

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

200 JUN 24 PM 4:26

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Marathon Oil Company (915) 682-1626

3. ADDRESS AND TELEPHONE NO.

P. O. Box 552, Midland, Tx. 79702-0552

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

At surface

2020' FNL & 1975' FEL

At proposed prod. zone

Same

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

3 air miles SE of LaPlata, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drilg. unit line, if any)

665'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

351'

19. PROPOSED DEPTH

5,500'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5,875' ungraded ground

22. APPROX. DATE WORK WILL START*

Feb. 25, 2000

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8" (J-55)	24#	350'	~289 cu ft & to surface
7-7/8"	4-1/2" (J-55)	11.6#	5,500'	~1829 cu ft & to surface



This permit is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

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 or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Consultant (505) 466-8120

1-20-00

SIGNED

TITLE

DATE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

/s/ Charlie Beecham

TITLE

DATE

FEB 29 2000

*See Instructions On Reverse Side

1946-1949, 1950-1959, 1960-1969, 1970-1979, 1980-1989, 1990-1999

PG Supply Co., Atlanta, NM 30311-5700

История ЛД

1988 Ed. Brown, Ed., Assoc., 124 574

Exhibit IV

FD Nov 2001, Santa Fe, NM 87804-20

345 State of New Mexico
Game, Fish & Natural Resources Department

OIL CONSERVATION DIVISION

RECEIVED Santa Fe NM 87504-2088

OIL CON. DIV
DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102

Revised February 21, 1964

Instructions on back

Submit to Appropriate District Office

State Loans - A Continuing

For Lease - 3 Copies

AMENDED REPORT

APR Number 30045-30115		BLANCO - MESA VERDE	
Property Code 25401	Property Name OHIO	Well Number 1-B	
COGZD No. 14021	Operator Name MARATHON OIL COMPANY	Elevation 5075	

Surface Location									
Oil or Gas No.	Section	Township	Range	Lot 16	Feet from the	North/South Line	Feet from the	East/West Line	County
0	18	32 N	12 W		2020	North	1975	East	San Juan

"Bottom Hole Location is Different From Surface"

UL or lat no.	Section	Township	Range	Lot No.	Feet from the	North/South line	Feet from the	East/West line	County
* Deducted Acres		** Joint or Fossil		*** Classification Code		**** Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL REQUIREMENTS ARE MET

**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**

ON A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

1910LN **N 89° 37' W** **20.01LN**

2020'

1975'

1946LN **N 89° 19' W** **19.95LN**

37.90LN

17 OPERATOR CERTIFICATION

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

Brian Wood

Signature **BRIAN WOOD**

Printed Name **CONSULTANT**


Title **JAN. 20, 2000**

Date

18 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 belief.

Date of Issue

Signature 

William S. Hargrave II

Certificate Number **8466**

Marathon Oil Company
Ohio E 1 B
2020' FNL & 1975' FEL
Sec. 18, T. 31 N., R. 12 W.
San Juan County, New Mexico

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Subsea Elevation</u>
Nacimiento Fm	000'	10'	+5,875'
Fruitland Coal	1,577'	1,587'	+4,298'
Pictured Cliffs Ss	2,230'	2,240'	+3,645'
Cliff House Ss	3,922'	3,932'	+1,953'
Menefee Fm	3,982'	3,992'	+1,893'
Pt. Lookout Ss	4,595'	4,605'	+1,280'
Base Mesa Verde Ss	4,672'	4,782'	+1,203'
Total Depth (TD)*	5,500'	5,510'	+375'

* all elevations reflect the ungraded ground level of 5,875'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Coal (1,577')	Fruitland Coal (1,577')	Fruitland Fm (1,577')
Pictured Cliffs (2,230')		
Mesa Verde (4,600')		

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 3,000 psi model is on PAGE 3.) An

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8-5/8" x 11" 3,000 pound double ram BOP system with a choke manifold and mud cross will be tested to 300 psi and then to 3000 psi. A flow indicator, PVT, and annular preventer will be used to drill the production hole. Upper and lower Kelly cocks with valve handle and subs to fit all drill string connections which are in use will be available on the rig floor.

Tests will be run when:

- 1) installed
- 2) anytime a pressure seal is broken (test only affected equipment)
- 3) at least every 20 days
- 4) blind & pipe rams will be activated each trip, but no more than daily

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested before drilling surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated daily to ensure good mechanical working order and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs. Maximum expected pressure is \approx 2,200 psi.

