

NSL

7/12/00

Mid-Continent Region  
Production United States

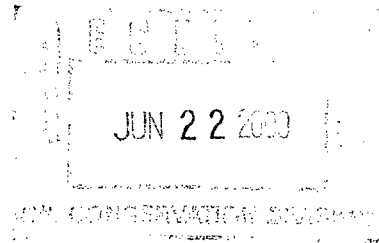


**Marathon  
Oil Company**

P.O. Box 552  
Midland, TX 79702-0552  
Telephone 915/682-1626

June 19, 2000

Mr. Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505



RE: Application for a Non-Standard Well Location  
Marshall "B" # 7  
2310' FSL & 330' FWL  
Sec. 27, T-21-S, R-37-E  
Lea County, New Mexico

Dear Mr. Stogner,

Marathon Oil Company respectfully requests authorization to re-complete the Marshall "B" # 7 well to the Tubb formation pool. Currently, the well is shut-in, as it is no longer economical to produce. Our plan for the Marshall "B" # 7 is to abandon the Abo formation and complete in the Tubb formation. This will hopefully result in capturing more net pay and in avoiding plugging and abandoning the well.

Pool Rules for the Tubb call for a well with more than 40 acres in the proration unit to be no nearer than 660' to the outer boundary of the unit, and no closer than 330' to any quarter/quarter section. Our well is located 330 feet from the outer boundary of the section. Marathon has one well, the Marshall "B" # 2 currently in the Tubb Formation on this 160 acre unit.

Re-completion to the Tubb Formation will affect four offset operators, each of which were sent waiver letters notifying them of our intent. Should you have any questions, please feel free to call me at 1-800-351-1417.

Respectfully,

A handwritten signature in cursive script, appearing to read 'Jerry Fletcher'.

Jerry Fletcher  
Marathon Oil Company

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised October 18, 1994

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
811 S. 1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-025-06822</b>	<sup>2</sup> Pool Code <b>86440</b>	<sup>3</sup> Pool Name <b>Tubb</b>
<sup>4</sup> Property Code <b>6428</b>	<sup>5</sup> Property Name <b>Marshall "B"</b>	<sup>6</sup> Well Number <b># 7</b>
<sup>7</sup> OGRID No. <b>14021</b>	<sup>8</sup> Operator Name <b>Marathon Oil Company</b>	<sup>9</sup> Elevation <b>G.L. 3420'</b>

<sup>10</sup> Surface Location									
UL or lot no. <b>"L"</b>	Section <b>27</b>	Township <b>21-S</b>	Range <b>37-E</b>	Lot. Idn	Feet from the <b>2310'</b>	North/South Line <b>South</b>	Feet from the <b>330'</b>	East/West line <b>West</b>	County <b>Lea</b>

<sup>11</sup> 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
<sup>12</sup> Dedicated Acres <b>160</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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

					<sup>17</sup> OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>   Signature <b>Jerry Fletcher</b> Printed Name <b>Engineer Tech.</b> Title <b>6-19-00</b> Date
					<sup>18</sup> SURVEYOR CERTIFICATION <i>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 belief.</i>  <b>n/a</b> Date of Survey Signature and Seal of Professional Surveyer:
					Certificate Number

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
811 S. 1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-101  
Revised October 18, 1994

Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator name and Address <b>Marathon Oil Company</b> <b>P.O. Box 552</b> <b>Midland Tx. 79701</b>		<sup>2</sup> OGRID Number <b>14021</b>
		<sup>3</sup> API Number <b>30-0 025-06822</b>
<sup>4</sup> Property Code <b>6428</b>	<sup>5</sup> Property Name <b>Marshall "B"</b>	<sup>6</sup> Well No. <b># 7</b>

<sup>7</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
"L"	27	21-S	37-E		2310'	South	330'	West	Lea

<sup>8</sup> 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
<sup>9</sup> Proposed Pool 1 <b>Tubb</b>					<sup>10</sup> Proposed Pool 2				

