

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE*

(Other instructions on
reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

C-15F

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

SINGLE ZONE ☒

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

Marathon Oil Company

14021

3. ADDRESS AND TELEPHONE NO.

P.O. Box 552 Midland, TX 79702

915-687-8357

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

At surface

660' FSL & 660' FEL

At proposed prod. zone

Same

Unit P

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

15 miles NE of Carlsbad

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any) 660'

16. NO. OF ACRES IN LEASE

640

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. * 2648'

19. PROPOSED DEPTH

11,500

20. ROTARY OR CABLE TOOLS

Rotary

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

3268' G.L.

Carlsbad Controlled Water Basin

22. APPROX. DATE WORK WILL START*

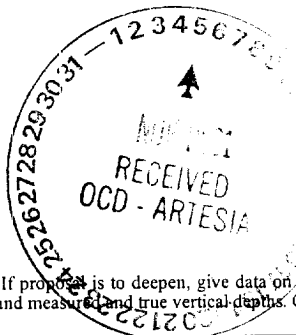
March 1, 2001

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20" H-40	94.00#	325' 350'	850 sks to surf.
17.50"	13-3/8" K-55	48#, 54.50#	1250'	1350 sks. to surf.
12.25"	9-5/8" K-55	36.00#	3200'	1250 sks to surf.
8.75"	5-1/2" L-80	17,20#	11,500	1925 sks.

Marathon Oil Company is proposing to drill a 11,500' deep Morrow well.

* Distance from Yates Federal Com. # 1 @ 860' FSL & 1980' FWL to the Yates Federal Com. # 2 is 2648'.



APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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.

Jerry Fletcher

SIGNED

TITLE Engineer Tech.

DATE 2/14/01

(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/ JOE G. LARA

TITLE

FIELD MANAGER

DATE

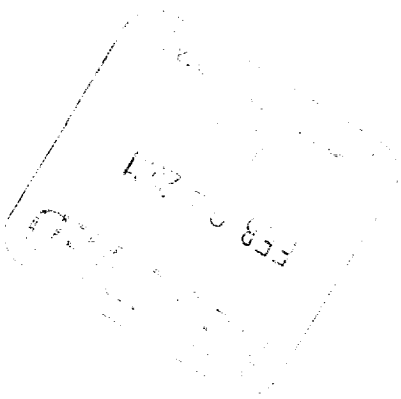
NOV 01 2001

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVAL FOR 1 YEAR

SA JOE G. LABA



DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name Burton Flat (Morrow East)
Property Code	Property Name YATES FEDERAL COM.	Well Number 2
OGED No. 14021	Operator Name MARATHON OIL COMPANY	Elevation 3268'

Surface Location

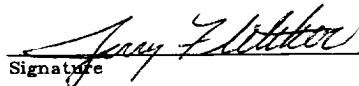
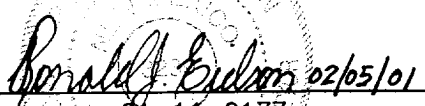
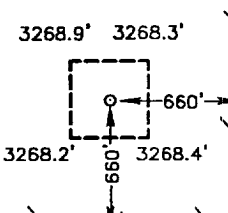
UL or lot No. P	Section 8	Township 20-S	Range 29-E	Lot Idn	Feet from the 660	North/South line SOUTH	Feet from the 660	East/West line EAST	County EDDY
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Bottom Hole Location If Different From Surface

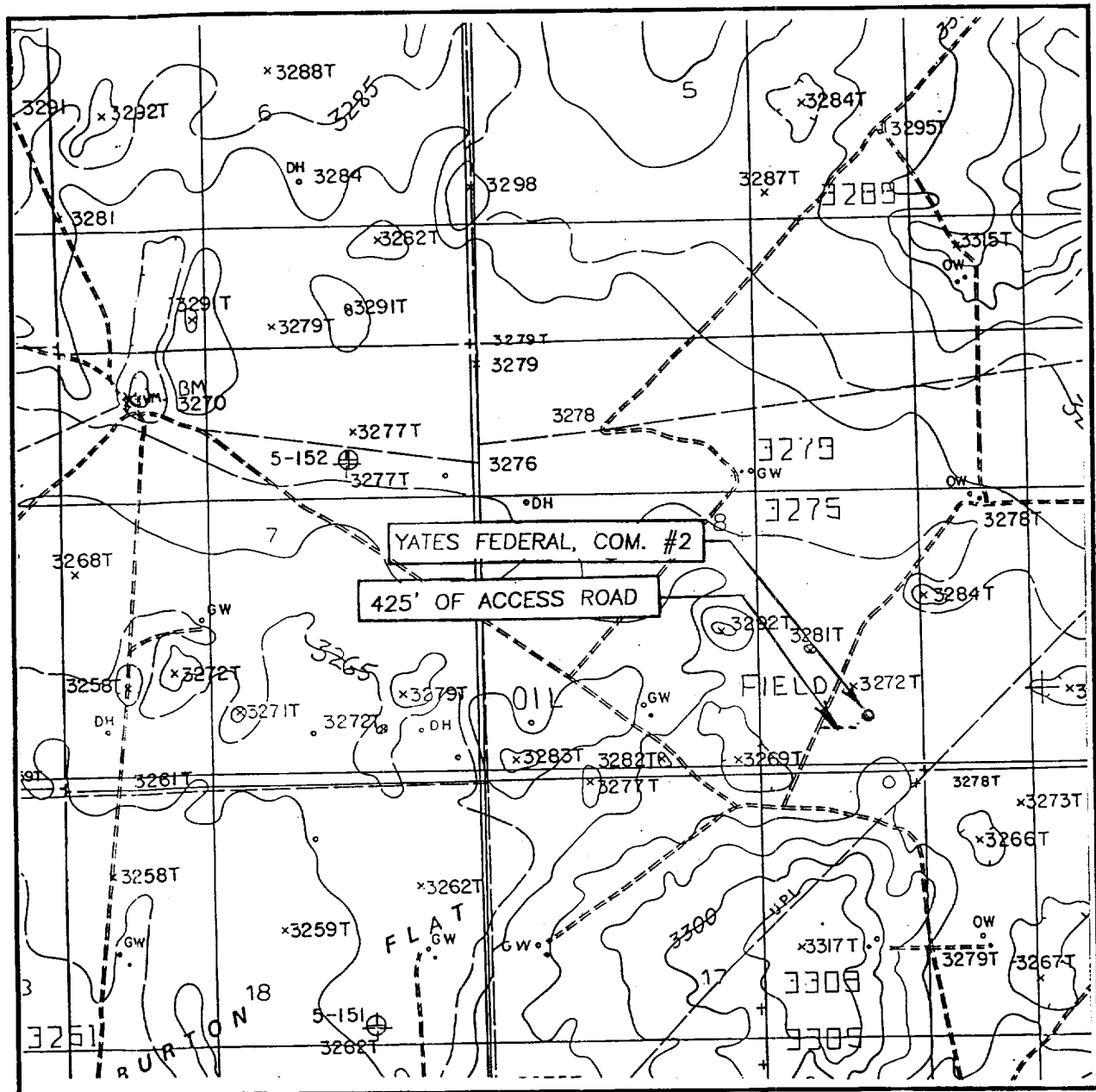
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acres 320 S/2	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

				OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature Jerry Fletcher Printed Name Engineer Tech. Title 2/14/01 Date
				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. FEBRUARY 01, 2001 Date Surveyed Signature & Seal of Professional Surveyor  Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12841
<p>Yates Fed, Com. # 1</p> 				

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

ILLINOIS CAMP SE, N.M.

SEC. 8 TWP. 20-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660'FSL & 660'FEL

ELEVATION 3268'

