

N.M. Oil Cons. Com. - Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

SUBMIT IN TRIPlicate

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

C/SF

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

3. ADDRESS AND TELEPHONE NO.

P.O. Box 552 Midland, TX 79702

915-687-8257

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

At surface

2310' FNL & 1980' FEL

At proposed prod. zone

Same as above

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

15 miles SW of Carlsbad

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest dir. unit line, if any) 1980' FEL

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT. 1658'

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED TO THIS WELL

320 E/2

19. PROPOSED DEPTH

9900' 8600'

20. ROTARY OR CABLE TOOLS

Rotary

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

3928' G.L.

22. APPROX. DATE WORK WILL START*

ASAP

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8" K-55	36#	1200'	500 sks.
8-3/4"	7.0" K-55	23/26#	8600'-9900'	1280 Sks.

Marathon Oil Company requests this well be Re-permitted due to expiration of the APD.

This site is a Standard location for the Indian Basin Upper Penn, Indian Basin Morrow and Mississippian.

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.

SIGNED

Jerry Fletcher

TITLE Jerry Fletcher

DATE 8/16/02

(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/ Mary J. Rugwell

TITLE

FIELD MANAGER

DATE

SEP 23 2002

APPROVAL FOR 1 YEAR

*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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Marathon Oil Company

3a. Address

P.O. Box 552 Midland, TX 79702

3b. Phone No. (include area code)

915-687-8360

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Section 35 T-21-S R-23-E

2310' FNL & 1980' FEL

5. Lease Serial No.

NM-06953

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Federal "C" 35 # 4

9. API Well No.

30-015-31828

10. Field and Pool, or Exploratory Area

Indian Basin Upper Penn.

Assoc.

11. County or Parish, State

Eddy

N.M.

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☒ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☐ Other

Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Marathon Oil Company is not planning to drill to the Morrow and Mississippian test as previously shown on the Re-submitted APD dated 8/16/02.

We plan to drill to the Upper Penn. Associated Pool only, to a total depth of 8600'.

The Upper Penn. is a Standard location.

Casing sizes and weights remain the same. Cement program will be modified accordingly to depth.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Jerry Fletcher

Title

Engineer Tech.

Date 9/04/02

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ Mary J. Rugwell

Title

FIELD MANAGER

Date

SEP 23 2002

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, 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.

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

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

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

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

State of New Mexico

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-31828	Pool Code 79040	Pool Name Indian Basin Upper Penn. Assoc.
Property Code	Property Name FEDERAL "C" 35	Well Number 4
OGRID No. 14021	Operator Name MARATHON OIL COMPANY	Elevation 3928'

