

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
JAN 10 2005
DOB-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
		³ API Number 30- 30-015-28435
⁴ Property Code 6411	⁵ Property Name North Indian Basin Unit	⁶ Well No. 18
⁹ Proposed Pool 1 Indian Basin Morrow Gas Pool		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
J	2	21-S	23-E		2310	South	1650	East	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
J	2	21-S	23-E		2000'	South	1650'	East	Eddy

Additional Well Location

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3741'
¹⁶ Multiple No	¹⁷ Proposed Depth 9600'	¹⁸ Formation Morrow	¹⁹ Contractor Unknown	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 1000 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
20"	16"	Conductor	60	Redi-Mix	Surface
14-3/4"	9-5/8"	36#	1250'	1400	Surface
8-3/4"	7"	23#, 26#	8,000'	1100	Surface
6.125"	4.5"	10.5	9,600'	150	7200'

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.

BOP equip: 7 1/16" 3M dual ram, annular and choke manifold. BOP equip will be installed and operated in accordance to rules #109 & #114. Marathon intends to directional drill a 6.125" hole to 9,600'. TL target- 2000' FSL & 1650' FEL, approx. is 310' S of SL. A 4.5" liner will be cemented in place from 7,200' to 9,600' w/ 150 sks. cement. Well proposed target is the Indian Basin Morrow.

NIBU #20 is located in SW quarter, and is proposed to be a Morrow completion. NIBU #23 was a Morrow completion (NW quarter), but is currently TA'D. Rig H2S plan attached. directional plan 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 NMOC guidelines ☒ a general permit ☐, or an (attached) alternative OCD-approved plan ☐.
Signature: *mfmick*

Printed name: **Mike Mick**

Title: **Adv. Sr. Engineering Tech.**

E-mail Address: **mfmick@marathonoil.com**

Date: **12-21-04**

Phone: **713-296-3254**

OIL CONSERVATION DIVISION

Approved by:

Title: **TIM W. GUM**
DISTRICT II SUPERVISOR

Approval Date: **JAN 13 2005** Expiration Date: **JAN 13 2006**

Conditions of Approval:

Attached ☐

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-144
June 1, 2004

For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Marathon Oil Company</u> Telephone: <u>713 296-3254</u> e-mail address: <u>mfmick@marathonoil.com</u>		
Address: <u>P.O. Box 3487</u> Houston, Texas 77253		
Facility or well name: <u>North Indian Basin Unit #18</u> API# <u>30-015-28435</u> U/L or Qtr/Qtr <u>J</u> Sec <u>2</u> T <u>21S</u> R <u>23E</u>		
County: <u>Eddy</u> Latitude <u>2310' FSL</u> Longitude <u>1650' FEL</u> NAD: 1927 <input type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input checked="" type="checkbox"/> Indian <input type="checkbox"/>		
Pit Type: Drilling <input type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input checked="" type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12 mil</u> Clay <input type="checkbox"/> Pit Volume <u>1,000 bbl</u>	Below-grade tank Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more <input checked="" type="checkbox"/>	(20 points) (10 points) (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No <input checked="" type="checkbox"/>	(20 points) (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more <input checked="" type="checkbox"/>	(20 points) (10 points) (0 points)
Ranking Score (Total Points)		

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Marathon intends to construct a 100' x 100' workover pit. The pit will be constructed in the area of the original reserve pit, and will not require any new surface disturbance. The top soil will be removed and stockpiled; the contents dug out of old pit area will be placed on a liner. The pit will be lined with a 12 mil liner, additional padding will be used to prevent puncture if necessary. Pit area will be fenced. When workover is completed, all liquids will be removed and contents allowed to dehydrate. Contents removed during construction will be replaced, pit liner will be folded, 20 mil liner cap installed. A minimum of 3' of cover placed on top of cap, stockpiled top soil then placed on area. Area will be seeded to promote vegetation growth.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 12-21-04

Printed Name/Title Mike Mick

Signature

mfmick

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title

Mike Bruckner Compliance Officer

Signature

Mike Bruckner

Date:

1/26/05

Additional Information- North Indian Basin Unit # 18

General

The North Indian Basin Unit # 18 is located on New Mexico State lands. No new surface damages for pit area utilized . Approx. size 100'x 100' x 4'.

