

ABOVE THIS LINE FOR DIVISION USE ONLY

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



Cedar Canyon 16 #3
30-015-41324
Oxy USA

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

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 _____

[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.

David Stewart
• Print or Type Name

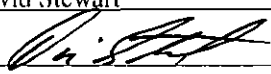
Signature

Se. Regulatory Advisor 4/30/13
Title Date

david_stewart@oxy.com
e-mail Address

Cedar Canyon 16 SWD #3

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ X Disposal _____ Storage
Application qualifies for administrative approval? _____ X Yes _____ No
- II. OPERATOR: _____ OXY USA Inc _____ Cedar Canyon 16 SWD #3
ADDRESS: _____ P.O. Box 50250 Midland, TX 79710
CONTACT PARTY: _____ David Stewart _____ PHONE: _____ 432-685-5717
- 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? _____ Yes _____ X No
If yes, give the Division order number authorizing the project: _____
- 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. Attached
- 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. Attached
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected; Avg-3500BWPD – Max-4000BWPD ✓
 2. Whether the system is open or closed; Closed
 3. Proposed average and maximum injection pressure; Avg-500psi – Max-590 psi ✓
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, Delaware and Bone Spring from OXY operated leases, see attached.
 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.). Attached
- *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. Attached
- IX. Describe the proposed stimulation program, if any. To Be Determined
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
Logs to be filed after well has been drilled and completed.
- *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. Per our field personnel no fresh water wells or windmills were found within one mile of this well. The only wells found were brine water wells.
- 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. Attached
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. Attached
- 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: _____ David Stewart _____ TITLE: _____ Sr. Regulatory Advisor
SIGNATURE: _____  _____ DATE: _____ 4/30/13
E-MAIL ADDRESS: _____ david_stewart@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: _____

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: OXY USA Inc.WELL NAME & NUMBER: Cedar Canyon 16 SWD #3WELL LOCATION: 725 FNL 660 FWL D 16 24S 29E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATICPROPOSED WELL CONSTRUCTION DATASurface CasingHole Size: 12-1/4" Casing Size: 9-5/8" @ 310'Cemented with: 210 sx. **or** 281 ft³Top of Cement: Surface Method Determined: To Be CircIntermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. **or** _____ ft³

Top of Cement: _____ Method Determined: _____

Production CasingHole Size: 8-3/4" Casing Size: 7" @ 4400'Cemented with: 1230 sx. **or** 2161 ft³Top of Cement: Surface Method Determined: To Be CircTotal Depth: 4400'Injection Interval2950 feet to 4200 feet

(Perforated or Open Hole; indicate which)

OXY USA Inc. - Proposed
Cedar Canyon 16 SWD #3
API No. 30-015-

12-1/4" hole @ 310'
9-5/8" csg @ 310'
w/ 210sx-TOC-Surf-Circ

2-7/8" PL tbg w/ pkr @ 2900'

Perfs @ 2950-4200'

8-3/4" hole @ 4400'
7" csg @ 4400'
w/ 1230sx-TOC-Surf-Circ

TD-4400'

INJECTION WELL DATA SHEETTubing Size: 2-7/8" 6.5# J55 Lining Material: polylinedType of Packer: Nickel Plated Arrow SetPacker Setting Depth: 2900'Other Type of Tubing/Casing Seal (if applicable): N/AAdditional 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: Delaware – Bell/Cherry Canyon

3. Name of Field or Pool (if applicable): Cedar Canyon Delaware

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: Delaware/Bone Springs



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<u>C 00463</u>		C	ED	4	4	4	17	24S	29E	594332	3564282*	260	4	256
<u>C 00863</u>			ED	3	3	1	16	24S	29E	594524	3565091*	220		
<u>C 00863 CLW199506</u>	O		ED	3	3	1	16	24S	29E	594524	3565091*	220		
<u>C 02713</u>		C	ED	4	4	1	16	24S	29E	591633	3565944	230	18	212
Average Depth to Water:												11 feet		
Minimum Depth:												4 feet		
Maximum Depth:												18 feet		

Record Count: 4

PLSS Search:

Section(s): 8, 9, 10, 15, 16, **Township:** 24S **Range:** 29E
17, 20, 21, 22

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/10/13 1:53 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

The wells that are listed on the NMOSE nine section list the following was found.

