

6/7/02	6/27/02	ENGINEER MS	LOGGED IN KV	TYPE NSL	APP NO. 216135512
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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**

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

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [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 - Simultaneous Dedication  
 NSL  NSP  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

- [D] Other: Specify \_\_\_\_\_

JUN - 7

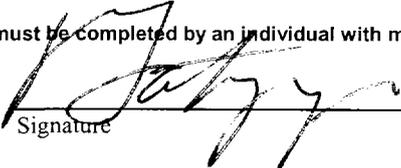
[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

- [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] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

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

K.W. Tatarzyn  Asset Team Manager 6-6-02  
 Print or Type Name Signature Title Date

\_\_\_\_\_  
 e-mail Address



P.O. Box 552  
Midland, TX 79702-0552  
Telephone 915/682-1626

June 6, 2002

Mr. Michael Stogner  
Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, New Mexico 87504

**RE: *Indian Hills Unit Well No. 45 Unorthodox Location  
806' FNL & 1010' FEL, Sec. 28, Township 21 South, Range 24 East (SHL),  
339' FSL & 1148' FEL, Sec. 21, Township 21 South, Range 24 East (BHL)  
Indian Basin Upper Pennsylvanian Associated Pool***

Dear Mr. Stogner,

Attached is Marathon Oil Company's application for administrative approval of an unorthodox bottom hole location for the proposed Indian Hills Unit Well No. 45.

I trust that this application contains all the information that was discussed by yourself and Mr. Walt Dueease several days ago. If there is any additional information that you would like, please call me and I will have it faxed to you as soon as possible. A copy of this application has also been forwarded to Mr. Tom Kellahin, Legal Council for Marathon.

Thank you for taking the time to review our application,

Truly Yours,

A handwritten signature in black ink, appearing to read 'S. Millican', written over a horizontal line.

Steven F. Millican  
Operations Engineer  
Indian Basin Asset Team  
Marathon Oil Company  
(915) 687-8306 (direct)  
(915) 559-4194 (mobile)  
[SFMillican@MarathonOil.com](mailto:SFMillican@MarathonOil.com)



P.O. Box 552  
Midland, TX 79702-0552  
Telephone 915/682-1626

June 6, 2002

Mr. Michael Stogner  
Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, New Mexico 87504

***RE: Indian Hills Unit Well No. 45 Unorthodox Location  
806' FNL & 1010' FEL, Sec. 28, Township 21 South, Range 24 East (SHL),  
339' FSL & 1148' FEL, Sec. 21, Township 21 South, Range 24 East (BHL)  
Indian Basin Upper Pennsylvanian Associated Pool***

Dear Mr. Stogner,

By means of this application, Marathon Oil Company respectfully requests non-standard location approval for the proposed Indian Hills Unit Well No. 45 with a surface location of 806' FNL & 1010' FEL, Section 28, Township 21 South, Range 24 East, and a bottom hole location of 339' FSL & 1148' FEL, Section 21, Township 21 South, Range 24 East, and to be dedicated to a standard spacing unit consisting of the east half of Section 21. Marathon is proposing to drill this well to an unorthodox location in the Upper Pennsylvanian formation. This will be a directionally drilled well.

Marathon proposes to complete the Indian Hills Unit Well No. 45 in the "Indian Basin Upper Pennsylvanian Associated Pool" as promulgated by the New Mexico Oil Conservation Division Order Nos. R-9922, R-9922-A, R-9922-B, R-9922-C, and R-9922-D and the general rules for the Associated Gas Pools of Southeast New Mexico as promulgated by Division Order No. R-5533. These rules require wells to be located no closer than 660 feet to the outer boundary of the proration/spacing unit and no closer than 330 feet to the governmental quarter/quarter section line. Indian Hills Unit Well No. 45 location is unorthodox because the producing interval and the bottom hole location are within the 660 foot setback from the southern outer boundary of the proposed 320-acre "stand-up" gas proration unit dedicated to the east half of Section 21 (please see Attachments #1 and #2 - Well Location and Acreage Dedication Plats, and Attachment #3 - Location Verification Map). Based on the proposed directional plan, it is expected that the top of the Upper Pennsylvanian formation will be penetrated at 100' FSL & 1119' FEL in Section 21, (please see Attachment #4 - Directional Plat supplied by Baker Inteq, Marathon's proposed directional drilling company for the well).

In support of this application, specific details will be provided for the proposed unorthodox location. These details will include the Participating Area surrounding this location, the purpose of the directional wellbore, how the well fits into Marathon's reservoir management plan, and why the proposed location is geologically superior to a standard location in Section 21.

## **Participating Area**

The proposed well is located within the Indian Hills Unit Upper Pennsylvanian Participating Area (see Attachment #5). The Indian Hills Unit is operated by Marathon. Indian Hills Unit Well No. 45 is proposed to be dedicated to a standard proration unit consisting of the east half of Section 21, Township 21 South, Range 24 East. Currently two other wells, the Indian Hills Unit Well Nos. 24 and 28, also produce from the same proration unit. The ownership of the proposed proration unit is identical to Section 28 which offsets the proposed unorthodox location in the Upper Pennsylvanian formation. Marathon Oil Company has a 99.54544% working interest while Nearburg Exploration has a 0.45456% working interest.

## **Directional Wellbore:**

The Indian Hills Unit Well No. 45 is proposed as a directionally drilled wellbore. Marathon's development of Sections 16, 17, 20, and 21, Township 21 South, Range 24 East, has relied heavily on directionally drilled wellbores because of the high topographical relief caused by the Seven Rivers Azotea Mesa (please see Attachment #6 – "East Indian Basin" Topographical Map). As a result, there are only a few wells on the Mesa that have been able to be drilled vertically to a standard target. The only location Marathon was able to find to develop the southeast corner of Section 21 was from a surface location in the northwest corner of Section 28.

## **Reservoir Management Plan:**

Marathon is entering its final anticipated infill development phase of the Indian Basin Upper Pennsylvanian Associated Gas Pool. The objective of this program is to infill drill the oil column from the current ~160-acre well density to an ~80-acre well density. It is Marathon's belief that the oil zone should be developed on tighter spacing than the current ~160 acre development of the gas zone. The proposed ~80-acre infill program will improve oil recovery while minimizing both economic and reservoir waste.

It is Marathon's belief that the proposed unorthodox location represents a superior location in regards to both reservoir drainage and geologic risk (discussed below). The BHL of the Upper Pennsylvanian in Indian Hills Unit Well No. 45 provides a well balanced and near equal inter-well spacing between the existing Indian Hills Unit Well Nos. 17 and 24 (please see Attachment #7 – Indian Basin Field, Proposed Wells for 2002). This 'equal' inter-well spacing will minimize well-to-well interference and hence maximize reserves recovery.

## **Geologic Issues:**

The Indian Basin Upper Pennsylvanian Associated Pool is predominantly composed of dolomite and limestone sequences. With current technology, only the dolomite sequences have proved productive and economic. The proposed location for the Indian Hills Unit Well No. 45 is an attempt to further develop the eastern extent of the productive dolomite horizons within the Indian Hills Unit.

Based on open hole logs from offsetting wells, it is Marathon's current interpretation that a relatively rapid transition from dolomite to limestone facies occurs from the east half of Section 21 to the west half of section 22. The attached cross section indicates that limestone (colored in blue) commonly occurs on top of the Cisco section. The Indian Hills Unit Well No. 24, which has a bottom hole location of 2139' FSL and 1764' FEL in Section 21, has approximately 64' of limestone in the top of the Cisco. The Lowe Staple AMR Well No. 1 (directional wellbore), which has an approximate bottom hole location of 800' FSL and 1250' FWL in Section 22, has 79' of limestone in the Cisco (See Attachment #8 – Cross Section of Indian Hills Unit #17, Indian Hills Unit #24, & Lowe Staple AMR #1). In the Lowe Staple AMR Well No. 2, recently drilled by Yates Petroleum in Unit Letter 'D' of Section 22, approximately 228' of limestone was reportedly encountered through the Cisco and Canyon sections of the Upper Pennsylvanian formation. Therefore limestone appears increasingly prominent as one moves further north and east within the east half of Section 21.

However, limestone appears less prominent as we move south within the east half of Sections 21 and 28. Indeed, Indian Hills Unit Well No. 17, located 660' FNL and 2220' FEL of Section 28, and the Yates Pardue Farms Well No. 1, located 2310' FNL and 1980' FWL of Section 27, showed no limestone in the Cisco. Therefore in order to lower the reservoir risks and improve the chances to encounter porous Cisco dolomite, it is Marathon's recommendation to move Indian Hills Unit Well No. 45 bottom hole location further to the west and south. Marathon proposes to move Indian Hills Unit No. 45 bottom hole location from a standard BHL location of 660' FSL and 660' FEL to a non-standard location of 339' FSL & 1148' FEL. Marathon strongly believes this is the best bottom hole location in which to encounter economic and productive dolomite, as well as to efficiently drain the reservoir.

**Notifications:**

It is Marathon's understanding that because the gas spacing unit towards which the Indian Hills Unit Well No. 45 is unorthodox is identical in ownership to that of the proposed, standard, 320-acre gas spacing unit, no waivers or notifications are required.

Should you have any questions/comments/concerns, please contact me at (915) 687-8306.

Respectfully,



Steven F. Millican  
Operations Engineer  
Indian Basin Asset Team  
Marathon Oil Company

DISTRICT I  
P.O. Box 1888, Hobbs, NM 88241-1888

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 80, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION  
P.O. Box 2088

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

Santa Fe, New Mexico 87504-2088

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number	Pool Code	Pool Name
	33685	Indian Basin Upper Penn. Assoc. Pool
Property Code	Property Name	Well Number
	INDIAN HILLS UNIT	45
OGRID No.	Operator Name	Elevation
14021	MARATHON OIL COMPANY	3654'

Surface Location

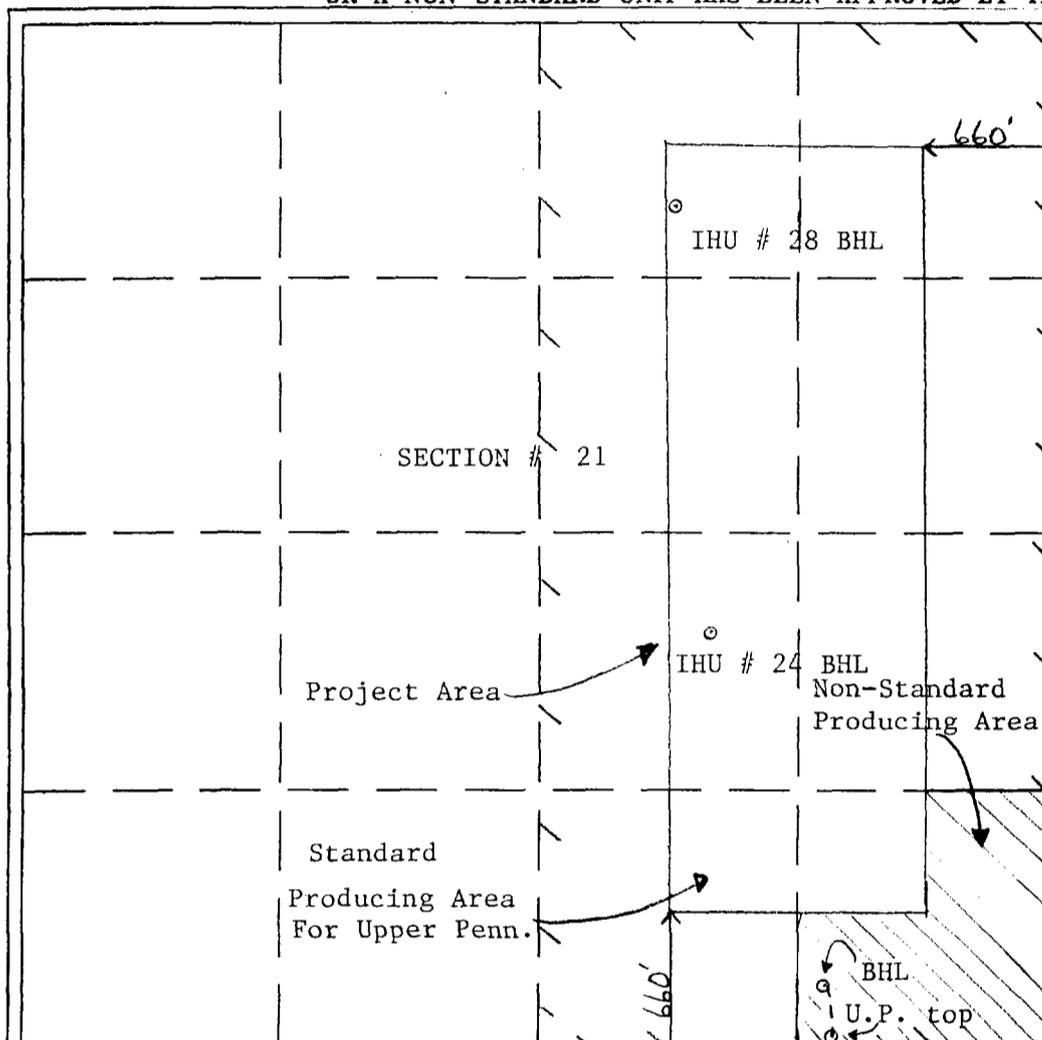
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	28	21-S	24-E		806	NORTH	1010	EAST	EDDY

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
P	21	21-S	24-E		339	SOUTH	1148	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320 E/2			

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.

*Jerry Fletcher*  
Signature  
Jerry Fletcher  
Printed Name  
Engineer Tech.  
Title  
5/16/02  
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.

JANUARY 29, 2002  
Date Surveyed  
AWB  
Signature & Seal of Professional Surveyor  
*Ronald J. Eidson* 01/31/02  
02.11.0089  
Certificate No. RONALD J. EIDSON 3239  
GARY EIDSON 12841

**OPERATOR CERTIFICATION**

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

*Jerry Fletcher*  
Signature  
Jerry Fletcher  
Printed Name  
Engineer Tech.  
Title  
5/16/02  
Date

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Date Surveyed  
AWB  
Signature & Seal of Professional Surveyor  
*Ronald J. Eidson* 01/31/02  
02.11.0089  
Certificate No. RONALD J. EIDSON 3239  
GARY EIDSON 12841

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

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

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name INDIAN HILLS UNIT	
OGRID No.	Operator Name MARATHON OIL COMPANY	Well Number 45 Elevation 3654'

Surface Location

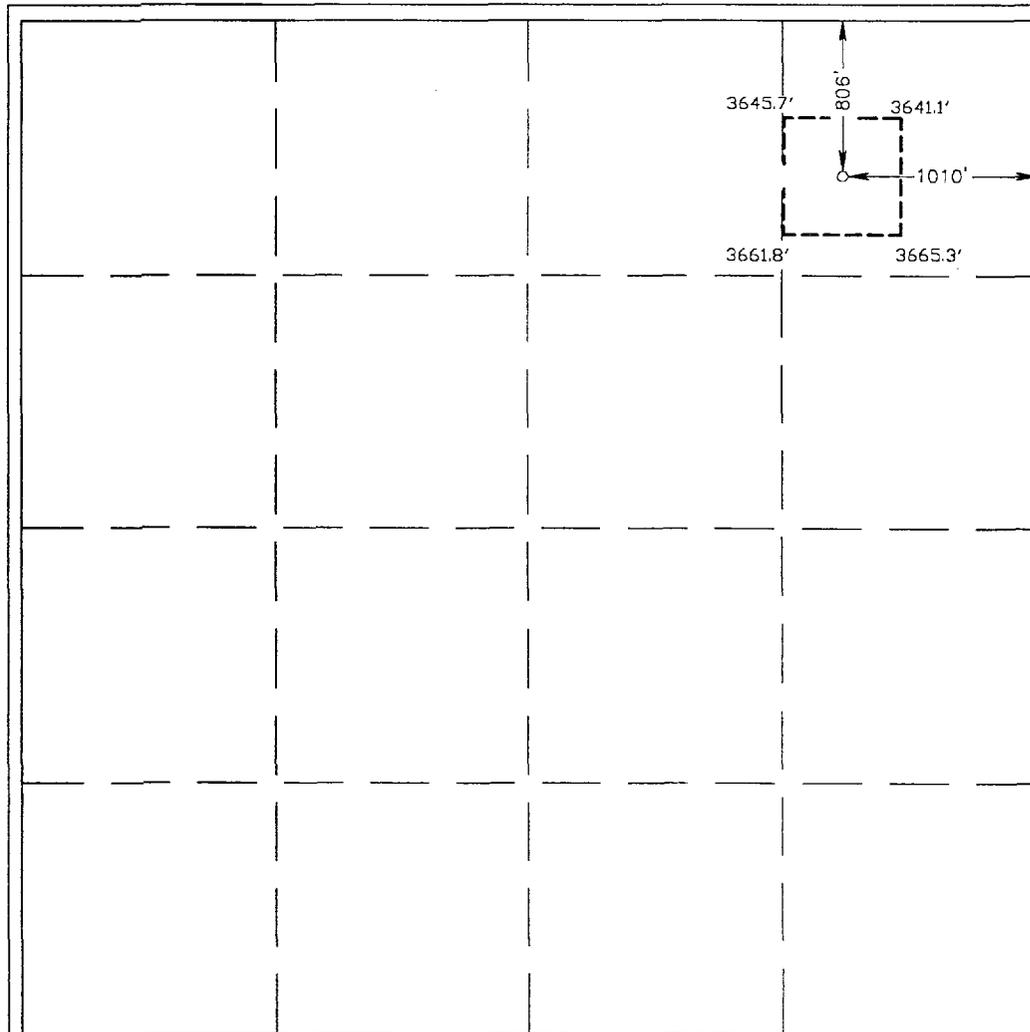
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	28	21-S	24-E		806	NORTH	1010	EAST	EDDY

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.

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.*

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

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.*

JANUARY 29, 2002

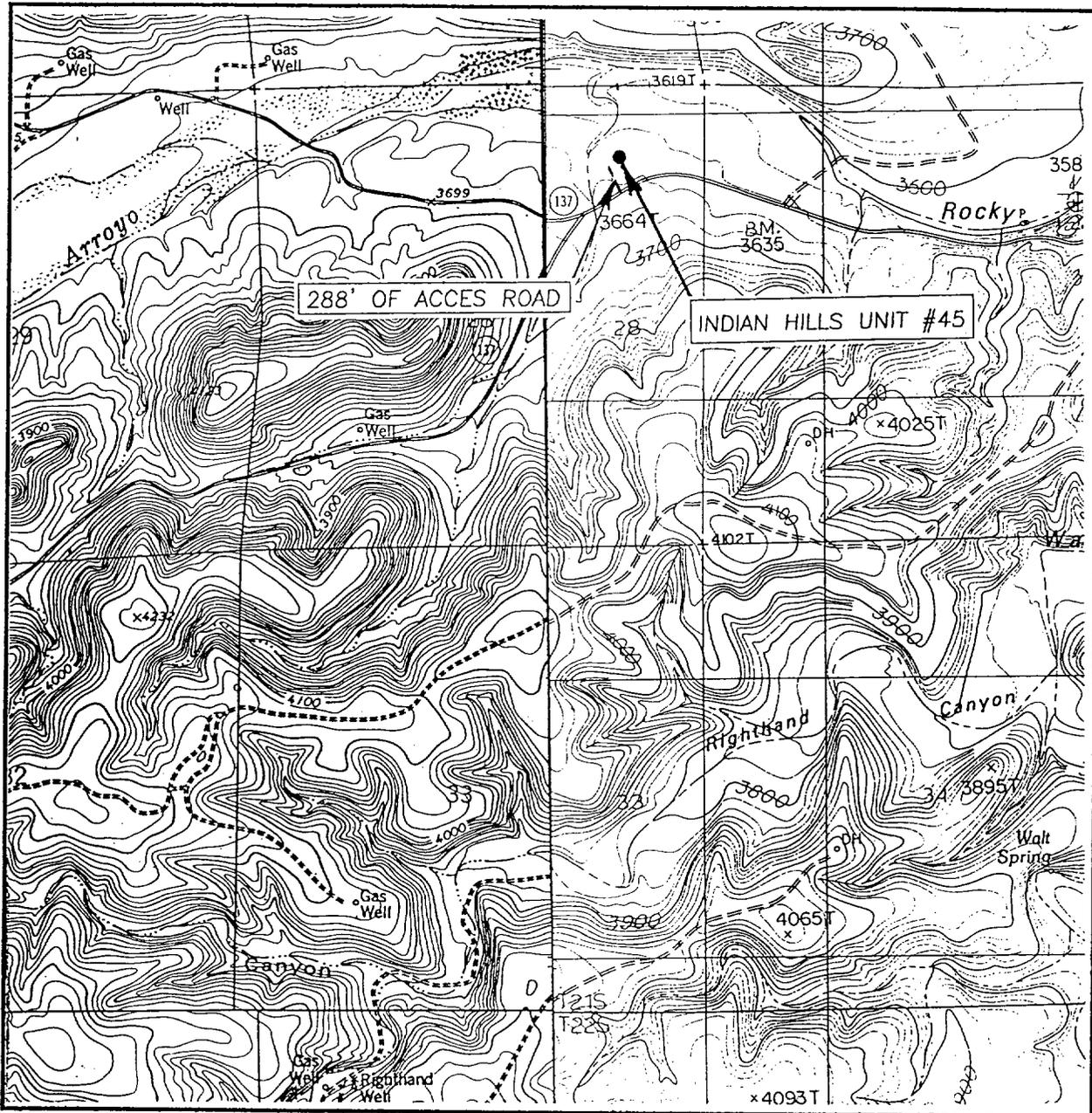
Date Surveyed \_\_\_\_\_ AWB

Signature & Seal of Professional Surveyor

*Ronald J. Eidson* 01/31/02  
02.11.0080

Certificate No. RONALD J. EIDSON 3239  
GARY EIDSON 12641

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 20'  
AZOTEA PEAK, N.M.

SEC. 28 TWP. 21-S RGE. 24-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY \_\_\_\_\_ EDDY

DESCRIPTION 806' FNL 1010' FEL

ELEVATION 3654'

OPERATOR MARATHON OIL COMPANY

LEASE INDIAN HILLS UNIT

U.S.G.S. TOPOGRAPHIC MAP  
AZOTEA PEAK, N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117



# Marathon Oil Company

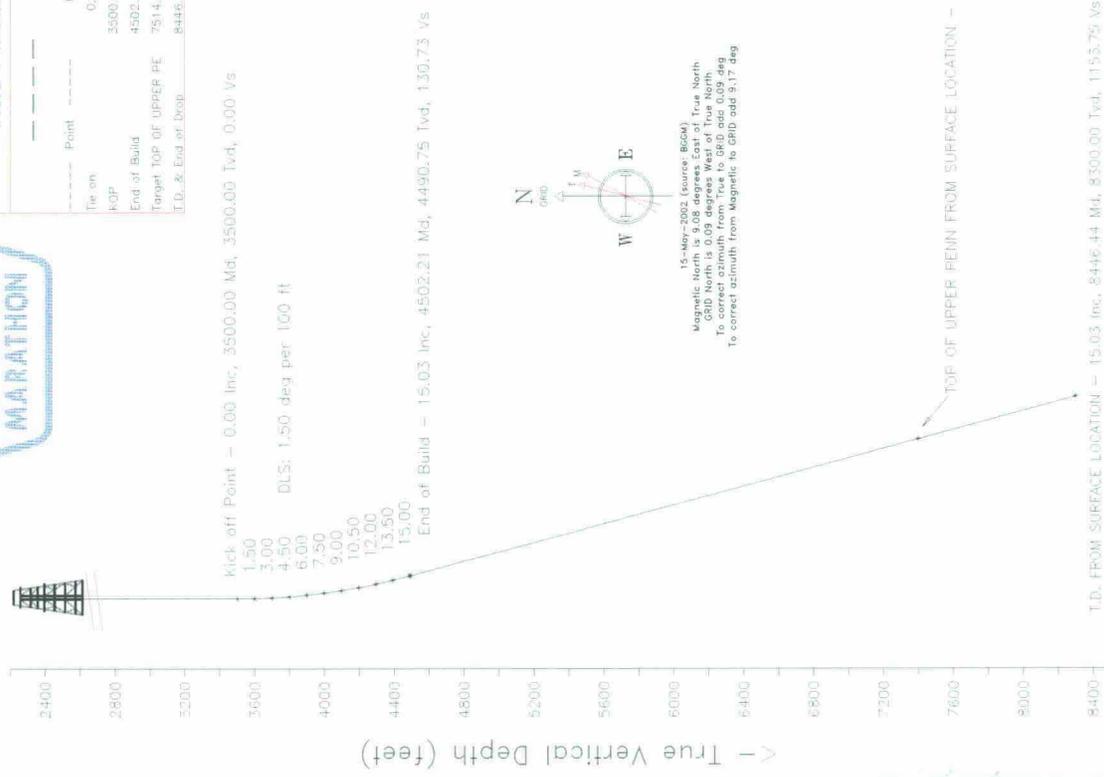
Structure : INDIAN HILLS UNIT 45 Slot : slot #1  
 Field : INDIAN BASIN Location : Eddy County New Mexico

WELL PROFILE DATA

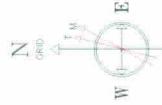
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KOP	3500.00	0.00	353.12	3500.00	0.00	0.00	0.00	0.00
End of Build	4502.21	15.03	353.12	4490.75	139.79	-15.65	130.73	1.50
Target TOP OF UPPER PE	7514.55	15.03	353.12	7400.00	905.50	-109.20	912.06	0.00
T.D. & End of Drop	8446.44	15.03	353.12	8300.00	1145.45	-138.13	1153.75	0.00

Created By: jellm  
 Date plotted: 31-May-2002  
 Plot Reference is PD 2DU RH  
 Coordinates are in feet reference slot #1  
 True Vertical Depths are reference rotary table  
 IH045  
 --- Baker Hughes INTEQ ---

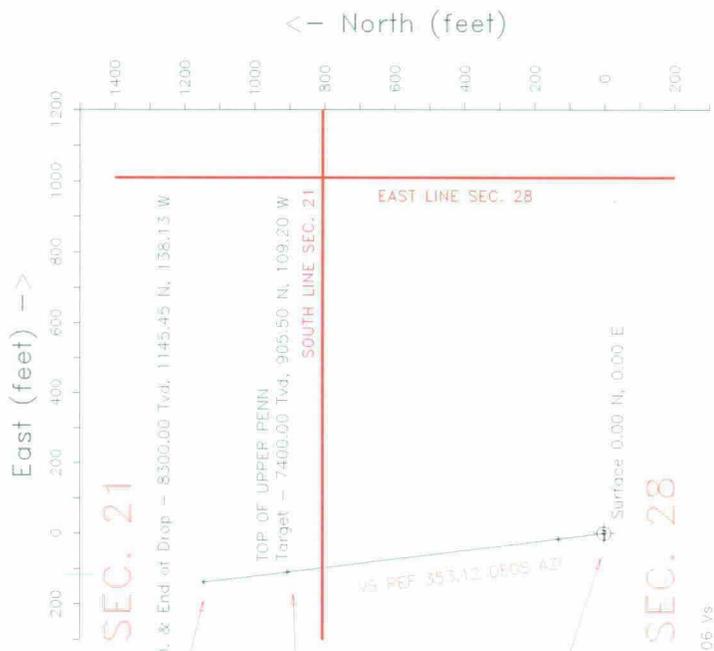
Approved By: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_



PBHL  
 1153.75' ON AZI 553.12 DEGS  
 FROM SURFACE LOCATION  
 M.D.: 8446.44' T.V.D.: 8300.00'  
 X = 449327.07 Y = 50609.85  
 339.45' FSL - SEC. 21  
 1148.73' FEL - SEC. 21



15-May-2002 (source BGGM) True North  
 GRID North is 0.09 degrees West of True North  
 To correct azimuth from True to GRID add 0.09 deg  
 To correct azimuth from Magnetic to GRID add 91.17 deg



STRUCTURE SET-UP REFERENCE

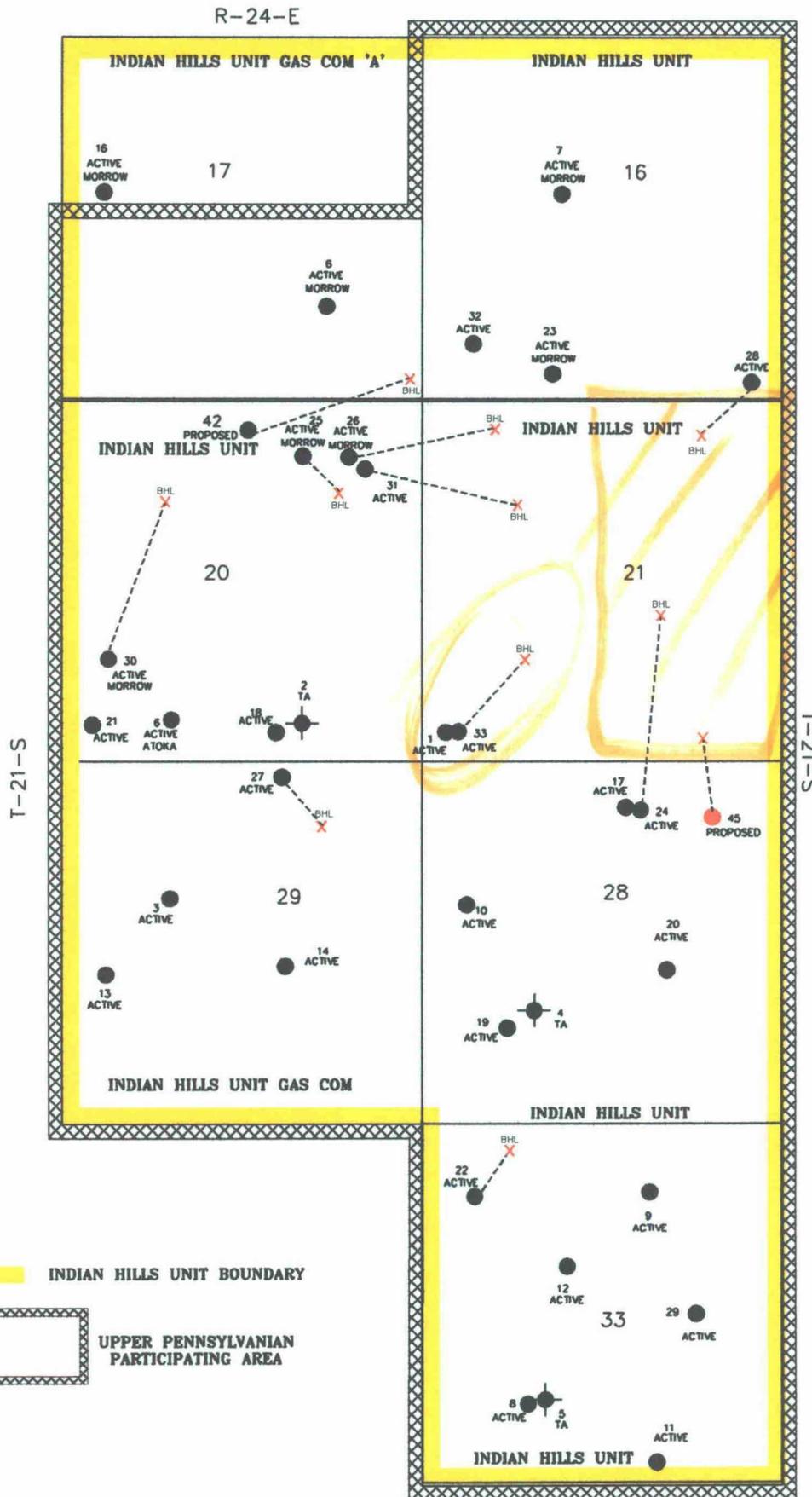
LAT :	32.2719.812	N
LONG:	104.2949.8	W
X=	449465.2	Y= 529464.4
PROJECTION: MERCATOR		
Mercator Zone: New Mexico East		
Spheroid Used: Clarke - 1866		
Data Source: BGGM		
Dip Angle:	60.46	deg
Field Strength:	4963.554	mT

T.D. FROM SURFACE LOCATION = 15.03 Inc, 8446.44 Md, 8300.00 Tvd, 1153.75 Vs



ILLEGIBLE

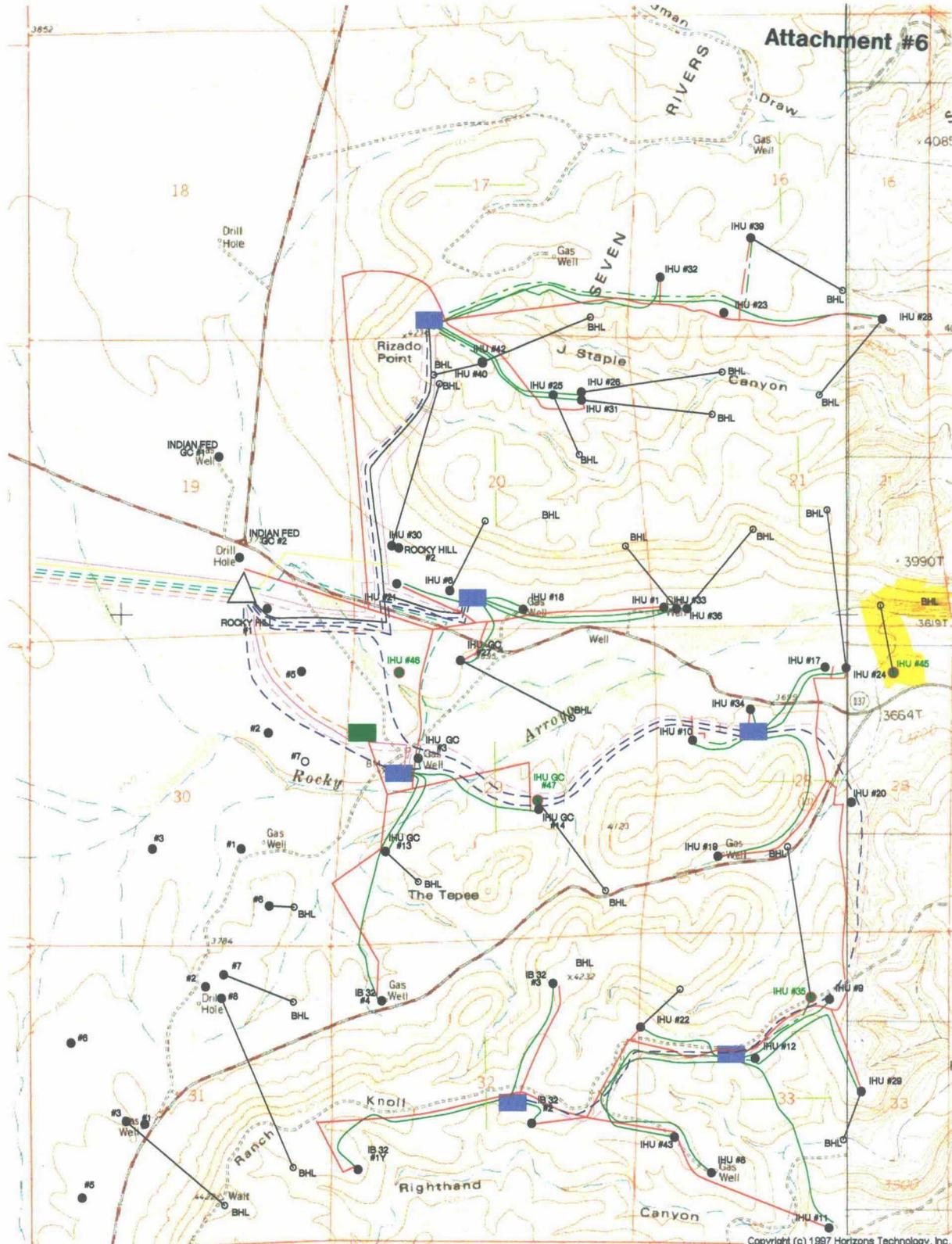
INDIAN HILLS UNIT  
 UPPER PENNSYLVANIAN PARTICIPATING AREA  
 EDDY COUNTY, NEW MEXICO



NOT TO SCALE

R-24-E

6/4/08  
 UPPENNPAL.DWG  
 BY: GINNY LARKE

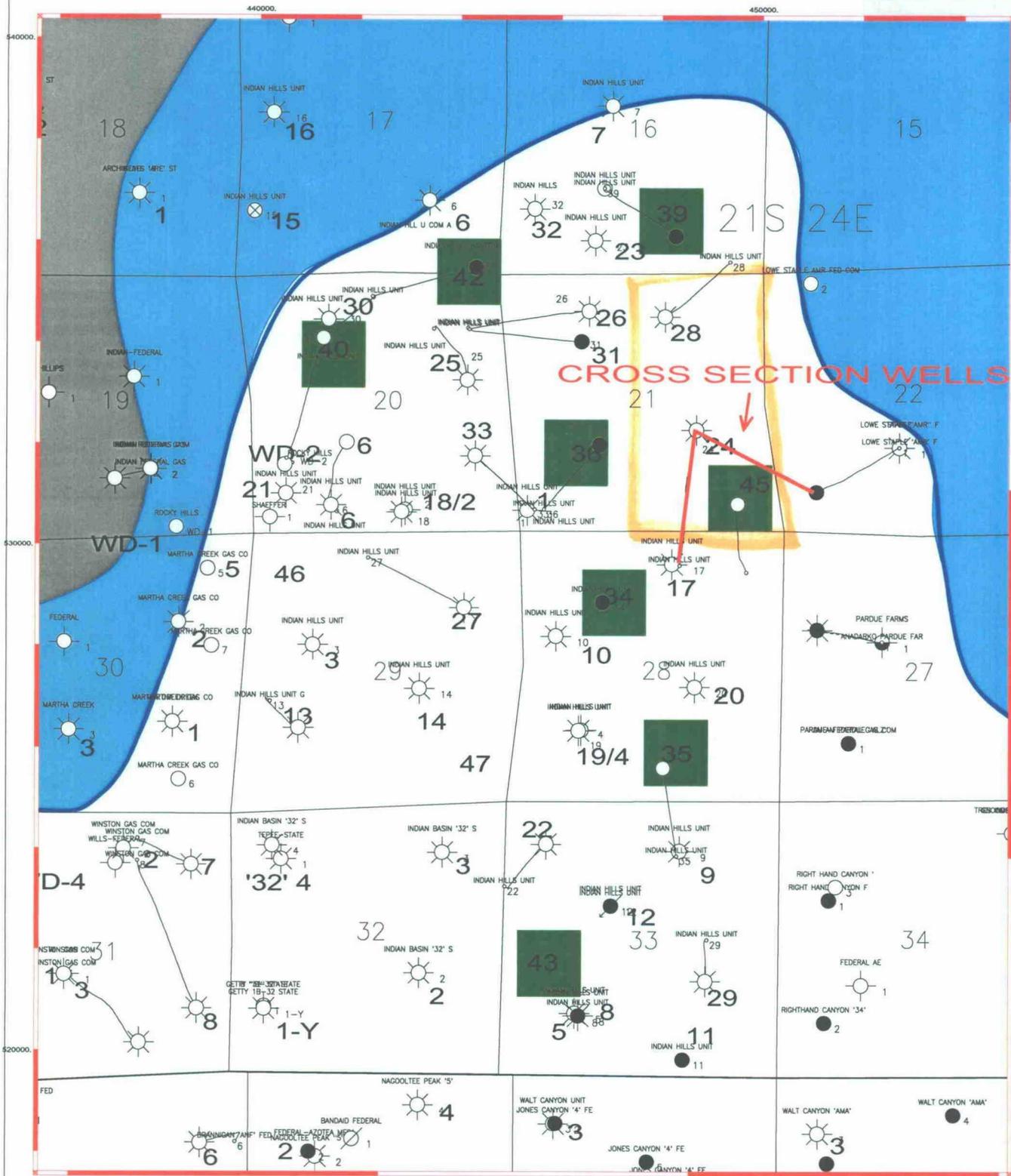


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- PRODUCING WELLS
- POTENTIAL LOCATIONS
- EXISTING DUAL FLOWLINES
- - - PROPOSED DUAL FLOWLINES
- EXISTING ELECTRICAL LINES
- - - PROPOSED ELECTRIC LINES
- - - FLUID GATHERING SYSTEM
- OIL GATHERING SYSTEM
- PRORATION UNIT ORIENTATION
- - - LOW PRESSURE GAS GATHERING SYSTEM
- - - HIGH PRESSURE GAS GATHERING SYSTEM
- - - COMPRESSOR FUEL LINE
- - - COMPRESSOR DISCHARGE LINE
- - - PROPOSED MORROW GAS GATHERING SYSTEM
- SWD INJECTION LINE
- == == ROADWAY
- △ CENTRAL FACILITY
- SATELLITE STATIONS
- COMPRESSOR STATION



MARATHON OIL COMPANY  
SOUTHERN BUSINESS UNIT  
EAST INDIAN BASIN  
EDDY COUNTY, NEW MEXICO



**LEGEND**

- PRIMARILY GAS TARGETS
- PRIMARILY OIL TARGETS
- LIMESTONE

**Marathon Oil Company**

**Indian Basin Field  
East Indian Basin  
Proposed Wells - 2002**

	1"=2000'	6/6/2002
Allen C. Brummert	Scale 1:34181.81	2002IHU.GPF

1



MARATHON OIL COMP  
 INDIAN HILLS UNIT 17  
 30015306610000  
 021.OS 024.0E 028

2



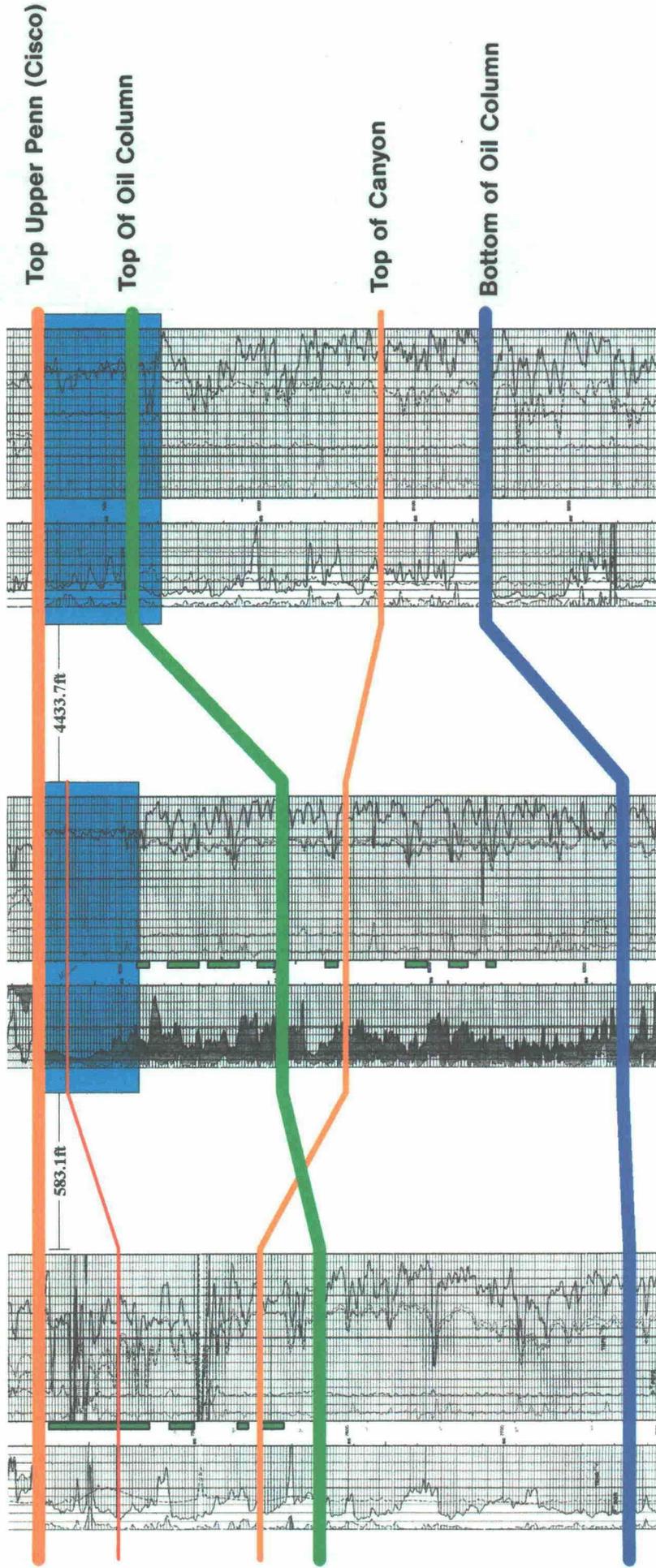
MARATHON OIL COMP  
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 021.OS 024.0E 028

3



YATES PETROLEUM  
 LOWE STAPLE 'AMF'  
 30015100400100  
 21.OS 24.0E 022

ATTACHMENT  
 #8  
 (X-SECTION)



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. 10748  
Order No. R-9922

APPLICATION OF YATES PETROLEUM  
CORPORATION FOR POOL CREATION,  
CLASSIFICATION OF THE NEW POOL  
AS AN ASSOCIATED POOL AND FOR  
SPECIAL POOL RULES, EDDY COUNTY,  
NEW MEXICO.

*See Also Order Nos.*

*R-9922-A*

*R-9922-B*

*R-9922-C*

*R-9922-D*

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 17, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of July, 1993, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Yates Petroleum Corporation, seeks the creation of a new associated pool for the production of oil and gas from the Upper Pennsylvanian formation comprising the W/2 of Section 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico.

(3) The applicant further seeks the promulgation of temporary special rules and regulations including 320-acre oil and gas spacing, designated well location requirements, a limit of no more than one well per quarter section, a special depth bracket allowable of 1400 barrels of oil per day per standard proration unit and an administrative procedure for approval of unorthodox well locations and non-standard spacing and proration units.

(4) At the time of the hearing the applicant requested that the portion of its request for an administrative procedure for obtaining approval for unorthodox well locations and non-standard spacing and proration units be dismissed.

**NOMENCLATURE**

**CASE No. 10748**

**Order No. R-9922**

**Page -2-**

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(5) Nearburg Producing Company (Nearburg), a leasehold operator in this area, appeared at the hearing in support of Yates' application with the exception of the request to limit the well density to one well per quarter section. In addition, Santa Fe Energy Operating Partners, L.P. and Marathon Oil Company appeared through counsel at the hearing but did not present evidence or testimony nor did they protest the application.

(6) On October 15, 1992 the applicant commenced re-entry operations on its Hickory "ALV" Federal Well No. 1 (previously the Pan American Petroleum Corporation I. T. Hollowell "A" USA No. 1) located 1650 feet from the North and West lines (Unit F) of Section 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico. The subject well has been completed in the Canyon formation through the perforated interval from approximately 8,139 feet to 8,259 feet.

(7) According to applicant's evidence and testimony, the Hickory "ALV" Federal Well No. 1 was tested in the Canyon formation on June 15, 1992 at a rate of 408 BOPD, 1,197 BWPD and 511 MCFGD.

(8) The subject well is located approximately 10 miles south of the South Dagger Draw-Upper Pennsylvanian Associated Pool and directly adjacent to the Indian Basin-Upper Pennsylvanian Gas Pool.

(9) The applicant's geologic evidence and testimony in this case indicates that:

a) the Hickory "ALV" Federal Well No. 1 is producing from the same Dolomite section, albeit structurally lower, being produced in the Indian Basin-Upper Pennsylvanian Gas Pool;

b) the Dolomite section in the Hickory "ALV" Federal Well No. 1 exhibits similar geologic characteristics to the Dolomite section being produced in the North and South Dagger Draw-Upper Pennsylvanian Pools;

c) the subject reservoir will likely ultimately be determined to be a separate "oil leg" of the Indian Basin-Upper Pennsylvanian Gas Pool or an extension of the South Dagger Draw-Upper Pennsylvanian Associated Pool.

(10) The engineering evidence and testimony in this case indicates that the oil being produced in the Hickory "ALV" Federal Well No. 1, having a gravity of approximately 42 degrees, is similar to that being produced in the North and South Dagger Draw-Upper Pennsylvanian Pools. The gravity of oil being produced in the Indian Basin-Upper Pennsylvanian Gas Pool ranges from 58-60 degrees.

**NOMENCLATURE**

**CASE No. 10748**

**Order No. R-9922**

**Page -3-**

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(11) The evidence currently available regarding the subject reservoir indicates that a new associated pool for the production of oil and gas from the Upper Pennsylvanian formation should be created and designated the Indian Basin-Upper Pennsylvanian Associated Pool, with horizontal limits comprising the W/2 of Section 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico.

(12) The applicant contends that the similarities between the subject reservoir and the North and South Dagger Draw-Upper Pennsylvanian Pools are sufficient to justify the promulgation of special rules and regulations similar to those currently governing these pools.

(13) The North Dagger Draw-Upper Pennsylvanian Pool is currently governed by Special Rules and Regulations as promulgated by Division Order No. R-4691, as amended, and Order No. R-5565, which require 160-acre spacing 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, an oil allowable of 700 barrels per day, and a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

(14) The South Dagger Draw-Upper Pennsylvanian Associated Pool is currently governed by Special Rules and Regulations as promulgated by Division Order No. R-5353, as amended, which require 320-acre oil or gas spacing 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, an oil allowable of 1400 barrels per day, and a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

(15) The Special Rules and Regulations for the North and South Dagger Draw-Upper Pennsylvanian Pools do not prohibit the drilling of more than one well on a standard proration unit.

(16) In support of its request to limit the well density to one well per quarter section, the applicant testified that the Hickory "ALV" Federal Well No. 1, based upon analogies to wells in the South Dagger Draw-Upper Pennsylvanian Associated Pool, should be capable of draining an area of approximately 80-100 acres.

(17) Without a limitation on well density, the South Dagger Draw-Upper Pennsylvanian Associated Pool has been developed on 40-acre well spacing, which, according to the applicant, is too dense for this type of reservoir.

**NOMENCLATURE**

**CASE No. 10748**

**Order No. R-9922**

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(18) Nearburg requested that the proposed pool rules contain a rule similar to Rule No. 22 of the Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool which states that all or part of the 1400 BOPD allowable may be produced by a single well or by two or more wells on a standard proration unit.

(19) Nearburg has the opportunity, during the period when temporary special rules and regulations are in place for the subject reservoir, to acquire drainage data and reopen this case in order to present evidence and testimony to support its request.

(20) In the absence of compelling evidence to support denser well spacing, and in order to prevent the drilling of unnecessary wells, the Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool should provide for 320-acre well spacing with no more than two wells per standard unit.

(21) The applicant requested an oil allowable of 1400 barrels per day per standard proration unit and a gas-oil ratio limitation of 2,000 cubic feet of gas per barrel of oil. Applicant's requested oil allowable is based upon:

a) a similar oil allowable currently in effect for both the North and South Dagger Draw-Upper Pennsylvanian Pools, and,

b) a gas well in the subject reservoir being able to effectively compete with gas wells in the Indian Basin-Upper Pennsylvanian Gas Pool, whose gas allowable has stabilized, according to the applicant, at approximately 5.5 MMCFGD.

(22) The oil allowable currently in effect for the North and South Dagger Draw-Upper Pennsylvanian Pools was established by the Division, at least in part, in order to provide an incentive to operators to drill additional wells. In addition, there is no evidence at the current time to indicate that the proposed allowable will not cause excessive waste of reservoir energy, thereby resulting in decreased ultimate oil recovery.

(23) The Indian Basin-Upper Pennsylvanian Associated Pool should be assigned an oil allowable equal to the depth bracket allowable of 470 barrels of oil per day per 160-acre tract, or 940 BOPD.

(24) Temporary Special Rules and Regulations should be promulgated for the Indian Basin-Upper Pennsylvanian Associated Pool for a period of eighteen months. These rules should provide for 320-acre oil and gas spacing and proration units, a limitation of one well per quarter section, designated well location requirements, an oil allowable of 940 barrels of oil per day per standard proration unit and a limiting gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

**NOMENCLATURE**

**CASE No. 10748**

**Order No. R-9922**

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(25) This case should be reopened at an examiner hearing in January, 1995 at which time the operators in the subject pool should be prepared to appear and present evidence and testimony regarding the nature of the subject reservoir, the appropriate well spacing, and an appropriate oil allowable.

**IT IS THEREFORE ORDERED THAT:**

(1) A new associated pool for the production of oil and gas from the Upper Pennsylvanian formation is hereby created and designated the Indian Basin-Upper Pennsylvanian Associated Pool with horizontal limits comprising the W/2 of Section 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico.

(2) The Indian Basin-Upper Pennsylvanian Associated Pool is hereby classified as an associated oil and gas pool and shall be operated in accordance with the General Rules and Regulations for the Associated Oil and Gas Pools of Northwest and Southeast New Mexico unless these general rules are in conflict with the Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool hereinafter promulgated in which case the provisions of the special rules and regulations shall apply.

(3) Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS  
FOR THE  
INDIAN BASIN-UPPER PENNSYLVANIAN ASSOCIATED POOL**

**RULE 2.** (a) A standard oil proration unit shall comprise 320 acres. A standard gas proration unit shall comprise 320 acres.

**RULE 2.** (b) Each well shall 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. No more than one well per quarter section shall be permitted on a proration unit.

**RULE 22.** The special depth bracket allowable for a 320-acre proration unit shall be 940 barrels of oil per day. All or any part of the allowable may be produced by a single well or by two wells on the unit. However, total oil allowable assigned to a 320-acre unit shall not exceed 940 barrels per day.

**NOMENCLATURE**

**CASE No. 10748**

**Order No. R-9922**

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**IT IS FURTHER ORDERED THAT:**

(4) The location of all wells presently drilling to or completed in the Indian Basin-Upper Pennsylvanian Associated Pool or in the Upper Pennsylvanian formation within one mile thereof 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 30 days from the date of this order.

(5) Pursuant to Paragraph A of Section 70-2-18, N.M.S.A. 1978 Comp., contained in Laws of 1969, Chapter 271, existing oil and gas wells in the Indian Basin-Upper Pennsylvanian Associated Pool shall have dedicated thereto 320 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

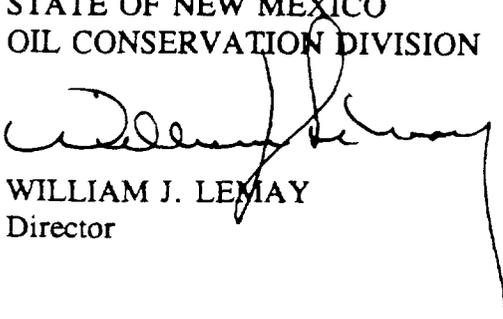
Failure to file new Forms C-102 with the Division dedicating 320 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable until a non-standard spacing unit has been approved and, subject to said 60-day limitation, each well presently drilling to or completed in the Indian Basin-Upper Pennsylvanian Associated Pool or in its corresponding vertical limits, or within one mile thereof, shall receive no more than one-fourth of a standard allowable for said pool.

(6) This case shall be reopened at an examiner hearing in January, 1995, at which time the operators in the subject pool may appear and show cause why the Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool promulgated herein should not be rescinded.

(7) Jurisdiction is hereby 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

  
WILLIAM J. LEMAY  
Director

S E A L

See Also Order Nos. R-9922  
R-9922-B  
R-9922-C  
R-9922-D

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

IN THE MATTER OF CASE NO. 10748 BEING REOPENED UPON APPLICATION OF YATES PETROLEUM CORPORATION TO AMEND THE SPACING REQUIREMENTS FOR THE INDIAN BASIN-UPPER PENNSYLVANIAN ASSOCIATED POOL, ESTABLISHED BY ORDER NO. R-9922, EDDY COUNTY, NEW MEXICO.

CASE NO. 10748  
ORDER NO. R-9922-A

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on December 16, 1993, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this 22nd day of December, 1993, the Division Director, having considered the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

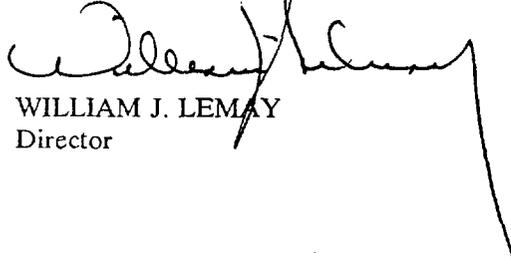
- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) Yates Petroleum Corporation made application to reopen Case No. 10748 to amend the spacing requirements for the Indian Basin-Upper Pennsylvanian Associated Pool established by Order No. R-9922, Eddy County, New Mexico.
- (3) By letter dated December 10, 1993, the applicant requested this case be dismissed.
- (4) The applicant's request for dismissal should be granted.

IT IS THEREFORE ORDERED THAT:

Case No. 10748 is hereby dismissed.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

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:**

**CASE NO. 10748 (Reopened)  
Order No. R-9922-B**

**IN THE MATTER OF CASE NO. 10748  
BEING REOPENED PURSUANT TO THE  
PROVISIONS OF DIVISION ORDER NO.  
R-9922, WHICH ORDER PROMULGATED  
TEMPORARY SPECIAL RULES AND  
REGULATIONS FOR THE INDIAN BASIN-  
UPPER PENNSYLVANIAN ASSOCIATED  
POOL, EDDY COUNTY, NEW MEXICO.**

*See Also Order Nos.  
R-9922  
R-9922-A  
R-9922-C  
R-9922-D*

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on February 2, 1995, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of February, 1995, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) By Order No. R-9922 issued in Case No. 10748 on July 6, 1993, the Division, upon application of Yates Petroleum Corporation, created the Indian Basin-Upper Pennsylvanian Associated Pool in Section 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico, and promulgated Temporary Special Rules and Regulations for said pool including the establishment of standard 320-acre oil or gas spacing and proration units, designated well locations, and a special depth bracket allowable of 940 barrels of oil per day.

(3) Pursuant to the provisions of Order No. R-9922, this case was reopened to allow the operators in the subject pool to appear and present evidence and testimony to show cause why the Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool should not be rescinded and the pool developed on statewide rules and regulations.

(4) Yates Petroleum Corporation, Marathon Oil Company, Nearburg Producing Company and Santa Fe Energy Operating Partners, L.P. appeared at the hearing through legal counsel.

(5) Yates Petroleum Corporation requested at the hearing that the Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool remain in effect for an additional twelve month period.

(6) According to Yates' statement, the conductance of an environmental audit during the past eighteen months has precluded developmental drilling within the subject pool.

(7) All operators represented at the hearing were in agreement with Yates' request.

(8) Approval of Yates' request will allow the operators in the subject pool additional time to gather reservoir data pertinent to this case.

(9) No other operator and/or interest owner appeared at the hearing in opposition to Yates' request.

(10) The Temporary Special Rules and Regulations for the Indian Basin- Upper Pennsylvanian Associated Pool should remain in effect for an additional twelve month period.

(11) This case should be reopened at an Examiner hearing in January, 1996, at which time the operators in the subject pool should be prepared to appear and show cause why the Temporary Special Rules and Regulations for the Indian Basin- Upper Pennsylvanian Associated Pool should not be rescinded and the pool developed on statewide rules and regulations.

**IT IS THEREFORE ORDERED THAT:**

(1) The Temporary Special Rules and Regulations for the Indian Basin- Upper Pennsylvanian Associated Pool are hereby continued in full force and effect for an additional twelve month period.

*Case No. 10748 (Reopened)*

*Order No. R-9922-B*

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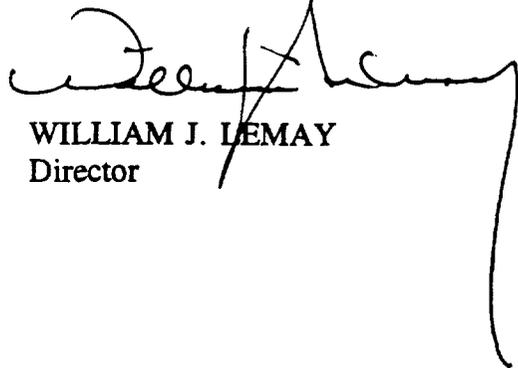
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(2) This case shall be reopened at an Examiner hearing in January, 1996, at which time the operators in the subject pool shall be prepared to appear and show cause why the Temporary Special Rules and Regulations for the Indian Basin- Upper Pennsylvanian Associated Pool should not be rescinded and the pool developed on statewide rules and regulations.

(3) Jurisdiction is hereby 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



WILLIAM J. LEMAY  
Director

S E A L

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:

*See Also Order Nos.*

*R-9922*

*R-9922-A*

*R-9922-B*

*R-9922-D*

CASE NO. 10748 (Reopened)

CASE NO. 11484

Order No. R-9922-C

IN THE MATTER OF CASE NO. 10748 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-9922-B, WHICH ORDER CONTINUED IN EFFECT THE TEMPORARY SPECIAL RULES AND REGULATIONS FOR THE INDIAN BASIN-UPPER PENNSYLVANIAN ASSOCIATED POOL AS PROMULGATED BY DIVISION ORDER NO. R-9922, AS AMENDED, EDDY COUNTY, NEW MEXICO.

APPLICATION OF YATES PETROLEUM CORPORATION TO AMEND THE SPECIAL RULES AND REGULATIONS FOR THE INDIAN BASIN-UPPER PENNSYLVANIAN ASSOCIATED POOL, EDDY COUNTY, NEW MEXICO.

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on March 21, 1996, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 14th day of May, 1996, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Division Case Nos. 10748 (Reopened) and Case No. 11484 were consolidated at the time of the hearing for the purpose of testimony, and inasmuch as both cases concern the Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool, one order should be entered for both cases.

CASE NO. 10748 (Reopened)

CASE NO. 11484

Order No. R-9922-C

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(3) By Order No. R-9922 issued in Case No. 10748 on July 6, 1993, the Division, upon application of Yates Petroleum Corporation (Yates), created the Indian Basin-Upper Pennsylvanian Associated Pool in Section 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico, and promulgated Temporary Special Rules and Regulations for said pool including the establishment of standard 320-acre oil or gas spacing and proration units, designated well locations, and a special depth bracket allowable of 940 barrels of oil per day.

(4) Pursuant to the provisions of Order No. R-9922, Case No. 10748 was reopened and heard in February, 1995, to consider permanently adopting the Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool. At the request of Yates and for good cause shown, the subject temporary rules were continued in full force and effect for an additional twelve month period.

(5) Pursuant to the provisions of Order No. R-9922-B, this case is being reopened at the present time to allow the operators in the subject pool to appear and present evidence and testimony to show cause why the Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool should not be rescinded and the pool developed on statewide rules and regulations.

(6) The applicant in Case No. 11484, Yates Petroleum Corporation, seeks to amend the Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool whereby:

- a) no more than one well would be allowed to be drilled per 80 acre tract;
- b) the simultaneous dedication of acreage to both oil and gas wells would be allowed;
- c) the gas-oil ratio limitation for the pool would be increased from 2,000 cubic feet of gas per barrel of oil to 10,000 cubic feet of gas per barrel of oil; and,
- d) the oil allowable for the pool would be increased from 940 barrels of oil per day to 1,400 barrels of oil per day.

(7) Yates Petroleum Corporation appeared and presented technical evidence and testimony in support of adopting amended and permanent rules for the Indian Basin-Upper Pennsylvanian Associated Pool.

CASE NO. 10748 (Reopened)

CASE NO. 11484

Order No. R-9922-C

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(8) Marathon Oil Company and Santa Fe Energy Resources Inc., both operators in the Indian Basin-Upper Pennsylvanian Associated Pool, appeared through legal counsel at the hearing in support of adopting permanent rules for the pool and in support of Yates' proposed pool rule amendments.

(9) The Indian Basin-Upper Pennsylvanian Associated Pool currently comprises all or portions of Sections 27, 33 and 34, Township 21 South, Range 24 East, and all or portions of Sections 2, 3, 4, 5, 7, 8, 9, 10, 11, 16 and 17, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico.

(10) According to the latest Division Monthly Statistical Report, there are twenty-one wells producing from the Indian Basin-Upper Pennsylvanian Associated Pool operated by five different companies. The pool rules currently in effect for the Indian Basin-Upper Pennsylvanian Associated Pool are summarized as follows:

<u>SPACING</u>	<u>ALLOWABLE</u>	<u>SIM. DEDICATION</u>		<u>DRILLING DENSITY</u>
		<u>POOL GOR</u>	<u>ALLOWED</u>	
320 Acres/Oil	940 BOPD	2,000:1	No	1 Well/160 acres
320 Acres/Gas	1.88 MMCFGD			

(11) The geologic evidence presented at the hearing in this matter and in numerous prior cases presented before the Division indicates that the Indian Basin-Upper Pennsylvanian Associated Pool is a small portion of an extensive Cisco-Canyon reservoir which encompasses the North Dagger Draw-Upper Pennsylvanian Pool, the South Dagger Draw-Upper Pennsylvanian Associated Pool, and the Indian Basin-Upper Pennsylvanian Gas Pool. This extensive reservoir comprises portions of Townships 19, 20, 20 1/2, 21 and 22 and Ranges 23, 24 and 25.

(12) The North Dagger Draw-Upper Pennsylvanian Pool, South Dagger Draw-Upper Pennsylvanian Associated Pool and the Indian Basin-Upper Pennsylvanian Gas Pool are all currently governed by permanent special rules and regulations summarized as follows:

CASE NO. 10748 (Reopened)

CASE NO. 11484

Order No. R-9922-C

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<u>POOL NAME</u>	<u>OIL/GAS/ ASSOCIATED</u>	<u>SPACING</u>	<u>ALLOWABLE</u>	<u>POOL GOR</u>	<u>SIM. DEDICATION ALLOWED</u>
North Dagger Draw-Upper Pennsylvanian	Oil	160 acres	700 BOPD 7.0 MMCFGD	10,000:1	No/NA
South Dagger Draw-Upper Pennsylvanian Associated	Associated	320 acres/ Oil 320 acres/ Gas	1,400 BOPD 9.8 MMCFGD	7,000:1	Yes
Indian Basin- Upper Pennsylvanian	Gas	640 acres	Prorated Gas	NA	NA

(13) In support of its request to increase the oil allowable and gas-oil ratio limitation and to include a provision whereby simultaneous dedication of acreage to both oil and gas wells is allowed, Yates presented geologic evidence which indicates that:

- a) the geologic properties (i.e. permeability, porosity, etc.) of the South Dagger Draw-Upper Pennsylvanian Associated Pool closely resemble those of the Indian Basin-Upper Pennsylvanian Associated Pool;
- b) extension of the pool boundaries for the South Dagger Draw-Upper Pennsylvanian Associated Pool and the Indian Basin-Upper Pennsylvanian Associated Pool through development drilling will likely demonstrate that the pools represent a single common source of supply; and,
- c) both the South Dagger Draw-Upper Pennsylvanian Associated Pool and the Indian Basin-Upper Pennsylvanian Associated Pool are located in an area of the Cisco-Canyon reservoir which is a transition zone between the oil producing portion of the reservoir and the gas cap, represented by the Indian Basin-Upper Pennsylvanian Gas Pool.

(14) The geologic evidence presented indicates that the Indian Basin-Upper Pennsylvanian Associated Pool is properly classified as an "associated" pool.

*CASE NO. 10748 (Reopened)*

*CASE NO. 11484*

*Order No. R-9922-C*

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(15) Previous cases presented before the Division have shown that oil allowables of 1,400 barrels per day per 320-acre proration unit should not have adverse effects on the reservoir or decrease ultimate recovery, therefore, the oil allowable for the Indian Basin-Upper Pennsylvanian Associated Pool should be increased as proposed by the applicant to be consistent with the North Dagger Draw-Upper Pennsylvanian Pool and the South Dagger Draw-Upper Pennsylvanian Associated Pool.

(16) The reservoir conditions and correlative rights issues which prompted the deletion of Rule No. 5 (b) of the General Rules and Regulations for the Associated Oil and Gas Pools of Northwest and Southeast New Mexico for the South Dagger Draw-Upper Pennsylvanian Associated Pool, thereby allowing the simultaneous dedication of acreage to both oil and gas wells, also exist within the Indian Basin-Upper Pennsylvanian Associated Pool, therefore, the simultaneous dedication of acreage to both oil and gas wells in the Indian Basin-Upper Pennsylvanian Associated Pool should be allowed.

(17) In support of its request to amend the current pool rules so as to allow the drilling of a well on each 80-acre tract within a standard proration unit, the applicant presented drainage data from existing wells within the pool. The information presented indicates that the smallest drainage area calculated was approximately 60 acres, and that the average drainage area within the pool is approximately 112 acres.

(18) The evidence presented indicates that even though both the North Dagger Draw-Upper Pennsylvanian Pool and the South Dagger Draw-Upper Pennsylvanian Associated Pool do not preclude the drilling of a well on each 40-acre tract within a standard proration unit, and that each of these pools has effectively been developed on 40-acre spacing, a more appropriate drilling density for the Indian Basin-Upper Pennsylvanian Associated Pool is one well per 80-acre tract.

(19) The applicant did not present sufficient evidence to justify the need for establishing a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil, however, the limiting gas-oil ratio for the Indian Basin-Upper Pennsylvanian Associated Pool should be increased to 7,000:1 in order to be consistent with the limiting GOR currently in effect for the South Dagger Draw-Upper Pennsylvanian Associated Pool.

(20) No other operator and/or interest owner appeared and presented evidence in opposition to Yates' proposed pool rule amendments or to adopting permanent rules for the subject pool.

CASE NO. 10748 (Reopened)

CASE NO. 11484

Order No. R-9922-C

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(21) The establishment of permanent Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool, including certain amendments proposed by Yates Petroleum Corporation, will allow the "equivalent" development of the Cisco-Canyon reservoir, will provide the oil and gas allowable incentive necessary for further development and delineation of the pool, will prevent the economic loss caused by the drilling of an excessive number of wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise prevent waste and protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The Temporary Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool, as promulgated by Division Order No. R-9922, as amended, are hereby amended as follows and continued in full force and effect until further order of the Division.

**SPECIAL RULES AND REGULATIONS  
FOR THE  
INDIAN BASIN-UPPER PENNSYLVANIAN ASSOCIATED POOL**

**RULE 2.** (a) A standard oil proration unit shall comprise 320 acres. A standard gas proration unit shall comprise 320 acres.

**RULE 2.** (b) Each well shall 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. No more than one well per 80-acre tract shall be drilled or produced on a standard proration unit.

**RULE 6.** The limiting gas-oil ratio shall be 7,000 cubic feet of gas per barrel of oil.

**RULE 22.** The special depth bracket allowable for a 320-acre proration unit shall be 1,400 barrels of oil per day. All or any part of the allowable may be produced by a single well or by two or more wells on the unit.

CASE NO. 10748 (Reopened)

CASE NO. 11484

Order No. R-9922-C

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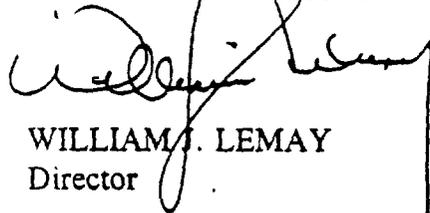
**IT IS FURTHER ORDERED THAT:**

(2) The application of Yates Petroleum Corporation in Case No. 11484 to delete Rule No. 5 (b) of the General Rules and Regulations for the Associated Oil and Gas Pools of Northwest and Southeast New Mexico, as promulgated by Division Order No. R-5353, as amended, as it pertains to the Indian Basin-Upper Pennsylvanian Associated Pool, thereby allowing the simultaneous dedication of acreage to both oil and gas wells, is hereby approved.

(3) Jurisdiction is hereby 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



WILLIAM J. LEMAY  
Director

S E A L

*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, GPJ'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.

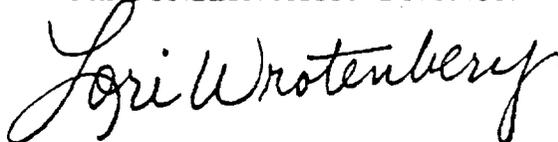
(8) Pursuant to Paragraph A of Section 70-2-18, NMSA (1978), contained in Chapter 271, Laws of 1969, existing wells in the Indian Basin-Upper Pennsylvanian Associated Pool within this expansion area shall have dedicated thereto 320 acres; or, pursuant to Paragraph C of Section 70-2-18, existing wells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

# WALTER DISEASE



800-351-1417



Subject	Page No.	Of
File	By	Date

80 ACRE DRAINAGE RADIUS:  
RADIUS = 1054'

BHL OF IHU 24:  
≈ 1650' FSL + 1850' FEL

YATES LOWE STABLE  
BHL ≈ 900' FSL + 1100' FEL

PROPOSED BHL @ TOP UPPER PENNS  
100' FSL + 1100' FEL  
370' ELL

ZONE OF INFRINGEMENT

DISTANCE BETWEEN 660' SETBACK + FOUR SECTION CORNER = 933'

SECTION 21  
SECTION 28

SECTION 22  
SECTION 27

933' FEL

Identify the patients for **NORVASC**

IHU 24 SHL:  
687' FNL + 2093' FEL

INDIAN HILLS UNIT #45  
\* PROPOSED \*  
SHL: 806' FNL + 1010' FEL

3:30 -  
4:10  
Walter

Walter on 5-20-02

BHL ≈ 2100' FNL + 700' FNL  
YATES ANADARKO FURDUE #:

660' SETBACK

**Marathon Oil Company**

# Fax

To: Mr. Michael Stegner From: Steve Millican  
 Fax: (505) 476-3471 Pages: 2, including this cover sheet  
 Phone: (505) 476-3465 Date: 5/08/02  
 Re: PROPOSED INDIAN HILLS UNIT #45 CC:

Urgent  For Review  Please Comment  Please Reply  Please Recycle

Comments:

Mr. Stegner:

I AM FAXING THIS TO YOU FOR INFORMATIONAL PURPOSES. I WILL TRY & PHONE YOU SHORTLY TO DISCUSS.

THANK YOU VERY MUCH,

Steve

(915) 687-8306

From...  
 Marathon Oil Company  
 Indian Basin Asset Team  
 125 W. Missouri  
 Midland, TX 79701  
 Phone: 915/687-8322  
 Fax: 915/687-8305



Subject	Page No.	Of
File	By	Date

80 Acre Drainage Radius:  
 Radius = 1054'

BHL of 1HU24:  
 ≈ 1650' FSL + 1850' FEL

YATES LOWE  
 STAPLE

BHL ≈ 700' FSL + 1100' FEL

Proposed BHL @ TOP UPPER PENN  
 100' FSL + 1100' FEL

DISTANCE BETWEEN 660' SETBACKS:  
 1867'

SECTION 21  
 SECTION 28

SECTION 22  
 SECTION 27

1086'

1071' FEL

1HU24 SHL:  
 687' FSL + 2097' FEL

1HU17:  
 660' FSL + 2200' FEL  
 (STRAIGHT HOLE)

INDIAN HILLS UNIT #45  
 \* PROPOSED \*  
 SHL: 806' FSL + 1010' FEL

BHL ≈ 2100' FSL + 700' FSL  
 YATES ANADARKO PLANT #1

660'  
 SETBACK

**Marathon Oil Company**

# Fax

To: *MR. MICHAEL STOGNER* From: *STEVE MILLICAN*  
 Fax: *(505) 476-3471* Pages: *2*, including this cover sheet  
 Phone: *(505) 476-3465* Date: *5/08/02*  
 Re: *PROPOSED INDIAN HILLS UNIT #45 CC:*

Urgent  For Review  Please Comment  Please Reply  Please Recycle

Comments:

*MR. STOGNER:*

*I AM FAXING THIS TO YOU FOR INFORMATIONAL  
 PURPOSES. I WILL TRY & PHONE YOU SHORTLY  
 TO DISCUSS.*

*THANK YOU VERY MUCH,*

*STEVE*

*(915) 687-8306*

*Andrew Berwin  
 Associate*

From....  
 Marathon Oil Company  
 Indian Basin Asset Team  
 125 W. Missouri  
 Midland, TX 79701  
 Phone: 915/687-8322  
 Fax: 915/687-8305



Subject	Page No.	Of
File	By	Date

80 ACRE DRAINAGE BASIN:  
 RADIUS = 1054'

RHL of IHU 24:  
 ≈ 1650' FSL + 1850' FEL

YATES LOWE  
 STABLE  
 BHL ≈ 900' FSL + 1100' FEL

Proposed BHL @ TOP UPPER PEAK  
 100' FSL + 1100' FEL

DISTANCE BETWEEN 660' SETBACKS:  
 1867'

SECTION 21  
 SECTION 28

SECTION 22  
 SECTION 27

1086'

1867'

IHU 24 SHL:  
 IHU 17: 687' FNL + 2073' FEL  
 660' FNL  
 + 2200' FEL  
 (STRAIGHT HOLE)

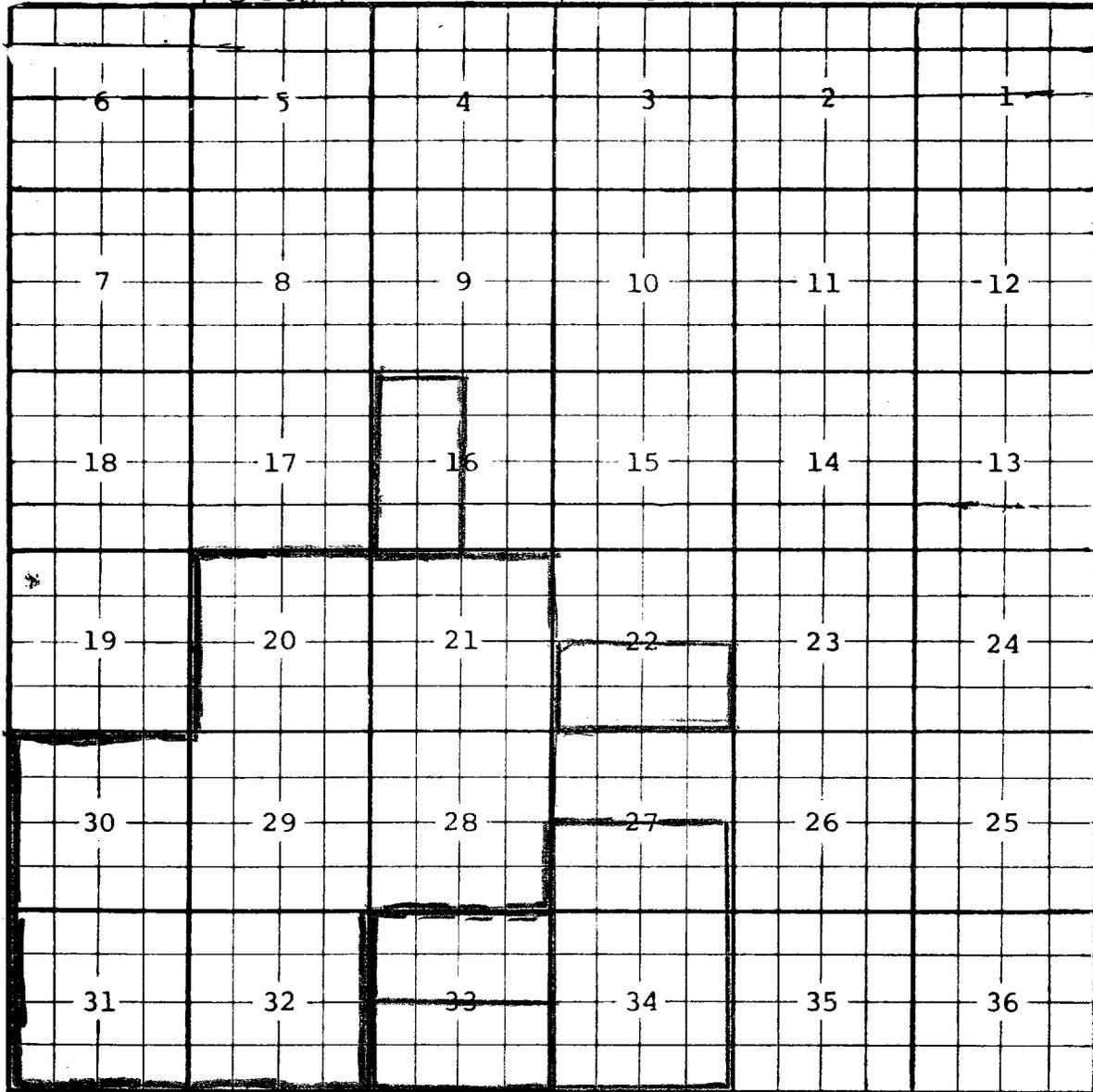
Indiana Hills Unit #45  
 \* PROPOSED \*  
 SHL: 806' FNL + 1010' FEL

BHL ≈ 2100' FNL + 700' FNL  
 YATES A. J. PARKO PURDUE #1

← 660' SETBACK →

county Eddy Pool Indian Basin-Upper Pennsylvanian  
Associated

TOWNSHIP 21 South Range 24 East NMPM



Ext:  $\frac{1}{2}$  Sec. 27, All Sec. 34 (R-9963, 9-20-93)

Ext:  $\frac{1}{2}$  Sec. 33 (R-10518, 10-20-95) Ext:  $\frac{1}{2}$  Sec. 33 (R-10664, 9-16-96)

Ext: All Secs 20, 21, 28, 29, 30, 31, 32 (R-9922-D, 12-7-98)

Ext:  $\frac{1}{2}$  Sec. 16 (R-11678, 10-23-01) Ext:  $\frac{1}{2}$  Sec. 22 (R-11729, 2-22-03)

CMD : ONGARD  
 OG5SECT INQUIRE LAND BY SECTION

06/17/02 16:19:42  
 OGOMES -TQPY  
 PAGE NO: 1

Sec : 21 Twp : 21S Rng : 24E Section Type : NORMAL

D	C	2	1
40.00	40.00	38.26	38.29
Federal owned U	Federal owned U	Federal owned U	Federal owned U
E	F	3	4
40.00	40.00	36.69	36.72
Federal owned U	Federal owned U	Federal owned U	Federal owned U

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

*14996*

*298.02*

