ABOVE THIS LINE FOR DIVISION USE ONLY

### NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST

| 7           | THIS CHECKLIST IS | MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE | AND REGULATIONS      |
|-------------|-------------------|---|----------------------|
| Appli       | cation Acrony     | ms:   |                      |
|             | _                 | andard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous D   |                      |
|             | =                 | withole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Com  |                      |
|             | ĮP C-P            | Pow Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measure] [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]        | mentj                |
|             |                   | [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]   |                      |
|             | [EOR-Qu           | alitied Enhanced Oil Recovery Certification] [PPR-Positive Production R   | _                    |
| <b>1</b> 17 | TVPF OF A         | PPLICATION - Check Those Which Apply for [A]  | <b>2005</b> JUL      |
| [1]         | [A]               | Location - Spacing Unit - Simultaneous Dedication   | <u> </u>             |
|             | £ <b>J</b>        | ☐ NSL ☐ NSP ☐ SD  |                      |
|             |                   |   | ည                    |
|             |                   | ck One Only for [B] or [C]'   |                      |
|             | [B]               | Commingling - Storage - Measurement  DHC CTB PLC PC OLS OLM   | PM                   |
|             |                   |   | <del></del>          |
|             | [C]               | Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  | 23                   |
|             |                   | ☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR   | ω                    |
|             | EO 3              | Others Serverific   |                      |
|             | [D]               | Other: Specify  | •                    |
| [2]         | NOTIFICAT         | TION 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   | ,                    |
|             |                   |   | 3.1 y                |
|             | [E]               | For all of the above, Proof of Notification or Publication is Attached, a   | nd/or,               |
|             | [F]               | Waivers are Attached  |                      |
|             |                   |   |                      |
| [3]         |                   | CURATE AND COMPLETE INFORMATION REQUIRED TO PROCE   | ESS THE TYPE         |
|             | OF AFFLICA        | ATION INDICATED ABOVE.  |                      |
| [4]         | CERTIFICA'        | TION: I hereby certify that the information submitted with this application for   | or administrative    |
| approv.     | al is accurate a  | nd complete to the best of my knowledge. I also understand that no action w   | ill be taken on this |
| applica     | tion until the je | carried information and notifications are submitted to the Division.  |                      |
|             | Nato.             | Statement must be completed by an individual with managerial and/or supervisory capac   | ity.                 |
|             | <b>カ</b> ム        | VIVAL   | 2/12/10              |
| Print or    | Type Name         | Signature KELLAHIN & KELLAHIN   | Date                 |
|             |                   | Attorneys At Law  | <del></del>          |

Santa-fiel Allows 87504-2265

# KELLAHIN & KELLAHIN Attorney at Law

W. Thomas Kellahin
Recognized Specialist in the Area of

Natural Resources-oil and gas law-New Mexico Board of Legal Specialization P.O. Box 2265 Santa Fe, New Mexico 87504 117 North Guadalupe Santa Fe, New Mexico 87501

Telephone 505-982-4285 Facsimile 505-982-2047 kellahin@earthlink.net

July 13, 2005

#### HAND DELIVERED

Mr. Mark E. Fesmire, Director Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, New Mexico 87505

Re:

Jordan"12" State Well No. 3 (API #30-025-37050)

Unit E of Section 12, T10S, R32E

Location: 1650 feet FNL and 330 feet FWL

Dedication: N/2 Section 12

Administrative Application of Chesapeake Operating Company

for an unorthodox gas well location, Undesignated Atoka/Morrow Pool

Lea County, New Mexico

Dear Mr. Fesmire:

On behalf of Chesapeake Operating Company, please find enclosed our referenced administrative application.

W. Thomas Kellahin

cc:

Chesapeake Operating, Inc.
Attn: Lynda Townsend

# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF CHESAPEAKE OPERATING, INC. FOR AN UNORTHODOX GAS WELL LOCATION, LEA COUNTY, NEW MEXICO.

#### ADMINISTRATIVE A P P L I C A T I O N

CHESAPEAKE OPERATING, INC. ("Chesapeake") by its attorneys, Kellahin & Kellahin, and seeks an order authorizing the drilling and production of its Jordan "12" State Well No. 3 (API # 30-025-37050) at an unorthodox gas well location 1650 feet from the North line and 330 feet from the West line (Unit E) of Section 12, Township 10 South Range 32 East, NMPM to be dedicate to a standard 320-acre gas spacing unit dedicated to production from the Atoka and/or Morrow formations

In support of its application Chesapeake states:

- 1. Chesapeake proposes to drill its Jordan "12" State Well No. 3 in such a way as to test both the Cisco formation and the Atoka-Morrow formations. But in doing so, the Cisco will be a standard oil well location while the Atoka-Morrow will be at an unorthodox gas well location. See Exhibit "A" locator map.
- 2. An Atoka-Morrow test will be too risky unless the wellbore is place at a location that is the optimal for the Cisco formation in order to reduces that risk associated with the Atoka/Morrow.



- 3. There are no Atoka/Morrow wells currently producing in the area. The Division's records reflect that there was an Atoka well in the SE/4 of Section 11 that tested for gas in 1956 with no record of production—the Sunray Mid Continent New Mexico State K #1 (API 30-025-00016)
- 4. Chesapeake desires permission to combine this attempt such that an unorthodox gas well location 1650 feet FNL and 330 feet FWL (Unit E) of Section 12, T10S, R32E, Lea County, New Mexico will be dedicated to a 320-acre gas spacing unit consisting of the N/2 of this section and to a standard oil well location for any Cisco production consisting of the SW/4NW/4 (Unit E) of this section. See C-102 attached as Exhibit "B"

NMOCD Application Chesapeake Oil Company -Page 2-

5. This spacing unit is subject Division Rule 104.

#### TECHNICAL EVIDENCE

- 6. Chesapeake, based upon geologic data, believes that:
  - a. Its proposed unorthodox gas well location will provide a better opportunity to access potential production in the Atoka and/or Morrow formations.
  - **b.** That is also a good Cisco location thereby reducing the total risk involved:
    - i. Exhibit "C" attached-2 page-written geological summary
    - ii. Exhibit "D" attached production map
    - iii. Exhibit "E" attached 3-D seismic time structure map
    - iv. Exhibit "F" attached 3-D vertical profile line

#### **NOTIFICATION**

- 7. Chesapeake is the operator for the N/2 of Section 12 and intends for this well to be located so that it encroaches towards:
  - a. The NE/4 of Section 11;
  - b. The SE/4 of Section 11; and
  - c. The SW/4 of Section 12.
- 8. All of Section 12 is the same State of New Mexico oil and gas lease, being number E-9713, dated January 7, 1956.
- 9. Section 11 does not contain a 320-acre gas spacing unit for the affected potential spacing unit could be either the N/2 or the E/2 of Section 11. Attached is a copy of Mr. Bill Chalfant's listed of the affected mineral interest owners in the NE/4, NW/4 and SE/4 of Section 11. See Exhibit "G"
- 10. In accordance with the Division's notice requirements, a copy of this application has been sent to those appropriate offsetting owners. See Exhibit "H"

WHEREFORE, Chesapeake, as applicant, requests that the Division enter its order approving this requested unorthodox well location

RESPECTFULLY SUBMITTED:

W THOMAS KELLAHIN KELLAHIN & KELLAHIN

P. O. Box 2265

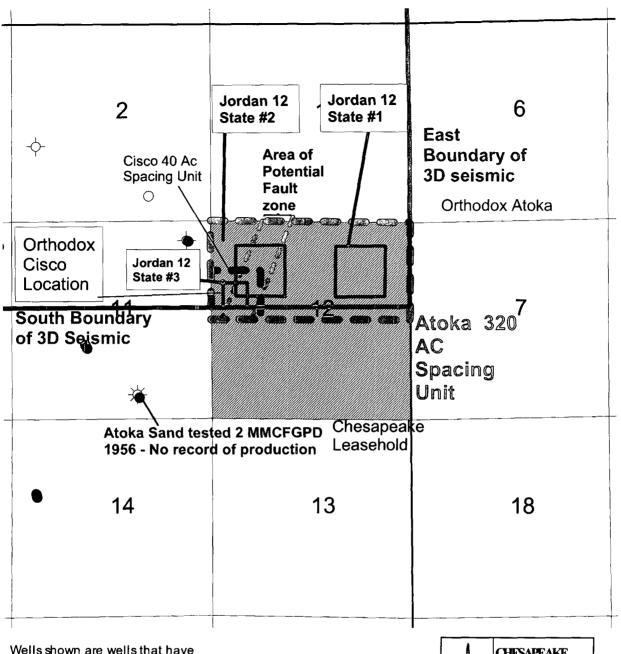
Santa Fe, New Mexico 87504

Telephone:

(505) 982-4285

Fax:

(505) 982-2047



Wells shown are wells that have pentrated Atoka. Only 1 well has tested the atoka to be hydrocarbon bearing. There is no record of production on this well.





District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM

87505

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

Form C-102 Permit 5320

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

| API Number<br>30-025-37050 | Pool Name<br>MESCALERO;CISCO, NORTH      | Pool Code<br>45750  |
|----------------------------|--|---------------------|
| Property Code<br>34007     | Property Name<br>JORDAN 12 STATE         | <b>Well No.</b> 003 |
| OGRID №.<br>147179         | Operator Name CHESAPEAKE OPERATING, INC. | Elevation<br>4237   |

#### **Surface And Bottom Hole Location**

| UL or Lot.<br>E    | 12 | Township<br>10S | Range<br>32E | Lot Idn<br>E | Feet From<br>1650 | N/S Line<br>N | Feet From | E/W Line<br>W | County<br>Lea |
|--------------------|----|-----------------|--------------|--------------|-------------------|---------------|-----------|---------------|---------------|
| Dedicated Acres 40 |    | Joint or        |              |              | dation Code       |               | Order     |               |               |

| X |  |  |
|---|--|--|
|   |  |  |
|   |  |  |

#### OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Electronically Signed By: Brenda Coffman

Title: Regulatory Analyst

Date: 01/17/2005

#### SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Surveyed By: Gary L Jones
Date of Survey: 12/16/2004
Certificate Number: 7977



COI Jordan 12 State #3 Non Standard Location for the Atoka Formation 1650' FNL & 330' FWL, SEC 12, T10S-R32E

This application is for a non-standard location for the Atoka Sand. The proposed well is being drilled at an orthodox location for a 40 acre unit for a development well for the Cisco formation. Chesapeake is drilling the Jordan 12 State #3 at an orthodox location for the Cisco as far away from a 3D Seismic documented fault zone as possible. Commercial Atoka production is rare in the immediate area, with the nearest economic well located several miles away. Undeniably the Atoka prospect is not worth drilling on a stand alone basis without the potential Cisco reserves. However if one has the rights to produce the Atoka, then the additional cost of drilling the 800 feet from the base of the Cisco to the Atoka (less than 10% of the well cost) is worth the risk.

I have attached two maps which illustrate the location of the 3D defined fault zone whose approximate boundary is illustrated by Orange dashed lines. On both maps the 320 Acre N/2 half of section 12 Atoka Unit is shown along with the two Dark Blue Outlined boxes in which the Atoka can be tested at an orthodox location. The Jordan 12 State #3 is being drilled as a 40 acre south offset to the Jordan 12 State #2 which is a Cisco Producer. Cisco Producers are shown in light blue filled Circles on the Production Map. This map illustrates all wells deep enough to test the Cisco or deeper formations. The Cisco 40 Acre Unit and the box in which orthodox Cisco wells can be drilled is illustrated on this display. The map illustrates that moving the Jordan 12 State #3 to a location which is orthodox for the Atoka and the Cisco would put the Cisco and the Atoka formations close to major reverse fault zone. A location in or even near the fault zone has four possible pitfalls;

- 1) potentially fault limited reservoirs,
- 2)loss of porosity and permeability due to to secondary cementation caused by fluid movement on fractures associated with faults,
  - 3) The potential to fault out a reservoir.
- 4) Intense fracturing which may increase vertical permeability between water bearing reservoirs and oil bearing reservoirs within the Cisco.creating high water cuts which may be uneconomic

