

**Before the Oil Conservation Division  
Examiner Hearing September 20, 2018**

**Case No. 16413**

*Duda Bides Federal 22-28-19 TBC 7H*



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

**APPLICATION OF MARATHON OIL  
PERMIAN LLC FOR COMPULSORY  
POOLING, EDDY COUNTY, NEW MEXICO.**

**CASE NO. 16413**

**AFFIDAVIT OF CHASE RICE**

STATE OF NEW MEXICO            )  
  ) ss.  
COUNTY OF BERNALILLO        )

Chase Rice, being duly sworn, deposes and states:

1. I am a landman for Marathon Oil Permian LLC ("Marathon"), and have personal knowledge of the matters stated herein. I have been qualified by the Division as an expert petroleum landman.
2. Pursuant to NMAC 19.15.4.12.A(1), the following information is submitted in support of the above referenced compulsory pooling application:
  - (a) The purpose of this application is to force pool working interest owners into the Bone Spring horizontal spacing unit described below, and in wells to be drilled in the unit.
  - (b) No opposition is expected because the interest owners being pooled have been contacted regarding the proposed well, but have failed or refused to voluntarily commit their interests in the well.
  - (c) A plat outlining the unit being pooled is attached hereto as Exhibit A, along with a list of pooled working interests and the percentages of such interests. This exhibit also



includes the ownership of each separate tract in the proposed unit and the proposed well's location within the unit. Marathon seeks an order approving a 160-acre, more or less, spacing and proration unit in the Bone Spring formation comprised of the E/2 E/2 of Section 19, Township 22 South, Range 28 East, NMPM, Eddy County, New Mexico. Applicant further seeking pooling of all mineral interests in the Bone Spring formation underlying the spacing and proration unit. The unit will be dedicated to the Duda Bides Federal 22-28-19 TBC 7H well. This well is a horizontal well. A plat which shows the surface location and first and last take points for each well are attached hereto as Exhibit B.

(d) There are no depth severances within the Bone Spring formation underlying the proposed unit.

(e) The proposed TVD for the well is approximately 8,483 feet. The well will develop the Willow Lake; Bone Springs, West Pool (Pool Code 96415), which is designated as an oil pool. The completed laterals will comply with the setback requirements for this pool.

(f) The parties being pooled, their last known address, and the nature of their interests are set forth in Exhibit C.

(g) I have conducted a diligent search of the public records in the county where the well is located, searched phone directories and conducted computer searched to locate contact information for parties entitled to notification.

(h) There are no un-locatable interest owners or returned mailings.

(i) Exhibit D contains a summary of contact or attempted contacts with the interest owners, together with copies of the proposal letters sent to interest owners.

(j) Marathon has made a good faith effort to obtain voluntary joinder of the work interest owners in the proposed well.

- (k) There are overriding royalty interests in the acreage at issue and they have been notified of this application. Marathon seeks to pool these interests in the unit.
- (l) Exhibit E is the well proposal letters and Authorization for Expenditure for the proposed well. The estimated cost of the well set forth therein is fair and reasonable, and is comparable to the costs of other wells of similar depths and length drilled in this area of New Mexico.
- (m) Marathon requests overhead and administrative rates of \$7000/month for a drilling well and \$700/month for a producing well. These rates are fair, and comparable to the rates charged by other operators for wells of this type in this area of Southeastern, New Mexico. Marathon requests that these rates be adjusted periodically as provided in the COPAS Accounting Procedure.
- (n) Marathon requests the maximum cost plus 200% risk charge be assessed against non-consenting working interest owners.
- (o) Marathon requests that it be designated operator of the well.
3. The attachments to this affidavit were prepared by me, or compiled from company business records.
4. I attest that the information provided herein is correct and complete to the best of my knowledge and belief.
5. The granting of this application is in the interests of conservation and the prevention of waste.

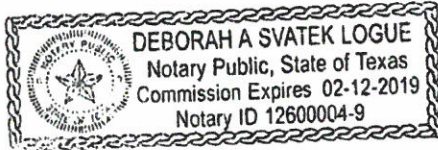


Chase Rice

SUBSCRIBED AND SWORN to before me this <sup>19<sup>th</sup></sup> ~~20<sup>th</sup>~~ day of September, 2018 by Chase Rice.

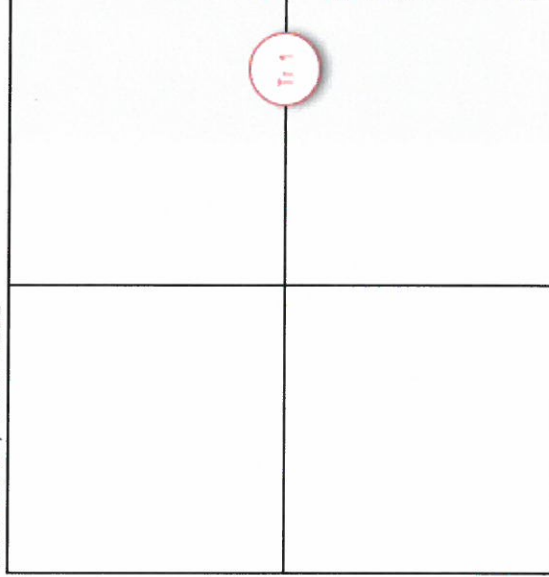
Deborah A Svatek Logue  
Notary Public

My commission expires: 02-12-2019



Lease Tract Map  
Duda Bides Federal 22-28-19 TBC 7H  
E2E2 of Section 19, T22S-R28E- 160 acres

