Submit 3 Copies to Appropriate District Office

DISTRICT I
P.O. Box 1980, Hobbs NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, NM 87505

Form C-103
Revised 1-1-89

WELL API NO. 30-025-33541

5. Indicate Type of Lease STATE [X] FEE [ ]

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: WARN STATE A/C 2

1. Type of Well: OIL WELL [X] GAS WELL [ ] OTHER

2. Name of Operator: Marathon Oil Company

8. Well No. 26

3. Address of Operator: P.O. Box 552 Midland, TX 79702

9. Pool name or Wildcat: VACUUM-ATOKA, WOLFCAMP

4. Well Location
Unit Letter E : 2180 Feet From The NORTH Line and 400 Feet From The WEST Line

Section 6 Township 18-S Range 35-E NMPM LEA County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. **Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[X]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[ ]	COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[ ]			CASING TEST AND CEMENT JOB	[ ]		
OTHER:	[ ]			OTHER:	[ ]		

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

PROPOSE TO COMPLETE AND TEST PENN & WOLFCAMP. COMMINGLE WITH ATOKA.

SEE ATTACHED PROCEDURE

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

SIGNATURE W. J. Nordt TITLE DRILLING SUPERINTENDENT DATE 4/20/98

TYPE OR PRINT NAME D. P. NORDT TELEPHONE NO. 915/687-8356

(This space for State Use)

APPROVED BY ORIGINAL SIGNED BY GARY WINK FIELD REP. II TITLE DATE APR 21 1998

CONDITIONS OF APPROVAL, IF ANY:

Completion Procedure

Warn State A/C 2 No. 26
2180' FNL, 400' FWL
Section 6, T18S & R35E
Vacuum Field
Lea County, New Mexico

AFE No.: 302498 **Date:** March 18, 1998

Est Cost: $ 300,000 **WI:** 100% **NRI:** 87.5%

AFE Days: Drilling: 46 Completion: 20 **Actual Days:** Drilling: 53 Completion:

Purpose: **Complete and test Penn & Wolfcamp, Commingle w/ Atoka**

Well Status: Atoka Producer (11,153' to 11,206') **Sqz Perfs:** Strawn (11,080' to 11,090')

Current Production: 47 bopd 273 mcfpd 87 bwpd

Elevation: TD: 11,500' PBTD: 11,211' KB: 3,982' GL: 3,967'

Surface Casing: 13 3/8" 48# H-40, set at 1,382'. Cemented with 950 sx Howco Lite "C" mixed at 12.50 ppg and 300 sx "C" with 2% CaCl2 mixed at 14.80 ppg. (Total ± 2,352 ft^3). Cement circulated.

Intermediate: 9 5/8" 40# K-55 from surface to 77', 36# K-55 from 77' to 3,048', 36# L-80 3,048' to 5,562'. Cemented with 1,800 sx Howco Lite "C" w/ 0.25# Flocele + 8.00# Salt at 12.6 ppg. Tail-in with 250 sx "C" w/ 0.60% Halad-9 at 14.80 ppg (Total ± 4,027 ft^3) Cement circulated.

Production: 5 1/2" 20# L-80 from surface to 4,475', 17# L-80 from 4,475' to 9,768', and 20# L-80 from 9,768' to 11,500'. Stage Tool at 9,101'. 1st stage cemented with 1100 sx 50/50 Pozmix "H" w/ additives mixed at 14.20 ppg. (Total ± 1,386 ft^3) Circulated off tool. 2nd stage cemented with 900 sx Howco Lite "H" w/ 0.3% CFR-3 + 0.25# Flocele mixed at 12.5 ppg, followed by 100 sx "H" neat mixed at 15.60 ppg. (Total Stage #2, ± 1,963 ft^3) Estimated TOC @ 5,000'

Casing:

Size & Wt.	I.D.	Drift I.D.	Burst	Collapse
5 1/2" 20#	4.778"	4.653"	9,190 psi	8,830 psi
5 1/2" 17#	4.892"	4.767"	7,740 psi	6,280 psi

Tubing:

