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 Divsiion
1220 S. St. Francis Dr.
Santa Fe, NM 87505

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- 25-37488

[4] Property Code	[5] Property Name	[6] Well No.
6442	J.L. Muncy	14

[9] Proposed Pool 1	[10] Proposed Pool 2
Langlie Mattix; Seven Rivers Queen Grayburg	

[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
N	24	22-S	37-E		660	South	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 Location

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
P	O		P	3312'

[16] Multiple	[17] Proposed Depth	[18] Formation	[19] Contractor	[20] Spud Date
N		Queen / Grayburg		

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"	8 5/8"	24#	1256'	860 sks	Surface
7 7/8"	5 1/2"	15.5#	5390'	1165 sks	Surface

Permit Expires 1 Year From Approval Date Unless Drilling Underway

Plugback

[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.

Marathon Oil Company is proposing to plug back the J.L. Muncy No. 14 in the current non-productive Paddock interval, and re-complete the well to the Langlie Mattix; Seven Rivers, Queen, Grayburg pool. A C-102 is on file with the NMOCD for this new pool. Please attachment for details of well work to be performed.

[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: Reg. Compliance Rep.

E-mail Address: cekendrix@marathonoil.com

Date: 09/07/2006 Phone: 713-296-2096

OIL CONSERVATION DIVISION

Approved by: Chris Williams

Title: OC DISTRICT SUPERVISOR/GENERAL MANAGE

Approval Date: SEP 14 2006 Expiration Date:

Conditions of Approval:

Attached ☐

Completion Procedure

API No. 30-025-37488
J L Muncy 14
660' FSL & 1980' FWL
Section 24, T22S-R37E, UL "N"
Lea County, New Mexico

WBS NO: RW.06.14367.CAP.CMP

Date: September 6th, 2006
Purpose: Complete GR and Queen Formations
Current Production: Paddock by 7/31/06: 3 BBL/D of oil and 28 MCF/D (8 BOE/D).
Current Perforations: 5330-50, 57-74 @ 2 SPF

Procedure:

1. Inspect surface location and improve if necessary. Test safety anchors.
2. MIRU WOR. MIRU Reverse Unit. Kill well with fresh water. POOH Rod string. Inspect the Rods for bad mechanical condition and paraffin accumulation. If paraffin is founded, 20 BBL of Hot Water treatment should be used. ND bonnet wellhead. Release TAC. NU 3M BOPE. POOH w/2-7/8" Tbg string, standing back. Visually inspect and replace as necessary.
3. RIH with 4 3/4" bit, 5 1/2" casing scraper to 5000'. POOH.
4. RU WSU. POOH with rods and pump. Install and test BOPE. POOH with 2-7/8" tubing.
5. RIH w/ 5 1/2" CIBP on 2 7/8" Tbg and set @ 4990'. Pick up TBG 30'. Pressure test the CIBP to 1000 PSI. Pick up Tbg string to 3910'. Circulate balanced plug of 10 BLL of 10% acetic acid across the proposed perforation interval (3820 to 3910'). POOH with tubing.
6. **Perforate:**
   RU Baker-Atlas electric line. Install full lubricator and pack-off; test to 1000 PSI. Use Halliburton CBL (GR AND CCL) for depth correlation (which was previous correlated to Halliburton Dual Spaced Neutron dated 2/17/06). Note: short joint at 4577.5'-4598.5'. RIH with 3-1/8" perf guns loaded with 311T charges 1 SPF and 2 SPF perforate 30 feet with 40 holes as follows:
   GRAYBURG FORMATION:

   3820'- 3830' (10 feet – 10 holes)
   3880' – 3890' (10 feet – 20 holes)
   3900' – 3910' (10 feet – 10 holes)
   RD Baker-Atlas. Pump acid away using 20 bbls of fresh water.
   Run a bailer with 3 sxs of sand.

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. Install Stinger Tree Saver. RU Halliburton Frac. Test line to 6000 PSI.
9. ***ACID and FRAC*** following the Halliburton Frac Procedure "Muncy 14 Halliburton Frac proc GB.doc, dated of August 7th, 2006 (STAGE 1). Using Expedite for sand production control. Bleed of the pressure.
10. RIH with a junk basket to 3650'. Ensure that sand top (if any) is below 3650' depth. If top above 3650', the second stage frac is canceled and well should be SI at least for 3 to 4 hours, in order to achieve the best Expedite settlement, before cleaning the wellbore. (Please, skip to *item 17* if 2nd frac stage is canceled).
11. RD the Tree saver.
12. RIH with 5 ½" CIBP and 2 7/8" TBG. Set the CIBP at 3650' depth. Pick up TBG 30'. Pressure test the CIBP to 1000 PSI. Pick up Tbg string to 3630'. Circulate balanced plug of 10 BLL of 10% acetic acid across the proposed perforation interval (3620' to 3630'). POOH with tubing.
13. **Perforate:** RU Baker-Atlas electric line. Install full lubricator and pack-off; test to 1000 PSI. Use Halliburton CBL (GR and CCL) for depth correlation (which was previous correlated to Halliburton Dual Spaced Neutron dated 2/17/06). Note: short joint at 4577.5'-4598.5'. RIH with 3-1/8" perf guns loaded with 311T charges at 2 SPF and perforate 10 feet with 20 holes as follows: ***It is desired to perforate from top down to maximize efficiency of acetic acid in wellbore***

WORKOVER PROCEDURE
J L Muncy # 14
Lea County, New Mexico

QUEEN FORMATION:
3620'- 3630' (10 feet – 20 holes).
RD Baker-Atlas. Pump acid away using 20 bbls of fresh water.

14. Install Stinger Tree Saver. RU Halliburton Frac. Test line to 6000 PSI.
15. ***ACID and FRAC*** following the Halliburton Frac Procedure "Muncy 14 Halliburton Frac proc GB.doc, dated of August 7th, 2006 (STAGE 2). Using Expedite for sand production control. Bleed of the pressure.
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 ¾" mill bit in order to clean out the wellbore at Queen Formation. Tag and drill CIBP @ 3650'.
19. Continue RIH and tag CIBP @ 4990'. POOH.
20. RIH with 2-7/8" production tubing. Set pump intake at top of perforations (3620'). RIH rods and pump, PWOP. Verify unit is pumping, RD WSU. Test well to battery or tank as advised by Morehead.
21. RU WSU.
22. **Test Grayburg and Queen Interval for 1-2 weeks to obtain indicative well test.**