4. CASING & CEMENT

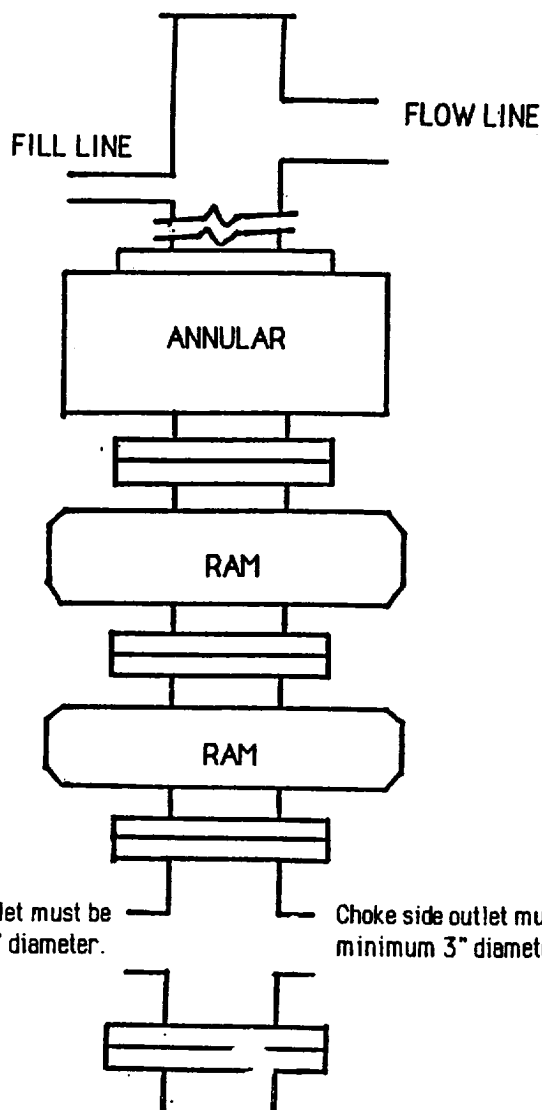
<u>Hole Size</u>	<u>O.D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connections</u>	<u>GL Setting Depth</u>
12-1/4"	8-5/8"	24	J-55	New	8rd, ST&C	350'
7-7/8"	4-1/2"	11.6	K-55	New	8rd, LT&C	5,500'

Surface casing will be cemented to surface with \approx 289 cu. ft. (\approx 228 sx) Class B Neat + 1/4 lb/sk cello-flake + 2% CaCl₂. Yield = 1.27 cu. ft./sk. Weight = 15.2 lb/gal.

Conventional centralizers will be set on the bottom two joints and every fourth joint to surface.

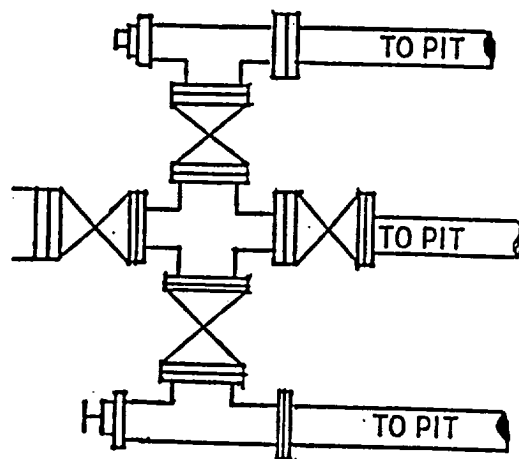
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Ohio E 1 B
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TYPICAL BOP STACK
& CHOKES MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.

Upper kelly cock will have handle available.
Safety valve and subs will fit all drill string connections in use.
All BOPE connections subjected to well pressure will be flanged, welded, or clamped.

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Production casing hole will be cemented to surface as follows. DV depth = 2,000'.

First stage Lead will be cemented to 2,000' with 1,012 cu. ft. (530 sx) 65:35 Poz + 3 lb/sk gilsonite + 4% gel + 1/4 lb/sk cello-flake. Yield = 1.91 cu. ft./sk. Weight = 12.6 lb/gal.

First stage Tail will be cemented to 5,400' with 127 cu. ft. (100 sx) Class B Neat + 3 lb/sk gilsonite + 1/4 lb/sk cello-flake. Yield = 1.27 cu. ft./sk. Weight = 12.6 lb/gal.

Second stage Lead will be cemented to surface with 563 cu. ft. (295 sx) 65:35 Poz + 3 lb/sk gilsonite + 4% gel + 1/4 lb/sk cello-flake. Yield = 1.91 cu. ft./sk. Weight = 12.6 lb/gal.

