

NSL 5/17/99

**KELLAHIN AND KELLAHIN**

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

April 23, 1999

W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285  
TELEFAX (505) 982-2047

**HAND DELIVERED**

Mr. Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87501

RE: **Lowe State Well No. 5**  
**1650 feet FSL & 2540 feet FWL**  
**Section 36, T21S, R23E**  
Administrative Application of  
Kerr McGee Oil & Gas Company for Approval  
of an Unorthodox Gas Well Location,  
Eddy County, New Mexico

99 APR 26 PM 1:30

OIL CONSERVATION DIV.

Dear Mr. Stogner:

Please find enclosed our administrative application for approval of an unorthodox gas well location for Kerr-McGee Oil & Gas Company for the referenced well.

Very truly yours,



W. Thomas Kellahin

cc: OCD-Artesia

fx: Kerr-McGee Oil & Gas Company  
Attn: Steve Foerster

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

**IN THE MATTER OF THE ADMINISTRATIVE  
APPLICATION OF KERR-McGEE OIL & GAS COMPANY  
FOR APPROVAL OF AN UNORTHODOX GAS WELL  
LOCATION, EDDY COUNTY, NEW MEXICO**

**ADMINISTRATIVE APPLICATION**

Comes now Kerr-McGee Oil & Gas Company (formerly Oryx Energy Company), by and through its attorneys, Kellahin and Kellahin, and in accordance with Division General Rule 104.F applies to the New Mexico Oil Conservation Division for administrative approval of an unorthodox gas well location for its Lowe State Well No. 5 which is to be drilled at an unorthodox gas well location 2540 feet FWL and 1650 feet FSL of Section 36, T21S, R23E, Eddy County, New Mexico to be dedicated to a non-standard 320-acre proration and spacing unit consisting of the W/2 of this section for production from the Indian Basin Upper Pennsylvanian Gas Pool, and in support states:

(1) Kerr-McGee Oil & Gas Company ("Kerr-McGee") is the operator of the currently approved non-standard 320-acre gas proration and spacing unit consisting of the W/2 of this section.

(2) On May 20, 1986, the Commission entered Order R-8162-A in DeNovo Case 8758 approving an unorthodox gas well location for the Lowe State Well No. 2 which was drilled at an unorthodox surface location 330 feet from the south and west lines of this section but imposing a 0.48 acreage factor. This well was temporarily abandoned on December 28, 1990.

(3) On December 7, 1998, the Division entered Order R-9922-D in Case 12006 which contracted the eastern boundary of the Indian Basin-Upper Pennsylvanian Gas Pool and expanded the western boundary of the Indian Basin-Upper Pennsylvanian Associated Pool such that the W/2 of this section stayed in the Gas Pool and the E/2 was placed in the Associated Pool. In doing so, the Division also approved the W/2 of this section as a 320-acre non-standard gas proration and spacing unit, assigned a 0.50 acreage factor and approved an unorthodox well location for the existing Lowe State Gas Com Well No. 1 (API No. 30-015-10342) located 1995 feet from the North line and 1712 feet from the West line (Unit F) of this section.

**Administrative Application of  
Kerr-McGee Oil & Gas Company  
Page 2**

(4) Kerr-McGee now desires to drill its Lowe State Well No. 5 at an unorthodox location 1650 feet FSL and 2540 feet FWL of this section to be simultaneously dedicated to the W/2 of this section.

(5) This unorthodox well location is a combination of topographic and geologic reasons. The unorthodox location is the optimum location in the spacing unit based upon Kerr-McGee's belief that moving further east in the spacing unit will increase to the total thickness of the dolomite pay section to be encountered. See attached maps and letter.

(6) Because Kerr-McGee also operates the E/2 of this section which is currently dedicated to a producing well in this same formation but in the Indian Basin Upper Pennsylvanian Associated Pool, Kerr McGee has obtained and attached copies of waivers from the other interest owners in the E/2 of this section.

WHEREFORE, Kerr-McGee Oil & Gas Company requests that this matter be approved administratively by the Division.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', written in a cursive style.

W. Thomas Kellahin  
Kellahin and Kellahin  
P.O. Box 2265  
Santa Fe, New Mexico 87504-2265  
(505) 982-4285  
Attorneys for Applicant

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 2040 South Pacheco, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [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 - Directional Drilling  
 NSL    NSP    DD    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

[2] **NOTIFICATION 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
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE - Certification**

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Edgar L. Perez                      Edgar L. Perez                      Proration Analyst                      4/14/99  
 Print of Type Name                      Signature                      Title                      Date

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
811 S. 1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

**OIL CONSERVATION DIVISION**  
2040 South Pacheco  
Santa Fe, NM 87505

Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator name and Address KERR MCGEE CORP. P.O. Box 2880 Dallas, TX 75221-2880		<sup>2</sup> OGRID Number 012558
		<sup>3</sup> API Number 30-0
<sup>4</sup> Property Code 008561	<sup>5</sup> Property Name LOWE STATE	<sup>6</sup> Well No. 5

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
K	36	21 S	23 E		1650'	SOUTH	2540'	WEST	EDDY

<sup>8</sup> Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
<sup>9</sup> Proposed Pool 1 INDIAN BASIN (UPPER PENN)					<sup>10</sup> Proposed Pool 2				

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary ROTARY	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3860'
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 8100'	<sup>18</sup> Formation UPPER PENN	<sup>19</sup> Contractor NOT YET AWARDED	<sup>20</sup> Spud Date 05/01/99

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
18 1/2	16"	84#	+ - 40'	GROUTED IN	SURFACE
14 3/4"	9 5/8"	36#	1300'	960 SXS	SURFACE
8 3/4"	7"	23# & 26#	8100'	545 SXS	4600'

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

BOP & choke manifold will be 3M systems and will be setup as indicated exhibits. Accumulator volume will be sufficient to provide an open and closing of preventers with 50% reserve. A drill pipe full opening safety valve will be kept on the rig floor in the open position at all times during drilling operations. An upper and lower kelly cock will be used.

