

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-101
May 27, 2004

Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
Submit to appropriate District Office

DEC 21 2004

ARTESIA AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address Marathon Oil Company P.O. Box 3487 Houston, Tx. 77253		² OGRID Number 14021	
⁴ Property Code 6409		³ API Number 30- 30-015-32103	
⁵ Property Name Indian Hills Unit		⁶ Well No. #39	
⁹ Proposed Pool 1 Indian Basin Upper Penn. Assoc.		¹⁰ Proposed Pool 2	

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
"K"	16	21-S	24-E		1690'	South	2026'	West	Eddy

⁸ Proposed 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
P	16	21-S	24-E		950'	South	750'	East	Eddy

Additional Well Location

¹¹ Work Type Code N n D	¹² Well Type Code G	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4119'
¹⁶ Multiple N	¹⁷ Proposed Depth 9200'	¹⁸ Formation Upper Penn	¹⁹ Contractor	²⁰ Spud Date ASAP
Depth to ground water 100' +		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mil mils thick Clay <input type="checkbox"/> Pit Volume 2,000 bbls Drilling Method:				
Closed-Loop System <input type="checkbox"/>		Fresh Water <input checked="" type="checkbox"/>		Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.250"	9-5/8"	36#	1800'	800 sks.	Surface
8.750"	7"	23#/26#	9200'	1850 sks.	Surface
4.75"	none		9493' md		

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Marathon is proposing to drill a horizontal lateral in the U. Penn. Existing perf. shall be squeezed with 150 sks of cement. A window shall be cut in the 7" casing @ approx. 8375' md, and a 4.75" hole will be drilled.

The completion will be openhole to a total Md of 9493'. Directional plan is attached.

All BOPE shall be installed and tested according to OCD rules # 109 and 114.

BOPE program and schematic is attached. Rig H2S plan is attached.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines <input checked="" type="checkbox"/> a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .		OIL CONSERVATION DIVISION	
Signature: mfmick		Approved by:	
Printed name: Mike Mick		Title: TIM W. GUM	
Title: Adv. Sr. Engineer Tech.		Approval Date: DEC 27 2004 Expiration Date: DEC 27 2005	
E-mail Address: mfmick@marathonoil.com		Conditions of Approval:	
Date: 12-20-04	Phone: 713-296-3254	Attached <input type="checkbox"/>	

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State of New Mexico

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number 30-015-32103	Pool Code 33685	Pool Name IB UPPER Penn Assoc.
Property Code 6409	Property Name INDIAN HILLS UNIT	Well Number 39
OGRID No. 14021	Operator Name MARATHON OIL COMPANY	Elevation 4119'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	16	21-S	24-E		1690	SOUTH	2026	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
P	16	21-S	24-E		950	SOUTH	750	EAST	EDDY

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

GEODETIC COORDINATES
NAD 27 NME SURF.
Y=537053.5 N
X=446855.1 E
LAT.=32.476357° N
LONG.=104.505670° W

B.H.
Y=536317.3 N
X=449318.9 E
LAT.=32.474341° N
LONG.=104.497675° W

Producing Area

Dimensions: 660' x 660' (Producing Area), 600' x 600' (Well Area)

Distances: 4108.5', 4115.1', 4132.4', 4107.4', 1690', 750', 1060.73', 1707.68'

Bearings: GR. AZ.=123.50°, DIST.=1707.68', GR. AZ.=78.87°, DIST.=1060.73'

Other: 2026', 1690', 600', 600', 660', 660', 750', 1690', 950'

Penetration Pt. 8119' MD

IHU #32

OPERATOR CERTIFICATION

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

M. Mick
Signature

Mike Mick
Printed Name

Adv. Sr. Eng. Tech
Title

12/20/04
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.

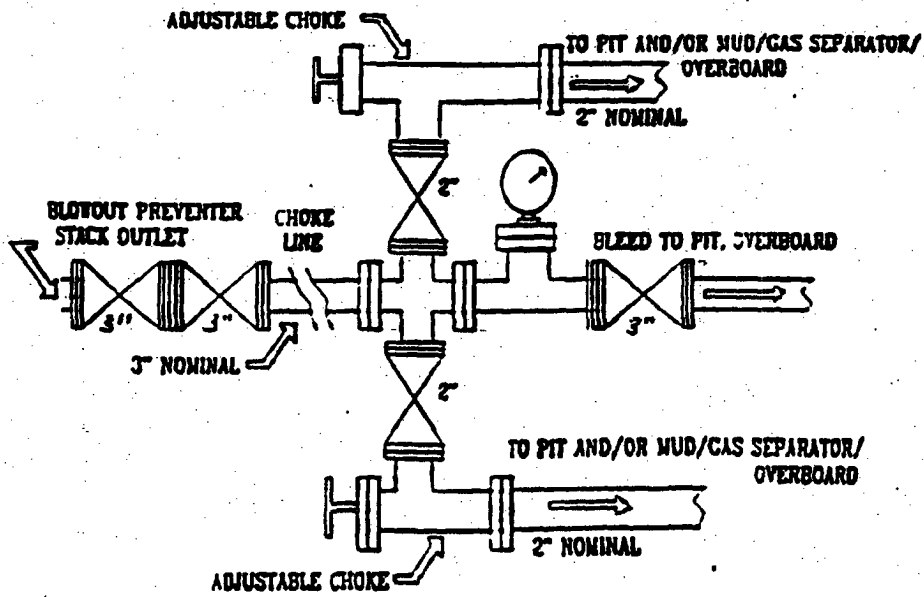
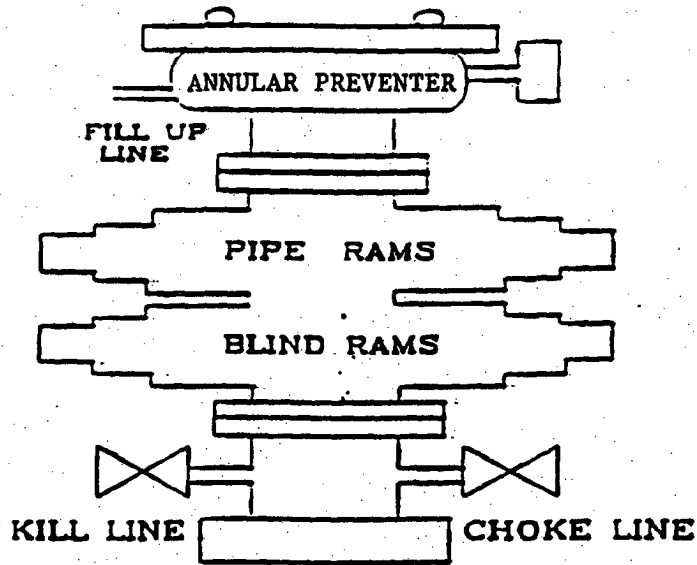
SEPTEMBER 5, 2001
Date Surveyed

REV: 12/13/04 JR
Signature & Seal of Professional Surveyor

Gary E. Eidsen 12/15/04
04.13.1648

Certificate No. GARY EIDSON 12841

BOP Stack



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 (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.**
- B. Automatic H2S 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 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.

Marathon Oil Company
Indian Hills Unit 39

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 : plan 1 horizontal
Our ref : prop4418
License :

Date printed : 8-Dec-2004
Date created : 8-Dec-2004
Last revised : 8-Dec-2004

Field is centred on 445535.500,521332.200,-105.00000,N
Structure is centred on 446854.000,537188.000,999.00000,N

Slot location is n32 28 36.204,w104 30 20.421
Slot Grid coordinates are N 537188.000, E 446854.000
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 39, slot #1
 INDIAN BASIN, Eddy County New Mexico

PROPOSAL LISTING Page 1
 Your ref : plan 1 horizontal
 Last revised : 8-Dec-2004

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	
8375.00	12.86	130.58	8129.07	866.31S	1337.24E	0.00	1529.78	448191.24	536321.69
8400.00	26.99	102.11	8152.56	869.33S	1344.95E	67.04	1538.04	448198.95	536318.67
8500.00	92.35	82.30	8200.69	867.14S	1426.13E	67.04	1615.16	448280.13	536320.86
8507.95	97.60	81.40	8200.00	866.02S	1433.96E	67.04	1622.34	448287.96	536321.98
8600.00	97.60	81.40	8187.83	852.38S	1524.18E	0.00	1704.83	448378.18	536335.62
8700.00	97.59	81.40	8174.61	837.56S	1622.19E	0.00	1794.45	448476.19	536350.44
8800.00	97.59	81.40	8161.40	822.74S	1720.20E	0.00	1884.07	448574.20	536365.26
8900.00	97.58	81.40	8148.20	807.92S	1818.21E	0.00	1973.69	448672.21	536380.08
9000.00	97.58	81.40	8135.01	793.11S	1916.22E	0.00	2063.31	448770.22	536394.89
9100.00	97.57	81.41	8121.82	778.29S	2014.24E	0.00	2152.93	448868.24	536409.71
9200.00	97.57	81.41	8108.65	763.48S	2112.25E	0.00	2242.56	448966.25	536424.52
9300.00	97.57	81.41	8095.47	748.67S	2210.27E	0.00	2332.18	449064.27	536439.33
9400.00	97.56	81.41	8082.31	733.86S	2308.28E	0.00	2421.81	449162.28	536454.14
9493.57	97.56	81.41	8070.00	720.00S	2400.00E	0.00	2505.67	449254.00	536468.00

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 2505.67 on azimuth 106.70 degrees from wellhead.
 Vertical section is from S 0.00 W 0.00 on azimuth 106.70 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 39, slot #1
 INDIAN BASIN, Eddy County New Mexico

PROPOSAL LISTING Page 2
 Your ref : plan 1 horizontal
 Last revised : 8-Dec-2004

				Comments in wellpath
				=====
MD	TVD	Rectangular Coords.		Comment

8507.95	8200.00	866.02S	1433.96E	End Of curve
9493.57	8070.00	720.00S	2400.00E	TD lateral 1

Targets associated with this wellpath				
=====				
Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised

End Of curve		8200.00	866.02S 1433.96E	8-Dec-2004
TD lateral 1		8070.00	720.00S 2400.00E	8-Dec-2004