Second stage Tail will be cemented to 1,900' with 127 cu. ft. (100 sx) Class B Neat + 3 lb/sk gilsonite + 1/4 lb/sk cello-flake. Yield = 1.27 cu. ft./sk. Weight = 12.6 lb/gal.

Conventional centralizers will be set on the bottom two joints and every second joint to 4,200'.

5. MUD PROGRAM

<u>RANGE</u>	<u>MUD TYPE</u>	<u>WEIGHT</u>	<u>VISCOSITY</u>	<u>WATER LOSS</u>	<u>ADDITIVES</u>
0' - 2,000'	Fresh	8.5-8.8	28	NC	Gel, lime
2,000'-5,500'	Fresh	8.5-8.8	35	10 cc	Gel, soda ash, LCM

6. CORING, TESTING, & LOGGING

No cores or DSTs are planned. Induction/GR, cement bond, and density logs will be run from TD to surface.

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7. DOWNHOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be $\approx 2,200$ psi.

8. OTHER INFORMATION

The anticipated spud date is February 25, 2000. It is expected it will take about ten days to drill and two weeks to complete the well.

Surface Use Plan

Marathon Oil Company
Ohio E 1 B
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Surface Use Plan

1. DIRECTIONS & EXISTING ROADS (See Pages 11 & 12)

From US 64 in Farmington, go north 14.5 mi. on NM 170 to a red school
Then turn right and go east 3.6 mi. on NM 574 to a yellow gate
Then turn right and go south 1.2 mi. on a dirt road
Then turn left and go southeast 2/3 mi. on a dirt road
Then turn left and go east 0.1 mi. on a dirt road to the existing 2DK well
Then turn right off Greystone's Jackson 2DK well and go south 100'

Roads will be maintained to a standard at least equal to their present condition. The BLM right-of-way application for Marathon's Ohio F 1 C APD will also serve this APD.

2. ROADS TO BE UPGRADED & BUILT (See Page 12)

About 100' of new road will be built. Road will be crowned and ditched with a 15' wide running surface. Maximum disturbed width will be 25'. No culvert or cattleguard is needed. Maximum cut or fill is 2'. Maximum grade is 5%.

3. EXISTING WELLS (See Page 12)

Nineteen gas wells and one P&A well are within a mile radius according to NM Oil Conservation Division records in Santa Fe reviewed on December 10, 1999. There are no water, oil, or injection wells within a mile.

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4. PROPOSED PRODUCTION FACILITIES (See Page 15)

A 300 bbl oil tank, 30 barrel water tank, meter run, and three phase separator will be installed on the pad. Surface equipment will be painted a flat juniper green color.

A 3" OD steel Schedule 40 Grade X-42 welded steel natural gas pipeline will be laid 356.59' east to and existing Marathon pipeline. Operating pressure = 20 psi. Test pressure = 1000 psi. Burst pressure >2000 psi. Pipe will be pressure tested with air or nitrogen. Wall thickness $\geq 0.2016"$. Burial depth $\geq 30"$. The route will be posted with intervisible markers. All of the route is on lease.

5. WATER SUPPLY

Water will be trucked from a private water source in Farmington.

6. CONSTRUCTION MATERIALS & METHODS

NM One Call (1-800-321-ALERT) and BLM will be notified before construction starts. The top 6" of soil and brush will be stockpiled in a pile southwest of the pad. A diversion ditch will be cut along the north side of the pad to drain west. A minimum 10 mil plastic liner will be installed in the reserve pit.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the county landfill. There will be no trash burning. Once dry, contents of the reserve pit will be buried in place. Human waste will be disposed of in

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chemical toilets and hauled to an approved dump station.

8. ANCILLARY FACILITIES

There will be no air strips or camps. Camper trailers will be on location for the company man, tool pusher, or mud logger.

9. WELL SITE LAYOUT

See Pages 13 and 14 for depictions of the well pad, cross section, cut and fill diagram, reserve pit, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

Reclamation starts once the reserve pit is dry. It usually takes a year for a reserve pit to fully evaporate, at which point it will be backfilled. The pad and backfilled pit will be recontoured to a natural appearance. Soil, brush, and trees will be evenly spread over disturbed areas. Disturbed areas will be ripped or harrowed. A BLM approved seed mix will be drilled between July 1 and September 15. If broadcast, the rate will be doubled. A harrow or cable will be dragged over the area to assure seed cover.

If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed as previously described.

11. SURFACE OWNER

All construction is on BLM surface.

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12. OTHER INFORMATION

The nearest hospital is a 30 minute drive away in southwest Farmington.

13. REPRESENTATION

Anyone having questions concerning the APD should call:

Brian Wood, Consultant

Permits West, Inc.

