Form 3160-3
(July 1992)

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

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM 030482
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT AGREEMENT NAME: Indian Hills Unit

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME, WELL NO.: Indian Hills Unit 53

2. NAME OF OPERATOR: Marathon Oil Company

9. API WELL NO.: 30-015-32875

3. ADDRESS AND TELEPHONE NO.: P.O. Box 552 Midland, TX 79702 — 432-687-8360

10. FIELD AND POOL, OR WILDCAT: Indian Basin U.P. Associated

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1383' FNL & 1586' FWL
At proposed prod. zone: 2397' FSL & 2014' FWL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 28, T-21-S, R-24-E

SUBJECT TO LIKE APPROVAL BY STATE

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 15 miles NW of Carlsbad

12. COUNTY OR PARISH: Eddy — 13. STATE: N.M.

RECEIVED
JUL 2003
OCD - ARTESIA

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): P.P. 52'

16. NO. OF ACRES IN LEASE: 320

17. NO. OF ACRES ASSIGNED TO THIS WELL: 80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 24'

19. PROPOSED DEPTH: 8385'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF,RT, GR, etc.): G.L. 3702

22. APPROX. DATE WORK WILL START*: July 1,2003

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'	515 sks.
8-3/4"	7" K-55	23/26#	8385'	1280 sks.

Carlsbad Controlled Water Basin

Marathon Oil Company is proposing to drill a Directional well from the existing drilling pad of the Indian Hills Unit # 34.
The same drilling pit used to drill the IHU # 34 will be re-opened and used again. Pit contents will be stockpiled on liner material to prevent soil contamination.

This well will have a Non-Standard BHL. The BHL is too close to the outer boundary of the 320 acre South half proration unit of Section 28.

Baker directional plan is attached.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

H2S Contingency Plan on File

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 [signature] TITLE Engineer Tech. DATE 5/28/03

(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/ LESLIE A. THEISS TITLE FIELD MANAGER DATE JUL 03 2003

*See Instructions On Reverse Side

APPROVAL FOR 1 YEA

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.

SELF-CERTIFICATION STATEMENT FROM LESSEE/OPERATOR

SURFACE OWNER IDENTIFICATION

Federal or Indian Lease No. NM-06293

I hereby certify to the Authorized Officer of the Bureau of Land Management that I have reached one of the following agreements with the Surface Owner; or after failure of my good-faith effort to come to an agreement of any kind with the Surface Owner, have provided a bond and will provide evidence of service of such bond to the Surface Owner:

1) _____ I have a signed access agreement to enter the leased lands;

2) _____ I have a signed waiver from the surface owner;

3) X I have entered into an agreement regarding compensation to the surface owner for damages for loss of crops and tangible improvements.

4) _____ Because I have been unable to reach either 1), 2), or 3) with the surface owner, I have obtained a bond to cover loss of crops and damages to tangible improvements and served the surface owner with a copy of the bond.

Surface owner information: (if available after diligent effort)

Surface Owner Name: Stacy E. Biebelle (50% owner)

Surface Owner Address: 646 Queens Highway, Carlsbad, NM 88220

Surface Owner Phone Number: (505) 457-2360

Signed this 29th -- day of May -, 2003.

S.F. Millican on behalf of Marathon Oil Company

(Name of lessee/operator) Marathon Oil Company

I (Surface Owner) accept √ do not accept _____ the lessee or operator's Surface Owner Agreement under 1, 2, or 3 above.

Signed this 10th -- day of June -, 2003

(Signature of Surface Owner if an agreement has been reached)

Attachment 1

SELF-CERTIFICATION STATEMENT
FROM LESSEE/OPERATOR

SURFACE OWNER IDENTIFICATION

Federal or Indian Lease No. NM-06293

I hereby certify to the Authorized Officer of the Bureau of Land Management that I have reached one of the following agreements with the Surface Owner; or after failure of my good-faith effort to come to an agreement of any kind with the Surface Owner, have provided a bond and will provide evidence of service of such bond to the Surface Owner:

1) _____ I have a signed access agreement to enter the leased lands;

2) _____ I have a signed waiver from the surface owner;

3) X I have entered into an agreement regarding compensation to the surface owner for damages for loss of crops and tangible improvements.

4) _____ Because I have been unable to reach either 1), 2), or 3) with the surface owner, I have obtained a bond to cover loss of crops and damages to tangible improvements and served the surface owner with a copy of the bond.

Surface owner information: (if available after diligent effort)

Surface Owner Name: Skipworth H. Shafer (50% owner)

Surface Owner Address: 2927 Pecos Highway, Carlsbad, NM 88220

Surface Owner Phone Number: (505) 628-1939

Signed this 29th -- day of May -, 2003.

S.F. Millican on behalf of Marathon Oil Company

(Name of lessee/operator) Marathon Oil Company

I (Surface Owner) accept ✓ do not accept _____ the lessee or operator's Surface Owner Agreement under 1, 2, or 3 above.

Signed this 12th -- day of June -, 2003

Skipworth H. Shafer

(Signature of Surface Owner if an agreement has been reached)

Attachment 1

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., Aztec, 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	Pool Code	Pool Name
	33685	Indian Basin Upper Penn. Assoc.