Size & Wt.	I.D.	Drift I.D.	Burst	Collapse
2 7/8" 6.5#	2.441"	2.347"	10,570 psi	11,160 psi

Rods:

Size	Type	Jts	Length
1.2"	Fiberglass	147	5,512.5'
7/8"	Steel	224	5,600.0'

Pressure Info:

Atoka	(11,152' to 11,205'):	BHP = 3,400 psi (5.9 ppg) (PBU)
Penn	(10,007' to 10,556')	BHP = 4,700 psi (8.6 ppg) (RFT)
Wolfcamp	(9,330' to 9,954')	BHP = 3,375 psi (6.8 ppg) (RFT)

Safety: Install H2S monitoring alarm and rescue equipment. Run killstring when necessary.

PROCEDURE:

1. Notify Hobbs personnel of impending workover.
2. MIRU PU.
3. Disconnect surface equipment. Hang off pumping unit. Lay down polish rod. POOH with rods & pump.
4. ND wellhead, unset TAC, install 7 1/16", 5M psi hydraulic BOP w/ 2 7/8" rams. Install (2) 2 1/16", 5M psi gate valves on BOP outlets below blind rams. Pressure test BOPE to 2,500 psi.
5. TOOH with the 2 7/8" tubing & TAC.

6. MIRU wireline co. and lubricator. Pressure test lubricator to 1.000 psi. RIH w/ a 5 1/2" 20# gauge ring to 11.000' before running RBP. Run a wireline-set/tubing-retrieve bridge plug with a GR/CCL. Correlate with CNL/LD/GR dated 1/13/97. Set the 5 1/2" 20# RBP w/ ballcatcher at ± 10.900'

7. PU 5 1/2" packer and RIH on 2 7/8" tubing to ± 10.850'. Set the packer and test the RBP to 2.000 psi. PU to ±9.950'. MIRU acid company, pickle the tubing with 400 gallons of 15% DINE HCl. Reverse pickle acid to the pit. Spot 600 gallons of 15% DINE acid from 9.942' to 10.556'. POH with tubing & packer.

8. MIRU wireline co. and lubricator. Pressure test lubricator to 1.000 psi. Perforate the Penn with a 3 3/8" Port gun from the top down as follows: 10007' to 10023', 10039' to 10069', 10259' to 10264', 10270' to 10273', 10306' to 10317', 10508' to 10556'. All shots 2SPF w/ 23 gram charges.

9. PU 5 1/2" 20# treating packer on 2 7/8" and hydrotest to 8.000 psi in the hole to ± 9.950'. Reverse the spot acid into the tubing and set the packer. Test the backside to 500 psi.

10. Spot a lined frac tank. Visually inspect tank for cleanliness and return line configuration. Add 290 bbls of fresh mix water.

11. MIRU Halliburton. Prepare to pump an acid frac on the Penn from 10.007' to 10.556' at 10 bpm with an expected surface treating pressure of 5.000 psi. The treatment will consist of 20.000 gallons of 15% VCA acid carrying 452 ballsealers. It is required that an acid blender be used to mix the individual components; not an acid single. The proposed pumping schedule is as follows:

VCA Acid Blend: 20.000 gals of 15% HCl Acid

Additives Per 1,000 gals:

10.0	gpt	SGA-III	Gellant
2.00	gpt	19N	Non-Emulsifier
1.50	ppt	BF-1	pH Control
4.50	gpt	XL-1	Crosslinker
4.00	ppt	Ferchek	Breaker
10.0	gpt	Fe-1A	Iron Control
2.00	gpt	HAI-85	Corrosion Inhibitor

Penn Pumping Schedule:

Stage	Fluid Type	Vol. (gals)	Balls	Rate (bpm)	Press (psi)
Acid	15.0 % VCA	2000	-	10	5000
Divert	15.0 % VCA	1000	113	10	5000
Acid	15.0 % VCA	2000	-	10	5000
Divert	15.0 % VCA	1000	113	10	5000
Acid	15.0 % VCA	3000	-	10	5000
Divert	15.0 % VCA	1000	113	10	5000
Acid	15.0 % VCA	4000	-	10	5000
Divert	15.0 % VCA	1000	113	10	5000
Acid	15.0 % VCA	5000	-	10	5000
Flush	2.00 % KCl	5000	-	Best Rate	5000

12. Once the job is done. surge the balls off of the perforations. Wait (1) hour before flowing or swabbing back the load water.