37 Verano Loop

Santa Fe, NM 87505

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

Field representatives will be:

Gary Doneghey

Marathon Oil Company

P. O. Box 1439

Farmington, NM 87499

(505) 326-2783

Kirk Spilman

Marathon Oil Company

P. O. Box 552

Midland, Tx. 79702-0552

(915) 682-1626

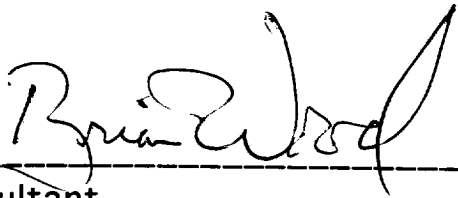
Marathon Oil Company has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by Marathon Oil Company.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Marathon

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Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

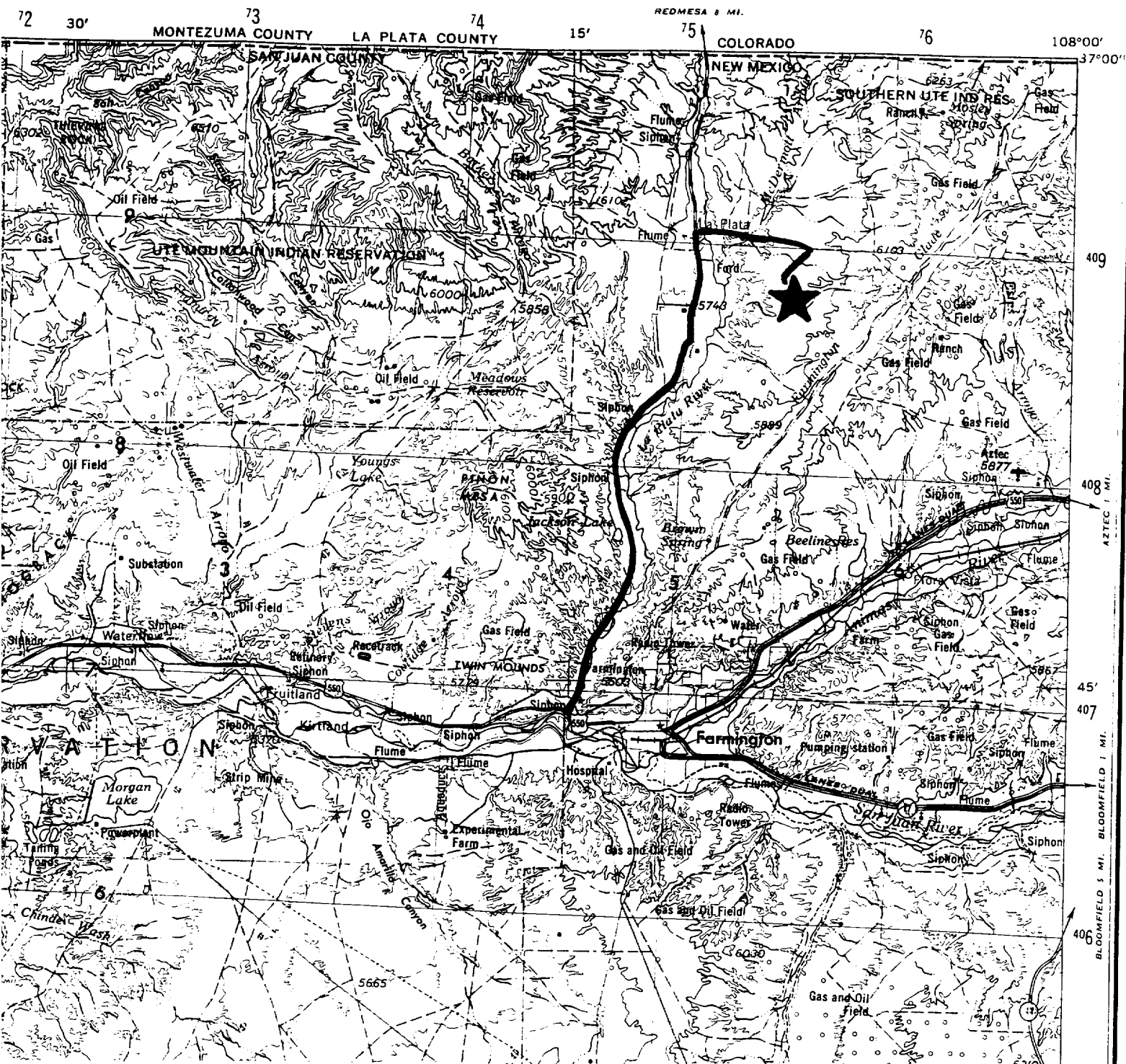


Consultant

January 20, 2000
Date

Marathon Oil Company
 Ohio E 1 B
 2020' FNL & 1975' FEL
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PROPOSED WELL:



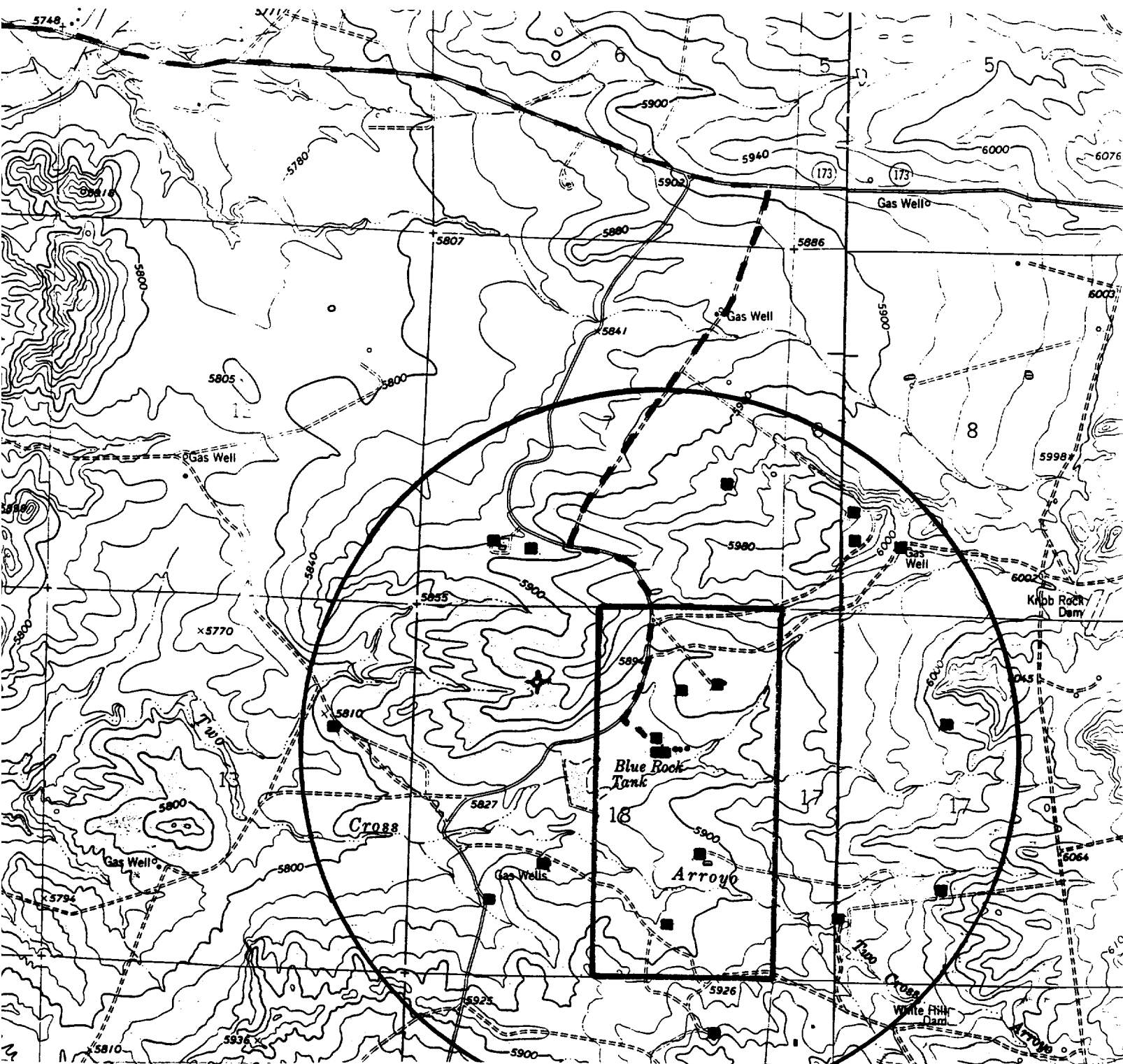
ACCESS ROUTE:



PERMITS WEST .INC.
 PROVIDING PERMITS for LAND USERS

Marathon Oil Company
Ohio E 1 E
2020' FNL & 1975' FEL
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PROPOSED WELL: ■

