District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

APR 2005
Received
Hobbs
OCD

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

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

[1] Operator Name and Address	[2] OGRID Number
Marathon Oil Company P.O. Box 3487 Houston, TX 77253-3487	14021
	[3] API Number 30- 25-33501

[4] Property Code	[5] Property Name	[6] Well No.
006440	McGrail State	7

[9] Proposed Pool 1	[10] Proposed Pool 2
~~Monument Drinkard~~ Yeso, Northwest	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
H	27	19S	36E		2310'	North	430'	East	Lea

[8] Proposed Bottom Hole Location If Different From Surface

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

Additional Well Location

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
A P	O	N/A	S	3704'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
N	6600'	Drinkard		

Depth to ground water	Distance from nearest fresh water well	Distance from nearest surface water

Pit: Liner: Synthetic ☐ _____ mils thick Clay ☐ Pit Volume _____ bbls Drilling Method:

Closed-Loop System ☐ Fresh Water ☐ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 1/4"	9 5/8"	32#	1173'	220	Surface
8 3/4"	7"	23#	5496'	775	1862 by TS
6 1/8"	4 1/2"	11.6#	7700'	370	5800 by CBL

Permit Expires 1 Year From Approval Date Unless Drilling Underway

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

Plug back

Marathon Oil Company is proposing to re-complete the McGrail State No. 7 to the Monument Drinkard pool. The well is currently producing from the Monument Abo pool. A CIBP will be set at approximately 6990' feet and the well will be perforated in the Drinkard formation. Please see attached document for details of well work over procedure.

Frac Tank will be used, per CK

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐ a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Signature: Charles E. Kendrix

Printed name: **Charles E. Kendrix**

Title: **Engineering Technician**

E-mail Address: **cekendrix@marathonoil.com**

Date: **04/14/2005** Phone: **713-296-2096**

OIL CONSERVATION DIVISION

Approved by:

Title: PETROLEUM ENGINEER

Approval Date: APR 29 2005 Expiration Date:

Conditions of Approval:

Attached ☐

WORKOVER PROCEDURE
McGrail State #7
Lea County, New Mexico

Procedure:

1. Notify Hobbs supervisor of activity. Test rig anchors, if appropriate. Check production casing for trapped pressure. Safely bleed-down any trapped pressure. Well records indicate surface by intermediate and intermediate by production casing annuli are exposed to formation due to low cement tops.

2. Have appropriate H2S safety equipment on location through-out job. H_2S content is 28,000 ppm.

3. MIRU WSU. Kill well with fresh water. POOH with rods and pump. Install BOPE and test. Release tubing anchor and POOH with tubing. RIH with bit and scraper (for 4-1/2" 11.6# casing) to 7400'. POOH.

4. **Set CIBP and Perforate:**
RU Baker-Atlas. Install pack-off. RIH with CIBP for 4-1/2", 11.6# casing and set same at 6,990'. Load casing with fresh water and test same to 500 psi. RIH with a 3-1/8" select-fire perforating gun loaded 2 shots per selection and perforate the following locations: 6706, 6700, 6692, 6686, 6678, 6664, 6658, 6652, 6642, and 6638. For depth control, use Wedge Dia-Log Cement Bond log dated 9/5/96. Casing collars at: 6954, 6910, 6732, 6687, 6643 and 6598. Short joint (40') at 6204-6244'. RD Baker-Atlas

5. Hydro-test tubing in hole to 6000 psi with treating packer and SN below packer to 6600'. Set packer and test backside to 500 psi. Break down perfs with fresh water and establish injection rate. If unable to establish rate, release packer and place same below perfs, circulate 5 bbls of acid across perfs and allowed to soak for 15 minutes prior to acid job below. Reset packer at 6600' for acid work below.

6. **ACID**
RU Halliburton to acidize. Have horsepower (+/- 500 HHP) on location for 4 BPM at 5000 psi. Use 100 bbls of 15% HCl inhibited for 4 hours at 120 deg F. Acid should contain iron control for H2S environments and surfactant. Drop 19 (0.9 SG) floating ball sealers evenly distributed across the acid (i.e. drop 1 ball each 5 bbls of acid). Drop first ball at start of acid. Establish injection into perfs using fresh water. Displace acid to perforations with 30 bbls of freshwater. Pump job at maximum rate not to exceed 5000 psi injection pressure. Leave tubing backside open during job. Surge balls off perfs immediately after acid job and allow well to flow back any super-charge.

7. Release packer and reverse balls out using 30 bbls of fresh water. POOH with packer. RIH with production equipment and set pump intake +/- 6800' above CIBP. PWOP. RD WSU.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Received
Hobbs
OCD

Form C-102
Revised June 10, 2003

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-33501	97089	~~Monument Drinkard~~ Yeso, Northwest

[4] Property Code	[5] Property Name	[6] Well Number
006440	McGrail State	7

[7] OGRID No.	[8] Operator Name	[9] Elevation
14021	Marathon Oil Company	3704'

[10] Surface Location

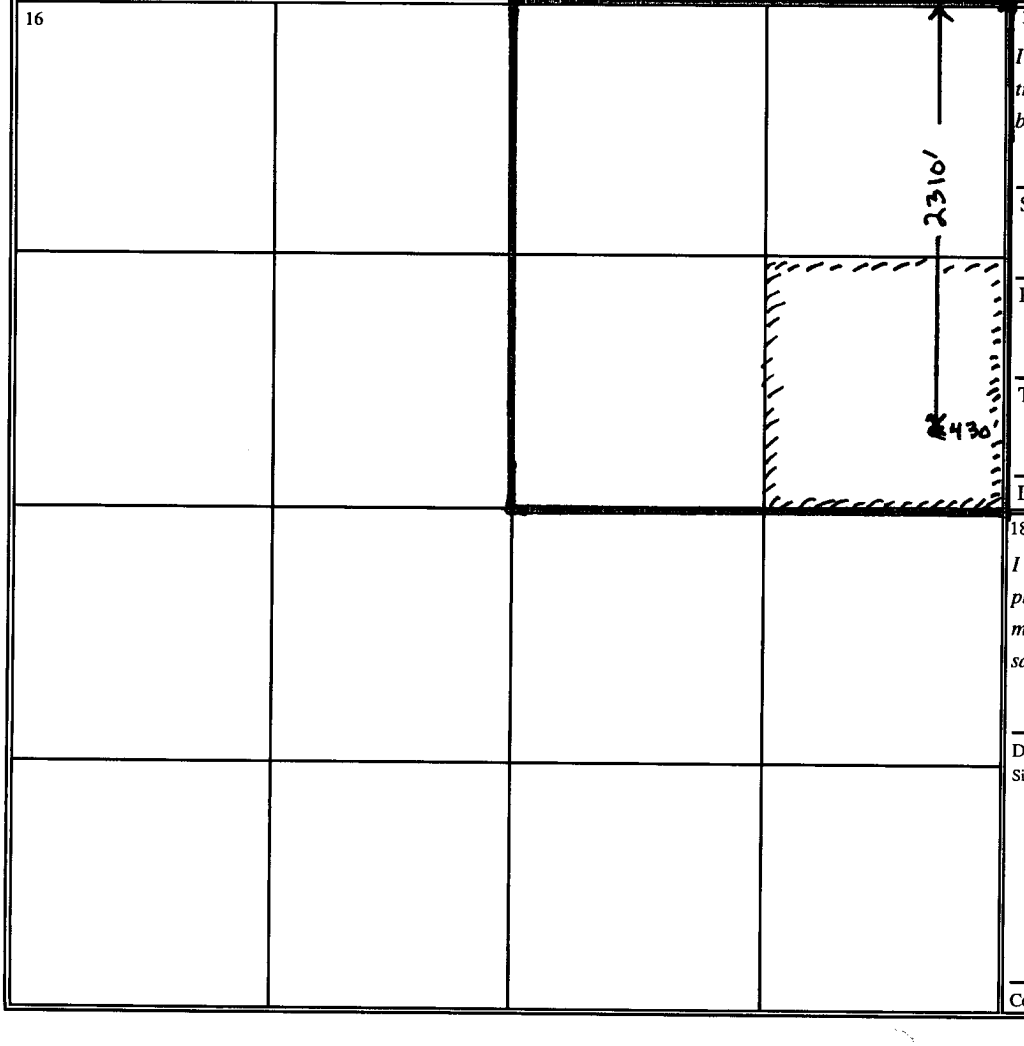
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	19S	36E		2310'	North	430'	East	Lea

[11] 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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40	N		

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



[17] OPERATOR CERTIFICATION

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

Charles E. Kendrix
Signature

Charles E. Kendrix
Printed Name

Engineering Technician
cekendrix@marathonoil.com
Title and E-mail Address

04/14/2005
Date

[18] 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.

Date of Survey
Signature and Seal of Professional Surveyer:

Certificate Number