Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. DRILL REENTER 1a. Type of work: 1b. Type of Well: Gas Well Oil Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing Single Zone Multiple Zone [332895] 2. Name of Operator 9. API Well No. 30-025-51053 [260297] 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory [97903] 4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec., T. R. M. or Blk. and Survey or Area At surface At proposed prod. zone 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State 15. Distance from proposed* 16. No of acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, applied for, on this lease, ft. 22. Approximate date work will start* 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 23. Estimated duration 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above). 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the 25. Signature Name (Printed/Typed) Date Title Approved by (Signature) Name (Printed/Typed) Date Title Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction NGMP Rec 01/26/2023 APPROVED WITH CONDITIONS SL (Continued on page 2) *(Instructions on page 2)

Approval Date: 12/14/2022

Released to Imaging: 2/8/2023 9:20:08 AM

DISTRICT I

1625 N French Dr., Hobbs, NM 88240 Phone (575) 393-6161 Fax (575) 393-0720

DISTRICT !! 811 S First St . Artesia, NM 88210 Phone (575) 748-1283 Fax (575) 748-9720 DISTRICT III

1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax (505) 334-6170

DISTRICT IV 1220 S St Francis Dr , Santa Fe, NM 87505 Phone: (505) 476-3460 Fax (505) 476-3462

A DI Number

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

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

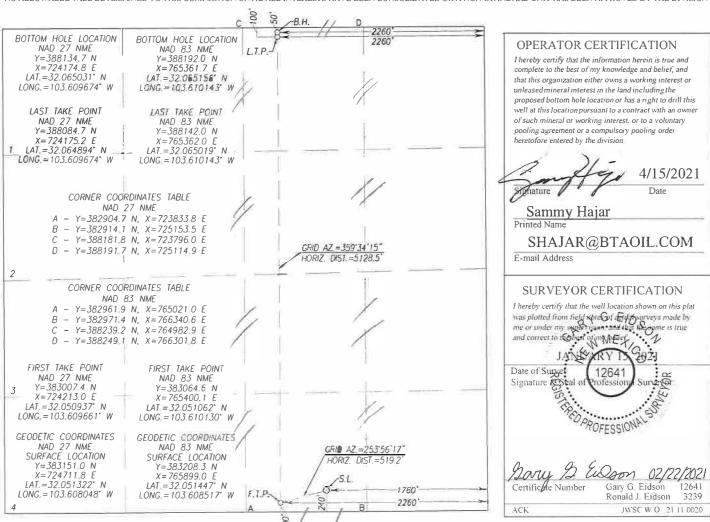
□AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-025-5105		97	7903	•	WC-025 G-06 S253329D;UPR BONE SPRING				
Property Code 332895		N	MESA B		Property Name Well Number 5 7 FEDERAL COM 32H				
OGRID No. 260297		Operator Name Elevation BTA OIL PRODUCERS, LLC 3239'							
				Surface Locat	ion				
UL or lot No Section 7	Township 26-S	Range 33-E	Lot Idn	Feet from the 240	North/South line SOUTH	Feet from the 1760	East/West line EAST	County LEA	
			Bottom Hol	e Location If Diff	erent From Surface				

UL or lot No. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County B 7 26-S 33-E 50 **NORTH** 2260 **LEA EAST** Dedicated Acres Joint or Infill Consolidation Code Order No. 160

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



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: BTA C	il Producers	s, LLC	OGRID:2	260297	Date:	12 / 22 / 2023
II. Type: ☑ Original ☐	l Amendment	due to □ 19.15.27.	9.D(6)(a) NMA	C □ 19.15.27.9.D((6)(b) NMAC □	Other.
If Other, please describe	:					
III. Well(s): Provide the be recompleted from a si					wells proposed to	be drilled or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
MESA B 8115 7		O-7-26S-33E	240 FSL, 1760 FEL	+/- 800	+/- 2000	+/- 1200
FEDERAL COM 32H	30-02	5-51053				
V. Anticipated Schedul proposed to be recomple Well Name	e: Provide the				vell or set of wells	9.15.27.9(D)(1) NMAC] s proposed to be drilled or Flow First Production
			Date	Commencement	Date Back I	Date Date
MESA B 8115 7		7/24/2023	8/13/2023	8/27/2023	9/17/2022	3 10/17/2023
FEDERAL COM 32H	30-02	25-51053				
VII. Operational Pract Subsection A through F	ices: ☑ Attac of 19.15.27.8 ☐ t Practices: ☑	h a complete descr NMAC.	iption of the act	ions Operator will	l take to comply	with the requirements of tices to minimize venting

Section 2 – Enhanced Plan <u>EFFECTIVE APRIL 1, 2022</u>

Beginning Apr	il 1, 2022,	an operator	that is not in	compliance	with its	statewide	natural	gas o	capture	requirement	for th	ie appli	cable
reporting area i	nust comp	lete this secti	on.										

🗵 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	Available Maximum Daily Capacity
			Start Date	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 🗆 v	vill □ will not have	capacity to gather	100% of the anticipated	natural gas
production volume from the well p	prior to the date of first pro	oduction.			

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

A 1 .	O 1	, 1		1 4.	•	4 41 .	ased line pres	
 Attach (Inerator	'c nlan to	manage	nraduction	in rechange	to the incre	aced line nrec	CILTO

XIV. Confidentiality: \square Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the informat	ion 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 spec	ific information
for which confidentiality is asserted and the basis for such assertion.	