<sup>11</sup> Work Type Code <b>P</b>	<sup>12</sup> Well Type Code <b>G</b>	<sup>13</sup> Cable/Rotary <b>N/A</b>	<sup>14</sup> Lease Type Code <b>F</b>	<sup>15</sup> Ground Level Elevation <b>3420'</b>
<sup>16</sup> Multiple <b>N</b>	<sup>17</sup> Proposed Depth <b>6700' PBTD</b>	<sup>18</sup> Formation <b>Tubb</b>	<sup>19</sup> Contractor <b>no</b>	<sup>20</sup> Spud Date <b>no</b>

<sup>21</sup> Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
Surface	13-3/8"	48#	298'	250	Surface
Intermediate	8-5/8"	32#	2798'	1400	200' From Surface
Production	5-1/2"	17#	7574'	1800	2400' From Surface

<sup>22</sup> 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

Propose to abandon ABO perfs and re-complete in the Tubb Formation.  
Set CIBP @ 6700', Perforate Tubb and stimulate same per attached procedure.

This will be a non-standard location due to the proximity of the SHL to the outer boundary of the proration unit and the distance to the quarter/quarter section.  
All offset operators have been notified in writing of the encroachment as of 6-8-00.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name: **Jerry Fletcher**

Title: **Engineer Tech.**

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

# Workover Procedure

## Marshall "B" No. 7

2310' FSL, 330' FWL  
Section 27, T21S & R37E, U/L "L"  
Drinkard Field, Lea County, New Mexico

**AFE NO.:** 303000

**Date:** May 24, 2000

**Purpose:** Isolate the ABO, and re-complete well in the Tubb formation.

**Elevation:** **KB:** 3431' **PBTD:** 7416' – CIBP @ 7559' over open-hole 7574'-7774',  
and CIBP @ 7430' over perms 7480'-7518'  
**GL:** 3420' **TD:** 7774'

**Estimated Cost:**

**Estimated Re-completion Duration:**

**WI:** 100% **NRI:** 87.5%

**Surface Casing:** 13-3/8", 48#, H-40, 8<sup>rd</sup> ST&C, casing set to 298'. Cemented w/ 250 sx. Regular (Trinity) cement. Circulated cement to surface.

**Intermediate Casing:** 8-5/8", 32#, J-55, 8<sup>rd</sup> LT&C, casing set to 2798'. Cemented w/ 1200sx. Regular (El Toro) cement (800 sx. of 3% HOWCO gel). Circulated cement to within 200' of surface.

**Production Casing:** 5-1/2", 17#, J-55, 8<sup>rd</sup> LT&C, seamless casing set to 7574'. Cemented w/ 1000sx. Regular (Atlas) cement (800 sx. of 5% HOWCO gel). Circulated cement to within 2400' of surface.  
ID = 4.892" Drift = 4.767" Burst = (80% = 4256 psi)

**Production Tubing:** 2-3/8", 4.7#, J-55 tubing with a tubing anchor, SN, and mud joint.

**Rod String / Pump:** 3/4" and 7/8" Norris "97" rods with a 1-1/4" insert pump.

**Perforations:** Abandoned (Ellenburger) – 7574'-7774' Open-hole

Abandoned (Ellenburger) – 7480', 7484', 7486', 7491', 7494', 7498', 7502', 7508', 7510', 7513', 7518', w/ 1 JSPF.

Existing (Wantz Abo) – 7153', 7161', 7170', 7175', 7181', 7189', 7202', 7214', 7218', 7223', 7227', 7230', 7237', 7240', 7245', 7148', 7257', w/ 1 JSPF on 12/74.

Existing (Wantz Abo) – 6746', 6756', 6759', 6771', 6782', 6789', 6798', 6812', 6914', 6926', 6994', 7005', 7036', 7064', 7078', 7094', 7120', 7262', 7268', 7282', 7314', 7322', 7332', 7348', 7354', 7372', 7378', w/ 1 JSPF on 9/86.

