# District I 1625 N. French District

District II

1301 W Grand Avenue, Artesia, NM 88210

District III

NOV 1 2 200  $\underset{1000 \text{ Rio Brazos Road,}}{\underline{\text{District III}}} \underset{1000 \text{ Rio Brazos Road,}}{\text{No. 2, Lec.}} \underset{\text{NM}}{\underline{\text{2,42008}}} \\$ 

## State of New Mexico Energy Minerals and Natural Resources

June 16, 2008

Oil Conservation Division 1220 South St. Francis Dr.

Submit to appropriate District Office

AMENDED DEDOPT

Form C-101

1220 S. St. Fr		B# 25 1.	इक्ट है।				ŕ	M 8750					MENDED REPORT
AP]	PLICA'	ī	Operator Name	and Addre	SS	LL, RE	-EN	TER, I	DEEP1	EN, PLU	<sup>2</sup> O	GRÍD Numb 14021	ADD A ZONE
Marathon Oil Company P.O Box 3487 / Mail Stop: #3308 Houston, 77253-3487								<sup>3</sup> API Number <b>30–025-33607</b>					607 —
Property Code Suppose										•			ell No. <b>9</b> /
			roposed Pool 1	west					11.111.11	10	Proposed	Pool 2	
		Wildian	int- i eso i voi en	17 C3 C	7	Surfac	e Loc	cation					
UL or lot no	Section 26	Township 19-S	Range 36-E	Lot I		Feet from	om the North/South line I			Feet from the	е Е	East/West line West	County
	·	<u> </u>	<sup>8</sup> Pro	osed Bo	ottom I	Hole Loc	cation	If Differ	ent Fro	m Surface			<u></u>
UL or lot no.	Section	Township	Range	Lot I		Feet from		North/Sc		Feet from the	E	East/West line County	
	l	<u> </u>		I	Additi	ional W	/ell Iı	nforma	tion				
	Type Code <b>P</b>	/	12 Well Type Cod	e		13 Cable/				15 Gro	15 Ground Level Elevation 3681'		
<sup>16</sup> M	Iultiple		17 Proposed Dept	n		18 Formation Yeso Key			19 Contractor Energy Services			<sup>20</sup> Spud Date <b>10-15-1996</b>	
Hole Size  Casing Size  Casing weight/foot  Setting Depth  Sacks of Cement  Estimated TOC  17" 1/2  13 3/8"  48#  500'  300 sacks  Surface  11"  8 5/8"  24.32#  2850'  800 sacks  Surface  7 7/8"  5 ½"  15.5, 17#  7500'  950 sacks  +/- 1,000  *Marathon Oil Company is proposing to plug back the 'Abo' formation by setting a 'CIBP' above the top perfs of the 'Abo' 7095' in the McGrail State No. 9. We will then proceed with the plans to re-complete the well to the Yeso pool. Please see attachment for the details of the workover proposal, and a C102-Well Location Plat for the 'Monument-Yeso-Northwest' is attached.  Permit Expires 2 Years From Approval  Date Unless Drilling Underway									Surface Surface +/- 1,000 I new productive zone.  fs of the 'Abo' @ Please see				
23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief.  Signature:							OIL CONSERVATION DIVISION  Approved by:						
Bick B. Ochell							Must						
Printed name: Rick R. Schell							Title: PETROLEUM ENGINEER						
Title: Regulatory Compliance Representative							Appro	oval I Ate	) V 2	0 2008	Expir	ation Date:	
E-mail Addre	ess: RRS	CHELL@M:	arathonOil.com										
Date: 10-13-2008 Phone: 713-296-3412							Conditions of Approval Attached						

## **Recompletion Procedure**

McGrail State Well No. 9 1980' FSL, 1650' FWL Section 26, 19S-36E, UL "K" Lea County, New Mexico

**WBS NO:** RW.08.17695.CAP

**Date:** May 30, 2008

Purpose: Recomplete to Yeso

**Elevation: KB:** 3697' **PBTD:** 7508' **GL:** 3681' **TD:** 8000'

Estimated Cost: \$314,500

**Estimated Rig Days: 5** 

WI: 100% NRI: 87.5%

Surface Casing: 13-3/8", 48#, H-40 casing set at 516'. Cemented w/ 525 sx. Circulated

cement to surface (210 sx).

