Well Name: CAPER 20/29 W1CN FED COM

Well Location: T21S / R32E / SEC 17 / NESW / 32.4759395 / -103.7010299

County or Parish/State: LEA / NM

Well Number: 1H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM94095

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002552234

Operator: MEWBOURNE OIL COMPANY

Notice of Intent

Sundry ID: 2785934

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 04/19/2024

Time Sundry Submitted: 08:06

Date proposed operation will begin: 05/06/2024

Procedure Description: Mewbourne Oil Company requests to make the following changes to APD ID 10400085554: Change the name of the CAPER 20/29 W1CN FED COM #1H to the CAPER 20/29 FED COM #722H Change the bottom hole location from 100' FSL & 2000' FWL (Sec 29, T21S, R32E) to 100' FSL & 1100' FWL (Sec 29, T21S, R32E) Permission to perform offline cementing and BOPE break testing as detailed in the attached documents Request permission to leave leave an open annulus below the 9 5/8" casing and bradenhead squeeze after frac operations. See attached C102, casing & cement assumptions, directional plot & plan, & additional info

NOI Attachments

Procedure Description

3_String_Open_Annulus_Variance_Request_20240506122121.pdf

Caper_20_29_Fed_Com___722H_CsgAssumptions_20240506122120.pdf

Caper_20_29_Fed_Com___722H_Drlg_Program_20240506122120.pdf

Caper_20_29_Fed_Com___722H_R_111Q_Variance_20240506122120.pdf

Caper_20_29_Fed_Com_722H_Offline_Cementing_Variance_20240419080602.pdf

CAPER_20_29_FED_COM__722H_20240419080556.pdf

Caper_20_29_Fed_Com_722H_Dir_Plan_20240419080556.pdf

Caper_20_29_Fed_Com_722H_Break_Testing_Variance_20240419080556.pdf

Well Name: CAPER 20/29 W1CN FED COM

Well Location: T21S / R32E / SEC 17 / NESW / 32.4759395 / -103.7010299

County or Parish/State: LEA / NM

Well Number: 1H

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Allottee or Tribe Name:

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Unit or CA Name:

Unit or CA Number:

US Well Number: 3002552234

Operator: MEWBOURNE OIL COMPANY

Caper_20_29_Fed_Com_722H_Dir_Plot_20240419080556.pdf

Caper_20_29_Fed_Com___722H_AddInfo_20240419080556.pdf

Conditions of Approval

Additional

CAPER_2029_FED_COM_722H_Sundry_2785934_COA_20240528145912.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CARTER CROOK

Signed on: MAY 06, 2024 12:28 PM

Name: MEWBOURNE OIL COMPANY

Title: Engineer

Street Address: 4801 BUSINESS PARK BLVD

City: HOBBS **State:** NM

Phone: (580) 754-3849

Email address: CCROOK@MEWBOURNE.COM

Field

Representative Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 05/29/2024

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: NESW / 1645 FSL / 1360 FWL / TWSP: 21S / RANGE: 32E / SECTION: 17 / LAT: 32.4759395 / LONG: -103.7010299 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 100 FNL / 2000 FWL / TWSP: 21S / RANGE: 32E / SECTION: 20 / LAT: 32.4711505 / LONG: -103.6989515 (TVD: 11752 feet, MD: 12170 feet)

PPP: NESW / 2642 FSL / 2000 FWL / TWSP: 21S / RANGE: 32E / SECTION: 20 / LAT: 32.4641703 / LONG: -103.6989462 (TVD: 11788 feet, MD: 14709 feet)

PPP: NENW / 0 FNL / 2000 FWL / TWSP: 21S / RANGE: 32E / SECTION: 29 / LAT: 32.4569084 / LONG: -103.6989407 (TVD: 11826 feet, MD: 17352 feet)

PPP: NESW / 2642 FSL / 2000 FWL / TWSP: 21S / RANGE: 32E / SECTION: 29 / LAT: 32.4496482 / LONG: -103.6989352 (TVD: 11863 feet, MD: 19993 feet)

PPP: SESW / 1321 FSL / 2000 FWL / TWSP: 21S / RANGE: 32E / SECTION: 29 / LAT: 32.4460173 / LONG: -103.6989325 (TVD: 11882 feet, MD: 21314 feet)

BHL: SESW / 100 FSL / 2000 FWL / TWSP: 21S / RANGE: 32E / SECTION: 29 / LAT: 32.4426621 / LONG: -103.6989308 (TVD: 11899 feet, MD: 22535 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL COMPANY
WELL NAME & NO.:	CAPER 20/29 FED COM 722H
APD ID:	10400085554
SURFACE HOLE FOOTAGE:	1645'/S & 1360'/W
BOTTOM HOLE FOOTAGE	100'/S & 1100'/W
SURFACE LOCATION:	Section 17, T.21 S., R.32 E. NMP.
COUNTY:	Lea County, New Mexico

COA

H_2S	◉ 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	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Pilot Hole	☑ Open Annulus
Other Variances	☑ Offline cementing	☑ Squeeze cement	☑ Break testing
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

SEE ORIGINAL COA FOR ALL OTHER REQUIREMENTS.