Test Procedure and Drills: Ram type preventers will be tested to 70% of casing burst pressure. Annular preventer will be tested to 1500 psi. Approved closed-in procedure to be posted on the rig floor. Each crew will hold a weekly bop drill.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Edgar L. Perez*

Printed name: EDGAR L. PEREZ

Title: PRORATION ANALYST

**OIL CONSERVATION DIVISION**

Approved by:

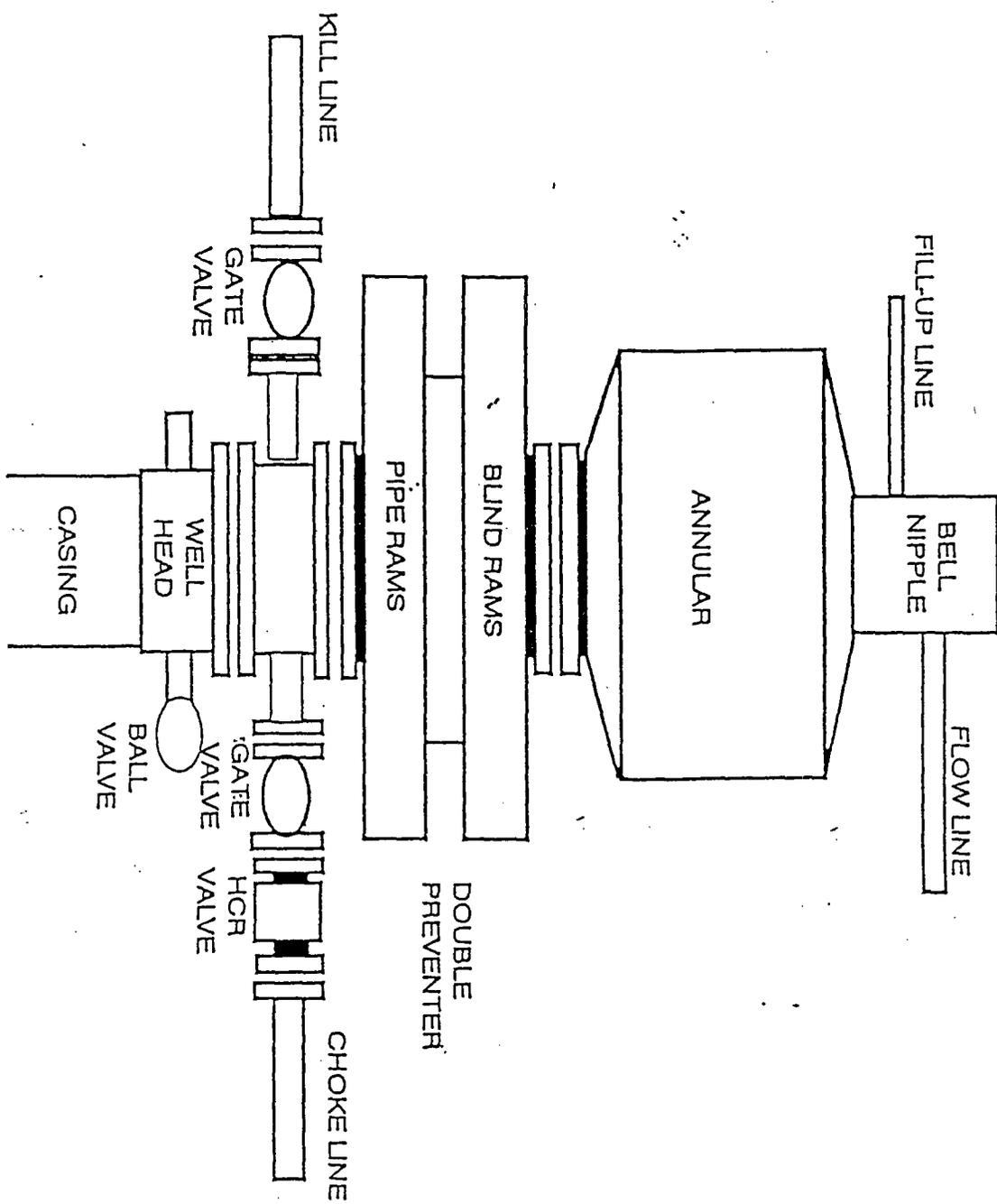
Title:

Approval Date:

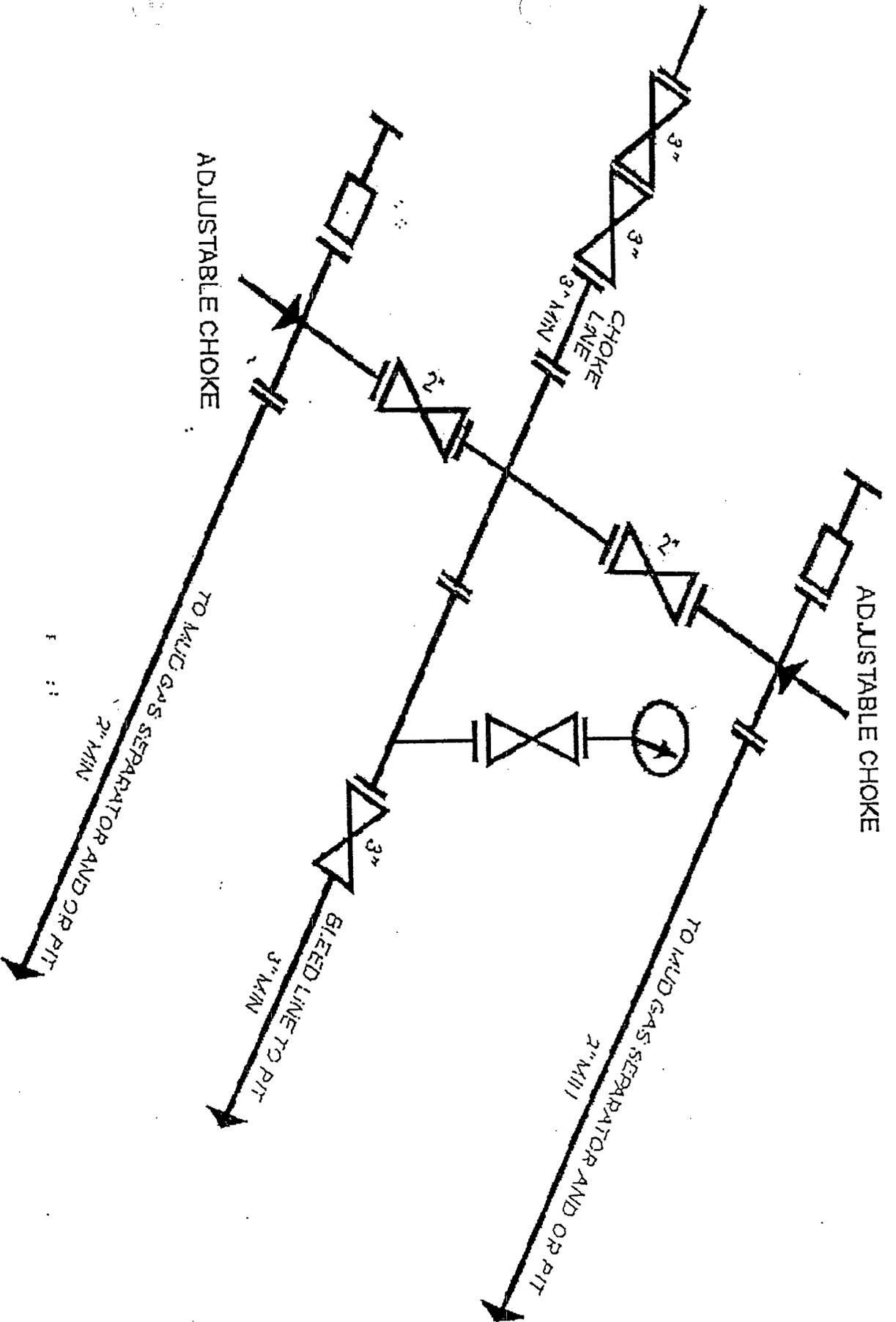
Expiration Date:

# ORYX ENERGY COMPANY

BOP STACK FOR A 3,000 PSI WORKING PRESSURE  
FOR SURFACE USE



Attachment I. Diagrams of Choke Manifold Equipment



I-2 3M Choke Manifold Equipment -- Configuration of chokes may vary

DISTRICT I  
P.O. Box 1080, Hobbs, NM 88241-1080

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

AMENDED REPORT

DISTRICT IV  
P.O. Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name <i>INDIAN BASIN (Upper Penn)</i>	
Property Code <i>008561</i>	Property Name LOWE STATE		Well Number 5	
OGRID No. <i>12558</i>	Operator Name KERR MCGEE OIL & GAS COMPANY		Elevation 3913	

Surface Location

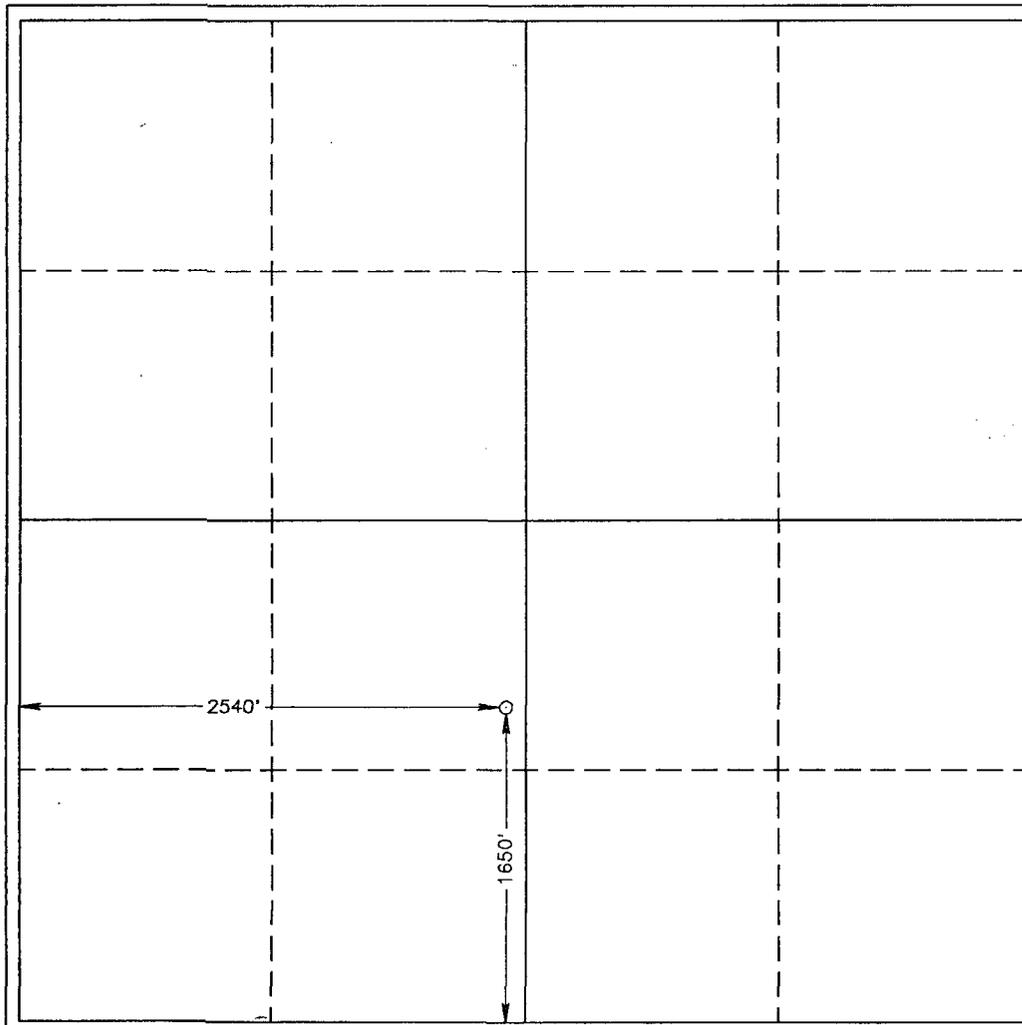
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	36	21 S	23 E		1650	SOUTH	2540	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
<i>320</i>			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