Section 19, T22S-R28E



Tract 1: BLM Lease 415461





**Summary of Interests**  
**Duda Bides Federal 22-28-19 TBC 7H**  
**E2E2 of Section 19, T22S-R28E- 160 acres**

<b><u>Committed Working Interest:</u></b> Marathon Oil Permian LLC	33.333300%
<b><u>Uncommitted Working Interest:</u></b> Occidental Permian Ltd. Thru Line LP	66.666700%
<b><u>Unleased Mineral Interest:</u></b>	49.823200%
	17.043500%
	0.0000000%
<b>Total</b>	100.00%

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, 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  
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>1</sup> API Number	<sup>2</sup> Pool Code 96415	<sup>3</sup> Pool Name WILLOW LAKE; BONE SPRING, WEST
<sup>4</sup> Property Code	<sup>5</sup> Property Name DUDA BIDES 22 28 19 TBC F	<sup>6</sup> Well Number 7H
<sup>7</sup> OGRID No. 372098	<sup>8</sup> Operator Name MARATHON OIL PERMIAN LLC	<sup>9</sup> Elevation 3080'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	22S	28E		1300	NORTH	210	EAST	EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	22S	28E		330	SOUTH	330	EAST	EDDY

<sup>12</sup> Dedicated Acres 160.0	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

**Defining Well**

**CORNER COORDINATES**  
NAD 83, SPCS NM EAST  
A - X: 606335.40' / Y: 503973.15'  
B - X: 607663.02' / Y: 503976.21'  
C - X: 607840.30' / Y: 498668.84'  
D - X: 606543.51' / Y: 498669.36'

**CORNER COORDINATES**  
NAD 27, SPCS NM EAST  
A - X: 565153.59' / Y: 503913.29'  
B - X: 566481.20' / Y: 503916.33'  
C - X: 566658.35' / Y: 498609.09'  
D - X: 565361.58' / Y: 498609.63'

**SURFACE HOLE LOCATION**  
1300' FNL 210' FEL, SECTION 19  
NAD 83, SPCS NM EAST  
X: 607496.34' / Y: 502675.59'  
LAT: 32.38174213N / LON: -104.11901699W  
NAD 27, SPCS NM EAST  
X: 566314.50' / Y: 502615.75'  
LAT: 32.38162249N / LON: -104.11851768W

**KICK OFF POINT**  
100' FNL 330' FEL, SECTION 19  
NAD 83, SPCS NM EAST  
X: 607336.21' / Y: 503875.01'  
LAT: 32.38504000N / LON: -104.11952795W  
NAD 27, SPCS NM EAST  
X: 566154.40' / Y: 503815.14'  
LAT: 32.38492040N / LON: -104.11902852W

**FIRST TAKE POINT**  
330' FNL 330' FEL, SECTION 19  
NAD 83, SPCS NM EAST  
X: 607343.90' / Y: 503645.04'  
LAT: 32.38440780N / LON: -104.11950456W  
NAD 27, SPCS NM EAST  
X: 566162.07' / Y: 503585.17'  
LAT: 32.38428819N / LON: -104.11900514W

**LAST TAKE POINT/BOTTOM HOLE LOCATION**  
330' FSL 330' FEL, SECTION 19  
NAD 83, SPCS NM EAST  
X: 607499.09' / Y: 498998.98'  
LAT: 32.37163577N / LON: -104.11903196W  
NAD 27, SPCS NM EAST  
X: 566317.15' / Y: 498939.23'  
LAT: 32.37151606N / LON: -104.11853299W

**<sup>17</sup> OPERATOR CERTIFICATION**  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

**<sup>18</sup> SURVEYOR CERTIFICATION**  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey \_\_\_\_\_

Signature and Seal of Professional Surveyor: \_\_\_\_\_

Certificate Number \_\_\_\_\_

SHEET 1 OF 3  
JOB No. R3956\_002  
REV 0 BM 09/18/2018

EXHIBIT

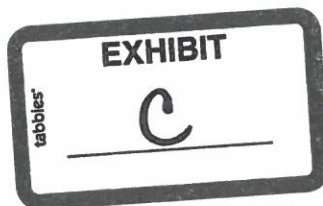
B

tabbles



## Exhibit C - Pooled Parties and Addresses

OWNER(S)	TYPE
Occidental Permian Ltd. 5 East Greenway Plaza #10 Houston, TX 77046	WI
Thru Line LP 201 Main Street, Suite 2700 Fort Worth, TX 76102	WI
Hilltop National Bank, as Successor Trustee of the Dorothy R. Brown Trust Casper, WY 82602	ORRI
Hilltop National Bank, as Successor Trustee of the William H. Brown Mineral Trust Casper, WY 82602	ORRI
Key Production Company, Inc 1700 Lincoln Street, Suite 2050 Denver, CO 80203	ORRI
Occidental Permian Ltd. 5 East Greenway Plaza #10 Houston, TX 77046	ORRI



## Summary of Attempted Contacts

- Marathon sent well proposal letters on June 26, 2018.
- Marathon then contacted parties to see if they would participate in the well and/or execute a joint operating agreement.
- Marathon conducted updated record searches and internet searches for contact information for parties it seeks to pool.
- Marathon continued to attempt to contact the parties who had not executed an agreement.
- Marathon filed an application to force pool parties who had not entered in to an agreement.
- Marathon sent notices of the force pooling application to the addresses of record.
- Marathon then also published notice in a newspaper of general circulation in the county where the wells will be located.