OPERATOR MARATHON OIL COMPANY

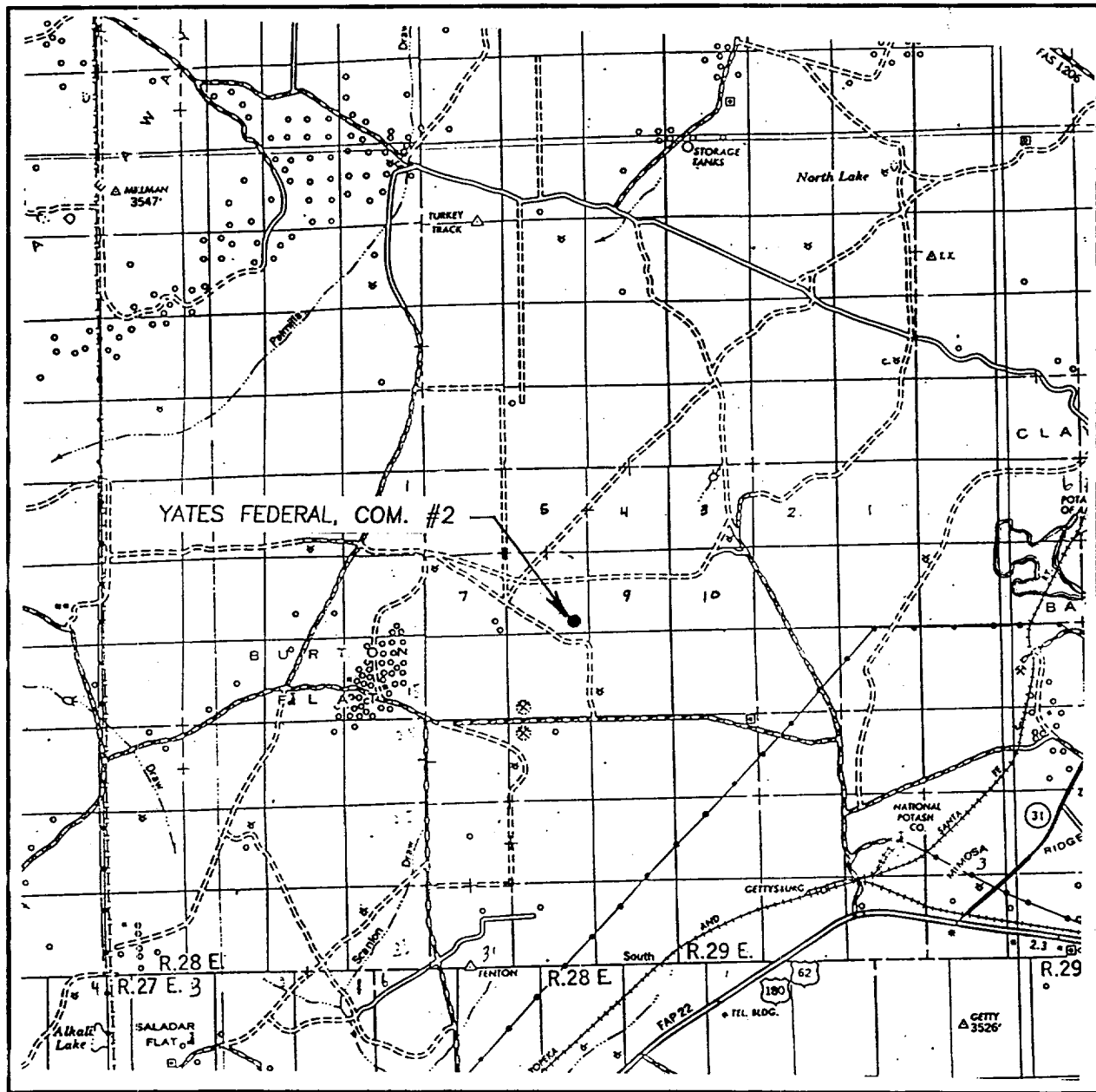
LEASE YATES FEDERAL COM.

U.S.G.S. TOPOGRAPHIC MAP

ILLINOIS CAMP SE, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 8 TWP. 20-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FSL & 660' FEL

ELEVATION 3268'

OPERATOR MARATHON OIL COMPANY

LEASE YATES FEDERAL, COM.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

Thirteen Point Surface Use Plan
MARATHON OIL COMPANY

Yates Federal Comm # 2
Sec. 8, T-20-S, R-29-E
Eddy County, New Mexico

1. Existing Roads: Refer to Vicinity Lease Map.

- a. The proposed wellsite is staked and the surveyor's plat is attached.
- b. To reach the location from Carlsbad, New Mexico: Follow Hwy. 62/180 East of Carlsbad Approx. 15 miles, turn North on Hwy. 238, follow black top road 5.1 miles, Turn North @ Duke Energy Compressor sign. Follow dirt road 1.2 miles to "Y" in road, stay right @ "Y", Go .3 mile to location on East side of the road.
- c. Existing roads within a one-mile radius (refer to Vicinity Lease Map).
- d. The existing road will be maintained as necessary to provide access during the drilling operation.

2. Planned Access Road: Refer to Vicinity Lease Map.

Access will be by existing State roads, lease roads, and 425 feet of new access road. Construction plans will require blading and rolling the road and pad. The access road enters the drilling pad on the Southwest corner. The drilling location will have the rig V-door facing East.

3. Location of Existing Wells: See Vicinity Lease Map.

4. Location of Existing and Proposed Production Facilities within a one-mile radius:

- a. Existing: There are seven oil and gas wells operated by Marathon, Devon, and Ewing G.W. within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon, Devon and Ewing G.W. operate a variety of dehydrators, meter runs, and several gathering lines in the one-mile radius.
- b. New Facilities : No new facilities are proposed at this time. The power line and flowline will be permitted on a separate action .
- c. Rehabilitation of disturbed areas no longer needed for operations will be accomplished by grading, leveling and seeding as recommended.

5. Location and Type of Water Supply:

- a. Source: Private Water Well.
- b. The water will be transported by a trucking contractor. No new construction will be required on/along the water route.
- c. No water well will be drilled on this location.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Yates Federal Com # 2

6. Source of Construction Materials:

- a. Construction materials may be obtained from the construction site.
- b. If production is obtained, native materials will be used on the location and for installation of production facilities.
- c. On-site inspection may dictate any changes in location construction.

7. Methods of Handling Waste Material Disposal:

- a. Cuttings - will be deposited in the reserve pit.
- b. Drilling fluids - contained in reserve pit and allowed to evaporate. Free water will be removed and transported to an approved disposal site to accelerate pit drying.
- c. Produced fluids - none anticipated.
- d. A portable chemical toilet will be provided.
- e. Garbage and other waste material - garbage and trash will be stored in a receptacle on location and periodically hauled to an approved sanitary landfill.
- f. After the rig moves out, all materials not necessary for operations will be removed. Pits will be backfilled and leveled. The location will be cleaned of all trash and debris.

8. Ancillary Facilities: Camp facilities will not be required. Portable trailers will be on location to house a company drilling foreman and contract toolpusher.

9. Wellsite Layout:

- a. The wellpad layout shows the drillsite layout as staked. Topsoil will be stockpiled per specifications.
- b. The reserve pit will be fenced on three sides before drilling begins. The fourth side will be fenced when the drilling rig leaves location.
- c. The reserve pit will be lined (8 mil material).

10. Plans for Restoration of the Surface:

- a. Backfilling, leveling, and contouring are planned as soon as all pits have dried. Waste disposal and spoiled materials will be hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- b. The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the BLM. Revegetation is recommended for road area, as well as around the drill pad.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Yates Federal Com # 2

- c. The reserve pit will be fenced during drilling operations. Fencing will be maintained until leveling and cleanup are accomplished.
- d. If any oil is in the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with mesh.
- e. The rehabilitation operations will begin after the completion rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation will be done between July 15 and September 15.

11. Other Information:

- a. There are no significant archaeological or cultural sites visible in the area of disturbance. A cultural resource survey was performed by Archaeological Consultants Inc. of Roswell.
- b. General topography: Shown on Vicinity Lease Map. The terrain at the wellsite is gently rolling hills. Vegetation is primarily sage brush and natural grasses.
- c. Animal life: Prairie dogs, domestic livestock, rabbits and native rodents and predators.
- d. Dwellings (nearest): Approximately 3 miles.
- e. General location: Approximately 20 miles East of Carlsbad, New Mexico.
- f. Drainage: Internal
- g. Surface Owner: The surface is owned by the Bureau of Land Management.

12. Operator Representatives:

R. J. Longmire
Drilling, Completion, & Workover Superintendent
P. O. Box 552
Midland, TX 79702
800/351-1417
915/682-1626
915/687-8344 (Direct Line)
915/495-2336 (Pager)

13. Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; and that the work associated with the operations proposed herein will be performed by MARATHON OIL COMPANY and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Yates Federal Com # 2

2/14/01
Date

Longmire for R.J.L.
R. J. Longmire

DRILLING PROGRAM
MARATHON OIL COMPANY
Yates Federal Com. # 2

1. Estimated KB Elevation: 3284' KB

<u>FORMATION</u>	<u>-----TOP-----</u>		<u>-----BASE-----</u>		<u>FLUID CONTENT</u>
	<u>MEASURED</u>	<u>SUBSEA</u>	<u>MEASURED</u>	<u>SUBSEA</u>	
Yates	Surface	+3284'	995'	+2289'	water
Seven Rivers	995'	+2289'	3130'	+154'	water
Cherry Canyon	3130	+ 154	4230'	-946'	
Brushy Canyon	4230	-946	5700'	-2416'	
Bone SpringsSands	5700	-2416	9300'	-6016	
Wolfcamp	9300	-6016	9960'	-6676	Oil and Gas
Cisco	9960	-6676	10300'	-7016	
Strawn	10,300	-7016	10635'	-7351	
Atoka	10,635	-7351	10950'	-7666	GAS
Morrow	10,950	- 7666	11235'	-7951	Gas and water
Morrow Lower	11,235	-7951	11500'	-8216	Gas and water

	<u>PSIG</u>	<u>PPG EMW</u>	<u>DEG f</u>	<u>PPM</u>	<u>(obj, marker, etc.)</u>
Bone Springs	1210	8.5		500	marker
Wolfcamp	1680	8.5		5000	marker
Atoka	1800	8.9		0	marker
Morrow	2050	9.0		0	Objective pay

2. See (1) above.
If any unexpected water or mineral bearing zones are encountered, they will be reported, evaluated, and protected as circumstances and regulations require.

3. **Pressure Control Equipment:**

4. 13-3/8" Surface:13-5/8" 3M Annular tested to 300#/3000#. 13-5/8" rams, choke Manifold and mud cross, Tested to 300#/3000#.

Auxiliary Equipment:

Surface Hole: Annular or rotating head w/air rig.

Intermediate Hole: N/A

Production Hole: Flow indicator, PVT, H₂S Sensors, air packs, stroke counter, rotating head.

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

Upper and lower kelly cocks with valve handle and safety valve and subs to fit all drillstring connections in use will be available on rig floor.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Yates Federal Com. # 2

Test Frequency

1. When installed.
2. Anytime a pressure seal is broken (test confined only to affected equipment).
3. At least every 20 days.
4. Blind and pipe rams shall be activated each trip but not more than once/day.

4.

Casing and Cement Program:

OK per Jerry 7/21/01

---DEPTH---	SECTION	HOLE	CSG	WT.	THREADS	NEW
FROM TO	LENGTH	SIZE	SIZE	PPF	GRADE COUPLINGS	USED
0 375' 350'	350' 375'	26.00"	20.00"	94.00#	H-40 BT&C	New
0 1250'	1250'	17.50"	13-3/8"	48,54.5#	K-55 8rd, ST&C	New
0 3200'	3200'	12.25"	9-5/8"	36.00#	K-55 8rd, LT&C	New
0 11,500'	11,500'	8.75"	5-1/2"	17,20#	L-80 8rd LT&C	New

Casing String	DV Depth	Stg.	Lead Tail	Amt SXS	Type Cement	Yield CF/SX	Wt. PPG.	TOC	Additives
20.00"	none	1	L	850	Prem. P.	1.34	14.8	surf	2% cac12+ 1#/sk Flocele
13-3/8"		1	L	1100	Interfill P.P.	2.46	11.9	surf.	1#/sk Flocele
13-3/8"		1	L	250	Prem. P.	1.32	14.8	surf	2% CaCl2
9-5/8"		1	L	1000	Howco Lite	2.11	12.4		.2% Econolite, 6#salt
9-5/8"		1	L	250	Prem. Plus	1.32	14.8		.2% Econolite
5-1/2"	D.V.	1	L	725	Mod. Sup. H	1.34	13.0		5#/sk Gilsonite, .5% halad344+1#/sk salt
5-1/2"	9000'	2	L	1100	Inter.P.P.	2.47	11.9		.25% Flocele, 3#/sk Gilsonite, .2% Halad 322
5-1/2"		2	T	100	50/50 Poz	1.35	14.8		.6% Halad 9, 3#/sk KCL, 5% mixed Bond

Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 25% excess.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Yates Federal Com. # 2

Centralizer Program:

13-3/8" Conventional centralizers. Bottom 3 joints and every fourth joint to surface.

9-5/8" Conventional centralizers middle of 1st joint, and 1 cent. Every 4th joint thereafter to 3200'

5. Mud Program

<u>---DEPTH---</u>			<u>WEIGHT</u>		<u>WL</u>		<u>VISUAL</u>
<u>FROM</u>	<u>TO</u>	<u>MUD TYPE</u>	<u>(PPG)</u>	<u>VIS</u>	<u>CC</u>	<u>ADDITIVES</u>	<u>MONTR.</u>
0	1200'	fresh water	8.3	28	N/A	Gel, Lime	Reserve
1200'	7800'	fresh	8.5	28-32	N/C	Gel, caustic, H ₂ S Scavenger	Reserve
7800'	11,500	Brine	9.0	32	N/C	Gel, Caustic, H ₂ S Scavenger	Steel Pits

Sufficient quantities of additives will be on location to maintain above mud properties for any anticipated well conditions.

6. Logging, Testing & Coring Programs:

<u>LOG/TEST/CORE/MUDLOG/OTHER</u>	<u>--INTERVAL--</u>		<u>REMARKS</u>
	<u>FROM</u>	<u>TO</u>	
DLL/MSFL/GR/CNL/LDT/CAL	TD	5000'	
LDT/CNL/GR/CAL	TD	surf casing	
MUD LOGGER	6000'	TD	ROP, Lithology, Gas Analysis, Chromatograph
NO CORES OR DST'S			

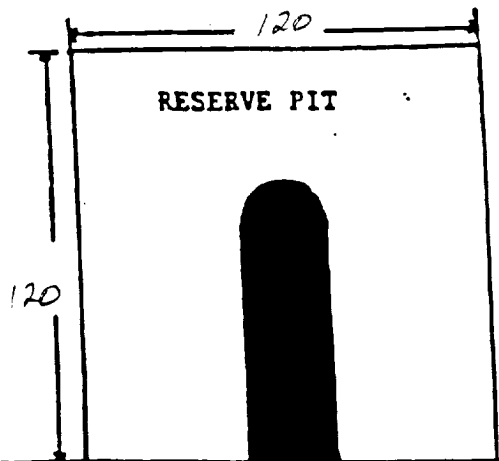
7. Abnormal Pressures, Temperatures or Potential Hazards:

None anticipated. Possible H₂S in Cisco & Upper Penn. See H₂S Drilling Operations Plan.