**Latest Test:** 11/07/97 – 0.2 BOPD, 20 MCFPD, and 0.4 BWPD. Well is TA'<sup>D</sup>.

**Estimated Bottom Hole Pressure:** Tubb ~ 1000 psi

**Safety:** Run sufficient amount of killstring during any extended shut-in period.  
Install H<sub>2</sub>S monitoring alarm and rescue equipment.  
2-7/8", 6.5#, L-80 tubing – (80% Burst = 8456 psi)

### PROCEDURE:

1. Notify Hobbs personnel of impending workover. Test safety anchors on location to 22,500# if necessary.
2. MIRUPU. Disconnect surface equipment.
3. Hang off pumping unit. Lay down polish rod. POOH with 7/8" rods, 3/4" rods, and 1-1/4" insert pump.

4. ND wellhead. NU 7 1/16" 3M hydraulic BOP stack w/ 2-3/8" pipe rams on top and blind rams on bottom.
5. Release TAC. POOH with 2-3/8" production tubing.
6. Change pipe rams on BOPE to 2-7/8".
7. PU and RIH with 2-7/8", L-80 workstring and set a tension set BP at  $\pm 100'$ . Pressure test pipe rams to 1,000 psi. POOH with tubing and setting tool. Pressure test blind rams to 1,000 psi. RIH with BP retrieving tool, latch onto BP, and release. POOH with BP.
8. PU and RIH with a 5-1/2" CIBP on 2-7/8" workstring. Set CIBP at  $\pm 6,700'$ . Pressure test CIBP to 1,500 psi. Circulate hole clean with 2% KCL water. Pickle tubing string with 750 gals. of 15% HCL acid at 1 BPM. Reverse circulate acid out with 2% KCL water. Spot 250 gal. of Double Inhibited Carbonate Completion Acid across perforations at 6,080'-6,256'. POOH with workstring.
9. RU electric line company and lubricator. Pressure test lubricator to 1,000 psi. RIH with a 4" slick gun. Gamma gun correlate on depth with Schlumberger OH log dated 11/26/74. Perforate Tubb formation top down with 2 JSPF, and 120 degree phasing at 6,080'-6,154', 6,180'-6,200', 6,204'-6,224', and 6,236'-6,256' (272 holes). RD electric line company and lubricator.
10. RIH with a 5-1/2" treating packer on 2-7/8", L-80 production tubing. Hydrotest tubing while running in hole to 7000#. Set packer at  $\pm 6,020'$ .
11. RU acid company. Acidize Tubb formation perforations with 13,500 gals. of 15% Carbonate Completion Acid. Pump treatment at 5-7 bpm, dropping 400 – 1.3 SG ballsealers (anticipated WHTP –3,000 psi). Flush to bottom perforation with 2% KCL water. RD acid company.
12. RU swab equipment. Swab test perforations. Notify Midland Engineering Department with results. RD swab equipment.
13. Release packer, and POOH laying down packer and workstring. Change out pipe rams from 2-7/8" to 2-3/8", and re-test to 1000 psi.
14. RIH with mud joint, perf sub, seating nipple, and TAC on 2-3/8" J-55 production tubing. Space out tubing, and set TAC.
15. ND BOPE. NU wellhead. RIH with rod string and 1-1/4" insert pump. Space out plunger and hang well on.
16. Reconnect surface equipment. Start well pumping to test, and monitor production and fluid levels.
17. RDMOPU.

Xc: D. Nordt  
D. Arnst  
M. Wiskofske  
J. Lazzari  
T. Kacir  
B. Longmire  
J. Chapman

Well File



MARATHON OIL COMPANY  
MID-CONTINENT REGION  
MIDLAND OPERATIONS NORTHWEST NEW MEXICO

FIELD: Drinkard  
LEASE: W. S. Marshall "B"  
COUNTY: Lea

BY: J. Lazzari  
WELL: # 7  
STATE: New Mexico

Current Date: 24/05/00  
Spud Date: 02/04/50  
Comp. Date: 04/04/50

LOCATION: 2310' FSL & 330' FWL, Sec. 27, T21S, R37E

GL: 3420'  
KB: 3431'

TD: 7774'  
PBTD: 7416'

- CIBP@7559' over open-hole  
section 7574'-7774'  
- CIBP@7430' over perf'd  
section 7480'-7518'

Set @ 298'

Surface Csg: 13-3/8", 48#, H-40, 8<sup>rd</sup> ST+C  
Cmt'd w/ 250 sx. Reg. (Trinity) cement.  
Circulated cement to surface.

