

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

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
May 27, 2004

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

Submit to appropriate District Office

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address <b>MARATHON OIL COMPANY</b>		<sup>2</sup> OGRID Number <b>14021</b>
		<sup>3</sup> API Number <b>30 - 025-37556</b>
<sup>4</sup> Property Code <b>6424</b>	<sup>5</sup> Property Name <b>WALTER LYNCH</b>	<sup>6</sup> Well No. <b>12</b>
<sup>9</sup> Proposed Pool 1 <b>ADD ADDITIONAL POOL - WILDCAT EUMONT YATES 7R QUEEN</b>		<sup>10</sup> Proposed Pool 2

**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
F	1	22-S	37-E		1830	NORTH	1980	WEST	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 Information**

<sup>11</sup> Work Type Code <b>ADD A ZONE</b>	<sup>12</sup> Well Type Code <b>OIL</b>	<sup>13</sup> Cable/Rotary	<sup>14</sup> Lease Type Code <b>PRIVATE</b>	<sup>15</sup> Ground Level Elevation <b>3353'</b>
<sup>16</sup> Multiple <b>Y</b>	<sup>17</sup> Proposed Depth <b>DRILLED TD = 4626'</b>	<sup>18</sup> Formation <b>DEEPEST = SAN ANDRES</b>	<sup>19</sup> Contractor	<sup>20</sup> Spud Date <b>ACTUAL = 12/29/2005</b>
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume: _____ bbls Drilling Method: _____				
Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

**21 Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.25	8.625	24	435'	280	0
7.875	5.5	15.5	4613'	1182	0
		<b>EXISTING</b>	<b>CASING</b>		

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

**Marathon Oil Company requests approval to move up hole in this existing well and to complete the Wildcat Eumont Yates 7R Queen Formation (2562' - 3253'). Attached please find Form C-102 for this proposal. Perforated intervals will be reported once the completion work is finalized.**

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway  
Adding



<sup>23</sup> 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 ☐.

Printed name: Frank M. Krugh

Title: Reg. Compl. Rep. III

E-mail Address: fmkrugh@marathonoil.com

Date: 9/14/2006

Phone: 713-296-3546

**OIL CONSERVATION DIVISION**

Approved by:

*Lang W. Wink*

**OC FIELD REPRESENTATIVE II/STAFF MANAGER**

Title:

Approval Date: **SEP 20 2006**

Expiration Date:

Conditions of Approval Attached ☐

## 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 and Natural Resources Department

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-37556</b>	Pool Code <b>✓</b>	Pool Name <b>WILDCAT <del>EMERY</del> YATES 7R Queen</b>
Property Code <b>6424</b>	Property Name <b>WALTER LYNCH</b>	Well Number <b>12</b>
OGRID No. <b>14021</b>	Operator Name <b>MARATHON OIL COMPANY</b>	Elevation <b>3353'</b>

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	1	22-S	37-E		1830	NORTH	1980	WEST	LEA

## 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 <b>40</b>	Joint or Infill	Consolidation Code	Order No.
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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>LOT 4      LOT 3      LOT 2      LOT 1</p> <p>39.77 AC      39.84 AC      39.90 AC      39.97 AC</p> <p>1830'</p> <p>1980'</p> <p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=519733.0 N X=874913.9 E</p> <p>LAT.=32°25'22.80" N LONG.=103°07'06.03" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Frank M Krugh</i> Signature <b>FRANK M KRUGH</b> Printed Name <b>Reg. Comp. Rep. III</b> Title <b>9/14/06</b> Date</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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><b>SEPTEMBER 12, 2005</b></p> <p>Date Surveyed      LA</p> <p>Signature &amp; Seal of Professional Surveyor <i>Gary Edison</i> <b>GARY EDISON</b> 05.11.1318 Certificate No. <b>GARY EDISON</b>      12641</p>
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# Workover Procedure

API No. 30-025-37556

Walter Lynch # 12

1830' FNL & 1980' FWL

Section 1, T22S-R37E, UL "F"

Lea County, New Mexico

WBS NO: DD.05.12602.CAP.CMP

Date: September 15, 2006

Purpose: Recomplete and Frac Yates

Elevation: KB: 3363' PBTB: 3951'  
GL: 3353' TD: 4626'

WI: 100% NRI: 87.5%

Surface Casing: 8-5/8", 24#, J-55 set at 422'. Cemented w/ 280 sx. TOC at Surface. Circulated 24 bbls.

Production Casing: 5-1/2", 15.5#, J-55 LT&C at 4613'. Cemented w/ 1182 sx. TOC Surface. Circulated 80 bbls

Production Tubing: 2-7/8", 6.5#, J-55, EUE

Current Perforations: 3829-32, 3840-47, 3871-73, 3899-3901, w/ 1 SPF Grayburg  
3676-77, 3680-82 w/ 1 SPF Queen

Reservoir Pressure: Estimated at <1190 PSI

Safety Issues: H<sub>2</sub>S Gas Present (anticipated)

## Performance/Capacities:

Tubular	ID (in.)	Drift (in.)	Burst (80%) (psi)	Capacity (bbl/ft)
2-7/8" 6.5# J-55	2.441	2.347	5808	.00579
5-1/2" 15.5# K-55	4.95	4.825	3848	.0238
Tbg/Csg Annulus	-----	-----	-----	.0158

## Procedure:

1. Inspect surface location and improve if necessary. Test safety anchors. Use 2% KCl water or produced water as workover fluid.
2. RU WSU. Kill well. Unseat pump POOH w/ Rods and pump. Unflange well head, release TAC. Install and test BOPE. POOH Stand Back 2-7/8" Tbg.
3. RIH with Tbg set CIBP set @ +/-3280' (about 1jt below bottom proposed perforation). Test casing to 2000 PSI. Pick up Tbg to bottom of proposed perf @ 3253'. Circulate 20-bbl balanced plug of 10% acetic acid. Inhibit acid for 24-hours at 100 deg F. POOH stand back tubing.

### 4. Perforate Seven Rivers:

RU Baker-Atlas electric line with pack-off. Use Baker-Atlas GR/CCL log dated 4/24/06 for depth control. Note short joint at 3169'-3190.5'. RU and test pack-off and lubricator to 1000 psi. RIH with guns loaded with 311T charges at 2SPF and perforate 18 feet with 36 holes as follows. (*It is desired to perforate from top down to maximize acid in wellbore*):

3061	to	3063	(2 ft, 4 holes)
3118	to	3122	(4 ft, 8 holes)
3152	to	3155	(3 ft, 6 holes)
3161	to	3163	(2 ft, 4 holes)

Yates Seven Rivers COMPLETION PROCEDURE  
Walter Lynch # 12  
Lea County, New Mexico

3184	to	3186	(2 ft, 4 holes)
3222	to	3224	(2 ft, 4 holes)
3250	to	3253	(3 ft, 6 holes)

RIH w/ cement bailer and dump one load on top of the CIBP.  
Pump into perfs to break down, pump 20 bbls of 2% KCL water to flush acid.  
RD Baker-Atlas.

5. RIH with 2-7/8" production tubing and rental 5 1/2" packer set at 3031'. Test backside to 500 PSI.
6. RU acid company with 50 bbls of 15% NEFEHCL acid. Have at least 500 HHP on location for pumping and positive displacement ball injector. Pump job @ max rate not to exceed 3848 psi. Inhibit acid for 4-hours at 100 deg F. Load ball injector with 50 (1.1 SG) ball sealers. Drop 1 ball/bbl of acid pumped evenly distributed throughout acid job. Over-displace acid using 30 bbls of 2% KCL water. RD acid company. POOH 2 7/8' TBG with 5 1/2" packer.
7. RIH with 5 1/2" RBP and 2 7/8" TBG. Set ~ 600 ft. Remove BOP. **Install frac valve** and pressure test (Casing Wellhead and frac valve) to 3000 PSI. Install BOP, open frac valve, RIH with retrieve-head in 2 7/8" TBG and unset the RBP. POOH. Close the frac valve and Remove BOP.
8. Mobilize Extra 500-BBL tank for gel hydration.
9. Install Stinger Tree Saver. RU Halliburton Frac. Test line to 6000 PSI.
10. Frac per Halliburton design, using Expedite. (STAGE 1, waiting on finalized design). Using Expedite for sand production control during frac. Dump Sand Plug (top of sand @ 2925'). Follow with 15% HCL in order to obtain an acid plug btw the perfs interval (2562' to 2792').
11. RD the Tree saver.
12. If top of sand plug is found above 2790', the second stage frac is canceled. If sand plug is below 3025', a CIBP should be set to isolate 7-Rivers perforations.
13. **Perforate Yates:**  
RU Baker-Atlas electric line with pack-off. Use Baker-Atlas GR/CCL log dated 4/26/06 for depth control. RU and test pack-off and lubricator to 1000 psi. RIH with guns loaded with 311T charges at 2 SPF and perforate 21 feet with 42 holes as follows. (*It is desired to perforate from top down to maximize acid in wellbore*):  
2562' to 2566' (4 ft, 8 holes)  
2603' to 2606' (3 ft, 6 holes)  
2634' to 2640' (6 ft, 12 holes)  
2666' to 2668' (2 ft, 4 holes)  
2782' to 2786' (4 ft, 8 holes)  
2790' to 2792' (2 ft, 4 holes)  
  
Pump into perfs to break down and insure injectivity.  
RD Baker-Atlas.
14. Install Stinger Tree Saver. RU Halliburton Frac. Test line to 6000 PSI.
15. Frac per Halliburton design, using Expedite (STAGE 2, - waiting on finalized design). Using Expedite for sand production control.
16. RD Halliburton equipment and tree saver. SWIFN.
17. Set RBP at 1000' and test. Remove frac valve. Install BOP. Recover RBP.
18. RIH w/ 2 7/8" Tbg and 4 3/4" bit in order to clean out to top of cmt plug ~ 3270'. POOH.

Yates Seven Rivers COMPLETION PROCEDURE  
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19. RIH with 2 7/8" production equipment. Remove BOP. Install wellhead. Set pump intake 10' off bottom (due to use of Expedite). Install rods and pump. PWOP. Verify unit is pumping, RD WSU. Test well to battery or tank as advised by Morehead.

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(Cell) 432-557-3470  
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