Inter. Casing: 8-5/8", 24/32#, K-55 casing set at 2845'. Cemented w/ 1000 sx.

Circulated cement to surface (106 sx).

**Production Casing:** 5-1/2", 15.5/17#, K-55 casing to 8000'. Cemented shoe with 270 sx.

TOC at 6450'. Remedial cement through perfs at 6080'. Sqz 1075 sx.

TOC at 556' (TS-2/97)

**Production Tubing:** 2-7/8", 6.5#, J-55, EUE, SN @ 7455'

**Perforations:** Current: 7183-87', 7322-26', 7350-54',7376-79', 7396-410', 7419-29',

7422-51', 7452-55'

Safety Issues: High Concentration Of H<sub>2</sub>S Gas (28,000 ppm)

### **Tubular Performance/Capacities:**

	ID	Drift	Burst	Collapse	Capacity
	<u>(in.)</u>	(in.)	<u>(psi)</u>	(psi)	(bbl/ft)
2-7/8" 6.5# J-55	2.441	2.347	5808	7680	.00579
5-1/2" 15.5# K-55	4.95	4.825	3848	4040	.0238
Tbg/Csg Annulus					.0158

### Procedure:

- 1. MIRU WSU. POOH with rods and pump. Install and test BOPE. POOH with 2-7/8" tubing.
- 2. Make bit and scraper run to PBTD at +/- 7500'. Pick-up additional tubing as needed for this operation.
- 3. RIH with cast iron bridge plug (CIBP). Set CIBP at +/-7150'. Swab well down for negative test on sqz perfs @ 6080'. Circulate wellbore full w/freshwater and test to 500 psi. PU end of tubing to 6720' and circulate a balance 3-bbl slug of acid from 6720' to 6600' using 7-1/2" NEFEHCL inhibited for 48-hours at 125 deg F. Be sure to keep the acid off the squeezed perfs at 6080'. POOH with tubing and tools.
- 4. RU Baker Atlas electric line. Install pack-off. RU lubricator and RIH with 3-1/8" slick gun with 311T charges loaded 2 SPF, phasing is not critical. Perforate from top-down to maximize benefit of acid. For depth control use Wedge Dia-Log CBL dated 11/10/96.

RECOMPLETION PROCEDURE McGrail State Well No. 9 Lea County, New Mexico May 30, 2008

> 6622-24 (2', 4 holes) 6636-38 (2', 4 holes) 6644-46 (2', 4 holes) 6674-78 (4', 8 holes) 6694-98 (4', 8 holes) 6704-08 (4', 8 holes) 6714-16 (2', 4 holes)

Yeso 20 Net Feet - 40 Holes

Casing collars at: 6722', 6676', 6633', 6587'. With 41' short joint @6904'-45'.

After last gun has been shot, tag CIBP and verify setting depth of top of CIBP. Dump 1 bailer of cement on CIBP. Pump 5 bbls of fresh water down casing to flush excess acid.

- 5. RIH w/TBG and PKR. Set packer @ 6590'. Load and test backside to 500 psi. Establish injection into new perforations.
- 6. RU acid company for acid stimulation. Need a minimum of 500 HHP on location. Pump +/- 60 bbls of 15% NEFEHCL inhibited for 4 hours at 125 deg F. Use a ball injector loaded with 50 (1.1 SG) ball sealers for acid diversion. Start off pumping 5 bbls of acid, then drop 1-ball for each 1-bbl of acid pumped. After last ball, pump remaining acid. Pump at maximum rate (4-5 BPM is desired) not to exceed 5000 psi surface pressure. Displace acid with 45 bbls of fresh water.
- 7. Release packer and lower past bottom perforation to knock ball sealers off perforations.
- 8. PU packer to 6590'. Set load and test the backside to 500 psi. Swab test well until dark. Report swab results. If fluid level is high, BHP in next step is not required. If fluid level is low, plan to obtain BHP as noted below.
- 9. Next morning RU slick line, RIH w/Amerada BHP gauge to measure the bottom hole pressure. Make last stop @ mid-perf (6669). Make stops every 1000' while GIH. RD slickline.
- 10. Release packer, POOH.
- 11. RIH with production tubing, insert pump and rods. PWOP.

