

p NRM 0334356878

C-103 Received 11-17-03
DHC No. Assigned 12-9-03

Order Number		API Number	Operator		County			
HOB-0063		30- 025-30285	Marathon Oil Company		Lea			
Order Date		Well Name		Number	Location			
		Lou Worthan		020	F	11	22S	37E
					UL	Sec	T (+Dir)	R (+Dir)
				Oil %	Gas %			
Pool 1	62700	Wantz Abo		33%	95%			
Pool 2	62730	Wantz Granite Wash		67%	5%			
Pool 3								
Pool 4								
<div>Comments: Work completed effective _____ Work cancelled effective _____ Supplement _____</div>								

DOWNHOLE COMMINGLE CALCULATIONS:

30-025-30285

HOB - 0063

OPERATOR: Marathon Oil Company

PROPERTY NAME: Lou Worthan

WNULSTR: 20-F, 11-22-37

SECTION I:

POOL NO. 1 Wantz Abo

ALLOWABLE AMOUNT

187 1122 MCF 6000

POOL NO. 2 Wantz Granite Wash

187 374 MCF 2000

POOL NO. 3 _____

_____ MCF

POOL NO. 4 _____

_____ MCF

POOL TOTALS 374

1496

SECTION II:

POOL NO. 1 Wantz Abo

Oil

Gas

33%

95%

POOL NO. 2 Wantz Granite Wash

67%

5%

POOL NO. 3 _____

POOL NO. 4 _____

OIL

GAS

SECTION III:

$187 \div 67\% = 279.11 (280)$

SECTION IV:

$280 \times 33\% = 92.40 (92)$

$280 \times 67\% = 187.60 (188)$

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-85

All distances must be from the outer boundaries of the Section

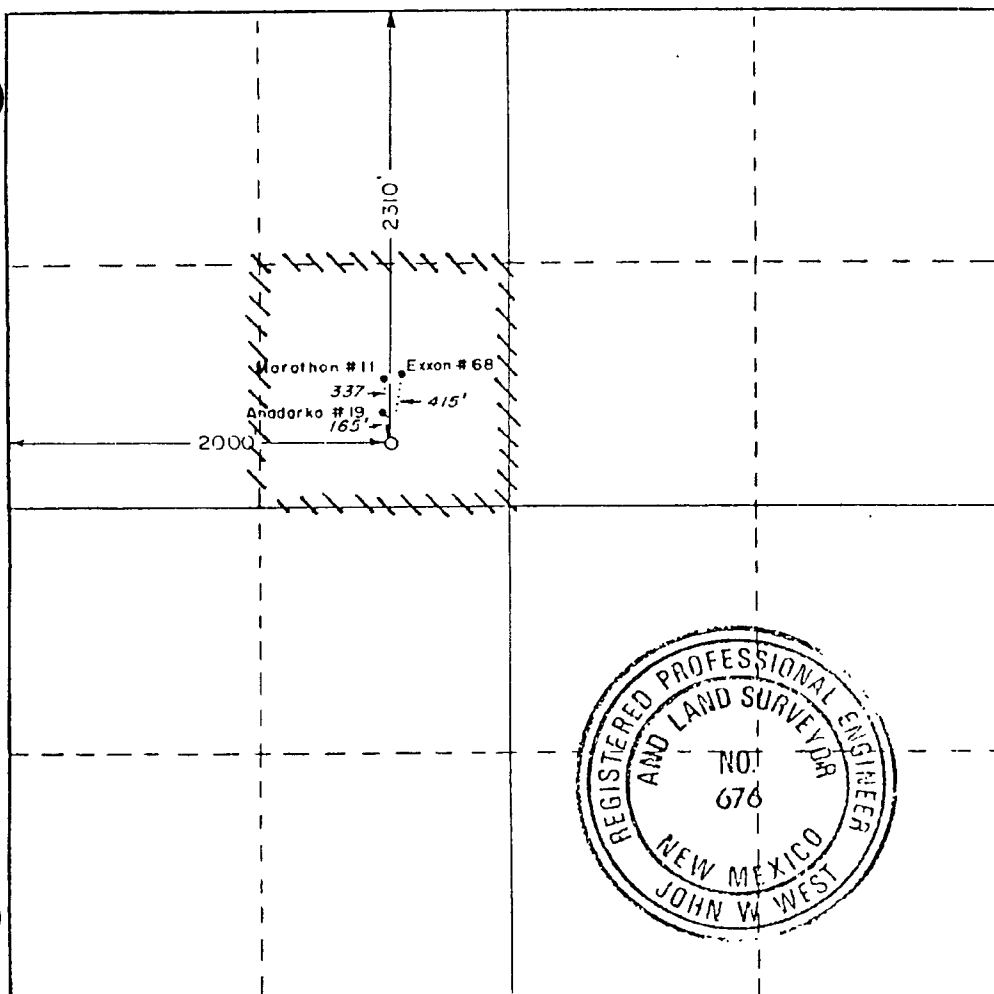
Operator Marathon Oil Company		Lessee Lou Worthan		Well No. 20
Unit Letter F	Section 11	Township 22 South	Range 37 East	County Lea
Actual Surface Location of Well: 2310 feet from the North line and 2000 feet from the West line				
Ground Level Elev 3355.3	Producing Formation Abo	Pool Wantz-Abo	Dedicated Acreage 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

T.L. Rivers
Name

T.L. Rivers
Position

Dist. Drlg Superintendent
Company

Marathon Oil Company

Date

3-2-88

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 knowledge and belief.

Date Surveyed

February 25, 1988

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. **JOHN W. WEST, 676**
RONALD L. EIDSON 1230

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-85

All distances must be from the outer boundaries of the Section

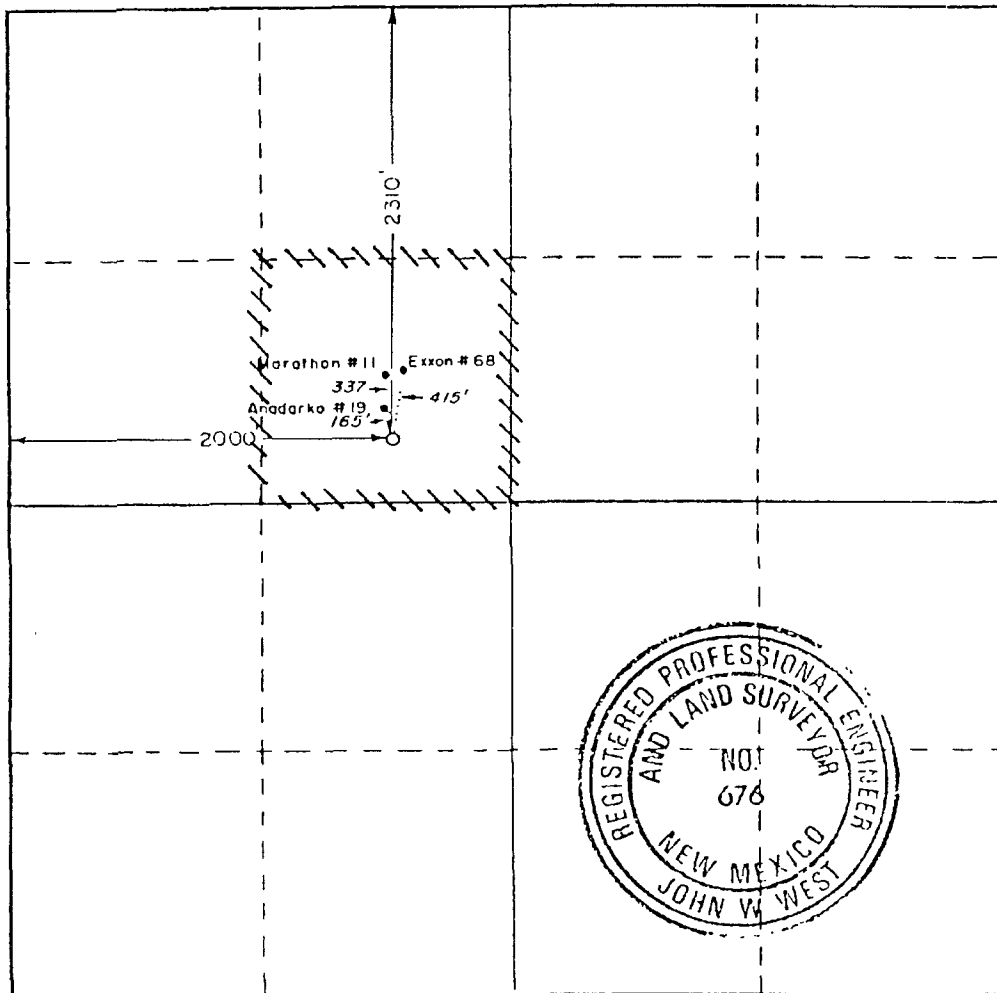
Operator Marathon Oil Company			Lease Lea Wortham		Well No. 20
Unit Letter F	Section 11	Township 22 South	Range 37 East	County Lea	
Actual Surface Location of Well: 2310 feet from the north line and 2000 feet from the west line					
Ground Level Elev. 3355.3	Producing Formation Granite Wash		Pool Washy Granite Wash		Drill Hole Acrylic 40

- 1 Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- 2 If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
- 3 If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

T.L. Rivers
Name

T.L. Rivers
Position

Dist. Drlg Superintendent

Company

Marathon Oil Company

Date

3-2-88

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 knowledge and belief

Date Surveyed

February 25, 1988

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No **JOHN W. WEST.**

676

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

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

Form C-103
Revised June 10, 2003

WELL API NO. 30-025-30285
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Lou Worthan
8. Well Number #20
9. OGRID Number
10. Pool name or Wildcat Wantz (Abo) & Wantz (Granite Wash)

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 ☐ Gas Well ☒ Other

2. Name of Operator
Marathon Oil Company

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

4. Well Location

Unit Letter F : 2,310' feet from the North line and 2,000' feet from the West line

Section 11 Township 22s Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3,355' - GL

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☒

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

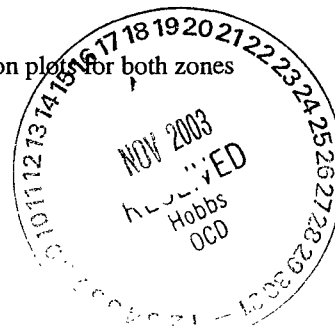
CASING TEST AND CEMENT JOB ☐

OTHER: ☐

13. 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.

Marathon Oil Company requests authorization to downhole commingle the Wantz (Abo) and Wantz (Granite Wash) pools. DHC 732 was granted on this well for the referenced zones in 1989. A recompletion to an upper Abo zone in 1998, temporarily abandoned a lower Abo zone and the Granite Wash. At this time, Marathon intends to remove a bridge plug so that all zones can be produced by rod pump

Please find attached a detailed procedure of the planned work, a wellbore diagram, and production plan for both zones



DHC Order No. HOB-0063

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

SIGNATURE BD Lockhart TITLE Engineer DATE 11/12/03

Print name Brent Lockhart E-mail address: BDLockhart@MarathonOil.com Telephone No. 432-687-8284

(This space for State use)

APPROVED BY PAUL F. KAUTZ DATE DEC 10 2003
Conditions of approval, if any: PETROLEUM ENGINEER

Lou Worthan Well No. 20
DHC Attachment

- i) Pre-approved pool status was established by Division Order R-11363
- ii) Wantz-Abo (62700) & Wantz-Granite Wash (62730)
- iii) Wantz-Abo (6,537' – 7,114') & Wantz-Granite Wash (7,193' – 7,425')
- iv) Wantz-Abo (95% gas & 33% oil) & Wantz-Granite Wash (5% gas & 67% oil). Supported from tests prior to temporary abandonment.
- v) The proposed commingling will not reduce the value of the total remaining production
- vi) The ownership and percentages are identical for the zones

**DHC Procedure
Lou Worthan Well No. 20
2,310' FNL & 1,850' FWL, Unit F
Section 11, T-22-S, R-37-E
Lea County, New Mexico**

Date: 11/12/2003

WBS #s:

AFE Cost: \$15,000

WI: 100.0% **NRI:** 87.5%

Elevation: **GL:** 3,354' **KB:** 3,369' **PBTD:** 7,058'(RBP) **TD:** 7,565'

Purpose: Downhole commingle Lower ABO and Granite Wash w/ Upper Abo

Surface Casing: 8-5/8", 24#, K-55, LTC casing set at 1,208'. Cemented with 325 sks. Circulated cement to surface.

Production Casing: 5-1/2", 15.5# casing set at 7,558'. DV tool at 4,024'

Tubing: 212 jts 2-3/8" J-55 tbg, 5-1/2" TAC, 17 jts 2-3/8" J-55 tbg, 1 jt ICC tbg, SN, 16' mud anchor.

Rods & Pump: 77 – 7/8" Norris 97, 192 – 3/4" Norris 97 w/2" X 1-1/2" X 20' pump w/ 6' gas anchor

<u>Current Perforations:</u>	Upper Abo	6,537-44, 49-54, 56-58, 6,600-04, 14-22, 48-52, 66-71, 76-78, 88-96, 6,700-03, 30-34, 38-44, 48-52, 54-56, 58-68, 72-76, 91-94, 96-00 6,802-05, 24-32, 46-50, 56-64, 68-72, 80-84, 86-90 6,944-46, 52-56, 64-71, 76-84, 90-92 7,020-22, 28-31 (2 spf)
-------------------------------------	------------------	--

TA Perforations (RBP): Lower Abo 7,066, 76, 81, 89, 95, 99, 7,104, 09, 14 (2 spf)

Granite Wash 7,193, 7,232, 43, 72, 79, 86, 93
7,300, 10, 30, 34, 41 47, 56, 61, 65, 72, 78, 86
7,400, 18, 25 (2 spf)

Special Considerations: Use limited amounts of 2% KCL for kill fluid.
Verify current tbg & rod tally w/Hobbs office prior to RU.
Lowering tbg will require additional ~ 400' of tbg & rods

Procedure:

1. Inspect surface location and improve if necessary. Test safety anchors to 22,500#.
2. SD pumping unit the evening prior to RU. Flow well to production facilities overnight.
3. MIRU WOR. Kill well w/limited amounts of 2% KCl.
4. Disconnect surface equipment. Hang off pumping unit. LD polish rod. POOH w/rods & pump, hot water if necessary
5. ND wellhead. NU 3M BOPE. Release TAC and POOH w/2-3/8" tbg string. Visually inspect and replace as necessary.
6. TIH w/retrieving head for Watson TS RBP, bulldog bailer on 2-3/8" tbg. Work bailer to cleanout fill to RBP at 7,058'. Latch onto RBP and POOH. TIH w/ 2-3/8" tbg and tag PBTD (7,456'). POOHw/same.
7. TIH w/mud anchor, SN, 2-3/8" tbg, 5-1/2" TAC on 2-3/8" prodction tbg. Space out tubing w/SN ~7,400' and TAC at 6,450'.
8. ND BOPE and NU wellhead. TIH w/pump & rods. Space out pump. Hang well on. Connect surface equipment. RD WOR and MOL. Start pumping well to production facilities.

XC: R. S. Bose
W. H. Arnett
B. D. Lockhart
Well File