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

*Edgar L. Perez*  
Signature

*Edgar L. Perez*  
Printed Name

*Production Analyst*  
Title

*4/13/99*  
Date

---

**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.

MARCH 7, 1999

Date Surveyed JLP

Signature & Seal of Professional Surveyor  
*Ronald J. Eidson*  
Professional Surveyor

NEW MEXICO  
Professional Surveyor  
3-09-99  
P.W.O. Num. 99-11-0168

Certificate No. RONALD J. EIDSON, 3239  
GARY G. EIDSON, 12841  
MACON McDONALD, 12185



# Indian Basin: Eddy County, NM

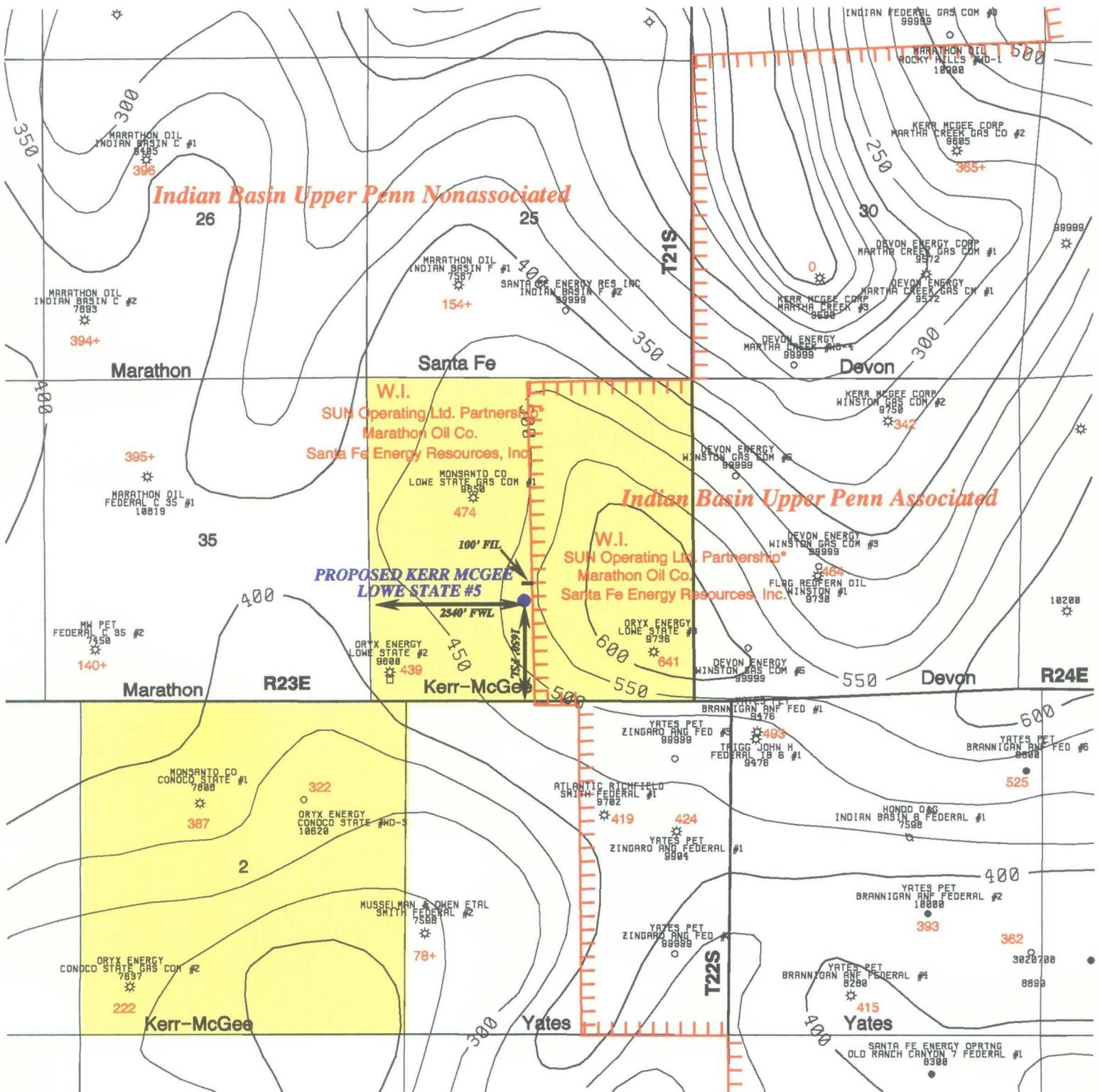
## Gross Dolomite Thickness contour interval 50'

scale 1" = 2225'



4/9/99

Todd N. Creamer



\* SUN Operating Ltd. Partnership-

Kerr-McGee Corp. is Managing General Partner of

SUN Operating Limited Partnership



**KERR-MCGEE CORPORATION**

PO BOX 2880 • DALLAS, TEXAS 75221-2880  
14311 WELCH ROAD • DALLAS, TEXAS 75244-3934  
972-715-8100

March 23, 1999

**Sent Via Fax at 915/686-6714 &  
Certified Return Receipt Requested**

Ms. Meg Muhlinghouse  
Santa Fe Energy Resources Inc.  
550 West Texas Ave., Suite 1330  
Midland, Texas 79701

RE: Request for Waiver of Objection  
to Unorthodox Well Location  
Lowe State No. 5, 1650' FSL &  
2540' FWL of Section 36, T21S, R23E,  
Eddy County, New Mexico

Ladies and Gentlemen:

Kerr-McGee Corporation (formerly Oryx Energy Company) requests offset working interest owner's approval of a non-standard Indian Basin, Upper Pennsylvanian Gas Pool location for the Lowe State Well No. 5 to be located 1650' FSL & 2540' FWL of Section 36, T21S, R23E, Eddy County, New Mexico. Pool rules for the Indian Basin, Upper Pennsylvanian Gas Pool require wells to be spaced no closer than 1650' from the outer or end boundaries nor closer than 330 feet from any governmental quarter-quarter section line or subdivision inner boundary. The proration unit for the proposed well will be a previously approved 320 acre non-standard proration unit consisting of the W/2 of Section 36, T21S, R23E, Eddy County, New Mexico.