C00863, and 00463 have been converted to brine wells

02713, could find no indication this well was even drilled. Also no windmills could be found within one mile search of the area.

This was done by:

Terry Coor – OXY Field Operations

Jim Wilson – OXY Construction Specialist

- *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.

Injection zone

Light gray to gray-green, clean, very fine-grained, massive-bedded, sub-angular, quartz sandstone, containing some layers of interlaminated shaly siltstone, and black shale up to one inch thick. Porosity ranges from 10 to 30 percent, averaging 22 percent with permeability ranging from 10 to 150 md.

Bell Canyon-Ramsey sand 2950' – 4200'

Zone thickness- 1250 ft

Formation	ft (MD)
Rustler	265
Salado Top	310
Potash Top	384
Potash Bottom	744
Salado Bottom	2690
Delaware Top	2855
Bell Canyon	2900
Cherry Canyon	3700
Brushy Canyon	5000

No oil or gas shows in offset mudlog.

Offset NuTech (Advanced Petrophysical) evaluation flags injection zone as "Free Water" with no "Free Hydrocarbon".

Calculated water saturation (Archie) between 60-70%

- IX. Describe the proposed stimulation program, if any.
Sand fracture treatment

- 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.

I have examined the available geologic and engineering data for the Cedar Canyon 16#3 SWD well and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.


Jennifer Schulz, Geologist

WATER SAMPLES

Delaware Brushy Canyon water

General Information About Sample 5891			
BCR FEDERAL			
API	3001526891	Sample Number	
Unit/Section/ Township/Range	A / 03 / 23S / 28E	Field	LOVING EAST
County	Eddy	Formation	BRUSH CYN
State	NM	Depth	
Lat/Long	32.34019 , -104.06699	Sample Source	
TDS (mg/L)	228167	Water Type	
Sample Date (MM/DD/YYYY)	11/9/1999 12:00:00 AM	Analysis Date (MM/DD/YYYY)	11/10/1999 12:00:00 AM
Remarks/Description			
Cation Information (mg/L)		Anion Information (mg/L)	
Potassium (K)		Sulfate (SO)	149.375
Sodium (Na)	81631.6	Chloride (Cl)	167300
Calcium (Ca)	23469.8	Carbonate (CO ₃)	
Magnesium (Mg)		Bicarbonate (HCO ₃)	72.895
Barium (Ba)		Hydroxide (OH)	
Manganese (Mn)		Hydrogen Sulfide (H ₂ S)	0
Strontium (Sr)		Carbon Dioxide (CO ₂)	
Iron (Fe)	35.85	Oxygen (O)	

