			N.	M. OH Cons	. Dr	FORM APPROVED	
Form 3160-3 (July 1992)			- 1		dPLfCAT. crippsfon∕,	OMB NO. 1004-0136	
ž		ED STATES	S . NTER	AResia, M	sloed FLVC	Expires: February 28, 1995 5. LEASE DESIGNATION AND SERIAL NO.	
					A 295.	0 NM 0330449	
						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
APPLI 1a. TYPE OF WORK	CATION FOR PE	RMIT TO D	RILL	OR DEEPEN		N/A 7. UNIT AGREEMENT NAME	
		DEEPEN [Indian Hills Unit Gas Com.	
OIL WELL	GAS WELL X OTHER			SINGLE X MULT ZONE ZONE		8. FARM OR LEASE NAME, WELL NO. Indian Hills Unit 47	
2. NAME OF OPERATOR						Gas Com.	
<u>Marathon 011 Comp</u> 3. Address and telephone						9. API WELL NO.	
P.O. Box 552 Mid				915	/687-8357	<u>30 - 015 - 32536</u> 10. FIELD AND POOL, OR WILDCAT	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface							
	FEL U.L. "J" Sect	tion 29, T-21	-S, R	-24-E		11. SEC, T., R., M., OR BLK.	
At proposed prod. zone	<u>& 700' FEL Section</u>	20 T 21 C	D 24	г		AND SURVEY OR AREA	
	DIRECTION FROM NEAREST TOWN		<u> </u>	<u> </u>		Section 29. T-21-S. R-24-E 12. COUNTY OR PARISH 13. STATE	
15 miles NW of Ca	arlsbad					Eddy N.M.	
15. DISTANCE FROM PROPOSE LOCATION TO NEAREST PROPERTY OR LEASE LINE	TT -			OF ACRES IN LEASE	17. NO. OF A TO THIS		
(Also to nearest drlg, unit) 18. DISTANCE FROM PROPOSE	lg. unit line, if any) 2004 *) POSED DEPTH	20 ROTAP	320 Y OR CABLE TOOLS	
TO NEAREST WELL, DRILL OR APPLIED FOR, ON THIS	, DRILLING, COMPLETED,			00 '	Rota		
21. ELEVATIONS (Show whet		• • • · ·				22. APPROX. DATE WORK WILL START*	
3775' G.L.		Carlsba	e Con	trolled Water Finsl	in	ASAP	
23.	I	PROPOSED CASING	AND CE	EMENTING PROGRAM			
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOO	T	SETTING DEPTH		QUANTITY OF CEMENT	
12.25"	9-5/8" K-55	36#		1200	<u>495 s</u>		
8.750	7.0" K-55	23# & 26	5#	8600'	1200	sks.	
	C	-		ctional well to	the India		
Hard line wil This well wil surface distu * The Indian Hills Unit Ga	Assoc. BHL target w 11 be 660' FSL & 66 11 share the Southe urbance. Hills Unit Gas Com	0' FEL. rn portion of . # 47 well s	f the stake	ley 700' FSL & 7 Indian Hills Uni is 150' South of G	00' FEL in t Gas Com the Exis PPROVA	# 14 pad to minimize LECT ting Indian	
Upper Penn. A Hard line wil This well wil surface distu * The Indian Hills Unit Ga IN ABOVE SPACE DESCRII deepen directionally, give pent	Assoc. BHL target 1 11 be 660' FSL & 66 11 share the Southe urbance. Hills Unit Gas Com as Com # 14.	0' FEL. rn portion of . # 47 well s	f the stake epen, give ue vertica	Iey 700' FSL & 7 Indian Hills Uni is 150' South of depths. Give blowout prevent	00' FEL in t Gas Com the Exis PPROVA	# 14 pad to minimize LECC # 14 pad to minimize LECC ting Indian L SUBJECT TO REQUIREMENTS AND STIMULATIONS proposal is to drill or	
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(**b**.) WECENED Ś.

IS JOE G. LARA

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Form 3160-5	UN	STATES				RM APPROVED		
(August 1999)		OF THE INTERIOR				B NO. 1004-0135 : November 30, 2000		
-	BUREAU OF LA	AND MANAGEMEN	Г		5. Lease Seria	·		
	SUNDRY NOTICES	AND REPORTS	ON WELLS		NM-0330449			
ח	o not use this form for				6. If Indian, Allottee or Tribe Name			
	ndoned well. Use For							
		· · · · · · · · · · · · · · · · · · ·			N/A			
SUBM	IT IN TRIPLICATE -	Other instructions	on reverse side			A/Agreement, Name and/or No		
1 Trans of Wall			Indian Hi	lls Unit Gas Com				
1. Type of Well Oil Well X Gas W	/ell Other				8. Well Name	and No.		
2. Name of Operator				·····	Indian Hil	ls Unit #47		
Marathon Oil Comp	anv				Gas Com.			
3a. Address	<u></u>		3b. Phone No. (include ar	ea code)	9. API Well N	0.		
P.O. Box 552 Mid	land, TX 79702		915-687-8360	· · · · · · · · · · · · · · · · · · ·	10 Field and I	Pool, or Exploratory Area		
4. Location of Well (Footage,	·	Description)				in U. Penn Assoc.		
SHL @ U.L. "J" Se	c. 29, T-21-S, R-2	4-E 2316' FSL &	2004' FEL					
BHL @ U.L. "P" SE	c. 29, T-21-S, R-2	4-E 700' FSL & 7	700' FEL		11. County or	Parish, State		
<u> </u>	· · · · · · · · · · · · · · · · · · ·			·····	Eddy	N.M.		
12. CH	IECK APPROPRIATE	BOX(ES) TO INC	ICATE NATURE OF I	NOTICE, REP	ORT, OR OTH	HER DATA		
TYPE OF SU	BMISSION		TYI	PE OF ACTION				
	-							
X Notice of Im	tent	Acidize	Deepen	Production	n (Start/Resume)	Water Shut-Off		
	D	Alter Casing	Fracture Treat	Reclamati	on	Well Integrity		
Subsequent	Report	Casing Repair	New Construction	Recomple	mplete Other			
Einel Abande	onment Notice	Change Plans	Plug and Abandon	Temporari	ily Abandon			
		Convert to Injectio	on Plug Back	Water Dis	nosal			
								
Attach the Bond under following completion o testing has been compl determined that the fina Please find the Please destroy	which the work will be per of the involved operations. I leted. Final Abandonment I il site is ready for final inspe- encew C-102 Well Lo the C-102 dated 4/	formed or provide the I f the operation results in Notices shall be filed on ction.) cation and Dedic 20/02. This pla	Bond No. on file with BLM a multiple completion or r	/BIA. Required : ecompletion in a cluding reclamatic ed. o be	subsequent report new interval, a Fo	Il pertinent markers and zones. s shall be filed within 30 days orm 3160-4 shall be filed once mpleted, and the operator has		
the footages ar		at 15 very filleg	itar 111 bibe and c	nererore				
are toolages a	e cirakous.							
Please find the	new C-102 attache	d. The new BHL	is 700' FSL & 700	' FEL just	like the			
APD reflects.	The BHL target was	figured taking	into consideratio	n the irreg	ular size			
of the Section.								
m 1								
Thank you								
14. I hereby certify that the fo	oregoing is true and correct		Title					
Name (Printed/Typed)			Bendue					
Jerry Fletch			Engine	er Tech.		······································		
Jum Filt	there -		Date 10/14/0	2				
	ТНІ	SPACE FOR FED	ERAL OR STATE OF	FICE USE				
Approved by	101 10		FIELD M	ANAGEF	2 Da	ate //		
Conditions of approval, if any	/S/ JOE G. I	ARA	VII FIELD IVI	MINAUEL	۱ <u> </u>	NOV 1 8 2002		
certify that the applicant hold	ds legal or equitable title to	those rights in the subj	ect lease Office CAF	RLSBAD	FIELD C)FFICE		
which would entitle the applic	cant to conduct operations the	nereon.						

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

State of New Mexico DISTRICT I Form C-102 P.O. Box 1980, Hobbs, NM 88241-1980 Energy, Minerals and Natural Resources Department Revised February 10, 1994 Submit to Appropriate District Office DISTRICT II OIL CONSERVATION DIVISION State Lease - 4 Copies P.O. Drawer DD, Artesia, NM 88211-0719 Fee Lease - 3 Copies P.O. Box 2088 DISTRICT III Santa Fe, New Mexico 87504-2088 1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT □ AMENDED REPORT P.O. BOX 2088, SANTA FE, N.M. 87504-2088 API Number Pool Code Pool Name 33685 Indian Basin Upper Penn. Assoc. **Property** Code **Property** Name Well Number INDIAN HILLS UNIT GAS COM 47 OGRID No. **Operator** Name Elevation MARATHON OIL COMPANY 3775 14021 Surface Location Feet from the UL or lot No. Section Township Lot Idn North/South line East/West line Range Feet from the County 29 21-S 24-E 2316 J SOUTH 2004 EAST EDDY Bottom Hole Location If Different From Surface UL or lot No. Lot Idn Section Township Range Feet from the North/South line Feet from the East/West line County 24-E 700 P 29 21-S SOUTH 700 EAST EDDY Joint or Infill **Dedicated** Acres **Consolidation** Code Order No. 320 E/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** IHU # 27 SHL 660 I hereby certify the the information ß contained herein is true and complete to the 660' best of my knowledge and belief. Proposed IHU # 46 hun Father Signature Jerry Fletcher Ъ Printed Name Engineer Tech. IHU # 27 BHL IHU # 3 Title 10/14/02 IHU # 14 Ò Date SURVEYOR CERTIFICATION 742.2 3729.1 IHU # 13 SHL GEODETIC COORDINATES I hereby certify that the well location shown NAD 27 NME on this plat was plotted from field notes of 2004' - \bigcirc actual surveys made by me or under my Y = 527209.8supervison, and that the same is true and X = 444173.5correct to the best of my belief. 3781.6 3785.5' MARCH 25, 2002 Date Surveyed IHU # 13 BHL AWB Signature & Seal of Professional Surveyor Project_Area Producing Area ኤ 700' 4/04/02 $\hat{\sigma}$ 02 1/ 0082 200 Certificate No. RONALD 1 EIDSON 3239 12641 K PORESSIQ 1100 Marine

BUREAU OF LAND MANAGEMENT Wates State Service As 2000 SUNDRY NOTICES AND REPORTS ON Wates Side, NMM 8822 Chars Service No. Do not use this form for proposals for diff or to re-orter an abandoned well. Use Form 3160-3 (APD) for such proposals. NA SUBMIT IN TRIPLICATE - Other instructions on reverse side 1.11Indian, Allotte or The Name I'm of the Mark Side Well Onter N.WA Name of Openior 8. Woll Mare and No. P.O. Box 552 Midland, TX. 79702 915/687-8357 Share of Openior 915/687-8357 10. Feld and Pool or Exploratory Area Inclain Hills Unit #47 6. Adveca 9. API Well No. Share of Openior 915/687-8357 10. Feld and Pool or Exploratory Area Inclain Mills Will Workson, K.C., K.M., or Namy Description 11. County or Paria, State 11. County or Paria, State SHL @ U.L. 'P'' Sec. 29, T-21-S, R-24-E 2316' FSL & 2004' FEL 11. County or Paria, State 11. County or Paria, State BHL @ U.L. 'P'' Sec. 29, T-21-S, R-24-E 2316' FSL & 2004' FEL 11. County or Paria, State 11. County or Paria, State CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF ACTION 11. County or Paria, State Y Mandelinscon Trans Adveca	Form 3160-5 UNII (August 1999) DEPARTMENT	ATES N	I.M. Oil Con	s. C 🗌 🖸	ist. 2 FO	RM APPROVED B NO. 1004-0135
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Implement		Other instructions o	n reverse side		7. If Unit or C	• ·
	Oil Well X Gas Well Other					
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	3a. Address	3	b. Phone No. (include an	ea code)	9. API Well N	ю.
	P.O. Box 552 Midland, TX 79702		•		10. Field and	Pool, or Exploratory Area
BHL @ U.L. "P" Sec. 29, T-21-S, R-24-E 740' FSL & 868' FEL 11. County or Parish, State Eddy N.M. 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Image: Distribution of Intere Acidize Image: Distribution of Intere Complete Image: Distribution of Intere Acidize Image: Distribution of Intere Complete The proposed of Complete Operation of Interestion and Distribution Distribution and Distribution		•				
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Image: Subsequent Report Acidaze Despen Production (Start/Resume) Water Start-Off Image: Subsequent Report Casing Repair Notice of Integrity Other Other Image: Final Abandonment Notice Casing Repair Plug and Abandon Temporarity Abandon Other 3. Describe Proposed or Completed Operation (clearly state all pertinent defails, including estimated starting date of any proposed work and approximate duration thereof. If the proposed is to descent fractionally or pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLMHBA. Resured addets of all performed markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLMHBA. Tensured and the vertical depth of all performed markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLMHBA. Tensured and the operator has determined that the final site is ready for final inspection. Blue with all be filed with all of the device determined that the final site is ready for final inspection. Please find the attached new Rig plat as per Barry Hunts request. Also find the Directional plan proposal for the Indian Hills Unit Gas Con. # 47. A new C-102 plat is attached. Image: Prove Algorithm Addition Directional plan proposal for the Indian Hills Unit Gas Con. # 4/24/02 Mark (Frinted/Typed) Unet Al/24/02 Engineer Tech.	12. CHECK APPROPRIATE	BOX(ES) TO INDIC	CATE NATURE OF N	NOTICE, REP		
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1 Iter to injection Plug Back Water Disposal 3. Describe Proposed or Completed Operation (clearly state all periment details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give substifice locations and measured and true vertical depths of all periment markers and zones. Attach the Doad under which the work will be performed or provide the Bond No. on file with BL/MBIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed within 30 days following completed. Final Abandomment Notices shall be filed within 30 days following completed. Final Abandomment Notices shall be filed within 30 days detail the final site is ready for final inspection.) Please find the attached new Rig plat as per Barry Hunts request. Also find the Directional plan proposal for the Indian Hills Unit Gas Com. # 47. A new C-102 plat is attached. 14. 1 hereby certify that the foregoing is true and correct Name (Printed/Npmed) Jerry Fletcher Upry Fletcher This Space For FEDERAL OR STATE OFFICE USE Approved by /S/ JOE G. LARA Nov 1 8 2002	Subsequent Report		H			Other
If the proposal is to deepen directionally or recomplete 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/BLA. Required subsequent reports shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. Final Abandonment Notices shall be filed once testing has been completed. An experiment that the final site is ready for final inspection. Please find the attached new Rig plan as per Barry Hunts request. Also find the Directional plan proposal for the Indian Hills Unit Gas Com. # 47. A new C-102 plat is attached. It is testing tone does ton the fin	Final Abandonment Notice					
Also find the Directional plan proposal for the Indian Hills Unit Gas Com. # 47. A new C-102 plat is attached. 14. Ihereby certify that the foregoing is true and correct Name (PrintedTyped) Jerry Fletcher Jerry Fletcher Date 4/24/02 THIS SPACE FOR FEDERAL OR STATE OFFICE USE Approved by SJOE G. LARA Conditions of approved if this notice does not correct of the solit does not correct of the	If the proposal is to deepen directionally or recomp Attach the Bond under which the work will be per following completion of the involved operations. I testing has been completed. Final Abandonment N determined that the final site is ready for final inspec	lete horizontally, give sub- formed or provide the Bo f the operation results in a lotices shall be filed only tion.)	surface locations and meas nd No. on file with BLM. a multiple completion or re after all requirements, inc	sured and true ver /BIA. Required s ecompletion in a s	rtical depths of a subsequent report new interval, a F	Il pertinent markers and zones. ts shall be filed within 30 days orm 3160-4 shall be filed once
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Name (Printed/Typed) Jerry Fletcher Engineer Tech. Juny Muther Date 4/24/02 THIS SPACE FOR FEDERAL OR STATE OFFICE USE Approved by /S/ JOE G. LARA Conditions of approval, if any, are attached. Approval of this notice does not warrant of Office Date						
Name (Printed/Typed) Jerry Fletcher Engineer Tech. Juny Muther Date 4/24/02 THIS SPACE FOR FEDERAL OR STATE OFFICE USE Approved by /S/ JOE G. LARA Conditions of approval, if any, are attached. Approval of this notice does not warrant of Office Date						
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Jung Flitther Date 4/24/02 THIS SPACE FOR FEDERAL OR STATE OFFICE USE Approved by /S/ JOE G. LARA Image: Field D MANAGER Date Conditions of approval, if any, are attached. Approval of this notice does not warrant of the proval of this notice does not warrant of the proval of this notice does not warrant of the proval of the pr	 14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Jerry, Eletcher 			on Toch		
Approved by /S/ JOE G. LARA Date NOV 1 8 2002	Aug Alterny					
Approved by /S/ JOE G. LARA Date NOV 1 8 2002	THIS	SPACE FOR FEDE		FICE USE		
Conditions of approval, if any, are attached. Approval of this notice does not warrant or	A 11				D	ate NOV 1 8 2002
	certify that the applicant holds legal or equitable title to	f this notice does not war those rights in the subject	rant on ora-	RLSBAD	FIELD C	

