



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

April 28, 1997

Marathon Oil Company  
P. O. Box 552  
Midland, Texas 79702-0552  
Attention: Walter J. Dueease

*Administrative Order DD-169(SD)*

Dear Mr. Dueease:

Reference is made to your application dated April 1, 1997 for authorization to re-enter and recomplete the plugged and abandoned Penrock Oil Corporation Indian Federal Gas Com Well No. 2 (API No. 30-015-10971) by side tracking off of the vertical portion of the wellbore and directionally drill to a pre-determined bottom-hole gas well location in order to further develop the Indian Basin-Morrow Gas Pool underlying its existing 663.30-acre non-standard gas spacing and proration unit ("GPU") comprising all of irregular Section 19, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico.

**The Division Director Finds That:**

- (1) The subject application submitted by Marathon Oil Company ("Marathon") as operator has been duly filed under the provisions of Rule 111.D and E of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (2) The Penrock Oil Corporation Indian Federal Gas Com Well No. 2 was originally drilled in 1966 to a depth of 7,540 feet at a standard gas well location 1650 feet from the South and East lines (Lot 6/Unit J) of said Section 19 to test the Indian Basin-Upper Pennsylvanian Gas Pool; said well tested dry and was subsequently plugged and abandoned;
- (3) The Indian Basin-Morrow Gas Pool is currently subject to Division Order No. R-8170-O-1/R-2441-B, as amended, "*Special Rules and Regulations For The Indian Basin-Morrow Gas Pool*", which includes provisions for 640-acre gas spacing and proration units and well location requirements whereby the initial well drilled on a GPU shall be located be no closer than 660 feet to the outer boundary of the GPU nor closer than 130 feet to any governmental quarter-quarter section line or subdivision inner boundary and the infill well drilled on an existing GPU shall be in a quarter section not containing a Morrow well and shall be located with respect to the restrictions as previously described;
- (4) Within this GPU Marathon is also producing Indian Basin-Morrow gas from its Indian

DD-MARA.3

Rec: 4-397

Susp: 4/23/97

Released 4-28-97

April 15, 1997

Marathon Oil Company  
P. O. Box 552  
Midland, Texas 79702-0552

Attention: Walter J. Dueease

Administrative Order DD-<sup>169</sup>\*\*\*\*(SD)

Dear Mr. Dueease:

Reference is made to your application dated April 1, 1997 for authorization to re-enter and recomplete the plugged and abandoned Penrock Oil Corporation Indian Federal Gas Com Well No. 2 (API No. 30-015-10971) by side tracking off of the vertical portion of the wellbore and directionally drill to a pre-determined bottom-hole gas well location in order to further develop the Indian Basin-Morrow Gas Pool underlying its existing 663.30-acre non-standard gas spacing and proration unit ("GPU") comprising all of irregular Section 19, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico.

**The Division Director Finds That:**

- (1) The subject application submitted by Marathon Oil Company ("Marathon") as operator has been duly filed under the provisions of Rule 111.D and E of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (2) The Penrock Oil Corporation Indian Federal Gas Com Well No. 2 was originally drilled in 1966 to a depth of 7,540 feet at a standard gas well location 1650 feet from the South and East lines (Lot 6/Unit J) of said Section 19 to test the Indian Basin-Upper Pennsylvanian Gas Pool; said well tested dry and was subsequently plugged and abandoned;
- (3) The Indian Basin-Morrow Gas Pool is currently subject to Division Order No. R-8170-O-1/R-2441-B, as amended, "Special Rules and Regulations For The Indian Basin-Morrow Gas Pool", which includes provisions for 640-acre gas spacing and proration units and well location

4-23

Attention: Mike Stogner  
From: Bryan G. Arrant  
Pages: ~~3~~ 4  
Re: Work

May 19, 1997

Dear Mike,

The Indian Federal Gas Com. # 2 was drilled as a standard location when Penroc Oil Corporation drilled the well back in September of 1966. Marathon re-entered this well and directionally drilled to the Morrow, by administrative approval DD-169 (SD), to the Indian Basin; Morrow Gas Pool.

Before the wellbore was re-entered and deepened, Marathon re-surveyed the location and found it to be 1359' FSL and 2025' FEL, a non-standard location. The bottom hole location is also non-standard being 1249' FSL & 2626' FEL as reported on their C-102 form.

What I need from you is if Marathon needs to have a NSL order issued for this well. They have sent in a C-104 and need its approval.

Also the API # is incorrect on the Administrative Order. Please give me a call when you determine what we need to do.

Thanks,

Bryan

*5-20-97*  
*Bryan to submit a copy of the actual well survey.*

*API*  
*30-015-10871*

*5-22-98*  
*Nothing heard from on this to date.*  
*M.S.*  
*?*

Form 3160-5  
(June 1990)

UNITED STATES N.M. Oil Cons. Division  
DEPARTMENT OF THE INTERIOR 811 S. 1st Street  
BUREAU OF LAND MANAGEMENT Artesia, NM 89210-2834

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT - " for such proposals

Case Designation and Serial No.  
NM0238436

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

1. Type of Well  
 Oil Well  Gas Well  Other

8. Well Name and No.  
INDIAN FED GAS COM 2

2. Name of Operator  
Marathon Oil Company

9. API Well No.  
NOT ASSIGNED

3. Address and Telephone No.  
P.O. Box 552, Midland, TX 79702 915/687-8327

10. Field and Pool, or exploratory Area  
INDIAN BASIN

4. Location of Well (Footing, Sec., T., R., M., or Survey Description)  
REPORTED: 1650' FSL & 1650' FEL SEC. 19, T-21-S, R-23-E.  
ACTUAL: 1349' FSL & 2025' FEL SEC. 19, T-21S, R-23-E.

11. County or Parish, State  
EDDY NM

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other DIRECTIONAL SIDETRACK
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note: Report results of mudlogs completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

REPORTED LOCATION WAS 1650' FSL & 1650' FEL WHEN WELL WAS DRILLED 10/18/66. DRY HOLE MARKER WAS RESURVEYED AND FOUND TO BE @ 1349' FSL & 2025' FEL. U.S.G.S. CALLED FOR A DEPENDENT RE-SURVEY AND CHANGED SOME OF THE ORIGINAL SET STONE MARKERS IN 1968. THE DEPENDENT RE-SURVEY WAS FILED OF RECORD IN 1969.

3/11/97 - INSTALLED 11" 3M DUAL RAMS AND ANNULAR. TESTED SAME TO 300/3000 PSI. P.U. 7/8" BIT. DC'S AND 4-1/2" D.P. TAGGED CEMENT PLUG @ 2241'. DRILLED TO 2340'. TAGGED PLUG AT 2661'. DRILLED TO 2340'. TAGGED PLUG AT 2661'. DRILLED TO 2760'. TAGGED PLUG AT 6416'. DRILLED CEMENT TO 6419'. DRILLED CEMENT 7499' - 7509'. DRILLED NEW FORMATION 7525' - 9600'. TD AT 08C HRS. 3/22/97. LOGGED WELL AS FOLLOWS: PLATFORM EXPRESS WITH HALS/SONIC/NGT 9600' - 2327'; CNL/GR/CAL TO SURFACE. RAN FMI 9530' - 9210', 7900' - 7300'. RAN RFT 9500' - 9200'. TOP PENN 7344'; TOP MORROW 9020'. RAN GYRO 0 - TD AT 100' STATIONS.

PROPOSE TO SET PLUG #1 8970-9070'. PLUG #2 7250-7500'. DRESS OFF PLUG #2 TO 7300'. P.U. BIT. BENT SUB AND MOTOR. MAKE KICK-OFF AT 7300'. BUILD ANGLE AT 4 /100' TO A MAXIMUM OF 20'. HOLD ANGLE AND DRILL TO A BHL AT 2625' FEL & 1249' FSL. SEC. 19, T-21-S, R-24-E. TOP TARGET AT 9200'. TD 9600' TVD. 9730' MD.

14. I hereby certify that the foregoing is true and correct  
Signed W.J. Duman FOR OPR Title DRILLING SUPERINTENDENT Date 3/24/97

(This space for Federal or State office use)  
Approved by OPR ALEXIS C. SWOBODA Title GENERAL SUPERVISOR Date MAR 21 1997

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.

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

DISTRICT II  
P.O. Drawer 88, Artesia, NM 87011-0719

DISTRICT III  
1500 La Grapes Rd., Artesia, NM 87410

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

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

**OIL CONSERVATION DIVISION**

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
		INDIAN BASIN MORROW
Property Code	Property Name	Well Number
	INDIAN FEDERAL	2
OCRID No.	Operator Name	Elevation
14021	MARATHON OIL COMPANY	3764

**Surface Location**

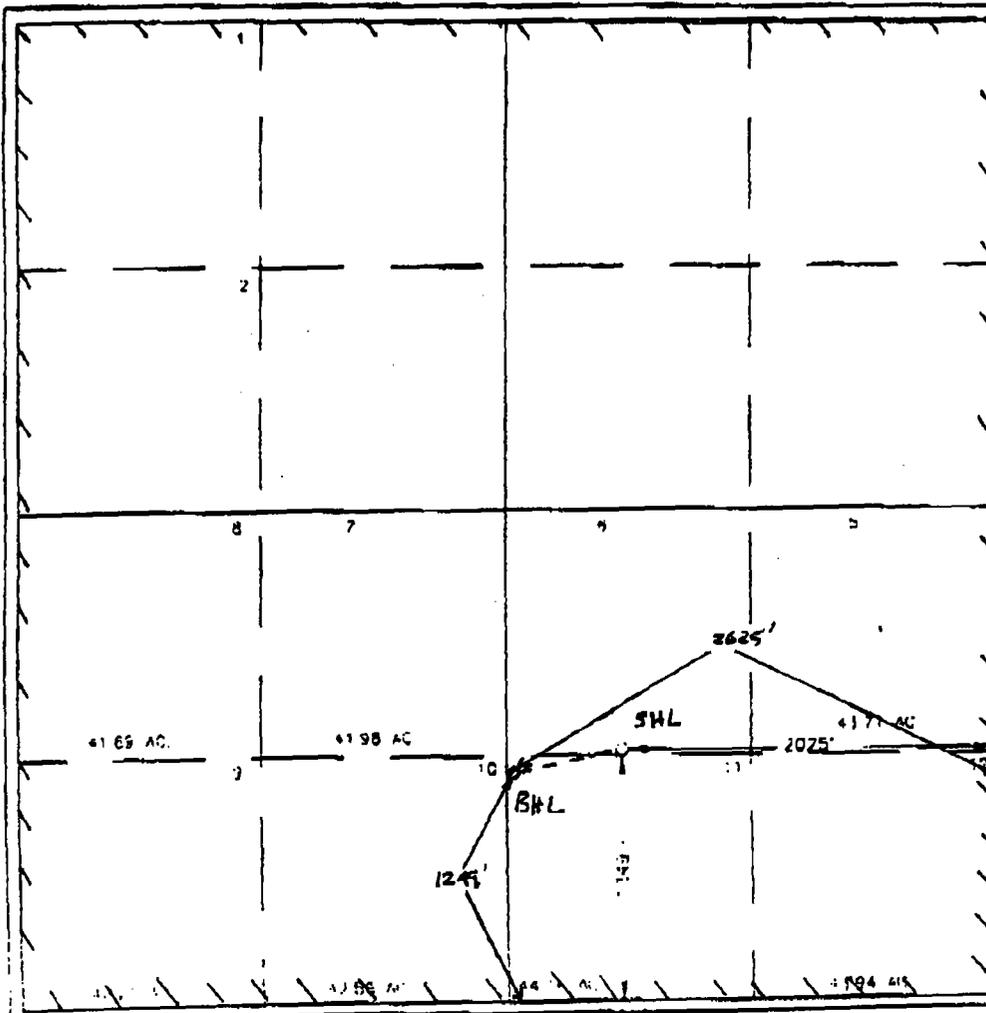
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
6	19	21 S	24 E		1349	SOUTH	2025	EAST	EDDY

**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
11	19	21-S	24-E		1249	South	2625	East	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			

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

*Walter J. Nordt*  
Signature  
D. P. Nordt  
Printed Name  
Drilling Superintendent  
Title  
3-24-97  
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.

JAN. 28, 1997  
Date Surveyed  
DMCC  
Signature & Seal  
Professional Surveyor  
1-30-97  
Consolidation No. 1-30-97  
WALTER J. NORDT  
PROFESSIONAL SURVEYOR

DD-169 (50)

(1) The applicant, Marathon Oil Company, is hereby authorized to recomplete its existing (Penrock Oil Corporation) Indian Federal Gas Com Well No. 2 (API No. 30-015-10971), located at a standard gas well location 1650 feet from the South and East lines (Lot 6/Unit J) of irregular Section 19, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, kick-off from vertical at a depth of approximately 7,300 feet, drill in a southwesterly direction, build to an angle of approximately 21 degrees and continue drilling in such a manner as to bottom back into the Indian Basin-Morrow Gas Pool (total horizontal displacement of said wellbore to be approximately 820 feet) within a drilling window or "producing area" comprising the SW/4 equivalent of said Section 19 that is no closer than 660 feet to the section lines.

PROVIDED HOWEVER THAT prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

PROVIDED FURTHER THAT during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

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(2) The applicant shall notify the supervisor of the Artesia district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Artesia offices of the Division upon completion.

(3) Indian Basin-Morrow gas production from both the existing Indian Federal Gas Com Well No. 1 (API No. 30-015-10355), located at a standard gas well location 1980 feet from the North and East lines (Unit G) of said Section 19, and (Penrock Oil Corporation) Indian Federal Gas Com Well No. 2, as described above, shall be attributed to the existing 663.30-acre non-standard gas spacing and proration unit ("GPU") comprising all of said irregular Section 19.

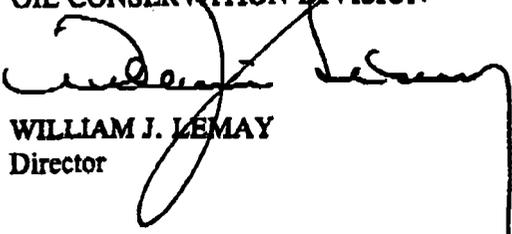
(4) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F and Order No. R-8170, as amended.

(5) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(6) Jurisdiction of this cause 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

  
WILLIAM J. LEMAY  
Director

4/3/97 | 4/23/97 | MS | KV | DD

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

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 [x] DD [ ] SD

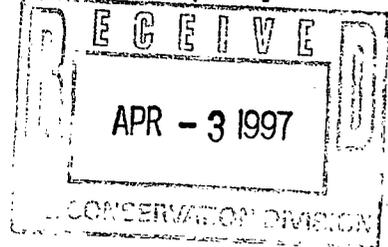
Check One Only for [B] or [C]

[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] [x] 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 - Statement of Understanding

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 further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

D.P. NORDT
Print or Type Name

Walter J. Quinn
Signature

DRUG. SUPT
Title

4/1/97
Date



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

April 1, 1997

State of New Mexico  
Energy, Minerals & Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Attn: Mr. Michael E. Stogner

Ref: Application for Administrative Approval of Marathon Oil Company to  
Re-enter and Directionally Drill to the Indian Basin, Morrow Gas Pool

Dear Mr. Stogner:

The Indian Federal Gas Com #2 was drilled to 7540' and abandoned in October, 1966 by Penroc Corporation. The location was originally staked in 1966 at 1650' FSL & 1650' FEL, Sec. 19, T-21-S, R-24-E, NMPM, Eddy County, New Mexico. In 1967 the Bureau of Land Management called for a dependent re-survey of the area which changed some of the original set stone markers in T-21-S, R-24-E. This dependent re-survey was filed of record in 1969. Marathon had the dry hole marker surveyed, based on the dependent re-survey, on January 29, 1997, and found the location at 1349' FSL & 2025' FEL, Sec. 19, T-21-S, R-24-E, NMPM, Eddy County, New Mexico. Marathon has re-entered the well and deepened to 9600' in the Morrow formation.

In order to penetrate the maximum thickness of the net porous Morrow Sand identified by an FMI log, Marathon proposes to sidetrack and test the Indian Basin, Morrow Gas Pool at a BHL of 2825' FEL & 1174' FSL. The FMI log indicated that a much thicker sand package may exist at the proposed BHL. The sand appears to be a bar deposit and the wellbore encountered the upstream edge of the bar. Marathon requests administrative approval under the provisions of Rule 111 (D) and (E) to re-enter the above referenced well and drill a directional well. By utilizing this existing wellbore, Marathon will be able to economically test the Morrow gas formation and form a 640 acre gas unit or project area. The following information is enclosed to support our request: Original Form C-102, Approved Application to Re-enter from BLM, Resurveyed Form C-102 reflecting the proposed 640 acre gas unit, plat of adjoining leases with project area, offset operator list, directional plan, and type log.

*DD-MAAA.3*

Application for Administrative Approval

April 1, 1997

Page 2

On this date, a copy of this application, including the plats and permit attached thereto, have been sent by certified mail to the affected parties listed on the attached page.

The affected parties have been advised that if they have an objection to this application, it must be filed in writing to the Division within twenty (20) days from this date.

Should you have any questions regarding this matter, please feel free to contact me at 1-800-351-1417.

Very truly yours,



W. J. Duëease

MARATHON OIL COMPANY

WJD/dt  
h:\duëease\stogner



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

April 1, 1997

**OFFSET OPERATORS**

Ref: Application for Administrative Approval of a Directional Well  
Indian Basin Morrow Gas Pool  
Indian Federal Gas Com No. 2

SHL: 1349' FSL & 2025' FEL  
Sec. 19, T-21-S, R-24-E  
Eddy County, New Mexico

BHL: 1174' FSL & 2825' FEL  
Sec. 19, T-21-S, R-24-E  
Eddy County, New Mexico

Gentlemen:

Please find attached an application for Administrative Approval of a Directional Well location for the above referenced well deepening and directional sidetrack filed with the State of New Mexico Oil Conservation Division on this day by Marathon Oil Company. Please be advised that if you have an objection to this application, it must be filed in writing within twenty (20) days from the date of this application. Marathon is requesting administrative approval to drill a directional well to the Indian Basin Morrow Gas Pool under the provisions of NMOCD Rule 111 (D) and (E).

Should you have no objection to this application, please signify by executing one original of this waiver of objection and return one original to me in the enclosed envelope.

Thank you for your attention to this matter.

Very truly yours,

W. J. Dueease  
MARATHON OIL COMPANY

I/we do hereby waive any objections to Marathon's request to re-enter, deepen, and directionally drill to a non-standard bottom hole location in the Indian Basin Morrow formation at its Indian Hills Gas Com No. 2, SHL: 1349' FSL & 2025' FEL; BHL: 1174' FSL & 2825' FEL, Sec. 19, T-21-S, R-24-E, Eddy County, New Mexico.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

WJD/dt  
h:\dueease\waiver

**AFFECTED OPERATOR LIST  
INDIAN HILLS FED. GAS COM. NO. 2  
SEC. 19, T-21-S, R-24-E  
EDDY COUNTY, NEW MEXICO**

**T-21-S, R-24-3**

**Section 18**

Yates Petroleum  
105 S. Fourth Street  
Artesia, NM 88210

Robert G. Hanagan  
Box 1737  
Roswell, NM 88201

Frank W. Podpechan  
P. O. Box 549  
Claremore, OK 74013

Merle Kelce  
301 N. Memorial Drive  
St. Louis, MO

Hugh E. Hanagan  
P. O. Box 1737  
Roswell, NM 88201

Nolan H. Brunson  
P. O. Box 1039  
Hobbs, NM 88241

Merrit Group II Partnership  
P. O. Box 351  
Midland, TX 79702

Burlington Resources  
Box 51810  
Midland, TX 79710

**Section 17**

Fasken Oil & Ranch  
303 W. Wall Street, Suite 1900  
Midland, TX 79701-5116

**Section 20**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702

**Section 29**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702

**Section 30**

Devon Energy  
20 North Broadway  
Oklahoma City, OK 73112

**T-21-S, R-23-E**

**Section 13**

Santa Fe Energy Operating Partners, LP  
500 W. Illinois  
Midland, TX 79701

**Section 24**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702

Santa Fe Energy Operating Partners, LP  
500 W. Illinois  
Midland, TX 79701

Open Acreage - Bureau of Land Management  
2909 W. Second Street  
Roswell, NM 88201-2019

**Section 25**

Santa Fe Energy Operating Partners, LP  
500 W. Illinois  
Midland, TX 79701

DISTRICT I  
P.O. Box 1880, Hobbs, NM 88241-1880

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name INDIAN FEDERAL	Well Number 2
OGRID No.	Operator Name MARATHON OIL COMPANY	Elevation 3764

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
6	19	21 S	24 E		1349	SOUTH	2025	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.*

JAN. 28, 1997

Date Surveyed \_\_\_\_\_ DMCC

Signature & Seal of \_\_\_\_\_

Certificate No. JOHN W. WEST 676  
RONALD J. EIDSON 3239  
BARRY EIDSON 12641



# MARATHON OIL COMPANY

Structure : INDIAN FED GAS COM NO.2

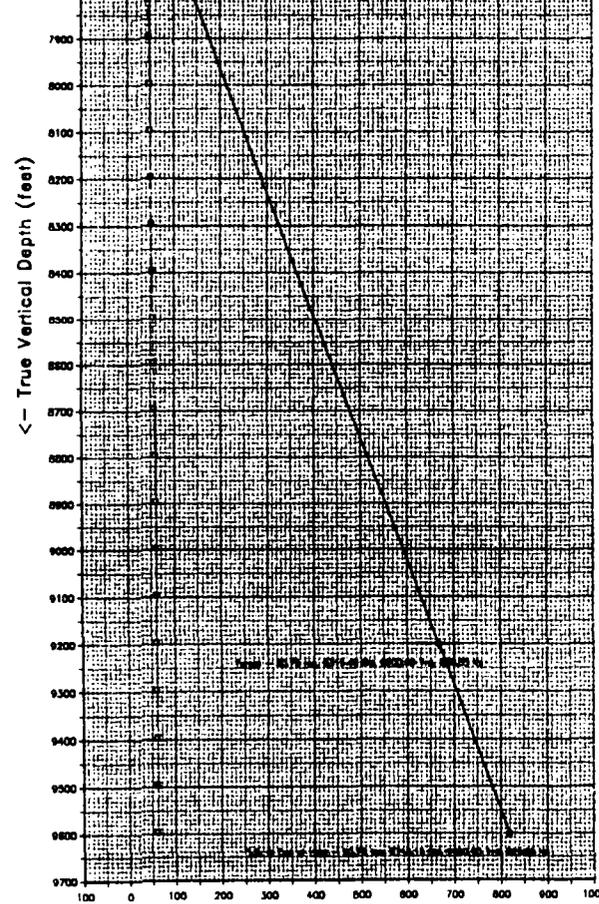
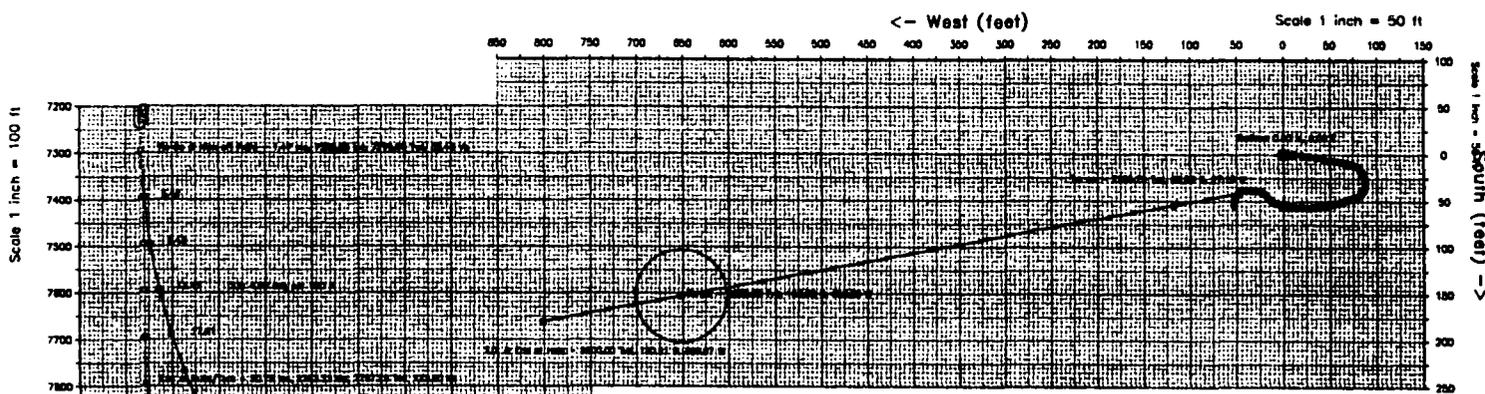
Slot : slot #1

Field :

Location : EDDY CO., NEW MEXICO

Created by boris  
 Date plotted : 24-Mar-67  
 Plot Reference is 4 DEE BUR.  
 Coordinates are in feet reference slot #1.  
 True Vertical Depths are reference rotary table.

--- Baker Hughes INTEQ ---



## WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East	V. Sect	Deg/100'
KOP	7300.00	1.47	275.03	7295.20	-38.90	-27.10	33.43	0.00
End of Build/Turn	7783.33	20.75	259.50	7767.26	-54.11	-118.40	125.90	4.00
Target	9315.40	20.75	259.50	9200.00	-153.00	-652.00	668.55	0.00
T.D. & End of Hole	9743.13	20.75	259.50	9600.00	-180.61	-800.97	820.05	0.00



24-Mar-67  
 Magnetic North is 8.60 Degrees East of True North  
 To convert azimuth from Magnetic to True add 8.60 Deg



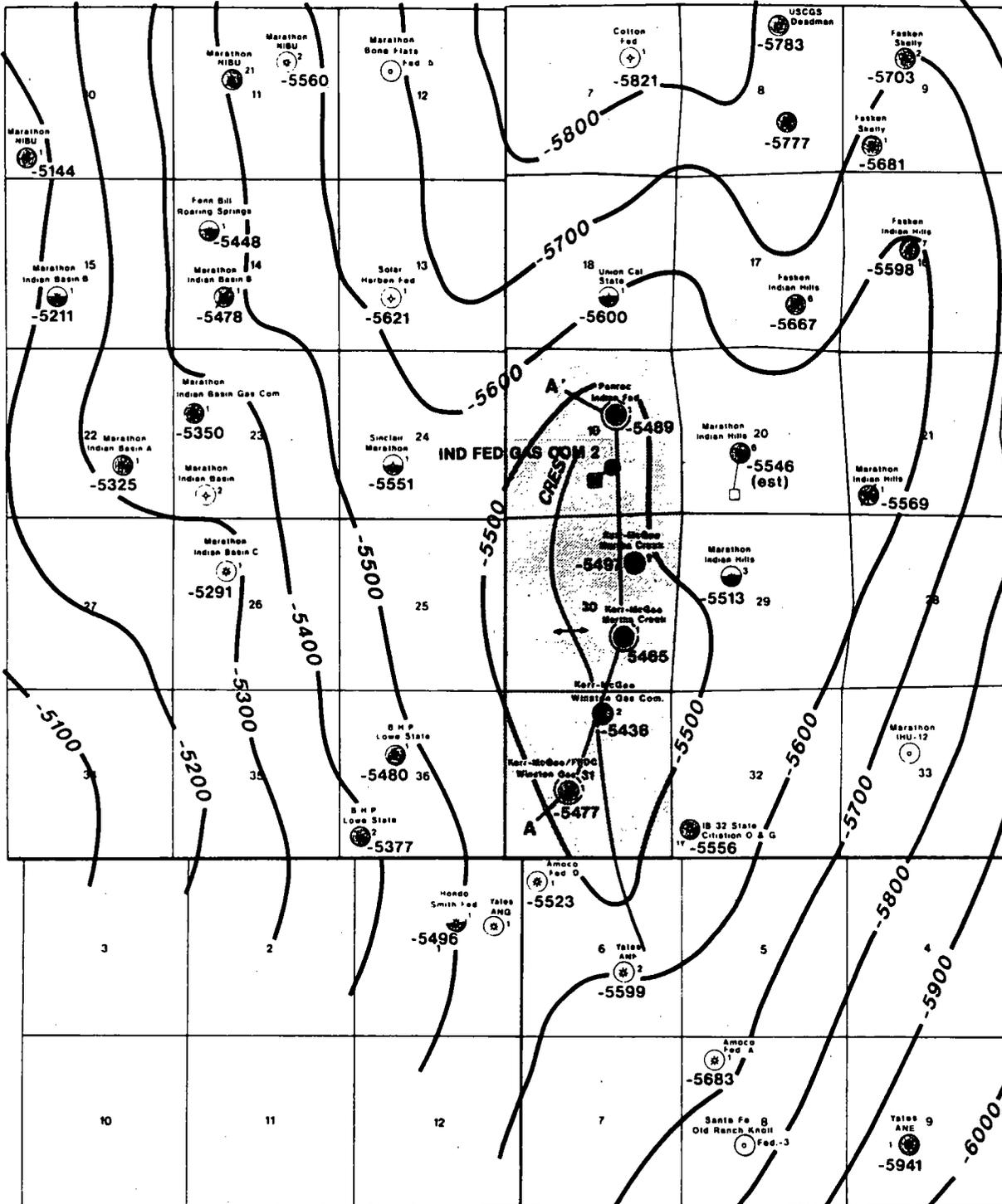
Scale 1 inch = 100 ft  
 Azimuth 280.17 with reference 0.00 N, 0.00 E from slot #1

R 23 E

R 24 E

T 21 S

T 22 S



- ORIGINAL BOTTOM HOLE LOCATION
- PROPOSED DIRECTIONAL WELL BOTTM HOLE LOCATION

Morrow Penetrations Only Shown

- MORROW PENETRATION
- MORROW PRODUCTIVE
- MORROW DST GAS SHOW OR PROD. TEST SHOW

**KERR-MCGEE CORPORATION**

**INDIAN BASIN**  
EDDY COUNTY, NEW MEXICO

**MIDDLE MORROW STRUCTURE**  
C.I. = 100'

Scale: 1" = 4000'      Date: 4/96      By: D.D.M.

MODIFIED BY MOC 3/97

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

5. LEASE DESIGNATION AND SERIAL NO. <b>NM0238436</b>
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME, WELL NO. <b>Indian Federal Gas Com</b>
9. API WELL NO. <b>2</b>
10. FIELD AND POOL, OR WILDCAT <b>INDIAN BASIN</b>
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>SEC. 19, T21S, R24E</b>
12. COUNTY OR PARISH <b>EDDY</b>
13. STATE <b>NM</b>

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

1a. TYPE OF WORK  
 DRILL       DEEPEN       RT       *RT 1 1/2" 1/2"*

b. TYPE OF WELL  
 OIL WELL       GAS WELL       OTHER       SINGLE ZONE       MULTIPLE ZONE

2. NAME OF OPERATOR  
**Marathon Oil Company**

3. ADDRESS AND TELEPHONE NO.  
**P.O. Box 552, Midland, TX 79702**      **915/687-8327**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
**1650' FSL & 1650' FEL**  
 At proposed prod. zone  
**1650' FSL & 1650' FEL**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**10 S.W. OF LAKEWOOD, NM**

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**640**

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH  
**9,600'**

20. ROTARY OR CABLE TOOLS  
**ROTARY**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**3746' G. L.**

22. APPROX. DATE WORK WILL START\*  
**11/25/96**

23. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
*17 1/2"	13 3/8"	48	168'	225 SX
*12 1/4"	8 5/8"	24	2310'	500 SX
7 7/8"	5 1/2"	15.5, 17	9,000'	2150 SX

Propose to re-enter well and deepen to Morrow

See attached for Detail

\*Casing in Place.

APPROVAL REQUESTED  
 GENERAL SUPERVISOR / BLM  
 SPECIAL AGENT / BLM

NOV 13 9 23 AM '96  
 RECEIVED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Walter J. Duane FOR DAN TITLE DRILLING SUPERINTENDENT DATE 11/8/96

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY Sony L Ferguson TITLE ADM, Minerals DATE 12/12/96

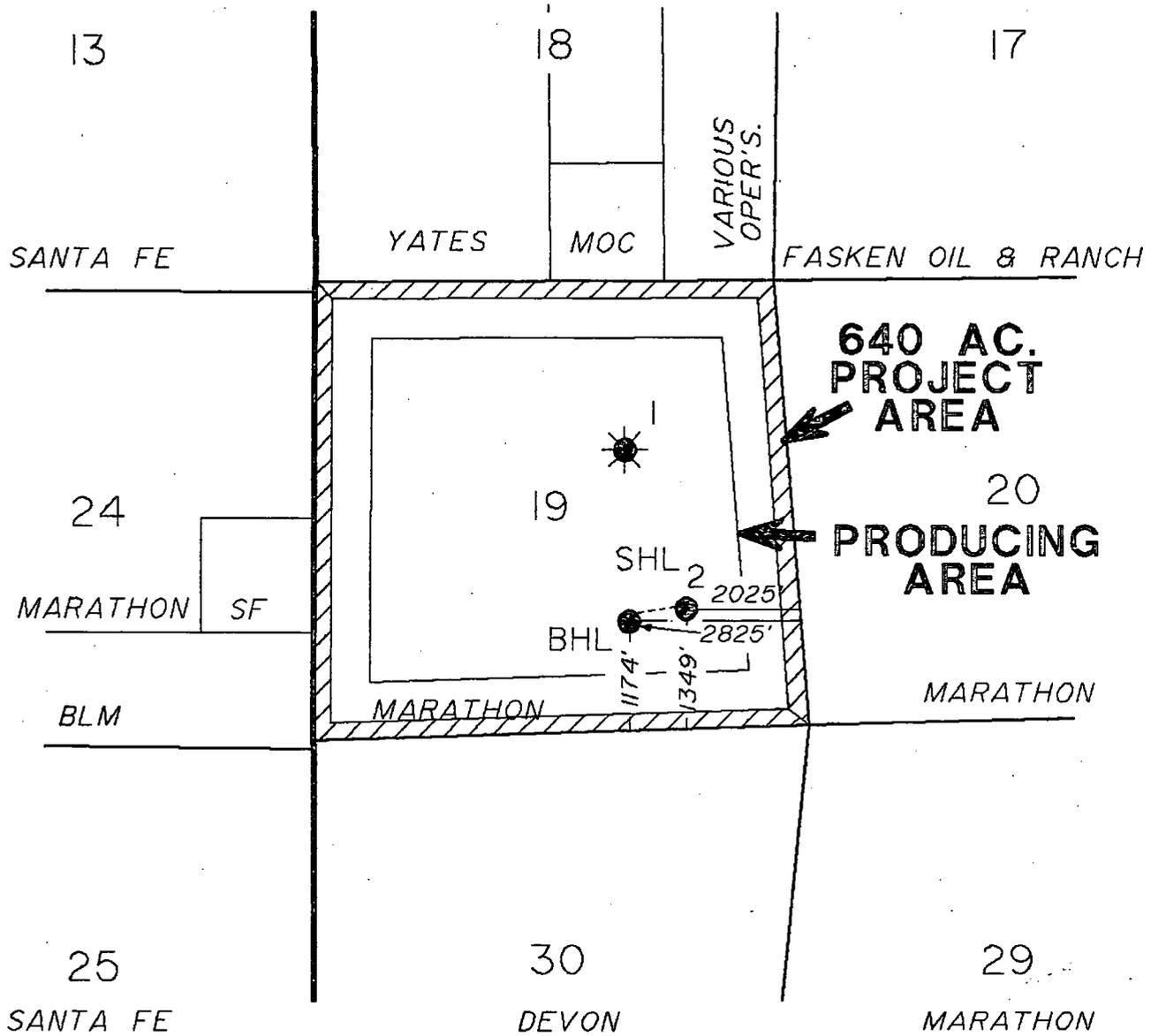
\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

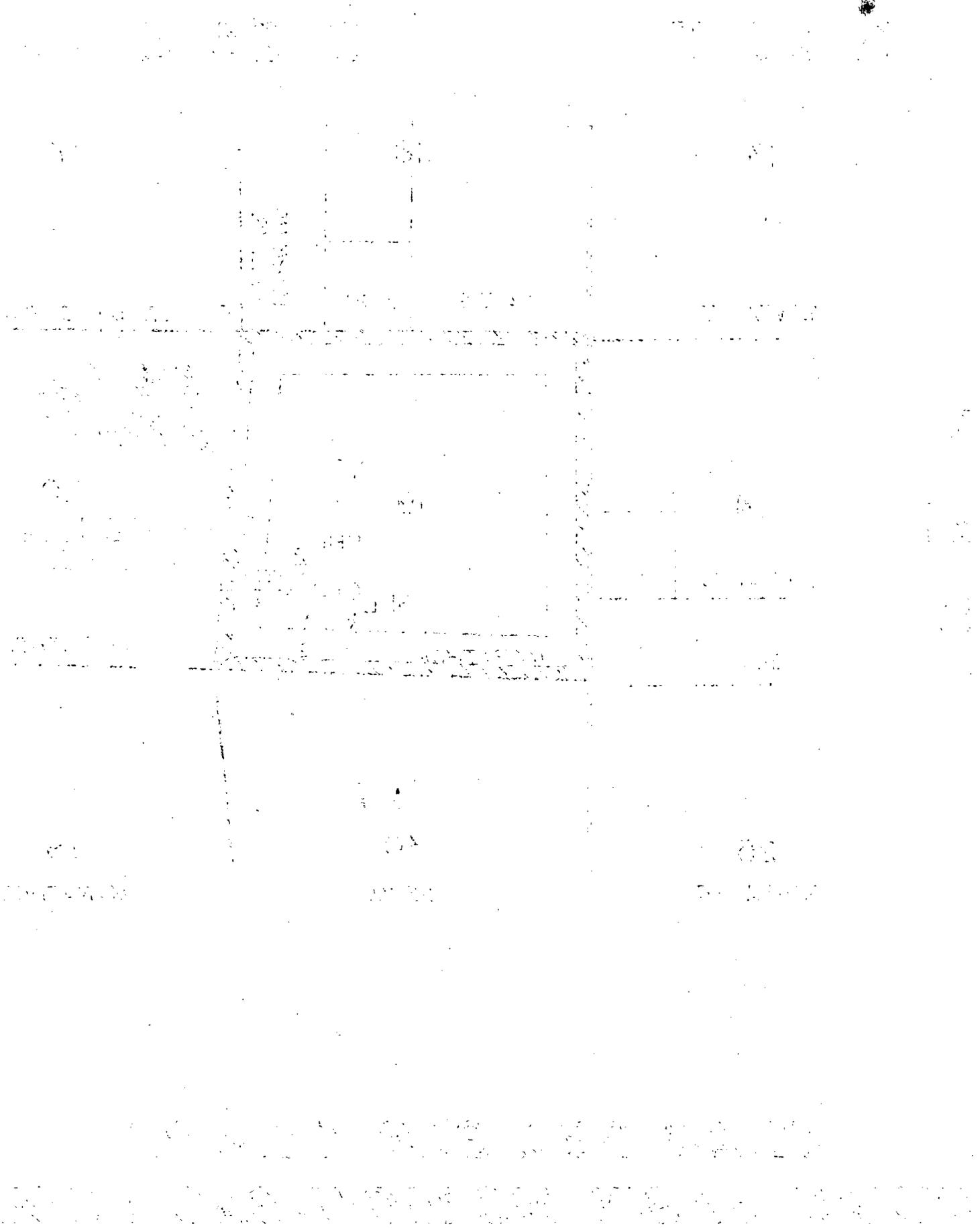
R 23 E

R 24 E

T  
21  
S



**INDIAN FED. GAS COM. #2**  
**INDIAN BASIN MORROW-GAS POOL**



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  
 PO Box 2088, Santa Fe, NM 87504-2088

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

Instructions on back  
 Submit to Appropriate District Office  
 State Lease - 4 Copies  
 Fee Lease - 3 Copies

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name Indian Basin(Morrow)	
<sup>4</sup> Property Code		<sup>5</sup> Property Name Indian Federal Gas Com			<sup>6</sup> Well Number 2
<sup>7</sup> OGRID No.		<sup>8</sup> Operator Name Marathon Oil Company			<sup>9</sup> Elevation 3746'

<sup>10</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
6	19	21-S	24-E		1650	South	1650	East	Eddy

<sup>11</sup> 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>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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**

	<p><sup>17</sup> <b>OPERATOR CERTIFICATION</b>                  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Walter J. Duman</i>                  Signature                  D. P. Nordt                  Printed Name                  Drilling Superintendent                  Title                  November 8, 1996                  Date</p>
	<p><sup>18</sup> <b>SURVEYOR CERTIFICATION</b>                  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.</p> <p>_____                  Date of Survey</p> <p>_____                  Signature and Seal of Professional Surveyor</p> <p>_____                  Certificate Number</p>

**Thirteen Point Surface Use Plan**  
**MARATHON OIL COMPANY**

**Indian Federal Gas Com #2**  
**Sec. 19, T-21-S, R-24-E**  
**Eddy County, New Mexico**

---

1. **Existing Roads:** Refer to Vicinity Lease Map.
  - a. The proposed wellsite is staked and the surveyor's plat is attached.
  - b. To reach the location from Carlsbad, New Mexico: Follow Hwy. 285 North of Carlsbad 14 miles. Turn West on Queen's highway (NM 137) for 8.8 miles. Turn right on NM 401 for 2.2 miles. Turn left on existing access road into location.
  - c. Existing roads within a one-mile radius (refer to Vicinity Lease Map).
  - d. The existing road will be maintained as necessary to provide access during the drilling operation.
  
2. **Planned Access Road:** Refer to Vicinity Lease Map.

Access will be by existing lease roads. Construction plans will require blading and rolling the road and pad. No access road will be required. The existing access road enters the drilling pad on the Southwest corner. The drilling location will have a V-door facing East. No new construction will be required, no new surface area will be disturbed.
  
3. **Location of Existing Wells:** See Vicinity Lease Map.
  
4. **Location of Existing and Proposed Production Facilities within a one-mile radius:**
  - a. **Existing:** There are six gas wells operated by Marathon and Santa Fe within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon and Santa Fe operate a variety of dehydrators, meter runs, and several gathering lines in the one-mile radius.
  - b. **New Facilities:** The proposed location will have a separator and gas sales line. The actual equipment and its configuration will be determined after the well is completed.
  - c. Rehabilitation of disturbed areas no longer needed for operations will be accomplished by grading, leveling and seeding as recommended.

A. P. D. (cont.)  
Thirteen Point Surface Use Plan  
Indian Federal Gas Com #2

5. Location and Type of Water Supply:

- a. Source: Indian Basin Gas Plant, SW/4, NE/4, Sec. 23, T-21-S, R-23-E.
- b. The water will be trucked by a contractor over existing roads to the well location. No new construction will be required on/along the water route.
- c. No water well will be drilled on this location.

6. Source of Construction Materials:

- a. Construction materials will be obtained from the construction site.
- b. If production is obtained, native materials will be used on the location and for installation of production facilities.
- c. On-site inspection may dictate any changes in location construction.

7. Methods of Handling Waste Material Disposal:

- a. Cuttings - will be deposited in the reserve pit.
- b. Drilling fluids - contained in reserve pit and allowed to evaporate. Free water will be removed and transported to an approved disposal site to accelerate pit drying.
- c. Produced fluids - none anticipated.
- d. A portable chemical toilet will be provided.
- e. Garbage and other waste material - garbage and trash will be stored in a receptacle on location and periodically hauled to an approved sanitary landfill.
- f. After the rig moves out, all materials not necessary for operations will be removed. Pits will be backfilled and leveled. The location will be cleaned of all trash and debris.

8. Ancillary Facilities: Camp facilities will not be required. Portable trailers will be on location to house a company drilling foreman and contract toolpusher.

9. Wellsite Layout:

- a. The wellpad layout shows the drillsite layout as staked. The drilling pad will utilize the existing gas well location.
- b. The reserve pit will be fenced on three sides before drilling begins. The fourth side will be fenced when the drilling rig leaves location.
- c. The reserve pit will be lined (8 mil material).

**A. P. D. (cont.)  
Thirteen Point Surface Use Plan  
Indian Federal Gas Com #2**

**10. Plans for Restoration of the Surface:**

- a. Backfilling, leveling, and contouring are planned as soon as all pits have dried. Waste disposal and spoiled materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- b. The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula by BLM. Revegetation is recommended for road area, as well as around the drill pad.
- c. The reserve pit will be fenced during drilling operations. Fencing will be maintained until leveling and cleanup are accomplished.
- d. If any oil is in the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with mesh.
- e. The rehabilitation operations will begin after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation will be done between July 15 and September 15.

**11. Other Information:**

- a. There are no significant archaeological or cultural sites visible in the area of disturbance. A cultural resource survey was not performed, as no new surface area will be disturbed.
- b. General topography: Shown on Vicinity Lease Map. The terrain at the wellsite is gently rolling hills. Vegetation is primarily sage brush and natural grasses.
- c. Animal life: Prairie dogs, domestic livestock, rabbits and native rodents and predators.
- d. Dwellings (nearest): Approximately 4-1/2 miles.
- e. General location: Approximately 8.5 miles west of Lakewood, New Mexico.
- f. Drainage: Internal
- g. Surface Owner: The surface is owned by the Federal Government, the surface is leased for grazing to Patsy Shafer Lyman.

**A. P. D. (cont.)  
Thirteen Point Surface Use Plan  
Indian Federal Gas Com #2**

12. Operator Representatives:

David Nordt  
Drilling, Completion, & Workover Superintendent  
P. O. Box 552  
Midland, TX 79702  
800/351-1417  
915/682-1626

13. Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; and that the work associated with the operations proposed herein will be performed by MARATHON OIL COMPANY and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

11/12-96  
Date

Walter J. Quinn  
D. P. Nordt

**DRILLING PROGRAM  
MARATHON OIL COMPANY**

**Indian Federal Gas Com #2**

1. **Estimated KB Elevation: 3762'**

<u>FORMATION</u>	<u>-----TOP-----</u>		<u>-----BASE-----</u>		<u>FLUID CONTENT</u>
	<u>MEASURED</u>	<u>SUBSEA</u>	<u>MEASURED</u>	<u>SUBSEA</u>	
Queen	Surface	+3762'	650'	+3112'	water
San Andres	650'	+3112'	2250'	+1512'	water
Glorietta	2250'	+1512'	2355'	+462'	
Delaware	3300'	+462'	4300'	-538'	
Bone Spring	4300'	-538'	5950'	-2188'	oil gas
Wolfcamp	5950'	-2188'	7520'	-3758'	oil gas
B/Permian Shale	7520'	-3758'	7530'	-3768'	
U. Penn	7530'	-3768'	7550'	-3788'	gas, oil, water
Penn Dolomite	7550'	-3788'	8500'	-4738'	gas, oil, water
Morrow	8500'	-4738'	9000'	-5238'	

<u>FORMATION</u>	<u>---EST PSIG</u>	<u>SBHP--- PPG EMW</u>	<u>EST SBHT DEG f</u>	<u>H2S PPM</u>	<u>---SIGNIFICANCE--- (obj. marker, etc.)</u>
Bone Springs	1210	8.5		500	marker
Wolfcamp	1680	9.0			marker
B/Permian Shale		1810	9.0		marker
U. Penn	2050	9.0		5000	objective pay
Penn Dolomite	2164	9.0		5000	objective
Morrow	3460	9.2			Objective

2. See (1) above.

If any unexpected water or mineral bearing zones are encountered, they will be reported, evaluated, and protected as circumstances and regulations require.

3. **Pressure Control Equipment:**

**8 5/8" Surface:** 11" 3M annular tested to 200#/2000#, 11" 3M dual rams, choke manifold and mud cross, tested to 300#/3000#.

**Auxiliary Equipment:**

**Surface Hole:** Annular or rotating head w/air rig.

**Intermediate Hole:** N/A

**Production Hole:** Flow indicator, PVT, H<sub>2</sub>S Sensors, air packs, stroke counter, rotating head.

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs.

Upper and lower kelly cocks with valve handle and safety valve and subs to fit all drillstring connections in use will be available on rig floor.

A. P. D. (cont.)  
 Thirteen Point Surface Use Plan  
 Indian Federal Gas Com #2

Test Frequency

1. When installed.
2. Anytime a pressure seal is broken (test confined only to affected equipment).
3. At least every 20 days.
4. Blind and pipe rams shall be activated each trip but not more than once/day.

4. Casing and Cement Program:

---DEPTH--- FROM TO	SECTION LENGTH	HOLE SIZE	CSG SIZE	WT. PPF	GRADE	THREADS COUPLINGS	NEW USED		
0 5400'	5400'	7.875"	5.5"	15.5	K-55	LTC	New		
5400' 8100'	2700'	7.875"	5.5"	17.0	K-55	LTC	New		
8100' 6400'	1500'	7.875"	5.5"	17.0	L-80	LTC	New		
<u>CASING STRING</u>	<u>DV DPTH</u>	<u>STG</u>	<u>LEAD TAIL</u>	<u>AMT SXS</u>	<u>TYPE CEMENT</u>	<u>YIELD CF/SX</u>	<u>WT. PPG.</u>	<u>TOC</u>	<u>ADDITIVES</u>
5 1/2"	6300	1	L	700	"H"	1.8	13.6	5 pps	NACL, 6% gel
5 1/2"		2	L	750	"C" Lite	1.91	12.8		
		2	T	700	"C" Neat	1.32	14.8		

*Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 15% excess.*

Centralizer Program:

5 1/2" Conventional centralizers middle of 1st joint, then every joint to 7500', and 1 centralizer every 4th joint thereafter to 1100'.

5. Mud Program:

---DEPTH--- FROM TO	MUD TYPE	WEIGHT (PPG)	VIS	WL CC	ADDITIVES	VISUAL MONTR.
0 7540'	cut brine	9.0	28.32	N/A		Reserve
7540' 9660'	cut brine	9.2	32-36	<20	Salt gel, starch, caustic	Steel Pits

*Sufficient quantities of additives will be on location to maintain above mud properties for any anticipated well conditions.*

A. P. D. (cont.)  
 Thirteen Point Surface Use Plan  
 Indian Federal Gas Com #2

6. Logging, Testing & Coring Programs:

<u>LOG/TEST/CORE/MUDLOG/OTHER</u>	<u>--INTERVAL--</u>		<u>REMARKS</u>
	<u>FROM</u>	<u>TO</u>	
DLL/MSFL/GR/CNL/LDT/CAL	TD	5000'	
LDT/CNL/GR/CAL	TD	surf casing	
MUD LOGGER	7540'	TD	ROP, Lithology, Gas Analysis, Chromatograph
NO CORES OR DST'S			

7. Abnormal Pressures, Temperatures or Potential Hazards:

None anticipated. Possible H<sub>2</sub>S in Cisco & Upper Penn. See H<sub>2</sub>S Drilling Operations Plan.

8. Other Information:

Anticipated Starting Date: As soon as possible.

Duration of Well: drilling - 18 days, completion - 10 days.

**Indian Federal Gas Com. No. 2  
Re-Entry and Deepening Procedure**

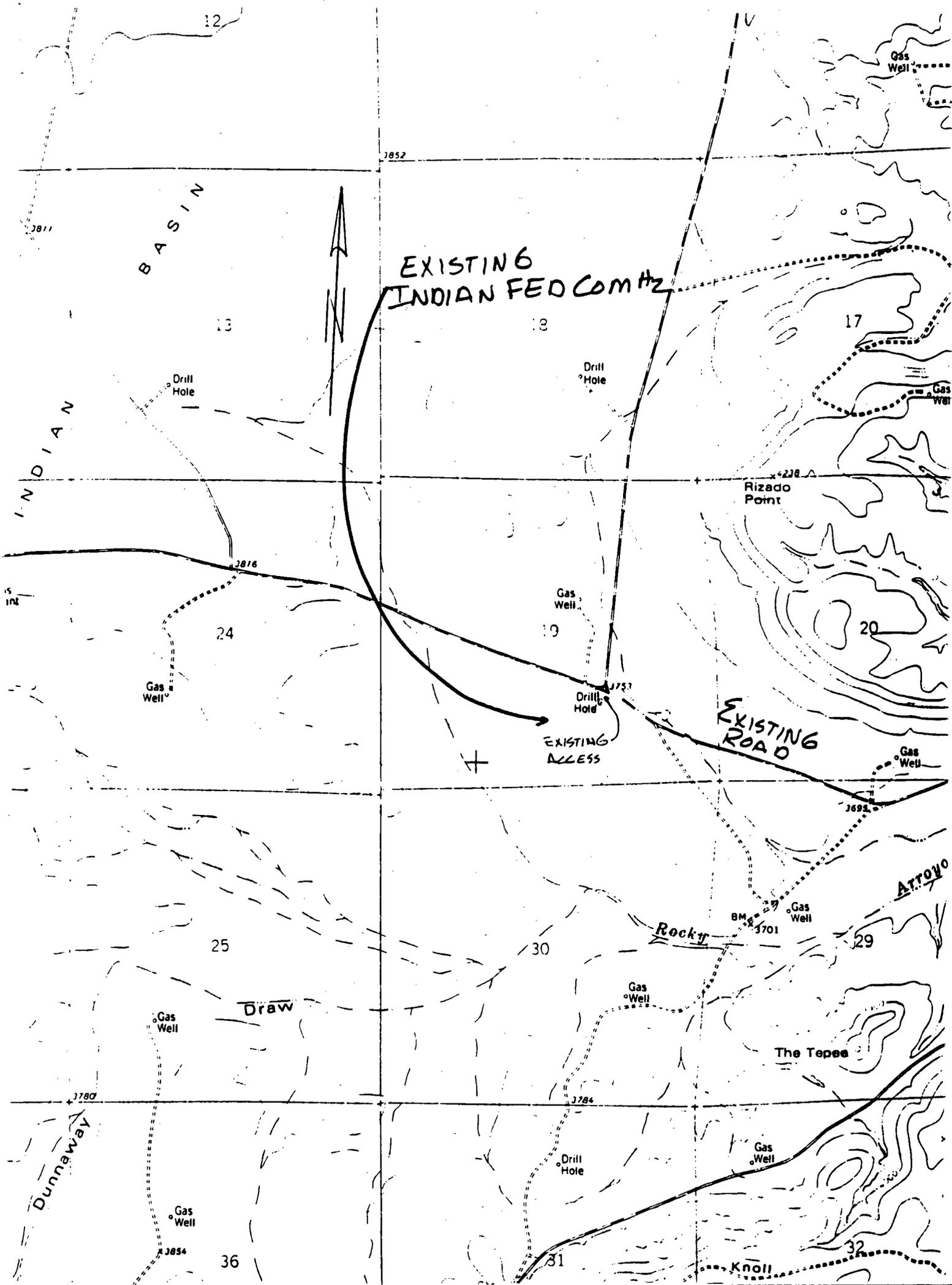
1. MIRU pulling unit. Dig out wellhead and remove dry hole marker. Cut off 8 5/8" casing and weld on 8 5/8" SOW X 11" 3M wellhead. NU BOP.
2. RU reverse unit. Drill out 20' surface cement plug with 7 7/8" bit. TIH to 2260' and tag cement plug. Test casing to 1000 psi. Drill 5' of cement to insure no junk on plug. TOOH, laying down. Install dryhole flange. RDMO pulling unit.
3. Build 75' x 75' single dike reserve pit over existing reserve pit area. MIRU drilling rig. NU 11" 3M dual ram BOP, 11" 3M annular and rotating head. Test BOPE to 250/3000 psi.
4. Drill out cement plugs and clean out hole to old PBD of 7540' with 7 7/8" bit and cut brine. Mud up and drill hole to TD @ 9600'. Log well as per geologist.
5. Run 5 1/2" casing as follows w/DV tool at 6300':

From	To	Weight	Grade
0'	5400'	15.5#	K-55
5400'	8100'	17.0#	K-55
8100-	9600'	17.0#	L-80

6. Cement as follows:

1st Stage - 700 sacks Class "H"  
2nd Stage - 750 sacks Class "C" Lite Lead  
700 sacks Class "C" Neat Tail





EXISTING  
INDIAN FED COM HZ

EXISTING  
ROAD

EXISTING  
ACCESS

BASIN

INDIAN

Dunaway

Arroyo

Rocky

Draw

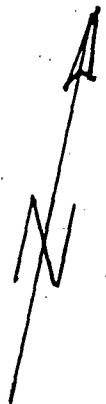
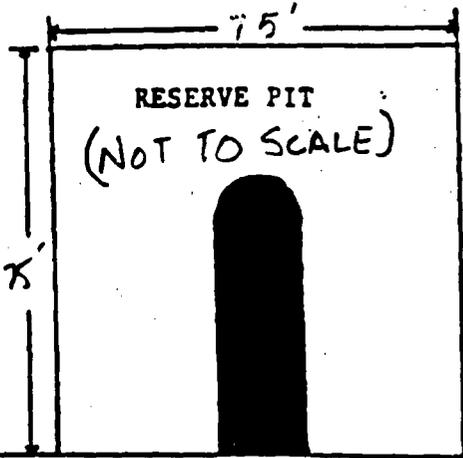
The Tepee

Knoll

MAZATHON ROAD

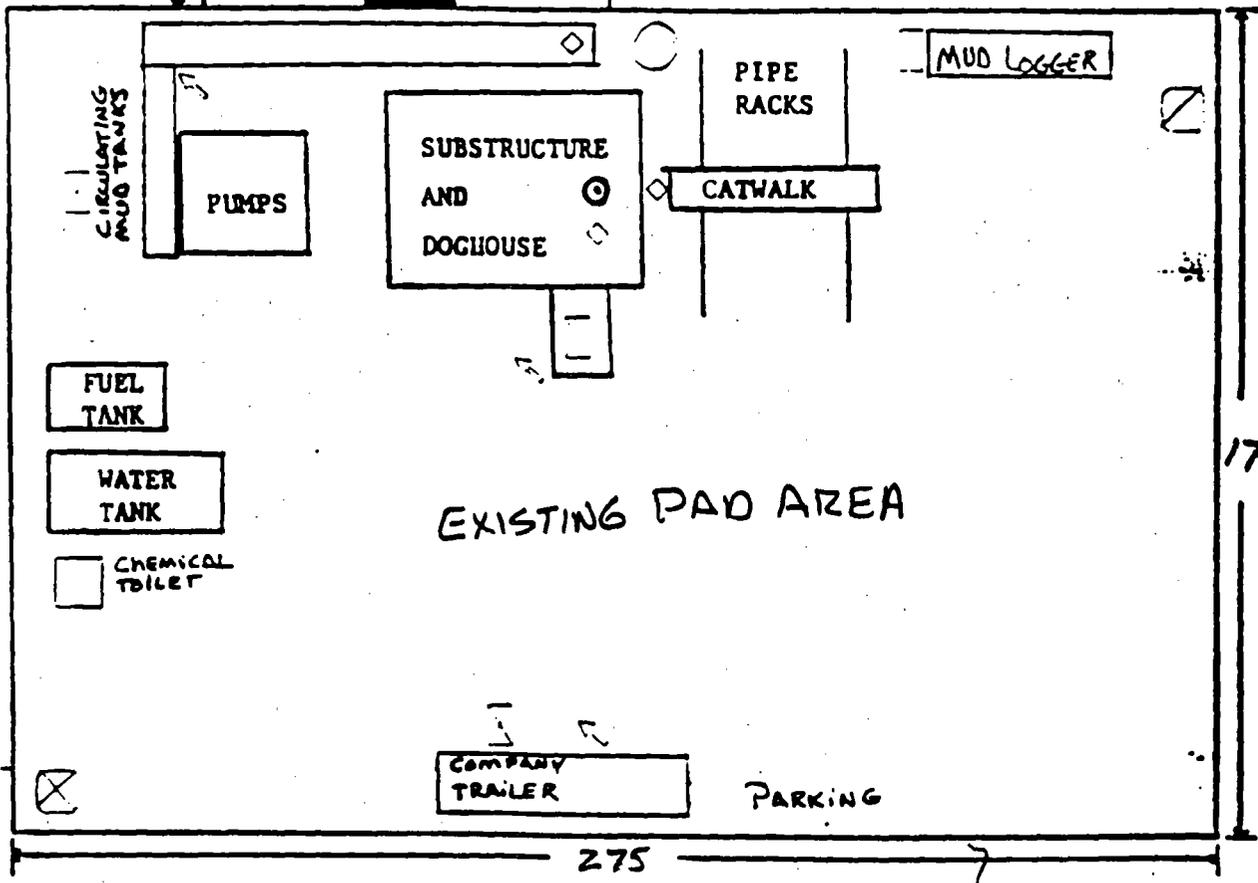
# INDIAN FED COM #2 RE-ENTRY

2 EXISTING  
LEASE ROAD



- ◇ H2S Detection Equipment
- ∩ Wind Direction Indicator
- ⊠ Self Contained Breathing Equip.
- ⊠ Briefing Area

FOOT  
PATH



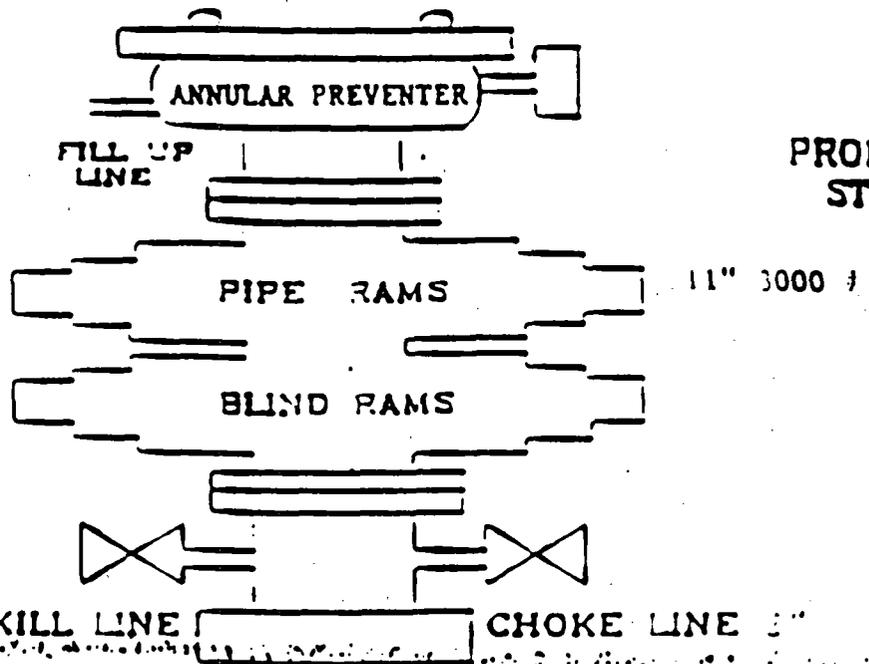
ACCESS  
± 500'



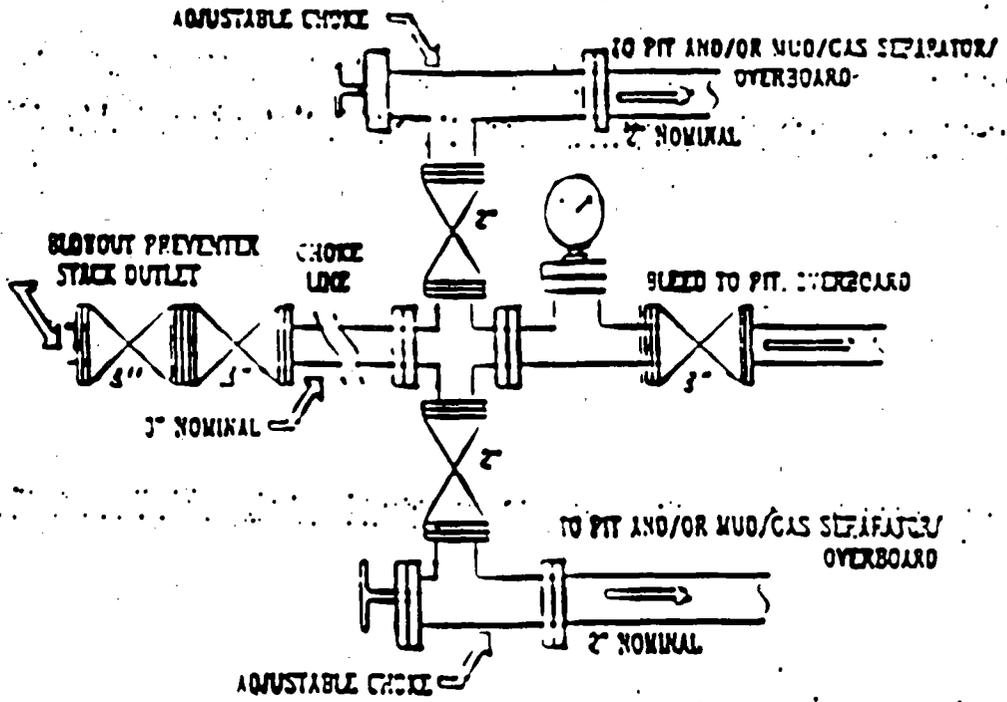
Prevailing Wind Direction  
Southwest

Foot-path for emergency  
egress

2 FOOTPATH



PRODUCTIO  
STACK



# MARATHON OIL COMPANY

## H2S DRILLING OPERATIONS PLAN

### *1. HYDROGEN SULFIDE TRAINING*

All contractors and subcontractors employed by Marathon Oil Company receive or have received training from a qualified instructor within the twelve months in the following areas prior to commencing drilling operations on this well.

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. Safety precautions
3. Operations of safety equipment and life support systems

In addition, contractor supervisory personnel will be trained or prepared in the following areas:

1. The effect of H<sub>2</sub>S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-down procedures when drilling or reworking a well, blowout prevention and well control procedures. If the nature of work performed involves these items.
3. The contents and requirements of the contingency plan when such plan is required.

All personnel will be required to carry documentation of the above training on their person.

### *1. H2S EQUIPMENT AND SYSTEMS*

#### *1. Safety Equipment*

The following safety equipment will be on location.

A. Wind direction indicators as seen in attached diagram.

B. Automatic H<sub>2</sub>S detection alarm equipment (both audio and visual).

C. Clearly visible warning signs as seen on the attached diagram. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.

D. Protective breathing equipment will be located in the dog house and at briefing areas as seen in the attached diagram.

## 2. WELL CONTROL SYSTEMS

### A. Blowout Prevention Equipment

Equipment includes but is not limited to:

- a. pipe rams to accomodate all pipe sizes
- b. blind rams
- c. choke manifold
- d. closing unit

Auxiliary equipment added as appropriate includes:

- a. annular preventor \_\_\_\_\_
- b. rotating head \_\_\_\_\_
- c. mud- gas separator \_\_\_\_\_
- d. flare line and means of ignition \_\_\_\_\_
- e. remote operated choke \_\_\_\_\_

### B. Communication

The rig contractor will be required to have two-way communication capability. Marathon Oil Company will have either land-line or mobile telephone capabilities.

### C. Mud Program

The mud program has been designed to minimize the volume of mud circulated to surface. Proper mud-weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers when appropriate will minimize hazards with penetrating H<sub>2</sub>S bearing zones.

D. Drill Stem Test intervals are as follows:

DST No. 1	_____ ft. to _____ ft.
DST No. 2	_____ ft. to _____ ft.
DST No. 3	_____ ft. to _____ ft.

Drill Stem Testing Safety Rules are attached.

## III. WELL SITE DIAGRAM

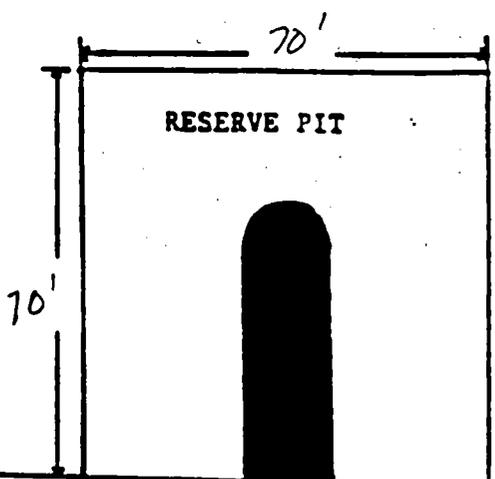
A complete well site diagram including the following information is attached.

1. Rig orientation
2. Terrain
3. Briefing areas
4. Ingress and egress
5. Pits and flare lines
6. Caution and danger signs
7. Wind indicators and prevailing wind direction

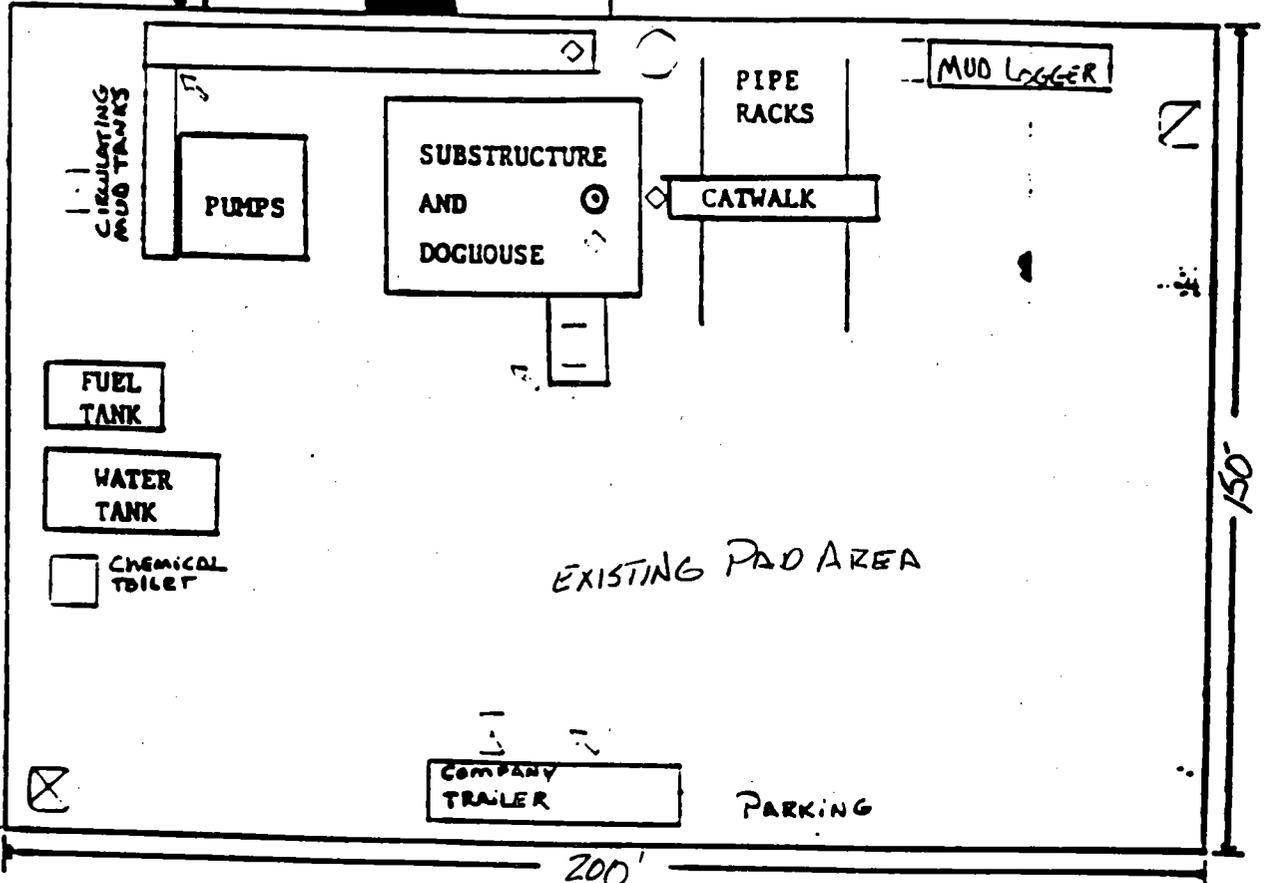
INDIAN FEDERAL GAS COM # 2  
RE-ENTRY

TO MARATHON ROAD

EXISTING ACCESS

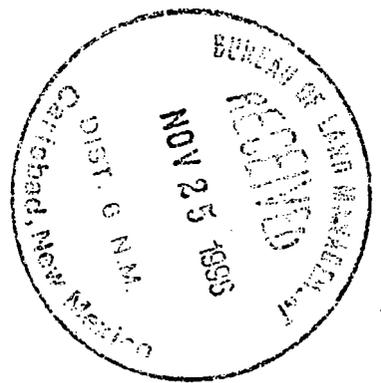


- ◇ H2S Detection Equipment
- ∩ Wind Direction Indicator
- Self Contained Breathing Equip.
- ⊗ Breathing Area



Prevailing Wind Direction  
Southwest

Foot-path for emergency  
egress



## SPECIAL DRILLING STIPULATIONS

### THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

OPERATOR'S NAME MARATHON OIL COMPANY WELL NO. & NAME #2 INDIAN FEDERAL GAS COM  
LOCATION 1650' F S L & 1650' F E L SEC. 19, T. 21S., R. 24E.  
LEASE NO. NM-0238436 COUNTY EDDY STATE NEW MEXICO

The special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 and 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

#### I. SPECIAL ENVIRONMENT REQUIREMENTS

- Lesser Prairie Chicken (Stips attached)                       Floodplain (Stips attached)  
 San Simon Swale (Stips attached)                               Other

#### II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

The BLM will monitor construction of this drill site. Notify the  Carlsbad Resource Area Office at (505) 887-6544  Hobbs Office at (505) 393-3612, at least 3 working days prior to commencing construction.

Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche.

All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately \_\_\_\_\_ inches in depth. Approximately \_\_\_\_\_ cubic yards of topsoil material will be stockpiled for reclamation.

Other

#### III. WELL COMPLETION REQUIREMENTS

A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at a depth of 1/2 inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

- |   |  |
|---|--|
| <input type="checkbox"/> A. Seed Mixture 1 (Loamy Site)               | <input type="checkbox"/> B. Seed Mixture 2 (Sandy Sites) |
| Lehmans Lovegrass ( <u>Eragrostis lehmanniana</u> ) 1.0               | Sand Dropseed ( <u>Sporobolus cryptandrus</u> ) 1.0      |
| Side Oats Grass ( <u>Bouteloua curtipendula</u> ) 5.0                 | Sand Lovegrass ( <u>Eragrostis trichodes</u> ) 1.0       |
| Sand Dropseed ( <u>Sporobolus cryptandrus</u> ) 1.0                   | Plains Bristlegrass ( <u>Setaria magrostachya</u> ) 2.0  |
| <input checked="" type="checkbox"/> C. Seed Mixture 3 (Shallow Sites) | <input type="checkbox"/> D. Seed Mixture 4 ("Gyp" Sites) |
| Sideoats Grama ( <u>Boute curtipendula</u> ) 1.0                      | Alkali Sacaton ( <u>Sporobolus airoides</u> ) 1.0        |
| Lehmans Lovegrass ( <u>Eragrostis lehmanniana</u> ) 1.0               | Four-wing Saltbush ( <u>Atriplex canescens</u> ) 5.0     |
| or Boar Lovegrass ( <u>E. chloromalas</u> ) 1.0                       |  |

Seeding should be done either late in the fall (September 15 - November 15, before freeze up) or early as possible the following spring to take advantage of available ground moisture.

Other

### RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6 mil plastic.

Mineral material extracted during construction of the reserve pit may be used for development of the pad and access road as needed. Removal of any additional material on location must be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

### OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- 1) Lined as specified above and,
- 2) A borrow/caliche/gravel pit can be constructed immediately adjacent to the reserve pit and is capable of containing all reserve pit contents. The mineral material removed in the process can be used for pad and access road construction. However, a material sales contract must be purchased from BLM prior to removal of the material.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

### CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to proceed by BLM.

### TRASH PIT STIPS

All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: MARATHON OIL COMPANY  
Well Name & No. Indian Federal Gas Com #2 - Re-entry  
Location: 1650' FSL, 1650' FEL, Sec. 19 , T. 21 S., R.24 E.  
Lease: NM-0238436  
.....

I. DRILLING OPERATIONS REQUIREMENTS:

The Bureau of Land Management (BLM) is to be notified at (505) 627-0272 for wells in Chaves and Roosevelt Counties, at (505) 887-6544 for wells in Eddy County, and at (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

1. Re-entry
2. Cementing casing: 5-1/2 inch

Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

II. CASING:

Minimum required fill of cement behind the 5-1/2 inch production casing is +1 600' above uppermost hydrocarbon bearing formation.

III. PRESSURE CONTROL:

Before re-entering the well, the blowout preventer assembly shall consist of a minimum of:

- One Annular Preventer
- Kelly Cock/Stabbing Valve

Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.

The results of the test will be reported to the BLM Carlsbad Resource Area office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292 for wells in Eddy County, and the BLM Hobbs Office at 414 West Taylor, Hobbs, New Mexico 88240 for wells in Lea County.

A Hydrogen Sulfide Contingency Plan should be activated prior to drilling in the Cisco formation. A copy of the plan shall be posted at the drilling site.

Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

IV. OTHER:

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

\*\*\*End of drilling stips\*\*\*

acswoboda, 12/10/96

**MOC INDIAN FED. GAS CO. NO. 2**

**19-21S-24E**

**1660' FSL & 1650' FSL**

**3762' KB**

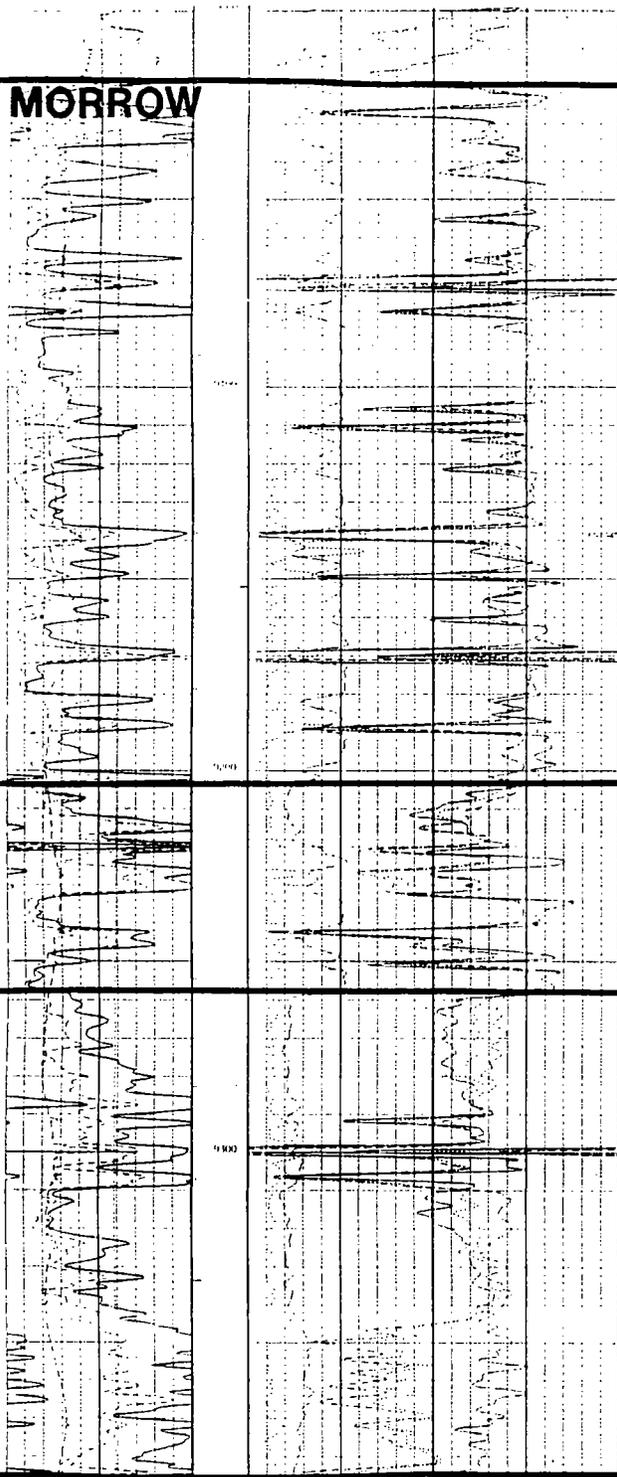
**MORROW**

**UPPER MORROW**

**UPPER MORROW**

**MIDDLE MORROW**

**LOWER MORROW**



**NEW MEXICO OIL CONSERVATION DIVISION**

- Engineering Bureau -

**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

**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 - Statement of Understanding**

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 further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

D.P. NORDT  
 Print or Type Name

Walter J. Quinn  
 Signature

ORLG. SUPT  
 Title

4/1/97  
 Date



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

April 1, 1997

State of New Mexico  
Energy, Minerals & Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Attn: Mr. Michael E. Stogner

Ref: Application for Administrative Approval of Marathon Oil Company to  
Re-enter and Directionally Drill to the Indian Basin, Morrow Gas Pool

Dear Mr. Stogner:

The Indian Federal Gas Com #2 was drilled to 7540' and abandoned in October, 1966 by Penroc Corporation. The location was originally staked in 1966 at 1650' FSL & 1650' FEL, Sec. 19, T-21-S, R-24-E, NMPM, Eddy County, New Mexico. In 1967 the Bureau of Land Management called for a dependent re-survey of the area which changed some of the original set stone markers in T-21-S, R-24-E. This dependent re-survey was filed of record in 1969. Marathon had the dry hole marker surveyed, based on the dependent re-survey, on January 29, 1997, and found the location at 1349' FSL & 2025' FEL, Sec. 19, T-21-S, R-24-E, NMPM, Eddy County, New Mexico. Marathon has re-entered the well and deepened to 9600' in the Morrow formation.

In order to penetrate the maximum thickness of the net porous Morrow Sand identified by an FMI log, Marathon proposes to sidetrack and test the Indian Basin, Morrow Gas Pool at a BHL of 2825' FEL & 1174' FSL. The FMI log indicated that a much thicker sand package may exist at the proposed BHL. The sand appears to be a bar deposit and the wellbore encountered the upstream edge of the bar. Marathon requests administrative approval under the provisions of Rule 111 (D) and (E) to re-enter the above referenced well and drill a directional well. By utilizing this existing wellbore, Marathon will be able to economically test the Morrow gas formation and form a 640 acre gas unit or project area. The following information is enclosed to support our request: Original Form C-102, Approved Application to Re-enter from BLM, Resurveyed Form C-102 reflecting the proposed 640 acre gas unit, plat of adjoining leases with project area, offset operator list, directional plan, and type log.

Application for Administrative Approval

April 1, 1997

Page 2

On this date, a copy of this application, including the plats and permit attached thereto, have been sent by certified mail to the affected parties listed on the attached page.

The affected parties have been advised that if they have an objection to this application, it must be filed in writing to the Division within twenty (20) days from this date.

Should you have any questions regarding this matter, please feel free to contact me at 1-800-351-1417.

Very truly yours,



W. J. Ducease

MARATHON OIL COMPANY

WJD/ct  
h:\ducease\stogner



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

April 1, 1997

**OFFSET OPERATORS**

**Ref:** Application for Administrative Approval of a Directional Well  
Indian Basin Morrow Gas Pool  
Indian Federal Gas Com No. 2

**SHL:** 1349' FSL & 2025' FEL  
Sec. 19, T-21-S, R-24-E  
Eddy County, New Mexico

**BHL:** 1174' FSL & 2825' FEL  
Sec. 19, T-21-S, R-24-E  
Eddy County, New Mexico

Gentlemen:

Please find attached an application for Administrative Approval of a Directional Well location for the above referenced well deepening and directional sidetrack filed with the State of New Mexico Oil Conservation Division on this day by Marathon Oil Company. Please be advised that if you have an objection to this application, it must be filed in writing within twenty (20) days from the date of this application. Marathon is requesting administrative approval to drill a directional well to the Indian Basin Morrow Gas Pool under the provisions of NMOCD Rule 111 (D) and (E).

Should you have no objection to this application, please signify by executing one original of this waiver of objection and return one original to me in the enclosed envelope.

Thank you for your attention to this matter.

Very truly yours,

W. J. Ducease  
MARATHON OIL COMPANY

I/we do hereby waive any objections to Marathon's request to re-enter, deepen, and directionally drill to a non-standard bottom hole location in the Indian Basin Morrow formation at its Indian Hills Gas Com No. 2, SHL: 1349' FSL & 2025' FEL; BHL: 1174' FSL & 2825' FEL, Sec. 19, T-21-S, R-24-E, Eddy County, New Mexico.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

WJD/dt  
h:\duceaselwaiver

**AFFECTED OPERATOR LIST  
INDIAN HILLS FED. GAS COM. NO. 2  
SEC. 19, T-21-S, R-24-E  
EDDY COUNTY, NEW MEXICO**

**T-21-S, R-24-3**

**Section 18**

Yates Petroleum  
105 S. Fourth Street  
Artesia, NM 88210

Robert G. Hanagan  
Box 1737  
Roswell, NM 88201

Frank W. Podpechan  
P. O. Box 549  
Claremore, OK 74013

Merle Kelce  
301 N. Memorial Drive  
St. Louis, MO

Hugh E. Hanagan  
P. O. Box 1737  
Roswell, NM 88201

Nolan H. Brunson  
P. O. Box 1039  
Hobbs, NM 88241

Merrit Group II Partnership  
P. O. Box 351  
Midland, TX 79702

Burlington Resources  
Box 51810  
Midland, TX 79710

**Section 17**

Fasken Oil & Ranch  
303 W. Wall Street, Suite 1900  
Midland, TX 79701-5116

**Section 20**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702

**Section 29**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702

**Section 30**

Devon Energy  
20 North Broadway  
Oklahoma City, OK 73112

**T-21-S, R-23-E**

**Section 13**

Santa Fe Energy Operating Partners, LP  
500 W. Illinois  
Midland, TX 79701

**Section 24**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702

Santa Fe Energy Operating Partners, LP  
500 W. Illinois  
Midland, TX 79701

Open Acreage - Bureau of Land Management  
2909 W. Second Street  
Roswell, NM 88201-2019

**Section 25**

Santa Fe Energy Operating Partners, LP  
500 W. Illinois  
Midland, TX 79701

DISTRICT I  
P.O. Box 1960, Hobbs, NM 88241-1960

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

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

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

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

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name INDIAN FEDERAL	Well Number 2
OGRID No.	Operator Name MARATHON OIL COMPANY	Elevation 3764

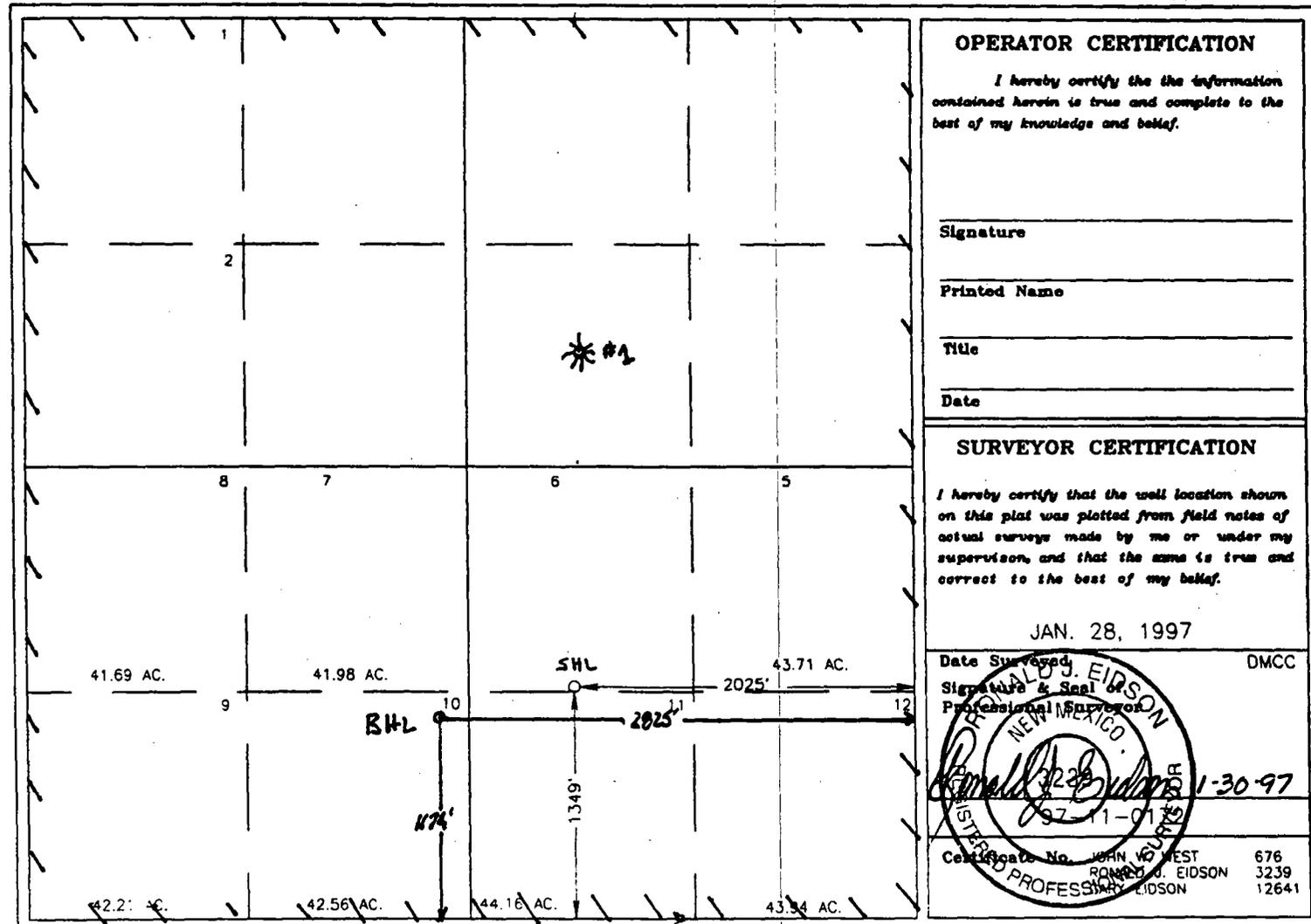
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
6	19	21 S	24 E		1349	SOUTH	2025	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 that 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.

JAN. 28, 1997

Date Surveyed \_\_\_\_\_ DMCC

Signature & Seal \_\_\_\_\_

Professional Surveyor  
NEW MEXICO  
1-30-97

Certificate No. JOHN W. WEST 676  
RONALD J. EIDSON 3239  
PROFESSIONAL SURVEYOR EIDSON 12641



# MARATHON OIL COMPANY

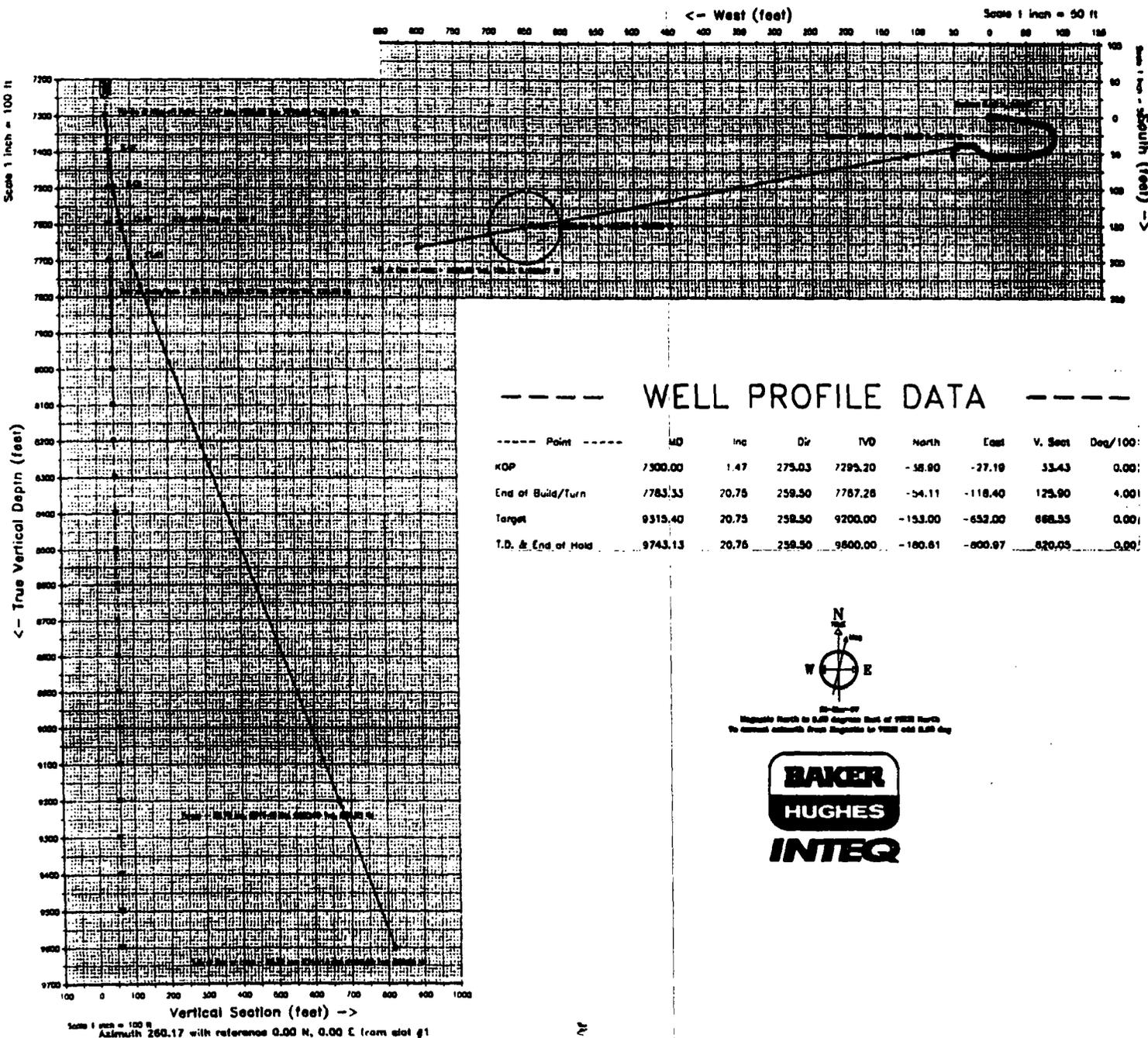
Structure : INDIAN FED GAS COM NO.2

Slot : slot #1

Field :

Location : EDDY CO., NEW MEXICO

Created by: *lsc*  
 Date printed: 24-10-87  
 Plot Reference is 4 OEDS 2542  
 Coordinates are in feet reference slot #1.  
 True Vertical Depth are reference rotary table.  
 --- Baker Hughes 8733 ---

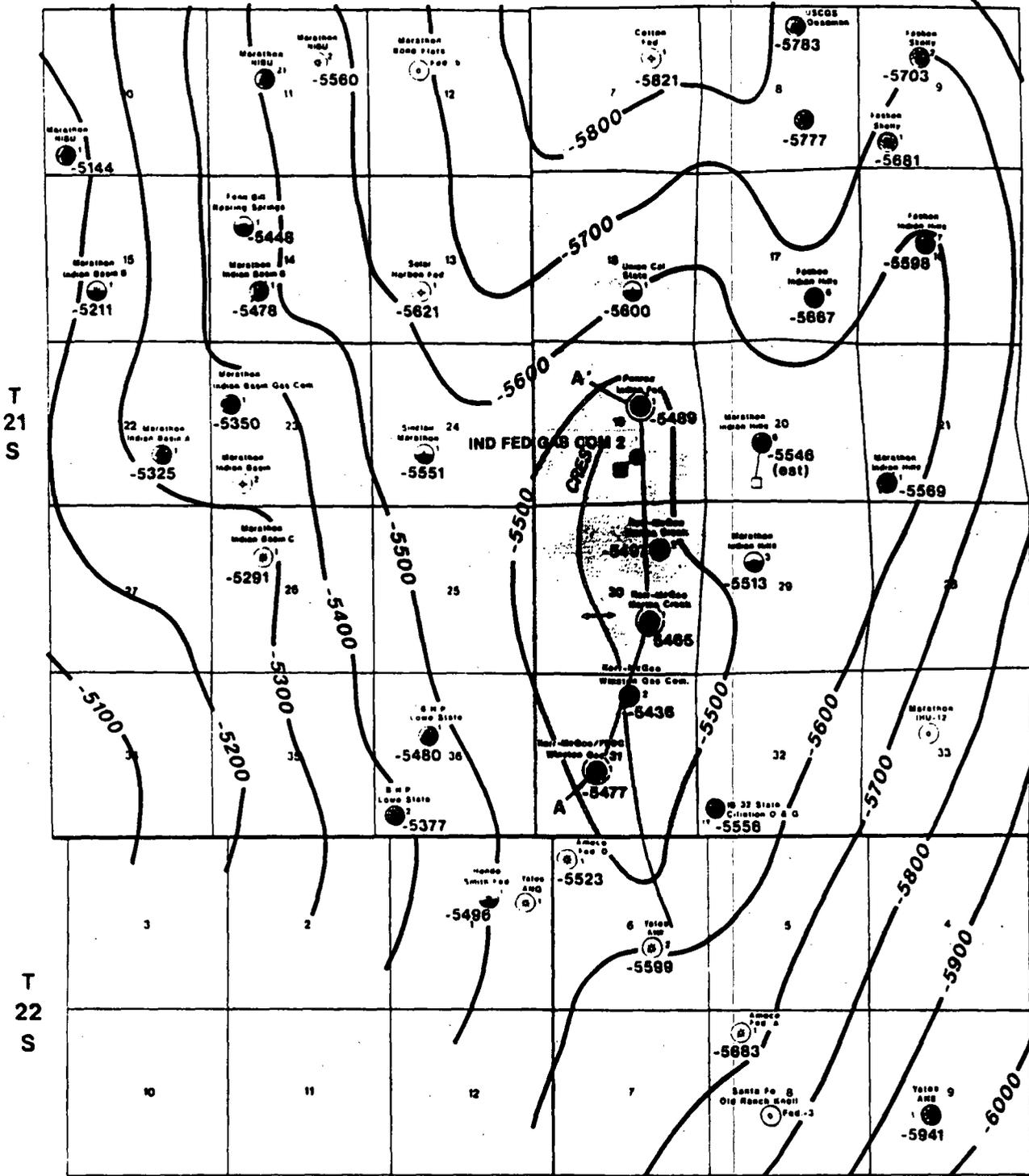


MagNorth is 8.88 degrees East of True North  
 To convert azimuth from Magnetic to True add 8.88 deg



R 23 E

R 24 E



- ORIGINAL BOTTO HOLE LOCATION
- PROPOSED DIRECTIONAL WE BOTTM HOLE LOCATION

Morrow Penetrations Only Shown

- MORROW PENETRATION
- MORROW PRODUCTIVE
- MORROW DST GAS SHOW or PROD. TEST SHOW

**KERR-MCGEE CORPORATION**

**INDIAN BASIN**  
EDDY COUNTY, NEW MEXICO

**MIDDLE MORROW STRUCTURE**

C.I. = 100'

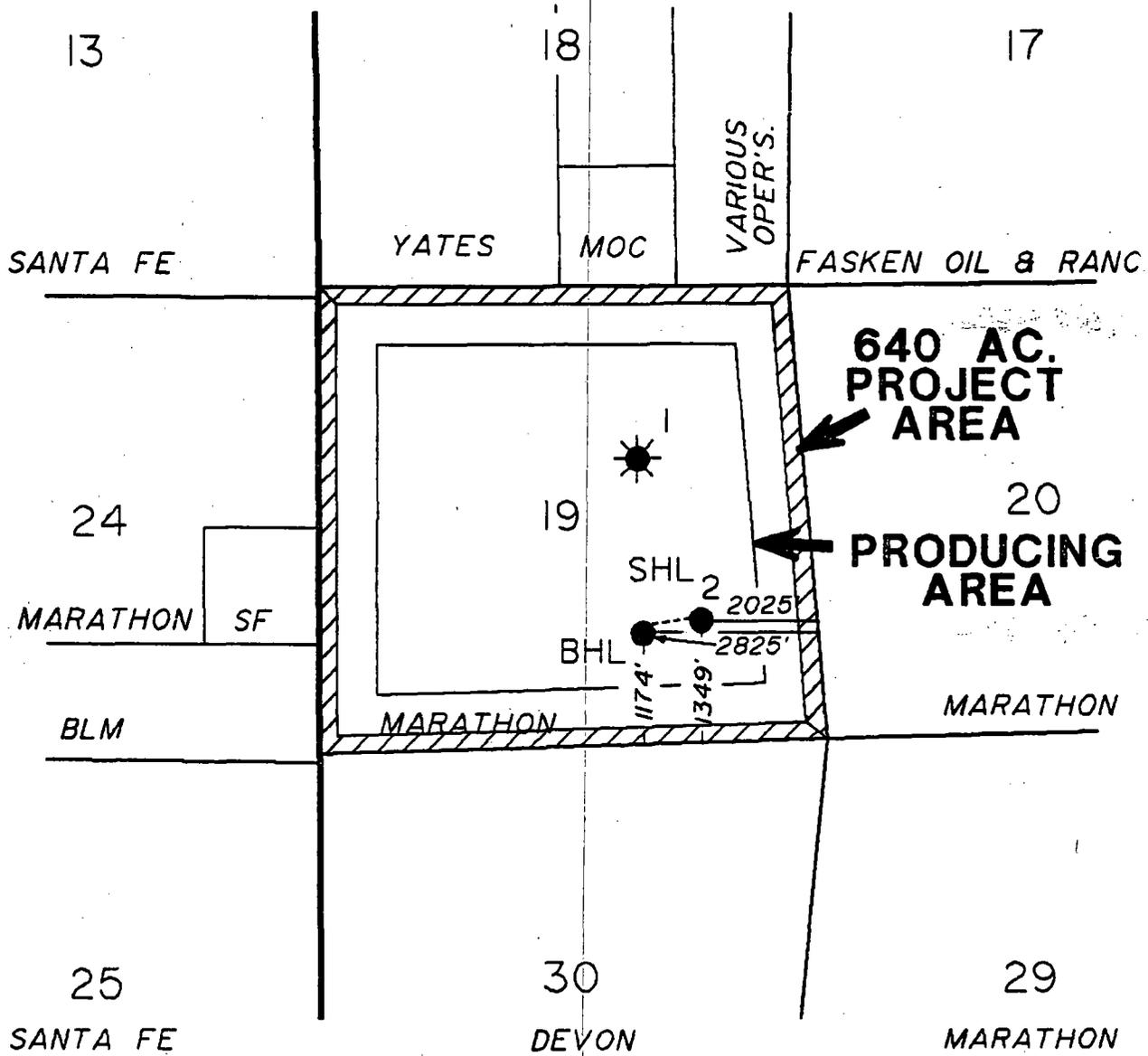
Scale: 1" = 4000'      Date: 4/96      By: D.D.M.

MODIFIED BY MOC 3/87

R 23 E

R 24 E

T  
21  
S



**INDIAN FED. GAS COM. #2**  
**INDIAN BASIN MORROW-GAS POOL**

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

5. LEASE DESIGNATION AND SERIAL NO. <b>NM0238436</b>
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME, WELL NO. <b>Indian Federal Gas Com</b>
9. API WELL NO. <b>2</b>
10. FIELD AND POOL, OR WILDCAT <b>INDIAN BASIN</b>
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>SEC. 19, T21S, R24E</b>
12. COUNTY OR PARISH <b>EDDY</b>
13. STATE <b>NM</b>

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

1a. TYPE OF WORK  
**DRILL**  **DEEPEN**  *RT. LIFT*

b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
**Marathon Oil Company**

3. ADDRESS AND TELEPHONE NO.  
**P.O. Box 552, Midland, TX 79702** **915/687-8327**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface  
**1650' FSL & 1650' FEL**  
At proposed prod. zone  
**1650' FSL & 1650' FEL**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**10 S.W. OF LAKEWOOD, NM**

13. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**640**

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH  
**9,600'**

20. ROTARY OR CABLE TOOLS  
**ROTARY**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**3746' G. L.**

22. APPROX. DATE WORK WILL START\*  
**11/25/96**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
<b>*17 1/2"</b>	<b>13 3/8"</b>	<b>48</b>	<b>168'</b>	<b>225 SX</b>
<b>*12 1/4"</b>	<b>8 5/8"</b>	<b>24</b>	<b>2310'</b>	<b>500 SX</b>
<b>7 7/8"</b>	<b>5 1/2"</b>	<b>15.5, 17</b>	<b>9,000'</b>	<b>7150 SX</b>

Propose to re-enter well and deepen to Morrow

See attached for Detail

\*Casing in Place.

APPROVAL AUTHORITY FOR  
GENERAL MINERAL RIGHTS AND  
WATER RIGHTS

NOV 13 9 25 AM '96  
RECEIVED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Walter J. Duvar FOR OPM TITLE DRILLING SUPERINTENDENT DATE 11/8/96

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY Sony L. Ferguson TITLE ADM, Minerals DATE 12/12/96

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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  
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
 Energy, Minerals & Natural Resources Department

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name <u>Indian Basin (Morrow)</u>	
<sup>4</sup> Property Code		<sup>5</sup> Property Name <u>Indian Federal Gas Com</u>			<sup>6</sup> Well Number <u>2</u>
<sup>7</sup> OGRID No.		<sup>8</sup> Operator Name <u>Marathon Oil Company</u>			<sup>9</sup> Elevation <u>3746'</u>

<sup>10</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
6	19	21-S	24-E		1650	South	1650	East	Eddy

<sup>11</sup> 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>12</sup> Dedicated Acres <u>640</u>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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**

	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p style="text-align: right;"><u>Walter J. Duncan</u> Signature</p> <p style="text-align: right;"><u>D. P. Nordt</u> Printed Name</p> <p style="text-align: right;"><u>Drilling Superintendent</u> Title</p> <p style="text-align: right;"><u>November 8, 1996</u> Date</p>
	<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p>
	<p>Certificate Number</p>

**Thirteen Point Surface Use Plan**  
**MARATHON OIL COMPANY**

**Indian Federal Gas Com #2**  
**Sec. 19, T-21-S, R-24-E**  
**Eddy County, New Mexico**

---

1. **Existing Roads:** Refer to Vicinity Lease Map.
  - a. The proposed wellsite is staked and the surveyor's plat is attached.
  - b. To reach the location from Carlsbad, New Mexico: Follow Hwy. 285 North of Carlsbad 14 miles. Turn West on Queen's highway (NM 137) for 8.8 miles. Turn right on NM 401 for 2.2 miles. Turn left on existing access road into location.
  - c. Existing roads within a one-mile radius (refer to Vicinity Lease Map).
  - d. The existing road will be maintained as necessary to provide access during the drilling operation.
  
