

ABOVE THIS LINE FOR DIVISION USE ONLY

NO NOTIFICATION OF SWD

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
- 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 _____

- SWD 1524
- COG OPERATING LLC
229137
well
- Lightning states SWD #2
30-025-pending
- SWD, Devonian
96101

- [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

RECEIVED OGD
 2014 NOV 25 10 3 15

[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.

BRIAN COLLINS Print or Type Name	<i>Brian Collins</i> Signature	Operations Engineering Advisor Title	19 Nov 2014 Date
		bcollins@concho.com e-mail Address	



November 19, 2014

RECEIVED OCD

2014 NOV 25 P 3: 15

New Mexico Oil Conservation Division
Attn: Phillip Goetze
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Application For Authorization To Inject
Lightning 1 State SWD #2
Township 21 South, Range 33 East, N.M.P.M.
Section 1: 3780' FSL & 2300' FWL
Lea County, New Mexico

Dear Mr. Goetze:

COG Operating LLC respectfully requests administrative approval for authorization to inject for the referenced well. Attached, for your review, is a copy of the C-108 application. Once we receive the newspaper publication and all certified return receipts, I will send you a copy.

Our geologic prognosis has the top of the Devonian at 15174', Fusselman at 15563', and Simpson at 16555'. I'm permitting the injection interval a couple of hundred feet shallower and deeper than the prognosis just in case the formation tops are different than expected due to the lack of deep well control in this area. We will likely call TD about 1250' to 1500' below the actual top of the Devonian when we drill the well.

Please do not hesitate to contact me at (575) 748-6940 should you have any questions.

Sincerely,

Brian Collins
Operations Engineering Advisor

BC/sw
Enclosures

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: COG Operating, LLC.

ADDRESS: 2208 West Main St, Artesia, NM 88210

CONTACT PARTY: BRIAN COLLINS PHONE: 575-748-6940

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 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.

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).

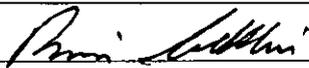
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: BRIAN COLLINS TITLE: Operations Engineering Advisor

SIGNATURE:  DATE: 19 Nov 2014

E-MAIL ADDRESS: bcollins@concho.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: _____

C-108 Application for Authorization to Inject
LIGHTNING 1 STATE SWD #2
3780' FSL, 2300' FWL
Unit N, Section 1, T21S, R33E
Lea County, NM

COG Operating, LLC, proposes to drill the captioned well to 16,700' for salt water disposal service into the Devonian/Silurian/Upper Ordovician from approximately 14,975' to 16,700'. A drilling permit will be submitted upon approval of this C-108.

- V. Map is attached.
- VI. No wells within the ½ mile radius area of review penetrate the proposed injection zone.
- VII.
 - 1. Proposed average daily injection rate = 17,300 BWPD
Proposed maximum daily injection rate = 25,000 BWPD
 - 2. Closed system
 - 3. Proposed maximum injection pressure = 2995 psi
(0.2 psi/ft. x 14,975' ft.)
 - 4. Source of injected water will be Delaware Sand, Bone Spring Sand and Wolfcamp produced water. No compatibility problems are expected. Analyses of Delaware, Bone Spring and Wolfcamp waters from analogous source wells are attached.
- VIII. The injection zone is the Devonian/Silurian/Upper Ordovician, a mixture of non-hydrocarbon bearing limestone and dolomite from 14975' to 16700'. Any underground water sources will be shallower than 1762', the estimated top of the Rustler Anhydrite.
- IX. The Devonian/Silurian/Upper Ordovician injection interval will be acidized with approximately 40,000 gals of 20 % HCl acid.
- X. Well logs will be filed with the Division. There are no nearby Devonian penetrations so no analog well logs are available.
- XI. There are a few fresh water wells within a mile of the proposed SWD well. Water analyses are attached for two of the wells, one deep and one shallow.
- XII. After examining the available geologic and engineering data, no evidence was found of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Proof of Notice is attached.

III.

WELL DATA

INJECTION WELL DATA SHEET

OPERATOR: COG Operating, LLC

WELL NAME & NUMBER: Lightning 1 State SWD No. 2

WELL LOCATION: 3780' FSL, 2300' FWL N 1 21s 33e
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26"
17 1/2"
Cemented with: = sx. or ± 5000 ft³
± 7000 ft³
Top of Cement: Surface Method Determined: Design
Surface Design

Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 5/8" e ± 11700'
Cemented with: = sx. or ± 4500 ft³
Top of Cement: Surface Method Determined: Design

Production Casing

Hole Size: 8 1/2" Casing Size: 7" liner ± 11500' - ± 14975'
Cemented with: - sx. or ± 700 ft³
Top of Cement: Top of Liner Method Determined: Design
Total Depth: ± 16,700'

Injection Interval

± 14,975' feet to ± 16,700'

(Perforated or Open Hole indicate which)

See Attached Wellbore Schematic

INJECTION WELL DATA SHEET

Tubing Size: 4 1/2" Lining Material: Duoline 20 / ccs Glassbore
 Type of Packer: Wickel plated 10K double grip retrievable or permanent packer
 Packer Setting Depth: ± 14925'
 Other Type of Tubing/Casing Seal (if applicable): N/A