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H_2S) Drilling Plan shall be activated **AT SPUD**. As a result, the Hydrogen Sulfide area must meet **Title 43 CFR 3176** 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 DESIGN

Primary Casing Program

1. The **13-3/8** inch surface casing shall be set at approximately **1,100 ft.** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered set casing at least 25 ft. above the salt.**
    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 psi 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 psi compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch **(HCL-80, 40#/ft.)** intermediate casing shall be set at approximately **4,450 ft.** 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. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Option 2 (Two-stage): Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
b. Second stage above DV tool: **Cement to surface.** If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Note: Excess cement for the second stage is below CFO's recommendation of 25%. More cement might be needed.

Note: The operator shall follow all applicable requirements in the order NO. R-111-Q. The minimum additives/characteristics of cement slurry as well as centralizer program prescribed for the 1st intermediate casing shall be in accordance with the order NO. R-111-Q.

3. Operator has proposed to set **7 in. (HCP-110, 26#/ft.)** production casing at approximately **11,245 ft.** (11,166 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:

- To cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the **R-111-Q** guidelines.

c. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation. Wait on cement (WOC) time for a

primary cement job is to include the lead cement slurry due to cave/karst and Potash.

d. Second stage: Operator will perform bradenhead squeeze **within 180 days** after completion. Cement shall be tie-back **at least 500 ft.** into intermediate casing and below the Marker Bed 126. If cement does not circulate, the appropriate BLM office shall be notified.

Note: Operator has proposed to pump down 9-5/8" X 7" annulus within 180 days after well completion in accordance with R-111-Q guidelines. Operator must run a cement evaluation tool (fluid shot tool, Temperature log or CBL, etc.) to verify TOC after the second stage bradenhead. Submit the results to the BLM.

Casing test must be conducted in accordance with R-111-Q. Surface pressure applied will vary based on fluid in the casing and burst conditions.

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-393-3612 Lea County).

4. The minimum required fill of cement behind the **4-1/2 in.** production liner is:

- Cement should tie-back **at least 100 feet** into previous casing string. Operator shall provide method of verification.

Alternate Casing Program

1. The **13-3/8** inch surface casing shall be set at approximately **1,100 ft.** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered set casing at least 25 ft. above the salt.**

e. 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.

f. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 psi compressive strength**, whichever is greater. (This is to include the lead cement)

g. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.

h. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch **(HCL-80, 40#/ft.)** intermediate casing shall be set at approximately **4,450 ft.** 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. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Option 2 (Two-stage): 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.

e. 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.
f. Second stage above DV tool: **Cement to surface.** If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Note: Excess cement for the second stage is below CFO's recommendation of 25%. More cement might be needed.

Note: The operator shall follow all applicable requirements in the order NO. R-111-Q. The minimum additives/characteristics of cement slurry as well as centralizer program prescribed for the 1st intermediate casing shall be in accordance with the order NO. R-111-Q.

3. Operator has proposed to set **7 in. (HCP-110, 26#/ft.)** production casing at approximately **12,136 ft.** (11,744 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:

- To cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the **R-111-Q** guidelines.

g. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Potash.

h. Second stage: Operator will perform bradenhead squeeze **within 180 days** after completion. Cement shall be tie-back **at least 500 ft.** into intermediate casing and below the Marker Bed 126. If cement does not circulate, the appropriate BLM office shall be notified.

Note: Operator has proposed to pump down 9-5/8" X 7" annulus within 180 days after well completion in accordance with R-111-Q guidelines. Operator must run a cement evaluation tool (fluid shot tool, Temperature log or CBL, etc.) to verify TOC after the second stage bradenhead. Submit the results to the BLM.

Casing test must be conducted in accordance with R-111-Q. Surface pressure applied will vary based on fluid in the casing and burst conditions.

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-393-3612 Lea County).

4. The minimum required fill of cement behind the **4-1/2 in.** production liner is:

- Cement should tie-back **at least 100 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use **flex line** from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. Variance is approved to use a 5M annular preventer along with 10M BOP/BOPE. Before drilling the surface casing shoe out, the BOP/BOPE and annular preventer shall be pressure-tested in accordance with **title 43 CFR 3172 and API Standard 53.**

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 the **title 43 CFR 3172.6(b)(9)** must be followed.

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

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing

operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-689-5981 Lea County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per title **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

Offline cementing variance is approved for surface and intermediate casings only. Contact the BLM prior to the commencement of any offline cementing procedure.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- 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

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

   b. When the operator proposes to set surface casing with Spudder Rig
      - 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 **title 43 CFR 3172**
      - as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. 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 integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-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 the **title 43 CFR 3172** and **API STD 53 Sec. 5.3**.

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 the **title 43 CFR 3172.6(b)(9)** 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 cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 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 **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained

and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

SA 05/28/2024

Mewbourne Oil Company
Variance Request

Mewbourne Oil Company request a variance for the production string per R-111Q guidelines to be implemented as follows:

Production String

a) The Production string shall consist new oil field casing in good condition that meets API specifications, rated for the loads expected over the lifecycle of the well.

b) For wells within the KPLA where a 2nd intermediate string will not be utilized resulting in a 3 String Design (Surface, Salt or Salt/Capitan Reef, Production), the following safeguard shall apply to safely divert flow of wellbore fluids away from the Salt Interval in the event of a catastrophic production casing failure. The Surface Equipment utilized during stimulation operations should be designed to relieve pressure from the production x intermediate casing annulus below the burst threshold of the casing string components.

