



October 3, 2005

VIA HAND DELIVERY

Mark E. Fesmire, P. E.
Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

2005 OCT 3 PM 4 49

Re: Oil Conservation Division Case No. 13583: Application of Chesapeake Operating, Inc. for approval of a waterflood project and qualification of the Project Area of the Trinity Burrus Unit for the Recovered Oil Tax Rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico.

Dear Mr. Fesmire:

Enclosed for filing is the application of Chesapeake Operating Inc. in the above-referenced case. This case is included on the ~~August 20, 2005~~ ^{October} examiner hearing docket.

Very truly yours,

William F. Carr

Enclosure

cc: Oil Conservation/Division
District I
1625 North French
Hobbs, New Mexico 88240

Mr. Terry Frohnepfel
Chesapeake Operating Inc.

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE : _____ X _____ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ X No
- II. OPERATOR: Chesapeake Operating, Inc.
- ADDRESS : P. O. Box 11050 Midland TX 79702-8050
- CONTACT PARTY : Brenda Coffman PHONE : (432)687-2992
- III. WELL DATA: Complete the data required on the reverse side of this form for each well processed 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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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: Brenda Coffman TITLE: Regulatory Analyst
- SIGNATURE: Brenda Coffman DATE: 09/28/2005
- E-MAIL ADDRESS: bcoffman@chkenergy.com
- * If the information required under Sections VI, VII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal: _____

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

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 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, NM 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.

APPLICATION FOR AUTHORIZATION TO INJECT
Chesapeake Operating, Inc.
Lea County, New Mexico

LIST OF WELLS FOR THIS APPLICATION

Burrus #2A
API # 30-025-35188
900 FSL & 600 FEL
Unit P, Section 22, T12S, R38E

Burrus 11
API # 30-025-36038
1650 FSL & 2310 FWL
Unit K Section 22, T12S, R38E

Burrus 23 5
API # 30-025-36451
2310 FNL 1650 FWL
Unit F Section 23, T12S, R38E

State 22 1
API # 30-025-36018
2310 FNL 990 FEL
Unit H Section 22, T12S, R38E

Burrus 7
API # 30-025-36187
330 FNL & 2310 FWL
Unit C, Section 27, T12S, R38E

Burrus 23 3
API # 30-025-36450
1650 FSL 2200 FEL
Unit J Section 23, T12S, R38E

State DZ 1
API # 30-025-30106
330 FSL & 1650 FWL
Unit N Section 23, T12S, R38E

REQUIREMENTS PER FORM C-108

ITEM I

The purpose of this application is secondary Recovery.

ITEM II

Chesapeake Operating, inc.
P. O. Box 11050
Midland, TX 79702-8050
Brenda Coffman (432) 687-2992 ext. 6032

ITEM III

See Data Sheet attached

ITEM IV

This is NOT an expansion of an existing project

ITEM V

See map attached

ITEM VI

See attached list of wells.

ITEM VII

1. Daily average injection rate is expected to be 1,000 BWPD. Maximum daily injection rate would be approximately 1,000 BWPD.
2. The system will be closed.
3. The proposed average injection pressure is expected to be 100 psig and the maximum pressure is expected to be 4600 psig.
4. The source of water to be injected is produced water, fresh water and Devonian. A water analysis is attached for the fresh water and the Devonian.
5. Injection is NOT for disposal.

ITEM VIII

The Gladiola; Wolfcamp pool is located in Southeastern Lea County, New Mexico. The top and depth to the bottom of the Wolfcamp is indicated below for each well in this application. The fresh water for the area is from the Ogallala with depth from the surface at approximately 35' and the total depth at around 125'.

<u>Well Name</u>	<u>Top of Wolfcamp</u>	<u>Bottom of Wolfcamp</u>
Burrus 2A	9001	9061
Burrus 23 5	9114	9174
Burrus 23 3	9205	9265
Burrus 7	9115	9175
Burrus 11	9100	9160
State DZ 1	9164	9224
State 22 1	9110	9170

ITEM IX

There will not be a stimulation program. The Procedure to Convert the well to an injector is attached.

ITEM X

The logs were sent to the Oil Conservation Division when the well was completed.

ITEM XI

Water analysis from the fresh water wells within one mile of the injection well is attached.

ITEM XII

This application is NOT for a salt water disposal well.

ITEM XIII

The "Proof of Notice" as required with this application is attached.

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: Burrus 2AWELL LOCATION: 900' FSL & 600' FELUNIT LETTER P SECTION 22 TOWNSHIP 12S RANGE 38EWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 440 sx. or ft³Top of Cement: 0 Method Determined: ObservationIntermediate CasingHole Size: 12 1/4" Casing Size: 9 5/8"Cemented with: 1150 sx. or ft³Top of Cement: 460' Method Determined: CBLProduction CasingHole Size: 8 1/2" Casing Size: 7"Cemented with: 350 sx. or ft³Top of Cement: 7780' Method Determined: CBLTotal Depth: 9800'Injection Interval7905679506feet to 9098

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8" Lining Material: plasticType of Packer: 4 1/2" Arrow Set IPacker Setting Depth: 9474'Other Type of Tubing/Casing Seal (if applicable): None**Additional Data**

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

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

2. Name of the Injected Formation: Wolfcamp

3. Name of Field or Pool (if applicable): Trinity; Wolfcamp

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. 9682 - 9670 - CIBP @ 9650 capped w/cmt.;

9504 - 9518' - CIBP @ 9248; 9070' - 9080' - CIBP @ 9065'; 9030 - 9060' - CIBP @ 8867'

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injected zone in this area: Yates 3060'; San Andres 4450'; Glorieta 5897'; Tubb 7158'; Abo 7821'

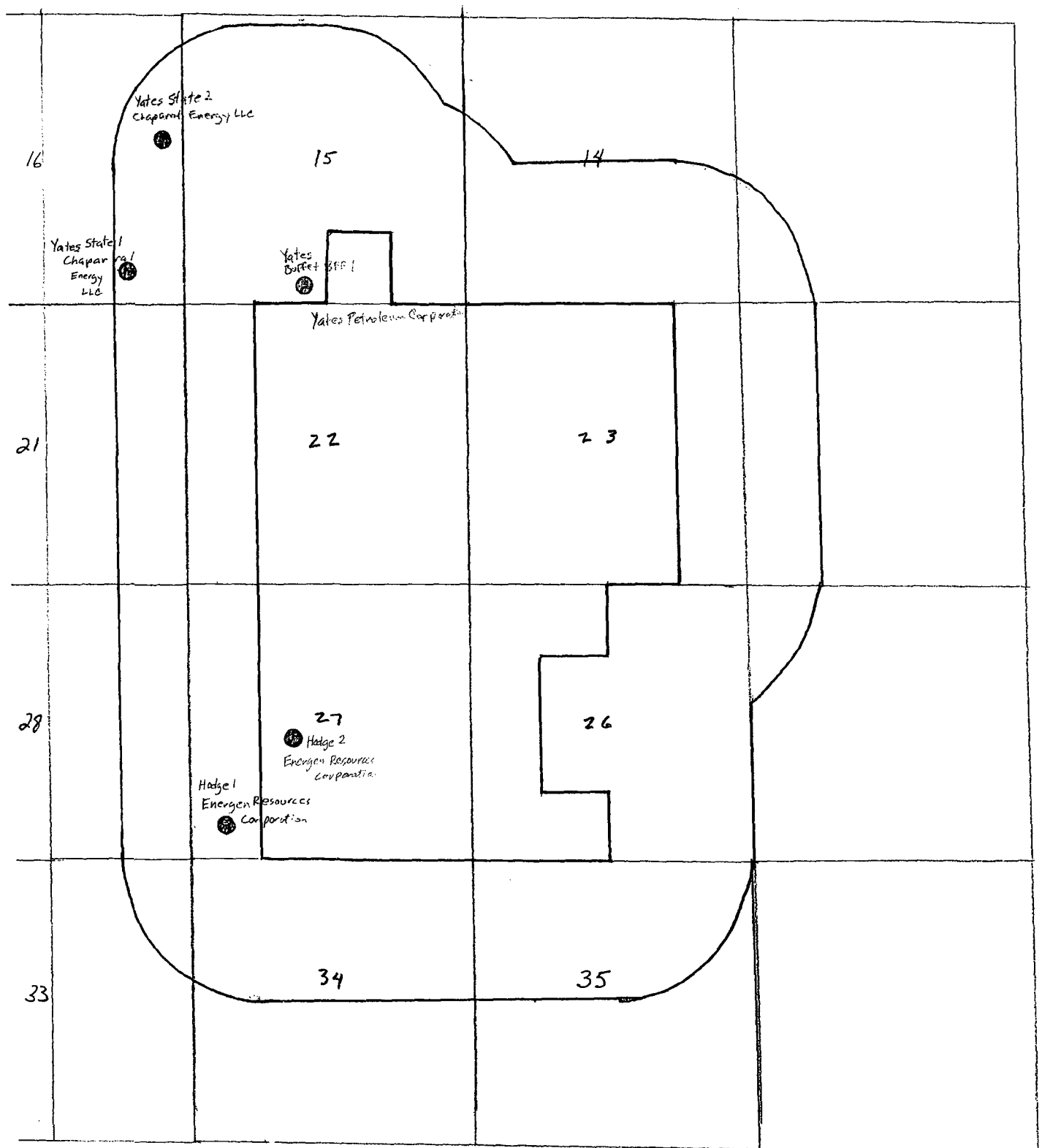
Trinity Burrus Abo Offset Operators within ½ mile of Unit

