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B.3.11		WVJ	8.3.11	TYPE SWD	1121529157
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NEW MEXICO OIL CONSERVATION DIVISION  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



Cimarex  
 162683

ABOVE THIS LINE FOR DIVISION USE ONLY

## 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 \_\_\_\_\_

*Amend  
 SWD-1294*

- [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.**

Kay Havenor

*Kay C Havenor*

Consultant

6/13/2011

Print or Type Name

Signature

Title

Date

KHavenor@georesources.com  
 e-mail Address



Kay C. Havenor, Ph.D

WVJ 1121529157

Cimarex 162683

Office: 575-626-4518  
e-mail: KHavenor@GeoResources.com  
904 Moore Ave  
Roswell, New Mexico 88201-1144

July 29, 2011

Mr. William V. Jones  
NM OCD, Engineering Bureau  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RECEIVED 003  
2011 AUG -1 4 11:51

Re: Requested Amendment SWD-1294

Dear Mr. Jones:

Thank you for your consideration of amending SWD-1294 as to location and depth. The enclosed C-108 now shows the proper location as 1,695' FNL and 1,343' FWL Unit F, Sec. 16, T17S-R32E, Lea County, and an approximate depth of 14,100' TVTD.

This change of surface location amounts to relocating about 57' west and 105' north of the original application's position. The shift is still within the original section's Unit F. In so doing, the ½-mile AOR now touches into the SE/4 SE/4 of Sec. 8 and into S/2 SW/4 of Sec. 9. The enclosed modified C-108 makes those changes. This adds only one required notification to Chevron as they have the deep rights in the Sections 8 and 9 added area. Chevron has now been notified and the Certified Mail receipt is incorporated in this C-108. The list of wells in the AOR has also been modified to fit the shift to the north.

Should there be any additional information desired please contact me.

Respectfully submitted,

*Kay Havenor*

Kay Havenor  
Consultant to Cimarex

**Jones, William V., EMNRD**

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**From:** Burdell, Aneka J [AnekaBurdell@chevron.com]  
**Sent:** Wednesday, August 03, 2011 11:02 AM  
**To:** Jones, William V., EMNRD  
**Cc:** Khavenor@GeoResources.com; Morse, Claire H  
**Subject:** Cimarex application C-108 - no protest

Per letter dated July 28, 2011 sent by Kay Havenor on behalf of Cimarex, Chevron has no objections to the proposed footage modifications indicated on Form C-108 for the JG SWD #1 well located in T17s-R32e Section 16, Lea County, New Mexico.

Please let me know if there are additional questions.

**Aneka Burdell**  
Land Representative  
[AnekaBurdell@chevron.com](mailto:AnekaBurdell@chevron.com)  
**MidContinent/Alaska**  
Chevron U.S.A. Inc.  
1400 Smith, Room 43146  
Houston, Texas 77002  
Tel: +1 713 372 1823  
Fax: +1 866 889 3573

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance  Disposal Storage  
Application qualifies for administrative approval?  Yes No
- II. OPERATOR: Cimarex Energy Co. of Colorado  
ADDRESS: 600 N. Marienfeld St. Suite 600; Midland, TX 79702  
CONTACT PARTY: Kay Havenor PHONE: 575-626-4518
- 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:
- Proposed average and maximum daily rate and volume of fluids to be injected;
  - Whether the system is open or closed;
  - Proposed average and maximum injection pressure;
  - Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - 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: Kay Havenor TITLE: Agent  
SIGNATURE: Kay C Havenor DATE: June 13, 2011  
E-MAIL ADDRESS: KHavenor@georesources.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.

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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: Cimarex Energy Co. of Colorado (OGRID 162383)

WELL NAME & NUMBER: JG SWD #1 30-025-NA

WELL LOCATION: 1695' FNL & 1343' FEL F 16 17S 32E  
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

See attached diagram

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8" 48# H-40

Cemented with: 600 sx. *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Opr

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 9-5/8" 40# N-80

Cemented with: 1450 sx. *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Opr

Production Casing

Hole Size: 8-3/4" Casing Size: 5-1/2" 17/20# to 13,730' ±

Cemented with: 2300 sxs sx. *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Opr

Total Depth: Approx 13,900'

Injection Interval

13,730'± To 14,100'±

(Perforated or Open Hole; indicate which) Open Hole

INJECTION WELL DATA SHEET

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" 9.3# N-80 or 2-7/8" 8.7# N-80 Lining Material: Fiberglass coated