Should you have no objection to this request for waiver, please sign and date this letter in the space provided below and returning it to my attention at the address on this letterhead. Also, we would appreciate being furnished a copy via fax at 972/715-4685.

Thank you, and if you should have any questions, please feel free to call me at 972/715-8269.

Santa Fe Energy Resources Inc.  
March 23, 1999  
Page 2

Sincerely,  
Kerr-McGee Corporation



Steve Foerster  
Landman

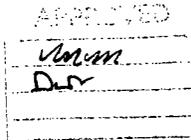
Santa Fe Energy Resources Inc. waives objection to Kerr-McGee Corporation's request to drill the Lowe State No. 5 at a non-standard location in the Indian Basin, Upper Pennsylvanian Gas Pool at a location 1650' FSL & 2540' FWL of Section 36, T21S, R23E, Eddy County, New Mexico.

Santa Fe Energy Resources Inc.

By: 

Title Attorney-in-Fact

Date: 3/29/99



Xc: Ray Powell, M.S., D.V.M.  
State of New Mexico Commissioner of Public Lands  
310 Old Santa Fe Trail  
P.O. Box 1148  
Santa Fe, New Mexico 87504-1148

Marathon Oil Company

MAR 26 1999

JOINT INTEREST OPERATIONS  
MID-CONTINENT REGION



**KERR-McGEE CORPORATION**

PO BOX 2880 • DALLAS, TEXAS 75221-2880  
14311 WELCH ROAD • DALLAS, TEXAS 75244-3934  
972-715-8100

March 23, 1999

**Sent Via Fax at 915/687/8431 &  
Certified Return Receipt Requested**

Mr. Joe Madron  
Marathon Oil Company  
PO Box 552  
Midland, Texas 79702

RE: Request for Waiver of Objection  
to Unorthodox Well Location  
Lowe State No. 5, 1650' FSL &  
2540' FWL of Section 36, T21S, R23E,  
Eddy County, New Mexico

Gentlemen:

Kerr-McGee Corporation (formerly Oryx Energy Company) requests offset working interest owner's approval of a non-standard Indian Basin, Upper Pennsylvanian Gas Pool location for the Lowe State Well No. 5 to be located 1650' FSL & 2540' FWL of Section 36, T21S, R23E, Eddy County, New Mexico. Pool rules for the Indian Basin, Upper Pennsylvanian Gas Pool require wells to be spaced no closer than 1650' from the outer or end boundaries nor closer than 330 feet from any governmental quarter-quarter section line or subdivision inner boundary. The proration unit for the proposed well will be a previously approved 320 acre non-standard proration unit consisting of the W/2 of Section 36, T21S, R23E, Eddy County, New Mexico.

Should you have no objection to this request for waiver, please sign and date this letter in the space provided below and returning it to my attention at the address on this letterhead. Also, we would appreciate being furnished a copy via fax at 972/715-4685.

Thank you, and if you should have any questions, please feel free to call me at 972/715-8269.

Marathon Oil Company  
March 23, 1999  
Page 2

Sincerely,  
Kerr-McGee Corporation



Steve Foerster  
Landman

Marathon Oil Company waives objection to Kerr-McGee Corporation's request to drill the Lowe State No. 5 at a non-standard location in the Indian Basin, Upper Pennsylvanian Gas Pool at a location 1650' FSL & 2540' FWL of Section 36, T21S, R23E, Eddy County, New Mexico.

Marathon Oil Company

By:   
Title Manager Indian Basin Asset Team  
Date: 3-26-99

Xc: Ray Powell, M.S., D.V.M.  
State of New Mexico Commissioner of Public Lands  
310 Old Santa Fe Trail  
P.O. Box 1148  
Santa Fe, New Mexico 87504-1148



**KERR-MCGEE CORPORATION**

PO BOX 2880 • DALLAS, TEXAS 75221-2880  
14311 WELCH ROAD • DALLAS, TEXAS 75244-3934  
972-715-8100

April 14, 1999

New Mexico Oil Conservation Division

The Lowe State #5 well is proposed for an unorthodox location 1650 feet from the south line of Section 36, in Township 21 South, Range 23 East, 2540 feet from the west line and 100 feet west of the interior line.

The primary objective of the well is the Upper Penn Cisco Formation.

The location was first moved to the east for topographic considerations. It was subsequently recognized that moving further to the east would increase the total thickness of dolomite pay section that would be encountered.

Todd Creamer  
Geologist

*See Also Order Nos.*

*R-9922*

*R-9922-A*

*R-9922-B*

*R-9922-C*

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

IN THE MATTER OF THE HEARING CALLED  
BY THE OIL CONSERVATION DIVISION  
FOR THE PURPOSE OF CONSIDERING:

**NOMENCLATURE**  
CASE NO. 12006  
ORDER NO. R-9922-D

APPLICATION OF MARATHON OIL COMPANY, YATES PETROLEUM CORPORATION, ORYX ENERGY COMPANY, DEVON ENERGY CORPORATION (NEVADA) AND SANTA FE ENERGY RESOURCES, INC. FOR THE EXPANSION OF THE INDIAN BASIN-UPPER PENNSYLVANIAN ASSOCIATED POOL AND THE CONCOMITANT CONTRACTION OF THE INDIAN BASIN-UPPER PENNSYLVANIAN GAS POOL, APPROVAL OF FOUR NON-STANDARD 320-ACRE GAS PRORATION UNITS, AN UNORTHODOX GAS WELL LOCATION, AND APPORTIONMENT OF GAS ALLOWABLES, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on July 9, 1998, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 7th day of December, 1998, the Division Director, having considered the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) The Indian Basin-Upper Pennsylvanian Gas Pool is a prorated gas pool currently governed by the "General Rules for the Prorated Gas Pools of New Mexico/Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Gas Pool," as promulgated by Division Order No. R-8170, as amended, which require standard 640-acre spacing and proration units ("GPU") with wells to be located no closer than 1650 feet from the outer boundary of the GPU nor closer than 330 feet from any governmental quarter-quarter section line or subdivision inner boundary. The current gas allowable for the Indian Basin-Upper Pennsylvanian Gas Pool is approximately 6.5 MMCFG per day per GPU.

