76...
@(1492-1494) Float Collar Nominal - 9.625" OD-10.630" Drill...
@(1494-1535) SHOE JT - J-55 9.625 OD/ 36.00# Round Short ...
@(17-1537) Cement (behind Casing)- - N/A
@(1535-1537) GUIDE Shoe (9.625 OD Casing)- - N/A
Production Casing (Top-Bottom Depth) Desc
@(17-4059) J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6.15...
@(4059-4071) FLAG JT -J-55 7.000 OD/ 26.00# Round Short 6...
@(4131-4141) Perforations - Open-Open - N/A
@(4170-4180) Perforations - Open-Open - N/A
@(4188-4198) Perforations - Open-Open - N/A
@(4206-4216) Perforations - Open-Open - N/A
@(4224-4234) Perforations - Open-Open - N/A
@(4242-4252) Perforations - Open-Open - N/A
@(4260-4270) Perforations - Open-Open - N/A
@(4278-4288) Perforations - Open-Open - N/A
@(4296-4306) Perforations - Open-Open - N/A
@(4314-4324) Perforations - Open-Open - N/A
@(4332-4340) Perforations - Open-Open - N/A
@(4565-4580) Plug - Cement on Top of CIBP- - N/A
@(4580-4584) Bridge Plug Cast Iron 7.000"- - N/A
@(4131-4934) Producing Interval (Completion)- - N/A
@(4681-4934) Perforations-Isolated - N/A
@(4071-5185) J-55 7.000 OD/ 26.00# Round Short 6.276 ID 6....
@(5185-5187) Float Collar Nominal - 7.000" OD- 7.650" Drillo...
@(5187-5226) SHOE JT - J-55 7.000 OD/ 26.00# Round Short ...
@(17-5228) Cement (behind Casing)- - N/A
@(5226-5228) FLOAT SHOE -J-55 7.000 OD/ 26.00# Round S...
@(5129-5228) Plug Back (unknown type)- - N/A
Wellbore Notes (Top-Bottom Depth) Desc
@(5228-5228) Total Depth- - N/A
@(4565-5228) Plug Back Total Depth- - N/A
Borehole (Top-Bottom Depth) Desc
@(17-1537) Wellbore Hole OD-12.6250- - N/A
@(1537-5228) Wellbore Hole OD- 8.7500- - N/A

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 (CO2), and the reinjection of produced CO2, water and gases including methane, natural gas liquids and hydrogen sulfide (H2S) in the South Hobbs Project Area;

(b) to provide for a surface injection pressure limit for CO2, 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 CO2 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 CO2 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 H2S and CO2 flooding operations in the Permian Basin;

(b) How enhanced oil recovery projects utilize the injection of CO2, 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 CO2 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, CO2 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, H2S 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 H2S 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 CO2 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 CO2 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, CO2 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 CO2 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 CO2 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 CO2 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, CO2 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 CO2, 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 CO2, 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 CO2, 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 CO2 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 value 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 C02 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 18th day of July, 2013.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

ROBERT BALCH, Member

TERRY WARNELL, Member

JAMI BAILEY, Chair

SEAL

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