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 13,700 ft

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: Siluro-Devonian

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. NA

\_\_\_\_\_

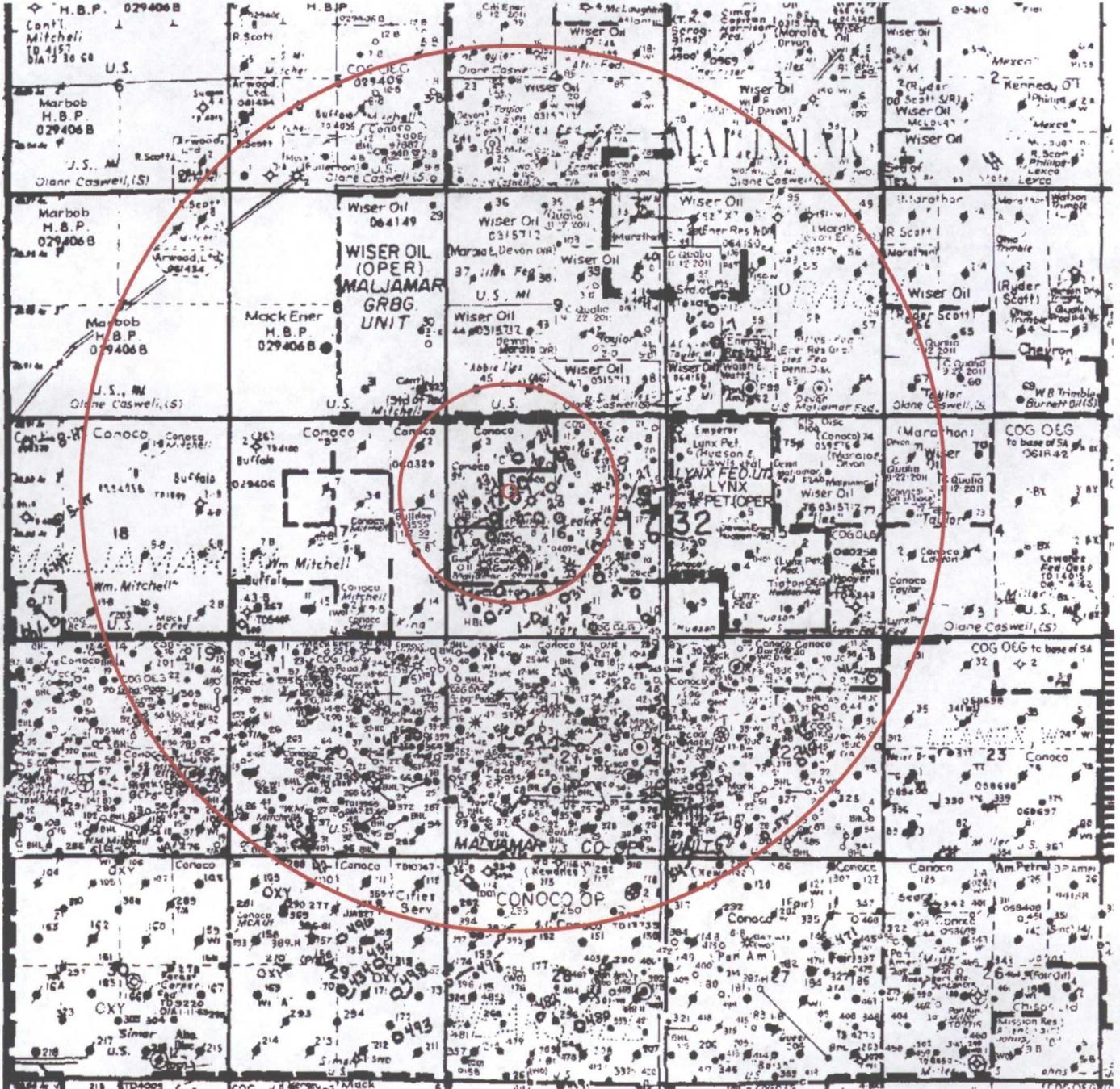
\_\_\_\_\_

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Artesia Group 2800' - San Andres 3770', Paddock 5310', Blinbry 6015',

Tubb 6800'

Item V:

Area of Review  
½ Mile AOR and 2 Mile Radius

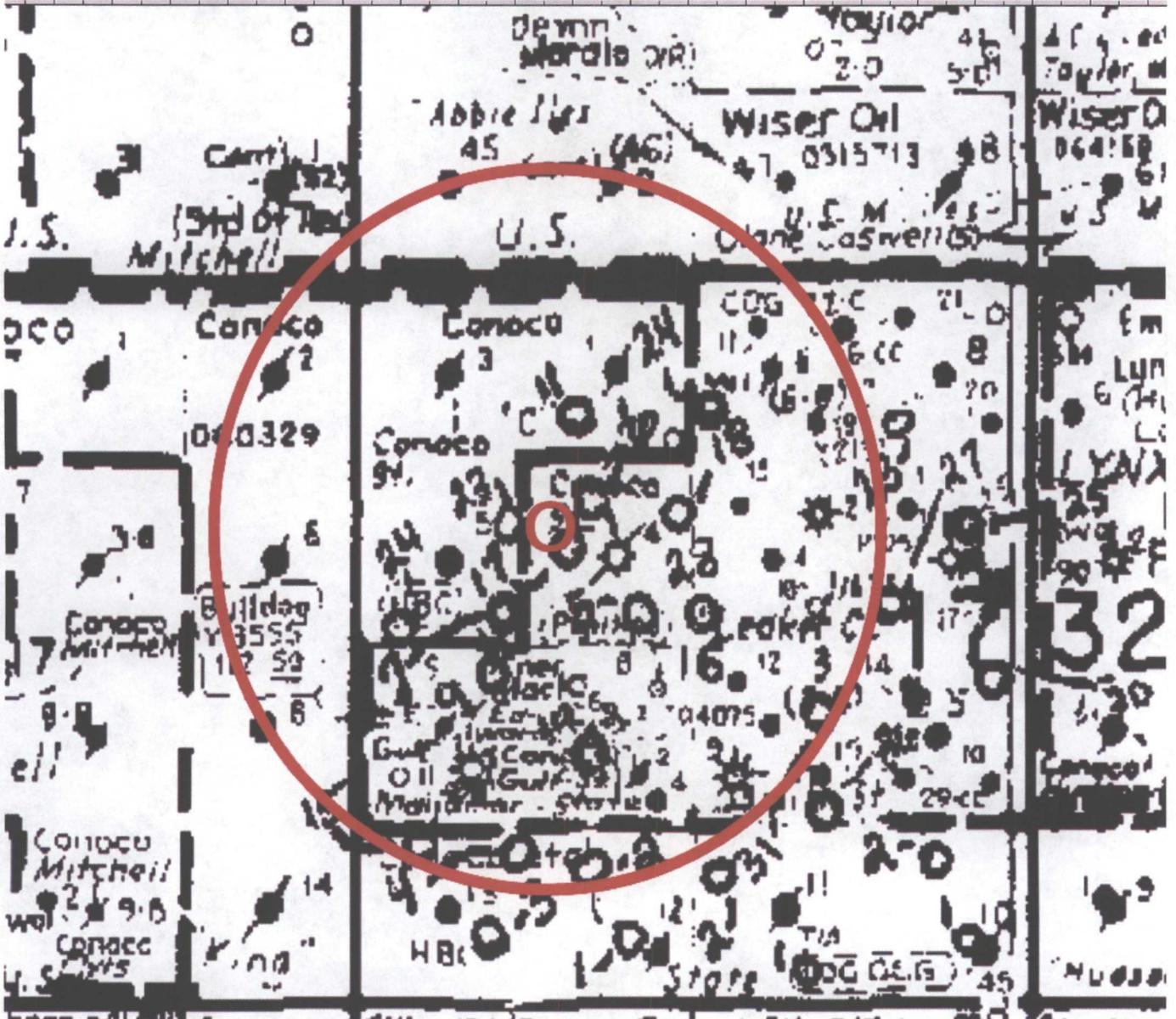


Cimarex Energy Company  
JG SWD #1  
1695' FNL & 1343' FWL  
Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

Item V (a):

Area of Review  
1/2 Mile AOR



Cimarex Energy Company  
 JG SWD #1  
 1695' FNL & 1343' FWL  
 Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

**Item VI:** Data on wells in AOR:

**Item VI(a):** Construction of wells in the AOR that penetrate into the proposed Siluro-Devonian injection interval:

No wells in the AOR penetrate the proposed injection interval.

**Item VI(b):** The following are wells located within the AOR.

API	WELL_NAME	STATUS	SEC	TWNSHP	RANGE	FT-NS	NS	FT-EW	EW	OCD	UL	OPERATOR	LAND	TYPE	PLUG	SPUD	ELEV-GL	TVD
3002500487	MALJAMAR GRAYBURG	Active	9	17S	32E	660	S	660	W	M		SANDRIDGE EXPLORATION AND	F	O				3966
3002521380	MALJAMAR GRAYBURG	Plugged	9	17S	32E	660	S	1980	W	N		CONOCO INC	F	O	24-Jan-90	24-Jan-90	4065	4120
3002500572	LEAKER CC 006	Plugged	16	17S	32E	660	N	1980	E	B		MACK ENERGY CORP	S	I	5/27/1998	6/27/1959	4072	4195
3002538620	LEAKER CC STATE 011	Active	16	17S	32E	330	N	2160	E	B		COG OPERATING LLC	S	O		4/2/2008	4075	7015
3002539030	LEAKER CC STATE 019	New (Not drilled)	16	17S	32E	990	N	1650	E	B		COG OPERATING LLC	S	O		9/10/2009	3576	7016
3002539695	LEAKER CC STATE 022	New (Not drilled)	16	17S	32E	405	N	1505	E	B		COG OPERATING LLC	S	O		7/1/2010	4082	7121
3002539838	LEAKER CC STATE 024	New (Not drilled)	16	17S	32E	990	N	2310	E	B		COG OPERATING LLC	S	O		2/20/2011	4068	7035
3002500583	MCA UNIT 004	Plugged	16	17S	32E	660	N	1980	W	C		CONOCO INC		O	1/1/1900	1/1/1900	4062	4154
3002539936	JG STATE 011	New (Not drilled)	16	17S	32E	990	N	1650	W	C		CIMAREX ENERGY CO. OF COLOR.	S	O			4058	0
3002540027	JG STATE 012	New (Not drilled)	16	17S	32E	520	N	2310	W	C		CIMAREX ENERGY CO. OF COLOR.	S	O			4064	0
3002540028	JG STATE 020	New (Not drilled)	16	17S	32E	330	N	1550	W	C		CIMAREX ENERGY CO. OF COLOR.	S	O			4058	0
3002500582	MCA UNIT 003	Plugged	16	17S	32E	660	N	660	W	D		CONOCO INC	S	O	1/25/1990	1/25/1990	4050	3985
3002540023	JG STATE 009	New (Not drilled)	16	17S	32E	990	N	330	W	D		CIMAREX ENERGY CO. OF COLOR.	S	O			4045	0
3002540024	JG STATE 010	New (Not drilled)	16	17S	32E	330	N	990	W	D		CIMAREX ENERGY CO. OF COLOR.	S	O			4055	0
3002540029	JG STATE 021	New (Not drilled)	16	17S	32E	330	N	330	W	D		CIMAREX ENERGY CO. OF COLOR.	S	O			4050	0
3002540030	JG STATE 022	New (Not drilled)	16	17S	32E	900	N	845	E	D		CIMAREX ENERGY CO. OF COLOR.	S	O			4050	0
3002500580	MCA UNIT 005	Active	16	17S	32E	1980	N	660	W	E		CONOCOPHILLIPS COMPANY	S	O		6/27/1941	4044	4040
3002539935	JG STATE 007	Active	16	17S	32E	2210	N	990	W	E		CIMAREX ENERGY CO. OF COLOR.	S	O		3/2/2011	4050	7010
3002539937	JG STATE 023	New (Not drilled)	16	17S	32E	1700	N	990	W	E		CIMAREX ENERGY CO. OF COLOR.	S	O			4050	0
3002539938	JG STATE 024	New (Not drilled)	16	17S	32E	2310	N	330	W	E		CIMAREX ENERGY CO. OF COLOR.	S	O			4041	0
3002500581	STATE O 001	Plugged	16	17S	32E	1980	N	1980	W	F		CONOCO INC	S	G	1/1/1900	1/1/1900	4065	3760
3002539934	JG STATE 006	New (Not drilled)	16	17S	32E	1650	N	1650	W	F		CIMAREX ENERGY CO. OF COLOR.	S	O			4058	0
3002539799	JG STATE 005	Active	16	17S	32E	2310	N	2050	W	F		CIMAREX ENERGY CO. OF COLOR.	S	O		9/8/2010	4060	7003
3002539800	JG STATE 017	Active	16	17S	32E	2050	N	1650	W	F		CIMAREX ENERGY CO. OF COLOR.	S	O		10/9/2010	4059	6984
3002539801	JG STATE 018	Active	16	17S	32E	1650	N	2310	W	F		CIMAREX ENERGY CO. OF COLOR.	S	O		10/23/2010	4056	7027

Cimarex Energy Company

API 30-025-NA

JG SWD #1

1695' FNL & 1343' FWL

Sec. 16, T17S-R32E Lea County, NM

Item VI(b): Continued

API	WELL_NAME	STATUS	SEC	TWNSHP	RANGE	FT-NS	NS	FT-EW	EW	OCD	UL	OPERATOR	LAND	TYPE	PLUG	SPUD	ELEV-GL	TYD
3002500566	LEAKER CC STATE 002	Active	16	17S	32E	1650	N	1650	E	G		COG OPERATING LLC	S	G		7/18/1956	4062	4202
3002500570	LEAKER CC STATE 004	Active	16	17S	32E	1980	N	1980	E	G		COG OPERATING LLC	S	O		3/22/1959	4050	4293
3002538734	LEAKER CC STATE 013	Active	16	17S	32E	1650	N	2310	E	G		COG OPERATING LLC	S	O		5/19/2008	3583	6972
3002539029	LEAKER CC STATE 018	Active	16	17S	32E	2310	N	1650	E	G		COG OPERATING LLC	S	O		9/23/2009	3576	7025
3002539759	LEAKER CC STATE 028	Active	16	17S	32E	2310	N	2310	E	G		COG OPERATING LLC	S	O		10/22/2010	4047	7112
3002500574	LEAKER CC 007	Plugged	16	17S	32E	1980	N	640	E	H		MACK ENERGY CORP	S	O	11/19/2002	9/16/1959	4064	933
3002512558	STATE B 007	Plugged	16	17S	32E	1980	N	660	E	H		CONOCOPHILLIPS COMPANY	S	O	8/11/1960	9/16/1959	4055	4147
3002538589	LEAKER CC STATE 001	Active	16	17S	32E	1650	N	990	E	H		COG OPERATING LLC	S	O		12/5/2007	4062	7020
3002539932	LEAKER CC STATE 025	Active	16	17S	32E	1650	N	330	E	H		COG OPERATING LLC	S	O			4061	7030
3002539028	LEAKER CC STATE 017	Active	16	17S	32E	2310	N	330	E	H		COG OPERATING LLC	S	O		1/16/2009	3576	6988
3002539758	LEAKER CC STATE 027	Active	16	17S	32E	2310	N	990	E	H		COG OPERATING LLC	S	O		8/31/2010	4055	7115
3002500571	LEAKER CC STATE 005	Active	16	17S	32E	1980	S	660	E	I		COG OPERATING LLC	S	O		5/28/1959	4038	4224
3002538619	LEAKER CC STATE 010	Active	16	17S	32E	1650	S	330	E	I		COG OPERATING LLC	S	O		2/26/2008	4033	7025
3002538735	LEAKER CC STATE 014	Active	16	17S	32E	2310	S	990	E	I		COG OPERATING LLC	S	O		8/19/2008	3583	7020
3002539760	LEAKER CC STATE 030	New (Not drilled)	16	17S	32E	2310	S	330	E	I		COG OPERATING LLC	S	O			4046	0
3002539389	LEAKER CC STATE 029	Active	16	17S	32E	1650	S	990	E	I		COG OPERATING LLC	S	O		10/23/2009	4029	7018
3002500569	LEAKER CC STATE 003	Active	16	17S	32E	1980	S	1980	E	J		COG OPERATING LLC	S	O		2/12/1959	4029	4318
3002530679	LEAKER CC STATE 009	Active	16	17S	32E	1650	S	2310	E	J		COG OPERATING LLC	S	O		7/21/1993	4022	6060
3002538838	LEAKER CC STATE 015	Active	16	17S	32E	1650	S	1650	E	J		COG OPERATING LLC	S	O		11/15/2008	4029	7000
3002539761	LEAKER CC STATE 031	New	16	17S	32E	2310	S	1650	E	J		COG OPERATING LLC	S	O		6/22/2011	4039	0
3002539952	LEAKER CC STATE 026	Active	16	17S	32E	1500	S	1650	E	J		COG OPERATING LLC	S	O		5/4/2011	4025	7045
3002538733	LEAKER CC STATE 012	Active	16	17S	32E	2310	S	2310	E	J		COG OPERATING LLC	S	O		6/3/2008	3583	7016
3002500576	EDWARD STATE 002	Active	16	17S	32E	1720	S	2240	W	K		COG OPERATING LLC	S	O		6/11/1959	4029	4350
3002500584	MALJAMAR 002	Plugged	16	17S	32E	1980	S	1980	W	K		PHILLIPS PETROLEUM CO	S	O	11/20/1941	8/31/1941	4040	4075
3002538730	EDWARD STATE 004	Active	16	17S	32E	1500	S	2290	W	K		COG OPERATING LLC	S	O		5/17/2008	4033	7025
3002538834	EDWARD STATE 006	Active	16	17S	32E	2310	S	1650	W	K		COG OPERATING LLC	S	O		9/12/2008	4052	7012
3002539682	EDWARD STATE 008	Active	16	17S	32E	2310	S	2310	W	K		COG OPERATING LLC	S	O		9/22/2010	4043	7016
3002539836	EDWARD STATE 010	Active	16	17S	32E	1650	S	1650	W	K		COG OPERATING LLC	S	O		1/27/2011	4039	7005
3002500575	GULF STATE E 001	Plugged	16	17S	32E	1980	S	660	W	L		CONTINENTAL OIL	S	O	8/12/1970	8/11/1941	4044	4216
3002500577	EDWARD STATE 003	Active	16	17S	32E	1720	S	990	W	L		COG OPERATING LLC	S	G		9/28/1994	4047	4168
3002538621	EDWARD STATE 005	Active	16	17S	32E	2310	S	330	W	L		COG OPERATING LLC	S	O		2/10/2008	4041	7040
3002539019	EDWARD STATE 007	Active	16	17S	32E	1600	S	990	W	L		COG OPERATING LLC	S	O		12/17/2008	4049	6069
3002539683	EDWARD STATE 011	Active	16	17S	32E	1650	S	330	W	L		COG OPERATING LLC	S	O		1/12/2010	4040	7020
3002539835	EDWARD STATE 009	Active	16	17S	32E	2310	S	990	W	L		COG OPERATING LLC	S	O		1/4/2011	4049	0
3002500579	MCA UNIT 013	Active	16	17S	32E	660	S	660	W	M		CONOCOPHILLIPS COMPANY	S	O		2/21/1969	4050	4150
3002540031	JG STATE 016	New (Not drilled)	16	17S	32E	385	S	330	W	M		CIMAREX ENERGY CO. OF COLOR.	S	O			4051	0
3002539798	JG STATE 004	Active	16	17S	32E	990	S	990	W	M		CIMAREX ENERGY CO. OF COLOR.	S	O		9/15/2010	4036	7032
3002539817	JG STATE 003	Active	16	17S	32E	370	S	840	W	M		CIMAREX ENERGY CO. OF COLOR.	S	O		9/28/2010	4055	7020
3002539920	JG STATE 015	Active	16	17S	32E	890	S	330	W	M		CIMAREX ENERGY CO. OF COLOR.	S	O		11/5/2010	4046	7000
3002500578	MCA UNIT 012	Plugged	16	17S	32E	330	S	2310	W	N		CONOCO INC	S	I	2/8/1991	12/15/1940	4030	4122
3002540025	JG STATE 013	New (Not drilled)	16	17S	32E	990	S	2310	W	N		CIMAREX ENERGY CO. OF COLOR.	S	O			4029	0
3002540026	JG STATE 014	New (Not drilled)	16	17S	32E	355	S	1650	W	N		CIMAREX ENERGY CO. OF COLOR.	S	O			4042	0
3002539797	JG STATE 002	Active	16	17S	32E	990	S	1650	W	N		CIMAREX ENERGY CO. OF COLOR.	S	O		9/3/2010	4030	7030
3002539816	JG STATE 001	Active	16	17S	32E	350	S	2010	W	N		CIMAREX ENERGY CO. OF COLOR.	S	O		8/17/2010	4040	7021
3002500600	MCA UNIT 002	Plugged	17	17S	32	660	N	660	E	P		CONOCO INC	F	O	12/1/1989	5/18/1944	4052	4052
3002500597	MCA UNIT 006	Plugged	17	17S	32E	1980	N	660	E	H		CONOCO INC	F	I	1/25/1990	1/25/1990	4031	3660
3002500598	MCA UNIT 008	Active	17	17S	32E	1980	S	660	E	I		CONOCOPHILLIPS COMPANY	F	O		7/2/1945	4034	4240

**Item VII:**

1. The maximum injected volume anticipated is 10,000 BWPD. Average anticipated is 8,000 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 2,746 psi, or as allowed by depth.
4. Sources will be produced water. These will be compatible with waters in the disposal zone.
5. Water sample analysis from the ConocoPhillip Company Elvis #1, Sec. 20, T17S-R32E, Lea Co., NM, API 30-015-33584, MCA Unit Devonian. (Source: Elvis #1 OCD well file):

APR 23 '98 16:00 1 CONOCO MALJAMAR TO SPILL R RTS PAGE.005  
 03/09/98 16:45 Rv 48 + 505 676 2377 NO. 100 006



**WATER ANALYSIS REPORT**

Company : Conoco Inc. Date : 9 Mar 98  
 Address : Maljamar, NM Date Sampled : 9 Mar 98  
 Lease : Elvis Analysis No. :  
 Well : #1 Bottom  
 Sample Pt. : Well Head

ANALYSIS	mg/L	* meq/L
1. pH	7.4	
2. H2S	6.0	
3. Specific Gravity	1.037	
4. Total Dissolved Solids	54850.0	
5. Suspended Solids	N/R	
6. Dissolved Oxygen	N/R	
7. Dissolved CO2	N/R	
8. Oil In Water	N/R	
9. Phenolphthalein Alkalinity (CaCO3)		
10. Methyl Orange Alkalinity (CaCO3)		
11. Bicarbonate	HCO3 610.0	HCO3 10.0
12. Chloride	Cl 33015.0	Cl 931.3
13. Sulfate	SO4 92.0	SO4 1.5
14. Calcium	Ca 2200.0	Ca 109.8
15. Magnesium	Mg 245.0	Mg 20.2
16. Sodium (calculated)	Na 18688.0	Na 812.9
17. Iron	Fe 20.0	
18. Barium	Ba N/R	
19. Strontium	Sr N/R	
20. Total Hardness (CaCO3)	6502.6	

**PROBABLE MINERAL COMPOSITION**

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
110	Ca(HCO3)2	81.0	810
68.1	CaSO4	68.1	102
55.5	CaCl2	55.5	5454
73.2	Mg(HCO3)2	73.2	
60.2	MgSO4	60.2	959
47.6	MgCl2	47.6	
84.0	NaHCO3	84.0	
71.0	Na2SO4	71.0	
58.4	NaCl	58.4	47504

