

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER ☐

SINGLE ☐

MULTIPLE ☐

2. NAME OF OPERATOR

Manzano Oil Corporation

APR 21 1993

505/623-1996

3. ADDRESS AND TELEPHONE NO.

P. O. Box 2107

DIST. SWIN. NM 88202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

660' FNL & 1650'

FBI, New Mex

At proposed prod. zone

Same

Unit B

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 miles NW of Eunice. NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest orig. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED

TO THIS WELL 40

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

2721'

19. PROPOSED DEPTH

12,400'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DP, RT, GL, etc.)

3662.1' GL

22. APPROX. DATE WORK WILL START

May 24, 1993

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8" J-55	54.5#	400'	Circ. 400 sx "C"
11"	8 5/8" J-55	24 & 32#	4,000'	Circ 1500 sx lite - 300
7 7/8"	5 1/2" J-55 LN-80	17 & 20#	12,400'	425 sx "C" to above 539 W/L

Mud Program:

	Mud Wt.	Vis.	W/L Control
0' - 400': Fresh water Gel/lime:	8.5- 8.8 ppg	32 - 34	No W/L contr
400' - 4,000': Cut brine mud w/starch:	10.0-10.1 ppg	28 - 29	No W/L contr
4,000' - 8,000': Fresh Water:	8.4- 8.6 ppg	28 - 29	No W/L contr
8,000' - 11,000': Cut Brine (50-90k):	9.5-10.0 ppg	28 - 29	No W/L contr
11,000' - TD : Cut Brine (90-100k):	9.9-10.2 ppg	33 - 35	W/L control

BOP Program:

An 11" 5000 psi wp Shaffer Type "LWS" BOP will be installed on the 8 5/8" casing. Casing and BOP will be tested before drilling out with 7 7/8". BOP will be used as 3000 psi wp system and will be tested daily.

GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill deepens directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

31.

Agent for:

SIGNED

TITLE

Manzano Oil Corp

DATE April 20 19

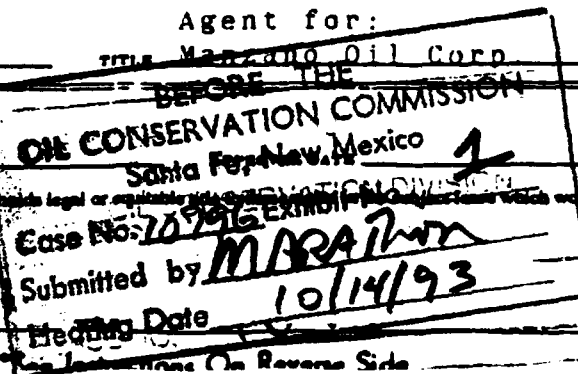
(This space for Federal or State office use)

PERMIT NO.

Application approval does not warrant or certify that the applicant is legal or eligible to conduct operations which would entitle the applicant to conduct operations the CONDITIONS OF APPROVAL, IF ANY:

10010 SGD (10/1/90)

APPROVED BY



DATE

5/7/93

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

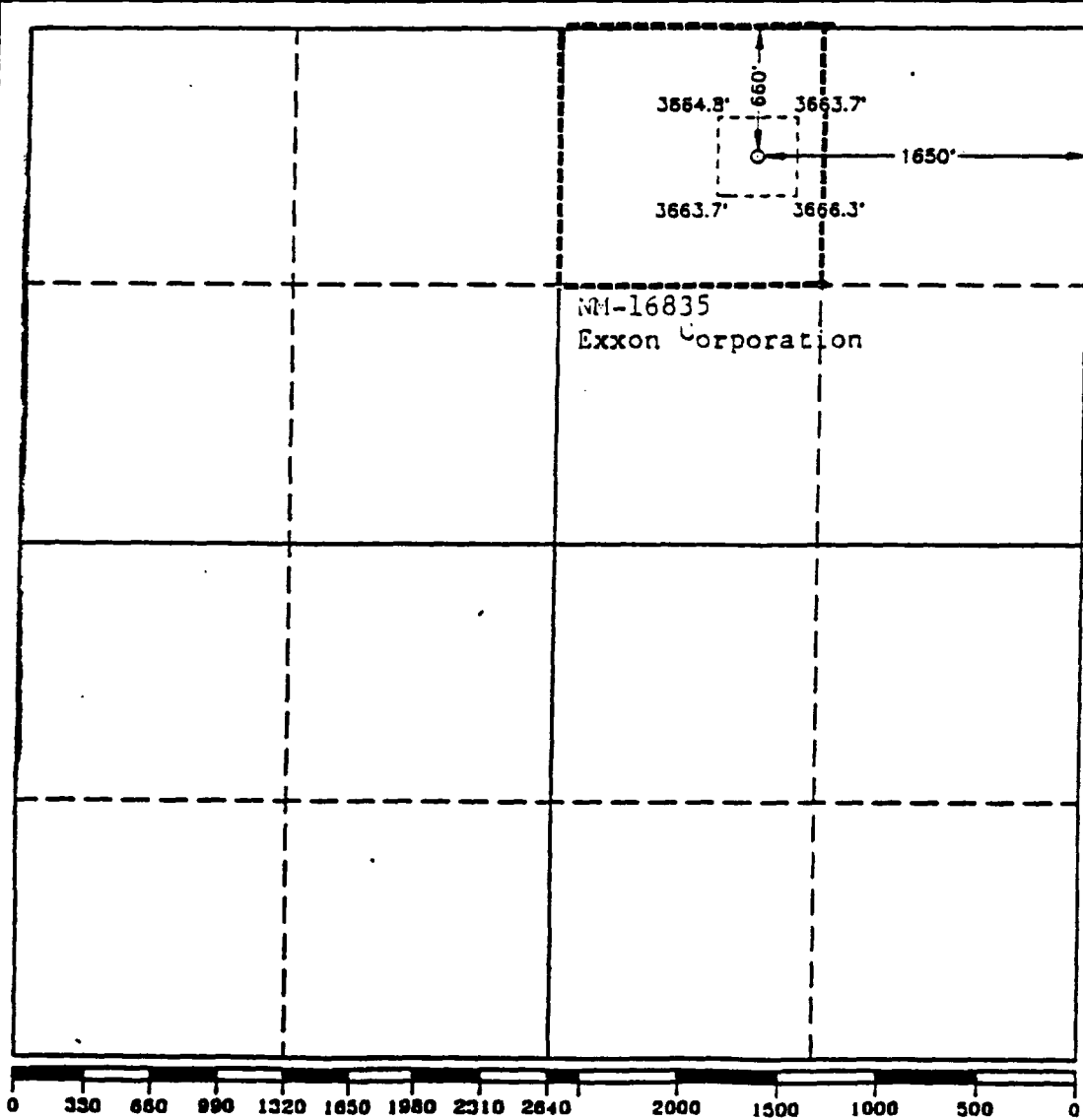
2000 Rio Grande Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator MANZANO OIL CORPORATION			Lease NEUHAUS "14" FEDERAL		Well No. 2
Unit Letter B	Section 14	Township 20 SOUTH	Range 35 EAST	NMPN	County LEA
Actual Footage Location of Well: 660 feet from the NORTH line and 1650 feet from the EAST line					
Ground Level Elev. 3662.1'		Producing Formation Strawn		Pool Wildcat	Dedicated Acreage: 40 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.)
No allowable will be assigned to the well unit all interests have been consolidated (by communization, unitization, forced-pooling otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature
George R. Smith
Printed Name
George R. Smith
Position
Agent for:
Company
Manzano Oil Corporation
Date
April 20, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes, actual surveys made by me or under my supervision and that the same is true or correct to the best of my knowledge and belief.