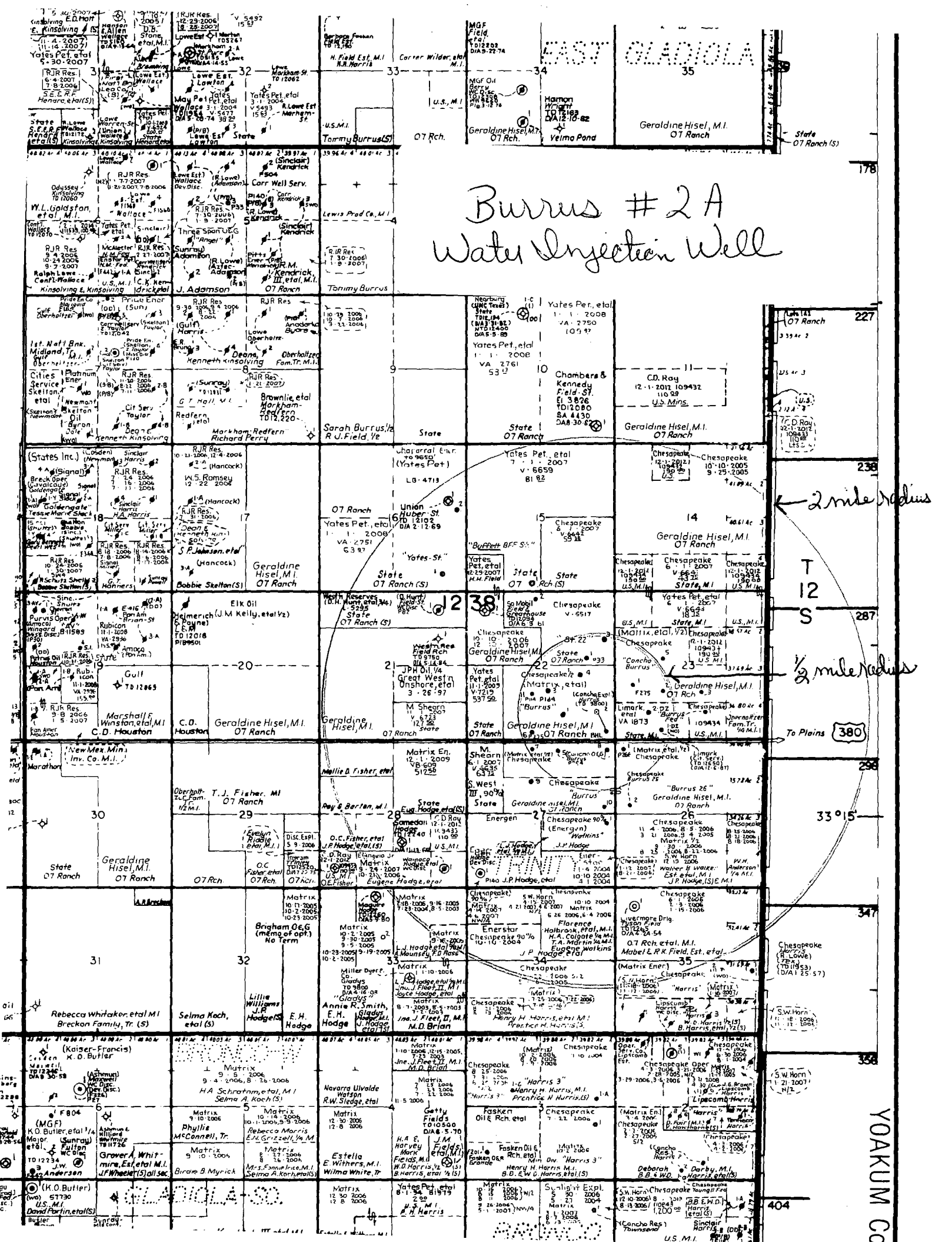
Chaparral Energy LLC
701 Cedar Lake Boulevard
Oklahoma City, OK 73114

Energen Resources Corporation
3300 North "A" Street
Building 4, Suite 100
Midland, TX 79705

Yates Petroleum Corporation
105 South 4th Street
Artesia, NM 88210

Burrus: Offset Producing wells within 1/2 mile of Unit Boundary. ● oil ⚙ gas





Burrus #2 A
Water Injection Well

2 mile radius

1/2 mile radius

To Plains 380

33° 15'

YOAKUM CO

CHESAPEAKE OPERATING, INC.
P.O. Box 11050
Midland, TX 79702-8050
(432) 687-2992

BURRUS 23 #5 WIW

APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
State 23 #3	O	10/3/04	Sec 22-T12S-R38E H 1645 FN - 354 FE	9265
Burrus 23 #1	O	5/23/03	Sec 23-T12S-R38E L 1980 FS - 660 FW	9235
Burrus 23 #2	O	10/3/03	Sec 23-T12S-R38E K 1650 FS - 1650 FW	9265
State DZ #1	O	2/15/02	Sec 23-T12S-R38E N 330 FS - 1650 FW	9316
State DZ #2	O		Sec 23-T12S-R38E	
Burrus 23 Fed #1	O	5/11/04	Sec 23-T12S-R38E O 990 FS - 2170 FE	9420
State 22 #1	O	10/19/02	Sec 22-T12S-R38E H 2310 FE - 990 FE	9250

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: Burrus 23 #5WELL LOCATION: 2310 FNL & 1650 FWLF 23 12S 38E
UNIT LETTER SECTION TOWNSHIP RANGE

FOOTAGE LOCATION

WELLBORE SCHEMATICWELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2 Casing Size: 13 3/8Cemented with: 390 sx. or ft³Top of Cement: 0 Method Determined: observationIntermediate CasingHole Size: 12 1/4 Casing Size: 8 5/8Cemented with: 1275 sx. or ft³Top of Cement: 0 Method Determined: observationProduction CasingHole Size: 7 7/8 Casing Size: 5 1/2Cemented with: 1275 sx. or ft³Top of Cement: 700 Method Determined: CBLTotal Depth: 9740Injection Interval9056 feet to 9091

