

**Before the Oil Conservation Division  
Examiner Hearing January 10, 2019**

**Case No. 20129**

***Battle 34 AV Fee 17H, Battle 34 AV Fee 25H***



# **EXHIBIT 1**

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

**APPLICATION OF MARATHON  
OIL PERMIAN LLC FOR APPROVAL  
OF A SPACING UNIT AND COMPULSORY  
POOLING, LEA COUNTY, NEW MEXICO.**

**CASE NO. 20129**

**AMENDED APPLICATION**

Marathon Oil Permian LLC ("Marathon"), OGRID Number 372098, through its undersigned attorneys, hereby makes an application to the Oil Conservation Division pursuant to the provisions of NMSA (1978), Section 70-2-17, for an order: (1) to the extent necessary, approving the creation of a 160-acre, more or less, spacing unit covering the E/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico from the top of the Bone Spring formation to 9,850'; and (2) pooling all uncommitted mineral interests in the proposed depths within the Bone Spring formation underlying the spacing unit. In support of this application, Marathon states as follows:

1. Marathon is an interest owner in the subject lands and has a right to drill a well thereon.
2. Marathon seeks to dedicate the E/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico from the top of the Bone Spring formation to 9,850' to form a 160-acre, more or less, spacing unit.



3. Marathon plans to drill the **Battle 34 AV Fee 17H** well and the **Battle 34 AV Fee 25H** well to a depth sufficient to test the proposed depths within the Bone Spring formation. These wells will be horizontally drilled.

4. The **Battle 34 AV Fee 17H** well will comply with the Division's setback requirements.

5. The **Battle 34 AV Fee 25H** well will be unorthodox, and Marathon will apply separately for administrative approval of the unorthodox locations.

6. Marathon sought, but has been unable to obtain a voluntary agreement from all interest owners in the Bone Spring formation underlying the proposed spacing unit to participate in the drilling of the well or to otherwise commit their interests to the well.

7. The creation of a spacing unit and pooling of the proposed depths in the Bone Spring formation underlying the proposed unit will prevent the drilling of unnecessary wells, prevent waste and protect correlative rights.

8. Marathon further requests that it be allowed one (1) year between the time the well is drilled and completion of the well.

WHEREFORE, Marathon requests this application be set for hearing before an Examiner of the Oil Conservation Division on January 10, 2019, and after notice and hearing as required by law, the Division enter its order:

A. To the extent necessary, approving the creation of a 160-acre, more or less, spacing unit covering the E/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico from the top of the Bone Spring formation to 9,850';

B. Pooling all mineral interests in the proposed depths within the Bone Spring formation underlying this spacing unit;

- C. Designating Marathon as operator of this unit and the well to be drilled thereon;
- D. Authorizing Marathon to recover its costs of drilling, equipping and completing this well;
- E. Approving actual operating charges and costs charged for supervision, together with a provision adjusting the rates pursuant to the COPAS accounting procedure;
- F. Setting a 200% charge for the risk involved in drilling and completing the well in the event a working interest owner elects not to participate in the well.
- G. Allowing a period of one (1) year between when the well is drilled and when the well is completed under the order.

Respectfully submitted,

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

By: Deana M. Bennett

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*Attorneys for Applicant*

**CASE NO. 20129: Amended Application of Marathon Oil Permian LLC for a spacing unit, and compulsory pooling, Lea County, New Mexico.** Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 160-acre, more or less, spacing unit covering the E/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico from the top of the Bone Spring formation to 9,850'; and (2) pooling all uncommitted mineral interests in the proposed depths in the Bone Spring formation underlying the spacing unit. This proposed spacing unit will be dedicated to the **Battle 34 AV Fee 17H** well and the **Battle 34 AV Fee 25H** well, to be horizontally drilled. The producing area for these wells will be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the wells, and a 200% charge for risk involved in drilling said well, and allowing a one year period between when the wells are drilled and when the first well is completed. Said area is located approximately 23 miles west of Eunice, New Mexico.

# **EXHIBIT 2**

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 97929	<sup>3</sup> Pool Name WC-025 G-06 S213326D; BONE SPRING
<sup>4</sup> Property Code	<sup>5</sup> Property Name BATTLE 34 AV FEE	<sup>6</sup> Well Number 17H
<sup>7</sup> OGRID No. 372098	<sup>8</sup> Operator Name MARATHON OIL PERMIAN LLC	<sup>9</sup> Elevation 3696'

<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
B	34	21S	33E		479	NORTH	1495	EAST	LEA

<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	34	21S	33E		100	SOUTH	330	EAST	LEA

<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.

<p><b>Infill Well</b></p> <p><b>CORNER COORDINATES NAD 83, SPCS NM EAST</b> A - X: 781120.14' / Y: 525606.74' B - X: 782441.55' / Y: 525614.66' C - X: 782488.55' / Y: 520336.18' D - X: 781167.88' / Y: 520329.51'</p> <p><b>CORNER COORDINATES NAD 27, SPCS NM EAST</b> A - X: 739937.95' / Y: 525545.62' B - X: 741259.34' / Y: 525553.53' C - X: 741306.22' / Y: 520275.21' D - X: 739985.56' / Y: 520268.55'</p> <p><b>SURFACE HOLE LOCATION</b> 479' FNL 1495' FEL, SECTION 34 NAD 83, SPCS NM EAST X: 780950.78' / Y: 525126.64' LAT: 32.44124336N / LON: -103.55862497W NAD 27, SPCS NM EAST X: 739768.57' / Y: 525065.53' LAT: 32.4411995N / LON: -103.55813944W</p> <p><b>KICK OFF POINT</b> 100' FNL 330' FEL, SECTION 34 NAD 83, SPCS NM EAST X: 782112.44' / Y: 525512.68' LAT: 32.44228114N / LON: -103.55285059W NAD 27, SPCS NM EAST X: 740930.23' / Y: 525451.56' LAT: 32.44215772N / LON: -103.55236514W</p> <p><b>FIRST TAKE POINT</b> 100' FNL 330' FEL, SECTION 34 NAD 83, SPCS NM EAST X: 782112.44' / Y: 525512.68' LAT: 32.44228114N / LON: -103.55285059W NAD 27, SPCS NM EAST X: 740930.23' / Y: 525451.56' LAT: 32.44215772N / LON: -103.55236514W</p> <p><b>LAST TAKE POINT/BOTTOM HOLE LOCATION</b> 100' FSL 330' FEL, SECTION 34 NAD 83, SPCS NM EAST X: 782157.66' / Y: 520434.51' LAT: 32.42832257N / LON: -103.55282429W NAD 27, SPCS NM EAST X: 740975.34' / Y: 520373.54' LAT: 32.42819912N / LON: -103.55233929W</p> <p><b>Diagram:</b> A map showing the well location in Section 34, Township 21S, Range 33E. The well is located 479' from the North line and 1495' from the East line. The diagram shows the well path, including the surface hole location, kick off point, first take point, and last take point/bottom hole location. The well is labeled 'KOP/FIRST TAKE' and 'SHL'. The diagram also shows the well's location relative to the section lines and the well's orientation.</p> <p><b>Diagram Labels:</b> SECTION 27, SECTION 34, SECTION 35, SECTION 2, T21S R33E SECTION 34, T22S R33E SECTION 3, SHEET 1 OF 3, JOB No. R3766_004, REV 3 BM 11/12/2018</p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> 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.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> 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.</p> <p>NOVEMBER 14, 2018 Date of Survey</p> <p>Signature and Seal of Professional Surveyor _____</p> <p><b>EXHIBIT 2</b></p>
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<sup>10</sup> Surface Location