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: Devonian / Silurian / Upper Ordovician
3. Name of Field or Pool (if applicable): -
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: _____
Underlying: None
Overlying: Yates Rivers ± 3700' - 3900', Bone Spring ± 8450' - 11600'

30-025-

Lightning 1 State SWD 2
3780' FSL, 2300' FWL
N-1-21s-33e
Lea, NM

26"

20" / / / e ±1800' ±5000 CF Cmt

17 1/2"

Capitol SWD #1
(24060 to 5601)

13 3/8" / / / e ±5700' ±7000 CF Cmt

12 1/4"

4 1/2" Inj. Tbg.

8 1/2"

9 5/8" / / / e ±11700' ±4500 CF Cmt

Inj. Pkr e ±14925'

Liner @ ±11,500 - ±14,975' ±700 CF Cmt

6 1/8"

Devonian/Silurian/Ordovician
OH Inj. Interval
±14,975' - ±16700'

16700'

"Not To Scale"

V.

MAP

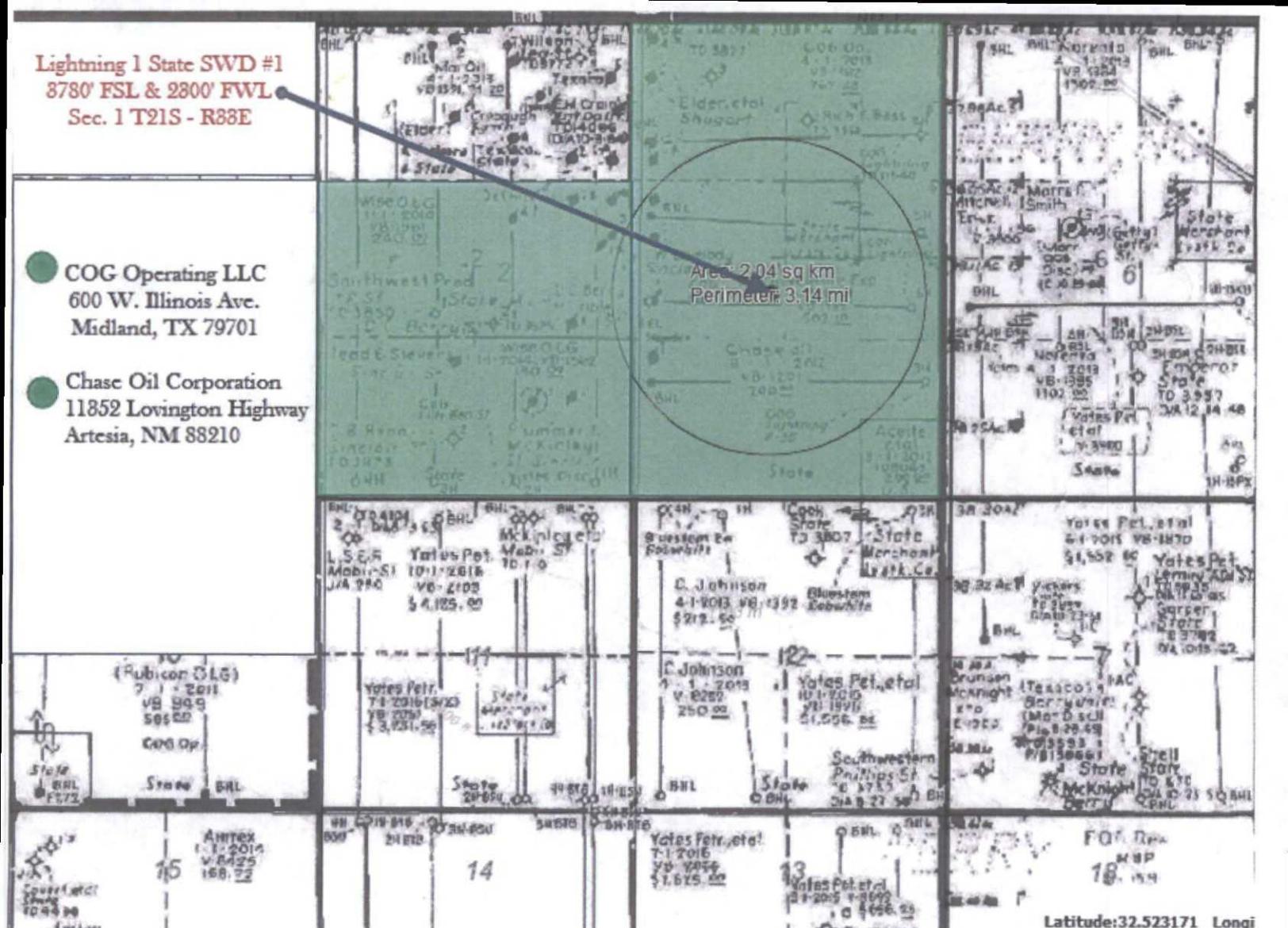
Lightning 1 State SWD #1
8780' FSL & 2800' FWL
Sec. 1 T21S - R38E

COG Operating LLC
600 W. Illinois Ave.
Midland, TX 79701

Chase Oil Corporation
11852 Lovington Highway
Artesia, NM 88210

Area: 2.04 sq km
Perimeter: 3.14 mi

Latitude: 32.523171 Longi



VI.