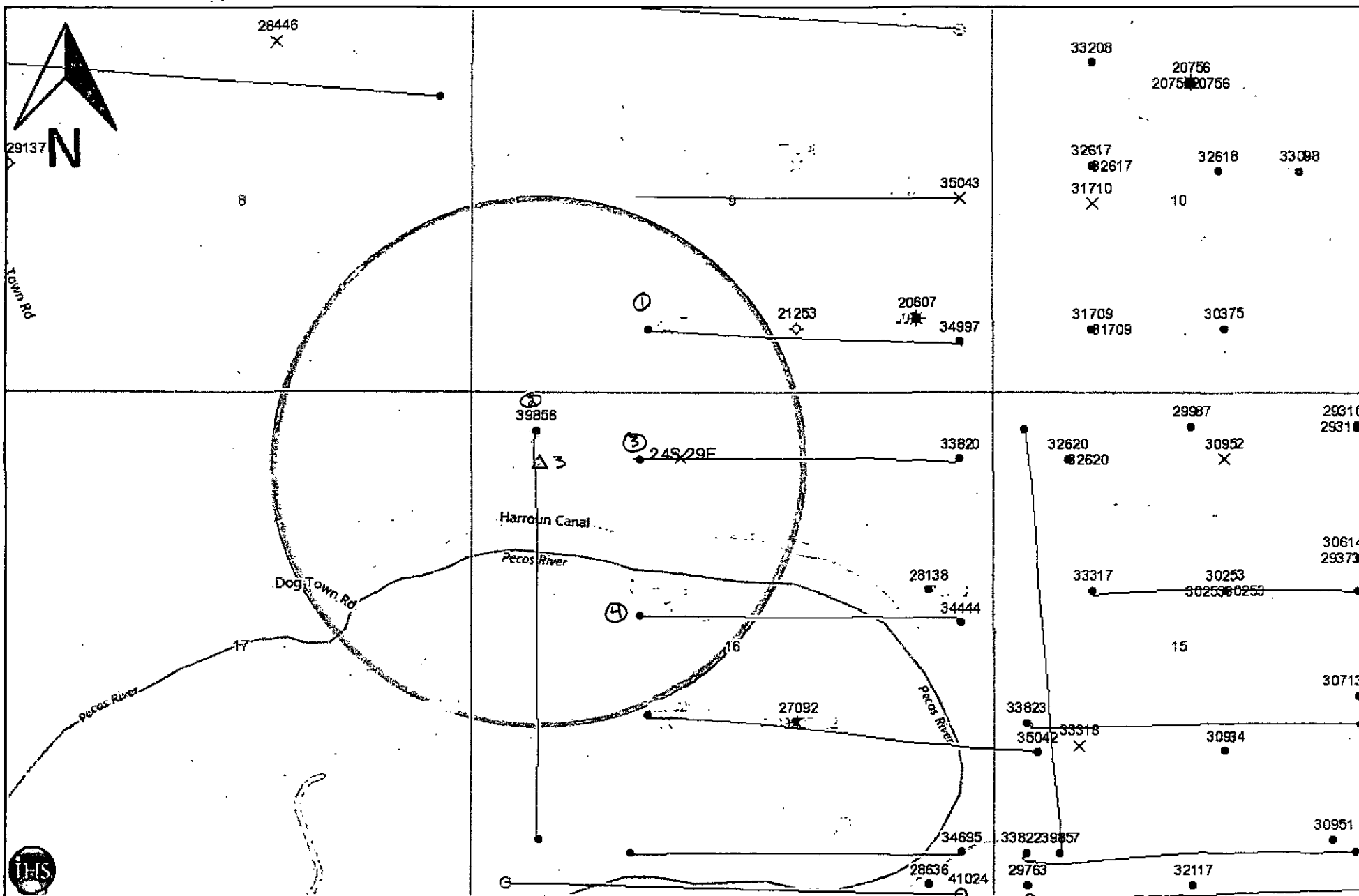
Bone Spring Water

General Information About: Sample 6747			
CORRAL DRAW AQH FEDERAL			
API	3001529396	Sample Number	
Unit/Section/ Township/Range	L / 13 / 24S / 29E	Field	LIVINGSTON RIDGE
County	Eddy	Formation	B SPG
State	NM	Depth	
Lat/Long	32.21635 , -103.94508	Sample Source	
TDS (mg/L)		Water Type	
Sample Date (MM/DD/YYYY)	12/27/2000 12:00:00 AM	Analysis Date (MM/DD/YYYY)	
Remarks/Description			
Cation Information (mg/L)		Anion Information (mg/L)	
Potassium (K)		Sulfate (SO)	190
Sodium (Na)		Chloride (Cl)	164963
Calcium (Ca)	25552	Carbonate (CO ₃)	
Magnesium (Mg)	4471	Bicarbonate (HCO ₃)	73
Barium (Ba)	0	Hydroxide (OH)	
Manganese (Mn)		Hydrogen Sulfide (H ₂ S)	0
Strontium (Sr)		Carbon Dioxide (CO ₂)	
Iron (Fe)	175	Oxygen (O)	