Section 3 - Certifications Effective May 25, 2021

	<u> </u>		
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			
hundred percent of the into account the current	able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. box, Operator will select one of the following:		
Well Shut-In. □ Opera D of 19.15.27.9 NMAC	tor will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection ; or		
	Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential ses 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: Samplejan
Printed Name: Sammy Hajar
Title: Regulatory Analyst
E-mail Address: SHAJAR@BTAOIL.COM
Date: 12/22/2023
Phone: 432-682-3753
OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

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

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Separation equipment will allow for adequate retention time to allow gas and liquids to separate.
- Separation equipment will separate all three phases (Oil, Water, and Gas).
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering is selected to be serviced without flow interruptions or the need to release gas from the well.

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

Drilling Operations

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared, unless there is an equipment
 malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and
 the environment, at which point the gas will be vented.

Completions/Recompletions Operations

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

Production Operations

- Weekly AVOs will be performed on all facilities that produce more than 60 MCFD.
- Leaking thief hatches and pressure safety valves found during AVOs will be cleaned and properly re-sealed.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All gas lift systems will be optimized to limit the amount of waste.
- All tanks will have automatic gauging equipment installed.

Performance Standards

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- All gas will have multiple points of separation to ensure no liquids enter flares, combustors, or gas sales line.
- Weekly AVOs will be performed on all wells and facilities that produce more than 60 MCFD.
- All OOOOa facilities will be filmed with an Optical Gas Imaging Thermographer camera once per month to check for fugitive emissions.

Measurement & Estimation

- All volume that is flared and vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- All meters will be calibrated at regular intervals according to meter manufacturer recommendations.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

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

- During downhole well maintenance, BTA will use best management practices to vent as minimally as possible.
- Prior to the commencement of any maintenance, the tank or vessel will be isolated from the rest of the facilities.
- All valves upstream of the equipment will be closed and isolated.
- After equipment has been isolated, the equipment will be blown down to as low a pressure as possible into the collection system.
- If the equipment being maintained cannot be relieved into the collection system, it shall be released to a tank where the vapor can either be captured or combusted if possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification.



APD ID: 10400073982

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report 12/15/2022

Submission Date: 04/30/2021

Operator Name: BTA OIL PRODUCERS LLC

Well Name: MESA B 8115 7 FEDERAL COM Well Number: 32H

Show Final Text Well Type: OIL WELL Well Work Type: Drill

Highlighted data reflects the most recent changes

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
3808983	QUATERNARY	3239	0	Ó	ALLUVIUM	NONE	N
3808984	RUSTLER	2475	764	764	ANHYDRITE	NONE	N
3808985	TOP SALT	2005	1234	1234	SALT	NONE	N
3808986	BASE OF SALT	-1275	4514	4514	SALT	NONE	N
3808987	DELAWARE	-1505	4744	4744	LIMESTONE	NATURAL GAS, OIL	N
3808996	BELL CANYON	-1675	4914	4914	SANDSTONE	NATURAL GAS, OIL	N
3808989	CHERRY CANYON	-2935	6174	6174	SANDSTONE	NATURAL GAS, OIL	N
3808990	BRUSHY CANYON	-4135	7374	7374	SANDSTONE	NATURAL GAS, OIL	N
3808991	BONE SPRING LIME	-5760	8999	8999	LIMESTONE	NATURAL GAS, OIL	N
3809005	UPPER AVALON SHALE	-6515	9754	9754	SHALE	NATURAL GAS, OIL	N
3809010	BONE SPRING 1ST	-6690	9929	9929	SANDSTONE	NATURAL GAS, OIL	N
3809095	BONE SPRING 2ND	-7260	10499	10499	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M Rating Depth: 12000

Equipment: The blowout preventer equipment (BOP) shown in Exhibit A will consist of a (5M system) double ram type (5,000 psi WP) preventer and a bag-type (Hydril) preventer (5000 psi WP). Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 5" drill pipe rams on bottom. The BOPs will be installed on the 13-3/8" surface casing and utilized continuously until total depth is reached. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. A remote kill line will be used for the 5M system as per onshore order #2. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines, and choke manifold having a 5,000 psi WP

Operator Name: BTA OIL PRODUCERS LLC

Well Name: MESA B 8115 7 FEDERAL COM Well Number: 32H

rating. The 5M annular will be tested as per BLM drilling Operations Order No. 2, and will be test to 100% of working pressure.

Requesting Variance? NO

Variance request:

Testing Procedure: Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. All BOPs and associated equipment will be tested as per BLM drilling Operations Order No. 2.

Choke Diagram Attachment:

Choke_Hose___Test_Chart_and_Specs_20190723082742.pdf

5M choke mannifold 20200917143047.pdf

BOP Diagram Attachment:

5M_BOP_diagram_20200917143053.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	814	0	814	3239	2425	814	J-55	54.5	ST&C	3.2	7.8	DRY	11.6	DRY	19.2
2	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	4757	0	4724	3419	-1485	4757	J-55	40	LT&C	1.8	1.6	DRY	2.7	DRY	3.3
3	PRODUCTI ON	8.75	5.5	NEW	API	N	0	15920	0	10884	3419	-7645	15920	P- 110	17	BUTT	1.4	2	DRY	2.1	DRY	2

Casing Attachments

Operator Name: BTA OIL PRODUCERS LLC

Well Name: MESA B 8115 7 FEDERAL COM

Well Number: 32H

asing Attachments	
Casing ID: 1 String Inspection Document:	SURFACE
Spec Document:	
Tapered String Spec:	
Casing Design Assumptions and V	Norksheet(s):
Casing ID: 2 String	INTERMEDIATE
Inspection Document:	
Spec Document:	
Tapered String Spec:	
Casing Design Assumptions and V	Worksheet(s):
Casing ID: 3 String	PRODUCTION
Inspection Document:	
Spec Document:	
Tapered String Spec:	

Section 4 - Cement

Casing Design Assumptions and Worksheet(s):

 $Mesa_B_32H_casing_assumption_20210429090748.JPG$

Operator Name: BTA OIL PRODUCERS LLC

Well Name: MESA B 8115 7 FEDERAL COM Well Number: 32H

String Type	Lead/Tail	Stage Tool Depth	Тор МD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	615	495	1.73	13.5	856.3 5	100	Class C	2% CaCl2
SURFACE	Tail		615	814	200	1.35	14.8	270	100	Class C	2% CaCl2
INTERMEDIATE	Lead		0	4200	1240	2.46	12.8	3050. 4	100	Class C	0.5% CaCl2
INTERMEDIATE	Tail		4200	4757	200	1.34	14.8	268	25	Class C	1% CaCl2
PRODUCTION	Lead		3757	9910	605	3.9	10.5	2359. 5	60	25% Poz 75% Class C	0.4% Fluid Loss
PRODUCTION	Tail		9910	1592 0	1520	1.25	14.4	1900	25	Class H	0.2% LT Retarder

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Denth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	H	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	814	OTHER : FW SPUD	8.3	8.4							
81	4 4724	OTHER : BRINE	10	10.2							
472	24 1088 4	OTHER : CUT BRINE	8.7	9.4							

Operator Name: BTA OIL PRODUCERS LLC

Well Name: MESA B 8115 7 FEDERAL COM Well Number: 32H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Drill Stem Tests will be based on geological sample shows.

List of open and cased hole logs run in the well:

MUD LOG/GEOLOGICAL LITHOLOGY LOG, GAMMA RAY LOG, CEMENT BOND LOG,

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5320 Anticipated Surface Pressure: 2925

Anticipated Bottom Hole Temperature(F): 168

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

BTA_Oil_Producers_LLC___EMERGENCY_CALL_LIST_20190723161502.pdf H2S_Equipment_Schematic_20190723161502.pdf H2S_Plan_20190723161502.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

MESA_B_8115_7_Fed_Com_32H_Gas_Capture_Plan_20210429091549.pdf Mesa_B_32H_directional_plan_20210429091603.pdf Mesa_B_32H_Wall_plot_20210429091603.pdf

Other proposed operations facets description:

A variance is requested for a Multi Bowl Wellhead. See the attached schematic. *All strings will be kept 1/3 full while running.

Other proposed operations facets attachment:

Other Variance attachment:

BOP_Break_Testing_Variance_20200917143242.pdf
Multi_Bowl_Diagram_13_38_x_9_58_x_5_12_20200917143315.pdf

BTA Oil Producers, LLC

Lea County, NM (NAD 83) Mesa B Mesa B #32H

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

28 April, 2021

Planning Report - Geographic

Database: EDM16

Company: BTA Oil Producers, LLC
Project: Lea County, NM (NAD 83)

 Site:
 Mesa B

 Well:
 Mesa B #32H

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Mesa B #32H

WELL @ 3239.0usft (Original Well Elev) WELL @ 3239.0usft (Original Well Elev)

Grid

Minimum Curvature

Project Lea County, NM (NAD 83), Lea County, NM

Map System:US State Plane 1983Geo Datum:North American Datum 1983

North American Datum 198: New Mexico Eastern Zone System Datum: Ground Level

Using geodetic scale factor

Site Mesa B

Map Zone:

 Site Position:
 Northing:
 383,154.37 usft
 Latitude:
 32° 3′ 4.704 N

 From:
 Map
 Easting:
 765,479.20 usft
 Longitude:
 103° 36′ 35.543 W

Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 "

Well Mesa B #32H

 Well Position
 +N/-S
 0.0 usft
 Northing:
 383,208.30 usft
 Latitude:
 32° 3' 5.210 N

 +E/-W
 0.0 usft
 Easting:
 765,899.0 usft
 Longitude:
 103° 36′ 30.661 W

 Position Uncertainty
 0.0 usft
 Wellhead Elevation:
 usft
 Ground Level:
 3,239.0 usft

Grid Convergence: 0.38 °

Wellbore #1

 Magnetics
 Model Name
 Sample Date (°)
 Dip Angle (°)
 Field Strength (nT)

 IGRF200510
 12/31/2009
 7.75
 60.07
 48,686.50747468

Design Design #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

 Vertical Section:
 Depth From (TVD) (usft)
 +N/-S +E/-W (usft)
 Direction (usft)

 0.0
 0.0
 0.0
 353.85

Plan Survey Tool Program Date 4/28/2021

Depth From Depth To

(usft) (usft) Survey (Wellbore) Tool Name Remarks

1 0.0 15,920.0 Design #1 (Wellbore #1)

Planning Report - Geographic

Database: E Company: B

EDM16

Design #1

BTA Oil Producers, LLC Lea County, NM (NAD 83)

 Project:
 Lea County, N

 Site:
 Mesa B

 Well:
 Mesa B #32H

 Wellbore:
 Wellbore #1

Design:

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Mesa B #32H

WELL @ 3239.0usft (Original Well Elev) WELL @ 3239.0usft (Original Well Elev)

Grid

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	8.00	246.25	1,498.7	-11.2	-25.5	2.00	2.00	0.00	246.25	
5,024.4	8.00	246.25	4,988.8	-208.8	-474.5	0.00	0.00	0.00	0.00	
5,424.4	0.00	0.00	5,387.5	-220.0	-500.0	2.00	-2.00	0.00	180.00	
10,393.4	0.00	0.00	10,356.5	-220.0	-500.0	0.00	0.00	0.00	0.00	
10,443.4	0.00	0.00	10,406.5	-220.0	-500.0	0.00	0.00	0.00	0.00	
11,193.4	90.00	359.59	10,884.0	257.5	-503.4	12.00	12.00	0.00	359.59	
15,920.0	90.00	359.59	10,884.0	4,983.9	-537.3	0.00	0.00	0.00	0.00	Mesa B #32H BHL

