

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
Revised March 25, 1999

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-20748
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name: Warn State A/C 1
8. Well No. 3
9. Pool name or Wildcat N.Vac. Abo/Vac. Upper Penn/Wolfcamp

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.)	
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	
2. Name of Operator Marathon Oil Company	
3. Address of Operator P.O. Box 2490, Hobbs, NM 88240	
4. Well Location Unit Letter <u>F</u> : <u>2080</u> feet from the <u>North</u> line and <u>1908</u> feet from the <u>West</u> line Section <u>31</u> Township <u>17S</u> Range <u>35E</u> NMPM County <u>Lea</u>	
10. Elevation (Show whether DR, RKB, RT, GR, etc.) GL 3975' KB 3989'	

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input checked="" type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

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. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Propose to Plug and Abandon well per attached procedure.

THE COMMISSION MUST BE NOTIFIED 24 HOURS PRIOR TO THE BEGINNING OF PLUGGING OPERATIONS FOR THE C-103 TO BE APPROVED.

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

SIGNATURE Julie Poupart TITLE Administrative Assistant DATE 2/5/2002

Type or print name Julie Poupart

Telephone No. 915-687-8418

(This space for State use)

APPROVED BY _____ TITLE PAUL F. KAUTZ DATE _____

Conditions of approval, if any:

PETROLEUM ENGINEER

FEB 13 2002

Handwritten initials

Warn State A/C 1 Well No. 3
UL 'F', 2080' FNL and 1908' FWL
Section 31, T-17-S, R-35-E
Lea County, New Mexico

Date: January 30, 2002
AFE No: NA (Expense)
Cost: \$ (9 Days)

Purpose: Plug and Abandon well

Elevation: **KB:** 3989'
GL: 3975'

PBTD: Abo csg: 9372' top of fish, 9400' CIBP, 10187' cmt
Wolfcamp csg: 250' top of fish, 10184' cmt
Penn csg: 10194' cmt

TD: 10,301'

Surface Casing: 13-3/8", 48 lb/ft, H-40 casing set at 356'. Cemented with 375 sks, circulate.

Intermediate Casing: 9-5/8", 36 & 40 lb/ft, J-55 & N-80 casing set at 5002'. Cemented w/ 2650 sks. TOC ~ 1100' by TS. Cement squeeze 150 sks down between 13-3/8" and 9-5/8" casing.

Production Casing: 3 strings of 2-7/8", 6.5 lb/ft, J-55 & N-80 tubing. Cemented w/ 300 sks. TOC ~ 2965' by TS. Wolfcamp @ 10,247'. Abo @ 10,245'. Penn @ 10,241'.

Tubing/BHA: Use: 1.90", 2.76 lb/ft, N-80, IJ – 10rd tubing.

Perforations:

Abo Csg:	9122' - 9279'	(Abo Pool)
	9222' - 9232'	(Communication with Penn csg)
	9354' - 9360'	(Communication with Penn csg)
Wolfcamp Csg:	9478' - 10031'	(Wolfcamp Pool)
	10005' - 10029'	(Communication with Penn csg)
	10124' - 10146'	(Communication with Penn csg)
Penn Csg:	9222' - 9232'	(Communication with Abo csg)
	9354' - 9360'	(Communication with Abo csg)
	9478' - 9854'	(Wolfcamp Pool)
	10005' - 10029'	(Communication with Wolfcamp csg)
	10124' - 10146'	(Penn Pool & Communication with Wolfcamp csg)

Anticipated SBHP: 600 psi

- Safety Considerations:**
1. Hold safety meeting to discuss procedures and safety issues.
 2. Top of Anhydrite is ~1500'.
 3. Top of fish in Wolfcamp casing is 250'.
 4. A cement yield of 1.18 cf/sk (15.6 ppg, class 'H') was used for cement top calculations, adjust sks of cement if yield is different.
 5. Wolfcamp pump in rate was 1.5 BPM at 400 psi with water.