C-108 - Item VI
Cedar Canyon 16 #3
AREA OF REVIEW

OPERATOR	LEASE	WELL NO.	API NO.	PLAT	LOCATION	DATE DRILLED	TD	PERFS	CASING-CEMENT	STATUS
OXY USA Inc.	Harroun 9	1	015-34997	1	S-530 FSL 330 FEL (P) B-629 FSL 1791 FWL (N) 9-24S-29E	6/5/06	10680'M 7691'V	7860-10580'	13-3/8" @ 550' w/ 425sx - TOC-Surf-Circ ✓ 9-5/8" @ 2875' w/ 950sx - TOC-Surf-Circ ✓ 5-1/2" @ 10680' w/ 2100sx - TOC-1550'-CBL ✓	Pierce Crossing Bone Spring Act Oil
OXY USA Inc.	Cedar Canyon 16	1H	015-39856	2	S-380 FNL 660 FWL (D) B-758 FSL 683 FWL (M) 16-24S-29E	6/12/12	11502'M 7685'V	8620-11201'	13-3/8" @ 385' w/ 430sx - TOC-Surf-Circ ✓ 9-5/8" @ 2875' w/ 1130sx - TOC-Surf-Circ ✓ 5-1/2" @ 11502' w/ 1840sx - TOC-2400'-Calc ✓	Corral Draw Bone Spring Act Oil
OXY USA Inc.	H. Buck State	3	015-33820	3	S-660 FNL 330 FEL (A) B-661 FNL 1705 FWL (C) 16-24S-29E	4/15/05	10750'M 7675'V	7971-10667'	13-3/8" @ 337' w/ 350sx - TOC-Surf-Circ ✓ 9-5/8" @ 2870' w/ 1050sx - TOC-Surf-Circ ✓ 5-1/2" @ 10750' w/ 2050sx - TOC-1802'-Calc ✓	Pierce Crossing Bone Spring Act Oil
OXY USA Inc.	H. Buck State	4H	015-34444	4	S-2310 FNL 330 FEL (H) B-2263 FNL 1701 FWL (F) 16-24S-29E	11/29/05	10686'M 7689'V	7879-10326'	13-3/8" @ 254' w/ 350sx - TOC-Surf-Circ ✓ 9-5/8" @ 2830' w/ 900sx - TOC-Surf-Circ ✓ 5-1/2" @ 10686' w/ 2050sx - TOC-1920'-Calc ✓	Pierce Crossing Bone Spring Act Oil

Cedar Canyon 16 SWD #3 - 1/2 Mile AOR



[illegible]

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Kathy McCarroll, being first duly sworn,
on oath says:

That she is the Classified Supervisor of the
Carlsbad Current-Argus, a newspaper
published daily at the City of Carlsbad, in
said county of Eddy, state of New Mexico
and of general paid circulation in said county;
that the same is a duly qualified newspaper
under the laws of the State wherein legal
notices and advertisements may be
published; that the printed notice attached
hereto was published in the regular and
entire edition of said newspaper and not in
supplement thereof on the date as follows, to
wit:

April 26 _____ 2013

That the cost of publication is **\$50.08** and that
payment thereof has been made and will be
assessed as court costs.

Kathy McCarroll

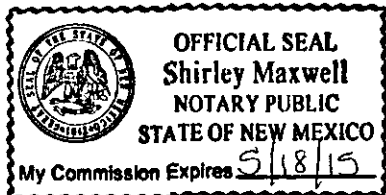
Subscribed and sworn to before me this

26th day of April, 2013

Shirley Maxwell

My commission Expires on May 18, 2015

Notary Public



April 26, 2013

Notice Of Application For Fluid Disposal

Applicant:

OXY USA Inc.
P.O. Box 50250
Midland, TX 79710
ATTN: David Stewart
432-685-5717

Purpose - Well:

Disposal of Produced Wa-
ter Into A Zone Non Pro-
ductive of Oil & Gas
Cedar Canyon 16 SWD #3
725 FNL 660 FWL
NWNW(D) Sec 16 T24S
R29E
Eddy County, NM

Formation:

Delaware - Bell/Cherry
Canyon
2950-4200'
Maximum Injection Rate -
4000 BWPD
Maximum Injection Pres-
sure - 590 psi

Interested parties must
file objections or re-
quests for hearing with
the Oil Conservation Divi-
sion, 1220 South St.
Francis Dr., Santa Fe,
New Mexico 87505 with-
in 15 days of this applica-
tion.

**C-108 Service List
OXY USA Inc
Cedar Canyon 16 #3**

New Mexico Oil Conservation Division
811 S. First St.
Artesia, NM 88210

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

State Land Office
P.O. Box 1148
Santa Fe, NM 87504

Surface Owner

John Drapper Brantley Jr.
706 W. Riverside Dr.
Carlsbad, NM 88220

Henry McDonald
P.O. Box 597
Loving, NM 88256

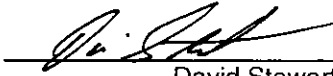
Offset Operators within 1/2 mile

OXY USA Inc.
P.O. Box 50250
Midland, TX 79710

Potash Lessee(s) within 1 mile

None

Copies of this application were mailed to the following individuals, companies and organizations on or before 4/30/13.



David Stewart
OXY USA Inc.

District I1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720**District II**811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720**District III**1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170**District IV**1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 166153

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address OXY USA INC PO Box 4294 Houston, TX 77210		2. OGRID Number 16696
		3. API Number
4. Property Code	5. Property Name CEDAR CANYON 16 SWD	6. Well No. 003

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	16	24S	29E	D	725	N	660	W	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	16	24S	29E	D	725	N	660	W	Eddy

9. Pool Information

SWD:DELAWARE	96100
--------------	-------

Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 2927
16. Multiple N	17. Proposed Depth 4400	18. Formation Delaware	19. Contractor	20. Spud Date 7/1/2013
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Type	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	310	210	0
Prod	8.75	7	26	4400	1230	0

Casing/Cement Program: Additional Comments

Additional information will be sent with the C-144 CLEZ & H2S Plan.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
DoubleRam	5000	5000	
Annular	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. Signature: Printed Name: Electronically filed by KAREN M SINARD Title: Email Address: karen_sinard@oxy.com Date: 4/25/2013	OIL CONSERVATION DIVISION	
	Approved By:	
	Title:	
	Approved Date:	Expiration Date:
	Phone: 713-366-5485	

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-	Pool Code 11540	Pool Name Cedar Canyon Delaware
Property Code 39045	Property Name CEDAR CANYON 16 SWD	Well Number 3
OGRID No. 16696	Operator Name OXY U.S.A. INC.	Elevation 2927'

Surface Location

UL or lot No. D	Section 16	Township 24-S	Range 29-E	Lot Idn	Feet from the 725	North/South line NORTH	Feet from the 660	East/West line WEST	County EDDY
--------------------	---------------	------------------	---------------	---------	----------------------	---------------------------	----------------------	------------------------	----------------

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 0	Joint or Infill N	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>GEODETIC COORDINATES NAD 27 NME</p> <p>SURFACE LOCATION Y=444915.5 N X=604501.4 E</p> <p>LAT.=32.222738° N LONG.=103.995408° W</p>
--	---

OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *David Stewart* Date: 4/24/13
Printed Name: David Stewart Sr. Reg. Adv.
E-mail Address: david.stewart@oxy.com

SURVEYOR CERTIFICATION

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 belief.