- Topsoil will be stripped and stockpiled for use as the final cover of fill at the time of closure.
- Contents removed from old pit will be stockpiled on a liner to prevent soil contamination.
- A 12 mil. Liner will be installed. Padding will be added if necessary. Liner will be anchored per OCD's guidelines. OCD will be contacted 24 hrs. prior to liner installation.
- All necessary steps will be taken to prevent liner damage.
- Marathon will used a combination of produced and freshwater during drilling, anticipated chloride content of drilling fluids - 10,000 ppm.
- Pit Area will be fence, work access will remain open during operations, closed once rig operations cease.
- All fluids will be removed from pit in a timely manner after operations cease.
- OCD will be contacted when pit closure commences.
- Closure of pit will be performed as per current OCD guidelines for onsite encapsulation The liner edges shall be folded over the contents and a 20 mil liner shall be installed on top. A min. of 3 foot of clean soil shall be spread over encapsulated pit contents. Stockpiled top soil shall be spread and contoured. Pit area will be re-seeded and re-vegetation promoted.

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

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Instruction on back
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
30-015-28435	078960	IB Morrow GAS Pool
Property Code	Property Name	Well Number
6411	NORTH INDIAN BASIN UNIT	18
OGRID No.	Operator Name	Elevation
014031	MARATHON OIL COMPANY	3741

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	2	21 S	23 E		2310	SOUTH	1650	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
J	2	21 S	23 E		2000'	South	1650'	East	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			

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>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i>
	<u>m7mick</u> Signature
	<u>Mike Mick</u> Printed Name
	<u>Adv. Sr. Eng. Tech</u> Title
	<u>1-4-05</u> Date
	SURVEYOR CERTIFICATION
	<i>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.</i>
	<u>MARCH 28, 1995</u> Date Surveyed
	<u>[Signature]</u> Signature & Seal of Professional Surveyor
	<u>W. P. Num 95-11-0495</u> W. P. Num
	<u>JOHN W. WEST</u> Certificate No.
	<u>RONALD J. EIDSON</u> 676
	<u>JOHN EIDSON</u> 3239
	<u>12641</u> 12641

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**

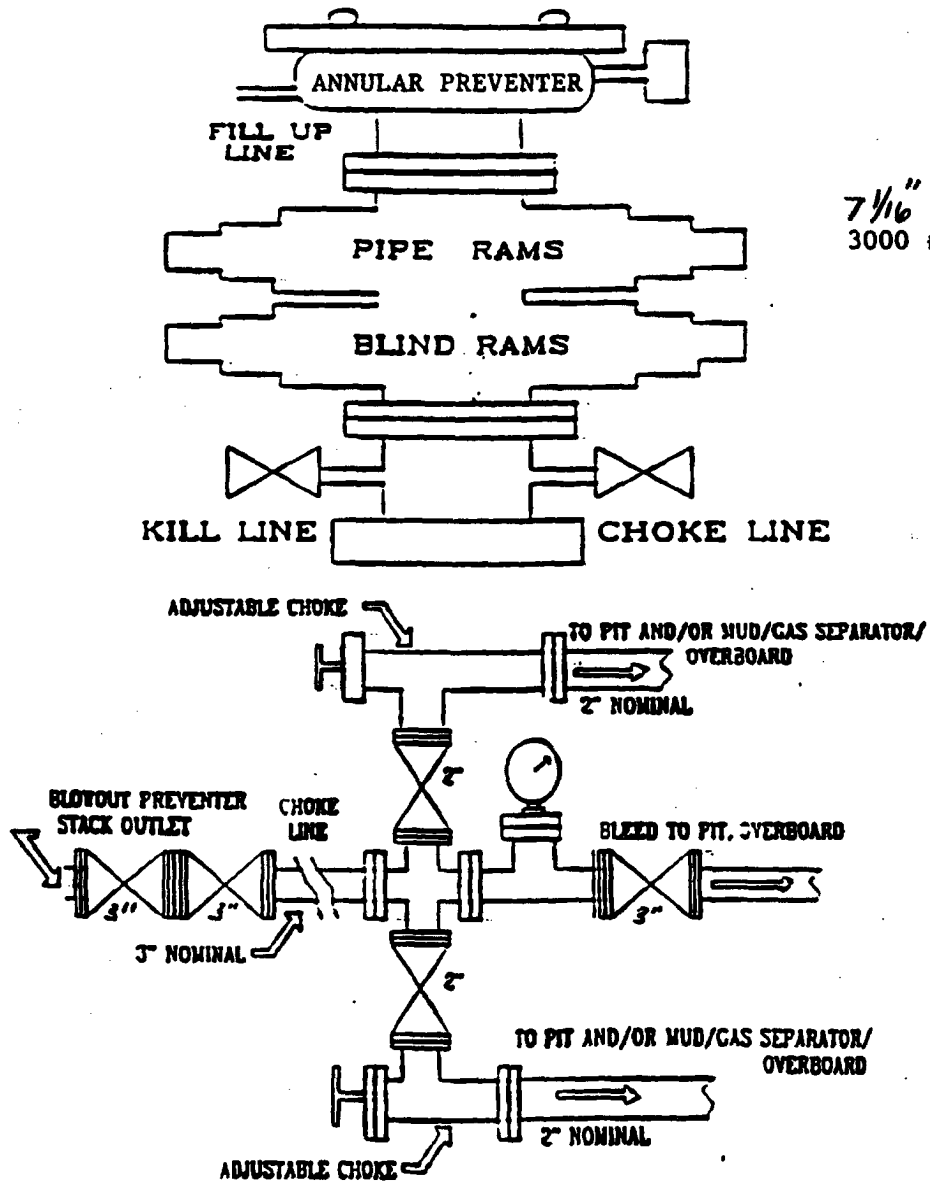
B. Communication

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.

BOP's



Marathon Oil Company
North Indian Basin Unit no.18

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 2
Our ref : prop4454
License :

Date printed : 5-Jan-2005
Date created : 5-Jan-2005
Last revised : 5-Jan-2005

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

Slot location is n32 25 59.274,w104 30 35.507
Slot Grid coordinates are N 521332.200, E 445535.500
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
North Indian Basin Unit no.18,slot #1
INDIAN BASIN,Eddy County New Mexico

PROPOSAL LISTING Page 1
Your ref : Plan 2
Last revised : 5-Jan-2005

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	180.00	0.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
500.00	0.00	180.00	500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
1000.00	0.00	180.00	1000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
1500.00	0.00	180.00	1500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
2000.00	0.00	180.00	2000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
2500.00	0.00	180.00	2500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
3000.00	0.00	180.00	3000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
3500.00	0.00	180.00	3500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
4000.00	0.00	180.00	4000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
4500.00	0.00	180.00	4500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
5000.00	0.00	180.00	5000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
5500.00	0.00	180.00	5500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
6000.00	0.00	180.00	6000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
6500.00	0.00	180.00	6500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
7000.00	0.00	180.00	7000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
7500.00	0.00	180.00	7500.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
8000.00	0.00	180.00	8000.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
8300.00	0.00	180.00	8300.00	0.00N	0.00E	0.00	0.00	445535.50	521332.20
8400.00	2.50	180.00	8399.97	2.18S	0.00E	2.50	2.18	445535.50	521330.02
8500.00	5.00	180.00	8499.75	8.72S	0.00E	2.50	8.72	445535.50	521323.48
8600.00	7.50	180.00	8599.14	19.61S	0.00E	2.50	19.61	445535.50	521312.59
8700.00	10.00	180.00	8697.97	34.82S	0.00E	2.50	34.82	445535.50	521297.38
8799.71	12.49	180.00	8795.76	54.26S	0.00E	2.50	54.26	445535.50	521277.94
9000.00	12.49	180.00	8991.31	97.59S	0.00E	0.00	97.59	445535.50	521234.61
9500.00	12.49	180.00	9479.47	205.75S	0.00E	0.00	205.75	445535.50	521126.45
9981.94	12.49	180.00	9950.00	310.00S	0.00E	0.00	310.00	445535.50	521022.20

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from structure and TVD from rotary table.
Bottom hole distance is 310.00 on azimuth 180.00 degrees from wellhead.
Vertical section is from wellhead on azimuth 180.00 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
North Indian Basin Unit no.18,slot #1
INDIAN BASIN,Eddy County New Mexico

PROPOSAL LISTING Page 2
Your ref : Plan 2
Last revised : 5-Jan-2005

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

9981.94	9950.00	310.00S	0.00E	TD

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

TD		9950.00	310.00S	0.00E 5-Jan-2005

Marathon Oil Company

Created by adrynm

Date plotted : 5-Jan-2005

Plot Reference is Plan 2.

Coordinates are in feet reference structure.

True Vertical Depths are reference structure.

--- Baker Hughes INTEQ ---

Structure : North Indian Basin Unit no.18

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	180.00	0.00	0.00	0.00	0.00	0.00
KOP	8300.00	0.00	180.00	8300.00	0.00	0.00	0.00	0.00
End of Build	8799.71	12.49	180.00	8795.76	-54.26	0.00	54.26	2.50
T.D. & Target TD	9981.94	12.49	180.00	9950.00	-310.00	0.00	310.00	0.00