Set @ 2798'

Intermediate Csg: 8-5/8", 32#, J-55, 8<sup>rd</sup>, LT+C  
Cmt'd w/1200 sx. Reg. (El Toro) cement (800 sx. of 3% HOWCO gel).  
Circulated cement to within 200' of surface.

Production Tubing: 2-3/8", 4.7#, J-55 w/ tbg. Anchor, SN, & mud jt.  
Rod String/Pump: 3/4" and 7/8" Norris "97" rods w/ a 1-1/4" insert pump.

6746' - 7378' Wantz Abo (see below)

CIBP @ 7430'

7480', 7484', 7486', 7491', 7494', 7498', 7502', 7508', 7510', 7513',  
7518', w/ 1 JSPF. Ellenburger

CIBP @ 7559'

Set @ 7574'

Production Csg: 5-1/2", 17#, J-55, 8<sup>rd</sup>, LT+C, Seamless  
Cmt'd w/1000 sx. (Atlas) cement (800 sx. of 5% HOWCO gel).  
Circulated cement to within 2400' of surface.

7574'-7774' Ellenburger Open-hole Completion

(9/86) TD: 7774'  
PBTD: 7416'

#### History

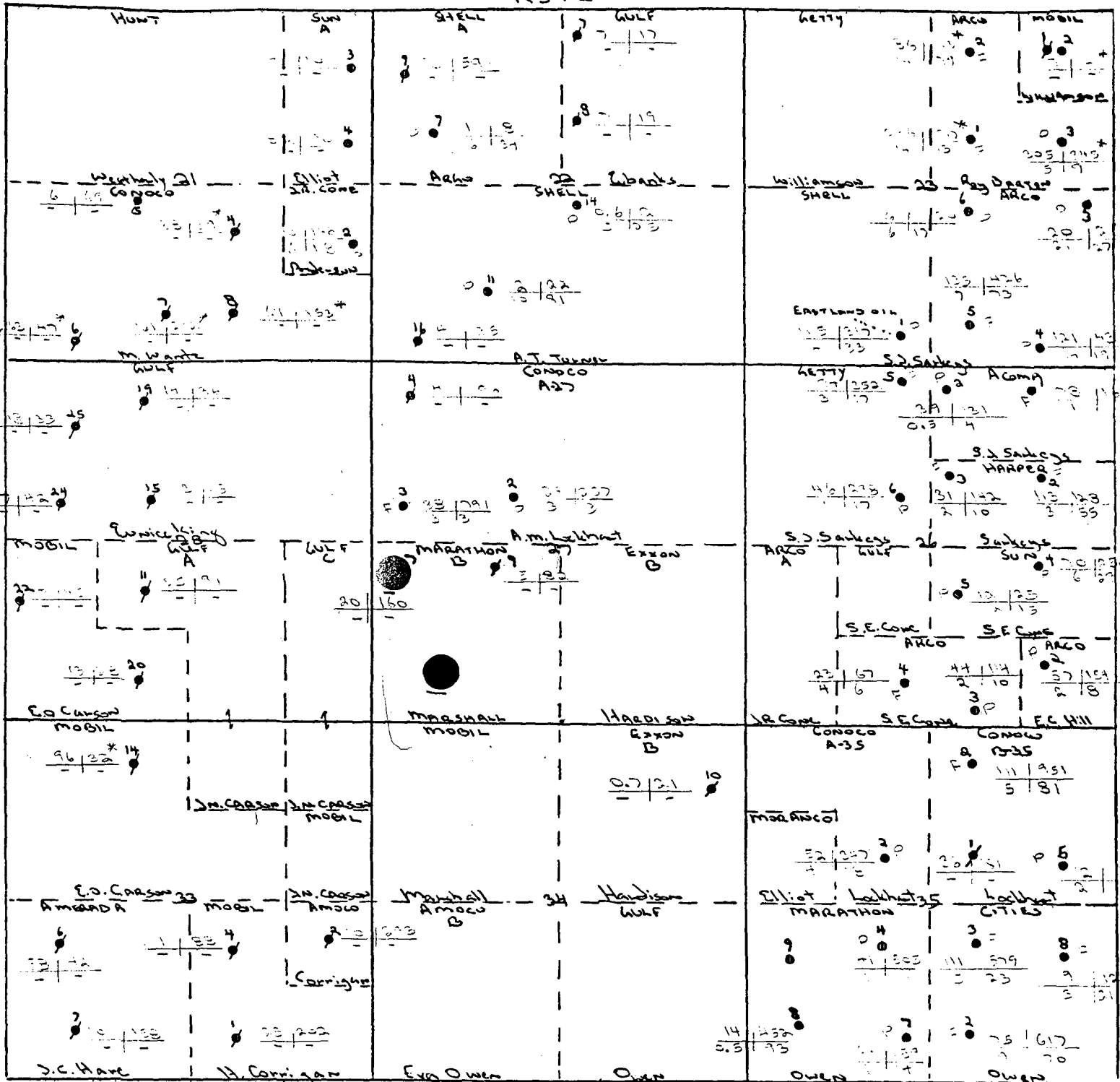
April 1950 Production commenced from Ellenburger open-hole 7574'-7774'.