Steven Martinez  
Land Agent for Marathon Oil Permian LLC



T-O Land & Minerals, Inc., Agent  
25465 Scenic Loop Rd.  
San Antonio, Texas 78255  
Telephone: (210) 826-3000  
Email: smartinez@t-oland.com

June 26, 2018

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED  
7018 0040 0000 3767 8483

Occidental Permian Ltd.  
5 Greenway Plaza, Suite 110  
Houston, Texas 77046

Re: Duda Bides Federal 5H, 6H, 7H & 10H Well Proposals  
N/2 and E/2 E/2 of Section 19, Township 22 South, Range 28 East  
Eddy County, New Mexico

Dear Occidental Permian Ltd.:

Marathon Oil Permian LLC ("Marathon") proposes the drilling of the following wells located in the N/2 and E/2 E/2 of Section 19, 22S-28E, Eddy County, New Mexico, all to be drilled from one surface pad location.

Well Name	SHL	BHL	Proration Unit	Target TVD	Est. MD
Duda Bides Federal 22-28-19 WXY 5H	~210' FEL & ~1390' FNL	330' FWL & 330' FNL	N/2 of Sec. 19	9,347'	14,262'
Duda Bides Federal 22-28-19 TBC 7H	~210' FEL & ~1300' FNL	330' FEL & 330' FSL	E/2 E/2 of Sec. 19	8,483'	13,410'
Duda Bides Federal 22-28-19 WA 6H	~210' FEL & ~1360' FNL	330' FWL & 1330' FNL	N/2 of Sec. 19	9,488'	14,359'
Duda Bides Federal 22-28-19 WXY 10H	~210' FEL & ~1330' FNL	330' FWL & 2310' FNL	N/2 of Sec. 19	9,327'	14,252'

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.

Marathon proposes drilling the wells under the terms of the 1989 AAPL JOA, and if you are interested in participating, a form of this JOA will be sent to you following this proposal. The JOA will have the following general provisions:

- 100%/300%/300% non-consent penalty
- \$7,000/\$700 drilling and producing rates
- Contract area of Section 19, 22S-28E, covering all depths

Our title records indicate that you own 0.49623200 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:

•

•  
•  
This term assignment offer terminates on July 26, 2018 and is subject to due diligence and title verification satisfactory to Marathon.

Should you have any questions regarding this or other matters, please do not hesitate to contact me via the phone number or email address listed above.

Sincerely,



Steven Martinez  
Land Agent for Marathon Oil Permian, LLC

\_\_\_\_\_ Occidental Permian Ltd. elects to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 WXY 5H.

\_\_\_\_\_ Occidental Permian Ltd. elects NOT to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 WXY 5H.

\_\_\_\_\_ Occidental Permian Ltd. elects to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 WA 6H.

\_\_\_\_\_ Occidental Permian Ltd. elects NOT to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 WA 6H.

\_\_\_\_\_ Occidental Permian Ltd. elects to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 TBC 7H.

\_\_\_\_\_ Occidental Permian Ltd. elects NOT to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 TBC 7H.

\_\_\_\_\_ Occidental Permian Ltd. elects to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 WXY 10H.

\_\_\_\_\_ Occidental Permian Ltd. elects NOT to participate in the drilling, completing, and equipping of the Duda Bides Federal 22-28-19 WXY 10H.

Occidental Permian Ltd.

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

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

DATE 6/12/2018

DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD  
COMPLETION PREPARED BY JOSH SHANNON  
FACILITIES PREPARED BY MATT HENSCHEN  
ARTIFICIAL LIFT PREPARED BY BILLY MOORE

Asset Team	PERMIAN			
Field	WILLOW LAKE;BON	FORMATION: 3RD BONE SPRINGS	WILDCAT	EXPLORATION
Lease/Facility	DUDA BIDES FEDERAL 22-28-19 TBC 7H		DEVELOPMENT	RECOMPLETION
Location	EDDY COUNTY		X EXPLOITATION	WORKOVER
Prospect	MALAGA			

Est Total Depth	13,410	Est Drilling Days	14.4	Est Completion Days	5.5
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LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	37,500
7001250	Land Broker Fees and Services	37,500
TOTAL LOCATION COST - INTANGIBLE		75,000

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	15,000
7012050	Intermediate Casing 1	61,000
7012050	Intermediate Casing 2	-
7012050	Production Casing	226,000
7012050	Drig Liner Hanger, Tieback Eq & Csg Accessories	10,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		419,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	33,750
7019220	Drilling Rig - day work/footage	347,500
7019040	Directional Drilling Services	109,050
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	-
7019020	Cement and Cementing Service Production	140,000
7019140	Mud Fluids & Services	57,900
7012310	Solids Control equipment	25,000
7012020	Bits	70,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	43,000
7019140	Fuel (Mud)	18,000
7001460	Water (non potable)	25,000
7019000	Well Logging Services	-
7019150	Mud Logging+geosteering	10,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing Inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7018150	Rental Tools and Equipment (surface rentals)	55,600
7018150	Rig Equipment and Misc.	6,950
7001110	Telecommunications Services	5,000
7001120	Consulting Services	65,330
7001400	Safety and Environmental	22,240
7018120	Rental Buildings (trailers)	11,120
7019310	Coring (sidewalls & analysis)	-
7011010	8% Contingency & Taxes	145,951
TOTAL DRILLING - INTANGIBLE		\$1,426,391

TOTAL DRILLING COST	\$1,845,391
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COMPLETION - TANGIBLE

7012580	Tubing	50,000
7012040	Tubing Accessories (nipple, wireline entry)	5,000
7012550	Wellhead Equip	5,000
7012560	Packers - Completion Equipment	40,000
TOTAL COMPLETION - TANGIBLE		\$100,000



Asset Team PERMIAN  
 Field WILLOW LAKE:BON FORMATION: 3RD BONE SPRINGS  
 Lease/Facility DUDA BIDES FEDERAL 22-28-19 TBC 7H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	5,000
7019220	Drilling Rig During Completion	60,000
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	120,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	105,000
7019320	Fracturing Services	2,030,000
7019330	Perforating	175,000
7019360	Wireline Services	10,000
7001460	Water Hauling & Disposal (frac fluids)	250,000
7016180	Freight - Truck (haul pipe; drlg & compl)	10,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg; lightplant,hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. Bit, BHA)	-
7000030	Contract Labor - general	25,000
7001110	Telecommunications Services	90,000
7001400	Safety and Environmental	-
7001120	Consulting Services	40,000
7018150	Zipper Manifold	110,000
7019300	Frac Stack Rentals	40,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental ( w/o operator, frac tanks, lightplants)	65,000
7018120	Rental Buildings (trailers)	15,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	232,400
TOTAL COMPLETION - INTANGIBLE		\$3,442,400

TOTAL COMPLETION COST

\$3,542,400

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	85,794
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	67,540
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	26,786
7012270	Miscellaneous Materials (containment system)	43,227
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	29,116
7012290	Metering and Instrumentation	235,914
7012290	I&E Materials	-
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	85,919
7012500	Tanks	144,894
7012100	Heater Treater	17,330
7012640	Flare & Accessories	11,646
7000010	Electrical Labor	29,116
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	23,293
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$800,575

TOTAL SURFACE EQUIPMENT COST

\$ 800,575

ARTIFICIAL LIFT

7006640	Company Labor	2,500
7012180	Gas Lift Equipment	38,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	-
7012140	Elect Sub Pumps (ESP)	-
7019350	Well Services-Well/Wellhead Services	20,000
7012270	Materials & Supplies-Tangible	13,000
7012550	Surface Wellhead Equipment	5,500
7012390	Pig Launchers/Receivers & Rel Equip	-
7011010	8% Contingency & Taxes	-
TOTAL ARTIFICIAL LIFT		79,000

TOTAL ARTIFICIAL LIFT COST

\$ 79,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

TOTAL COST

TOTAL LOCATION COST	\$ 75,000
TOTAL DRILLING COST	\$ 1,845,391
TOTAL COMPLETIONS COST	\$ 3,542,400

TOTAL SURFACE EQUIPMENT COST	\$ 800,575
TOTAL ARTIFICIAL LIFT COST	\$ 79,000
GRAND TOTAL COST	<u>\$6,342,366</u>

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

**APPLICATION OF MARATHON OIL  
PERMIAN LLC FOR COMPULSORY  
POOLING, EDDY COUNTY, NEW MEXICO.**

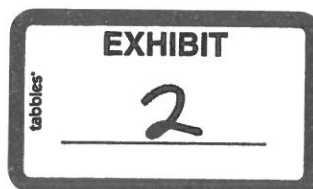
**CASE NO. 16413**

**AFFIDAVIT OF TUCKER KEREN**

STATE OF NEW MEXICO            )  
  ) ss.  
COUNTY OF BERNALILLO        )

Tucker Keren, being duly sworn, deposes and states:

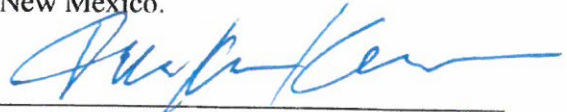
1. I am over the age of 18, and have person knowledge of the matters stated herein. I have been qualified by the Division as an expert petroleum geologist.
2. I am a geologist for Marathon Oil Permian LLC ("Marathon") and I have conducted a geologic study in connection with the above-captioned application.
3. I am familiar with the geological matters involved in this case.
4. The following geological exhibits are attached hereto:
  - a. Exhibit A is a structure map on the base of the Second Bone Spring Sand formation. It shows that the structure dips gently to the east. It also shows producing Bone Spring wells in the vicinity of the proposed Duda Bides Federal 22-28-19 TBC 7H, and a line of cross-section.
  - b. Exhibit A shows that the Bone Spring formation is uniform across the proposed well unit.



- c. Exhibit B is a stratigraphic cross section showing the targeted zones in the Bone Spring formation. The well logs on the cross-section give a representative sample of the Bone Spring formation in the area. The target zone for the wells is the Third Bone Spring Carbonate in addition, Marathon plans on drilling future wells in the Second Bone Spring Sand, and these zones are continuous across the well unit. The logs in the middle and right are considered to be most representative of the well unit.
  - d. Exhibit C is Net Sand Isochore map which shows the Second Bone Spring Sand to Third Bone Spring Sand zone and uses a 50' contour interval. This map shows the thickness of sands in this zone is consistently around 250 feet thick in total across the well unit.
5. I conclude from the maps that:
- a. The horizontal spacing and proration unit is justified from a geologic standpoint.
  - b. There are no structural impediments or faulting that will interfere with horizontal development.
  - c. Each quarter quarter section in the unit will contribute more or less equally to production.
6. The preferred well orientation in this area is east-west or north-south in the Bone Spring formation. There are several Bone Spring lateral wells oriented north-south in township-range 22S 28E (sections 23, 26, 36). For the Duda Bides Federal 22-28-19 TBC 7H well, Marathon proposes drilling north to south in order to follow the orientation of somewhat narrow sand depositional channel that can be resolved on well and seismic data. Alternatively, Marathon has decided to drill the Wolfcamp wells east-west because: a)

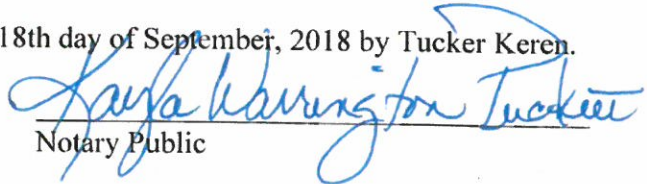
this channel likely does not play a significant role in Wolfcamp deposition; b) regional present-day stress maps suggest SHmax is approaching north-south in this area; and c) other Wolfcamp lateral wells in the area have been drilled east-west.

7. The producing interval for the well will be orthodox and will comply with the Division's set back requirements.
8. Marathon has requested that it be allowed 365 days after the first well is drilled to complete the wells in this application. This is needed because Marathon currently has one completions crew dedicated to operations in New Mexico.



Tucker Keren

SUBSCRIBED AND SWORN to before me this 18th day of September, 2018 by Tucker Keren.

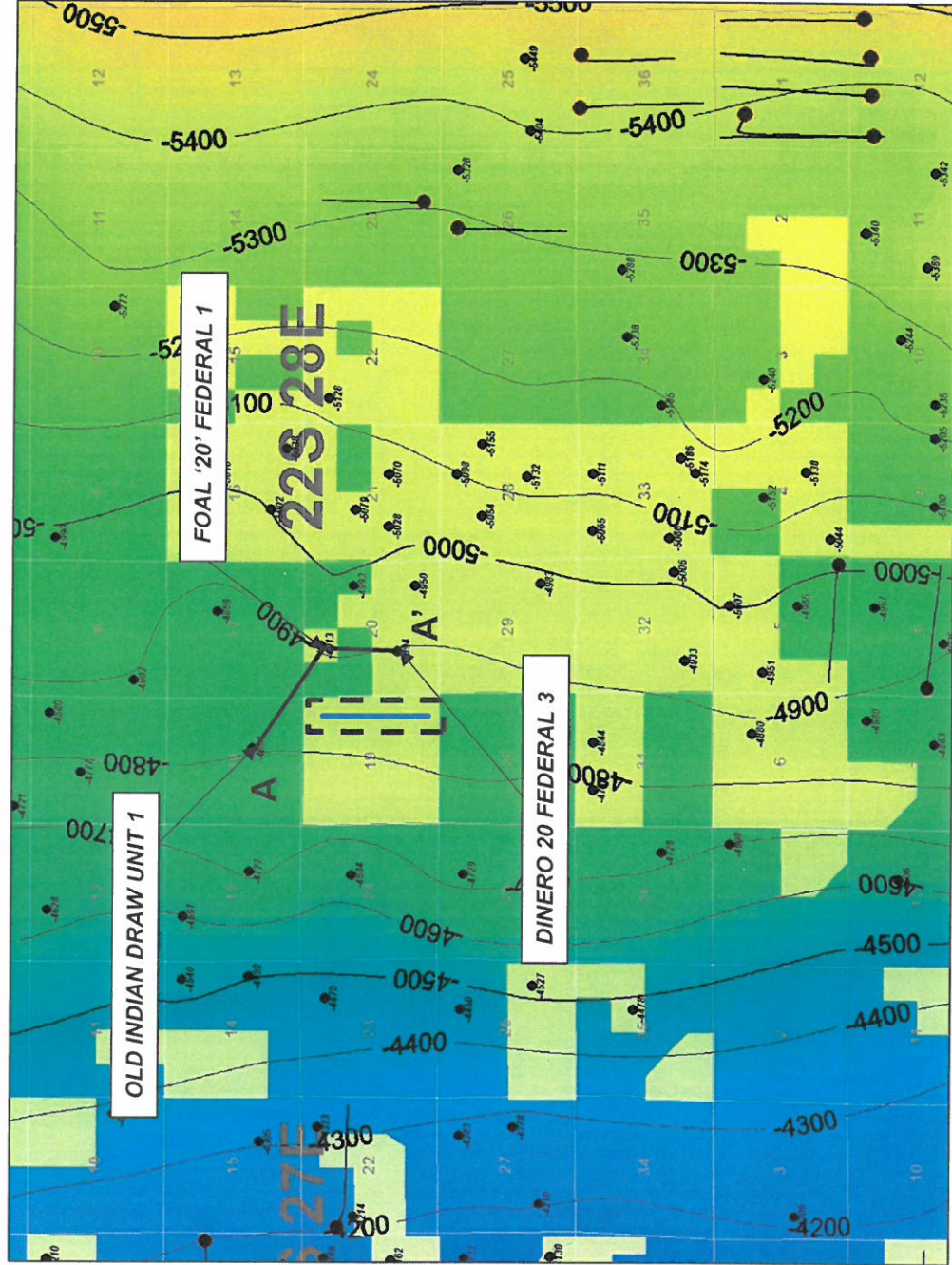
  
Notary Public

My commission expires: \_\_\_\_\_



# Duda Bides Federal 22-28-19

Structure Map – Base of 2<sup>nd</sup> Bone Spring Sand Subsea



## Map Legend

MRO – Proposed HZ Wellbore



Bone Spring HZ Producing Well



MRO Acreage



HZ Spacing Unit

C.I. = 100'



1 mile

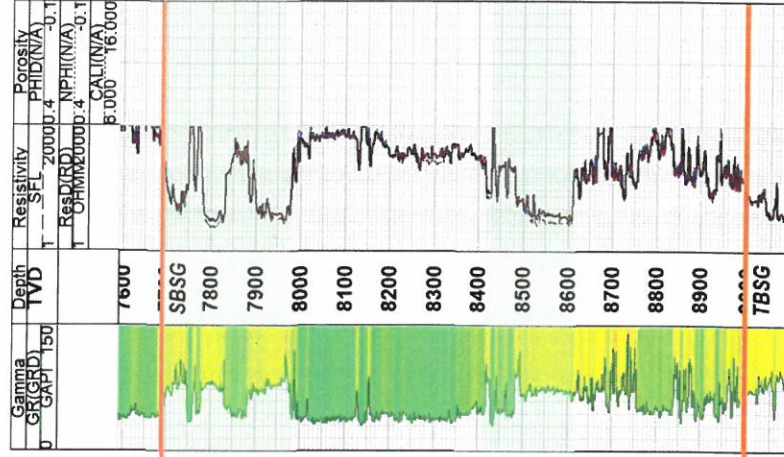
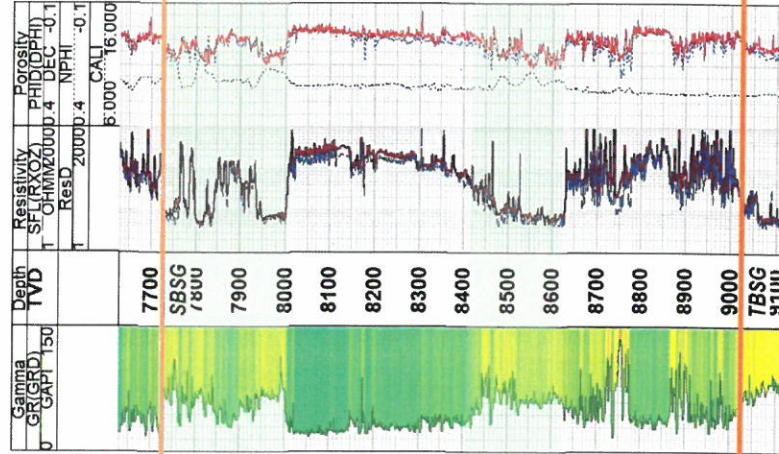
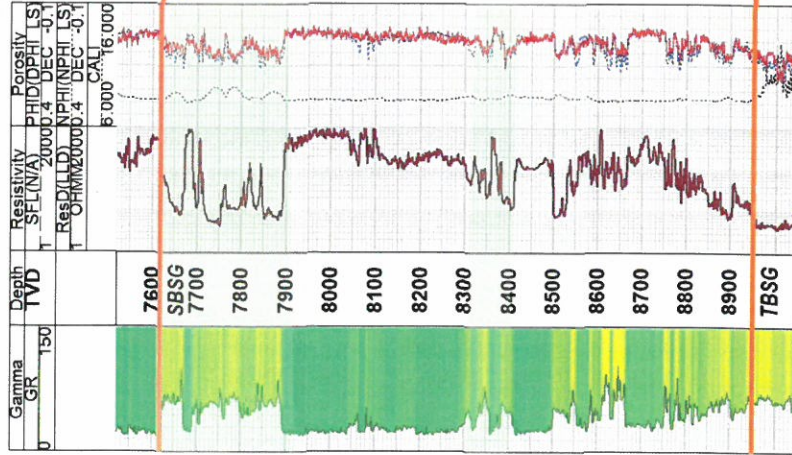
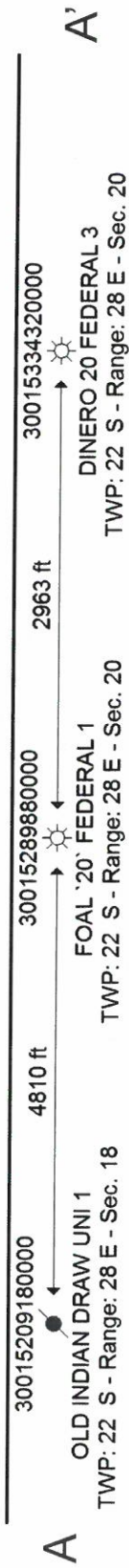
EXHIBIT  
A

MarathonOil



# Duda Bides Federal 22-28-19

## Stratigraphic Cross Section (Top of 3<sup>rd</sup> Bone Spring Datum)



Producing Zone

Producing Zone

Type Log for Duda Bides

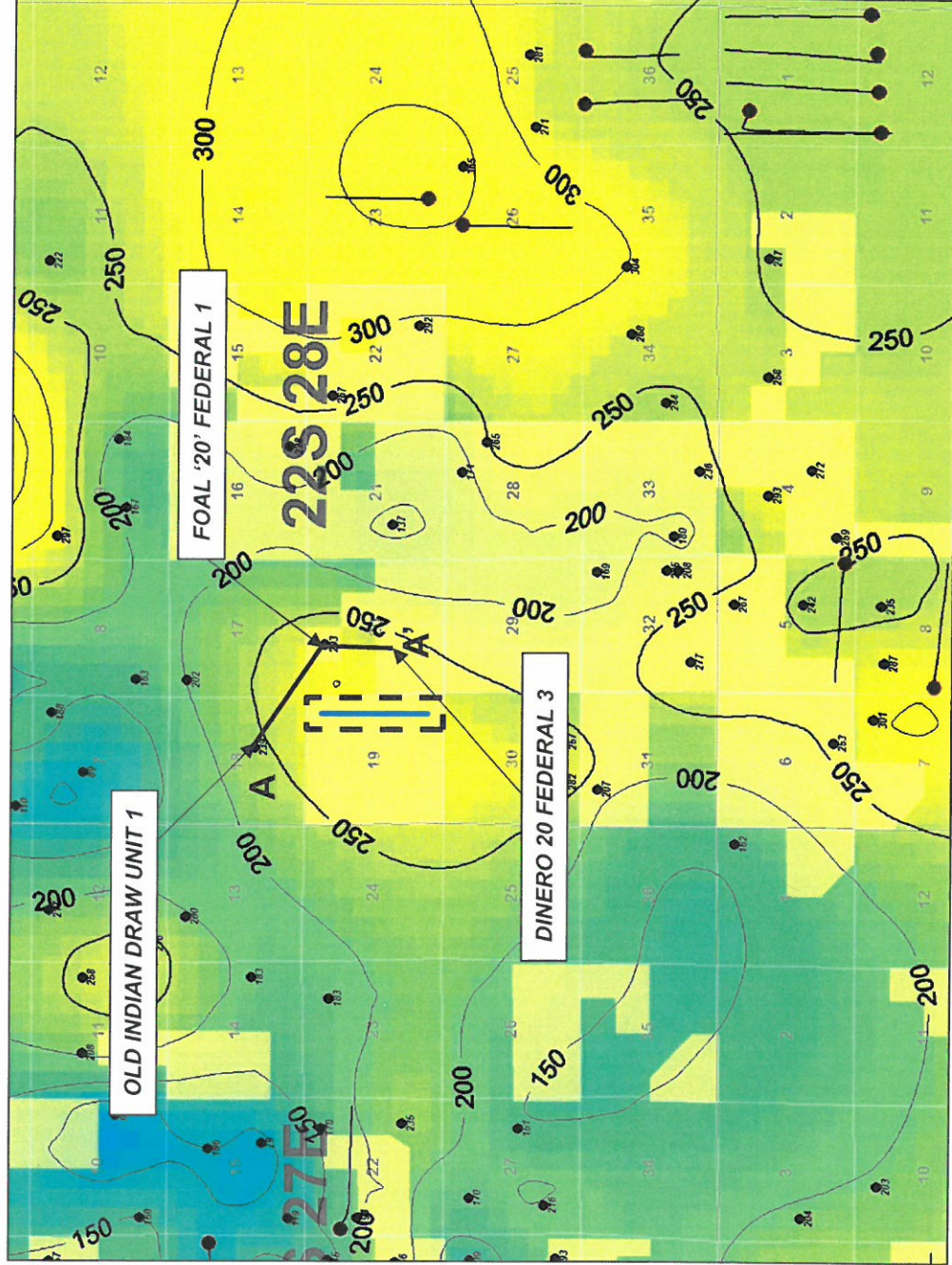
EXHIBIT

B



# Duda Bides Federal 22-28-19

Net Sand Isochore – 2<sup>nd</sup> Bone Spring Sand to 3<sup>rd</sup> Bone Spring Sand



## Map Legend



MRO – Proposed HZ Wellbore



Bone Spring HZ Producing Well



MRO Acreage



HZ Spacing Unit

C.I. = 50'



1 mile

EXHIBIT

C

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


**APPLICATION OF MARATHON OIL  
PERMIAN LLC FOR COMPULSORY  
POOLING, EDDY COUNTY, NEW MEXICO.**

**CASE NO. 16413**

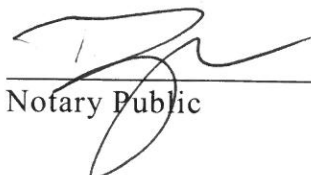
**AFFIDAVIT**

STATE OF NEW MEXICO       )  
  ) ss.  
COUNTY OF BERNALILLO    )

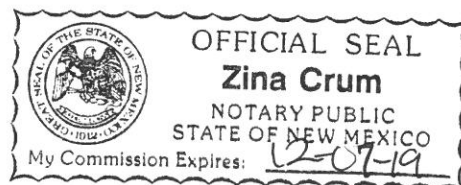
Jennifer L. Bradfute, attorney in fact and authorized representative of Marathon Oil Permian LLC ("Marathon"), the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application was provided under the notice letter and that proof of receipt is attached hereto. Marathon has conducted a good faith, diligent effort to find the names and correct addresses for the interest owners entitled to receive notice of the application filed herein.

  
\_\_\_\_\_  
Jennifer L. Bradfute

SUBSCRIBED AND SWORN to before me this 19<sup>th</sup> day of September, 2018 by  
Jennifer L. Bradfute.

  
\_\_\_\_\_  
Notary Public

My commission expires: 12-07-2019



Zina Crum  
Modrall Sperling  
500 4th Street NW  
Suite 1000  
Albuquerque NM 87102



Firm Mailing Book ID: 150129

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
1	9314 8699 0430 0050 2585 23	Chevron 6301 Deauville Blvd., Midland TX 79706	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
2	9314 8699 0430 0050 2585 30	Chisholm Trail Ventures, LP 201 Main Street, Suite 2700 Ft. Worth TX 76102	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
3	9314 8699 0430 0050 2585 47	Devon 333 West Sheridan Ave., Oklahoma City OK 73102	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
4	9314 8699 0430 0050 2585 54	Hilltop National Bank, as Successor Trustee of the Dorothy R. Brown Trust 300 Country Club Road Casper WY 82609	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
5	9314 8699 0430 0050 2585 61	Hilltop National Bank, as Successor Trustee of the William H. Brown Mineral Trust 300 Country Club Road Casper WY 82609	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
6	9314 8699 0430 0050 2585 78	Key Production Company, Inc 1700 Lincoln Street, Suite 2050 Denver CO 80203	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
7	9314 8699 0430 0050 2585 85	Keystone Group 201 Main Street, Suite 2700 Ft. Worth TX 76102	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
8	9314 8699 0430 0050 2585 92	LMBI, LP 201 Main Street, Suite 2700 Ft. Worth TX 76102	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
9	9314 8699 0430 0050 2586 08	Mewbourne Oil Company 500 West Texas Ave, Suite 1020 Midland TX 79701	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
10	9314 8699 0430 0050 2586 15	Occidental Permian Ltd. 5 East Greenway Plaza #10 Houston TX 77046	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
11	9314 8699 0430 0050 2586 22	SRBI, LP 201 Main Street, Suite 2700 Ft. Worth TX 76102	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
12	9314 8699 0430 0050 2586 39	Sundown Energy, LP. Knoll Trail Plaza 16400 Dallas Parkway, Suite 100 Dallas TX 75248	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
13	9314 8699 0430 0050 2586 46	Thru Line LP 201 Main Street, Suite 2700 Ft. Worth TX 76102	\$1.21	\$3.45	\$1.50	81363-0168	\$0.00 Notice
<b>Totals:</b>			<b>\$15.73</b>	<b>\$44.85</b>	<b>\$19.50</b>	<b>Grand Total:</b>	<b>\$80.08</b>

List Number of Pieces  
Listed by Sender

Total Number of Pieces  
Received at Post Office

Postmaster:  
Name of receiving employee

Dated:



## Transaction Report Details - CertifiedPro.net

Firm Mail Book ID= 150129

Generated: 9/19/2018 11:07:07 AM

Certified Mail Article Number	Date Created	Name 1	Name 2	Address	City	State	Zip	Postage	Certified Mailing Status	Service Options	Mail Delivery Date
9314869904300050258646	2018-08-31 10:24 AM	Thru Line LP		201 Main Street, Suite 2700	Ft. Worth	TX	76102	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258639	2018-08-31 10:24 AM	Sundown Energy, LP.	Knoll Trail Plaza	16400 Dallas Parkway, Suite 100	Dallas	TX	75248	1.21	Delivered	Return Receipt - Electronic	09-04-2018
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9314869904300050258608	2018-08-31 10:24 AM	Mewbourne Oil Company		500 West Texas Ave, Suite 1020	Midland	TX	79701	1.21	Delivered	Return Receipt - Electronic	09-05-2018
9314869904300050258592	2018-08-31 10:24 AM	LMBI, LP		201 Main Street, Suite 2700	Ft. Worth	TX	76102	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258585	2018-08-31 10:24 AM	Keystone Group		201 Main Street, Suite 2700	Ft. Worth	TX	76102	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258578	2018-08-31 10:24 AM	Key Production Company, Inc		1700 Lincoln Street, Suite 2050	Denver	CO	80203	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258561	2018-08-31 10:24 AM	Hilltop National Bank, as Successor Trustee	of the William H. Brown Mineral Trust	300 Country Club Road	Casper	WY	82609	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258554	2018-08-31 10:24 AM	Hilltop National Bank, as Successor Trustee	of the Dorothy R. Brown Trust	300 Country Club Road	Casper	WY	82609	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258547	2018-08-31 10:24 AM	Devon		333 West Sheridan Ave.,	Oklahoma City	OK	73102	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258530	2018-08-31 10:24 AM	Chisholm Trail Ventures, LP		201 Main Street, Suite 2700	Ft. Worth	TX	76102	1.21	Delivered	Return Receipt - Electronic	09-04-2018
9314869904300050258523	2018-08-31 10:24 AM	Chevron		6301 Deauville Blvd.,	Midland	TX	79706	1.21	Delivered	Return Receipt - Electronic	09-05-2018

CARLSBAD  
**CURRENT-ARGUS**

**AFFIDAVIT OF PUBLICATION**


Ad No.  
0001260716

MODRALL SPERLING  
PO BOX 2168

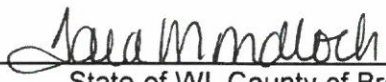
ALBUQUERQUE NM 87103

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

09/06/18

  
Legal Clerk

Subscribed and sworn before me this  
6th of September 2018.

  
State of WI, County of Brown  
NOTARY PUBLIC

  
My Commission Expires

**CASE No. 1643: Notice to all affected parties, as devisees of Occidental Permian Ltd.; Chisholm Tr; LP; Thru Line LP; Keystone Group; LMBI, LP; Hill Successor Trustee of the Dorothy R. Brown Trust; Bank, as Successor Trustee of the William H. Brown Production Company, Inc of Marathon Oil Permian for a non-standard spacing and proration unit and Eddy County, New Mexico.** The State of New Mexico Conservation Division, hereby gives notice that the Division is holding a public hearing at 8:15 a.m. on September 20, 2018, at the Division's office in the City of Albuquerque, New Mexico. Applicant seeks an order from the Division: approving a non-standard spacing unit and pooling all uncommitted mineral interests with the horizontal spacing unit underlying the E/2 E/2 of Section 22 South, Range 28 East, NMPM, Eddy County, New Mexico. The proposed horizontal spacing unit will be dedicated to the Duda Bides Federal 2800 well, to be horizontally drilled. The producing area for the well is approximately 40 acres. Also to be considered will be the cost of drilling the well, the allocation of these costs as well as the costs and charges for supervision, designation of Marcellus, and a 200% charge for risk involved in drilling the well, allowing a one year period between when the well is completed and when the well is completed. Said area is located approximately 10 miles East South East of Carlsbad, New Mexico.  
Pub: Sept. 6, 2018 Legal # 1260716

TARA MONDLOCH  
Notary Public  
State of Wisconsin