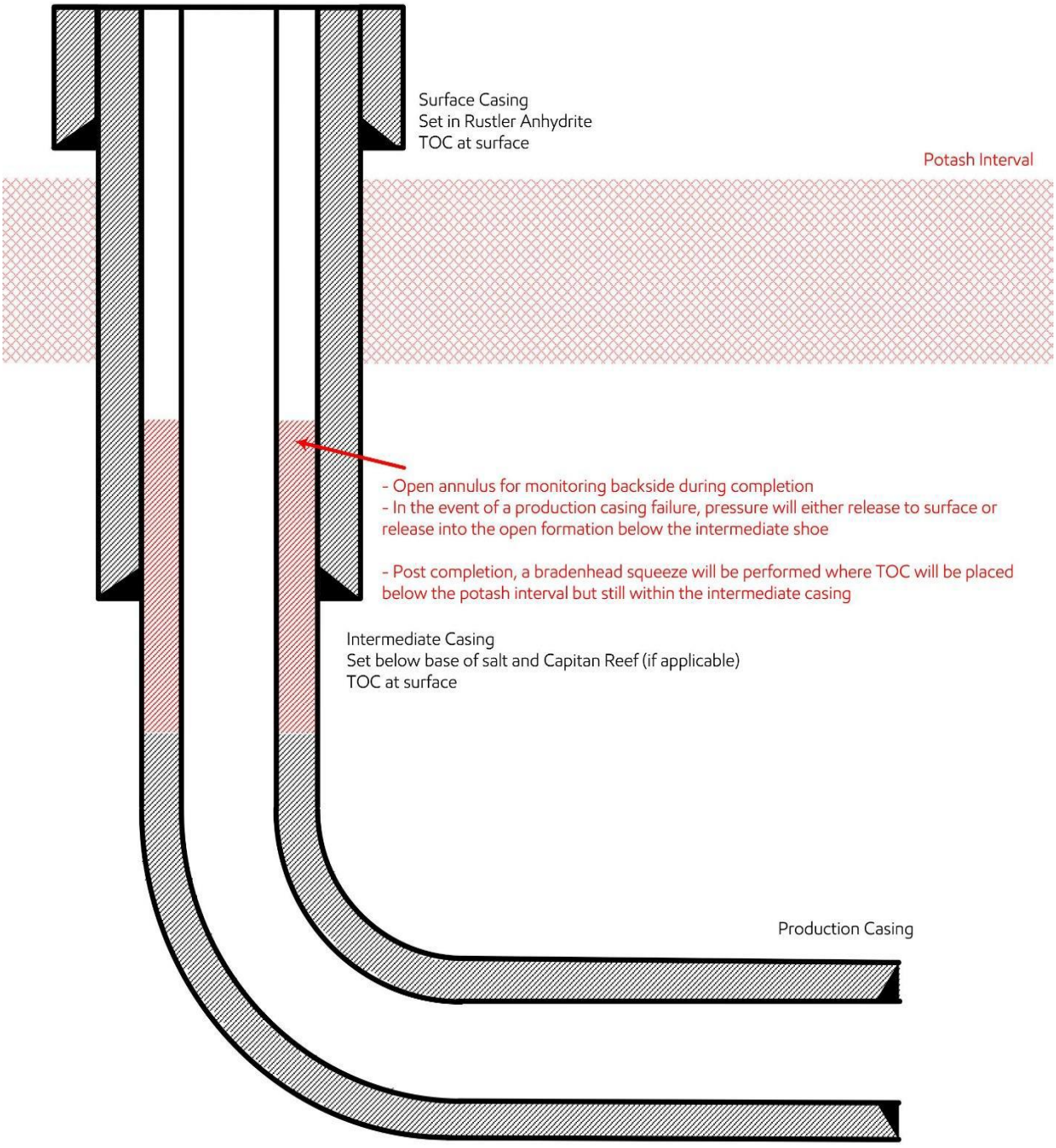
i. A monitored open annulus will be incorporated during completion by leaving the 1st Intermediate Casing x Production Casing annulus un-cemented and monitored inside the 1st Intermediate String. Reference wellbore diagram.

i. The top of cement in the Production Casing x 1st Intermediate Casing Annulus shall stand uncemented at least 500’ below the 1st Intermediate Casing Shoe. Zero percent excess shall be pumped on the Production Cementing Slurry to ensure no tie-back into the 1st Intermediate Casing Shoe.

ii. After Stimulation Operations have been concluded and no longer than 180 days after the well is brought online, the operator will be responsible for Bradenheading cement to ensure at least a 500’ tie back has been established inside the 1st Intermediate (Salt String / Capitan String) but not higher than Marker Bed No. 126 (base of the Potash mining interval).

iii. The top of cement may be estimated through pumped displacement volumes or with the use of a fluid shot tool prior to filling backside with fluid.

