

Release Date:
April 26,
1988

By Doe

MARSH OPERATING COMPANY
P.O. Box 1746
AMARILLO, TEXAS 79105-1746

—
(806) 372-2381

CERTIFIED MAIL -
RETURN RECEIPT REQUESTED

April 4, 1988

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

NSL-2500
RULE-104 F(II)
Undesignated South Remnitz
Atoka-Morrow Gas Pool
320 Acre dcd. N/2 Sect 34

RE: Administrative Approval of
Unorthodox Location
MOC State #1-34
660' FNL, 990' FEL
13,300' Atoka/Morrow Test
N/2 Unit
Section 34-16S-34E
Lea County, New Mexico

Gentlemen:

We are requesting administrative approval of an unorthodox location to test the Atoka/Morrow formation at 660' FNL, 990' FEL for a 320 acre unit composed of the North Half (N/2) of the captioned Section 34. We are seeking approval of said unorthodox location for geological reasons.

We are enclosing this letter in triplicate along with the following:

1. Three (3) copies of Discussion of Geological Conditions which result in the necessity for an unorthodox location.
2. Three (3) copies of a plat showing all leases offsetting the spacing unit, all wells completed thereon, the proposed location and the unit outline.
3. One (1) production map.
4. One (1) Morrow marker structure map.
5. One (1) Atoka Sand Isopach Map.
6. One (1) Log Cross Section.


We have mailed waiver requests by certified mail to all lessees and operators of wells located on lands which adjoin the proposed N/2 Unit.

New Mexico Oil
Conservation Division
April 4, 1988
Page -2-

If you have any questions relating to this matter, please
contact us.

Very truly yours,

MARSH OPERATING COMPANY



William W. Cline
Attorney-in-Fact

WWC/dlw

GEOLOGICAL EXPLANATION OF THE
PROPOSED UNORTHODOX LOCATION
MARSH OPERATING COMPANY'S
GHOST MESA PROSPECT
LEA COUNTY, NEW MEXICO

Land Description:

Marsh Operating Company seeks an Unorthodox Location proposed at a distance of 660 feet from the north line (legal) and 990 feet from the east line (unorthodox) in the northeast quarter of Section 34-T16S-R34E, Lea County, New Mexico. The proposed test is on a 320 acre, lay-down, gas spacing unit that consists of the north half of the referenced section. Marsh Operating Company refers to these lands as its Ghost Mesa Prospect (see Exhibit #1 - Land Plat).

Geographic Location:

The Ghost Mesa Prospect consisting of the north half of Section 34-T16S-R34E is located within the Kemnitz Wolfcamp oil pool (all Wolfcamp wells in this section are now abandoned) and just to the south of the Kemnitz N.E. Atoka-Morrow gas pool. The large Vacuum pool lies immediately to the south in T17S-R34E (see Exhibit #2 - Production Map).

Geological Discussion:

The unit configuration and the proposed location are identified on Exhibit #1. The primary objective at the proposed location is the Atoka sandstone. Secondary objectives include the Morrow sandstone, the Strawn limestone, the Canyon sandstone, and the Wolfcamp dolomite. Projected total depth is 13,300 feet. The Atoka and Morrow formations produce gas in the area and the proposed location is unorthodox for these formations. All other objectives produce oil in the area and the proposed location is legal for these formations. The relationship of offset gas wells and oil wells can be seen on the Production map (Exhibit #2). This map identifies all wells and their producing formation along with their performance. Oil wells are marked with a small circle around them and gas wells (except for Queen gas wells) are marked with a hexagon around them.

Exhibit #3 is a structural contour map drawn on a shale marker within the Morrow clastics and the contour interval is 100'. It is believed that the primary objective (Atoka sandstone) consists of gas trapped stratigraphically at the proposed location. Structure does not appear to affect production in this reservoir until further north where a structural saddle is evident (Sections 22 & 23-T16S-R34E). For this reason a structure map was prepared but should not be considered reasoning for the unorthodox location.

The Atoka sandstone which produces in the north offset section and to the southeast in T17S-R34E is believed to have been deposited in deltaic distributary channels. These channels exhibit a northwest-southeast trend (see Exhibit #4 - Isopach map) and can be seen to be regionally extensive over several townships. These channel sands are very lenticular and can be totally absent in wells drilled fairly short distances from those that have thick occurrences of this sand. Exhibit #4 shows the distribution and thickness of the Atoka "Kemvac" sand.

