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GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

September 27, 1985

50 YEARS



1935 - 1985

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Exxon Company, Inc.
P. O. Box 1600
Midland, Texas 79702-1600

Case 9387

Attention: Melba Knipling

Administrative Order NSL-2152

Gentlemen:

Reference is made to your application for a non-standard location for your Happy Valley Federal Com "B" No. 1 well to be located 1471 feet from the South line and 1908 feet from the West line of Section 28, Township 22 South, Range 26 East, NMPM, Undesignated Happy Valley Morrow Pool, Eddy County, New Mexico. The S/2 of said Section 28 shall be dedicated to the well.

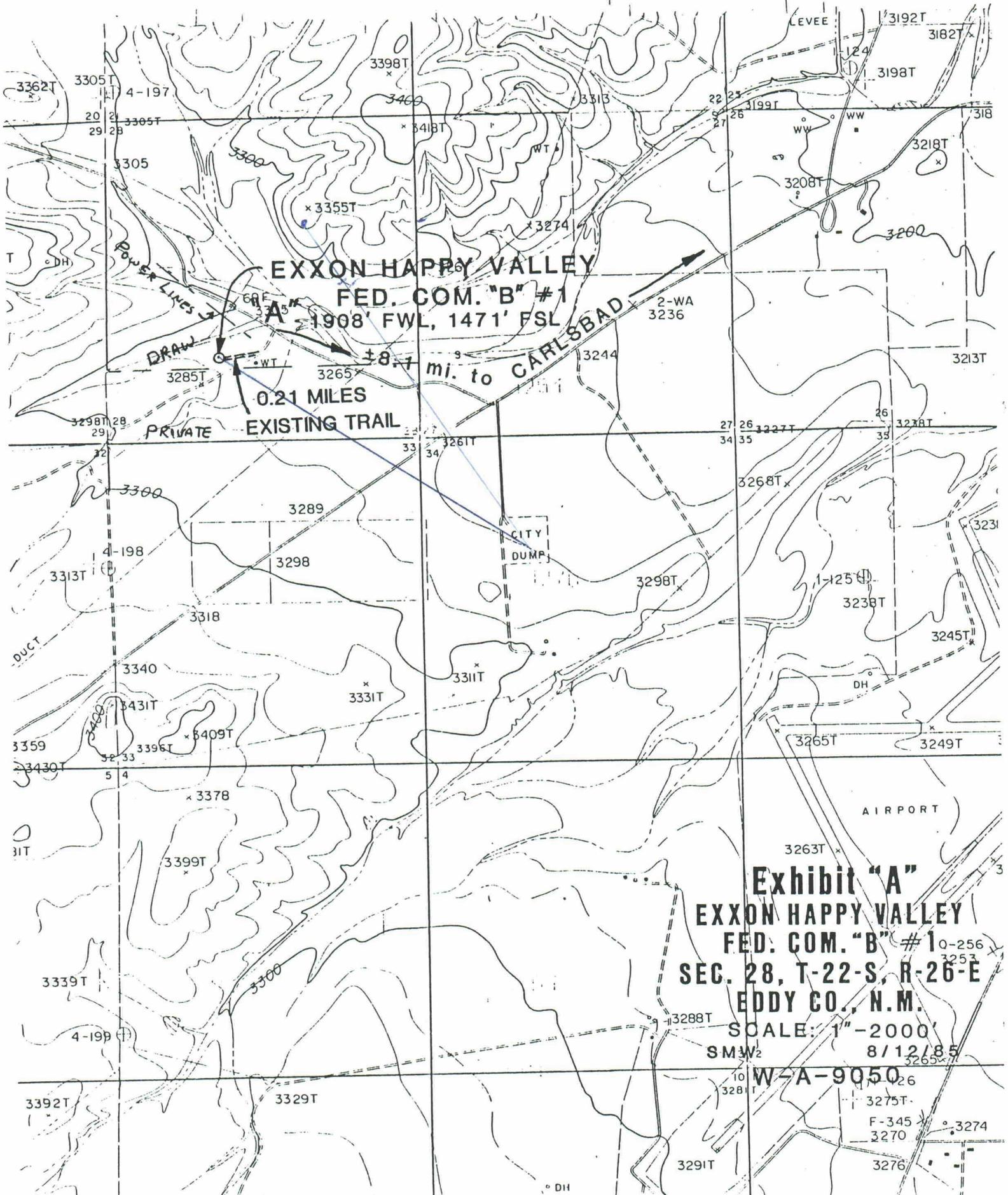
By authority granted me under the provisions of Rule 104 F(I), the above-described unorthodox location is hereby approved.

