Form 3160-3
(June 2015)

HOBBS OCD
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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC0061873B

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☑ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
CHINCOTEAGUE 8-32 FED ST COM
522H

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY LP

9. API Well No.
30-025-46475

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
333 West Sheridan Avenue Oklahoma City OK 73102	(800)583-3866	FED WC-025 G-06 S253206M / BONE SP 97899

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENW / 2318 FNL / 1375 FWL / LAT 32.1457299 / LONG -103.7013614
At proposed prod. zone NENW / 20 FNL / 1680 FWL / LAT 32.181102 / LONG -103.6997951

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 8 / T25S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
	LEA	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
1375 feet	1759.31	800
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. in file**
1710 feet	10200 feet / 23142 feet	FED: NMB000801
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3439 feet	01/01/2020	45 days

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.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Jenny Harms / Ph: (405)524-4902	04/10/2019
Title		
Regulatory Compliance Professional		
Approved by *(Signature)*	**Name *(Printed/Typed)***	**Date**
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	10/15/2019
Title	**Office**	
Assistant Field Manager Lands & Minerals	CARLSBAD	

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.

APPROVED WITH CONDITIONS
Approval Date: 10/15/2019

KZ 10/15/19

- Double Sided

(Continued on page 2)

*(Instructions on page 2)

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: SENW / 2318 FNL / 1375 FWL / TWSP: 25S / RANGE: 32E / SECTION: 8 / LAT: 32.1457299 / LONG: -103.7013614 (TVD: 0 feet, MD: 0 feet)
   PPP: SENW / 2547 FNL / 1680 FWL / TWSP: 25S / RANGE: 32E / SECTION: 8 / LAT: 32.1451031 / LONG: -103.7003786 (TVD: 9949 feet, MD: 9985 feet)
   PPP: SESW / 1 FSL / 1680 FWL / TWSP: 25S / RANGE: 32E / SECTION: 5 / LAT: 32.152097 / LONG: -103.700265 (TVD: 10200 feet, MD: 12589 feet)
   BHL: NENW / 20 FNL / 1680 FWL / TWSP: 24S / RANGE: 32E / SECTION: 32 / LAT: 32.181102 / LONG: -103.6997951 (TVD: 10200 feet, MD: 23142 feet)

BLM Point of Contact

Name: Candy Vigil
Title: Admin Support Assistant
Phone: 5752345982
Email: cvigil@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LEASE NO.:	**NMLC0061873B**
WELL NAME & NO.:	Chincoteague 8-32 Fed St Com 522H
SURFACE HOLE FOOTAGE:	2318'/N & 1375'/W
BOTTOM HOLE FOOTAGE	20'/N & 1680'/W
LOCATION:	Section 8, T.25 S., R.32 E., NMPM
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
Other	[ ] 4 String Area	[ ] Capitan Reef	[ ] WIPP
Other	[x] Fluid Filled	[x] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 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

1. The **13-3/8** inch surface casing shall be set at approximately **830 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 minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

Option 2:

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.

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to BLM.

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.
  Cement excess is less than 25%, more cement might be required.

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.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** psi.

Option 2:

1. 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 **3000 (3M)** 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.

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
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

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. The casing intergrity 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 intergrity 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-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: 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:

    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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

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.

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
WELL NAME & NO.:	Chincoteague 8-32 Fed St Com 522H
SURFACE HOLE FOOTAGE:	2318'/N & 1375'/W
BOTTOM HOLE FOOTAGE	20'/N & 1680'/W
LOCATION:	Section 8, T.25 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

Approval Date: 10/15/2019

AFMSS

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

Application Data Report

10/17/2019

APD ID: 10400040675 **Submission Date:** 04/10/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Well Type: OIL WELL **Well Work Type:** Drill

[redacted]

Show Final Text

Section 1 - General

APD ID: 10400040675 **Tie to previous NOS?** **Submission Date:** 04/10/2019

BLM Office: CARLSBAD **User:** Jenny Harms **Title:** Regulatory Compliance Professional

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMLC0061873B **Lease Acres:** 1759.31

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

Operator Info

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue **Zip:** 73102

Operator PO Box:

Operator City: Oklahoma City **State:** OK

Operator Phone: (800)583-3866

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** FED WC-025 G-06 S253206M **Pool Name:** BONE SPRING (OIL)

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL,POTASH

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** CHINCOTEAGUE 8 PAD **Number:** 1

Well Class: HORIZONTAL **Number of Legs:**

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: **Distance to nearest well:** 1710 FT **Distance to lease line:** 1375 FT

Reservoir well spacing assigned acres Measurement: 800 Acres

Well plat: AA000213625_CHINCOTEAGUE_8_32_FSC_522H_WL_P_C102_signed_20190410133411.pdf

Well work start Date: 01/01/2020 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 7003 **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	2318	FNL	1375	FWL	25S	32E	8	Aliquot SENW	32.1457299	-103.7013614	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061873B	3439	0	0	
KOP Leg #1	2618	FNL	1680	FWL	25S	32E	8	Aliquot SENW	32.1449	-103.700382	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061873B	-6188	9644	9627	
PPP Leg #1	1	FSL	1680	FWL	25S	32E	5	Aliquot SESW	32.152097	-103.700265	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061863A	-6761	12589	10200	

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 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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	97899	WC-025 G-06 S253206M;BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
	CHINCOTEAGUE 8-32 FED STATE COM	522H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3439.2

[10] Surface Location

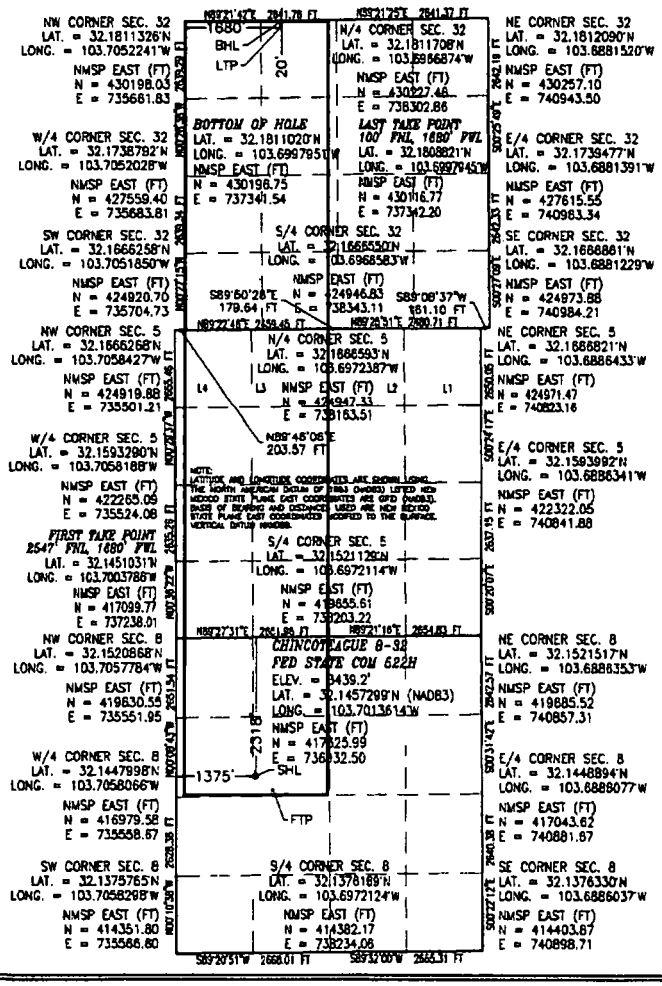
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	8	25 S	32 E		2318	NORTH	1375	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	32	24 S	32 E		20	NORTH	1680	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
800			

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.