Date Surveyed
MARCH 24, 1993
Signature & Seal of
Professional Surveyor
DAVID L. JONES
Certificate No. **67**
DAVID L. JONES
NEW MEXICO
1974
ROBERT L. JONES
322
797

93-11-0467

APPLICATION FOR DRILLING

MANZANO OIL CORPORATION
 Neuhaus "14" Federal. Well No. 2
 660' FNL & 1650' FEL. Sec. 14-T20S-R35E
 Lea County, New Mexico
 Lease No.: NM-16835
 (Exploratory Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Manzano Oil Corporation submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Rustler	2035'	Bone Spring	8070'
Base/Salt	3600'	Wolfcamp	11.150'
Yates	3735'	Wolfcamp Pay	11.300'
Queen	4700'	Strawn	12.000'
San Andres	5160'	T.D.	12.100'
Delaware	6055'		
3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 350'.

Oil: Possible in the Yates, San Andres, Wolfcamp and Strawn.

Gas: None expected
4. Proposed Casing Program: See Form 3160-3.
5. Proposed Control Equipment: See Form 3160-3 and Exhibit "E".
6. Mud Program: See Form 3160-3.
7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.
8. Testing, Logging, and Coring Program:

Drill Stem Tests: Possible in the Strawn and Wolfcamp.

Logging: Gamma Ray:	Surf. Csg. to T.D.
CNL-LDT, DLL-MFL	Below 8 5/8" to T.D.
Coring: None planned.	
9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated BHP = 5400 psi (Exc. Hole), Temp. = 150°.
- 9a. H₂S: None expected, based on wells drilled in the area.
10. Anticipated starting date: May 20, 1993.
 Anticipated completion of drilling operations: Approximately 6 weeks.

DISTRICT II
P.O. Drawer DD, Alameda, NM 88210DISTRICT III
1000 Rio Union Rd., Alamosa, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

REQUEST FOR ALLOWABLE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

I. Operator Manzano Oil Corporation		Well API No. 30-025-31970
Address P.O. Box 2107, Roswell, NM 88202-2107		
Reason(s) for Filing (Check proper box) ☐ Other (Please explain)		
New Well ☒	Change in Transporter of: Oil ☐ Dry Gas ☒ Casinghead Gas ☐ Condensate ☐	
Recompletion ☐		
Change in Operator ☐		
If change of operator give name and address of previous operator _____		
THIS WELL HAS BEEN PLACED IN THE POOL DESIGNATED BELOW, IF YOU DO NOT CONCUR, PLEASE STATE OFFICE _____		
Lease Name Neulhaus "14" Federal	Well No. 2	Pool Name, including Formation Wildcat
Kind of Lease 5000' Federal #11111	Lease No. 111-16835	
Location Unit Letter <u>B</u> <u>660</u> Feet From The <u>North</u> Line and <u>1650</u> Feet From The <u>East</u> Line Section <u>14</u> Township <u>20 South</u> Range <u>35 East</u> <u>NM</u> <u>Lea</u> County		

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil ☐ or Condensate ☒ Koch Oil Company	Address (Give address to which approved copy of this form is to be sent) P.O. Box 2256, Wichita, KS 67201	
Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☒ GPM Gas Services Company	Address (Give address to which approved copy of this form is to be sent) 4044 Penbrook, Odessa, TX 79762	
If well produces oil or liquids, give location of tanks.	Unit B	Sec. 14
	Twp. 20S	Rge. 35E
Is gas actually connected?	When? Yes July 15, 1993	

If this production is commingled with that from any other lease or pool, give commingling order number: _____

IV. COMPLETION DATA

Designate Type of Completion - (X) Oil Well ☐ Gas Well ☒	New Well ☒ Workover ☐ Deepen ☐ Plug Back ☐ Stave Hole ☐ Jaff Hole ☐		
Date Spudded 6/3/93	Date Compl. Ready to Prod. 7/14/93	Total Depth 11606' KB	P.B.T.D. 11574'
Electronics (DF, AKB, RT, CR, etc.) 3662' GL	Name of Producing Formation Wolfcamp	Top Oil/Gas Pay 11354' KB	Tubing Depth 11298'
Perforations 11362-366 & 380-386' @ 4 spf, 11390-406, 416-420 & 424-444' @ 2 spf		Depth Casing Shoe 11606' KB	
TUBING, CASING AND CEMENTING RECORD			
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
17-1/2"	13-3/8"	400' KB	300 C1 C w/2% CaCl
11"	8-5/8"	3735' KB	1100 lite + 300 C1 C
7-7/8"	5-1/2"	11606' KB	375 sx C1 II
	2-7/8"	11298' KB	

V. TEST DATA AND REQUEST FOR ALLOWABLE

OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date From New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF

GAS WELL

Actual Prod. Test - MCF/D 6000	Length of Test 4 hrs	Bbls. Condensate/MCF No Measurement	Gravity of Condensate 60 d API
Tubing Method (pump, back pr.)	Tubing Pressure (Shut-in) 1600	Casing Pressure (Shut-in) Zero	Choke Size 3/4"

VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Atkinson-Raney
Signature
Atkinson Raney Engineering Technician
Printed Name
7/16/93 (505) 623-1996
Date Telephone No.

OIL CONSERVATION DIVISION

Date Approved _____

By _____

Title _____

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.

Submit to Appropriate
District Office
State Leases - 6 copies
For Leases - 5 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-101
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

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

DISTRICT III
1000 New Brands Rd, Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

API No. (assigned by OCS to New Mexico)
30-025-31883
5. Leasehold Type of Lease STATE ☒ FEE
6. State Oil & Gas Lease No.
V-3449

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL ☒ RE-ENTER ☐ DEEPEN ☐ PLUG BACK ☐
b. Type of Well: oil well ☒ gas well ☐ OTHER ☐
SINGLE ZONE ☐ MULTIPLE ZONE ☐
7. Leasehold of Well Registered in Name of
Sims State
8. Well No.
1
9. Field Name of Well
Wildcat
4. Well Location
Well Letter M : 660 Feet From The South Line and 330 Feet From The West Line
Section 12 Township 20 South Range 35 East NMPW Lea County

10. Proposed Depth
12,100'
11. Formation
Strawn
12. Industry or C.T.
Rotary
13. Estimation (Source whether DF, RT, GR, etc.)
3658' GL
14. Kind of Sealing Plug Bit
Single Well
15. Drilling Contractor
Zia Drill
16. Approval Date with Well No.
1/21/93

17. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST TOP
17-1/2"	13-3/8"	54.5#	400	400 sks	Circul
11"	8-5/8"	24 & 32#	4,000	1600 sks	Circul
7-7/8"	5-1/2"	17 & 20#	12,100	425 sks	Above Strawn

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE SHUT-IN PRESSURE PROGRAM, IF ANY.