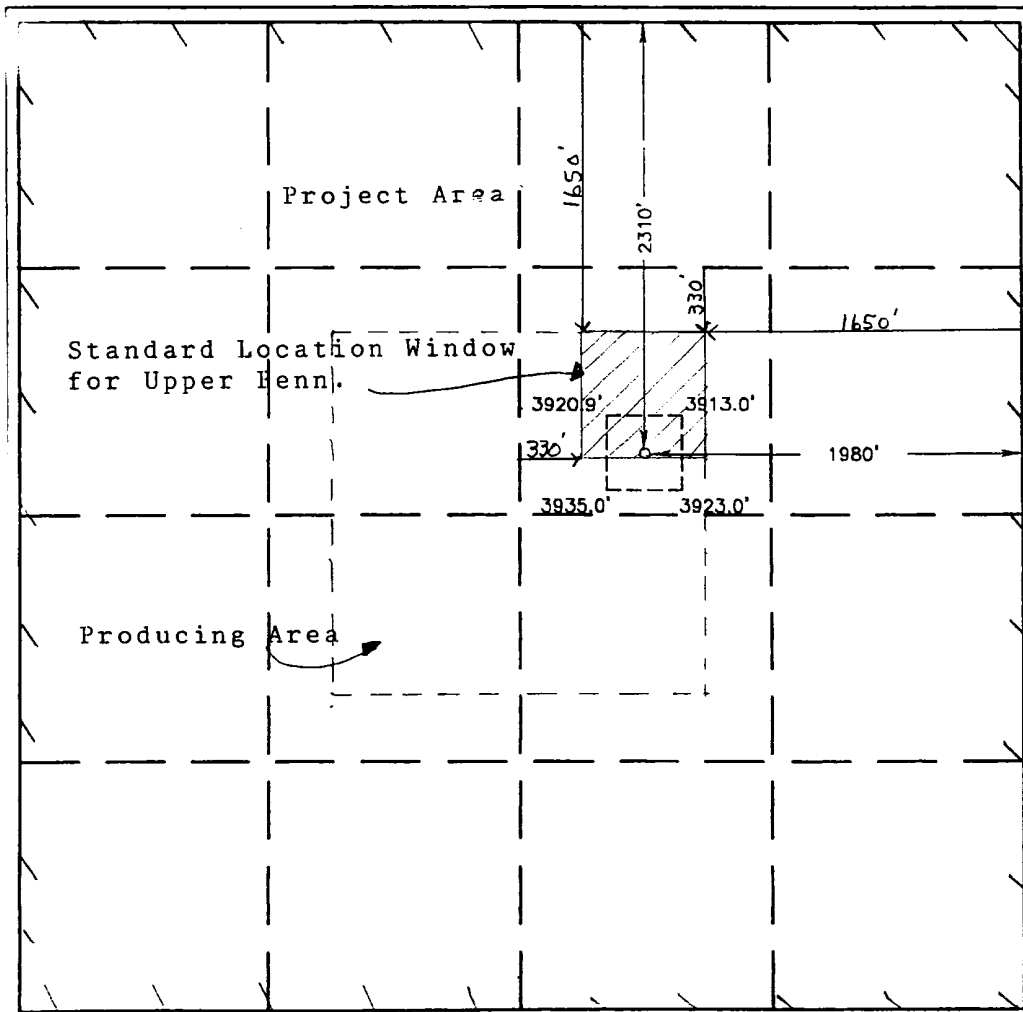
Surface Location

UL or lot No. G	Section 35	Township 21-S	Range 23-E	Lot Idn	Feet from the 2310	North/South line NORTH	Feet from the 1980	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
Dedicated Acres 640.320	Joint or Infill E12	Consolidation Code	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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Jerry Fletcher</u> Signature</p> <p><u>Jerry Fletcher</u> Printed Name</p> <p><u>Engineer Tech.</u> Title</p> <p><u>12/04/01</u> Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p><u>JUNE 20, 2001</u> Date Surveyed</p> <p><u>AWB</u> Signature & Seal of Professional Surveyor</p> <p><u>Ronald J. Eidson 6/22/01</u> Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12841</p>
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WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-31828	Pool Code	Pool Name Mississippian (Wildcat)
Property Code	Property Name FEDERAL "C" 35	Well Number 4
OGRID No. 14021	Operator Name MARATHON OIL COMPANY	Elevation 3928'

Surface Location

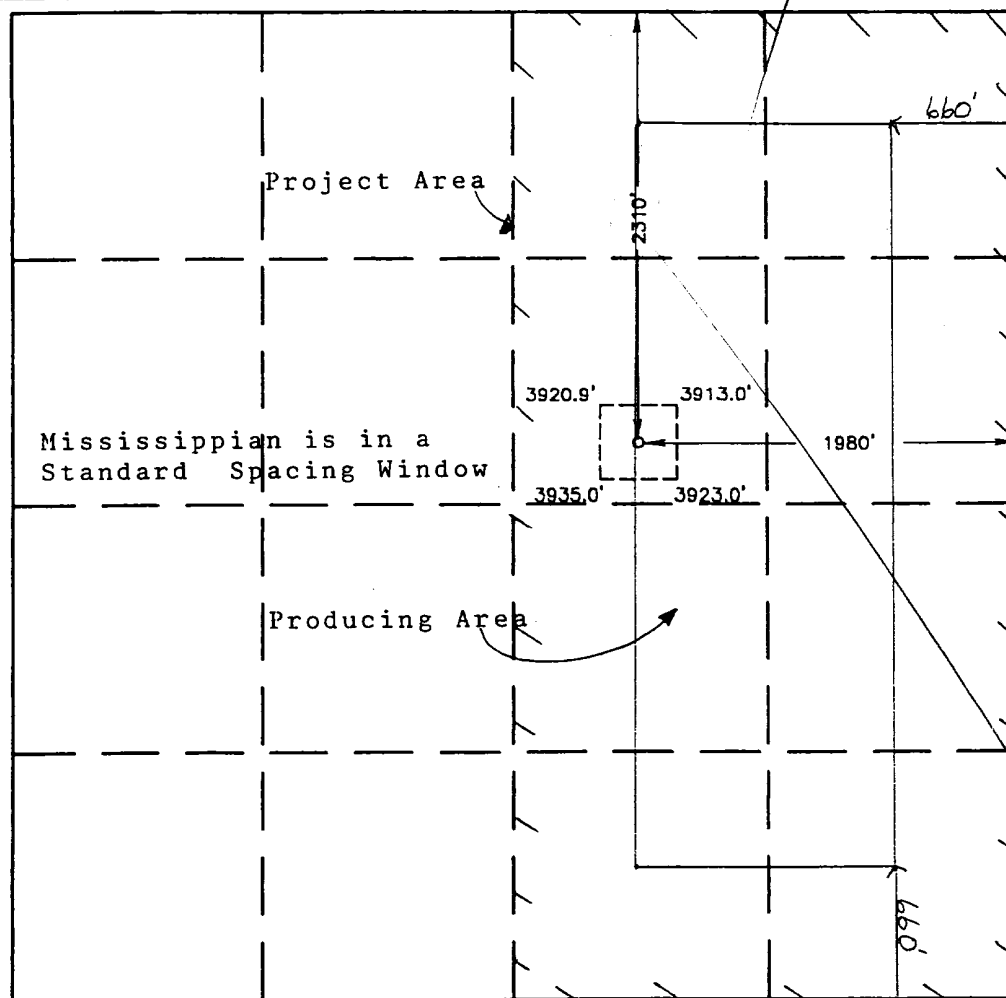
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	35	21-S	23-E		2310	NORTH	1980	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320 E/2			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
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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

12/04/01

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.

