

2.24.12	3/10/12	WVT	2.24.12	TYPE SWD 1321	1205533003
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NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



Cimarex Energy
RECEIVED OGD 112383

ABOVE THIS LINE FOR DIVISION USE ONLY

2012 FEB 23 P.12:26
Vermejo SWD #1
- New Drill -

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] ☒ X Offset Operators, Leaseholders or Surface Owner
 [C] ☒ X Application is One Which Requires Published Legal Notice
 [D] ☒ X 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

2/7/2012

Print or Type Name

Signature

Title

Date

KHavenor@georesources.com
e-mail Address

0-15-175-28E
Cisco Formation
Eddy

8150-8500
1630PST

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X 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 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.
- 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: Kay Havenor TITLE: Agent
- SIGNATURE: Kay C Havenor DATE: January 16, 2012
- 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.

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: Vermijo SWD #1 30-015-NA (New Drill)WELL LOCATION: 900' FSL & 2530' FEL O 15 17S 28E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELBORE SCHEMATICPROPOSED WELL CONSTRUCTION DATASurface CasingHole Size: 17-1/2" Casing Size: 13-3/8" 48# H-40Cemented with: 400 sx. or ft³Top of Cement: Surface Method Determined: OprIntermediate CasingHole Size: 12-3/4" Casing Size: 9-5/8" 32# H-40Cemented with: 1200 sx. or ft³Top of Cement: Surface Method Determined: OprProduction CasingHole Size: 8-3/4" Casing Size: 7" 26# to 9,000'Cemented with: 2300 sx. or ft³Top of Cement: Surface Method Determined: OprTotal Depth: 9,000'Injection IntervalApproximately 8,150' To 8,500'(Perforated or Open Hole; indicate which) Perforated

INJECTION WELL DATA SHEET

See attached diagram

INJECTION WELL DATA SHEET

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

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 8,100 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: Cisco

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: Queen 1,450' - San Andres 1,980', Abo 5,450, Wolfcamp 6,550, Morrow 9,800'

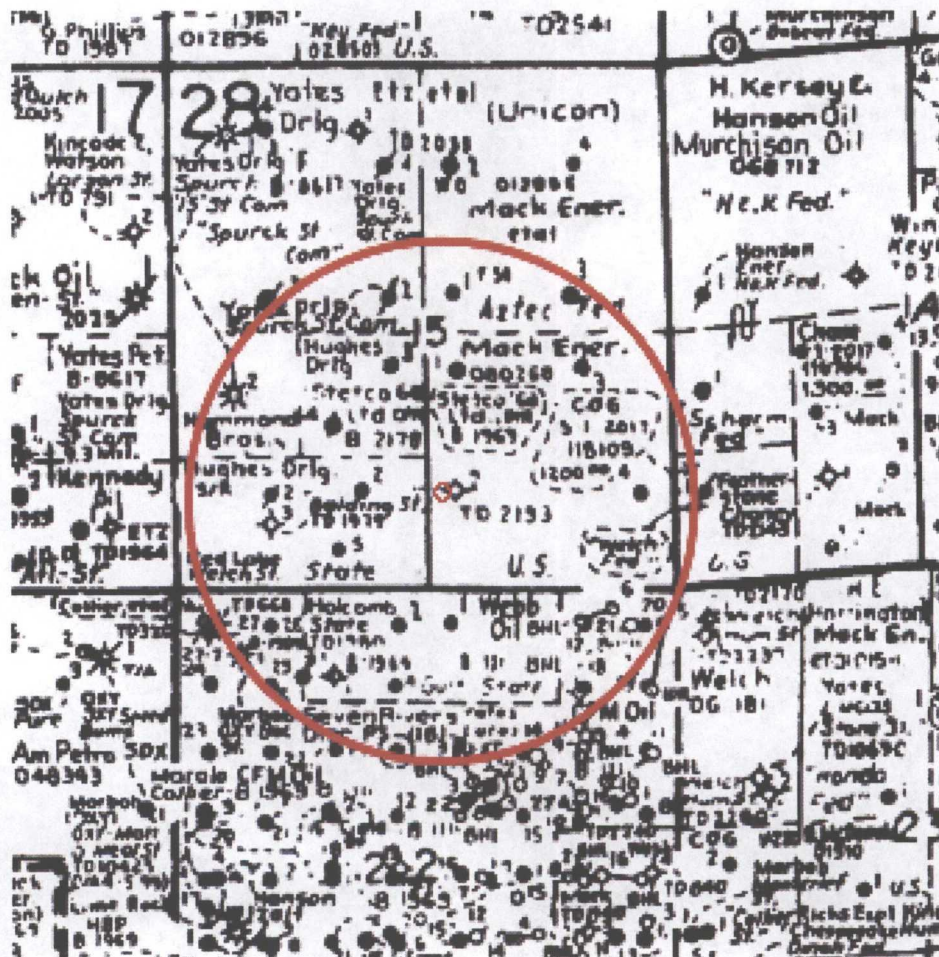
Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Item V (a):