Nov 1958 Acidized open-hole Ellenburger 7574'-7774' w/ 3000 gal. XLST acid w/ 30 gal. NOCOR 802 added.  
SD press. 900#, Max. press. 1500#, & AIR 4 BPM.

Nov 1974 - Jan 1975 Set CIBP @ 7559' w/ 11' cement. Perf'd Ellenburger 7480', 7484', 7486', 7491', 7494', 7498', 7502', 7508', 7510',  
7513', 7518', w/ 1 JSPF. Acidized perfs w/ 5000 gals. Mod-202, 15% HCL w/ 5.2% acetic acid &  
3# FR-20/1000 gals. acid. Max. 4800#, Min. 2400#, & AIR 6 BPM. Set CIBP @ 7430' w/ 10' cement.  
Perf'd Abo 7153', 61', 70', 75', 81', 89', 7202', 14', 18', 23', 27', 30', 37', 40', 45', 48', 7257', w/ 1 JSPF.  
Acidized Abo w/ 6000 gals. 20% HCL w/ 3 gals. G-10/1000 gals acid. & 30 BS's for divert. Max. 5500#,  
Min. 2800#, AIR 3 BPM, AIP 3500#, & ISIP 2800#.  
Treated Abo 7153'-7257' w/ 5000 gals. 2% KCL w/ 7.5 gals. J-4A emulsion breaker. Max. 3000#, Min. 2100#,  
AIR 3BPM, ISIP 1800#. Installed pumping equipment and turned to production.

Sep 1986 Perf'd Abo 6746', 56', 59', 71', 82', 89', 98', 6812', 6914', 26', 94', 7005', 36', 64', 78', 94', 7120', 7262', 68, 82',  
7314', 22', 32', 48', 54', 72', 7378' w/ 1 JSPF. Acidized Abo 7153'-7378' w/ 2000 gals. 15% HCL and 40 BS's for  
divert. Zone communicated w/ 900 gals. of acid in form. Balled out of 2000 gals. in form. Max. 4500#, Min. 600#,  
AIR 3 BPM, ISIP 500#. Acidized Abo 6746'-7378' w/ 2000 gals. 15% HCL and 64 BS's for divert. Balled out w/  
1250 gals. in form. Max. 5000#, Min. 1000#, AIR 3 BPM, ISIP 2200#.  
Acid Frac'd Abo 6746'-7378' w/ 17,000 gals. of Pure Gel 30 w/ 600# mesh sand & 15,000 gals. of 28 % HCL in  
3 stages. 30 BS's for divert. 300# increase from 1st set of balls, and 200# increase from 2nd set of balls.  
Max. 4040#, Min. 1920#, AIR 10 BPM, & ISIP 2400#.

