

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



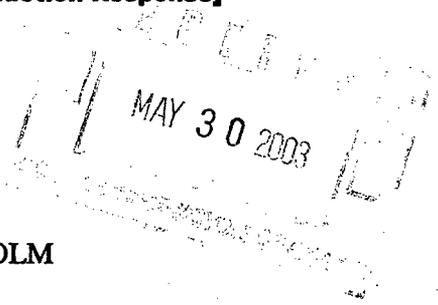
ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication
 NSL NSP SD
- Check One Only for [B] or [C]
 [B] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR
- [D] Other: Specify _____



- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] Working, Royalty or Overriding Royalty Interest Owners
- [B] Offset Operators, Leaseholders or Surface Owner
- [C] Application is One Which Requires Published Legal Notice
- [D] Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

S.F. MILLICAN [Signature] INDIAN BOUND ASSET TEAM 5/29/03
 Print or Type Name Signature Title Date

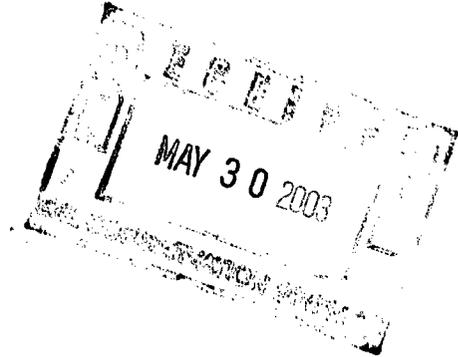
SF.Millican@MarathonOil.com
 e-mail Address



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

May 29, 2003

Mr. Richard Ezeanyim
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, New Mexico 87504



**RE: *Indian Hills Unit Well No. 53 Unorthodox Location
1383' FNL & 1586' FWL, Sec. 28, Township 21 South, Range 24 East (SHL),
2397' FSL & 2014' FWL, Sec. 28, Township 21 South, Range 24 East (BHL)
Indian Basin Upper Pennsylvanian Associated Pool***

Dear Mr. Ezeanyim,

By means of this application, Marathon Oil Company respectfully requests administrative approval for a non-standard location for the proposed Indian Hills Unit Well No. 53 with a surface location of 1383' FNL & 1586' FWL, Section 28, Township 21 South, Range 24 East, and a bottom hole location of 2397' FSL & 2014' FWL, Section 28, Township 21 South, Range 24 East, and to be dedicated to a standard 320 acre spacing unit consisting of the South half of Section 28. Marathon is proposing to drill this well to an unorthodox location in the Upper Pennsylvanian formation. This will be a directionally drilled well.

Marathon proposes to complete the Indian Hills Unit Well No. 53 in the "Indian Basin Upper Pennsylvanian Associated Pool" as promulgated by the New Mexico Oil Conservation Division Order Nos. R-9922, R-9922-A, R-9922-B, R-9922-C, R-9922-D and R-9922-E and the general rules for the Associated Gas Pools of Southeast New Mexico as promulgated by Division Order No. R-5353. These rules require wells to be located no closer than 660 feet to the outer boundary of the proration/spacing unit and no closer than 330 feet to the governmental quarter/quarter section lines. Indian Hills Unit Well No. 53 location is unorthodox because the producing interval infringes upon the 660 foot setback from the northern boundary of the 320 acre "lay-down" gas proration unit dedicated to the South half of Section 28 (please see Attachment #1 & 1A- Well Location and Acreage Dedication Plats, Attachment #2 - Location Verification Map and Attachment #3 - Vicinity Map). Based on the proposed directional plan, it is expected that the top of the Upper Pennsylvanian formation will be penetrated at 2582' FSL & 1945' FWL in Section 28, (please see Attachment #4 - Directional Plat supplied by Baker Inteq, Marathon's proposed directional drilling company for the well).

Participating Area

The proposed well is located within the Indian Hills Unit Upper Pennsylvanian Participating Area (see Attachment #5 -). The Indian Hills Unit is operated by Marathon Oil Company. Indian Hills Unit Well No. 53 is proposed to be dedicated to a proration unit consisting of the South half of Section 28, Township 21 South, Range 24 East. The mineral ownership of the South half 320 acre proration unit is identical to the North half of Section 28 which offsets the proposed unorthodox location in the Upper Pennsylvanian formation. Marathon Oil Company has a 99.54544% working interest while Nearburg Exploration has a 0.45456% working interest in both the North and South halves of Section 28.

Directional Wellbore:

The Indian Hills Unit Well No. 53 is proposed to be directionally drilled. Marathon's development of the East Indian Basin area relies heavily upon directionally drilled wellbores due to the extreme topographical relief of the Seven Rivers Hills and the Azotea Mesa plateaus. (please see Attachment #2). Furthermore, in the SW/4 of Section 28, the topographical relief and the visual resource restrictions imposed by the BLM near the Scenic Byway allow no available surface locations to drill a vertical wellbore. Therefore, the only available surface location to drill a development well for the SW/4 of Section 28 falls on the existing pad for the Indian Hills Unit No. 34 (API No. 30-015-31751, approved by Division Administrative Order NSL-4638-A(SD)).

Geologic Issues:

The Indian Basin Upper Pennsylvanian Associated Pool is predominantly composed of dolomite and limestone sequences. With current technology, only the dolomite sequences have proved productive and economic. The proposed location for the Indian Hills Unit Well No. 53 is expected to encounter minimal limestone because of dolomitic facies in all offsetting wells. Furthermore, the proposed penetration point at 2582' FSL & 1945' FWL in Section 28 is structurally equivalent to a standard location in the NE/4 SW/4 (UL "K") (please see Attachment #6 - Upper Pennsylvanian structure map of Section 28). Therefore, it is Marathon's opinion that the proposed unorthodox location is geologically similar to a standard location.

Reservoir Management Plan:

Currently three (3) wells, the Indian Hills Unit Well Nos. 19 (API No. 30-015-30572, approved by Division Administrative Order NSL-4215), 20 (API No. 30-015-30658, approved by Division Administrative Order NSL-4215-A (SD)) and 35 (API No. 30-015-32199), produce from the Indian Basin Upper Pennsylvanian Associated Pool in the South half of Section 28, with the Indian Hills Unit Well No. 19 being the only well located in the SW/4 of Section 28. Our proposed Indian Hills Unit No. 53 will therefore be the final well slotted for 80 acre spacing in the Upper Pennsylvanian within the SW/4 of Section 28.

Marathon is entering its final anticipated infill development phase of the Indian Basin Upper Pennsylvanian Associated Gas Pool. The objective of this program is to infill drill the oil column from the current ~160-acre well density to an ~80-acre well density. It is Marathon's belief that the oil zone should be developed on tighter spacing than the current ~160 acre development of the gas zone. The proposed ~80-acre infill program will improve oil recovery while minimizing both economic and reservoir waste.

Due to current pool rules allowing one well per 80 acres, only one (1) additional well can be drilled in the South half of Section 28. The BHL of the Upper Pennsylvanian in the Indian Hills Unit Well No. 53 provides a well balanced and near equal inter-well spacing between the existing wells. This 'equal' inter-well spacing will minimize well-to-well interference and hence maximize reserve recovery. By placing the well at the proposed BHL, Marathon can maximize and adequately drain reserves from Section 28. It is Marathon's belief that the proposed unorthodox location represents a superior location in regard to optimal reservoir drainage.

Notifications:

It is Marathon's understanding that since the working interest and mineral ownership are the same in the gas proration unit for the proposed well and the affected offset gas proration unit, no waivers or notifications to offset owners are required.

Should you have any questions/comments/concerns, please contact me at (432) 687-8306.

Respectfully,

A handwritten signature in black ink, appearing to read 'S. Millican', with a long horizontal flourish extending to the right.

Steven F. Millican
Indian Basin Asset Team
Marathon Oil Company

DISTRICT I
P.O. Box 1880, Hobbs, NM 88241-1880

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

Attachment # 1

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number	Pool Code	Pool Name
	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 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

	<p>Section 28 is a standard 640 acres.</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Jerry Fletcher</i> Signature</p> <p>Jerry Fletcher Printed Name</p> <p>Engineer Tech. Title</p> <p>5/23/03 Date</p>
	<p>GEODETTIC COORDINATES NAD 27 NME</p> <p>Y = 528872.9 X = 446801.8 LAT. 32°27'13.92"N LONG. 104°30'20.87"W</p>	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>May 20, 2003 Date Surveyed</p> <p>AWB</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Ronald J. Edson</i> 03.11.0532</p>
		<p>Certificate No. RONALD J. EDSON 3239 GARY EDISON 12641</p>

DISTRICT I
P.O. Box 1680, Hobbs, NM 88241-1680

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

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

DISTRICT IV
P.O. BOX 2086, SANTA FE, N.M. 87504-2086

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

Attachment 1-A

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

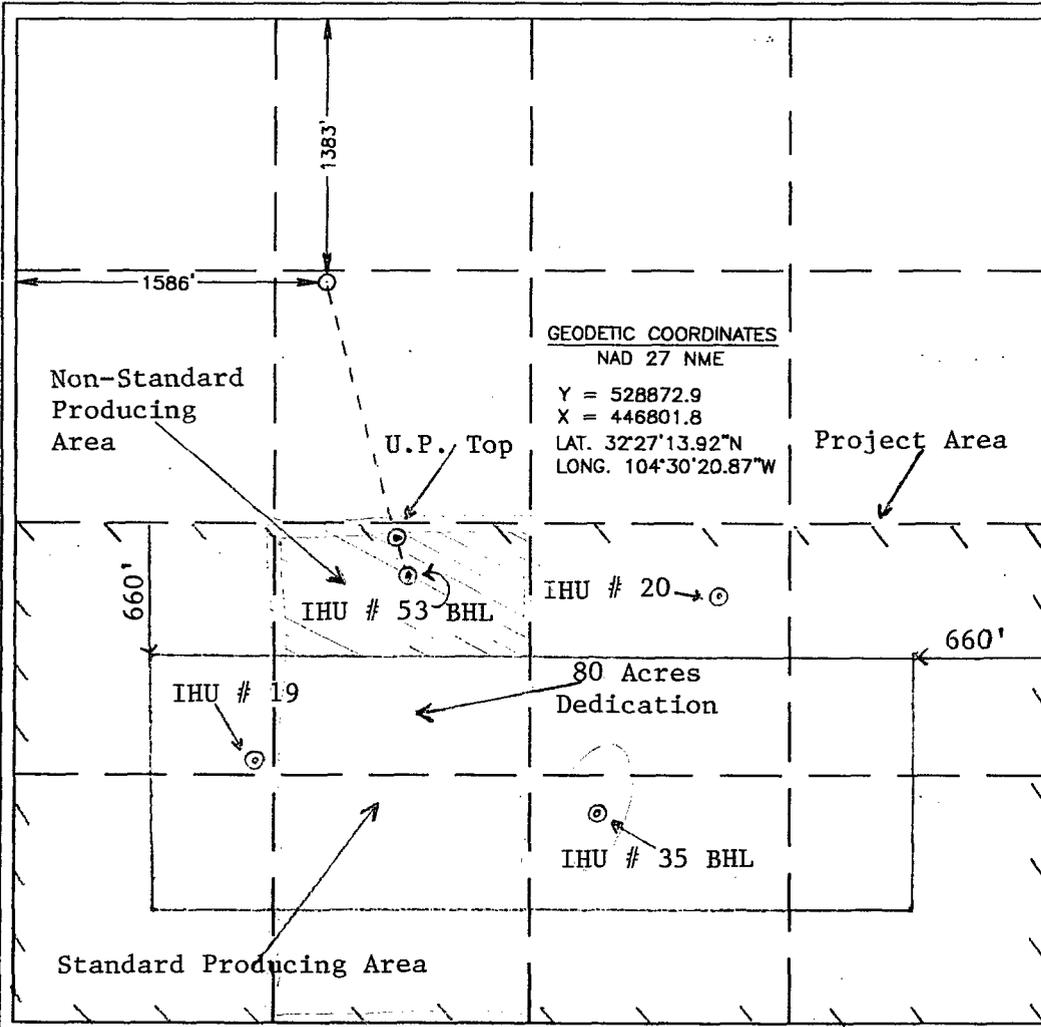
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	28	21-S	24-E		1383'	NORTH	1586'	WEST	EDDY

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.

Jerry Fletcher
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 supervision, 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

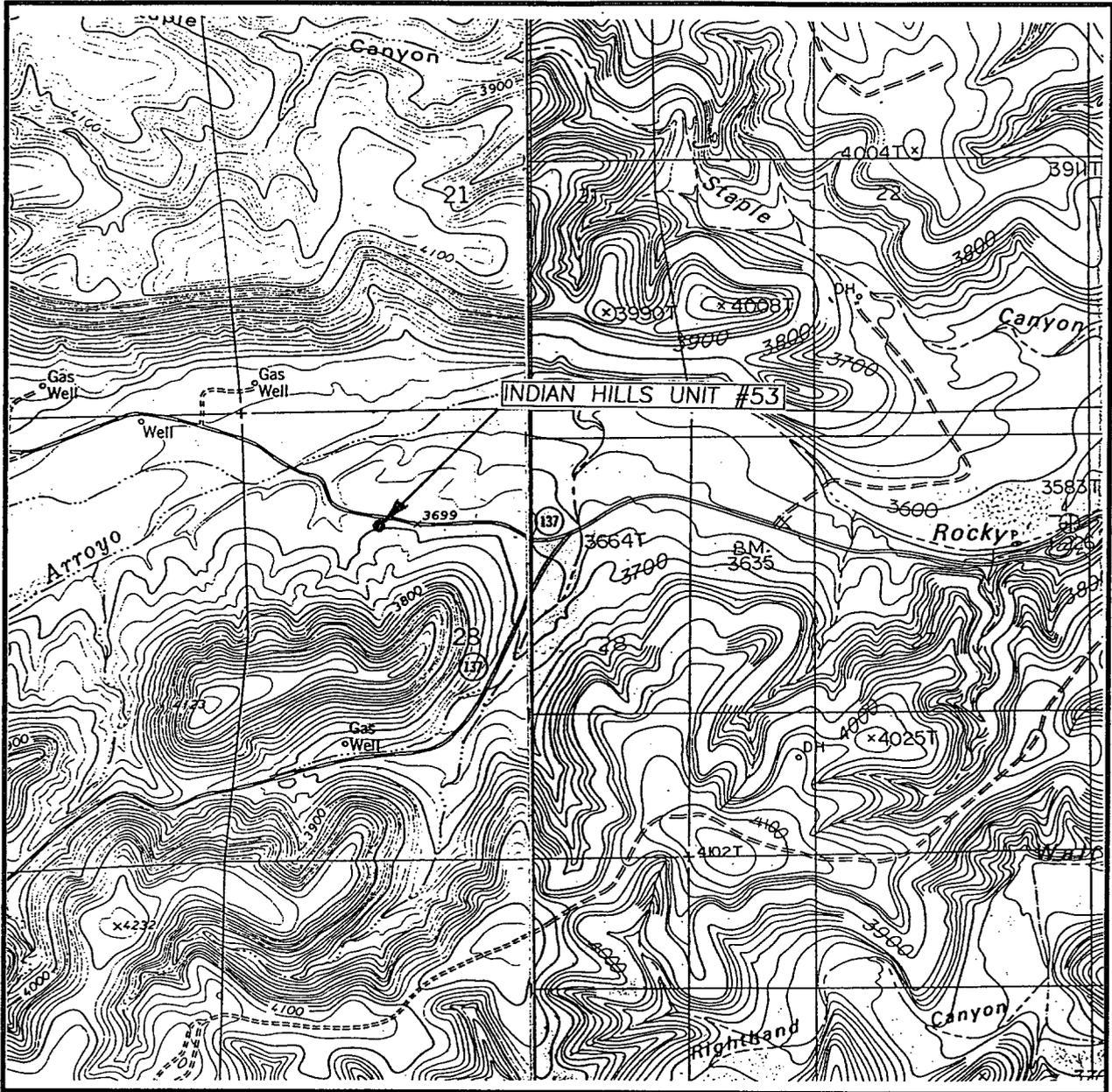
Ronald J. Eidson
Professional Surveyor

03.11.0532

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

LOCATION VERIFICATION MAP

Attachment 2



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'

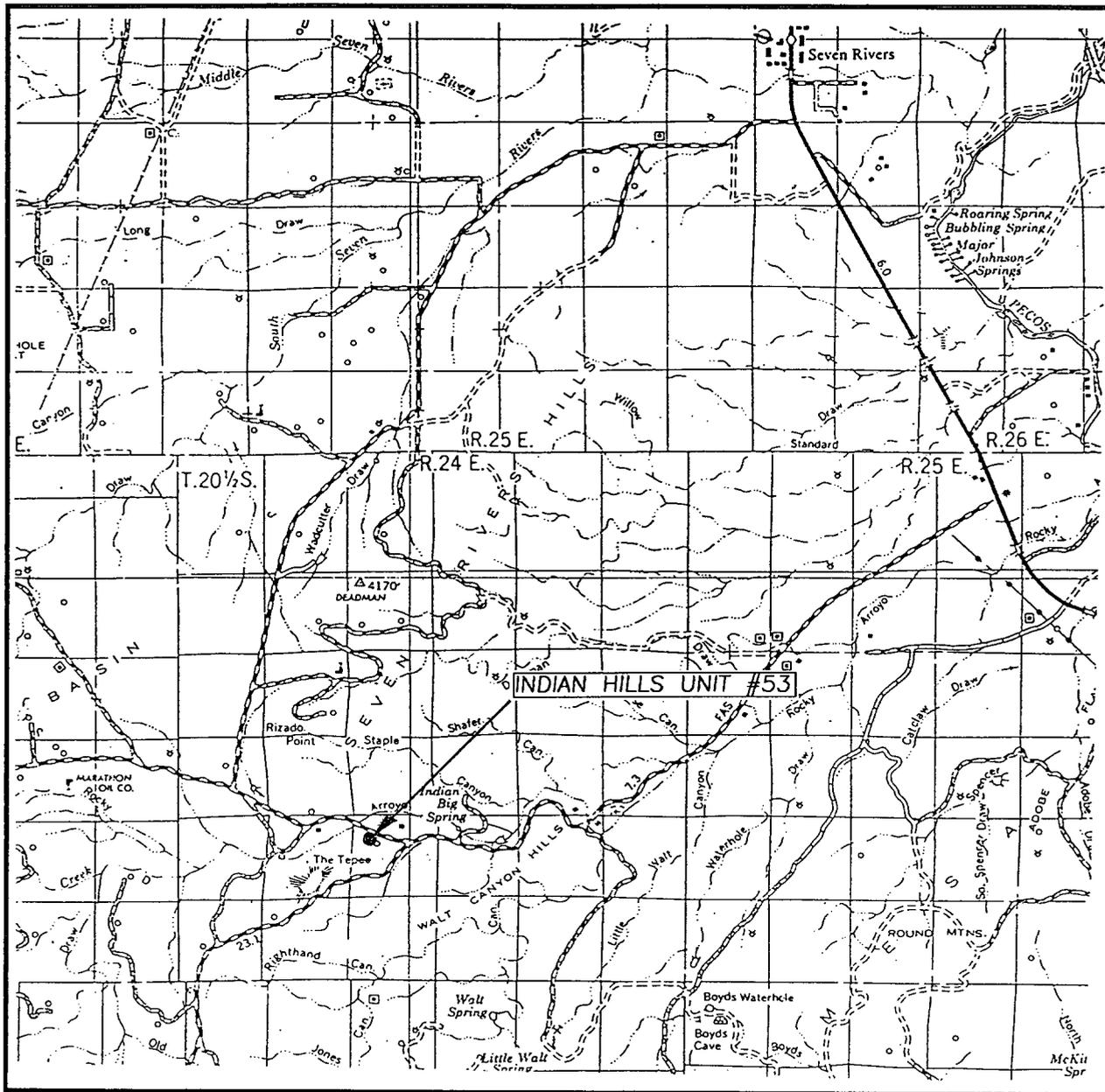
OPERATOR MARATHON OIL COMPANY

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

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



Marathon Oil Company

Structure : Indian Hills Unit #53

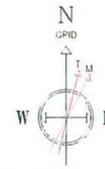
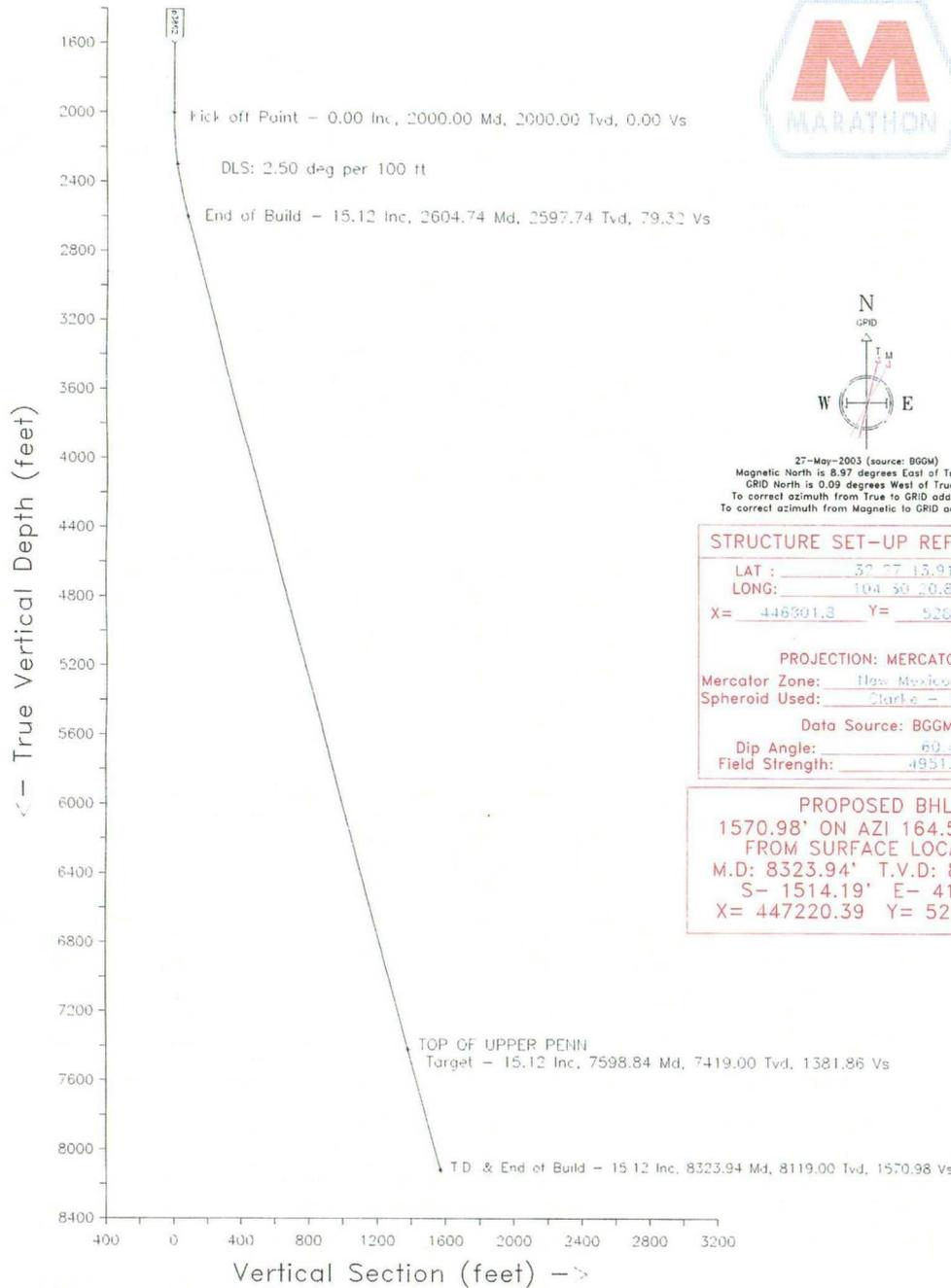
Slot : slot #1

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
FOP	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	-76.45	21.14	79.32	2.50
Target TOP OF UPPER PE	7598.84	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



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 : 32 27 13.917 N
 LONG: 104 50 20.874 W
 X= 446301.3 Y= 526872.9

PROJECTION: MERCATOR

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

Data Source: BGGM

Dip Angle: 60.42 deg
 Field Strength: 49513.13 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

VS REF 164.55 DEGS AZI

South (feet) ->

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

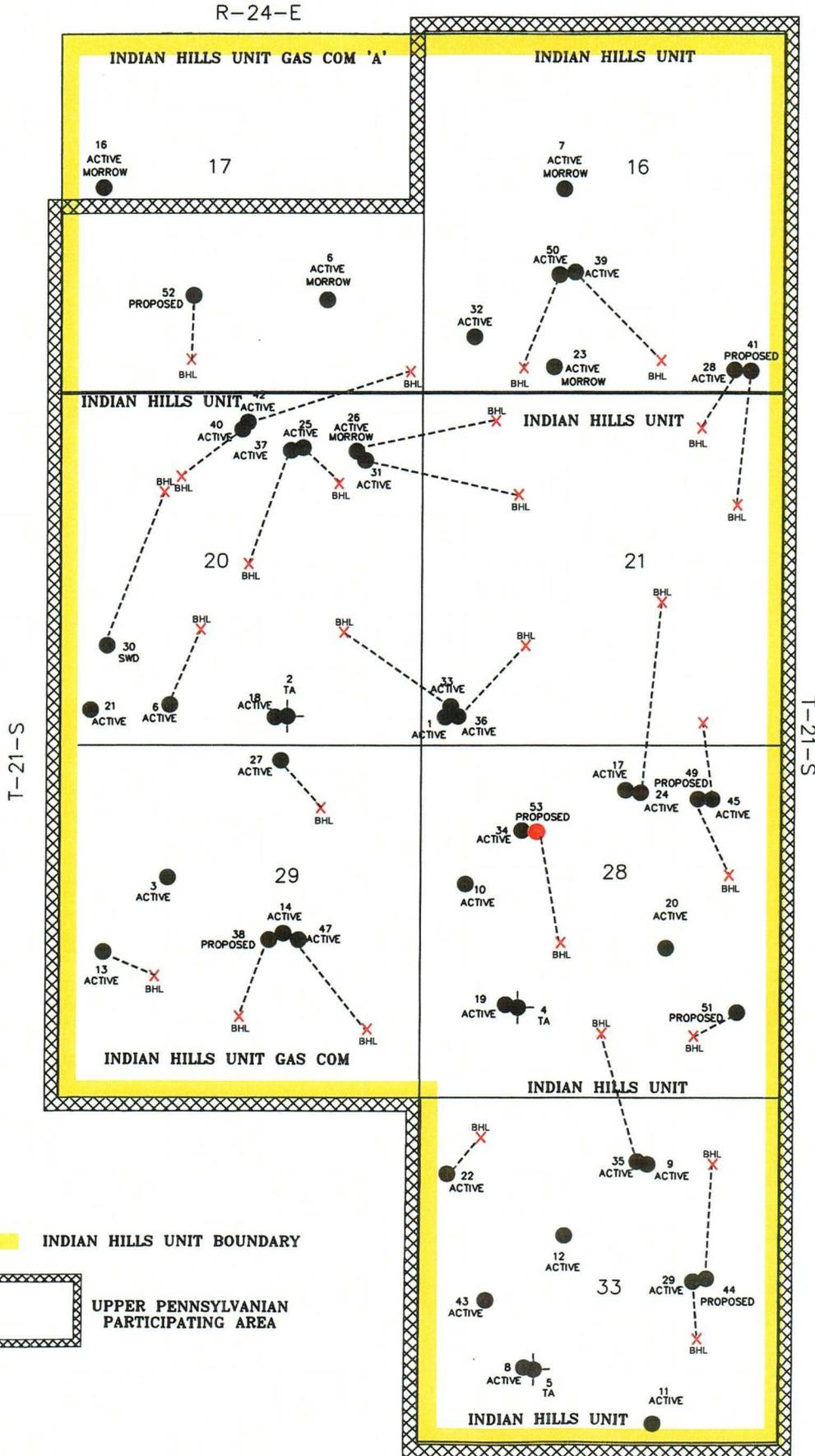


INTEQ

Created By kellym
 Date plotted : 27-May-2003
 Plot Reference is PO 2DJ SM/JF
 Coordinates are in feet reference slot #1.
 True Vertical Depths are reference rotary table.
 ihu53
 --- Baker Hughes INTEQ ---

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

INDIAN HILLS UNIT
UPPER PENNSYLVANIAN PARTICIPATING AREA
EDDY COUNTY, NEW MEXICO



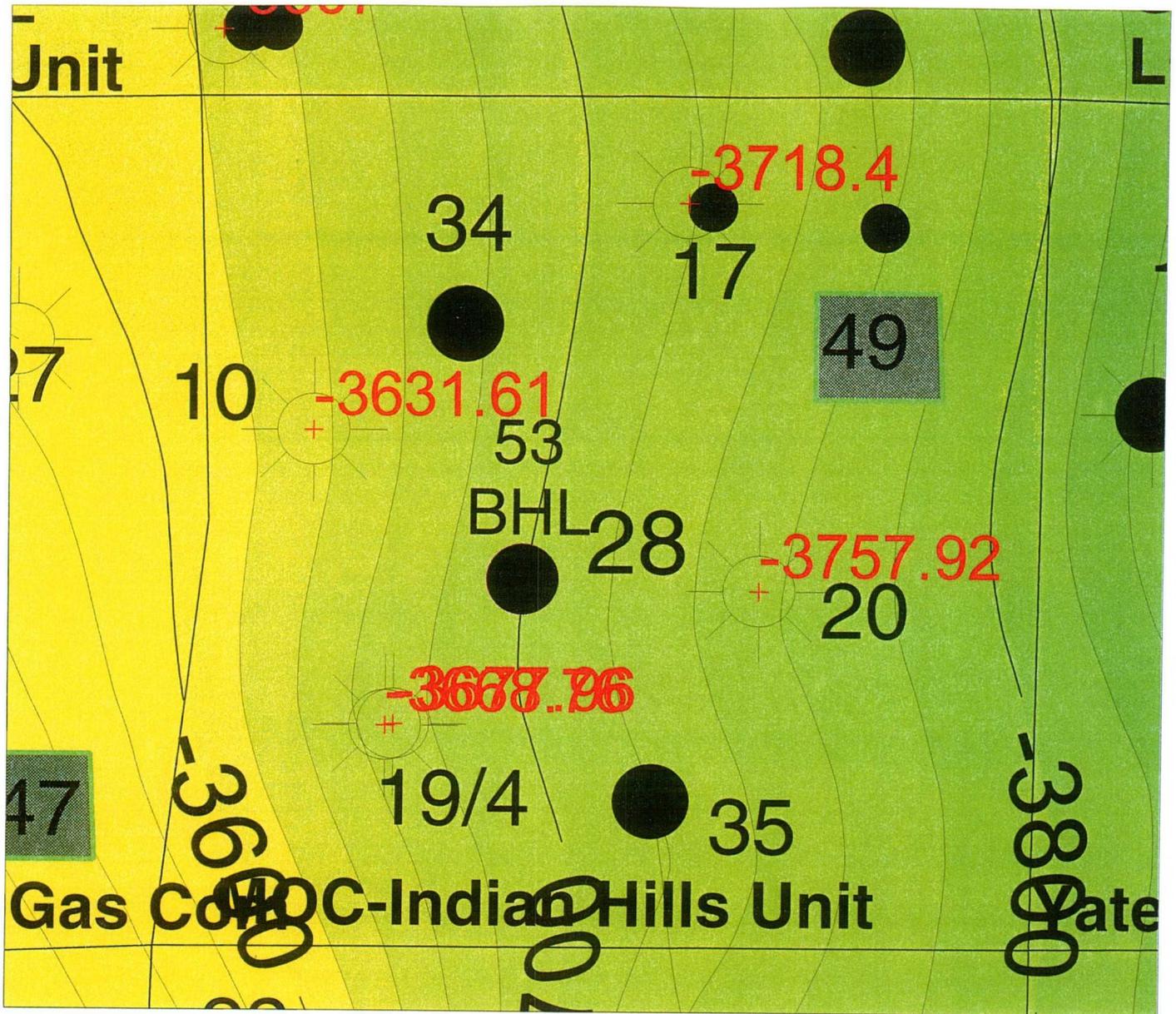
INDIAN HILLS UNIT BOUNDARY

UPPER PENNSYLVANIAN PARTICIPATING AREA

NOT TO SCALE

R-24-E

06/28/03
UPPENPA.DWG
BY: GINNY LARVE



1 inch = 1000 feet