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: plastic

Type of Packer: Arrow Set I

Packer Setting Depth: 8996

Other Type of Tubing/Casing Seal (if applicable): None

Additional Data

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

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

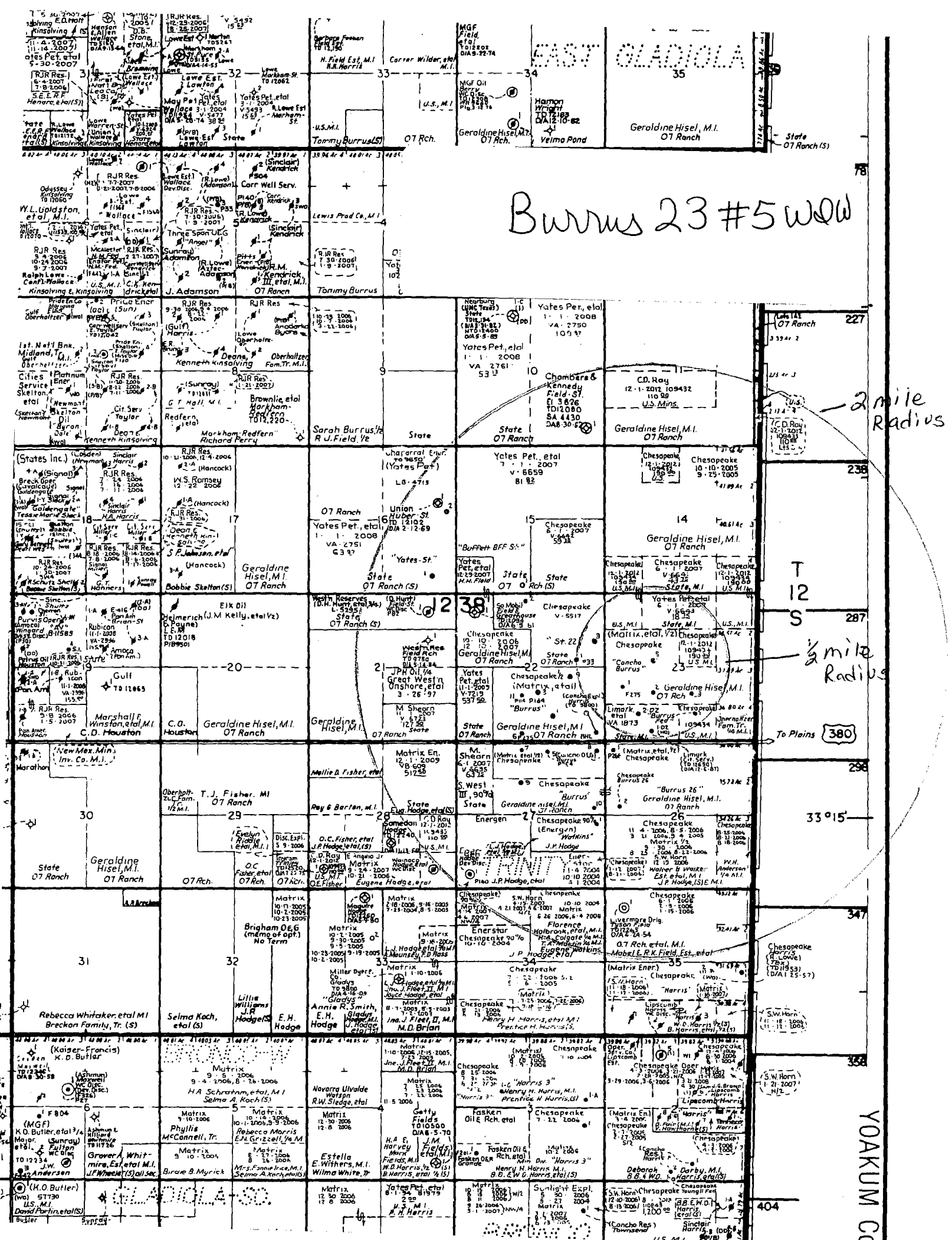
2. Name of the Injected Formation: Wolfcamp

3. Name of Field or Pool (if applicable): Trinity;Wolfcamp

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 injected zone in this area: Abo 7852; Drinkard 7287; Tubb 7161; Blinebry 6599; Glorieta 5933; San Andres

4464; Yates 3064



CHESAPEAKE OPERATING, INC.

P.O. Box 11050

Midland, TX 79702-8050

(432) 687-2992

BURRUS 23 #3 WIW - 1650 FSL - 2200 FEL

**APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI**

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
State DZ #1	O	12/15/02	Sec 23-T12S-R38E N 330 FS - S 1650 FW	9316
Burrus 23 #1	O	5/23/03	Sec 22-T12S-R38E L 1980 FS - 660 FW	9235
State DZ #2	O	8/26/03	Sec 22-T12S-R38E M 990 FS - 1200 FW	9225
Burrus 23 #2	O	10/3/03	Sec 22-T12S-R38E K 1650 FS - 1650 FW	9265
Burrus 23 #5	O	2/29/04	Sec 23-T12S-R38E F 2310 FN - 1650 FW	9793
Burrus 23 Fed #1	O	5/11/04	Sec 23-T12S-R38E O 990 FS - 2170 FE	9420

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: Burrus 23 #3WELL LOCATION: 1650 FSL & 2200 FEL
FOOTAGE LOCATIONUNIT LETTER JSECTION 23TOWNSHIP 12SRANGE 38EWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2 Casing Size: 13 3/8Cemented with: 500 sx. or ft³Top of Cement: 0 Method Determined: observationIntermediate CasingHole Size: 12 1/4 Casing Size: 8 5/8Cemented with: 1825 sx. or ft³Top of Cement: 0 Method Determined: observationProduction CasingHole Size: 7 7/8 Casing Size: 5 1/2Cemented with: 1300 sx. or ft³Top of Cement: 1080 Method Determined: CBLTotal Depth: 9800Injection Interval9222 feet to 9265

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8" Lining Material: plasticType of Packer: Arrow Set IPacker Setting Depth: 9162Other Type of Tubing/Casing Seal (if applicable): None**Additional Data**

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

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

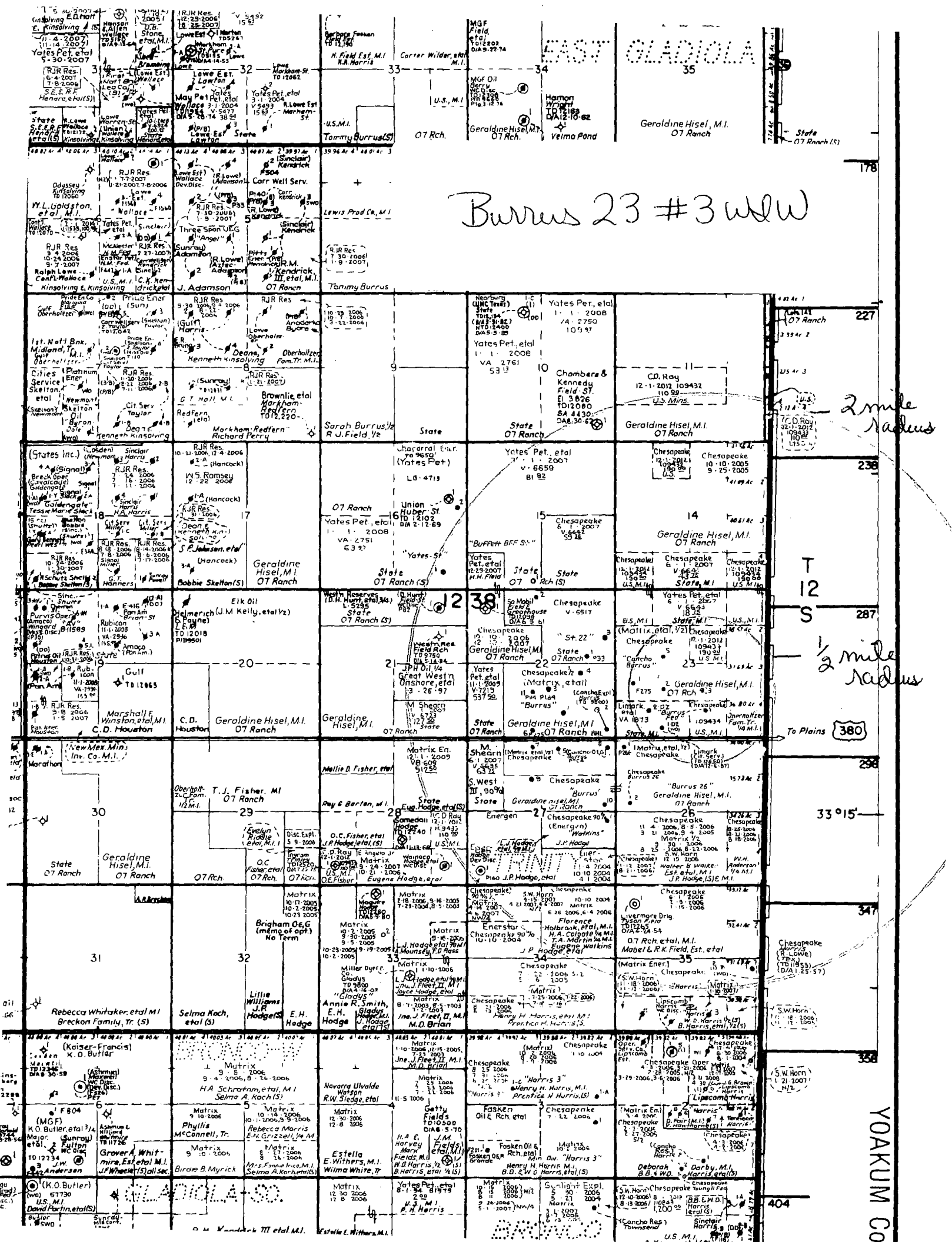
2. Name of the Injected Formation: Wolfcamp

3. Name of Field or Pool (if applicable): Trinity; Wolfcamp

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 injected zone in this area: Abo 7932; Tubb 7260; San Andres 4400

4464; Yates 3064



CHESAPEAKE OPERATING, INC.
P.O. Box 11050
Midland, TX 79702-8050
(432) 687-2992

STATE DZ #1 WIW

APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
State DZ #2	O		Sec 22-T12S-R38E	
State 22 Fed #1	O	10/19/02	Sec 22-T12S-R38E H 2310 FN - 990 FE	9250
Burrus 23 #1	O	5/23/03	Sec 23-T12S-R38E L 1980 FS - 660 FW	9235
Burrus 23 #2	O	10/3/03	Sec 23-T12S-R38E K 1650 FS - 1650 FW	9265
Burrus #2A	O	5/13/03	Sec 22-T12S-R38E P 900 FS - 600 FE	9549
Burrus #8	O	7/16/03	Sec 27-T12S-R38E A 330 FN - 330 FE	9164
Burrus 26 #1	O	9/8/03	Sec 26-T12S-R38E D 330 FN - 330 FW	9260
Burrus #5	O	9/19/02	Sec 27-T12S-R38E B 330 FN - 2000 FE	9260

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: State DZ 1WELL LOCATION: 330 FSL & 1650 FSWUNIT LETTER N SECTION 23 TOWNSHIP 12S RANGE 38E

FOOTAGE LOCATION

WELLBORE SCHEMATICWELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2 Casing Size: 13 3/8Cemented with: 400 sx. or ft³Top of Cement: 0 Method Determined: observationIntermediate CasingHole Size: 12 1/4 Casing Size: 9 5/8Cemented with: 2300 sx. or ft³Top of Cement: 0 Method Determined: observationProduction CasingHole Size: 8 1/2 Casing Size: 5 1/2Cemented with: 315 sx. or ft³Top of Cement: 7900 Method Determined: CBLTotal Depth: 9316Injection Interval9110 feet to 9136

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8" Lining Material: plasticType of Packer: Arrow Set IPacker Setting Depth: 9050Other Type of Tubing/Casing Seal (if applicable): None**Additional Data**

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

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

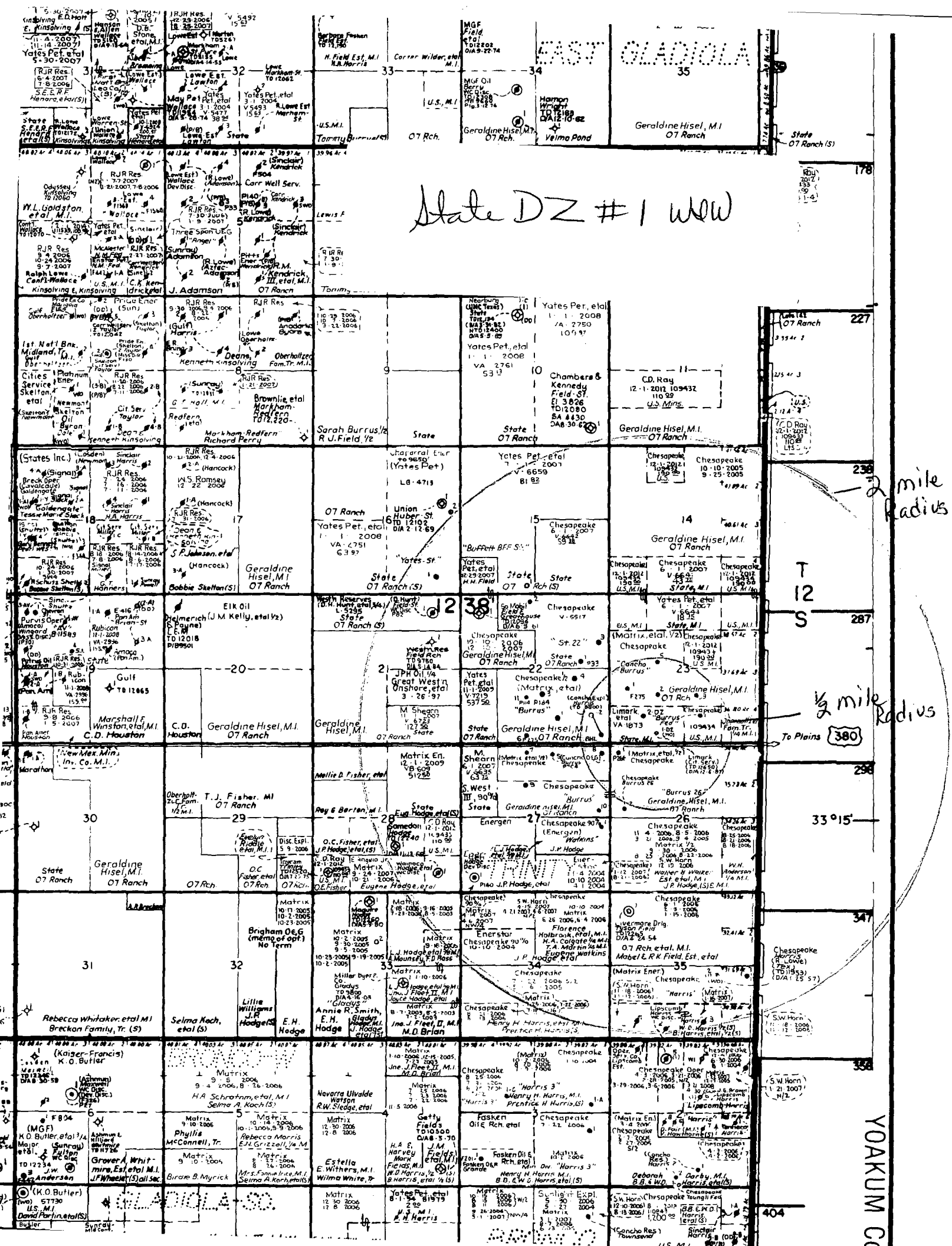
2. Name of the Injected Formation: Wolfcamp

3. Name of Field or Pool (if applicable): Trinity; Wolfcamp

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 injected zone in this area: Abo 7860; Drinkard 7200; Tubb 7170; Glorieta 5700; San Andres 4450

4464; Yates 3064



CHESAPEAKE OPERATING, INC.
P.O. Box 11050
Midland, TX 79702-8050
(432) 687-2992

STATE 22 #1 WIW

APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
State 22 #3	O	10/3/04	Sec 22-T12S-R38E H 1645 FN - 354 FE	9265
Burrus #4	O	2/6/02	Sec 22-T12S-R38E I 2310 FS - 1210 FE	9214
Burrus #11	O	11/13/02	Sec 22-T12S-R38E K 1650 FS - 2310 FW	9240
Burrus #3	O	7/3/01	Sec 22-T12S-R38E J 1720 FS - 2310 FE	9184
Burrus #1	O	4/11/00	Sec 22-T12S-R38E O 900 FS - 1859 FE	12036
Burrus #2A	O	5/13/03	Sec 22-T12S-R38E P 900 FS - 600 FE	
Burrus 23 #1	O	5/23/03	Sec 23-T12S-R38E L 1980 FS - 660 FW	9235
Burrus 23 #5	O	2/29/04	Sec 23-T12S-R38E F 2310 FN - 1650 FW	9793
State 22 #2	O	8/31/04	Sec 22-T22S-R38E C 217 FN - 2417 FW	9800

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: State 22 1WELL LOCATION: 2310 FNL & 990 FEL

H	23	12S	38E
UNIT LETTER	SECTION	TOWNSHIP	RANGE

FOOTAGE LOCATION

WELLBORE SCHEMATICWELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2 Casing Size: 13 3/8

Cemented with: 375 sx. or ft³

Top of Cement: 0 Method Determined: observation

Intermediate Casing

Hole Size: 11 Casing Size: 8 5/8

Cemented with: 1357 sx. or ft³

Top of Cement: 0 Method Determined: observation

Production Casing

Hole Size: 7 7/8 Casing Size: 5 1/2

Cemented with: 892 sx. or ft³

Top of Cement: 3470 Method Determined: CBL

Total Depth: 9250

Injection Interval

9052 feet to 9086

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: plastic

Type of Packer: Arrow Set I

Packer Setting Depth: 8992

Other Type of Tubing/Casing Seal (if applicable): None

Additional Data

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

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

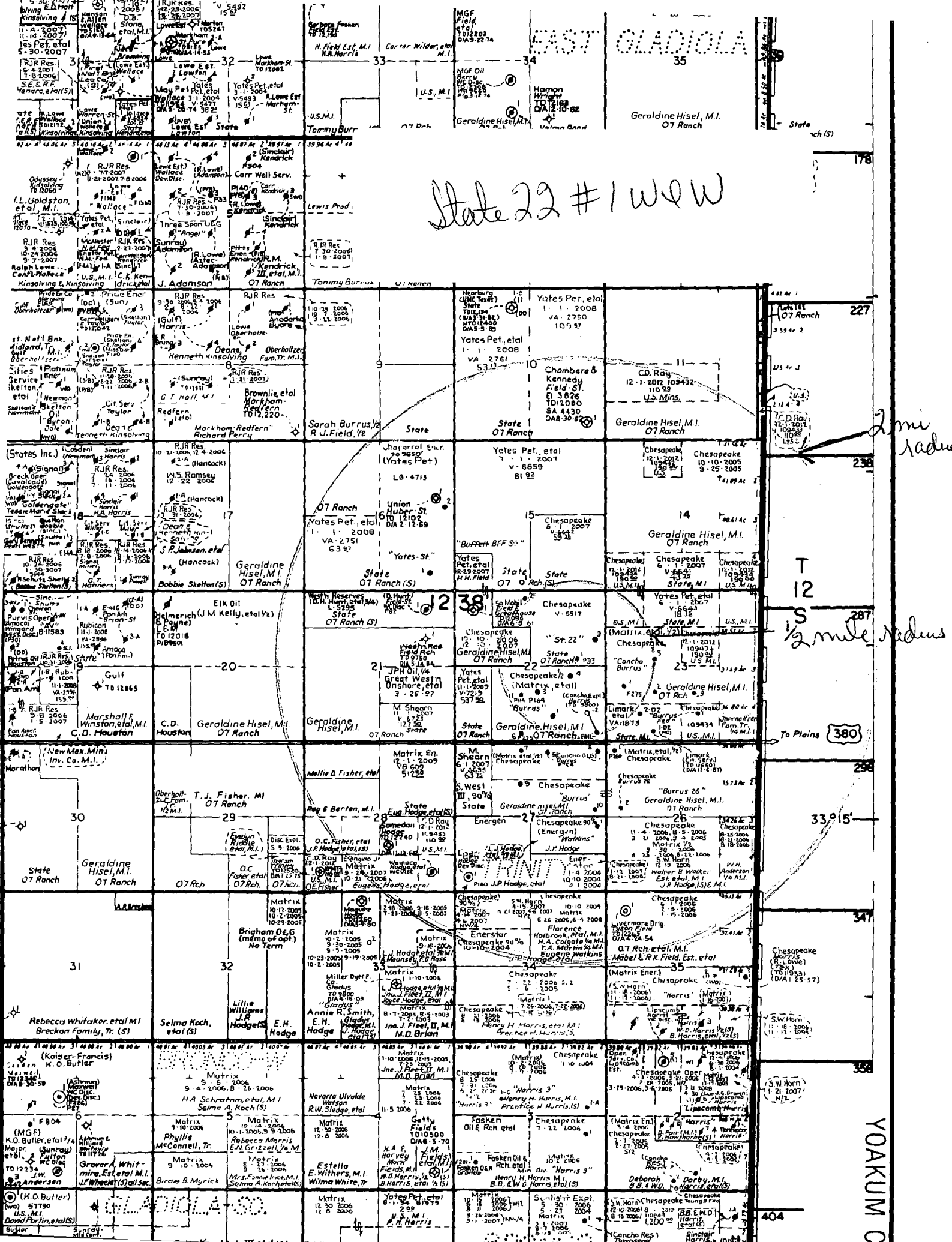
2. Name of the Injected Formation: Wolfcamp

3. Name of Field or Pool (if applicable): Trinity; Wolfcamp

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. Yes

9104 - 9110 CIBP 9095

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injected zone in this area: Abo 7845; San Andres 4455; Yates 3050



State 22 #1 WNW

2 mi radius

1/2 mile radius

YOAKUM CO

CHESAPEAKE OPERATING, INC.
P.O. Box 11050
Midland, TX 79702-8050
(432) 687-2992

BURRUS 11 WIW

APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
Burrus #1	O	4/11/00	Sec 22-T12S-R38E O 900 FS - 1859 FE	12036
Burrus #3	O	7/3/01	Sec 22-T12S-R38E J 1720 FS - 2310 FE	9184
Burrus #4	O	2/6/02	Sec 22-T12S-R38E I 2310 FS - 1210 FE	9214
Burrus #6	O	7/13/02	Sec 22-T12S-R38E N 330 FS - 2310 FW	9254
Burrus #7	O	4/17/03	Sec 27-T12S-R38E C 330 FN - N 2310 FW	9218
Burrus #5	O	9/19/02	Sec 27-T12S-R38E B 330 FN - 2000 FE	9260
State 22 #1	O	10/19/02	Sec 22-T12S-R38E H 2310 FN - 990 FE	9250

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: Burns 11WELL LOCATION: 1650 FSL & 2310 FWL

K	22	12S	38E
UNIT LETTER	SECTION	TOWNSHIP	RANGE

FOOTAGE LOCATION

WELLBORE SCHEMATICWELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2 Casing Size: 13 3/8Cemented with: 440 sx. or ft³Top of Cement: 0 Method Determined: observationIntermediate CasingHole Size: 12 1/4 Casing Size: 8 5/8Cemented with: 1414 sx. or ft³Top of Cement: 0 Method Determined: observationProduction CasingHole Size: 7 7/8 Casing Size: 5 1/2Cemented with: 895 sx. or ft³Top of Cement: 3625 Method Determined: CBLTotal Depth: 9240Injection Interval9030 feet to 9080

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8" Lining Material: plasticType of Packer: Arrow Set IPacker Setting Depth: 8970Other Type of Tubing/Casing Seal (if applicable): None**Additional Data**1. Is This a new well drilled for injection? _____ Yes X No _____If no, for what purpose was the well originally drilled? Oil2. Name of the Injected Formation: Wolfcamp3. Name of Field or Pool (if applicable): Trinity; Wolfcamp4. 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. No5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injected zone in this area: Abo 7840; San Andres 4460; Yates 3055

CHESAPEAKE OPERATING, INC.
P.O. Box 11050
Midland, TX 79702-8050
(432) 687-2992

BURRUS 7 WIW

APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
Burrus #5	O	9/19/02	Sec 27-T12S-R38E B 330 FN - 2000 FE	9260
Burrus #8	O	7/16/03	Sec 27-T12S-R38E A 330 FN - 330 FE	9164
Burrus #6	O	7/13/02	Sec 22-T12S-R38E N 330 FS - 2310 FW	9254
Burrus #1	O	4/11/02	Sec 22-T12S-R38E O 900 FS - 1859 FE	12036
Burrus #3	O	7/3/01	Sec 22-T12S-R38E J 1720 FS - 2310 FE	9184
Burrus #11	O	11/13/02	Sec 22-T12S-R38E K 1650 FS - 2310 FW	9240
Burrus #2A	O	5/13/03	Sec 22-T12S-R38E P 900 FS - 600 FE	9549
Burrus 27 #9	O	8/7/04	Sec 23-T12S-R38E L 1980 FS - 660 FW	9800

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: Burrus 7WELL LOCATION: 330 FNL 2310 FWL

C

FOOTAGE LOCATION

27

UNIT LETTER

12S

TOWNSHIP

38E

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2 Casing Size: 13 3/8Cemented with: 440 sx. or ft³Top of Cement: 0 Method Determined: observationIntermediate CasingHole Size: 12 1/4 Casing Size: 8 5/8Cemented with: 1550 sx. or ft³Top of Cement: 0 Method Determined: observationProduction CasingHole Size: 7 7/8 Casing Size: 5 1/2Cemented with: 800 sx. or ft³Top of Cement: 4660 Method Determined: CBLTotal Depth: 9218Injection Interval9048feet to 9092

(Peforated or Open Hole; indicated which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: plastic

Type of Packer: Arrow Set I

Packer Setting Depth: 8988

Other Type of Tubing/Casing Seal (if applicable): None

Additional Data

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

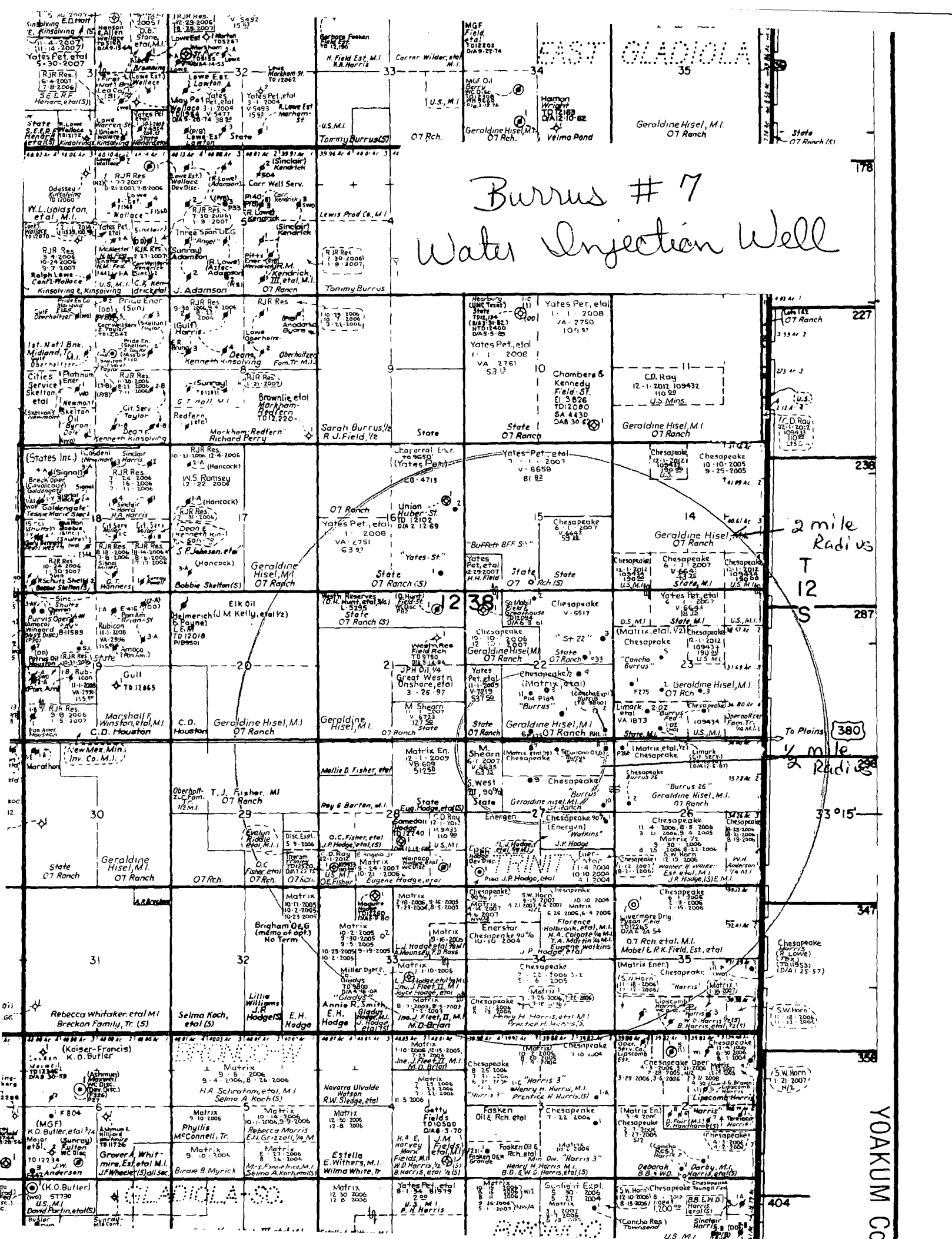
If no, for what purpose was the well originally drilled? Oil

2. Name of the Injected Formation: Wolfcamp

3. Name of Field or Pool (if applicable): Trinity; Wolfcamp

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 injected zone in this area: Abo 7840; Tubb 7150; Glorieta 5370; San andres 4460



Burrus #7
Water Injection Well

2 mile
Radius
T
12
S
287
380
To Plains
1/2 mile
Radius
33°15'

YOAKUM CO

**Procedure to Convert Producing Wells to Injectors
Burrus Waterflood
Lea Co. NM**

1. MIRU workover rig. ND wellhead, NU BOP.
2. POH and lay down rods, pump and tbg.
3. RIH w/ injection packer on 2 3/8" plastic lined tbg. Place packer within 100' of the top perf.
4. Load backside with packer fluids and set packer.
5. Pressure test back side to 500 psi.
6. ND BOP, NU wellhead. RD workover rig. Hook well up for injection with flow meter. Install pressure gauges to monitor both tubing and annulus pressures.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819

TO: Mr. Rob Crews	LABORATORY NO.	804-102
5014 Carlsbad Hwy, Hobbs, NM 88240	SAMPLE RECEIVED	8-13-04
	RESULTS REPORTED	8-17-04

COMPANY Chesapeake Operating LEASE _____
FIELD OR POOL _____
SECTION _____ BLOCK _____ SURVEY _____ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Drinking water - taken from windmill south of new location for Burrus #12.
NO. 2 Drinking water - taken from water well next to Burrus #2-A.
NO. 3 Maximum contents for drinking water as recommended by the Texas Dept. of Health.
NO. 4 _____

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0007	1.0019		
pH When Sampled				
pH When Received	7.00	6.90		
Bicarbonate as HCO ₃	259	205		
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	250	700		
Calcium as Ca	90	216		
Magnesium as Mg	6	39		
Sodium and/or Potassium	89	300		
Sulfate as SO ₄	145	310	300	
Chloride as Cl	57	611	300	
Iron as Fe	0.25	0.40	0.30	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	644	1,680	1,000	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohm/cm at 77° F.	12.88	3.75		
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	1.9	2.8	10.0	
Results Reported As Milligrams Per Liter				
The undersigned certifies the above to be true and correct to the best of his knowledge and belief.				

Form No. 3

By

Greg Ogden, B.S.

Devonian

Analytical Laboratory Report for:

Chesapeake Operating



Chemical Services

Account Representative:

Jerry White

Production Water Analysis

Listed below please find water analysis report from: Apache, SWD

Lab Test No: 2005133824

Sample Date:

09/29/2005

Specific Gravity: 1.034

TDS: 50896

pH: 6.80

Cations:	mg/L	as:
Calcium	1954	(Ca ⁺⁺)
Magnesium	522	(Mg ⁺⁺)
Sodium	14091	(Na ⁺)
Iron	56.41	(Fe ⁺⁺)
Potassium	480.0	(K ⁺)
Barium	0.35	(Ba ⁺⁺)
Strontium	55.89	(Sr ⁺⁺)
Manganese	1.23	(Mn ⁺⁺)
Anions:	mg/L	as:
Bicarbonate	415	(HCO ₃ ⁻)
Sulfate	1200	(SO ₄ ⁼)
Chloride	32600	(Cl ⁻)
Gases:		
Carbon Dioxide	50	(CO ₂)
Hydrogen Sulfide		(H ₂ S)

Chesapeake Operating Lab Test No: 2005133824

DownHole SAT™ Scale Prediction
@ 100 deg. F



Chemical Services

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO ₃)	3.18	.13
Aragonite (CaCO ₃)	2.69	.119
Witherite (BaCO ₃)	< 0.001	-20.42
Strontianite (SrCO ₃)	.157	-1.43
Magnesite (MgCO ₃)	.939	-.0103
Anhydrite (CaSO ₄)	.632	-152.48
Gypsum (CaSO ₄ *2H ₂ O)	.729	-112.54
Barite (BaSO ₄)	1.67	.0828
Celestite (SrSO ₄)	.259	-89.81
Silica (SiO ₂)	0	-52.27
Brucite (Mg(OH) ₂)	< 0.001	-.583
Magnesium silicate	0	-120.03
Strengite (FePO ₄ *2H ₂ O)	0	>-0.001
Siderite (FeCO ₃)	154.45	.219
Halite (NaCl)	.00771	-178312
Thenardite (Na ₂ SO ₄)	< 0.001	-70042
Iron sulfide (FeS)	0	-.0256

Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The scale is logarithmic, i.e. a Saturation Index of 3 is 10 times more saturated than a value of 2.

The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) infinity to positive (precipitating) infinity. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

Trinity Burrus Abo Unit

Surface Ownership:

 07 Ranch Land Mineral Limited Partnership
PO Box 1090
Plains, TX 79355
(806/456-7401)

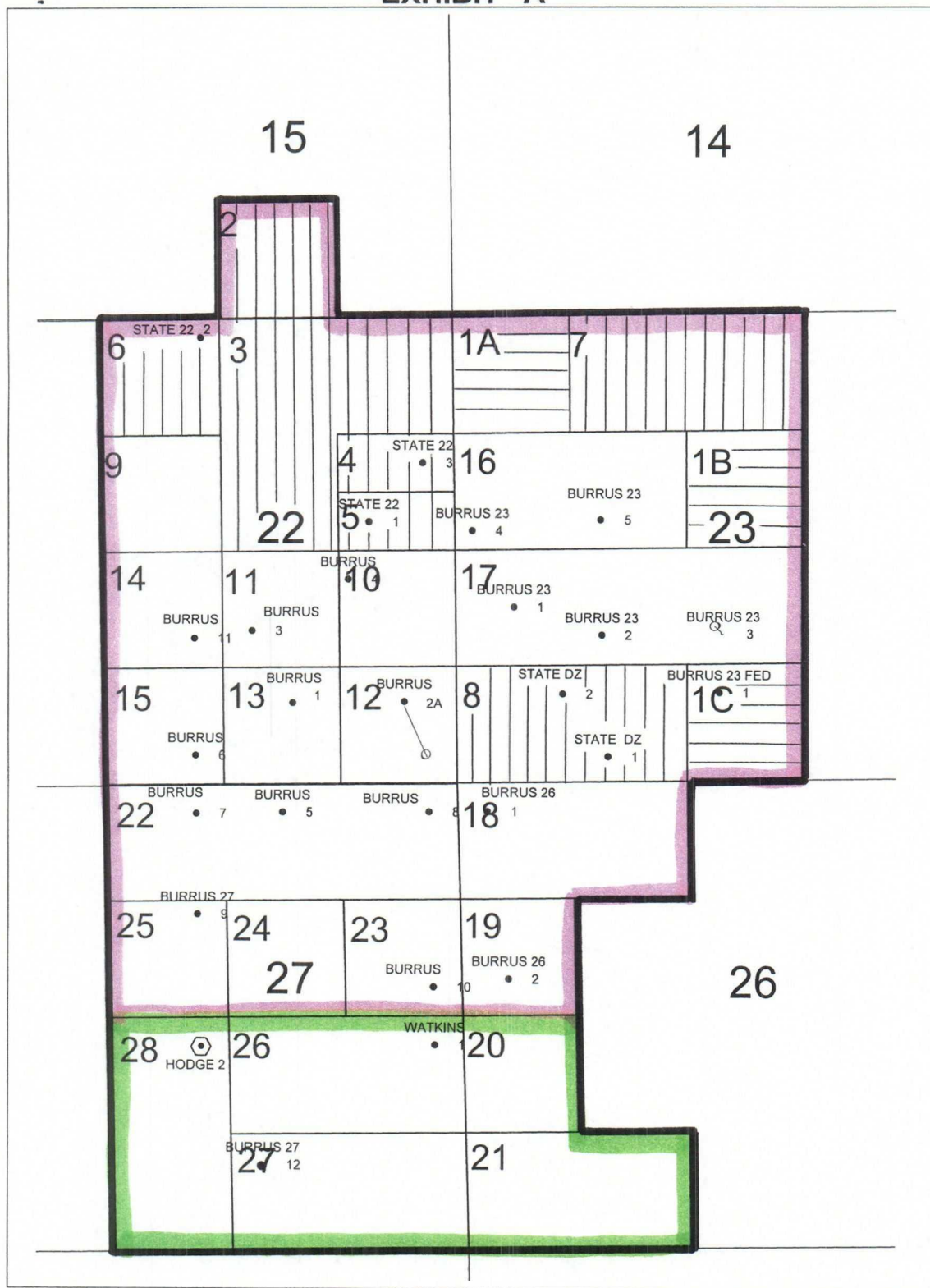
Owens all of surface inside unit, less the below listed land.

 Jimmy P. Hodge
P.O. Box 565
Lovington, NM 88260
(505/396-2104)

NW SW & S/2 SW of Sec.26;
And SE & E/2 SW of Sec. 27;
All in T12S-R38E
Lea County, NM

(See attached map)

EXHIBIT "A"



TOWNSHIP 12 SOUTH, RANGE 38 EAST
LEA COUNTY, NEW MEXICO

PROPOSED TRINITY BURRUS ABO UNIT CHESAPEAKE ENERGY CORPORATION

- | | | | |
|---|-----------------------------------|---|-----------------------------|
|  | Proposed Waterflood Unit Boundary |  | Federal Acreage = 120 acres |
|  | Chesapeake Operated Wells |  | State Acreage = 400 acres |
|  | Energyn Resources Operated Wells |  | Fee Acreage = 1200 acres |
| | | | Total Acreage = 1720 acres |

**CHESAPEAKE OPERATING, INC.
P O BOX 11050
MIDLAND, TX 79702-8050**

September 30, 2005

**PROOF OF NOTICE
ITEM XIII
FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT**

I, Brenda Coffman, do hereby certify that a copy of the Form C-108, along with all attachments has been mailed by Certified Mail on this date to all of the following:

OFFSET OPERATORS:

Chaparral Energy LLC
701 Cedar Lake Boulevard
Oklahoma City, OK 73114

Energen Resources Corporation
3300 North "A" Street
Building 4, Suite 100
Midland, TX 79705

Yates Petroleum Corporation
105 South 4th Street
Artesia, NM 88210

SURFACE OWNERS:

(Description of Ownership within application)

Jimmy P. Hodge
P. O. Box 565
Lovington, NM 88260

07 Ranch Land Mineral Limited Partnership
P. O. Box 1090
Plains, TX 79355

Brenda Coffman
Brenda Coffman

Regulatory Analyst 9-30-05
Title Date



Midland Field Office

September 30, 2005

Chaparral Energy LLC
701 Cedar Lake Boulevard
Oklahoma City, OK 73114

RE: Application for Authorization to Inject
Lea County, New Mexico

Dear Sir:

Please, find within a copy of the Application for Authorization to Inject.

