BEFORE THE OIL CONSERVATION DIVISION EXAMINER HEARING OCTOBER 08, 2020

CASE No. 21459

MARINER 193507 #1H WELL

LEA COUNTY, NEW MEXICO



APPLICATION OF CATENA RESOURCES OPERATING, LLC FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NO. 21459

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ALL INFORMATION IN THE APPLICATION MUST B	SE SUPPORTED BY SIGNED AFFIDAVITS
Case: 21459	APPLICANT'S RESPONSE
Date: October 8, 2020	
Applicant	Catena Resources Operating, LLC
Designated Operator & OGRID (affiliation if applicable)	Catena Resources Operating, LLC (OGRID No. 328449)
Applicant's Counsel:	Holland & Hart LLP
Case Title:	APPLICATION OF CATENA RESOURCES OPERATING, LLC FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO
Entries of Appearance/Intervenors:	Marathon Oil Permian, LLC
Well Family	Mariner 193507 1H well
Formation/Pool	
Formation Name(s) or Vertical Extent:	Wolfcamp Formation
Primary Product (Oil or Gas):	Oil
Pooling this vertical extent:	Wolfcamp Formation
Pool Name and Pool Code:	Scharb; Wolfcamp (55640)
Well Location Setback Rules:	Statewide horizontal oil well rules
Spacing Unit Size:	640-acres, more or less
Spacing Unit	
Type (Horizontal/Vertical)	Horizontal well spacing unit
Size (Acres)	640 acres, more or less
Building Blocks:	quarter-quarter sections
Orientation:	North to South
Description: TRS/County	E/2 of Sections 6 and 7, Township 19 South, Range 35
	East, NMPM, Lea County, New Mexico
Standard Horizontal Well Spacing Unit (Y/N), If No, describe	Yes
Other Situations	
Depth Severance: Y/N. If yes, description	None
Proximity Tracts: If yes, description	W/2 E/2 of Sections 6 and 7
Proximity Defining Well: if yes, description	Mariner 193507 1H well
Applicant's Ownership in Each Tract	Exhibit A-3
Well(s)	
Name & API (if assigned), surface and bottom hole location,	Add wells as needed
footages, completion target, orientation, completion status	
(standard or non-standard)	
Well #1	Mariner 193507 #1H well (API # 30-025-pending)
	SHL: 190' FNL & 1245' FEL (Unit A), Sec. 18, T19S, R35E
	BHL: 100' FNL & 1285' FEL (Lot 1), Sec. 6, T19S, R35E
	Completion target: Wolfcamp
	Well orientation: South to North
	Completion location: expected to be: proximity tract we
Horizontal Well First and Last Take Points	See Exhibit A-1
Completion Target (Formation, TVD and MD)	See Exhibit B
AFE Capex and Operating Costs	
Drilling Supervision/Month \$	\$8,000
Production Supervision/Month \$	\$800
Justification for Supervision Costs	See Exhibit A
Requested Risk Charge	200%

Notice of Hearing	
Proposed Notice of Hearing	Exhibit C
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit C
Proof of Published Notice of Hearing (10 days before hearing)	N/A
Ownership Determination	
Land Ownership Schematic of the Spacing Unit	Exhibit A-3
Tract List (including lease numbers and owners)	Exhibit A-3
Pooled Parties (including ownership type)	Exhibit A-3
Unlocatable Parties to be Pooled	N/A
Ownership Depth Severance (including percentage above &	
below)	N/A
Joinder	
Sample Copy of Proposal Letter	Exhibit A-4
List of Interest Owners (ie Exhibit A of JOA)	Exhibit A-3
Chronology of Contact with Non-Joined Working Interests	Exhibit A-5
Overhead Rates In Proposal Letter	Exhibit A-4
Cost Estimate to Drill and Complete	Exhibit A-4
Cost Estimate to Equip Well	Exhibit A-4
Cost Estimate for Production Facilities	Exhibit A-4
Geology	
Summary (including special considerations)	Exhibit B
Spacing Unit Schematic	Exhibit A-2
Gunbarrel/Lateral Trajectory Schematic	Exhibit A-2
Well Orientation (with rationale)	Exhibit B-1
Target Formation	Exhibit B
HSU Cross Section	Exhibit B-2
Depth Severance Discussion	N/A
Forms, Figures and Tables	
C-102	Exhibit A-1
Tracts	Exhibit A-3
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit A-3
General Location Map (including basin)	Exhibit A-2
Well Bore Location Map	Exhibit A-2
Structure Contour Map - Subsea Depth	Exhibit B-1
Cross Section Location Map (including wells)	Exhibit B-1
Cross Section (including Landing Zone)	Exhibit B-2
Additional Information	
Special Provisions/Stipulations	None
CERTIFICATION: I hereby certify that the information prov	ided in this checklist is complete and accurate.
Printed Name (Attorney or Party Representative):	Kaitlyn A. Luck
Signed Name (Attorney or Party Representative):	- Frontfull
Date:	6-Oct-20

APPLICATION OF CATENA RESOURCES OPERATING, LLC FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NO. 21459

APPLICATION

Catena Resources Operating, LLC ("Applicant") (OGRID No. 328449), through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of NMSA 1978, § 70-2-17, for an order pooling all uncommitted interests in the Wolfcamp formation underlying a standard 640-acre, more or less, horizontal spacing unit comprised of the E/2 of Sections 6 and 7, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico. In support Applicant states:

- 1. Applicant is a working interest owner in the proposed horizontal spacing unit and has the right to drill thereon.
- 2. Applicant seeks to initially dedicate the above-referenced spacing unit to the proposed initial Mariner 193507 1H well to be horizontally drilled from a surface location in the NE/4 NE/4 (Unit A) of Section 18 to a bottom hole location in the NE/4 NE/4 (Unit A) of Section 6.
- 3. The completed interval for the proposed well will remain within 330 feet of the W/2 E/2 of Sections 6 and 7 to include this offsetting acreage in a standard horizontal well spacing unit.
- 4. Applicant has sought and been unable to obtain voluntary agreement for the development of these lands from all interest owners in the subject spacing unit.

- 5. The pooling of interests will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.
- 6. In order to permit Applicant to obtain its just and fair share of the oil and gas underlying the subject lands, all uncommitted interests in this horizontal spacing unit should be pooled, and Applicant should be designated the operator of the proposed well and horizontal spacing unit.

WHEREFORE, Applicant requests that this application be set for hearing before an Examiner of the Oil Conservation Division on October 8, 2020, and, after notice and hearing as required by law, the Division enter an order:

- A. Pooling all uncommitted interests in the horizontal spacing unit and approving the initial well thereon;
- B. Designating Applicant as operator of the horizontal spacing unit and the horizontal wells to be drilled thereon;
- C. Authorizing Applicant to recover its costs of drilling, equipping, and completing the well;
- D. 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
- E. Imposing a 200% charge for the risk assumed by Applicant in drilling and completing the well against any working interest owner who does not voluntarily participate in the drilling of the well.

Respectfully submitted,

HOLLAND & HART LLP

By:

Michael H. Feldewert
Adam G. Rankin
Julia Broggi
Kaitlyn A. Luck
Post Office Box 2208
Santa Fe, New Mexico 87504-2208
(505) 988-4421
(505) 983-6043 Facsimile
mhfrldewert@hollandhart.com
agrankin@hollandhart.com
jbroggi@hollandhart.com
kaluck@hollandhart.com

ATTORNEYS FOR CATENA RESOURCES OPERATING, LLC

APPLICATION OF CATENA RESOURCES OPERATING, LLC FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NO. 21459

AFFIDAVIT OF ROBERT SWANN

Robert Swann, of lawful age and being first duly sworn, declares as follows:

My name is Robert Swann. I am a Land Manager with Catena Resources Operating, 1.

LLC ("Catena").

I have previously testified before the New Mexico Oil Conservation Division as an 2.

expert witness in petroleum land matters. My credentials as a petroleum landman have been

accepted by the Division and made a matter of record.

I am familiar with the application filed by Catena in this case, and I am familiar 3.

with the status of the lands in the subject area.

The uncommitted parties have not indicated any opposition to this pooling 4.

application proceeding by affidavit, and I do not expect any opposition at the hearing.

5. Catena seek an order pooling all uncommitted interests in the Wolfcamp formation

[Scharb; Wolfcamp Pool (55640)] underlying a standard 640-acre, more or less, horizontal spacing

unit comprised of the E/2 of Sections 6 and 7, Township 19 South, Range 35 East, NMPM, Lea

County, New Mexico.

6. Catena seeks to initially dedicate this spacing unit to the proposed Mariner 193507

1H well to be horizontally drilled from a surface location in the NE/4 NE/4 (Unit A) of Section 18

to a bottom hole location in the NE/4 NE/4 (Unit A) of Section 6. The completed interval for the

1

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Amended Exhibit No. A

Submitted by: Catena Resources Operating, LLC

Hearing Date: October 08, 2020

Case No. 21459

proposed well will remain within 330 feet of the W/2 E/2 of Sections 6 and 7 to include this offsetting acreage in a standard horizontal well spacing unit.

- 7. **Exhibit A-1** contains the Form C-102 for the proposed well.
- 8. **Exhibit A-2** is a general location map outlining the acreage being pooled and the lateral trajectory of the proposed well. The acreage is comprised of state, and fee lands.
- 9. **Exhibit A-3** identifies the tracts of land comprising the proposed spacing unit, the working interest ownership in each tract and their respective interest in the horizontal spacing unit. The mineral owners that remain to be pooled are highlighted on Exhibit A-3.
- 10. No ownership depth severances exist within in the Wolfcamp formation underlying the subject acreage.
- 11. Catena has conducted a diligent search of company records, county records, telephone directors and conducted computer searches to locate contact information for each of the mineral owners that it seeks to pool.
- 12. **Exhibit A-4** contains a sample of the letter and AFE for the proposed well sent to the working interest owners that Catena has been able to locate. The costs reflected on the AFE are consistent with what Catena and other operators have incurred for drilling similar horizontal wells in the area in this formation.
- 13. **Exhibit A-5** contains a chronology of the contacts with the uncommitted mineral owners Catena was able to locate. Catena has made a good faith effort to obtain voluntary joinder of these owners in the proposed wells.
- 14. **Exhibit A-6** is Catena's notice of the overlapping spacing unit in this case, pursuant to 19.15.16.15.B(9) NMAC, which reflects that all affected working interest owners were provided notice of the overlapping spacing unit. No objection was received within the 20-day time period.

- 15. Catena requests overhead and administrative rates of \$8,000 per month for drilling and \$800 per month for a producing well. These rates are consistent with the rates charged by Catena and other operators for similar wells in this area.
- 16. I have provided the law firm of Holland and Hart, LLP, with the names and addresses (where available) of the mineral owners that Catena seeks to pool and instructed that they be notified of this hearing.
- 17. Exhibits A-1 through A-6 were prepared by me or compiled under my direction from company business records.

FURTHER AFFIANT SAYETH NAUGHT.

ROBERT SWANN

STATE OF TEXAS)			
COUNTY OF BEXAR)			
SUBSCRIBED and S	SWORN to before me this	Winday o	of Otobe	₹ 2020 by
Robert Swann.				2 5



NOTARY PUBLIC

My Commission Expires:

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720

Phone: (575) 393-0101 Pax. (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 Fc, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

API Number

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

³ Pool Name

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

² Pool Code

				550	Schard; Wolfcamp							
⁴ Property	Code				⁵ Property	6	Well Number					
					1H							
⁷ OGRID	No.			8 Operator Name 9 Elevation								
3284	49			Cate	ena Resource	es Operating, L	_LC					
					¹⁰ Surface I	Location						
UL or lot no.	Section	Township	Range	Lot Idr	Feet from the	North/South line	Feet from the	East/West line	County			
Α	18	199	35E		190'	FNL	1245'	FEL	Lea			
		0	¹¹ Во	ttom Ho	le Location I	f Different From	m Surface					
UL or lot no.	Section	Township	Range	Lot Idr	Feet from the	North/South line	Feet from the	East/West line	County			
1	6	199	5 35E		100'	FEL	Lea					
12 Dedicated Acres	13 Joint of	r Infill	14 Consolidation	Code 15 O	rder No.							
639.40			СОМ									

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.

			7	4					
s¶\$B\$	364年	L 4	sesw 3		8S 95E	SWSW	SESW	SWSE	17 OPERATOR CERTIFICATION
198	34E				35E		ı	I I	I hereby certify that the information contained herein is true and complet to the best of my knowledge and belief, and that this organization either
L 2	L 1	4 4	3 1	100'	R LTP 1	L 4) L	L L L L L L L L L L	owns a working interesor unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this
				1285 6 199			Ī		location pursuant to a contract with an owner of such a mineral or work
SWNE	SENE	L 5	SENW	SWNE	SENE	SWNW	l SENW	SWNE I	interest, or to a voluntary pooling agreement or ampulsory pooling order heretofore entered by the division.
C	11		0	6	1		-05	1	
NWSE	NESE LL	L 6	NESW I	NWSE	NESE	NWSW	l NESW	NWSE	Signature Date
	34E	32					-	-	Printed Name
SWSE	sese O	ທ ⊦້	sesw !	SWSE	SESE	swsw	l sesw	swse	
0.102	19	19					1	l I	E-mail Address
		L		NWNE I	NENE	NWNW	I NENW	NWNE	*SURVEYOR CERTIFICATION
NWNE	NENE	1		1	NENE	NVVIVV	l NEWW	NVINE I	I hereby certify that the well location shown onisiplat
							1		was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true
SWNE	SENE	2	SENW I	SWNE	SENE	SWNW	! SENW	SWNE I	and correct to the best of my belief.
1	2		0	7		_	-08		
	NESE	L 3	NESW I	NWSE I	NESE	NWSW	I NESW	l NWSE	Date of Survey
NWSE	NESE	3	Mariner 19350	17			1	I I	Signature and Seal of Professional Surveyor:
			1H 190' FNL	"					İ
SWSE	SESE	L d	1245' FEL 18 19S 35E	SWSE	SESE	swsw	I SESW	SWSE	
NWNE 1	3 NENE	L 1	NENW 1	8 NWNE	NENE	WWW	I NEWW	NWNE I	Certificate Number BEFORE THE OIL CONSERVATION DIVISION
									BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico
Exhibit No. A1

Submitted by: Catena Resources Operating, LLC
Hearing Date: October 08, 2020

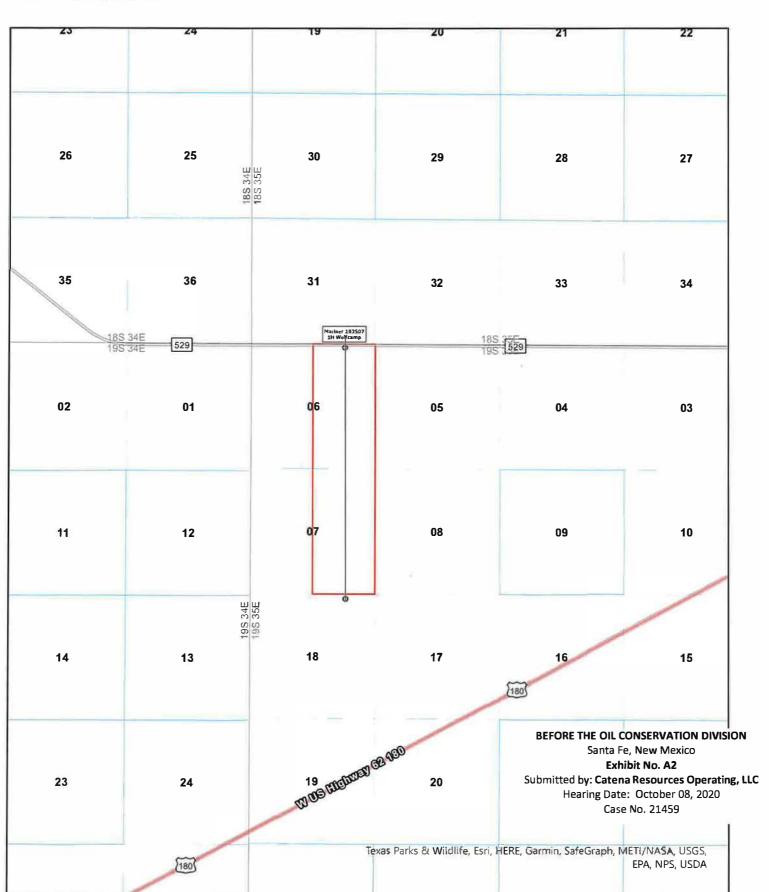
Case No. 21459

Catena Resources Operating, LLC

<u>Unit Name:</u> Mariner 193507 <u>Well Name:</u> Mariner 193507

Well No: 1H

Case Number: 21459



Catena Resources Operating, LLC

<u>Unit Name:</u> Mariner 193507 <u>Well Name:</u> Mariner 193507

Well No: 1H

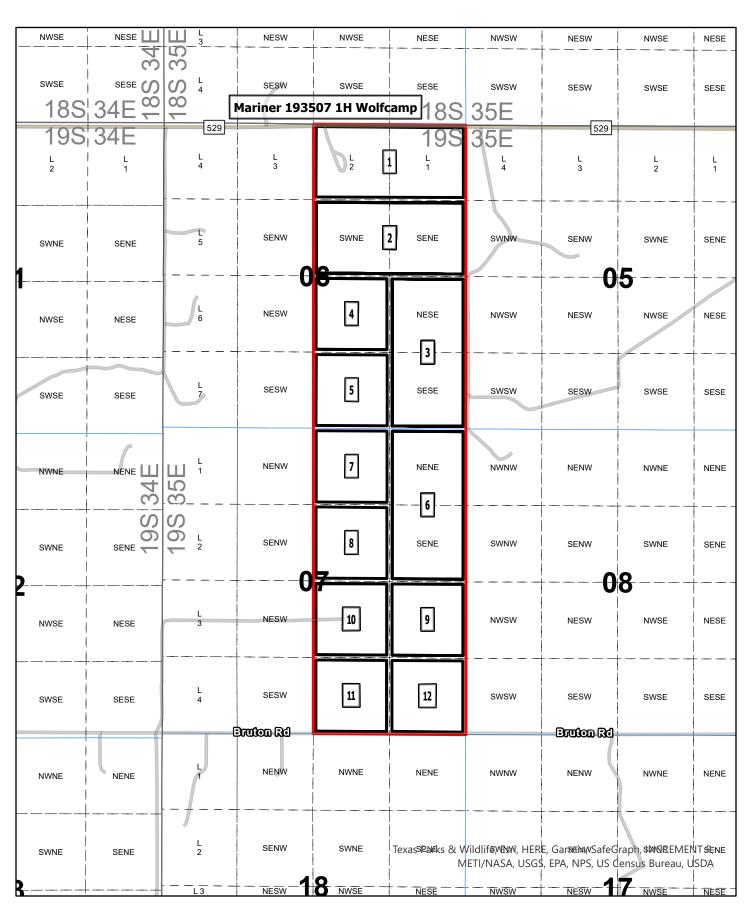
BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico
Exhibit No. A3

Submitted by: Catena Resources Operating, LLC

Hearing Date: October 08, 2020 Case No. 21459

Case Number: 21459



u																
Tract Participation	12.50%	12.50%	12.50%	12.50%	6.25%	6.25%	12.50%	12.50%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Tract WI	12.50%	12.50%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	3.13%	3.13%	4.69%	1.56%	6.25%
MMN	08	08	40	40	40	40	40	40	40	40	40	70	70	08	10	40
æ	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E	35E
Ţ	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195
S	9	9	9	9	9	9	7	7	7	7	7	7	7	7	7	7
Property Description	NZNE	S2NE	E2SE	E2SE	NWSE	SWSE	E2NE	E2NE	NWNE	SWNE	NESE	NWSE	NWSE	SWSE	SWSE	SESE
Gross	80	80	80	80	40	40	80	80	40	40	40	40	40	40	40	40
WC WI	1	1	0.5	0.5	1	1	0.5	0.5	1	1	1	0.5	0.5	0.75	0.25	1
Record WI Owner	Marathon	Marathon	Catena Resources Operating, LLC	900	Catena Resources Operating, LLC	900	900	Catena Resources Operating, LLC	λxO	λxO	Marathon	Marathon	Read and Stevens	Catena Resources Operating, LLC	900	900
Proposed Unit Gross	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640
Tract No	1	2	3	3	4	2	9	9	7	8	6	10	10	11	11	12

Record WI Owner	IM DM	WC WI NMA WC
Catena Resources Operating, LLC	23.44%	150
000	%95'97	170
Marathon	34.38%	220
Oxy	12.50%	80
Read and Stevens	3.13%	20
Totals	100.00%	640



July 23, 2020
Via Certified Mail

Re:

Mariner 193507 1H Well Proposal

Wolfcamp Formation

E2 of Section 7 T19S, 35E, and Section 6, T19S, R35E

Lea County, New Mexico

Mariner 193507 2H Well Proposal

Bone Springs Formation

E2 of Section 7 T19S, 35E, and Section 6, T19S, R35E

Lea County, New Mexico

Ladies and Gentlemen,

Catena Resources Operating, LLC ("Catena") as Operator hereby proposes to drill the following wells to a depth sufficient to test the Wolfcamp and Bone Spring formations:

Well Name	SHL	BHL	BHL Spacing Unit		Estimated	
	Sec. 18	Sec. 6	640 Acres	TVD	TMD	
Mariner 193507 1H Wolfcamp Formation	FNL: 190' FEL: 1245'	FNL: 100' FEL: 1285'	E/2 of Section 7, T19S, 35E and Section 6, T19S, R35E	11,018'	20,698'	
Mariner 193507 2H Bone Spring Formation	FNL: 190' FEL: 1235'	FNL: 100' FEL: 1285'	E/2 of Section 7, T19S, 35E and Section 6, T19S, R35E	9,591	20,444'	

These proposed locations and target depths are subject to change depending on any surface or subsurface concerns encountered.

Regarding the above, enclosed for your further handling are our AFE's dated April 16, 2020 for the proposed wells. The AFE's 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. In the event you elect to participate in the proposed wells, please execute the enclosed AFE's and return to me. We are happy to furnish you with a proposed Joint Operating Agreement upon request. Please respond within 30 days of receiving this notice. If you do not wish to participate, Catena proposes to acquire your interest via term assignment subject to due diligence and title verification satisfactory to Catena.

Should you have any questions regarding the above, please email me at rswann@catenares.com or call me at (210) 775-6993.

Sincerely,

Catena Resources Operating, LLC

Robert Swann Land Manager **BEFORE THE OIL CONSERVATION DIVISION**

Santa Fe, New Mexico Exhibit No. A4

Submitted by: Catena Resources Operating, LLC

Hearing Date: October 08, 2020 Case No. 21459

210-319-7557 www.catenares.com info@catenares.com



									AFE NO.
PRATERIA	WELL NAME: 1	Mariner 19	JELL COST EST	TIMATE	DATE:		16-A	pr-20	
	RELD NAME:				START DATE: COMPLETE DATE:		1	pr-20	
i i	COUNTY/ST:	2.0 sec. (a) Lea County	y, NM		ORIGINAL:		Q.		
, c	DBJECTIVE:	Wollcamp			SUPPLEMENT:				
INTANGBLE COSTS		ACCT CODE	DRILLING- 310XX	ACCT CODE	COMPLETION - 320XX		CODE	FACILITIES - 330XX	TOTAL
Legal Fees / Title Opinion Surveys / Staking / Permits / Bonds / Regulatory		31001 31002	\$50,000 \$25,700	32001 32002	\$0 \$0	\exists	33001 33002	\$0 \$0	\$50,000 \$25,700
ROW / Surface Damages	- 1	31003	\$60,000	32003	\$0			\$0	\$50,000
Roads & Location / Reserve Pit - Construction Roads & Location / Reserve Pit - Reclaimation	- 1	31004 31005	\$90,000	32004 32005	50 50		- 1	\$0 \$0	\$90,000
Frac Pond Cate Guard	- 1	31006 31007		32006 32007	\$0 \$0			\$0 \$0	50
Mouse / Rathole / Conductor Mobilization / Demobilization	- 1	31008 31009	\$19,000 \$230,675	32008	\$0 \$0			\$0 \$0	\$19,000 \$230,675
Drilling - Daywork	I	31010	\$574,646	9200	\$0			\$0	\$574,646 \$0
Drilling - Foolage Drilling - Turnkey	- 1	31011 31012			\$0 \$0			\$0 \$0	\$0
Completion / Snubbing / Workover Unit Trailer House / Communications	1	31013 31014	\$43,572	32009 32010	\$40,000 \$24,200			\$0 \$0	\$40,000
Drill Bits	- 1	31015 31016	\$103,000	32011 32012	\$0 \$0			\$0 \$0	\$103,000 \$266,326
Directional Equipment / Gyro Surveys Downhole Tool / Stabilization Rental	1	31017	\$266,326 \$57,075	32013	134,000			10	\$91,075
Mud / Chemicals Fuel / Power		31018 31019	\$222,658 \$116,482	32014 32015	\$601,500 \$471,800			\$0 \$0	\$624,058 \$588,282
Water Supply Well, equipment		31020 31021	\$3,603	32016 32017	\$0 \$816,550	\Box		50 50	\$816,550
Water / Water Hauling Offsite Water & Cultings Disposal	I	31022	\$284,770	32018	\$30,500			10	\$315,270
Transportation / Hauling	- 1	31023 31024	\$31,000	32019 32020	\$0 \$0	+	33009	\$15,000	\$46,000 \$101,000
Laydown Machine / Casing Crew / Tongs	I	31025 31026	\$62,190 \$65,072	32021 32022	\$0 \$0	=		\$0 \$0	\$62,190 \$65,072
Cementing, Float Equipment & Services Mud Logging	1	31027	\$35,343		\$0			50	\$35,343
Logging - Open Hole Logging - Cased Hole		31028 31029		32023 32024	\$0 \$13,000	$\vdash \exists$		\$0 \$0	\$13,000
Coring & Analysis, Drill Stem Test		31030		32025	\$0 \$421,200			50 50	\$0 \$421,200
Perforating Wireline / Stickline Services	- 1	31032		32026	\$15,000	Щ		\$0	\$15,000
Equipment Rental Pumping Services/Rental	I	31033 31034	\$163,809	32027 32028	\$236,000 \$21,000	\vdash		50 50	\$399,809
Acidizing & Fracturing	1	31035		32029	\$2,479,000			\$0	\$2,479,000
Coil Tubing Unit How Testing, Swabbing	1	31036 31037		32030 32031	\$120,000 \$95,875	\exists		\$0 \$0	\$120,000 \$35,875
Fishing / Sidetrack Services	I	3103B 31039	\$6,400	32032 32033	10 \$23,000	\Box		\$0 \$0	\$0 \$29,400
Nipple Up / BOPE Testing Overhead	I	31040	\$8,000	32034	\$19,500	H		50	\$27,500
Wellsite Consulting Services/Supervision Engineering / Geological / Lab Service Tracers and dla	agnostics	31041 31042	\$170,628 \$25,000	32035 32036	\$153,950 \$35,500	\vdash	33003	\$20,000 \$15,000	\$344,578 \$75,500
Roustabout / Contract Labor Welding Services		31043 31044	18,490	32037 32038	\$0 \$0	\Box	33004	\$160,000	\$168,480
Insurance		31045	\$5,120 \$10,600	32039	10		33005	\$0	\$10,000
Miscellaneous P&A Costs		31046 31047		32040 32041	\$0 \$0	\sqcup	33006	\$0 \$0	\$0
Safety / EH&S 5.5% Contingency (6% Taxes on Casing included in ca		31048 31049	\$141,973	32042 32043	\$6,610 \$311,200		33007	\$10,500	\$6,610 \$463,673
NON-Op Drilling Intangible	Lingcosty	31050	- 5.13.004	32044	10		*****	\$0 \$0	110000000000000000000000000000000000000
Pipeline Installation / Interconnect TOTAL INTANGBLE COSTS		31051	\$2,981,422	32045	\$5,569,385		33008	\$220,600	19,171,307
TANGBLE COSTS		ACCT	ORILLING-311XX	ACCT CODE	COMPLETION - 321XX	П	ACCT	FACILITIES -	TOTAL
Size	Feet 1/Pt	CODE			-	Н	0.00	39100	
Conductor Surface Casing 13 3/6"		31101 31102	\$68,600						\$68,600
1st Intermediate Casing / Liner B 5/8" Ind Intermediate Casing / Liner		31103 31104	\$113,200	V		4			\$113,200
Production Casing / Liner 5 1/2"	21,500 \$18.00	3170-		32101	\$430,000				\$430,000
Casing Tie Back Liner Hanger Assembly				32102 32103		\exists			
Tubing 2.875	10,500 \$ 5.85			32104 32105	\$61,425 \$31,200	\exists			\$61,425 \$31,200
Casing Equipment - OHMS / Etc Wellhead Equipment	1	31105	\$52,000	32106	\$27,000				\$79,000
Pumping Unit / Prime Mover / Base Rods / Pony Rods / Sinker Bars	1			32107 32108	\$0 \$0		33101 33102	\$0 \$0	50
Artificial Lift Other - Gas Lift Wellhead Equipment Completions - Production Tree				32109 32110	\$14,000 \$42,000		33103 33104	\$0 \$0	\$14,000
Tanks / Tank Steps / Stairs				32111	\$0		33105	\$66,000	\$66,000
Gas Treating / Dehydration Equipment Separation Equipment, Heater Treater				32112 32113	\$0 \$0		33106 33107	\$58,200	\$68,200
Surface Pumps Filters				32114 32115	\$0 \$0		3310B 33109	\$3,000	
Buildings		1		32116	\$0		33110	\$0	\$0
Interconnect Piping / Manifolds / Headers Rowlines / Connections / Valves				32117 32118	\$0 \$0		33111 33112	\$60,000 \$46,960	\$46,960
Automation / Instruments / Controls / Analyzers				32119 32120	\$0 \$0		33113 33114	\$16,000 \$52,000	
Electrical Equipment / Generators Compressor & Related Equipment		-		32121	\$0		33115	\$0	30
Metering Equipment, LACT Unit Chemical Equipment / Cathodic Protection				32122 32123	\$0 \$0		33116 33117	\$104,000 \$0	
Subsurface Equipment - Packer, Plugs, TAC		- 4		32124	\$11,000 \$4,000		33118 33119	\$36,000	\$11,000
Safety / EH&S Equipment NON-OP Drilling Intangible				32125 32126	\$0		33120	50	\$0
Transfer/SWD Pumps & Equipment Hare / Combustor	1	13		32127 32128	\$0 \$0		33121 33122	\$19,060 \$32,000	\$0
Miscellaneous		31106	\$11,690	32129	\$24,410 \$31,031		33123 33124	\$0 \$0	\$24,410
Contingency Costs TOTAL TANGELE COSTS		31107	\$245,490	32130	\$676,066		20122	\$503,220	\$1,424,776
TOTAL WELL COSTS			\$3,226,912		\$6,646,451	Ш	V.	\$723,720	110,596,083
Prepared by	Travis Salinas	_	Title: Engineer						
The AFE is only an estimate By returning one signed copy, yo Extra Expense Insurance	at agree to pay your share o	f the actual	costs incurred						
I elect to be con	vered by Operator's Extr	a Expense	insurance and pa	y my proportionale	share of the premium,				
I elect to purch	ase my own well control	insurance	policy.						
either box is checked above, non-operating working interest or	wner elects to be covered by	y Operator's	well control insuran			_	_		
Joint Owner Interest:	Amount								



AFE NO.

		- V	ELL COST EST	IMATE				
PATĒNA	WELL NAME:	Mariner 19		IUIA-1000	DATE:	16-	Apr-20	
	HELD NAME:				START DATE:			
RESOURCES		2 sec, late Lea Count			COMPLETE DATE: ORIGINAL:			
		Bone Sprin			SUPPLEMENT:	7.		
	1	ACCT	DRILLING:		T	ACCT	FACILITIES -	TOTAL
INTANGIBLE COSTS		CODE	310XX	ACCT CODE	COMPLETION - 320XX	CODE	330XX	
egal Fees / Title Opinion Surveys / Staking / Permits / Bonds / Regulatory		31001 31002	\$50,000 \$25,700	32001 32002	\$0 \$0	33001	\$0	\$50,00 \$25,70
ROW / Surface Damages		31003	\$60,000	32003	\$0	_	50	\$60,00
toads & Location / Reserve Pit - Construction	1	31004	\$90,000	32004	50	4=1	50 50	\$90,0
oads & Location / Reserve Pit - Reclaimation rac Pond	- 1	31005 31006		32006 32006	50	-	50	
ale Guard	1	31007	- Salasida	32007	\$0		\$0	72000
touse / Rathole / Conductor tobilization / Demobilization	1	31008	\$19,000	32008	\$0 \$0	=	\$0	\$19,0 \$230,6
rilling - Daywork	1	31010	\$475,000		\$0		\$0	\$475,0
rilling - Footage	- 1	31011	2000		10		50	
rilling - Turnkey completion / Snubbing / Workover Unit		31012		32009	\$40,000	-	50	\$40,0
railer House / Communications	- 1	31014	\$43,572	32010	\$24,200		\$0	\$67,7
rill Bits	- 1	31015	\$95,000 \$225,000	32011	\$0 \$0		\$0	\$85,0 \$225,0
rirectional Equipment / Gyro Surveys www.hole Tool / Stabilization Rental	1	31017	\$67,076	32013	\$34,000		\$0	\$91,0
lud / Chemicals	1	31018	\$200,000	32014	\$601,600		\$0	\$601,0
uel / Power Vater Supply Well, equipment		31019	\$104,500 \$3,603	32015 32016	\$471,800		50	\$676,3
Vater / Water Hauling		31021	0.000	32017	2816,550		10	\$816,5
Ifsite Water & Cuttings Disposal	1	31022	\$243,055	32018 32019	\$30,500	33009	\$15,000	\$273.5
ransportation / Hauling ispection / Tubular Testing	1	31023	\$31,000 \$95,654	32020	50	- 33009	\$10,000	\$95.0
aydown Machine / Casing Crew / Tongs	1	31025	\$58,245	32021	\$0		\$0	\$58,2
ementing, Float Equipment & Services		31026	\$62,468	32022	\$0 \$0		\$0 \$0	\$62,4 \$36,2
tud Logging ogging - Open Hote		31027	\$35,343	32023	50		\$0	
ogging - Cased Hole		31029		32024	\$13,000		50	\$13,
oring & Analysis, Drill Stem Test		31030		32025	\$421,200	3 1	10	\$421,3
erforating Vireline / Slickline Services		31032		32026	\$15,000		10	\$16,
quipment Rental		31033	\$149,500	32027	\$236,000		10	\$385
umping Services/Rental cidizing & Fracturing	1	31034 31035		32028 32029	\$21,000 \$2,175,000	-	50	\$7,175
oil Tubing Unit		31036		32030	\$120,000		10	1120.
low Testing, Swabbing		31037 31038		32031 32032	\$95,875	-	50	\$96.
ishing / Sidetrack Services lipple Up / BOPE Testing		31039	\$5,400	32032	\$23,000	-	50	\$29,
verhead		31040	\$8,000	32034	\$19,500		\$0	\$27,
Vellsite Consulting Services/Supervision ingineering / Geological / Lab Service Tracers and	disappetias	31041	\$159,861 \$25,000	32036 32036	\$163,360 \$36,600	33003	\$20,000	\$333, \$76,
lous (about / Contract Labor	diagnostics	31043	\$8,480	32037	\$0	33004	\$160,000	\$168,
Velding Services		31044	\$5,120	32038 32039	\$0 \$0	33005	50	15, 510,
nsurance fiscellaneous	1	31045	\$10,000	32039	50	33006	10	8.0%
&A Costs		31047		32041	\$0	—	10	-
afely / EH&S .5% Contingency (8% Taxes on Casing included in .	-aring cost)	31048	\$141,202	32042 32043	\$4,610 \$311,200	33007	\$10,500	\$492
ION-Op Drilling Intangible	Lasing Cost)	31050	9141,893	32044	10		\$0	
Pipeline Installation / Interconnect TOTAL, INTANGBLE COST		31051	\$2,700,524	32045	\$5,665,385	33001	\$220,500	\$8,594,
					- Ashimitary			
		1000						
TANGBLE COSTS		CODE	DRILLING - 311XX	ACCT CODE	COMPLETION - 321XX	ACCT	FACILITIES - 221XX	TOTAL
Size	Feet 159	CODE	DRILLING - 311XX	ACCT CODE	COMPLETION - 321XX			TOTAL
Size	Feet 159	31101		ACCT CODE	COMPLETION - 321XX			
Size conductor conface Casing 13.3MT	Feet 159	31101 31102 31103	DRILLING-311XX \$68,600 \$113,200	ACCT CODE	COMPLETION - 321XX			\$68,
Conductor Surface Casing Surface Casing 13.38" 15.88" 15.88" Ind Intermediate Casing / Liner Ind Intermediate Casing / Liner		31101 31102	\$08,600					\$58, \$112,
tonductor Suface Casing 13.38" 13.58" Intermediate Casing Liner Ind Intermediate Casing Liner Foduction Casing Liner 5.12"	Feet 1:R 20,760 \$18.00	31101 31102 31103	\$08,600	32101 32102	COMPLETION - 321XX			\$68,
Conductor Size Surface Casing: 13 M	20,760 \$18.00	31101 31102 31103	\$08,600	32101 32102 32103	1373,600			\$68, \$112,
conductor Size Surface Casing: 13.8" 13.8" 13.8" 13.8" 13.8" 15.6" 13.8" 15.6" 15.6" 15.6" 15.1"		31101 31102 31103	\$08,600	32101 32102 32103 32104	\$373,600 \$68,500			\$55, \$112, \$373,
conductor urface Casing: 11 Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner soft roduction Casing / Liner sizing Tie Back iner Hanger Assembly ubing asing Equipment - OHM's / Bc.	20,760 \$18.00	31101 31102 31103	\$08,600	32101 32102 32103	1373,600	CODE	221XX	\$68, \$112, \$373, \$68, \$31,
ondutter surface Gasing st Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner roduction Casing / Liner saing Tie Back iner Hanger Assembly ubing asing Tie Back Zaing Equipment - OHMS / Bc. Velihead Equipment upping that Prime Mover / Base	20,760 \$18.00	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32106 32107	\$373,600 \$58,509 \$31,200 \$27,000 \$50	CODE	231XX	\$68, \$112, \$373, \$68, \$31,
onductor urface Casing ut face mediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner roduction Casing / Liner sating Tie Back incr Hanger Assembly ubing sating Equipment - OHMS / Ec. velihead Equipment of Base dosf / Pony Rods / Sinker Bars	20,760 \$18.00	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32106 32107 32108	\$373,500 \$58,509 \$31,200 \$27,000 \$30	CODE	\$21XX	\$58 \$112 \$373 \$58 \$31 \$52
onductor urface Gasing urface Gasing / Liner urface Harger Assembly ubing using Stulpment - OHMS / Bc. Velhead Equipment urping that if Prime Mover / Base ods / Pony Rods / Sinker Bars urface Liner Gas Lili	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32106 32107 32108 32109 32109	\$273,500 \$58,500 \$31,200 \$27,000 \$0 \$14,000 \$14,200 \$42,000	3310: 3310: 3310: 3310: 3310:	231XX 50 50 10	\$68, \$112, \$373, \$58, \$31, \$62,
onductor or face Gasing ut letermedute Casing / Liner ut letermedute Casing ut let	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32107 32108 32109 32110	\$373,600 \$58,500 \$31,200 \$27,000 \$0 \$14,000 \$42,000	3310: 3310: 3310: 3310:	221XX 50 50 10 10 545,000	\$68, \$112, \$373, \$59, \$31, \$52, \$14, \$42, \$66,
sinductor urface Casing at Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner sching /	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32106 32107 32108 32109 32109	\$273,500 \$58,500 \$31,200 \$27,000 \$0 \$14,000 \$14,200 \$42,000	3310: 3310: 3310: 3310: 3310:	221XX 500 100 100 100 100 100 100 100 100 100	\$588 \$112, \$1373, \$588 \$21, \$53, \$542 \$42 \$66
onductor urface Casing st Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner sterior intermediate Casing / Liner sterior intermediate Casing / Liner sterior intermediate sterior interm	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32106 32107 32109 32110 32111 32112 32113 32114	\$273,500 \$58,509 \$31,200 \$77,000 \$14,000 \$42,000 \$42,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	2310: 2310: 2310: 2310: 2310: 3310: 3310: 3310: 3310:	\$50 \$50 \$50 \$50 \$50,000 \$50,000 \$51,000 \$51,000	558 5112 1373 558 531 551 554 542 542 565 565 565 566 566 566 566 566 566 56
onductor urface Gasing urface Gasing / Liner	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32103 32104 32106 32107 32108 32109 32109 32111 32112 32112	\$373,500 \$58,500 \$31,200 \$27,000 \$14,000 \$42,000 \$42,000 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	2310: 3310: 3310: 3310: 3310: 3310: 3310: 3310: 3310:	\$0 \$0 \$10 \$15 \$45,000 \$1,000 \$1,000	\$588 \$1112 \$373 \$590 \$311 \$514 \$42 \$42 \$42 \$42 \$43 \$44 \$44 \$44 \$44 \$44 \$44 \$44 \$44 \$44
inductor urface Casing at Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner sching / L	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32103 32104 32106 32106 32109 32111 32111 32112 32113 32114 32116 32116 32116 32116	\$273,500 \$58,500 \$31,200 \$17,000 \$144,000 \$442,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100 33100	\$0 \$0 \$19 \$2,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000	\$588 \$112,2 \$373, \$588 \$31,5 \$51,5 \$52,5 \$54,5 \$56,5 \$
inductor urface Casing ut face Teasing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner of Intermediate Casing / Liner schigt Teasing / Lin	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32103 32103 32104 32106 32106 32107 32111 32112 32113 32114 32114 32116 32117 32114	\$273,500 \$58,509 \$31,200 \$27,000 \$14,000 \$42,000 \$42,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	33100 33100 33100 33100 33100 33101 30101 30101 30101 30101 30101 30101 30101 30101 30101 30101 30101	301XX 500 100 100 100 100 100 100 100	568 5113 1373 568 521 583 514 542 542 548 533
ionductor urface Gasing at Idearmediate Casing / Liner of Idearmediate Casing / Liner adaing Tile Back Idearmediate Casing / Liner Idearmediate Casing / Liner Idearmediate Casing / Liner Idearmediate Liner Idearmediate Liner Idearmediate Casing Idearmediate Casing Idearmediate Casing Idearmediate Casing Idearmediate Idear	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32103 32104 32106 32106 32109 32111 32111 32112 32113 32114 32116 32116 32116 32116	\$273,500 \$58,500 \$31,200 \$17,000 \$144,000 \$442,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	33101 33101 33102 33102 33102 33103 33103 33113 33113 33113 33113 33113	301XX 500 100 100 100 100 100 100 100	\$58, \$112, \$373, \$59, \$511, \$53, \$514, \$42, \$66, \$68, \$33, \$31, \$31, \$31, \$31, \$31, \$31, \$31
onductor urface Gasing ut totermediate Casing / Liner do Intermediate Casing / Liner do Intermediate Casing / Liner and Intermediate Casing / Liner do Intermediate Casing / Liner acting Tie Back asing Tie Back asing Tie Back do Intermediate do Intermedia	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32103 32104 32106 32106 32107 22109 22110 32111 32112 32113 32114 32116 32117 32119 32119 32119 32119 32119	\$273,600 \$58,500 \$131,200 \$27,000 \$27,000 \$314,000 \$42,000 \$40,000	3310 3310 3310 3310 3310 3310 3310 3311 3311 3311 3311	\$0 \$0 \$19 \$2,00 \$1	\$68, \$113, \$113, \$113, \$113, \$113, \$113, \$1373, \$13
onductor urface Casing ut Intermediate Casing / Liner of Intermediate Casing / Liner acting Tite Back incr Hanger Assembly ubing asing Equipment - OHMS / Ec. velikead Equipment umping that Phine Mover / Base ods / Pony Rods / Sinker Bars rificial LIII Other - Cas LIII velikead Equipment Completions - Production Tree anks / Tank Steps / Stairs si Treating / Devloyarion is Treating / Devloyarion is Treating / Devloyarion is Treating / Devloyarion is Treating / Commettions / Valves utformation / Instruments / Controls / Analyzers is certical Equipment / Generators compressor & Related Equipment teering Equipment, LACT / Unit teering Equipment, LA	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32103 32104 32106 32106 32107 32119 32111 32112 32114 32114 32116 32117 32118 32119 32119 32119 32119 32119 32119 32119 32119 32119 32119	\$273,500 \$55,509 \$31,200 \$27,000 \$14,000 \$42,000 \$42,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	3310° 3310° 3310° 3310° 3311° 331	\$50,000 \$46,00	\$588 \$1102 \$37A \$558 \$5115 \$542 \$42 \$566 \$580 \$31 \$316 \$316 \$316 \$316 \$316 \$316 \$316
ionductor urface Gasing st Idearmediate Casing / Liner of Idearmediate Casing / Liner asing Education of Idearmediate asing Education of Idearmediate of Idearmedia	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32103 32104 32106 32106 32107 32111 32112 32113 32114 32114 32116 32117 32118 32117 32118 32119 32129 3229 32	\$273,500 \$55,509 \$31,200 \$27,000 \$14,000 \$42,000 \$42,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	33100 33100 33100 33100 33100 33101 33101 33111 33111 33111 33111 33111 33111 33111	231XX 50 10 10 10 10 10 10 10 10 10 1	\$58, \$113, \$373, \$58, \$531, \$63, \$542, \$66, \$58, \$33, \$31, \$44, \$516, \$5
ionductor urface Gasing st idearmediate Casing / Liner of hitermediate Casing / Liner ading Tie Back iner Hanger Assembly bubing upment - OMMS / Bc. saing Baujument - OMMS / Bc. let head back Prime Mover / Base loofs / Pony Rods / Sinker Bars urface but of the Cas Lin velihead Equipment Operations - Production Tre- nank / Tank Steps / Sains sas Treating / Dehydration Equipment expansion Equipment, Heater Treater uirface Pumps litters littlers uirface Pumps litters uirface Piping / Manifolds / Headers lowines / Connections / Valves utomation / Instruments / Controls / Analyzers sectrical Equipment / Gandoic Protection rompessor & Related Equipment fetering Equipment / Cathodic Protection ubbus/face Equipment / Cathodic Protection ubbus/face Equipment / Packer, Plugs, TAC salety / Stake Stayment	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32104 32106 32106 32107 32107 32109 22110 32111 32111 32111 32116 32117 32116 32117 32119 32119 32119 32121 32122 32122 32122 32122 32122 32122	\$273,500 \$55,500 \$131,200 \$27,000 \$314,000 \$44,000 \$40 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	33100 33100 33100 33100 33100 33100 33101 33101 33111 33111 33111 33111 33111 33111 33111 33111 33111	\$00 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	\$58, \$112, \$373, \$58, \$31, \$56, \$14, \$42, \$42, \$42, \$42, \$42, \$42, \$42, \$4
Size conductor urface Casing st Intermediate Casing / Liner of Infermediate Casing / Liner of Intermediate Casing / Liner conduction Casing / Liner asing Tee Back incer Hanger Assembly ubring saling Equipment - OHMS / Bc. vellhead Equipment winging that Pinims Mover / Base tools / Pony Rods / Sinker Bars vellhead Equipment Completions - Production Tre- ranks / Tank Steps / Stairs as Treating / Destydration Equipment reparation Equipment, Heater Treater urface Pumps illers using / Onnections / Valves usomation / Instruments / Controls / Analyzers dectrical Equipment / Generators compressor & Related Equipment detering Equipment / Generators onnections (John Stairs) beward Equipment / Sone / Controls / Analyzers dectrical Equipment / C	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31104	\$08,500	32101 32102 32102 32103 32104 32106 32106 32107 32111 32112 32113 32114 32114 32116 32117 32118 32117 32118 32119 32129 3229 32	\$273,500 \$55,509 \$31,200 \$27,000 \$14,000 \$42,000 \$42,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	33100 33100 33100 33100 33100 33101 33101 33111 33111 33111 33111 33111 33111 33111	231XX 50 10 10 10 10 10 10 10 10 10 1	\$58, \$113, \$113, \$113, \$1373, \$158,
ionductor urface Gazing st idearmediate Casing / Liner do Intermediate Casing / Liner do Intermediate Casing / Liner do Intermediate Casing / Liner ading Tile Back ading Tile Back along Assembly bubing automent - OMMS / Bc. Intermediate Casing / Liner asing Backment - OMMS / Bc. Intermediate Casing / Liner asing Backment - OMMS / Bc. Intermediate Liner Casing / Liner asing Backment - OMMS / Bc. Intermediate Liner Casing / Liner solds / Pony Rods / Sinker Bars strated is Liner Casing / Liner strate / Tank Steps / Salirs ass Treating / Dehydration Equipment sars Treating / Dehydration Protection sars Treating / Dehydration Prote	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31103 31104 31106	\$08,500	32101 32102 32102 32103 32104 32106 32106 32107 32111 32112 32113 32114 32114 32116 32117 32118 32117 32118 32119 32120 32121 32122 32123 32122 32123 32123 32123 32124 32123 32124 32123 32124 32125 32127 32127 32128	\$373,600 \$48,500 \$311,200 \$27,000 \$14,000 \$42,000 \$40,	33100 33100 33100 33100 33100 33100 33101 3311 33111 3311 33111 33111 33111 33111 33111 33111 33111 33111 33111 33111 3311 3311 33111 33111 33111 33111 33111 33111 33111 33111 33111 33111 3311 3311 3311 33111 33111 33111 33111 33111 33111 33111 33111 3	231XX 50 10 10 10 10 10 10 10 10 10 1	\$69, \$10.3, \$10.
ioneductor urface Gazing st idearmedute Casing / Liner do Intermedute Casing / Liner do Intermedute Casing / Liner do Intermedute Casing / Liner ading Tie Back aling Tie Back liner Hanger Assembly ubbig automatic - OHMS / Bc. lethe ad Equipment - OHMS / Bc. lethe ad Equipment - Base tools / Pony Rods / Sinker Bars staffeal kill Office - Gas kill vollhead Equipment Omptetions - Production Tree ans / Trank Steps / Salirs ass Treating / Dehydration Equipment sparation Equipment, Heater Treater surface Pumps littlers little	20,760 \$18.00 10,000 \$ 5.86	31101 31102 31103 31103 31104 31106	\$00,500 \$113,200	32101 32102 32102 32104 32106 32106 32106 32109 32110 32111 32112 32121 32122 32122	\$273,500 \$55,509 \$31,200 \$12,000 \$142,000 \$42,000 \$15,000 \$15,000 \$100 \$100 \$100 \$100 \$100 \$100 \$100	33100 33100 33100 33100 33100 33100 33101 3311 3311 331 3311 3311 3311 3311 3311 3311 3311 3311 3311 3311 3311 3311 331 3311	\$00 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	\$58, \$112, \$
ioneductor urface Gazing st idearmedute Casing / Liner do Intermedute Casing / Liner do Intermedute Casing / Liner do Intermedute Casing / Liner ading Tie Back aling Tie Back liner Hanger Assembly ubbig automatic - OHMS / Bc. lethe ad Equipment - OHMS / Bc. lethe ad Equipment - Base tools / Pony Rods / Sinker Bars staffeal kill Office - Gas kill vollhead Equipment Omptetions - Production Tree ans / Trank Steps / Salirs ass Treating / Dehydration Equipment sparation Equipment, Heater Treater surface Pumps littlers little	20,760 \$18.00 10,000 \$ 5.85	31101 31102 31103 31103 31104 31106	\$08,500	32101 32102 32102 32103 32104 32106 32106 32107 32111 32112 32113 32114 32114 32116 32117 32118 32117 32118 32119 32120 32121 32122 32123 32122 32123 32123 32123 32124 32123 32124 32123 32124 32125 32127 32127 32128	\$373,600 \$48,500 \$311,200 \$27,000 \$14,000 \$42,000 \$40,	33100 33100 33100 33100 33100 33100 33101 3311 33111 3311 33111 33111 33111 33111 33111 33111 33111 33111 33111 33111 3311 3311 33111 33111 33111 33111 33111 33111 33111 33111 33111 33111 3311 3311 33111 33111 33111 33111 33111 33111 33111 33111 33111 33111 3311 33111 3	\$00 \$10 \$40,000 \$10 \$40,000 \$1	\$58, \$112, \$112, \$122, \$124, \$
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Catena Resources Operating, LLC – Discussion Timeline

Wells

Mariner 1H well

Catena's conversations with Marathon began on December 6, 2019. From that time on, multiple emails, phone calls, proposals and letters were exchanged. The main contact at Marathon is Jeff Broussard and as of August 3, 2020, dealings with Marathon are ongoing.

15531039_v1

BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico

Exhibit No. A5

Submitted by: Catena Resources Operating, LLC
Hearing Date: October 08, 2020

Case No. 21459

APPLICATION OF CATENA RESOURCES OPERATING, LLC FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NO. 21459

AFFIDAVIT OF VINCE SMITH

Vince Smith, of lawful age and being first duly sworn, declares as follows:

1. My name is Vince Smith. I work for Catena Resources Operating, LLC ("Catena")

as a Geologist.

2. I have previously testified before the New Mexico Oil Conservation Division as an

expert witness in petroleum geology. My credentials as a petroleum geologist have been accepted

by the Division and made a matter of record.

3. I am familiar with the application filed by Catena in this matter, and I have

conducted a geologic study of the lands in the subject area.

4. Catena is initially targeting the Wolfcamp 'A' Lower interval of the Wolfcamp

formation. Exhibit B-1 is a subsea structure map that I prepared for this interval with 25-foot

contours. The proposed horizontal well spacing unit is highlighted in red and the initial well is

depicted with a green dashed line. The structure map shows the Wolfcamp formation dipping

gently to the south. The structure appears consistent across the proposed spacing unit and I do not

observe any faulting, pinch outs, or other geologic impediments to drilling horizontal wells in this

area.

5. Exhibit B-1 also shows a cross-section line in red running south to north reflecting

four (4) wells penetrating the Wolfcamp formation that I used to construct a stratigraphic cross-

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Case No. 21459

section from A to A'. These wells contain good logs and I consider them representative of the geology in the subject area.

- 6. **Exhibit B-2** is a stratigraphic cross-section that I prepared using the logs from the wells noted on Exhibit B-1. Each well in the cross-section contains the gamma ray in the first track, resistivity in the second track and porosity curves in the third track. The initial target interval is labeled and marked. The cross-section demonstrates that the targeted interval is continuous across the proposed spacing unit.
- 7. Based on my geologic study, the Wolfcamp formation underlying the subject area is suitable for development by horizontal wells and the acreage comprising the proposed spacing unit will be productive and contribute proportionately to the production from the well.
- 8. **Exhibit B-1** also shows the orientation of the wells drilled in the Wolfcamp formation in the surrounding area. The stand-up orientation of the proposed well is the preferred orientation for horizontal well development in this area and is appropriate to efficiently and effectively develop the subject acreage.
- 9. In my opinion, the granting of Catena's application is in the best interest of conservation, the prevention of waste, and protection of correlative rights.
- 10. **Exhibits B-1** through **B-2** were either prepared by me or compiled under my direction and supervision.

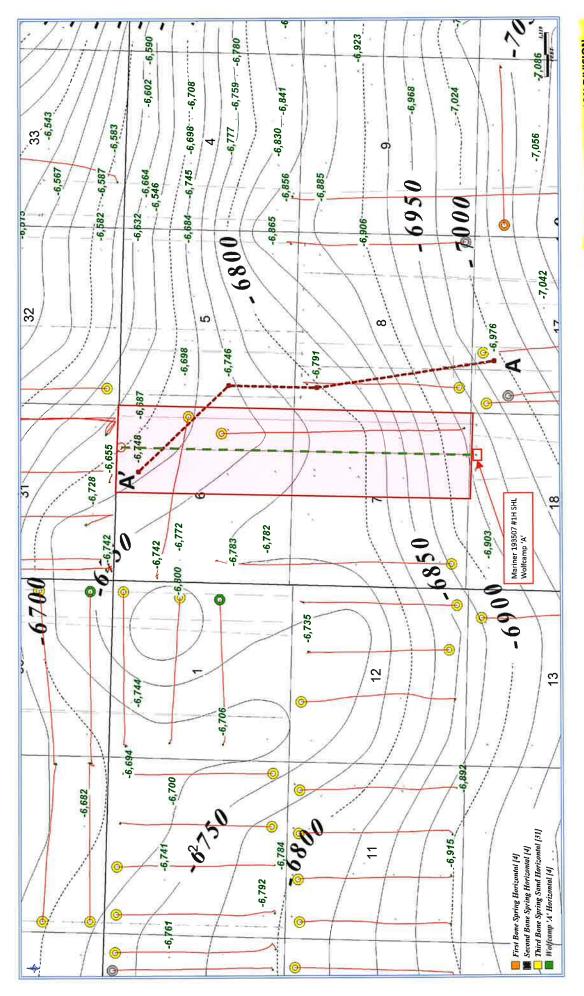
FURTHER AFFIANT SAYETH NOT.

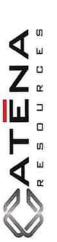
VINCE SMITH

STATE OF TEXAS COUNTY OF BEXAR)))
SUBSCRIBED and SWOR	RN to before me this Utday of OCT 2020 by Vince Smith.
CAITLIN MARY HART Notary Public, State of Texas Comm. Expires 12-05-2023 Notary ID 132274509	NOTARY PUBLIC
My Commission Expires:	

Wolfcamp 'A'

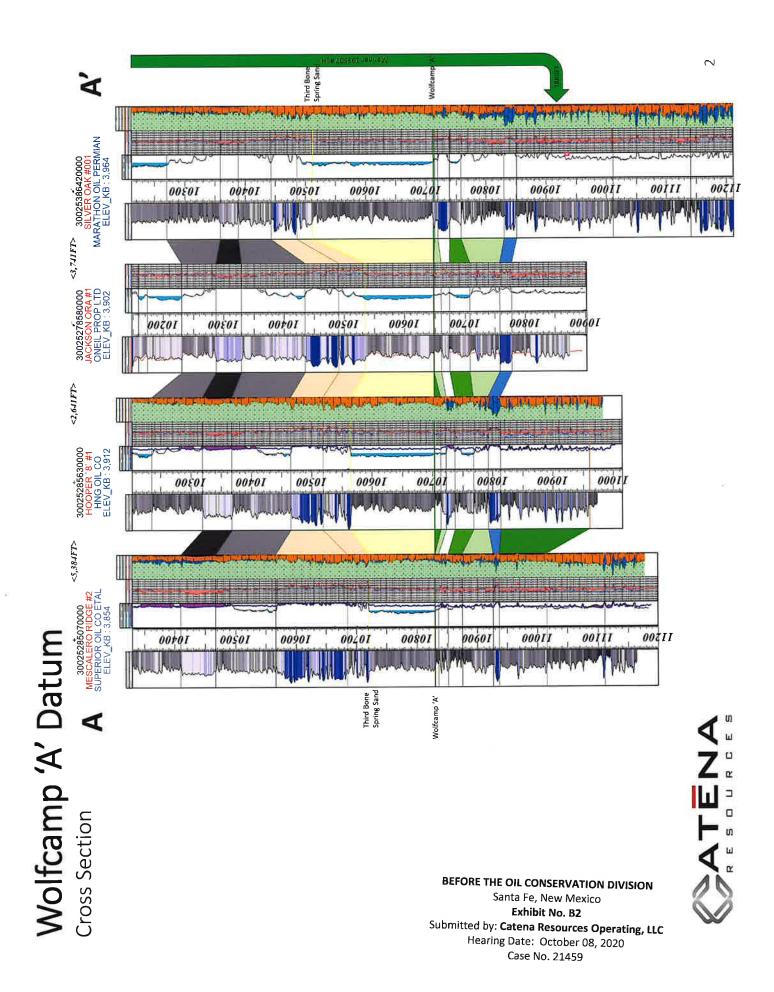
Subsea Structure





Contour Interval = 25'

Santa Fe, New Mexico
Santa Fe, New Mexico
Exhibit No. B1
Submitted by: Catena Resources Operating, LLC
Hearing Date: October 08, 2020
Case No. 21459



APPLICATION OF CATENA RESOURCES OPERATING, LLC FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NO. 21459

AFFIDAVIT

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

Kaitlyn A. Luck, attorney in fact and authorized representative of Catena Resources Operating, LLC the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application has been provided under the notice letters and proof of receipts attached hereto.

Kaitlyn A. Luck

SUBSCRIBED AND SWORN to before me this 5th day of October, 2020 by Kaitlyn A. Luck.

My Commission Expires:

Nov.12,2023

OFFICIAL SEAL
Carla Garcia
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: Nov. 12, 2023

Notary Public

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico Exhibit No. C

Submitted by: Catena Resources Operating, LLC

Hearing Date: October 08, 2020 Case No. 21459



Michael H. Feldewert Phone (505) 988-4421 Fax (505) 983-6043 mfeldewert@hollanhart.com

September 18, 2020

VIA CERTIFIED MAIL CERTIFIED RECEIPT REQUESTED

TO: ALL INTEREST OWNERS SUBJECT TO POOLING PROCEEDINGS

Re: Application of Catena Resources Operating, LLC for Compulsory Pooling, Lea

County, New Mexico. Mariner 193507 1H Well

Ladies & Gentlemen:

This letter is to advise you that COG Operating Inc. has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Examiner on October 8, 2020, and the status of the hearing can be monitored through the Division's website at http://www.emnrd.state.nm.us/ocd/. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from subsequently challenging this matter.

During the COVID-19 Pubic Health Emergency, state buildings are closed to the public and hearings will be conducted remotely. To participate in the electronic hearing, see the instructions posted on the Oil Conservation Division "OCD Hearings" website at http://www.emnrd.state.nm.us/OCD/announcements.html.

Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter, please contact Robert Swann at (210) 775-6993 or at rswann@catenares.com.

Sincerely,

Michael H. Feldewert

ATTORNEY FOR CATENA RESOURCES OPERATING,

LLC

Catena - Mariner 193507 1H Case No. 21459 Postal Delivery Report

						Your item was delivered at Sep 22 in
9414811898765827198668	COG Operating	600 W Illinois Ave	Midland	ĭ	79701-4882	MIDLAND,TX 79701.
9414811898765827198156	Prospector LLC	PO Box 429	Roswell	Σ	88202-0429	Your item was delivered at Sep 23 in ROSWELL,NM 88201.
9414811898765827198163	Big Three Energy Group LLC	PO Box 429	Roswell	Σ	88202-0429	Your item was delivered at Sep 23 in ROSWELL,NM 88201.
9414811898765827198125	Robert C Hooper	PO Box 773	Roswell	Σ	88202-0773	Returned
9414811898765827198101	Roy G Barton	1919 N Turner St	Hobbs	ΣZ	88240-2712	In Transit, Arriving Late at Sep 25 in
9414811898765827198149	Marathon Oil Company	PO Box 2069	Houston	×	77252-2069	Your item was delivered at Sep 22 in HOUSTON, TX 77002.
9414811898765827198187	James I. Riddle	4247 Goodfellow Dr	Dallas	¥	75229-2815	Awaiting Delivery Scan at Sep 22 in ,
9414811898765827198170	Donaldson Brown Trusts c/o Paul J. Haviland	PO Box 1183	Abingdon	MD	21009-6183	In Transit, Arriving Late at Oct 04 in ,
9414811898765827198316	Gabler Investments	1223 N 15th St	Wolfforth	¥	79382-3314	Your item was delivered at Sep 22 in WOLFFORTH, TX 79382.
9414811898765827198354	Merit Energy Partners IV, LP	13727 Noel Rd Ste 1200	Dallas	¥	75240-7362	In Transit, Arriving Late at Sep 25 in
9414811898765827198361	Merit Energy Partners VIII, LP	13727 Noel Rd Ste 1200	Dallas	¥	75240-7362	In Transit, Arriving Late at Sep 25 in , .
9414811898765827198620	Marathon	PO Box 2069	Houston	¥	77252-2069	Your item was delivered at Sep 22 in HOUSTON, TX 77002.
9414811898765827198323	Merit Energy Partners X, LP	13727 Noel Rd Ste 1200	Dallas	¥	75240-7362	In Transit, Arriving Late at Sep 25 in
9414811898765827198309	Merit Energy PartnersE-II, LP	13727 Noel Rd Ste 1200	Dallas	×	75240-7362	In Transit, Arriving Late at Sep 25 in
9414811898765827198392	Merit Energy Partners F-11 LP	13727 Noel Rd Ste 1200	Dallas	×	75240-7362	In Transit, Arriving Late at Sep 25 in
9414811898765827198347	Merit Energy Partners G, LP	13727 Noel Rd Ste 1200	Dallas	¥	75240-7362	In Transit, Arriving Late at Sep 25 in , .
9414811898765827198330	Merit Energy Partners G, LP	13727 Noel Rd Ste 1200	Dallas	¥	75240-7362	In Transit, Arriving Late at Sep 25 in
9414811898765827198378	Curtis W. Mewbourne	PO Box 7698	Tyler	¥	75711-7698	Your item was delivered at Sep 25 in TYLER,TX 75701.

Catena - Mariner 193507 1H Case No. 21459 Postal Delivery Report

9414811898765827198019	Fort Worth Mineral Co	500 Main St Ste 1200	Fort Worth TX		76102-3926	Your item was delivered at Sep 22 in 76102-3926 FORT WORTH, TX 76102.
9414811898765827198606	Оху	PO Box 4294	Houston	×	77210-4294	Your item was delivered at Sep 22 in 77210-4294 HOUSTON,TX 77002.
9414811898765827198699	Mewbourne	500 W Texas Ave Ste 1020	Midland	¥	TX 79701-4279	In Transit, Arriving Late at Sep 25 in
9414811898765827198644	Read & Stevens, Inc	PO Box 1518	Roswell	Σ	88202-1518	Your item was delivered at Sep 21 in ROSWELL,NM 88201.
9414811898765827198682	Featherstone	PO Box 429	Roswell	Σ	88202-0429	Your item was delivered at Sep 23 in R8202-0429 ROSWELL,NM 88201.
9414811898765827198637	9414811898765827198637 Resonance Resources Energy	9337B Katy Fwy Ste 315	Houston	¥	77024-1515	Your item was delivered at Sep 23 in 77024-1515 HOUSTON,TX 77024.
9414811898765827198675	Brian C. Reid & wife, Katherine	2502 Camarie Ave	Midland	¥	79705-6309	Your item was delivered at Sep 21 in MIDLAND,TX 79705.
9414811898765827198118	9414811898765827198118 Ross Duncan Properties LLC	PO Box 647	Artesia	ΣN	88211-0647	Your item was delivered at Sep 22 in NM 88211-0647 ARTESIA,NM 88210.

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 September 22, 2020 and ending with the issue dated September 22, 2020.

Sworn and subscribed to before me this 22nd day of September 2020.

Business Manager

My commission expires

January 29, 2023

OFFICIAL SEAL **GUSSIE BLACK** Notary Public State of New Mexico My Commission Expires

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

LEGAL NOTICE September 22, 2020

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

The State of New Mexico, Energy Minerals and Natural Resources Department, Oil Conservation Division ("Division") hereby gives notice that the Division will hold public hearings before a hearing examiner on the following case. During the COVID-19 Public Health Emergency, state buildings are closed to the public and Division hearings will be conducted remotely. The public hearing for the following case will be electronic and conducted remotely. The hearing will be conducted on Thursday, October 8, 2020, beginning at 8:15 a.m. To participate in the electronic hearing, see the instructions posted below. The docket may be viewed at http://www.emnrd.state.nm.us/OCD/hearings.html or obtained from Marlene Salvidrez, at Marlene Salvidrez@state.nm.us. Documents filed in the case may be viewed at http://ocdimage.emnrd.state.nm.us/imaging/CaseFileCriteria.aspx. If you are an individual with a disability who needs a reader, amplifier, qualified sign language interpreter, or other form of auxiliary aid or service to attend or participate in a hearing, contact Marlene Salvidrez at Marlene.Salvidrez@state.nm.us, or the New Mexico Relay Network at 1-800-659-1779, no later than September 28, 2020. Persons may view and participate in the hearings through the following link and as indicated below:

https://nmemnrd.webex.com/nmemnrd/onstage/g.php?MTID=e126931b9c49e4f0_185ab46b8e33452c9

Event number: 146 604 0307

Event password: yWJvuXn3q67

Join by video: 1466040307@nmemnrd.webex.com

You can also dial 173.243.2.68 and enter your meeting number

Join by audio: 1-844-992-4726 United States Toll Free

Access code: 146 604 0307.

STATE OF NEW MEXICO TO: All named parties and persons having any right, title, interest or claim in the following case and notice to the public.

(NOTE: All land descriptions herein refer to the New Mexico Principal Meridian whether or not so stated.)

To: All overriding royalty interest owners and pooled parties, including: COG Operating; Marathon; Oxy; Mewbourne; Read & Stevens, Inc; Featherstone; Resonance Resources Energy; Brian C. Reid & wife, Katherine, their heirs and devisees; Ross Duncan Properties LLC; Prospector LLC; Big Three Energy Group LLC; Robert C. Hooper or Robert G. Hooper, his heirs and devisees; Roy G. Barton, his heirs and devisees; Marathon Oil Company; James I. Riddle, his heirs and devisees; Donaldson Brown Trusts; Gabler Energy Investments or Gabler Investments; Merit Energy Partners IV, LP; Merit Energy Partners VIII, LP; Merit Energy Partners X, LP; Merit Energy Partners E-II, LP; Merit Energy Partners F-11 LP; Merit Energy Partners G, LP; Curtis W. Mewbourne, his heirs and devisees; and Fort Worth Mineral Co.

Case No. 21459: Application of Catena Resources Operating, LLC for compulsory pooling, Lea County, New Mexico. Applicant in the above-styled cause seeks an order pooling all uncommitted interests in the Wolfcamp formation underlying a standard 640-acre, more or less, horizontal spacing unit comprised of the E/2 of Sections 6 and 7. Township 19 South, Range 35 East, NMPM, Lea County, New Mexico. Said horizontal spacing unit is to be initially dedicated to the proposed Mariner 193507 1H well to be horizontally drilled from a surface location in the NE/4 NE/4 (Unit A) of Section 18 to a bottom hole location in the NE/4 NE/4 (Unit A) of Section 6. The completed interval for the proposed well will remain within 330 feet of the W/2 E/2 of Sections 6 and 7 to include this offsetting acreage in a standard horizontal well spacing unit. Also, to be considered will be the cost of drilling and completing the well and the allocation of the cost thereof, the actual operating costs and charges for supervision, the designation of applicant as operator of the well and the proposed horizontal spacing unit, and a 200% charge for risk involved in drilling said well. Said area is located approximately 18 miles West of Hobbs, New Mexico. Mexico. #35831

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HOLLAND & HART LLC PO BOX 2208 SANTA FE,, NM 87504-2208

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. D

Submitted by: Catena Resources Operating, LLC

Hearing Date: October 08, 2020 Case No. 21459