BEFORE THE OIL CONSERVATION DIVISION EXAMINER HEARING OCTOBER 08, 2020

CASE No. 21461

RAMBO 193517 #3H WELL

LEA COUNTY, NEW MEXICO



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

CASE NO. 21461

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| ALL INFORMATION IN THE APPLICATION MUST B | SE SUPPORTED BY SIGNED AFFIDAVITS |
|--|---|
| Case: 21461 | 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 | Rambo 193517 3H 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 | W/2 of Sections 8 and 17, 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 Sections 8 and 17 Rambo 193517 3H well |
| Proximity Defining Well: if yes, description | Exhibit A-3 |
| Applicant's Ownership in Each Tract Well(s) | EXTINUIT A-3 |
| Name & API (if assigned), surface and bottom hale location, | Add wells as needed |
| footages, completion target, orientation, completion status | Add Aciis as liceaca |
| (standard or non-standard) | |
| Well #1 | Rambo 193517 #3H well (API # 30-025-pending) |
| vven nz | SHL: 190' FNL & 1230' FWL (Unit D), Sec. 20, T19S, R35E |
| | BHL: 100' FNL & 1280' FWL (Unit D), Sec. 8, T19S, R35E |
| | Completion target: Wolfcamp |
| | Well orientation: South to North |
| | Completion location: expected to be: proximity tract we |
| | 3 |
| Horizontal Well First and Last Take Points | See Exhibit A-1 |
| Completion Target (Formation, TVD and MD) | See Exhibit B |
| completion ranges (commutation) 115 and may | |
| 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): | towohull |
| Date: | 6-Oct-20 |
| | |

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

CASE NO. 21461

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 W/2 of Sections 8 and 17, 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 Rambo 193517 3H well to be horizontally drilled from a surface location in the NW/4 NW/4 (Unit D) of Section 20 to a bottom hole location in the NW/4 NW/4 (Unit D) of Section 8.
- 3. The completed interval for the proposed well will remain within 330 feet of the W/2 E/2 of Sections 8 and 17 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 NOS. 21461

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 W/2 of Sections 8 and 17, Township 19 South, Range 35 East, NMPM, Lea

County, New Mexico.

Catena seeks to initially dedicate this spacing unit to the proposed Rambo 193517 6.

3H well to be horizontally drilled from a surface location in the NW/4 NW/4 (Unit D) of Section

20 to a bottom hole location in the NW/4 NW/4 (Unit D) of Section 8. The completed interval for

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. 21461

the proposed well will remain within 330 feet of the W/2 E/2 of Sections 8 and 17 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 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. 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.

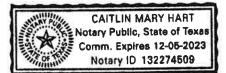
- 15. I have provided the law firm of Holland and Hart, LLP, with the names and addresses (where available) of the mineral owners that Catena seeks to pool and instructed that they be notified of this hearing.
- 16. Exhibits A-1 through A-5 were prepared by me or compiled under my direction from company business records.

FURTHER AFFIANT SAYETH NAUGHT.

ROBERT SWANN

| STATE OF TEXAS |) | | |
|-----------------|------------|-------|--------|
| COUNTY OF BEXAR |) | | |
| | 1.00000000 | into. | CHITCH |

SUBSCRIBED and SWORN to before me this Uth day of Otto 2020 by Robert Swann.



NOTARY PUBLIC

My Commission Expires:

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

District II
811 S, First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Azlec, NM 87410

Phone: (505) 334-6178 Fax: (505) 334-6170 <u>District IV</u> 1220 S, St, Francis Dr., Santa Fc, NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

¹ 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

☐ AMENDED REPORT

Scharb: Wolfcamp

| WEL | L LOCATION AN | D ACREAGE DEDICATION I | PLAT_ |
|-----|------------------------|------------------------|-----------|
| | ² Pool Code | 3 | Pool Name |

² Pool Code

55640

| | | | 550 10 Schlare/ 11011021115 | | | | | | | |
|--------------------|------------|------------|---------------------------------|---|-----------------------|------------------|---------------|-------|-----------|-------------|
| 4 Property | Code | | | | ⁵ Property | Name | | | 6 | Well Number |
| | | | Rambo 193517 3H | | | | | | | |
| 7 OGRID | No. | | 8 Operator Name 9 Elevation | | | | | | | |
| 32844 | 19 | | Catena Resources Operating, LLC | | | | | | | |
| | | | ¹⁰ Surface Location | | | | | | | |
| UL or lot no. | Section | Township | Range | Range Lot Idn Feet from the North/South line Feet from the East/W | | | | | | County |
| D | 20 | 19S | 35E | | 190' | FNL | 1230' | F۱ | NL | Lea |
| | | | л Bot | tom Hol | e Location It | Different Fron | m Surface | | | |
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/ | West line | County |
| D | 8 | 19S | 35E | | 100' | FNL | 1280' | F۱ | NL | Lea |
| 12 Dedicated Acres | 13 Joint o | r Infill 1 | ¹⁴ Consolidation | Code 15 Or | der No. | · | | | | |
| 640 | | | COM | | | | | | | |

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.

| _ | | | | | | | | | | |
|--------|------|----------------|---|--|--------|--------|--------|------------|--------|---|
| L 7 | SESW | l swsE | SESE | swsw | sesw 0 | 5 swse | l sese | swsw | SESW | ¹⁷ OPERATOR CERTIFICATION |
| L 1 | NENW | NWNE | NENE | 3H BHL & LTP 100' FNL 1280' FWL | NENW | NWNE | NENE | NWNW | I NENW | I hereby certify that the information contained herein is true and comple to the best of my knowledge and belief, and that this organization either 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 |
| L 2 | SENW | swne 07 | SENE | 8 19S 35E swnw | SENW | SWNE | SENE | sww 09 | I SENW | location pursuant to a contract with an owner of such a mineral or work interest, or to a voluntary pooling agreement or ampulsory pooling orde heretofore entered by the division. |
| L 3 | NESW | NWSE | NESE | NWSW | NESW | NWSE | NESE | NWSW | NESW | Signature Date |
| L 4 | SESW | swse | SESE | swsw | SESW I | SWSE | SESE | swsw | SESW | PrintedName E-mail Address |
| L 1 | NENW | NWNE | NENE | NWNW | I NENW | NWNE | NENE | NWNW | NENW | 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown onithplat was plotted from field notes of actual surveys made by |
| L 2 | SENW | swne 18 | SENE | SWNW | SENW | SWNE | SENE | sww | SENW | me or under my supervision, and that the same is true and correct to the best of my belief. |
| L 3 | NESW | NWSE | NESE Rambo 193517 | NWSW | NESW | NWSE | NESE | 16 NWSW | NESW | Date of Survey Signature and Seal of Professional Surveyor: |
| L 4 | SESW | SWSE | 3H 190' FNL 1230' FWL 20 19S 35E | wswa | SESW | SWSE | SESE | swsw | SESW | |
| L 1 | NENW | NWNE | l NENE | www & | NENW 2 | 0 NWNE | NENE | NWNW | NENW | Certificate Number BEFORE THE OIL CONSERVATION DIVISION |

Santa Fe, New Mexico

Exhibit No. A1

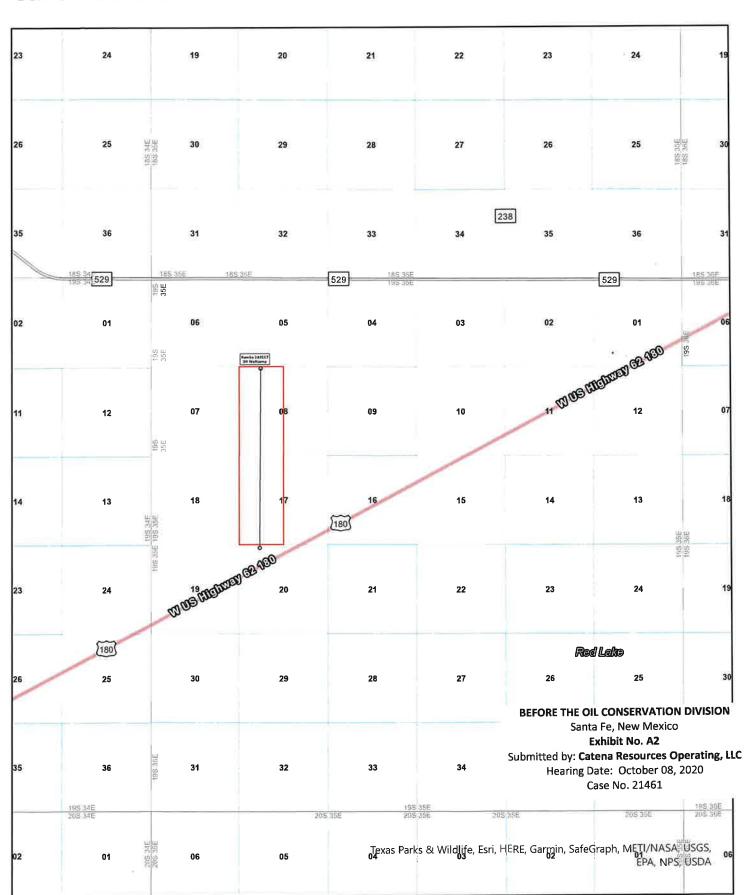
Submitted by: Catena Resources Operating, LLC Hearing Date: October 08, 2020 Case No. 21461

Catena Resources Operating, LLC

<u>Unit Name:</u> Rambo 193517 <u>Well Name:</u> Rambo 193517

Well No: 3H

Case Number: 21461



Catena Resources Operating, LLC

<u>Unit Name:</u> Rambo 193517 Well Name: Rambo 193517

Well No: 3H

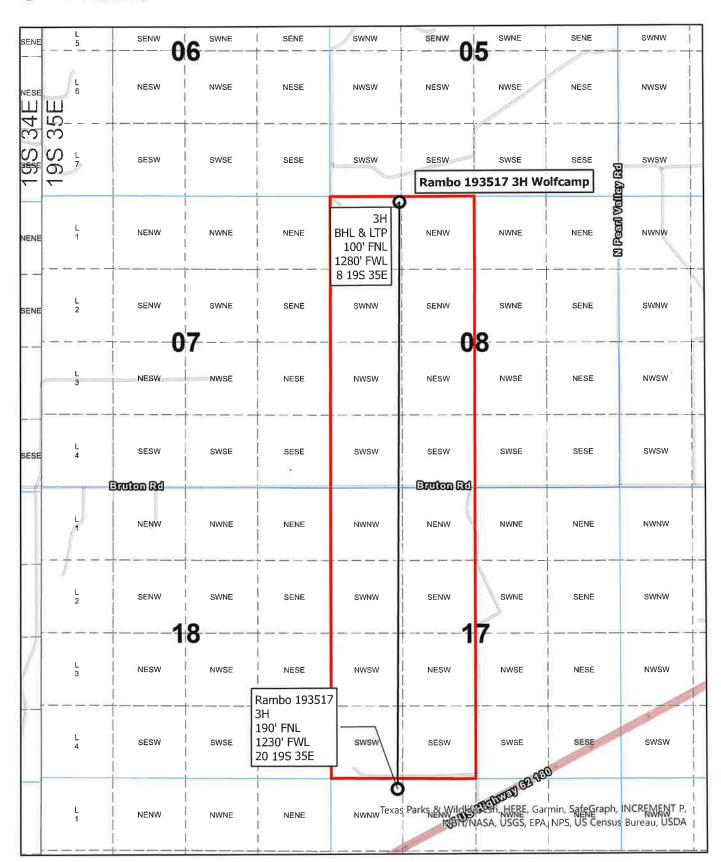
Case Number: 21461

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. 21461



| Tract No | Proposed Unit Gross | Record WI Owner | MC MI | Gross | Property Description | S | н | ~ | NMA | Tract WI | Tract Participation |
|----------|------------------------|---------------------------------|---------|-------|-------------------------|----|-----|-----|---------|----------|------------------------|
| 1 | 640 | Catena Resources Operating, LLC | 100.00% | 120 | E2NW, NESW | ∞ | 195 | 35E | 120 | 18.75% | 18.75% |
| 2 | 640 | 900 | 44.79% | 120 | W2NW, NWSW | 8 | 195 | 35E | 53.75 | 8.40% | 18.75% |
| 2 | 640 | Catena Resources Operating, LLC | 20.00% | 120 | W2NW, NWSW | 8 | 198 | 35E | 09 | 9.38% | 18.75% |
| 2 | 640 | Davis Partners, LTD | 5.21% | 120 | W2NW, NWSW | 8 | 19S | 35E | 6.25416 | 0.98% | 18.75% |
| 3 | 640 | 900 | 100.00% | 40 | SWSW | 8 | 198 | 35E | 40 | 6.25% | 6.25% |
| 4 | 640 | Catena Resources Operating, LLC | 75.00% | 40 | SESW | 8 | 198 | 35E | 30 | 4.69% | 6.25% |
| 4 | 640 | 500 | 25.00% | 40 | SESW | 8 | 198 | 35E | 10 | 1.56% | 6.25% |
| 2 | 640 | 500 | 100.00% | 80 | NZNW | 17 | 198 | 35E | 80 | 12.50% | 12.50% |
| 9 | 640 | 900 | 100.00% | 80 | S2NW | 17 | 198 | 35E | 80 | 12.50% | 12.50% |
| 7 | 640 | 500 | 100.00% | 80 | N2SW | 17 | 198 | 35E | 80 | 12.50% | 12.50% |
| 8 | 640 | 900 | 100.00% | 80 | S2SW | 17 | 195 | 35E | 80 | 12.50% | 12.50% |

| Record WI Owner | WC WI | WC WI NMA WC |
|---------------------------------|---------|--------------------|
| Catena Resources Operating, LLC | 32.81% | 210 |
| 900 | 66.21% | 423.75 |
| Davis Partners, LTD | 0.98% | 6.25416 |
| Totals | 100.00% | 100.00% 640.0042 |



July 23, 2020
Via Certified Mail

Re:

Rambo 193517 3H Well Proposal

Wolfcamp Formation

W/2 of Section 17 T19S, 35E, and Section 8, T19S, R35E

Lea County, New Mexico

Rambo 193517 4H Well Proposal

Bone Springs Formation

W/2 of Section 17 T19S, 35E, and Section 8, 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 Sec. 20 | BHL Sec. 8 | Spacing Unit 640 Acres | Target TVD | Estimated TMD |
|--|-------------------------|-------------------------|---|---------------|------------------|
| Rambo 193517 3H Wolfcamp Formation | FSL: 190' FWL: 1230' | FSL: 100' FWL: 1280' | W/2 of Section 17, T19S, 35E and Section 8, T19S, R35E | 10,054' | 20,758' |
| Rambo 193517 4H Bone Spring Formation | FSL: 190' FWL: 1330' | FSL: 100' FWL: 1280' | W/2 of Section 17, T19S, 35E and Section 8, T19S, R35E | 9,785' | 20,489' |

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

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. 21461

Robert Swann

Land Manager



| | | | | | | | | AFE NO. |
|---|-----------------------|------------------------|---|---|----------------|---|---|---|
| | | VELL COST ES | TIMATE | | _ | | | _ |
| ENA WELL NAME: | Rambo 19 | 3517 3H | | DATE: START DATE: | | 16-A | pr-20 | |
| RESCURCES LOCATION: | 2.0 sec. ta | | | COMPLETE DATE: | | | | |
| COUNTY/ST: | Les Count Wolfcamp | | | ORIGINAL: SUPPLEMENT: | * | | | |
| UBJELIVE | | | | SOLVEDNICAT: | | | | |
| INTANGIBLE COSTS | CODE | DRILLING - 310XX | ACCT CODE | COMPLETION - 320XX | | ODE | FACILITIES = 330XX | TOTAL |
| Legal Fees / Title Opinion | 31001 | \$50,000 | 32001 | \$0 | | 3001 | \$0 | \$50,000 |
| Surveys / Staking / Permits / Bonds / Regulatory | 31002 | \$25,700 | 32002 | 10 | | 3002 | \$0 \$0 | \$25,700 |
| ROW / Surface Damages Roads & Location / Reserve Pit - Construction | 31003 31004 | \$80,000 | 32003 32004 | \$0 | | 3 | 50 | \$60,000 |
| Roads & Location / Reserve Pit - Reclaimation | 31005 | ***//// | 32005 | \$0 | | - 3 | \$0 | 50 |
| Frac Pond | 31006 | | 32006 | 50 | | | 10 | 50 |
| Gate Guard Mouse / Rathole / Conductor | 31007 31008 | \$19,000 | 32007 | 10 | | - 3 | \$0 | \$19,000 |
| Mobilization / Demobilization | 31009 | \$230,675 | 32008 | 50 | | | 50 | \$230,675 |
| Drilling - Daywork Drilling - Footage | 31010 31011 | \$574,646 | | \$0 | | - 9 | \$0 \$0 | \$574,648 |
| Drilling - Footage Drilling - Turnkey | 31012 | - 5 | | 10 | | | 50 | 31 |
| Completion / Snubbing / Workover Unit | 31013 | | 32009 | \$40,000 | | | 10 | \$40,000 |
| Trailer House / Communications Drill Bits | 31014 31015 | \$43,572 | 32010 32011 | \$24,200 | \vdash | | \$0 | \$103,000 |
| Directional Equipment / Gyro Surveys | 31016 | \$266,326 | 32012 | \$0 | | | 10 | \$266,320 |
| Downhole Tool / Stabilization Rental | 31017 | \$57,075 | 32013 | \$34,000 | \Box | | 50 | \$91,071 \$924,051 |
| Mud / Chemicals Fuel / Power | 31018 31019 | \$222,558 \$116,482 | 32014 32015 | \$601,500 \$471,800 | \vdash | | 50 | 155R.28 |
| Water Supply Well, equipment | 31020 | \$3,003 | 32016 | \$0 | | | \$0 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Water / Water Hauling | 31021 | | 32017 | \$816,550 | - | | \$0 \$0 | \$916,554 \$315,271 |
| Offsite Water & Cuttings Disposal Transportation / Hauling | 31022 31023 | \$284,770 | 32018 32019 | \$30,500 | | 3009 | \$15,000 | \$46,00 |
| Inspection / Tubular Testing | 31024 | \$101,000 | 32020 | \$0 | | - 1 | 10 | \$101,00 |
| Laydown Machine / Casing Crew / Tongs | 31025 31026 | \$62,190 \$65,072 | 32021 32022 | \$0 | | | 50 | \$62,150 \$65,07 |
| Cementing, Roat Equipment & Services Mud Logging | 31026 | \$35,343 | 32022 | \$0 | | | 10 | \$35,34 |
| Logging - Open Hole | 31028 | - 100-50 | 32023 | 10 | | | \$0 | |
| Logging - Cased Hole | 31029 | | 32024 | \$13,000 | \blacksquare | | \$0 \$0 | \$13,00 |
| Coring & Analysis, Drill Stem Test Perforating | 31030 31031 | - | 32025 | \$421,200 | 1 1 | | 10 | \$421,20 |
| Wireline / Slickline Services | 31032 | | 32026 | \$15,000 | | | \$0 | \$15,00 |
| Equipment Rental | 31033 31034 | \$163,605 | 32027 32028 | \$236,000 \$21,000 | | | \$0 | \$399,80 |
| Pumping Services/Rental Acidizing & Fracturing | 31035 | | 32029 | \$2,479,000 | H | | \$0 | \$2,479,00 |
| Coil Tubing Unit | 31036 | | 32030 | \$120,000 | | | 50 | \$120,00 |
| Row Testing, Swabbing Rishing / Sidetrack Services | 31037 31038 | | 32031 32032 | \$95,975 | | | \$0 \$0 | \$95,97 |
| Nipple Up / BOPE Testing | 31039 | \$6,400 | 32033 | \$23,000 | | | \$0 | \$29,40 |
| Overhead | 31040 | \$8,000 | 32034 | \$19,500 | | | 50 | \$27,50 |
| Wellska Consulting Services/Supervision | 31041 31042 | \$170,628 | 32035 32036 | \$153,560 \$35,500 | | 13003 | \$20,000 | \$344,67 \$75,50 |
| Engineering / Geological / Lab Service: Tracers and diagnostics Roustabout / Contract Labor | 31043 | \$0,490 | 32037 | \$0 | 111 | 3004 | \$160,000 | \$168,48 |
| Welding Services | 31044 | \$5,120 | 32038 | 10 | | 3005 | 50 | \$5,12 \$10,00 |
| Insurance Miscellaneous | 31045 31046 | \$10,000 | 32039 32040 | \$0 \$0 | | 33005 | 50 | \$10,00 |
| P&A Costs | 31047 | | 32041 | \$0 | 7 | | 10 | |
| Safety/ EH&S | 31049 31049 | \$141,973 | 32042 32043 | \$0,610 | | 53007 | \$10,500 | \$463.67 |
| 5.5% Contingency (8% Taxes on Casing included in casing cost) NON-Op Drilling Intangible | 31050 | *191,873 | 32044 | \$0 | | | 10 | |
| Pigeline Installation / Interconnect | 31051 | | 32045 | \$5,969,385 | | 33008 | \$220,500 | \$9,171,00 |
| TOTAL INTANGBLE COSTS | _ | \$2,591,422 | 10. | \$3,265,005 | | | ******* | *************************************** |
| TANGIBLE COSTS | ACCT | DRILLING - 311XX | ACCT CODE | COMPLETION - 321XX | | ACCT | FACILITIES - | TOTAL |
| Size Feet SIF | CODE | | | | 1 1 | ODE | 33188 | |
| Conductor | 31101 | | | | | | | |
| Surface Casing 13 3/8" | 31102 | \$68,600 | | | | | | \$69,60 \$113,20 |
| 1st Intermediate Casing / Liner 959* 2nd Intermediate Casing / Liner | 31103 | \$113,200 | | | | | | \$113,20 |
| Production Casing / Liner 5 1/2 21,500 5 | 6.00 | | 32101 | \$430,000 | | | | \$430,00 |
| Casing Tie Back | | | 32102 32103 | | + | | - | |
| Liner Hanger Assembly Tubing 2,975 10,500 5 | 5.85 | | 32103 32104 | \$61,425 | | | | \$61,42 |
| Casing Equipment - OHMS / Etc. | - | | 32105 | \$31,200 | | | | \$31,20 |
| Wellhead Equipment | 31105 | \$52,000 | 32106 32107 | \$27,000 | | 33101 | 50 | \$79,00 |
| Pumping Unit / Prime Mover / Base Rods / Pony Rods / Sinker Bars | | | 32108 | 10 | | 33102 | 50 | |
| Artificial Lift Other - Gas Lift | | | 32109 | \$14,000 | | 33103 | 50 | \$14,00 |
| Wellhead Equipment Completions - Production Tree | 11.5 | - | 32110 32111 | \$42,000 | | 33104 33105 | \$60,000 | \$42,00 \$66,00 |
| Gas Treating / Dehydration Equipment | | | 32112 | \$0 | | 33106 | 50 | |
| CONTRACTOR | | | 32113 | \$0 | | 33107 | \$68,200 | 168,20 |
| Separation Equipment, Heater Treater | | | 32114 | 50 | | 3310B 33109 | \$3,000 | \$3,00 |
| Surface Pumps | 1 | | 32115 | 50 | | | | 1 |
| | 12 | | 32116 | \$0 | | 33110 | 20 | |
| Surface Pumps Riters Buildings Intoconnect Piping / Manifolds / Headers | | | 32116 32117 | \$0 50 | | 33111 | \$60,000 | \$60,00 |
| Surface Plumps Hitters Buildings Interconnect Piping / Manifolds / Headers Howlines / Connections / Valves | | | 32116 32117 32118 | \$0 | | | \$60,000 \$46,960 \$16,000 | \$46,96 \$16,00 |
| Surface Pumps Filters Buildings Intoconnect Piping / Manifolds / Headers | | | 32116 32117 32118 32119 32120 | \$0 \$0 \$0 \$0 \$0 | | 33111 33112 33113 33114 | \$46,960 \$16,000 \$52,000 | \$46,96 \$18,00 \$62,00 |
| Surface Pumps Hiters Buildings Hertconnect Piping / Manifolds / Headers Howlines / Connections / Valvas Automation / Instruments / Controls / Analyzers Bectrical Equipment / Cenerators Dempressor & Rolated Equipment | | | 32116 32117 32118 32119 32120 32121 | \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$ | | 33111 33112 33113 33114 33115 | \$46,960 \$16,000 \$52,000 \$0 | \$46.96 \$16.00 \$52.00 |
| Surface Pumps Hiters Sulfdings Interconnect Piping / Manifolds / Headers Howlines / Connections / Valves Automation / Instruments / Control s / Analyzers Bestrical Equipment / Generators Compressor & Rolated Equipment Meeting Equipment, LACT Unit. | | | 32116 32117 32118 32119 32120 | \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$ | | 33111 33112 33113 33114 | \$46,960 \$16,000 \$52,000 | \$46,96 \$16,00 \$52,00 \$ \$104,00 |
| Surface Pumps Filters Buildings Het connect Piping / Manifolds / Headers Howlines / Connections / Valves Automation / Instruments / Control of Analyzers Beetrical Equipment / Control ors Compressor & Related Equipment Metering Equipment, LACT Unil Chemical Equipment / Control ors Suburdrace Exployment / Packer, Plugs , TAC | | | 32116 32117 32118 32119 32120 32121 32122 32123 32123 | \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,000 | | 33111 33112 33113 33114 33115 33116 33117 33118 | \$46,000 \$16,000 \$52,000 \$0 \$104,000 \$0 | \$46,96 \$18,00 \$62,00 \$104,00 \$104,00 |
| Surface Pumps Hiters Buildings Interconnect Piping / Manifolds / Headers Howlines / Connections / Valvas Automation / Instruments / Controls / Analyzers Bectrical Equipment / Centrols / Analyzers Dectrical Equipment (Senter Equipment Metering Equipment, LACT Unil Chemical Equipment / Cathodic Protection Subcurface Equipment - ACA Safety / SANS Equipment | | | 32116 32117 32118 32119 32120 32121 32122 32122 32123 32124 32125 | \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,000 | | 33111 33112 33113 33114 33115 33116 33117 33118 33119 | \$45,950 \$16,000 \$52,000 \$104,000 \$104,000 \$0 \$104,000 | \$46,96 \$18,00 \$52,00 \$104,00 \$11,00 \$40,00 |
| Surface Pumps Filters Buildings Het connect Piping / Manifolds / Headers Howlines / Connections / Valves Automation / instruments / Control of Analyzers Bectifical Equipment / Control or S Compressor & Related Equipment Metering Equipment, LACT Unit Chemical Equipment / Control or S Suburface Equipment / Control or S Suburface Equipment / Cathodic Protection Suburface Equipment / Packer, Plugs , TAC Safety / EM&S Equipment | | | 32116 32117 32118 32119 32120 32121 32122 32123 32123 | \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,000 | | 33111 33112 33113 33114 33115 33116 33117 33118 | \$46,960 \$16,000 \$52,000 \$104,000 \$104,000 \$10,000 \$35,000 \$10,000 | \$18,00 \$18,00 \$52,00 \$104,00 \$11,00 \$40,00 |
| Surface Pumps Filters Buildings filters Buildings filterconnect Piping / Manifolds / Headers Rowlines / Connections / Valves Automation / Instruments / Controls / Analyzers Beclifical Equipment / Controls / Analyzers Compressor & Robited Equipment Matering Equipment, LACT Unit Chemical Equipment / Cathodic Protection Suburface Equipment / Cathodic Protection Suburface Equipment / Packer, Pilugs, TAC Safety / PilaS Equipment NoN-OP Ortiling Inlangible Transfer/SWD Pumps & Equipment Frare / Combustor | | | 32116 32117 32118 32119 32120 32121 32122 32123 32124 32125 32126 32127 32127 | \$0 \$5 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,00 \$4,00 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$1,00 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 | | 33111 33112 33113 33114 33115 33116 33117 33118 33119 33120 33121 33122 | \$46,950 \$16,000 \$52,000 \$104,000 \$10 \$104,000 \$10 \$10,000 \$13,000 \$13,000 | \$46,96 \$18,90 \$52,00 \$104,00 \$11,00 \$40,00 |
| Surface Pumps Filters Buildings Interconnect Piping / Manifolds / Headers Flowlines / Connections / Valvase Automation Instruments / Controls / Analyzers Bectrical Equipment / Centrols / Analyzers Dectrical Equipment Centrols / Analyzers Matering Equipment Cathodic Protection Subcurface Equipment / Cathodic Protection Subcurface Equipment - Packer, Plugs, TAC Safety / EMS Equipment NON-OP Orilling Intangible Transfer/SWD Pumps & Equipment Fare / Combustor Miscellaneous | 31106 | 111 EM | 32116 32117 32118 32120 32120 32121 32122 32123 32124 32125 32126 32127 32128 | \$0 \$5 \$0 \$0 \$0 \$1 \$0 \$1,000 \$4,000 \$2,410 \$2,410 | | 33111 33112 33113 33114 33115 33116 33117 33118 33119 33120 33121 33122 33123 | \$46,960 \$16,000 \$52,000 \$104,000 \$104,000 \$10 \$20 \$10,000 \$10, | \$46,96 \$18,00 \$52,00 \$104,00 \$11,00 \$40,00 \$40,00 \$32,44 |
| Surface Pumps Filters Buildings filters Buildings filterconnect Piping / Manifolds / Headers Rowlines / Connections / Valves Automation / Instruments / Controls / Analyzers Beclifical Equipment / Controls / Analyzers Compressor & Robited Equipment Matering Equipment, LACT Unit Chemical Equipment / Cathodic Protection Suburface Equipment / Cathodic Protection Suburface Equipment / Packer, Pilugs, TAC Safety / PilaS Equipment NoN-OP Ortiling Inlangible Transfer/SWD Pumps & Equipment Frare / Combustor | 31106 31107 | \$11,600 | 32116 32117 32118 32119 32120 32121 32122 32123 32124 32125 32126 32127 32127 | \$0 \$5 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,00 \$4,00 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$1,00 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 | | 33111 33112 33113 33114 33115 33116 33117 33118 33119 33120 33121 33122 | \$46,950 \$16,000 \$52,000 \$104,000 \$10 \$104,000 \$10 \$10,000 \$13,000 \$13,000 | \$ \$24,41 \$42,72 \$1,424,77 |
| Surface Pumps Filters Buildings functionnect Piping / Manifolds / Headers Rowlines / Connections / Valves Automation / Instruments / Controls / Analyzers Beetifical Equipment / Generators Compressor & Robited Equipment Metering Equipment, LACT Unit Chemical Equipment / Tothodic Protection Suburlace Equipment / Post Protection Suburlace Equipment / Post Protection Safety / PMS Equipment NoN-OP Ortiling Inlangible Transfer/SWD Pumps & Equipment Frare / Combustor Misc ellaneous Constingancy Costs. | | | 32116 32117 32118 32120 32120 32121 32122 32123 32124 32125 32126 32127 32128 | \$0 \$1 \$0 \$1 \$0 \$1 \$1 \$1,00 \$4,00 \$2 \$2 \$3,03 | | 33111 33112 33113 33114 33115 33116 33117 33118 33119 33120 33121 33122 33123 | \$46,960 \$16,000 \$52,000 \$0 \$104,000 \$10 \$35,000 \$19,060 \$32,000 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 | \$46,96 \$18,00 \$52,00 \$104,00 \$110,00 \$40,00 \$40,00 \$24,41 \$42,72 \$1,424,72 |

This AFE is only an estimate: By returning one signed copy, you agree to say your share of the actual costs incurred Eathra Expense Insurance

ether box as checked above, non-operating working interest ow her elects to be convered by Operator's wiell control maurans.

___ Signature:__

| | | | | | | | | | AFE NO. |
|---|-------------------------------|-------------|-----------------------|--------------------|-----------------------------|----------|----------------|-----------------------|--------------------------|
| ON A TENIA | 720 | | ELL COST EST | IMATE | | | 16-Ap | 70 | |
| | ELL NAME: Range ELD NAME: | 1bo 193 | 517 4H | | DATE: START DATE: | | 16-A | or-20 | |
| | | County | | | COMPLETE DATE: ORIGINAL: | | | | |
| | | e Sprin | | | SUPPLEMENT: | | | | |
| INTANGIBLE COSTS | | сст | DRILLING- | ACCT CODE | COMPLETION - 320XX | T | ACCT | FACILITIES = 330XX | TOTAL |
| Legal Fees / Title Opinion | | ODE 1001 | 310XX \$50,000 | 32001 | \$0 | \vdash | 33601 | 330XX | \$50,000 |
| Surveys / Staking / Permits / Bonds / Regulatory | 3: | 1002 | \$25,700 | 32002 | \$0 | | 33002 | \$0 | \$25,700 |
| ROW / Surface Damages Roads & Location / Reserve Pit - Construction | | 1003 | \$60,000 \$90,000 | 32003 32004 | \$0 | + | ł | 10 | \$90,000 |
| Roads & Location / Reserve Pit - Reclaimation | 3 | 1005 | | 32005 | \$0 | | | \$0 | 10 |
| Frac Pond Gale Guard | | 1006 | _ | 32006 32007 | 50 | Н | ŀ | \$0 | 50 |
| Mouse / Rathole / Conductor | 3 | 1008 | \$19,000 | | \$0 | | Ţ | \$0 | \$19,000 |
| Mobilization / Demobilization Drilling - Daywork | | 1009 | \$475,000 | 32008 | 50 | | ł | \$0 \$0 | \$230,675 |
| Drilling - Daywork Drilling - Footage | | 1011 | PA10,000 | | 50 | | , t | \$0 | \$0 |
| Drilling - Turnkey | | 1012 | | 32009 | \$40,000 | | 1 | \$0 \$0 | \$40,000 |
| Completion / Snutbing / Workover Unit Trailer House / Communications | | 1013 | \$43,672 | 32010 | \$24,200 | | ı | 50 | \$67,772 |
| Drill Bits | 3 | 1015 | \$85,000 | 32011 | 50 | | - 1 | \$0 \$0 | \$85,000 |
| Directional Equipment / Gyro Surveys Downhole Tool / Stabilization Rental | | 1016 | \$228,000 | 32012 32013 | \$34,000 | | Ì | 50 | \$91,076 |
| Mud / Chemicals | 3 | 1018 | \$200,000 | 32014 | \$601,500 | | | \$0 | \$801,500 |
| Fuel / Power | | 1019 | \$104,500 | 32015 32016 | \$471,800 | + | 1 | \$0 \$0 | \$576,300 |
| Water Supply Well, equipment Water / Water Hauling | 3 | 1021 | | 32017 | \$916,550 | | ļ | 10 | \$616,550 |
| Offsite Water & Cuttings Disposal | | 1022 | \$243,056 \$31,000 | 32018 32019 | \$30,500 | \vdash | 22009 | \$15,000 | \$273,556 \$46,000 |
| Transportation / Hauling Inspection / Tubular Testing | | 1024 | \$90,854 | 32020 | 50 | | | 50 | 195,654 |
| Laydown Machine / Casing Crew / Tongs | | 1025 | \$58,245 | 32021 | 50 | Ш | 1 | 50 | \$58,246 \$62,458 |
| Cementing, Roat Equipment & Services Mud Logging | | 1026 | \$35,343 | 32022 | \$0 \$0 | | | \$0 \$0 | \$35,343 |
| Logging - Open Hole | 3 | 1028 | | 32023 | \$0 | | | 50 | \$0 |
| Logging - Cased Hole | | 1029 | | 32024 | \$13,000 | | | \$0 \$0 | \$13,000 |
| Coring & Analysis, Drill Stem Test Perforating | 3 | 1031 | | 32025 | 5421,700 | | | \$0 | \$421,200 |
| Wireline / Slickline Services | 3 | 1032 | \$149,580 | 32026 32027 | \$18,000 \$236,000 | | | \$0 \$0 | \$15,000 \$385,680 |
| Equipment Rental Pumping Services/Rental | | 1034 | \$169,000 | 32028 | \$21,000 | | 1 | \$0 | |
| Acidizing & Fracturing | 3 | 1035 | | 32029 | \$2,175,000 | \Box | | 10 | \$2,175,000 \$120,000 |
| Coil Tubing Unit Flow Testing, Swabbing | | 1036 | | 32030 32031 | \$120,000 \$95,875 | + | | 10 | \$95,875 |
| Fishing / Sidetrack Services | 3 | 103B | 1 | 32032 | \$0 | | 1 | 10 | \$0 |
| Nipple Up / BOPE Testing | | 1039 | \$6,400 \$8,000 | 32033 32034 | \$23,000 \$19,500 | + | | \$0 \$0 | \$29,400 \$27,500 |
| Overhead Wellsite Consulting Services/Supervision | | 1041 | \$155,861 | 32036 | \$163,860 | | 33003 | \$20,000 | \$333,811 |
| Engineering / Geological / Lab Service Tracers and diag | | 1042 | \$25,000 | 32036 | \$35,500 | | 33004 | \$15,000 \$160,000 | \$75,500 |
| Roustabout / Contract Labor Welding Services | | 1043 | \$8,460 \$6,120 | 32037 32038 | 50 | \vdash | 33004 | \$100,000 | 15,120 |
| Insurance | 3 | 1045 | \$10,000 | 32039 | \$0 | \Box | 33005 33006 | \$0 \$0 | \$10,000 |
| Miscellaneous P&A Costs | | 1046 | | 32040 32041 | 50 | + | 33006 | \$0 | 50 |
| Safety / EH&S | 3 | 1048 | | 32042 | \$6,610 | | 33007 | \$0 | \$6,610 |
| 5,5% Contingency (8% Taxes on Casing included in cas NON-Op Drilling Intangible | | 1049 | \$141,202 | 32043 32044 | \$311,200 | | | \$10,000 | \$462,902 |
| Pipeline Installation / Interconnect | | 1051 | | 32045 | \$0 | | 33008 | \$220,500 | \$8,594,409 |
| TOTAL INTANGBLE COSTS | | | \$2,708,524 | | \$5,666,305 | | | | 30,034,403 |
| TANGIBLE COSTS | | ODE | DRILLING - 311XX | ACCT CODE | COMPLETION - 321X | 4 | CODE | FACILITIES - 331XX | TOTAL |
| | Feet S/R | 1101 | | | | П | | | |
| Conductor Surface Casing 13 3.5 | | 1102 | \$69,600 | | 4 | 1 | | | \$63,600 |
| 1st Intermediate Casing / Liner 9.58* | | 11103 | \$113,200 | | | | | | \$113,200 \$0 |
| 2nd Intermediate Casing / Liner Production Casing / Liner 512 2 | 20,750 \$18.00 | 1104 | | 32101 | \$373,500 | | | | \$373,500 |
| Casing Tie Back | | | | 32102 | | | | | |
| Liner Hanger Assembly Tubing 2.875 | 10,000 S 5.85 | | | 32103 32104 | \$88,600 | | | | \$58,500 |
| Casing Equipment - OHMS / Bc | 202 | | une suite | 32106 | \$31,200 | | | | \$31,200 |
| Wellhead Equipment Pumping Unit / Prime Mover / Base | 3 | 1105 | \$26,750 | 32106 32107 | \$27,000 | | 33101 | 50 | \$53,750 |
| Rods / Pony Rods / Sinker Bars | 10 | | | 32108 | \$0 | | 33102 | 50 | 50 |
| Artificial Lift Other - Gas Lift | 10 | | | 32109 32110 | \$14,000 \$42,000 | | 33103 33104 | \$0 \$0 | \$14,000 |
| Wellhead Equipment Completions - Production Tree Tanks / Tank Steps / Stairs | | | | 32111 | 10 | | 33105 | \$56,000 | \$65,000 |
| Gas Treating / Dehydration Equipment | | | | 32112 | 50 | | 33106 | \$68,200 | \$68,200 |
| Separation Equipment, Heater Treater Surface Pumps | | | | 32113 32114 | \$6 | | 33107 | \$3,000 | \$3,000 |
| Filters | | | | 32115 | \$0 | | 33109 | 80 | |
| Buildings | | | | 32116 32117 | 50 | | 33110 | \$60,000 | \$60,000 |
| Interconnect Piping / Manifolds / Headers Rowlines / Connections / Valves | | | | 32118 | 50 | | 33112 | \$46,560 | 146,960 |
| Automation / Instruments / Controls / Analyzers | 10 | | | 32119 32120 | 50 | | 33113 | \$16,000 | \$16,000 \$52,000 |
| Bectrical Equipment / Generators Compressor & Related Equipment | 10 | | | 32121 | 50 | | 33115 | \$0 | \$0 |
| Metering Equipment, LACT Unit | 0 | | | 32122 32123 | 50 | | 33116 33117 | \$104,000 | |
| Chemical Equipment / Cathodic Protection Subsurface Equipment - Packer, Plugs, TAC | | | | 32124 | \$11,000 | | 33118 | 10 | \$11,000 |
| Safety / EH&S Equipment | | | | 32125 | \$4,000 | | 33119 | \$18,000 | |
| NON-OP Drilling Intangible Transfer/SWD Pumps & Equipment | | | | 32126 32127 | 50 | | 33120 33121 | \$19,060 | |
| Rare / Combustor | | | | 32128 | 50 | | 33122 | \$16,000 | \$0 |
| Miscellaneous Contingency Costs | | 1106 | \$11,590 | 32129 | \$24,410 \$29,000 | | 33123 33124 | \$0 | |
| TOTAL TANGBLE COSTS | | ,,,,,, | \$220,240 | 34.10 | \$613,670 | | | \$469,220 | \$1,303,130 |
| TOTAL WELL COSTS | | | \$2,928,764 | | \$6,279,055 | | | \$589,720 | \$9,897,539 |
| Prepared by | Travis Salinas | | Title: Engineer | | 14 | | | | |
| This AFE is only an estimate. By returning one signed copy, you | | e actual e | - 1 had a contract | | | | | | |
| Estra Expense Insurance | ered by Operator's Extra E | | | v my proportionals | share of the premium | | | | |
| | | | | ,y proportionalt | | | | | |
| | se my own well control ins | | | | | | | | |
| either taxe is checked above, non-operating working interest ow | ner elects to be covered by O | permitter's | WAS COTTON ASSESSED. | | | _ | | | |
| Joint Owner Interest: | Amount: | | | | | | | | |
| | | | | | | | | | |

COG Discussion

- 5/20/2020 COG / Catena talks about a term assignment for a single well.
 - After the term assignment was completed, Catena informed COG about other COG acreage that would be included in proposed Catena Units.
 - Several options were discussed about doing a letter agreement where COG would assign under the same terms for each unit Catena proposed.
- 6/10/2020 Proposal letters were sent out
- 6/11/2020-7/23/2020 Brent Sawyer and I discussed all units proposed, and executing the term assignment for all Catena Units. During this time multiple emails were exchanged between COG and Catena regarding spud dates, depths, ect.
- 8/6/2020 Brent Sawyer called me and notified me that Jennifer Midkiff would be my main
- 9/1/2020 Phone call with Jennifer Midkiff discussing possible options on Term Assignment and other questions about ownership
- 9/21/2020 Video conference was scheduled with Geologists, engineers and landman from Catena and COG to review the proposed wells.
 - o Geology slides and well information was sent to COG
- 9/28/2020 Follow up email was sent to Jennifer asking if she had any other questions, about the slides and information reviewed during the conference call
 - o No Response

15530587_v1

Case No. 21461

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

CASE NOS. 21461

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 dashed line. The structure map shows the Wolfcamp formation dipping gently to

the south-southeast. 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

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.

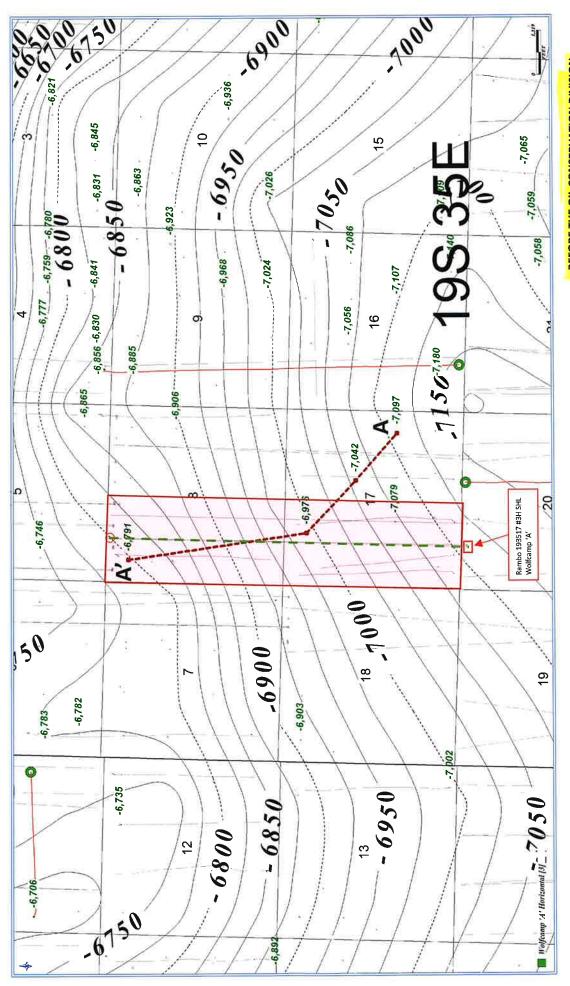
FURTHER AFFIANT SAYETH NOT.

VINCE SMITH

| STATE OF TEXAS COUNTY OF BEXAR |)) |
|--|--|
| CAITLIN MARY HART Notary Public, State of Texas Comm. Expires 12-05-2023 | N to before me this 1th day of 2020 by Vince Smith. NOTARY PUBLIC |
| My Commission Expires: 12/5/2023 | |

Wolfcamp 'A'

Subsea Structure





Contour Interval = 25'

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B1
Submitted by: Catena Resources Operating, LLC
Hearing Date: October 08, 2020
Case No. 21461

Third Bone Spring San À HOOPER '8' #1 HNG OIL CO ELEV_KB: 3,912 00±01 <5,384FT> MESCALERO RIDGE #2 SUPERIOR OIL CO ETAL ELEV_KB: 3,854 OOILI 00t01 <2,156FT> MOBIL-MESCALERO RIDG #1 WESTERN OIL PRODUCER ELEV_KB: 3,840 <1,889FT> 30025285610000 MESCLERO RIDG'A'COM#1 SUPERIOR OIL CO ETAL ELEV_KB: 3,848 Wolfcamp 'A' Datum Cross Section Third Bone Spring Sand Wolfcamp 'A' J BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. B2 Submitted by: Catena Resources Operating, LLC Hearing Date: October 08, 2020

Case No. 21461

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

CASE NO. 21461

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.

My Commission Expires:

Luck.

Nov. 12, 2023

Notary Public

OFFICIAL SEAL
Carla Garcia
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: Nov - (2, 2023

Santa Fe, New Mexico

Exhibit No. C

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

Case No. 21461



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. Rambo 193517 3H 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,

ATTORNEY FOR CATENA RESOURCES OPERATING,

LLC

Catena - Rambo 193517 3H Case No. 21461 Postal Delivery Report

| | | | | | | Your item was delivered at Sep 23 in ROSWELL, NM |
|--------------|-------------------------------------|--------------------|--------------|---|-------------------|---|
| 941481185 | 941481189 Featherstone | PO Box 429 | Roswell | Σ | NM 88202-0429 | 88201. |
| 941481189 | 94148118G Davis Partners | PO Box 271 | Midland | ř | 79702-0271 | Your item was delivered at Sep 29 in MIDLAND,TX |
| | | | UI | | | Your item was delivered at Sep 22 in ARTESIA, NM |
| 941481185 | 941481189 Ross Duncan | PO Box 647 | Artesia | Σ | 88211-0647 | 88210. |
| | | | | | | Your item was delivered at Sep 23 in ROSWELL, NM |
| 941481185 | 941481189 Prospector | PO Box 429 | Roswell | Σ | 88202-0429 | 88201. |
| | | | | | t): | Your item was delivered at Sep 23 in ROSWELL, NM |
| 941481185 | 941481189 Big Three Energy | PO Box 429 | Roswell | Σ | 88202-0429 | 88201. |
| 941481185 | 941481189 Robert C. Hooper | PO Box 773 | Roswell | Σ | 88202-0773 | Returned |
| | | | | | | |
| 941481185 | 941481189Roy G. Barton | 1919 N Turner St | Hobbs | ξ | 88240-2712 | 88240-2712 In Transit, Arriving Late at Sep 25 in , . |
| | | | | | | Your item was delivered at Sep 21 in MIDLAND, TX |
| 941481189 | 941481189 Camarie Oil & Gas | 2502 Camarie Ave | Midland | ¥ | 79705-6309 | 79705. |
| | | | | | | Your item was delivered at Sep 22 in |
| 941481185 | 941481189 Gabler Energy Investments | 1223 N 15th St | Wolfforth TX | ĭ | 79382-3314 | 79382-3314 WOLFFORTH,TX 79382. |
| | | | | | | Your item was delivered at Sep 22 in MIDLAND,TX |
| 941481189COG | 900 | 600 W Illinois Ave | Midland | ĭ | 79701-4882 79701. | 79701. |

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 23, 2020 and ending with the issue dated September 23, 2020.

Publisher

Sworn and subscribed to before me this 23rd day of September 2020.

Vario 11

Business Manager

My commission expires

January 29, 2023

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

~ Selycularing the pier of the 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

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LEGAL NOTICE September 23, 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; Davis Partners; Featherstone; Ross Duncan, his heirs and devisees; Prospector; Big Three Energy Group LLC; Robert G. Hooper or Robert C. Hooper, his heirs and devisees; Roy G. Barton, his heirs and devisees; Camarie Oil & Gas; and Gabler Investments or Gabler Energy

Case No. 21461: 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 W/2 of Sections 8 and 17, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico. Said horizontal spacing unit is to be initially dedicated to the proposed Rambo 193517 3H well to be horizontally drilled from a surface location in the NW/4 NW/4 (Unit D) of Section 20 to a bottom hole location in the NW/4 NW/4 (Unit D) of Section 8. The completed interval for the proposed well will remain within 330 feet of the W/2 E/2 of Sections 8 and 17 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. #35836

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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. 21461