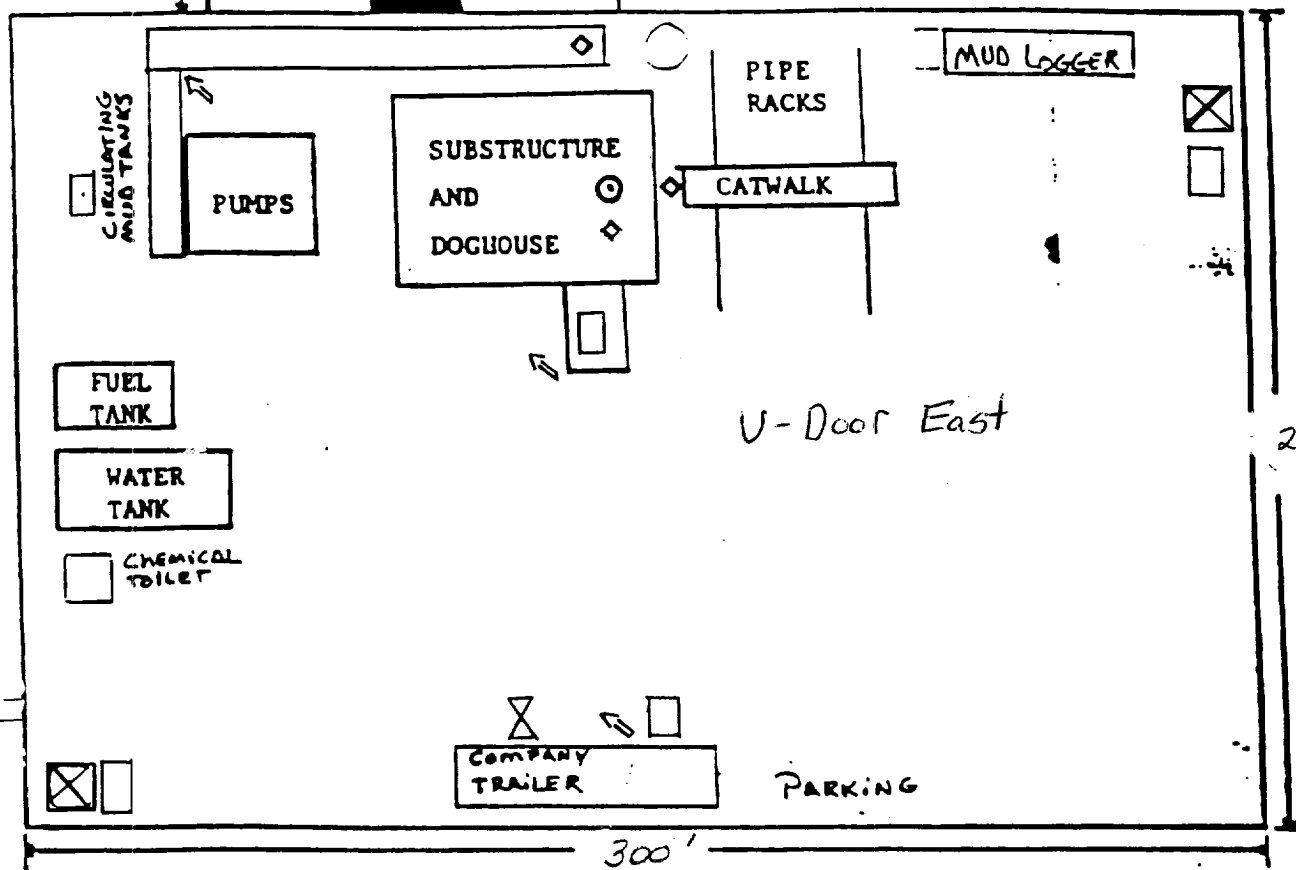
8. Other Information:

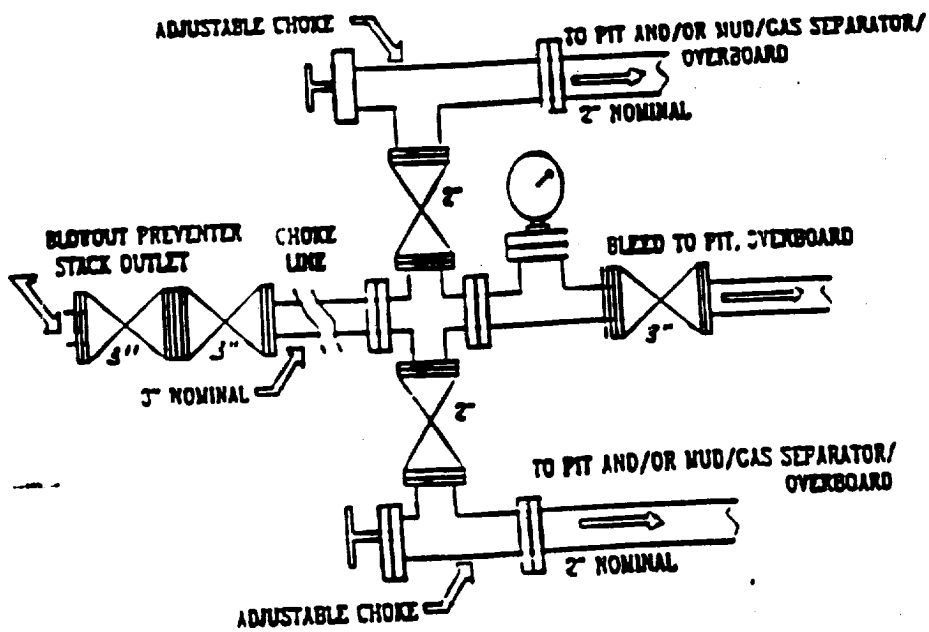
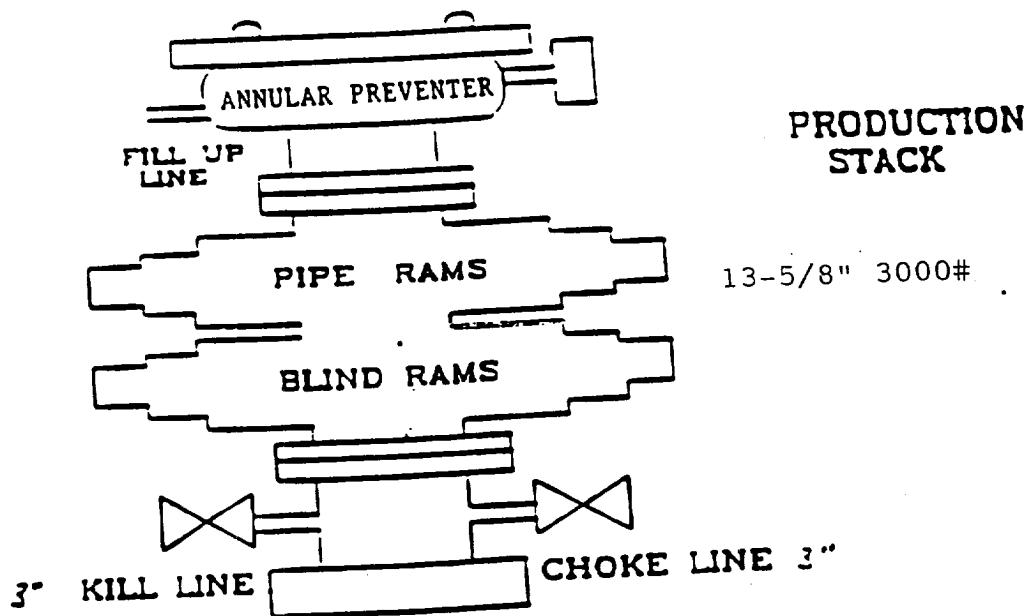
Anticipated Starting Date: As soon as possible.

Duration of Well: Drilling-- 20 days completion- 10 days.



- ◆ H2S Detection Equipment
- ↗ Wind Direction Indicator
- Self Contained Breathing Equipment
- ⊗ Briefing Area





MARATHON OIL COMPANY

H2S DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All contractors and subcontractors employed by Marathon Oil Company will receive or have received training from a qualified instructor within the last twelve months in the following areas prior to commencing drilling operations on this well.

1. The hazards and characteristics of hydrogen sulfide (H₂S)
2. Safety precautions
3. Operations of safety equipment and life support systems

In addition, contractor supervisory personnel will be trained or prepared in the following areas:

1. The effect of H₂S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-down procedures when drilling or reworking a well, blowout prevention and well control procedures, if the nature of work performed involves these items.
3. The contents and requirements of the contingency plan when such plan is required.

All personnel will be required to carry documentation of the above training on their person.

II. H2S EQUIPMENT AND SYSTEMS

1. Safety Equipment

The following safety equipment will be on location.

- A. Wind direction indicators as seen in attached diagram.
- B. Automatic H₂S detection alarm equipment (both audio and visual).
- C. Clearly visible warning signs as seen on the attached diagram. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.
- D. Protective breathing equipment will be located in the dog house and at briefing areas as seen in the attached diagram.

2. WELL CONTROL SYSTEMS

A. Blowout Prevention Equipment

Equipment includes but is not limited to:

- a. pipe rams to accomodate all pipe sizes
- b. blind rams
- c. choke manifold
- d. closing unit

Auxillary equipment added as appropriate includes:

- a. annular preventor ✓
- b. rotating head ✓
- c. mud- gas separator ✓
- d. flare line and means of ignition ✓
- e. remote operated choke ✓

B. Communication

The rig contractor will be required to have two-way communication capability. Marathon Oil Company will have either land-line or mobile telephone capabilities.

C. Mud Program

The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight, safe drilling practices, and the use of H₂S scavengers when appropriate will minimize hazards when penetrating H₂S bearing zones.

D. Drill Stem Test intervals are as follows:

DST No. 1	_____ ft. to _____ ft.
DST No. 2	_____ ft. to _____ ft.
DST No. 3	_____ ft. to _____ ft.