3-String Design – Open Production Casing Annulus



Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	**Hole Size**	**Top MD**	**Top TVD**	**Bot MD**	**Bot TVD**	**Csg. Size**	**SF Collapse**	**SF Burst**	**SF Jt Tension**	**SF Body Tension**
Surface	17.5"	0'	0'	1100'	1100'	13.375" 48# H40 STC	1.570	3.52	6.10	10.25
Int	12.25"	0'	0'	4450'	4450'	9.625" 40# HCL80 LTC	1.740	2.37	4.70	5.15
Production	8.75"	0'	0'	11245'	11166'	7" 26# HCP110 LTC	1.400	1.80	2.37	2.84
Liner	6.125"	11045'	11012'	22510'	11894'	4.5" 13.5# P110 LTC	1.440	1.67	2.18	2.73

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	600	12.5	2.12	0' - 910'	1280	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	910' - 1100'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	330	12.5	2.12	2000' - 3772'	700	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3772' - 4450'	268		Class C: Retarder
9 5/8" DV Tool @ 2000'								
2nd Stg 9.625 in	LEAD	300	12.5	2.12	0' - 1654'	640	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1654' - 2000'	134		Class C: Retarder
7 in	LEAD	230	12.5	2.12	4950' - 8156'	490	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	8156' - 11245'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	730	13.5	1.85	11045' - 22510'	1360	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 1100'	8.4 - 8.6	Fresh Water
1100' - 4450'	9.5 - 10.5	Brine
4450' - 11245'	8.6 - 9.5	Cut-Brine
11245' - 22510'	10.0 - 12.	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	1020'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4563'	Oil/Natural Gas
Salt Top	1152'	None	Bell Canyon	4575'	Oil/Natural Gas
Salt Base	4225'	None	Cherry Canyon		
Yates			Manzanita Marker	5698'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	6700'	Oil/Natural Gas
Queen			Bone Spring	8440'	Oil/Natural Gas
Capitan			1st Bone Spring	9490'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10140'	Oil/Natural Gas
San Andres			3rd Bone Spring	11110'	Oil/Natural Gas
Glorieta			Wolfcamp	11515'	Oil/Natural Gas

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172. Must have table for contingency casing.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	**Y**
Is casing API approved? If no, attach casing specification 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 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.	**N**
Is well located in SOPA but not in R-111-Q?	**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-Q and SOPA?	**Y**
If yes, are the first three strings cemented to surface?	**N**
Is 2nd string set 100' to 600' below the base of salt?	**Y**
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	**Y**
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
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?	

Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1100'	1100'	13.375" 48# H40 STC	1.57	3.52	6.10	10.25
Int	12.25"	0'	0'	4450'	4450'	9.625" 40# HCL80 LTC	1.74	2.37	4.70	5.15
Production	8.75"	0'	0'	12136'	11744'	7" 26# HCP110 LTC	1.34	1.72	2.20	2.63
Liner	6.125"	11245'	11166'	22510'	11894'	4.5" 13.5# P110 LTC	1.44	1.67	2.22	2.77

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	600	12.5	2.12	0' - 910'	1280	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	910' - 1100'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	330	12.5	2.12	2000' - 3772'	700	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3772' - 4450'	268		Class C: Retarder
9 5/8" DV Tool @ 2000'								
2nd Stg 9.625 in	LEAD	300	12.5	2.12	0' - 1654'	640	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1654' - 2000'	134		Class C: Retarder
7 in	LEAD	290	12.5	2.12	4950' - 9030'	620	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	9030' - 12136'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	720	13.5	1.85	11245' - 22510'	1340	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 1100'	8.4 - 8.6	Fresh Water
1100' - 4450'	9.5 - 10.5	Brine
4450' - 12136'	8.6 - 9.5	Cut-Brine
12136' - 22510'	10.0 - 12.	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	1020'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4563'	Oil/Natural Gas
Salt Top	1152'	None	Bell Canyon	4575'	Oil/Natural Gas
Salt Base	4225'	None	Cherry Canyon		
Yates			Manzanita Marker	5698'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	6700'	Oil/Natural Gas
Queen			Bone Spring	8440'	Oil/Natural Gas
Capitan			1st Bone Spring	9490'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10140'	Oil/Natural Gas
San Andres			3rd Bone Spring	11110'	Oil/Natural Gas
Glorieta			Wolfcamp	11515'	Oil/Natural Gas

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172. Must have table for contingency casing.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification 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 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.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
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?	

Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Well Location **GL: '**

Point	Calls	Leases	Aliquot	Section	Township	Range	County	Lat	Long	TVD	MD
SHL	SHL: 1645' FSL & 1360' FWL (Sec 17)	NMNM 094095	NESW	17	21S	32E	Lea	32.4759395	103.7010299	0'	0'
KOP	KOP: 473' FSL & 11100' FWL (Sec 17)	NMNM 094095	SWSW	17	21S	32E	Lea	32.4727157	103.7018710	11,171'	11,245'
FTP	FTP: 100' FNL & 1100' FWL (Sec 20)	NMNM 137457	NWNW	20	21S	32E	Lea	32.4711410	103.7018700	11,744'	12,145'
PPP2	PPP2: 2641' FSL & 1100' FWL (Sec 20)	NMNM 014331	NWSW	20	21S	32E	Lea	32.4641566	103.7018645	11,781'	14,686'
PPP3	PPP3: 1321' FNL & 1100' FWL (Sec 29)	NMNM 031955	SWNW	29	21S	32E	Lea	32.4532675	103.7018559	11,838'	18,647'
PPP4	PPP4: 2642' FSL & 1099' FWL (Sec 29)	NMNM 031375	NWSW	29	21S	32E	Lea	32.4496370	103.7018530	11,857'	19,969'
PPP5	PPP5: 1321' FSL & 1100' FWL (Sec 29)	NMNM 031955	SWSW	29	21S	32E	Lea	32.4460067	103.7018501	11,876'	21,290'
BHL	BHL: 100' FSL & 1100' FWL (Sec 29)	NMNM 031955	SWSW	29	21S	32E	Lea	32.4426512	103.7018474	11,894'	22,510'