[17] OPERATOR CERTIFICATION

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

Jenny Harms 4-9-2019
Signature Date

JENNY HARMS
Printed Name

JENNY.HARMS@DVN.COM
E-mail Address

[18] SURVEYOR CERTIFICATION

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

MARCH 1, 2019
Date of Survey

FILIMON F. JARAMILLO
NEW MEXICO
12797
PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number: FILIMON F. JARAMILLO, PLS 12797
SURVEY NO. 7003

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1	1	FSL	1680	FWL	25S	32E	5	Aliquot SESW	32.152097	-103.700265	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061863A	-6761	12589	10200	
PPP Leg #1	1	FSL	1680	FWL	25S	32E	5	Aliquot SESW	32.152097	-103.700265	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061863A	-6761	12589	10200	
PPP Leg #1	2547	FNL	1680	FWL	25S	32E	8	Aliquot SENW	32.1451031	-103.7003786	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061873B	-6510	9985	9949	
PPP Leg #1	2547	FNL	1680	FWL	25S	32E	8	Aliquot SENW	32.1451031	-103.7003786	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061873B	-6510	9985	9949	
PPP Leg #1	2547	FNL	1680	FWL	25S	32E	8	Aliquot SENW	32.1451031	-103.7003786	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061873B	-6510	9985	9949	
EXIT Leg #1	100	FSL	1680	FWL	24S	32E	32	Aliquot NENW	32.1808821	-103.6997945	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6761	23061	10200	
BHL Leg #1	20	FNL	1680	FWL	24S	32E	32	Aliquot NENW	32.181102	-103.6997951	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6761	23142	10200	

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION CO., L.P.	CHINCOTEAGUE 8-32 FED STATE COM	522H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	8	25S	32E		2618	FNL	1680	FWL	LEA

Latitude	Longitude	NAD
32.144900	-103.700382	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	8	25S	32E		2547	NORTH	1680	WEST	LEA

Latitude	Longitude	NAD
32.1451031	103.7003786	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	32	24S	32E		100	NORTH	1680	WEST	LEA

Latitude	Longitude	NAD
32.1808821	103.6997945	83

Is this well the defining well for the Horizontal Spacing Unit? [NO]

Is this well an infill well? [YES]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

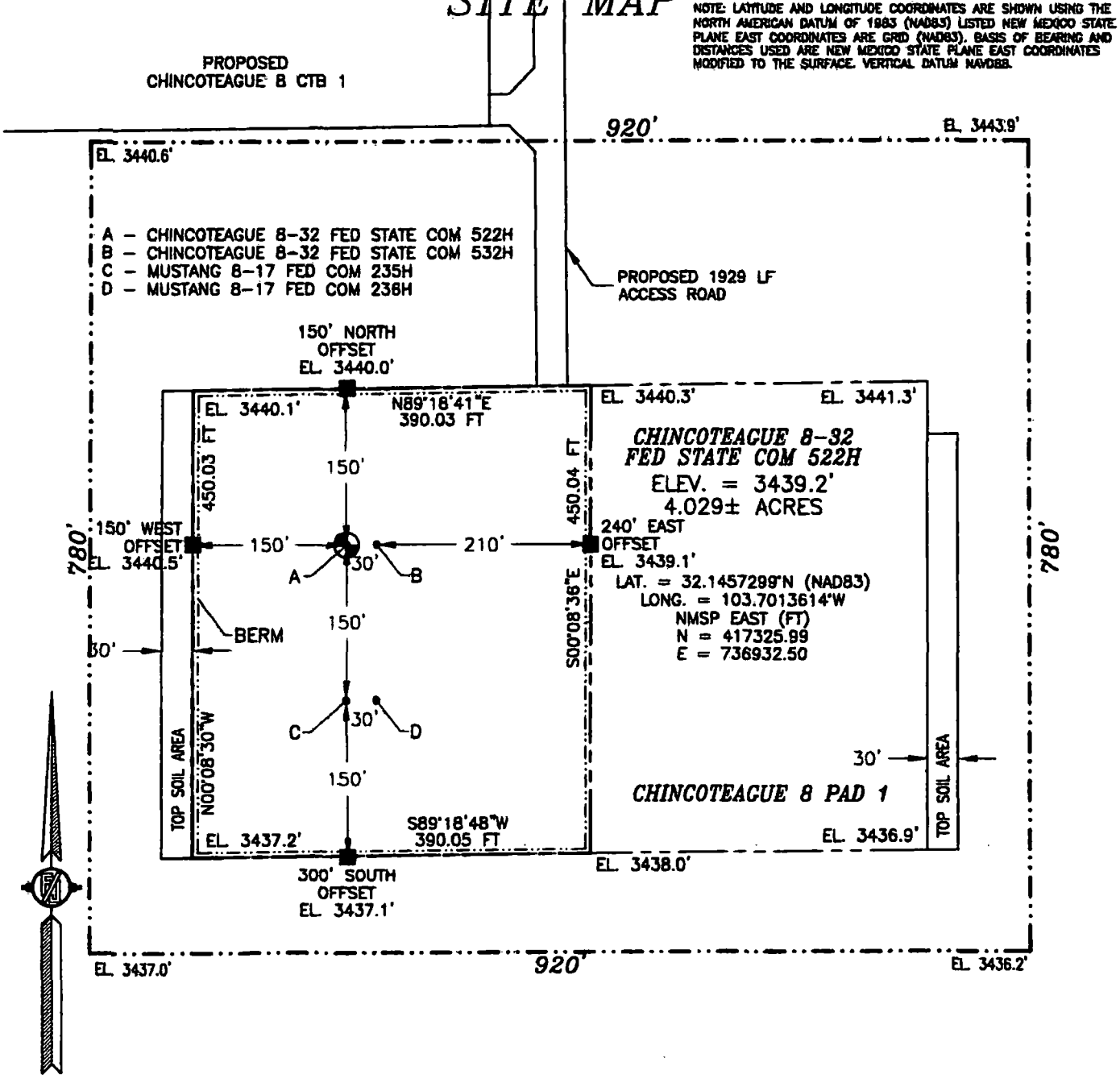
API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD88.



015 75 150 300

SCALE 1" = 150'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 & CR 1 (ORLA) GO SOUTH ON CR 1 6.1 MILES TO MONSANTO ROAD, TURN RIGHT (WEST) GO 2.1 MILES, TURN RIGHT (NORTH) GO 1.0 MILE, NORTH ROAD TURNS LEFT (WEST) GO 200' TO A LEASE ROAD ON RIGHT (NORTH) TURN NORTH GO 0.7 OF A MILE TO ROAD LATHS ON RIGHT (EAST) GO 1128', TURN RIGHT GO SOUTH 801' (TOTAL OF 1929') TO NORTH EDGE OF PAD FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

CHINCOTEAGUE 8-32 FED STATE COM 522H

LOCATED 2318 FT. FROM THE NORTH LINE AND 1375 FT. FROM THE WEST LINE OF SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LAND STATUS: BLM

MARCH 1, 2019

SURVEY NO. 7003

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

ACCESS ROAD PLAT

ACCESS ROAD TO THE CHINCOTEAGUE 8 PAD 1 (CHINCOTEAGUE 8-32 FED STATE COM 522H, 532H & MUSTANG 8-17 FED COM 235H, 236H)

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
MARCH 1, 2019

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 NW/4 OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N18°03'36"W, A DISTANCE OF 1436.80 FEET;
THENCE N89°18'36"E A DISTANCE OF 1127.70 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°41'23"E A DISTANCE OF 800.78 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S72°26'57"W, A DISTANCE OF 1652.72 FEET;

SAID STRIP OF LAND BEING 1928.48 FEET OR 116.87 RODS IN LENGTH, CONTAINING 1.328 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NW/4	886.44 L.F.	53.72 RODS	0.610 ACRES
SE/4 NW/4	1042.04 L.F.	63.15 RODS	0.718 ACRES

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 3 DAY OF MARCH 2019

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

FILIMON F. JARAMILLO, PLS. 12797

APD ID: 10400040675 **Submission Date:** 04/10/2019

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Well Type: OIL WELL **Well Work Type:** Drill

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	3439	0	0	OTHER,ALLUVIUM : Surface	NONE	N
2	RUSTLER	2713	725	725	SANDSTONE	NONE	N
3	SALADO	2353	1085	1085	SALT	NONE	N
4	TOP SALT	2354	1085	1085	SALT	NONE	N
5	LAMAR	-961	4400	4400	SANDSTONE	NATURAL GAS,OIL	N
6	BASE OF SALT	-962	4400	4400	SALT	NONE	N
7	BELL CANYON	-981	4420	4420	SANDSTONE	NATURAL GAS,OIL	N
8	CHERRY CANYON	-1961	5400	5400	SANDSTONE	NATURAL GAS,OIL	N
9	BRUSHY CANYON	-3461	6900	6900	SANDSTONE	NATURAL GAS,OIL	N
10	BONE SPRING LIME	-4891	8330	8330	LIMESTONE	NATURAL GAS,OIL	N
11	BONE SPRING	-4971	8410	8410	SANDSTONE	NATURAL GAS,OIL	Y
12	BONE SPRING 2ND	-6511	9950	9950	SANDSTONE	NATURAL GAS,OIL	Y
13	BONE SPRING LIME	-7061	10500	10500	LIMESTONE	NATURAL GAS,OIL	N
14	BONE SPRING 3RD	-7841	11280	11280	SANDSTONE	NATURAL GAS,OIL	N
15	WOLFCAMP	-8281	11720	11720	SANDSTONE	NATURAL GAS,OIL	N
16	STRAWN	-10231	13670	13670	LIMESTONE	NATURAL GAS,OIL	N