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

SIGNATURE [Signature] TITLE Production Analyst DATE 1/21/93
TYPE OR PRINT NAME _____ TELEPHONE NO. _____

(This space for State Use)
APPROVED BY [Signature] TITLE DISTRICT 1 SUPERVISOR DATE JAN 22 1993
CONDITIONS OF APPROVAL, IF ANY:

Permit Expires 6 Months From Approval
Date Unless Drilling Underway.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

OIL CONSERVATION DIVISION
P.O. Box 2083
Santa Fe, New Mexico 87504-2083

00008

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

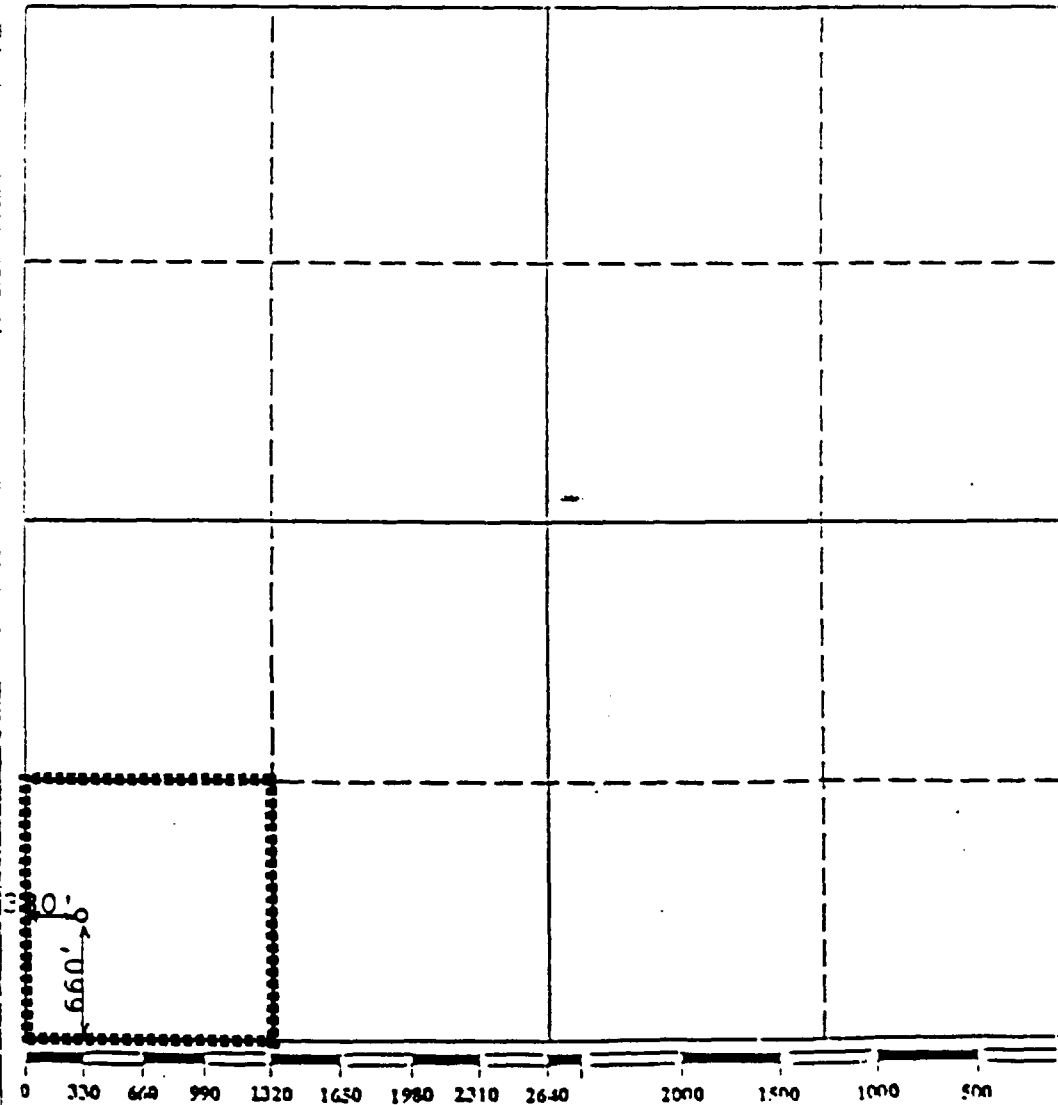
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Manzano Oil Corporation			Lease Sims State		Well No. 1
Unit Letter M	Section 12	Township 20 South	Range 35 East	County Lea	
Actual Footage Location of Well: 660 feet from the South line and 330 feet from the West line					
Ground level Elev. 3658	Producing Formation STRAWN		Pool Wildcat	Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest 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, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature
Printed Name
Donnie E. Brown
Position
VP Engineering
Company
Manzano Oil Corporation
Date
January 15, 1993

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 knowledge and belief.

Date Surveyed
January 14, 1993
Signature & Seal of Professional Surveyor

Certificate No. 8112
PROFESSIONAL LAND SURVEYOR



Sims State #1
Sec. 12, T20S, R35E
Lea County, NM

00007

ZIA DRILL RIG 3 9,000' - 15,000'

P.O. Box 1860 • Hobbs, New Mexico 88241 • 505/397-3511 • 800/922-3748

DRAWWORKS

Mid Continent U-712-A 1000 H.P.
Drum: 1 1/4" Labus grooved
Compound: 2-engine oil bath chain drive
Brake: Hydromatic Parkersburg 48" Double
Satellite Automatic Driller
Duo-O-Matic Crown Block Protector.
Tanco Weight Indicator

ENGINES

Two 610-H.P. D379TA Caterpillar Diesel.

DERRICK

Lee C. Moore, 131' 550,000 lb. rated capacity.

SUBSTRUCTURE

Lee C. Moore, 18' high 550,000 lb. rated capacity.

MUD PUMPS

Pump No. 1: Emaco DB700, 700-H.P. with steel fluid end.
4 1/4" - 7 1/4" liners, 18" stroke. Compound driven
Pump No. 2: Emaco DB500 powered by D379
Caterpillar Diesel.

DRILL STRING

5,500' 4 1/4" Grade E, 20-lb.
9,000' 4 1/4" Grade E, 16.60-lb.
Tool Joints: 4 1/4" XH, 8 1/4" OD.
Twenty-Seven drillcollars 8 1/4" OD, 2 1/4" ID.
Twenty-One 8" OD x 2 1/4" ID Drill Collars
Other sized drillpipe and drillcollars available.

