# - R-14577 - R-14578

## Before the Oil Conservation Division Examiner Hearing January 25, 2018

Case No. 15906 & 15907

Knife Fight Fee 24 34 26 WXY 3H, Knife Fight Fee 24 34 26 WA 6H, Knife Fight Fee 24 34 26 WXY 19H, and Knife Fight Fee 24 34 26 TB 7H



MarathonOil

### STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF MARATHON
OIL PERMIAN LLC FOR A NON-STANDARD
SPACING AND PRORATION UNIT,
NON-STANDARD LOCATIONS,
AND COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO.

Case Nos. 15906 and 15907

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### STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF MARATHON
OIL PERMIAN LLC FOR A NON-STANDARD
OIL SPACING AND PRORATION UNIT,
NON-STANDARD LOCATIONS,
AND COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO

CASE	NO.	

#### **APPLICATION**

Marathon Oil Permian LLC ("Marathon"), OGRID Number 372098, through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-17, for an order: (1) creating a non-standard 160-acre spacing a proration unit in the Bone Spring formation, comprised of the E/2 E/2 of Section 26, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico; (2) approving non-standard locations, and (3) pooling all mineral interests in the Bone Spring formation underlying this proposed non-standard spacing and proration unit. In support of this application, Marathon states:

- 1. Marathon is an interest owner in the subject lands and has a right to drill a well thereon.
- 2. Marathon plans to drill and complete the **Knife Fight Fee 24 34 26 TB 7H**, which is a horizontal well that will develop the Red Hills Bone Spring, North Pool (Pool Code 96434) underlying the E/2 E/2 of Section 26 to form a non-standard 160-acre oil spacing and proration unit (the "project area").



- 3. The Knife Fight Fee 24 34 26 WXY 7H well will be drilled from NE/4 NE/4 (Unit A) of Section 26 to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 26. The first and last perforations for the well will be non-standard. The first perforation for this well will be located 150' from the North line and 994' from the East line, and the last perforation for this well will be located 150' from the South line and 988' from the East line. Other than the locations for the first and last perforations for the well, the completed interval for this well will comply with the 330' setbacks required by the Division's rules.
- 4. The Red Hills Bone Spring, North Pool (Pool Code 96434) is subject to the Division's statewide rule providing for 40 acre spacing units.
  - 5. Marathon plans to develop each 40 acre spacing unit within the project area.
- 6. Marathon sought, but has been unable to obtain a voluntary agreement from all interest owners in the Red Hills Bone Spring, North formation underlying the proposed project area to participate in the drilling of the wells or to otherwise commit their interests to the wells.
- 7. The pooling of interests will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.
- 8. In order to permit Marathon to obtain it's just and fair share of the oil and gas underlying the subject lands, all interests in this non-standard spacing unit should be pooled and Marathon should be designated operator of the proposed horizontal wells and spacing unit.
  - Notice of this application is being given in accordance with Division rules.

WHEREFORE, Marathon requests that this application be set for hearing before an Examiner of the Oil Conservation Division on December 21, 2017, and, after notice and hearing as required by law, the Division enter an order:

A. Creating a 160-acre non-standard spacing and proration unit in the Bone Spring formation, comprised of the E/2 E/2 of Section 26, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico;

B. Approving non-standard locations;

C. Pooling all mineral interests in the non-standard spacing and proration unit:

D. Designating Marathon Oil Permian LLC operator of this non-standard spacing unit and the horizontal wells to be drilled thereon;

E. Authorizing Marathon to recover its costs of drilling, equipping and completing the wells;

F. Approving the actual operating charges and costs of supervision while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and

G. Imposing a 200% penalty for the risk assumed by Marathon in drilling, completing and equipping the wells against any working interest owner who does not voluntarily participate in the drilling of the well.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

By:

Earl E. DeBrine

Jennifer Bradfute

Zoë E. Lees

P.O. Box 2168

500 Fourth Street NW, Suite 1000

Albuquerque, New Mexico 87103-2168

Telephone: 505.848.1800 Attorneys for Applicant

### STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF MARATHON
OIL PERMIAN LLC FOR A NON-STANDARD
OIL SPACING AND PRORATION UNIT,
NON-STANDARD LOCATION
AND COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO

CASE	NO.

#### **APPLICATION**

Marathon Oil Permian LLC ("Marathon"), OGRID Number 372098, through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-17, for an order: (1) creating a non-standard 320-acre spacing and proration unit in the Wolfcamp formation, comprised of the E/2 of Section 26, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico; (2) approving non-standard locations; and (3) pooling all mineral interests in the Wolfcamp formation underlying this proposed non-standard spacing and proration unit. In support of this application, Marathon states:

- 1. Marathon is an interest owner in the subject lands and has a right to drill a well thereon.
- 2. Marathon proposes to dedicate the above-referenced spacing and proration unit as the project area for three proposed wells: the proposed Knife Fight Fee 24 34 26 WXY 3H, Knife Fight Fee 24 34 26 WA 6H, and Knife Fight Fee 24 34 26 WXY 19H wells, which are horizontal wells that will develop the Antelope Ridge Wolfcamp Pool (Pool Code 2220)



underlying the E/2 of Section 26, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico (the "project area"). The three proposed horizontal wells will be pad drilled.

- 3. The Knife Fight Fee 24 34 26 WXY 3H well will be drilled from a surface location in the NW/4 NE/4 (Unit B) of Section 26 to a bottom hole location in the SW/4 SE/4 (Unit O) of Section 26. The first perforation for this well will be located 150' from the North Line and 2,317' from the East line of Section 26. The last perforation for this well will be located 150' from the South line and 2,302' from the East line.
- 4. The Knife Fight Fee 24 34 26 WA 6H well will be drilled from a surface location in the NE/4 NE/ of Section 26 to a bottom hole location in SW/4 SE/4 of Section 26. The first perforation for this well will be located 150' from the North Line and 1,324' from the East line of Section 26. The last perforation for this well will be located 150' from the South line and 1,318' from the East line.
- 5. The **Knife Fight Fee 24 34 26 WXY 19H** well will be drilled from NE/4 NE/4 (Unit A) of Section 26 to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 26. The first perforation for this well will be located 150' from the North Line and 330' from the East line of Section 26. The last perforation for this well will be located 150' from the South line and 330' from the East line.
- 6. Other than the locations for the first and last perforations for each well, the completed interval for the wells will comply with the 330 foot setback requirements established under the statewide rules.
- 7. The Antelope Ridge Wolfcamp Pool (Pool Code 2220) is subject to the Division's statewide rule providing for 40 acre spacing units.
  - 8. Marathon plans to develop each 40 acre spacing unit within the project area.

- 9. Marathon sought, but has been unable to obtain a voluntary agreement from all interest owners in the Antelope Ridge Wolfcamp formation underlying the proposed project area to participate in the drilling of the wells or to otherwise commit their interests to the wells.
- 10. The pooling of interests will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.
- 11. In order to permit Marathon to obtain it's just and fair share of the oil and gas underlying the subject lands, all interests in this non-standard spacing unit should be pooled and Marathon should be designated operator of the proposed horizontal wells and spacing unit.
  - 12. Notice of this application is being given in accordance with Division rules.

WHEREFORE, Marathon requests that this application be set for hearing before an Examiner of the Oil Conservation Division on December 21, 2017, and, after notice and hearing as required by law, the Division enter an order:

- A. Creating a 320-acre non-standard spacing and proration unit in the Wolfcamp formation, comprised of the E/2 of Section 26, Township 24 South, Range 34 East, NMPM, Lea County, New Mexico;
  - B. Approving non-standard locations for each well;
  - C. Pooling all mineral interests in the non-standard spacing and proration unit;
- D. Designating Marathon Oil Permian LLC operator of this non-standard spacing unit and the horizontal wells to be drilled thereon;
- E. Authorizing Marathon to recover its costs of drilling, equipping and completing the wells;

- F. Approving the actual operating charges and costs of supervision while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and
- G. Imposing a 200% penalty for the risk assumed by Marathon in drilling, completing and equipping the wells against any working interest owner who does not voluntarily participate in the drilling of the well.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

Bv:

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P.O. Box 2168

500 Fourth Street NW, Suite 1000

Albuquerque, New Mexico 87103-2168

Telephone: 505.848.1800 Attorneys for Applicant

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. Frest St., Anceia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Arree, NM 87410

Phone: (505) 334-6178 Fax: (505) 334-6170 District IV. 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (503) 476-3462

#### State of New Mexico

#### Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

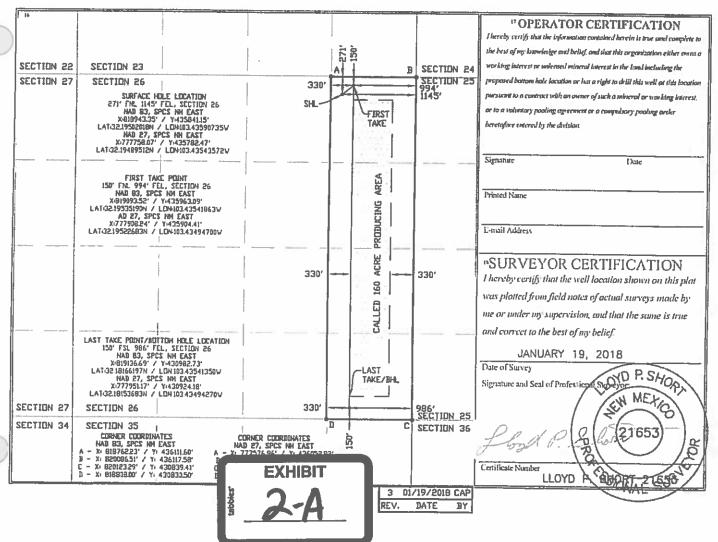
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

			WELL	LOCA'	TION.	AND ACE	REAGE DEDIC	CATION PLA	T			
					l Code			<sup>2</sup> Pool No	me			_
				964	34		RED HIL	LS: BONE	SPRING	, NOR	?TH	ļ
4 Property	Code		_			<sup>1</sup> Property	Name			41	Vell Number	г —
		<u> </u>		KNIF	E FI	GHT FEE	24 34 26	TB	11		7H	
'OGRID		ŀ				Operator	Name			1	Elevation	
37209	8	8 MARATHON OIL PERMIAN, LLC						- 1		3447'		
						" Surface !	Location					
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Α	26	T24	S R34E			271	NORTH	1145	EAST	.	LEA	
			n F	Bottom	Hole I	ocation If	Different From	1 Surface				
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12 Dedicated Acres	i Joint o	r Infill	11 Consolidatio	n Code	" Order !	No.		<del></del>				
160.00												ĺ

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.



District.J 1625 N. French Dr., Hubbs, NM 88240 Phone; (575) 393-6161 Fax; (575) 393-0720 Pistrict.H B11 S. Fret St., Anesia, NM 88210 Phone; (575) 748-1283 Fax; (575) 748-9720

District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

#### State of New Mexico

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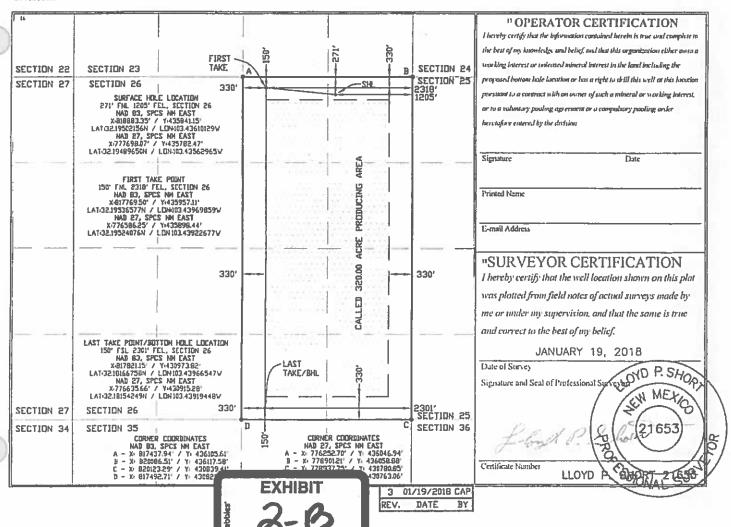
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AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1,	r		Pool Code Pool Name							
				2220	220 ANTELOPE RIDGE: WOLFCAMP					
4 Property C	Code	-	•		<sup>5</sup> Property	Name		41	4 Well Number	
			K	NIFE F	IGHT FEE	24 34 26	WXY		3H	
OGRID	No.				<sup>2</sup> Operator	Name		- 0	Elevation	
37209	8			MARA	THON OIL F	PERMIAN, LLC			3447	
					" Surface ]	Location				
UL or let no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line		County
) A	26	T24S	R34E		271	NORTH	1205	EAST	LEA	
			" Bo	ttom Ho	le Location If	Different Fron	n Surface			
UL or lot no.	Section	Township	Range	Lnt Idn	Feet from the	North/South line	Feet from the	East/AVest line		County
0	26	T24S	R34E		150	SOUTH	2301	EAST	LEA	12
12 Dedicated Acres	<sup>13</sup> Joint o	r Infill	<sup>4</sup> Consolidation	Code 15 Or	rder No.					
320.00										

No altowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



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#11 S. First St., Artesla, NM #8210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM \$7410

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#### State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>4</sup> API Number				<sup>2</sup> Pool Code <sup>3</sup> Pool Name				me		
2220 ANTELOPE RIDGE: WOLF							: WOLFCAM	Р	ĺ	
4 Property (	Code				<sup>3</sup> Property			1	Well Number	
			k	NIFE F	IGHT FEE	24 34 26	WXY		19H	
7OGRID I	Νo				* Operator	Name		-	* Elevation	
37209	В			MARA'	THON OIL F	PERMIAN, LLC	,	İ	3446'	
	" Surface Location									
UL or lot no.	Section	Township	Range	Lat Idn	Feet from the	North/South line	Feet from the	Enst/West line		County
Α	26	T24S	R34E		271	NORTH	1115	EAST	LEA	
			" Bo	ttom Ho	le Location If	Different Fron	n Surface			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line		County
P	26	T24S	R34E		150	SOUTH	330	EAST	LEA	
11 Dedicated Acres	11 Joint or	Infili	Consolidation	Code "Or	der No.			<del> </del>		$\overline{}$
320.00										

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.

SECTION 22 SECTION 27	SECTION 23  SECTION 26  SURFACE HOLE LOCATION 271° FM, 1113° FEL, SECTION 26  NAB 83, SPES NM EAST  K81897333° / 143554113°  LAT:22:19501949N / LOMID:343581037V  NAB 27, SPES NM EAST  X77778807' / 143578247'  LAT:22:19489443N / LOMID:343333875V	A ÉE SHL	B SECTION 24 SECTION 25 330' 1115'	19 OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my invertedge and belief, and that this organization either owns at wasking interest or unlessed adore all interest in the land including the proposed bottom hale location or has a right to dill this well at this location pursuant to a contract with an owner of such a subsected or working invest, or to a whentury proling up cement or a compulsory proving order benefitors entered by the shirtdon  Signature  Date
	FIRST TAKE PUINT 150' FNL 330' FEL, SECTION 26 NAD 83, SPCS NM EAST 1619737.54' / Y435966.09' LAT-3219534489N / LEN-103.43227218V NAD 27, SPCS NM EAST 1778572.24' / Y435907.40' LAT-3219521980N / LON-103.43280065V	CALLED 320 ACRE PRODUCING AREA	330′	Printed Name  E-mail Address  **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 water my supervision, and that the same is true and correct to the best of my belief
SECTION 27 SECTION 34	LAST TAKE POINT/RUTTOH HOLE LOCATION 150' FSL 330' FEL, SCETION 26 MAD 93, SPCS NH EAST X-81979224' / Y-43099717' LATIJS:18165912N / LONIOL43329472V NAD 27, SPCS NH EAST X-778606.71' / Y-430928.61' LATIJS:18153395N / LONIOL433282401V SECTION 26  SECTION 35  CORNER COURDINATES NAD 83, SPCS NH EAST A - X-817437.94' / Y-43615.61' B - X-820806.51' / Y-436115.61' B - X-820806.51' / Y-436115.81' C - X-820123.29' / Y-430839.41' D - X-817492.71' / Y-430839.41'	D  CORNER COURBUNATES  NAD E7, SPCS NM EAST  A - X: 776252.70' / Y: 436046.94'  B - X: 77893121' / Y: 436763.86'  C - X: 77893772' / Y: 430763.86'	330, DECLION SE SECTION SE SECTIO	JANUARY 19, 2018  Date of Survey  Signature and Seal of Professional Survey  MEXICO

District I
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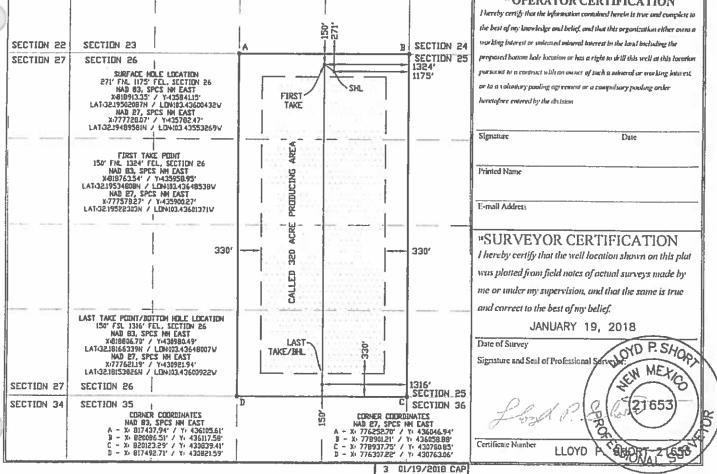
## State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

■ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[			<sup>2</sup> Pool Code								
	2220 ANTELOPE RIDGE: WOLFCAM					FCAME					
<sup>4</sup> Propert	y Cade				<sup>5</sup> Property					Vell Number	
			1	KNIFE	FIGHT FEE	24 34 26	WA			6H	
<sup>7</sup> OGRII	D No.				"Operator	ivame			1	Elevation	
3720	98			MARA	THON OIL F	PERMIAN, LLC				3447'	- 1
					" Surface I	Location					
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Enst	/\Vest line		County
Α	26	T24S	R34E		271	NORTH-	1175	EAS	т ]	LĘA	· ]
			" Bo	ttom Ho	le Location If	Different Fron	n Surface				
VL or lot no.	Section	Township	Range	Lat Ida	Feet from the	North/South line	Feet from the	East	/West line		County
P	26	T24S	R34E		150	SOUTH	1316	EAS	T	LEA	
11 Dedicated Acr	es 13 Joint o	e Infill H	Consolidation	Code 13 O	rder No.						$\overline{}$
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No allowable division.	will be ass	igned to t	his complet	ion until a	ll interests have b	ocen consolidated (	or a non-standar	d unit has	been app	roved by	the
16								PERATO			
SECTION 22	SECTION (	23			-150′	B SECTIO	the best of no.	nowledge and be tor intersed int	dief, and that th	ls organization	either osma a



REV.

DATE

Exhibit "3" Lease Tract Map Knife Fight Fee 24 34 26 TB 7H E/2 E/2 of Section 26, 24S-34E – 160 acres

24	
23	Tract 1
22	
Tract 1: Fee Acreage Tract 2: Fee Acreage Tract 3: Fee Acreage Tract 4: Fee Acreage	

36		25		
	Tract 4	Tract 3	Tract 2	Tract 1
35		26		
34		27		



MarathonOil

en

Knife Fight Fee 24 34 26 WXY 3H, Knife Fight Fee 24 34 26 WA 6H, and Knife Fight Fee 24 34 26 WXY 19H E/2 of Section 26, 24S-34E - 320 acres Exhibit "3" Lease Tract Map

		MarathonO
24	25	36
23	Tract 1 Tract 2 Tract 3 Tract 4 Tract 5 Tract 6 Tract 7 Tract 8	S
22	27	34
Tract 1: Fee Acreage Tract 2: Fee Acreage Tract 3: Fee Acreage Tract 4: Fee Acreage Tract 5: Fee Acreage	Tract 6: Fee Acreage Tract 7: Fee Acreage Tract 8: Fee Acreage	

## Knife Fight Fee 24 34 26 WXY 3H, Knife Fight Fee 24 34 26 WA 6H, and Knife Fight Fee 24 34 26 WXY 19H Exhibit "4" Summary of Interests E/2 Section 26, 24S-34E

Committed Working Interest:	Marathon Oil Permian LLC	

Uncommitted Working Interest:

60.865625%

60.865625%

27.412500%

Energen Resources Corporation Advance Energy Partners MRC Permian Company EOG Y Resources, Inc. Legion Petroleum, LLC

Unleased Mineral Interest: The Estate of Rita Sumner Curtis Robert Taylor Rubert Fred Madera Carolyn A. Taylor Harvey R. Taylor Marilyn S. Taylor Bill G. Taylor, Jr. Kathy J. Smith Roy Light

7.290625% 4.218750% 2.187500% 9.028125% 4.687500% 0.231250% 1.443750% 1.443750% 1.443750% 1.443750% 1.443750% 0.521875% 1.562500%

2.187500%

11.721875%







Exhibit "4" Summary of Interests Knife Fight Fee 24 34 26 TB 7H E/2 E/2 Section 26, 24S-34E

Committed Working Interest: Marathon Oil Permian LLC

45.068750%

45.068750%

42.012500%

18.056250% 14.581250% 6.250000% 3.125000%

Uncommitted Working Interest:

EOG Y Resources, Inc.
MRC Permian Company
Energen Resources Corporation
Advance Energy Partners

Unleased Mineral Interest: Roy Light Bill G. Taylor, Jr. Kathy J. Smith

Harvey R. Taylor Marilyn S. Taylor Carolyn A. Taylor Curtis Robert Taylor The Estate of Rita Sumner

0.462963% 1.656250% 1.656250% 1.656250%

1.656250% 1.043750% 3.125000%

1.656250%

12.918750%

1

Ryan Gyllenband Land Professional



Marathon Oil Permian LLC 5555 San Felipe Street Houston, TX 77056 Telephone: 713.296.2453 Mobile: 281.684.7389 Fax: 713.513.4006 mrgyllenband@marathonoil.com

October 17, 2017

VIA CERTIFIED RETURN RECEIPT MAIL

MRC Permian Company Attn: Nick Weeks 5400 Lyndon B. Johnson Fwy. Dallas, TX 75240

Re:

Knife Fight 3H, 6H, 7H and 19H Well Proposals

Section 26, T24S-R34E Lea County, New Mexico

Dear MRC Permian Company:

Marathon Oil Permian LLC ("MRO") proposes the drilling of the following wells located in the east half of Section 26, 24S-34E, Lea County, New Mexico all to be drilled from the same surface pad location.

- Knife Fight Fee 24 34 26 WXY 3H with a proposed first take point located 2,310' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 2,310' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the Wolfcamp XY Formation (-12,433' TVD) with a productive lateral length of approximately 4,614'. The total estimated drilling and completion cost is \$7,350,667 as shown in the attached AFE.
- Knife Fight Fee 24 34 26 WA 6H with a proposed first take point located 1,320' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 1,320' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the Wolfcamp A Formation (~12,552' TVD) with a productive lateral length of approximately 4,616'. The total estimated drilling and completion cost is \$9,441,096, including a pilot hole as shown in the attached AFE.
- Knife Fight Fee 24 34 26 TB 7H with a proposed first take point located 990' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 990' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the 3<sup>rd</sup> Bone Spring Formation (~12,301' TVD) with a productive lateral length of approximately 4,617'. The total estimated drilling and completion cost is \$7,397,073 as shown in the attached AFE.
- Knife Fight Fee 24 34 26 WXY 19H with a proposed first take point located 330' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 330' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the Wolfcamp XY Formation (~12,473' TVD) with a productive lateral length of approximately 4,618'. The total estimated drilling and completion cost is \$7,350,667 as shown in the attached AFE.

These proposed locations and target depths are subject to change depending on any surface or subsurface concerns encountered. The AFEs represent an estimate of the costs that will be incurred to drill and complete the wells, but those electing to participate in the wells are responsible for their proportionate share of the actual costs incurred.

MRO proposes drilling the well under the terms of the 1989 AAPL JOA and a form of this JOA will be sent to you following this proposal. The JOA will have these general provisions:

- 100%/300%/300% non-consent penalty
- \$7,000/\$700 drilling and producing rates
- Contract area of E/2 Section 26, 24S-34E, covering all depths

Our title records show that you own 7.290625% WI in the proposed unit-



If your election is to participate in the drilling and completion of the wells please sign and return a copy of this letter along with the enclosed AFE within thirty (30) days of receipt of this proposal.

If you do not wish to participate, Marathon proposes to acquire your interest via term assignment at the following terms:

- 3 year lease term
- \$2000 bonus consideration per net mineral acre
- Delivering a 75% NRI, proportionately reduced

This term assignment offer terminates December 15, 2017 and is subject to due diligence and title verification satisfactory to Marathon.

Should you have any questions regarding this or other matters, please don't hesitate to contact me at the above listed numbers.

Sincerely,

Ryan Gyllenband

MRC Permian Company elects to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WXY 3H well.

MRC Permian Company elects NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WXY 3H well.

MRC Permian Company elects to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WA 6H well.

MRC Permian Company elects NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WA 6H well.

MRC Permian Company elects to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 TB 7H well.

MRC Permian Company elects NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 TB 7H well.

MRC Permian Company elects to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WXY 19H well.

MRC Permian Company elects NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WXY 19H well.

MRC Permian LKE, Co.

Ву:			
Print Name:		 	
Title:	<u> </u>		
Date			

Ryan Gyllenband Land Professional



Marathon Oil Permian LLC 5555 San Felipe Street Houston, TX 77056 Telephone: 713.296.2453 Mobile: 281.684.7389 Fax: 713.513.4006 mrgyllenband@marathonoil.com

October 17, 2017

VIA CERTIFIED RETURN RECEIPT MAIL

Curtis Robert Taylor 507 East Russell Carlsbad, NM 88220

Re:

Knife Fight 3H, 6H, 7H and 19H Well Proposals

Section 26, T24S-R34E Lea County, New Mexico

Dear Mr. Taylor:

Marathon Oil Permian LLC ("Marathon") shows you with 1.67 unleased net mineral acres in the east half of Section 26, 24S-34E. As an unleased mineral owner, Marathon would like to offer you the opportunity to lease your minerals to Marathon at the below lease terms:

- 3 year lease term with a 2 year option to extend
- \$2000 bonus consideration per net mineral acre
- 20% royalty rate

This offer to lease terminates December 15, 2017 and is subject to due diligence and title verification satisfactory to Marathon. Should you be agreeable to this offer to lease, please sign the lease form included in this proposal in the presence of a notary and return to my attention at the address listed above.

Marathon proposes the drilling of the following wells located in the east half of Section 26, 24S-34E, Lea County, New Mexico all to be drilled from the same surface pad location and should you not elect to lease, Marathon would also like to offer you the opportunity to participate in the drilling of the wells as a working interest owner.

- Knife Fight Fee 24 34 26 WXY 3H with a proposed first take point located 2,310' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 2,310' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the Wolfcamp XY Formation (~12,433' TVD) with a productive lateral length of approximately 4,614'. The total estimated drilling and completion cost is \$7,350,667 as shown in the attached AFE.
- Knife Fight Fee 24 34 26 WA 6H with a proposed first take point located 1,320' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 1,320' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the Wolfcamp A Formation (~12,552' TVD) with a productive lateral length of approximately 4,616'. The total estimated drilling and completion cost is \$9,441,096, including a pilot hole as shown in the attached AFE.
- Knife Fight Fee 24 34 26 TB 7H with a proposed first take point located 990' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 990' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the 3<sup>rd</sup> Bone Spring Formation (~12,301' TVD) with a productive lateral length of approximately 4,617'. The total estimated drilling and completion cost is \$7,397,073 as shown in the attached AFE.
- Knife Fight Fee 24 34 26 WXY 19H with a proposed first take point located 330' FEL and 330' FNL of Section 26, 24S-34E, and a proposed last take point located 330' FEL and 330' FSL of Section 26, 24S-34E. The well will have a targeted interval located in the Wolfcamp XY Formation (~12,473' TVD) with a productive lateral length of approximately 4,618'. The total estimated drilling and completion cost is \$7,350,667 as shown in the attached AFE.

These proposed locations and target depths are subject to change depending on any surface or subsurface concerns encountered. The AFEs represent an estimate of the costs that will be incurred to drill and complete the wells, but those electing to participate in the wells are responsible for their proportionate share of the actual costs incurred.

MRO proposes drilling the well under the terms of the 1989 AAPL JOA and a form of this JOA will be sent to you following this proposal. The JOA will have these general provisions:

- 100%/300%/300% non-consent penalty
- \$7,000/\$700 drilling and producing rates
- Contract area of E/2 Section 26, 24S-34E, covering all depths

Your estimated WI would be 0.52%.

If your election is to participate in the drilling and completion of the wells please sign and return a copy of this letter along with the enclosed AFE within thirty (30) days of receipt of this proposal.

Should you have any questions regarding this or other matters, please don't hesitate to contact me at the above listed numbers.

Sincerely,

Ryan Gyllenband

I elect to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WXY 3H well.  I elect NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 26 WXY 3H well.	
I elect to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WA 6H well.  I elect NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 26 WA 6H well.	
I elect to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 7H well.  I elect NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 26 TB 7H well.	
I elect to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 34 26 WXY 19H well.  I elect NOT to participate in the drilling, completing, and equipping of the Knife Fight Fee 24 26 WXY 19H well.	
Curtis Robert Taylor	
Print Name:	



UTHORITY FOR EXPENDITURE

Drilling Project #
Pad Project #
DATE: 8/13/2017

Permian Asset T		
Field Lease / Facility	0	Location 24, 34, 26 Rig 45
Operator	KNIFE FIGHT FEE 24 34 26 T MARATHON OIL PERMIAN L	B 7H
орс.вю.	MATON HOW OIL PERMIAN LI	COUNTY FAISH LEA
		Estimated Start Date 20-Feb-2018
Estimated	d Gross Cost This AFE: \$7,3	Estimated Completion Date 22-Mar-2018
	tion & Reason for Expenditure.	Drill, Complete, & Equip a Horizontal Well
and long term at The well will be	rtificial lift systems. drilled to a total vertical depth of 1:	with multistage fracturing using plug and perf. The estimated cost of drilling, testing, completing, the provided authority for expenditure document. This will include installation of transitional 2.301' and a total measured depth of 17,300', with an estimated translable lateral length of 4,617 and approximately 2.500 lbs/ft of proppant.
Judened BA.	AG PRADEEP, , CAMBLO ARIAS, JOSH SI	MANNON, MATT HENSCHEN, BILLY MODRE, LANE NEAL
(A	Final Approval	Date10/11/2017
Title (Region	nal Vic President Permian Asset Tear	m see
		Participant's Approval
		Landcibaut a WhitoAsi
	Name of	
	Company	
	Signature:	
	Trtle:	Date:
		Date:
	and the second second	



MARATHON OIL PERMIAN LLC AUTHORITY FOR EXPENDITURE DETAIL OF ESTIMATED WELL COSTS

DATE	9/13/2017
DRILLING & LOCATION PREPARED BY	CAMILD ARIAS
COMPLETION PREPARED BY	JOSH SHANNON
FACILITIES & ARTIFICIAL LIET PROBABLES BY	MATT DESIGNED

ARREST TORRES	PERMIAN	
Field	RED HILLS FORMATION: 3RD BONE SPRINGS WILDCAT	DIPLORATION
Luase/Facility	KNIFE FIGHT FEE TB 7H DEVELOPMENT	RECOMPLETION
Location	LEA COUNTY X EXPLOITATION	WORKOVER
Prospect	AED HILLS	
Est Total Depth	17,300 Est Orifling Days23.3 Est Completion	Dan # #
	Est Completion	Days 5.5
LOCATION COST -	INTANGISIE	
	WIP OR INCLUDE	
GL CODE		
	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	20,000
7001250	Land Broker Fees and Services	37,500
	TOTAL LOCATION COST - INTANGIBLE	81 500
		<u>87,500</u>
DRILLING COST - T.	ANGIRE	
processed engil - 1	N VOI DEL	
7012050	Conductor Pipe	
7012050	Surface Casing	30,000
7012050		36,000
	Intermediate Casing 1	149,000
7012050	Intermediate Casing 2	275,000
7012050	Production Casing	60,000
7012050	Drig Uner Hanger, Tieback Eq & Cag Accessories	65,000
7012550	Dritting Welthead Equipment	
7012040	Casing & Tubing Access	65,000
7012270	Miscellaneous MAO Materials	24,000
		11121
	TOTAL SPECIAL PROPERTY.	
	TOTAL DRILING - TANGIBLE	704,000
	· · · · · · · · · · · · · · · · · · ·	
DRILLING COST - IN	TANGIBLE	
7019200	Drilling Rig Mob/Demob	
7019220		37,500
	Deliting Rig - day work/footage	465,000
701.9040	Directional Dritting Services	195,500
7019020	Coment and Comenting Service Surface	30,000
7019020	Commit and Comenting Service Intermediate 1	40,000
7019028	Cement and Comenting Service Intermediate 2	\$0,000
7019020	Cement and Cementing Service Production	
7019140	Mud Fluids & Services	50,000
7012310	Solids Control equipment	75,000
		37,200
7012020	Bits	E0,000
7019010	Casing Crew and Services	35,000
7016350	Fuel (Rig)	71,610
7019140	Fired (Mud)	11,000
7001460	Water (non potable)	25,000
7019000	Well Logging Services	22,000
7019150	Mud togging+geosteering	
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	18,050
7019110	Casing inspection/cleaning	15,000
7019110		8,000
	Drill pipe/collar Inspection services	18.000
7016180	Freight + bruck	40,000
7001460	Water hauling and disposal (includes soil farming)	120,000
7001440	Vacuum Trucks	20,000
7000030	Contract Labor - general	35,000
7018150	Rental Tools and Equipment (surface rentals)	116,250
7018150	Rig Equipment and Misc.	
7001110	Telecommunications Services	6,975
7001120	Consulting Services	10,000
7001400	Safety and Environmental	90,67\$
7018120		25,575
	Rental Buildings (trailers)	120
7019310	Coring (sidewalls & malysis)	
7011010	B% Contingency & Taxes	145,820
	TOTAL DRILLING - INTANGIBLE	\$1,872,155
	TOTAL DRILLING COST	\$2,576,155
		1-1-1-1-23
OAADI ETION - TANK	TINE P	
OMPLETION - TANK	NOLE	
3043504	Problem	
7012580	Tubing	87,500
7012040	Tubing Accessories (Alppie, wireline entry)	15,000
7012550	Wellhead Equip	20,000
7012560	Packers - Completion Equipment	38,850
1	TOTAL COMPLETION - TANGIBLE	\$161,350

MARATHON OIL PER AUTHORITY FOR EXP		DATE 9/13/2017
DETAIL OF ESTIMATE	D WELL COSTS	
Asset Team	PERMIAN	
Fleid	RED HILLS FORMATION: 3RD BONE SPRINGS	
Lease/Facility	KNIFE FIGTH FEE TB 7H	
COMPLETION - IN	TANGIBLE	
GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	20,000
7019140	Drilling Rig During Completion  Mud Fluids & Services	21,600
7019010	Coiled Tubing Services (3 rum)	
7019240	Snubbing Services	90,000
7019270	Pulling/Swab Units	30,000
7016350	Fuel (from drig)	11,520
7019010	Casing Crew and Services	
7019020	Cement and Cementing Services	
7019080	Well Testing Services (flow hand & equip)	66,500
7019320 7019330	Fracturing Services	2,000,000
7019360	Perforating Wireline Services	1,12,000
7001460	Water Hazing & Disposal (frac fluids)	
7016180	Freight - Truck (hauf pipe; strig & compl)	600,000
7018150	80P Rental & Testing	30,000
7018150	Rental Tools and Equipment (incl drig: lightplant,hydra-walk)	<del> :</del>
7012150	CT Downhole Rental Equipment (le. Bk, \$HA)	45,000
7000030	Contract Labor - general	20,000
7001110	Telecommunications Services Sefety and Environmental	15,000
7001120	Consulting Services	
7018150	Eipper Manifold	24,000
7019300	Frack Stack Rentals	57,500
7016190	Freight (Transportation Services)	30,000
7018150	Equipment Rental ( w/o operator, frac tanks, lightplants)	\$0,000
7018120	Rental Buildings (trailers)	40,000
7000030 7011010	Contract Labor - Pumping (pump-down pumps)	42,000
Antidio	2% Contingency & Taxes	221,326
	TOTAL COMPLETION - INTANGIBLE	
		\$3,636,546
	TOTAL COMPLETION COST	\$3,797,896
SUBSECT COURTER	7. 7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	53,797,896
SURFACE EQUIPMEN	IT - TANGIBLE	
7012350	Misc. Piping, Fittings & Valves	
7006640	Company Labor & Surden	12,821
7000030	Contract Labor - General	66,368
7001110	Telecommunication equip (Telemetry)	90,364
7012410	Line Pipe & Accessories	25,847
7013270	Miscellaneous Materials (containment system)	41,091
7008060 7016180	SCADA	
7001190	Freight - truck Contract Engineering	-
7012290	Metering and instrumentation	27,792
7012290	IEE Materials	239,430
7012200	Gas Treating	<u>-</u>
7012200	Dehydration	<del></del>
7012010	Compressor	
7012350	Power	-
7913616 7013440	Vapor Recovery Unit	
7012500	Separator & other pressure vessels Tanks	101,137
7012100	Heater Treater	194,189
7012640	Flare & Actossories	12,406
7000010	Electrical Labor	16,675
7000030	Mechanical Labor	27,792
7012480	Rod Pumping unit & Pad	<del>- :</del>
7012180	Pumping Unit Engine	<del></del>
7012350	Electrical Power (electrical cooperative construction costs)	22,234
1	otal surface equipment - tanginle	\$799,782
1	OTAL SURFACE EQUIPMENT COST	
		\$ 799,782
RTIFICIAL LIFT		
7006640	Company Labor	*
7012180	Gas Lift Equipment	7,500
7012480	Rod Pumping, Sucker Rods & Rod Pump	
7012140	Elect Sub Pumps (ESP)	78,000
7019350	Well Services-Well/Wellhead Services	22,300
7012370 7012550	Materials & Supplies-Tangible	13,000
7012390	Surface Wellhead Equipment Pig Launchers/Receivers 2. Rel Equip	8,500
7011010	BN Contingency & Taxes	
		6,240
	PTAL ARTIFICIAL LIFT	135,740
т	OTAL ARTIFICIAL LIFT COST	
· · · · · · · · · · · · · · · · · · ·		\$ 135,740
	SUMMARY OF ESTIMATED DRILLING WELL COSTS	TOTAL COST
	TOTAL LOCATION COM	
	TOTAL LOCATION COST	\$ 87,500
	TOTAL DRILLING COST	5 2,576,155
	TOTAL COMPLETIONS COST	\$ 3,797,896
	TOTAL SURFACE EQUIPMENT COST	\$ 799,782
	TOTAL ARTIFICIAL LIFT COST	\$ 135,740

**GRAND TOTAL COST** 

\$7,397,073



AUTHORITY FOR EXPENDITURE EXPLORATION & PRODUCTION Drilling Project #
Pad Project #
DATE: 9/13/2017

Field	eam 0			Location		24 34 26	Ria	
Lease / Facility	KNIFE FIGHT FE	E 24 34 26 WXY 3H	1	2002001)		VEW MEX		49
Operator	MARATHON OIL			Count	tv/Parlsh I		<u> </u>	_
				Estimated S			8	
				Estimated Complet	ion Date 1	3-Jun-201	8	
Estimated	d Gross Cost This	AFE: \$7,350,66	7					
Project Descript	tion & Reason for Ex	penditure:	Drill, Complete, &	Equip a Horizontal Well				
and long term ar The well will be	ne well is \$7,350,667 rtificial lift systems, drilled to a total verti	as detailed in the pr	ovided authority for a	ng plug and parf. The estim expenditure document. This depth of 18,212', with an e- is/ft of proppant.	will includ	e installatio	on of transitio	onal
			,					
Prepared By	AG PRADEEP., CAME	o arias, Joeh Shannon	n, matt henschen bel	Y MOORE., LANE NEAL				
Title. Region	Final Appro	n7	Date: 10/11/	<u>w</u> 17				
		P	articipant's Appr	oval		67		
	Name of Company							
	Signature							
	Title _		<del></del>	Date				



MARATHON OIL PERMIAN LLC AUTHORITY FOR EXPENDITURE DETAIL OF ESTIMATED WELL COSTS

DATE	9/13/2017
DRILLING & LOCATION PREPARED BY	CAMILO ARIAS
COMPLETION PREPARED BY	IOSH SHANNON
FACILITIES & ARTIFICIAL LIFT PREPARED BY	MATTHEMSCHOOL

WELFE LIEBLE	PERMIAN		
Fleid	RED HILLS FORMATION: WOLFCARP Y	WILDCAT	DOM ORATION
Lease/Facility	KNIFE FIGHT FEE 24 34 26 WXY 3H	DEVELOPMENT	DIPLORATION
Location	LEA COUNTY		RECOMPLETION
Prospect	RED HILLS	X EXPLOITATION	WORKOVER
	THE PROOF		
For Board to			
Est Total Depth	18,712 Est Drilling Days	23.3 Est Completion	Days S.S
LOCATION COST	INTANGIRE F		
	111111111111111111111111111111111111111		
GL CODE			
	DESCRIPTION		ESTIMATED COST
7001270	Location and Access		50,000
7001250	Land Broker Fees and Services		
			37,500
	TOTAL LOCATION COST - INTANGISLE		
	101VE ENCYTON COST - INTENDEDE		<b>27,500</b>
DRILLING COST -	TANGIBLE		
7012050	Conductor Pipe		
7012050	Surface Casing		30,000
7012050			36,000
	Intermediate Casing 1		149,000
7012050	Intermediate Casing 2		
7012050	Production Casing		283,000
7012050	Drig Uner Hanger, Tleback Eq & Csg Accessories		60,000
			65,000
7012550	Dritting Welthead Equipment		65,000
7012040	Casing & Tubing Access		
7012270	Miscellaneous MRQ Materials		24,000
	TOTAL DRILLING - TANGIBLE		712,000
			132,000
DRIVING COST 4			
DRILLING COST - I	NTANGIBLE		
7019200	Drilling Rig Mob/Demob		
7019220			37,500
	Drilling Rig - day work/lootage		465,000
7019040	Directional Drilling Services		195,500
7019019	Cement and Cementing Service Surfa		
7019020		mediate 2	30,000
7019020			40,000
		mediate 2	\$0,000
7019020	Cement and Comenting Service Produ	uttlen	50,000
7019140	Mad Fluids & Services		
7012310	Solids Control equipment		75,000
7012020	Bits		37,280
			80,000
7019010	Casing Crew and Services		35,000
7016350	Foel (Rig)		
7019140	Fuel (Mud)		71,764
7001460			11,000
	Water (non potable)		25,000
7019000	Well Logging Services		
7019150	Mud Logging-geosteering		10.000
7019250	Stabilizers, Hole Openers, Underreamers (OH rentals)		18,050
7019110	Cating inspection/cleaning		15,000
7019110			6,000
	Drill pipe/callar inspection services		18,000
7016180	Freight - truck		43,000
7001460	Water hauling and disposal (includes soil farming)		
7001440	Vacuum Trucks		120,000
7000030	Contract Labor - general		26,008
			35,000
7018150	Rental Tools and Equipment (surface rentals)		226,500
7018150	Rig Equipment and Misc.		
7001110	Telecommunications Services		6,990
7001120	Consulting Services		10,000
7001400			90,870
	Safety and Environmental		25,610
7018120	Rental Buildings (trailers)		-
7019310	Coring (sidewalls & analysis)		
7011010	BM Contingency & Taxes		<del></del>
			146,405
	TOTAL DRILLING - INTANGISLE		\$1 \$74 400
			\$1,874,489
	TOTAL DRILLING COST		A
			\$2,586,489
OMPLETION - TAN	GIBLE		
7012580	Tubles		
	Tubing	<u></u>	27,500
7012040	Tubing Accessories (nipple, wireline entry)		15.000
7012550	Wellhead Equip		
7012560	Packers - Completion Equipment		20,000
			38.850
	***************************************		
	TOTAL COMPLETION - TANGIBLE		\$161,350

**TOTAL COMPLETIONS COST** 

TOTAL ARTIFICIAL LIFT COST

TOTAL SURFACE EQUIPMENT COST

**GRAND TOTAL COST** 

3,797,896

799,782

79,000

\$7,350,667



AUTHORITY FOR EXPENDITURE EXPLORATION & PRODUCTION Drilling Project #
Pad Project #
DATE: @13/2017

Permian Asset T						-		
Field	O VANCE CIQUE CEC A. A.	0011001 4011	Loc	ation	0		Rig	498
Lease / Facility Operator  KNIFE FIGHT FEE 24 34 26 WXY 19H MARATHON OIL PERMIAN LLC		State NEW MEXICO County/Parish LEA						
		<del></del>		ed Start Date				
			Estin		npletion Date			
Estimated	d Gross Cost This AFE:	\$7,350,667			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	70 11107 201		
Project Descript	tion & Reason for Expenditure	Σ	Drill, Complete, & Equip a Horizo	ntal Well				
and equipping the and long term at The well will be	ne well is 57,350,667 as detai rtificial lift systems drilled to a total vertical depth	of 12,473' and	tage fracturing using plug and prided authority for expenditure do d a total measured depth of 18,2 roximately 2,500 los/it of proppa	ocument. 2321. with	This will inclu	de Installatio	on of transit	ional
repared By	AG PRADEEP, CAMILO ARIAS, A	)SH SHANNON, I	MATT HENSCHEN, BILLY MOORE, LANI	E NEAL_				
Title Regio	Final Approval	Team	Date: 10/11/2017					
	40							
		Pai	rticipant's Approval					
	Name of Company							
	Signature:	<del></del>	<del></del>					
	Title		Date:					



MARATHON OIL PERMIAN LLC AUTHORITY FOR EXPENDITURE DETAIL OF ESTIMATED WELL COSTS

DATE	9/13/2017
DRILLING & LOCATION PREPARED BY	CAMILO ARIAS
COMPLETION PREPARED BY	JOSH SHANNON
FACILITIES & ARTIFICIAL LIFT PREPARED BY	MATT HENSCHER

Asset Team	PERMIAN	
Field	RED HILLS FORMATION: WOLFCAMP Y WILDCAT	DIPLORATION
Lease/Facility	ENIFE FIGHT FEE 24 34 26 WKY 19H DEVELOPMENT	_
Location		RECOMPLETION
Prospect	RED HILLS	WORKOVER
	The second secon	
Fet Tetal Death	48.332	
Est Total Depth	18,232 Est Drilling Days 23,3 Est Completion De	rys
LOCATION COST	- INTANGIBLE	
GT CODE	DESCRIPTION	ESTIMATED COST
7001270	Lecation and Access	
7001250	Land Broker Fees and Services	50,000
	Ching at Out 1 Add that St. and 3	37,500
	TOTAL LOCATION COST - INTANGIBLE	
DRILLING COST -	TANGIRLE	
7012050	Conductor Pipe	****
7012050	Surface Casing	30,000
7012050		36,000
	Intermediate Casing 1	149,000
7012050	Intermediata Casing 2	283,000
7012050	Production Casing	60,000
7012050	Ortg Uner Hanger, Tieback Eq & Ctg Accessories	
7012550	Drilling Weithead Equipment	65,000
7012040	Casing & Yubing Access	65,000
		24,000
7012270	Miscellaneous MRO Materials	
	6.	
	TOTAL DRILLING - TANGIBLE	712,000
	9.	711,000
DDU 1410 4000		······································
DRILLING COST -	NTANGIBLE	
7019200	Orizing Rig Mob/Demob	37,500
7019220	Drilling Rig - day work/footage	466,000
7019040	Directional Drilling Services	
7019020		195,500
7019020		30,000
	Cement and Cementing Service Intermediate 1	40,000
7019020	Cement and Cementing Service Intermediate 2	\$0,000
701,9020	Cement and Cementing Service Production	50,000
7019140	Mud Fluids & Services	75,000
7012310	Solids Control equipment	
7012020	Ns	37,210
7019010		20,000
	Casing Crew and Services	15,000
7016350	Fuel (Rig)	71,764
7019140	Fuel (Mtud)	11,000
7001460	Water (non potable)	25,000
7019000	Well Logging Services	
7019150	Mad Logging+gwastnering	10.070
7019250	Stabilizers, Hole Openers, Undergomers (DH rentals)	18,050
7019110	Casing Inspection/cleaning	15,000
7019110		8,000
	Drill pipe/collar inspection services	18.000
7016180	Fraight - truck	40,000
7001460	Water hauling and disposal (includes soil farming)	120,000
7001440	Vacuum Trucks	20,000
7000030	Contract Labor - general	35,000
7018150	Rental Tools and Equipment (surface rentals)	
701#150	Nig Equipment and Misc.	116,500
7001110	Tolecommunications Services	6,990
		10,000
7001120	Consulting Services	90,870
7001400	Sefery and Environmental	25,630
7018120	Rontal Buildings (trailers)	14
7019310	Coring (sidewalis & analysis)	
7011010	B% Contingency & Tangs	145,405
		270/103
	TOTAL DRILLING -INTANGIBLE	
	THE PERSON NAMED IN THE PE	\$1,874,489
	TOTAL DRILLING COST	4-
	remembered 6631	\$2,586,489
OMPLETION - TAI	4GIBLE	
	4000.07	
7012580	Tubing	44.***
7012040		<u> 27,500</u>
	Tubing Accessories (nisple, wireline entry)	15,000
7012550	Wellhead Equip	20,000
7012560	Packers - Completion Equipment	38,850
	· · · · · · · · · · · · · · · · · · ·	
	TOTAL COMPLETION - TANGIBLE	\$161,350

Pumping Unit Engine	
Electrical Power (electrical cooperative construction costs)	22,234
TOTAL SURFACE EQUIPMENT - TANGIBLE	\$799,782
TOTAL SURFACE EQUIPMENT COST	\$\$
Company Labor	2,500
Gas Lift Equipment	38,000
Rod Pumping, Sucker Rods & Rod Pump	
Elect Sub Pumps (ESP)	
Well Services-Well/Wellhead Services	20,000
Materials & Supplies-Tangble	13,000
Syrface Wellhead Equipment	5,500
Pig Launchers/Receivers & Rei Equip	
#% Contingency & Taxes	
TOTAL ARTIFICIAL LIFT	79,000
TOTAL ARTIFICIAL LIFT COST	\$79,000
SUMMARY OF ESTIMATED DRILLING WELL COSTS	TOTAL COST
TOTAL LOCATION COST	\$ 87,500
TOTAL DRILLING COST	
TOTAL COMPLETIONS COST	\$ 2,586,489
	\$ 3,797,896
TOTAL EUDEACE EQUIDADENT COCY	
TOTAL SURFACE EQUIPMENT COST	\$ 799,782
TOTAL SURFACE EQUIPMENT COST TOTAL ARTIFICIAL UFT COST	\$ 3,797,896 \$ 799,782 \$ 79,000
	\$ 79,000 \$7,350,667

7011010



MARATHON OIL PERMIAN LLC AUTHORITY FOR EXPENDITURE EXPLORATION & PRODUCTION 0 Drilling Project # 0 170/1900 DATE: 7/24/2017

Permian Asset To	o O		Location	- 0	Rig	480
Lease / Facility	KNIFE FIGHT FEE 24 34 :	26 WA 6H	Excellen		EW MEXICO	700
Operator	MARATHON OIL PERMIAN LLC			County/Parish El		
				ed Start Date 19		
			Estimated Cor	npletion Date 3-	May-2018	
Estimated	f Gross Cost This AFE	\$9,441,096				
Project Descript	ion & Reason for Expenditure	Drill, Con	plete, & Equip a Horizontal Well			
and equipping the and long term at The well will be	ne well is \$9,441,096 as detai rtificial lift systems. drilled to a total vertical depth	led in the provided auth of 12,552' and a total n	uring using plug and perf. The ority for expenditure document, reasured depth of 18,2811, with 2,500 lbs/ft of proppant with Pi	This will include an estimated tre	installation of transitions at able lateral langth	tional
Prepared By	LANE NEAL, AG PRADEEP CAMIL	O ARIAS, JOSH SHANNON, &	BALLY MOORE			
The Redo	Final Approval  MATHEMAN  Mal Vica President Permian Asse	et Team Date 10	11/2017			
		Participan	's Approval			
	Name of					
	. ,,,					
	-					
	Signature:					
	Title:		Date:			



MARATHON OIL PERMIAN LLC AUTHORITY FOR EXPENDITURE DETAIL OF ESTIMATED WELL COSTS

DATE	7/24/2017
DRILLING & LOCATION PREPARED BY	CAMILO ARIAS
COMPLETION PREPARED BY	JOSH SHANNON
FACILITIES & ARTIFICIAL LIFT PREPARED BY	MATT HERSCHEN

Auset Team	PERMIAN					
Field	0	FORMATION: WOLFCAMP A		WILDCAT		EXPLORATION
Lease/Facility	KNIFE FIGHT FEE 24 34 26 WA 6H			DEVELOPMENT		RECOMPLETION
Location	LEA COUNTY		X	EXPLOITATION		WORKOVER
Prospect	NED HILLS			_		
Est Total Depth	18,381	Est Drilling Days	37.8	Est Completion	Days_	5.5
LOCATION COST - I	NTANGIBLE					
	and business after the second					
GL CODE		DESCRIPTION				ESTIMATED COST
7001270	Location and Access				_	50,000
7001250	Land Broker Fees and Services				_	37,500
	TOTAL LOCATION COST - INTANGIBLE				_	87,500
DRILLING COST - TA	NGIRIF			· · · · · · · · · · · · · · · · · · ·		
5111001110 0001 - 17	1101040					
7012050	Conductor Pipe				-	30,000
7012050	Surface Casing				_	16,085
7012050	Intermediate Casing 1				_	149,215
7012050	Intermediate Casing 2				_	273,000
7012050	Production Casing				_	86,040
7012050	Orig Uner Henger, Tleback Eq & Cag Acc	estories	***		_	65,000
7012550	Drilling Wellhead Equipment				_	65,000
7012040	Casing & Tubing Access				-	
7012270					_	24,000
7011270	Miscellaneous MRO Materials				_	
	TOTAL DRILLING - TANGIBLE					728,343
					_	
DRILLING COST - IN	ANGIBLE	<del></del>				
7019200	Dritting Rig Mob/Demob					37,500
7019220	Drilling Rig - day work/footage				_	756,000
7019040	Directional Drilling Services				-00	282,500
7019020	Coment and Comenting Service	Sur!	Mar.		_	
7019020	Cement and Cementing Service		mediate 1	***	-	74,000
7019020					_	40,000
	Cement and Cementing Service		mediate 2		_	50,000
7013020	Cement and Committing Service	Prod	uction		_	\$0,000
7019140	Mud Fluids & Services				_	105,000
7012310	Solids Control equipment					63,340
7012020	Bits					15,000
7019010	Casing Craw and Services				_	35,000
7016350	Fuel (Rig)				-	115,424
7019140	Fuel (Mud)		-		_	76,000
7001460	Water (non potable)				_	
7019000					_	25,000
	Well Logging Services			<del></del>	_	450,000
7019150	Mud Logging-geosteering	4			-	118,050
7019250	Stabilizers, Hole Openers, Underreamer	s (DH rentals)			_	25,000
7019110	Casing Inspection/cleaning				_	1,000
7019110	Drill pipe/collar inspection services				_	2.1,000
7016189	Freight - truck					60,000
7001460	Water hauling and disposal (includes spi	I farming)				145,000
7001440	Vacuum Trucks					20,000
7000030	Contract Labor - general		-		_	70,000
7018150	Rental Tools and Equipment (surface ren	stals)				196,500
7018150	Rig Equipment and Misc.				-	41,990
7001110	Telecommunications Services				_	18,500
7001120	Consulting Services				_	
					-	259,020
7001400 7018120	Salety and Environmental				_	41,530
	Rental Buildings (trailers)				_	
7019310	Coring (sidewalls & analysis)				_	541,400
7011010	2% Contingency & Taxes				_	264,731
	TOTAL DRILLING - INTANGIBLE					\$3,948,575
		-			-	\$3,574,313
	TOTAL DRILLING COST					\$4,676,918
COMPLETION - TANK	HBLE			-		
7012580	Tubing				_	E7,500
7012040	Tubing Accessories (nipple, wireline entr	γ)			-	15,000
7012550	Wellhead Equip				_	30,000
7012560	Packers - Completion Equipment					38,850
					-	
	TOTAL COMPLETION - TANGIBLE					\$161,350

DATE 7/24/2017

Asset Team	PERMIAN				
Field	O FORMATION: WOLSCAMP A				
Lease/Facility	KNGFE FASTH FEE TO 6H				
COMPLETION - INT	ANGIBLE				
GL CODE	DESCRIPTION	ESTIMATED COST			
7001270	Location and Access (dress location after rig move, set anchors)  Drilling Rig During Completion	20,000			
7015140	Mud Fluids & Services	21,600			
7019030	Colled Tubing Services (3 runs)	90,000			
7019240 7019270	Snubbing Services	30,000			
7016350	Pulling/Swab Units Fuel (from drig)	11,520			
7019010	Casing Crew and Services	<del></del>			
7019020	Coment and Comenting Services	= .			
7019080 7019320	Well Testing Services (flow hand & equip) Fracturing Services	66,500			
7019330	Perforating	2,000,020			
7019360	Wireline Services	152,000			
7001460 7015180	Water Hayling & Disposed (franticide)	600,000			
7018150	Freight - Truck (hauf pipe; drig & compl) BOP Rental & Testing	30,000			
7018150	Rental Tools and Equipment ( Incl. drig: lightplant,hydra-walls)	<del> </del>			
70181SQ	CT Downhole Rental Equipment (le. Bit, BHA)	45,000			
7000030	Contract Labor - general	20,000			
7001110 7001400	Telecommunications Services Salety and Environmental	15,000			
7001120	Consulting Services				
7018150	Zipper Manifold	24,000 57,600			
7019300	Frack Stack Rentals	30,000			
7016190 7018150	Freight (Transportation Services)	·			
7018120	Equipment Rental ( w/o operator, frac tanks. lightplants) Rental Buildings (trailers)	80,000			
7000030	Contract Labor - Pumping (pump-down pumps)	42,000			
7011010	EX Contingency & Taxes	281,326			
	TOTAL COMPLETION - INTANGIBLE				
		\$3,636,546			
	TOTAL COMPLETION COST	\$3,797,896			
		23,737,030			
SURFACE EQUIPMEN	IT - TANGIBLE				
7012350	Misc. Piping, Fittings & Valves	87.821			
9005027	Company Labor & Burden				
7000030	Contract Labor - General Telecommunication equip (Telemetry)	66,363			
7012410	Une Pipe & Accessories				
7012270	Miscellaneous Materials (containment system)	25,847 41,091			
7008060	SCADA	41,031			
7016180	Freight - truck				
7001190 7012290	Contract Engineering Metering and Instrumentation	27,792			
7012290	I&C Materials	231,430			
7012200	Get Treating	<del></del>			
7012200	Dehydration	<del></del>			
7012010	Compressor	-			
7012350	Power Vapor Recovery Unit				
7012440	Separator & other pressure vessels	101,137			
7012500	Tanks	236,189			
7012100	Heater Treater	12,406			
7012540 7000010	Flare & Accessories Electrical Lubor	16,675			
7000010	Mechanical Labor	27,792			
7012480	Rod Pumping unit & Fad	<del></del>			
7012180	Pumping Unit Engine				
7012350	Electrical Power (electrical cooperative construction costs)	22,234			
1	OTAL SURFACE EQUIPMENT - TANGIBLE	\$799,782			
	ATAL PURPAGE FAUIDATAN COM				
	OTAL SURFACE EQUIPMENT COST	\$ 799,782			
ARTIFICIAL LIFT					
	Company Libor				
7012180	Gas Ulft Equipment	2,500			
7012480	Rod Pumping, Sucker Rods & Rod Pump	38,000			
7012140	Efect Sub Pumps (ESP)	•			
7019350	Well Services Well/Well/head Services	20,000			
7012550	Materials & SuppRes-Tangible Surface Wellhead Equipment	13,000			
7012390	Pig Launchers/Receivers & Rel Equip	5,500			
7011010	10% Contingency & Taxes				
ī	DTAL ARTIFICIAL LIFT	79,000			
	OTAL ARTIFICIAL LIFT COST	\$ 79,000			
	SUMMARY OF ESTIMATED DRILLING WELL COSTS	TOTAL COST			
		TOTAL COST			
	TOTAL LOCATION COST	\$ 87,500			
	TOTAL DRILLING COST	\$ 4,676,918			
	TOTAL COMPLETIONS COST	\$ 3,797,896			
	TOTAL SURFACE EQUIPMENT COST	\$ 799,782			
	TOTAL ARTIFICIAL LIFT COST	\$ 79,000			
	GRAND TOTAL COST	\$9,441,096			

# Knife Fight Fee 24 34 26 WXY 3H

Knife Fight Fee 24 34 26 WXY 3H SURFACE HOLE 271' FNL, 1205' FEL OF SEC 26-24S-34E

FBSG-LMAR-BSPG-SBSG Carb. **BCYN** TBSG Carb North Line of 24S 34E Sec 26 WFM 150' from North Line of 24S 34E Sec 26 Knife Fight Fee 24 34 26 WXY 3H PLAN WELL PATH 150' from South Line of 24S 34E Sec 26 Last Perforation no closer than 150' from North Line of 24S 34E Sec 26 DIAGRAM NOT DRAWN TO SCALE South Line of 24S 34E Sec 26

EXHIBIT South Line

First Perforation no closer than 150' from South Line of 24S 34E Sec 26



# Knife Fight Fee 24 34 26 WA 6H

Knife Fight Fee 24 34 26 WA 6H SURFACE HOLE 271' FNL, 1175' FEL OF SEC 26-24S-34E LMAR-Pilot Hole TD. FBSG-TBSG Carb - WFM -BSPG-SBSG Carb. BCYN North Line of 24S 34E Sec 26 150' from North Line of 24S 34E Sec 26 First Perforation no closer than 150' from South Line of 24S 34E Sec 26 Knife Fight Fee 24 34 26 WA 6H PLAN WELL PATH 150' from South Line of 24S 34E Sec 26 DIAGRAM NOT DRAWN TO SCALE Last Perforation no closer than 150' from North Line of 24S 34E Sec 26 South Line of 24S 34E Sec 26

MarathonOil

# Knife Fight Fee 24 34 26 TB 7H

Knife Fight Fee 24 34 26 TB 7H SURFACE HOLE 271' FNL, 1145' FEL OF SEC 26-24S-34E LMAR-SBSG Carb -FBSG-BSPG-**BCYN** TBSG Carb North Line of 24S 34E Sec 26 First Perforation no closer than 150' from 150' from North Line of 24S 34E Sec 26 Knife Fight Fee 24 34 26 TB 7H PLAN WELL PATH 150' from South Line of 24S 34E Sec 26 Last Perforation no closer than 150' from North Line of 24S 34E Sec 26 DIAGRAM NOT DRAWN TO SCALE South Line of 24S 34E Sec 26



South Line of 24S 34E Sec 26

# Knife Fight Fee 24 34 26 WXY 19H

Knifa Fight Fee 24 34 26 WXY 19H SURFACE HOLE 271' FNL, 1145' FEL OF SEC 26-24S-34E -MAR-FBSG-TBSG Carb -BSPG-BCYN-SBSG Carb -WFM. North Line of 24S 34E Sec 26 First Perforation no closer than 150' from South Line of 24S 34E Sec 26 150' from North Line of 24S 34E Sec 26 Knife Fight Fee 24 34 26 WXY 19H PLAN WELL PATH 150' from South Line of 24S 34E Sec 26 DIAGRAM NOT DRAWN TO SCALE Last Perforation no closer than 150' from North Line of 24S 34E Sec 26 South Line of 24S 34E Sec 26