Section 2 - Blowout Prevention

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Pressure Rating (PSI): 5M **Rating Depth:** 4635

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a BOP/BOPE system with the above minimum rating will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.
Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.
Choke Diagram Attachment:

5M_BOPE__CK_20190406162412.pdf

BOP Diagram Attachment:

5M_BOPE__CK_20190408073802.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 10200

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below intermediate casing, a BOP/BOPE system with the above minimum rating will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.
Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.
Choke Diagram Attachment:

5M_BOPE__CK_20190406162442.pdf

BOP Diagram Attachment:

5M_BOPE__CK_20190406162458.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

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	750	0	750	-6965	-8031	750	H-40	48	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4635	0	4635	-6965	-12965	4635	J-55	40	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
3	PRODUCTION	8.75	5.5	NEW	API	N	0	23142	0	10200	-6965	-17514	23142	P-110	17	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Surf_Csg_Ass_20190406163130.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Int_Csg_Ass_20190406163257.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Prod_Csg_Ass_20190406163405.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead					1.44					
INTERMEDIATE	Lead					3.27					
INTERMEDIATE	Tail										
PRODUCTION	Lead					3.27					

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail										

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 Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
4635	10200	WATER-BASED MUD	8.5	9				2			
750	10200	OTHER : BRINE	10	10.5				2			
0	10200	OTHER : FRESH WATER GEL	8.5	9							

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: CHINCOTEAGUE 8-32 FED ST COM **Well Number:** 522H

Section 6 - Test, Logging, Coring

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

Will run GRMWD from TD to from KOP. Cement bond logs will be run in vertical to determine top of cement. Stated logs run will be in the completion report and submitted to the BLM.

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

CALIPER,CBL,DS,GR,MUDLOG

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4774 **Anticipated Surface Pressure:** 2530

Anticipated Bottom Hole Temperature(F): 143

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Chincoteague_8_32_Fed_State_Com_522H_H2S_PLAN_20190408092910.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Chincoteague_8_32_Fed_State_Com_522H_Permit_Plan_1_20190408093001.pdf

Devon_Chincoteague_8_32_Fed_State_Com_522H_AC_Report_Permit_Plan_1_20190408093003.pdf

Devon_Chincoteague_8_32_Fed_State_Com_522H_Permit_Plan_1_20190408093004.pdf

Devon_Chincoteague_8_32_Fed_State_Com_522H_Plot_Permit_Plan_1_20190408093004.pdf

Addl_Tops_20190830105908.pdf

Other proposed operations facets description:

Multi-Bowl Verbiage 5M
Multi-Bowl Wellhead 5M
Closed-Loop Design Plan
Gas Capture Plan
Spudder Rig

Other proposed operations facets attachment:

MB_Verb_5M_20190314132649.pdf

MB_Wellhd_5M_20190314132650.pdf

Spudder_Rig_Info_20190314132650.pdf

Clsd_Loop_20190314132649.pdf

GasCapturePlan_CHINCO_8_CTB_2_20190408093030.pdf

Other Variance attachment:

Co_flex_20190314132801.pdf

devon

Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015

Hydrogen Sulfide (H_2S) Contingency Plan

For

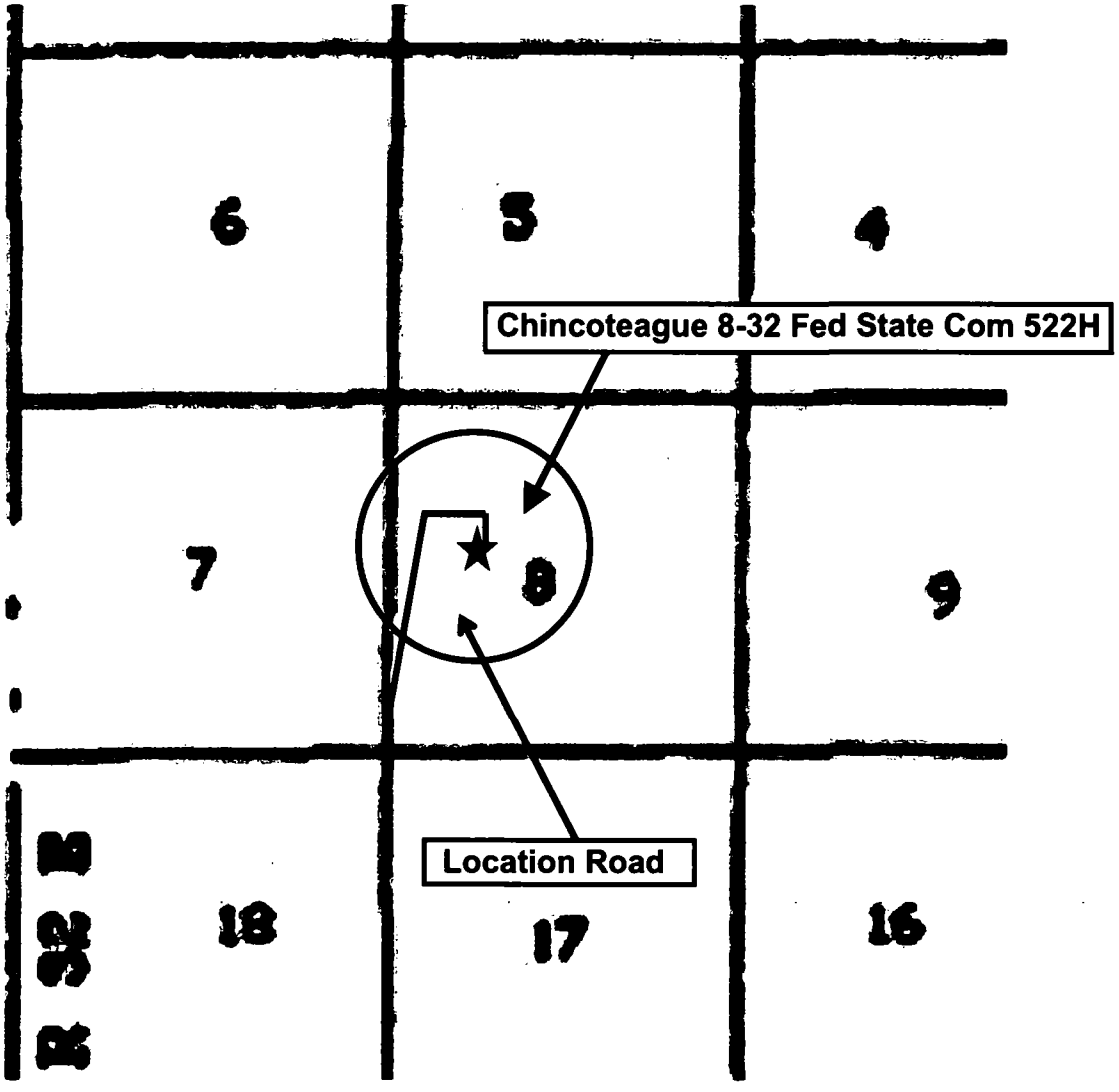
Chincoteague 8-32 Fed State Com 522H

Sec-8 T-25S R-32E
2318' FNL & 1375' FWL
LAT. = 32.1457299' N (NAD83)
LONG = 103.7013614' W

Lea County NM

Chincoteague 8-32 Fed State Com 522H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.



Assumed 100 ppm ROE = **3000'** (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S)

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the H_2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

   - Bell nipple
   - Rig floor
   - Choke manifold
   - Possum Belly/Shale shaker
   - Cellar

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. **Mud program:**

   The mud program has been designed to minimize the volume of H_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

5. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H_2S trim.