Saturation Values Dist. Water 20 C  
 CaCO3 13 mg/L  
 CaSO4 + 2H2O 2090 mg/L  
 BaSO4 2.4 mg/L

REMARKS:

Baker PetroLITE

Respectfully submitted,  
 W.C. Peterson

Cimarex Energy Company  
JG SWD #1  
1695' FNL & 1343' FWL  
Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

**Item VIII:**

The Devonian carbonates in this area are dolomitized. Such carbonate alteration often results in enhanced porosity as is shown on the porosity logs. Testing in 30-025-33584, ConocoPhillips Co., Elvis No. 1, Sec. 20, T17S-R32E, confirms water in those carbonates which, additionally, are structurally higher than the Devonian in the target new well. The Devonian is overlain by Woodford Shale and Mississippian limestones that essentially prevent vertical migration of formation or disposal waters.



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

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No records found

Basin/County Search:

Basin: Lea County

UTMNA83 Radius Search (in meters):

Easting (X): 614655

Northing (Y): 3633666

Radius: 3300

---

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.

---

6/12/11 8:57 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

The surface geology of the greater area, including the 2-mile radius as shown in Item V above, is Quaternary eolian and piedmont deposits of Holocene to middle Pleistocene age. These are underlain by the Permian Rustler Formation and some evaporites.

Cimarex Energy Company  
JG SWD #1  
1695' FNL & 1343' FWL  
Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

**Item IX:**

Acidize open-hole in the Siluro-Devonian between approximately 13,730' to 14,100' below 5-1/2" casing with approximately 20,000 gal of 20% HCl.

**Item X:**

Logs will be run on the new well and submitted to the OCD.