2. **Planned Access Road:** Refer to Vicinity Lease Map.

Access will be by existing lease roads. Construction plans will require blading and rolling the road and pad. No access road will be required. The existing access road enters the drilling pad on the Southwest corner. The drilling location will have a V-door facing East. No new construction will be required, no new surface area will be disturbed.
  
3. **Location of Existing Wells:** See Vicinity Lease Map.
  
4. **Location of Existing and Proposed Production Facilities within a one-mile radius:**
  - a. Existing: There are six gas wells operated by Marathon and Santa Fe within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon and Santa Fe operate a variety of dehydrators, meter runs, and several gathering lines in the one-mile radius.
  - b. **New Facilities:** The proposed location will have a separator and gas sales line. The actual equipment and its configuration will be determined after the well is completed.
  - c. Rehabilitation of disturbed areas no longer needed for operations will be accomplished by grading, leveling and seeding as recommended.

**A. P. D. (cont.)  
Thirteen Point Surface Use Plan  
Indian Federal Gas Com #2**

**5. Location and Type of Water Supply:**

- a. **Source: Indian Basin Gas Plant, SW/4, NE/4, Sec. 23, T-21-S, R-23-E.**
- b. The water will be trucked by a contractor over existing roads to the well location. No new construction will be required on/along the water route.
- c. No water well will be drilled on this location.

**6. Source of Construction Materials:**

- a. Construction materials will be obtained from the construction site.
- b. If production is obtained, native materials will be used on the location and for installation of production facilities.
- c. On-site inspection may dictate any changes in location construction.

**7. Methods of Handling Waste Material Disposal:**

- a. Cuttings - will be deposited in the reserve pit.
- b. Drilling fluids - contained in reserve pit and allowed to evaporate. Free water will be removed and transported to an approved disposal site to accelerate pit drying.
- c. Produced fluids - none anticipated.
- d. A portable chemical toilet will be provided.
- e. Garbage and other waste material - garbage and trash will be stored in a receptacle on location and periodically hauled to an approved sanitary landfill.
- f. After the rig moves out, all materials not necessary for operations will be removed. Pits will be backfilled and leveled. The location will be cleaned of all trash and debris.

**8. Ancillary Facilities: Camp facilities will not be required. Portable trailers will be on location to house a company drilling foreman and contract toolpusher.**

**9. Wellsite Layout:**

- a. The wellpad layout shows the drillsite layout as staked. The drilling pad will utilize the existing gas well location.
- b. The reserve pit will be fenced on three sides before drilling begins. The fourth side will be fenced when the drilling rig leaves location.
- c. The reserve pit will be lined (8 mil material).

**A. P. D. (cont.)  
Thirteen Point Surface Use Plan  
Indian Federal Gas Com #2**

**10. Plans for Restoration of the Surface:**

- a. Backfilling, leveling, and contouring are planned as soon as all pits have dried. Waste disposal and spoiled materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- b. The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula by BLM. Revegetation is recommended for road area, as well as around the drill pad.
- c. The reserve pit will be fenced during drilling operations. Fencing will be maintained until leveling and cleanup are accomplished.
- d. If any oil is in the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with mesh.
- e. The rehabilitation operations will begin after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation will be done between July 15 and September 15.

**11. Other Information:**

- a. There are no significant archaeological or cultural sites visible in the area of disturbance. A cultural resource survey was not performed, as no new surface area will be disturbed.
- b. General topography: Shown on Vicinity Lease Map. The terrain at the wellsite is gently rolling hills. Vegetation is primarily sage brush and natural grasses.
- c. Animal life: Prairie dogs, domestic livestock, rabbits and native rodents and predators.
- d. Dwellings (nearest): Approximately 4-1/2 miles.
- e. General location: Approximately 8.5 miles west of Lakewood, New Mexico.
- f. Drainage: Internal
- g. Surface Owner: The surface is owned by the Federal Government, the surface is leased for grazing to Patsy Shafer Lyman.

A. P. D. (cont.)  
Thirteen Point Surface Use Plan  
Indian Federal Gas Com #2

12. Operator Representatives:

David Nordt  
Drilling, Completion, & Workover Superintendent  
P. O. Box 552  
Midland, TX 79702  
800/351-1417  
915/682-1626

13. Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; and that the work associated with the operations proposed herein will be performed by MARATHON OIL COMPANY and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

11/12-96  
Date

Walter J. Quinn  
D. P. Nordt

**DRILLING PROGRAM  
MARATHON OIL COMPANY**

**Indian Federal Gas Com #2**

1. Estimated KB Elevation: 3762'

<u>FORMATION</u>	<u>-----TOP-----</u>		<u>-----BASE-----</u>		<u>FLUID CONTENT</u>
	<u>MEASURED</u>	<u>SUBSEA</u>	<u>MEASURED</u>	<u>SUBSEA</u>	
Queen	Surface	+3762'	650'	+3112'	water
San Andres	650'	+3112'	2250'	+1512'	water
Glorietta	2250'	+1512'	2355'	+462'	
Delaware	3300'	+462'	4300'	-538'	
Bone Spring	4300'	-538'	5950'	-2188'	oil gas
Wolfcamp	5950'	-2188'	7520'	-3758'	oil gas
B/Permian Shale	7520'	-3758'	7530'	-3768'	
U. Penn	7530'	-3768'	7550'	-3788'	gas, oil, water
Penn Dolomite	7550'	-3788'	8500'	-4738'	gas, oil, water
Morrow	8500'	-4738'	9000'	-5238'	

<u>FORMATION</u>	<u>---EST PSIG</u>	<u>SBHP--- PPG EMW</u>	<u>EST SBHT DEG f</u>	<u>H2S PPM</u>	<u>---SIGNIFICANCE--- (obj, marker, etc.)</u>
Bone Springs	1210	8.5		500	marker
Wolfcamp	1680	9.0			marker
B/Permian Shale		1810	9.0		marker
U. Penn	2050	9.0		5000	objective pay
Penn Dolomite	2164	9.0		5000	objective
Morrow	3460	9.2			Objective

2. See (1) above.

If any unexpected water or mineral bearing zones are encountered, they will be reported, evaluated, and protected as circumstances and regulations require.

3. Pressure Control Equipment:

8 5/8" Surface: 11" 3M annular tested to 200#/2000#, 11" 3M dual rams, choke manifold and mud cross, tested to 300#/3000#.

Auxiliary Equipment:

Surface Hole: Annular or rotating head w/air rig.

Intermediate Hole: N/A

Production Hole: Flow indicator, PVT, H<sub>2</sub>S Sensors, air packs, stroke counter, rotating head.

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs.

Upper and lower kelly cocks with valve handle and safety valve and subs to fit all drillstring connections in use will be available on rig floor.

A. P. D. (cont.)  
 Thirteen Point Surface Use Plan  
 Indian Federal Gas Com #2

Test Frequency

1. When installed.
2. Anytime a pressure seal is broken (test confined only to affected equipment).
3. At least every 20 days.
4. Blind and pipe rams shall be activated each trip but not more than once/day.

4. Casing and Cement Program:

<u>---DEPTH---</u> <u>FROM TO</u>	<u>SECTION</u> <u>LENGTH</u>	<u>HOLE</u> <u>SIZE</u>	<u>CSG</u> <u>SIZE</u>	<u>WT.</u> <u>PPF</u>	<u>GRADE</u>	<u>THREADS</u> <u>COUPLINGS</u>	<u>NEW</u> <u>USED</u>		
0 5400'	5400'	7.875"	5.5"	15.5	K-55	LTC	New		
5400' 8100'	2700'	7.875"	5.5"	17.0	K-55	LTC	New		
8100' 6400'	1500'	7.875"	5.5"	17.0	L-80	LTC	New		
<u>CASING</u> <u>STRING</u>	<u>DV</u> <u>DPTH</u>	<u>STG</u>	<u>LEAD</u> <u>TAIL</u>	<u>AMT</u> <u>SXS</u>	<u>TYPE</u> <u>CEMENT</u>	<u>YIELD</u> <u>CF/SX</u>	<u>WT.</u> <u>PPG.</u>	<u>TOC</u>	<u>ADDITIVES</u>
5 1/2"	6300	1	L	700	"H"	1.8	13.6	5 pps	NACL, 6% gel
5 1/2"		2	L	750	"C" Lite	1.91	12.8		
		2	T	700	"C" Neat	1.32	14.8		

*Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 15% excess.*

Centralizer Program:

5 1/2" Conventional centralizers middle of 1st joint, then every joint to 7500', and 1 centralizer every 4th joint thereafter to 1100'.

5. Mud Program:

<u>---DEPTH---</u> <u>FROM TO</u>	<u>MUD TYPE</u>	<u>WEIGHT</u> <u>(PPG)</u>	<u>VIS</u>	<u>WL</u> <u>CC</u>	<u>ADDITIVES</u>	<u>VISUAL</u> <u>MONTR.</u>
0 7540'	cut brine	9.0	28.32	N/A		Reserve
7540' 9660'	cut brine	9.2	32-36	<20	Salt gel, starch, caustic	Steel Pits

*Sufficient quantities of additives will be on location to maintain above mud properties for any anticipated well conditions.*

A. P. D. (cont.)  
 Thirteen Point Surface Use Plan  
 Indian Federal Gas Com #2

6. Logging, Testing & Coring Programs:

<u>LOG/TEST/CORE/MUDLOG/OTHER</u>	<u>--INTERVAL--</u>		<u>REMARKS</u>
	<u>FROM</u>	<u>TO</u>	
DLL/MSFL/GR/CNL/LDT/CAL	TD	5000'	
LDT/CNL/GR/CAL	TD	surf casing	
MUD LOGGER	7540'	TD	ROP, Lithology, Gas Analysis, Chromatograph

NO CORES OR DST'S

7. Abnormal Pressures, Temperatures or Potential Hazards:

None anticipated. Possible H<sub>2</sub>S in Cisco & Upper Penn. See H<sub>2</sub>S Drilling Operations Plan.

8. Other Information:

Anticipated Starting Date: As soon as possible.

Duration of Well: drilling - 18 days, completion - 10 days.

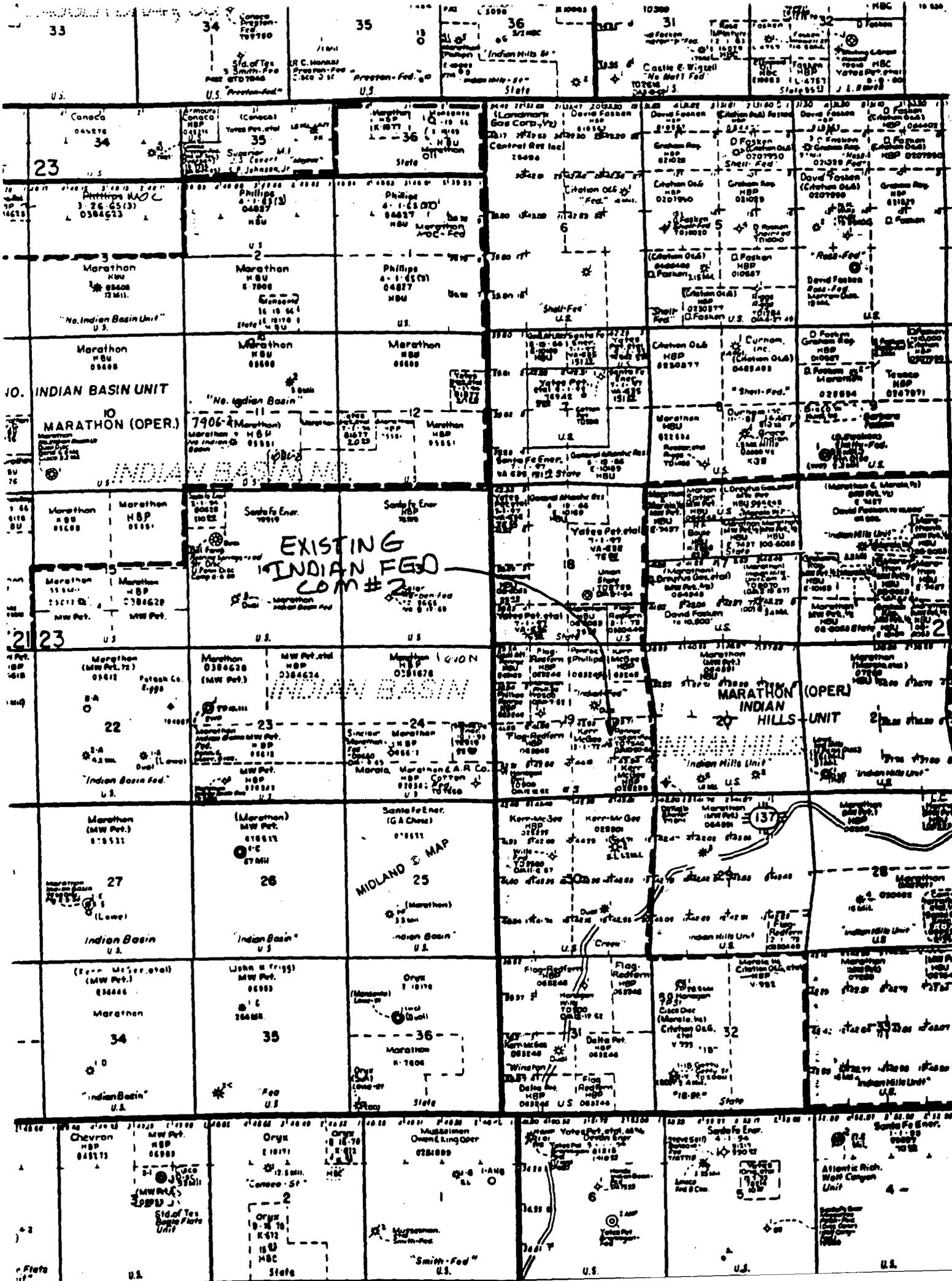
**Indian Federal Gas Com. No. 2  
Re-Entry and Deepening Procedure**

1. MIRU pulling unit. Dig out wellhead and remove dry hole marker. Cut off 8 5/8" casing and weld on 8 5/8" SOW X 11" 3M wellhead. NU BOP.
2. RU reverse unit. Drill out 20' surface cement plug with 7 7/8" bit. TIH to 2260' and tag cement plug. Test casing to 1000 psi. Drill 5' of cement to insure no junk on plug. TOOH, laying down. Install dryhole flange. RDMO pulling unit.
3. Build 75' x 75' single dike reserve pit over existing reserve pit area. MIRU drilling rig. NU 11" 3M dual ram BOP, 11" 3M annular and rotating head. Test BOPE to 250/3000 psi.
4. Drill out cement plugs and clean out hole to old PBTD of 7540' with 7 7/8" bit and cut brine. Mud up and drill hole to TD @ 9600'. Log well as per geologist.
5. Run 5 1/2" casing as follows w/DV tool at 6300':

From	To	Weight	Grade
0'	5400'	15.5#	K-55
5400'	8100'	17.0#	K-55
8100-	9600'	17.0#	L-80

6. Cement as follows:

1st Stage - 700 sacks Class "H"  
2nd Stage - 750 sacks Class "C" Lite Lead  
700 sacks Class "C" Neat Tail



EXISTING  
INDIAN FGO  
COM #2

MIDLAND & MAP

MARATHON (OPER)  
INDIAN HILLS UNIT

23

35

36

31

32

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23

24

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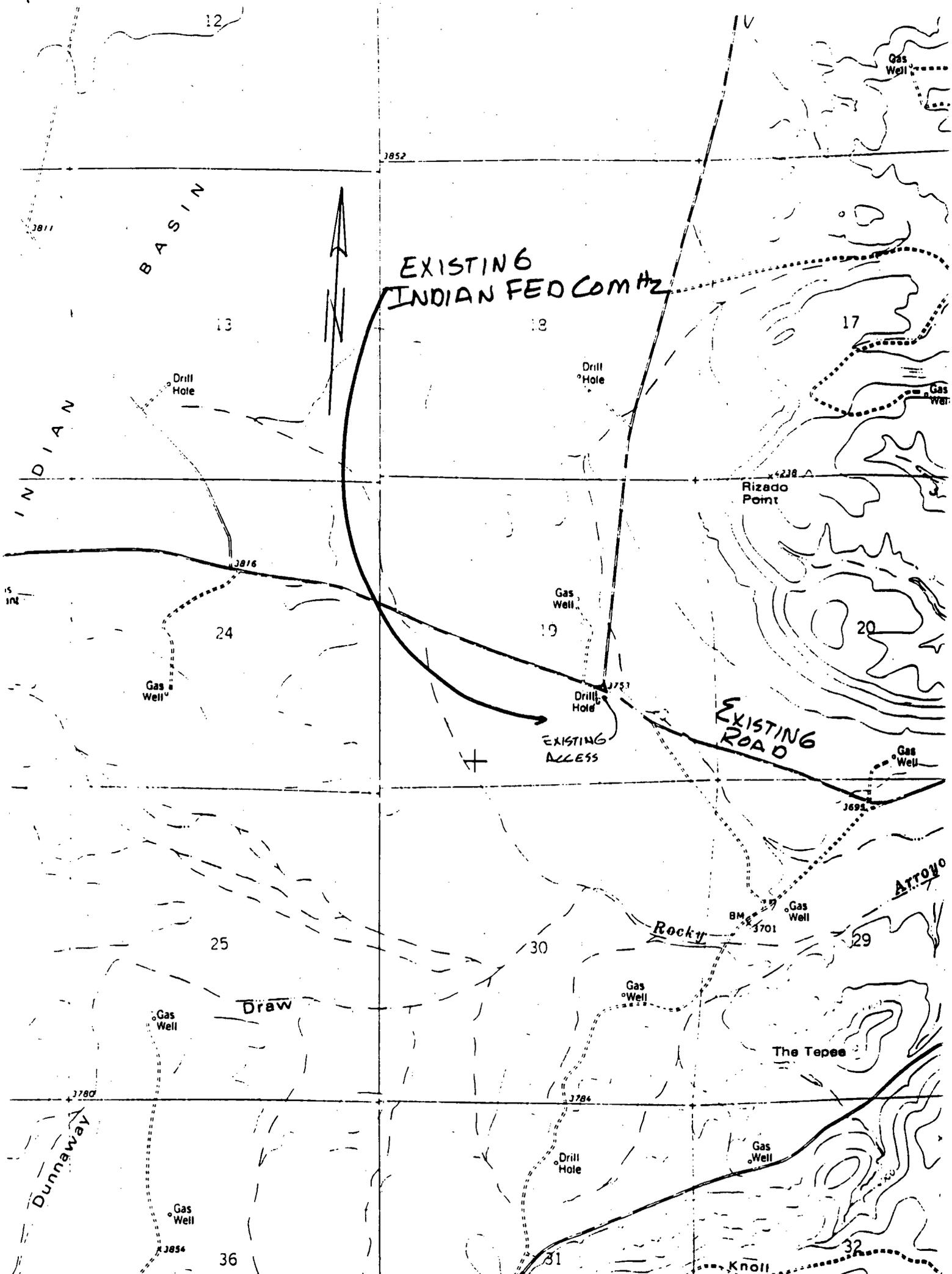
34

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36

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32



EXISTING  
INDIAN FED COM HZ

EXISTING  
ROAD

EXISTING  
ACCESS

BASIN

INDIAN

Rizado  
Point

Rocky

Draw

The Teepee

Arroyo

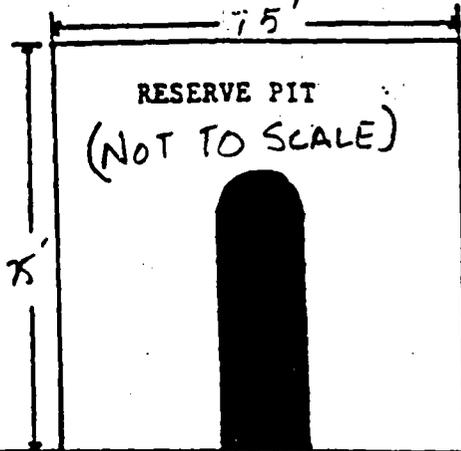
Dunaway

Knoll

MARATHON ROAD

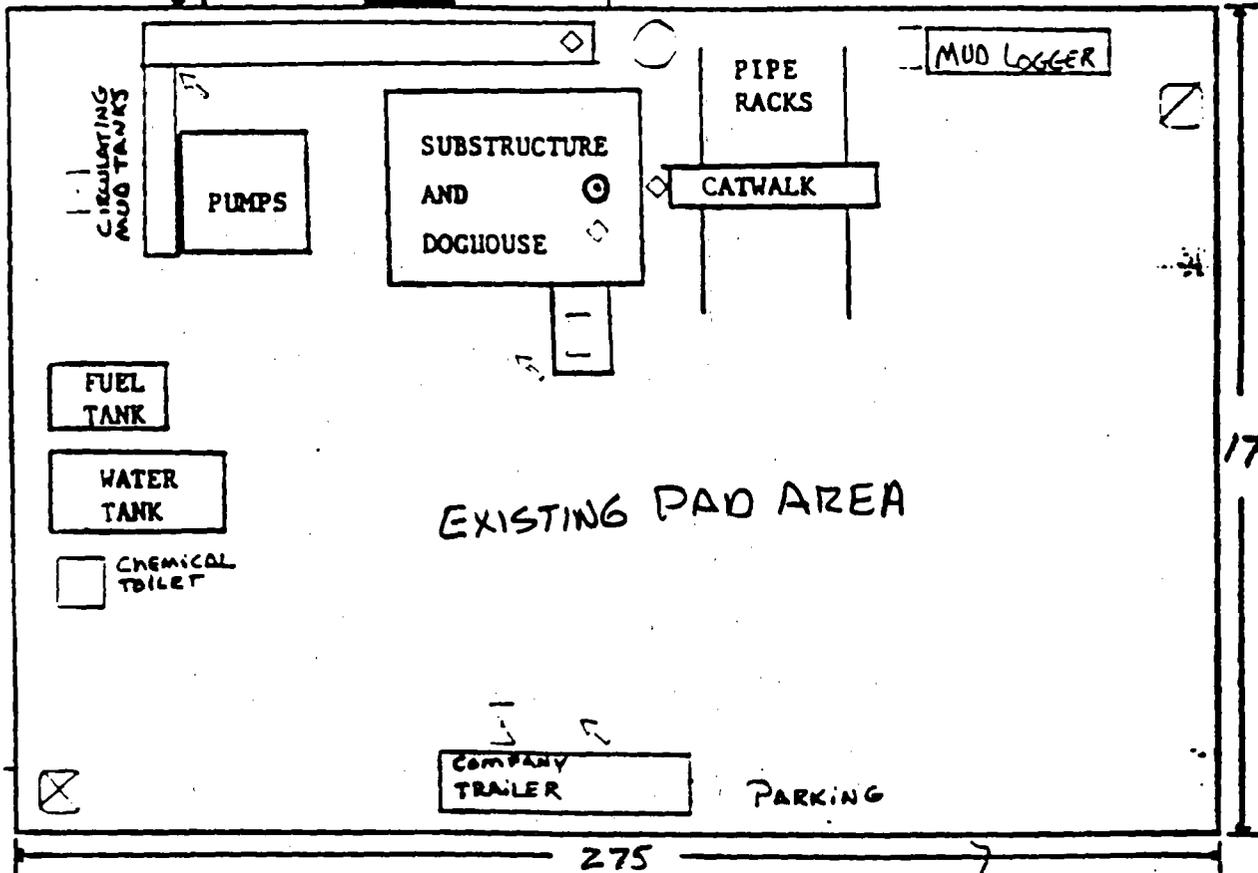
INDIAN FED COM #2  
RE-ENTRY

2 EXISTING  
LEASE ROAD



- ◇ H2S Detection Equipment
- ↗ Wind Direction Indicator
- Self Contained Breathing Equip.
- ⊗ Briefing Area

2 FOOT  
PATH

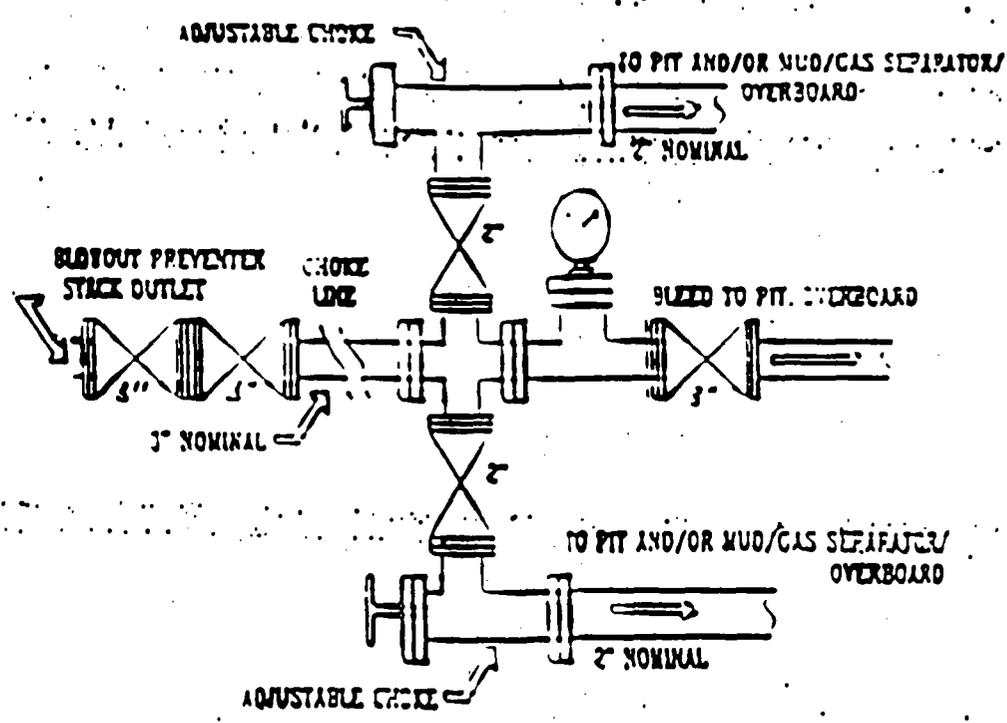
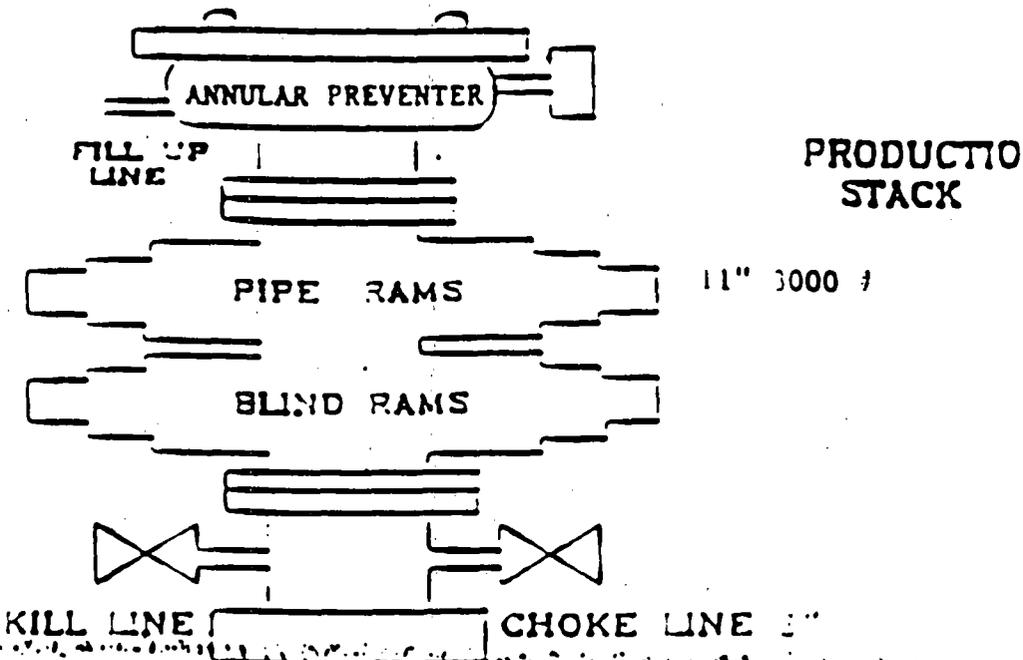


ACCESS  
1500'

Prevailing Wind Direction  
Southwest

Foot-path for emergency  
egress

2 FOOTPATH



# MARATHON OIL COMPANY

## H2S DRILLING OPERATIONS PLAN

### *I. HYDROGEN SULFIDE TRAINING*

All contractors and subcontractors employed by Marathon Oil Company receive or have received training from a qualified instructor within the twelve months in the following areas prior to commencing drilling operations on this well.

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. Safety precautions
3. Operations of safety equipment and life support systems

In addition, contractor supervisory personnel will be trained or prepared in the following areas:

1. The effect of H<sub>2</sub>S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-down procedures when drilling or reworking a well, blowout prevention and well control procedures. If the nature of work performed involves these items.
3. The contents and requirements of the contingency plan when such plan is required.

All personnel will be required to carry documentation of the above training on their person.

### *I. H2S EQUIPMENT AND SYSTEMS*

#### *1. Safety Equipment*

The following safety equipment will be on location.

- A. Wind direction indicators as seen in attached diagram.
- B. Automatic H<sub>2</sub>S detection alarm equipment (both audio and visual).
- C. Clearly visible warning signs as seen on the attached diagram. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.
- D. Protective breathing equipment will be located in the dog house and at briefing areas as seen in the attached diagram.

## 2. WELL CONTROL SYSTEMS

### A. Blowout Prevention Equipment

Equipment includes but is not limited to:

- a. pipe rams to accomodate all pipe sizes
- b. blind rams
- c. choke manifold
- d. closing unit

Auxiliary equipment added as appropriate includes:

- a. annular preventor \_\_\_\_\_
- b. rotating head \_\_\_\_\_
- c. mud- gas separator \_\_\_\_\_
- d. flare line and means of ignition \_\_\_\_\_
- e. remote operated choke \_\_\_\_\_

### B. Communication

The rig contractor will be required to have two-way communication capability. Marathon Oil Company will have either land-line or mobile telephone capabilities.

### C. Mud Program

The mud program has been designed to minimize the volume of mud circulated to surface. Proper mud-weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers when appropriate will minimize hazards with penetrating H<sub>2</sub>S bearing zones.

D. Drill Stem Test intervals are as follows:

DST No. 1	_____ ft. to _____ ft.
DST No. 2	_____ ft. to _____ ft.
DST No. 3	_____ ft. to _____ ft.

Drill Stem Testing Safety Rules are attached.

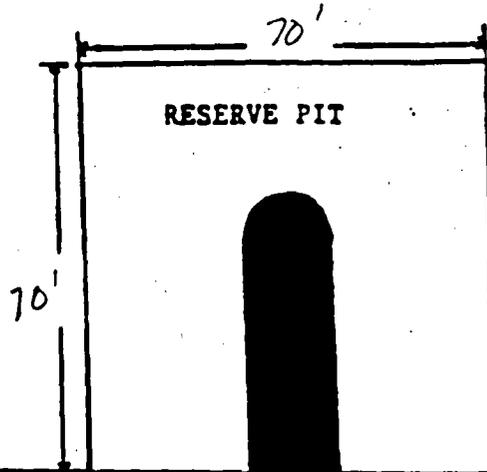
## III. WELL SITE DIAGRAM

A complete well site diagram including the following information is attached:

1. Rig orientation
2. Terrain
3. Briefing areas
4. Ingress and egress
5. Pits and flare lines
6. Caution and danger signs
7. Wind indicators and prevailing wind direction

INDIAN FEDERAL GAS COM # 2  
RE-ENTRY

TO MAINTENANCE ROAD →



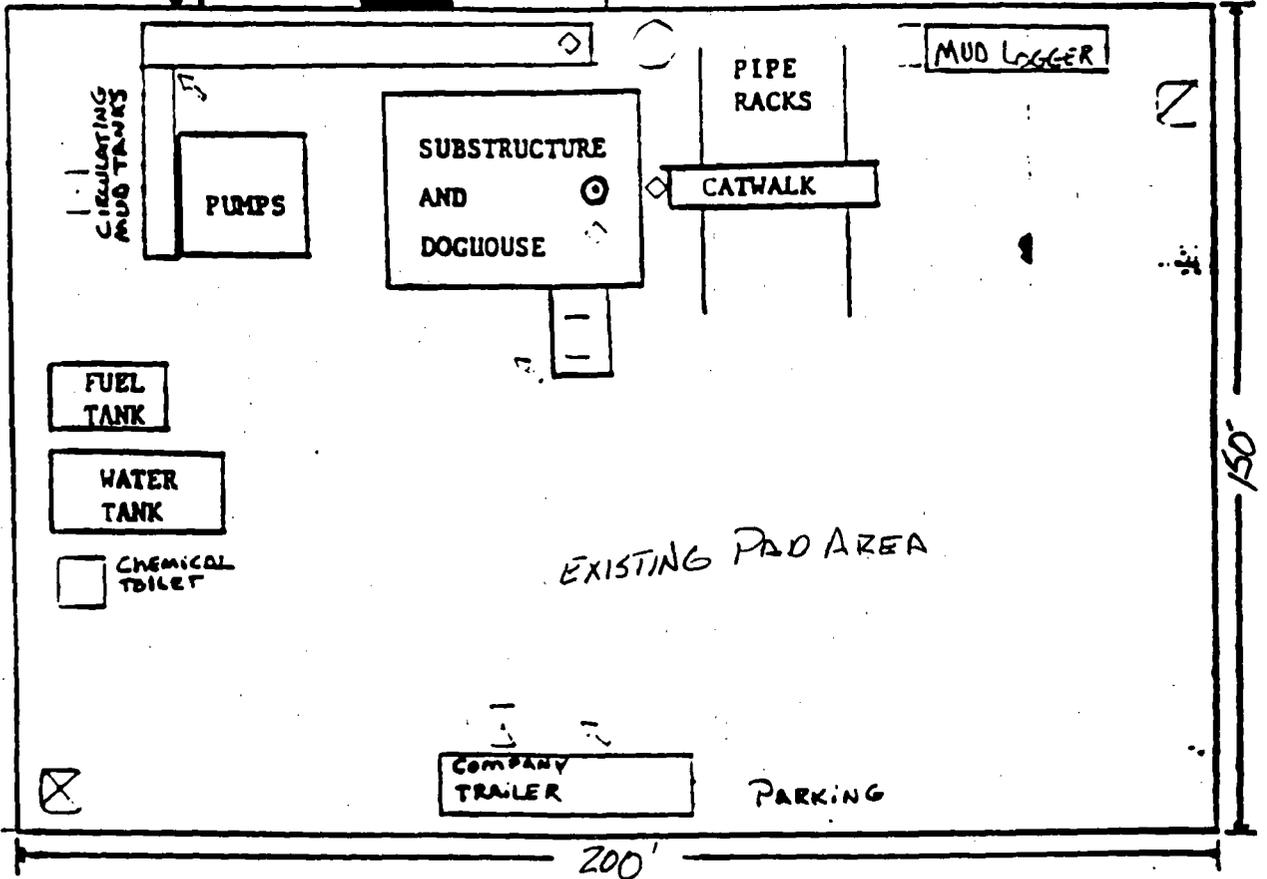
◇ H2S Detection Equipment

↗ Wind Direction Indicator

□ Self Contained Breathing Equip.

⊗ Briefing Area

EXISTING ACCESS



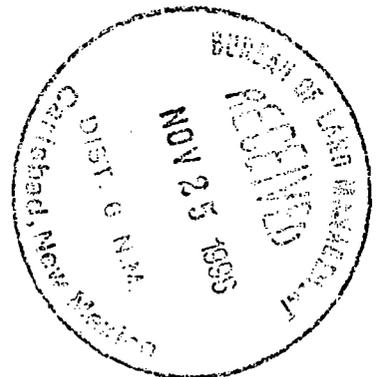
EXISTING PAD AREA

Prevailing Wind Direction

Southwest

Foot-path for emergency

egress



## SPECIAL DRILLING STIPULATIONS

### THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

OPERATOR'S NAME MARATHON OIL COMPANY WELL NO. & NAME # 2 INDIAN FEDERAL GAS COM  
LOCATION 1650' F S L & 1650' F E L SEC. 19, T. 21S, R. 24E.  
LEASE NO. NM-0238436 COUNTY EDDY STATE NEW MEXICO

The special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 and 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

#### I. SPECIAL ENVIRONMENT REQUIREMENTS

- Lesser Prairie Chicken (Stips attached)                       Floodplain (Stips attached)  
 San Simon Swale (Stips attached)                               Other

#### II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

The BLM will monitor construction of this drill site. Notify the  Carlsbad Resource Area Office at (505) 887-6544  Hobbs Office at (505) 393-3612, at least 3 working days prior to commencing construction.

Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche.

All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately \_\_\_\_\_ inches in depth. Approximately \_\_\_\_\_ cubic yards of topsoil material will be stockpiled for reclamation.

Other

#### III. WELL COMPLETION REQUIREMENTS

A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at a depth of 1/2 inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

- |   |  |
|---|--|
| <input type="checkbox"/> A. Seed Mixture 1 (Loamy Site)               | <input type="checkbox"/> B. Seed Mixture 2 (Sandy Sites) |
| Lehmans Lovegrass ( <u>Eragrostis lehmanniana</u> ) 1.0               | Sand Dropseed ( <u>Sporobolus cryptandrus</u> ) 1.0      |
| Side Oats Grass ( <u>Bouteloua curtipendula</u> ) 5.0                 | Sand Lovegrass ( <u>Eragrostis trichodes</u> ) 1.0       |
| Sand Dropseed ( <u>Sporobolus cryptandrus</u> ) 1.0                   | Plains Bristlegrass ( <u>Setaria magrostachya</u> ) 2.0  |
| <input checked="" type="checkbox"/> C. Seed Mixture 3 (Shallow Sites) | <input type="checkbox"/> D. Seed Mixture 4 ("Gyp" Sites) |
| Sideoats Grama ( <u>Bouteloua curtipendula</u> ) 1.0                  | Alkali Sacaton ( <u>Sporobolus airoides</u> ) 1.0        |
| Lehmans Lovegrass ( <u>Eragrostis lehmanniana</u> ) 1.0               | Four-Wing Saltbush ( <u>Atriplex canescens</u> ) 5.0     |
| or Boar Lovegrass ( <u>E. chloromalas</u> )                           |  |

Seeding should be done either late in the fall (September 15 - November 15, before freeze up) or early as possible the following spring to take advantage of available ground moisture.

Other

### RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6 mil plastic.

Mineral material extracted during construction of the reserve pit may be used for development of the pad and access road as needed. Removal of any additional material on location must be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

### OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- 1) Lined as specified above and,
- 2) A borrow/caliche/gravel pit can be constructed immediately adjacent to the reserve pit and is capable of containing all reserve pit contents. The mineral material removed in the process can be used for pad and access road construction. However, a material sales contract must be purchased from BLM prior to removal of the material.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

### CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to proceed by BLM.

### TRASH PIT STIPS

All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: MARATHON OIL COMPANY  
Well Name & No. Indian Federal Gas Com #2 - Re-entry  
Location: 1650' FSL, 1650' FEL, Sec. 19 , T. 21 S., R.24 E.  
Lease: NM-0238436  
.....

I. DRILLING OPERATIONS REQUIREMENTS:

The Bureau of Land Management (BLM) is to be notified at (505) 627-0272 for wells in Chaves and Roosevelt Counties, at (505) 887-6544 for wells in Eddy County, and at (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

1. Re-entry
2. Cementing casing: 5-1/2 inch

Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

II. CASING:

Minimum required fill of cement behind the 5-1/2 inch production casing is +1 600' above uppermost hydrocarbon bearing formation.

III. PRESSURE CONTROL:

Before re-entering the well, the blowout preventer assembly shall consist of a minimum of:

- One Annular Preventer
- Kelly Cock/Stabbing Valve

Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.

The results of the test will be reported to the BLM Carlsbad Resource Area office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292 for wells in Eddy County, and the BLM Hobbs Office at 414 West Taylor, Hobbs, New Mexico 88240 for wells in Lea County.

A Hydrogen Sulfide Contingency Plan should be activated prior to drilling in the Cisco formation. A copy of the plan shall be posted at the drilling site.

Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

IV. OTHER:

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

\*\*\*End of drilling stips\*\*\*

acswoboda, 12/10/96

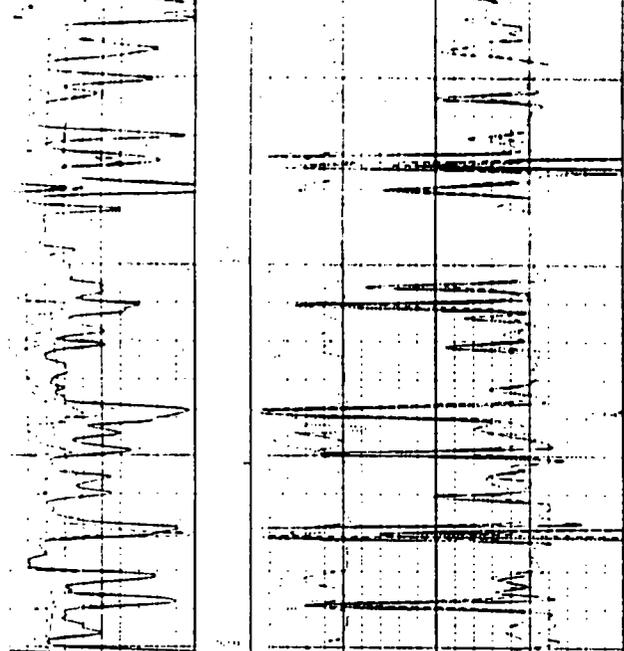
**MOC INDIAN FED. GAS CO. NO. 2**

**19-21S-24E**

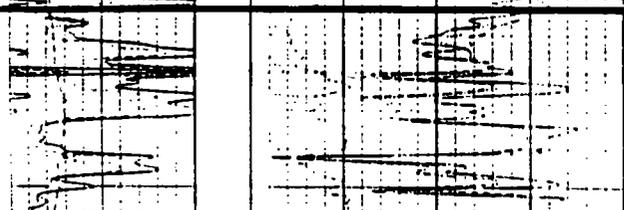
**1660' FSL & 1650' FSL**

**3762' KB**

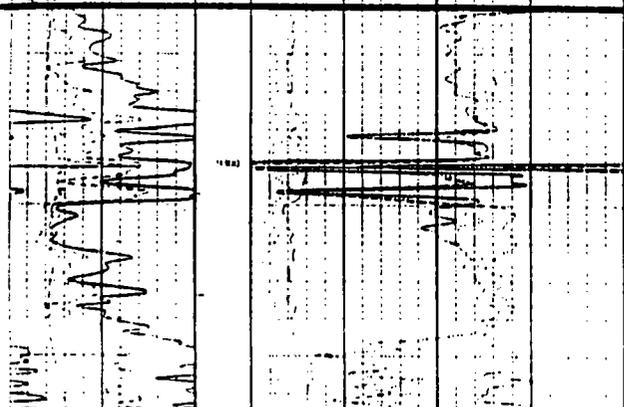
**MORROW**



**UPPER MORROW**



**MIDDLE MORROW**



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. 11512  
ORDER NOS. R-8170-O-1  
AND  
R-2441-B

APPLICATION OF MARATHON OIL COMPANY, KERR-McGEE CORPORATION, AND  
SANTA FE ENERGY RESOURCES, INC. TO TERMINATE GAS PRORATIONING, TO  
"INFILL" DRILL, AND TO AMEND THE SPECIAL RULES AND REGULATIONS FOR  
THE INDIAN BASIN-MORROW GAS POOL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1996, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 31st day of July, 1996, 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) By Division Order No. R-2441, dated February 28, 1963, the Indian Basin-Morrow Gas Pool was created and designated as a gas pool for the production of gas from the Morrow formation underlying all of Sections 22 and 23, Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico. Said order further provided for 640-acre spacing units with well location requirements such that each well completed or recompleted in the Indian Basin-Morrow Gas Pool shall be no closer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any quarter-quarter section or subdivision inner boundary.

(3) Gas production allocation or gas prorationing based on acreage alone was instituted in the Indian Basin-Morrow Gas Pool by Division Order No. R-1670-F, issued in Case 3237 and dated May 6, 1965. Both the "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*" that were originally adopted by said Order No. R-2441 and the subsequent prorationing under R-1670-F were later recodified and combined in Division Order No. R-8170, as amended. Because this pool is "prorated", an infill or second well on an individual 640-acre gas spacing and proration unit is acceptable; further any allowable issued to such a unit can usually be produced

from both wells in any proportion (see Division Memorandums dated July 27, 1988 and August 3, 1990).

(4) The reasons stated in said Order No. R-1670-F for instituting gas prorationing in this pool in the year 1963 were as follows:

- (a) there were a total of eight wells completed in the Indian Basin-Morrow Gas Pool; however no Morrow gas had been transported from these wells because no transportation facilities to this area were in existence;
- (b) there existed a market demand for this production and two purchasers were planning construction of gas transportation facilities to these wells; and,
- (c) the wells that were completed at the time were capable of producing in excess of the reasonable market demand for gas from the pool and were capable of producing in excess of the gas transportation facilities to be constructed.

**THEREFORE**, production from the Indian Basin-Morrow Gas Pool was restricted to reasonable market demand and the capacity of the gas transportation facilities to be constructed.

(5) By Division Order R-8170-O, dated November 27, 1995, entered in Case 11333, the Division granted, in part, an application of Marathon Oil Company ("Marathon") to expand the nearby and unprorated Cemetery-Morrow Gas Pool and to contract the Indian Basin-Morrow Gas Pool because:

- (a) the Morrow formation underlying the area encompassing both the Indian Basin and Cemetery Morrow Gas Pools is approximately 1600 feet below the Cisco/Canyon formation or the South Dagger Draw-Upper Pennsylvanian Associated Pool, in which and is now often treated as a secondary objective which can be economically explored in conjunction with the drilling or deepening of a well for production from the primary objective--the Cisco/Canyon formation or South Dagger Draw-Upper Pennsylvanian Associated Pool;
- (b) the Morrow wells in both the Indian Basin-Morrow Gas Pool and the Cemetery-Morrow Gas Pool will drain no more than 320 acres;
- (c) there is no physical or impermeable barrier within the Morrow interval separating the Cemetery and the Indian Basin Morrow Gas Pools indicating that the Morrow formation constitutes one single common source of supply ("reservoir") in this particular area; and,

- (d) in order to afford an opportunity to drill a well to test both the Cisco/Canyon formation of the South Dagger Draw-Upper Pennsylvanian Associated Pool and the Morrow formation, it is necessary to have the Morrow formation spaced on the same 320-acre standard spacing pattern as established for the South Dagger Draw-Upper Pennsylvanian Associated Pool:

with the Division finding that many of Marathon's objectives may be obtained in a manner consistent with Division practice by the following:

- (i) contracting a portion of the Indian Basin Morrow Gas Pool; and,
- (ii) by declaring that the special rules and regulations for the Indian Basin-Morrow Gas Pool rules shall not apply beyond its current boundary.

(6) With amendments to these orders the horizontal limits of said pool have been adjusted from time to time and currently comprise the following described area in Eddy County, New Mexico:

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

Section 2:	All
Sections 9 and 10:	All
Section 11:	W/2
Section 14:	SW//4
Section 15:	All
Sections 22 through 25:	All
Section 36:	All

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

Section 9:	S/2
Section 15:	S/2
Sections 16 and 17:	All
Sections 19 through 22:	All
Sections 30 through 32:	All

(7) At this time the applicants in this matter, Marathon Oil Company, Kerr-McGee Corporation ("Kerr-McGee"), and Santa Fe Energy Resources, Inc., operators and working interest owners in the aforementioned Indian Basin-Morrow Gas Pool, seek (i) to terminate gas prorationing for said pool, to cancel all over and under production, (ii) authority for the infill drilling of a second well within a standard 640-acre gas spacing unit, and (iii) to amend the special rules and regulations to provide for standard well locations not closer than 660 feet to the outer boundary of a spacing unit for said pool.

- (8) Recent gas prorationing activity in the subject pool includes:
- (a) On August 19, 1993, the New Mexico Oil Conservation Commission ("Commission") held a "gas allowable hearing" in which Kerr-McGee sought but was denied an increase in gas allowable for the Pool (see Division Order No. R-9960);
  - (b) Since then, the Commission has adopted a gas allowable for this pool which has resulted in the following non-marginal pool allowable per month being assigned to usually just one single non-marginal well in the pool:
    - Oct 93-Mar 94: 16,947 MCF/Mo.
    - Apr 94-Sep 94: 15,469 MCF/Mo.
    - Oct 94-Apr-95: 16,000 MCF/Mo.
    - Apr 95-Sep 95: 16,000 MCF/Mo.
    - Oct 95-Mar 96: 22,304 MCF/Mo.
    - Apr 96-Oct 96: 15,674 MCF/Mo.
  - (c) In August, 1995, and again in March, 1996 Marathon balloted all operators in the subject pool and determined that no operator opposed terminating prorationing for the Indian Basin-Morrow Gas Pool; and,
  - (d) On February 15, 1996 the Commission held its "Gas Allowable Hearing" at which Marathon and Kerr-McGee advised the Commission that they were seeking to terminate prorationing in this pool.

(9) At the time of the hearing in this case, evidence was presented that Gas Prorationing for the Indian Basin-Morrow Gas Pool should now be terminated at this time for reasons which include:

- (a) Since the institution of prorationing for this pool in 1963, there has been substantial changes in the pool production, development, gas purchasing and marketing practices and other factors affecting the oil and gas industry which make prorationing of the product from this pool no longer necessary;
- (b) Market demand for gas currently exceeds deliverability from the pool and for its expected remaining life the total deliverability of the wells in the pool is not expected to exceed market demand for gas produced from the pool;
- (c) Currently there are 9 producing wells in the pool with 5 wells classified as marginal and 4 wells classified as non-marginal;

- (d) 100 % of the operators of both marginal and non-marginal wells in the pool support the termination of prorationing in the pool;
- (e) There are no wells in the pool which are underproduced because of a lack of market for the gas from wells;
- (f) Geologic and engineering calculations establish that the higher capacity wells are draining less than 320 acres and therefore the termination of prorationing for the pool will not give the non-marginal wells any unfair advantage over the marginal wells;
- (g) Termination of prorationing for the pool will result in increased ultimate recovery from the pool thereby preventing waste;
- (h) Production of the non-marginal wells is currently being restricted by the proration system assignment of allowable for those wells and not by a lack of market for that production;
- (i) The Division's practice of using the pool's production for the prior 6-month proration period as the main indication of actual market demand by which it sets allowable has not kept pool production in line with actual market demand because when allowable levels and well capabilities are such that a well attempting to meet its market demand hits the six times limit in two months or less, it will be curtailed by the time the allowable has a chance to reflect the increased market demand;
- (j) The current proration system for the pool lacks the flexibility to resolve the problem by simply producing the non-marginal wells at rates in excess of the current allowable and causing the future allowable to be adjusted upward to reflect actual market demand and now most non-marginal wells are at least six times overproduced;
- (k) The current allowable of 688 MCFPD is too low and does not accurately reflect the actual market demand for gas from the pool;
- (l) While the current Commission has granted increases in allowable for certain prorated pools in Southeastern New Mexico, simply assigning more allowable to the pool would provide only temporary and partial incentives for additional production, drilling and workover activities. Such adjustments will not provide a long term reliable solution because the Operators are not assured that such practice will continue and the opportunity to produce wells without allowable restrictions provides an economic incentive necessary to encourage further drilling in the pool;

- (m) Because the pipeline companies in the pool which used to be the purchasers of a substantial volume of gas produced are now transporters and not purchasers, the potential for non-ratable takes by the pipelines no longer exists and proration in this pool is no longer justified on that basis;
  - (n) Because there is only one non-standard proration unit in the pool and its well no longer produces, there exists no basis for continuing prorationing of the pool based upon the advantage a non-standard sized proration and spacing unit might theoretically have over standard sized spacing units;
  - (o) Because there are no spacing units that currently have producing more than one well per 320 acres, prorationing can be terminated and spacing maintained at 640 acres with authorization for a second "infill" well;
  - (q) All current unorthodox well locations are for wells which are no longer producing in this pool and thus is not a basis for continuing proration for the pool;
  - (r) Cancellation of over and under production from any gas spacing and proration unit will not create the potential for drainage which is not equalized by counter-drainage;
  - (s) Termination of prorationing will not cause the non-marginal wells if allowed to produce at capacity to satisfy more than their share of the market and thereby displace or deny a market for the marginal wells; and
  - (t) Termination of prorationing will not cause the high capacity wells, if allowed to produce at capacity, to take more than their share of the remaining gas reserves to the disadvantage of the marginal wells' gas proration units nor will this cause marginal wells to be prematurely abandoned.
- (10) At the time of the hearing in this case, evidence was presented that authorization of infill drilling of a second well on a standard 640-acre gas spacing and proration unit and the amendment of the current special pool rules for this pool to provide for standard gas well locations not closer than 660 feet to the outer boundary of a spacing unit are necessary because:
- (a) Production from the Morrow formation in this area is from many separate stringers which vary greatly in areal extent, porosity, and thickness;
  - (b) These stringers are not continuous across the pool; and,
  - (c) There are recoverable gas reserves underlying each of the spacing units within this pool which might not otherwise be recovered unless greater flexibility is provided for standard well locations and provision is made

for increasing the density to greater than one well per 640-acre spacing unit.

(11) However, such a request for greater flexibility for well locations in this instance causes an inconsistency along the Pool's boundary lines where spacing and well location requirements are governed by **Rule 104** of the "*New Mexico Oil Conservation Division General Rules and Regulations*" which provides for 320-acre spacing for gas wells in southeast New Mexico (Lea, Chaves, Eddy, and Roosevelt Counties) of Pennsylvanian age or older with wells to be no closer than 660 feet to the nearest side boundary (one of the outer boundaries running lengthwise to the tract's greatest overall dimensions) of the dedicated tract nor closer than 1650 feet from the nearest end boundary (one of the outer boundaries perpendicular to a side boundary and closing the tract across its least overall dimension) nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary. Such inconsistency could result in an offsetting operator of Morrow interest outside of the Indian Basin-Morrow Gas Pool unable to adequately counter-drain a well that is legally offsetting his acreage by a distance of 660 feet with a legal well a minimum distance of 1650 feet from the common boundary line separating the two spacing units. Therefore, a buffer-zone of one-half mile should extend beyond the Indian Basin-Morrow Gas Pool whereby a well could be drilled on a standard 320-acre gas spacing and proration unit:

- (a) no closer than 660 feet to the nearest side boundary (as defined above) of the 320 acres therein dedicated to said well;
- (b) nor closer than 660 feet from the nearest end boundary (as defined above) of said dedicated tract;
- (c) nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

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

(13) Approval of this application will afford the applicants and all affected interest owners the opportunity to produce their just and equitable share of the hydrocarbons in these Morrow formations and will otherwise prevent waste and protect correlative rights.

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

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Marathon Oil Company ("Marathon"), Kerr-McGee Corporation ("Kerr-McGee"), and Santa Fe Energy Resources, Inc. seeking an order terminating gas prorationing in the Indian Basin-Morrow Gas Pool in portions of Township 21 South, Ranges 23 and 24 East, NMPM, Eddy County, New Mexico is hereby granted effective August 1, 1996.

**IT IS FURTHER ORDERED THAT:**

(2) Effective August 1, 1996, all allowable established for the Indian Basin-Morrow Gas Pool, including any accumulated over and under production shall be canceled and considered null, void, and of no effect whatsoever.

**FURTHER:**

(3) For reasons of clarification all previous and current rules and regulations governing the Indian Basin-Morrow Gas pool in Division Order Nos. R-2441, R-2441-A, R-1650, as amended, and R-8170, as amended, shall be superseded by this order and a new set of procedures entitled "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*" shall be recodified at this time to take the place of any and all previous sets of pool rules.

(4) The following set of rules and regulations for the Indian Basin-Morrow Gas Pool are hereby reestablished as follows:

**SPECIAL RULES AND REGULATIONS  
FOR THE  
INDIAN BASIN-MORROW GAS POOL**

**RULE 1.** Confinement of the special rules governing the Indian Basin-Morrow Gas Pool shall apply only to such lands as shall from time to time lie within the horizontal limits of said pool and each well completed in or recompleted within said pool shall be spaced, drilled, operated, and produced in accordance with the Special Rules hereinafter set forth;

**RULE 2.** Each well shall be located on a standard unit containing 640 acres, more or less, substantially in the form of a square, which is a governmental section being a legal subdivision of the United States Public Lands Survey.

**RULE 3.** The supervisor of the Artesia District Office of the Division shall have authority to approve non-standard units without notice when the unorthodox size or shape is due to a variation in the legal subdivision of the United States Public Lands Survey and consists of an entire governmental section and the non-standard unit is no less than 75% nor more than 125% of a standard unit;

**RULE 4.** The Director of the Oil Conservation Division, hereinafter referred to as the "Division" may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit consisting of less than 640 acres and when the following facts exist and the following provisions are complied with:

(a) the non-standard unit consists of quarter-quarter sections and/or lots that are contiguous by a common bordering side;

(b) the non-standard unit lies wholly within a single governmental section;

(c) the applicant presents written consent in the form of waivers from;

(I) all offset operators to the section in which the non-standard gas unit is located; and,

(II) from all working interest owners in the section in which the non-standard unit is situated and which acreage is not included in the non-standard unit;

(d) in lieu of sub-part (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid parties to be notified were notified by registered or certified mail of his intent to form such non-standard unit, the Division Director may approve the application if no such notified party has entered an objection to the formation of such non-standard unit within 30 days after the Division Director has received the application;

**RULE 5(a).** The initial well within a spacing unit shall be located no closer than 660 feet to the outer boundary of the proration unit nor closer than 130 feet to any governmental quarter-quarter section line or subdivision inner boundary;

**RULE 5(b).** The infill well or second well within a spacing unit shall be located in a quarter section of the existing spacing unit not containing a Morrow gas well and shall be located with respect to the spacing unit boundaries as described in the preceding sub-paragraph above;

**RULE 6.** The Division Director may grant an exception to the requirements of Rule 5 without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions. All operators offsetting the proposed location shall be notified of the application by registered

or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application;

(5) Any other wells presently drilling to or completed in the Indian Basin-Morrow Gas Pool 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.

(4) Pursuant to Paragraph A of Section 70-2-18 NMSA (1978), existing gas wells in the Indian Basin-Morrow Gas Pool shall have dedicated thereto 640 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 640 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.

**IT IS FURTHER ORDERED THAT:**

(6) A buffer zone extending one-half mile beyond the Indian Basin-Morrow Gas Pool boundary whereby a Morrow gas well developed on 320-acre spacing can be drilled on a standard 320-acre gas spacing and proration unit that is:

- (a) no closer than 660 feet to the nearest side boundary (as defined above) of the 320 acres therein dedicated to said well;
- (b) nor closer than 660 feet from the nearest end boundary (as defined above) of said dedicated tract;
- (c) nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

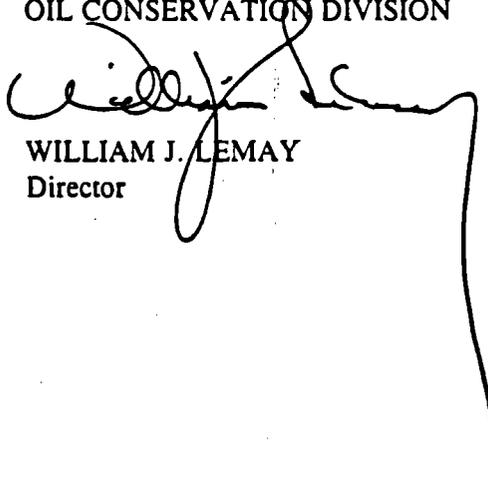
(7) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

Case No. 11512  
Order Nos. R-8170-O-1/R-2441-B  
Page 11

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

SEAL

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

CASE NO. 11512

APPLICATION OF MARATHON OIL COMPANY, KERR-McGEE CORPORATION, AND SANTA FE ENERGY RESOURCES, INC. TO TERMINATE GAS PRORATIONING, TO "INFILL" DRILL, AND TO AMEND THE SPECIAL RULES AND REGULATIONS FOR THE INDIAN BASIN-MORROW GAS POOL, EDDY COUNTY, NEW MEXICO.

ORDER NOS. R-8170-O-2  
AND  
R-2441-C

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the New Mexico Oil Conservation Division ("Division") that Order Nos. R-8170-O-1/R-2441-B, issued in Case No. 11512 and dated July 31, 1996, does not correctly state the intended order of the Division.

IT IS THEREFORE ORDERED THAT:

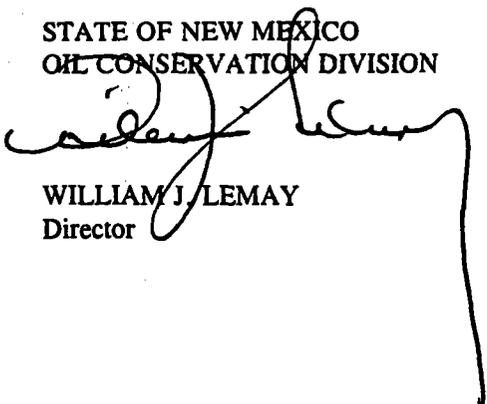
(1) RULE 5(a) on page 9 of Decretory Paragraph No. (4) of said Order Nos. R-8170-O-1/R-2441-B, be and the same, is hereby amended to read in its entirety as follows:

" RULE 5(a). The initial well within a spacing unit shall be located no closer than 660 feet to the outer boundary of the proration unit nor closer than 330 feet to any governmental quarter-quarter section line or subdivision inner boundary;"

(2) The corrections set forth in this order be entered nunc pro tunc as of July 31, 1996.

DONE at Santa Fe, New Mexico, on this 15th day of August, 1996.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

SEAL

Sec : 19 Twp : 21S Rng : 24E Section Type : NORMAL

8 41.69  Federal owned C	7 41.98  Federal owned C	6 43.93  Federal owned C A	5 43.71  Federal owned C
9 42.21  Federal owned C	10 42.56  Federal owned C	11 44.16  Federal owned C A	12 43.94  Federal owned C

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

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DD-Amol.10

Sec : 19 Twp : 21S Rng : 24E Section Type : NORMAL

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2 39.54  Federal owned C	F 40.00  Federal owned C	G 40.00  Federal owned C A	H 40.00  Federal owned C

M0002: This is the first page

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PF07 BKWD    PF08 FWD        PF09 PRINT   PF10 SDIV     PF11            PF12

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79.12

319.12

CMD :  
OG6IWCM

ONGARD.  
INQUIRE WELL COMPLETIONS

04/14/97 08:24:23  
OGOMES -EMD7

API Well No : 30 15 10355 Eff Date : 03-24-1994 WC Status : A  
Pool Idn : 78960 INDIAN BASIN;MORROW (PRO GAS)  
OGRID Idn : 14021 MARATHON OIL CO  
Prop Idn : 13993 INDIAN FEDERAL GAS COM

Well No : 001  
GL Elevation: 3768

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
B.H. Locn	: G	19	21S	24E	FTG 1980 F N	FTG 1980 F E	P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : F

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07	PF08	PF09	PF10 NEXT-WC	PF11 HISTORY	PF12 NXTREC