Sincerely,

R. L. STAMETS, DIRECTOR

RLS/DC/dr

cc: Oil Conservation Division - Artesia
Bureau of Land Management - Artesia



**EXXON HAPPY VALLEY
FED. COM. "B" #1**

1908' FWL, 1471' FSL

0.21 MILES
EXISTING TRAIL

18.7 mi. to CARLSBAD

Exhibit "A"
EXXON HAPPY VALLEY
FED. COM. "B" #1
SEC. 28, T-22-S, R-26-E
EDDY CO., N.M.

SCALE: 1" = 2000'

SMW₂

8/12/85

W-A-9050

F-345
3270
3276

3275T
3274

3291T

3291T

3291T

HINKLE, COX, EATON, COFFIELD & HENSLEY

ATTORNEYS AT LAW

218 MONTEZUMA

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CLARENCE E. HINKLE (1904-1985)
W. E. BONDURANT, JR. (1913-1973)
ROY C. SNODGRASS, JR. (1915-1987)

*NOT LICENSED IN NEW MEXICO

June 21, 1988

RECEIVED

JUN 21 1988

OIL CONSERVATION DIVISION

Mr. Michael E. Stogner
New Mexico Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico 87501

HAND DELIVERED

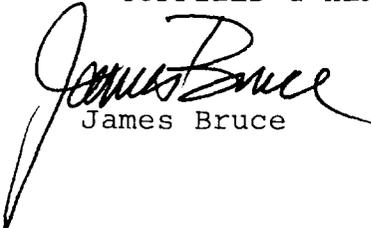
Re: Case No. 9387, the Application of Exxon Corporation for an unorthodox gas well location, downhole commingling, hydrocarbon storage authority, and relief from the reporting requirements of Division Rule 1131, Eddy County, New Mexico.

Dear Mr. Stogner:

As you requested at the May 25, 1988 hearing, enclosed is a proposed order regarding the above case. Also enclosed is an affidavit from the geology witness setting forth his geologic discussion on the Strawn formation in the subject area. Also enclosed is an affidavit from the engineering witness regarding completion of the well. Please call me if I can provide any further information on this matter.

Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY


James Bruce

JB: jr
Enclosure

Additional Comments Regarding the Size of the Strawn Reservoir in Exxon Corporation's Happy Valley Fed. Com. #1.

Geologic evidence indicates the Strawn gas reservoir encountered in the Happy Valley Fed Com. #1 (HVFC #1) is limited in size and probably confined to the NE/4 of Section 28, T-22-S, R-26-E, in the Sheep Draw, Northeast (Strawn) Pool of Eddy County. This conclusion is based upon the following:

Geologic Mapping

Subsurface mapping in the Sheep Draw area indicates the Strawn reservoir penetrated in the HVFC #1 is absent in offset wells. Based upon correlation and interpretation of well logs in T-22-S, R-26-S, the reservoir is absent to the southeast in the J. A. Tomaino #1 (Exxon) located in the SW/4 of Section 27; the southwest in the Happy Valley Fed. Com. #B-1 (Exxon) located in the SW/4 of Section 28; the west in the West Airport Fed Com. #1-Y (C&K Petroleum) located in the NE/4 of Section 29; and the northwest in the "CN" Fed Com. #1 (Amoco) located in the SW/4 of Section 20.