   B. All elastomers used for packing and seals shall be H_2S trim.

6. **Communication:**

   A. Company personnel have/use cellular telephones in the field.

   B. Land line (telephone) communications at Office

7. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H_2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

Devon Energy Corp. Company Call List		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129

Agency Call List

Lea County (575)	**Hobbs**		
	Lea County Communication Authority		393-3981
	State Police		392-5588
	City Police		397-9265
	Sheriff's Office		393-2515
	Ambulance		**911**
	Fire Department		397-9308
	LEPC (Local Emergency Planning Committee)		393-2870
	NMOCD		393-6161
	US Bureau of Land Management		393-3612
Eddy County (575)	**Carlsbad**		
	State Police		885-3137
	City Police		885-2111
	Sheriff's Office		887-7551
	Ambulance		**911**
	Fire Department		885-3125
	LEPC (Local Emergency Planning Committee)		887-3798
	US Bureau of Land Management		887-6544
	NM Emergency Response Commission (Santa Fe)		(505) 476-9600
	24 HR		(505) 827-9126
	National Emergency Response Center		(800) 424-8802
	National Pollution Control Center: Direct		(703) 872-6000
	For Oil Spills		(800) 280-7118
	Emergency Services		
	Wild Well Control		(281) 784-4700
	Cudd Pressure Control	915-699-0139	(915) 563-3356
	Halliburton		(575) 746-2757
	B. J. Services		(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs		(800) 642-7828
	Flight For Life - Lubbock, TX		(806) 743-9911
	Aerocare - Lubbock, TX		(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM		(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM		(800) 222-1222
	Poison Control (24/7)		(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service		(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov		

Prepared in conjunction with
Dave Small SHARP communications and consulting

1. Geologic Formations

TVD of target	10200	Pilot hole depth	N/A
MD at TD:	23142	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	725		
Salado	1085		
Base of Salt	4400		
Delaware	4535		
Bone Spring 1st	9410		
Bone Spring 2nd	10000		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Wt (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17 1/2	0	750 TVD	13 3/8	48.0	H40	BTC	1.125	1.25	1.6
12 1/4	0	4635 TVD	9 5/8	40.0	J-55	BTC	1.125	1.25	1.6
8 3/4	0	TD	5 1/2	17.0	P110	BTC	1.125	1.25	1.6
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for continengcy casing.
• Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
• A variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing.

• Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth with be revised accordingly if needed.
• A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specficition sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	581	Surf	13.2	1.4	Lead: Class C Cement + additives
Int	508	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Int 1 Two Stage w/ DV @ TVD of Delaware	-24	Surf	9.0	3.3	1st stage Lead: Class C Cement + additives
	136	500' above shoe	13.2	1.4	1st stage Tail: Class H / C + additives
	480	Surf	9.0	3.3	2nd stage Lead: Class C Cement + additives
	136	500' above DV	13.2	1.4	2nd stage Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	508	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Production	469	500' tieback	9.0	3.3	Lead: Class H /C + additives
	2605	KOP	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	50%
Intermediate	30%
Production	10%

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✔	Tested to:
Int 1	13-58"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and sbumitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain.
	Coring? If yes, explain.

Additional logs planned		**Interval**
	Resistivity	
	Density	
X	CBL	Production casing
X	Mud log	KOP to TD
	PEX	

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	4774
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogren Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

8. Other facets of operation

Is this a walking operation? Potentially

1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1 Spudder rig will move in and batch drill surface hole.
    a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan
_____ Other, describe

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Chincoteague 8-32 Fed State Com 522H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3464.20ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3464.20ft
Site:	Sec 08-T25S-R32E	**North Reference:**	Grid
Well:	Chincoteague 8-32 Fed State Com 522H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Project	Lea County (NAD83 New Mexico East)		
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 08-T25S-R32E				
Site Position:		**Northing:**	419,630.47 usft	**Latitude:**	32.152087
From:	Map	**Easting:**	735,551.49 usft	**Longitude:**	-103.705780
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.33 °

Well	Chincoteague 8-32 Fed State Com 522H				
Well Position	**+N/-S**	0.00 ft	**Northing:**	417,325.99 usft	**Latitude:**	32.145730
	+E/-W	0.00 ft	**Easting:**	736,932.50 usft	**Longitude:**	-103.701362
Position Uncertainty		0.50 ft	**Wellhead Elevation:**		**Ground Level:**	3,439.20 ft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	3/20/2019	6.82	59.95	47,697.54271805

Design	Permit Plan 1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	1.82	

Plan Survey Tool Program **Date** 3/28/2019

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	23,141.81	Permit Plan 1 (Wellbore #1)	MWD+HDGM OWSG MWD + HDGM	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,953.04	4.53	134.53	3,952.57	-12.55	12.76	1.00	1.00	0.00	134.53	
8,991.50	4.53	134.53	8,975.29	-291.63	296.49	0.00	0.00	0.00	0.00	
9,293.53	0.00	0.00	9,277.00	-300.00	305.00	1.50	-1.50	0.00	180.00	
9,643.57	0.00	0.00	9,627.04	-300.00	305.00	0.00	0.00	0.00	0.00	
10,543.57	90.00	0.45	10,200.00	272.94	309.53	10.00	10.00	0.00	0.45	PBHL - Chincoteague
23,141.81	90.00	0.45	10,200.00	12,870.79	409.04	0.00	0.00	0.00	0.00	PBHL - Chincoteague

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Chincoteague 8-32 Fed State Com 522H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3464.20ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3464.20ft
Site:	Sec 08-T25S-R32E	**North Reference:**	Grid
Well:	Chincoteague 8-32 Fed State Com 522H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
100.00	0.00	0.00	100.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
200.00	0.00	0.00	200.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
300.00	0.00	0.00	300.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
400.00	0.00	0.00	400.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
500.00	0.00	0.00	500.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
600.00	0.00	0.00	600.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
700.00	0.00	0.00	700.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
800.00	0.00	0.00	800.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
900.00	0.00	0.00	900.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,000.00	0.00	0.00	1,000.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,100.00	0.00	0.00	1,100.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,200.00	0.00	0.00	1,200.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,300.00	0.00	0.00	1,300.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,400.00	0.00	0.00	1,400.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,500.00	0.00	0.00	1,500.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,600.00	0.00	0.00	1,600.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,700.00	0.00	0.00	1,700.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,800.00	0.00	0.00	1,800.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
1,900.00	0.00	0.00	1,900.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,000.00	0.00	0.00	2,000.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,100.00	0.00	0.00	2,100.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,200.00	0.00	0.00	2,200.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,300.00	0.00	0.00	2,300.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,400.00	0.00	0.00	2,400.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,500.00	0.00	0.00	2,500.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,600.00	0.00	0.00	2,600.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,700.00	0.00	0.00	2,700.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,800.00	0.00	0.00	2,800.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
2,900.00	0.00	0.00	2,900.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,000.00	0.00	0.00	3,000.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,100.00	0.00	0.00	3,100.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,200.00	0.00	0.00	3,200.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,300.00	0.00	0.00	3,300.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,400.00	0.00	0.00	3,400.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,500.00	0.00	0.00	3,500.00	0.00	0.00	417,325.99	736,932.50	32.145730	-103.701362
3,600.00	1.00	134.53	3,600.00	-0.61	0.62	417,325.38	736,933.12	32.145728	-103.701360
3,700.00	2.00	134.53	3,699.96	-2.45	2.49	417,323.54	736,934.98	32.145723	-103.701354
3,800.00	3.00	134.53	3,799.86	-5.51	5.60	417,320.48	736,938.09	32.145715	-103.701344
3,900.00	4.00	134.53	3,899.68	-9.79	9.95	417,316.20	736,942.45	32.145703	-103.701330
3,953.04	4.53	134.53	3,952.57	-12.55	12.76	417,313.44	736,945.26	32.145695	-103.701321
4,000.00	4.53	134.53	3,999.38	-15.15	15.41	417,310.83	736,947.90	32.145688	-103.701312
4,100.00	4.53	134.53	4,099.07	-20.69	21.04	417,305.30	736,953.53	32.145673	-103.701294
4,200.00	4.53	134.53	4,198.76	-26.23	26.67	417,299.76	736,959.17	32.145657	-103.701276
4,300.00	4.53	134.53	4,298.44	-31.77	32.30	417,294.22	736,964.80	32.145642	-103.701258
4,400.00	4.53	134.53	4,398.13	-37.31	37.93	417,288.68	736,970.43	32.145627	-103.701240
4,500.00	4.53	134.53	4,497.82	-42.85	43.56	417,283.14	736,976.06	32.145611	-103.701222
4,600.00	4.53	134.53	4,597.51	-48.39	49.19	417,277.60	736,981.69	32.145596	-103.701204
4,700.00	4.53	134.53	4,697.19	-53.93	54.83	417,272.06	736,987.32	32.145581	-103.701186
4,800.00	4.53	134.53	4,796.88	-59.47	60.46	417,266.52	736,992.95	32.145566	-103.701167
4,900.00	4.53	134.53	4,896.57	-65.00	66.09	417,260.98	736,998.58	32.145550	-103.701149
5,000.00	4.53	134.53	4,996.26	-70.54	71.72	417,255.45	737,004.22	32.145535	-103.701131
5,100.00	4.53	134.53	5,095.94	-76.08	77.35	417,249.91	737,009.85	32.145520	-103.701113
5,200.00	4.53	134.53	5,195.63	-81.62	82.98	417,244.37	737,015.48	32.145504	-103.701095
5,300.00	4.53	134.53	5,295.32	-87.16	88.61	417,238.83	737,021.11	32.145489	-103.701077

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Chincoteague 8-32 Fed State Com 522H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3464.20ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3464.20ft
Site:	Sec 08-T25S-R32E	**North Reference:**	Grid
Well:	Chincoteague 8-32 Fed State Com 522H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.00	4.53	134.53	5,395.01	-92.70	94.24	417,233.29	737,026.74	32.145474	-103.701059
5,500.00	4.53	134.53	5,494.69	-98.24	99.88	417,227.75	737,032.37	32.145458	-103.701041
5,600.00	4.53	134.53	5,594.38	-103.78	105.51	417,222.21	737,038.00	32.145443	-103.701023
5,700.00	4.53	134.53	5,694.07	-109.32	111.14	417,216.67	737,043.63	32.145428	-103.701005
5,800.00	4.53	134.53	5,793.76	-114.86	116.77	417,211.13	737,049.27	32.145412	-103.700987
5,900.00	4.53	134.53	5,893.45	-120.39	122.40	417,205.60	737,054.90	32.145397	-103.700968
6,000.00	4.53	134.53	5,993.13	-125.93	128.03	417,200.06	737,060.53	32.145382	-103.700950
6,100.00	4.53	134.53	6,092.82	-131.47	133.66	417,194.52	737,066.16	32.145366	-103.700932
6,200.00	4.53	134.53	6,192.51	-137.01	139.29	417,188.98	737,071.79	32.145351	-103.700914
6,300.00	4.53	134.53	6,292.20	-142.55	144.93	417,183.44	737,077.42	32.145336	-103.700896
6,400.00	4.53	134.53	6,391.88	-148.09	150.56	417,177.90	737,083.05	32.145320	-103.700878
6,500.00	4.53	134.53	6,491.57	-153.63	156.19	417,172.36	737,088.68	32.145305	-103.700860
6,600.00	4.53	134.53	6,591.26	-159.17	161.82	417,166.82	737,094.32	32.145290	-103.700842
6,700.00	4.53	134.53	6,690.95	-164.71	167.45	417,161.28	737,099.95	32.145275	-103.700824
6,800.00	4.53	134.53	6,790.63	-170.24	173.08	417,155.74	737,105.58	32.145259	-103.700806
6,900.00	4.53	134.53	6,890.32	-175.78	178.71	417,150.21	737,111.21	32.145244	-103.700788
7,000.00	4.53	134.53	6,990.01	-181.32	184.34	417,144.67	737,116.84	32.145229	-103.700770
7,100.00	4.53	134.53	7,089.70	-186.86	189.98	417,139.13	737,122.47	32.145213	-103.700751
7,200.00	4.53	134.53	7,189.38	-192.40	195.61	417,133.59	737,128.10	32.145198	-103.700733
7,300.00	4.53	134.53	7,289.07	-197.94	201.24	417,128.05	737,133.73	32.145183	-103.700715
7,400.00	4.53	134.53	7,388.76	-203.48	206.87	417,122.51	737,139.37	32.145167	-103.700697
7,500.00	4.53	134.53	7,488.45	-209.02	212.50	417,116.97	737,145.00	32.145152	-103.700679
7,600.00	4.53	134.53	7,588.13	-214.56	218.13	417,111.43	737,150.63	32.145137	-103.700661
7,700.00	4.53	134.53	7,687.82	-220.10	223.76	417,105.89	737,156.26	32.145121	-103.700643
7,800.00	4.53	134.53	7,787.51	-225.63	229.40	417,100.36	737,161.89	32.145106	-103.700625
7,900.00	4.53	134.53	7,887.20	-231.17	235.03	417,094.82	737,167.52	32.145091	-103.700607
8,000.00	4.53	134.53	7,986.88	-236.71	240.66	417,089.28	737,173.15	32.145075	-103.700589
8,100.00	4.53	134.53	8,086.57	-242.25	246.29	417,083.74	737,178.78	32.145060	-103.700571
8,200.00	4.53	134.53	8,186.26	-247.79	251.92	417,078.20	737,184.42	32.145045	-103.700552
8,300.00	4.53	134.53	8,285.95	-253.33	257.55	417,072.66	737,190.05	32.145029	-103.700534
8,400.00	4.53	134.53	8,385.63	-258.87	263.18	417,067.12	737,195.68	32.145014	-103.700516
8,500.00	4.53	134.53	8,485.32	-264.41	268.81	417,061.58	737,201.31	32.144999	-103.700498
8,600.00	4.53	134.53	8,585.01	-269.95	274.45	417,056.04	737,206.94	32.144984	-103.700480
8,700.00	4.53	134.53	8,684.70	-275.48	280.08	417,050.50	737,212.57	32.144968	-103.700462
8,800.00	4.53	134.53	8,784.38	-281.02	285.71	417,044.97	737,218.20	32.144953	-103.700444
8,900.00	4.53	134.53	8,884.07	-286.56	291.34	417,039.43	737,223.83	32.144938	-103.700426
8,991.50	4.53	134.53	8,975.29	-291.63	296.49	417,034.36	737,228.99	32.144924	-103.700409
9,000.00	4.40	134.53	8,983.76	-292.10	296.96	417,033.89	737,229.46	32.144922	-103.700408
9,100.00	2.90	134.53	9,083.55	-296.56	301.51	417,029.43	737,234.00	32.144910	-103.700393
9,200.00	1.40	134.53	9,183.48	-299.20	304.18	417,026.79	737,236.68	32.144903	-103.700385
9,293.53	0.00	0.00	9,277.00	-300.00	305.00	417,025.99	737,237.50	32.144900	-103.700382
9,300.00	0.00	0.00	9,283.47	-300.00	305.00	417,025.99	737,237.50	32.144900	-103.700382
9,400.00	0.00	0.00	9,383.47	-300.00	305.00	417,025.99	737,237.50	32.144900	-103.700382
9,500.00	0.00	0.00	9,483.47	-300.00	305.00	417,025.99	737,237.50	32.144900	-103.700382
9,600.00	0.00	0.00	9,583.47	-300.00	305.00	417,025.99	737,237.50	32.144900	-103.700382
9,643.57	0.00	0.00	9,627.04	-300.00	305.00	417,025.99	737,237.50	32.144900	-103.700382
KOP @ 9644' MD, 2618' FNL, 1680' FWL									
9,700.00	5.64	0.45	9,683.38	-297.22	305.02	417,028.77	737,237.52	32.144908	-103.700382
9,800.00	15.64	0.45	9,781.54	-278.78	305.17	417,047.21	737,237.66	32.144959	-103.700381
9,900.00	25.64	0.45	9,875.00	-243.57	305.45	417,082.42	737,237.94	32.145056	-103.700379
9,985.44	34.19	0.45	9,948.98	-201.00	305.78	417,124.99	737,238.28	32.145173	-103.700378
FTP @ 9985' MD, 2547' FNL, 1680' FWL									
10,000.00	35.64	0.45	9,960.92	-192.67	305.85	417,133.32	737,238.34	32.145195	-103.700377
10,100.00	45.64	0.45	10,036.70	-127.62	306.36	417,198.37	737,238.86	32.145374	-103.700374

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Chincoteague 8-32 Fed State Com 522H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3464.20ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3464.20ft
Site:	Sec 08-T25S-R32E	**North Reference:**	Grid
Well:	Chincoteague 8-32 Fed State Com 522H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,200.00	55.64	0.45	10,100.04	-50.40	306.97	417,275.59	737,239.47	32.145586	-103.700371
10,300.00	65.64	0.45	10,149.00	36.65	307.66	417,362.64	737,240.16	32.145826	-103.700367
10,400.00	75.64	0.45	10,182.11	130.87	308.40	417,456.86	737,240.90	32.146085	-103.700363
10,500.00	85.64	0.45	10,198.34	229.41	309.18	417,555.40	737,241.68	32.146356	-103.700358
10,543.57	90.00	0.45	10,200.00	272.94	309.53	417,598.93	737,242.02	32.146475	-103.700356
10,600.00	90.00	0.45	10,200.00	329.37	309.97	417,655.36	737,242.47	32.146630	-103.700354
10,700.00	90.00	0.45	10,200.00	429.37	310.76	417,755.35	737,243.26	32.146905	-103.700349
10,800.00	90.00	0.45	10,200.00	529.36	311.55	417,855.35	737,244.05	32.147180	-103.700345
10,900.00	90.00	0.45	10,200.00	629.36	312.34	417,955.35	737,244.84	32.147455	-103.700341
11,000.00	90.00	0.45	10,200.00	729.36	313.13	418,055.34	737,245.63	32.147730	-103.700336
11,100.00	90.00	0.45	10,200.00	829.35	313.92	418,155.34	737,246.42	32.148005	-103.700332
11,200.00	90.00	0.45	10,200.00	929.35	314.71	418,255.34	737,247.21	32.148279	-103.700327
11,300.00	90.00	0.45	10,200.00	1,029.35	315.50	418,355.33	737,248.00	32.148554	-103.700323
11,400.00	90.00	0.45	10,200.00	1,129.34	316.29	418,455.33	737,248.79	32.148829	-103.700318
11,500.00	90.00	0.45	10,200.00	1,229.34	317.08	418,555.33	737,249.58	32.149104	-103.700314
11,600.00	90.00	0.45	10,200.00	1,329.34	317.87	418,655.32	737,250.37	32.149379	-103.700309
11,700.00	90.00	0.45	10,200.00	1,429.33	318.66	418,755.32	737,251.16	32.149654	-103.700305
11,800.00	90.00	0.45	10,200.00	1,529.33	319.45	418,855.32	737,251.95	32.149929	-103.700301
11,900.00	90.00	0.45	10,200.00	1,629.33	320.24	418,955.31	737,252.74	32.150203	-103.700296
12,000.00	90.00	0.45	10,200.00	1,729.32	321.03	419,055.31	737,253.53	32.150478	-103.700292
12,100.00	90.00	0.45	10,200.00	1,829.32	321.82	419,155.31	737,254.32	32.150753	-103.700287
12,200.00	90.00	0.45	10,200.00	1,929.32	322.61	419,255.30	737,255.11	32.151028	-103.700283
12,300.00	90.00	0.45	10,200.00	2,029.32	323.40	419,355.30	737,255.90	32.151303	-103.700278
12,400.00	90.00	0.45	10,200.00	2,129.31	324.19	419,455.30	737,256.69	32.151578	-103.700274
12,500.00	90.00	0.45	10,200.00	2,229.31	324.98	419,555.29	737,257.48	32.151853	-103.700269
12,589.00	90.00	0.45	10,200.00	2,318.31	325.68	419,644.29	737,258.18	32.152097	-103.700265
Cross Section @ 12589' MD, 0' FSL, 1680' FWL									
12,600.00	90.00	0.45	10,200.00	2,329.31	325.77	419,655.29	737,258.27	32.152127	-103.700265
12,700.00	90.00	0.45	10,200.00	2,429.30	326.56	419,755.29	737,259.06	32.152402	-103.700260
12,800.00	90.00	0.45	10,200.00	2,529.30	327.35	419,855.28	737,259.85	32.152677	-103.700256
12,900.00	90.00	0.45	10,200.00	2,629.30	328.14	419,955.28	737,260.64	32.152952	-103.700252
13,000.00	90.00	0.45	10,200.00	2,729.29	328.93	420,055.28	737,261.43	32.153227	-103.700247
13,100.00	90.00	0.45	10,200.00	2,829.29	329.72	420,155.27	737,262.22	32.153502	-103.700243
13,200.00	90.00	0.45	10,200.00	2,929.29	330.51	420,255.27	737,263.01	32.153777	-103.700238
13,300.00	90.00	0.45	10,200.00	3,029.28	331.30	420,355.27	737,263.80	32.154051	-103.700234
13,400.00	90.00	0.45	10,200.00	3,129.28	332.09	420,455.26	737,264.58	32.154326	-103.700229
13,500.00	90.00	0.45	10,200.00	3,229.28	332.88	420,555.26	737,265.37	32.154601	-103.700225
13,600.00	90.00	0.45	10,200.00	3,329.28	333.67	420,655.26	737,266.16	32.154876	-103.700220
13,700.00	90.00	0.45	10,200.00	3,429.27	334.46	420,755.25	737,266.95	32.155151	-103.700216
13,800.00	90.00	0.45	10,200.00	3,529.27	335.25	420,855.25	737,267.74	32.155426	-103.700211
13,900.00	90.00	0.45	10,200.00	3,629.27	336.04	420,955.25	737,268.53	32.155701	-103.700207
14,000.00	90.00	0.45	10,200.00	3,729.26	336.83	421,055.24	737,269.32	32.155975	-103.700203
14,100.00	90.00	0.45	10,200.00	3,829.26	337.62	421,155.24	737,270.11	32.156250	-103.700198
14,200.00	90.00	0.45	10,200.00	3,929.26	338.41	421,255.24	737,270.90	32.156525	-103.700194
14,300.00	90.00	0.45	10,200.00	4,029.25	339.20	421,355.23	737,271.69	32.156800	-103.700189
14,400.00	90.00	0.45	10,200.00	4,129.25	339.99	421,455.23	737,272.48	32.157075	-103.700185
14,500.00	90.00	0.45	10,200.00	4,229.25	340.78	421,555.23	737,273.27	32.157350	-103.700180
14,600.00	90.00	0.45	10,200.00	4,329.24	341.57	421,655.22	737,274.06	32.157625	-103.700176
14,700.00	90.00	0.45	10,200.00	4,429.24	342.36	421,755.22	737,274.85	32.157899	-103.700171
14,800.00	90.00	0.45	10,200.00	4,529.24	343.15	421,855.22	737,275.64	32.158174	-103.700167
14,900.00	90.00	0.45	10,200.00	4,629.23	343.94	421,955.21	737,276.43	32.158449	-103.700162
15,000.00	90.00	0.45	10,200.00	4,729.23	344.73	422,055.21	737,277.22	32.158724	-103.700158
15,100.00	90.00	0.45	10,200.00	4,829.23	345.52	422,155.21	737,278.01	32.158999	-103.700154
15,200.00	90.00	0.45	10,200.00	4,929.23	346.31	422,255.20	737,278.80	32.159274	-103.700149

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Chincoteague 8-32 Fed State Com 522H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3464.20ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3464.20ft
Site:	Sec 08-T25S-R32E	**North Reference:**	Grid
Well:	Chincoteague 8-32 Fed State Com 522H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,300.00	90.00	0.45	10,200.00	5,029.22	347.10	422,355.20	737,279.59	32.159549	-103.700145
15,400.00	90.00	0.45	10,200.00	5,129.22	347.89	422,455.20	737,280.38	32.159823	-103.700140
15,500.00	90.00	0.45	10,200.00	5,229.22	348.68	422,555.19	737,281.17	32.160098	-103.700136
15,600.00	90.00	0.45	10,200.00	5,329.21	349.47	422,655.19	737,281.96	32.160373	-103.700131
15,700.00	90.00	0.45	10,200.00	5,429.21	350.26	422,755.19	737,282.75	32.160648	-103.700127
15,800.00	90.00	0.45	10,200.00	5,529.21	351.05	422,855.18	737,283.54	32.160923	-103.700122
15,900.00	90.00	0.45	10,200.00	5,629.20	351.84	422,955.18	737,284.33	32.161198	-103.700118
16,000.00	90.00	0.45	10,200.00	5,729.20	352.63	423,055.18	737,285.12	32.161472	-103.700114
16,100.00	90.00	0.45	10,200.00	5,829.20	353.42	423,155.17	737,285.91	32.161747	-103.700109
16,200.00	90.00	0.45	10,200.00	5,929.19	354.21	423,255.17	737,286.70	32.162022	-103.700105
16,300.00	90.00	0.45	10,200.00	6,029.19	355.00	423,355.17	737,287.49	32.162297	-103.700100
16,400.00	90.00	0.45	10,200.00	6,129.19	355.79	423,455.16	737,288.28	32.162572	-103.700096
16,500.00	90.00	0.45	10,200.00	6,229.18	356.58	423,555.16	737,289.07	32.162847	-103.700091
16,600.00	90.00	0.45	10,200.00	6,329.18	357.37	423,655.16	737,289.86	32.163122	-103.700087
16,700.00	90.00	0.45	10,200.00	6,429.18	358.16	423,755.15	737,290.65	32.163396	-103.700082
16,800.00	90.00	0.45	10,200.00	6,529.18	358.95	423,855.15	737,291.44	32.163671	-103.700078
16,900.00	90.00	0.45	10,200.00	6,629.17	359.74	423,955.15	737,292.23	32.163946	-103.700073
17,000.00	90.00	0.45	10,200.00	6,729.17	360.53	424,055.14	737,293.02	32.164221	-103.700069
17,100.00	90.00	0.45	10,200.00	6,829.17	361.32	424,155.14	737,293.81	32.164496	-103.700065
17,200.00	90.00	0.45	10,200.00	6,929.16	362.11	424,255.14	737,294.60	32.164771	-103.700060
17,300.00	90.00	0.45	10,200.00	7,029.16	362.90	424,355.13	737,295.39	32.165046	-103.700056
17,400.00	90.00	0.45	10,200.00	7,129.16	363.69	424,455.13	737,296.18	32.165320	-103.700051
17,500.00	90.00	0.45	10,200.00	7,229.15	364.48	424,555.13	737,296.97	32.165595	-103.700047
17,600.00	90.00	0.45	10,200.00	7,329.15	365.27	424,655.13	737,297.76	32.165870	-103.700042
17,700.00	90.00	0.45	10,200.00	7,429.15	366.06	424,755.12	737,298.55	32.166145	-103.700038
17,800.00	90.00	0.45	10,200.00	7,529.14	366.85	424,855.12	737,299.34	32.166420	-103.700033
17,869.00	90.00	0.45	10,200.00	7,598.14	367.39	424,924.12	737,299.89	32.166610	-103.700030
Cross Section @ 17869' MD, 0' FSL, 1600' FWL									
17,900.00	90.00	0.45	10,200.00	7,629.14	367.64	424,955.12	737,300.13	32.166695	-103.700029
18,000.00	90.00	0.45	10,200.00	7,729.14	368.43	425,055.11	737,300.92	32.166970	-103.700024
18,100.00	90.00	0.45	10,200.00	7,829.13	369.21	425,155.11	737,301.71	32.167244	-103.700020
18,200.00	90.00	0.45	10,200.00	7,929.13	370.00	425,255.11	737,302.50	32.167519	-103.700016
18,300.00	90.00	0.45	10,200.00	8,029.13	370.79	425,355.10	737,303.29	32.167794	-103.700011
18,400.00	90.00	0.45	10,200.00	8,129.13	371.58	425,455.10	737,304.08	32.168069	-103.700007
18,500.00	90.00	0.45	10,200.00	8,229.12	372.37	425,555.10	737,304.87	32.168344	-103.700002
18,600.00	90.00	0.45	10,200.00	8,329.12	373.16	425,655.09	737,305.66	32.168619	-103.699998
18,700.00	90.00	0.45	10,200.00	8,429.12	373.95	425,755.09	737,306.45	32.168894	-103.699993
18,800.00	90.00	0.45	10,200.00	8,529.11	374.74	425,855.09	737,307.24	32.169168	-103.699989
18,900.00	90.00	0.45	10,200.00	8,629.11	375.53	425,955.08	737,308.03	32.169443	-103.699984
19,000.00	90.00	0.45	10,200.00	8,729.11	376.32	426,055.08	737,308.82	32.169718	-103.699980
19,100.00	90.00	0.45	10,200.00	8,829.10	377.11	426,155.08	737,309.61	32.169993	-103.699975
19,200.00	90.00	0.45	10,200.00	8,929.10	377.90	426,255.07	737,310.40	32.170268	-103.699971
19,300.00	90.00	0.45	10,200.00	9,029.10	378.69	426,355.07	737,311.19	32.170543	-103.699967
19,400.00	90.00	0.45	10,200.00	9,129.09	379.48	426,455.07	737,311.98	32.170818	-103.699962
19,500.00	90.00	0.45	10,200.00	9,229.09	380.27	426,555.06	737,312.77	32.171092	-103.699958
19,600.00	90.00	0.45	10,200.00	9,329.09	381.06	426,655.06	737,313.56	32.171367	-103.699953
19,700.00	90.00	0.45	10,200.00	9,429.08	381.85	426,755.06	737,314.35	32.171642	-103.699949
19,800.00	90.00	0.45	10,200.00	9,529.08	382.64	426,855.05	737,315.14	32.171917	-103.699944
19,900.00	90.00	0.45	10,200.00	9,629.08	383.43	426,955.05	737,315.93	32.172192	-103.699940
20,000.00	90.00	0.45	10,200.00	9,729.08	384.22	427,055.05	737,316.72	32.172467	-103.699935
20,100.00	90.00	0.45	10,200.00	9,829.07	385.01	427,155.04	737,317.51	32.172742	-103.699931
20,200.00	90.00	0.45	10,200.00	9,929.07	385.80	427,255.04	737,318.30	32.173016	-103.699926
20,300.00	90.00	0.45	10,200.00	10,029.07	386.59	427,355.04	737,319.09	32.173291	-103.699922
20,400.00	90.00	0.45	10,200.00	10,129.06	387.38	427,455.03	737,319.88	32.173566	-103.699918

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Chincoteague 8-32 Fed State Com 522H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3464.20ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3464.20ft
Site:	Sec 08-T25S-R32E	**North Reference:**	Grid
Well:	Chincoteague 8-32 Fed State Com 522H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,500.00	90.00	0.45	10,200.00	10,229.06	388.17	427,555.03	737,320.67	32.173841	-103.699913
20,600.00	90.00	0.45	10,200.00	10,329.06	388.96	427,655.03	737,321.46	32.174116	-103.699909
20,700.00	90.00	0.45	10,200.00	10,429.05	389.75	427,755.02	737,322.25	32.174391	-103.699904
20,800.00	90.00	0.45	10,200.00	10,529.05	390.54	427,855.02	737,323.04	32.174666	-103.699900
20,900.00	90.00	0.45	10,200.00	10,629.05	391.33	427,955.02	737,323.83	32.174940	-103.699895
21,000.00	90.00	0.45	10,200.00	10,729.04	392.12	428,055.01	737,324.62	32.175215	-103.699891
21,100.00	90.00	0.45	10,200.00	10,829.04	392.91	428,155.01	737,325.41	32.175490	-103.699886
21,200.00	90.00	0.45	10,200.00	10,929.04	393.70	428,255.01	737,326.20	32.175765	-103.699882
21,300.00	90.00	0.45	10,200.00	11,029.03	394.49	428,355.00	737,326.99	32.176040	-103.699877
21,400.00	90.00	0.45	10,200.00	11,129.03	395.28	428,455.00	737,327.78	32.176315	-103.699873
21,500.00	90.00	0.45	10,200.00	11,229.03	396.07	428,555.00	737,328.57	32.176589	-103.699869
21,600.00	90.00	0.45	10,200.00	11,329.03	396.86	428,654.99	737,329.36	32.176864	-103.699864
21,700.00	90.00	0.45	10,200.00	11,429.02	397.65	428,754.99	737,330.15	32.177139	-103.699860
21,800.00	90.00	0.45	10,200.00	11,529.02	398.44	428,854.99	737,330.94	32.177414	-103.699855
21,900.00	90.00	0.45	10,200.00	11,629.02	399.23	428,954.98	737,331.73	32.177689	-103.699851
22,000.00	90.00	0.45	10,200.00	11,729.01	400.02	429,054.98	737,332.52	32.177964	-103.699846
22,100.00	90.00	0.45	10,200.00	11,829.01	400.81	429,154.98	737,333.31	32.178239	-103.699842
22,200.00	90.00	0.45	10,200.00	11,929.01	401.60	429,254.97	737,334.10	32.178513	-103.699837
22,300.00	90.00	0.45	10,200.00	12,029.00	402.39	429,354.97	737,334.89	32.178788	-103.699833
22,400.00	90.00	0.45	10,200.00	12,129.00	403.18	429,454.97	737,335.68	32.179063	-103.699828
22,500.00	90.00	0.45	10,200.00	12,229.00	403.97	429,554.96	737,336.47	32.179338	-103.699824
22,600.00	90.00	0.45	10,200.00	12,328.99	404.76	429,654.96	737,337.26	32.179613	-103.699819
22,700.00	90.00	0.45	10,200.00	12,428.99	405.55	429,754.96	737,338.05	32.179888	-103.699815
22,800.00	90.00	0.45	10,200.00	12,528.99	406.34	429,854.95	737,338.84	32.180163	-103.699811
22,900.00	90.00	0.45	10,200.00	12,628.99	407.13	429,954.95	737,339.63	32.180437	-103.699806
23,000.00	90.00	0.45	10,200.00	12,728.98	407.92	430,054.95	737,340.42	32.180712	-103.699802
23,061.80	90.00	0.45	10,200.00	12,790.78	408.41	430,116.74	737,340.90	32.180882	-103.699799
LTP @ 23062' MD, 100' FNL, 1678' FWL									
23,100.00	90.00	0.45	10,200.00	12,828.98	408.71	430,154.94	737,341.21	32.180987	-103.699797
23,141.80	90.00	0.45	10,200.00	12,870.78	409.04	430,196.74	737,341.54	32.181102	-103.699795
PBHL; 20' FNL, 1680' FWL									
23,141.81	90.00	0.45	10,200.00	12,870.79	409.04	430,196.75	737,341.54	32.181102	-103.699795

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Chincoteague 8-	0.00	0.00	0.00	12,870.79	409.04	430,196.75	737,341.54	32.181102	-103.699795
- plan misses target center by 10200.00ft at 23141.81ft MD (10200.00 TVD, 12870.79 N, 409.04 E)									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,643.57	9,627.04	-300.00	305.00	KOP @ 9644' MD, 2618' FNL, 1680' FWL
9,985.44	9,948.98	-201.00	305.78	FTP @ 9985' MD, 2547' FNL, 1680' FWL
12,589.00	10,200.00	2,318.31	325.68	Cross Section @ 12589' MD, 0' FSL, 1680' FWL
17,869.00	10,200.00	7,598.14	367.39	Cross Section @ 17869' MD, 0' FSL, 1600' FWL
23,061.80	10,200.00	12,790.78	408.41	LTP @ 23062' MD, 100' FNL, 1678' FWL
23,141.80	10,200.00	12,870.78	409.04	PBHL; 20' FNL, 1680' FWL

Devon Energy

WELL DETAILS: Chincoteague 8-32 Fed State Com 522H

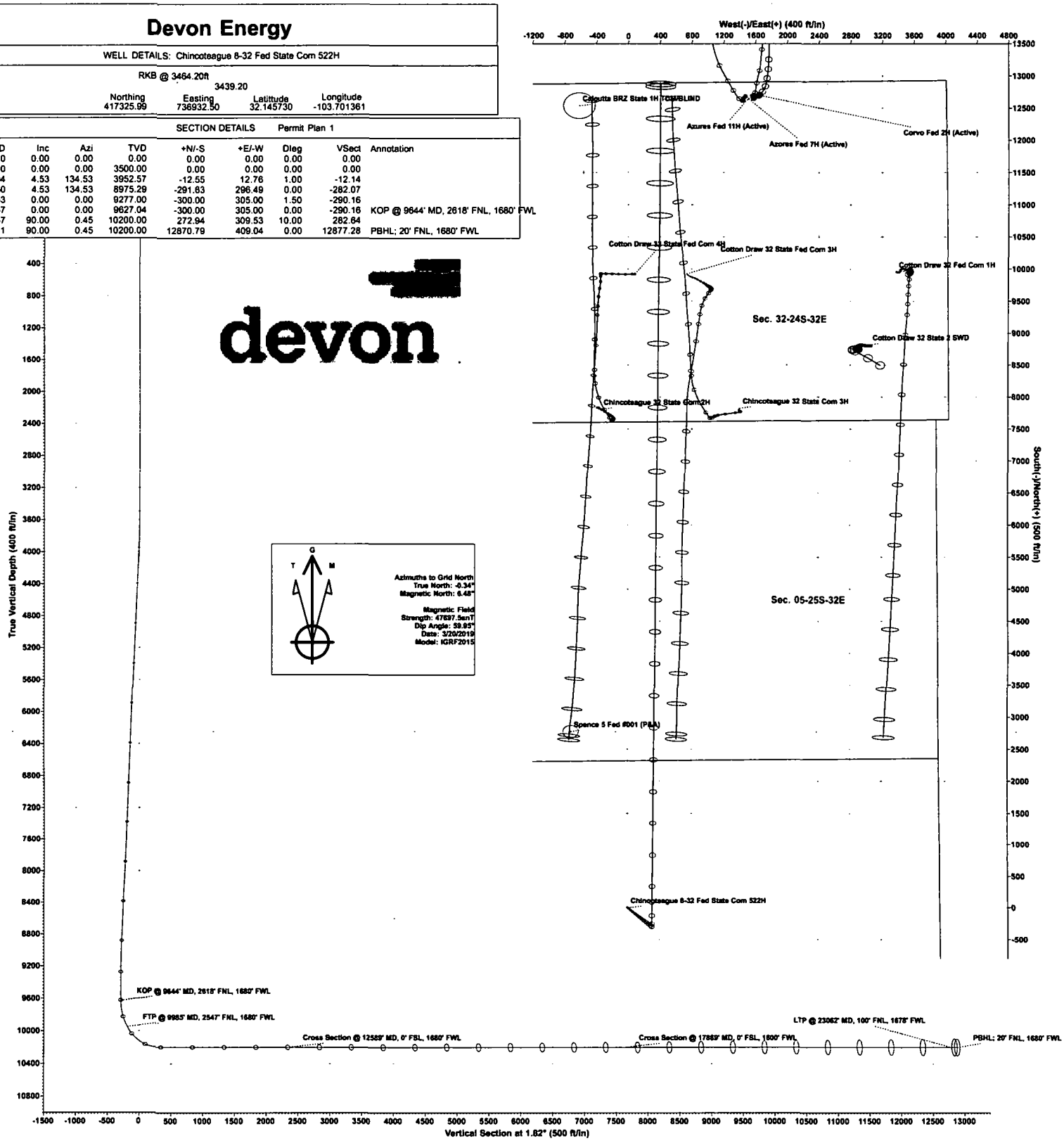
RKB @ 3464.20ft

3439.20

Northing	Easting	Latitude	Longitude
417325.99	736932.50	32.145730	-103.701361

SECTION DETAILS Permit Plan 1

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	
3953.04	4.53	134.53	3952.57	-12.55	12.76	1.00	-12.14	
8991.50	4.53	134.53	8975.29	-291.83	296.49	0.00	-282.07	
9293.53	0.00	0.00	9277.00	-300.00	305.00	1.50	-290.16	
9643.57	0.00	0.00	9627.04	-300.00	305.00	0.00	-290.16	KOP @ 9644' MD, 2618' FNL, 1680' FWL
10543.57	90.00	0.45	10200.00	272.94	309.53	10.00	282.64	
23141.81	90.00	0.45	10200.00	12870.79	409.04	0.00	12877.28	PBHL; 20' FNL, 1680' FWL



UNKNOWN	0
RUSTLER	725
SALADO	1085
TOP OF SALT	1085
BASE OF SALT	4400
LAMAR	4400
BELL CANYON	4420
CHERRY CANYON	5400
BRUSHY CANYON	6900
BONE SPRING LIME	8330
1ST BONE SPRING SAND	8410
2ND BONE SPRING SAND	9950
3RD BONE SPRING LIME	10500
3RD BONE SPRING SAND	11280
WOLFCAMP	11720
STRAWN	13670