

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NMOC

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 <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMLC064391B	
2. Name of Operator MARATHON OIL COMPANY		6. If Indian, Allottee or Tribe Name	
3a. Address P O BOX 3128 HOUSTON, TX 77253		7. If Unit or CA/Agreement, Name and/or No. NMNM70964A	
3b. Phone No. (include area code) Ph: 713.629.6600 Ext: 3254 Fx: 713.499.6748		8. Well Name and No. INDIAN HILLS UNIT GAS COM 56	
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 21 T21S R24E SWSW Lot M 453FSL 350FWL		9. API Well No. 30-015-32878-00-S1	
		10. Field and Pool, or Exploratory INDIAN BASIN UPPER PENN ASS	
		11. County or Parish, and 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 type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Drilling Operations
	<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.)

Marathon Oil Co. intends to drill a new horizontal lateral to the same permitted producing interval. Marathon intends to plug off existing Upper Penn. with approx. 200 sks. of premium cement. Marathon will cut a window in the casing @ approx. 8100', drill a 4-3/4" hole to a new TL of 913' FNL & 2633' FEL of sec. 29 T-21S, R- 24E. Marathon will use fresh water and produced water as drilling fluids. This will be an open hole completion (no liner).

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS ATTACHED**

NSL

14. I hereby certify that the foregoing is true and correct. Electronic Submission #32871 verified by the BLM Well Information System For MARATHON OIL COMPANY, sent to the Carlsbad Committed to AFMSS for processing by ARMANDO LOPEZ on 07/12/2004 (04AL0256SE)	
Name (Printed/Typed) MIKE MICK	Title AUTHORIZED REPRESENTATIVE
Signature (Electronic Submission)	Date 07/09/2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By ALEXIS C SWOBODA	Title PETROLEUM ENGINEER	Date 07/12/2004
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

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

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

## DISTRICT I

P.O. Box 1882, Santa Fe, NM 87504-1882

## DISTRICT II

P.O. Box 1882, Santa Fe, NM 87504-1882

## DISTRICT III

1882 Rio Grande Rd., Santa Fe, NM 87504

## DISTRICT IV

P.O. Box 1882, Santa Fe, NM 87504-1882

## 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
Property Code	Property Name <b>INDIAN HILLS UNIT GAS COM</b>	Well Number <b>56</b>
OGED No.	Operator Name <b>MARATHON OIL COMPANY</b>	Elevation <b>3667'</b>

## Surface Location

UL or lot No.	Section	Township	Range	Lot 1/2	Feet from the	North/South line	Feet from the	East/West line	County
M	21	21-S	24-E		453'	SOUTH	350'	WEST	EDDY

## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot 1/2	Feet from the	North/South line	Feet from the	East/West line	County
1	29	21-S	24-E		913'	NORTH	2633'	EAST	EDDY
Dedicated Acres	John 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

<p>GEODETIC COORDINATES HAD 27 NME SURF. Y=530701.2 N X=445521.6 E</p> <p>LAT.=32°27'31.99" N LONG.=104°30'35.85" W</p>				<p>LOT 2</p> <p>38.26 AC LOT 3</p> <p>36.88 AC LOT 6</p> <p>36.36 AC LOT 7</p> <p>37.74 AC</p>		<p>LOT 1</p> <p>38.29 AC LOT 4</p> <p>36.72 AC LOT 5</p> <p>36.28 AC LOT 8</p> <p>37.88 AC</p>		<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature _____</p> <p>Printed Name _____</p> <p>Title _____</p> <p>Date _____</p>	
<p>LOT 3</p> <p>42.20 AC LOT 4</p> <p>41.76 AC LOT 5</p> <p>41.87 AC LOT 6</p> <p>42.47 AC LOT 10</p> <p>42.03 AC LOT 9</p> <p>43.38 AC LOT 8</p> <p>42.78 AC LOT 11</p> <p>42.42 AC LOT 12</p> <p>43.83 AC LOT 13</p> <p>43.45 AC LOT 14</p> <p>43.05 AC</p>				<p>350'</p> <p>2633'</p> <p>81</p> <p>88</p> <p>81</p> <p>88</p> <p>350'</p> <p>2633'</p> <p>81</p> <p>88</p> <p>81</p> <p>88</p>		<p><b>SURVEYOR CERTIFICATION</b></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 19, 2003</p> <p>Date Surveyed REV: 07/1/04 JR</p> <p>Signature &amp; Seal of Professional Surveyor</p>			
<p>SCALE 1"=2000'</p>				<p>04.13.0832</p>		<p>Certificate No. GARY EDSON 18943</p>			
<p>43.05 AC</p>				<p>42.69 AC</p>		<p>42.91 AC</p>			<p>42.53 AC</p>

Marathon Oil Company  
INDIAN HILLS UNIT GAS COM #56

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 : ST\_P1  
Our ref : prop4295  
License :

Date printed : 25-Jun-2004  
Date created : 25-Jun-2004  
Last revised : 25-Jun-2004

Field is centred on 445535.500,521332.200,-105.00000,N  
Structure is centred on 445541.600,530707.200,-105.00000,N

Slot location is n32 27 32.049,w104 30 35.617  
Slot Grid coordinates are N 530707.200, E 445541.600  
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

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
7870.00	14.11	261.58	7660.69	612.05S	1430.43W	0.00	1555.16	444111.17
7879.11	14.11	243.50	7669.52	612.71S	1432.52W	48.20	1557.34	444109.08
7900.00	24.19	243.50	7689.23	615.76S	1438.64W	48.24	1564.18	444102.96
8000.00	72.43	243.50	7753.80	648.10S	1503.52W	48.24	1636.64	444038.08
8054.24	98.60	243.50	7758.00	672.02S	1551.49W	48.24	1690.22	443990.11
8100.00	98.60	243.50	7751.16	692.21S	1591.98W	0.00	1735.45	443949.62
8200.00	98.60	243.50	7736.21	736.32S	1680.47W	0.00	1834.29	443861.13
8300.00	98.60	243.50	7721.26	780.44S	1768.96W	0.00	1933.12	443772.64
8400.00	98.60	243.50	7706.30	824.56S	1857.45W	0.00	2031.96	443684.15
8500.00	98.60	243.50	7691.35	868.67S	1945.94W	0.00	2130.80	443595.66
8600.00	98.60	243.50	7676.40	912.79S	2034.42W	0.00	2229.63	443507.18
8700.00	98.60	243.50	7661.45	956.91S	2122.91W	0.00	2328.47	443418.69
8800.00	98.60	243.50	7646.49	1001.03S	2211.40W	0.00	2427.31	443330.20
8856.79	98.60	243.50	7638.00	1026.08S	2261.65W	0.00	2483.44	443279.95
8887.34	96.63	243.50	7633.95	1039.59S	2288.75W	6.44	2513.71	443252.85
8987.34	90.19	243.50	7628.00	1084.11S	2378.04W	6.44	2613.44	443163.56
8990.29	90.00	243.50	7628.00	1085.42S	2380.67W	6.44	2616.38	443160.93
9000.00	90.00	243.50	7628.00	1089.76S	2389.37W	0.00	2626.09	443152.23
9100.00	90.00	243.50	7628.00	1134.38S	2478.86W	0.00	2726.05	443062.74
9200.00	90.00	243.49	7628.00	1179.01S	2568.35W	0.00	2826.01	442973.25
9300.00	90.00	243.49	7628.00	1223.64S	2657.84W	0.00	2925.97	442883.76
9400.00	90.00	243.49	7628.00	1268.27S	2747.32W	0.00	3025.93	442794.28
9500.00	90.00	243.49	7628.00	1312.91S	2836.81W	0.00	3125.89	442704.79
9600.00	90.00	243.48	7628.00	1357.55S	2926.29W	0.00	3225.85	442615.31
9605.93	90.00	243.48	7628.00	1360.20S	2931.60W	0.00	3231.78	442610.00

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 3231.78 on azimuth 245.11 degrees from wellhead.  
Vertical section is from N 0.00 W 0.00 on azimuth 245.11 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 GAS COM #56,slot #1  
 INDIAN BASIN,Eddy County New Mexico

PROPOSAL LISTING Page 2  
 Your ref : ST\_P1  
 Last revised : 25-Jun-2004

				Comments in wellpath
				=====
MD	TVD	Rectangular Coords.		Comment
-----				
8054.24	7758.00	672.02S	1551.49W	EOC
9605.93	7628.00	1360.20S	2931.60W	BHL

Targets associated with this wellpath =====				
Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
EOC		7758.00	672.02S 1551.49W	25-Jun-2004
BHL	442610.000,529347.000,-105.00	7628.00	1360.20S 2931.60W	25-Jun-2004



# Marathon Oil Company

Created by: danf  
Date plotted: 25-Jun-2004  
Plot Reference is ST P1.

Coordinates are in feet reference slot #1.  
True Vertical Depths are reference rotary table.  
56stpl  
--- Baker Hughes INTEQ ---

Structure : INDIAN HILLS UNIT GAS COM #56

Slot : slot #1

Field : INDIAN BASIN

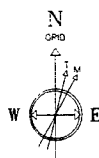
Location : Eddy County New Mexico

BAKER  
HUGHES

INTEQ

## WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East	V. Sect	Deg/100
Tie on	7870.00	14.11	261.58	7660.69	-612.05	-1430.43	1555.16	0.00
KOP	7879.11	14.11	243.50	7669.52	-612.71	-1432.52	1557.34	48.20
Target EOC	8054.24	98.60	243.50	7758.00	-672.02	-1551.49	1690.22	48.24
End of Build/Turn	8856.79	98.60	243.50	7638.00	-1026.08	-2261.65	2483.44	0.00
KOP	8990.29	90.00	243.50	7628.00	-1085.42	-2380.67	2616.38	6.44
T.D. & Target BHL	9605.93	90.00	243.48	7628.00	-1360.20	-2931.60	3231.78	0.00



25-Aug-2003 (source: BGGM)  
Magnetic North is 8.95 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 9.04 deg