(3) The Indian Basin-Upper Pennsylvanian (Prorated) Gas Pool currently comprises the following described area in Eddy County, New Mexico:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Section 3:	W/2
Section 4:	All
Sections 8 and 9:	All
Section 10:	W/2
Section 15:	W/2
Sections 16 through 30:	All
Sections 32 through 36:	All

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Sections 19 through 21:	All
Sections 28 through 32:	All

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM

Sections 1 through 5:	All
Sections 8 through 17:	All
Section 21:	N/2
Section 22:	All.

(4) The Indian Basin-Upper Pennsylvanian Associated Pool is currently governed by the "Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool," as promulgated by Division Order No. R-9922, as amended, which require standard 320-acre oil and gas spacing units with wells to be located no closer than 660 feet from the outer boundary of the proration unit nor closer than 330 feet from any quarter-quarter section line or subdivision inner boundary, and with no more than one well per 80-acre tract to be drilled or produced on a standard proration unit. The special depth bracket allowable for the pool is 1,400 barrels of oil per day. The limiting gas-oil ratio for the pool is 7,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 9.8 MMCFG per day.

(5) The Indian Basin-Upper Pennsylvanian Associated Pool currently comprises the following described area in Eddy County, New Mexico:

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Section 27:	S/2
Sections 33 and 34:	All.

TOWNSHIP 22 SOUTH, RANGE 24 EAST, NMPM

Sections 2 through 10: All  
Section 11: N/2  
Sections 16 and 17: All.

(6) The applicants, Marathon Oil Company, Yates Petroleum Corporation, Oryx Energy Company, Devon Energy Corporation (Nevada), and Santa Fe Energy Resources, Inc. seek an order expanding the Indian Basin-Upper Pennsylvanian Associated Pool in Eddy County, New Mexico to include:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Section 36: E/2

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Sections 20 and 21: All  
Sections 28 through 32: All

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM

Section 1: E/2  
Section 12: E/2  
Section 13: E/2

TOWNSHIP 22 SOUTH, RANGE 24 EAST, NMPM

Section 18: All

AND THE concomitant contraction of the Indian Basin-Upper Pennsylvanian Gas Pool by deleting therefrom:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Section 36: E/2

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Sections 20 and 21: All  
Sections 28 through 32: All

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM

Section 1: E/2  
Section 12: E/2  
Section 13: E/2.

(7) In conjunction with the proposed adjustment to the boundaries of the two subject pools, the applicants seek to establish the following four 320-acre, more or less, GPU's within the Indian Basin-Upper Pennsylvanian Gas Pool within Section 36, Township 21 South, Range 23 East, NMPM, and Sections 1, 12, and 13, Township 22 South, Range 23 East, NMPM, Eddy County, New Mexico:

(A) the W/2 of Section 36, comprising 320 acres, which is to be dedicated to the existing Lowe State Gas Com Well No. 1 (API No. 30-015-10342), located 1995 feet from the North line and 1712 feet from the West line (Unit F) of Section 36;

(B) the W/2 equivalent of Section 1, comprising 336.57 acres, on which there is currently no well;

(C) the W/2 of Section 12, comprising 320 acres, which is to be dedicated to the existing Smith Federal Gas Com Well No. 2 (API No. 30-015-26834) located 2049 feet from the North line and 480 feet from the West line (Unit E) of Section 12; and

(D) the W/2 of Section 13, comprising 320 acres, which is to be dedicated to the HOC Federal Gas Com Well No. 2 (API No. 30-015-26939) located 330 feet from the North and West lines (Unit D) of Section 13.

(8) The proposed acreage and pool rededication results in the Lowe State Gas Com Well No. 1 being only 928 feet from the outer boundary of its newly designated 320-acre gas proration unit. The resulting unorthodox gas well location for this well requires proper authorization pursuant to the appropriate rules and regulations governing the Indian Basin-Upper Pennsylvanian Gas Pool.

(9) On behalf of the applicants, Marathon Oil Company presented geologic, petroleum engineering, and oil and gas mineral ownership and land evidence, which demonstrates that this application should be granted and which is summarized as follows:

(A) In the Indian Basin area, the Upper Pennsylvanian interval contains multiple compartmentalized reservoirs, which are productive of oil, gas and water from several dolomitized horizons from the top of the Cisco formation to

the base of the Canyon formation.

(B) The Cisco/Canyon formations within the Indian Basin-Upper Pennsylvanian Gas Pool, including the extension area, and the Indian Basin-Upper Pennsylvanian Associated Pool were originally developed with flowing gas wells on 640-acre gas spacing such that, once the gas wells stopped flowing as a result of water encroachment, the wells were abandoned.

(C) The Indian Basin-Upper Pennsylvanian Gas Pool attained its maximum extension in the 1970s and, since then, water encroachment has advanced from east to west slowly watering out the flowing gas wells. Currently, flowing gas production occurs west of a structural contour line at minus 3300 feet subsea elevation.

(D) In 1992, Yates Petroleum Corporation reentered and recompleted the Hickory "ALV" Federal Well No 1 (API No. 30-015-10566), located 1650 feet from the North and West lines (Unit F) of Section 17, Township 22 South, Range 24 East, NMPM. Using the same high capacity pumps used in the nearby South Dagger Draw-Upper Pennsylvanian Associated Pool, Yates was able to achieve rates of 400 BOPD, 500 MCFGPD and 1200 BWPD in a former Indian Basin-Upper Pennsylvanian Gas Pool well which had previously been depleted. Thereafter the Division entered Order No. R-9922 and created the Indian Basin-Upper Pennsylvanian Associated Pool.