GEOLOGY

Formation	Est. Top (TVD)	Lithology	Mineral Resources	Formation	Est. Top (TVD)	Lithology	Mineral Resources
Rustler	1020'	Dolomite/Anhydrite	Usable Water	Yeso			
Castile				Delaware (Lamar)	4563'	Limestone/Dolomite	Oil/Natural Gas
Salt Top	1152'	Salt	None	Bell Canyon	4575'	Sandstone	Oil/Natural Gas
Salt Base	4225'	Salt	None	Cherry Canyon			
Yates				Manzanita Marker	5698'	Limestone	Oil/Natural Gas
Seven Rivers				Basal Brushy Canyon	6700'	Sandstone	Oil/Natural Gas
Queen				Bone Spring	8440'	Limestone	Oil/Natural Gas
Capitan				1st Bone Spring	9490'	Sandstone	Oil/Natural Gas
Grayburg				2nd Bone Spring	10140'	Sandstone	Oil/Natural Gas
San Andres				3rd Bone Spring	11110'	Sandstone	Oil/Natural Gas
Glorietta				Wolfcamp	11515'	Shale/Sandstone/Limestone	Oil/Natural Gas

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1100'	1100'	13.375" 48# H40 STC	1.570	3.52	6.10	10.25
Int	12.25"	0'	0'	4450'	4450'	9.625" 40# HCL80 LTC	1.740	2.37	4.70	5.15
Production	8.75"	0'	0'	11245'	11166'	7" 26# HCP110 LTC	1.400	1.80	2.37	2.84
Liner	6.125"	11045'	11012'	22510'	11894'	4.5" 13.5# P110 LTC	1.440	1.67	2.18	2.73

All casing strings will be tested in accordance with 43 CFR Part 3172. Must have table for contingency casing.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification 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 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.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
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?	

Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Design A - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft^3/sack	TOC/BOC	Volume, ft^3	% Excess	Slurry Description
13.375 in	LEAD	600	12.5	2.12	0' - 910'	1280	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	910' - 1100'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	330	12.5	2.12	2000' - 3772'	700	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3772' - 4450'	268		Class C: Retarder
9 5/8" DV Tool @ 2000'								
2nd Stg 9.625 in	LEAD	300	12.5	2.12	0' - 1654'	640	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1654' - 2000'	134		Class C: Retarder
7 in	LEAD	230	12.5	2.12	4950' - 8156'	490	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	8156' - 11245'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	730	13.5	1.85	11045' - 22510'	1360	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Pressure Control Equipment

BOP installed and tested before drilling hole, in:	Size, in	System Rated WP	Type		Tested to:	Rating Depth
12.25	13.375	5M	Annular	X	2500#	22,510'
		5M	Blind Ram	X	5000#	
			Pipe Ram	X		
			Double Ram			
			Other*			

*Specify if additional ram is utilized.

Equipment: Annular, Pipe Rams, Blind Rams, Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Variance Request: A variance is requested for the use of a variable choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Y	Formation integrity test will be performed per 43 CFR Part 3172. On Exploratory wells or 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. Will be tested in accordance with 43 CFR Part 3172.
N	Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack.

Mud Program

Depth (MD)	Mud Wt., lb/gal	Mud Type
0' - 1100'	8.6	Fresh Water
1100' - 4450'	10.5	Brine
4450' - 11245'	9.5	Cut-Brine
11245' - 22510'	12	OBM

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?	Pason/PVT/Visual Monitoring

Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Logging and Testing Procedures

Logging, Coring and Testing.	
N	Will run GR/CNL from KOP (11245') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No logs are planned based on well control or offset log information. Offset Well:
N	Coring? If yes, explain:

Open & Cased Hole Logs Run In the Well

☐	Caliper	☐	Cement Bond Log	☐	CNL/FDC
☐	Compensated Densilog	☑	**Compensated Neutron Log**	☐	Computer Generated Log
☐	Dip Meter Log	☑	**Directional Survey**	☐	Dual Induction/Microresistivity
☐	Dual Lateral Log/Microspherically Focused	☐	Electric Log	☐	Formation Density Compensated Log
☑	**Gamma Ray Log**	☑	**Measurement While Drilling**	☐	Mud Log/Geological Lithology Log
☐	Other	☐	Porosity-Resistivity Log	☐	Sidewall Neutron Log
☐	Sonic Log	☐	Spontaneous Potential Log	☐	Temperature Log

Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7422 psi
BH Temperature	165
Abnormal Temp, Pressure, or Geologic Hazards	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

Hydrogen 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.