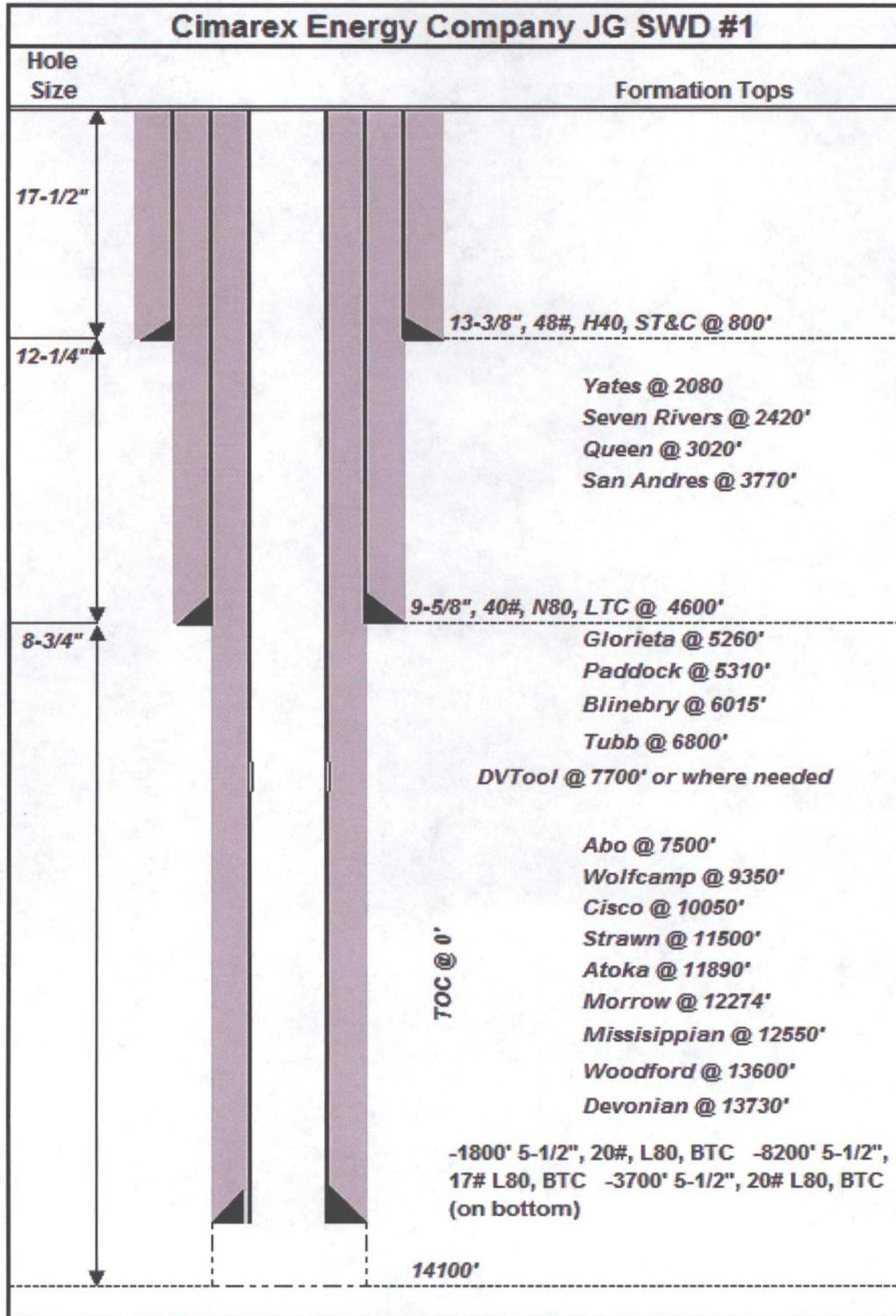
**Item XI:**

No water wells are reported the 2-mile area. Please note Item VIII discussion above.

**Item XII:**

There is no geological evidence of open faults nor hydrologic connection between the disposal zone and any possible underground sources of protectable water.

Proposed Completion of SWD Well



Cimarex Energy Company  
JG SWD #1  
1695' FNL & 1343' FWL  
Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

### SPOT10 Satellite and Matching Topographic Map



Directions to location: From Lovington west on US-82 for 25.5 miles to Maljamar and intersection of CR-126A, turn south on CR-126A (Mescalero Rd) for 0.6 miles, then west/southwest for 1.1 miles, turn east for 0.1 miles, then south for 0.2 miles to the well access road going to the east an additional 0.1 miles. Total 2.1 road miles from Maljamar. 1.5 miles 208° from Maljamar US-82 and CR-126A intersection.

Cimarex Energy Company  
JG SWD #1  
1695' FNL & 1343' FWL  
Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

**Item XIII: Proof of Notice**

**Minerals Owner:**

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, New Mexico 87504-1148

**Operators:**

COG Operating, LLC  
550 W. Texas St. Ste. 1300  
Midland, TX 79701

Penroc Oil Corporation  
P.O. Box 2769  
Hobbs, NM 88241

ConocoPhillips Company  
3401 E. 30th St.  
Farmington, NM 87402

Chevron North American Exploration  
and Production Company  
P.O. Box 2100, Houston, Texas 77002  
Attn: Claire Morse, Room 43002

Sandridge Exploration and Production, LLC  
123 Robert Kerr Ave.  
Oklahoma City, OK 73102

**Surface Owner:**

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, New Mexico 87504-1148



Cimarex Energy Company  
 JG SWD #1  
 1695' FNL & 1343' FWL  
 Sec. 16, T17S-R32E Lea County, NM

API 30-025-NA

Item XIII:

Certified Mail Receipts

U.S. Postal Service<sup>TM</sup>  
**CERTIFIED MAIL<sup>TM</sup> RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**  
 FARMINGTON NM 87402

Postage	\$ 1.88	0602
Certified Fee	\$2.85	03
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 7.03	

Sent To  
 ConocoPhillips Company  
 Street, Apt. No., or PO Box No. 3401 E. 30th St.  
 City, State, ZIP+4 Farmington, NM 87402

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 SANTA FE NM 87504

Postage	\$ 1.88	0602
Certified Fee	\$2.85	03
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 7.03	

Sent To  
 Commissioner of Public Lands  
 Street, Apt. No., or PO Box No. P.O. Box 1148  
 City, State, ZIP+4 Santa Fe, NM 87504-1148

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**OFFICIAL USE**  
 HOBBS NM 88241

Postage	\$ 1.88	0602
Certified Fee	\$2.85	03
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 7.03	

Sent To  
 Penroc Oil Corporation  
 Street, Apt. No., or PO Box No. P. O. Box 2769  
 City, State, ZIP+4 Hobbs, NM 88241

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 MIDLAND TX 79701

Postage	\$ 1.88	0602
Certified Fee	\$2.85	03
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 7.03	

Sent To  
 COG Operating, LLC  
 Street, Apt. No., or PO Box No. 550 W. Texas St. Ste 1300  
 City, State, ZIP+4 Midland, TX 79701

PS Form 3800, August 2006 See Reverse for Instructions

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**OFFICIAL USE**  
 HOUSTON TX 77002

Postage	\$ 1.48	0602
Certified Fee	\$2.85	03
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.63	

Sent To  
 Chevron NA Expl & Prod Co  
 Street, Apt. No., or PO Box No. P.O. Box 2100  
 City, State, ZIP+4 Houston, TX 77002

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For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**  
 OKLAHOMA CITY OK 73102

Postage	\$ 1.88	0602
Certified Fee	\$2.85	03
Return Receipt Fee (Endorsement Required)	\$2.30	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 7.03	

Sent To  
 Sandridge E & P, LLC  
 Street, Apt. No., or PO Box No. 123 Robert Kerr Ave.  
 City, State, ZIP+4 Oklahoma City, OK 73102

PS Form 3800, August 2006 See Reverse for Instructions