13. Test the Penn zone for entry and cut as necessary.

14. Release the packer and TOH with the 2 7/8" tubing.

15. PU 5 1/2" 20# RBP w/ ballcatcher and packer. RIH on 2 7/8" tubing to ± 9.980'. Set the RBP and test to 2.000 psi. PU to 9.954' and spot 250 gallons of 15% DINE acid across the lower Wolfcamp from 9.752' to 9.954'. POH with tubing & packer.

16. MIRU wireline co. and lubricator. Pressure test lubricator to 1.000 psi. Perforate the lower Wolfcamp with a 3 3/8" Port gun from the top down as follows: 9752' to 9758', 9795' to 9799', 9842' to 9872', 9935' to 9954'. All shots 2SPF w/ 23 gram charges.

17. PU 5 1/2" 17# packer on 2 7/8" tubing w/ SN. RIH to ± 9,710' reverse spot acid into the tubing then set the packer. Test the backside to 500 psi. Drop a SV and test the tubing to 8,000 psi. Fish the SV. Add 215 bbls of mix water to the tank

18. MIRU Halliburton. Prepare to pump an acid frac on the lower Wolfcamp from 9752' to 9954' at 10 bpm with an expected surface treating pressure of 5,000 psi. The treatment will consist of 15,000 gallons of 15% VCA acid carrying 236 ballsealers. It is required that an acid blender be used to mix the individual components; not an acid single. The acid schedule is as follows:

VCA Acid Blend: 15,000 gals of 15% HCl Acid

Additives Per 1,000 gals:

(Same additives as Penn treatment)

Lower Wolfcamp Pumping Schedule:

Stage	Fluid Type	Vol. (gals)	Balls	Rate (bpm)	Press (psi)
Acid	15.0 % VCA	3000	-	10	5000
Divert	15.0 % VCA	1000	118	10	5000
Acid	15.0 % VCA	4000	-	10	5000
Divert	15.0 % VCA	1000	118	10	5000
Acid	15.0 % VCA	6000	-	10	5000
Flush	2.00 % KCl	5000	-	Best Rate	5000

19. Once the job is done, surge the balls off of the perforations. Wait (1) hour before flowing or swabbing back the load water.

20. Test the lower Wolfcamp zone for entry and cut as necessary.

21. Release the packer, retrieve the RBP and TOH with the 2 7/8" tubing to empty the ballcatcher.

22. PU 5 1/2" 17# RBP w/ ballcatcher and packer. RIH on 2 7/8" tubing to ±9,720'. Set the RBP and test to 2,000 psi. PU to 9,695' and spot 250 gallons of 15% DINE acid across the middle Wolfcamp from 9,495' to 9,695'. TOH with tubing and packer.

23. MIRU wireline co. and lubricator. Pressure test lubricator to 1,000 psi. Perforate the middle Wolfcamp with a 3 3/8" Port gun from the top down as follows: 9495' to 9526', 9547' to 9611', 9624' to 9649', 9661' to 9695'. All shots 2SPF w/ 23 gram charges.

24. PU 5 1/2" 17# packer on 2 7/8" tubing w/ SN. RIH to ± 9,450' reverse spot acid into the tubing then set the packer. Test backside to 500 psi. Drop SV and test the tubing to 8,000 psi. Fish SV.

25. Spot an additional lined frac tank. Visually inspect for cleanliness and return line configuration. Manifold the two tanks together and add 500 bbls of mix water.

26. MIRU Halliburton. Prepare to pump an acid frac on the middle Wolfcamp from 9495' to 9695' at 10 bpm with an expected surface treating pressure of 5,000 psi. The treatment will consist of 35,000 gallons of 15% VCA acid carrying 615 ballsealers. It is required that an acid blender be used to mix the individual components; not an acid single. The acid schedule is as follows:

VCA Acid Blend: 35,000 gals of 15% HCl Acid

Middle Wolfcamp Pumping Schedule:

Stage	Fluid Type	Vol. (gals)	Balls	Rate (bpm)	Press (psi)
Acid	15.0 % VCA	3500	-	10	5000
Divert	15.0 % VCA	1000	123	10	5000
Acid	15.0 % VCA	4000	-	10	5000
Divert	15.0 % VCA	1000	123	10	5000
Acid	15.0 % VCA	4500	-	10	5000
Divert	15.0 % VCA	1000	123	10	5000
Acid	15.0 % VCA	5000	-	10	5000
Divert	15.0 % VCA	1000	123	10	5000
Acid	15.0 % VCA	5500	-	10	5000
Divert	15.0 % VCA	1000	123	10	5000
Acid	15.0 % VCA	7000	-	10	5000
Flush	2.00 % KCl	5000	-	Best Rate	5000

27. Once the job is done, surge the balls off of the perforations. Wait (1) hour before flowing or swabbing back the load water.

28. Test the middle Wolfcamp zone for entry and cut as necessary.

29. Release the packer, retrieve the RBP and TOH with the 2 7/8" tubing to empty the ballcatcher.

30. PU 5 1/2" 17# RBP w/ ballcatcher and packer. RIH on 2 7/8" tubing to ±9,480'. Set the RBP and test to 2,000 psi. PU to 9,452' and spot 250 gallons of 15% DINF acid across the upper Wolfcamp from 9,330' to 9,452'. TOH with tubing and packer.

31. MIRU wireline co. and lubricator. Pressure test lubricator to 1,000 psi. Perforate the upper Wolfcamp with a 3 3/8" Port gun from the top down as follows: 9330' to 9337', 9348' to 9358', 9366' to 9383', 9401' to 9417', 9421' to 9452'. All shots 2SPF w/ 23 gram charges.

32. PU 5 1/2" 17# packer on 2 7/8" tubing w/ SN. RIH to ± 9,250' reverse spot acid into the tubing then set the packer. Test the backside to 500 psi. Drop a SV and test the tubing to 8,000 psi. Fish the SV. Add 290 bbls to the lined tank for mix water.

33. MIRU Halliburton. Prepare to pump an acid frac on the upper Wolfcamp from 9330' to 9452' at 10 bpm with an expected surface treating pressure of 5,000 psi. The treatment will consist of 20,000 gallons of 15% VCA acid carrying 324 ballsealers. It is required that an acid blender be used to mix the individual components; not an acid single. The proposed pumping schedule is as follows:

VCA Acid Blend: 20,000 gals of 15% HCl Acid

Additives Per 1,000 gals:

(Same additives as middle Wolfcamp treatment)

Upper Wolfcamp Pumping Schedule:

~~Stage~~	Fluid Type	Vol. (gals)	Balls	Rate (bpm)	Press (psi)
Acid	15.0 % VCA	2000	-	10	5000
Divert	15.0 % VCA	500	81	10	5000
Acid	15.0 % VCA	3000	-	10	5000
Divert	15.0 % VCA	500	81	10	5000
Acid	15.0 % VCA	3500	-	10	5000
Divert	15.0 % VCA	500	81	10	5000
Acid	15.0 % VCA	4500	-	10	5000
Divert	15.0 % VCA	500	81	10	5000
Acid	15.0 % VCA	5000	-	10	5000
Flush	2.00 % KCl	5000	-	Best Rate	5000

34. Once the job is done, surge the balls off of the perforations. Wait (1) hour before flowing or swabbing back the load water.

35. Test the upper Wolfcamp zone for entry and cut as necessary.

36. Release the packer, retrieve the RBP and TOH with the 2 7/8" tubing.

37. TIH w/ tubing and retrieve the RBP at 10,900'. POH w/ tubing & RBP.

38. PU 2 7/8" tubing w/ SN & TAC. Space out tubing such that the TAC is at ± 11,000', and the SN is at is 11,300'.

39. RIH with IP & rods. Space out plunger and hang well on.

40. Reconnect surface equipment start well pumping to production facilities.

41. RDMO PU.