### STRUCTURE SET-UP REFERENCE

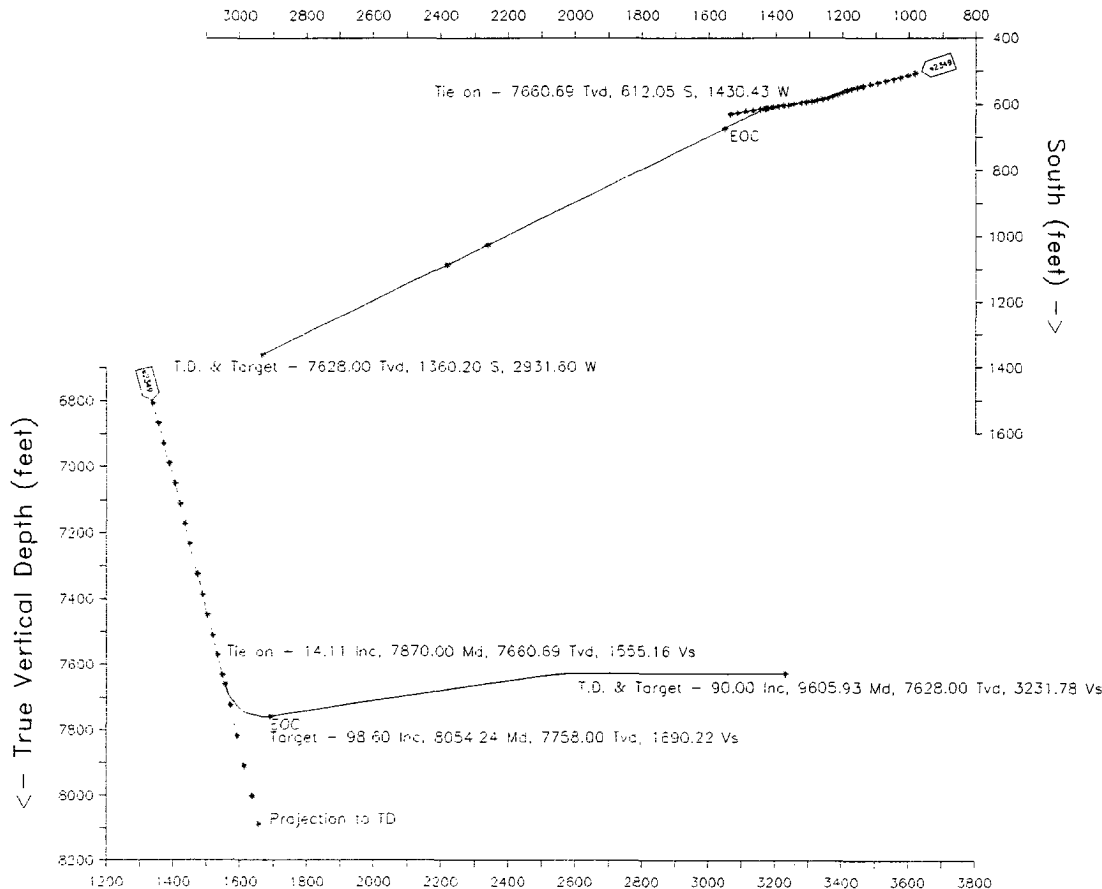
LAT :   
LONG :   
X =   
Y =

PROJECTION: MERCATOR

Mercator Zone:   
Spheroid Used:   
Data Source: BGGM

Dip Angle:   
Field Strength:   
rT

<- West (feet)



Vertical Section (feet) ->

Azimuth 245.11 with reference 0.00 N, 0.00 W from slot #1

## **MARATHON OIL COMPANY**

### **H2S DRILLING OPERATIONS PLAN**

#### **• 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 (H<sub>2</sub>S)**
- 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 H<sub>2</sub>S 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. H<sub>2</sub>S EQUIPMENT AND SYSTEMS**

##### **1. Safety Equipment**

**The following safety equipment will be on location.**

**A. Wind direction indicators.**

**B. Automatic H<sub>2</sub>S detection alarm equipment (both audio and visual).**

**C. Clearly visible warning signs. 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.**

## **2. WELL CONTROL SYSTEMS**

### **A. Blowout Prevention Equipment**

**Equipment includes but is not limited to:**

- a. pipe rams to accommodate all pipe sizes**
- b. blind rams**
- c. choke manifold**
- d. closing unit**