**No Wells Penetrate
Proposed Disposal
Interval Within Half
Mile Area of Review**

VII.

Water Analysis Produced Formation Water

**No Water Analyses
Available for Receiving
Formation**

WATER SAMPLES REPRESENTATIVE OF WATER BEING INJECTED INTO THE PROPOSED SWD WELL

Delaware												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128362	Sly Hawk State	1	William D Polk	9/28/2011	9/13/2011	1.17	4.06	256802.26	6.50		26180.00	4101.14
Bone Spring												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2012108003	Boyles	24 1H	William D Polk	4/16/2012	4/3/2012	1.13	3.41	206441.81	6.69		3700.86	841.87
Wolfcamp												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2012105892	Augustus 10	1H		3/15/2012	3/8/2012	1.06	1.46	89771.55	6.60		3963.30	639.83

TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
83379.63	62970.16	1133.12	38.78	20.06	1.64	905.03	9.33		73.00	0.00		70.00	161300.00	360.00	0.00
TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
13271.35	69386.15	1109.30	0.00	17.57	0.00	483.07	0.00		1403.00	0.00		700.00	128800.00	400.00	0.00
TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
13352.51	28320.32	350.70	0.00	17.85	1.77	707.79	0.00		220.00	0.00		950.00	54600.00	60.00	0.00

X.

**No Log Available Across
Proposed
Devonian/Silurian/Upper
Ordovician Injection Interval**

XI.

Fresh Water Sample Analyses



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr.	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)				X	Y			
									Source	6416	4	Sec			Tws	Rng	
<u>CP 00799</u>	PLS	3	DANIEL C. BERRY	LE	<u>CP 00799</u>				4	3	4	34	20S	34E	636666	3599364*	
<u>CP 01288</u>	EXP	0	BERRY RANCH	LE	<u>CP 01288</u>	POD1			4	4	2	34	20S	34E	637134	3600204	
<u>CP 01289</u>	COM	0	ATKINS ENGR ASSOC INC	LE	<u>CP 01289</u>	POD1		Artesian	4	4	2	34	20S	34E	637037	3600261	
<u>CP 01327</u>	PRO	0	COG OPERATING	LE	<u>CP 01289</u>	POD1		Artesian	4	4	2	34	20S	34E	637037	3600261	
<u>CP 01328</u>	PRO	0	COG OPERATING	LE	<u>CP 01289</u>	POD1		Artesian	4	4	2	34	20S	34E	637037	3600261	
<u>CP 01329</u>	PRO	0	COG OPERATING	LE	<u>CP 01289</u>	POD1		Artesian	4	4	2	34	20S	34E	637037	3600261	
<u>CP 01330</u>	COM	0	BERRY RANCH/GLENNS WW SERV INC	LE	<u>CP 01330</u>	POD1		Artesian	3	2	1	34	20S	34E	636197	3600483	
<u>CP 01334</u>	COM	0	ATKINS ENGR ASSOC INC	LE	<u>CP 01334</u>	POD1		Artesian	3	2	4	35	20S	34E	638402	3599879	
<u>CP 01335</u>	COM	0	ATKINS ENGR ASSOC INC	LE	<u>CP 01335</u>	POD1	NON	Artesian	4	1	4	35	20S	34E	638205	3599736	
<u>CP 01346</u>	PRO	0	COG OPERATING	LE	<u>CP 01330</u>	POD1		Artesian	3	2	1	34	20S	34E	636197	3600483	
<u>CP 01347</u>	PRO	0	COG OPERATING	LE	<u>CP 01330</u>	POD1		Artesian	3	2	1	34	20S	34E	636197	3600483	
<u>CP 01348</u>	PRO	0	COG OPERATING	LE	<u>CP 01330</u>	POD1		Artesian	3	2	1	34	20S	34E	636197	3600483	
<u>CP 01352</u>	COM	0	BERRY RANCH/GLENNS WW SERV INC	LE	<u>CP 01352</u>	POD1	NON	Artesian	3	1	4	34	20S	34E	636559	3599716	
<u>CP 01369</u>	PRO	0	COG OPERATING	LE	<u>CP 01334</u>	POD1		Artesian	3	2	4	35	20S	34E	638402	3599879	
<u>CP 01370</u>	PRO	0	COG OPERATING	LE	<u>CP 01334</u>	POD1		Artesian	3	2	4	35	20S	34E	638402	3599879	
<u>CP 01371</u>	PRO	0	COG OPERATING	LE	<u>CP 01334</u>	POD1		Artesian	3	2	4	35	20S	34E	638402	3599879	
<u>CP 01372</u>	PRO	0	COG OPERATING	LE	<u>CP 01352</u>	POD1	NON	Artesian	3	1	4	34	20S	34E	636559	3599716	
<u>CP 01373</u>	PRO	0	COG OPERATING	LE	<u>CP 01352</u>	POD1	NON	Artesian	3	1	4	34	20S	34E	636559	3599716	

All greater than 1 mile away.