MARCH 15, 2013

Date of Survey
Signature & Seal of Professional Surveyor:

GARY G. EIDSON
NEW MEXICO
12641
Professional Surveyor
3/27/13
Certificate Number: Gary G. Eidson 12641
Ronald J. Eidson 3239
BKL

Operator Name/Number:	OXY USA Inc.	16696
Lease Name/Number:	Cedar Canyon 16 SWD #3	39045
Pool Name/Number:	Cedar Canyon Delaware	11540
Surface Location:	725 FNL 660 FWL D Sec 16 T24S R29E	

C-102 Plats: 3/15/13 3/27/13 4/18/13 Elevation: 2927' GL

Proposed TD: 4400' TVD

SL - Lat: 32.2222738 Long: 103.995408 X=604501.4 Y=4444915.5 NAD - 1927

Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	<u>Condition</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
12-1/4"	0-310'	9-5/8"	36	ST&C	J-55	New	14.92	2.38	3.54
				Hole filled with 8.4# Mud			2020#	3520#	
8-3/4"	0-4400'	7"	26	LT&C	L-80	New	2.46	4.12	3.38
				Hole filled with 9.6# Mud			5410#	7240#	

Collapse and burst loads calculated using Stress Check with anticipated loads

Cement Program:

- a. 9-5/8" Surface Circulate cement to surface w/ 210sx PP cmt w/ 1% CaCl₂, 14.8ppg 1.35 yield
1346# 24hr CS 165% Excess
- c. 7" Production Circulate cement w/ 850sx HES light PP cmt w/ .5% salt + .35% HR-800, 12.9ppg 1.85 yield
734# 24hr CS, 125% Excess followed by 380sx PP cmt w/ .5% Halad R-344 +
.2% WellLife 734 + 5#/sx Microbond + .3% Econolite + .3% CFR-3, 14.2ppg 1.55 yield
1914# 24hr CS 125% Excess

Description of Cement Additives: Calcium Chloride, Salt (Accelerator); WellLife 734 (Cement Enhancer); D-Air 6000 (Defoamer); CFR-3 (Dispersant); Microbond (Expander); Kol Seal, Poly-E-Flake (Lost Circulation Additive); Halad R-344 (Low Fluid Loss Control); HR-601, HR-800 (Retarder)

The above cement volumes could be revised pending the caliper measurement.

Proposed Mud Circulation System:

<u>Depth</u>	<u>Mud Wt. ppg</u>	<u>Visc sec</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 - 310'	8.4-8.8	27-38	NC	Fresh Water/Spud Mud
310' - TD	9.6-10.0	28-40	NC	Cut Brine/Salt Gel-Starch

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

BOP Program:

Surface None

Intermediate/Production 11" 5M two ram stack w/ 3M annular preventer, 5M Choke Manifold

Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

<u>Geological Marker</u>	<u>Depth</u>	<u>Type</u>
a. Rustler	285'	Formation
b. Top Salt	330'	Formation
c. Bottom Salt	2690'	Formation
d. Base Anhydrite	2875'	Formation
e. Delaware-Bell Canyon	2968'	Oil/Gas
f. Delaware-Brushy Canyon	3720'	Oil/Gas

Fresh water may be present above the Rustler formation. Surface casing will be set below the top of the Rustler, which will cover potential fresh water sources.

Injection Permit Checklist: Received 05/07 First Email Date: NA Final Reply Date: NA Suspended?: NA

Issued Permit: Type: WFX / PMX / SWD Number: 1421 Permit Date: 05/29/13 Legacy Permits or Orders: NA

Well No. # 3 Well Name(s): Cedar Crest 16 SWD

API: 30-0 15-41324 Spud Date: NA New/Old: New (UIC CI II Primacy March 7, 1982)

Footages 725 FNL / 660 FWL Lot 1 Unit D Sec 16 Tsp 24S Rge 29E County Eddy

General Location: ~ 1.5 miles west of Malaga Pool: [SWD - Delaware] Pool No.:

Operator: OX4 USA OGRID: 116496 Contact: Daniel Stewart

COMPLIANCE RULE 5.9: Inactive Wells: 4 Total Wells: 1836 Fincl Assur: OK Compl. Order? NA IS 5.9 OK? Yes

Well File Reviewed: Yes Current Status: APD approved

Planned Rehab Work to Well: None - new well for SWD purpose

Well Diagrams: Proposed ✓ Before Conversion After Conversion Are Elogs in Imaging?: None available

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned <u> </u> or Existing <u>Cond</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Planned <u>✓</u> or Existing <u>Surface</u>	<u>12 1/4 / 9 5/8</u>	<u>0 - 310</u>	<u>NA</u>	<u>210</u>	<u>Circ. to surf</u>
Planned <u> </u> or Existing <u>Interm</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Planned <u>✓</u> or Existing <u>LongSt</u>	<u>8 3/4 / 7</u>	<u>0 - 4400</u>	<u>NA</u>	<u>1230</u>	<u>circulate to surface</u>
Planned <u> </u> or Existing <u>Liner</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Planned <u>✓</u> or Existing <u>OH / PERF</u>	<u>8 3/4 / 7</u>	<u>2950 - 4400</u>	<u> </u>	<u> </u>	<u> </u>

Injection Formation(s):	Depths (ft)	Formation	Tops?
Above Top of Inject Formation	<u>+260</u>	<u>Salado/Botton</u>	<u>2690</u>
Above Top of Inject Formation	<u>+95</u>	<u>Delaware</u>	<u>2855</u>
Proposed Interval TOP:	<u>2950</u>	<u>Delaware Bell Canyon</u>	<u>2900 / 2900</u>
Proposed Interval BOTTOM:	<u>4400</u>	<u>Cherry Canyon</u>	<u>3700</u>
Below Bottom of Inject Formation	<u>-600</u>	<u>Brushy Canyon</u>	<u>5000</u>
Below Bottom of Inject Formation	<u> </u>	<u> </u>	<u> </u>

Completion/Ops Details:	
Drilled TD	<u>4400</u> PBDT <u>4400</u>
Open Hole	<u> </u> or Perfs <u>✓</u>
Tubing Size	<u>2 7/8"</u> Inter Coated? <u>✓</u>
Proposed Packer Depth	<u>2900</u>
Max Packer Depth	<u>2850</u> (100-ft limit)
Proposed Max. Surface Press	<u>590</u>
Calc. Injt Press	<u>590</u> (0.2 psi per ft)
Calc. FPP	<u> </u> (0.65 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P NA Noticed? NA BLM Sec Ord NA WIPP NA Noticed? NA SALADO T: 310 B: 2690 CLIFF HOUSE NA

Fresh Water: Max Depth 260' FW Formation Shallow Wells? 1 mile Analysis? NA Hydrologic Affirm Statement Yes

Disposal Fluid: Formation Source(s) Top of Hester 265 has Alluvial top On Lease Only from Operator or Commercial

Injection Rate: 4000 Max Disposal Interval: Protectable Waters? NA CAPITAN REEF: in N thru N outside of Yes - south

H/C Potential: Producing Interval? No Formerly Producing? No Method: E Log / Mudlog / DST / Depleted / Other NA HC shows NA

AOR Wells: 1/2-M Radius Map? 4 Well List? 4 Total No. Wells Penetrating Interval: 4 offset No Tech NA

Penetrating Wells: No. Active Wells 4 Num Repairs? 0 on which well(s)? Bone Spring Diagrams? N

Penetrating Wells: No. P&A Wells 0 Num Repairs? 0 on which well(s)? Diagrams? N

NOTICE: Newspaper Date 03/26/13 Mineral Owner SLO Surface Owner Two private N. Date 4/30/13

RULE 26.7(A): Identified Tracts? Yes Affected Persons: Oxy / SLO McDonald & Brantley Jr. N. Date 4/30/13

Permit Conditions: None requested

Issues: