

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 - 025-37754</b>
<sup>4</sup> Property Code <b>35507</b>	<sup>5</sup> Property Name <b>MCDONALD STATE A/C 1-15</b>	<sup>6</sup> Well No. <b>1</b>
<sup>9</sup> Proposed Pool 1 <b>ADD ADDITIONAL POOL - Eunice 7R QUEEN South (24130 POOL CODE)</b>		<sup>10</sup> Proposed Pool 2

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	22-S	36-E		1650	NORTH	1650	WEST	LEA

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

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

**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 = 5671'</b>	<sup>18</sup> Formation <b>DEEPEST = PADDOCK</b>	<sup>19</sup> Contractor	<sup>20</sup> Spud Date <b>ACTUAL = 04/07/2006</b>
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic X <input type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume: _____ bbls Drilling Method: _____				
Closed-Loop System <input type="checkbox"/> Fresh Water X <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

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

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.25	8.625	24	1244'	780	0
7.875	5.5	15.5	5664'	1680	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 Eunice 7R Queen South Formation (3356 - 3634'). 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 NMOC guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name: Frank M. Krugh *Frank M Krugh*  
Title: Reg. Compl. Rep. III  
E-mail Address: fmkkrugh@marathonoil.com  
Date: 9/21/2006 Phone: 713-296-3546

**OIL CONSERVATION DIVISION**

Approved by: *Larry W. Wink*  
Title: **OC FIELD REPRESENTATIVE / STAFF MANAGER**

Approval Date: Expiration Date:

**SEP 25 2006**

**Oil Conservation Division**

Conditions of approval: Approval for drilling ONLY  
--- CANNOT produce Downhole Commingled until  
DHC is approved in Santa Fe.

## DISTRICT I

1620 N. FREYER DR., BOBBS, NM 88240

## DISTRICT II

1301 W. GRAND AVENUE, ARIZONA, 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 October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-37754</b>	Pool Code <b>24130</b>	Pool Name <b>Cunice 7R Queen South</b>
Property Code <b>35507</b>	Property Name <b>McDonald State A/C 1-15</b>	
OGRID No. <b>14021</b>	Operator Name <b>MARATHON OIL COMPANY</b>	Well Number <b>1</b>
		Elevation <b>3543'</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	15	22-S	36-E		1650	NORTH	1650	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.						

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>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=508880.2 N X=832565.0 E</p> <p>LAT.=32°23'39.91" N LONG.=103°15'21.29" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Frank M. Krugh</i> 9/21/06 Signature Date</p> <p><b>FRANK M. KRUGH</b> Printed Name</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>FEBRUARY 14, 2006</p> <p>Date Surveyed DSR</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p><i>Gary Kidson</i> 2/23/06 06.11.0299</p> <p>Certificate No. GARY KIDSON 12841</p>
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## Workover Procedure

API No. 30-025-37754

McDonald State A/C 1 #15-1

1650' FNL & 1650' FWL

Section 15, T22S-R36E, UL "F"

Lea County, New Mexico

WBS NO: DD.06.13712.CAP.CMP

Date: September 13th, 2006

Purpose: Recomplete w/ frac to Yates/Seven Rivers (Jalmat Field)

Current formation: Grayburg formation (qo=3.5 bbl/d, qg= 23mcf/d, qw=472 bbl/d, qt=7 boe/d, as 9/8/2006).

WI: 100% NRI: 87.5%

Surface Casing: 8-5/8", 24#, J-55 set at 1244'. Cemented w/ 790' sx. TOC at Surface. Circulated 230 sx.

Production Casing: 5-1/2", 15.5#, J-55 LT&C at 5662' (DV Tool at 4397'). Stage one cemented with 300sx (circulated). Stage two cemented w/ 780 sx (Fill C) 600 sx (Premium), it did not circulate. TOC at 1006' from CBL (07/26/2006).

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

Reservoir Pressure: Expected Pressure ~ 1570 PSI.

### Performance/Capacities:

Tubulars:	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 @ +/-3930' (about 1jt above top perforation). Test casing to 2000 PSI. Pick up Tbg to bottom of proposed perf @ 3634'. Circulate 20-bbl balanced plug of 10% acetic acid. Inhibit acid for 24-hours at 100 deg F. POOH stand back tubing.
4. Install frac valve and test.
5. **Perforate:**  
RU Baker-Atlas electric line with pack-off. For depth control use CBL dated July 26, 2006. RU and test pack-off and lubricator to 1000 psi. RIH with guns loaded with 311T charges at 2SPF and perforate 20 feet with 40 holes as follows. Note marker joint @ 3182-3203. (*It is desired to perforate from top down to maximize acid in wellbore*):  
3356' to 3358' (2 ft, 4 holes)  
3394' to 3396' (2 ft, 4 holes)  
3412' to 3414' (2 ft, 4 holes)  
3430' to 3432' (2 ft, 4 holes)  
3490' to 3492' (2 ft, 4 holes)  
3510' to 3512' (2 ft, 4 holes)  
3544' to 3546' (2 ft, 4 holes)  
3578' to 3580' (2 ft, 4 holes)  
3616' to 3618' (2 ft, 4 holes)

WORKOVER PROCEDURE  
McDonald State A/C 1 15-1  
Lea County, New Mexico

3632' to 3634' (2ft, 4 holes)

RIH w/ cement bailer and dump one load of cement on top of the CIBP.

Pump into perfs to break down, pump 20 bbls of 2% or produced water to flush acid.  
RD Baker-Atlas.

6. RIH with 2-7/8" production tubing and rental 5 1/2" packer set at 3326'. Test backside to 500 PSI.
7. 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 20 bbls of 2% water. RD acid company. POOH 2 7/8' TBG with 5 1/2" packer.
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. (Dated September 13<sup>th</sup>, 2006).
11. RD Halliburton equipment and tree saver.
12. Remove frac valve.
13. RIH w/ bit and clean-out sand to top of CMT plug ~ 3920'. POOH.
14. RIH with 2 7/8" production equipment. Remove BOP. Install wellhead. Set pump intake below lower perfs (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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Jackline Renno- (Wk) 713-296-3525