*UTM location was derived from PLSS - see Help

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)
 C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	6416 4	Sec	Tws	Ring	X	Y
<u>CP 01374</u>		PRO	0	COG OPERATING	LE	<u>CP 01352 POD1</u>		NON	Artesian	3	1	4	34 20S 34E	636559	3599716
<u>CP 01375</u>		PRO	0	COG OPERATING	LE	<u>CP 01335 POD1</u>		NON	Artesian	4	1	4	35 20S 34E	638205	3599736
<u>CP 01376</u>		PRO	0	COG OPERATING	LE	<u>CP 01335 POD1</u>		NON	Artesian	4	1	4	35 20S 34E	638205	3599736
<u>CP 01377</u>		PRO	0	COG OPERATING	LE	<u>CP 01335 POD1</u>		NON	Artesian	4	1	4	35 20S 34E	638205	3599736
<u>CP 01389</u>		EXP	0	BERRY RANCH/GLENN'S WW SERV INC	LE	<u>CP 01389 POD1</u>				1	1	1	34 20S 34E	635725	3600733
<u>CP 01391</u>		EXP	0	ATKINS ENGR ASSOC INC	LE	<u>CP 01391 POD1</u>				1	4	2	34 20S 34E	636834	3600363

All greater than 1 mile away

Record Count: 24

PLSS Search:

Section(s): 31-36 Township: 20S Range: 34E

Sorted by: File Number

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.



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	(acre ft per annum)		(quarters are 1=NW 2=NE 3=SW 4=SE)		(quarters are smallest to largest) (NAD83 UTM in meters)		
									Source	64164	Sec	Tws	Rng	X	Y
<u>CP 00578</u>		STK	3	MERCHANT LIVESTOCK COMPANY	LE	<u>CP 00578</u>									
<u>CP 00579</u>		DOL	3	BERRY RANCH	LE	<u>CP 00579</u>									
<u>CP 00796</u>		PLS	3	DANIEL C. BERRY	LE	<u>CP 00796</u>									
<u>CP 00797</u>		PDM	3	DANIEL C. BERRY	LE	<u>CP 00797</u>									
<u>CP 00801</u>		PLS	3	DANIEL C. BERRY	LE	<u>CP 00801</u>									
<u>CP 00802</u>		PLS	3	DANIEL C. BERRY	LE	<u>CP 00802</u>									
<u>CP 00803</u>		PLS	3	DANIEL C. BERRY	LE	<u>CP 00803</u>									
<u>CP 00804</u>		PLS	3	DANIEL C. BERRY	LE	<u>CP 00804</u>									
<u>CP 01290</u>		EXP	0	BERRY RANCH	LE	<u>CP 01290</u>	POD1		NON						
<u>CP 01316</u>		EXP	0	ATKINS ENGR ASSOC INC	LE	<u>CP 01316</u>	POD1								
<u>CP 01317</u>		EXP	0	ATKINS ENGR ASSOC INC	LE	<u>CP 01317</u>	POD1		NON						
<u>CP 01319</u>		COM	0	BERRY RANCH/GLENN'S WW SERV	LE	<u>CP 01317</u>	POD1		NON						
<u>CP 01323</u>		COM	0	BERRY RANCH/GLENN'S WW SERV	LE	<u>CP 01316</u>	POD1								
<u>CP 01324</u>		PRO	0	COG OPERATING	LE	<u>CP 01290</u>	POD1		NON						
<u>CP 01325</u>		PRO	0	COG OPERATING	LE	<u>CP 01290</u>	POD1		NON						
<u>CP 01326</u>		PRO	0	COG OPERATING	LE	<u>CP 01290</u>	POD1		NON						
<u>CP 01331</u>		PRO	0	COG OPERATING	LE	<u>CP 01317</u>	POD1		NON						
<u>CP 01332</u>		PRO	0	COG OPERATING	LE	<u>CP 01317</u>	POD1		NON						

*UTM location was derived from PLSS - see Help

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)
 C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	6416	4	Sec	Tws	Rng	X	Y	
CP 01333		PRO	0	COG OPERATING	LE	CP 01317 POD1		NON	Artesian	1	3	2	02	21S	33E	636884	3598450
CP 01336		PRO	0	COG OPERATING	LE	CP 01316 POD1			Artesian	3	2	4	02	21S	33E	637431	3597709
CP 01337		PRO	0	COG OPERATING	LE	CP 01316 POD1			Artesian	3	2	4	02	21S	33E	637431	3597709
CP 01338		PRO	0	COG OPERATING	LE	CP 01316 POD1			Artesian	3	2	4	02	21S	33E	637431	3597709

Record Count: 22

PLSS Search:

Section(s): 1, 2, 11, 12 Township: 21S Range: 33E

Sorted by: File Number

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.