**Auxiliary 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**

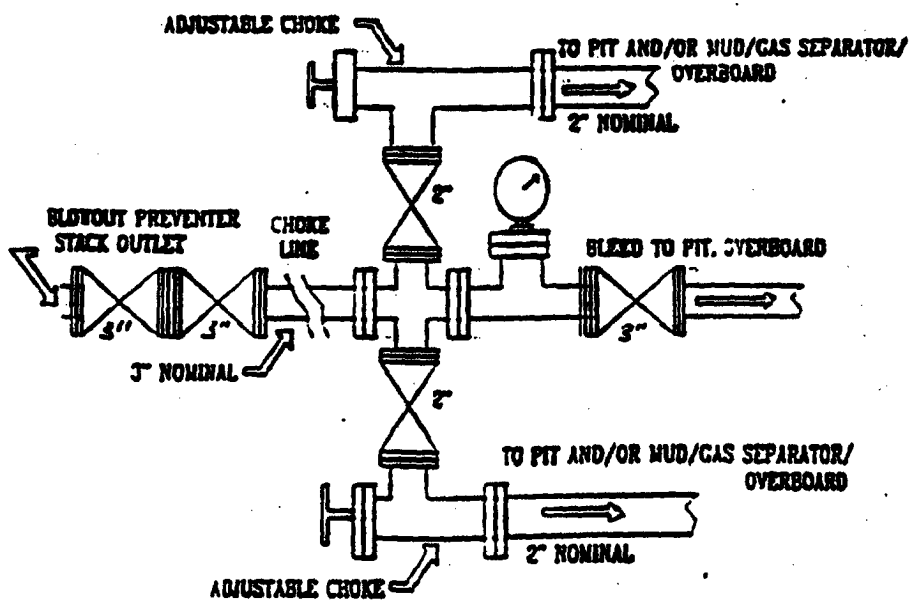
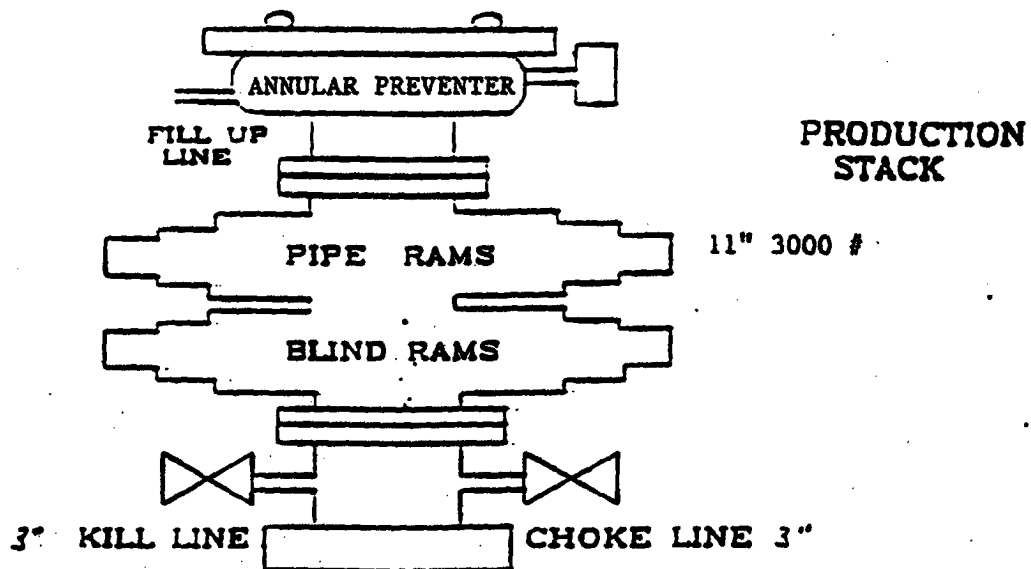
**The rig contractor will be required to have two-way communication capability. Marathon Oil Company will have either land-line or mobile telephone capabilities.**

### **C. Mud Program**

**The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers when appropriate will minimize hazards when penetrating H<sub>2</sub>S bearing zones.**

## **III. WELL SITE DIAGRAM**





## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: **Marathon Oil Company**  
Well Name & No. **Indian Hills Unit # 56- PLUG BACK AND SIDE TRACK**  
SH Location: **453' FSL, 350' FWL, Section 21, T. 21 S., R. 24 E., Eddy County, New Mexico**  
Proposed BH Location: **913' FNL, 2633' FEL, Section 29, T. 21 S., R. 24 E., Eddy County, New Mexico**  
Lease: **LC-064391-B (BHL)**

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

A. Well spud

B. Cementing casing: 9-5/8 inch 7 inch – ALL CASINGS IN PLACE

C. BOP tests

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.

4. The API No. assigned to the well by NMOC D shall be included on the subsequent report of setting the first casing string.

### II. CASING:

1. The 9-5/8 inch surface casing is set at 1208 feet and cement circulated to the surface.

2. The 7 inch production casing is set at 8310 feet and cement circulated to the surface.

3. Well bore will be plugged back with 200 sx cement. A window will be cut in the existing 7" casing at approximately 8100' and a 4-3/4" hole will be drilled to the proposed bottom hole location.

4. Well will be completed open hole.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 9-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

07/12/04

acs