Area of Review

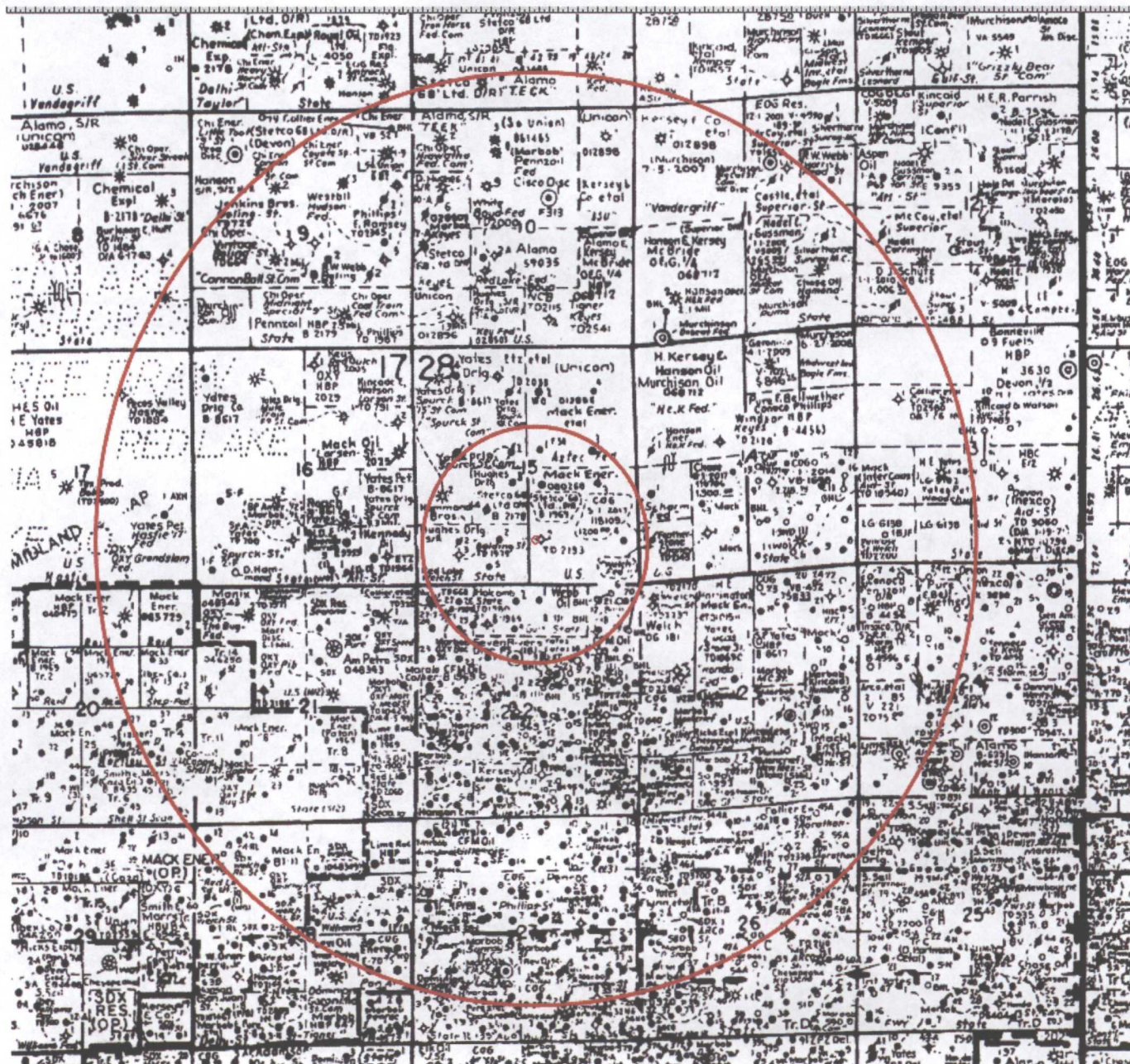
½ Mile AOR



Item V:

Area of Review

½ Mile AOR and 2 Mile Radius



Cimarex Energy Company of Colorado

API 30-015-NA

Vermejo SWD #1

990' FSL & 2530' FEL

Sec. 15, T17S-R28E Eddy County, NM

API	WELL NAME	STATUS	SDIV	SEC	TWNSP	RANGE	FTG	NS	FTG	EW	OC	OPERATOR	LAND	WELL	PLUG DATE	SPUD DATE	ELEVGL	TVD
3001501372	SPURCK F STATE	Plugged	F	15	17.0S	28E	2310	N	2310	W	F	YATES DRILLING CO	S	O	11-Jun-01	5-Nov-58	3533	2092
3001501374	AZTEC FEDERAL	Active	G	15	17.0S	28E	2310	N	2310	E	G	TANDEM ENERGY	F	O		14-Jul-58	3543*	2000
3001501376	AZTEC FEDERAL	Active	H	15	17.0S	28E	2310	N	2310	E	H	TANDEM ENERGY	F	O		18-Feb-61	3627	2143
3001501379	FEDERAL 003	Active	I	15	17.0S	28E	2310	S	2310	E	I	TANDEM ENERGY	F	O		5-Jan-61	3669	2157
3001501377	FEDERAL 001	Active	J	15	17.0S	28E	2310	S	2310	E	J	TANDEM ENERGY	F	O		10-Mar-60	3555	2025
3001501370	PHILLIPS BALDING	Active	K	15	17.0S	28E	1650	S	1650	W	K	HUGHES DRILLING CO.	S	O		15-Nov-40	3541	1976
3001501381	PHILLIPS BALDING	Active	L	15	17.0S	28E	2310	S	2310	W	K	HUGHES DRILLING CO.	S	O		18-Feb-59	3544	2015
3001501315	SPURCK 15 STATE	Active	L	15	17.0S	28E	1980	S	660	W	L	OXY USA INC	S	G	14-Feb-47	19-Jan-01	3522	10100
3001501371	PHILLIPS BALD ST	Plugged	M	15	17.0S	28E	990	S	990	W	M	N GORDON PHILLIPS	S	O		10-Jan-46	3533	2025
3001501369	PHILLIPS BALDING	Active	N	15	17.0S	28E	250	S	1570	W	N	HUGHES DRILLING CO.	S	O		Circa 7/1936	3570*	1975
3001501382	PHILLIPS BALDING	Active	N	15	17.0S	28E	990	S	1980	W	N	HUGHES DRILLING CO.	S	O		24-Mar-59	3540	2015
3001501378	FEDERAL 002	Plugged	O	15	17.0S	28E	990	S	2310	E	O	KINCAID & WATSON DRLG	S	O	8-May-60	8-Apr-60	3573	2193
3001501383	PHILLIPS BALD ST	Plugged	P	15	17.0S	28E	660	S	990	E	P	N GORDON PHILLIPS	S	O	31-Jul-59	6-Jul-59	3535	1979
3001501380	FEDERAL 004	Active	P	15	17.0S	28E	990	S	330	E	P	TANDEM ENERGY	F	O		3-Jan-62	3707	2222
3001523569	STATE B 1111 018	Active	A	22	17.0S	28E	990	N	990	E	A	CFM OIL, LLC	S	O		28-Jan-81	3599	813
3001523571	STATE B 1111 020	Active	A	22	17.0S	28E	330	N	330	E	A	CFM OIL, LLC	S	O		2-Feb-81	3714	1000
3001523572	STATE B 1111 021	Active	A	22	17.0S	28E	330	N	990	E	A	CFM OIL, LLC	S	O		3-Feb-81	3705	970
3001538331	MARACAS 22	New	A	22	17.0S	28E	330	N	485	E	A	CIMAREX ENERGY CO. OF	S	O			3721	0500
3001538428	MARACAS 22	New	A	22	17.0S	28E	345	N	160	E	A	CIMAREX ENERGY CO. OF	S	O			3706	0
3001538429	MARACAS 22	New	A	22	17.0S	28E	150	N	680	E	A	CIMAREX ENERGY CO. OF	S	O			3724	0
3001501496	GULF STATE 001	Active	B	22	17.0S	28E	330	N	2310	E	B	TANDEM ENERGY	S	O		17-Jan-59	3558	2017
3001501497	GULF STATE 002	Active	C	22	17.0S	28E	330	N	2310	W	C	TANDEM ENERGY	S	O		16-May-59	3550	2015
3001501498	GULF STATE 003	Active	C	22	17.0S	28E	1018	N	1642	W	C	TANDEM ENERGY	S	O		Circa 12/1937	3551	1950
3001525115	GULF STATE 004	Active	C	22	17.0S	28E	975	N	2270	W	C	TANDEM ENERGY	S	O		17-Dec-84	3553	810
3001539654	ROO 22 STATE 008	New	C	22	17.0S	28E	408	N	1510	W	C	OXY USA WTP LIMITED	S	O			3545	0520
3001523478	STATE B 1969 026	Active	D	22	17.0S	28E	330	N	990	W	D	CFM OIL, LLC	S	O		30-Sep-80	3543	835
3001523479	STATE B-1969 TR 4	Plugged	D	22	17.0S	28E	330	N	330	W	D	COLLIER ENERGY INC	S	O	21-Oct-80	03-Oct-80	3549	660
3001530955	OXY BOC STATE	Active	D	22	17.0S	28E	660	N	660	W	D	APACHE CORP	S	G		16-Jun-00	3548	10100
3001539653	ROO 22 STATE 007	New	D	22	17.0S	28E	380	N	472	W	D	OXY USA WTP LIMITED	S	O			3547	0520
3001510247	STATE B 1111 001	Active	F	22	17.0S	28E	1650	N	2310	W	F	CFM OIL, LLC	S	O		22-Jun-63	3586*	808
3001523452	STATE B 1111 013	Active	G	22	17.0S	28E	1650	N	2310	E	G	CFM OIL, LLC	S	O		8-Sep-80	3592	840
3001523453	STATE B 1111 014	Active	G	22	17.0S	28E	1650	N	1650	E	G	CFM OIL, LLC	S	O		22-Sep-80	3582	840
3001538398	MARACAS 22	New	G	22	17.0S	28E	1650	N	1460	E	G	CIMAREX ENERGY CO. OF	S	O			3584	0520
3001523139	STATE B 1111 009	Active	H	22	17.0S	28E	1650	N	990	E	H	CFM OIL, LLC	S	O		20-Apr-80	3592	800

* Elevation from topographic map

Cimarex Energy Company of Colorado

API 30-015-NA

Vermelo SWD #1

990' FSL & 2530' FEL

Sec. 15, T17S-R28E Eddy County, NM

Item VI: Data on wells in AOR:

Item VI(a): Wells within the AOR that penetrate the proposed Cisco injection interval.

API	WELL_NAME	STATUS	SDIV	SEC	TWNSP	RANGE	FTG	NS	FTG	EW	OCD	OPERATOR	LAND	WELL	PLUG	DATE	SPUD	DATE	ELEVGL	TVD
3001531315	SPURCK 15 STATE	Active	L	15	17.0S	28E	1980	S	660	W	L	OXY USA INC	S	G			19-Jan-01		3522	10100
3001530955	OXY BOC STATE	Active	D	22	17.0S	28E	660	N	660	W	D	APACHE CORP	S	G			16-Jun-00		3548	10100

1. 30-015-31315 OXY USA, Inc. Spurck 15 State Com. #2, Unit L, 1980 FSL & 660 FWL Sec. 15, T17S-R28E, Eddy Co. Elev 3522 GL. Spud 10/10/2000. 17½" hole set 13⅜" 48# @398' w/363 sx cmt, circ 99 sx. 12¼" hole set 9⅝" @2,055' w/750 sx, reported circ to surface. 8¾" hole set 7" S/P 110, N-80, J-55, L-80 23/26# @10,099' w/1210 sx, reported circ to surface. Perf Morrow 9,838'-9,966' (OA). Acid + Frac. Active well.

2. 30-015-30955 Apache Corporation OXY BOC State #1, Unit D, 660' FNL & 660' FWL Sec. 22, T17S-R28E, Eddy Co. Elev 3548 GL. Spud 6/16/2000. 17½" hole set 13⅜" 48# @406' w/360 sx, circ 5 sx to surface. 8⅝" hole set 7" @8,138' w/300 sx, TOC 7,925'. 6¼" hole set 5½" liner 7,810-10,100', cmt w/160 sx, TOC top of liner 7,810' (calc). Perf Morrow 10,021'-10,026'. Acid 500 gal 7.5%. Active well.

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Item VII:

1. The maximum injected volume anticipated is 4,000 BWPD. Average anticipated is 3,000 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 1,630 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 Apache Corporation Empire Abo Unit 036A, Unit I, Sec. 27, T17S-R28E, Eddy Co., NM, is the closest representative of Permo-Pennsylvanian water quality similar what would be disposed in the Cimarex Vermejo SWD #1. This sample has TDS of approximately 137,000 mg/l from the Permian Abo. Pennsylvanian TDS's would be lower than Permian, but not incompatible.

NM WAIDS



Water Samples for Well EMPIRE ABO UNIT 036A

API = 3001501583

Formation = ABO

Field = EMPIRE

Current Water Production Information

Instructions:

Click

For general information about this sample.

Click

For scale calculation pages (Stiff-Davis or Oddo Tomson methods).

Click

To select this water sample for water mixing. It will lead to the main page, and add the sample ID to the mixing table.

Click **664**

Click the hyperlinked sample number to make a .csv for that sample, or select several check boxes and click Submit for multiple samples

The ions are in (mg/L) units.

SampleID	T	R	S	SO4	CL	CO3	HCO3	K	Na	Ca	Mg
5305											
			17S 28E 27 699	135900	null	378	null	null	null	null	null
<input type="checkbox"/> SELECT/DESELECT ALL											
<input type="button" value="Submit"/>											



Before disposal the interval will be evaluated to confirm the absence of commercial hydrocarbons.

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Item VIII:

The Cisco Pennsylvanian carbonates in this area are limestone and dolomitized limestones, interbedded with shales and some sandstones.

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTM NAD83 Radius Search (in meters):

Easting (X): 578479

Northing (Y): 3632408

Radius: 3220

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.

1/15/12 5:08 PM

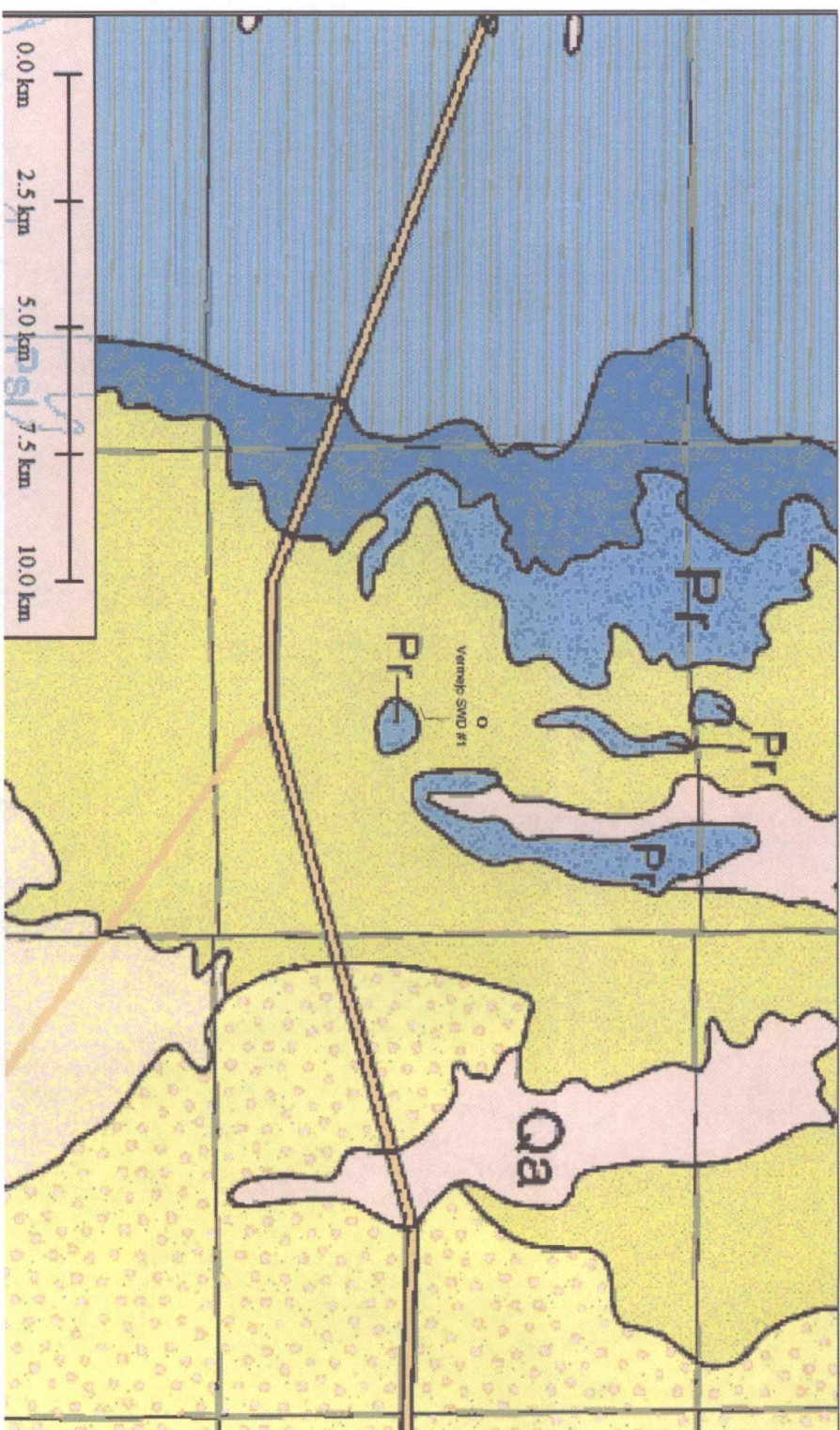
WATER COLUMN/ AVERAGE
DEPTH TO WATER

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. An excerpt from the NM Bureau of Geology map of New Mexico is shown below with the location of the Vermejo SWD #1.

Based upon surface geology the depth to potential potable water is estimated to be less than 150', if present.

Cimarex Energy Company of Colorado
 Vermejo SWD #1
 990' FSL & 2530' FEL
 Sec. 15, T17S-R28E Eddy County, NM

Map of Vermejo SWD #1 Surface Geology



Qa Alluvium - Holocene to upper Pleistocene
 Qep Eolian and piedmont deposits
 Qoa Older alluvial deposit
 Pr Rustler Formation

NM Bureau of Geology and Mineral Resources 2003

Item IX:

Acidize the Cisco perforations between 8,150' and 8,500' through 7" casing perforations with approximately 10,000 gal of 15% HCl.

Item X:

Logs will be filed with the OCD upon completion of the well.

Item XI:

No water wells are reported in the 2-mile radius of the proposed SWD. Please note Item VIII discussion above.

Item XII:

There is no geological evidence of open faults or hydrologic connection between the disposal zone and any possible underground sources of protectable water.

Drilling/evaluation of the Cisco of the greater area around this well, discussed in Item IV(a) above, demonstrates the lack of reasonable hydrocarbon commercial production potential. Additionally, the Cisco has been drilled-through by numerous wells in the greater area without significant hydrocarbon shows in the formation. The Cisco is currently utilized for SWD southwest of the proposed Vermejo SWD (Judah Oil, LLC, Red Lake State SWD, Unit G, Sec. 22, T17S-R28E) and in other wells in the greater area.

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Proposed Completion of Vermejo SWD Well

PROPOSED COMPLETION

API: 30-015-NA
Operator: Cimarex Energy Co. of Colorado
Lease: Vermejo SWD
Location: Sec 15, T17S-R28E Eddy Co., NM
Footage: 990 FSL, 2530 FEL

Vermejo SWD #1
Well No: 1

KB Est: 3578
GL: 3559

Original Surface Csg

Size: 13-3/8" 48# H-40
Set @: 400
Sxs cmt: 400 sk
Circ:
TOC:
Hole Size: 17-1/2"

Original Intermediate Csg

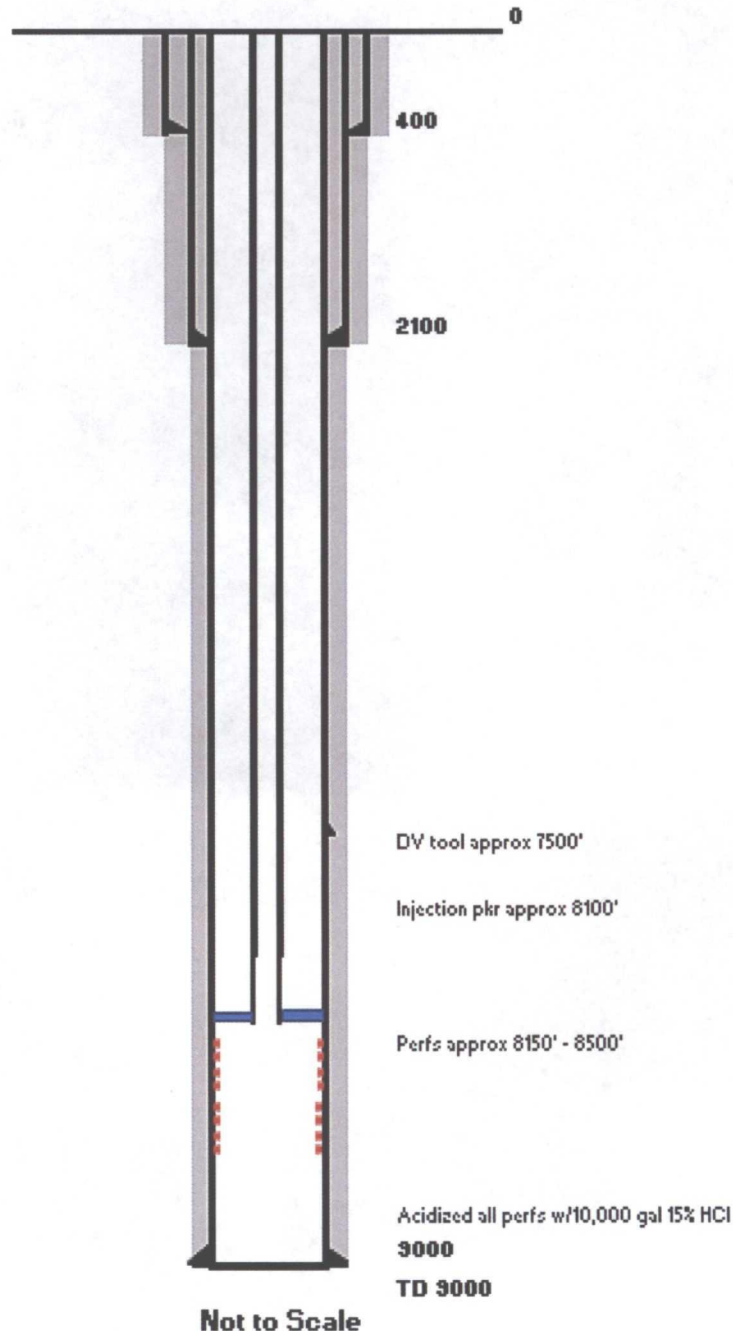
Size: 9-5/8" 32# H-40 STC
Set @: 2100
Sxs cmt: 800
Circ:
TOC: Surface
Hole Size: 12-1/4"

Original Production Csg

Size: 7" 26# N80
Set @: 9000
Sxs cmt: 900
Circ:
TOC: Surface
Hole Size: 8-3/4"

Tubular requirements (made-up):
8100' 3-1/2" N80 3.3# upset Fiberglass coated
Lok-Set packer or equivalent approx 8100'

Perf and acidized selectively
Load tubing annulus w/corrosion inhibitor
Complete surface head for disposal



Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

SPOT10 Satellite and Matching Topographic Map



Delorme Xmap6

The Cimarex Energy Company Vermejo SWD #1 is located 2.2 miles north of the junction of US-82 and NM-380.

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Item XIII: Proof of Notice

Minerals Owner:

Bureau of Land Management
620 E. Greene St.
Carlsbad, NM 87220

Operators:

Apache Corporation
6120 So. Yale, Ste. 1500
Tulsa, OK 74136

CFM Oil Company
P.O. Box 1176
Artesia, NM 88210

Chevron USA, Inc.
15 Smith Road
Midland, TX 79705

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

Devon Energy Production Company, LP
20 N. Broadway
Oklahoma City, OK 73102

Exxon Mobil Corporation
P.O. Box 4358
Houston, TX 77210

Surface Lessee:

Bogle, Ltd.
Attn: Lewis Derrick
P.O. Box 460
Dexter, NM 88231-0460

BP America Permian Operations
P.O. Box 1610
Midland, TX 79702

Chesapeake Operating, Inc.
P.O. Box 18496
Oklahoma City, OK 73102

Concho Resources, Inc.
550 W. Texas St., Ste. 100
Midland, TX 79701

Cochran Energy, LP
c/o Hummingbird Investments, LLP 2219
Westlake Dr., Ste. 120
Austin, TX 78746

EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702

Harvey E. Yates Company
P.O. Box 1933
Roswell, NM 88202

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Hughes Drilling Company
31 Jerry Drive
Artesia, NM 88210

Mack & Marilyn Chase Trust
P.O. Box 693
Artesia, NM 88211

McBride Oil & Gas, Inc.
P.O. Box 1515
Roswell, NM 88202

McCombs Energy, LLC
599 San Felipe, Ste. 1200
Houston, TX 77056

Murchison Oil & Gas, Inc.
1100 Mira Vista Blvd
Plano, TX 75093

OXY USA, Inc.
P.O. Box 4294
Houston, TX 77210

S. P. Yates c/o Yates Petroleum Corp.
105 South 4th St.
Artesia, NM 88210

Tandem Energy Corporation
11490 Westheimer Rd, Ste. 1000
Houston, TX 77077

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Item XIII: Legal Publication

Affidavit of Publication

NO. 22031

STATE OF NEW MEXICO

County of Eddy:

Danny Scott

being duly sworn, says that he is the **Publisher**

of the Artesia Daily Press, a daily newspaper of general
circulation, published in English at Artesia, said county
and state, and that the hereto attached

Legal Notice

was published in a regular and entire issue of the said
Artesia Daily Press, a daily newspaper duly qualified
for that purpose within the meaning of Chapter 167 of
the 1937 Session Laws of the state of New Mexico for
1 Consecutive weeks/days on the same
day as follows:

First Publication February 17, 2012

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Subscribed and sworn to before me this

17th day of February 2012



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015

Latisha Romine

Latisha Romine
Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Cimarex Energy Company of Colorado, 600 N. Marienfeld St., Ste 600, Midland, Texas, 432-571-7800, is seeking approval from the New Mexico Oil Conservation Division to drill and complete the Cimarex Energy Company of Colorado Vermejo SWD No. 1 well API: unassigned, located 900 feet from the south line and 2530 feet from the east line of Section 15, T17S, R28E, Eddy County, NM, located 2.2 miles north of the junction of US-82 and NM-380, to perforate casing and complete for non-commercial disposal of produced water.

The proposed disposal interval is in the Pennsylvanian Cisco formation through casing perforations from approximately 8,150 feet to 8,500 feet (OA) beneath the surface.

Cimarex plans to dispose of approximately 4,000 BWPD at a maximum pressure of 1,630 psi, or as controlled by actual disposal depth.

Parties with questions regarding this proposal may contact Cimarex at the address or phone number above.

Interested parties must file objections or requests for hearing within 15 days of publication to the Oil Conservation Division: 1220 S. St. Francis Dr., Santa Fe, NM 87505. Published in the Artesia Daily Press, Artesia, N.M., Feb. 17, 2012. Legal No 22031.

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

Item XIII:

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Street, Apt. No.,
or PO Box No. P.O. Box 460
City, State, ZIP+4
Dexter, NM 88231-0460
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Artesia, NM 88210
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Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

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City, State, ZIP+4 Midland, TX 79701
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Cortran Energy, L.P./c/o Hummingbird Instr., LLP
Street, Apt. No., or PO Box No. 2219 Westlake Dr., Ste. 120
City, State, ZIP+4 Austin, TX 78746
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EOG Resources, Inc.
Street, Apt. No., or PO Box No. P.O. Box 2267
City, State, ZIP+4 Midland, TX 79702
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Devon Energy Production Company, LP
Street, Apt. No., or PO Box No. 20 N. Broadway
City, State, ZIP+4 Oklahoma City, OK 73102
PS Form 3800, August 2006 See Reverse for Instructions

Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

API 30-015-NA

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Street Apt. No.:
or PO Box No.: P.O. Box 1933
City, State, ZIP+4: Roswell, NM 88202
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Sent To: Exxon Mobil Corporation
Street Apt. No.:
or PO Box No.: P.O. Box 4358
City, State, ZIP+4: Houston, TX 77210-4358
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Sent To: Mark & Marilyn Chase Trust
Street Apt. No.:
or PO Box No.: P.O. Box 693
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or PO Box No.: 31 Jerry Drive
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Sent To: McCombs Energy, LLC
Street Apt. No.:
or PO Box No.: 599 San Felipe St. 1200
City, State, ZIP+4: Houston, TX 77056
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Sent To: McBride Oil & Gas, Inc.
Street Apt. No.:
or PO Box No.: P.O. Box 1515
City, State, ZIP+4: Roswell, NM 88202
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Cimarex Energy Company of Colorado
Vermejo SWD #1
990' FSL & 2530' FEL
Sec. 15, T17S-R28E Eddy County, NM

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Murchison Oil & Gas, Inc.
Street, Apt. No.,
or PO Box No. 1100 Mira Vista Blvd.
City, State, ZIP+4
Plano TX 75093
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Sent To
Tandem Energy Corporation
Street, Apt. No.,
or PO Box No. 11490 Westheimer Road, Ste. 1000
City, State, ZIP+4
Houston TX 77077
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Total Postage & Fees **\$6.80** 02/17/2012

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S.P. Yates c/o Yates Petroleum Corporation
Street, Apt. No.,
or PO Box No. 105 South 4th St.
City, State, ZIP+4
Artesia NM 88210
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Miss Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.	
1		<u>Operator, Well, and Contact info:</u>	
2	II	Name of person submitting the application: Kay Havenor	Other Contact?
3	II	Did you Include a contact Email in the application? Yes and Mailing Address? Yes and Phone? Yes	
4	II	Operator Name: Cimarex Energy Company of Colorado	OGRID Num: 162683
5		RULE 5.9 Compliance.. Number of Inactive Wells 0 vs Total Wells Operated 1270 Is financial assurance required on any well? Yes-53 wells 0 wells in violation	
6		Is there any hearing order finding this operator out of compliance with Division Rule 19.15.5.9 NMAC?	
7		Are all Rule 5.9 issues OK to allow the Division to issue Disposal Permits?	
8	III	Well Name: Vermejo SWD #1	
9	III	API Num: 30-025-XXXXX	Spud Date: New Drill
10		Have you included API numbers on all wellbore diagrams and well list(s) in this application? Yes	
11	III	Proposed well...Footages 900' FSL & 2530' FEL	Unit O Sec 15 Tsp 17S Rge 28E County Eddy
12		General Location (i.e. Y miles NW of Z): located 2.2 miles north of the junction of US-82 and NM-380	
13		Current Well Status: New Drill	
14	I	General Summary of Planned Work to Well: New drill to TD 9,000', run 7" csg production string, cmt to surface, Perf and acidize.	
15		<u>INTERVAL TOP and BOTTOM:</u>	
16	IIIB (2)	Proposed disposal	Top Depth: approx 8,150' Formation Name: Cisco
17	IIIB (2)	Proposed disposal	Bottom Depth: approx 8,500' Formation Name: Cisco
18	IIIB (2)	Is the disposal interval OpenHole? or Perfed? X or Both?	
19	IIIB (2)	What will be the disposal tubing size OD? 3-1/2" Packer Seat, Feet: approx 8,100'	

Miss	Row C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.	
20	VII	What max surf inj. psi are you proposing? 1,630	If differing from 0.2 psi/ft surf. Grad., is supporting data attached such as a Step Rate Test?
21		<u>FRESH WATERS:</u>	
22	VIII	Depth to bottom of Fresh Waters: est less than 150"	Formation Name(s)? Quaternary alluvium
23	XI	Any Fresh Water Wells Within 1 Mile? None reported	If so, did you attach an analysis from these Wells? None available
24		Are all "Fresh" waters isolated with Casing and Cement? Yes	("Fresh" water is defined as less than 10,000 mg/l of TDS)
25	XII	Included "Affirmative Statement" concerning any Connection from Disposal Depths to existing Fresh Waters?	Yes Item XII
26		<u>WASTE WATERS:</u>	
27	XIV	Will this be a Lease Only disposal well? or only used for the Operator's own waste needs? X	or Commercial Disposal?
28	VII	Which formations will supply the waste waters to be disposed into this well... List most common... Artesia Group to Abo	
29	VII	Are Waste waters compatible with proposed disposal interval waters? Yes	Did you include waste water analysis? No
30		<u>AT PROPOSED WELL...INSITU WATERS AND HYDROCARBON POTENTIAL:</u>	
31		Is a discussion included of the potential for future OIL/GAS recovery from the proposed disposal interval? Yes	
32		If your proposed well for disposal is a depleted producer (within the proposed interval), do you know what was the cumulative oil/gas/water? and did you include a Rate-Time plot of this depleted interval?	
33	VII	In situ water analysis included? No	Is the salinity within the disposal interval more than 10,000 mg/l of TDS? or how will you determine this insitu water salinity? Upon completion of perforations the proposed disposal interval will be swabbed to 1) confirm the absence of commercial hydrocarbons and 2) obtain analysis of formation water.
34	VIII	Does the application include a list of Formation tops down to and including the bottom of the target formation? Yes	
35		What is the top 300' and bottom 454'	of the Salado Salt reported in one nearby cable tool well. Most wells report redbeds and anhydrite.
36	X	Are all existing Logs (including any CBL over the disposal interval) are on the OCD Web Site? New Drill If logs not there, please send	
37	IIIA.	Are the wellbore diagrams for this well included in the Application....Before Conversion? New Drill and After Conversion? Yes	

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.		
38			Are the top and bottom footage of the proposed disposal interval marked on the "after" diagram? <u>Yes</u>		
39			<u>NOTICE:</u>		
40	XIV		Date of the Newspaper Notice in the County: <u>2/18/2012</u> Eddy Co.		
41	V		Within 1/2 mile, did you clearly identify (either on a map or by legal description) all separately owned tracts of lands within the disposal interval? <u>Yes</u>		
42	XIII		Did you identify the owner(s) of each of these separately owned tracts? <u>Yes, in</u> <u>Were they all formally noticed? Yes</u>		
43	XIII		If reentering a P&Aed well, are there depth divisions of ownership within that well? <u>...If so, have you also noticed all the shallower interests of the intent to use the well for disposal?</u>		
44	XIII		Is the proposed well within the R-111-P defined Potash Area or the BLM Secretaries Potash Area? <u>No</u> <u>..... If so, did you send notice to the nearest Potash lessee?</u>		
45	XIV		Who owns the surface lands at the disposal well site (BLM, SLO, or who)? <u>BLM - Surface leased</u> Was that party formally noticed? <u>Yes</u>		
46			<u>Area of Review:</u>		
47	V		Did you include a map identifying all wells within 2 miles? <u>Yes</u>		
48	VI		Did you include a list of all AOR wells? <u>Yes</u> Is the list available to be emailed (if requested) in spreadsheet format? <u>Yes - Included in Item VI list</u>		
49	VI		Does this list identify all wells penetrating (at least the top of) the disposal interval within 1/2 mile of the proposed well? <u>Yes</u>		
50	VI		Did you include wellbore diagrams for all P&Aed wells that exist within the 1/2 mile AOR that penetrate the disposal interval? <u>No</u> P&A deep wells in AOR		
51	VI		How many wells exist within the 1/2 mile AOR that penetrate the disposal interval? <u>2</u> How many of these are Plugged/Dry and Abandoned? <u>0</u> P&A		
52	VI		Are details included on cement coverage of the proposed disposal interval for all wells penetrating the disposal interval within 1/2 mile of the proposed well? <u>Yes</u>		
53	VI		Do all reported cement tops describe how that "top" was determined? <u>If Available</u> If you calculated any tops, what fillup efficiency factor did you use?		
54	VI		Did you identify the presence and depth of all Cement Stage Tools (DV) in the subject well and in the AOR wells? <u>Yes, when info was available</u>		
55	VIII		For the target formation, is there significant formation structural depth changes within the 1/2 mile AOR? <u>No</u>		
56	VIII		Is there any Karst or Massive Limestone in this target formation? <u>No</u> ...or in the formations directly above or below? <u>No</u>		

			C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
Miss	Row	C-108	
57			<u>Administrative or Hearing:</u>
58	VI	How many wells within the 1/2 mile AOR currently are producing (or still have open perforations) within the disposal interval?	is it "gas" or "oil"?
59	 NOTE: If the proposed disposal interval is a "Gas" interval or if any AOR wells are producing or have open perforations within this interval then this application may not be properly classified as a "disposal". These types of applications must be processed at an examiner hearing.	
60		Any other Issues..?	

Injection Permit Checklist (11/15/2010)

WFX _____ PMX _____ SWD 1321 Permit Date 3/12/12 UIC Qtr G(F/M)# Wells 1 Well Name(s): Vernago SWD #1API Num: 30-015-NA Spud Date: _____ New/Old: N (UIC primacy March 7, 1982)Footages 900 FSL/2530 FEL Unit 0 Sec 15 Tsp 17S Rge 28E County EDDY

General Location: _____

Operator: Cimcray Energy Co of COLORADO Contact Kay HAVENOROGRID: 162383 RULE 5.9 Compliance (Wells) 6/1288 (Finan Assur) OK IS 5.9 OK? OKWell File Reviewed _____ Current Status: New Drill

Planned Work to Well: _____

Diagrams: Before Conversion _____ After Conversion ✓ Elogs in Imaging File: will file

Well Details:	Sizes Hole.....Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
New ___ Existing ___ Surface	<u>17 1/2 13 1/8</u>	<u>400</u>	<u>—</u>	<u>400 SX</u>	<u>CIRC</u>
New ___ Existing ___ Intern	<u>12 1/4 9 5/8</u>	<u>2100</u>	<u>—</u>	<u>1200 SX</u>	<u>CIRC</u>
New ___ Existing ___ LongSt	<u>8 3/4 7</u>	<u>9000'</u>	<u>7500</u>	<u>2300 SX</u>	<u>CIRC</u>
New ___ Existing ___ Liner					
New ___ Existing ___ OpenHole					

Depths/Formations: Depths, Ft. Formation Tops?

Formation(s) Above			
Injection TOP: <u>(approx) 18150</u>	<u>CISCO</u>	Max. PSI <u>1630</u>	OpenHole <u>—</u> Perfs <u>✓</u>
Injection BOTTOM: <u>8500</u>	<u>CISCO</u>	Tubing Size <u>3 1/2</u>	Packer Depth <u>8100'</u>
Formation(s) Below			

Capitan Reef? _____ (Potash? _____ Noticed? _____) [WHP? _____ Noticed? _____] Salado Top/Bot 300 - 454 Cliff House? _____Fresh Water: Depths: <150' Formation QAL Wells? None Analysis? _____ Affirmative Statement ✓Disposal Fluid Analysis? ✓ Sources: Permian FormDisposal Interval: Analysis? ✓ Production Potential/Testing: Stalwart in XIINotice: Newspaper Date 2/17/12 Surface Owner BLM (2/17/12) Mineral Owner(s) _____RULE 26.7(A) Affected Persons: See List (2/17/12)AOR: Maps? ✓ Well List? ✓ Producing in Interval? NO Wellbore Diagrams? _____.....Active Wells 2 Repairs? 0 Which Wells? _____.....P&A Wells 0 Repairs? 0 Which Wells? _____Issues: will SWAB Test for Hydrocarbon/water analysis Request Sent _____ Reply: _____