HALLIBURTON

PERMAIN BASIN OPERATIONS LABORATORY
 WATER ANALYSIS REPORT
 HOBBS, NEW MEXICO

COMPANY: Cog
 LEASE: Berry Ranch
NE/4 Sec 2-21s-33e, Lea Co.
FW collected at water station at Berry Ranch

REPORT W12-200
 DATE September 11, 2012
 DISTRICT Hobbs

SUBMITTED BY Brian Collins

TANK
 SAMPLE

	_____	_____	_____	_____	_____
Sample Temp.	70 °F	_____ °F	_____ °F	_____ °F	_____ °F
RESISTIVITY	0.6	_____	_____	_____	_____
SPECIFIC GR.	1.007	_____	_____	_____	_____
pH	8.24 <i>mg/L</i>	_____	_____	_____	_____
CALCIUM	250 mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
MAGNESIUM	130 mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
CHLORIDE	6582 <i>mg/L</i> mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
SULFATES	<400 mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
BICARBONATES	335 mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
SOLUBLE IRON	0 mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
KCL	_____	_____	_____	_____	_____
Sodium	_____ mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
TDS	_____ mpl	_____ mpl	_____ mpl	_____ mpl	_____ mpl
OIL GRAVITY	_____ @ 60 °F	_____ @ 60 °F	_____ @ 60 °F	_____ @ 60 °F	_____ @ 60 °F

REMARKS

MPL = Milligrams per liter
 Resistivity measured in: Ohm/m2/m

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Co.

ANALYST: SB

STATE ENGINEER OFFICE
WELL RECORD

SANTA FE
67455

Section 1. GENERAL INFORMATION

(A) Owner of well Berry Ranch Owner's Well No. _____
Street or Post Office Address Box 67
City and State Alamogordo, New Mexico 88231

Well was drilled under Permit No. CP-579 and is located in the:
a. _____ 1/4 _____ 1/4 NE 1/4 of Section 2 Township 21-S Range 33-E N.M.P.M.

ORIGINAL DOCUMENT IS OF POOR QUALITY
FOR LEGIBLE MICROFILM

b. _____ of Map No. _____ of the _____
c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in _____ County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor K. L. Van Roy License No. SB-268

Address P.O. Box 7 Oil Center, New Mex, 88266

Drilling Began Nov. 21, 1979 Completed Nov. 22, 1979 tools Spudder Size of hole 8 in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well 125 ft.

Completed well is shallow artesian. Depth to water upon completion of well 4 100 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)	
From	To				
100	102	2	water sand.		

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
6"	welded		0	125	125 HARBY	none	105	120

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

Section 5. PLUGGING RECORD

Plugging Contractor _____
Address _____
Plugging Method _____
Date Well Plugged _____
Plugging approved by: _____

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

State Engineer Representative

FOR USE OF STATE ENGINEER ONLY

Date Received April 2, 1980 Quad _____ FWL _____ FSL _____

File No. CP-579 Use DOM & STK Location No. 21.33.2.22000

STATE ENGINEER
 SANTA FE, N.M.
 APR 11 1980
 PM 1:05

HALLIBURTON

PERMAIN BASIN OPERATIONS LABORATORY
 WATER ANALYSIS REPORT
 HOBBS, NEW MEXICO

COMPANY: Glenns Water Well Services
 LEASE: _____

REPORT DATE W14-109
 DISTRICT _____

SUBMITTED BY _____

TANK SAMPLE	Rock #1	Ben Lilly Pit	
Sample Temp.	<u>70</u> °F	<u>70</u> °F	This is a combination of:
RESISTIVITY	<u>15.8</u>	<u>15.8</u>	
SPECIFIC GR.	<u>1.001</u>	<u>1.001</u>	
pH	<u>8.61</u>	<u>8.44</u>	
CALCIUM	<u>25</u> mpl	<u>35</u> mpl	CP-1290 - Taco pl
MAGNESIUM	<u>20</u> mpl	<u>15</u> mpl	CP-1289 - SKeen #1 pl
CHLORIDE	<u>55</u> mpl	<u>90</u> mpl	CP-1317 - Lea pl
SULFATES	<u><800</u> mpl	<u><800</u> mpl	
BICARBONATES	<u>329</u> mpl	<u>347</u> mpl	
SOLUBLE IRON	<u>0</u> mpl	<u>0</u> mpl	
KCL	<u>N</u>	<u>N</u>	
Sodium	_____ mpl	_____ mpl	
TDS	_____ mpl	_____ mpl	
OIL GRAVITY	_____ @ 60°F	_____ @ 60°F	

REMARKS _____

MPL = Milligrams per litter
 Resitivity measured in: Ohm/m2/m

ANALYST: TR/JH

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Co.



