District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 303096

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
Catena Resources Operating, LLC 919 Milam Houston, TX 77002	328449
	3. API Number 30-025-49536

4. Property Code	5. Property Name	6. Well No.
331697	RAMBO E2 08 17 STATE COM	002H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	5	19S	35E	P	319	S	1213	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	17	19S	35E	P	100	S	330	E	Lea

9. Pool Information

SCHARB;WOLFCAMP	55640

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3854
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22000	Wolfcamp		12/5/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1850	1610	0
Int1	12.25	9.625	45.5	3950	1250	0
Prod	8.75	5.5	20	22000	3000	5000

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	10000	10000	Cameron
Double Ram	10000	10000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Robert Swann	Approved By:	Paul F Kautz
Title:	rswann	Title:	Geologist
Email Address:	rswann@catenares.com	Approved Date:	11/8/2021 Expiration Date: 11/8/2023
Date:	10/30/2021 Phone: 210-775-6993	Conditions of Approval Attached	

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, N.M. 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-49536	55640	Scharb; Wolfcamp

4 Property Code	5 Property Name	6 Well Number
331697	Rambo E2 08 17 ~~WA~~ State Com	2H

7 OGRID No.	8 Operator Name	9 Elevation
328449	Catena Resources Operating, LLC	3854

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	5	19 S	35 E		319	South	1213	East	Lea

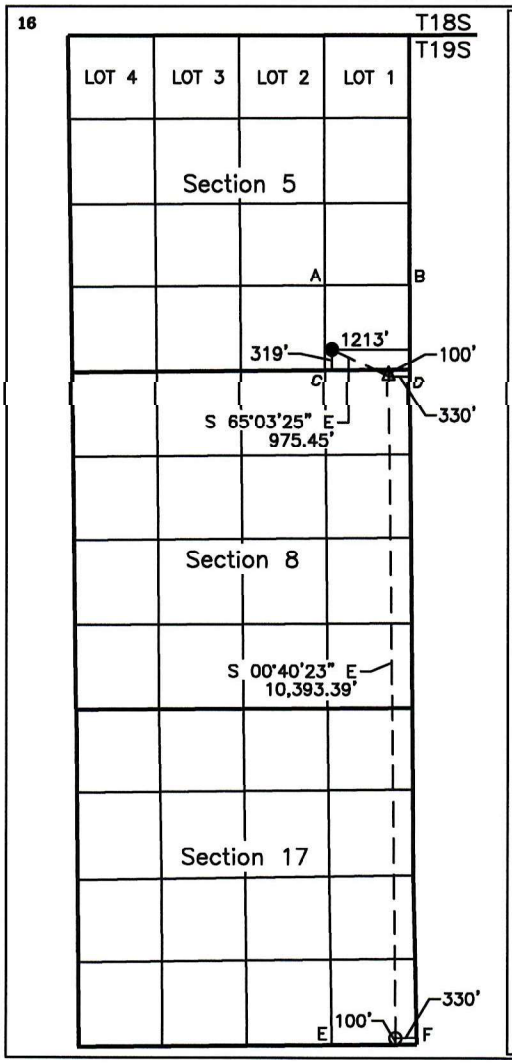
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	19 S	35 E		100	South	330	East	Lea

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
640			

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

16



SCALE: 1"=3000'

SURFACE LOCATION
NAD 83 NME
Y=613374.06 N
X=805447.41 E
LAT.=32.6832724° N
LONG.=103.4749197° W

FIRST TAKE POINT
100' FNL, 330' FEL
SEC. 8, T19S, R35E
NAD 83 NME
Y=612962.70 N
X=806331.87 E
LAT.=32.6821221° N
LONG.=103.4720561° W

CORNER COORDINATES TABLE
NAD 83 NME
A - Y=614368.88 N, X=805337.48 E
B - Y=614378.47 N, X=806658.88 E
C - Y=613053.96 N, X=805342.89 E
D - Y=613065.61 N, X=806661.03 E
E - Y=602462.24 N, X=805460.62 E
F - Y=602472.63 N, X=806786.23 E

CORNER COORDINATES TABLE
NAD 83 NME
A - LAT.=32.6860090° N, LONG.=103.4752508° W
B - LAT.=32.6860059° N, LONG.=103.4709560° W
C - LAT.=32.6823949° N, LONG.=103.4752678° W
D - LAT.=32.6823976° N, LONG.=103.4709837° W
E - LAT.=32.6532820° N, LONG.=103.4751635° W
F - LAT.=32.6532810° N, LONG.=103.4708565° W

BOTTOM HOLE LOCATION
NAD 83 NME
Y=602570.03 N
X=806453.99 E
LAT.=32.6535561° N
LONG.=103.4719334° W

Legend:
● = Surface Location
O = Bottom Hole Location
△ = First Take Point (FTP)

17 OPERATOR CERTIFICATION

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

Byron W. Barnes 10/12/2021
Signature Date

Byron W. Barnes
Printed Name

barnes@catenares.com
E-mail Address

18 SURVEYOR CERTIFICATION

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

9/19/21
Date of Survey
Date Revised: 9/30/21
Signature and Seal of Professional Surveyor:

MARSHALL W. LINDEEN
NEW MEXICO
17078
10-7-21
PROFESSIONAL SURVEYOR

17078
Certificate Number

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 303096

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Catena Resources Operating, LLC [328449] 919 Milam Houston, TX 77002	30-025-49536
	Well: RAMBO E2 08 17 STATE COM #002H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Catena Resource Operating, LLC **OGRID:** 328449 **Date:** 10 / 11 / 21

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Rambo E2 08 17 W1 State Com 1H	30-025-	P-5-19S-35E	319 FSL 1233 FEL	1100 BBLD	600 MCF/D	3800 BBL/D
Rambo E2 08 17 W1 State Com 2H	30-025-	P-5-19S-35E	319 FSL 1213 FEL	1100 BBLD	600 MCF/D	3800 BBL/D

IV. Central Delivery Point Name Targa Rambo E2 08 17 1H 2H CTB

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Rambo E2 08 17 W1 State Com 1H	30-025-	11/05/2021	12/05/2021	01/12/2022	02/12/2022	02/17/2022
Rambo E2 08 17 W1 State Com 2H	30-025-	12/06/2021	01/06/2022	01/12/2022	02/12/2022	02/17/2022

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: Daniel Pyziak
Printed Name: Daniel Pyziak
Title: Senior Operations Engineer
E-mail Address: pyziak@catenares.com
Date: 10/11/2021
Phone: 303-956-6947

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

Catena Resources Operating, LLC (328449)

Natural Gas Management Plan Descriptions

VI. Separation Equipment:

Catena utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations. Our goal is to maintain 5 minutes of retention time in the test vessel and 20 minutes in the heater treater at peak production rates. The gas produced is routed from the separator to the gas sales line.

VII. Operational Practices:

Drilling

During Catena's drilling operations it is uncommon for venting or flaring to occur. If flaring is needed due to safety concerns, gas will be routed to a flare and volumes will be estimated.

Flowback

During completion/recompletion flowback operations, after separation flowback begins and as soon as it is technically feasible, Catena routes gas though a permanent separator and the controlled facility where the gas is either sold or flared through a high-pressure flare if needed.

Production

Per 19.15.27.8.D, Catena's facilities are designed to minimize waste. Our produced gas will only be vented or flared in an emergency or malfunction situation, except as allowed for normal operations noted in 19.15.27.8.0(2) & (4). All gas that is flared is metered. All gas that may be vented will be estimated.

Performance Standards

Catena utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations.

All of Catena's permanent storage tanks associated with production operations which are routed to a flare or control device are equipped with an automatic gauging system.

All of Catena's flare stacks, both currently installed and for future installation, are:

1) Appropriately sized and designed to ensure proper combustion efficiency.
2) Equipped with an automatic igniter or continuous pilot.
3) Anchored and located at least 100 feet from the well and storage tanks.

Catena's field operations and HSE teams have implemented an AVO inspection schedule that adheres to the requirements of 19.15.27.8.E(S).

All of our operations and facilities are designed to minimize waste. We routinely employ the following methods and practices:

- Closed-loop systems
- Enclosed and properly sized tanks

- Vapor recovery units to maximize recovery of low-pressure gas streams and potential unauthorized emissions
- Low-emitting or electric engines whenever practical
- Combustors and flare stacks in the event of a malfunction or emergency
- Routine facility Inspections to identify leaking components, functioning control devices, such as flares and combustors, and repair/ replacement of malfunctioning components where applicable

Measurement or estimation

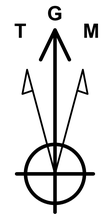
Catena measures or estimates the volumes of natural gas vented, flared and/or beneficially used for all of our drilling, completing and producing wells. We utilize accepted industry standards and methodology which can be independently verified. Annual GOR testing is completed on our wells and will be submitted as required by the OCD. None of our equipment is designed to allow diversion around metering elements except during inspection, maintenance, and repair operations.

VIII. Best Management Practices:

Catena utilizes the following BMPs to minimize venting during active and planned maintenance activities:

- Use a closed-loop process wherever possible during planned maintenance activities, such as blowdowns, liquid removal, and work over operations.
- Employ low-emitting or electric engines for equipment, such as compressors
- Adhere to a strict preventative maintenance program which includes routine facility inspections, identification of component malfunctions, and repairing or replacing components such as hatches, seals, valves, etc. where applicable
- Utilize vapor recovery units (VRU's) to maximize recovery of volumes of low-pressure gas streams and potential unauthorized emissions
- Route low pressure gas and emissions streams to a combustion device to prevent venting where necessary

Company: Catena Resources Operating LLC
Field: Lea County, NM (NAD83)
Location: Rambo E2 08 17 State Com W1
Well: 2H
Wellbore: OH
Plan: Plan 2
GL: GL 3854 + 25' KB @ 3879.00usft



Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.03°

Magnetic Field
Strength: 47738.7nT
Dip Angle: 60.32°
Date: 10/11/2021
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 6.03°

PROJECT DETAILS: Lea County, NM (NAD83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

RIG: TBD

WELL DETAILS: 2H

GL 3854 + 25' KB @ 3879.00usft 3854.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	613374.06	805447.41	32.683272	-103.474920	

DESIGN TARGET DETAILS

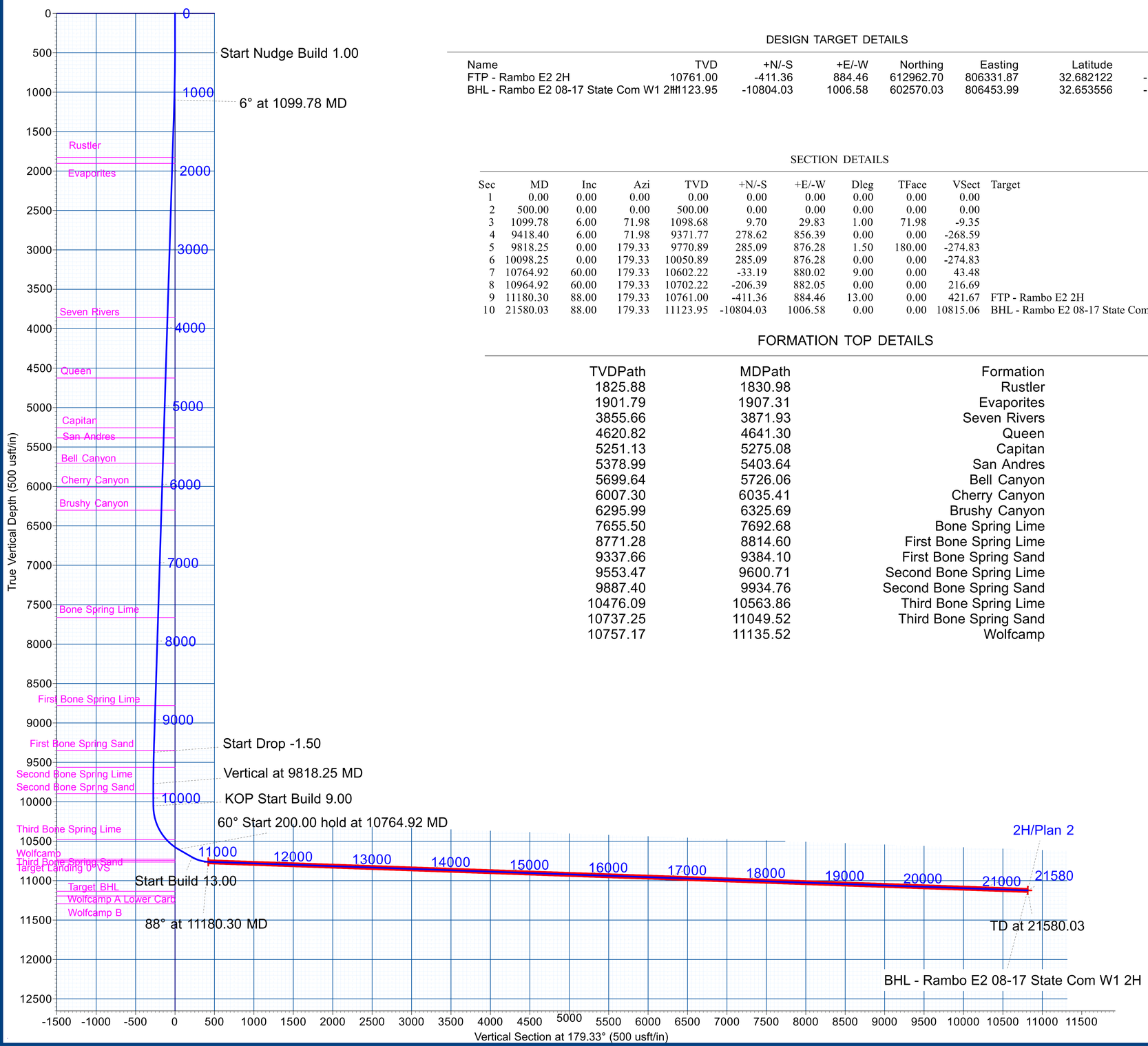
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP - Rambo E2 2H	10761.00	-411.36	884.46	612962.70	806331.87	32.682122	-103.472056
BHL - Rambo E2 08-17 State Com W1 2H	11123.95	-10804.03	1006.58	602570.03	806453.99	32.653556	-103.471933

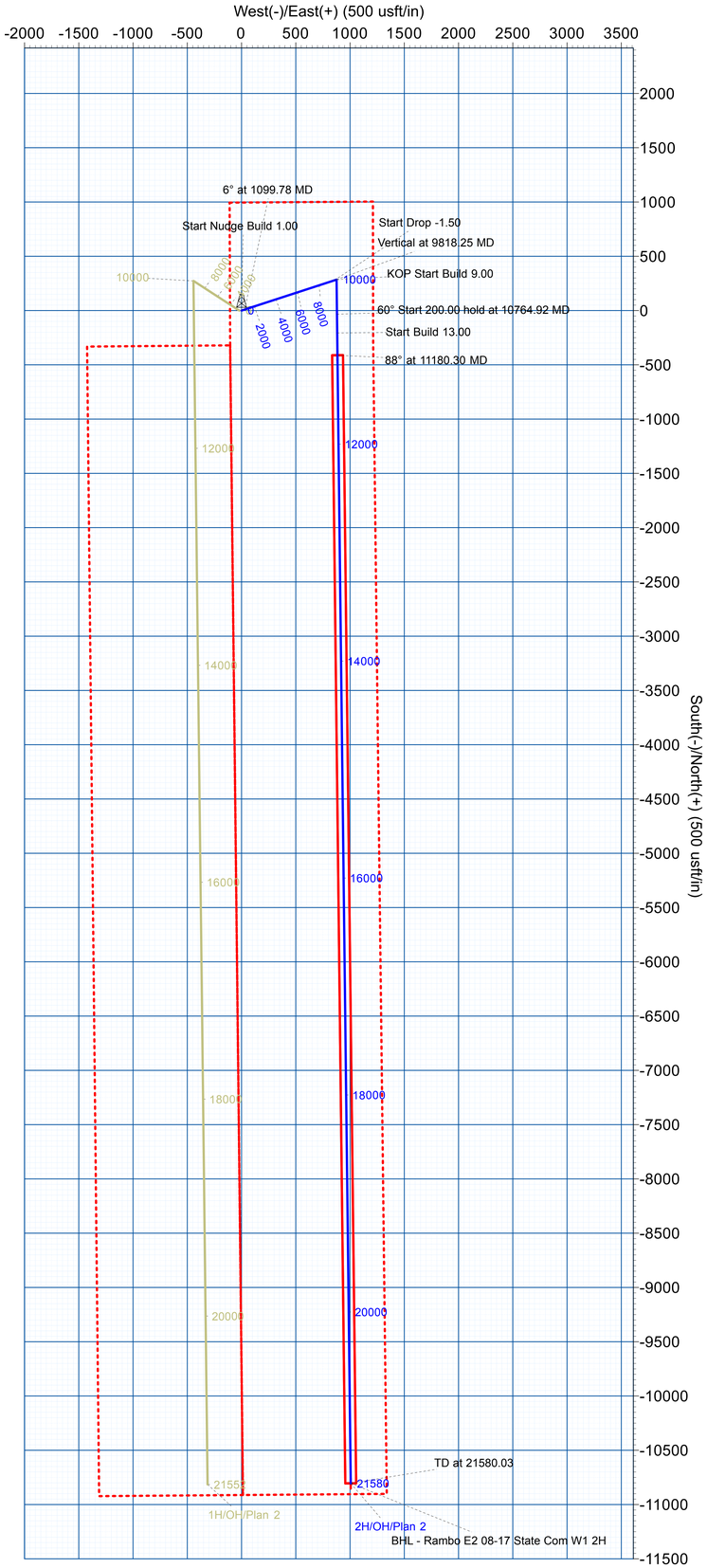
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	1099.78	6.00	71.98	1098.68	9.70	29.83	1.00	71.98	-9.35	
4	9418.40	6.00	71.98	9371.77	278.62	856.39	0.00	0.00	-268.59	
5	9818.25	0.00	179.33	9770.89	285.09	876.28	1.50	180.00	-274.83	
6	10098.25	0.00	179.33	10050.89	285.09	876.28	0.00	0.00	-274.83	
7	10764.92	60.00	179.33	10602.22	-33.19	880.02	9.00	0.00	43.48	
8	10964.92	60.00	179.33	10702.22	-206.39	882.05	0.00	0.00	216.69	
9	11180.30	88.00	179.33	10761.00	-411.36	884.46	13.00	0.00	421.67	FTP - Rambo E2 2H
10	21580.03	88.00	179.33	11123.95	-10804.03	1006.58	0.00	0.00	10815.06	BHL - Rambo E2 08-17 State Com W1 2H

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1825.88	1830.98	Rustler
1901.79	1907.31	Evaporites
3855.66	3871.93	Seven Rivers
4620.82	4641.30	Queen
5251.13	5275.08	Capitan
5378.99	5403.64	San Andres
5699.64	5726.06	Bell Canyon
6007.30	6035.41	Cherry Canyon
6295.99	6325.69	Brushy Canyon
7655.50	7692.68	Bone Spring Lime
8771.28	8814.60	First Bone Spring Lime
9337.66	9384.10	First Bone Spring Sand
9553.47	9600.71	Second Bone Spring Lime
9887.40	9934.76	Second Bone Spring Sand
10476.09	10563.86	Third Bone Spring Lime
10737.25	11049.52	Third Bone Spring Sand
10757.17	11135.52	Wolfcamp





Plan: Plan 2 (2H/OH)
Created By: Jenise Kirkpatrick Date: 16:23, October 12 2021