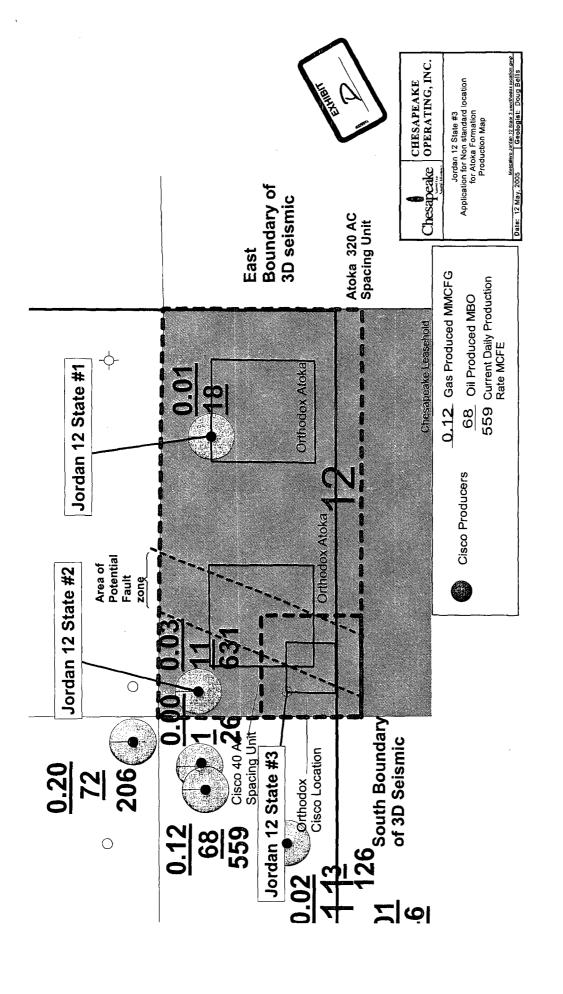


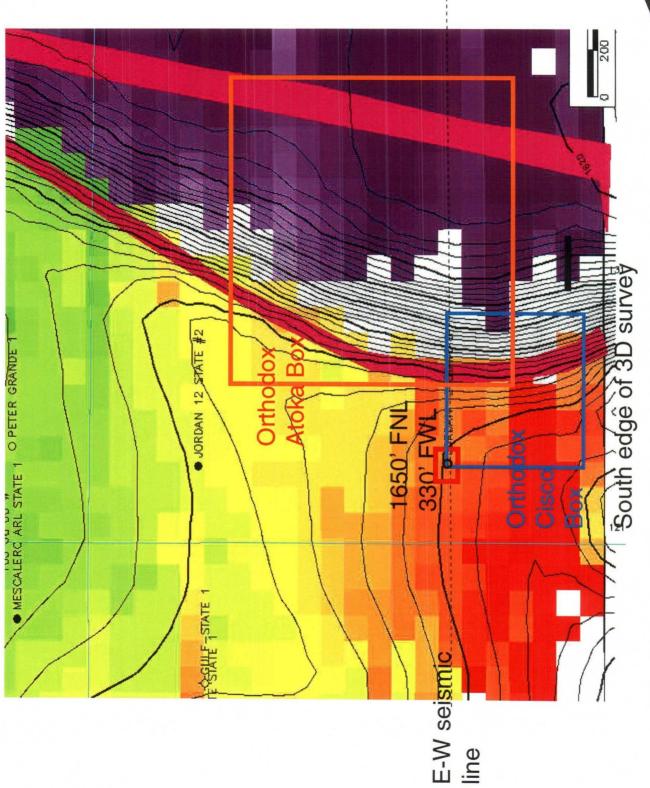
Testing the east side of the fault will find reservoirs on the downside of this fault zone at a significantly lower structural location. Drilling east of the fault for the Cisco would be very risky as the closest Cisco wells east of the fault are not economic.

By drilling an Atoka test at the proposed location, one could prove up a potentially lucrative Atoka trend, which would otherwise never be drilled. The Non Standard Location for Atoka Map shows all wells which have penetrated the Atoka in the 9 sections surrounding the Atoka Proration Unit. Only one well in the SW SE of 11 has tested the Atoka to be hydrocarbon bearing and there is no record of any production from this interval. This is the only well that found any reservoir at all.