BLOWOUT PREVENTERS

One Shaffer LWS hydraulic double 11" x 5,000 p.s.i. One
Shaffer 11" x 5,000 p.s.i. Choke manifold 4" x
5,000 p.s.i. flanged connections. Kookey Type 80, 8-station
accumulator closing unit with remote control.

MUD SYSTEM

Three 30' x 7 1/2' x 6' steel pits with 700-bbl capacity and
one 250-bbl slug pit. Complete low pressure circulating
system, consisting of four submerged mud guns and two
countersunk jets in each pit. System utilizes a 6 x 8
centrifugal pump, powered by diesel.

MUD HOSE

One 8' x 30' Steel Storage House.

COMMUNICATIONS

24-hour direct telephone interconnection through Hobbs
(505/393-1111) or 1-800/922-3748

OTHER EQUIPMENT

BLOCKS. Ideal 350 Ton

HOOK. Webb Wilson 350 Ton.

SWIVEL. Oilwell P-400 350 Ton

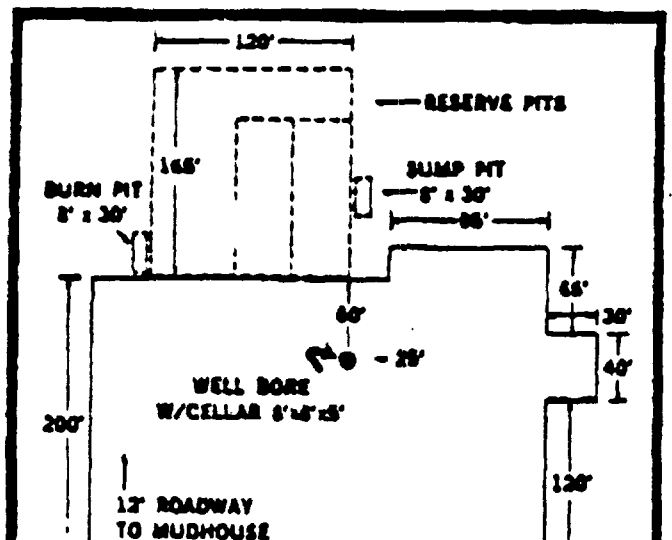
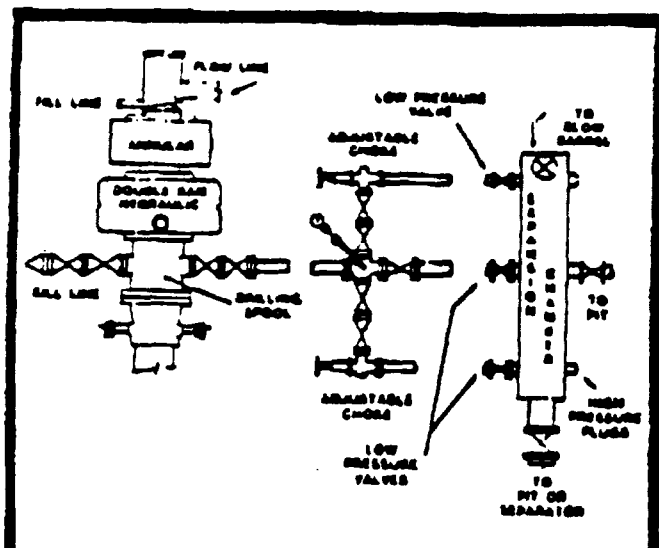
ROTARY TABLE. Oilwell 27 1/2"

SHALE SHAKER. Harrisburg Single Screen.

ELECTRICAL POWER. Two 155-kw AC Generators
powered by diesel engines. AC fluorescent or
mercury vapor lights. All vapor-proof.

FRESH WATER STORAGE. Two 500-bbl horizontal tanks.

HOUSING. One 10' x 44' refrigerated air-conditioned
house with sleeping and cooking facilities.



Submit to Appropriate
District Office
State Lease - 6 copies
Fed Lease - 5 copies
P.O. Box 1940, Hobbs, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-84

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

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

WELL API NO. 30-025-31883

2. Lease Type of Lease

STATE ☒ FE

6. State Oil & Gas Lease No.
V-3449

7. Lease Name of User Agreement Name

Sims State

8. Well No.

1

9. Pool name or Well

Wildcat

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐

2. Type of Completion: NEW WELL ☒ WORK OVER ☐ DESAND ☐ PLUG BACK ☐ DEEP ☐ OTHER ☐

3. Name of Operator
Manzano Oil Corporation

4. Address of Operator
P.O. Box 2107, Roswell, NM 88202-2107

5. Well Location

Unit Lease M: 660 Feet From The South Line and 330 Feet From The West

Section 12 Township 20 South Range 35 East NMPM Lea Co

10. Date Spudded 1/29/93 11. Date T.D. Reached 2/24/93 12. Date Comp. (Ready to Prod.) 4/2/93 13. Elevations (DF & AKS, RT, CR, etc.) 3658' GL 14. Elev. Completion 3659'

15. Total Depth 11,532' 16. Plug Back T.D. 5524' 17. If Multiple Comp. How Many Zones? 18. Intervals Downed By 0-11,532' 19. Casing Ties

19. Producing Interval(s), of this completion - Top, Bottom, Name
5277-5434' San Andres

20. Was Directional Survey Made
No

21. Type Electric and Other Logs Run
CBL/GR/CCL; CNL-Density; DLL/MLL/GR

22. Was Well Cased
No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT P.
13-3/8"	54.5#	100' KB	17-1/2"	100 sx CL C - 2% CaO	None
8-5/8"	32 & 24#	4025' KB	11"	1500 sx Lite - 300 sx CL C	None
4-1/2"	10.5#	5602' KB	7-7/8"	300 sx CL H	None

LINER RECORD				TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET
					2-3/8"	5425'

25. Perforation record (interval, size, and number)

5424-5434'; 5325-28'; 5344-62'; 5372-76';
5382-88'; 5296-5304'; 5277-83'
All intervals 1 spf

27. ACID, SHOT, FRACTURE CEMENT, SQUEEZE E

DEPTH INTERVAL AMOUNT AND KIND MATERIAL USE

5424-5434' Acidized w/2000 gal 20% -

5325-28, 5344-62' Acidized w/6000 gal 20% -

28. PRODUCTION All Other Perfs Acidized w/3000 gal 20%

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)					Well Status (Prod. or Shut-in)	
4/8/93		Pumping					Producing	
Date of Test	Hours Tested	Casing Size	Prods. For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl	Gas - Cu	
4/19/93	24			6	TSTM	29		
Flow Testing Press.	Casing Pressure	Produced Per Hour Rate	Oil - Bbl	Gas - MCF	Water - Bbl	Oil Gravity - API - (Corr.)		
10	10		6	TSTM	29			

29. Disposition of Gas (Sold, used for fuel, vented, etc.)
Vented

Test Witnessed By
Ronnie Carre

30. Log Annotations
CBL/GR/CCL; CNL-Density; DLL/MLL/GR

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Allison Raney

Printed
Name

Allison Raney

Title Engineering Tech Due 4/93

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-dri- or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all spec- tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, : vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STAT.

