

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ARTESIA, NM 88210-2834

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

1-800-351-1417

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

1069' FNL, 685' FEL SEC. 20, T-21-S, R-24-E

At proposed prod. zone

1544' FNL & 1381' FWL SEC. 21, T-21-S, R-24-E

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

15 MILES N.W. OF CARLSBAD

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) ** REFERENCE NOTE

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT. * 700'

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

G.L. 4149'

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED TO THIS WELL

640

19. PROPOSED DEPTH

8800

20. ROTARY OR CABLE TOOLS

ROTARY

22. APPROX. DATE WORK WILL START*

JULY 2000

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8" K-55	54.5#	1800'	946 SX CIRC TO SURFACE
12-1/4"	9-5/8" K-55	40# & 43.5#	8800'	2610 SX CIRC. TO SURFACE

CARLSBAD CONTROLLED WATER BASIN

PROPOSE TO DRILL UPPER PENN. ASSOC.

JUL 2000
RECEIVED
OCD - ARTESIA

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS

** NOTE: BHL@ 1544' FNL, 1381' FWL SEC 21, T-21-S, R-24E

* DISTANCE TO INDIAN HILLS UNIT # 25 (1093' FNL & 1367' FEL) 700'

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.

R.J. Longmire

SIGNED

TITLE DRILLING SUPERINTENDENT

DATE

June 23, 2000

(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

Acting

Assistant Field Manager,
Lands And Minerals

DATE

JUL 27 2000

*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.

APPROVED FOR 1 YEAR

RECEIVED
JUN 27 2000
BLM
ROSWEIL, NM

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

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
Property Code	Property Name INDIAN HILLS UNIT	Well Number 26
OGRID No. 14021	Operator Name MARATHON OIL COMPANY	Elevation 4149

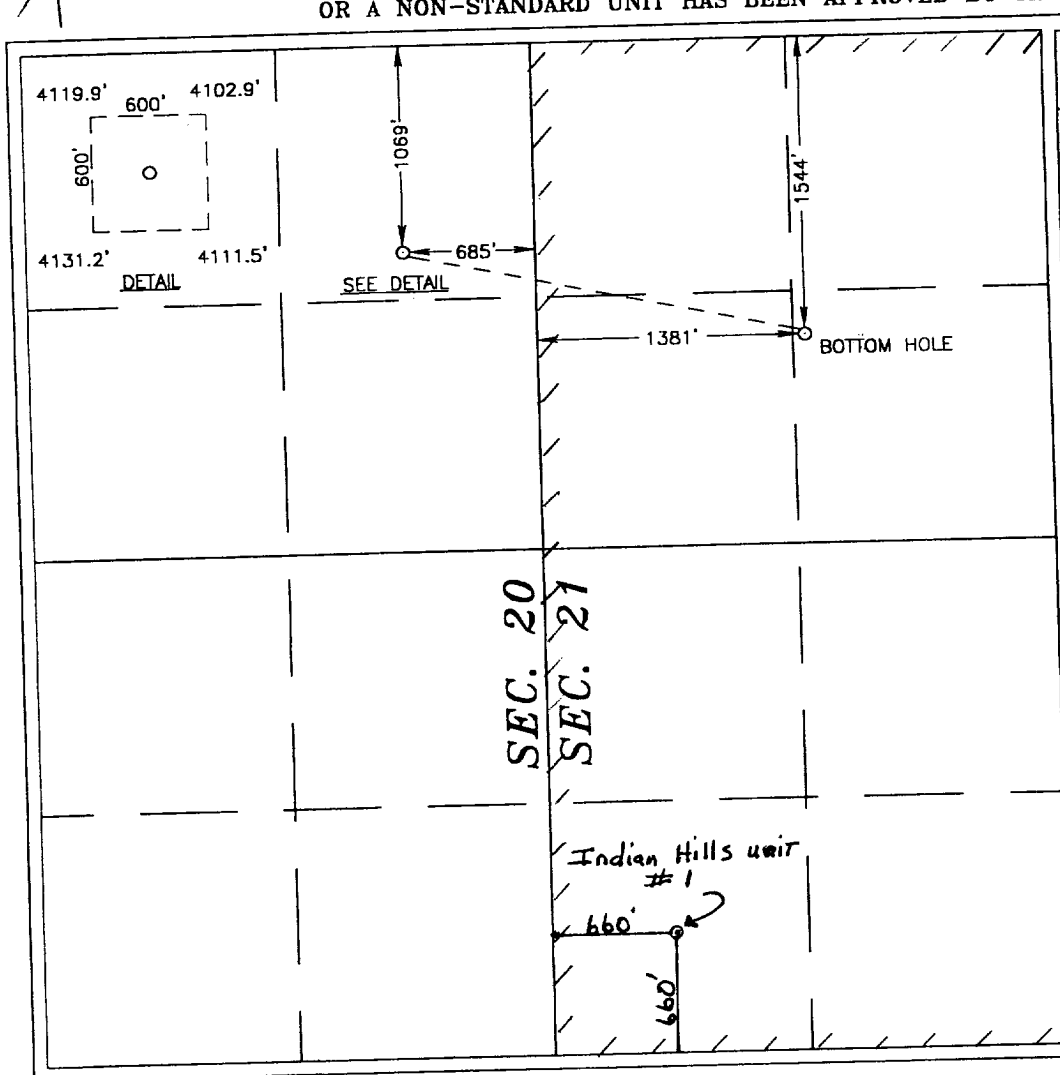
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	21 S	24 E		1069	NORTH	685	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
F	21	21 S	24 E		1544	NORTH	1381	WEST	EDDY
Dedicated Acres 6.40 32c	Joint or Infill	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



OPERATOR CERTIFICATION

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

Jerry Fletcher
Signature

Jerry Fletcher
Printed Name

Engineer Tech.
Title

6-23-00
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.

APRIL 17, 2000

Date Surveyed LMP
Signature & Seal of
Professional Surveyor

Ronald J. Edson
5/25/2000
00-11-0125

Certificate No. RONALD J. EDSON 3239
GARY EDSON 12841
MACDONALD 12185

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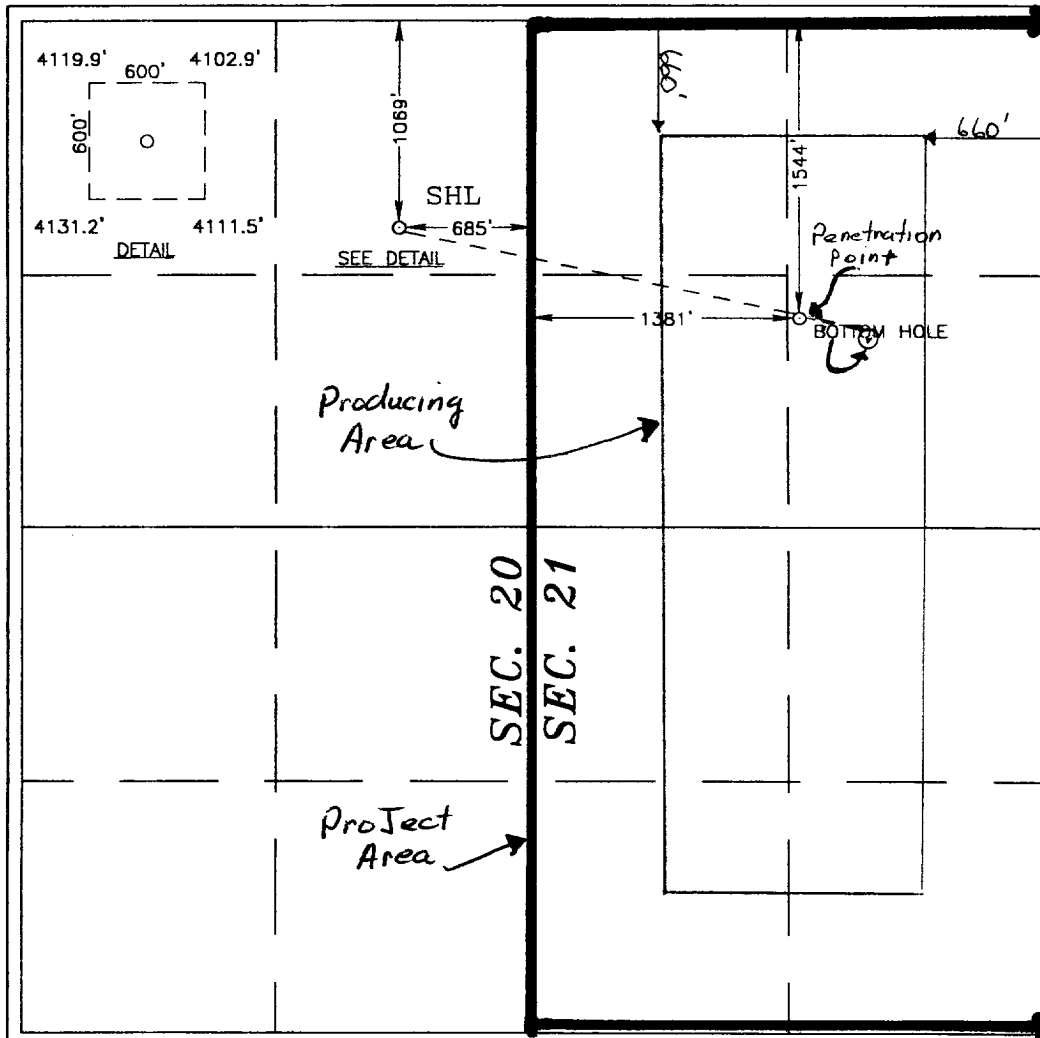
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A	20	21 S	24 E		1069	NORTH	685	EAST	EDDY

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
F	21	21 S	24 E		1544	NORTH	1381	WEST	EDDY
Dedicated Acres 640	Joint or Infill	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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Jerry Fletcher</i> Signature Jerry Fletcher Printed Name Engineer Tech, Title 6-23-00 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. APRIL 17, 2000 Date Surveyed LMP Signature & Seal of Professional Surveyor <i>Ronald J. Edson</i> 5/05/2000 00-11-0125 Certificate No. RONALD J. EDSON 3239 GARY EDSON 12641 MACON McDONALD 12185
--	--

MARATHON OIL COMPANY

Structure : Indian Hills Unit No.26

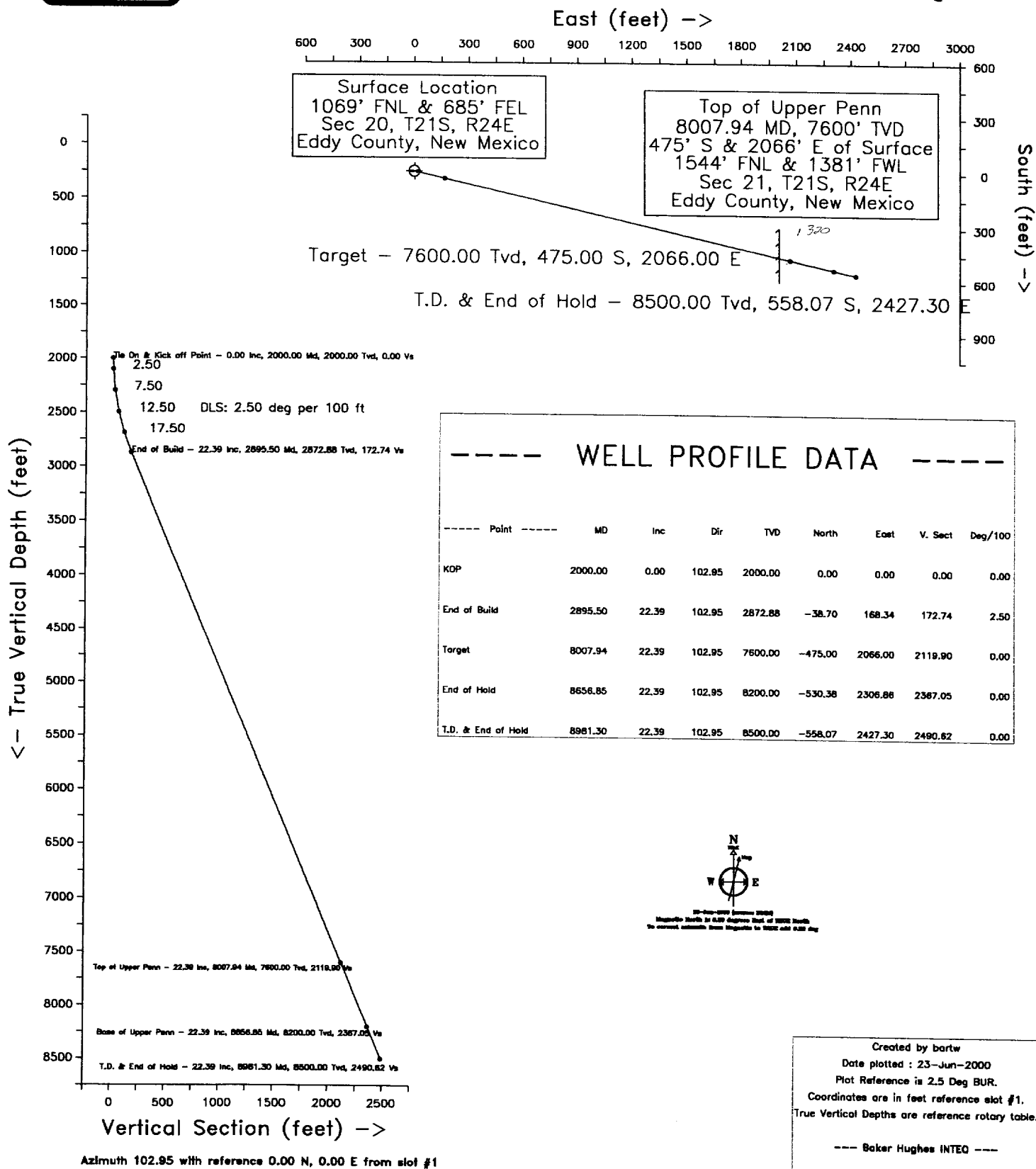
Slot : slot #1

Field : Indian Basin

Location : EDDY COUNTY, NM.



INTEQ



MARATHON OIL COMPANY
Indian Hills Unit No.26

slot #1
Indian Basin
EDDY COUNTY, NM.

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

by
Baker Hughes INTEQ

Your ref : 2.5 Deg BUR
Our ref : prop2519
License :

Date printed : 23-Jun-2000
Date created : 23-Jun-2000
Last revised : 23-Jun-2000

Field is centred on n32 30 0.000,w104 30 0
Structure is centred on n32 30 0.000,w104 30 0

Slot location is n32 30 0.000,w104 30 0.000
Slot Grid coordinates are N 545652.918, E 448616.515
Slot local coordinates are 0.00 N 0.00 E

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

Reference North is True North

MARATHON OIL COMPANY
Indian Hills Unit No.26,slot #1
Indian Basin,EDDY COUNTY, NM.

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
2000.00	0.00	102.95	2000.00	0.00 N 0.00 E	0.00	0.00
2100.00	2.50	102.95	2099.97	0.49 S 2.13 E	2.50	2.18
2200.00	5.00	102.95	2199.75	1.95 S 8.50 E	2.50	8.72
2300.00	7.50	102.95	2299.14	4.39 S 19.11 E	2.50	19.61
2400.00	10.00	102.95	2397.97	7.80 S 33.93 E	2.50	34.82
2500.00	12.50	102.95	2496.04	12.17 S 52.94 E	2.50	54.33
2600.00	15.00	102.95	2593.17	17.50 S 76.11 E	2.50	78.09
2700.00	17.50	102.95	2689.17	23.77 S 103.38 E	2.50	106.07
2800.00	20.00	102.95	2783.85	30.97 S 134.70 E	2.50	138.21
2895.50	22.39	102.95	2872.88	38.70 S 168.34 E	2.50	172.74
3000.00	22.39	102.95	2969.51	47.62 S 207.13 E	0.00	212.54
3500.00	22.39	102.95	3431.83	90.29 S 392.73 E	0.00	402.97
4000.00	22.39	102.95	3894.14	132.96 S 578.32 E	0.00	593.41
4500.00	22.39	102.95	4356.45	175.63 S 763.91 E	0.00	783.84
5000.00	22.39	102.95	4818.77	218.30 S 949.50 E	0.00	974.27
5500.00	22.39	102.95	5281.08	260.97 S 1135.09 E	0.00	1164.71
6000.00	22.39	102.95	5743.40	303.64 S 1320.69 E	0.00	1355.14
6500.00	22.39	102.95	6205.71	346.31 S 1506.28 E	0.00	1545.58
7000.00	22.39	102.95	6668.03	388.98 S 1691.87 E	0.00	1736.01
7500.00	22.39	102.95	7130.34	431.65 S 1877.46 E	0.00	1926.44
8000.00	22.39	102.95	7592.66	474.32 S 2063.05 E	0.00	2116.88
8007.94	22.39	102.95	7600.00	475.00 S 2066.00 E	0.00	2119.90
8500.00	22.39	102.95	8054.97	516.99 S 2248.64 E	0.00	2307.31
8656.85	22.39	102.95	8200.00	530.38 S 2306.86 E	0.00	2367.05
8981.30	22.39	102.95	8500.00	558.07 S 2427.30 E	0.00	2490.62

Top of Upper Penn
Base of Upper Penn

All data is in feet unless otherwise stated.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 2490.62 on azimuth 102.95 degrees from wellhead.
Vertical section is from wellhead on azimuth 102.95 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

MARATHON OIL COMPANY
Indian Hills Unit No.26,slot #1
Indian Basin,EDDY COUNTY, NM.

PROPOSAL LISTING Page 2
Your ref : 2.5 Deg BUR
Last revised : 23-Jun-2000

Measured Incln.	Azimuth	True Vert	R E C T A N G U L A R	Dogleg	Vert
Depth	Degrees	Depth	C O O R D I N A T E S	Deg/100ft	Sect

All data is in feet unless otherwise stated.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 2490.62 on azimuth 102.95 degrees from wellhead.
Vertical section is from wellhead on azimuth 102.95 degrees.
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MARATHON OIL COMPANY
 Indian Hills Unit No.26,slot #1
 Indian Basin,EDDY COUNTY, NM.

PROPOSAL LISTING Page 3
 Your ref : 2.5 Deg BUR
 Last revised : 23-Jun-2000

Comments in wellpath

=====

Comment

Rectangular Coords.

TVD

MD

8007.94 7600.00 475.00 S 2066.00 E Top of Upper Penn
 8656.85 8200.00 530.38 S 2306.86 E Base of Upper Penn

Targets associated with this wellpath

=====

Target name

Geographic Location

T.V.D.

Rectangular Coordinates

Revised

7600.00 475.00S 2066.00E 23-Jun-2000

Thirteen Point Surface Use Plan
MARATHON OIL COMPANY

INDIAN HILLS UNIT #26
Sec. 20, T-21-S, R-24-E
Eddy County, New Mexico

1. Existing Roads: Refer to Vicinity Lease Map.

- a. The proposed wellsite is staked and the surveyor's plat is attached.
- b. To reach the location from Carlsbad, New Mexico: Follow Hwy. 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 $\pm$ 1 mile. Turn Right at "Y" and follow lease road $\pm$.5 miles to new access road turn south east 3/4 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.

A new access road of 750' will be constructed from the extant of existing lease roads. Construction plans will require blading and rolling the road and pad. The access road enters the drilling pad on the Southwest corner. The drilling location will have a V-door facing east.

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

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

- a. Existing: There are four 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.
- c. No water well will be drilled on this location.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #26

- c. The reserve pit will be fenced during drilling operations. Fencing will be maintained until leveling and cleanup are accomplished.
- d. If any oil is in the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with mesh.
- e. The rehabilitation operations will begin after the completion rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation will be done between July 15 and September 15.
- 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 wellsite is gently rolling hills. Vegetation is primarily sage brush and natural grasses.
- c. Animal life: Prairie dogs, domestic livestock, rabbits and native rodents and predators.
- d. Dwellings (nearest): Approximately 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 is intended to identify any potential development in the Northern portion of the Indian Hills Unit. The well shall be drilled and tested to determine any commercial potential prior to any facility construction.

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 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

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #26

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.

June 23, 2000
Date

R. J. Longmire
R. J. Longmire

DRILLING PROGRAM
MARATHON OIL COMPANY
INDIAN HILLS UNIT #26

1. Estimated KB Elevation: 4174' 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	+4174'	650'	+3524'	water
San Andres	650'	+3524'	2250'	+1924'	water
Glorietta	2250'	+1924'	2355'	+1819'	
Delaware	3300'	+874'	4300'	+ 126'	
Bone Spring	4300'	-126'	5950'	-1716'	oil gas
Wolfcamp	5950'	-1776'	7520'	-3346'	oil gas
B/Permian Shale	7520'	-3346'	7530'	-3356'	
U. Penn	7530'	-3356'	8800'	-4626'	gas, oil, water

<u>FORMATION</u>	<u>---EST</u> <u>PSIG</u>	<u>SBHP---</u> <u>PPG EMW</u>	<u>EST</u> <u>DEG f</u>	<u>SBHT</u> <u>PPM</u>	<u>H2S</u>	<u>---SIGNIFICANCE---</u> <u>(obj, marker, etc.)</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:**

4. 13-3/8" Surface: 13-5/8" 3M annular tested to 300#/3000#, 13-5/8" 3M dual rams, choke manifold and mud cross, tested to 300#/3000#.

Auxiliary Equipment:

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

Intermediate Hole: N/A

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

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and 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 drillstring connections in use will be available on rig floor.

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #26

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'	17.50"	13-3/8"	54.50#	K-55	8rd, STC	New
0	4800'	4800'	12.25"	9-5/8"	40#	L-80	8rd, LT&C	New
4800'	8200'	4000'	12.25"	9-5/8"	43.5	C-75	8rd, LT&C	New

Casing	DV		Lead	Amt	Type	Yield	Wt.		
String	Depth	Stg.	Tail	SXS	Cement	CF/SX	PPG.	TOC	Additives
13-3/8"			L	100	"C"	7.15	9.5		Dia Seal
13-3/8"			L	100	Thixset	1.52	14.0		Thixset
13-3/8"			L	746	Lite	2.02	12.4	surface	2% cacl2
13-3/8"			T	300	PremPlus	1.34	14.8		
9-5/8"	6400'	1	L	350	" "	2.18	9.2		N2
9-5/8"		1	T	700	" "	1.44	13.0		N2
9-5/8"		2	L	1360	Interfill "C"	2.47	11.9		Flocele
9-5/8"		2	T	200	PremPlus	1.32	14.8		Neat

Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 20% excess.

Centralizer Program:

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

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #26

13-3/8" Conventional centralizers , Bottom 3-joints and every 4th joint to surface.

9-5/8" Conventional centralizers middle of 1st joint, then every joint to 7500', and 1 cent. Every 4th joint thereafter to 1100'.

5. Mud Program

---DEPTH---			WEIGHT		WL	ADDITIVES	VISUAL
FROM	TO	MUD TYPE	(PPG)	VIS	CC		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 ₂ S Scavenger	Reserve
5000'	7000'	fresh	8.9	32-36	N/C	Gel, caustic, H ₂ S Scavenger	Reserve
7000'	8800'	fresh	8.9	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:

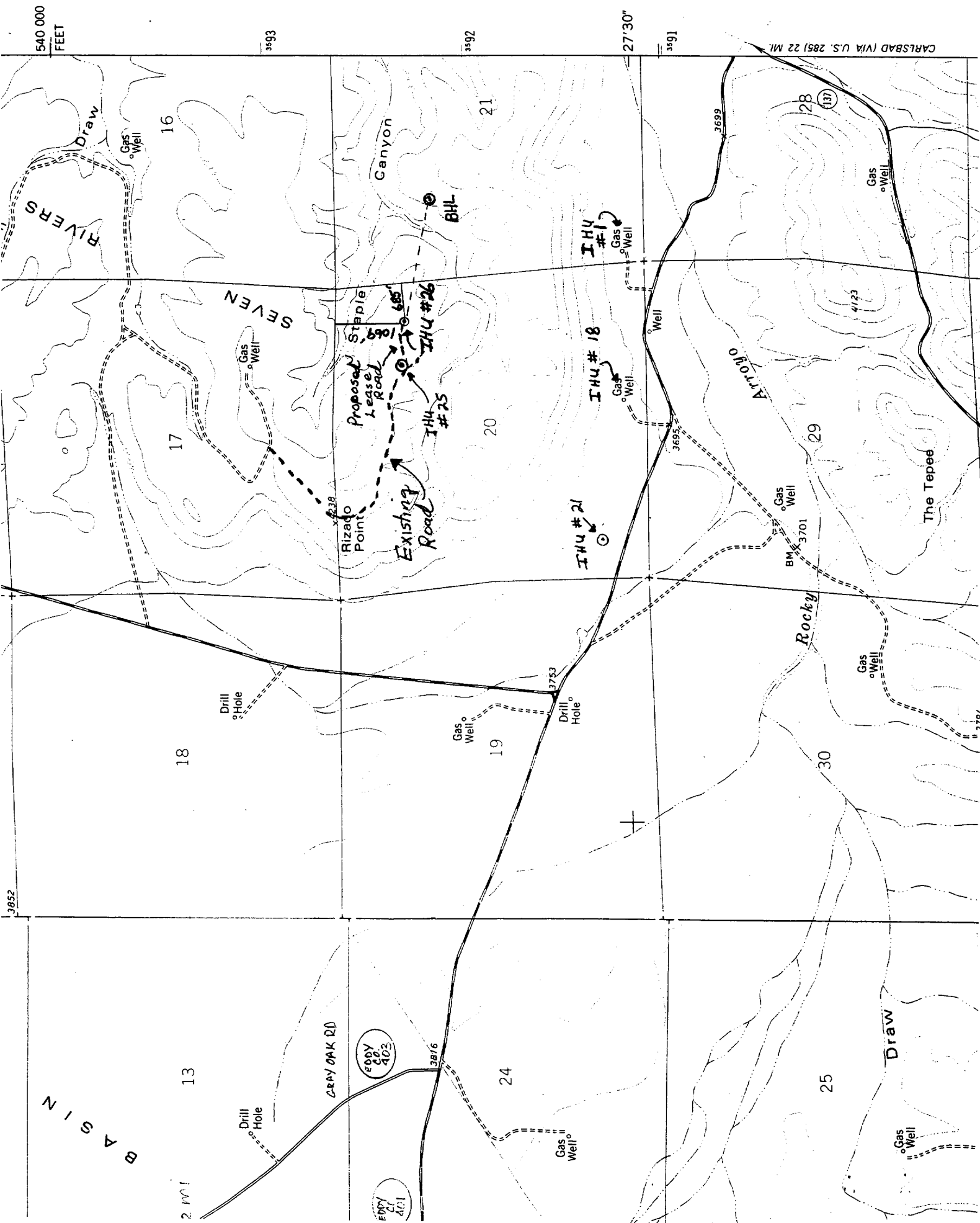
None anticipated. Possible H₂S in Cisco & Upper Penn. See H₂S Drilling Operations Plan.

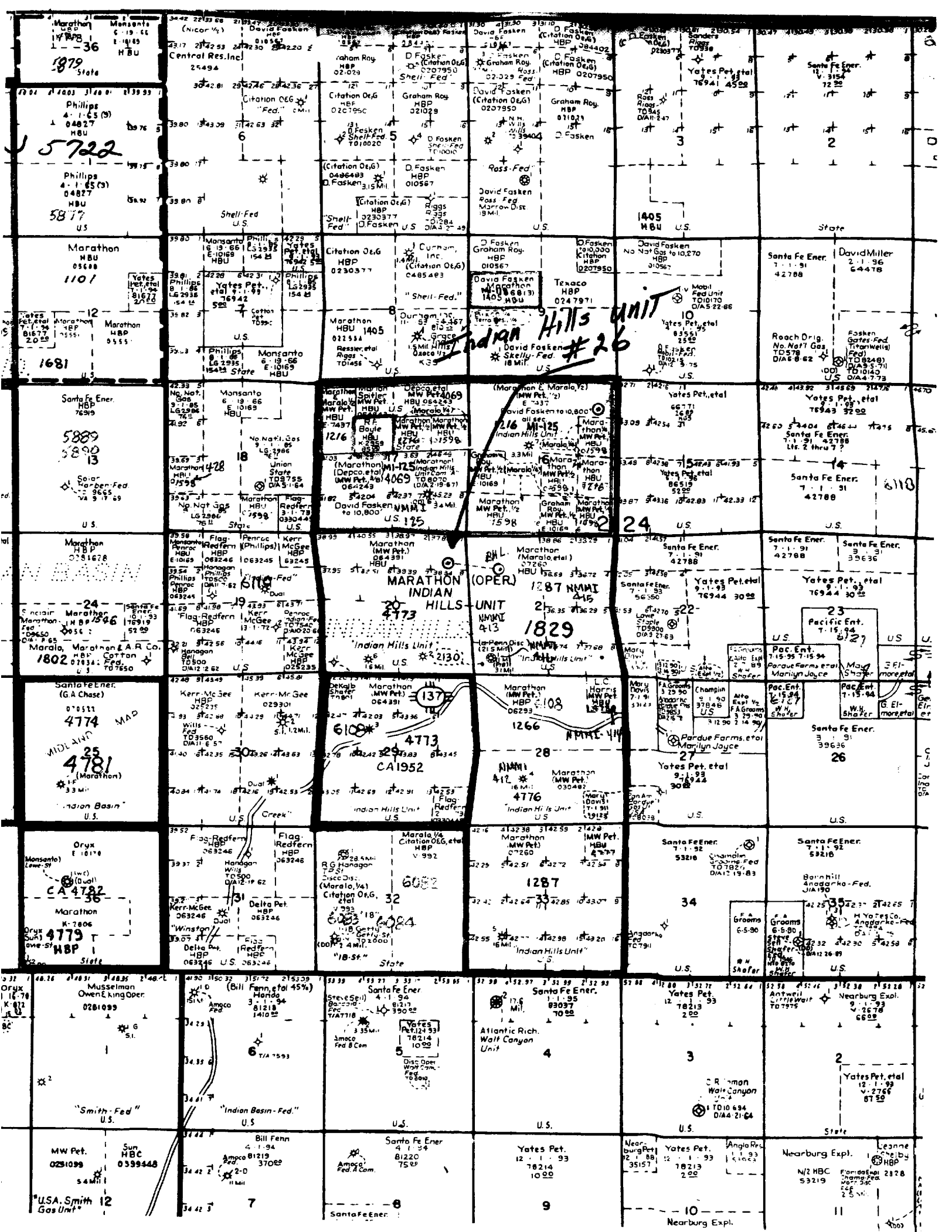
8. Other Information:

Anticipated Starting Date: As soon as possible.

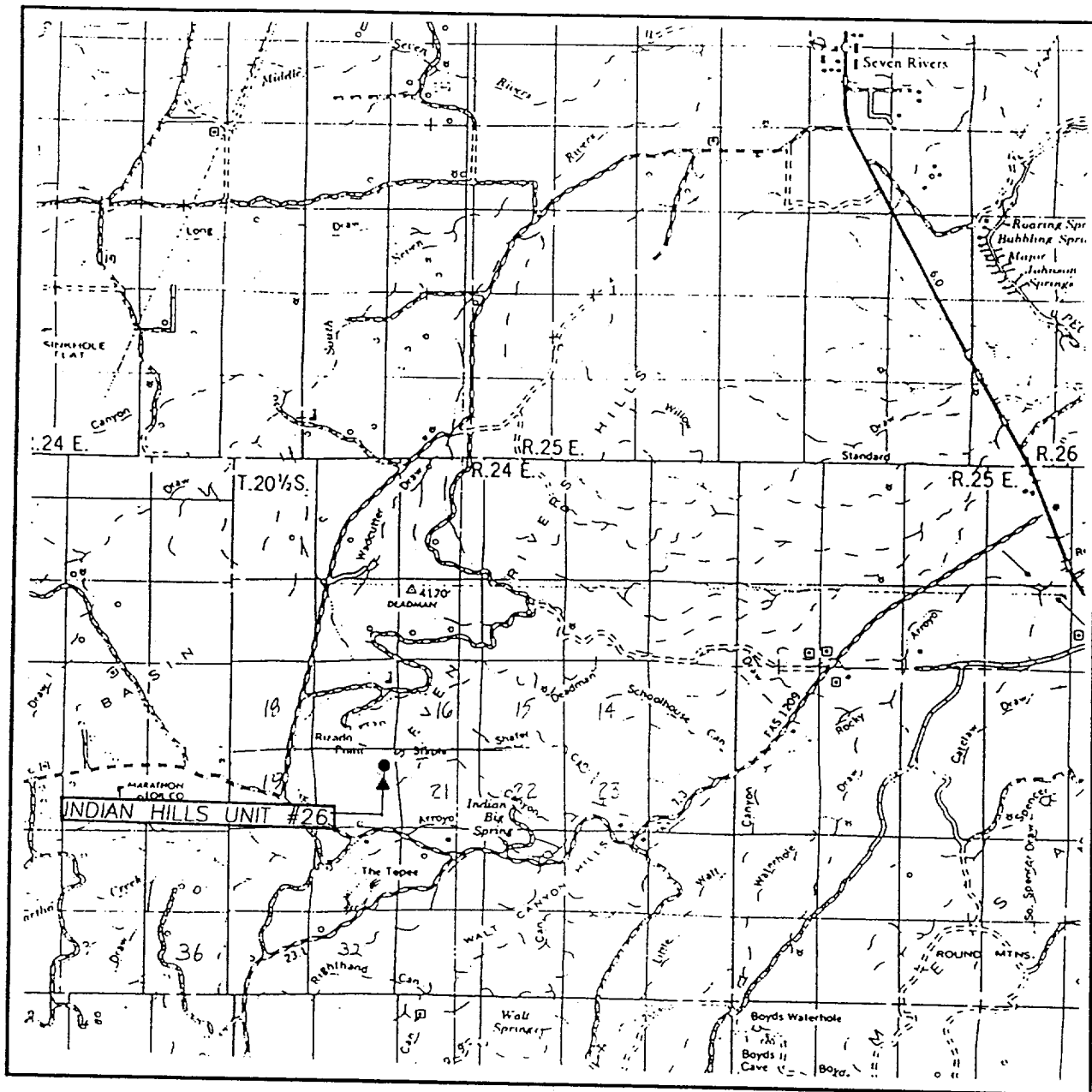
Duration of Well: drilling - 18 days, completion - 10 days.

This well shall be directionally drilled to a non standard BHL.





VICINITY MAP



SCALE: 1" = 2 MILES

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

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1069' FNL & 685' FEL

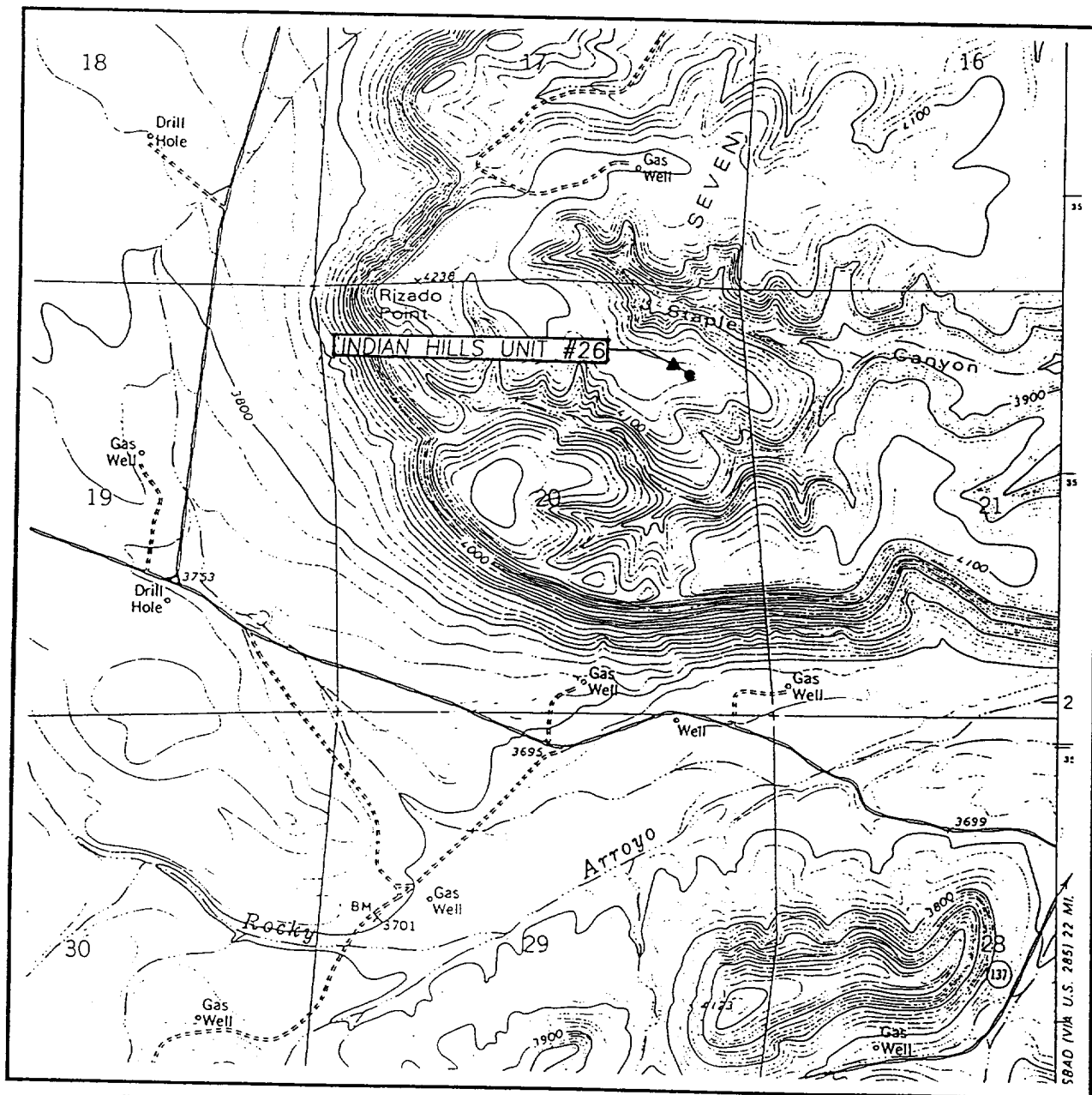
ELEVATION 4149

OPERATOR MARATHON OIL CO.

LEASE INDIAN HILLS UNIT

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
MARTHA CREEK, N.M. - 20'

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

SURVEY _____ N.M.P.M.

COUNTY _____ EDDY

DESCRIPTION 1069' FNL & 685' FEL

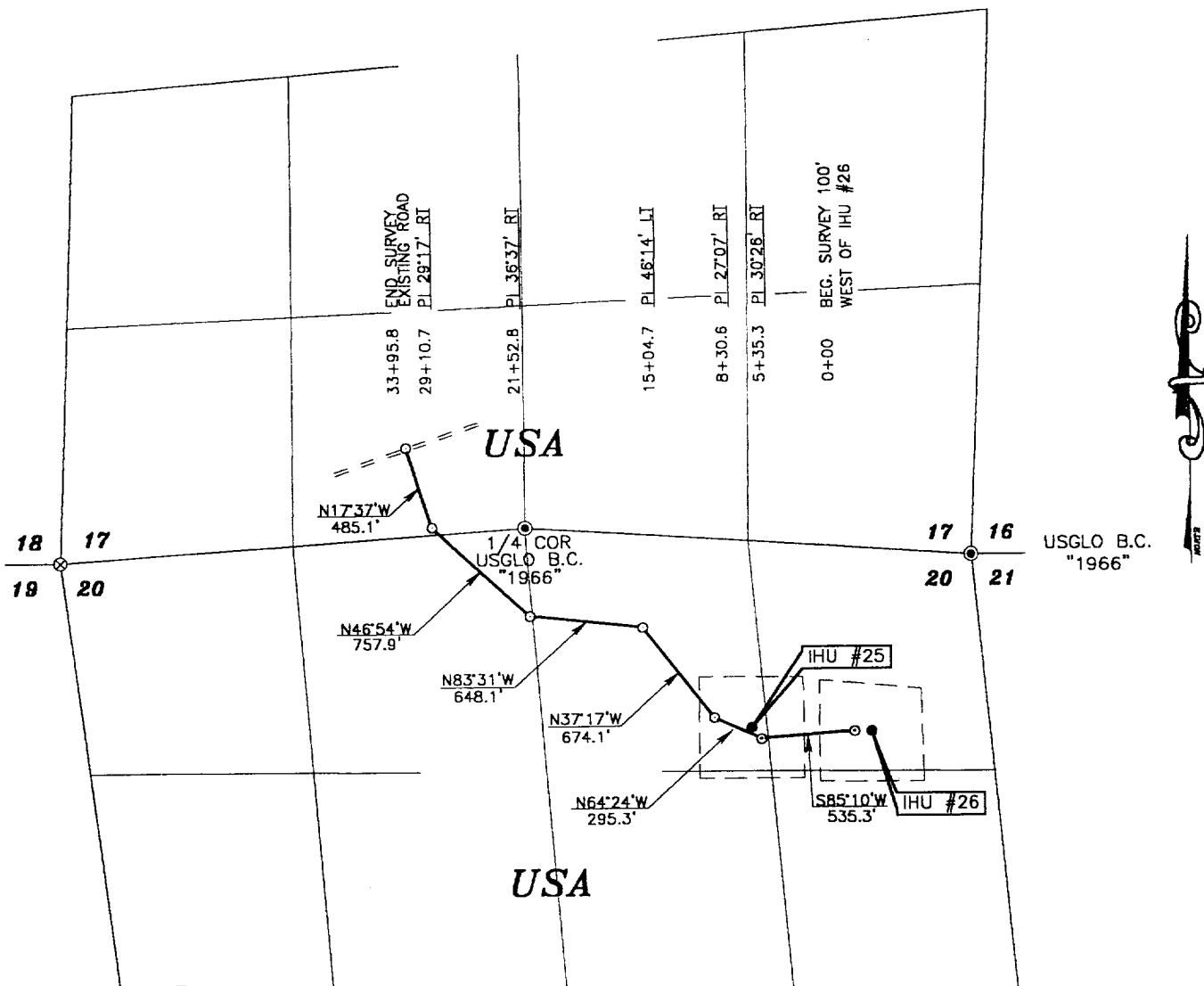
ELEVATION _____ 4149

OPERATOR _____ MARATHON OIL CO.

LEASE _____ INDIAN HILLS UNIT

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

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

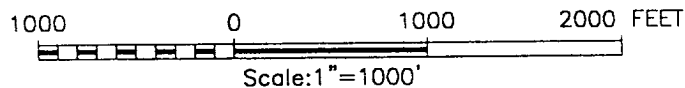


DESCRIPTION

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

No. 3239
No. 12641

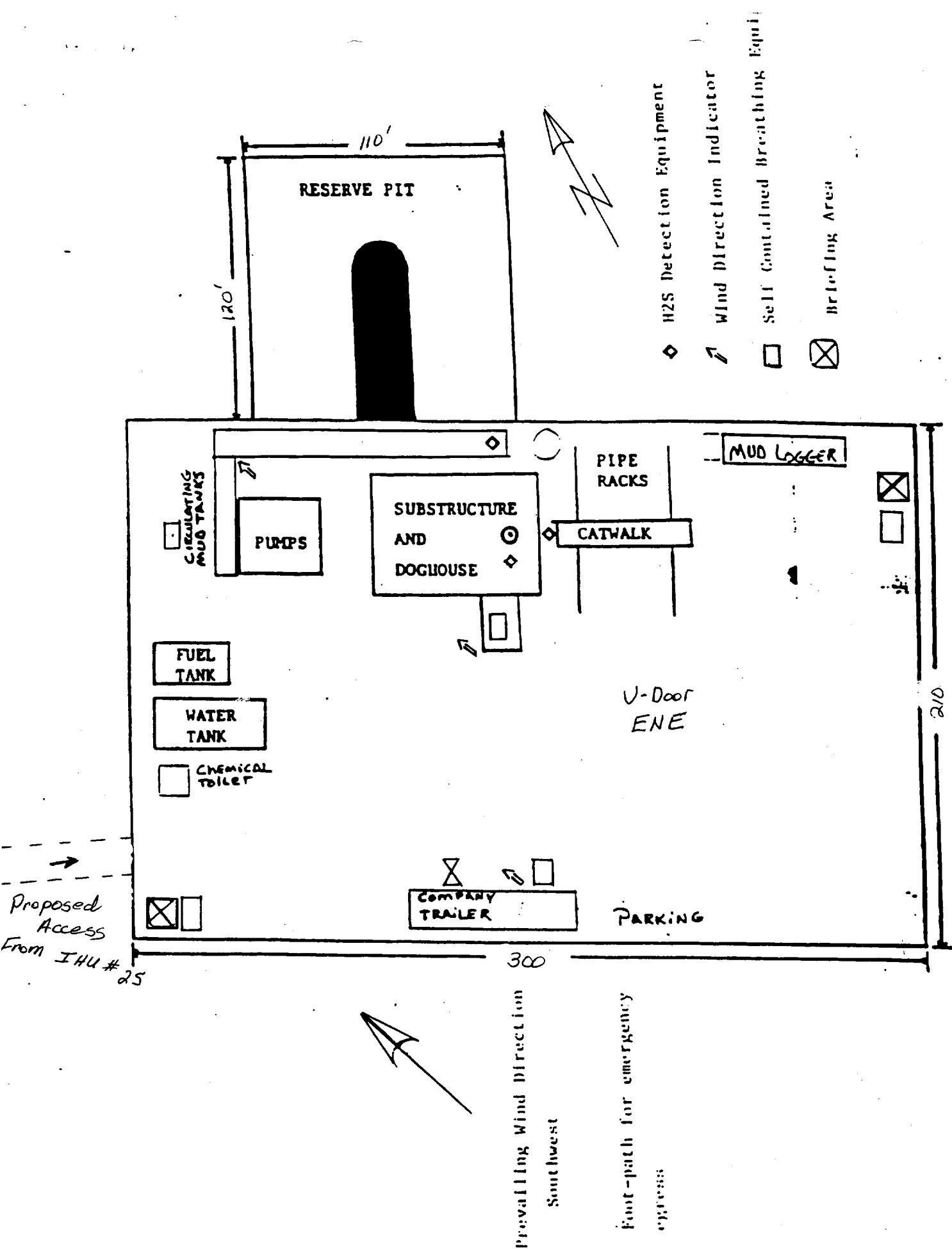
JOHN WEST SURVEYING COMPANY

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'



ARATHON 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