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) CP - 1317				OSE FILE NUMBER(S)									
	WELL OWNER NAME(S) Berry Ranch/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) (575)398-2424									
	WELL OWNER MAILING ADDRESS P.O. Box 692				CITY Tatum		STATE NM		ZIP 88267					
	WELL LOCATION (FROM GPS)		DEGREES 32		MINUTES 30		SECONDS 53.76 N		* ACCURACY REQUIRED: ONE TENTH OF A SECOND					
		LONGITUDE 103		32		33.60 W		* DATUM REQUIRED: WGS 84						
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS														
2. OPTIONAL	(2.5 ACRE) ¼		(10 ACRE) NW ¼		(40 ACRE) SW ¼		(160 ACRE) NE ¼		SECTION 2					
					TOWNSHIP 21		RANGE 33		<input type="checkbox"/> NORTH <input checked="" type="checkbox"/> SOUTH <input type="checkbox"/> EAST <input type="checkbox"/> WEST					
	SUBDIVISION NAME				LOT NUMBER		BLOCK NUMBER		UNIT/TRACT					
HYDROGRAPHIC SURVEY						MAP NUMBER		TRACT NUMBER						
3. DRILLING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn				NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.							
	DRILLING STARTED 5/9/14		DRILLING ENDED 5/15/14		DEPTH OF COMPLETED WELL (FT) 1250'		BORE HOLE DEPTH (FT) 1250'		DEPTH WATER FIRST ENCOUNTERED (FT) 1025'					
	COMPLETED WELL IS: <input checked="" type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT)							
	DRILLING FLUID: <input type="checkbox"/> AIR <input checked="" type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:													
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:													
	DEPTH (FT)		BORE HOLE DIA. (IN)		CASING MATERIAL		CONNECTION TYPE (CASING)		INSIDE DIA. CASING (IN)		CASING WALL THICKNESS (IN)		SLOT SIZE (IN)	
	FROM TO		DIA. (IN)		MATERIAL		TYPE (CASING)		CASING (IN)		THICKNESS (IN)		SIZE (IN)	
	0 40'		20"		16"		none		15 1/2"		.250			
	0 1017'		14 3/4"		9 5/8"		Thread and collar		8.921"		.352			
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)		FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)						YIELD (GPM)			
	FROM TO		THICKNESS (FT)		Brown Sand Rock, Santa Rosa Sand						50			
	1025' 1212'		187'											
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA								TOTAL ESTIMATED WELL YIELD (GPM)						

2014 MAY 27 AM 10:45

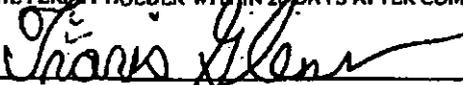
FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)	
FILE NUMBER	CP-1317	POD NUMBER	1
LOCATION	Exp	TRN NUMBER	545000
		21S. 33E. 2. 231	PAGE 1 OF 2

5. SEAL AND PUMP	TYPE OF PUMP: <input checked="" type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				
	0	40'	20"	cemented	2 yds	Top Pour	
	0	1017'	14 3/4"	Float and shoe cemented to surface	740 sacks	Circulated	

6. GEOLOGIC LOG OF WELL	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?	
	FROM	TO			<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	0	2	2	Soil	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	2	29	27	Caleche	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	29	115	86	Sand	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	115	320	205	Red Clay with Rock Ledges	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	320	728	408	Red Clay and Brown Shale	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	728	760	32	Red Clay	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	760	1025	265	Red and Brown Shale (some Blue)	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	1025	1048	23	Brown Sand Rock	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	1048	1212	164	Santa Rosa Sand	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	1212	1250	38	Brown Shale and Sand Rock	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.	
	ADDITIONAL STATEMENTS OR EXPLANATIONS: 0 to 1017' drilled with mud. 1017' to 1250' drilled with air and foam.	

8. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
		5/22/2014
	SIGNATURE OF DRILLER	DATE

FOR USE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)	
FILE NUMBER	POD NUMBER	TRN NUMBER	PAGE 2 OF 2
LOCATION			



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q	q	q	Sec	Tws	Range	X	Y
CP 00611	PRO		0	DALE CROCKETT	LE	CP 00611		Shallow	2	1	06	21S	34E	639838	3598306*	
CP 00791	SAN		3	ENRON GAS PROCESSING CO.	LE	CP 00791		Shallow	4	2	06	21S	34E	640754	3597413*	

(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)
 C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

} More than 1 mile away

Record Count: 2

PLSS Search:

Section(s): 6, 7 Township: 21S Range: 34E

Sorted by: File Number

*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.



November 17, 2014

Hobbs News-Sun
P.O. Box 850
Hobbs, NM 88240

Re: Legal Notice
Salt Water Disposal Well
Lightning 1 State SWD #2

To Whom It May Concern:

Enclosed is a legal notice regarding New Mexico Oil Conservation Division C-108 Application for Authorization to Inject for a salt water disposal well.