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

Station Station 21 8:21

SUDE G. LARA BECEIVED



1 INCH= 50 feet

Prevailing Wind Direction Southwest

5



Marathon Oil Company Indian Hills Unit 47

Eddy County New Mexico INDIAN BASIN slot #1

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Baker Hughes INTEQ уq

Your ref : Our ref : prop3247 License : PO 2DJ DH/RH

Date created : 17-Apr-2002 Last revised : 18-Apr-2002 Date printed : 19-Apr-2002

-

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

Reference North is Grid North

Slot Grid coordinates are N 527174.200, E 443163.400 Slot local coordinates are 0.00 N 0.00 E Slot location is n32 26 57.047,w104 31 3.303 Structure is centred on 443163.400,527174.200,999.00000,N

Field is centred on n32 30 0.000,w104 30 0

-

Bottom hole distance is 1943.53 on azimuth 144.21 degrees from wellhead Grid coordinates in FEET and computed using the Clarke - 1866 spheroid Vertical section is from N 0.00 E 0.00 on azimuth 144.21 degrees Grid is mercator - New Mexico East (3001). Presented by Baker Hughes INTEQ

All data in feet unless otherwise stated. Calculation uses minimum curvature method

Coordinates from slot #1 and TVD from rotary table.

7500.00 4500.00 8000.00 7558.91 7000.00 6500.00 6000.00 5500.00 4000.00 3200.00 3100.00 5000.00 3500.00 3277.60 3000.00 2900.00 2800.00 2700.00 2600.00 2500.00 2000.00 1500.00 1000.00 Measured Inclin 500.00 Depth 0.00 INDIAN BASIN, Eddy County New Mexico 19.44 19.44 19.44 19.44 19.44 19.44 19.44 19.44 19.44 19.44 19.44 19.44 17.50 15.00 10.00 Degrees 12.50 2.50 0.00 7.50 5.00 0.00 0.00 0.00 0.00 0.00 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21 144.21144.21 144.21 144.21 144.21144.21 144.21 144.21 144.21 Degrees Azimuth 7300.00 7244.45 6772.95 5358.47 4886.97 3093.17 7715.94 6301.46 5829.96 4415.48 3943.98 3472.49 3189.17 2799.14 3262.77 2996.04 2897.97 2699.75 2599.97 2500.00 2000.00 1500.00 1000.00 True Vert 500.00 Depth 0.00 ч 1245.985 1380.975 1261.88S 1110.985 975.998 571.01S 841.00S 706.005 436.025 301.035 166.035 105.995 ០៧ 86.05S 63.35S 44.07S 15.91S 28.24S 1.77S 7.07S 0.00N 0.00N 0.00N 0.00N 0.00N 0.00N 0 0 ΤA R υ z н z ብ d ⊳ 909.63E 898.16E 800.85E 703.54E 217.00E 995.47E 606.23E 508.92E 411.61E 314.31E 119.69E 러 년 62.03E 45.67E 76.40E 31.77E 20.36E **11.47E** 1.28E 5.10E 0.00E 0.00E 0.00E 0.00E 0.00E 0.00E ਸ⊳ თ. 20 Deg/100ft Dogleg 0.00 0.00 2.50 2.50 2.50 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 2.50 2.50 0.00 0.00 0.00 0.00 0.00 Last revised : 18-Apr-2002 1702.36 1555.56 1535.95 1369.54 1036.72 1203.13 537.49 870.31 703.90 371.08 204.68 130.66 106.07 78.09 19.61 54.33 34.82 0.00 8.72 2.18 0.00 Vert 0.00 0.00 0.00 0.00 Sect 444158.87 443575.01 GRID 444073.03 444061.56 443964.25 443866.94 443769.63 443672.32 443477.71 443380.40 443283.09 443239.80 443225.43 443209.07 443195.17 443183.76 443174.87 443168.50 443164.68 443163.40 443163.40 443163.40 443163.40 Easting 443163.40 443163.40 Ω OORD 525793.23 525912.32 UPPER PENN 2 525928.22 526333.20 526468.20 526603.19 Northing 526063.22 526738.18 527158.29 526198.21 526873.17 527008.17 527068.21 527088.15 527110.85 527145.96 527167.13 527172.43 527174.20 527174.20 527174.20 527174.20 527130.13 527174.20 527174.20 ഗ 1055' FSL * 1095' FE

Marathon Oil Company Indian Hills Unit 47,slot #1

PROPOSAL LISTING

Page 1

Your ref : P0 2DJ DH/RH

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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 1943.53 on azimuth 144.21 degrees from wellhead. Vertical section is from N 0.00 E 0.00 on azimuth 144.21 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 47,slot #1 INDIAN BASIN,Eddy County New Mexico

PROPOSAL LISTING Page 3 Your ref : P0 2DJ DH/RH Last revised : 18-Apr-2002

7558.91 8380.76 Ð 7300.00 8075.00 TVD Rectangular Coords. 1261.88S 1483.77S 909.63E 1069.58E TOP OF UPPER PENN TOP OF STRAWN Comments in wellpath Comment

NO Targets associated with this wellpath



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS _____100 ft Scale: 1:3,600 Detail: 14-7 Datum: NAD27



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Detail 13-9 Datum: NAD27



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Detail 13-9 Datum: NAD27

LOCATION VERIFICATION MAP



VICINITY MAP



SCALE: 1" = 2 MILES

SEC. <u>29</u> TWP.<u>21-S</u> RGE. <u>24-E</u> SURVEY <u>N.M.P.M.</u> COUNTY <u>EDDY</u> DESCRIPTION <u>2316' FSL 2004' FEL</u> ELEVATION <u>3775'</u> OPERATOR <u>MARATHON OIL COMPANY</u> LEASE <u>INDIAN HILLS UNIT GAS COM</u>

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

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Thirteen Point Surface Use Plan MARATHON OIL COMPANY

INDIAN HILLS UNIT Gas Com. #47 Sec. 29, T-21-S, R-24-E 2316' FSL & 2004' FEL Eddy County, New Mexico

- 1. <u>Existing Roads</u>: Refer to Vicinity Lease Map.
 - a. The proposed well site 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 1.6 miles to access road on South side of county road, turn South follow lease road that runs on the West side of 117 Facility. After crossing over pipelines, turn West follow lease road (Which runs parallel with pipelines) to location just south of the existing IHU # 14.
 - 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. <u>Planned Access Road</u>: Refer to Vicinity Lease Map.

No new access road will be required. Construction plans will require blading and rolling the road and pad. The access road enters the drilling pad on the Northwest corner. The drilling location will have a V-door facing West.

- 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 eight oil and gas wells operated by Marathon, Yates, and Devon within a one-mile radius of the proposed location. These locations have production facilities including separators, condensate, oil, water storage tanks. Marathon, Yates and Devon operate a variety of dehydrators, meter runs, and several gathering lines in the one-mile radius.
 - b. <u>New Facilities</u>: No new facilities are proposed at this time.
 - c. Rehabilitation of disturbed areas no longer needed for operations will be accomplished by grading, leveling and seeding as recommended.
- 5. <u>Location and Type of Water Supply:</u>
 - 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. If poly line is used an existing ROW route will be utilized.
 - c. No water well will be drilled on this location.

A. P. D. (cont.) Thirteen Point Surface Use Plan Indian Hills Unit Gas Com. #47

6. <u>Source of Construction Materials</u>:

- a. Construction materials may be obtained from the construction site.
- b. If production is obtained, native materials will be used on the location and for installation of production facilities.
- c. On-site inspection may dictate any changes in location construction.

7. <u>Methods of Handling Waste Material Disposal</u>:

- a. Cuttings will be deposited in the reserve pit.
- b. Drilling fluids contained in reserve pit and allowed to evaporate. Free water will be removed and transported to an approved disposal site to accelerate pit drying.
- c. Produced fluids none anticipated.
- d. A portable chemical toilet will be provided.
- e. Garbage and other waste material garbage and trash will be stored in a receptacle on location and periodically hauled to an approved sanitary landfill.
- f. After the rig moves out, all materials not necessary for operations will be removed. Pits will be backfilled and leveled. The location will be cleaned of all trash and debris.
- 8. <u>Ancillary Facilities</u>: Camp facilities will not be required. Portable trailers will be on location to house a company drilling foreman and contract tool pusher.

9. Well site Layout:

- a. The well pad layout shows the drill site layout as staked. Topsoil will be stockpiled per specifications.
- b. The reserve pit will be fenced on three sides before drilling begins. The fourth side will be fenced when the drilling rig leaves location.
- c. The reserve pit will be lined w/ 2- 6 mil liners after padding pit w/ dirt.
- 10. Plans for Restoration of the Surface:
 - a. Backfilling, leveling, and contouring are planned as soon as all pits have dried. A 6 mil liner will be place over the pit mud contents before pushing the side walls in. Waste disposal and spoiled materials will be hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.

- b. The soil banked material will be spread over the area. Re-vegetation will be accomplished by planting mixed grasses as per formula provided by the BLM. Re-vegetation is recommended for road area, as well as around the drill pad.
- 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 re-vegetation 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. <u>Other Information</u>:

- a. There are some significant archaeological or cultural sites visible in the area of disturbance. A cultural resource survey was performed by Archaeological Consultants Inc. of Roswell. Phase 2 will be completed and submitted to the BLM.
- b. General topography: Shown on Vicinity Lease Map. The terrain at the well site 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 Federal Government.
- 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..
- 12. <u>Operator Representatives</u>: R. J. Longmire Drilling, Completion, & Workover Superintendent P. O. Box 552 Midland, TX 79702 800/351-1417 915/682-1626 Direct Line 915/687-8344
- 13. <u>Certification</u>:

A. P. D. (cont.) Thirteen Point Surface Use Plan Indian Hills Unit Gas Com. #47

> 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 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.

> >

mila, 2002

C. Ruguin

R. J. Longmire

Date

A. P. D. (cont.) Thirteen Point Surface Use Plan Indian Hills Unit Gas Com. # 47

DRILLING PROGRAM MARATHON OIL COMPANY INDIAN HILLS UNIT Gas Com. #47

1. Estimated KB Elevation: 3791' KB G.L. @ 3775'

		TOP			BASE-		FLUID
FORMATION	MEASL	IRED SUBSE	<u>A</u>	<u>MEASI</u>	JRED	SUBSE.	A <u>CONTENT</u>
Queen San Andres Glorietta Delaware	Surface 650' 2250' 3300'	+3141' +1541' +491'		650' 2250' 2355' 4300'		+3791` +1541' +1436' - 509	water water
Bone Spring Wolfcamp B/Permian Shale U. Penn	4300' 5950' 7520'. 7530'	-509' -2159' -3729' -3739'		5950' 7520' 7530' 8600'		-2159' -3729' -3739' -4809'	oil gas oil gas gas, oil, water
FORMATION	EST <u>PSIG</u>	SBHP PPG EMW	EST <u>DEG f</u>	SBHT PPM	H2S		FICANCE arker, etc.)
Bone Springs Wolfcamp B/Permian Shale U. Penn	1210 1680 1810 2050	8.5 9.0 9.0 9.0			500 5000		marker marker marker 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:

<u>9-5/8" Surface:</u> 11" 3M annular tested to 300# PSI / 3000#PSI , 11" 3M Dual rams, choke manifold and mud cross, tested to 300#/3000# PSI.

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 drill string connections in use will be available on rig floor.

4. <u>Casing and Cement Program:</u>

DEP1 <u>FROM</u>	ГН <u>ТО</u>	SECTIO LENGT		HOLE <u>SIZE</u>	CSG SIZE	WT. <u>PPF</u>	GRADE	THRE/	+	NEW <u>USED</u>
0	1200'	1200'		12.25"	9-5/8"	36.00#	K-55	8rd, ST	С	New
0	4800'	4800'		8.750"	7.00"	23.00#	K-55	8rd, LT	&C	New
4800'	8600'	3800 ʻ		8.750"	7.00"	26.00#	K-55	8rd, L ⁻	T&C	New
Casing	DV		Lead	Amt	Туре		Yield	Wt.		
String	<u>Depth</u>	<u>Stg.</u>	<u>Tail</u>	SXS	Cement		<u>CF/SX</u>	<u>PPG.</u>	<u>тос</u>	Additives
<u>String</u> 9.625"		<u>Stg.</u> 1				•			<u>TOC</u> 100'	<u>Additives</u>
	<u>Depth</u>		Tail	<u>sxs</u>	Cement	•	<u>CF/SX</u>	PPG.		<u>Additives</u> 3% Cacl

7.0"	1	L	1100	Class "H"	1.44	13.0	Surface	Foamers, N2
7.0"	2	Т	100	Mod. Super H	1.67	13.0	Surface	Gilsonite 5pps Hr-7, 1-pps salt

Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 25% excess.

Centralizer Program:

- 9-5/8" Conventional centralizers, Bottom 3-joints and every 4th joint to surface.
- Conventional centralizers middle of 1st joint, then every joint to 7500', and 1 cent. Every 4th joint 7-0" thereafter to 8600'.

5. Mud Program

DEP1	rH		WEIGH	т	WL		VISUAL
FROM	<u>T0</u>	MUD TYPE	<u>(PPG)</u>	<u>VIS</u>	<u>cc</u>	ADDITIVES	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'	8600'	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.

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6. Logging, Testing & Coring Programs:

LOG/TEST/CORE/MUDLOG/OTHER	INTE <u>FROM</u>	RVAL- TOREMARKS
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 H_2S in Cisco & Upper Penn. See H_2S Drilling Operations Plan.

8. <u>Other Information</u>:

Anticipated Starting Date: As soon as possible.

Duration of Well: drilling - 25 days, completion - 10 days.



MARATHON 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	\checkmark
b. rotating head	
c. mud- gas separator	V
d. flare line	$\overline{\mathbf{V}}$
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. toft.
DST No. 2	ft. to ft.
DST No. 3	ft. toft.

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