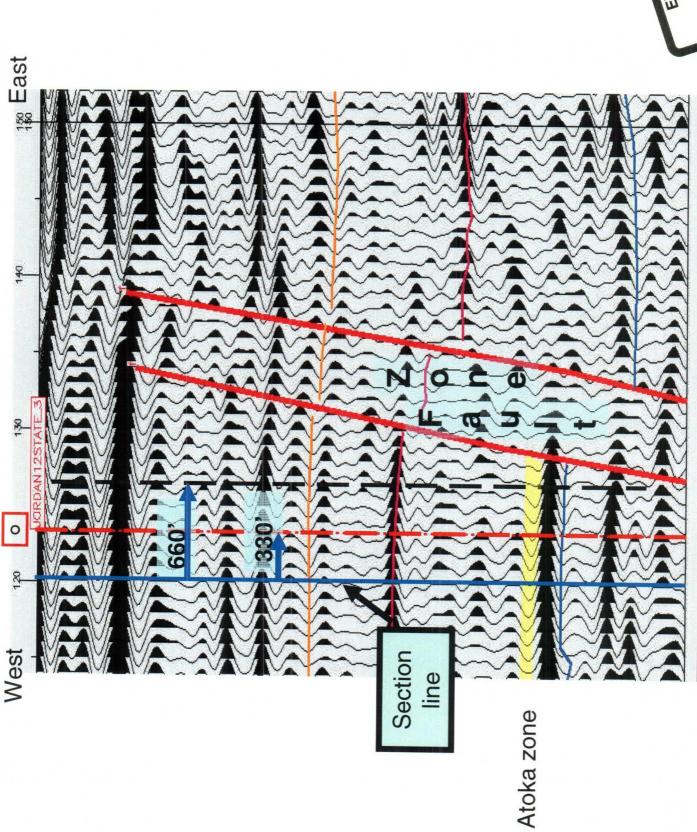
We have enclosed a seismic structure map of the Mississippi time Structure, which lies directly under the Atoka Reservoir. One can easily see that structural dip starts to increase rapidly 220 feet east of the proposed location (Each square box on this map is a 110' square bin.) This is due to it's proximity to the major fault zone. The East west seismic line through our proposed location indicates that the seismic signature of the peak above the Atoka trough (highlighted in Yellow) starts to lose amplitude just 110 feet east of our proposed location. This change in seismic character is likely due to it's proximity to the fault zone which may be affecting the reservoir quality of the Atoka. Crowding the fault to the east could prove disastrous if reservoir quality was effected by the faulting as mentioned above. In addition significant drilling problems are invited by attempting to drill east of our location. The proposed location is simply as close as a prudent operator should drill to such a fault zone.

Doug Bellis Geologist Chesapeake Energy





CI 2 ms. ~ 15' Jordan 12 State 3 Unorthodox location Mississippian Time Structure





**CPI** 

Chalfant Properties, Inc.

July 8, 2005

Mr. Tom Kellahin via fax

Dear Tom:

The offset leasehold owners in the N/2 and SE/4 of Section 11, T10S, R32E, Lea County, New Mexico are as follows:

Kerr McGee Oil & Gas Onshore LP P. O. Box 809004 Dallas, Texas 75380

Manzano LLC P. O. Box 2107 Roswell, NM 88202

J. H. Herd P. O. Box 130 Midland, Texas 79702

Rosalind Redfern P. O. Box 2127 Midland, Texas 79702

Joe D. Price P. O. Box 1111 Bartlesville, OK 74005

Harold C. Price, Jr. 2633 Rivera Drive Laguna Beach, CA 92651



Claremont Corp. P. O. Box 549 Claremore, OK 74018

Marathon Oil Company P. O. Box 3487 Houston, TX 77042

Jackal Oil Company 307 W. 7<sup>th</sup> #1178 Fort Worth, TX 76102

Penroc Oil Corp. P. O. Box 5970 Hobbs, NM 88241

Harcor Energy, Inc. Five Post Oak Park 4400 Post Oak Parkway, Suite 2200 Houston, Texas 77027