EXISTING WELL: ●

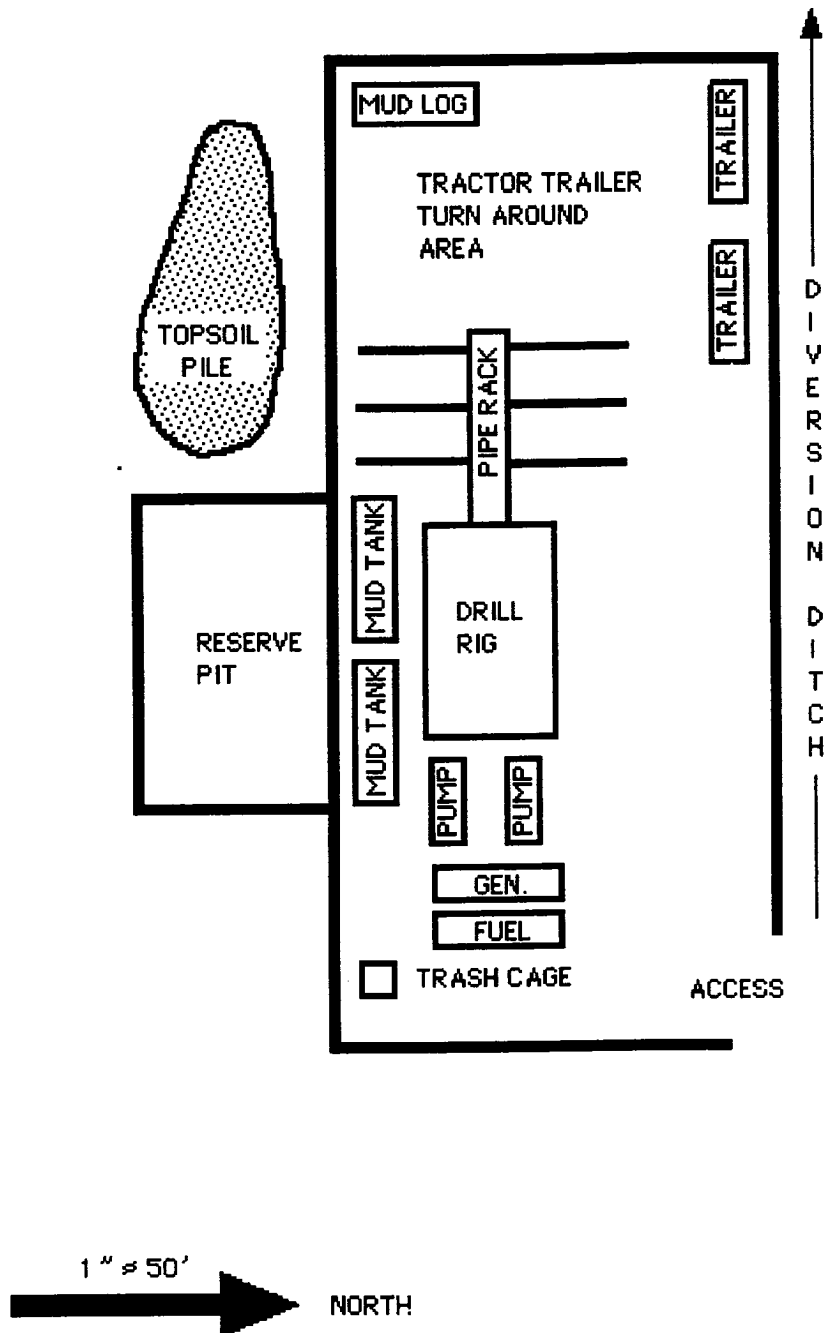
PROPOSED PIPELINE: ...

