

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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) 687-8360

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

At surface

1092' FNL & 1380' FEL

At proposed prod. zone

2620' FNL & 2538' FEL

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

15 miles SE of Carlsbad

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

(Also to nearest drile unit line, if any) BHL 2538'

18. DISTANCE FROM PROPOSED LOCATION*

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

*1912'

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

4162'

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#	1800'	640 sks.
8-3/4"	7" K-55	23# & 26#	8600'	1280 sks.

Marathon Oil Company is proposing to drill a directional Indian Basin Upper Penn. Associated Gas Pool well to 8600'.

The surface location of the well is on the same pad as the Indian Hills Unit # 25, previously drilled and completed to the Morrow.

The BHL is non Standard to the 660' setback line of the internal boundary of the Unit.

*The Indian Hills Unit # 25 BHL is 1912' from the proposed BHL of the Indian Hills Unit # 37. Directional plan is attached from Baker Inteq.

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

TITLE Engineer tech.

DATE September 05, 2002

(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:

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

APPROVED BY

/S/ JOE G. LARA

TITLE

FIELD MANAGER

DATE

OCT 30 2002

*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

DISTRICT I
P.O. Box 1960, Hobbs, NM 88241-1960

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

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

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

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

OIL CONSERVATION DIVISION
P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	33685	Indian Basin Upper Penn. Associated
Property Code	Property Name	Well Number
	INDIAN HILLS UNIT	37
OGRID No.	Operator Name	Elevation
14021	MARATHON OIL COMPANY	4161.7'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	20	21-S	24-E		1092'	NORTH	1380'	EAST	EDDY

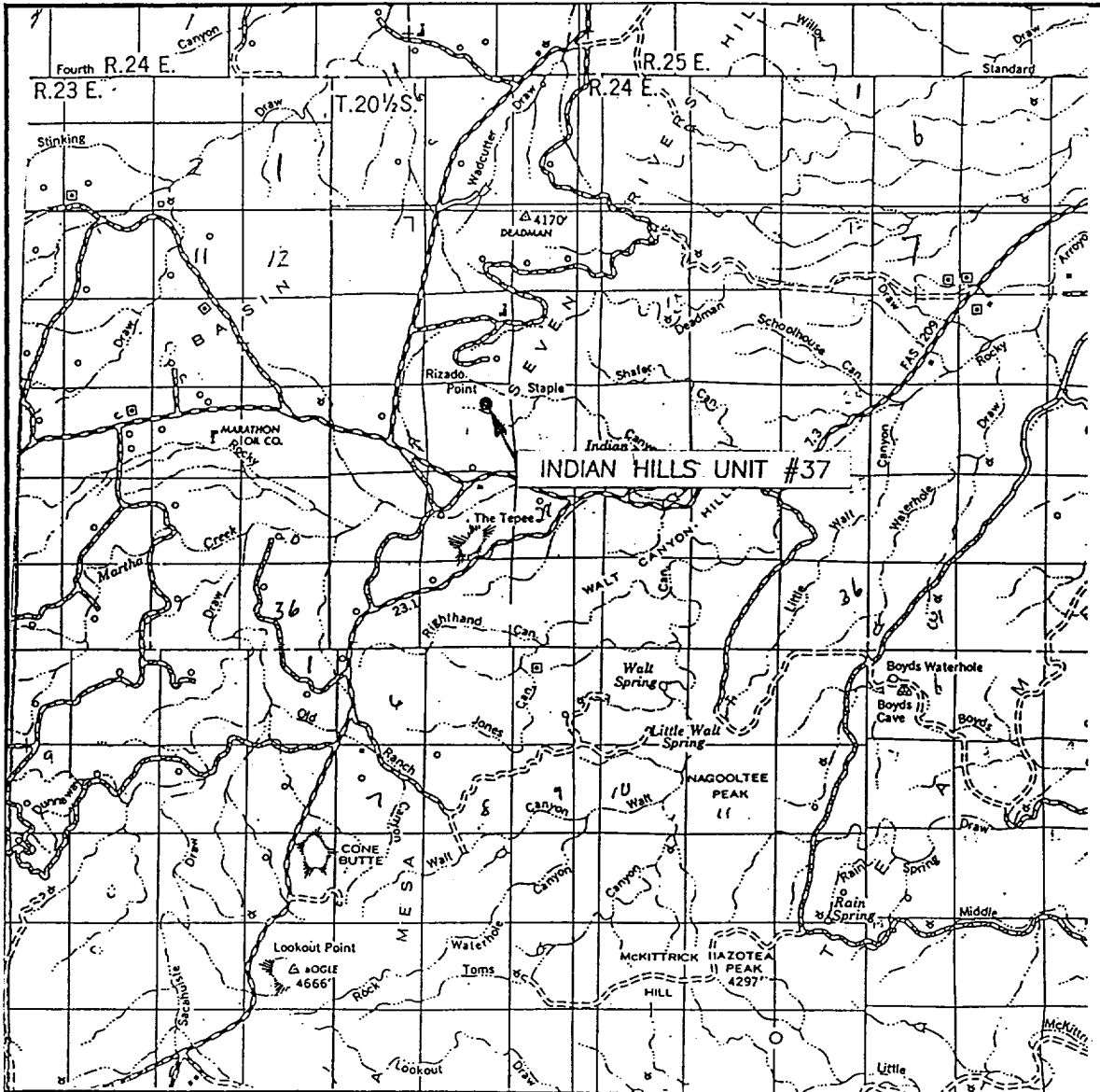
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
"G"	20	21-S	24-E		2620'	NORTH	2538'	EAST	EDDY
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
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 August 30, 2002 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. AUGUST 23, 2002 Date Surveyed Signature & Seal of Professional Surveyor Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 20 TWP. 21-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1092' FNL & 1380' FEL

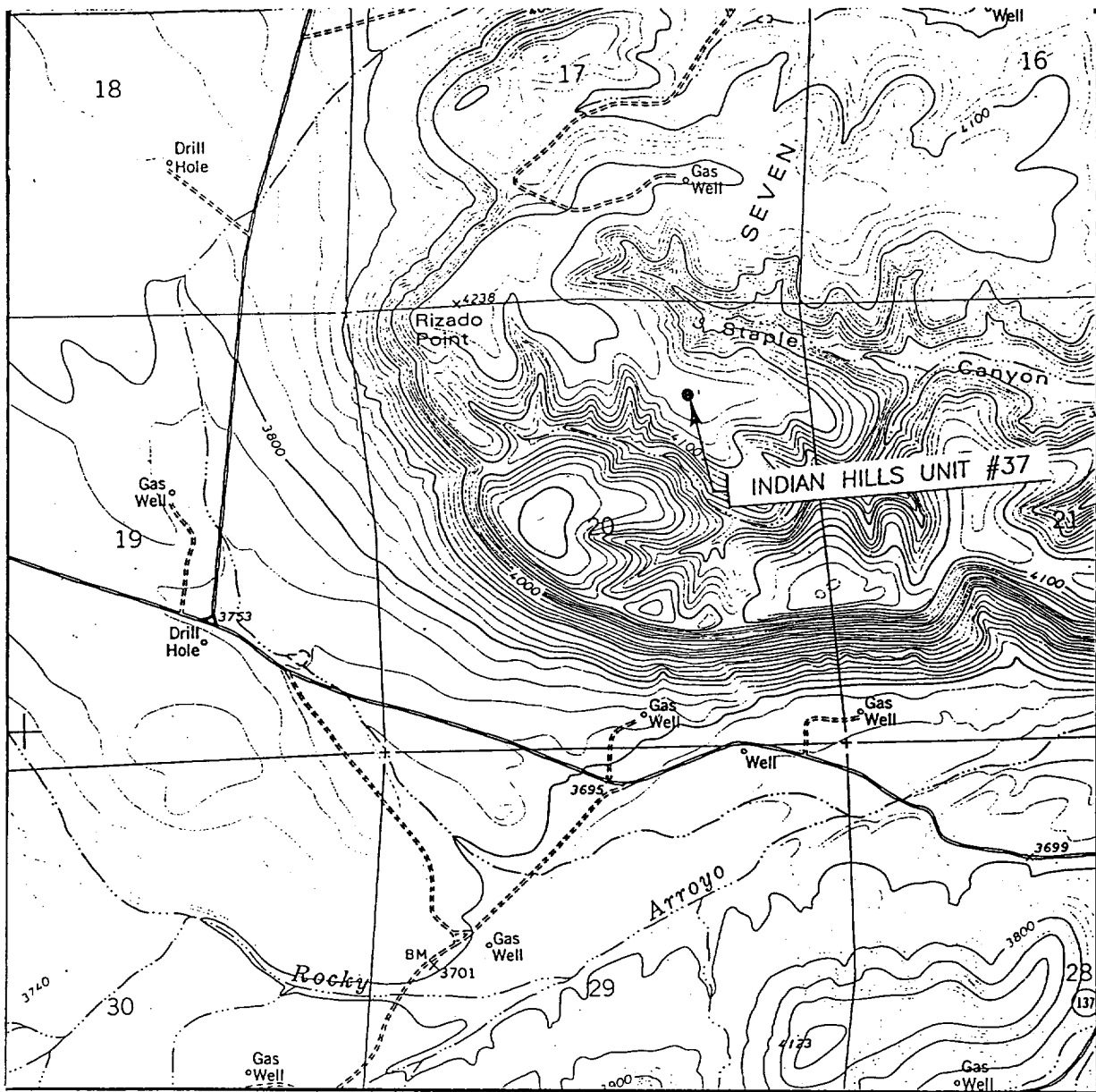
ELEVATION 4161.7'

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.

SEC. 20 TWP. 21-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1092' FNL & 1380' FEL

ELEVATION 4161.7'

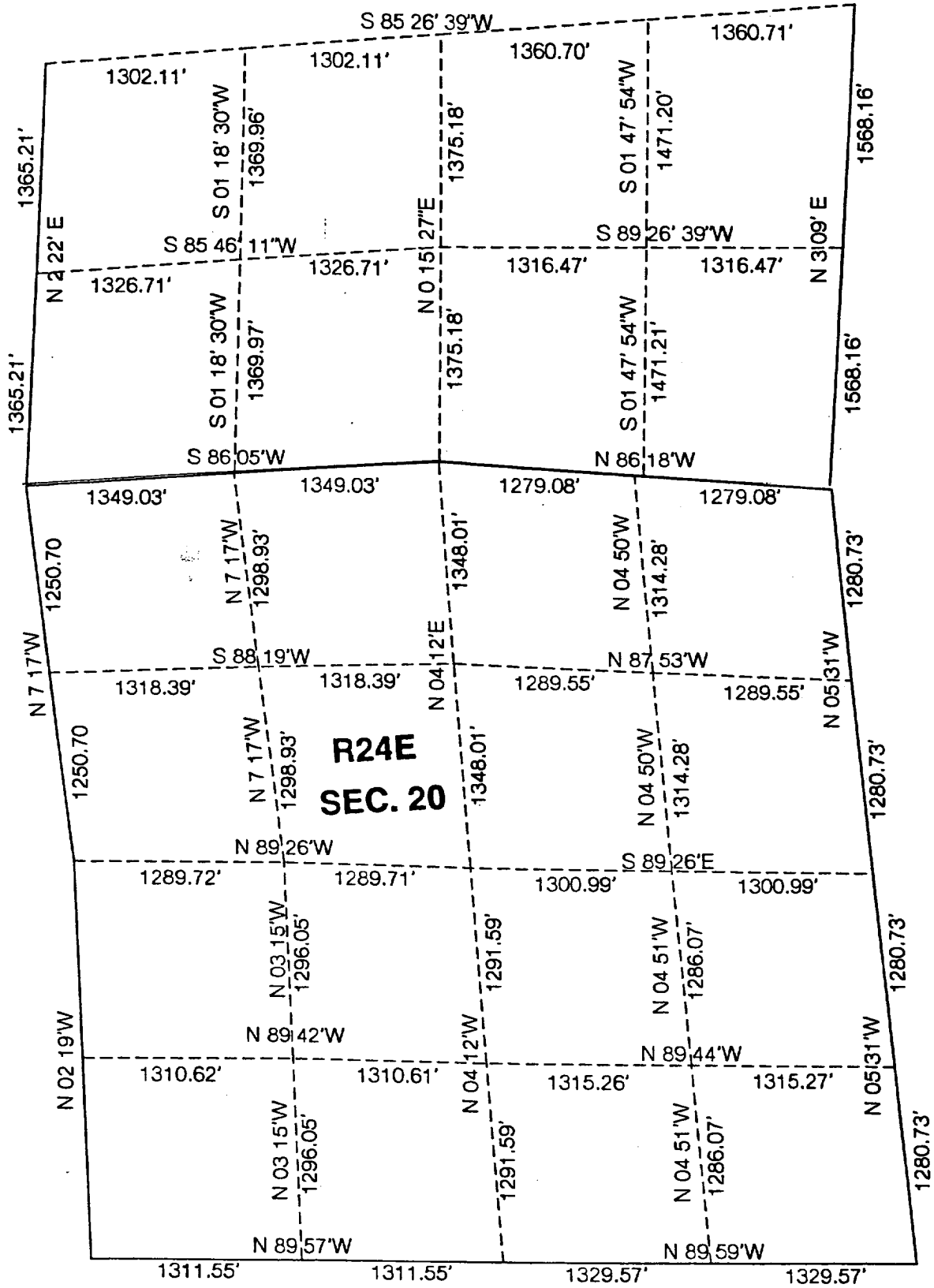
OPERATOR MARATHON OIL COMPANY

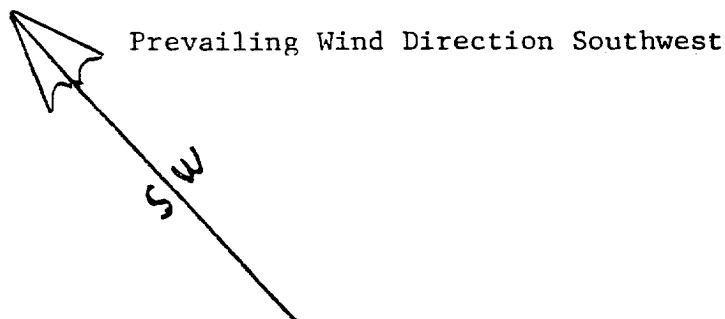
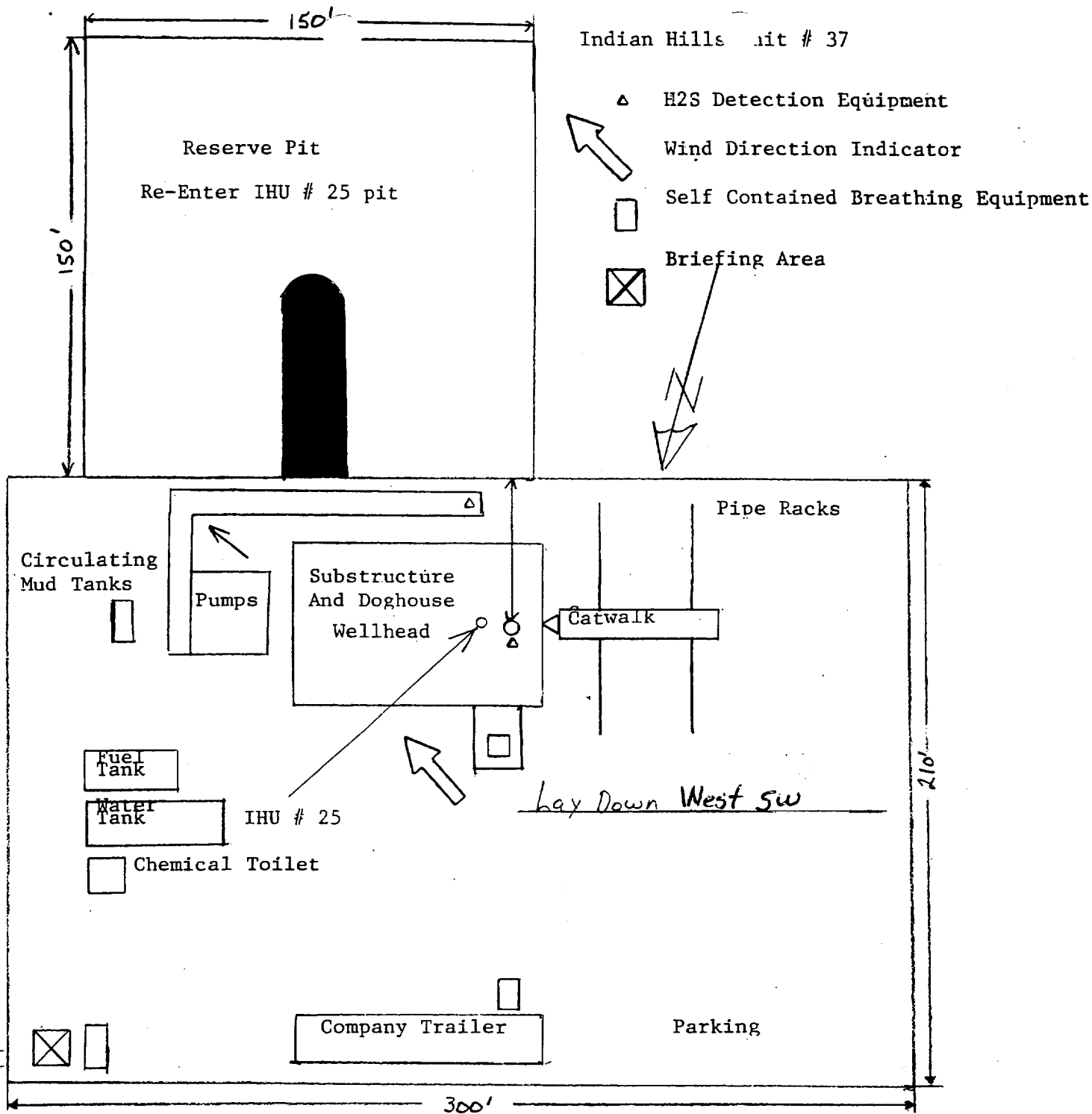
LEASE INDIAN HILLS UNIT

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

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

**T21S R24E
SEC. 17**





Marathon Oil Company

Structure : Indian Hills Unit #37

Slot : slot #1

Field : INDIAN BASIN

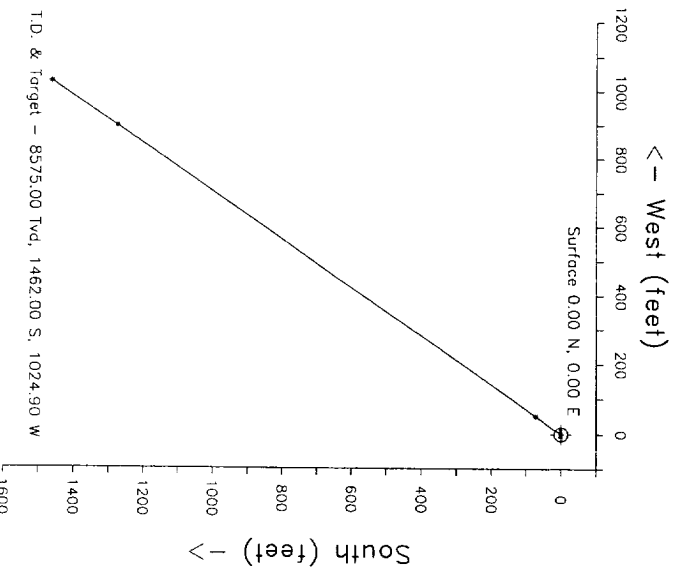
Location : Eddy County New Mexico

WELL PROFILE DATA

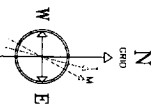
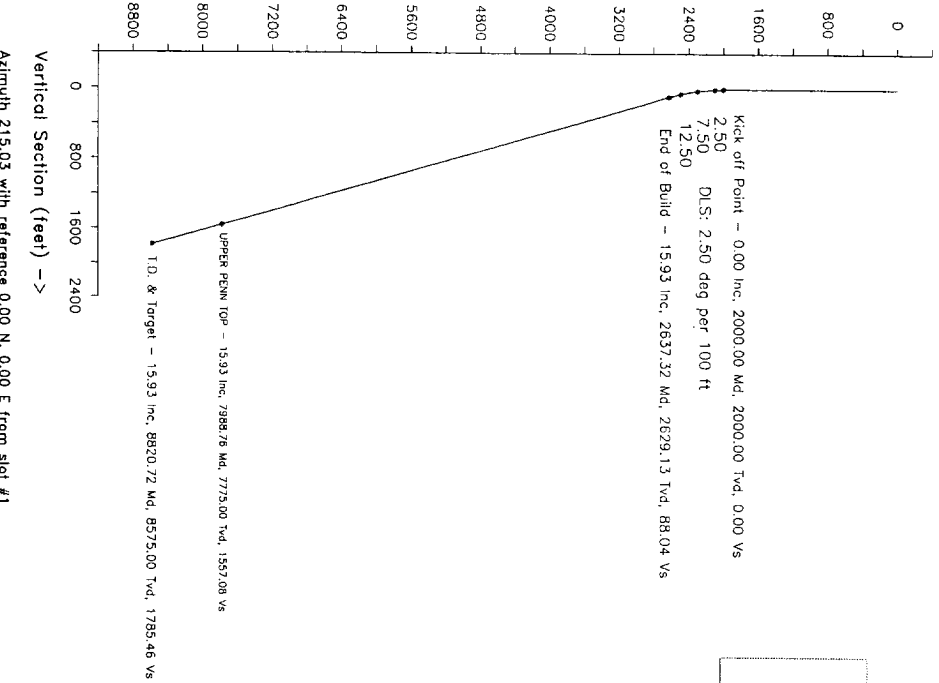
Point	MD	Inc	Dic	TVD	North	East	V. Sect	Deq/100
Tie on	0.00	0.00	215.03	0.00	0.00	0.00	0.00	0.00
KOP	2000.00	0.00	215.03	2000.00	0.00	0.00	0.00	0.00
End of Build	2637.32	15.93	215.03	2629.13	-72.09	-50.54	88.04	2.50
T.D. & Target TD	8820.72	15.93	215.03	8575.00	-1462.00	-1024.90	1785.46	0.00



PROPOSED BHL
1785.46' ON AZI 215.03 DEGS
FROM SURFACE LOCATION
M.D: 8820.72' T.V.D: 8575.00'
S- 1462.00' W- 1024.90'
X= 442414.60 Y= 532878.10



True Vertical Depth (feet)



3-Sep-2002 (source: BCGM)
Magnetic North is 9.06 degrees East of True North
Magnetic North is 0.10 degrees East of True North
To correct declination from Magnetic to Grid add 9.16 deg
To correct azimuth from Magnetic to Grid add 9.16 deg

STRUCTURE SET-UP REFERENCE

LAT : 32.28 7.965 N
LONG: 104.31 0.224 W
X = 443439.5 Y = 534340.1

PROJECTION: MERCATOR

Mercator Zone: New Mexico East
Spheroid Used: Clarke - 1866

Data Source: BCGM

Dip Angle: 60.47 deg
Field Strength: 49614.47 nT



INTEQ

APPROVAL

Operations: _____
Client: _____
Date: _____

Created By: kellym
Date plotted: 3-Sep-2002

Plot Reference is PO 200 RV/SU.

Coordinates are in feet reference slot #1.

True Vertical Depths are reference rotary table

thuj37
--- Baker Hughes INTEQ ---

Marathon Oil Company
Indian Hills Unit #37

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 RH/SJ
Our ref : prop3452
License :

Date printed : 3-Sep-2002
Date created : 3-Sep-2002
Last revised : 3-Sep-2002

Field is centred on n32 30 0.000,w104 30 0
Structure is centred on 443439.500,534340.100,999.00000,N

Slot location is n32 28 7.965,w104 31 0.224
Slot Grid coordinates are N 534340.100, E 443439.500
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 #37, slot #1
INDIAN BASIN, Eddy County New Mexico

PROPOSAL LISTING Page 1
Your ref : P0 2DJ RH/SJ
Last revised : 3-Sep-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect	G R I D Easting	C O O R D S Northing
0.00	0.00	215.03	0.00	0.00N	0.00E	0.00	443439.50	534340.10
500.00	0.00	215.03	500.00	0.00N	0.00E	0.00	443439.50	534340.10
1000.00	0.00	215.03	1000.00	0.00N	0.00E	0.00	443439.50	534340.10
1500.00	0.00	215.03	1500.00	0.00N	0.00E	0.00	443439.50	534340.10
2000.00	0.00	215.03	2000.00	0.00N	0.00E	0.00	443439.50	534340.10
2100.00	2.50	215.03	2099.97	1.79S	1.25W	2.50	443438.25	534338.31
2200.00	5.00	215.03	2199.75	7.14S	5.01W	2.50	443434.49	534332.96
2300.00	7.50	215.03	2299.14	16.05S	11.25W	2.50	443428.25	534324.05
2400.00	10.00	215.03	2397.97	28.51S	19.99W	2.50	443419.51	534311.59
2500.00	12.50	215.03	2496.04	44.48S	31.18W	2.50	443408.32	534295.62
2600.00	15.00	215.03	2593.17	63.94S	44.83W	2.50	443394.67	534276.16
2637.32	15.93	215.03	2629.13	72.09S	50.54W	2.50	443388.96	534268.01
3000.00	15.93	215.03	2977.88	153.62S	107.69W	0.00	443331.81	534186.48
3500.00	15.93	215.03	3458.68	266.01S	186.48W	0.00	443253.02	534074.09
4000.00	15.93	215.03	3939.47	378.40S	265.27W	0.00	443174.23	533961.70
4500.00	15.93	215.03	4420.26	490.79S	344.05W	0.00	443095.45	533849.31
5000.00	15.93	215.03	4901.05	603.18S	422.84W	0.00	443016.66	533736.92
5500.00	15.93	215.03	5381.84	715.57S	501.63W	0.00	442937.87	533624.53
6000.00	15.93	215.03	5862.64	827.96S	580.42W	0.00	442859.08	533512.14
6500.00	15.93	215.03	6343.43	940.35S	659.21W	0.00	442780.29	533399.75
7000.00	15.93	215.03	6824.22	1052.74S	738.00W	0.00	442701.50	533287.36
7500.00	15.93	215.03	7305.01	1165.13S	816.78W	0.00	442622.72	533174.97
7988.76	15.93	215.03	7775.00	1274.99S	893.80W	0.00	442545.70	533065.11
8000.00	15.93	215.03	7785.80	1277.52S	895.57W	0.00	442543.93	533062.58
8500.00	15.93	215.03	8266.60	1389.91S	974.36W	0.00	442465.14	532950.19

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 1785.46 on azimuth 215.03 degrees from wellhead.
Vertical section is from wellhead on azimuth 215.03 degrees.
Grid is mercator - New Mexico East (3001).
Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
Presented by Baker Hughes INTEQ

Marathon Oil Company
Indian Hills Unit #37, slot #1
INDIAN BASIN, Eddy County New Mexico

PROPOSAL LISTING Page 2
Your ref : P0 2DJ RH/SJ
Last revised : 3-Sep-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect	G R I D Easting	C O O R D S Northing
8820.72	15.93	215.03	8575.00	1462.00S 1024.90W	0.00	1785.46	442414.60	532878.10

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 1785.46 on azimuth 215.03 degrees from wellhead.
Vertical section is from wellhead on azimuth 215.03 degrees.
Grid is mercator - New Mexico East (3001).
Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
Presented by Baker Hughes INTEQ

Marathon Oil Company
Indian Hills Unit #37, slot #1
INDIAN BASIN, Eddy County New Mexico

PROPOSAL LISTING Page 3
Your ref : P0 2DJ RH/SJ
Last revised : 3-Sep-2002

Comments in wellpath
=====

MD	TVD	Rectangular Coords.	Comment
7988.76	7775.00	1274.99S	893.80W UPPER PENN TOP
8820.72	8575.00	1462.00S	1024.90W TD

Targets associated with this wellpath
=====

Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
TD	442414.600, 532878.100, 0.00000	8575.00	1462.00S	1024.90W 3-Sep-2002

Thirteen Point Surface Use Plan
MARATHON OIL COMPANY

INDIAN HILLS UNIT #37
Sec. 20, T-21-S, R-24-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. Follow 1.9 miles to White Pine Road. Go North 1.3 miles, turn Right on lease road and continue East 1 mile. Turn Right at "Y" and follow lease road 0.5 miles to new access road turn south east 1/2 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.

No new access road will be required. 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- Southwest.
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 six oil and gas wells operated by Marathon and Fasken within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon and Fasken 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 well shall be evaluated prior to any facility construction.
 - 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. No new construction will be required on/along the water route. If poly line is utilized for drilling purposes Marathon will follow existing ROW.
 - c. No water well will be drilled on this location.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #37

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. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #37

- 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.
- 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..
- i. **This well will be drilled on the existing well pad of the Indian Hills Unit # 25 previously drilled and completed.**
- j. **Marathon will utilize the pit area used for the IHU # 25 well which will be re-entered for the IHU # 37.**

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #37

12. Operator Representatives:

R. J. Longmire
Drilling, Completion, & Workover Superintendent
P. O. Box 552
Midland, TX 79702
800/351-1417
915/682-1626

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.

9/6/2002

Date

R. J. Longmire

R. J. Longmire

DRILLING PROGRAM
MARATHON OIL COMPANY
INDIAN HILLS UNIT #37

1. Estimated KB Elevation: 4178' KB G.L.-4162' Rig Floor 16'

<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	+4178'	650'	+3528'	water
San Andres	650'	+3528'	2250'	+1928'	water
Glorietta	2250'	+1928'	2355'	+1823'	
Delaware	3300'	+878'	4300'	+ 130'	
Bone Spring	4300'	-122'	5950'	-1712'	oil gas
Wolfcamp	5950'	-1772'	7520'	-3342'	oil gas
B/Permian Shale	7520'	-3342'	7530'	-3352'	
U. Penn	7530'	-3352'	8600'	-4422'	gas, oil, water

<u>FORMATION</u>	<u>---EST</u>	<u>SBHP---</u>	<u>EST</u>	<u>SBHT</u>	<u>H2S</u>	<u>---SIGNIFICANCE---</u> <u>(obj, marker, etc.)</u>
	<u>PSIG</u>	<u>PPG EMW</u>	<u>DEG f</u>	<u>PPM</u>		
Bone Springs	1210	8.5			500	marker
Wolfcamp	1680	9.0				marker
B/Permian Shale	1810	9.0				objective pay
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:**

11" Surface: 11" 3M annular tested to 300PSI/3000PSI, 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 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 #37

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---		SECTION	HOLE	CSG	WT.		THREADS		NEW
FROM	TO	LENGTH	SIZE	SIZE	PPF	GRADE	COUPLINGS		USED
0	1800'	1800'	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'	8600'	3800'	8.750"	7.00"	26.00#	K-55	8rd, LT&C		New

Casing	DV		Lead	Amt	Type	Yield	Wt.		
String	Depth	Stg.	Tail	SXS	Cement	CF/SX	PPG.	TOC	Additives
9.625"	none	1	L	500	Foam Cmt.	1.78	11.2	100'	
9.625"	none		T	140	C Neat	1.35	14.8	900'	3% Cacl

NOTE: Pump 55 sks. Class "C" dn. Annulus W/ 3% CACL2, Yield: 1.35cf/sk, Density 14.8 ppg coverage, Surface To 100'.

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	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 #37

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

5. Mud Program

---DEPTH---			WEIGHT		WL		
FROM	TO	MUD TYPE	(PPG)	VIS	CC	ADDITIVES	VISUAL MONTR.
0	1200'	fresh water	8.3	28	N/A	Gel, Lime	Reserve
1200'	5000'	fresh/ produced	8.5	28-32	N/A	Gel, caustic H ₂ S Scavenger	Reserve
5000'	7000'	fresh/ produced	8.9	32-36	N/C	Gel, caustic, H ₂ S Scavenger	Reserve
7000'	8600'	fresh/produced	9.0	32-36	<20	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 - 25 days, completion - 10 days.

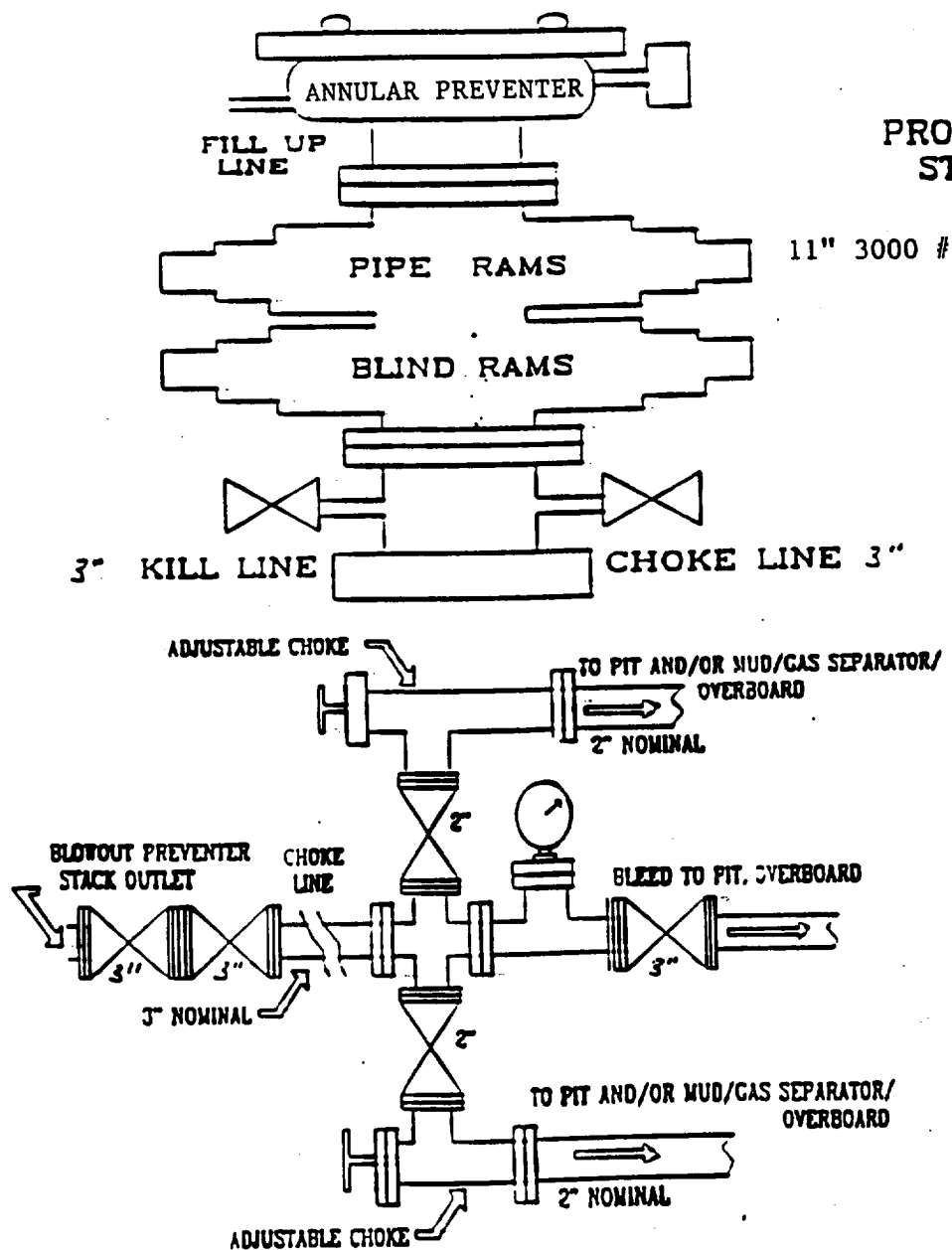


Exhibit "I"

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.

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:

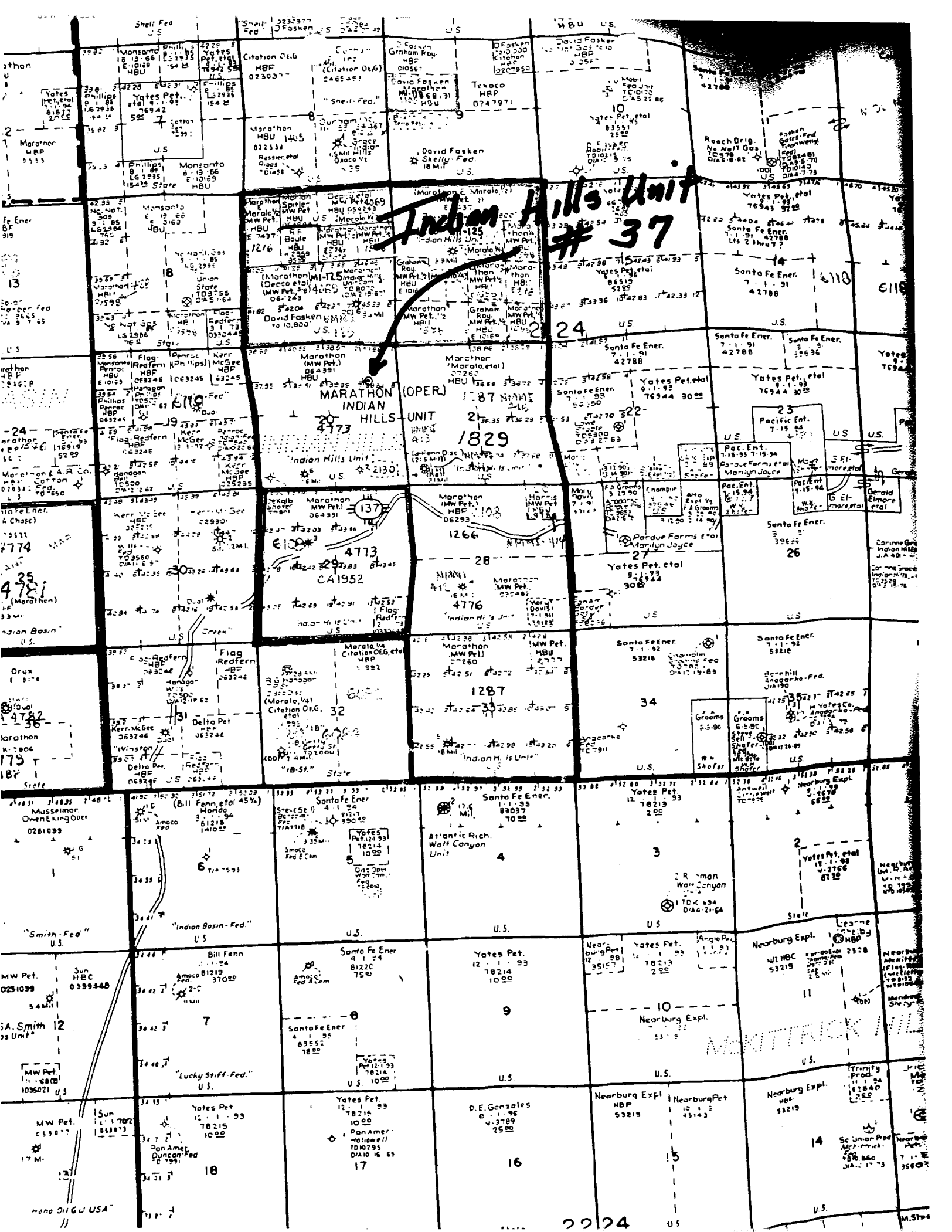
DST No. 1	_____ ft. to _____ ft.
DST No. 2	_____ ft. to _____ ft.
DST No. 3	_____ ft. to _____ ft.

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



Southern U.S. Business Unit
Domestic Production



**Marathon
Oil Company**

P.O. Box 552
Midland, TX 79702-0552
Telephone 915/682-1626

August 30, 2002

Attn: Mr. Barry Hunt
United States Department of the Interior
Bureau of Land Management
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88221

Ref: Marathon Oil Company
Indian Hills Unit #37
Sec. 17 & 20, T-21-S, R-24-E
Eddy County, NM

Dear Mr. Hunt:

Enclosed is a Sundry Notice for proposed Indian Hills Unit #37's flowline installation.

Your prompt attention is appreciated, if you have any questions please contact Roger Edelbrock in our Midland Office, (915) 687-8302.

Sincerely yours,

A handwritten signature in cursive script, appearing to read 'R. Edelbrock', followed by a stylized 'PE'.

Roger D. Edelbrock PE
Senior Construction Engineer

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 79702-0552

3b. Phone No. (include area code)

(915) 682-1626

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

Section 17 & 20, Township 21 South, Range 24 East, N.M.P.M.

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

Indian Hills Unit

8. Well Name and No.

Indian Hills Unit #37

9. API Well No.

10. Field and Pool, or Exploratory Area

Indian Basin

11. County or Parish, State

Eddy County, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input checked="" type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. 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 recompleat 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 recompleat 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 site is ready for final inspection.)

Indian Hills Unit #37 Flowlines and Power Line Installation

Marathon Oil Company proposes to install two flowlines from IHU #37 to Station 117, one 4" line and one 6" line as shown on attached John West Survey Plat 01110125. It will consist of two welded, schedule 40 grade B steel lines, installed on the surface at an estimated distance of 2860 ft. The two lines will transport liquid and gas from the IHU #37 at a rate of 400 BOPD, 10,000 BWPD, and 10 MMSCFD to Production Station #117. The operating pressure will be between 150-300 psig. The flowlines and power lines will follow existing ROWs and roads. The Power Line hook up will be minimal since IHU #37 will share a wellpad with IHU #25.

An archaeological survey for the ROW has been previously completed by Archaeological Survey Consultants and should be on file.

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

Name (Printed/Typed)

Roger D. Edelbrock P.E.

Title Senior Construction Engineer

Signature

[Handwritten Signature]

Date August 30, 2002

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/S/ JOE G. LARA

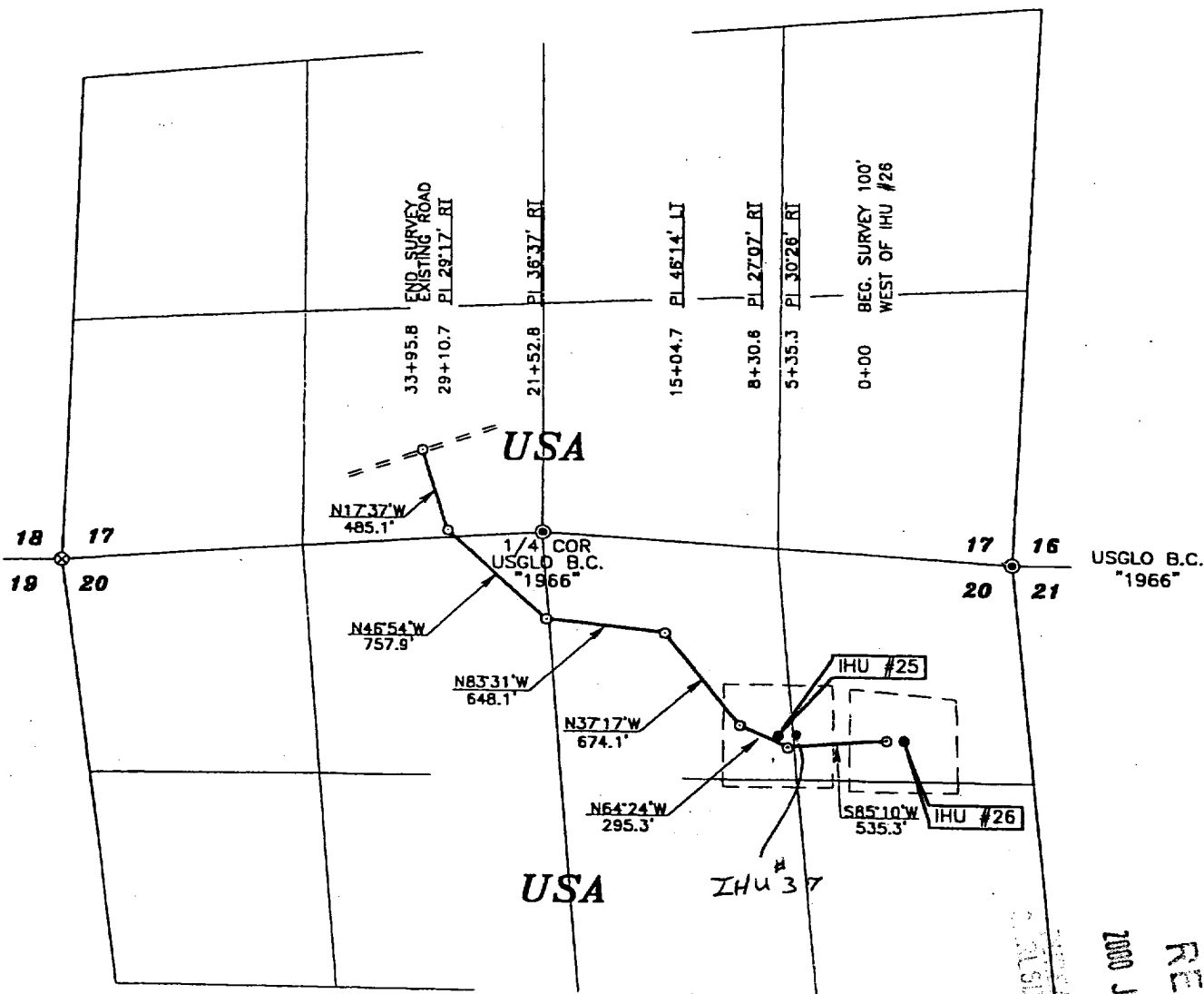
[Handwritten Signature]

FIELD MANAGER

Date OCT 30 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

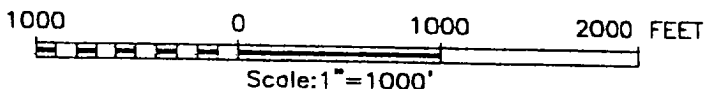


DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE, 3395.8 FEET OR 0.643 MILES IN LENGTH AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE CENTERLINE SURVEY.

LEGEND

⊙ DENOTES FOUND MONUMENT AS NOTED



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 4/24/2000

RONALD J. EIDSON, N.M., P.S.
GARY G. EIDSON, N.M., P.S.

No. 3239
No. 12641

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO, HOBBS, NEW MEXICO - 505-393-3117

MARATHON OIL COMPANY

SURVEY OF AN ACCESS ROAD
CROSSING USA LAND
LOCATED IN SECTIONS 20 & 17,
TOWNSHIP 21 SOUTH, RANGE 24 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date:	3/3/2000	Sheet	1	of	1	Sheets
W.O. Number:	00-11-0125	Drawn By:	LMP			
Date:	4/24/00	CD	#1	MARA0125	Scale:	1"=1000'