Bahlburg Exploration, Inc. . P. O. Box 866937 Plano, Texas 75086

Kenneth Barbe, Jr. P. O. Box 2107 Roswell, NM 88202

Clayton Barnhill P. O. Box 2304 Roswell, NM 88202

Branex Resources, Inc. P. o. Box 2328 Roswell, NM 88202

Campbell Investment Company P. O. Box 3854 Roswell, NM 88202

Gary Chappell 3603 Trinity Meadows Midland, Texas 79701 Caprock Pipe & Supply Company P. O. Box 1535 Lovington, NM 88261

Elk Oil Company P. O. Box 310 Roswell, NM 88202

Bill Fenn P. O. Box 1757 Roswell, NM 88202

Residuary Trust Est Under the Last Will and Testament of Joe Glenn Fenn P. O. Box 1757
Roswell, NM 88202

Richard J. Forrest, Jr. 208 Dickson Lane Carlsbad, NM 88220

Gennaway Oil LLCP. O. Box 2791Roswell, NM 88202

James E. Guy 1902 Briscoe Artesia, NM 88210

Hanagan Petroleum Corp. P. O. Box 1737 Roswell, NM 88202

Blaine Hess P. O. Box 326 Roswell, NM 88202

JW Drilling Co., Inc. P. O. Box 160 Artesia, NM 88211

McVay Drilling Company P. O. Box 924 Hobbs, NM 88241

Jeremiah LLC ₹. O. Box 924 Hobbs, NM 88241

Millennium Partners c/o Don Turlington 46th Floor 1114 Avenue of the Americas New York, NY 10036

Pabo Oil & Gas P. O. Box 1675 Roswell, NM 88202

Rayellen Resources, Inc. P. O. Box 1201 Lovington, NM 88202

Alan Tucker P. O. Box 1238 Roswell, NM 88202

Verde Vista Energy P. O. Box 310 Roswell, NM 88202

Wilson Brothers Energy 2208 Centre Street Artesia, NM 88210

Yates-McMinn, Inc. P. O. Box 232388202

Wil-Mc Oil Corp. 3950 1st International Bldg. Dallas, TX 75270

The leasehold ownership for Section 12-10-32 is common and if you need any additional information please let me know.

Bill Chalfant

cc: Lynda Towsend

# KELLAHIN & KELLAHIN Attorney at Law

W. Thomas Kellahin
Recognized Specialist in the Area of
Natural Resources-oil and gas lawNew Mexico Board of Legal Specialization

P.O. Box 2265
Santa Fe, New Mexico 87504
117 North Guadalupe
Santa Fe, New Mexico 87501

Telephone 505-982-4285 Facsimile 505-982-2047 kellahin@earthlink.net

July 13, 2005

#### CERTIFIED MAIL-RETURN RECEIPT REQUESTED

### NOTICE OF THE FOLLOWING NEW MEXICO OIL CONSERVATION DIVISION ADMINISTRATIVE CASE:

OFFSETTING WORKING INTEREST OWNERS:

Re: Administrative Application of Chesapeake Operating, Inc. for approval of unorthodox well location for its Jordan "12" Well No. 3, Unit E, SW/4NW/4 of Section 12, T10S, R32E, Lea County, New Mexico.

Dear interest owner:

On behalf of Chesapeake Operating, Inc. please find enclosed a copy of its referenced administrative application. This notice is based upon records that indicate that you have either an unleased mineral interest or a working interest in Section 11 within the "deep gas" formations (the Wolfcamp formation and below) towards which this well location encroaches.

If you have no objection, then there is nothing for you to do. If you are willing to waiver objection, please sign this letter as indicated and return it to me. However, should you have any objection to the Division approving this application, then it will be necessary for you to file a written objection with the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505 within twenty (20) days of the date of this letter. Failure to file a timely objection will preclude you from objecting at a later date.

Very truly yours,
W. Dhomas Kellahin

WAIVER OF OBJECTION:

| with authority for |
|--------------------|
|                    |
|                    |
|                    |