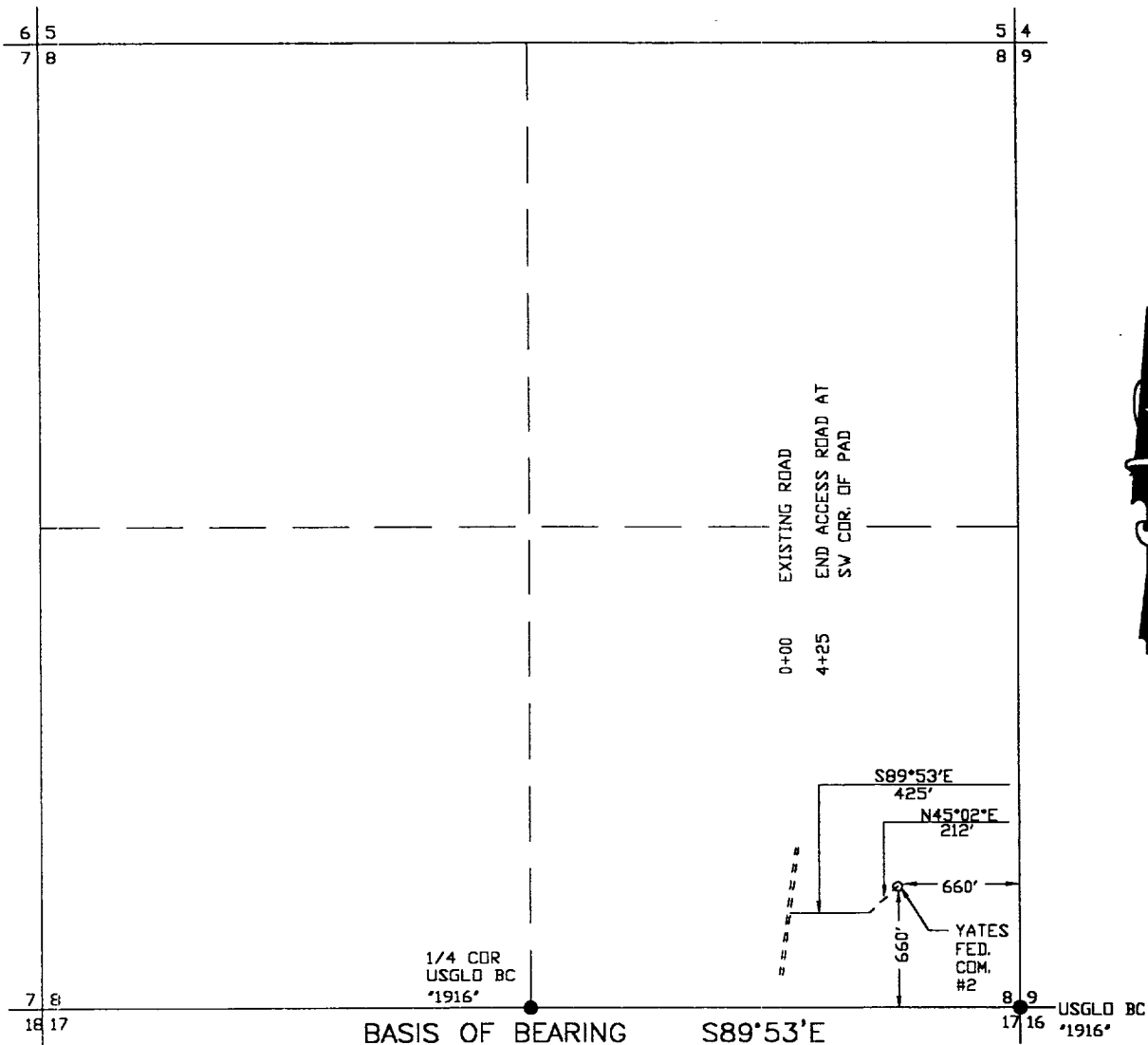
Drill Stem Testing Safety Rules are attached.

III. WELL SITE DIAGRAM

A complete well site diagram including the following information is attached.

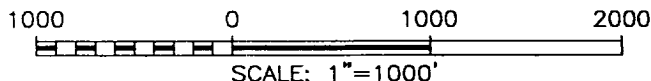
1. Rig orientation
2. Terrain
3. Briefing areas
4. Ingress and egress
5. Pits and flare lines
6. Caution and danger signs
7. Wind indicators and prevailing wind direction

SECTION 8, TOWNSHIP 20 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE 425 FEET OR 0.081 MILES IN LENGTH AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE CENTERLINE SURVEY.



I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

Ronald J. Eidson 02/07/01

RONALD J. EIDSON, N.M. P.S. No. 3239
 GARY G. EIDSON, N.M. P.S. No. 12641

JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO - HOBBS, NEW MEXICO - 505-393-3117

MARATHON OIL COMPANY

SURVEY OF AN ACCESS ROAD TO THE YATES FEDERAL COM. #2, LOCATED IN SECTION 8 TOWNSHIP 20 SOUTH, RANGE 29 EAST EDDY COUNTY, NEW MEXICO

Survey Date: 02/01/01	Sheet 1 of 1 Sheets
W.O. Number: 01-11-0177	Drawn By: A.W.B.
Date: 02/6/01	DISK: 0177
MARA0177	Scale: 1"=1000'