EXISTING ROAD: ---

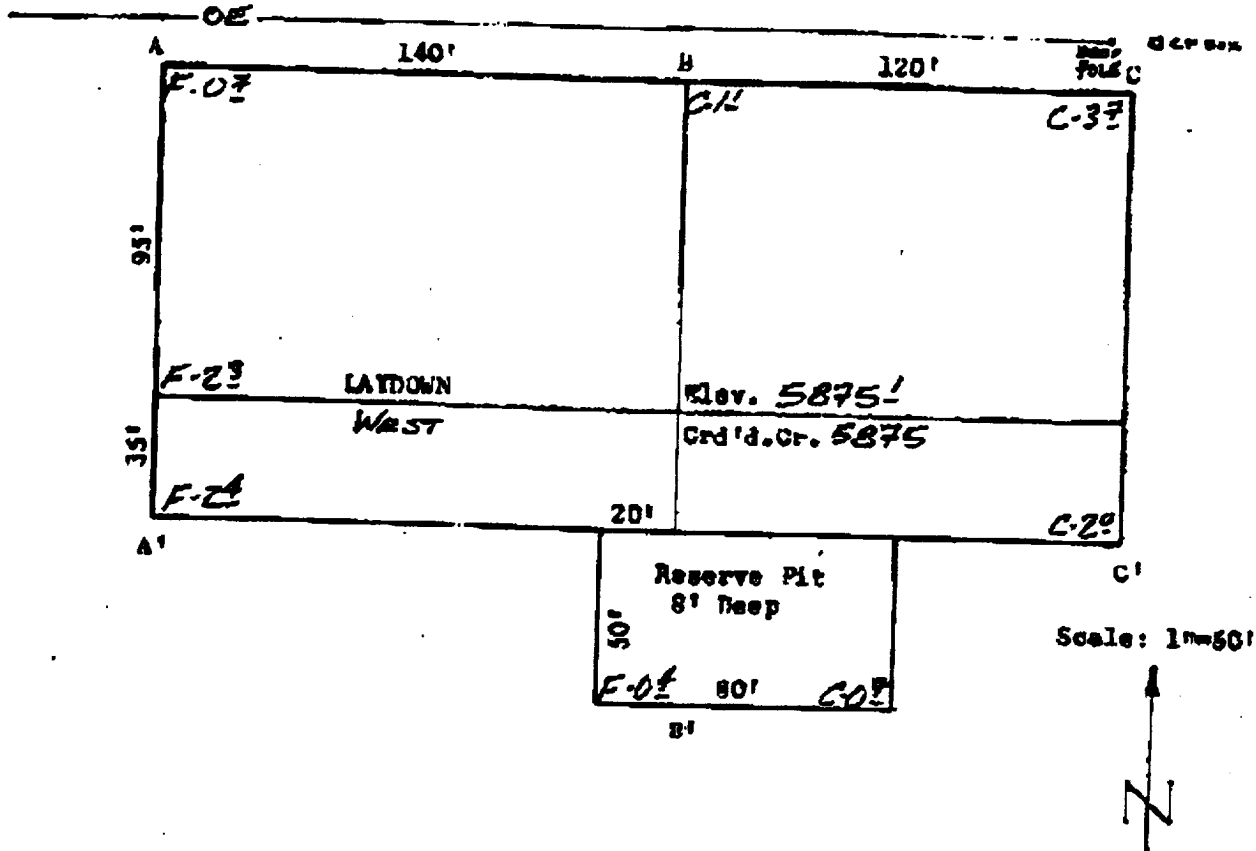
LEASE BOUNDARY LINE: └

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San Juan County, New Mexico

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MARATHON OIL COMPANY
 OHIO "3" #1-B
 2020' FNL & 1975' FNL
 Sec. 15, T31N, R12W, NMPM
 San Juan Co., NM



Vert. 1" = 30' Horiz. 1" = 100'

	C/L					
5880	---	---	---	---	---	---
5870	---	---	---	---	---	---
	---	---	---	---	---	---

	C/L					
5880	---	---	---	---	---	---
5870	---	---	---	---	---	---
	---	---	---	---	---	---

	C/L					
5880	---	---	---	---	---	---
5870	---	---	---	---	---	---
	---	---	---	---	---	---

PROPOSED PIPELINE FOR

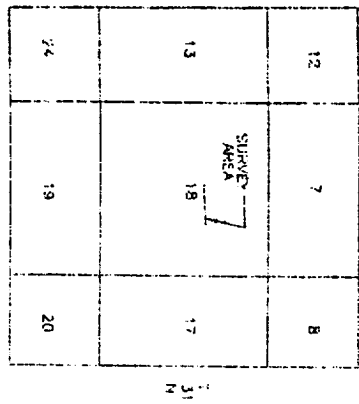
MARATHON OIL COMPANY

OHIO "E" #1-B

SW NE SEC. 18, T 31 N, R 12 W, NMPM

SAN JUAN CO., NM

VICINITY MAP
NOT TO SCALE

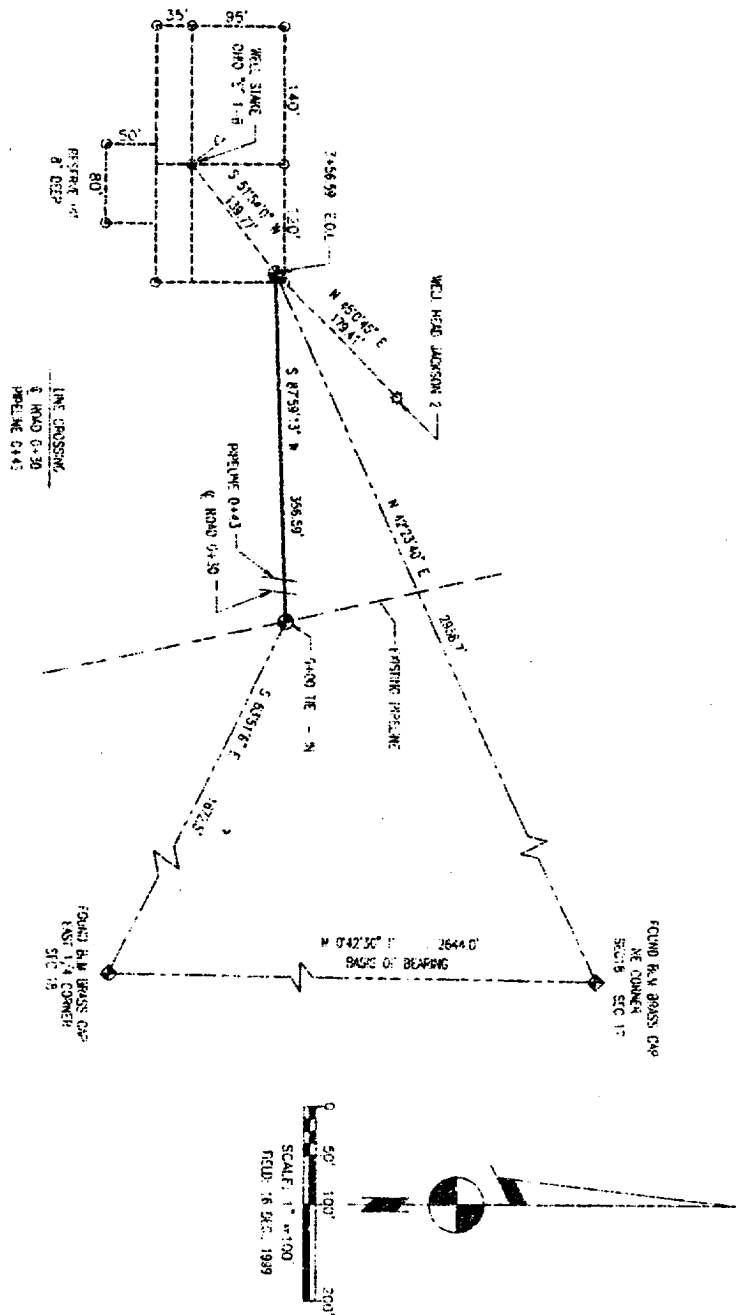


BASIS OF BEARING

BEARINGS ARE BASED UPON THE EAST LINE OF THE NE 1/4 OF SECTION 18, MONUMENTED BY A BRASS CAP (EAST 1/4 CORNER OF SECTION 18 AND A BRASS CAP AT THE NORTHEAST CORNER OF SEC. 18, N 0°42'30" E SHOWN HEREON).

LEGEND

- ◆ FOUND BRASS CAP
- SECTION LINE
- PIPELINE
- ⊙ WELL HEAD
- POINT OF INTERSECTION
- WELL STAKE STATION
- 9 BEGINNING/END OF LINE



CERTIFICATE OF SURVEY

I, WILLIAM E. MANNING, II, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THE SURVEY SHOWN HEREON, AND THAT THE SURVEY BEARING, DISTANCE, AND STATIONING FOR SURVEYS IN NEW MEXICO.

WILLIAM E. MANNING II
DATE: 11/16/2000
NEW MEXICO
UNITED STATES SHIELD, SEALED AND DATED THIS IS A PRELIMINARY SURVEY



PROPOSED PIPELINE FOR

MARATHON OIL COMPANY
OHIO "E" #1-B

SW NE SEC. 18, T 31 N, R 12 W, NMPM
SAN JUAN CO., NM

CLIENT:

WALTER DUEEASE
MARATHON OIL COMPANY
P.O. BOX 552
MIDLAND, TX 79702-0552



Powers Elevation Co., Inc.
LAND SURVEYORS
1200 E. HARVEST AVE., SUITE 113 (103) 101
ALBUQUERQUE, NM 87104
1-800-874-1111

No.	DATE	REVISION	BY
1	11/10/00	REVISIONS PER MANNING	JL

Scale: 1"=100'	Surveyed By: W. MANNING
Drawn By: C. LOBBETT	Checked By: T. F. MANNING
File: C:\PROGRAMS\99\117.DWG	Date: 11-5-00
SHEET 1	OF 1