Southeastern New Mexico

Northwestern New Mexico

T. Anhy 2020	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Aboka	T. Picured Cliffs	T. Penn. "D"
T. Yates 3765	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefes	T. Madison
T. Queen 4940	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	T. Mancos	T. McCracken
T. San Andres 5133	T. Simpson	T. Gallup	T. Ignacio Otne
T. Glorieta	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinberry	T. Gr. Wash	T. Morrison	T.
T. Tubb	T. Delaware Sand	T. Todilto	T.
T. Drinkard	T. Bone Springs	T. Entrada	T.
T. Abo	T.	T. Wingate	T.
T. Wolfcamp 11,247	T.	T. Chinle	T.
T. Perm	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Perm "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1. from.....to.....	No. 3. from.....to.....
No. 2. from.....to.....	No. 4. from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1. from.....to.....feet
No. 2. from.....to.....feet
No. 3. from.....to.....feet

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology	From	To	Thickness in Feet	Lithology
Surf	2020	2020	Redbeds, Gravel, Shale				
2020	3765	1745	Anhydrite, Shale				
3765	4940	1175	Dolomite, Sand, Shale				
5133	6000	867	Dolomite, Shale, Limestone				
6000	8020	2020	Sand, Shale, Dolomite				
8020	9240	1220	Limestone, Shale, Sand				
9240	9510	270	Sand, Silt, Shale, Limestone				
9510	9968	458	Limestone, Shale, Dolomite				
9968	10350	382	Sand, Shale, Silt, Limestone				
10350	10982	632	Limestone, Shale, Chert				
10982	11247	265	Sand, Limestone, Dolomite				
11247	TD	235	Limestone, Shale, Chert, Dolomite				

RECEIVED
JAN 10 1943
OIL FIELD DIVISION

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

SOIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: <u>W. J. HARRIS</u>					Lease or Unit Name: <u>NEUNAUSE 14 FED.</u>				
Type Test: ☒ Initial ☐ Annual ☐ Special					Test Date: <u>7-25-93</u>		Well No.: <u>2</u>		
Completion Date: <u>7-14-93</u>		Total Depth: <u>11606</u>		Plug Back TD: <u>11566</u>		Elevation:		Uplift - Sec. - TWP - Rge. - <u>14-20-35-</u>	
Csg. Size: <u>5 1/2</u>	WC: <u>17*</u>	d: <u>11606</u>	Sec At: <u>11606</u>	Perforations: From: <u>11362</u> To: <u>11444</u>			Country:		
Tub. Size: <u>2 7/8</u>	WC: <u>6.7</u>	d: <u>11243</u>	Sec At: <u>11243</u>	Perforations: From: _____ To: _____			Fluid:		
Type Well - Single - Bradenhead - G.O. or G.O. Multiple <u>SINGLE</u>				Packer Set At: <u>11243</u>			Formation:		
Flowing Thrust: <u>705</u>		Reservoir Temp. °F: <u>188 (no 11403)</u>		Mean Annual Temp. °F: <u>60</u>		Baro. Press. - P.: <u>13.2</u>		Connection:	
L: <u>11403</u>	H: <u>11403</u>	G: <u>.734</u>	% CO ₂ : <u>2.12</u>	% N ₂ : <u>1.26</u>	% H ₂ S: _____	Prover:		Meter Run: <u>41.024</u>	Taps: <u>126</u>

FLOW DATA					TUBING DATA			CASING DATA		Duration of Flow
NO.	Inner Line Size	Orifice Size	Press. p.s.i.g.	Diff. h.	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
31						<u>1428</u>		<u>152</u>		<u>20</u>
1.	<u>4 X</u>	<u>1.500</u>	<u>260</u>	<u>2.00</u>	<u>108</u>	<u>1420</u>		"		<u>45"</u>
2.	<u>4 X</u>	<u>1.500</u>	<u>262</u>	<u>8.00</u>	<u>106</u>	<u>1416</u>		"		<u>45"</u>
3.	<u>4 X</u>	<u>1.500</u>	<u>253</u>	<u>30.00</u>	<u>83</u>	<u>1260</u>		"		<u>1 hr.</u>
4.	<u>4 X</u>	<u>1.600</u>	<u>275</u>	<u>52.00</u>	<u>55</u>	<u>1100</u>		"		<u>1 hr.</u>
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{d^5}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1.	<u>10.84</u>	<u>23.32</u>	<u>273.2</u>	<u>.9288</u>	<u>1.167</u>	<u>1.027</u>	<u>29.</u>
2.	<u>10.84</u>	<u>46.93</u>	<u>275.2</u>	<u>.9283</u>	<u>1.167</u>	<u>1.027</u>	<u>584</u>
3.	<u>10.84</u>	<u>89.36</u>	<u>266.2</u>	<u>.9213</u>	<u>1.167</u>	<u>1.030</u>	<u>1143</u>
4.	<u>10.84</u>	<u>128.59</u>	<u>252.2</u>	<u>.9268</u>	<u>1.167</u>	<u>1.032</u>	<u>1576</u>
5.							

NO.	P _i	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	<u>.40</u>	<u>568</u>	<u>1.43</u>	<u>.949</u>	<u>70.3</u>	<u>51.4 @ 60°</u>	<u>.734</u>	<u>XXXXXXX</u>	<u>672</u>	<u>553</u>
2.	<u>.40</u>	<u>566</u>	<u>1.43</u>	<u>.949</u>				<u>XXXXXX</u>	<u>673</u>	<u>549</u>
3.	<u>.39</u>	<u>540</u>	<u>1.36</u>	<u>.948</u>						
4.	<u>.42</u>	<u>545</u>	<u>1.37</u>	<u>.939</u>						
5.										

P_i = 1441.2 P_s = 2027.1

NO.	P _i	P _s	P _i ²	P _s ²	1) $\frac{P_i^2}{P_s^2 - P_i^2} =$	2) $\left[\frac{P_i^2}{P_s^2 - P_i^2} \right]^{.5} =$
1.	<u>1440.5</u>	<u>1432.5</u>	<u>2075.2</u>	<u>2053.2</u>	<u>83.42</u>	<u>9.093</u>
2.	<u>1438.5</u>	<u>1434.6</u>	<u>2069.7</u>	<u>2058.7</u>	<u>46.1</u>	<u>2.647</u>
3.	<u>1436.5</u>	<u>1436.7</u>	<u>2063.5</u>	<u>2063.5</u>	<u>43.70</u>	
4.	<u>1434.5</u>	<u>1438.8</u>	<u>2058.8</u>	<u>2070.3</u>		
5.						

Absolute Open Flow: <u>2.647</u>	Mcf/d @ 15.025	Angle of Slope θ: <u>68.5°</u>	Slope, n: <u>.499</u>
----------------------------------	----------------	--------------------------------	-----------------------

Remarks: RNP TEST SUMMIT - 2) W 7 1/2" 128 FT W
Flow = 1140.176 D 20 2... = 1.26 P 1/2 WELL M. 100' } 4.00 300 M 60
2.04 2000 Cal.