PROCEDURE for P&A

1. Inspect location. Test safety anchors and replace as needed.
2. MIRU PU.
3. Kill well as necessary with 2% KCl water. ND wellhead and NU BOP equipment (Wolfcamp csg).
4. Hook up line from Abo and Penn casing to pit. Pump down Wolfcamp casing with 60 to 100 bbls of 2% KCl while checking for blow on Abo, Penn and surface casing. (This is to check communication between the three casing strings and for cement volume calculation)
5. RU wireline company on Wolfcamp casing. Run gauge ring to top of fish at 250'. Run cement retainer and set at 235'. RD wireline company.
6. TIH with 1.90" tubing and stinger into retainer (Wolfcamp casing). Test tubing with 2% KCl to 1000 psi

7. Pump 368 sks (434.2 cf) of cement, flush with 9.5 ppg mud. As cement is clearing retainer, let it take the flush with out the pump if possible. Sting out and reverse out. WOC.

Note: A. If cement does not fall below retainer then the top of cement in Abo and Penn csg is at ~4900'.
B. If cement falls to balance point, then top of cement will be 4600' in the Wolfcamp csg, and in the Abo & Penn csg at 4050', and this could take up to 10.5 bbls of total flush.
C. Need to pump a minimum of 101 sks to reach top of Wolfcamp perms.
D. Maximum pump rate 2 BPM and maximum pressure 500 psi.

8. Sting into retainer. Attempt to pump down the tubing with 9.5 ppg mud. Call OCD with results.

9. Sting out of retainer. Stop 1 sks of cement on top of retainer. Circulate 9.5 ppg drilling mud to surface. POOH.

10. RU wireline company on Wolfcamp casing. Cut 2-7/8" casing at deepest depth (200'). RD wireline company.

11. POOH with 2-7/8" Wolfcamp casing, laying down.

12. NU BOP on Penn casing. TIH with 1.90" tubing and tag top of cement. Circulate 9.5 ppg drilling mud to surface. If cement is above 4950', POOH. If cement is below 4950', spot cement plug (~5 sks) from 5080' to 4900', WOC then tag top of cement and POOH.

Note: If cement top is below 5100', call OCD with depth to cement top. They will tell us if we need any other cement plugs from the cement top to 5100'.

13. RU wireline company on Penn casing. Run free point and chemical cut 2-7/8" Penn casing at top of cement (~2965'). RD wireline company.

14. POOH with 2-7/8" Penn casing, laying down.

15. NU BOP on Abo casing. TIH with 1.90" tubing and tag top of cement. Circulate 9.5 ppg drilling mud to surface. If cement is above 4950', POOH. If cement is below 4950', spot cement plug (~5 sks) from 5080' to 4900', WOC then tag top of cement and POOH.

Note: If cement top is below 5100', call OCD with depth to cement top. They will tell us if we need any other cement plugs from the cement top to 5100'.

16. RU wireline company on Abo casing. Chemical cut 2-7/8" Abo casing at same depth as Penn casing (~2965'). RD wireline company.

17. POOH with 2-7/8" Abo casing, laying down.

18. NU BOP on 9-5/8" casing. TIH with 1.90" tubing to top of 2-7/8" casing (~2965'). Circulate 9.5 ppg drilling mud to surface.

19. Spot 65 sks (76.7 cf) cement plug from top of cut 2-7/8" casing string at 2965' (top of cement to 2770'). WOC and tag.

20. Pull up hole to 1550 (Anhydrite). Spot 65 sks (76.7 cf) cement plug (top to 1355'). WOC and tag.

21. Pull up hole to 410' (Shoe). Spot 91 sks (107.4 cf) cement plug (top to 140'). WOC and tag.

22. Pull up hole to 60'. Spot 25 sks (29.5 cf) cement plug (top at surface). POOH.

23. ND BOP equipment. RDMO PU.

24. Cut off wellhead and anchors (3' BGL). Install dry hole marker.

C:\wpdocs\proc\warn 1_3_b.doc

xc: Brad Hutchison
Tony Hallum
Tom Kacir
Ralph Skinner
Wall Files



Subject Warn State 1 #3

Page No.

Of

File

By JPK

Date

Current Jan 2002

Wolfcamp CSS

Top of fish 250'

1.5" Tbg. + Rods

13³/₈" 48# c 356'

H-40 cmt'd w/ 375 sk
TOC ~ 1100' (TS)

Bradenhead cmt 50#
13³/₈" x 9⁵/₈" 150 sk.

9⁵/₈" 36+40# c 5002'

J-55 + N-80

cmt'd w/ 2850 sk

TOC ~ 2965' (TS)

css
Abo Perfs

9354'-9360' comm w/ Penn

9222'-9232' comm w/ Penn

9122'-9279

CISBP c 9400'

fish c 9373'

Wolfcamp CSS
Perfs

9478'-10031'

10005'-10029' comm w/ Penn

10124'-10146' comm w/ Penn

css
Penn Perfs

10124'-10146' Penn Pool + Comm w/ W.C.

10005'-10029' Comm w/ Wolfcamp

9478'-9854'

9354'-9360' comm w/ Abo

9222'-9232' comm w/ Abo CSS

fill c 10040'

2⁷/₈" 6.5# J-55 + N-80
cmt'd w/ 300 sk

Hole TD c 10301'

8³/₄"

	Wolfcamp	Abo	Penn
TD	10247'	10245'	10241'
PBTD	10184'	10187'	10181'



Subject	Warn State 1 #3		Page No.	Of
File			By	Date
			TPK	

Proposed P & A

Jan 2002

25 sk cmt Plug
0 - 60'

102 sk cmt Plug
140' - 410'

75 sk cmt Plug
1350' - 1550'
9 5/8" x 13 3/8"
TOC ~ 1100'

75 sk cmt Plug
2765' - 2965'
2 7/8" x 9 5/8"
TOC ~ 2965'

13 3/8", 48 # c 356'
H-40, cmt'd w/ 375 sk
TOC ~ 1100' (TS)

⊕ Bradenhead cmt SQZ
13 3/8" x 9 5/8", 150 sk

9 5/8", 36 + 40 # c 5002
J-55 + N-80
cmt'd w/ 2650 sks
TOC ~ 2965' (TS)

Abbe Perfs
9122' - 9360'
c 288 e 9400'

Wolfcamp Perfs
9470' - 10146'

Penn Perfs
9222' - 10146'

fill e 10040'

2 7/8", 6.5 #, J-55 + N-80
cmt'd w/ 300 sks

	Wolfcamp	Abbe	Penn
TD	10247'	10245'	10241'
PBTD	10184'	10187'	10194'

Hole TD = 10301'
8 3/4"

Warn State A/C 1 No. 3 Well Hls.

- Jun '64 Cmt'd 3 strings of 2-7/8" tbg as production csg for 3 different zones: Abo @ 10,245', Wolfcamp @ 10,247' & Penn @ 10,241'.
- Aug '64 Perf'd Wolfcamp (1 SPF) @ 9975-80.5 93 10,005.5 10.5 25 31'. Acid'd same w/2000 gal Spearhead acid & 1000 gal Acetic acid. Perf'd Penn (2 SPF) @ 10,124-25 31-32 36-37 45-46'. Acid'd same w/1000 gal Acetic acid. Perf'd Abo (1 SPF) @ 9122 37 76 64 94 9208 17 22 29 50.5 64.5 79'. Acid'd same w/gal BDA acid & 1000 gal Acetic acid. Turned to prod flwg: Abo-240 bopd, Wolfcamp-191 bopd & Penn-242 bopd thru individual 2-7/8" csg strings.
- Sep '64 Acid'd Wolfcamp 9975-10,031' w/8000 gal 15% CRA acid. Ret to prod flwg all 3 zones.
- Dec '65 Acid'd Abo 9122-9279' w/10,000 gal 15% CRA acid for scale. Ret to prod flwg all 3 zones.
- Aug '66 Acid'd Wolfcamp 9975-10,031' w/2000 gal 15% acid. Installed pumping equipment. Ret to prod ppg Wolfcamp, flwg Abo & Penn.
- July '67 Cut paraffin in Abo string. Installed pumping equipment. Ret to prod ppg Abo & Wolfcamp, flwg Penn.
- Aug '67 Acid'd Abo & Wolfcamp w/1000 gal each 15% converted acid & ret to prod ppg.
- Oct '78 Perf'd Wolfcamp string in Penn zone (2 SPF) @ 10,124-46' thru Penn string (plans were to commingle Wolfcamp/Penn & produce thru Wolfcamp string). Set Baker CIBP in Abo string @ 9400'. Lost 1-1/2" integral joint tbg w/rods in Wolfcamp - unable to fish (top/fish @ 237' - collar looking up w/dutchman in threads). Decided to commingle using Penn string. Perf'd Penn string in Wolfcamp zone (2 SPF) @ 10,005-29'. Ret to prod ppg Abo: 15 bopd & Wolfcamp/Penn: 30 bopd.
- Sep '82 Sqzd 13-3/8" csg w/150 sx 'H' w/2% CaCl₂ to cover pressure entering 9-5/8" x 13-3/8" annulus just below 13-3/8" csg shoe.
- Jan '86 Fished rods & tbg in Abo string and fished rods in Penn/Wolfcamp string. Ret to prod ppg Abo: 13 bopd & Wolfcamp/Penn: 38 bopd.
- Oct '94 C/O fill in Abo string 9365-72'. Tagged Penn/Wolfcamp string PB @ 10,427'. Perf'd Wolfcamp in Penn/Wolfcamp csg (1 SPF) @ 9478-88 9840-50 & 9844-54'. Perf'd communication holes (thru both strings) (4 SPF) @ 9354-80'. Perf'd Abo in Abo csg (1 SPF) @ 9222-32'. Acid'd Abo 9122-9279' w/2000 gal 15% HCl. Acid'd Wolfcamp 9844-54' w/1500 gal 15% HCl & 9478-9650' w/2100 gal 15% HCl. Turned to prod ppg original Penn string (Perf'd in Penn/Wolfcamp & commingled w/Abo thru communication holes) @ 2 bopd & 48 bwpd from all 3 zones.
- Oct '95 Shut-in well.

Well Name & No.		WARN STATE A/C 1 #3		Field	VACUUM		Date 03/28/01
County	LEA	API	3002520748	State	NEW MEXICO	By	TIM L. CHASE
Spudded	5/2/1964	Comp Drig	6/8/1964	Location	2080' FNL & 1908' FWL, Section 31, Township 17S, Range 35E, UL 'F'		



17-1/2" Hole

12-1/4" Hole

Abo
Wolfcamp
Penn

8-3/4" Hole

13-3/8" 45# H-40 ST&C 5rd @ 355' w/375 Sx (Circ'd)
(375 Sx Trinity Regular w/2% Gel & 2% CaCl₂) + Sqz Csg Shoe w/150 Sx

1-1/2" Integral Joint Tbg w/Rods Stuck in Hole w/Top @ 237' in Wolfcamp String

TOC @ 1100' By TS Outside 8-5/8"

TOC @ 2965' By TS Outside 2-7/8"

9-5/8" 36/40# J-55 N-80 ST&C LT&C @ 6902' w/2850 Sx (DNC)
(2300 Sx Lite + 350 Sx Trinity Regular - All w/2% Gel & 1/4 PPS Floccs)

9122 37 78 84 94 9206 17 22-32 50.5 64.5 79' (Abo)

9354-50' (Communication Perfs) w/ Abo csg

9372' Fill in Abo String

9400' CIBP in Abo String

9478-88 9640-50 9844-54 9975 80.5 93 10031' (Wolfcamp)
10005-29' (Wolfcamp)
10124-45' (Penn)

10247' TOC in Wolfcamp; 10,245' in Abo
10427' TOC in Penn/Wolfcamp String

3 Strings 2-7/8" 8.4# J-55 N-80 Amco Seal Lock Tbg As Csg (DNC)
(300 Sx Incor w/18% Salt, 4% Gel & .75% CFR-2) (TOC @ 2965' By TS)

Formation Tops			
✓ Yates	2793'	Paddock	6018'
7 Rivers	3496'	Blinbry	6583'
Queen	3702'	Abo	7977'
Grayburg	4049'	Wolfcamp	9371'
San Andres	4340'	Lwr Wlfc	9965'
✓ Glorieta	5899'	Penn	10,089'

GL: 3975' DF: 3988' KB: 3989'

PBTD: Abo-9372' Wolfcamp-237' Penn-10,427' TD: 10,301'

2500
1491 (SMT) (1541-1441)

4 x 1/2

4 1/2