Seismic Mapping

Exxon Corporation shot a northwest-southeast oriented seismic line through the surface location of the HVFC #1 to determine whether the Strawn reservoir extends to the north in Section 21 of T-22-S, R-26-E. A large reservoir with a vertical section as thick as the Strawn in the HVFC #1 should be readily detectable by seismic means. However, this Strawn reservoir could not be resolved on the seismic line. I would conclude from this seismic data that the Strawn reservoir is limited in size. Several months after completion of the seismic interpretation the production from the HVFC #1 began to decline rapidly, confirming this interpretation.

Regional Geologic Studies

Based upon regional geologic studies of the Strawn Formation, the reservoir penetrated in the HVFC #1 is a phylloid algal mound (bioherm) with secondary porosity developed during subaerial exposure of the mound shortly after deposition. Such mounds are common in Desmonian-age rocks of the Permian Basin where they form ovoid-shaped reservoirs with the long axis oriented parallel to the strike of the shelf-edge. They commonly have lengths and widths on the order of hundreds of feet. Such small mounds occur in outcrop along the western flank of the Sacramento Mountains near Alamogordo, where their size and geometry can be readily observed at the surface.



6-20-88

Gordon A. Jenner, Jr.
June 20, 1988
Senior Geologist
Exxon Corporation

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

BEFORE ME, the undersigned authority on this day personally appeared GORDON A. JENNER, JR. known to me to be a creditable person above the age of twenty-one (21) years who, after being by me first duly sworn on oath, deposed and said that he had read the foregoing statement dated June 20, 1988, and that the contents thereof are true and accurate to the best of his knowledge.

Gordon A. Jenner Jr. 6-20-88
Gordon A. Jenner, Jr.

Subscribed and sworn to me before me, by the said Gordon A. Jenner, Jr. on this 20th day of June, 1988.

Judy Bagwell
Judy Bagwell, Notary Public
in and for the State of Texas

Commission Expires: 11-10-88



JUDY BAGWELL
Notary Public, State of Texas
My Commission Expires **11-10-88**

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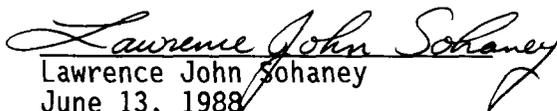
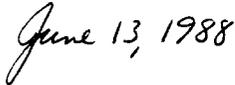
During the hearing on May 25, 1988, Examiner Stogner asked what Exxon would do with the Happy Valley Fed. Com #1 well if this commingling request is denied and when the Strawn ceases to produce.

The answer I gave was not complete; it addressed the Strawn Zone but not the Morrow Zone. The complete answer is:

The Strawn Completion will remain shut in and compression will not be installed on the Strawn because it is not economical to do so at this time. Economics are a direct result of the current gas market price situation.

However, the well would be quickly recompleted into the deeper Morrow Zone as a single completion. Simultaneously, the shallower Strawn Zone would be squeezed off. It is very unlikely that the Strawn Zone would ever be opened up again at a future date. There is also risk that once squeezed, the Strawn Zone could never produce again.

Therefore, the 130 MMSCF of additional gas reserves from the Strawn (attributable to commingling now and the eventual installation of compression on the commingled Morrow/Strawn Zones) would never be recovered.


Lawrence John Schaney
June 13, 1988


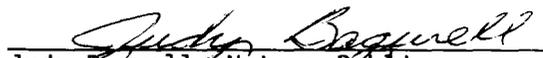
THE STATE OF TEXAS §

COUNTY OF MIDLAND §

BEFORE ME, the undersigned authority on this day personally appeared LAWRENCE JOHN SOHANEY known to me to be a creditable person above the age of twenty-one (21) years who, after being by me first duly sworn on oath, deposed and said that he had read the foregoing statement dated June 13, 1988, and that the contents thereof are true and accurate to the best of his knowledge.


Lawrence John Sohaney

Subscribed and sworn to before me, by the said Lawrence John Sohaney on this 13th day of June, 1988.


Judy Bagwell, Notary Public
in and for the State of Texas

Commission Expires: 11-10-88



JUDY BAGWELL
Notary Public, State of Texas
My Commission Expires **11-10-88**