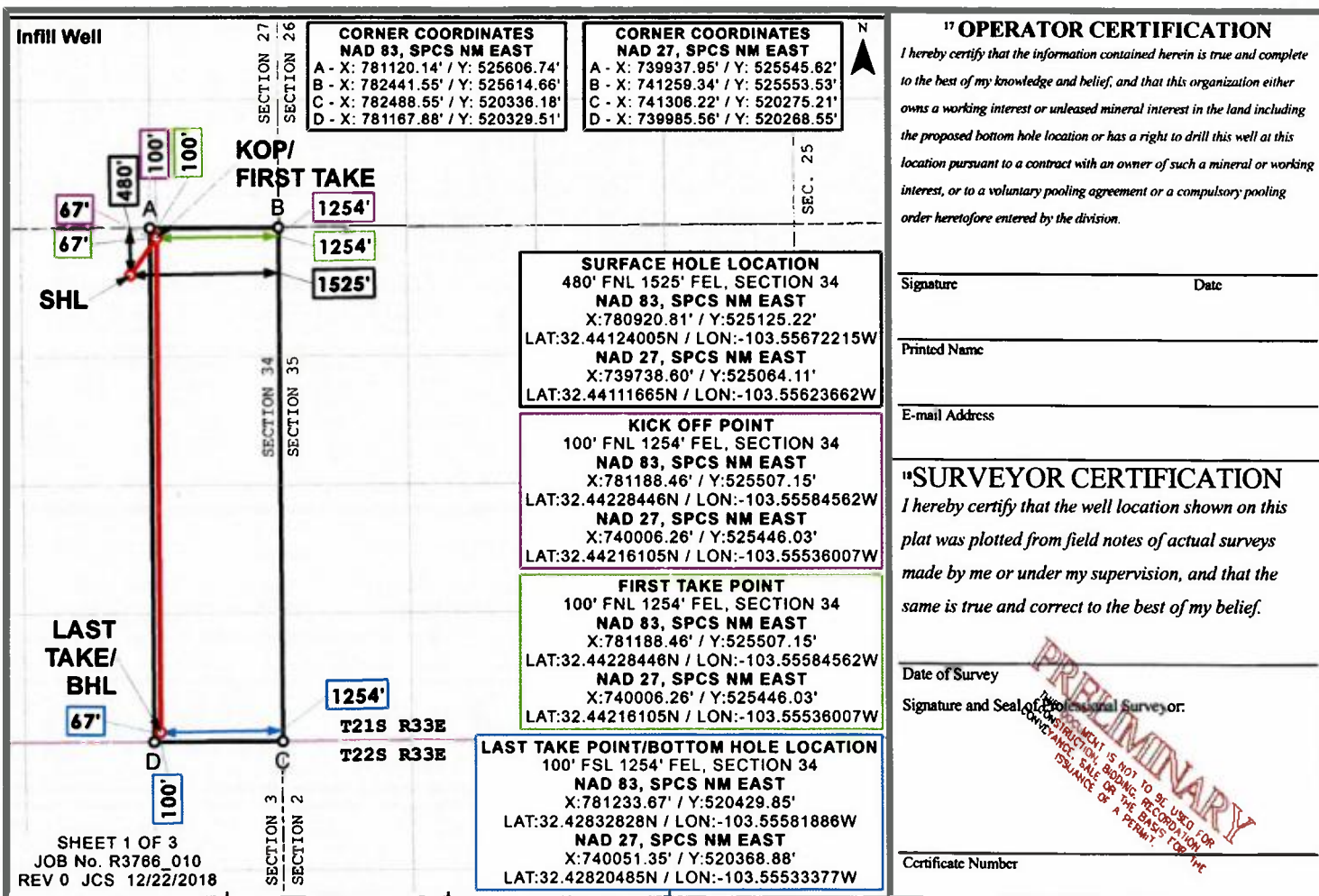
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	34	21S	33E		480	NORTH	1525	EAST	LEA

<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	34	21S	33E		100	SOUTH	1254	EAST	LEA

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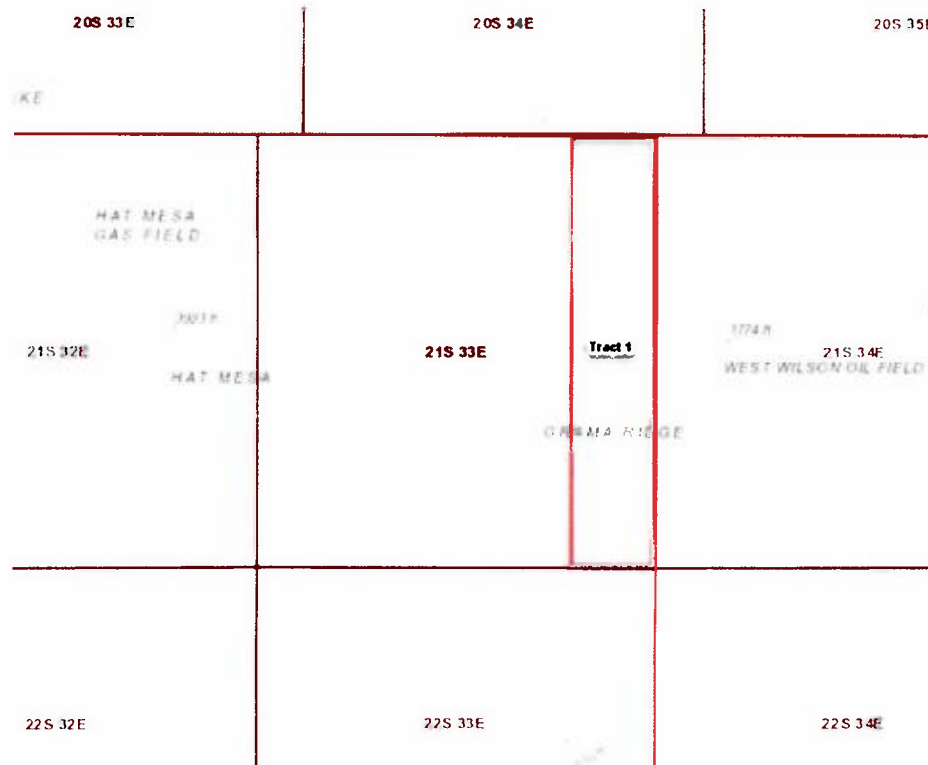
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



# **EXHIBIT 3**

**Lease Tract Map**  
**Battle AV Fee 17H and Battle 34 AV Fee 25H**  
**E2E2 of Section 34, T21S-R33E – 160 acres**

- Tract 1: Fee Acreage



# **EXHIBIT 4**

**Battle 34 AV Fee 17H and Battle 34 AV 25H**

**E/2E/2 of Section 34, 21S-33E – 160 acres**

**Top of the Upper Avilon Sands to a Frac Barrier located at 9,850' below the surface.**

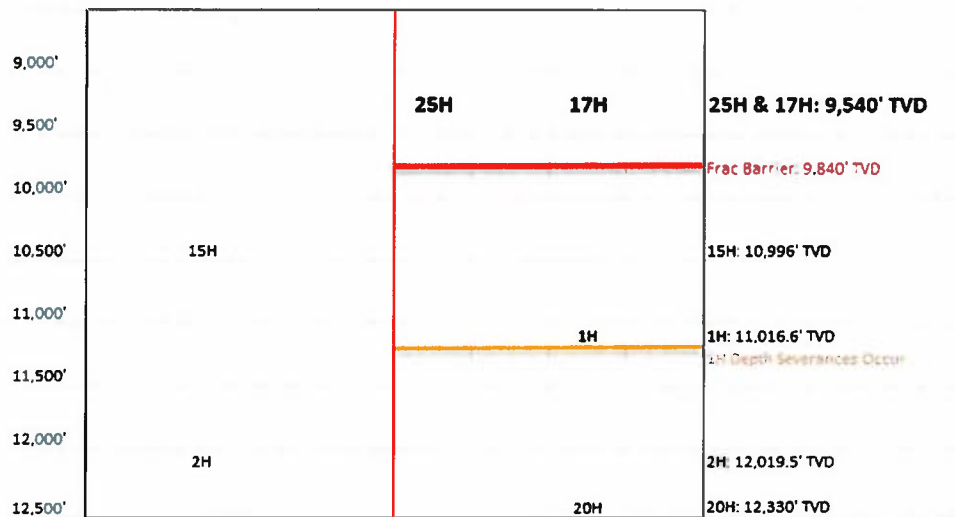
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•	<u>Committed Working Interest:</u>		<b>99.571429%</b>
	- Marathon Oil Permian LLC	87.153274%	
	- Roy Barton Jr., Trustee of the Roy G. Barton, Sr. & Opal Revocable Trust	5.275298%	
	- The Allar Company	4.142857%	
	- Mosaic Resources LLC	3.000000%	
•	<u>Uncommitted Working Interest:</u>		
•	<u>Unleased Mineral Interest:</u>		<b>0.428571%</b>
	- Estate of Warren Thurston	0.428571%	



# **EXHIBIT 5**

# Depth Severances in the 17H and 25H Avalon wells



1H Depth Severances @ 100' below deepest depth drilled/perforated in proration unit (11,116.6')

## Lease Language

- "... 100' below the deepest depth drilled in each proration unit."
  - *Baloney Feathers, Oak Valley, Patricia B. Young Trust*
- "... 100' below the stratigraphic equivalent of the deepest depth capable of producing in paying quantities in each well which is included within the boundaries of a producing proration unit."
  - *Richard Donald Jones*
- "... 100' below the base of the deepest producing formation(s) within such producing proration units."
  - *William McCaw, et ux*



# **EXHIBIT 6**



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

DATE 12/20/2018  
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD  
 COMPLETION PREPARED BY JOSH SHANNON  
 FACILITIES PREPARED BY MATT HENSCHEN  
 ARTIFICIAL LIFT PREPARED BY BILLY MOORE/MATT HE

Asset Team	PERMIAN		
Field	0	FORMATION: 1ST BONE SPRINGS	WILDCAT
Lease/Facility	Battle 34 AV Fee 17H		DEVELOPMENT
Location	EDDY COUNTY		X EXPLOITATION
Prospect	MALAGA		WORKOVER

Est Total Depth	15,930	Est Drilling Days		Est Completion Days	5.5
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LOCATION COST - INTANGIBLE

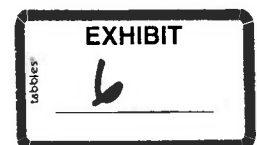
GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	37,500
7001250	Land Broker Fees and Services	33,750
TOTAL LOCATION COST - INTANGIBLE		71,250

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	36,000
7012050	Intermediate Casing 1	111,000
7012050	Intermediate Casing 2	-
7012050	Production Casing	223,000
7012050	Drilg 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		487,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	32,500
7019220	Drilling Rig - day work/footage	549,250
7019040	Directional Drilling Services	185,000
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	125,000
7019140	Mud Fluids & Services	65,000
7012310	Solids Control equipment	38,000
7012020	Bits	70,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	65,000
7019140	Fuel (Mud)	18,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging+geosteering	17,000
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
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000



7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	20,563
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	84,500
7018150	Rig Equipment and Misc.	10,563
7001110	Telecommunications Services	5,000
7001120	Consulting Services	99,288
7001400	Safety and Environmental	33,800
7018120	Rental Buildings (trailers)	16,900
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	160,325
TOTAL DRILLING - INTANGIBLE		\$1,963,688

TOTAL DRILLING COST	\$2,450,688
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COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

MARATHON OIL PERMIAN LLC

DATE 12/20/2018

AUTHORITY FOR EXPENDITURE

DETAIL OF ESTIMATED WELL COSTS

Asset Team	PERMIAN
Field	FORMATION: 1ST BONE SPRINGS
Lease/Facility	Battle 34 AV Fee 17H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	210,000
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)	315,000
7019320	Fracturing Services	1,960,000
7019330	Perforating	175,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	214,000
7016180	Freight - Truck (haul pipe; drlg & compl)	15,000
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	35,000
7001110	Telecommunications Services	90,000
7001400	Safety and Environmental	-
7001120	Consulting Services	60,000

7018150	Zipper Manifold	150,000
7019300	Frack Stack Rentals	45,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental ( w/o operator, frac tanks, lightplants)	135,000
7018120	Rental Buildings (trailers)	15,000
7000030	Contract Labor - Pumping (pump-down pumps)	30,000
7011010	8% Contingency & Taxes	234,800
TOTAL COMPLETION - INTANGIBLE		\$3,708,800

<b>TOTAL COMPLETION COST</b>	<b>\$3,723,800</b>
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**SURFACE EQUIPMENT - TANGIBLE**

7012350	Misc. Piping, Fittings & Valves	85,795
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	74,150
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	27,950
7012270	Miscellaneous Materials (containment system)	43,230
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	29,115
7012290	Metering and Instrumentation	237,080
7012290	I&E Materials	-
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	67,350
7012500	Tanks	193,450
7012100	Heater Treater	17,560
7012640	Flare & Accessories	11,645
7000010	Electrical Labor	29,115
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	23,290
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$839,730

<b>TOTAL SURFACE EQUIPMENT COST</b>	<b>\$ 839,730</b>
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**ARTIFICIAL LIFT**

7012580	Tubing	50,000
7012040	Tubing Accessories (nipple, wireline entry)	5,000
7012550	Wellhead Equip	5,000
7012560	Packers - Completion Equipment	5,000
7006640	Company Labor	6,000
7012180	Gas Lift Equipment	23,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	-
7012140	Elect Sub Pumps (ESP)	-
7019350	Well Services-Well/Wellhead Services	42,500
7012270	Materials & Supplies-Tangible	25,000
7012550	Surface Wellhead Equipment	3,000
7012390	Pig Launchers/Receivers & Rel Equip	-
7011010	Contingency & Taxes	5,000
TOTAL ARTIFICIAL LIFT		169,500

TOTAL ARTIFICIAL LIFT COST

\$ 169,500

SUMMARY OF ESTIMATED DRILLING WELL COSTS

TOTAL COST

TOTAL LOCATION COST

\$ 71,250

TOTAL DRILLING COST

\$ 2,450,688

TOTAL COMPLETIONS COST

\$ 3,723,800

TOTAL SURFACE EQUIPMENT COST

\$ 839,730

TOTAL ARTIFICIAL LIFT COST

\$ 169,500

GRAND TOTAL COST

\$7,254,968

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

DATE 12/20/2018  
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD  
 COMPLETION PREPARED BY JOSH SHANNON  
 FACILITIES PREPARED BY MATT HENSCHEN  
 ARTIFICIAL LIFT PREPARED BY BILLY MOORE/MATT HE

Asset Team	<u>PERMIAN</u>		
Field	<u>0</u>	FORMATION: <u>1ST BONE SPRINGS</u>	<u>WILDCAT</u> <u>EXPLORATION</u>
Lease/Facility	<u>Battle 34 AV Fee 25H</u>		<u>DEVELOPMENT</u> <u>RECOMPLETION</u>
Location	<u>EDDY COUNTY</u>		<u>X</u> <u>EXPLOITATION</u> <u>WORKOVER</u>
Prospect	<u>MALAGA</u>		

Est Total Depth	<u>15,930</u>	Est Drilling Days	<u>          </u>	Est Completion Days	<u>5.5</u>
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LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
<u>7001270</u>	<u>Location and Access</u>	<u>37,500</u>
<u>7001250</u>	<u>Land Broker Fees and Services</u>	<u>33,750</u>
TOTAL LOCATION COST - INTANGIBLE		<u>71,250</u>

DRILLING COST - TANGIBLE

<u>7012050</u>	<u>Conductor Pipe</u>	<u>28,000</u>
<u>7012050</u>	<u>Surface Casing</u>	<u>36,000</u>
<u>7012050</u>	<u>Intermediate Casing 1</u>	<u>111,000</u>
<u>7012050</u>	<u>Intermediate Casing 2</u>	<u>          </u>
<u>7012050</u>	<u>Production Casing</u>	<u>223,000</u>
<u>7012050</u>	<u>Drig Liner Hanger, Tieback Eq &amp; Csg Accessories</u>	<u>10,000</u>
<u>7012550</u>	<u>Drilling Wellhead Equipment</u>	<u>50,000</u>
<u>7012040</u>	<u>Casing &amp; Tubing Access</u>	<u>24,000</u>
<u>7012270</u>	<u>Miscellaneous MRO Materials</u>	<u>5,000</u>
TOTAL DRILLING - TANGIBLE		<u>487,000</u>

DRILLING COST - INTANGIBLE

<u>7019200</u>	<u>Drilling Rig Mob/Demob</u>	<u>32,500</u>
<u>7019220</u>	<u>Drilling Rig - day work/footage</u>	<u>549,250</u>
<u>7019040</u>	<u>Directional Drilling Services</u>	<u>185,000</u>
<u>7019020</u>	<u>Cement and Cementing Service</u> <u>Surface</u>	<u>15,000</u>
<u>7019020</u>	<u>Cement and Cementing Service</u> <u>Intermediate 1</u>	<u>25,000</u>
<u>7019020</u>	<u>Cement and Cementing Service</u> <u>Intermediate 2</u>	<u>          </u>
<u>7019020</u>	<u>Cement and Cementing Service</u> <u>Production</u>	<u>125,000</u>
<u>7019140</u>	<u>Mud Fluids &amp; Services</u>	<u>65,000</u>
<u>7012310</u>	<u>Solids Control equipment</u>	<u>38,000</u>
<u>7012020</u>	<u>Bits</u>	<u>70,000</u>
<u>7019010</u>	<u>Casing Crew and Services</u>	<u>30,000</u>
<u>7016350</u>	<u>Fuel (Rig)</u>	<u>65,000</u>
<u>7019140</u>	<u>Fuel (Mud)</u>	<u>18,000</u>
<u>7001460</u>	<u>Water (non potable)</u>	<u>25,000</u>
<u>7012350</u>	<u>Water (potable)</u>	<u>5,000</u>
<u>7019000</u>	<u>Well Logging Services</u>	<u>          </u>
<u>7019150</u>	<u>Mud Logging+geosteering</u>	<u>17,000</u>
<u>7019250</u>	<u>Stabilizers, Hole Openers, Underreamers (DH rentals)</u>	<u>15,000</u>
<u>7019110</u>	<u>Casing inspection/cleaning</u>	<u>15,000</u>
<u>7019110</u>	<u>Drill pipe/collar inspection services</u>	<u>10,000</u>
<u>7016180</u>	<u>Freight - truck</u>	<u>25,000</u>
<u>7001460</u>	<u>Water hauling and disposal (includes soil farming)</u>	<u>60,000</u>
<u>7001160</u>	<u>Contract Services - Disposal/Non-Hazardous Waste</u>	<u>80,000</u>

7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	20,563
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	84,500
7018150	Rig Equipment and Misc.	10,563
7001110	Telecommunications Services	5,000
7001120	Consulting Services	99,288
7001400	Safety and Environmental	33,800
7018120	Rental Buildings (trailers)	16,900
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	160,325
TOTAL DRILLING - INTANGIBLE		\$1,963,688

TOTAL DRILLING COST	\$2,450,688
---------------------	-------------

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

MARATHON OIL PERMIAN LLC

DATE 12/20/2018

AUTHORITY FOR EXPENDITURE

DETAIL OF ESTIMATED WELL COSTS

Asset Team	PERMIAN
Field	FORMATION: 1ST BONE SPRINGS
Lease/Facility	Battle 34 AV Fee 25H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	210,000
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)	315,000
7019320	Fracturing Services	1,960,000
7019330	Perforating	175,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	214,000
7016180	Freight - Truck (haul pipe; drlg & compl)	15,000
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	35,000
7001110	Telecommunications Services	90,000
7001400	Safety and Environmental	-
7001120	Consulting Services	60,000

7018150	Zipper Manifold	150,000
7019300	Frack Stack Rentals	45,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental ( w/o operator, frac tanks, lightplants)	135,000
7018120	Rental Buildings (trailers)	15,000
7000030	Contract Labor - Pumping (pump-down pumps)	30,000
7011010	8% Contingency & Taxes	234,800
TOTAL COMPLETION - INTANGIBLE		\$3,708,800

#### TOTAL COMPLETION COST

\$3,723,800

#### SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	85,795
7006640	Company Labor & Burden	*
7000030	Contract Labor - General	74,150
7001110	Telecommunication equip (Telemetry)	*
7012410	Line Pipe & Accessories	27,950
7012270	Miscellaneous Materials (containment system)	43,230
7008060	SCADA	*
7016180	Freight - truck	*
7001190	Contract Engineering	29,115
7012290	Metering and Instrumentation	237,080
7012290	I&E Materials	*
7012200	Gas Treating	*
7012200	Dehydration	*
7012010	Compressor	*
7012350	Power	*
7012610	Vapor Recovery Unit	*
7012440	Separator & other pressure vessels	67,350
7012500	Tanks	193,450
7012100	Heater Treater	17,560
7012640	Flare & Accessories	11,645
7000010	Electrical Labor	29,115
7000010	Mechanical Labor	*
7012480	Rod Pumping unit & Pad	*
7012180	Pumping Unit Engine	*
7012350	Electrical Power (electrical cooperative construction costs)	23,290
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$839,730

#### TOTAL SURFACE EQUIPMENT COST

\$ 839,730

#### ARTIFICIAL LIFT

7012580	Tubing	50,000
7012040	Tubing Accessories (nipple, wireline entry)	5,000
7012550	Wellhead Equip	5,000
7012560	Packers - Completion Equipment	5,000
7006640	Company Labor	6,000
7012180	Gas Lift Equipment	23,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	*
7012140	Elect Sub Pumps (ESP)	*
7019350	Well Services-Well/Wellhead Services	42,500
7012270	Materials & Supplies-Tangible	25,000
7012550	Surface Wellhead Equipment	3,000
7012390	Pig Launchers/Receivers & Rel Equip	*
7011010	Contingency & Taxes	5,000
TOTAL ARTIFICIAL LIFT		169,500

TOTAL ARTIFICIAL LIFT COST

\$ 169,500

SUMMARY OF ESTIMATED DRILLING WELL COSTS

TOTAL COST

TOTAL LOCATION COST

\$ 71,250

TOTAL DRILLING COST

\$ 2,450,688

TOTAL COMPLETIONS COST

\$ 3,723,800

TOTAL SURFACE EQUIPMENT COST

\$ 839,730

TOTAL ARTIFICIAL LIFT COST

\$ 169,500

GRAND TOTAL COST

\$7,254,968



# **EXHIBIT 7**

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

**APPLICATION OF MARATHON OIL PERMIAN LLC FOR APPROVAL OF A  
SPACING UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.**

CASE NO. 20128

**APPLICATION OF MARATHON OIL PERMIAN LLC FOR APPROVAL OF A  
SPACING UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.**

CASE NO. 20129

**APPLICATION OF MARATHON OIL PERMIAN LLC FOR APPROVAL OF A  
SPACING UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.**

CASE NO. 20131

**AFFIDAVIT**

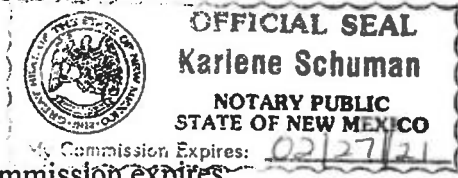
STATE OF NEW MEXICO            )  
  ) ss.  
COUNTY OF BERNALILLO        )

Zoe E. Lees, attorney in fact and authorized representative of Marathon Oil Permian LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Applications were sent under a notice letter and that proof of receipt is attached hereto.

  
\_\_\_\_\_  
Zoe E. Lees



SUBSCRIBED AND SWORN to before me this 9th day of January, 2019 by Zoe E. Lees.