District I

1625 N. Frencistor Frobbenia 1240

District II

1301 W. Grand Avenue, Atesia, NM 88210

District III

1000 Rio Brazos Rd., Aziec, NM 87410

District IV

1220 S. St. Francs Fr., Spita NN 97505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102 Revised October 12, 2005 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

ī	API Numbe		1	<sup>2</sup> Pool Code		EAGE DEDIC					
	30-025-33607		07000	roor Cong	<u>-                                    </u>	<sup>3</sup> Pool Name					
			97089		Monument Yeso Northwest						
4 Property	Code				<sup>5</sup> Property N	lame		61	<sup>6</sup> Well Number		
6440					•	9					
7 OGRID	No.	******				, Elevation					
01402	1				1	3681'					
					<sup>10</sup> Surface I	ocation			**** <u></u>		
JL or lot no.	Section	on Township Range Lot Idn Feet from the North/South line Feet from the East/West line					County				
	26	19 S	36E		1980	SOUTH	1650	WEST	LEA		
		<u> </u>	11 Bc	ttom Ho	le Location If	Different From	1 Surface				
IL or lot no.	Section	Township	Range		· · · · · · · · · · · · · · · · · · ·	North/South line	Feet from the	East/West line	County		
									•		
Dedicated Acre	S Joint or	Infill 14 C	onsolidation	Code 15 Or	der No.						
40 -	No				uci i tu						

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.

10 DERATOR CERTIFICATION 1 hereby certify than the nighrantian combined herein stree and compilete to the best of my tomologic and bested, and that are agamization either comes a varieting microse or unleased maneral interest in the land including the proport about more in lands on the sa equit so drill this well at the location partiant to a contract with an onser of such a mirred or working interest, or to a violantary pooling agreement or a computatory pooling order hereisfore entered by the drawan.  Rick R. Schell Printed Nature  Rick R. Schell  Date  Rick R. Schell  Natathory  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 helief.  Date of Survey  Signature and Seal of Professional Surveyor	16		**************************************		T
to the best of my bronkedge and belief, and that that in gaucyation either owns a wirking interest or unleased mannel interest in the land including the propered bottom hole known on has a night to drill that well location pursuant to a contract with an owner of such a mineral or working interest, or to a woluntary pooling agreement or a compulsory peoling under herestypic entered by the divivian.    Chief G. Cheplan 10-13-08	10				17 OPERATOR CERTIFICATION
Onto a working interest or unlessed maneral interest in the land including the proposed bottom had boaton or has a night to did that well to cannon pursuant to a contract with an owner of such a mineral or working interest or to a witninary pooling agreement or a compulsary pooling onder hereinfore entered by the division.  Rick R. Schell  Printed Name  REGULATORY CamplxAnce Res.  (It Schell@ Marathori): com  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 helief.  Date of Survey  Signature and Seal of Professional Surveyor			1		I hereby cerufy that the information contained herein is true and complete
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 a mineral or working interest, or to a woluming specimen or a compulsary peoling order hereofore entered by the downon.  Rick R. Schell Printed Name  REGULATORY Compliance Res.  [Prachell@ Marathon()].com  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 helief.  Date of Survey  Signature and Scal of Professional Surveyor					to the best of my knowledge and belief, and that this organization either
Incathon  Murathon  Murath				I	owns a working interest or unleased mineral interest in the land including
Murathon  Murath					the proposed bottom hole location or has a right to drill this well at this
ander heretofore entered by the durum.  Rick R. Schell Printed Name  Regula Tory Compliance Rep.  (**Schell@ Marathan():].com  18 SURVEYOR CERTIFICATION  18 SURVEYOR CERTIFICATION  18 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 Surveyor					location pursuant to a contract with an owner of such a mineral or working
Rick R. Schell  Rick R. Schell  Regulatory Compliance Rep.  (Prachello Marathono): com  Survey Compliance Rep.  (Prachello				1	interest, or to a voluntary pooling agreement or a compulsory pooling
Rick R. Schell Printed Name  REGULA TORY Compliance Rep.  (**Schell@ Marathon0;)-com  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 helief.  Date of Survey  Signature and Seal of Professional Surveyor					order heretofore entered by the division.
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Date of Survey Signature and Seal of Professional Surveyor		7			made by me or under my supervision, and that the
Signature and Seal of Professional Surveyor				;	same is true and correct to the best of my helief.
Signature and Seal of Professional Surveyor		MALLINE			Date of Survey
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					Signature and Seat Of Froncestonal Surveyor
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Contract (value)					Certificate Number
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