Property Code	Property Name	Well Number
	INDIAN HILLS UNIT	53

OGRID No.	Operator Name	Elevation
14021	MARATHON OIL COMPANY	3702'

Surface Location

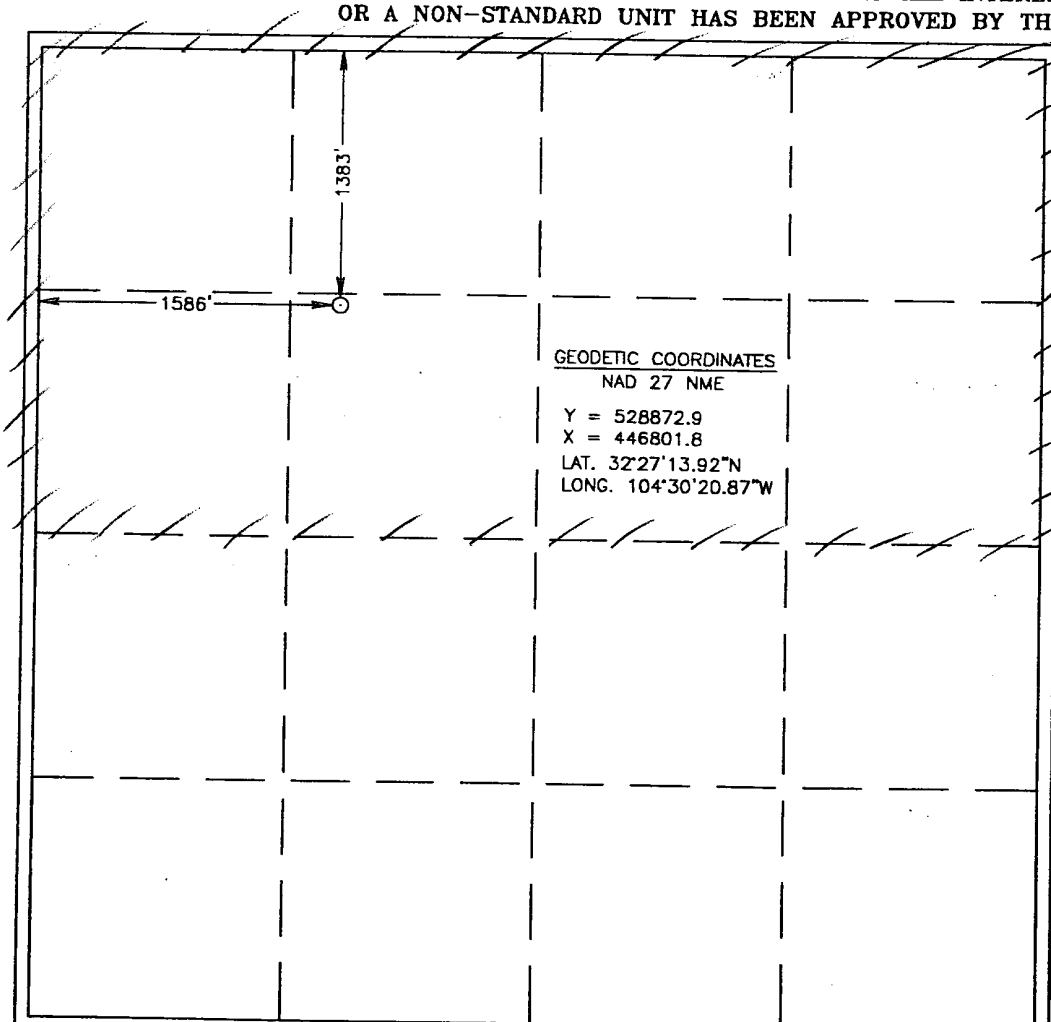
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	28	21-S	24-E		1383'	NORTH	1586'	WEST	EDDY

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 N/2			

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

5/28/03
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 supervison, and that the same is true and correct to the best of my belief.

May 20, 2003
Date Surveyed AWB

Signature & Seal of Professional Surveyor

Gary L. Eidson 5/23/03

03.11.0532

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

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., Aztec, 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	Pool Code	Pool Name
	33685	Indian Basin Upper Penn. Assoc.

Property Code	Property Name	Well Number
	INDIAN HILLS UNIT	53

OGRID No.	Operator Name	Elevation
14021	MARATHON OIL COMPANY	3702'

Surface Location

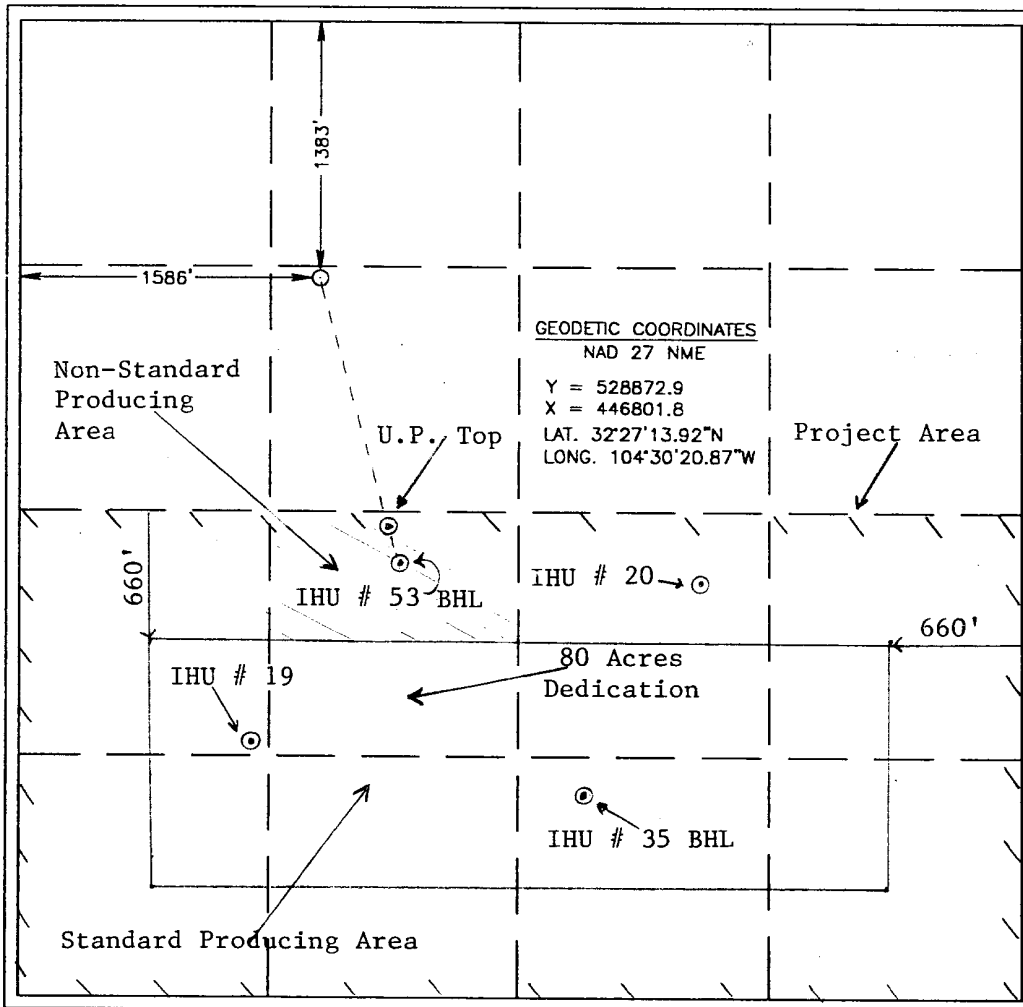
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	28	21-S	24-E		1383'	NORTH	1586'	WEST	EDDY

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
K	28	21-S			2397'	SOUTH	2014'	WEST	

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

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 Technician
Title

5/28/03
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 supervison, and that the same is true and correct to the best of my belief.

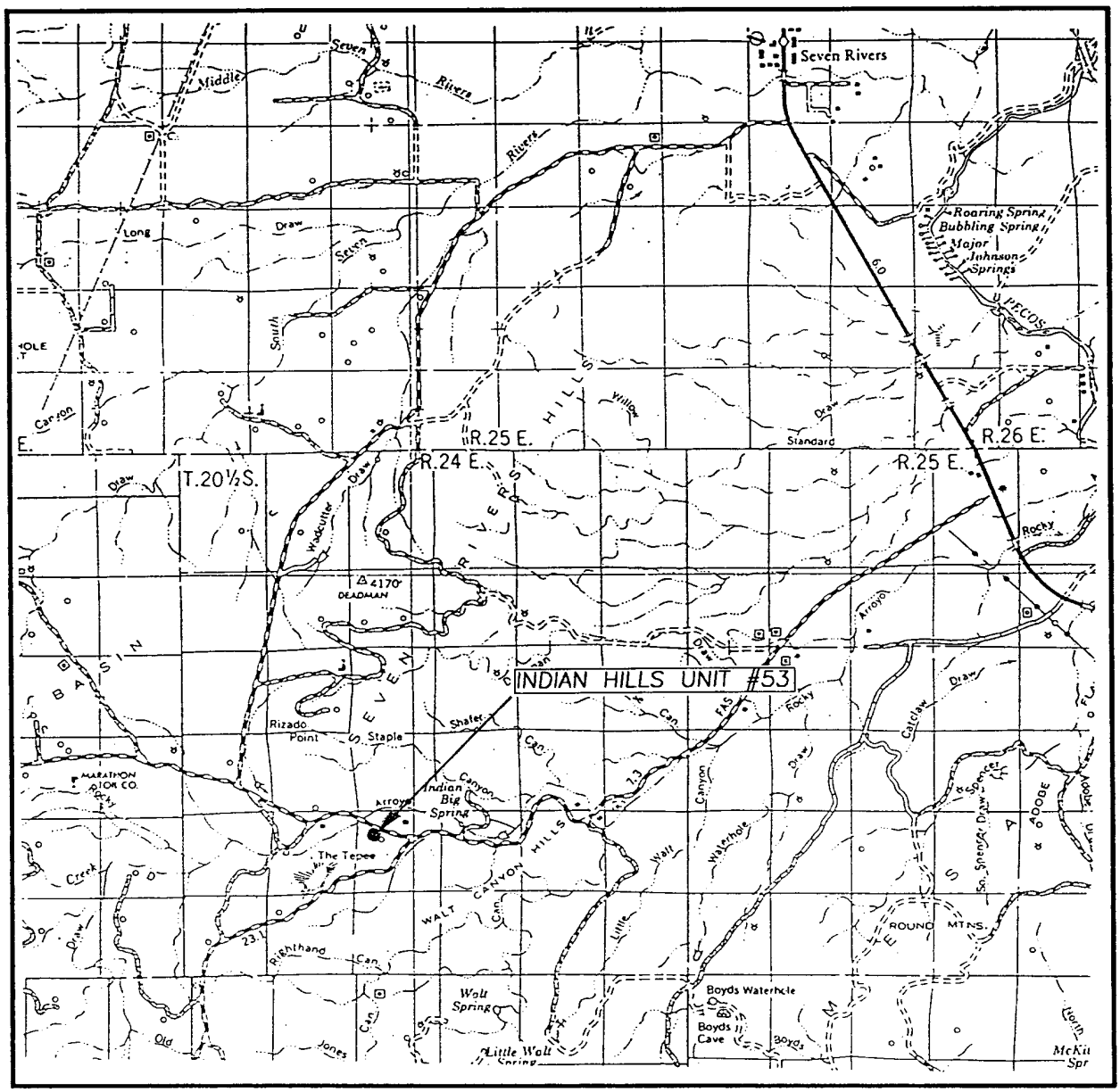
May 20, 2003
Date Surveyed AWB

Signature & Seal of Professional Surveyor

Gary G. Eidson 5/23/03
03.11.0532

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 28 TWP. 21-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1383' FNL 1586' FWL