Please run this notice and return the proof of notice to the undersigned at:

COG Operating LLC, 2208 W. Main St., Artesia, NM 88210

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Operations Engineering Advisor

BC/sw
Enclosures

CORPORATE ADDRESS

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701
PHONE 432.683.7443 | FAX 432.683.7441

LOCAL ADDRESS

Concho West | 2208 West Main Street | Artesia, New Mexico 88210
PHONE 575.748.6940 | FAX 575.748.6968

HOBBS NEWS-SUN
LEGAL NOTICES

COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico, 88210, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Lightning 1 State SWD No. 2 is located 3780' FSL and 2300' FWL, Section 1, Township 21 South, Range 33 East, Lea County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware, Bone Spring and Wolfcamp formations. The disposal water will be injected into the Devonian formation at a depth of 14,975' to 16,700' at a maximum surface pressure of 2995 psi and a maximum rate of 25,000 BWPD. The proposed SWD well is located approximately 25 miles west of Eunice. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party with questions or comments may contact Brian Collins at COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico 88210, or call 575-748-6940.

Published in the Hobbs News-Sun Hobbs, New Mexico
_____, 2014.



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 Sub-Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00611			LE	2	1	06	21S	34E		639838	3598306*	118	112	6
CP 00791			LE	4	2	06	21S	34E		640754	3597413*	85	55	30

Average Depth to Water: **83 feet**
 Minimum Depth: **55 feet**
 Maximum Depth: **112 feet**

Record Count: 2

PLSS Search:

Section(s): 6 Township: 21S Range: 34E

*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.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

New Mexico Oil Conservation Division
 Attn: Phillip Goetze
 1220 South St. Francis Drive
 Santa Fe, NM 87505
 Lightning 1 State SWD #2

2. Article Number
(Transfer from service label)

7013 3020 0000 8749 1843

PS Form 3811, July 2013

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Phillip Goetze

- Agent
- Addressee

B. Received by (Printed Name)

Phillip Goetze

C. Date of Delivery

NOV 24 2014

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below No

- Priority Mail Express™
- Return Receipt for Merchandise
- Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes

7013 3020 0000 874

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee	

Postmark Here

New Mexico Oil Conservation Division
 Attn: Phillip Goetze
 1220 South St. Francis Drive
 Santa Fe, NM 87505
 Lightning 1 State SWD #2

PS Form 3800, August 2006

See Reverse for Instructions

Form 3800, August 2008 (Reverse) PSN 7530-02-000-9047

IMPORTANT: Save this receipt and present it when making an inquiry.

If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail. If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail endorsement, Restricted Delivery, or addressee's authorized agent, advise the clerk or mark the addressee or For an additional fee, delivery may be restricted to the addressee or required. For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested" to receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.

For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested" to receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.

For an additional fee, delivery may be restricted to the addressee or endorsement, Restricted Delivery, or addressee's authorized agent. Advise the clerk or mark the addressee or For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested" to receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Chase Oil Corporation
11352 Lovington Highway
Artesia, NM 88210
Lightning 1 State SWD #2

A. Signature
 Agent
 Addressee
Kim Rodriguez

B. Received by (Printed Name)
Kim Rodriguez

C. Date of Delivery

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
 Certified Mail® Priority Mail Express™
 Registered Return Receipt for Merchandise
 Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes

2. Article Number (Transfer from service label) 7013 3020 0000 8745 1867

PS Form 3811, July 2013

Domestic Return Receipt

IMPORTANT: Save this receipt and present it when making an inquiry.
Certified Mail may ONLY be combined with First-Class Mail or Priority Mail. Certified Mail is not available for any class of international mail. NO INSURANCE COVERAGE IS PROVIDED with Certified Mail. For valuables, please consider insured or Registered Mail.
For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS® postmark on your Certified Mail receipt is required.
For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement "Restricted Delivery".
If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

Important Reminders:
A unique identifier for your mailpiece
A record of delivery kept by the Postal Service for two years

Certified Mail Provides:

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Oil Conservation Division
 Attn: Paul Kautz
 1625 North French Dr.
 Hobbs, NM 88240
 Lightning 1 State SWD #2

A. Signature <i>[Signature]</i>		<input type="checkbox"/> Agent
		<input type="checkbox"/> Addressee
B. Received by (Printed Name) <i>[Signature]</i>	C. Date of Delivery <i>11-21-14</i>	
D. Is delivery address different from item 1? <input type="checkbox"/> Yes		
If YES, enter delivery address below: <input type="checkbox"/> No		
3. Service Type		
<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Priority Mail Express™	
<input type="checkbox"/> Registered	<input type="checkbox"/> Return Receipt for Merchandise	
<input type="checkbox"/> Insured Mail	<input type="checkbox"/> Collect on Delivery	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

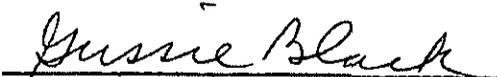
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
November 21, 2014
and ending with the issue dated
November 21, 2014.



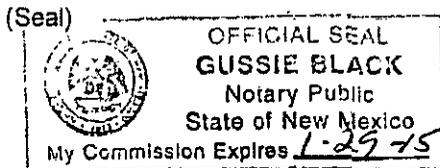
Publisher

Sworn and subscribed to before me this
21st day of November 2014.