R37E



WANT 2 ABO

PRODUCTION MAP

MBO MMCF (41-86)  
BOPD MCFD (12-85)

\* Gas Cumulative since 1-1-59

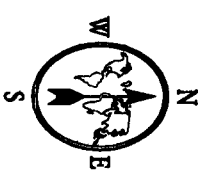
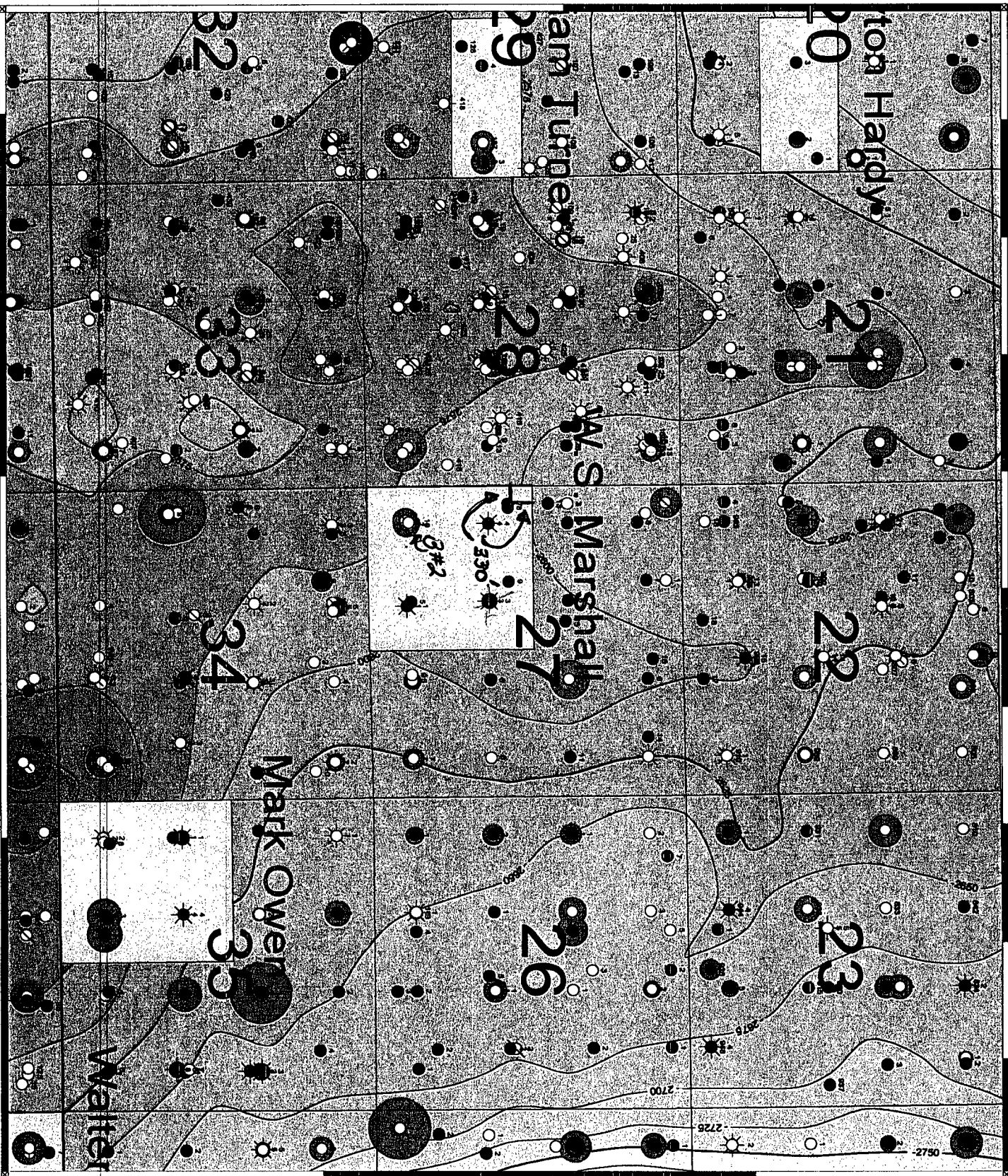
1" = 2000'



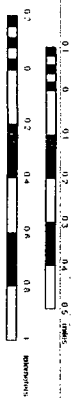
PROPOSED WORKOVER



1987 BUDGET WELL



Marathon Oil Company		
DRINKARD AREA		
Top Subsea of the Tubb Formation		
Cumulative Tubb Oil and Water Production		
S.F. Nihan		5/18/2000
	Scale 1:27500	



Scale 1:27500.