Karlene Schuman  
Notary Public

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

Karlene Schuman  
 Modrall Sperling Roehl Harris & Sisk P.A.  
 500 Fourth Street, Suite 1000  
 Albuquerque NM 87102

PS Form 3877  
 Type of Mailing: CERTIFIED  
 12/21/2018



Firm Mailing Book ID: 158013

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
1	9314 8699 0430 0054 2816 19	Chevron USA Inc 6301Deauville Midland TX 79708	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
2	9314 8699 0430 0054 2816 26	Devon Energy Production CO LP 333 W Sheridan Ave. Oklahoma City OK 73102	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
3	9314 8699 0430 0054 2816 33	Advance Energy Partners Hat Mesa, LLC 11490 Westheimer Rd. Ste 950 Houston TX 77077	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
4	9314 8699 0430 0054 2816 40	Cimarex Energy Co. 600 N Maricfeld St. Ste 600 Midland TX 79701	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
5	9314 8699 0430 0054 2816 57	COG Operating LLC 600 W Illinois Ave. Midland TX 79701	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
6	9314 8699 0430 0054 2816 64	Sam L. Shackleford, a single man 1096 Mechem Dr. Riodoso NM 88345	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
7	9314 8699 0430 0054 2816 71	Mosaic Resources LLC P.O. Box 2390 Hobbs NM 88241	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
8	9314 8699 0430 0054 2816 88	The Allar Company P.O. Box 1567 Graham TX 76450	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
9	9314 8699 0430 0054 2816 95	Roy G. Barton, Jr., Trustee of the Roy G. Barton & Opal Revocable Trust 1919 N. Turner St. Hobbs NM 88240	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
10	9314 8699 0430 0054 2817 01	Crown Oil Partners V, LP P.O. Box 50820 Midland TX 79710	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
11	9314 8699 0430 0054 2817 18	Artesia Oil & Gas LLC P.O. Box 1768 Artesia NM 88211	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
12	9314 8699 0430 0054 2817 25	Oak Valley Mineral and Land LP P.O. Box 50820 Midland TX 79710	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
13	9314 8699 0430 0054 2817 32	Jean Johnstone, as separate property 10 Calle Loma Sante Fe NM 87507	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
14	9314 8699 0430 0054 2817 49	Richardson Mineral & Royalty P.O. Box 2423 Roswell NM 88202	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
15	9314 8699 0430 0054 2817 56	Richard Donald Jones 200 N. Gaines Road Ceder Creek TX 78612	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice



Karlene Schuman  
 Modrall Sperling Roehl Harris & Sisk P.A.  
 500 Fourth Street, Suite 1000  
 Albuquerque NM 87102

PS Form 3877  
 Type of Mailing: CERTIFIED  
 12/21/2018



Firm Mailing Book ID: 158013

Line	Article Number	Name, Street & P.O. Address	Postage	Fee	R.R.Fee	Reference	Rest.Del.Fee Contents
16	9314 8699 0430 0054 2817 63	Baloney Feathers, Ltd. P.O. Box 1586 Lubbock TX 79408	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
17	9314 8699 0430 0054 2817 70	Robert P. Byron and Jeannine Hooper Byron P.O. Box 1562 Roswell NM 88202	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
18	9314 8699 0430 0054 2817 87	Mark E. Hodge P.O. Box 3149 Bellaire TX 77402	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
19	9314 8699 0430 0054 2817 94	William J. McCaw and Nancy K. McCaw P.O. Box 376 Artesia NM 88211	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
20	9314 8699 0430 0054 2818 00	Roy G. Barton, III 1919 N. Turner St. Hobbs NM 88240	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
21	9314 8699 0430 0054 2818 17	5588 Oil LLC P.O. Box 470925 Fort Worth TX 76147	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
22	9314 8699 0430 0054 2818 24	Texas Commerce Bank, Trustee of the Patricia Patricia Boyle Young Management Trust P.O. Box 209829 Houston TX 77216	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
23	9314 8699 0430 0054 2818 31	The Estate of Warren Thurston 1122 8th Ave. West Seattle WA 98119	\$1.42	\$3.45	\$1.50	81363-0172	\$0.00 Notice
Totals:			\$32.66	\$79.35	\$34.50		\$0.00
Grand Total:							\$146.51

List Number of Pieces  
Listed by Sender

Total Number of Pieces  
Received at Post Office

Postmaster:  
Name of receiving employee

Dated:

23



## Transaction Report Details - CertifiedPro.net

Firm Mail Book ID= 158013

Generated: 1/8/2019 4:05:33 PM

Certified Mail Article Number	Name 1	Address	City	State	Zip	Certified Mailing Status	Mail Delivery Date
9314869904300054281831	The Estate of Warren Thurston	1122 8th Ave. West	Seattle	WA	98119	Delivered	01-03-2019
9314869904300054281824	Texas Commerce Bank, Trustee of the Patricia Boyle Youn	P.O. Box 209829	Houston	TX	77216	Delivered	12-28-2018
9314869904300054281817	5588 Oil LLC	P.O. Box 470925	Fort Worth	TX	76147	Delivered	12-24-2018
9314869904300054281800	Roy G. Barton, III	1919 N. Turner St.	Hobbs	NM	88240	Delivered	12-26-2018
9314869904300054281794	William J. McCaw and Nancy K. McCaw	P.O. Box 376	Artesia	NM	88211	Delivered	12-26-2018
9314869904300054281787	Mark E. Hodge	P.O. Box 3149	Bellaire	TX	77402	Delivered	12-31-2018
9314869904300054281770	Robert P. Byron and Jeannine Hooper Byron	P.O. Box 1562	Roswell	NM	88202	Delivered	12-26-2018
9314869904300054281763	Baloney Feathers, Ltd.	P.O. Box 1586	Lubbock	TX	79408	Delivered	12-26-2018
9314869904300054281756	Richard Donald Jones	200 N. Gaines Road	Ceder Creek	TX	78612	Delivered	12-26-2018
9314869904300054281749	Richardson Mineral & Royalty	P.O. Box 2423	Roswell	NM	88202	Delivered	12-26-2018
9314869904300054281732	Jean Johnstone, as separate property	10 Calle Loma	Sante Fe	NM	87507	To be Returned	
9314869904300054281725	Oak Valley Mineral and Land LP	P.O. Box 50820	Midland	TX	79710	Delivered	12-26-2018
9314869904300054281718	Artesia Oil & Gas LLC	P.O. Box 1768	Artesia	NM	88211	Delivered	12-28-2018
9314869904300054281701	Crown Oil Partners V, LP	P.O. Box 50820	Midland	TX	79710	Delivered	12-26-2018
9314869904300054281695	Roy G. Barton, Jr., Trustee of the Roy G. Barton & Opal R	1919 N. Turner St.	Hobbs	NM	88240	Delivered	12-26-2018
9314869904300054281688	The Allar Company	P.O. Box 1567	Graham	TX	76450	Delivered	12-26-2018
9314869904300054281671	Mosaic Resources LLC	P.O. Box 2390	Hobbs	NM	88241	Delivered	12-27-2018
9314869904300054281664	Sam L. Shackleford, a single man	1096 Mechem Dr.	Riodoso	NM	88345	To be Returned	
9314869904300054281657	COG Operating LLC	600 W Illinois Ave.	Midland	TX	79701	Delivered	12-26-2018
9314869904300054281640	Cimarex Energy Co.	600 N Marienfeld St. Ste 600	Midland	TX	79701	Undelivered	
9314869904300054281633	Advance Energy Partners Hat Mesa, LLC	11490 Westheimer Rd. Ste 950	Houston	TX	77077	Delivered	12-26-2018
9314869904300054281626	Devon Energy Production CO LP	333 W Sheridan Ave.	Oklahoma City	OK	73102	Delivered	12-26-2018
9314869904300054281619	Chevron USA Inc	6301Deauville	Midland	TX	79708	Delivered	01-07-2019

# Affidavit of Publication

STATE OF NEW MEXICO  
COUNTY OF LEA

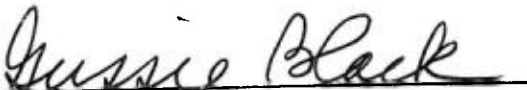
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated  
December 29, 2018  
and ending with the issue dated  
December 29, 2018.



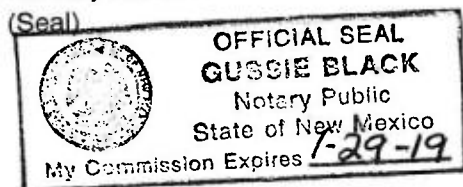
Publisher

Sworn and subscribed to before me this  
29th day of December 2018.



Business Manager

My commission expires  
January 29, 2019



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

**CASE No. 20128:** Notice to all affected parties, as well as the heirs and devisees of, Chevron USA Inc, Devon Energy Production CO LP, Advance Energy Partners Hat Mesa, LLC, Cimarex Energy Co., COG Operating LLC, Sam L. Shackelford, a single man, Mosaic Resources LLC, The Allar Company, Roy G. Barton, Jr., Trustee of the Roy G. Barton Sr. & Opal Revocable Trust, Crown Oil Partners V, LP, Artesia Oil & Gas LLC, Oak Valley Mineral and Land LP, Ethel Knowlton, a widow, Jean Johnstone, as separate property, Richardson Mineral & Royalty, Richard Donald Jones, Baloney Feathers, Ltd., Robert P. Byron and Jeannine Hooper Byron, Mark E. Hodge, William J. McCaw and Nancy K. McCaw, Roy G. Barton, III, 5588 Oil LLC, Texas Commerce Bank, Trustee of the Patricia Boyle Young Management Trust, and The Estate of Warren Thurston of Marathon Oil Permian LLC's amended application for approval of a spacing unit and compulsory pooling, Lea County, New Mexico. The State of New Mexico, through its Oil Conservation Division, hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on January 10, 2019. Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 160-acre, more or less, spacing unit covering the W/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico from the top of the Bone Spring formation to +/- 11,168' TVD below the surface; and (2) pooling all mineral interests in the proposed depths within the Bone Spring formation underlying this spacing unit. This proposed spacing unit will be dedicated to the **Battle 34 SB Fee 15H** well, to be horizontally drilled. The producing area for this well will be orthodox. Also to be considered will be the cost of drilling and completing said well, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the well, and a 200% charge for risk involved in drilling said well, and allowing a one year period between when the well is drilled and when the well is completed. Said areas are located approximately 23 miles west of Eunice, New Mexico.

**CASE No. 20129:** Notice to all affected parties, as well as the heirs and devisees of, Chevron USA Inc, Devon Energy Production CO LP, Advance Energy Partners Hat Mesa, LLC, Cimarex Energy Co., COG Operating LLC, Sam L. Shackelford, a single man, Mosaic Resources LLC, The Allar Company, Roy G. Barton, Jr., Trustee of the Roy G. Barton Sr. & Opal Revocable Trust, Crown Oil Partners V, LP, Artesia Oil & Gas LLC, Oak Valley Mineral and Land LP, Ethel Knowlton, a widow, Jean Johnstone, as separate property, Richardson Mineral & Royalty, Richard Donald Jones, Baloney Feathers, Ltd., Robert P. Byron and Jeannine Hooper Byron, Mark E. Hodge, William J. McCaw and Nancy K. McCaw, Roy G. Barton, III, 5588 Oil LLC, Texas Commerce Bank, Trustee of the Patricia Boyle Young Management Trust, and The Estate of Warren Thurston of Marathon Oil Permian LLC's amended application for approval of a spacing unit and compulsory pooling, Lea County, New Mexico. The State of New Mexico, through its Oil Conservation Division, hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on January 10, 2019. Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 160-acre, more or less, spacing unit covering the E/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico from the top of the Bone Spring formation to 9,850'; and (2) pooling all uncommitted mineral interests in the proposed depths in the Bone Spring formation underlying the spacing unit. This proposed spacing unit will be dedicated to the **Battle 34 AV Fee 17H** and **Battle AV 34 Fee 25H** well, to be horizontally drilled. The producing area for the **Battle 34 AV Fee 17H** well will be orthodox. The producing area for the **Battle AV 34 Fee 25H** well will be unorthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the wells, and a 200% charge for risk involved in drilling said wells, and allowing a one year period between when the wells are drilled and when the wells are completed. Said areas are located approximately 23 miles west of Eunice, New Mexico.

**CASE No. 20131:** Notice to all affected parties, as well as the heirs and devisees of, Chevron USA Inc, Devon Energy Production CO LP, Advance Energy Partners Hat Mesa, LLC, Cimarex Energy Co., COG Operating LLC, Sam L. Shackelford, a single man, Mosaic Resources LLC, The Allar Company, Roy G. Barton, Jr., Trustee of the Roy G. Barton Sr. & Opal Revocable Trust, Crown Oil Partners V, LP, Artesia Oil & Gas LLC, Oak Valley Mineral and Land LP, Ethel Knowlton, a widow, Jean Johnstone, as separate property, Richardson Mineral & Royalty, Richard Donald Jones, Baloney Feathers, Ltd., Robert P. Byron and Jeannine Hooper Byron, Mark E. Hodge, William J. McCaw and Nancy K. McCaw, Roy G. Barton, III, 5588 Oil LLC, Texas Commerce Bank, Trustee of the Patricia Boyle Young Management Trust, and The Estate of Warren Thurston of Marathon Oil Permian LLC's amended application for approval of a spacing unit and compulsory pooling, Lea County, New Mexico. The State of New Mexico, through its Oil Conservation Division, hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on January 10, 2019. Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 160-acre, more or less, spacing unit covering the E/2 E/2 of Section 34, Township 21 South, Range 33 East, NMPM, Lea County, New Mexico, from +/- 11,980' of the Wolfcamp formation to the base of the Wolfcamp Oil Pool; and (2) pooling all mineral interests in the proposed depths within the Upper Wolfcamp formation underlying this spacing unit. This proposed spacing unit will be dedicated to the **Battle 34 WC Fee 20H** well, to be horizontally drilled. The producing area for this well will be orthodox. Also to be considered will be the cost of drilling and completing said well, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the well, and a 200% charge for risk involved in drilling said well, and allowing a one year period between when the well is drilled and when the well is completed. Said areas are located approximately 23 miles west of Eunice, New Mexico. #33587

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00222836

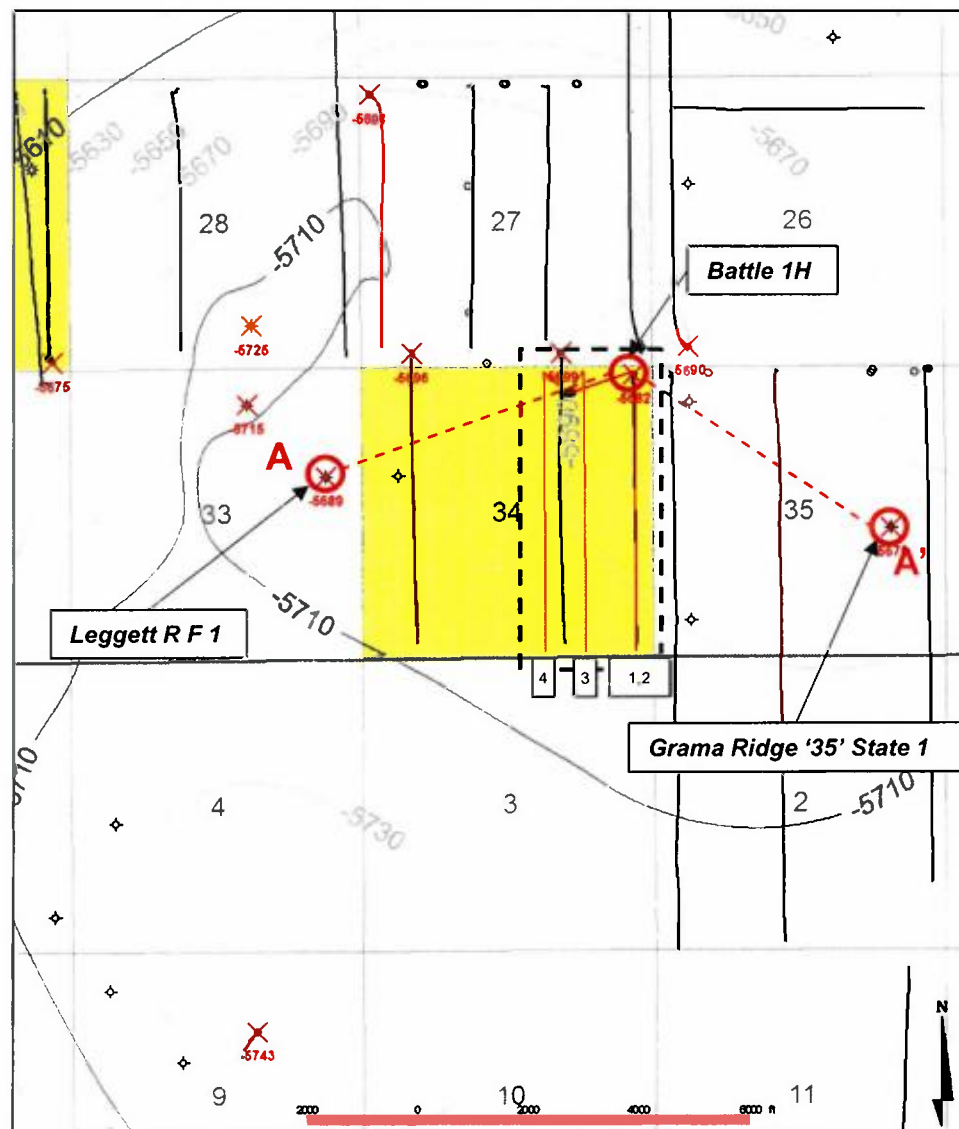
DOLORES SERNA  
MODRALL, SPERLING, ROEHL, HARRIS &  
P. O. BOX 2168  
ALBUQUERQUE, NM 87103-2168

# **EXHIBIT 8**






# Battle 34 AV Fee 17H, 25H

## Structure Map – Avalon Shale Top (TVDSS)





### Map Legend

-  MRO Acreage
-  Project Area
-  MRO – Proposed Horizontal Location

X - Map Data Point

C.I. = 20'

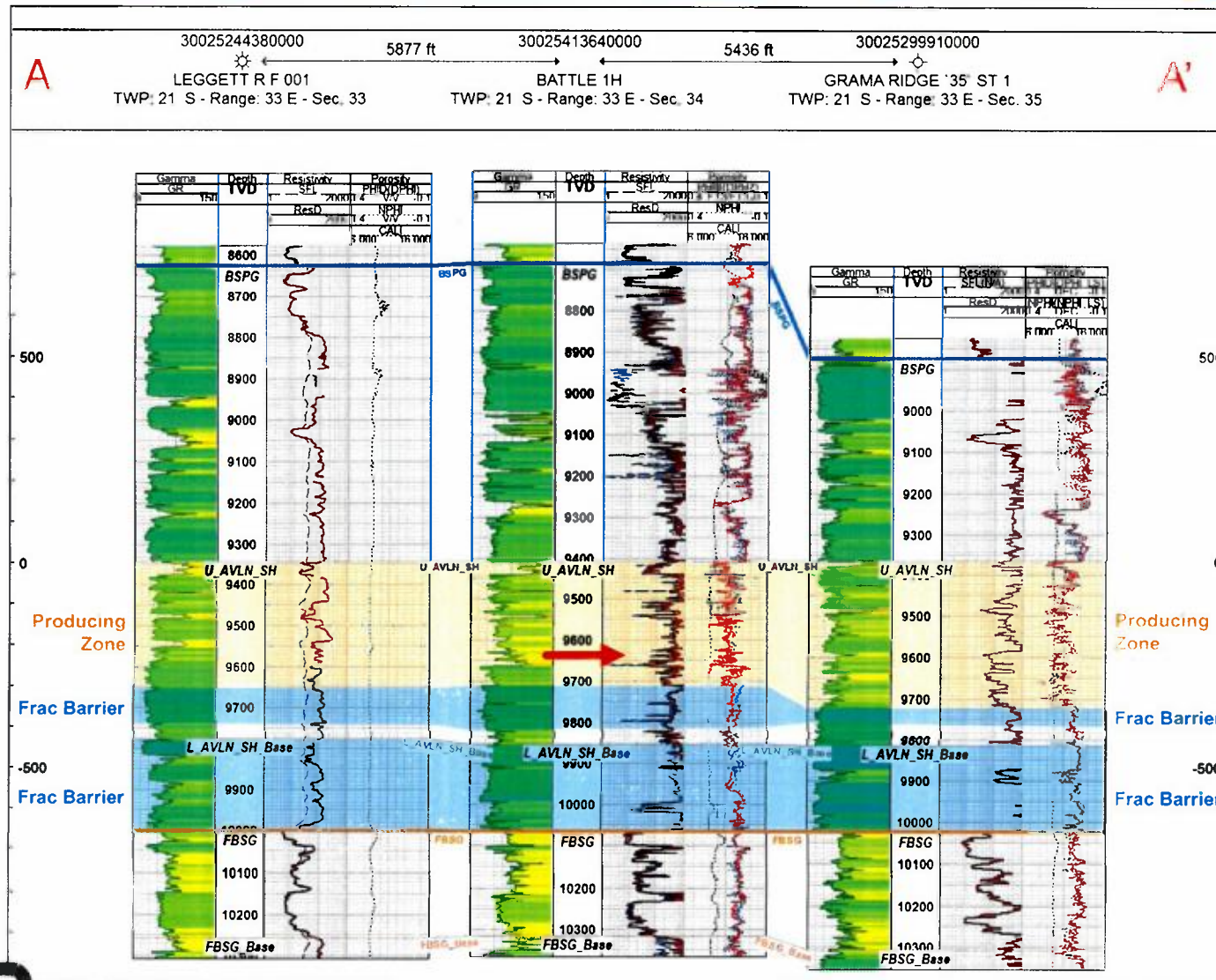
-  Battle 34 AV Fee 17H
-  Battle 34 WC Fee 20H
-  Battle 34 AV Fee 25H
-  Battle 34 SB Fee 15H



# **EXHIBIT 9**

# Battle 34 AV Fee 17H, 25H

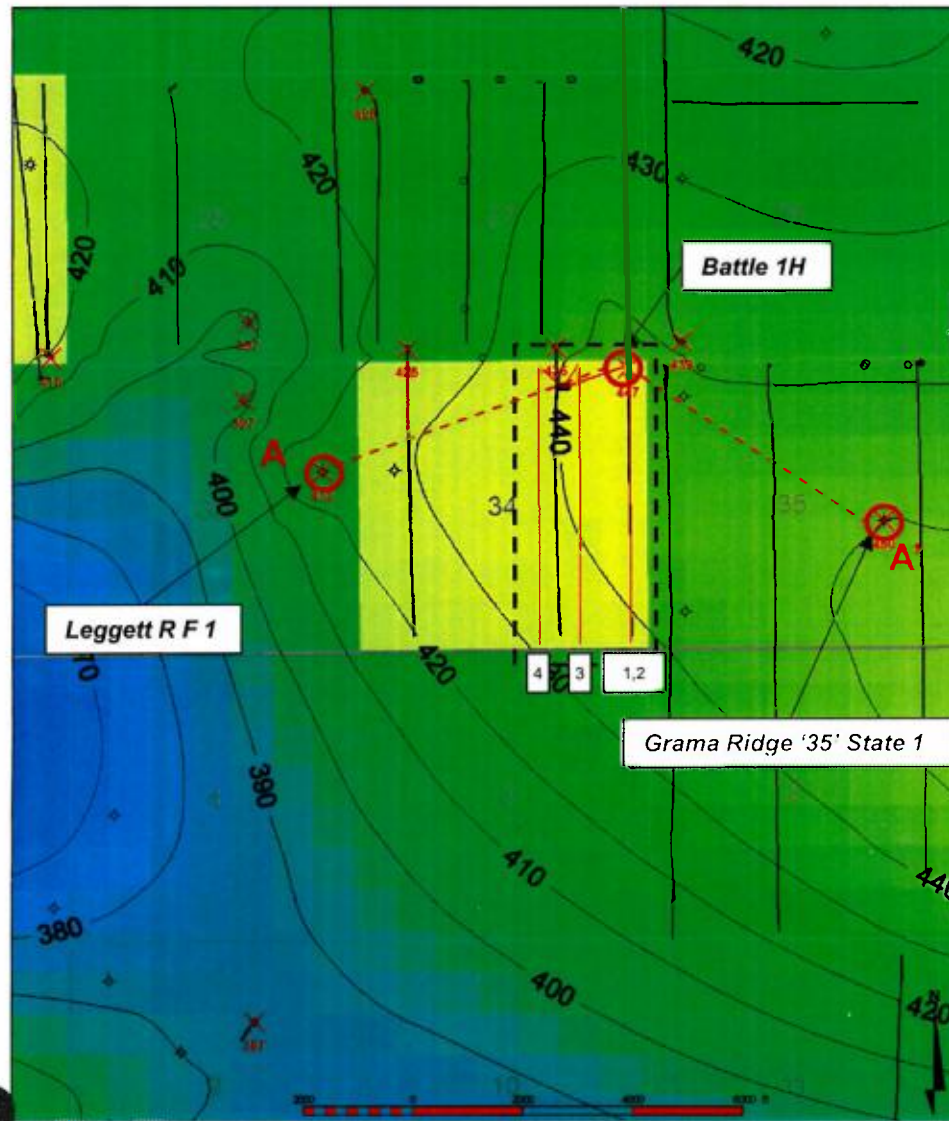
## Stratigraphic Cross Section (Top Avalon Shale Datum)







# **EXHIBIT 10**




# Battle 34 AV Fee 17H, 25H

## Isochore – Gross Avalon Shale Interval



### Map Legend

-  MRO Acreage
-  Project Area
-  MRO – Proposed Horizontal Location
-  - Map Data Point
- C.I. = 10'

-  Battle 34 AV Fee 17H
-  Battle 34 WC Fee 20H
-  Battle 34 AV Fee 25H
-  Battle 34 SB Fee 15H

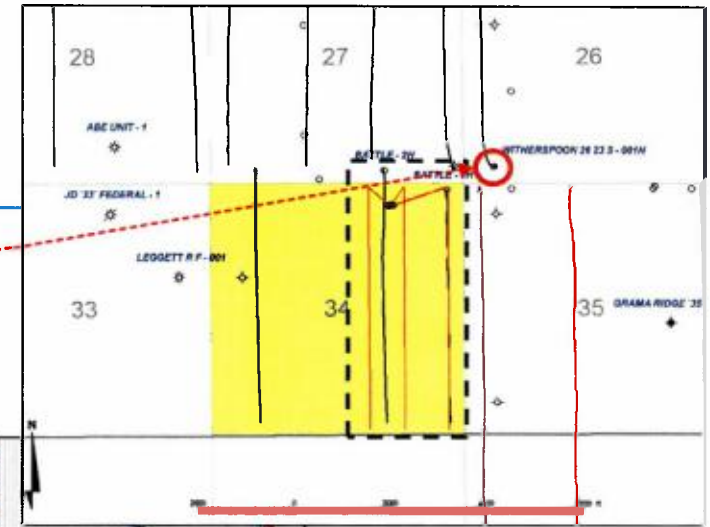


# **EXHIBIT 11**

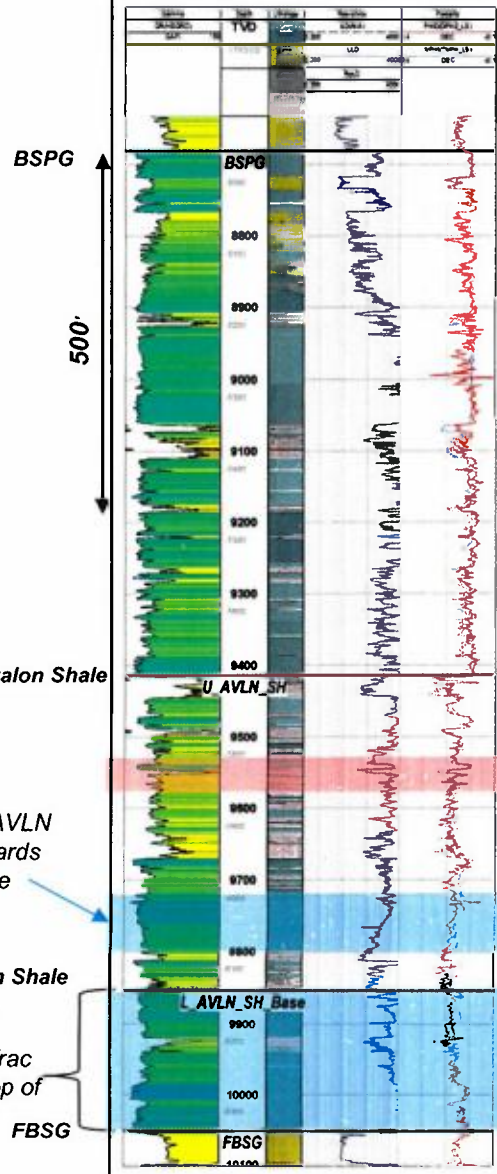


# Battle 34 AV Fee 17H, 25H

## Lower Stratigraphic Frac Barrier



Witherspoon 26 23 S 001H



Drilling target zone

BSPG

500'

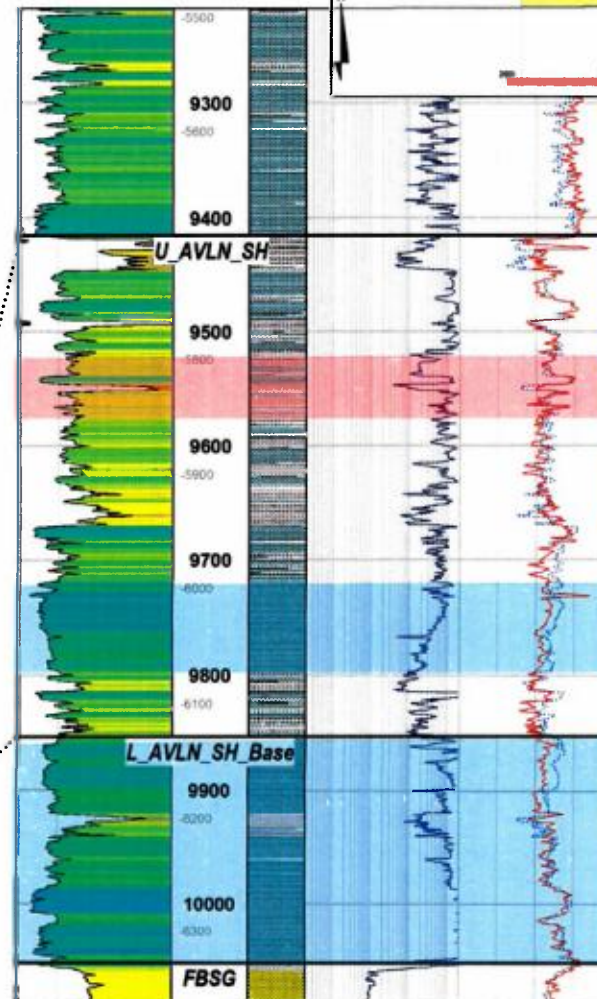
Top of Avalon Shale

Thick limestone interval within AVLN will reduce frac growth downwards towards base of AVLN Shale

Base of Avalon Shale (Base of Pool)

200'+ of limestone serves as a frac barrier between the AVLN and top of FBSG sand

FBSG



Battle 34 AV Fee 17H, 25H Target

350' Hydraulic Frac Height

200' Propped SRV