(E) The Cisco/Canyon formations within the Indian Basin-Upper Pennsylvanian Associated Pool and the extension area are in a structural feature separated from the Indian Basin-Upper Pennsylvanian Gas Pool by a structural saddle at the top of the Cisco at a subsea elevation of minus 3500 feet. New wells located within 320-acre spacing units in the Indian Basin-Upper Pennsylvanian Associated Pool and the extension area are now producing or have the potential to produce oil and gas that was not previously recovered when this area was originally developed as part of the Indian Basin-Upper Pennsylvanian Gas Pool.

(F) Current oil and gas production from the Cisco/Canyon formations in the Indian Basin-Upper Pennsylvanian Associated Pool and the extension area required extensive formation "de-watering." Hydrocarbons are mobilized by continuous movement of large volumes of water with artificial lift.

(G) Pressure data demonstrates that:

(i) the Indian Basin-Upper Pennsylvanian Associated Pool, with a pressure on average of 1600 psi, is not in pressure communication with the Indian Basin-Upper Pennsylvanian Gas Pool, which has a current pressure on average of 500 psi; and

(ii) wells in the extension area of Township 21 South, Range 24 East, NMPM, have a pressure related to the Indian Basin-Upper Pennsylvanian Associated Pool.

(H) Production data demonstrates that:

(i) there are no flowing gas wells in the extension area; and

(ii) old flowing gas wells in the extension area were abandoned when they watered out and new wells are attaining oil and gas production by using high capacity pumps.

(I) The division of Section 36, Township 21 South, Range 23 East, NMPM and Sections 1, 12, and 13, Township 22 South, Range 23 East, NMPM (the transition area) into non-standard 320-acre, more or less, gas proration and spacing units will provide an equitable "buffer" between the Indian Basin-Upper Pennsylvanian Gas Pool and the Indian Basin-Upper Pennsylvanian Associated Pool because:

(i) wells have been located or can be located such that drainage by wells in the Indian Basin-Upper Pennsylvanian Associated Pool can be met with counter drainage from wells located or to be located on the eastern side of each of the four 320-acre, more or less, non-standard gas spacing and proration units in the Indian Basin-Upper Pennsylvanian Gas Pool provided that wells located on the eastern side of these units can be no closer than 660 feet from the eastern boundary, which is also the setback requirement for wells in the Indian Basin-Upper Pennsylvanian Associated Pool; and

(ii) wells located in the Indian Basin-Upper Pennsylvanian Gas Pool will not suffer unfair competition from wells located or to be located in these four, non-standard gas proration units because allowables will be apportioned based upon the gas proration system adopted for the Indian Basin-Upper Pennsylvanian Gas Pool.

(J) The granting of this application should not impair the correlative rights:

(i) of any working interest owner within any of the existing 640-acre GPUs because there are voluntary joint operating agreements requiring that all those owners continue to share in production and pay costs from the new 320-acre spacing units on the same proportional basis as in the original 640-acre unit;

(ii) of any overriding royalty interest owner or the federal royalty under a federal oil and gas lease within any of the existing 640-

acre GPUs because there are federal communitization agreements requiring that all those owners continue to share in production from the new 320-acre spacing units on the same proportional basis as in the original 640-acre unit;

(iii) under Section 32, Township 21 South, Range 24 East, NMPM, which consists of two 320-acre State of New Mexico leases and is operated by Marathon Oil Company, because there are no overriding royalty owners and the State Land Office desires that the communitization agreement for the existing 640-acre proration unit terminate and be replaced by two 320-acre proration units co-extensive with the two State leases; and,

(iv) under Section 36, Township 21 South, Range 23 East, NMPM, which consists of two State of New Mexico leases and is operated by ORYX Energy Company, because there are no overriding royalty owners and the State Land Office desires that the existing 640-acre communitization agreement terminate and be replaced by two 320-acre communitization agreements.

(10) The evidence and testimony presented at the hearing further indicate that:

(A) The Cisco/Canyon formations within the Indian Basin-Upper Pennsylvanian Associated Pool and the extension area are a single structural feature such that wells located in this area should be subject to the same special rules and regulations.

(B) Geologic and petroleum engineering evidence demonstrate that substantial volumes of oil and gas, which otherwise would not be produced, can be economically recovered from the extension area if that area is subject to the

current rules applicable to the Indian Basin-Upper Pennsylvanian Associated Pool, thereby preventing waste.

(C) Making the extension area part of the Indian Basin-Upper Pennsylvanian Associated Pool will afford the opportunity to increase the de-watering process in the reservoir and improve recovery efficiencies for both oil and gas.

(D) The adoption of the four 320-acre, more or less, non-standard gas proration and spacing units will establish a temporary "buffer" or transition area between the Indian Basin-Upper Pennsylvanian Gas Pool and the Indian Basin-Upper Pennsylvanian Associated Pool, which at this time will establish equity and protect correlative rights.

(11) The applicants are all of the operators of wells in the extension area and they have met and unanimously agreed upon this application.

(12) In accordance with Division notification rules, notification of this application and request for hearing has been sent to the owners within the proposed expansion area and to the offset operators to each non-standard gas proration and spacing unit and no objections have been received by either the Division or Marathon Oil Company, which sent out these notices.

(13) In order to prevent waste, to prevent the drilling of unnecessary wells, to protect correlative rights and provide for a more orderly development of the Cisco/Canyon formations, it is necessary to do the following:

(A) contract the Indian Basin-Upper Pennsylvanian Gas Pool and expand the Indian Basin-Upper Pennsylvanian Associated Pool as described in Finding Paragraph No. 6;

(B) approve the four non-standard 320-acre, more or less, GPU's within the Indian Basin-Upper Pennsylvanian Gas Pool as described in Finding Paragraph No. 7; and,

(C) approve an unorthodox gas well location for the Lowe State Gas Com Well No. 1 located 1995 feet from the North line and 1712 feet from the West line (Unit K) of said Section

36.

(14) Marathon Oil Company, Santa Fe Energy Resources, Inc. and ORYX Energy Corporation were present at the hearing and Marathon Oil Company, on behalf of the applicants, provided technical land, geologic and engineering testimony concerning the reservoir and, these pools.

(15) No other operator and/or interest owner appeared at the hearing in opposition to the application.

(16) Approval of the applicant's request will allow the interest owners the opportunity to economically recover their share of the oil and gas in the subject pools, will not reduce ultimate recovery from the subject pools, and will not violate correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The Indian Basin-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, as heretofore classified, defined, and described, is hereby contracted by the deletion of the following described area:

**TOWNSHIP 21 SOUTH. RANGE 23 EAST. NMPM**

Section 36: E/2

**TOWNSHIP 21 SOUTH. RANGE 24 EAST. NMPM**

Sections 20 and 21: All

Sections 28 through 32: All

**TOWNSHIP 22 SOUTH. RANGE 23 EAST. NMPM**

Section 1: E/2

Section 12: E/2

Section 13: E/2.

(2) Concomitantly, the Indian Basin-Upper Pennsylvanian Associated Pool in Eddy County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein the following described area:

**TOWNSHIP 21 SOUTH. RANGE 23 EAST. NMPM**

Section 36: E/2

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Sections 20 and 21: All  
Sections 28 through 32: All

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM

Section 1: E/2  
Section 12: E/2  
Section 13: E/2.

TOWNSHIP 22 SOUTH, RANGE 24 EAST, NMPM

Section 18: All.

(3) The following four 320-acre, more or less, GPU's within the Indian Basin-Upper Pennsylvanian Gas Pool within Section 36, Township 21 South, Range 23 East, and Sections 1, 12, and 13, Township 22 South, Range 23 East, NMPM, Eddy County, New Mexico, are hereby approved:

(A) the W/2 of Section 36, comprising 320 acres, which is to be dedicated to the existing Lowe State Gas Com Well No. 1 (API No. 30-015-10342), located at an unorthodox gas well location for the 320-acre GPU, 1995 feet from the North line and 1712 feet from the West line (Unit F) of Section 36;

(B) the W/2 of Section 1, comprising 336.57 acres, on which there is currently no well;

(C) the W/2 of Section 12, comprising 320 acres, which is to be dedicated to the existing Smith Federal Gas Com Well No. 2 (API No. 30-015-26834) located 2049 feet from the North and 480 feet from the West lines (Unit E) of Section 12; and,

(D) the W/2 of Section 13, comprising 320 acres, which is to be dedicated to the HOC Federal Gas Com Well No. 2 (API No. 30-015-26939) located 330 feet from the North line and 330 feet from the West line (Unit D) of Section 13.

(4) Any future well located in any of these four non-standard gas proration and spacing units no closer than 660 feet to the eastern boundary of the unit shall be considered

to be at a standard location.

(5) The apportionment of gas allowables for the four non-standard GPU's shall be accomplished by applying a 0.5 acreage factor to each of the non-standard GPU's.

(6) An unorthodox gas well location for the following well in the Indian Basin-Upper Pennsylvanian Gas Pool, which became unorthodox as a result of the change in pool boundary, is hereby approved: Lowe State Gas Com Well No. 1 located 1995 feet from the North line and 1712 feet from the West line and of Section 36, Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico.

(7) The locations of all wells presently drilling to or completed in the Indian Basin-Upper Pennsylvanian Associated Pool within this expansion area are hereby approved; the operator of any well having an unorthodox location shall notify the Artesia District Office of the Division in writing of the name and location of the well within thirty days from the date of this order.

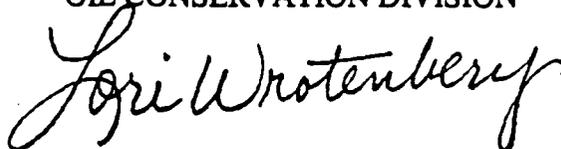
(8) Pursuant to Paragraph A of Section 70-2-18, NMSA (1978), contained in Chapter 271, Laws of 1969, existing wells in the Indian Basin-Upper Pennsylvanian Associated Pool within this expansion area shall have dedicated thereto 320 acres; or, pursuant to Paragraph C of Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

(9) Failure to file new Forms C-102 with the Division dedicating 320 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to being shut-in.

(10) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

SEAL

CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

05/12/99 13:46:09  
OGOMES -TPSC  
PAGE NO: 1

Sec : 36 Twp : 21S Rng : 23E Section Type : NORMAL

D 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C	C 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C	B 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C	A 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C
E 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C	F 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C A	G 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C	H 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C A

PF01 HELP    PF02            PF03 EXIT    PF04 GoTo    PF05            PF06  
PF07 BKWD   PF08 FWD      PF09 PRINT   PF10 SDIV    PF11            PF12

CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

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OGOMES -TPSC  
PAGE NO: 2

Sec : 36 Twp : 21S Rng : 23E Section Type : NORMAL

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M 40.00 CS VB0519 0001 08/02 SANTA FE ENERGY R C A	N 40.00 CS VB0519 0001 08/02 SANTA FE ENERGY R C	O 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C	P 40.00 CS E10170 0003 06/66 ORYX ENERGY CO C A

PF01 HELP      PF02              PF03 EXIT      PF04 GoTo      PF05              PF06  
PF07 BKWD      PF08 FWD          PF09 PRINT      PF10 SDIV      PF11              PF12

CMD : ONGARD 05/12/99 13:46:32  
OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -TPSC

OGRID Idn : 16587 API Well No: 30 15 30583 APD Status(A/C/P): A  
Opr Name, Addr: ORYX ENERGY CO Aprvl/Cncl Date : 03-01-1999  
PO BOX 2880  
DALLAS, TX 75221

Prop Idn: 8561 LOWE STATE Well No: 5

	U/L	Sec	Township	Range	Lot Idn	North/South	East/West
Surface Locn :	K	36	21S	23E		FTG 2065 F S	FTG 1924 F W
OCD U/L :	K		API County :	15			

Work typ(N/E/D/P/A) : N Well typ(O/G/M/I/S/W/C): G Cable/Rotary (C/R) : F  
Lease typ(F/S/P/N/J/U/I): S Ground Level Elevation : 3920

State Lease No: Multiple Comp (Y/N) : N  
Prpsd Depth : 8000 Prpsd Frmtn : U/PENN

E0009: Enter data to modify record

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06 CONFIRM
PF07	PF08	PF09 PRINT	PF10 C102	PF11 HISTORY	PF12