CMD :  
OG6IWCM

ONGARD  
INQUIRE WELL COMPLETIONS

07/17/00 09:52:40  
OGOMES -TQDZ

API Well No : 30 25 6819 Eff Date : 03-28-1994 WC Status : A  
Pool Idn : 60240 TUBB OIL AND GAS (OIL)  
OGRID Idn : 14021 MARATHON OIL CO  
Prop Idn : 6428 MARSHALL B

Well No : 002  
GL Elevation: 3431

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
	---	---	-----	-----	-----	-----	-----
B.H. Locn : M	27	21S	37E	FTG	600 F S	FTG 660 F W	A
Lot Identifier:							
Dedicated Acre: 160.00							
Lease Type : P							
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :							

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07	PF08	PF09	PF10 NEXT-WC	PF11 HISTORY	PF12 NXTREC

*Tubb Gas  
160-acre  
Spacing*

CMD :  
OG6IWC

ONGARD  
INQUIRE WELL COMPLETIONS

07/17/00 09:52:16  
OGOMES -TQDZ

API Well No : 30 25 6820 Eff Date : 05-21-1992 WC Status : P  
Pool Idn : 60240 TUBB OIL AND GAS (OIL)  
OGRID Idn : 14021 MARATHON OIL CO  
Prop Idn : 6428 MARSHALL B

Well No : 003  
GL Elevation: 3410

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
	---	---	-----	-----	-----	-----	-----
B.H. Locn : K	27	21S	37E	FTG 1980 F S	FTG 1980 F W		P
Lot Identifier:							
Dedicated Acre:							
Lease Type : P							
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :							

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07	PF08	PF09	PF10 NEXT-WC	PF11 HISTORY	PF12 NXTREC

*Tubb Titled  
1992*

CMD :  
OG5SECTONGARD  
INQUIRE LAND BY SECTION07/17/00 09:49:09  
OGOMES -TQDZ  
PAGE NO: 1

Sec : 27 Twp : 21S Rng : 37E Section Type : NORMAL

D 40.00  Federal owned  A A	C 40.00  Federal owned  A A	B 40.00  Federal owned  A A	A 40.00  Federal owned  A A
E 40.00  Federal owned  A A A	F 40.00  Federal owned  A A	G 40.00  Federal owned  A	H 40.00  Federal owned  A

PF01 HELP  
PF07 BKWDPF02  
PF08 FWDPF03 EXIT  
PF09 PRINTPF04 GoTo  
PF10 SDIVPF05  
PF11PF06  
PF12

CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

07/17/00 09:49:36  
OGOMES -TQDZ  
PAGE NO: 2

Sec : 27 Twp : 21S Rng : 37E Section Type : NORMAL

L 40.00	K 40.00	J 40.00	I 40.00
Fee owned	Fee owned	Fee owned	Fee owned
A A A	A A	A	A
M 40.00	N 40.00	O 40.00	P 40.00
Fee owned	Fee owned	Fee owned	Fee owned
A A A	A A	A	A

PF01 HELP  
PF07 BKWD

PF02  
PF08 FWD

PF03 EXIT  
PF09 PRINT

PF04 GoTo  
PF10 SDIV

PF05  
PF11

PF06  
PF12

CMD : ONGARD 07/17/00 09:52:04  
OG6IWCM INQUIRE WELL COMPLETIONS OGOMES -TQDZ

API Well No : 30 25 6822 Eff Date : 01-01-1975 WC Status : A  
Pool Idn : 62700 WANTZ;ABO  
OGRID Idn : 14021 MARATHON OIL CO  
Prop Idn : 6428 MARSHALL B

Well No : 007  
GL Elevation: 3420

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
	---	---	-----	-----	-----	-----	-----
B.H. Locn : L	27	21S	37E	FTG 2310	F S FTG 330	F W	A

Lot Identifier:  
Dedicated Acre: 40.00  
Lease Type : P  
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

E6317: No more recs. for this api well no.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06  
PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC