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

Sundry Print Report

09/26/2024

Well Name: GRAMA 8817 16-9 FEDERAL COM

Well Location: T22S / R34E / SEC 16 / SESW / 32.38512 / -103.4785634

County or Parish/State: LEA / NM

Well Number: 8H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM82799

Unit or CA Name: GRAMA 8817 JV P FED COM 2H

Unit or CA Number: NMNM136737

US Well Number: 3002551033

Operator: BTA OIL PRODUCERS LLC

Notice of Intent

Sundry ID: 2811132

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 09/10/2024

Time Sundry Submitted: 03:33

Date proposed operation will begin: 09/10/2024

Procedure Description: BTA Oil Producers, LLC respectfully requests the following footage, casing, cement, and drill plan changes to the original APD as approved. We are also requesting the option to use a Spudder Rig. Please see attached documents for more details. OLD FOOTAGES: SHL: 246' FSL & 1537' FWL (NO CHANGE) FTP: 100' FSL & 660' FWL LTP: 100' FNL & 660' FWL BHL: 50' FNL & 660’ FWL NEW FOOTAGES KOP: 50' FSL & 660' FWL FTP: 100' FSL & 659' FWL LTP: 100' FNL & 351' FWL BHL: 50' FNL & 350’ FWL

NOI Attachments

Procedure Description

Copy_of_Grama__08H_revised_to_four_string_9_17_24_DRILL_PLANS_20240918140603.pdf

GRAMA_8817_16_9_FED_COM_8H_REV1_CERTIFIED_C102__Revised_9_9_24__20240910090213.pdf

Grama_8817_16_9_Fed_Com__8H_WM_20240910090154.pdf

Grama_8817_16_9_Fed_Com__8H_Well_Plan_Rpt_20240910090154.pdf

BTA_Oil_Producers___Spud_Rig_Procedure_20240910090134.pdf

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Conditions of Approval

Additional

BTA_OIL_GRAMA_8817_16_9_FED_COM_8H_COAs_20240925103944.pdf

SEC16_T22S_R34E_GRAMA_8817_16_9_FED_COM_Lea__BTA_OIL_PRODUCERS_LLC_45560_JS_20240925103945.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SAMMY HAJAR

Signed on: SEP 18, 2024 02:06 PM

Name: BTA OIL PRODUCERS LLC

Title: Regulatory Analyst

Street Address: 104 S. Pecos

City: Midland **State:** TX

Phone: (432) 682-3753

Email address: shajar@btaoil.com

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 09/26/2024

Signature: Chris Walls

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BTA Oil Producers LLC
WELL NAME & NO.:	GRAMA 8817 16-9 FEDERAL COM 8H
SURFACE HOLE FOOTAGE:	246'/S & 1537'/W
BOTTOM HOLE FOOTAGE	50'/N & 350'/W
LOCATION:	Section 16, T.22 S., R.34 E., NMP
COUNTY:	Lea County, New Mexico

COA

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Wellhead Variance	○ Diverter		
Other	☐ 4 String	☑ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	☐ Contingency Cement Squeeze	☐ EchoMeter	☐ Primary Cement Squeeze
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements Variance	☑ Break Testing	☐ Offline Cementing	☐ Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately 1700 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable

fresh water) and cemented to the surface. The surface hole shall be **17 1/2** inch in diameter.

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.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef. Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

❖ In Capitan Reef 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.

❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. The minimum required fill of cement behind the **7-5/8** inch intermediate liner is:

    - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef. Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

4. The minimum required fill of cement behind the **5-1/2 X 5** inch production casing is:

    - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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, potash or capitan reef.

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 **13-3/8** inch 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 Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.
- 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.

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)
BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- 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 **(575-706-2779)** 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. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 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.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

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)

☒ Eddy County
EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
BLM_NM_CFO_DrillingNotifications@BLM.GOV
(575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
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-Q 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 **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

ii. 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.
iii. Manufacturer representative shall install the test plug for the initial BOP test.
iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
v. 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.
   i. 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 cement), 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).
   ii. 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
   iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** 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 8 hours or 500 pounds

compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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.

v. The results of the test shall be reported to the appropriate BLM office.

vi. 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.

vii. 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.

viii. 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 **43 CFR 3172**.

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.

JS 9/25/2024

SEC16-T22S-R34E_GRAMA 8817 16-9 FED COM_Lea__BTA OIL PRODUCERS LLC_45560_JS

GRAMA 8817 16-9 FED COM

13 3/8	surface csg in a	17 1/2	inch hole.		Design Factors			Surface				
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50	j 55		stc	5.55	1.28	0.49	1,700	4	0.85	2.22	92,650
"B"				stc				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	1,169		Tail Cmt	does not	circ to sfc.		Totals:	1,700			92,650

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	1365	2365	1181	100	10.00	3207	5M	1.56

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK. Alt Burst OK

9 5/8	casing inside the	13 3/8			Design Factors			Int 1				
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	hcl 80		ltc	3.97	1.55	1.03	5,270	1	1.79	2.68	210,800
"B"								0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	1,500						Totals:	5,270			210,800
	The cement volume(s) are intended to achieve a top of				0	ft from surface or a			1700			overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	600	1294	1735	-25	10.00	2874	3M	0.81
D V Tool(s):			3600				sum of sx	Σ CuFt	Σ%excess
t by stage % :		147	114				1860	3881	124

Does not meet CFO 25% excess

7 5/8	Liner w/top @	5170			Design Factors			Liner				
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	p 110		fj	0.76	1.18	1.35	5,540	1	2.41	2.14	164,538
"B"				0.00				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	626						Totals:	5,540			164,538
	The cement volume(s) are intended to achieve a top of				5070	ft from surface or a			200			overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.1005	270	664	568	17	9.40	3137	5M	0.56

Class 'C' tail cmt yld > 1.35

Does not meet CFO 25% excess

Tail cmt

5 1/2	casing inside the	7 5/8			Design Factors			Prod 1				
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	p 110		btc	2.87	2.11	2.25	10,510	2	4.03	3.78	210,200
"B"	18.00	p 110		btc	7.69	2.18	2.43	11,122	2	4.34	4.29	200,196
	w/8.4#/g mud, 30min Sfc Csg Test psig:	2,312						Totals:	21,632			410,396
	The cement volume(s) are intended to achieve a top of				10510	ft from surface or a			200			overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
6 3/4	0.0835	1265	1607	931	73	9.60			0.59

Class 'H' tail cmt yld > 1.20 Capitan Reef est top XXXX.

BTA Oil Producers, LLC
104 S Pecos
Midland, TX 79701

WELL: Grama 8817 16 - 9 Fed Com #8H
TVD: 11256
MD: 21632

DRILLING PLAN

Casing Program

Hole Size	Csg.Size	From (MD)	To (MD)	From (TVD)	To (TVD)	Tapered String	Weight (lbs)	Grade	Conn.	Collapse	Burst	Body Tension	Joint Tension	Dry/ Buoyant	Mud Weight (ppg)
17 1/2	13 3/8	0	1700	0	1700	No	54.5	J-55	STC	1.5	3.7	9.2	5.5	Dry	8.3
12 1/4	9 5/8	0	5270	0	5240	No	40	HCL80	LTC	1.6	2.1	4.3	4.0	Dry	10
8 3/4	7 5/8	5170	10710	5140	10637	No	29.7	P110	FJ	1.9	1.8	3.0	3.0	Dry	9.4
6 3/4	5 1/2	0	10510	0	10437	Yes	20	P110	Buttress	2.1	2.4	1.6	1.6	Dry	9.6
6 3/4	5	10510	21632	10437	11256	Yes	18	P110	Buttress	2.1	2.9	2.9	3.0	Dry	9.6

*9 5/8" has DV Tool @ 3600'

Dv Tool Depth 3600

Cementing Program

Csg. Size		Stage Tool Depth	Top MD of Segment	Bottom MD of Segment	Cement Type	Quantity (sk)	Yield (cu. Ft./sk)	Density (lbs. gal)	Volume (cu.ft.)	% Excess	Additives
13 3/8	Lead		0	1505	Class C	1165	1.8	13.5	2097	100%	2% CaCl2
	Tail		1505	1700	Class C	200	1.34	14.8	268	100%	2% CaCl2
9 5/8	Stg 2 Lead		0	3200	Class C	1060	2.19	12.7	2321.4	100%	0.5% CaCl2
	Stg 2 Tail		3200	3600	Class C	200	1.33	14.8	266	50%	1% CaCl2
	Stg 1 Lead		3600	4870	Class C	400	2.64	10.5	1056	100%	0.5% CaCl2
	Stg 1 Tail		4870	5270	Class C	200	1.19	15.6	238	100%	1% CaCl2
7 5/8	Lead		5170	9710	Class C	160	3.34	10.7	534.4	15%	.5% Fluid loss
	Tail		9710	10710	Class H	110	1.18	15.6	129.8	15%	.5% Fluid loss
5 1/2	Lead										
	Tail		9710	10510							
5	Lead										
	Tail		10510	21632	Class H	1265	1.27	14.8	1606.55	10%	0.1% Fluid Loss

BOP/CHOKE

Pressure Rating	5M	Rating Depth:	14000	Requesting Variance?	5M Annular on 10M BOPE Choke Hose Multi Bowl Wellhead

Pressure

Anticipated Bottom Hole Pressure: 5,619 psi

Anticipated Bottom Hole Temperature: 171 °F

Anticipated abnormal pressures, temperatures, or potential geologic hazards? None

Anticipated Bottom Surface Pressure: 3,143 psi

Hydrogen sulfide drilling operations plan required? Yes

Circulating Medium Table			
Depth (TVD)		Type	Weight (ppg)
From	To		
0	1700	FW Spud	8.3 - 8.4
1700	5270	Brine	10
5270	10637	Cut Brine	9.1 -9.4
10637	11256	Cut Brine	9.1 - 9.6

C-102

Submit Electronically
Via OCD Permitting

State of New Mexico
Energy, Minerals, & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal Type: ☐ Initial Submittal ☒ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-025-51033		Antelope Ridge; Bone Spring North

Property Code	Property Name	Well Number
333756	GRAMA 8817 16-9 FED COM	8H

OGRID No.	Operator Name	Ground Level Elevation
260297	BTA OIL PRODUCERS, LLC	3481'

Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal
Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
N	16	22S	34E		246' FSL	1537' FWL	32.38512006	-103.47856349	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
D	09	22S	34E		50' FNL	350' FWL	32.41333141	-103.48235938	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.00			No	

Order Numbers:
Well setbacks are under Common Ownership: ☒ Yes ☐ No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
M	16	22S	34E		50' FSL	660' FWL	32.38458138	-103.48140577	LEA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
M	16	22S	34E		100' FSL	659' FWL	32.38471881	-103.48141033	LEA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
D	09	22S	34E		100' FNL	351' FWL	32.41319398	-103.48235482	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type: ☒ Horizontal ☐ Vertical	Ground Floor Elevation
		3481'

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Sammy Hajar — 9/10/2024
Signature — Date

Sammy Hajar
Printed Name

SHAJAR@BTAOIL.COM
Email Address

SURVEYOR CERTIFICATIONS

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.

Signature and Seal of Professional Surveyor

Certificate Number	Date of Survey
21653	SEPTEMBER 6, 2024

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.

ACREAGE DEDICATION PLATS

GRAMA 8817 16-9 FED COM 8H

BHL
FNL 50' FWL 350', SECTION 09
NAD 83, SPCS NM EAST
X:803943.16' / Y:515146.59'
LAT:32.41333141 / LON:-103.48235938
NAD 27, SPCS NM EAST
X:762760.44' / Y:515085.72'
LAT:32.41320750 / LON:-103.48187737

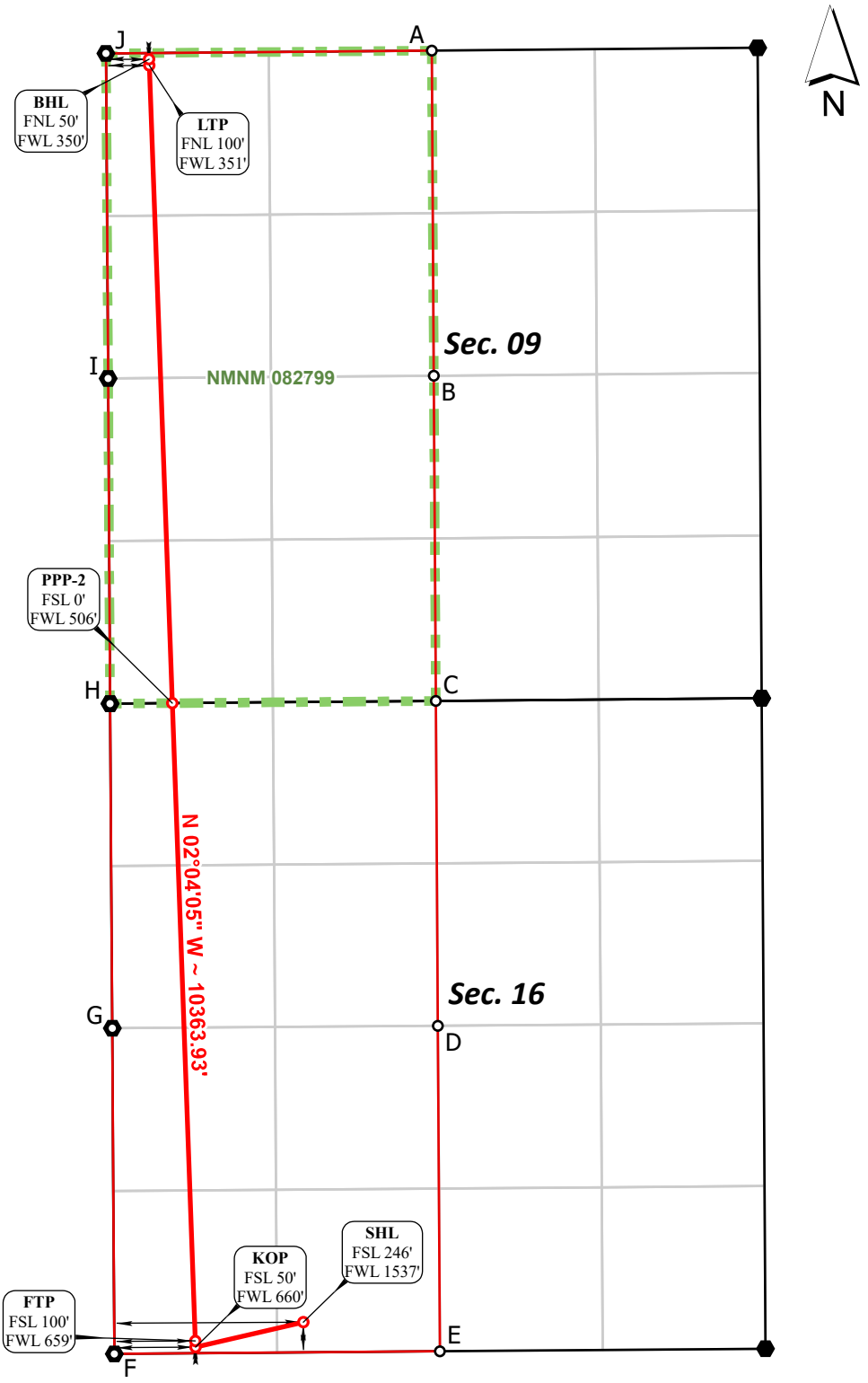
LTP
FNL 100' FWL 351', SECTION 09
NAD 83, SPCS NM EAST
X:803944.97' / Y:515096.60'
LAT:32.41319398 / LON:-103.48235482
NAD 27, SPCS NM EAST
X:762762.25' / Y:515035.73'
LAT:32.41307007 / LON:-103.48187282

PPP-2
FSL 0' FWL 506', SECTION 09
NAD 83, SPCS NM EAST
X:804131.97' / Y:509918.29'
LAT:32.39895718 / LON:-103.48188255
NAD 27, SPCS NM EAST
X:762949.13' / Y:509857.58'
LAT:32.39883324 / LON:-103.48140099

FTP
FSL 100' FWL 659', SECTION 16
NAD 83, SPCS NM EAST
X:804318.98' / Y:504739.42'
LAT:32.38471881 / LON:-103.48141033
NAD 27, SPCS NM EAST
X:763136.04' / Y:504678.86'
LAT:32.38459485 / LON:-103.48092920

KOP
FSL 50' FWL 660', SECTION 16
NAD 83, SPCS NM EAST
X:804320.79' / Y:504689.43'
LAT:32.38458138 / LON:-103.48140577
NAD 27, SPCS NM EAST
X:763137.84' / Y:504628.88'
LAT:32.38445742 / LON:-103.48092465

SHL
FSL 246' FWL 1537', SECTION 16
NAD 83, SPCS NM EAST
X:805196.64' / Y:504892.41'
LAT:32.38512006 / LON:-103.47856349
NAD 27, SPCS NM EAST
X:764013.67' / Y:504831.84'
LAT:32.38499607 / LON:-103.47808250



*FTP TO LTP LEASE DISTANCES

TRACT	DISTANCE
NMNM 082799	5181.69'
TOTAL	5181.69'

CORNER COORDINATES NAD 83, SPCS NM EAST	CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 806240.11' / Y:515216.46'	A - X: 765057.32' / Y:515155.58'
B - X: 806256.44' / Y:512576.50'	B - X: 765073.60' / Y:512515.70'
C - X: 806272.77' / Y:509936.10'	C - X: 765089.87' / Y:509875.38'
D - X: 806289.29' / Y:507298.04'	D - X: 765106.34' / Y:507237.40'
E - X: 806305.84' / Y:504655.43'	E - X: 765122.84' / Y:504594.86'
F - X: 803661.11' / Y:504634.11'	F - X: 762478.19' / Y:504573.56'
G - X: 803644.95' / Y:507278.66'	G - X: 762462.08' / Y:507218.03'
H - X: 803626.19' / Y:509914.08'	H - X: 762443.37' / Y:509853.37'
I - X: 803610.71' / Y:512554.28'	I - X: 762427.94' / Y:512493.49'
J - X: 803592.84' / Y:515193.56'	J - X: 762410.13' / Y:515132.69'

DELTA FIELD SERVICES

Drill Line Events | Section Corners | Drill Line | Dimension Lines | Federal Leases | Project Area

JOB No. R4255_001
REV 1 REM 9/4/2024

All bearings and coordinates refer to New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet.

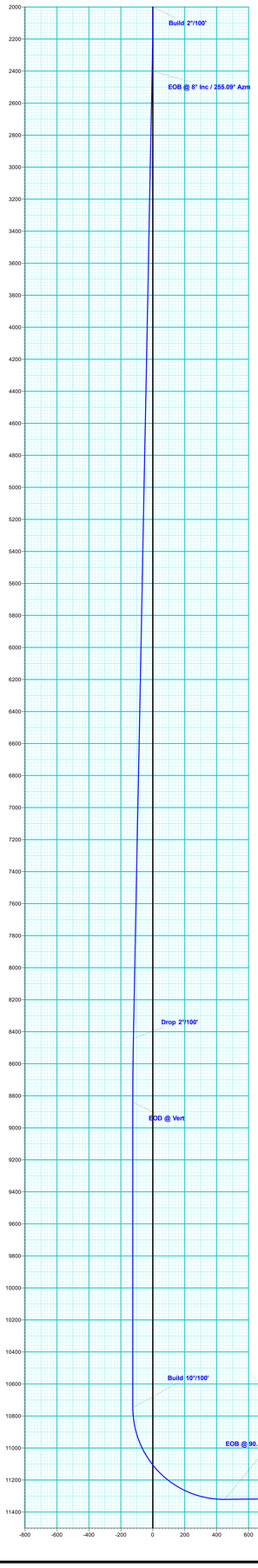
Distances/areas relative to NAD 83 grid measurements. Combined Scale Factor: 0.99982352 and a Convergence Angle: 0.44953028°

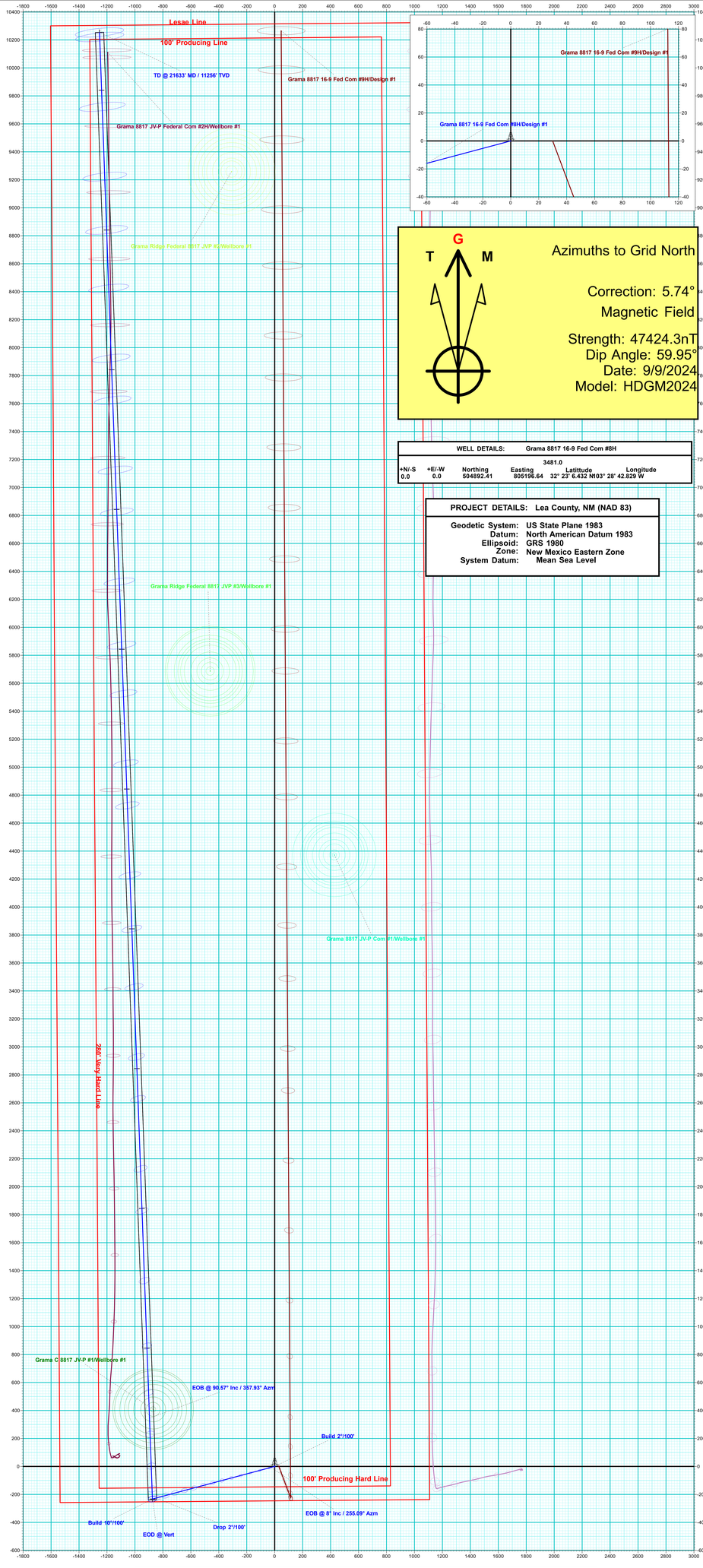
Company Name: BTA Oil Producers, LLC
Grama 8817 16-9 Fed Com #8H
Lea County, NM (NAD 83)
Rig: Patterson #566
Created By: Shane Robbins
Date: 9/10/2024

Grama 8817 16-9 Fed Com #8H
Lea County, NM (NAD 83)
Q240*** & WT-240***
Design #1

BTA

KLX Directional Drilling





Azimuths to Grid North

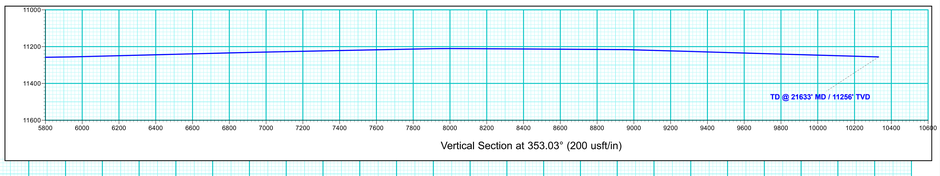
Correction: 5.74°
Magnetic Field
Strength: 47424.3nT
Dip Angle: 59.95°
Date: 9/9/2024
Model: HDGM2024

WELL DETAILS:	Grama 8817 16-9 Fed Com #8H			
		3481.0		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	504892.41	805196.64	32° 23' 6.432 M103° 28' 42.829 W

PROJECT DETAILS:	Lea County, NM (NAD 83)
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
2000.0	0.00	0.00	2000.0	0.0	0.0	0.0	0.0	Build 2°/100'
2400.1	8.00	255.09	2398.8	-7.2	-27.0	-3.9	27.9	EOB @ 8° Inc / 255.09° Azm
8501.9	8.00	255.09	8441.2	-225.8	-847.8	-121.3	877.4	Drop 2°/100'
8902.0	0.00	255.09	8840.0	-233.0	-874.8	-125.1	905.3	EOD @ Vert
10810.1	0.00	0.00	10748.1	-233.0	-874.8	-125.1	905.3	Build 10°/100'
11715.9	90.57	357.93	11321.0	345.4	-895.7	451.5	1484.0	EOB @ 90.57° Inc / 357.93° Azm
21632.7	88.35	357.94	11256.0	10254.2	-1253.5	10330.5	11399.3	TD @ 21633' MD / 11256' TVD



BTA Oil Producers, LLC

Lea County, NM (NAD 83)
Sec 16, T22-S, R34-E
Grama 8817 16-9 Fed Com #8H

Wellbore #1

Plan: Design #1

KLX Well Planning Report

10 September, 2024

KLX Directional Drilling

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project Lea County, NM (NAD 83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Sec 16, T22-S, R34-E

Site Position:		**Northing:**	504,874.80 usft	**Latitude:**	32° 23' 5.986 N
From:	Map	**Easting:**	808,619.20 usft	**Longitude:**	103° 28' 2.920 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.46 °

Well Grama 8817 16-9 Fed Com #8H

Well Position	**+N/-S**	17.6 usft	**Northing:**	504,892.41 usft	**Latitude:**	32° 23' 6.432 N
	+E/-W	-3,422.6 usft	**Easting:**	805,196.64 usft	**Longitude:**	103° 28' 42.829 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,481.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2024	9/9/2024	6.20	59.95	47,424.30000000

Design Design #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	353.03

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,400.1	8.00	255.09	2,398.8	-7.2	-27.0	2.00	2.00	0.00	255.09	
8,501.9	8.00	255.09	8,441.2	-225.8	-847.8	0.00	0.00	0.00	0.00	
8,902.0	0.00	0.00	8,840.0	-233.0	-874.8	2.00	-2.00	0.00	180.00	VP Grama 8H
10,810.1	0.00	0.00	10,748.1	-233.0	-874.8	0.00	0.00	0.00	0.00	
11,715.9	90.57	357.93	11,321.0	345.4	-895.7	10.00	10.00	-0.23	357.93	
12,217.2	90.57	357.93	11,316.0	846.4	-913.8	0.00	0.00	0.00	0.00	T1 GRAMA 8H
12,231.7	90.28	357.93	11,315.9	860.9	-914.3	2.00	-2.00	0.00	-179.97	
13,217.2	90.28	357.93	11,311.0	1,845.7	-949.9	0.00	0.00	0.00	0.00	T2 GRAMA 8H
13,246.4	90.87	357.93	11,310.7	1,874.9	-951.0	2.00	2.00	0.00	0.00	
14,217.3	90.87	357.93	11,296.0	2,845.1	-986.0	0.00	0.00	0.00	0.00	T3 GRAMA 8H
14,217.8	90.86	357.93	11,296.0	2,845.5	-986.0	2.00	-2.00	0.00	179.96	
15,217.5	90.86	357.93	11,281.0	3,844.4	-1,022.1	0.00	0.00	0.00	0.00	T4 GRAMA 8H
15,231.9	90.57	357.93	11,280.8	3,858.8	-1,022.7	2.00	-2.00	0.00	-180.00	
16,217.5	90.57	357.93	11,271.0	4,843.7	-1,058.3	0.00	0.00	0.00	0.00	T5 GRAMA 8H
16,232.0	90.86	357.93	11,270.8	4,858.3	-1,058.8	2.00	2.00	0.00	0.00	
17,217.6	90.86	357.93	11,256.0	5,843.1	-1,094.4	0.00	0.00	0.00	0.00	T6 GRAMA 8H
17,246.6	91.44	357.93	11,255.4	5,872.0	-1,095.4	2.00	2.00	0.00	0.00	
18,217.9	91.44	357.93	11,231.0	6,842.4	-1,130.5	0.00	0.00	0.00	0.00	T7 GRAMA 8H
18,232.8	91.14	357.93	11,230.7	6,857.3	-1,131.0	2.00	-2.00	0.00	180.00	
19,218.1	91.14	357.93	11,211.0	7,841.8	-1,166.6	0.00	0.00	0.00	0.00	T8 GRAMA 8H
19,292.4	89.66	357.93	11,210.5	7,916.0	-1,169.3	2.00	-2.00	0.00	180.00	
20,218.2	89.66	357.93	11,216.0	8,841.1	-1,202.7	0.00	0.00	0.00	0.00	T9 GRAMA 8H
20,283.6	88.35	357.94	11,217.1	8,906.5	-1,205.1	2.00	-2.00	0.02	179.39	
21,632.7	88.35	357.94	11,256.0	10,254.2	-1,253.5	0.00	0.00	0.00	0.00	PBHL Grama 8817

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 2°/100'									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	2.00	255.09	2,100.0	-0.4	-1.7	-0.2	2.00	2.00	0.00
2,200.0	4.00	255.09	2,199.8	-1.8	-6.7	-1.0	2.00	2.00	0.00
2,300.0	6.00	255.09	2,299.5	-4.0	-15.2	-2.2	2.00	2.00	0.00
EOB @ 8° Inc / 255.09° Azm									
2,400.1	8.00	255.09	2,398.8	-7.2	-27.0	-3.9	2.00	2.00	0.00
2,500.0	8.00	255.09	2,497.7	-10.8	-40.4	-5.8	0.00	0.00	0.00
2,600.0	8.00	255.09	2,596.8	-14.3	-53.8	-7.7	0.00	0.00	0.00
2,700.0	8.00	255.09	2,695.8	-17.9	-67.3	-9.6	0.00	0.00	0.00
2,800.0	8.00	255.09	2,794.8	-21.5	-80.8	-11.5	0.00	0.00	0.00
2,900.0	8.00	255.09	2,893.8	-25.1	-94.2	-13.5	0.00	0.00	0.00
3,000.0	8.00	255.09	2,992.9	-28.7	-107.7	-15.4	0.00	0.00	0.00
3,100.0	8.00	255.09	3,091.9	-32.3	-121.1	-17.3	0.00	0.00	0.00
3,200.0	8.00	255.09	3,190.9	-35.8	-134.6	-19.2	0.00	0.00	0.00
3,300.0	8.00	255.09	3,289.9	-39.4	-148.0	-21.2	0.00	0.00	0.00
3,400.0	8.00	255.09	3,389.0	-43.0	-161.5	-23.1	0.00	0.00	0.00
3,500.0	8.00	255.09	3,488.0	-46.6	-174.9	-25.0	0.00	0.00	0.00
3,600.0	8.00	255.09	3,587.0	-50.2	-188.4	-26.9	0.00	0.00	0.00
3,700.0	8.00	255.09	3,686.0	-53.8	-201.8	-28.9	0.00	0.00	0.00
3,800.0	8.00	255.09	3,785.1	-57.3	-215.3	-30.8	0.00	0.00	0.00
3,900.0	8.00	255.09	3,884.1	-60.9	-228.7	-32.7	0.00	0.00	0.00
4,000.0	8.00	255.09	3,983.1	-64.5	-242.2	-34.6	0.00	0.00	0.00
4,100.0	8.00	255.09	4,082.1	-68.1	-255.6	-36.6	0.00	0.00	0.00
4,200.0	8.00	255.09	4,181.2	-71.7	-269.1	-38.5	0.00	0.00	0.00
4,300.0	8.00	255.09	4,280.2	-75.2	-282.5	-40.4	0.00	0.00	0.00
4,400.0	8.00	255.09	4,379.2	-78.8	-296.0	-42.3	0.00	0.00	0.00
4,500.0	8.00	255.09	4,478.3	-82.4	-309.4	-44.3	0.00	0.00	0.00
4,600.0	8.00	255.09	4,577.3	-86.0	-322.9	-46.2	0.00	0.00	0.00
4,700.0	8.00	255.09	4,676.3	-89.6	-336.4	-48.1	0.00	0.00	0.00
4,800.0	8.00	255.09	4,775.3	-93.2	-349.8	-50.0	0.00	0.00	0.00
4,900.0	8.00	255.09	4,874.4	-96.7	-363.3	-52.0	0.00	0.00	0.00
5,000.0	8.00	255.09	4,973.4	-100.3	-376.7	-53.9	0.00	0.00	0.00
5,100.0	8.00	255.09	5,072.4	-103.9	-390.2	-55.8	0.00	0.00	0.00

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	8.00	255.09	5,171.4	-107.5	-403.6	-57.7	0.00	0.00	0.00
5,300.0	8.00	255.09	5,270.5	-111.1	-417.1	-59.6	0.00	0.00	0.00
5,400.0	8.00	255.09	5,369.5	-114.7	-430.5	-61.6	0.00	0.00	0.00
5,500.0	8.00	255.09	5,468.5	-118.2	-444.0	-63.5	0.00	0.00	0.00
5,600.0	8.00	255.09	5,567.5	-121.8	-457.4	-65.4	0.00	0.00	0.00
5,700.0	8.00	255.09	5,666.6	-125.4	-470.9	-67.3	0.00	0.00	0.00
5,800.0	8.00	255.09	5,765.6	-129.0	-484.3	-69.3	0.00	0.00	0.00
5,900.0	8.00	255.09	5,864.6	-132.6	-497.8	-71.2	0.00	0.00	0.00
6,000.0	8.00	255.09	5,963.6	-136.2	-511.2	-73.1	0.00	0.00	0.00
6,100.0	8.00	255.09	6,062.7	-139.7	-524.7	-75.0	0.00	0.00	0.00
6,200.0	8.00	255.09	6,161.7	-143.3	-538.1	-77.0	0.00	0.00	0.00
6,300.0	8.00	255.09	6,260.7	-146.9	-551.6	-78.9	0.00	0.00	0.00
6,400.0	8.00	255.09	6,359.7	-150.5	-565.1	-80.8	0.00	0.00	0.00
6,500.0	8.00	255.09	6,458.8	-154.1	-578.5	-82.7	0.00	0.00	0.00
6,600.0	8.00	255.09	6,557.8	-157.7	-592.0	-84.7	0.00	0.00	0.00
6,700.0	8.00	255.09	6,656.8	-161.2	-605.4	-86.6	0.00	0.00	0.00
6,800.0	8.00	255.09	6,755.9	-164.8	-618.9	-88.5	0.00	0.00	0.00
6,900.0	8.00	255.09	6,854.9	-168.4	-632.3	-90.4	0.00	0.00	0.00
7,000.0	8.00	255.09	6,953.9	-172.0	-645.8	-92.4	0.00	0.00	0.00
7,100.0	8.00	255.09	7,052.9	-175.6	-659.2	-94.3	0.00	0.00	0.00
7,200.0	8.00	255.09	7,152.0	-179.1	-672.7	-96.2	0.00	0.00	0.00
7,300.0	8.00	255.09	7,251.0	-182.7	-686.1	-98.1	0.00	0.00	0.00
7,400.0	8.00	255.09	7,350.0	-186.3	-699.6	-100.1	0.00	0.00	0.00
7,500.0	8.00	255.09	7,449.0	-189.9	-713.0	-102.0	0.00	0.00	0.00
7,600.0	8.00	255.09	7,548.1	-193.5	-726.5	-103.9	0.00	0.00	0.00
7,700.0	8.00	255.09	7,647.1	-197.1	-739.9	-105.8	0.00	0.00	0.00
7,800.0	8.00	255.09	7,746.1	-200.6	-753.4	-107.7	0.00	0.00	0.00
7,900.0	8.00	255.09	7,845.1	-204.2	-766.8	-109.7	0.00	0.00	0.00
8,000.0	8.00	255.09	7,944.2	-207.8	-780.3	-111.6	0.00	0.00	0.00
8,100.0	8.00	255.09	8,043.2	-211.4	-793.7	-113.5	0.00	0.00	0.00
8,200.0	8.00	255.09	8,142.2	-215.0	-807.2	-115.4	0.00	0.00	0.00
8,300.0	8.00	255.09	8,241.2	-218.6	-820.7	-117.4	0.00	0.00	0.00
8,400.0	8.00	255.09	8,340.3	-222.1	-834.1	-119.3	0.00	0.00	0.00
Drop 2°/100'									
8,501.9	8.00	255.09	8,441.2	-225.8	-847.8	-121.3	0.00	0.00	0.00
8,600.0	6.04	255.09	8,538.5	-228.9	-859.4	-122.9	2.00	-2.00	0.00
8,700.0	4.04	255.09	8,638.1	-231.1	-867.9	-124.1	2.00	-2.00	0.00
8,800.0	2.04	255.09	8,738.0	-232.5	-873.0	-124.9	2.00	-2.00	0.00
EOD @ Vert									
8,902.0	0.00	255.09	8,840.0	-233.0	-874.8	-125.1	2.00	-2.00	0.00
9,000.0	0.00	0.00	8,938.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,100.0	0.00	0.00	9,038.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,138.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,300.0	0.00	0.00	9,238.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,338.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,438.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,538.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,700.0	0.00	0.00	9,638.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,738.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,838.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,938.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,100.0	0.00	0.00	10,038.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,138.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,238.0	-233.0	-874.8	-125.1	0.00	0.00	0.00

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.0	0.00	0.00	10,338.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,500.0	0.00	0.00	10,438.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,600.0	0.00	0.00	10,538.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,700.0	0.00	0.00	10,638.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,738.0	-233.0	-874.8	-125.1	0.00	0.00	0.00
Build 10°/100'									
10,810.1	0.00	0.00	10,748.1	-233.0	-874.8	-125.1	0.00	0.00	0.00
10,850.0	3.99	357.93	10,787.9	-231.6	-874.8	-123.7	10.00	10.00	0.00
10,900.0	8.99	357.93	10,837.6	-225.9	-875.0	-118.1	10.00	10.00	0.00
10,950.0	13.99	357.93	10,886.6	-216.0	-875.4	-108.2	10.00	10.00	0.00
11,000.0	18.99	357.93	10,934.5	-201.8	-875.9	-94.0	10.00	10.00	0.00
11,050.0	23.99	357.93	10,981.0	-183.5	-876.6	-75.8	10.00	10.00	0.00
11,100.0	28.99	357.93	11,025.8	-161.2	-877.4	-53.6	10.00	10.00	0.00
11,150.0	33.99	357.93	11,068.4	-135.1	-878.3	-27.6	10.00	10.00	0.00
11,200.0	38.99	357.93	11,108.6	-105.4	-879.4	2.0	10.00	10.00	0.00
11,250.0	43.99	357.93	11,146.0	-72.4	-880.6	35.0	10.00	10.00	0.00
11,300.0	48.99	357.93	11,180.4	-36.1	-881.9	71.1	10.00	10.00	0.00
11,350.0	53.99	357.93	11,211.6	3.0	-883.3	110.1	10.00	10.00	0.00
11,400.0	58.99	357.93	11,239.2	44.6	-884.8	151.6	10.00	10.00	0.00
11,450.0	63.99	357.93	11,263.0	88.5	-886.4	195.4	10.00	10.00	0.00
11,500.0	68.99	357.93	11,283.0	134.3	-888.0	241.1	10.00	10.00	0.00
11,550.0	73.99	357.93	11,298.8	181.7	-889.8	288.3	10.00	10.00	0.00
11,600.0	78.99	357.93	11,310.5	230.2	-891.5	336.7	10.00	10.00	0.00
11,650.0	83.99	357.93	11,317.9	279.6	-893.3	386.0	10.00	10.00	0.00
11,700.0	88.99	357.93	11,321.0	329.5	-895.1	435.7	10.00	10.00	0.00
EOB @ 90.57° Inc / 357.93° Azm									
11,715.9	90.57	357.93	11,321.0	345.4	-895.7	451.5	9.98	9.98	0.00
11,800.0	90.57	357.93	11,320.2	429.4	-898.7	535.3	0.00	0.00	0.00
11,900.0	90.57	357.93	11,319.2	529.4	-902.3	634.9	0.00	0.00	0.00
12,000.0	90.57	357.93	11,318.2	629.3	-905.9	734.6	0.00	0.00	0.00
12,100.0	90.57	357.93	11,317.2	729.2	-909.5	834.2	0.00	0.00	0.00
12,200.0	90.57	357.93	11,316.2	829.1	-913.2	933.8	0.00	0.00	0.00
12,217.2	90.57	357.93	11,316.0	846.4	-913.8	951.0	0.00	0.00	0.00
12,231.7	90.28	357.93	11,315.9	860.9	-914.3	965.4	2.00	-2.00	0.00
12,300.0	90.28	357.93	11,315.6	929.1	-916.8	1,033.5	0.00	0.00	0.00
12,400.0	90.28	357.93	11,315.1	1,029.0	-920.4	1,133.1	0.00	0.00	0.00
12,500.0	90.28	357.93	11,314.6	1,128.9	-924.0	1,232.7	0.00	0.00	0.00
12,600.0	90.28	357.93	11,314.1	1,228.9	-927.6	1,332.4	0.00	0.00	0.00
12,700.0	90.28	357.93	11,313.6	1,328.8	-931.2	1,432.0	0.00	0.00	0.00
12,800.0	90.28	357.93	11,313.1	1,428.7	-934.8	1,531.6	0.00	0.00	0.00
12,900.0	90.28	357.93	11,312.6	1,528.7	-938.4	1,631.3	0.00	0.00	0.00
13,000.0	90.28	357.93	11,312.1	1,628.6	-942.1	1,730.9	0.00	0.00	0.00
13,100.0	90.28	357.93	11,311.6	1,728.5	-945.7	1,830.5	0.00	0.00	0.00
13,200.0	90.28	357.93	11,311.1	1,828.5	-949.3	1,930.2	0.00	0.00	0.00
13,217.2	90.28	357.93	11,311.0	1,845.7	-949.9	1,947.3	0.00	0.00	0.00
13,246.4	90.87	357.93	11,310.7	1,874.9	-951.0	1,976.4	2.00	2.00	0.00
13,300.0	90.87	357.93	11,309.9	1,928.4	-952.9	2,029.8	0.00	0.00	0.00
13,400.0	90.87	357.93	11,308.4	2,028.3	-956.5	2,129.4	0.00	0.00	0.00
13,500.0	90.87	357.93	11,306.9	2,128.3	-960.1	2,229.0	0.00	0.00	0.00
13,600.0	90.87	357.93	11,305.4	2,228.2	-963.7	2,328.7	0.00	0.00	0.00
13,700.0	90.87	357.93	11,303.8	2,328.1	-967.3	2,428.3	0.00	0.00	0.00
13,800.0	90.87	357.93	11,302.3	2,428.0	-970.9	2,527.9	0.00	0.00	0.00
13,900.0	90.87	357.93	11,300.8	2,527.9	-974.6	2,627.5	0.00	0.00	0.00

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.0	90.87	357.93	11,299.3	2,627.9	-978.2	2,727.1	0.00	0.00	0.00
14,100.0	90.87	357.93	11,297.8	2,727.8	-981.8	2,826.8	0.00	0.00	0.00
14,200.0	90.87	357.93	11,296.3	2,827.7	-985.4	2,926.4	0.00	0.00	0.00
14,217.3	90.87	357.93	11,296.0	2,845.1	-986.0	2,943.7	0.00	0.00	0.00
14,217.8	90.86	357.93	11,296.0	2,845.5	-986.0	2,944.1	2.00	-2.00	0.00
14,300.0	90.86	357.93	11,294.8	2,927.6	-989.0	3,026.0	0.00	0.00	0.00
14,400.0	90.86	357.93	11,293.3	3,027.6	-992.6	3,125.6	0.00	0.00	0.00
14,500.0	90.86	357.93	11,291.8	3,127.5	-996.2	3,225.3	0.00	0.00	0.00
14,600.0	90.86	357.93	11,290.3	3,227.4	-999.8	3,324.9	0.00	0.00	0.00
14,700.0	90.86	357.93	11,288.8	3,327.3	-1,003.5	3,424.5	0.00	0.00	0.00
14,800.0	90.86	357.93	11,287.3	3,427.3	-1,007.1	3,524.1	0.00	0.00	0.00
14,900.0	90.86	357.93	11,285.8	3,527.2	-1,010.7	3,623.8	0.00	0.00	0.00
15,000.0	90.86	357.93	11,284.3	3,627.1	-1,014.3	3,723.4	0.00	0.00	0.00
15,100.0	90.86	357.93	11,282.8	3,727.0	-1,017.9	3,823.0	0.00	0.00	0.00
15,200.0	90.86	357.93	11,281.3	3,827.0	-1,021.5	3,922.6	0.00	0.00	0.00
15,217.5	90.86	357.93	11,281.0	3,844.4	-1,022.1	3,940.0	0.00	0.00	0.00
15,231.9	90.57	357.93	11,280.8	3,858.8	-1,022.7	3,954.4	2.00	-2.00	0.00
15,300.0	90.57	357.93	11,280.1	3,926.9	-1,025.1	4,022.3	0.00	0.00	0.00
15,400.0	90.57	357.93	11,279.1	4,026.8	-1,028.7	4,121.9	0.00	0.00	0.00
15,500.0	90.57	357.93	11,278.1	4,126.7	-1,032.3	4,221.5	0.00	0.00	0.00
15,600.0	90.57	357.93	11,277.2	4,226.7	-1,036.0	4,321.1	0.00	0.00	0.00
15,700.0	90.57	357.93	11,276.2	4,326.6	-1,039.6	4,420.8	0.00	0.00	0.00
15,800.0	90.57	357.93	11,275.2	4,426.5	-1,043.2	4,520.4	0.00	0.00	0.00
15,900.0	90.57	357.93	11,274.2	4,526.5	-1,046.8	4,620.0	0.00	0.00	0.00
16,000.0	90.57	357.93	11,273.2	4,626.4	-1,050.4	4,719.7	0.00	0.00	0.00
16,100.0	90.57	357.93	11,272.2	4,726.3	-1,054.0	4,819.3	0.00	0.00	0.00
16,200.0	90.57	357.93	11,271.2	4,826.3	-1,057.6	4,918.9	0.00	0.00	0.00
16,217.5	90.57	357.93	11,271.0	4,843.7	-1,058.3	4,936.4	0.00	0.00	0.00
16,232.0	90.86	357.93	11,270.8	4,858.3	-1,058.8	4,950.8	2.00	2.00	0.00
16,300.0	90.86	357.93	11,269.8	4,926.2	-1,061.2	5,018.5	0.00	0.00	0.00
16,400.0	90.86	357.93	11,268.3	5,026.1	-1,064.9	5,118.2	0.00	0.00	0.00
16,500.0	90.86	357.93	11,266.8	5,126.0	-1,068.5	5,217.8	0.00	0.00	0.00
16,600.0	90.86	357.93	11,265.3	5,225.9	-1,072.1	5,317.4	0.00	0.00	0.00
16,700.0	90.86	357.93	11,263.8	5,325.9	-1,075.7	5,417.0	0.00	0.00	0.00
16,800.0	90.86	357.93	11,262.3	5,425.8	-1,079.3	5,516.7	0.00	0.00	0.00
16,900.0	90.86	357.93	11,260.8	5,525.7	-1,082.9	5,616.3	0.00	0.00	0.00
17,000.0	90.86	357.93	11,259.3	5,625.6	-1,086.5	5,715.9	0.00	0.00	0.00
17,100.0	90.86	357.93	11,257.8	5,725.6	-1,090.1	5,815.5	0.00	0.00	0.00
17,200.0	90.86	357.93	11,256.3	5,825.5	-1,093.7	5,915.2	0.00	0.00	0.00
17,217.6	90.86	357.93	11,256.0	5,843.1	-1,094.4	5,932.7	0.00	0.00	0.00
17,246.6	91.44	357.93	11,255.4	5,872.0	-1,095.4	5,961.5	2.00	2.00	0.00
17,300.0	91.44	357.93	11,254.1	5,925.4	-1,097.4	6,014.8	0.00	0.00	0.00
17,400.0	91.44	357.93	11,251.6	6,025.3	-1,101.0	6,114.4	0.00	0.00	0.00
17,500.0	91.44	357.93	11,249.0	6,125.2	-1,104.6	6,214.0	0.00	0.00	0.00
17,600.0	91.44	357.93	11,246.5	6,225.1	-1,108.2	6,313.6	0.00	0.00	0.00
17,700.0	91.44	357.93	11,244.0	6,325.0	-1,111.8	6,413.2	0.00	0.00	0.00
17,800.0	91.44	357.93	11,241.5	6,424.9	-1,115.4	6,512.8	0.00	0.00	0.00
17,900.0	91.44	357.93	11,239.0	6,524.8	-1,119.0	6,612.4	0.00	0.00	0.00
18,000.0	91.44	357.93	11,236.5	6,624.7	-1,122.6	6,712.0	0.00	0.00	0.00
18,100.0	91.44	357.93	11,234.0	6,724.6	-1,126.2	6,811.6	0.00	0.00	0.00
18,200.0	91.44	357.93	11,231.5	6,824.5	-1,129.9	6,911.2	0.00	0.00	0.00
18,217.9	91.44	357.93	11,231.0	6,842.4	-1,130.5	6,929.1	0.00	0.00	0.00
18,232.8	91.14	357.93	11,230.7	6,857.3	-1,131.0	6,943.8	2.00	-2.00	0.00
18,300.0	91.14	357.93	11,229.3	6,924.4	-1,133.5	7,010.8	0.00	0.00	0.00

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,400.0	91.14	357.93	11,227.3	7,024.4	-1,137.1	7,110.4	0.00	0.00	0.00
18,500.0	91.14	357.93	11,225.3	7,124.3	-1,140.7	7,210.0	0.00	0.00	0.00
18,600.0	91.14	357.93	11,223.3	7,224.2	-1,144.3	7,309.7	0.00	0.00	0.00
18,700.0	91.14	357.93	11,221.3	7,324.1	-1,147.9	7,409.3	0.00	0.00	0.00
18,800.0	91.14	357.93	11,219.3	7,424.0	-1,151.5	7,508.9	0.00	0.00	0.00
18,900.0	91.14	357.93	11,217.3	7,523.9	-1,155.1	7,608.5	0.00	0.00	0.00
19,000.0	91.14	357.93	11,215.4	7,623.8	-1,158.7	7,708.1	0.00	0.00	0.00
19,100.0	91.14	357.93	11,213.4	7,723.8	-1,162.4	7,807.7	0.00	0.00	0.00
19,200.0	91.14	357.93	11,211.4	7,823.7	-1,166.0	7,907.3	0.00	0.00	0.00
19,218.1	91.14	357.93	11,211.0	7,841.8	-1,166.6	7,925.4	0.00	0.00	0.00
19,292.4	89.66	357.93	11,210.5	7,916.0	-1,169.3	7,999.4	2.00	-2.00	0.00
19,300.0	89.66	357.93	11,210.5	7,923.6	-1,169.6	8,007.0	0.00	0.00	0.00
19,400.0	89.66	357.93	11,211.1	8,023.5	-1,173.2	8,106.6	0.00	0.00	0.00
19,500.0	89.66	357.93	11,211.7	8,123.5	-1,176.8	8,206.2	0.00	0.00	0.00
19,600.0	89.66	357.93	11,212.3	8,223.4	-1,180.4	8,305.9	0.00	0.00	0.00
19,700.0	89.66	357.93	11,212.9	8,323.3	-1,184.0	8,405.5	0.00	0.00	0.00
19,800.0	89.66	357.93	11,213.5	8,423.3	-1,187.6	8,505.1	0.00	0.00	0.00
19,900.0	89.66	357.93	11,214.1	8,523.2	-1,191.3	8,604.8	0.00	0.00	0.00
20,000.0	89.66	357.93	11,214.7	8,623.1	-1,194.9	8,704.4	0.00	0.00	0.00
20,100.0	89.66	357.93	11,215.3	8,723.1	-1,198.5	8,804.0	0.00	0.00	0.00
20,200.0	89.66	357.93	11,215.9	8,823.0	-1,202.1	8,903.7	0.00	0.00	0.00
20,218.2	89.66	357.93	11,216.0	8,841.1	-1,202.7	8,921.8	0.00	0.00	0.00
20,283.6	88.35	357.94	11,217.1	8,906.5	-1,205.1	8,987.0	2.00	-2.00	0.02
20,300.0	88.35	357.94	11,217.6	8,922.9	-1,205.7	9,003.3	0.00	0.00	0.00
20,400.0	88.35	357.94	11,220.5	9,022.8	-1,209.3	9,102.9	0.00	0.00	0.00
20,500.0	88.35	357.94	11,223.4	9,122.7	-1,212.9	9,202.5	0.00	0.00	0.00
20,600.0	88.35	357.94	11,226.3	9,222.6	-1,216.4	9,302.1	0.00	0.00	0.00
20,700.0	88.35	357.94	11,229.1	9,322.5	-1,220.0	9,401.6	0.00	0.00	0.00
20,800.0	88.35	357.94	11,232.0	9,422.4	-1,223.6	9,501.2	0.00	0.00	0.00
20,900.0	88.35	357.94	11,234.9	9,522.3	-1,227.2	9,600.8	0.00	0.00	0.00
21,000.0	88.35	357.94	11,237.8	9,622.2	-1,230.8	9,700.4	0.00	0.00	0.00
21,100.0	88.35	357.94	11,240.7	9,722.1	-1,234.4	9,800.0	0.00	0.00	0.00
21,200.0	88.35	357.94	11,243.5	9,822.0	-1,238.0	9,899.6	0.00	0.00	0.00
21,300.0	88.35	357.94	11,246.4	9,921.9	-1,241.5	9,999.2	0.00	0.00	0.00
21,400.0	88.35	357.94	11,249.3	10,021.7	-1,245.1	10,098.8	0.00	0.00	0.00
21,500.0	88.35	357.94	11,252.2	10,121.6	-1,248.7	10,198.4	0.00	0.00	0.00
21,600.0	88.35	357.94	11,255.1	10,221.5	-1,252.3	10,298.0	0.00	0.00	0.00
TD @ 21633' MD / 11256' TVD									
21,632.7	88.35	357.94	11,256.0	10,254.2	-1,253.5	10,330.5	0.00	0.00	0.00

Well Planning Report

Database:	KLXDirectional-AD	**Local Co-ordinate Reference:**	Well Grama 8817 16-9 Fed Com #8H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	WELL @ 3506.0usft (Patterson #566)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3506.0usft (Patterson #566)
Site:	Sec 16, T22-S, R34-E	**North Reference:**	Grid
Well:	Grama 8817 16-9 Fed Com #8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
T10 GRAMA 8H - plan misses target center by 9918.2usft at 0.0usft MD (0.0 TVD, 0.0 N, 0.0 E) - Point	0.00	0.00	0.0	9,840.5	-1,238.9	514,732.90	803,957.77	32° 24' 43.899 N	103° 28' 56.362 W
VP Grama 8H - plan hits target center - Point	0.00	0.00	8,840.0	-233.0	-874.8	504,659.44	804,321.87	32° 23' 4.196 N	103° 28' 53.051 W
T8 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,211.0	7,841.8	-1,166.6	512,734.20	804,030.01	32° 24' 24.116 N	103° 28' 55.705 W
T9 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,216.0	8,841.1	-1,202.7	513,733.55	803,993.89	32° 24' 34.008 N	103° 28' 56.033 W
T7 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,231.0	6,842.4	-1,130.5	511,734.85	804,066.13	32° 24' 14.225 N	103° 28' 55.376 W
PBHL Grama 8817 16 - plan hits target center - Point	0.00	0.00	11,256.0	10,254.2	-1,253.5	515,146.59	803,943.16	32° 24' 47.993 N	103° 28' 56.494 W
T6 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,256.0	5,843.1	-1,094.4	510,735.51	804,102.26	32° 24' 4.334 N	103° 28' 55.048 W
T5 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,271.0	4,843.7	-1,058.3	509,736.16	804,138.38	32° 23' 54.443 N	103° 28' 54.719 W
T4 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,281.0	3,844.4	-1,022.1	508,736.81	804,174.50	32° 23' 44.552 N	103° 28' 54.391 W
T3 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,296.0	2,845.1	-986.0	507,737.46	804,210.62	32° 23' 34.661 N	103° 28' 54.062 W
T2 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,311.0	1,845.7	-949.9	506,738.12	804,246.74	32° 23' 24.770 N	103° 28' 53.734 W
T1 GRAMA 8H - plan hits target center - Point	0.00	0.00	11,316.0	846.4	-913.8	505,738.77	804,282.86	32° 23' 14.879 N	103° 28' 53.406 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.0	2,000.0	0.0	0.0	Build 2°/100'
2,400.1	2,398.8	-7.2	-27.0	EOB @ 8° Inc / 255.09° Azm
8,501.9	8,441.2	-225.8	-847.8	Drop 2°/100'
8,902.0	8,840.0	-233.0	-874.8	EOD @ Vert
10,810.1	10,748.1	-233.0	-874.8	Build 10°/100'
11,715.9	11,321.0	345.4	-895.7	EOB @ 90.57° Inc / 357.93° Azm
21,632.7	11,256.0	10,254.2	-1,253.5	TD @ 21633' MD / 11256' TVD

BTA Oil Producers, LLC

Spud Rig Procedure

Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.

a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).

b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.

2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.

3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.

a. A means for intervention will be maintained while the drilling rig is not over the well.

4. Spudder rig operations are expected to take 2-3 days per well on the pad.

5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.

6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nippled up and tested on the wellhead before drilling operations resume on each well.

a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.

b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations

7. BTA Oil Producers, LLC will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.

8. Once the rig is removed, BTA Oil Producers, LLC will secure the wellhead area by placing a guard rail around the cellar area

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

CONDITIONS

Action 387057

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 387057
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	ALL PREVIOUS COA's APPLY.	9/27/2024