JUNE 20, 2001

Date Surveyed

AWB

Signature & Seal of
Professional Surveyor

Ronald G. Edson 6/22/01
01-11-0782

Certificate No. RONALD G. EDSON 3239
GARY EDSON 12641

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Form C-102
Revised February 10, 1994
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WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 078960	Pool Name Indian Basin Morrow
Property Code 16957	Property Name FEDERAL "C" 35	Well Number 4
OGRID No. 014021	Operator Name MARATHON OIL COMPANY	Elevation 3928'

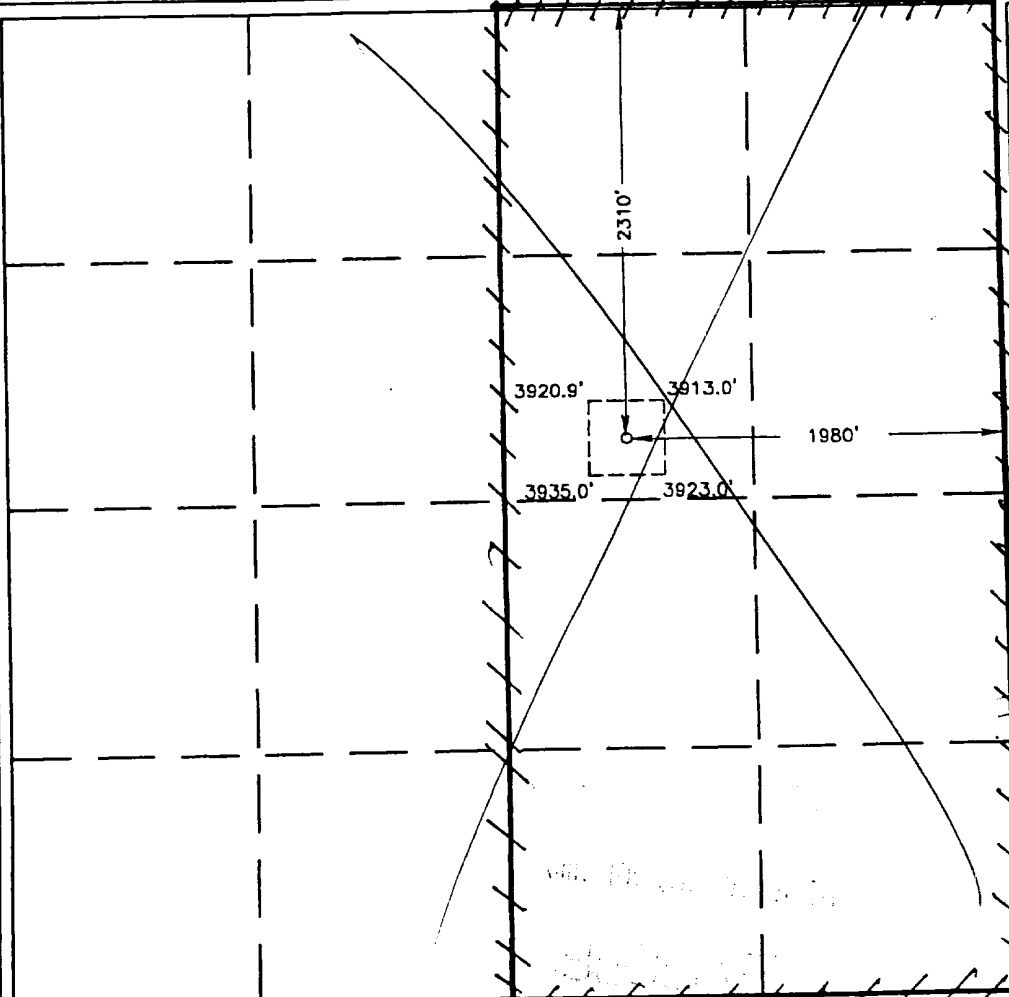
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	35	21-S	23-E		2310	NORTH	1980	EAST	EDDY

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
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No. R-8170-0-1/R-2441-B						

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. <u>Ginny Larke</u> Signature <u>Ginny Larke</u> Printed Name <u>Engineer Technician</u> Title <u>6/27/01</u> 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. <u>JUNE 20, 2001</u> Date Surveyed <u>[Signature]</u> <u>AWB</u> Signature & Seal of Professional Surveyor <u>RONALD F. EIDSON</u> Certificate No. <u>3239</u> <u>GARY EIDSON</u> 12641

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

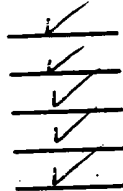
A. Blowout Prevention Equipment

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.