As offset leasehold operator to our project area and in compliance with the New Mexico Oil Conservation Commission, enclosed is a copy of our Application to Inject (Form C-108) along with all attachments.

If there are no objections to the application, please, acknowledge below and return to me at P. O. Box 11050, Midland, TX 79702-8050. Any objections must be filed with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505 within 15 days from the date this application was mailed.

Yours truly,

Brenda Coffman
Regulatory Analyst

_____ has no objections to Chesapeake Operating's
Application for Authorization to Inject into the following wells located in Sec. 22 T12S
R38E, Lea County NM: Burrus 2A; Burrus 11; Burrus 23 3; Burrus 23 5; State DZ 1;
State 22 1; Sec. 27: Burrus 7

Signature

Printed Name

Date



Midland Field Office

September 30, 2005

Energen Resources Corporation
3300 North "A" Street
Building 4, Suite 100
Midland, TX 79705

RE: Application for Authorization to Inject
Lea County, New Mexico

Dear Sir:

Please, find within a copy of the Application for Authorization to Inject.

As offset leasehold operator to our project area and in compliance with the New Mexico Oil Conservation Commission, enclosed is a copy of our Application to Inject (Form C-108) along with all attachments.

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Yours truly,

Brenda Coffman
Regulatory Analyst

_____ has no objections to Chesapeake Operating's
Application for Authorization to Inject into the following wells located in Sec. 22 T12S
R38E, Lea County NM: Burrus 2A; Burrus 11; Burrus 23 3; Burrus 23 5; State DZ 1;
State 22 1; Sec. 27: Burrus 7

Signature

Printed Name

Date



Midland Field Office

September 30, 2005

Yates Petroleum Corporation
105 South 4th Street
Artesia, NM 88210

RE: Application for Authorization to Inject
Lea County, New Mexico

Dear Sir:

Please, find within a copy of the Application for Authorization to Inject.

As offset leasehold operator to our project area and in compliance with the New Mexico Oil Conservation Commission, enclosed is a copy of our Application to Inject (Form C-108) along with all attachments.

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Yours truly,

Brenda Coffman
Regulatory Analyst

_____ has no objections to Chesapeake Operating's
Application for Authorization to Inject into the following wells located in Sec. 22 T12S
R38E, Lea County NM: Burrus 2A; Burrus 11; Burrus 23 3; Burrus 23 5; State DZ 1;
State 22 1; Sec. 27: Burrus 7

Signature

Printed Name

Date



Midland Field Office

September 30, 2005

Jimmy P. Hodge
P. O. Box 565
Lovington, NM 88260

RE: NW SW & S/2 SW of Sec. 26;
And SE & E/2 SW of Sec. 27;
All in T12S, R38E
Lea County, New Mexico
Water Flood Project

Dear Sir:

Please, find within a copy of the Application for Authorization to Inject.

As surface owner within our project area and in compliance with the New Mexico Oil Conservation Commission, enclosed is a copy of our Application to Inject (Form C-108) along with all attachments.

If there are no objections to the application, please, acknowledge below and return to me at P. O. Box 11050, Midland, TX 79702-8050. Any objections must be filed with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505 within 15 days form the date this application was mailed.

Yours truly,

A handwritten signature in cursive script that reads "Brenda Coffman".

Brenda Coffman
Regulatory Analyst

_____ has no objections to Chesapeake Operating's
Application for Authorization to Inject into the following wells located in Sec. 22 T12S
R38E, Lea County NM: Burrus 2A; Burrus 11; Burrus 23 3; Burrus 23 5; State DZ 1;
State 22 1; Sec. 27: Burrus 7

Signature

Printed Name

Date



Midland Field Office

September 29, 2005

07 Ranch Land Mineral Limited Partnership
PO Box 1090
Plains, TX 79355

RE: T12S, R38E, Lea County NM
Water Flood Project

Dear Sir:

Please, find within a copy of the Application for Authorization to Inject.

As surface owner within our project area and in compliance with the New Mexico Oil Conservation Commission, enclosed is a copy of our Application to Inject (Form C-108) along with all attachments.

If there are no objections to the application, please, acknowledge below and return to me at P. O. Box 11050, Midland, TX 79702-8050. Any objections must be filed with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505 within 15 days form the date this application was mailed.

Yours truly,

A handwritten signature in cursive script that reads "Brenda Coffman".

Brenda Coffman
Regulatory Analyst

_____ has no objections to Chesapeake Operating's
Application for Authorization to Inject into the following wells located in Sec. 22 T12S
R38E, Lea County NM: Burrus 2A; Burrus 11; Burrus 23 3; Burrus 23 5; State DZ 1;
State 22 1; Sec. 27: Burrus 7

Signature

Printed Name

Date

CASE 15583: Application of Chesapeake Operating, Inc. for approval of a waterflood project and qualification of the Project Area of the Trinity Burrus Unit for the Recovered Oil Tax rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico. Applicant in the above-styled cause, seeks approval of its Trinity Burrus Unit Waterflood Project by injection of water into the Wolfcamp formation through seven injection wells located in the following described area:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM

Section 15:	SW/4 SE/4
Section 22:	E/2, E/2 W/2
Section 23:	W/2, W/2 E/2
Section 26:	W/2 W/2, NE/4 NW/4, SE/4 SW/4
Section 27:	E/2, E/2 W/2

The applicant requests that the Division establish procedures for the administrative approval of additional injection wells within the unit area without the necessity of further hearings and the adoption of any provisions necessary for such other matters as may be appropriate for said waterflood operations. Said area is located approximately 25 miles northeast of Lovington, New Mexico.

CHESAPEAKE OPERATING, INC.
P.O. Box 11050
Midland, TX 79702-8050
(432) 687-2992

BURRUS 2A

APPLICATION FOR AUTHORIZATION TO INJECT
LIST OF WELLS WITHIN ½ MILE RADIUS THAT PENETRATE
INJECTION ZONE FORM C-108 ITEM # VI

WELL NAME	TYPE	DATE DRLD	LOCATION	DEPTH
Burrus #6	O	7/13/02	Sec 22-T12S-R38E N 330 FS - 2310 FW	9254
Burrus #1	O	4/11/02	Sec 22-T12S-R38E N 900 FS - 1859 FE	12036
Burrus #11	O	11/13/02	Sec 22-T12S-R38E K 1650 FS - 2310 FW	9240
Burrus #3	O	7/3/01	Sec 22-T12S-R38E J 1720 FS - 2310 FE	9184
Burrus #4	O	2/6/02	Sec 22-T12S-R38E I 2310 FS - 1210 FE	9214
State 22 #3	O	10/3/04	Sec 22-T12S-R38E H 1645 FN - 354 FE	9265
State DZ #1	O	2/15/02	Sec 22-T12S-R38E N 330 FS - 1650 FW	9316
Burrus 23 #1	O	5/23/03	Sec 22-T12S-R38E L 1980 FS - 660 FW	9235
Burrus 23 #2	O	10/3/03	Sec 22-T12S-R38E K 1650 FS - 1650 FW	9265
Burrus 26 #1	O	9/8/03	Sec 26-T12S-R38E D 330 FN - 330 FW	9260
Burrus #5	O	9/19/02	Sec 27-T12S-R38E B 330 FN - 2000 FE	9260

Burrus #8	O	7/16/03	Sec 27-T12S-R38E A 330 FN - 330 FE	9164
Burrus #7	O	4/17/03	Sec 27-T12S-R38E C 330 FN - 2310 FW	9218
State 22 #1	O	10/19/02	Sec 22-T12S-R38E H 2310 FN - 990 FE	9250