	H2S is present
X	H2S Plan attached

Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Other facets of operation

Mewbourne Oil Company also requests approval to implement Design B as described below. BLM will be notified of elected design.

Offline Cementing Variance: Variance is requested to perform offline cementing according to the attached procedure. **R-111Q Varaince:** Variance is requested to perform Open Hole Cementing Variance per R-111Q Guidelines if well is in Potash.

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt	SF Body
Surface	17.5"	0'	0'	1100'	1100'	13.375" 48# H40 STC	1.57	3.52	6.10	10.25
Int	12.25"	0'	0'	4450'	4450'	9.625" 40# HCL80 LTC	1.74	2.37	4.70	5.15
Production	8.75"	0'	0'	12136'	11744'	7" 26# HCP110 LTC	1.34	1.72	2.20	2.63
Liner	6.125"	11245'	11166'	22510'	11894'	4.5" 13.5# P110 LTC	1.44	1.67	2.22	2.77

All casing strings will be tested in accordance with 43 CFR Part 3172. Must have table for contingency casing.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification 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 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.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
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?	

Design B - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft³/sack	TOC/BOC	Volume, ft³	% Excess	Slurry Description
13.375 in	LEAD	600	12.5	2.12	0' - 910'	1280	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	910' - 1100'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	330	12.5	2.12	2000' - 3772'	700	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3772' - 4450'	268		Class C: Retarder
9 5/8'' DV Tool @ 2000'								
2nd Stg 9.625 in	LEAD	300	12.5	2.12	0' - 1654'	640	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1654' - 2000'	134		Class C: Retarder
7 in	LEAD	290	12.5	2.12	4950' - 9030'	620	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	9030' - 12136'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	720	13.5	1.85	11245' - 22510'	1340	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	**Hole Size**	**Top MD**	**Top TVD**	**Bot MD**	**Bot TVD**	**Csg. Size**	**SF Collapse**	**SF Burst**	**SF Jt Tension**	**SF Body Tension**
Surface	17.5"	0'	0'	1100'	1100'	13.375" 48# H40 STC	1.570	3.52	6.10	10.25
Int	12.25"	0'	0'	4450'	4450'	9.625" 40# HCL80 LTC	1.740	2.37	4.70	5.15
Production	8.75"	0'	0'	11245'	11166'	7" 26# HCP110 LTC	1.400	1.80	2.37	2.84
Liner	6.125"	11045'	11012'	22510'	11894'	4.5" 13.5# P110 LTC	1.440	1.67	2.18	2.73

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	600	12.5	2.12	0' - 910'	1280	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	910' - 1100'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	330	12.5	2.12	2000' - 3772'	700	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3772' - 4450'	268		Class C: Retarder
9 5/8" DV Tool @ 2000'								
2nd Stg 9.625 in	LEAD	300	12.5	2.12	0' - 1654'	640	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1654' - 2000'	134		Class C: Retarder
7 in	LEAD	230	12.5	2.12	4950' - 8156'	490	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	8156' - 11245'	472		Class H: Retarder, Fluid Loss, Defoamer
7" TOC @ 4950', BHS TOC @ 3950'								
Braden Head Sqz	LEAD	140	14.8	1.34	3950' - 4950'	190	25%	Class C
4.5 in	LEAD	730	13.5	1.85	11045' - 22510'	1360	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	**Hole Size**	**Top MD**	**Top TVD**	**Bot MD**	**Bot TVD**	**Csg. Size**	**SF Collapse**	**SF Burst**	**SF Jt Tension**	**SF Body Tension**
Surface	17.5"	0'	0'	1100'	1100'	13.375" 48# H40 STC	1.57	3.52	6.10	10.25
Int	12.25"	0'	0'	4450'	4450'	9.625" 40# HCL80 LTC	1.74	2.37	4.70	5.15
Production	8.75"	0'	0'	12136'	11744'	7" 26# HCP110 LTC	1.34	1.72	2.20	2.63
Liner	6.125"	11245'	11166'	22510'	11894'	4.5" 13.5# P110 LTC	1.44	1.67	2.22	2.77

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	600	12.5	2.12	0' - 910'	1280	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	910' - 1100'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	240	12.5	2.12	2500' - 3778'	510	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3778' - 4450'	268		Class C: Retarder
9 5/8" DV Tool @ 2500'								
2nd Stg 9.625 in	LEAD	400	12.5	2.12	0' - 2160'	850	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	2160' - 2500'	134		Class C: Retarder
7 in	LEAD	290	12.5	2.12	4950' - 9030'	620	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	9030' - 12136'	472		Class H: Retarder, Fluid Loss, Defoamer
7" TOC @ 4950', BHS TOC @ 3950'								
Braden Head Sqz	LEAD	140	14.8	1.34	3950' - 4950'	190	25%	Class C
4.5 in	LEAD	720	13.5	1.85	11245' - 22510'	1340	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

MEWBOURNE OIL COMPANY

Mewbourne Oil Co.