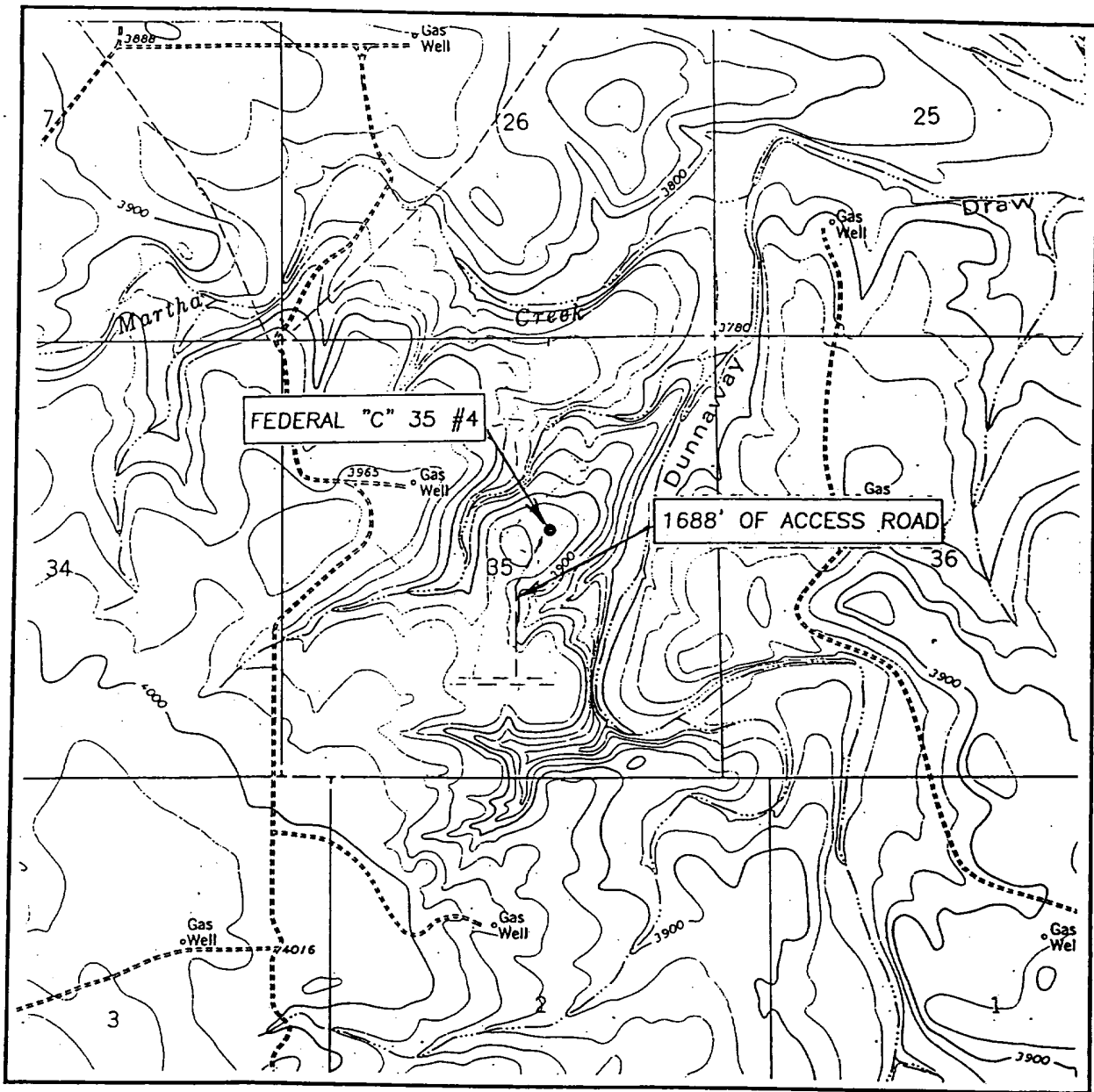
Drill Stem Testing Safety Rules are attached.

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 20'
MARTHA CREEK N.M.

SEC. 35 TWP. 21-S RGE. 23-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 2310' FNL & 1980' FEL

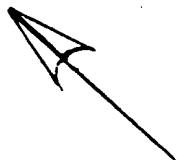
ELEVATION 3928'

OPERATOR MARATHON OIL COMPANY

LEASE FEDERAL "C" 35

U.S.G.S. TOPOGRAPHIC MAP
MARTHA CREEK N.M.

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

Foot-path for emergency
approach

A detailed topographic map of a region in New Mexico, showing a grid of sections numbered 1 through 36. The map includes geographical features such as 'SINKHOLE FLAT', 'CANYON', 'DRAIN', 'WATERSHED', and 'CONE BUTTE'. A central box is labeled 'FEDERAL "C" 35 #4'. The map is bounded by 'R. 22 E.', 'R. 23 E.', 'R. 24 E.', 'T. 20 N.', and 'T. 21 N.'.

SEC. 35 TWP. 21-S RGE. 23-E
SURVEY _____ N.M.P.M. _____
COUNTY _____ EDDY _____
DESCRIPTION 2310' FNL & 1980' FEL
ELEVATION 3928'
OPERATOR MARATHON OIL COMPANY
LEASE FEDERAL "C" 35

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

Thirteen Point Surface Use Plan
MARATHON OIL COMPANY

Federal "C" 35 # 4
Sec. 35, T-21-S, R-23-E
Eddy County, New Mexico

1. Existing Roads: Refer to Vicinity Lease Map.

- a. The proposed well site is staked and the surveyor's plat is attached.
- b. To reach the location from Carlsbad, New Mexico: Follow Hwy. 285 North of Carlsbad 11 miles. Turn left on (NM)137. Go 6 miles West. Turn right on Marathon Road (401). Follow (401) 5.2 miles, turn South on wide caliche road, follow .8 mile, turn East follow .5 mile, take Right "Y" follow 1.9 miles to the Federal "C" 35 # 2 access road on left. Follow access road East .3 mile to new access road on left, follow ½ mile to location.
- 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 and existing lease roads. Construction plans will require blading and rolling the road and pad. The access road enters the drilling pad on the Southeast corner. The drilling location will have the rig V-door facing Northwest.

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 and Santa Fe within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon and Santa Fe 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..
- 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: Indian Basin Gas Plant, NE/4 Sec. 23, T-21-S, R-23-E.
- b. The water will be transported by a trucking contractor or via Fas-line from an existing water well or other storage facility. If Fas-line is used it will be placed along existing roads and or

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Federal "C" 35 # 4

ROW's. No new construction will be required on/along the water route.

- c. No water well will be drilled on this location.

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 tool pusher.

9. Well site Layout:

- a. The well pad layout shows the drill site layout as staked. If any topsoil is present it 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).

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Federal "C" 35 # 4

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. Re-vegetation will be accomplished by planting mixed grasses as per formula provided by the BLM. Re-vegetation is recommended for road area, as well as around the drill pad.
- 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 the area will be flagged and fenced. Other cleanup will be done as needed. Planting and re-vegetation will be done between July 15 and September 15.
- f. All efforts will be made to minimize surface disturbances and protect the visual resources along the scenic byway.

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 well site 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 2 miles.
- e. General location: Approximately 15 miles Northwest of Carlsbad, New Mexico.
- f. Drainage: Internal
- g. Surface Owner: The surface is owned by the Bureau of Land Management.
- h. Due to proximity of the location and nearby drainage, Marathon will make every effort to minimize surface disturbance. Please see the location pad and reserve pit dimensions.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Federal "C" 35 # 4

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 drill site 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.

8/19/02

Date



R. J. Longmire

DRILLING PROGRAM
MARATHON OIL COMPANY
Federal "C" 35 # 4

1. Estimated KB Elevation: 3944' 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>	
Queen	Surface	+3944'	535'	+3409'	water
San Andres	535'	+3409'	2073'	+1871'	water
Glorietta	2073'	+1871'	2355'	+1720'	
Yeso	2220	+1720'	3710	+234'	
Bone Spring	3710'	+234'	5860	-1916'	oil gas
Tubb	5860	-1916'	6010'	-2066'	
Wolfcamp	6010'	-2066'	7385'	-3441'	oil gas
Cisco	7385'	-3441'	7550	-3659'	
Canyon	7550'	-3659'	8665'	-3944'	
Atoka	8665'	-3944'	8947'	-5003'	gas
Morrow	8947'	-5003'	9600'	-5807'	gas
Mississippian	9751'	-5807	9900'	-5956'	gas
T.D.	9900'	-5956'	9900'	-6009'	

<u>Formation</u>	<u>PSIG</u>	<u>PPG EMW</u>	<u>H2S PPM</u>	<u>(obj, marker, etc.)</u>
Bone Springs	1210	8.5	500	marker
Wolfcamp	1680	8.5	5000	marker
Morrow	3460	9.2	0	Objective Pay
Mississippian	3520	9.2	0	Test

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. 9-5/8" Surface: 11" 3M annular tested to 200 psi /2000 psi, 11" 3M dual rams, choke manifold and mud cross, tested to 300psi/3000psi

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 will be 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 drill string connections in use will be available on rig floor.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Federal "C" 35 # 4

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:

<u>---DEPTH---</u>	<u>SECTION</u>	<u>HOLE</u>	<u>CSG</u>	<u>WT.</u>	<u>THREADS</u>	<u>NEW</u>
<u>FROM TO</u>	<u>LENGTH</u>	<u>SIZE</u>	<u>SIZE</u>	<u>PPF</u>	<u>GRADE COUPLINGS</u>	<u>USED</u>
0 1200'	1200	12.25"	9-5/8"	36.00#	K-55 8rd, STC	New
0 4800'	4800'	8.750"	7.00"	23.00#	K-55 8rd, LT&C	New
4800' 9900'	5100 '	8.750"	7.00"	26.00#	K-55 8rd, LT&C	New

<u>Casing</u>	<u>DV</u>	<u>Lead</u>	<u>Amt</u>	<u>Type</u>	<u>Yield</u>	<u>Wt.</u>	<u>TOC</u>	<u>Additives</u>
<u>String</u>	<u>Depth</u>	<u>Stg.</u>	<u>Tail</u>	<u>SXS</u>	<u>Cement</u>	<u>CF/SX</u>	<u>PPG.</u>	
9.625"	none	1	L	350	"C"	2.02	12.4	surf. 5# /Sk.Gilsonite,2% Cacl1/4# cello
9.625"	none		T	150	"C Neat	1.34	14.8	800' 2% Cacl, 1/4# cello
7.0"	6300'	1	L	340	Prem.	1.44	13.0	5600' Foamers, N2
7.0"		2	L	840	Interfill "C"	2.47	11.9	1/4pps Cello,3pps Gilsonite,0.2% Halad 322
7.0		2	T	100	"C" Neat	1.32	14.8	6000' N/A

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
Federal "C" 35 # 4

Centralizer Program

9-5/8" Conventional centralizers. Bottom 3 joints and every fourth joint to surface.

7.0" Conventional centralizers middle of 1st joint, then every joint to 7500', and 1 cent. Every 4th joint thereafter to 9900'

5. Mud Program

<u>---DEPTH---</u>		<u>MUD TYPE</u>	<u>WEIGHT</u>		<u>WL</u>		<u>ADDITIVES</u>	<u>VISUAL</u> <u>MONTR.</u>
<u>FROM</u>	<u>TO</u>		<u>(PPG)</u>	<u>VIS</u>	<u>CC</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'	8200'	Cut Brine	9.0	32-36	>20		Gel, Starch, Caustic	Steel Pits
8200'	9900'	Cut Brine	9.0	32-36	> 20		Gel, Starch, Caustic	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.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Federal "C" 35 # 4

Duration of Well: drilling - 24 days, completion - 10 days.

ARCHAEOLOGICAL SURVEY CONSULTANTS
P.O. Box 2285
Roswell, New Mexico 88202-2285
Phone: 505-623-5012

Vendor No. A03601

Federal "C" 35 Well
No. 4 Relocation &
Access Road R/W

ASC Job 01-098

Date: 7/06/2001

Jerry Fletcher
Marathon Oil Company
P.O. Box 552
Midland, Texas 79702

Dear Jerry:

Enclosed please find ASC Report 01-098, covering the archaeological survey of the Federal "C" 35 Well No. 4 Relocation, and Access Road R/W.

Three Isolated Finds, including a projectile point, occurred; since the finds are not significant past the level of recording and collection (of the projectile point), we have recommended archaeological **CLEARANCE** for the well pad and access road R/W.

Copies of the report have been distributed as per the list on the title page, and you need not concern yourself with distribution to those agencies.

Also enclosed please find ASC Invoice 01-098, for performance of the survey.

We are pleased to have been of service with this project, and hope to assist you in the future. Should you have questions concerning the project, please call our office.

Sincerely,



D.M. Griffiths
Principal Investigator

enclosure: report (1); invoice (1)

cc: ASC File 01-098 (1)

ARCHAEOLOGICAL SURVEY of the MARATHON OIL COMPANY
FEDERAL "C" 35 WELL NO. 4 RELOCATION and ACCESS ROAD R/W,
T21S, R23E, SECTION 35 (SW $\frac{1}{4}$ NE $\frac{1}{4}$)
[2310 FNL, 1980 FEL]. EDDY COUNTY, NEW MEXICO

FEDERAL LAND SURFACE
[U.S.G.S. 7.5 minute series, MARTHA CREEK, NEW MEXICO, 1978]

ASC Report 01-098 (NMCRIS #:)

by James V. Sciscenti, Project Archaeologist
and Dorothy M. Griffiths, Principal Investigator

ARCHAEOLOGICAL SURVEY CONSULTANTS
P.O. Box 2285, Roswell, New Mexico 88202-2285
[505] 623-5012

BUREAU OF LAND MANAGEMENT PERMIT NO.: 18-2920-01-Q
N.M. STATE LAND ANNUAL PERMIT NO.: NM-01-070

July 2, 2001

Prepared for:

Marathon Oil Company
P.O. Box 552
Midland, Texas 79702

Attention: Jerry Fletcher

Distribution:

Marathon Oil Company (1)
BLM - Carlsbad Field Office (2)
Sciscenti (1)

TITLE PAGE/ABSTRACT/NEGATIVE PROJECT REPORT FORM

CARLSBAD FIELD OFFICE

BLM/CFO

1. BLM Report #	2. (ACCEPTED) (REJECTED)	3. NMCRIS #:
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4. **Report Title:**
ARCHAEOLOGICAL SURVEY of the MARATHON OIL COMPANY FEDERAL "C" 35 WELL NO. 4
RELOCATION & ACCESS ROAD R/W. T21S, R23E, SECTION 35, SW $\frac{1}{4}$ NE $\frac{1}{4}$ [2310 FNL, 1980 FEL].
EDDY COUNTY, NEW MEXICO.
-
5. **Project Date (Fieldwork):** 6/23/2001 **6. Report Date:** 7/02/2001
-
7. **Consultant Name & Address:**
ARCHAEOLOGICAL SURVEY CONSULTANTS
P.O. Box 2285, Roswell, New Mexico 88202-2285. Phone: 505-623-5012.

Direct Charge: D.M. Griffiths and/or J.V. Sciscoenti
Project Archaeologist: D.M. Griffiths and/or J.V. Sciscoenti
Field Personnel Names: J.V. Sciscoenti; D.M. Griffiths; Louis Jaramillo
-
8. **A.S.C. PERMIT #:** 18-2920-01-Q **9. Consultant Report #:** ASC Report 01-098
-
10. **Sponsor Name, Address, & Phone Number:**
Individual Responsible: Jerry Fletcher
MARATHON OIL COMPANY,
P.O. Box 552, Midland, TX 79702; Phone: 1-800-351-1417
-
11. **For BLM Use Only.**
-
12. **ACREAGE.** Total Acres Surveyed: 7.63
Surface Ownership by Acres: Federal: 7.63 N.M. State: 0 Fee: 0
-
13. **Location (Maps attached):** a. State: New Mexico b. County: Eddy
c. BLM Field Office: Carlsbad d. Nearest Town: Seven Rivers
e. Well Pad Location: T21S, R23E, Section 35 (SW $\frac{1}{4}$ NE $\frac{1}{4}$).
Footages: 2310 FNL, 1980 FEL.
Access Road R/W Location: T21S, R23E, Section 35 (SW $\frac{1}{4}$ NE $\frac{1}{4}$; NW $\frac{1}{4}$ SE $\frac{1}{4}$; SW $\frac{1}{4}$ SE $\frac{1}{4}$).
f. Map Name(s): U.S.G.S. 7.5 minute series, MARTHA CREEK, NEW MEXICO, 1978 (32104-D5)
g. Impacted Block Area: 300 ft. square Surveyed Block Area: 400 ft. square.
Linear Impact Area: access road R/W (1650 ft. long 35 ft. wide).
Surveyed Linear Area: access road R/W (1650 ft. long x 100 ft. wide, with a 150 ft. sq. delta)
-
14. a. **Records Search:** ARMS & BLM records indicate the prior recording of LA 120388 within 0.25 miles of the project area; there are no closer previously recorded sites.
b. **Description of Undertaking:** intensive archaeological survey of the Marathon Oil Company Federal "C" 35 Well No. 4 Relocation & Access Road R/W. A well pad (400 ft. sq., 3.67 acres); and access road R/W (1650 ft. long x 100 ft. wide, with a 150 ft. sq. delta, 3.96 acres), with a total federal land surface of 7.63 acres was inspected for cultural remains.

TITLE PAGE/ABSTRACT/NEGATIVE PROJECT REPORT FORM
(continued)

BLM/CFO

- 14 c. **Environmental Setting:** situated in Indian Basin, ca. 800 ft. west of Dunnaway Draw, on the spine of a NNE trending ridge between Dunnaway Draw (to the east), and a north and NE trending tributary of Dunnaway Draw, ca. 500 ft. to 700 ft. west of the project area. The northern part of the access road and well pad are situated on the crest of the ridge, within an area marked by abundant limestone scree, and bedrock limestone outcrops, with very shallow soils. Shallow sandy loam overlays bedrock at a shallow depth; abundant limestone and caliche float occurs throughout the project area. Steep slopes occur to the NW, N, E and SE of the well pad & access road R/W, except in the southern part of the access road R/W. Soils: Ector stony loam complex. Vegetation: marginal Chihuahua Desert Scrub. Ground Visibility: 75% to 95%.

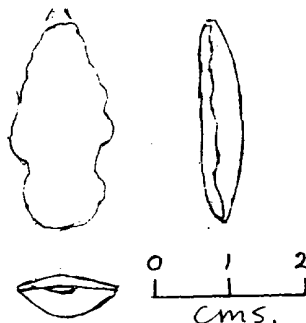
d. **Field Methods:** straight and zig-zag transects, spaced no greater than 15 metres apart, with dogleash transects in the vicinity of artifacts. **Work Hours on Ground:** 9.0. **Crew Size:** 3. **Artifacts Collected:** 1.

15. **Cultural Resource Findings:** archaeological survey of the Marathon Oil Company Federal "C" 35 Well No. 4 Relocation & Access Road R/W revealed the occurrence of 3 Isolated Finds, only 1 of which appears significant past the level of field recording. I.F. # 3, consisting of an arrowpoint, was collected for curation by the Museum of New Mexico.

I.F. # 1: T21S, R23E, Section 35 (SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$), Eddy Co., N.M. **Artifacts:** 2 metre diameter concentration of ca. 100 thumbnail-sized burnt caliche fragments; the feature is probably the result of a lightening strike.

I.F. # 2: T21S, R23E, Section 35 (SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$), Eddy Co., N.M. **Artifacts:** 1 dark gray chert, cortex platform, secondary flake, with use retouch on the distal end, dorsal face (2.5 x 3.3 x 1.2); ca. 9.5 metres ENE is 1 light gray chert, medial segment of a biface (2.5 x 2.9 x 0.5).

I.F. # 3: T21S, R23E, Section 35 (NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$), Eddy Co., N.M. **Artifacts:** 1 gray chert, bifacially pressure flaked, side-notched projectile point, possibly "Type 10-B" (Leslie 1978: Fig. 21), dated to late Hueco Phase (A.D. 900 - A.D. 1000). Measurements: (overall length, 2.7 cms. +; width at the shoulders, 1.25 cms.; blade length, 1.9+ cms.; stem length, 1.1 cms.; thickness, 0.5 cms.).



16. **Management Summary & Recommendations:** since the Isolated Finds do not appear significant past the level of recording (or collection), archaeological **CLEARANCE** for the Marathon Oil Company Federal "C" 35 Well No. 4 Relocation and Access Road R/W is **RECOMMENDED**, without proviso.

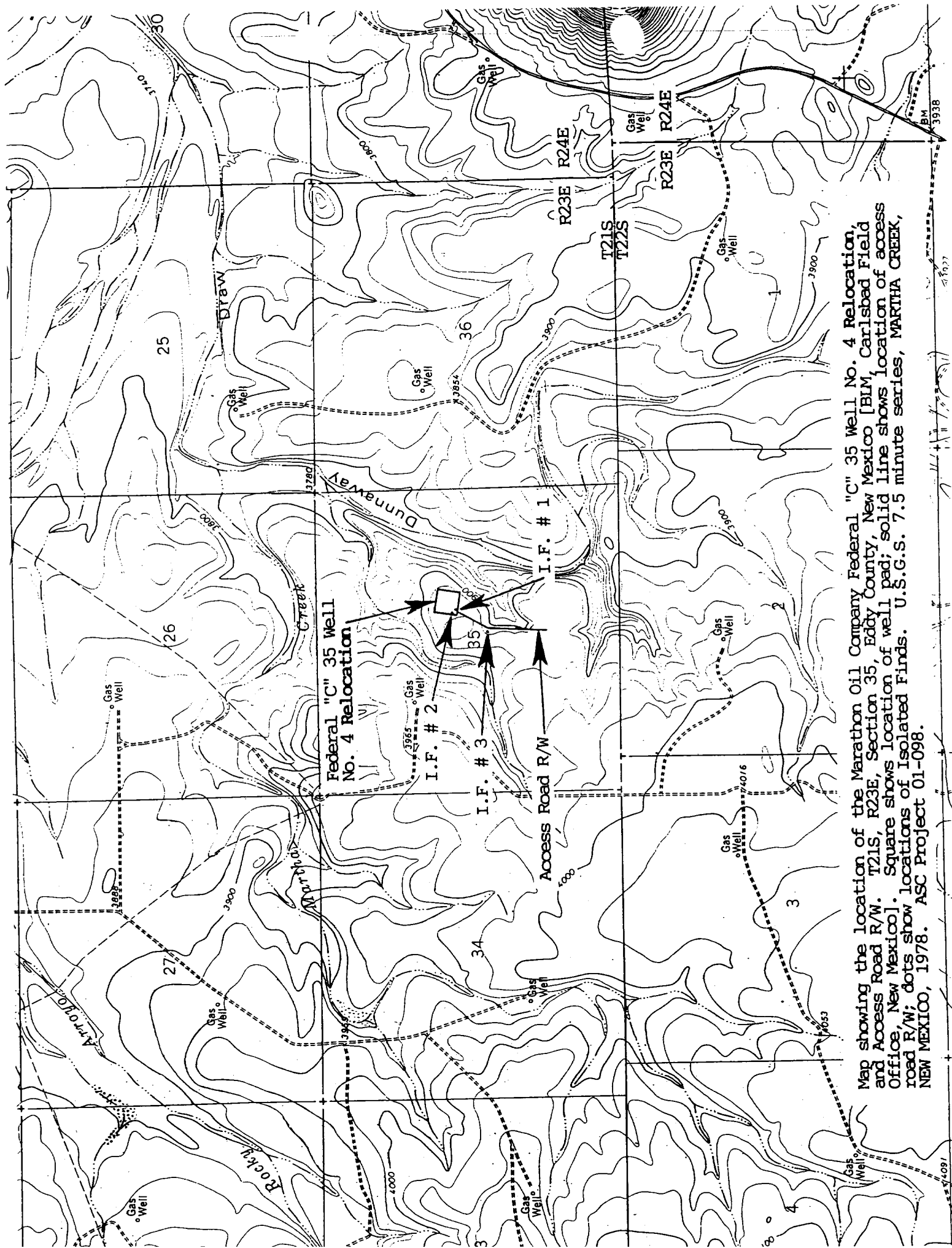
I certify that the information provided above is correct and accurate, and meets all applicable BLM standards.

Project Archaeologist

D.M. Griffiths pp. J.V. Sciscienti, D.M. Griffiths

Principal Investigator

D.M. Griffiths



Map showing the location of the Marathon Oil Company Federal "C" 35 Well No. 4 Relocation, and Access Road R/W. T21S, R23E, Section 35, Eddy County, New Mexico [BIM, Carlsbad Field Office, New Mexico]. Square shows location of well pad; solid line shows location of access road R/W; dots show locations of Isolated Finds. U.S.G.S. 7.5 minute series, MARTHA CREEK, NEW MEXICO, 1978. ASC Project 01-098.