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

00011



BRUCE KING
GOVERNOR

July 21, 1993

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-3800

ANITA LOCKWOOD
CABINET SECRETARY

Manzano Oil Corporation
P. O. Box 2107
Roswell, New Mexico 88202-2107

Attention: Kenneth Barbe, Jr.

*Re: Manzano Oil Corporation
Newham "14" Federal No. 2
660' FNL and 1650' FEL
Section 14, T20S, R35E
Lea County, New Mexico*

Gentlemen:

Your request to produce the subject well is approved as a testing allowable. You can produce the well to gather data for your hearing scheduled for August 12, 1993 but not beyond that date until an order has been issued in the case. Be advised that the gas produced as a testing allowable may have to be made up as a result of the hearing order.

The testing allowable will be 882 Mcf/D which is 1/3 of the calculated Absolute Open Flow of 2647 Mcf/D. This gas must be produced to a pipeline and cannot be vented.

Prior to producing the well you must submit a new C-102 showing the dedicated acreage and producing formation and obtain an approved C-104 from the OCD Hobbs district office.

At the conclusion of the testing period, you must submit a report to my attention, detailing the gas produced during this testing period.

Sincerely,

William J. LeMay
Director

cc: Robert Unger, Marathon

Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

00012
Form C-122
Revised 4-1-

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Manzano Oil Company						Lease or Unit Name Neuhaas "14" Federal					
Type Test ☐ Initial ☐ Annual ☒ Special (Retest)						Test Date 8-3-93		Well No. 2			
Completion Date 7-14-93		Total Depth 11606		Plug Back TD 11566		Elevation 3662		Unit Ltr. - Sec. - TWP - Rge.			
Csg. Size 5 1/2		Wt. 17#		d 4.892"		Set At 11606 KB		Perforations: From: 11362 To: 11440 (OA)		County Lea	
Tbg. Size 2 7/8		Wt. 6.5		d 2.441"		Set At 11243		Perforations: From: To:		Pool	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple						Packer Set At 11243		Formation Wolfcamp			
Producing Thru Tubing		Reservoir Temp. °F 154 @ 11401		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		Connection			
L 11243		H 11243		G _g .710		% CO ₂ 2.18		% N ₂ 1.26		% H ₂ S	
Prover		Meter Run 4"		Taps Flange							
FLOW DATA						TUBING DATA		CASING DATA		Dens. of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _v	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							1424		Pkr		
1.	4.026 x 2.500			115.9	63.0	86.7	813	82	Pkr		1 ho
2.	4.026 x 2.500			124.1	68.6	85.5	755	85	Pkr		2 ho
3.	4.026 x 2.500			125.4	80.7	83.1	711	86	Pkr		1 ho
4.	4.026 x 2.500			128.4	80.7	78.6	688	83	Pkr		2 ho
5.											
RATE OF FLOW CALCULATIONS											
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_v P_a}$	Pressure P _a	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mc/d				
1.							3270				
2.	Gas rates measured by Applied Automation electronic gas total flow meter.						3636				
3.	Meter station #95899 (Phillips).						3865				
4.							3989				
5.											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 4.21 Mc/d						
1.	.19	546.7	1.41	.974	A.P. L Gravity of Liquid Hydrocarbons 53.6 @ 60°F						
2.	.20	545.5	1.40	.973	Specific Gravity Separator Gas 0.710 XXXXXXXXX						
3.	.21	543.1	1.40	.972	Specific Gravity Flowing Fluid XXXXX						
4.	.21	538.6	1.38	.972	Critical Pressure 675 P.S.I.A.						
5.					Critical Temperature 389 °R						
P _i 2055.2 P _w 4223.8											
NO.	P _i ²	P _w	P _w ²	P _i ² - P _w ²	1) $\frac{P_i^2}{P_i^2 - P_w^2} = 14.727$ (2) $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^2 = 8.834$						
1.	682.6	2000.2	4000.8	223.0	AOF = Q $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^2 = 35,240$						
2.	590.1	1993.2	3972.8	251.0							
3.	524.5	1989.2	3956.9	266.9							
4.	491.7	1984.2	3937.0	286.8							
5.											
Absolute Open Flow 35,240 Mc/d @ 15.025						Angle of Slope @ 51.0		Slope, s 0.810			
Remarks: Bottomhole pressures (P _r , P _s) were measured using Amerada RPG-3 Mechanical gauge											
Serial #50663. Pressures were measured at 11500' (KB) and adjusted to mid-perf depth 11401' (KB)											
Approved By Division				Conducted By: Tefteller, Inc.				Calculated By: M. Kent Williams			
								Checked By:			

44018



AOF : 35,240 MCFD
 θ : 51.0°
 n : 0.810

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNORANITA LOCKWOOD
CABINET SECRETARYPOST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-3800

August 13, 1993

Manzano Oil Corporation
P. O. Box 2107
Roswell, New Mexico 88202-2107

Attention: Kenneth Barbe, Jr.

Re: Manzano Oil Corporation
Newham "14" Federal No. 2
660' FNL and 1650' FEL
Section 14, T20S, R35E
Lea County, New Mexico

Gentlemen:

Your request to produce the subject well has been approved as a testing allowable by correspondence dated July 21, 1993. You were allowed to produce the well to gather data for your hearing originally scheduled for August 12, 1993 but rescheduled for August 19, 1993. You were advised that the gas produced as a testing allowable may have to be made up as a result of the hearing order.

The testing allowable was 882 Mcf/D which was 1/3 of the calculated Absolute Open Flow of 2647 Mcf/D. This gas was to be produced into a pipeline and not vented. At the time you submitted your original CAOF you indicated that there was a problem with this measurement because of fluid in the hole. We are in receipt of your new test indicating a CAOF of 35,240 MCFGPD. Effective today you may produce up to 1/3 of this amount being 11,740 MCFGPD for testing purposes only. All other provisions of my July 21, 1993 letter to you remain in effect.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. LeMay".

William J. LeMay, Director

WJL/si

cc: ✓ Robert Unger, Marathon



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

August 20, 1993

Manzano Oil Corporation
c/o Campbell, Carr, Berge
& Sheridan, P.A.
P.O. Box 2208
Santa Fe, New Mexico 87504-2208

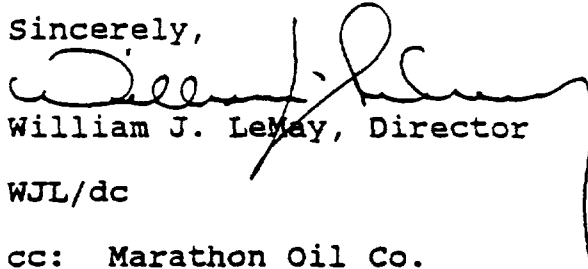
Attention: Mr. William F. Carr

Re: Neuhaus Federal Well No. 2
Section 14, T-20S, R-35E, NMPM

Dear Mr. Carr:

Please be advised that under the terms and conditions contained within my letter to Manzano Oil Corporation dated August 13, 1993, and, as directed by the Division Examiner at the conclusion of the hearing in Case No. 10796, the Neuhaus Federal Well No. 2 shall be shut-in until further notice of the Division, or until an order is issued approving the unorthodox well location.