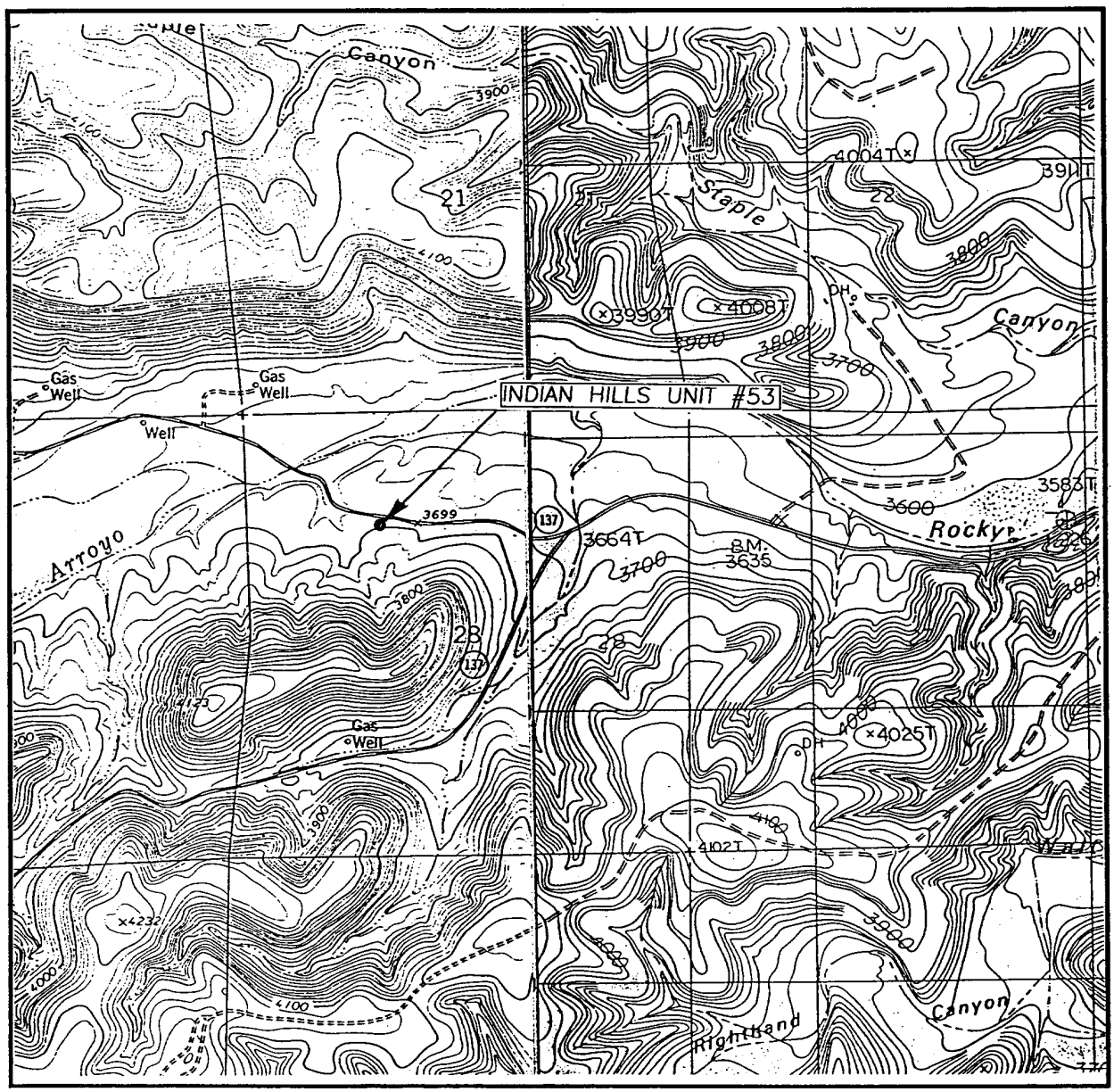
ELEVATION 3702'

OPERATOR MARATHON OIL COMPANY

LEASE INDIAN HILLS UNIT

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 20'
MARTHA CREEK, N.M.
AZOTEA PEAK, N.M.

SEC. 28 TWP. 21-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1383' FNL 1586' FWL

ELEVATION 3702'

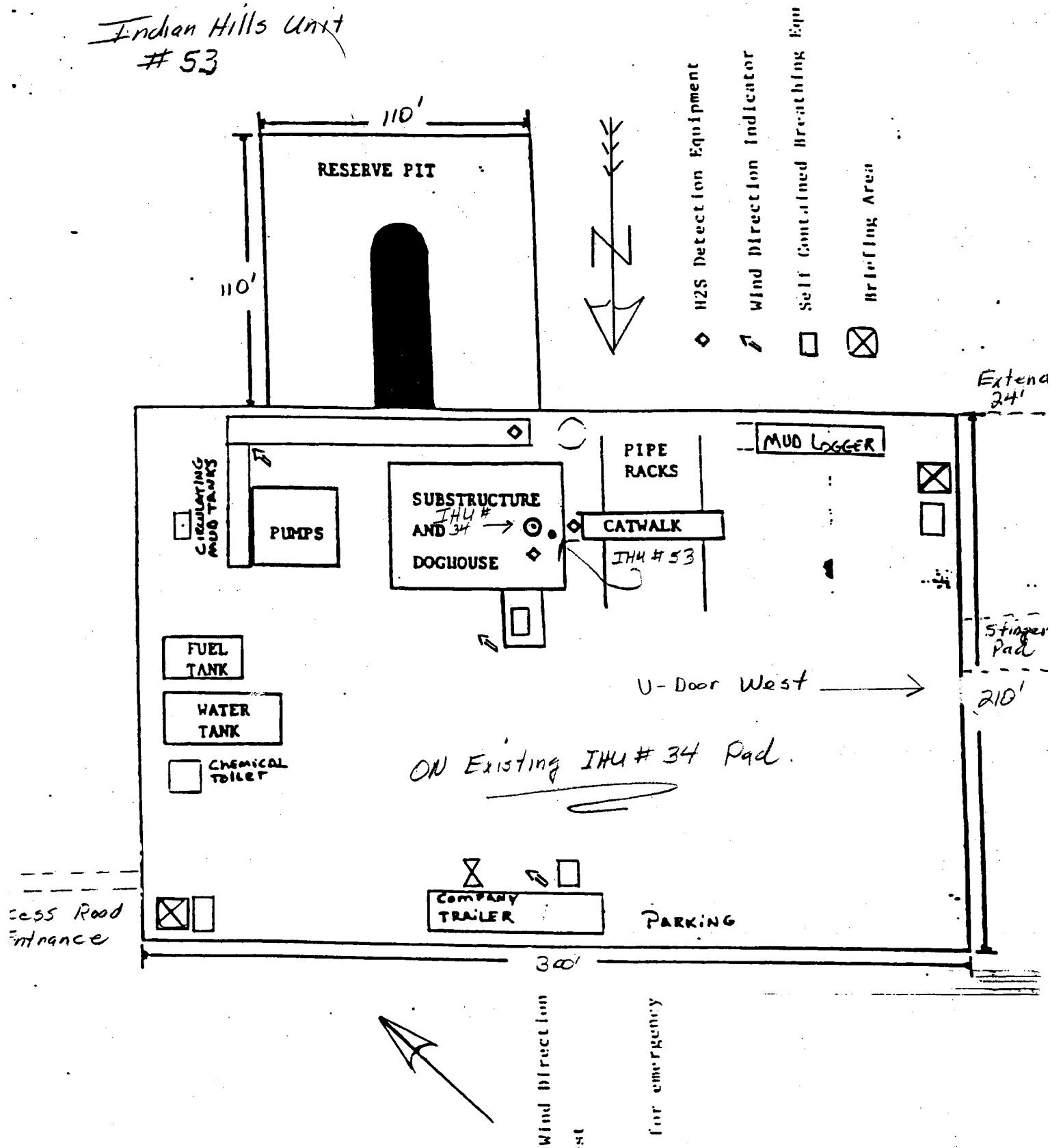
OPERATOR MARATHON OIL COMPANY

LEASE INDIAN HILLS UNIT

U.S.G.S. TOPOGRAPHIC MAP
MARTHA CREEK AZOTEA PEAK, N.M.

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

Indian Hills Unit #53



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

Exhibit "I"

Marathon Oil Company

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
(SPCC PLAN)

Marathon Oil Company has pollution prevention, good housekeeping, safety and fire prevention policies that are to be followed at all times. All company employees, contractors and subcontract personnel are to observe safe working practices and prevent pollution to the maximum extent possible.

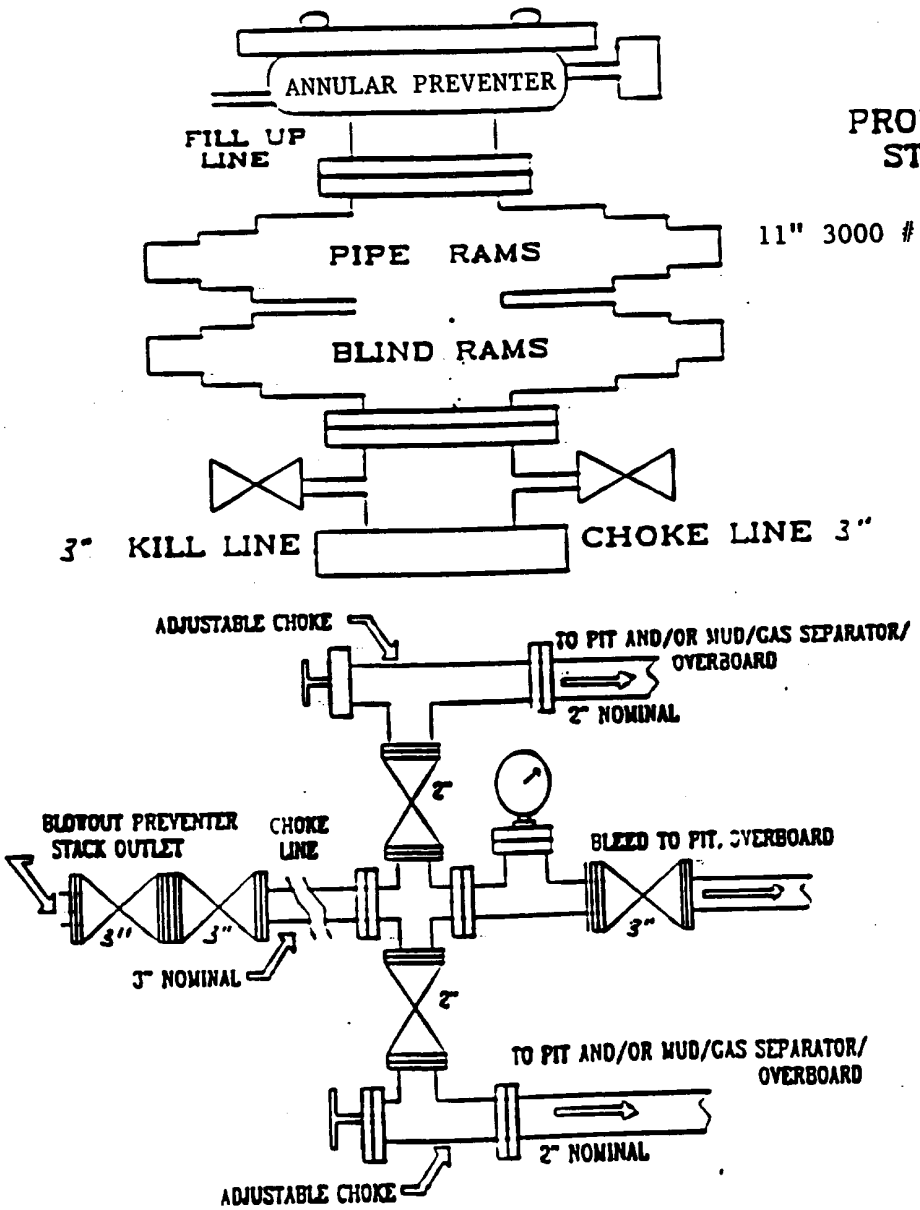
In the event of an emergency, spill, fire, explosion or blowout, personal injuries, property or equipment damage, call **MARATHON OIL COMPANY @ 915-559-9339**

Prior to drilling, certain measures should be taken:

1. Use impervious materials to build the location and the reserve pit.
2. Ditch the outline of the rig toward the reserve pit.
3. Place sumps on each end of the rig to catch any free oil or debris from entering the reserve pit.
4. Keep materials on location to contain or clean up spills (absorbent pads, shovels, etc).
5. Make known to Drilling Supervisors a list of spill response contractors available.
6. BOP testing shall be performed each time a casing string is set.
7. The Drilling contractor is required to have a certified SPCC plan for the Drilling rig.
8. Routine inspections of the operations shall be performed to ensure SPCC guidelines are followed.
9. Ensure all Marathon personnel are HAZWOPER trained in methods for stopping, controlling, and cleaning up any spills.

Spill control measures to be taken:

1. Shut down activities underway, as deemed necessary by the person in charge.
2. Determine the source of pollution and stop the discharge, if possible.
3. Isolate and contain the discharged materials, if possible.
4. Seek guidance from the Southern Region Emergency Action Plan.


ANNULAR PREVENTER
FILL UP LINE
PRODUCTION STACK
PIPE RAMS
11" 3000 #
BLIND RAMS
3" KILL LINE
CHOKE LINE 3"
ADJUSTABLE CHOKE
TO PIT AND/OR MUD/GAS SEPARATOR/ OVERBOARD
2" NOMINAL
2"
BLOWOUT PREVENTER STACK OUTLET
CHOKE LINE
BLEED TO PIT, OVERBOARD
3"
3" NOMINAL
2"
TO PIT AND/OR MUD/GAS SEPARATOR/ OVERBOARD
2" NOMINAL
ADJUSTABLE CHOKE

Thirteen Point Surface Use Plan
MARATHON OIL COMPANY

INDIAN HILLS UNIT #53
Sec. 28, T-21-S, R-24-E
SHL 1383' FNL * 1586' FWL
BHL 2014' FWL & 2397' FSL
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.
   NOTE: New location is staked on the existing drilling pad of the IHU # 34

   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. Follow 1.6 miles to access road on South side of county road, turn South follow lease road into 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.

   No new access road will be required. Using existing road into our # 128 facility. Construction plans will require blading and rolling the road and pad. The access road enters the drilling pad on the Northeast corner. The drilling location will have a V-door facing West.

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, Yates, and Devon within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon, Yates and Devon 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. We will utilize existing # 128 facility.

   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 and or via poly line from water stripper station. 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. 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. 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 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. Extra pad is need to the West side of the location, and an additional extension of the arch survey will be performed.

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 Patricia Shafer Life Estate Et AL.

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
Indian Hills Unit #53

12. Operator Representatives:
Tom Laylock
Drilling, Completion, & Workover Superintendent
P. O. Box 552
Midland, TX 79702
800/351-1417
915/687-8344 (Direct Line)

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.

5/29/03
Date

Tom Laylock

DRILLING PROGRAM
MARATHON OIL COMPANY
INDIAN HILLS UNIT #53

1. Estimated KB Elevation: KB= 3718' G.L.= 3702 Rig KB 16'

FORMATION	TOP MEASURED	TOP SUBSEA	BASE MEASURED	BASE SUBSEA	FLUID CONTENT
Queen	Surface	+3718'	800'	+2920'	water
San Andres	800'	+2920'	2405'	+1315'	water
Glorietta	2405'	+1315'	2535'	+1185'	
Yeso	2535'	+1185'	6580'	- 2680	
Bone Spring	6580'	-2680'	6700'	-2980'	oil gas
Wolfcamp	6700'	-2980'	7390'	-3670'	oil gas
B/Permian Shale	7390'.	-3670'	7550'	-3830'	
U. Penn	7550'	-3830'	8385'	-4667'	gas, oil, water

FORMATION	EST PSIG	SBHP PPG EMW	EST DEG f	SBHT PPM	H2S	SIGNIFICANCE (obj, marker, etc.)
Bone Springs	1210	8.5		500		marker
Wolfcamp	1680	9.0				marker
B/Permian Shale	1810	9.0				marker
U. Penn	2050	9.0		5000		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**

9-5/8" Surface/ 7" Intermediate 11" 3M annular tested to 300 PSI/3000 PSI, 11" 3M dual rams, choke manifold and mud cross, tested to 300 PSI/3000 PSI

Auxiliary Equipment:

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

Intermediate Hole: N/A

Production Hole: Flow indicator, PVT, H_2S Sensors, air packs, stroke counter, rotating head.

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and 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. Preventers and 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
Indian Hills Unit # 53

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:

---DEPTH--- FROM	TO	SECTION LENGTH	HOLE SIZE	CSG SIZE	WT. PPF	GRADE	THREADS COUPLINGS	NEW USED
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'	8385"	3585 '	8.750"	7.00"	26.00#	K-55	8rd, LT&C	New

Casing String	DV Depth	Stg.	Lead Tail	Amt SXS	Type Cement	Yield CF/SX	Wt. PPG.	TOC	Additives
9.625"	none	1	L	300	Foam Cmt.	1.78	11.2	100'.	
9.625"	none		T	140	"C Neat	1.35	14.8	900'	3% Cacl

NOTE: Pump 75 sks. Class "C" dn. Annulus W/ 3% CACL2, Yield: 1.35cf/sk, Density 14.8 ppg coverage, Surface To 100'.

7.0"	7800'	1	L	340	Prem.	1.44	13.0	5600'	Foamers, N2
7.0"		2	L	840	Interfill "C"	2.47	11.9	Surface	1/4pps Cello,3pps Gilsonite,0.2% Halad 322
7.0 "		2	T	100	"C" Neat	1.32	14.8	6000'	N/A

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit # 53

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

Centralizer Program:

9-5/8" Conventional centralizers middle of shoe joint, then every other joint to surface.
7-0" Conventional centralizers middle of shoe joint, then every other joint to above the Upper Penn.

5. Mud Program

---DEPTH---			WEIGHT		WL		VISUAL
FROM	TO	MUD TYPE	(PPG)	VIS	CC	ADDITIVES	MONTR.
0	1200'	fresh water	8.3	28	N/A	Gel, Lime	Reserve
1200'	5000'	fresh	8.5	28-32	N/C	Gel, caustic, H_2S Scavenger	Reserve
5000'	7000'	fresh	8.9	32-36	N/C	Gel, caustic, H_2S Scavenger	Reserve
7000'	8385'	fresh	8.9	32-36	<20	Gel, caustic, H_2S 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:

LOG/TEST/CORE/MUDLOG/OTHER	--INTERVAL- FROM	TO	REMARKS
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 H_2S in Cisco & Upper Penn. See H_2S Drilling Operations Plan.

8. Other Information:

Anticipated Starting Date: **Would like to spud the well in the first week of July 2003 to allow for a continuous drilling program.**

Duration of Well: drilling - 25 days, completion - 10 days.

Marathon Oil Company

Structure : Indian Hills Unit #53 Slot : slot #1

Field : INDIAN BASIN Location : Eddy County New Mexico

WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East	V. Sect	Deg/100
Tie on	0.00	0.00	164.55	0.00	0.00	0.00	0.00	0.00
KOP	2000.00	0.00	164.55	2000.00	0.00	0.00	0.00	0.00
End of Build	2604.74	15.12	164.55	2597.74	-79.45	21.14	79.52	2.50
Target TOP OF UPPER PE	7998.84	15.12	164.55	7419.00	-1331.90	368.20	1381.86	0.00
T.D. & End of Build	8323.94	15.12	164.55	8119.00	-1514.19	418.59	1570.98	0.00

Kick off Point = 0.00 Inc, 2000.00 Md, 2000.00 Tvd, 0.00 Vs

DLS: 2.50 deg per 100 ft

End of Build = 15.12 Inc, 2604.74 Md, 2597.74 Tvd, 79.52 Vs

TOP OF UPPER PENN
Target = 15.12 Inc, 7998.84 Md, 7419.00 Tvd, 1381.86 Vs

T.D. & End of Build = 15.12 Inc, 8323.94 Md, 8119.00 Tvd, 1570.98 Vs

V — True Vertical Depth (feet)

1600 2000 2400 2800 3200 3600 4000 4400 4800 5200 5600 6000 6400 6800 7200 7600 8000 8400

400 0 400 800 1200 1600 2000 2400 2800 3200

Vertical Section (feet) —>

Azimuth 164.55 with reference 0.00 N, 0.00 E from slot #1

N (GRID)

W E

S

27-May-2003 (source: BGGM)
Magnetic North is 8.97 degrees East of True North
GRID North is 0.09 degrees West of True North
To correct azimuth from True to GRID add 0.09 deg
To correct azimuth from Magnetic to GRID add 9.06 deg

STRUCTURE SET-UP REFERENCE

LAT : _____ N

LONG: _____ W

X= _____ Y= _____

PROJECTION: MERCATOR

Mercator Zone: _____

Spheroid Used: _____

Data Source: BGGM

Dip Angle: _____ deg

Field Strength: _____ nT

PROPOSED BHL
1570.98' ON AZI 164.55 DEGS
FROM SURFACE LOCATION
M.D: 8323.94' T.V.D: 8119.00'
S- 1514.19' E- 418.59'
X= 447220.39 Y= 527358.71

East (feet) —

0 200 400 600

Surface 0.00 N, 0.00 E

V.S. REF 164.55 DEGS AZI

TOP OF UPPER PENN
Target = 7419.00 Tvd, 1331.90 S, 368.20 E
X= 447170 Y= 527541

T.D. & End of Build = 8119.00 Tvd, 1514.19 S, 418.59 E

South (feet) —

0 200 400 600 800 1000 1200 1400 1600

BAKER HUGHES

INTEQ

Created By kellym
Date plotted : 27-May-2003
Plot Reference is PD 20J SM/OF
Coordinates are in feet reference slot #1.
True Vertical Depths are reference rotary table.
ihu53
--- Baker Hughes INTEQ ---

Marathon Oil Company
Indian Hills Unit #53

slot #1
INDIAN BASIN
Eddy County New Mexico

P R O P O S A L L I S T I N G

by
Baker Hughes INTEQ

Your ref : P0 2DJ SM/JF
Our ref : prop3862
License :

Date printed : 27-May-2003
Date created : 27-May-2003
Last revised : 27-May-2003

Field is centred on n32 30 0.000,w104 30 0
Structure is centred on 446801.800,528872.900,999.00000,N

Slot location is n32 27 13.917,w104 30 20.874
Slot Grid coordinates are N 528872.900, E 446801.800
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866

Reference North is Grid North

Marathon Oil Company
Indian Hills Unit #53,slot #1
INDIAN BASIN,Eddy County New Mexico

PROPOSAL LISTING Page 1
Your ref : P0 2DJ SM/JF
Last revised : 27-May-2003

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting	Northing	
0.00	0.00	164.55	0.00	0.00N	0.00E	0.00	0.00	446801.80	528872.90	
500.00	0.00	164.55	500.00	0.00N	0.00E	0.00	0.00	446801.80	528872.90	
1000.00	0.00	164.55	1000.00	0.00N	0.00E	0.00	0.00	446801.80	528872.90	
1500.00	0.00	164.55	1500.00	0.00N	0.00E	0.00	0.00	446801.80	528872.90	
2000.00	0.00	164.55	2000.00	0.00N	0.00E	0.00	0.00	446801.80	528872.90	
2100.00	2.50	164.55	2099.97	2.10S	0.58E	2.50	2.18	446802.38	528870.80	
2200.00	5.00	164.55	2199.75	8.41S	2.32E	2.50	8.72	446804.12	528864.49	
2300.00	7.50	164.55	2299.14	18.90S	5.22E	2.50	19.61	446807.02	528854.00	
2400.00	10.00	164.55	2397.97	33.56S	9.28E	2.50	34.82	446811.08	528839.34	
2500.00	12.50	164.55	2496.04	52.36S	14.48E	2.50	54.33	446816.28	528820.54	
2600.00	15.00	164.55	2593.17	75.27S	20.81E	2.50	78.09	446822.61	528797.63	
2604.74	15.12	164.55	2597.74	76.45S	21.14E	2.50	79.32	446822.94	528796.45	
3000.00	15.12	164.55	2979.33	175.82S	48.60E	0.00	182.41	446850.40	528697.08	
3500.00	15.12	164.55	3462.02	301.51S	83.35E	0.00	312.82	446885.15	528571.39	
4000.00	15.12	164.55	3944.72	427.20S	118.10E	0.00	443.23	446919.90	528445.70	
4500.00	15.12	164.55	4427.41	552.90S	152.85E	0.00	573.63	446954.65	528320.00	
5000.00	15.12	164.55	4910.10	678.59S	187.59E	0.00	704.04	446989.39	528194.31	
5500.00	15.12	164.55	5392.80	804.28S	222.34E	0.00	834.45	447024.14	528068.62	
6000.00	15.12	164.55	5875.49	929.97S	257.09E	0.00	964.86	447058.89	527942.93	
6500.00	15.12	164.55	6358.19	1055.67S	291.84E	0.00	1095.26	447093.64	527817.23	
7000.00	15.12	164.55	6840.88	1181.36S	326.58E	0.00	1225.67	447128.38	527691.54	
7500.00	15.12	164.55	7323.58	1307.05S	361.33E	0.00	1356.08	447163.13	527565.85	
7598.84	15.12	164.55	7419.00	1331.90S	368.20E	0.00	1381.86	447170.00	527541.00	Top of U.P.
8323.94	15.12	164.55	8119.00	1514.19S	418.59E	0.00	1570.98	447220.39	527358.71	Terminus

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 1570.98 on azimuth 164.55 degrees from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 164.55 degrees.
Grid is mercator - New Mexico East (3001).
Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
Presented by Baker Hughes INTEQ

Comments in wellpath

MD	TVD	Rectangular Coords.	Comment
7598.84	7419.00	1331.90S 368.20E	TOP OF UPPER PENN

Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
TOP OF UPPER PENN	447170.000,527541.000,0.00000	7419.00	1331.90S 368.20E	27-May-2003