Exhibit #5 is a stratigraphic cross-section that was prepared from logs of wells that appear to generally occur in the axis of a major producing Atoka distributary channel. Where possible, a porosity log was hung beneath the correlation log in order to show that the wells which have the thickest clean sand also have the best porosity development. For this reason Marsh Operating Company seeks to locate the proposed well at an unorthodox location in the northeast quarter of Section 34. A deep well drilled by Yates Petroleum (#1 Vacuum North "ADJ" State Com) in the northwest quarter encountered no Atoka "Kemvac" sand.

Conclusion:

The proposed unorthodox location is necessary to have the best chances of encountering thick and porous Atoka "Kemvac" sand with productive characteristics similar to those in wells to the north and southeast.

Marsh Operating Company respectfully requests approval for the proposed unorthodox location for our Ghost Mesa Prospect as it offers an effective means to explore and develop gas reserves for the State of New Mexico.

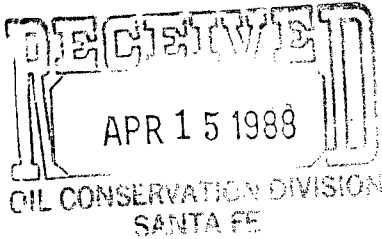
MARSH OPERATING COMPANY

P.O. Box 1746

AMARILLO, TEXAS 79105-1746

(806) 372-2381

RECEIVED APR - 6 1988



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 4, 1988

Foran Oil Co.
Suite 158 Pecan Creek
Dallas, Texas 75231

RE: Unorthodox Location
Marsh Operating Company
State #1-34
660' FNL, 990' FEL
NE/4, Section 34-16S-34E
Lea County, New Mexico

Gentlemen:

Marsh Operating Company is proposing the drilling of a well to test the Atoka/Morrow Formation at the above captioned location on a unit comprised of the North Half (N/2) of Section 34. Because the drilling will be conducted at an unorthodox location in an easterly direction, we request that you indicate that you do not object to the proposed location by executing all three copies of this letter. Please forward one copy to the New Mexico Oil Conservation Division in Santa Fe in the enclosed envelope, return one copy to us in the enclosed envelope and retain one copy for your files.


We are filing for Administrative Approval for the unorthodox location, but in the event this is not approved we are requesting a hearing date of April 27, 1988 with the OCD in Santa Fe.

If you have any questions or would like to discuss the matter in more detail, please contact the undersigned.

FORAN OIL CO.
Letter Dated April 4, 1988
State #1-34
Page 2

Very truly yours,

MARSH OPERATING COMPANY


William W. Cline
Attorney-in-Fact

AGREED TO AND ACCEPTED this

11th day of April, 1988.

BY: 

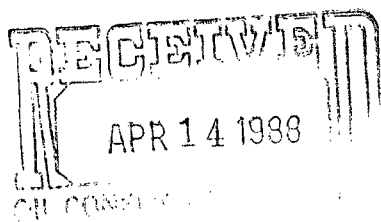
Title: President

MARSH OPERATING COMPANY

P.O. Box 1746

AMARILLO, TEXAS 79105-1746

—
(806) 372-2381



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 4, 1988

Elk Oil Company
P. O. Box 310
Roswell, New Mexico 88201

RE: Unorthodox Location
Marsh Operating Company
State #1-34
660' FNL, 990' FEL
NE/4, Section 34-16S-34E
Lea County, New Mexico

Gentlemen:

Marsh Operating Company is proposing the drilling of a well to test the Atoka/Morrow Formation at the above captioned location on a unit comprised of the North Half (N/2) of Section 34. Because the drilling will be conducted at an unorthodox location in an easterly direction, we request that you indicate that you do not object to the proposed location by executing all three copies of this letter. Please forward one copy to the New Mexico Oil Conservation Division in Santa Fe in the enclosed envelope, return one copy to us in the enclosed envelope and retain one copy for your files.

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ELK OIL COMPANY
Letter Dated April 4, 1988
State #1-34
Page 2

Very truly yours,


MARSH OPERATING COMPANY



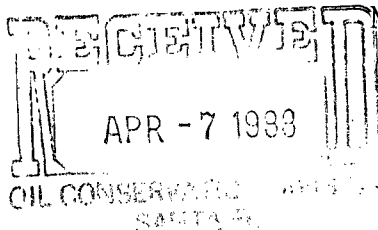
William W. Cline
Attorney-in-Fact

AGREED TO AND ACCEPTED this

12th day of April, 1988.

BY: 

Title: President



MARSH OPERATING COMPANY
P.O. Box 1746
AMARILLO, TEXAS 79105-1746
—
(806) 372-2381

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 4, 1988

James G. Bruce
P. O. Box 2068
Santa Fe, New Mexico 87504

RE: Unorthodox Location
Marsh Operating Company
State #1-34
660' FNL, 990' FEL
NE/4, Section 34-16S-34E
Lea County, New Mexico

Gentlemen:

Marsh Operating Company is proposing the drilling of a well to test the Atoka/Morrow Formation at the above captioned location on a unit comprised of the North Half (N/2) of Section 34. Because the drilling will be conducted at an unorthodox location in an easterly direction, we request that you indicate that you do not object to the proposed location by executing all three copies of this letter. Please forward one copy to the New Mexico Oil Conservation Division in Santa Fe in the enclosed envelope, return one copy to us in the enclosed envelope and retain one copy for your files.


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If you have any questions or would like to discuss the matter in more detail, please contact the undersigned.

JAMES G. BRUCE
Letter Dated April 4, 1988
State #1-34
Page 2

Very truly yours,

MARSH OPERATING COMPANY


William W. Cline
Attorney-in-Fact

AGREED TO AND ACCEPTED this

6th day of April, 1988.

BY: James Bruce

Title:

[illegible]

STT

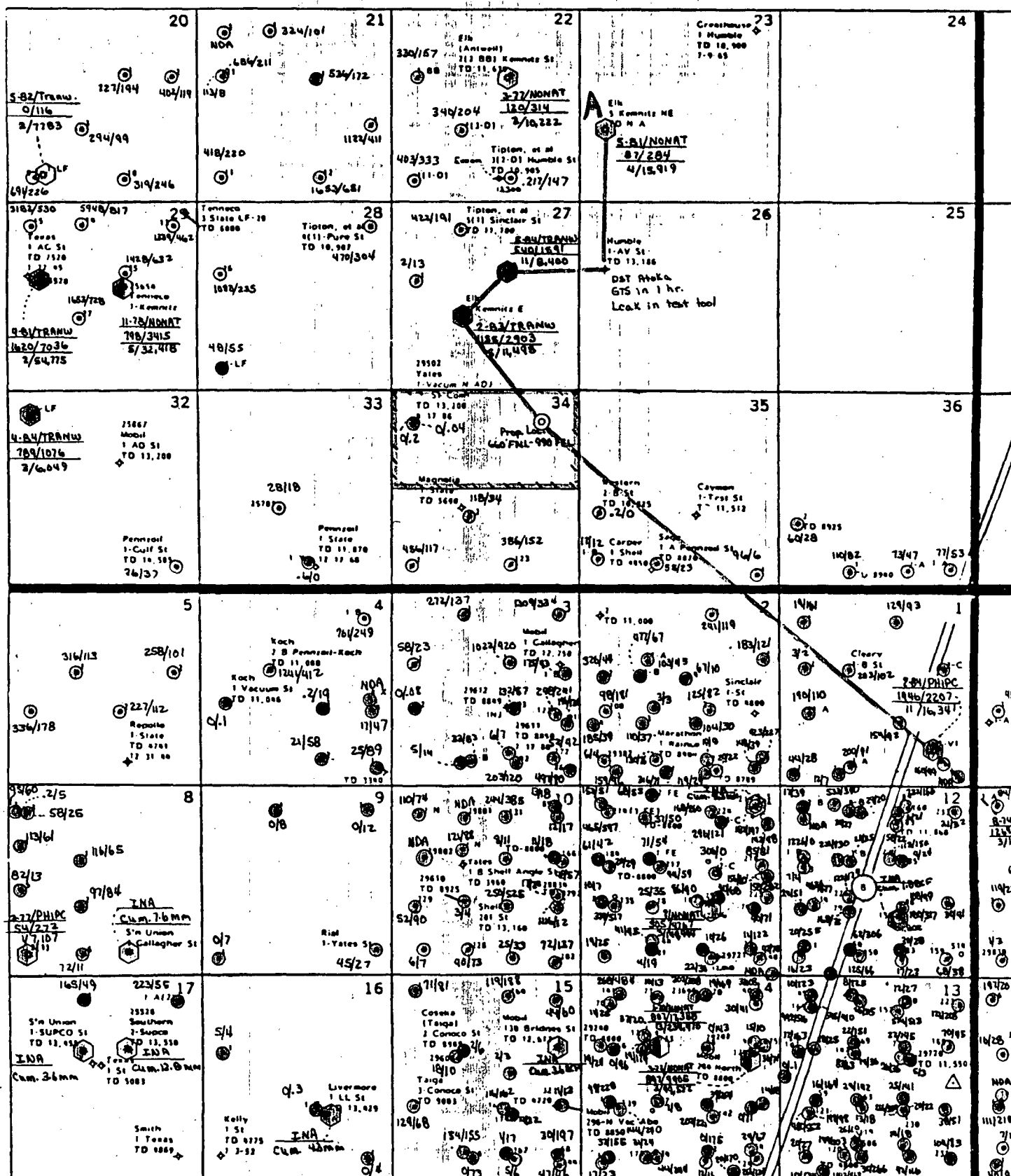
MARSH OPERATING COMPANY
Ghost Mesa Prospect
Sec. 34—T16S-R34E
Lea County, New Mexico

Proposed 320 Acre (Lay-Down)
Proration Spacing Unit

1 mile

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| | |
|---|---|
| <p>19</p> <p>19812 Terra 1-S1 "BM" 14,200' Amoco 1-MO ST TO 13,185</p> <p>29081 Marziano 1-Venture TO 11000</p> | <p>20</p> <p>Dinero 1-Edison</p> <p>P&A 7-82 Cum. 14.3 mm</p> |
| <p>30</p> <p>Magnolia 1-Edison Ach. et al TD 1300</p> | <p>29</p> |
| <p>31</p> | <p>32⁺ 1,000' Southern Union 1 Kathy Felt TD 11,815. (C) 54/33</p> |
| <p>6</p> <p>Marathon 1-Statole TD 12,250 86/72</p> | <p>5</p> <p>Tenace 1-O NM S1 TD 12,813</p> |
| <p>7</p> <p>NOA 1-S1 R 5790 15/193 5/193 Marathon 1-S1 115/130 Mobil 16 North Vacuum TD 8800 15/24 97/110 19700</p> | <p>8</p> <p>Mobil 70-No Vacuum TD 9008 Mobil 1-S1 "NM" TD 12,925 P-18-76/6 NM 3932/16248 0/167,652</p> |
| <p>17</p> <p>17124 11503 Mobil 21-No Vacuum TD 8975 2 P 9,448 mm Mobil 18 North Vacuum TD 8850 Mobil 1-S1 "PPP" TD 9000 12/43</p> | <p>17</p> <p>17124 11503 Mobil 21-No Vacuum TD 8975 2 P 9,448 mm Mobil 18 North Vacuum TD 8850 Mobil 1-S1 "PPP" TD 9000 12/43</p> |

- Queen
- San Andres
- Abo
- Wolfcamp
- Cisco Canyon
- Strawn
- Atoka "Kemue" Sand
- Morrow "Uno" Sand
- Morrow "Dos" Sand
- Morrow - Undifferentiated

oil wells
384/150 - cum. csq. hd. gas (mmcf) / cum. oil (mbo)

Gas Wells

| <u>Gas Wells</u> | <u>Date 1st Prod. / Gas Purchaser</u> |
|------------------|---|
| 8-74/6NM - | <u>Ave Daily (mcsd) / c.u.m. (mcsd)</u> |
| 1269/13198 - | <u>Ave Daily (BC) / c.u.m. (BC)</u> |
| 3/159,346 - | |

INA- Inactive
NOA- No Data Available

EXHIBIT #2

MARSH OPERATING CO.
GHOST MESA PROSPECT

Sec. 34-T16S-R34E
Lea County, New Mexico

PRODUCTION

1-mile