Sincerely,


William J. Lemay, Director

WJL/dc

cc: Marathon Oil Co.
c/o W. Thomas Kellahin



Manzano Oil Corporation

P.O. Box 2107
Roswell, New Mexico 88202-2107
(505) 623-1996
FAX (505) 625-2620

August 20, 1993

State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Attn: Mr. Bill LeMay

Re: Neuhaus "14" Federal #2
Lea County, NM

Dear Mr. LeMay:

Enclosed is a detailed report of gas produced on the above referenced well as requested in your letter of July 21, 1993 and subsequent letter of August 13, 1993, whereby you stated that we submit a report to your attention detailing the gas produced during our testing period, which ended August 19, 1993, as stated in your letter.

With regards to condensate production, Manzano was also in compliance with the condensate allowable as authorized by Jerry Sexton on July 20, 1993 (see attached authorization). If you would like a detailed report of the condensate production, please do not hesitate to contact us.

If you have any questions or need anything further, please do not hesitate to give me a call. Thank you for your continued cooperation in this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ken Barbe".

Kenneth Barbe, Jr.

OIL CONSERVATION DIVISIO.

00017

Hobbs, New Mexico 88240

DISTRICT OFFICE

July Thru
December, 1993
NO. 1052L

SUPPLEMENT TO THE OIL PRORATION SCHEDULE

DATE: 07/20/93

PURPOSE: CONDENSATE ALLOWABLE

Effective 07/14/93, a condensate allowable of
6000 barrels per month is hereby assigned to the

MANZANO OIL CORP.,

NEUHAUS "14" FEDERAL, 2 - B, 14-20-35,

LEA UNDESIGNATED;WOLFCAMP (GAS) Pool.

July Total	6000 Barrels
August Total	6000 Barrels
September Total	6000 Barrels

OIL CONSERVATION DIVISION

Jerry Linton
DISTRICT SUPERVISOR *nm*

JS:nm

MANZANO OIL CORP.

KSV

GPM

DISTRIBUTION: WHITE-OPERATOR, GREEN-TRANSPORTER, CANARY-OCC SANTA FE, PINK-OFFICE COPY, GOLDENROO-EXTRA COPY

Production Test Data
 Neuhaus "14" Federal #2
 Section 14, T20S, R35E
 Lea County, New Mexico

<u>Date</u>	<u>Gas Prod</u> <u>MCF</u>	<u>Cum Gas</u> <u>Prod</u> <u>MCF</u>	<u>Cum</u> <u>Allowable</u> <u>882 MCFPD</u>	<u>Cum</u> <u>Allowable</u> <u>11,740 MCFPD</u>
Open 8:00 p.m. 7/24/93				
1993 July 25	3,178	3,178	882	
26	3,240	6,418	1,764	
27	3,178	9,596	2,646	
28	3,104	12,700	3,528	
29	3,120	15,820	4,410	
30	3,135	18,955	5,292	
31	3,193	22,148	6,174	
Aug 1	3,227	25,375	7,056	
2	3,272	28,647	7,938	
3	3,306	31,953	8,820	
4	1,815	33,768	9,702	
5	SI	33,768	10,584	
6	2,885	36,653	11,466	
7	3,984	40,637	12,348	
8	3,988	44,625	13,230	
9	3,931	48,556	14,112	
10	3,955	52,511	14,994	
11	4,021	56,532	15,876	
12	4,084	60,616	16,758	
13	4,134	64,750		28,498
14	4,202	68,952		40,238
15	4,263	73,215		51,978
16	4,321	77,536		63,718
17	4,384	81,920		75,458
18	4,665	86,585		87,198
19	4,896	91,481		98,938



Manzano Oil Corporation

P.O. Box 2107
Roswell, New Mexico 88202-2107
(505) 623-1996
FAX (505) 625-2620

August 24, 1993

State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Attn: Mr. David Catanach

Re: Condensate Production
Neuhaus "14" Federal #2
Lea County, New Mexico

Dear Mr. Catanach:

Pursuant to your request directed to Mr. Bill Carr regarding the condensate production from the Neuhaus "14" Federal #2, I have enclosed a detailed report of the production as was approved by the OCD. Manzano was originally granted a condensate allowable of 6,000 barrels for the months of July, August and September, respectively. After our corrected four point test was submitted, Manzano was granted a testing allowable of up to 11,740 MCFPD, which is reflected from August 13th to August 19th. On August 19th, the hearing date, the well was shut-in as was requested by Mr. LeMay's original letter in which an allowable was granted until the hearing date.

If you have any questions, please do not hesitate to call. Thank you for your prompt attention to this matter.

Sincerely,

Kenneth Barbe, Jr.

KB:ar

cc: Bill Carr✓

Production Test Data
 Neuhaus "14" Federal #2
 Section 14, T20S, R35E
 Lea County, New Mexico

<u>Date</u>	<u>BCPD</u>	<u>Cum Condensate Bbls</u>	<u>Cum Condensate Allowable @ 6000 B/M</u>
Open 8:00 p.m. 7/24/93			
1993 July 25	563	563	
26	556	1,119	
27	597	1,716	
28	553	2,269	
29	528	2,797	
30	596	3,393	
31	656	4,049	6,000
Aug 1	542	4,591	
2	619	5,210	
3	539	5,749	
4	412	6,161	
5	SI	6,161	
6	520	6,681	
7	687	7,368	
8	680	8,048	
9	701	8,749	
10	728	9,477	
11	643	10,120	
12	579	10,699	12,000
13	538	11,237	
14	682	11,919	
15	633	12,552	
16	570	13,122	
17	693	13,815	
18	677	14,492	
19	660	15,152	

Gas Allowable
 Increased to
 11,740 MCFPD



00021

Manzano Oil Corporation

P.O. Box 2107
Roswell, New Mexico 88202-2107
(505) 623-1996
FAX (505) 625-2620

October 7, 1993

Oil Conservation Division
P.O. Box 1980
Hobbs, New Mexico 88240

Attn: Jerry Sexton

Re: Neuhaus "14" Federal #2
Section 14, T20S, R35E
Lea County, New Mexico

Dear Jerry:

Enclosed is the Form C-122 Multipoint and One Point Back Pressure
Test for Gas Well that was run 9/27/93 on the captioned well.

If you have any questions, please do not hesitate to call.

Very truly yours,

Donnie E. Brown

Donnie E. Brown
VP Engineering

WJH

DB:ar

Enclosure

Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

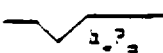
State of New Mexico
Energy, Minerals and Natural Resources Department

00022 Form C-122
Revised 4-1-93

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

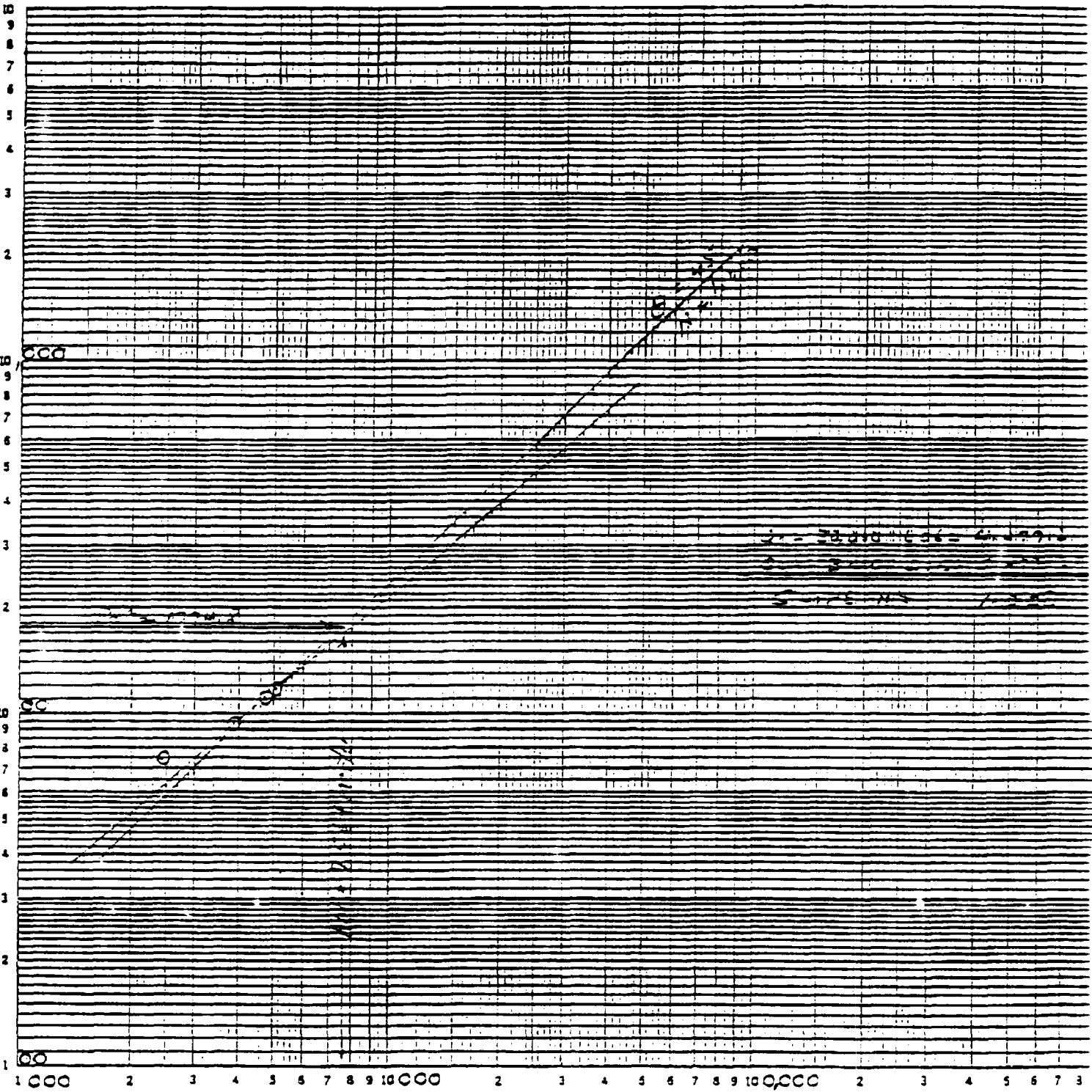
Operator MANZANO OIL CORPORATION						Lease or Unit Name NEUHAUS "14" FED.						
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-27-93		Well No. 2				
Completion Date 7-14-93		Total Depth 11606		Plug Back TD 11566		Elevation 3662KB		Gas Ltr. - Sec. - TWP - Rge.				
Cig. Size 5 1/2		Wt. 17#		d 4.892		Set At 11606		Perforations: From: 11362 To: 11440		County LEA		
Tag. Size 2-7/8		Wt. 6.5		a 2.441		Set At 11243		Perforations: From: To:		Pool		
Type Well - Single - Bracenead - G.G. or G.O. Multiple SINGLE						Packer Set At 11243		Formation WOLFCAMP				
Producing Thru T3G		Reservoir Temp. °F		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		Connection PHILLIPS				
L 11500		H 11500		G _g .710		% CO ₂ 2.18		% N ₂ 1.26		% H ₂ S Prover		
Meter Run 4.026		Taps FTG										
FLOW DATA						TUBING DATA			CASING DATA			Durac of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. b _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F		
SI							1319		PKR		16	
1.							982		"		12	
2.							848		"		1	
3.							713		"		1	
4.							642		"		2	
5.												
RATE OF FLOW CALCULATIONS												
NO.	COEFFICIENT (24 HOUR)		Pressure P _a	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd					
1.							2,431					
2.	VOL MEASURED ELECTRONIC FLOW METER #95899 (PHILLIPS)						3,398					
3.							4,695					
4.							5,009					
5.												
NO.	P _i	Temp. °R	T _i	Z	Gas Liquid Hydrocarbon Ratio 614		Metho					
1.					A.P. L Gravity of Liquid Hydrocarbons 53.6 @ 60							
2.					Specific Gravity Separator Gas .710		XXXXXXXXXX					
3.					Specific Gravity Flowing Fluid XXXXXX		GMIX=1.126					
4.					Critical Pressure PSIA		*658		PSIA			
5.					Critical Temperature °F		*524		°F			
P _i 1332.2		P _o 1774.8										
NO.	P _i	P _o	P _i	P _o	1) $\frac{P_i}{P_o} = 1.510$ (2) $\left[\frac{P_i}{P_o} \right]^* = 1.510$							
1.		1013.1	1026.5	748.3								
2.		910.4	828.8	946.0								
3.		815.0	664.2	1110.6								
4.		774.3	599.5	1175.3								
5.												
Absolute Open Flow 7.564					Mcfd @ 15.025		Angle of Slope @ 45		Slope, s 1.000			
Remarks: WELL MADE 135.3 BBLS 53.6 API CONDENSATE												
* CORRECTED TO 2.18% CO2 & 1.26% N2												
Approved By Division				Consulted By: JOHN WEST ENGINEERING				Calculated By: B. M.		Checked By: B. M.		

[illegible]

MANZANO OIL COMPANY
 NEUHAUS "14" FED. WELL NO. 2
 LEA COUNTY, NEW MEXICO
 SEPTEMBER 27, 1993

PC² - PW² - TISUNDS 46 7400

LOGANTHMIC 3 X 3 CYCLES
 NEUHAUS & LESER CO. MADE IN USA



Q-MCF/DAY