Planning Report - Geographic

Database: E Company: E

Project:

EDM16

BTA Oil Producers, LLC Lea County, NM (NAD 83)

 Site:
 Mesa B

 Well:
 Mesa B #32H

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Mesa B #32H

WELL @ 3239.0usft (Original Well Elev) WELL @ 3239.0usft (Original Well Elev)

Grid

Design.	Desig								
Planned Survey	,								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
, ,									_
0.0	0.00	0.00	0.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
100.0	0.00	0.00	100.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
200.0	0.00	0.00	200.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
300.0 400.0	0.00	0.00 0.00	300.0 400.0	0.0	0.0	383,208.30 383,208.30	765,899.00 765,899.00	32° 3' 5.210 N 32° 3' 5.210 N	103° 36' 30.661 W 103° 36' 30.661 W
500.0	0.00	0.00	500.0	0.0 0.0	0.0 0.0	383,208.30	765,899.00 765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
600.0	0.00	0.00	600.0	0.0	0.0	383,208.30	765,899.00 765,899.00	32° 3′ 5.210 N	103° 36' 30.661 W
700.0	0.00	0.00	700.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
800.0	0.00	0.00	800.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
900.0	0.00	0.00	900.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	383,208.30	765,899.00	32° 3' 5.210 N	103° 36' 30.661 W
1,200.0	2.00	246.25	1,200.0	-0.7	-1.6	383,207.60	765,897.40	32° 3' 5.203 N	103° 36' 30.680 W
1,300.0	4.00	246.25	1,299.8	-2.8	-6.4	383,205.49	765,892.61	32° 3' 5.183 N	103° 36' 30.736 W
1,400.0	6.00	246.25	1,399.5	-6.3	-14.4	383,201.98	765,884.63	32° 3′ 5.149 N	103° 36' 30.829 W
1,500.0	8.00	246.25	1,498.7	-11.2	-25.5	383,197.07	765,873.48	32° 3′ 5.101 N	103° 36' 30.959 W
1,600.0	8.00	246.25	1,597.7	-16.8	-38.3	383,191.47	765,860.74	32° 3′ 5.046 N	103° 36' 31.107 W
1,700.0	8.00	246.25	1,696.8	-22.4	-51.0	383,185.86	765,848.00	32° 3' 4.992 N	103° 36' 31.255 W
1,800.0	8.00	246.25	1,795.8	-28.0	-63.7	383,180.26	765,835.26	32° 3′ 4.937 N	103° 36' 31.404 W
1,900.0	8.00	246.25	1,894.8	-33.6	-76.5	383,174.65	765,822.53	32° 3′ 4.882 N	103° 36' 31.552 W
2,000.0	8.00	246.25	1,993.8	-39.3	-89.2	383,169.05	765,809.79	32° 3′ 4.828 N	103° 36' 31.701 W
2,100.0	8.00	246.25	2,092.9	-44.9	-102.0	383,163.44	765,797.05	32° 3′ 4.773 N	103° 36' 31.849 W
2,200.0	8.00	246.25	2,191.9	-50.5	-114.7	383,157.84	765,784.31	32° 3′ 4.719 N	103° 36' 31.998 W
2,300.0	8.00	246.25	2,290.9	-56.1	-127.4	383,152.23	765,771.57	32° 3′ 4.664 N	103° 36' 32.146 W
2,400.0	8.00	246.25	2,389.9	-61.7	-140.2	383,146.63	765,758.83	32° 3' 4.609 N	103° 36' 32.295 W
2,500.0	8.00	246.25	2,489.0	-67.3	-152.9	383,141.02	765,746.10	32° 3' 4.555 N	103° 36' 32.443 W
2,600.0	8.00	246.25	2,588.0	-72.9	-165.6	383,135.42	765,733.36	32° 3' 4.500 N	103° 36' 32.591 W
2,700.0	8.00	246.25	2,687.0	-78.5	-178.4	383,129.81	765,720.62	32° 3' 4.446 N	103° 36' 32.740 W
2,800.0	8.00	246.25	2,786.1	-84.1	-191.1	383,124.21	765,707.88	32° 3' 4.391 N	103° 36' 32.888 W
2,900.0	8.00	246.25	2,885.1	-89.7	-203.9	383,118.60	765,695.14	32° 3' 4.336 N	103° 36' 33.037 W
3,000.0	8.00	246.25	2,984.1	-95.3	-216.6	383,113.00	765,682.40	32° 3' 4.282 N	103° 36' 33.185 W
3,100.0	8.00	246.25	3,083.1	-100.9	-229.3	383,107.39	765,669.67	32° 3' 4.227 N	103° 36' 33.334 W
3,200.0 3,300.0	8.00 8.00	246.25 246.25	3,182.2 3,281.2	-106.5 -112.1	-242.1 -254.8	383,101.79 383,096.18	765,656.93 765,644.19	32° 3' 4.172 N 32° 3' 4.118 N	103° 36' 33.482 W 103° 36' 33.631 W
3,400.0	8.00	246.25	3,380.2	-112.1 -117.7	-254.6 -267.6	383,090.58	765,631.45	32° 3' 4.063 N	103° 36' 33.779 W
3,500.0	8.00	246.25	3,479.2	-117.7	-280.3	383,084.97	765,618.71	32° 3' 4.009 N	103° 36' 33.927 W
3,600.0	8.00	246.25	3,578.3	-123.3	-200.3	383,079.37	765,605.97	32° 3' 3.954 N	103° 36' 34.076 W
3,700.0	8.00	246.25	3,677.3	-134.5	-305.8	383,073.76	765,593.24	32° 3' 3.899 N	103° 36' 34.224 W
3,800.0	8.00	246.25	3,776.3	-140.1	-318.5	383,068.16	765,580.50	32° 3' 3.845 N	103° 36' 34.373 W
3,900.0	8.00	246.25	3,875.3	-145.7	-331.2	383,062.55	765,567.76	32° 3' 3.790 N	103° 36' 34.521 W
4,000.0	8.00	246.25	3,974.4	-151.4	-344.0	383,056.95	765,555.02	32° 3' 3.735 N	103° 36' 34.670 W
4,100.0	8.00	246.25	4,073.4	-157.0	-356.7	383,051.34	765,542.28	32° 3' 3.681 N	103° 36' 34.818 W
4,200.0	8.00	246.25	4,172.4	-162.6	-369.5	383,045.74	765,529.54	32° 3' 3.626 N	103° 36' 34.966 W
4,300.0	8.00	246.25	4,271.5	-168.2	-382.2	383,040.13	765,516.81	32° 3' 3.572 N	103° 36' 35.115 W
4,400.0	8.00	246.25	4,370.5	-173.8	-394.9	383,034.53	765,504.07	32° 3' 3.517 N	103° 36' 35.263 W
4,500.0	8.00	246.25	4,469.5	-179.4	-407.7	383,028.93	765,491.33	32° 3' 3.462 N	103° 36' 35.412 W
4,600.0	8.00	246.25	4,568.5	-185.0	-420.4	383,023.32	765,478.59	32° 3' 3.408 N	103° 36' 35.560 W
4,700.0	8.00	246.25	4,667.6	-190.6	-433.2	383,017.72	765,465.85	32° 3′ 3.353 N	103° 36' 35.709 W
4,800.0	8.00	246.25	4,766.6	-196.2	-445.9	383,012.11	765,453.12	32° 3′ 3.299 N	103° 36' 35.857 W
4,900.0	8.00	246.25	4,865.6	-201.8	-458.6	383,006.51	765,440.38	32° 3′ 3.244 N	103° 36' 36.006 W
5,000.0	8.00	246.25	4,964.6	-207.4	-471.4	383,000.90	765,427.64	32° 3′ 3.189 N	103° 36' 36.154 W
5,024.4	8.00	246.25	4,988.8	-208.8	-474.5	382,999.53	765,424.53	32° 3′ 3.176 N	103° 36' 36.190 W
5,100.0	6.49	246.25	5,063.8	-212.6	-483.2	382,995.69	765,415.81	32° 3' 3.139 N	103° 36' 36.292 W
5,200.0	4.49	246.25	5,163.3	-216.5	-492.0	382,991.84	765,407.05	32° 3' 3.101 N	103° 36' 36.394 W
5,300.0	2.49	246.25	5,263.1	-218.9	-497.5	382,989.39	765,401.49	32° 3' 3.077 N	103° 36' 36.459 W

Planning Report - Geographic

Database: Company:

Project:

EDM16

BTA Oil Producers, LLC Lea County, NM (NAD 83)

 Site:
 Mesa B

 Well:
 Mesa B #32H

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Mesa B #32H

WELL @ 3239.0usft (Original Well Elev) WELL @ 3239.0usft (Original Well Elev)

Grid

Design:	Desig	111 # 1							
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.0	0.49	246.25	5,363.1	-220.0	-499.9	382,988.35	765,399.11	32° 3' 3.067 N	103° 36' 36.486 W
5,424.4	0.00	0.00	5,387.5	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
5,500.0	0.00	0.00	5,463.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
5,600.0	0.00	0.00	5,563.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
5,700.0	0.00	0.00	5,663.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
5,800.0	0.00	0.00	5,763.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
5,900.0	0.00	0.00	5,863.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,000.0	0.00	0.00	5,963.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,100.0	0.00	0.00	6,063.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,200.0	0.00	0.00	6,163.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,300.0	0.00	0.00	6,263.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,400.0	0.00	0.00	6,363.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,500.0	0.00	0.00	6,463.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,600.0	0.00	0.00	6,563.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,700.0	0.00	0.00	6,663.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,800.0	0.00	0.00	6,763.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
6,900.0	0.00	0.00	6,863.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,000.0	0.00	0.00	6,963.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,100.0	0.00	0.00	7,063.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,200.0	0.00	0.00	7,163.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,300.0	0.00	0.00	7,263.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,400.0	0.00	0.00	7,363.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,500.0	0.00	0.00	7,463.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,600.0	0.00	0.00	7,563.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,700.0	0.00	0.00	7,663.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,800.0	0.00	0.00	7,763.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
7,900.0	0.00	0.00	7,863.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
8,000.0	0.00	0.00	7,963.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
8,100.0	0.00	0.00	8,063.1	-220.0	-500.0	382,988.31	765,399.01	32° 3′ 3.067 N	103° 36' 36.488 W
8,200.0	0.00	0.00	8,163.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,300.0	0.00	0.00	8,263.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,400.0	0.00	0.00	8,363.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,500.0	0.00	0.00	8,463.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,600.0	0.00	0.00	8,563.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,700.0	0.00	0.00	8,663.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,800.0	0.00	0.00	8,763.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
8,900.0	0.00	0.00	8,863.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,000.0	0.00	0.00	8,963.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,100.0	0.00	0.00	9,063.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,200.0	0.00	0.00	9,163.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,300.0	0.00	0.00	9,263.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,400.0	0.00	0.00	9,363.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,500.0	0.00	0.00	9,463.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,600.0	0.00	0.00	9,563.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,700.0	0.00	0.00	9,663.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,800.0	0.00	0.00	9,763.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
9,900.0	0.00	0.00	9,863.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,000.0	0.00	0.00	9,963.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,100.0	0.00	0.00	10,063.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,200.0	0.00	0.00	10,163.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,300.0	0.00	0.00	10,263.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,393.4	0.00	0.00	10,356.5	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,400.0	0.00	0.00	10,363.1	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,443.4	0.00	0.00	10,406.5	-220.0	-500.0	382,988.31	765,399.01	32° 3' 3.067 N	103° 36' 36.488 W
10,500.0	6.79	359.59	10,463.0	-216.7	-500.0	382,991.65	765,398.99	32° 3′ 3.100 N	103° 36' 36.488 W

Planning Report - Geographic

Database: EDM16

Company: BTA Oil Producers, LLC
Project: Lea County, NM (NAD 83)

 Site:
 Mesa B

 Well:
 Mesa B #32H

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Mesa B #32H

WELL @ 3239.0usft (Original Well Elev) WELL @ 3239.0usft (Original Well Elev)

Grid

Jesigii.	Desig	,,.							
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,600.0	18.79	359.59	10,560.3	-194.6	-500.2	383,013.75	765,398.83	32° 3' 3.318 N	103° 36' 36.488 W
10,700.0	30.79	359.59	10,650.9	-152.7	-500.5	383,055.59	765,398.53	32° 3' 3.732 N	103° 36' 36.488 W
10,800.0	42.79	359.59	10,730.9	-92.9	-500.9	383,115.37	765,398.10	32° 3' 4.324 N	103° 36' 36.488 W
10,900.0	54.79	359.59	10,796.6	-17.8	-501.4	383,190.45	765,397.56	32° 3' 5.067 N	103° 36' 36.489 W
11,000.0	66.79	359.59	10,845.4	69.3	-502.1	383,277.57	765,396.94	32° 3' 5.929 N	103° 36' 36.489 W
11,100.0	78.79	359.59	10,874.9	164.6	-502.8	383,372.91	765,396.26	32° 3' 6.873 N	103° 36' 36.490 W
11,193.4	90.00	359.59	10,884.0	257.5	-503.4	383,465.74	765,395.59	32° 3' 7.791 N	103° 36' 36.490 W
11,200.0	90.00	359.59	10,884.0	264.0	-503.5	383,472.31	765,395.54	32° 3' 7.856 N	103° 36' 36.490 W
11,300.0	90.00	359.59	10,884.0	364.0	-504.2	383,572.31	765,394.83	32° 3' 8.846 N	103° 36' 36.491 W
11,400.0	90.00	359.59	10,884.0	464.0	-504.9	383,672.30	765,394.11	32° 3' 9.835 N	103° 36' 36.491 W
11,500.0	90.00	359.59	10,884.0	564.0	-505.6	383,772.29	765,393.39	32° 3' 10.825 N	103° 36' 36.492 W
11,600.0	90.00	359.59	10,884.0	664.0	-506.3	383,872.29	765,392.67	32° 3' 11.814 N	103° 36' 36.492 W
11,700.0	90.00	359.59	10,884.0	764.0	-507.1	383,972.28	765,391.96	32° 3' 12.804 N	103° 36' 36.493 W
11,800.0	90.00	359.59	10,884.0	864.0	-507.8	384,072.28	765,391.24	32° 3' 13.794 N	103° 36' 36.494 W
11,900.0	90.00	359.59	10,884.0	964.0	-508.5	384,172.27	765,390.52	32° 3' 14.783 N	103° 36' 36.494 W
12,000.0	90.00	359.59	10,884.0	1,064.0	-509.2	384,272.26	765,389.81	32° 3' 15.773 N	103° 36' 36.495 W
12,100.0	90.00	359.59	10,884.0	1,164.0	-509.2	384,372.26	765,389.09	32° 3' 16.762 N	103° 36' 36.495 W
12,100.0	90.00	359.59	10,884.0	1,264.0	-510.6	384,472.25	765,388.37	32° 3' 17.752 N	103° 36' 36.496 W
12,300.0	90.00	359.59	10,884.0	1,364.0	-511.4	384,572.25	765,387.65	32° 3' 18.741 N	103° 36' 36.496 W
12,400.0	90.00	359.59	10,884.0	1,464.0	-511.4 -512.1	384,672.24	765,386.94	32° 3' 19.731 N	103° 36' 36.497 W
12,400.0	90.00	359.59	10,884.0	1,564.0	-512.1 -512.8	384,772.23	765,386.22	32° 3' 20.720 N	103° 36' 36.497 W
					-512.6 -513.5		765,385.50	32° 3′ 21.710 N	103° 36' 36.498 W
12,600.0	90.00	359.59	10,884.0	1,664.0		384,872.23	,		
12,700.0	90.00	359.59	10,884.0	1,764.0	-514.2	384,972.22	765,384.79	32° 3' 22.699 N	103° 36' 36.498 W
12,800.0	90.00	359.59	10,884.0	1,864.0	-514.9	385,072.22	765,384.07	32° 3′ 23.689 N	103° 36' 36.499 W
12,900.0	90.00	359.59	10,884.0	1,964.0	-515.7	385,172.21	765,383.35	32° 3′ 24.679 N	103° 36' 36.500 W
13,000.0	90.00	359.59	10,884.0	2,064.0	-516.4	385,272.21	765,382.64	32° 3′ 25.668 N	103° 36' 36.500 W
13,100.0	90.00	359.59	10,884.0	2,164.0	-517.1	385,372.20	765,381.92	32° 3′ 26.658 N	103° 36' 36.501 W
13,200.0	90.00	359.59	10,884.0	2,264.0	-517.8	385,472.19	765,381.20	32° 3' 27.647 N	103° 36' 36.501 W
13,300.0	90.00	359.59	10,884.0	2,364.0	-518.5	385,572.19	765,380.48	32° 3' 28.637 N	103° 36' 36.502 W
13,400.0	90.00	359.59	10,884.0	2,464.0	-519.2	385,672.18	765,379.77	32° 3' 29.626 N	103° 36' 36.502 W
13,500.0	90.00	359.59	10,884.0	2,564.0	-520.0	385,772.18	765,379.05	32° 3' 30.616 N	103° 36' 36.503 W
13,600.0	90.00	359.59	10,884.0	2,664.0	-520.7	385,872.17	765,378.33	32° 3' 31.605 N	103° 36' 36.503 W
13,700.0	90.00	359.59	10,884.0	2,764.0	-521.4	385,972.16	765,377.62	32° 3′ 32.595 N	103° 36' 36.504 W
13,800.0	90.00	359.59	10,884.0	2,864.0	-522.1	386,072.16	765,376.90	32° 3′ 33.584 N	103° 36' 36.504 W
13,900.0	90.00	359.59	10,884.0	2,964.0	-522.8	386,172.15	765,376.18	32° 3′ 34.574 N	103° 36' 36.505 W
14,000.0	90.00	359.59	10,884.0	3,063.9	-523.5	386,272.15	765,375.46	32° 3′ 35.563 N	103° 36' 36.506 W
14,100.0	90.00	359.59	10,884.0	3,163.9	-524.3	386,372.14	765,374.75	32° 3′ 36.553 N	103° 36' 36.506 W
14,200.0	90.00	359.59	10,884.0	3,263.9	-525.0	386,472.13	765,374.03	32° 3′ 37.543 N	103° 36' 36.507 W
14,300.0	90.00	359.59	10,884.0	3,363.9	-525.7	386,572.13	765,373.31	32° 3′ 38.532 N	103° 36' 36.507 W
14,400.0	90.00	359.59	10,884.0	3,463.9	-526.4	386,672.12	765,372.60	32° 3′ 39.522 N	103° 36' 36.508 W
14,500.0	90.00	359.59	10,884.0	3,563.9	-527.1	386,772.12	765,371.88	32° 3′ 40.511 N	103° 36' 36.508 W
14,600.0	90.00	359.59	10,884.0	3,663.9	-527.9	386,872.11	765,371.16	32° 3′ 41.501 N	103° 36' 36.509 W
14,700.0	90.00	359.59	10,884.0	3,763.9	-528.6	386,972.11	765,370.45	32° 3′ 42.490 N	103° 36' 36.509 W
14,800.0	90.00	359.59	10,884.0	3,863.9	-529.3	387,072.10	765,369.73	32° 3′ 43.480 N	103° 36' 36.510 W
14,900.0	90.00	359.59	10,884.0	3,963.9	-530.0	387,172.09	765,369.01	32° 3′ 44.469 N	103° 36' 36.511 W
15,000.0	90.00	359.59	10,884.0	4,063.9	-530.7	387,272.09	765,368.29	32° 3′ 45.459 N	103° 36' 36.511 W
15,100.0	90.00	359.59	10,884.0	4,163.9	-531.4	387,372.08	765,367.58	32° 3′ 46.448 N	103° 36' 36.512 W
15,200.0	90.00	359.59	10,884.0	4,263.9	-532.2	387,472.08	765,366.86	32° 3′ 47.438 N	103° 36' 36.512 W
15,300.0	90.00	359.59	10,884.0	4,363.9	-532.9	387,572.07	765,366.14	32° 3′ 48.428 N	103° 36' 36.513 W
15,400.0	90.00	359.59	10,884.0	4,463.9	-533.6	387,672.06	765,365.43	32° 3′ 49.417 N	103° 36' 36.513 W
15,500.0	90.00	359.59	10,884.0	4,563.9	-534.3	387,772.06	765,364.71	32° 3′ 50.407 N	103° 36' 36.514 W
15,600.0	90.00	359.59	10,884.0	4,663.9	-535.0	387,872.05	765,363.99	32° 3′ 51.396 N	103° 36' 36.514 W
15,700.0	90.00	359.59	10,884.0	4,763.9	-535.7	387,972.05	765,363.27	32° 3′ 52.386 N	103° 36' 36.515 W
15,800.0	90.00	359.59	10,884.0	4,863.9	-536.5	388,072.04	765,362.56	32° 3′ 53.375 N	103° 36' 36.515 W
15,900.0	90.00	359.59	10,884.0	4,963.9	-537.2	388,172.03	765,361.84	32° 3′ 54.365 N	103° 36' 36.516 W

Planning Report - Geographic

Database: EDM16

Company: BTA Oil Producers, LLC
Project: Lea County, NM (NAD 83)

 Site:
 Mesa B

 Well:
 Mesa B #32H

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Mesa B #32H

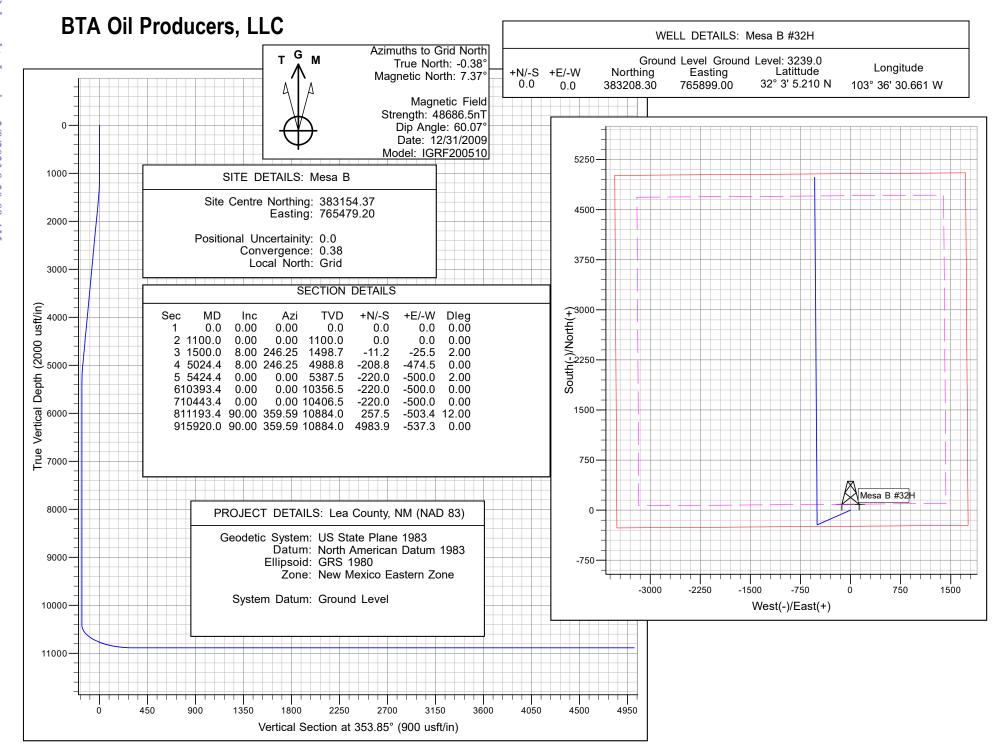
WELL @ 3239.0usft (Original Well Elev) WELL @ 3239.0usft (Original Well Elev)

Grid

Planned Survey	,								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,920.0	90.00	359.59	10,884.0	4,983.9	-537.3	388,192.00	765,361.70	32° 3′ 54.562 N	103° 36' 36.516 W

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Mesa B #32H BHL - plan hits target cel - Point	0.00 nter	0.00	10,884.0	4,983.9	-537.3	388,192.00	765,361.70	32° 3′ 54.562 N	103° 36' 36.516 W

Received by OCD: 1/25/2023 1:54:21 PM



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: BTA Oil Producers

LEASE NO.: | NMNM160973

WELL NAME & NO.: | MESA B 8115 7 Fed Com 32H

SURFACE HOLE FOOTAGE: 240'/S & 1760'/E **BOTTOM HOLE FOOTAGE** 50'/N & 2260'/E

LOCATION: | Section 7, T.26 S., R.33 E., NMP

COUNTY: Lea County, New Mexico

COA

H2S	O Yes	• No	
Potash	None	Secretary	© R-111-P
Cave/Karst Potential	O Low	• Medium	O High
Cave/Karst Potential	Critical		
Variance	O None	• Flex Hose	Other
Wellhead	Conventional	• Multibowl	OBoth
Other	☐4 String Area	☐ Capitan Reef	□WIPP
Other	▼ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	□ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

Casing Design:

- 1. The 13-3/8 inch surface casing shall be set at approximately 835 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

- completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 2. The 9-5/8 inch intermediate casing shall be set at approximately 4,724 feet. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
 Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
 - ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000** (**5M**) psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

BOP Break Testing Variance (Note: For 5M BOP or less)

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted (575-361-2822 Eddy County) (575-393-3612 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - Chaves and Roosevelt Counties
 Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
 During office hours call (575) 627-0272.
 After office hours call (575)
 - Eddy County
 Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the

plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

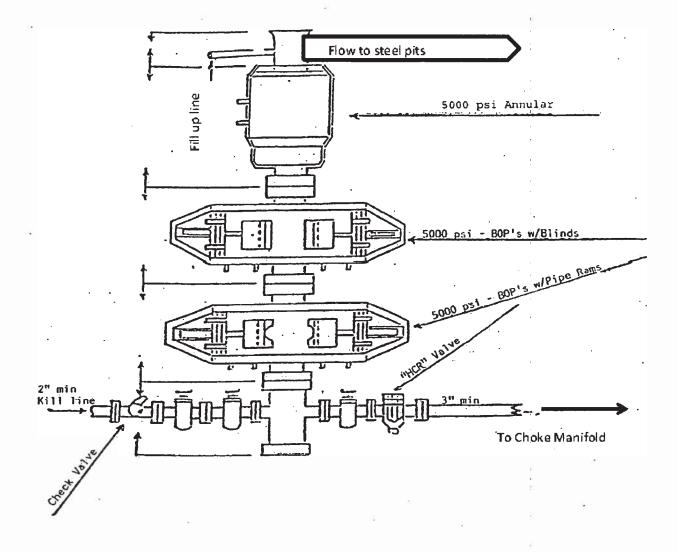
Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

OTA08232021

13-3/8" SOW



13-5/8" 5,000 PSI BOP



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

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**

CONDITIONS

Action 179619

CONDITIONS

Operator:	OGRID:	
BTA OIL PRODUCERS, LLC	260297	
104 S Pecos	Action Number:	
Midland, TX 79701	179619	
	Action Type:	
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)	

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	2/8/2023
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	2/8/2023
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	2/8/2023
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	2/8/2023