Business Manager

My commission expires
January 29, 2015



LEGAL NOTICE
November 21, 2014

COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico, 88210, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Lightning 11 State SWD No 2 is located 3780 FSU and 2900 FWL Section 1, Township 21, South Range 33 East, Lea County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware, Bone Spring and Wolfcamp formations. The disposal water will be injected into the Devonian formation at a depth of 14,975' to 16,700' at a maximum surface pressure of 2995 psi and a maximum rate of 25,000 BWP/D. The proposed SWD well is located approximately 25 miles west of Etניה. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 4220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party with questions or comments may contact Brian Collins at COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico, 88210, or call 575-748-8940. #28580

67112034

00147945

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

BRIAN COLLINS
COG OPERATING LLC
2208 W. MAIN ST.
ARTESIA, NM 88210



PERMIT TYPE: WFX / PMX / SWD Number: _____ Permit Date: _____ Legacy Permits/Orders: None

Well No. 2 Well Name(s): Lightwing 1 State SWD

API: 30-0 25-Pending Spud Date: _____ New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 3780' FSL Lot 14 or Unit _____ Sec 1 Tsp 21S Rge 33E County Leq

General Location: _____ Pool: SWD: Dominion - Mataga Pool No.: _____

BLM 100K Map: _____ Operator: COG Operating, LLC OGRID: 229137 Contact: Brian Collins

COMPLIANCE RULE 5.9: Total Wells: 3790 Inactive: 0 Fincl Assur: Y Compl. Order? No IS 5.9 OK? Yes Date: 2-02-2015

WELL FILE REVIEWED Current Status: Proposed - no APD filed 2-20-2015

WELL DIAGRAMS: NEW: Proposed or RE-ENTER: Before Conv. After Conv. Logs in Imaging: _____

Planned Rehab Work to Well: CBL 9 5/8" / 9 7"

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Surface	<u>24" / 20"</u>	<u>1800</u>	<u>5000</u>	<u>SURFACE / CEM</u>
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>17 1/2" / 13 3/8"</u>	<u>5700</u>	<u>7000</u>	<u>SURFACE / CEM</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>12 1/4" / 9 5/8"</u>	<u>11700</u>	<u>4500</u>	<u>SURFACE / CEM</u>
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner	_____	_____	_____	_____
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Liner	<u>8 1/2" / 7"</u>	<u>14975</u>	<u>No</u>	<u>7000 / 11700 / DESIGN</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH PERF	<u>14975</u>	<u>16700</u>	<u>Inj Length 1725</u>	_____

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.	_____	_____	_____	NEW TD _____ NEW PBDT _____
Confining Unit: Litho. Struc. Por.	_____	_____	_____	NEW Open Hole <input type="checkbox"/> or NEW Perfs <input type="checkbox"/>
Proposed Inj Interval TOP:	<u>14975</u>	<u>Dominion</u>	<u>15174</u>	Tubing Size <u>4 1/2</u> in. Inter Coated? <u>Y</u>
Proposed Inj Interval BOTTOM:	<u>16700</u>	<u>Fursellman / Mataga</u>	<u>16550</u>	Proposed Packer Depth <u>14925</u> ft
Confining Unit: Litho. Struc. Por.	_____	<u>Ellenburger</u>	_____	Min. Packer Depth <u>14875</u> (100-ft limit)
Adjacent Unit: Litho. Struc. Por.	_____	<u>DE/GW</u>	_____	Proposed Max. Surface Press. <u>2995</u> psi
AOR: Hydrologic and Geologic Information				Admin. Inj. Press. <u>2995</u> (0.2 psi per ft)

POTASH: R-111-P Noticed NMSLO BLM Sec Ord WIPP Noticed? NA SALT/SALADO T: _____ B: _____ CLIFF HOUSE _____

FRESH WATER: Aquifer Ogallala Max Depth 118 HYDRO AFFIRM STATEMENT By Qualified Person

NMOSE Basin: CAPITAN CAPITAN REEF: thru adj NAO No. Wells within 1-Mile Radius? Yes FW Analysis Yes Berry Patch

Disposal Fluid: Formation Source(s) Bones Spring, WULF Camp Analysis? _____ On Lease Operator Only or Commercial

Disposal Int: Inject Rate (Avg/Max BWPD): 23,000 BWPD Protectable Waters? Low Prob Source: _____ System: Closed or Open

HC Potential: Producing Interval: UNK Formerly Producing? No Method: Logs/DST/P&A/Other [Mudlog] 2-Mile Radius Pool Map HA

AOR Wells: 1/2-M Radius Map? Yes Well List? No Total No. Wells Penetrating Interval: 0 Horizontals? 0

Penetrating Wells: No. Active Wells N/A Num Repairs? _____ on which well(s)? _____ Diagrams? NA

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

NOTICE: Newspaper Date NOV 27 Mineral Owner NMSLO Surface Owner NMSLO N. Date NOV 29

RULE 26.7(A): Identified Tracts? Y Affected Persons: Chase N. Date _____

Permit Conditions: Issues: CBL 9 5/8" / 9 7" mudlog, formation tops

Add Permit Cond: CBLs / Salinity Calc. / mudlog / formation / injection survey

* Mineral estate owner (NMSLO) notified; no potash leases on state land within one mile; Fed.