Surface & Intermediate Offline Cementing Variance

Mewbourne Oil Company requests a variance to perform offline cementing for surface and intermediate casing strings with the following conditions:

- Offline cementing will not be performed on production casing.
- Offline cementing will not be performed on a hole section with MASP > 5000 psi.
- Offline cementing will not be performed concurrently with offset drilling.

Surface Casing Order of Operations:

1. Run 13 3/8" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static.
4. Make up 13 ⅝" wellhead or wellhead landing ring assembly and land on 20" conductor.
5. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint.
8. Walk rig to next well on pad with cement crew standing by to rig up.
9. Make up offline cement tool with forklift per wellhead manufacturer (Fig. 1 & 2).
10. Make up cement head on top of offline cement tool with forklift.
11. Commence cement operations.
12. If cement circulates, confirm well is static and proceed to step 16.
13. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
14. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
15. Confirm well is static.
16. Once cement job is complete, the cement head and offline cementing tool are removed. The wellhead technician returns to cellar to install wellhead/valves.
17. Install wellhead capping flange.

Barriers

Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus

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After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing

20” Surface Casing Order of Operations (4 string area):

1. Run 20" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
4. Confirm well is static.
5. Back out landing joint and pull to rig floor. Lay down landing joint.
6. Make up cement head.
7. Walk rig to next well on pad with cement crew standing by to rig up.
8. Commence cement operations.
9. If cement circulates, confirm well is static and proceed to step 13.
10. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
11. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
12. Confirm well is static.
13. Once cement job is complete, remove cement head and install cap.

Barriers

Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement Head

After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement head
- Capping flange after cementing

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Intermediate Casing Order of Operations:

1. Run casing as per normal operations (float shoe and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static (if running SBM).
4. Land casing.
5. Fill pipe, circulate casing capacity and confirm floats are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint. Install packoff & test.
8. Nipple down BOP.
9. Walk rig to next well on pad with cement crew standing by to rig up.
10. Make up offline cement tool using forklift per wellhead manufacturer (Fig. 3 - 8).
11. Make up cement head on top of offline cement tool.
12. Commence cement operations.
13. If cement circulates, confirm well is static and proceed to step 16.
14. If cement does not circulate (when required), notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
15. Pump remedial cement job if required.
16. Confirm well is static.
17. Remove cement head and offline cementing tool.
18. Install wellhead capping flange and test.

Barriers

Before Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

After Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing

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Risks:

- Pressure build up in annulus before cementing
  - Contact BLM if a well control event occurs.
  - Rig up 3rd party pump or rig pumps to pump down casing and kill well.
  - Returns will be taken through the wellhead valves to a choke manifold (Fig 9 & 10).
  - Well could also be killed through the wellhead valves down the annulus.

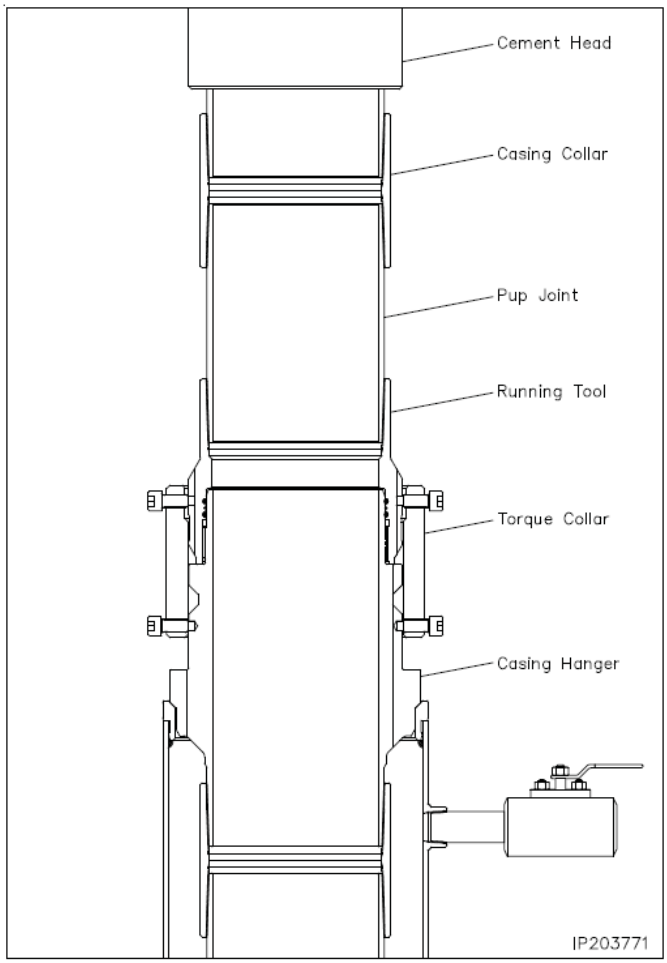

Figure 1. Cactus 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

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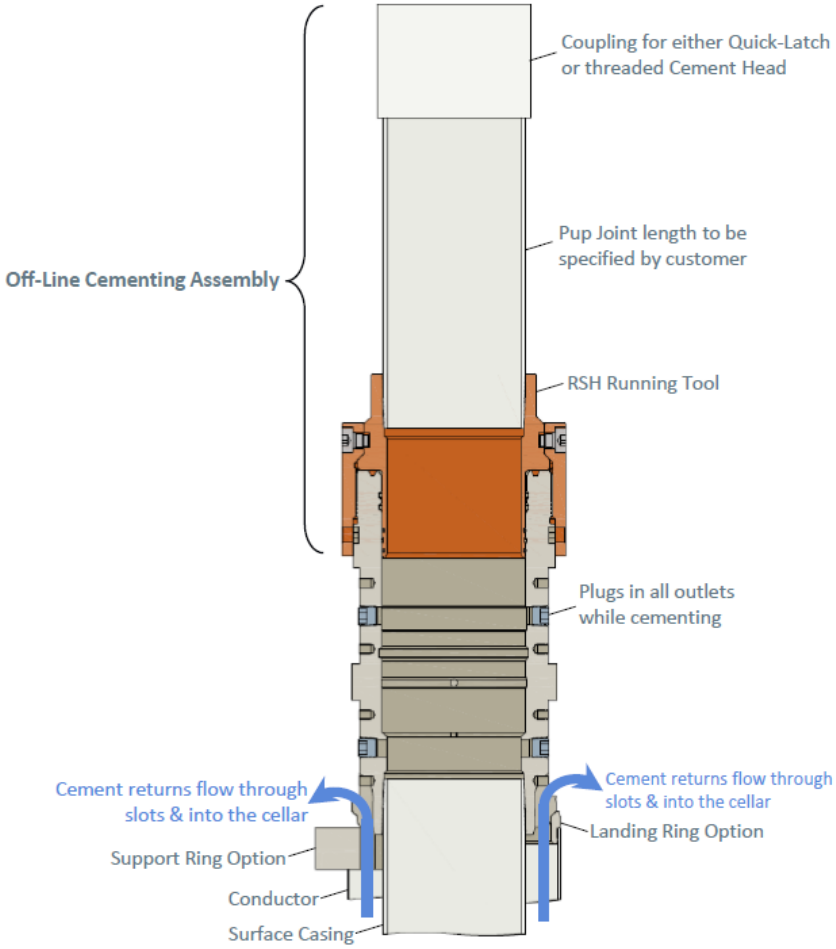

Figure 2. Vault 13 3/8” 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8” pup joint and casing.

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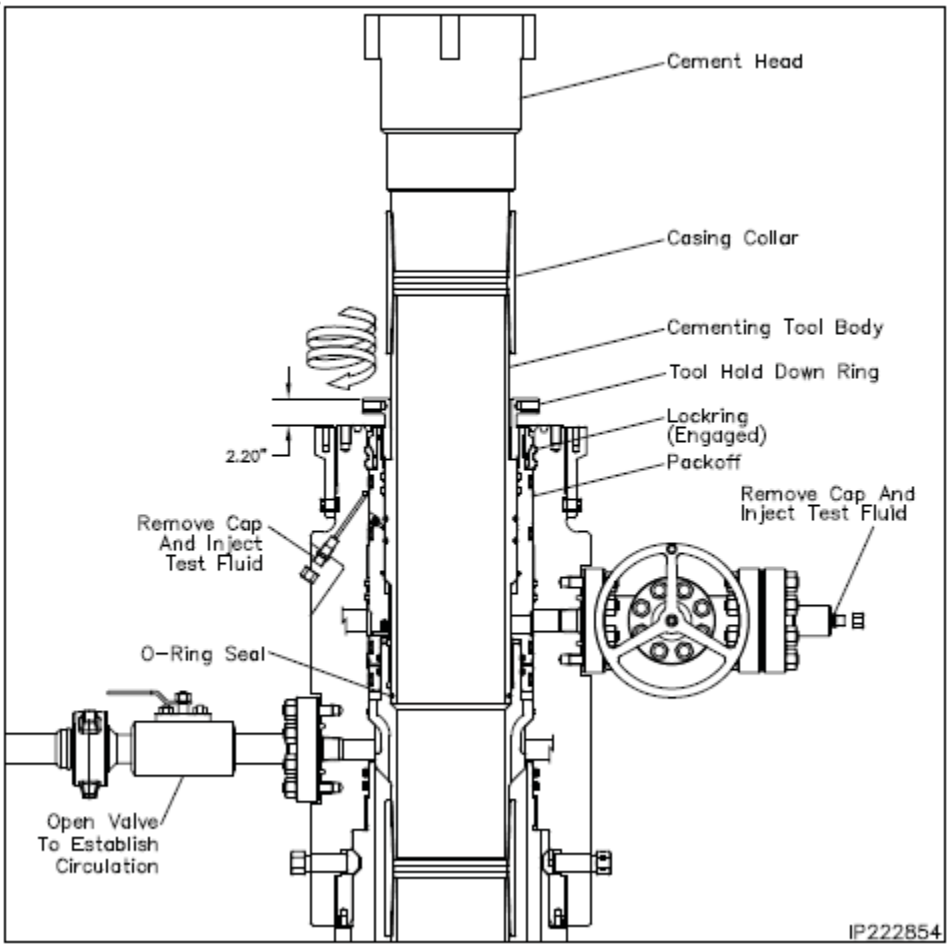

Figure 3. Cactus 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

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OIL COMPANY

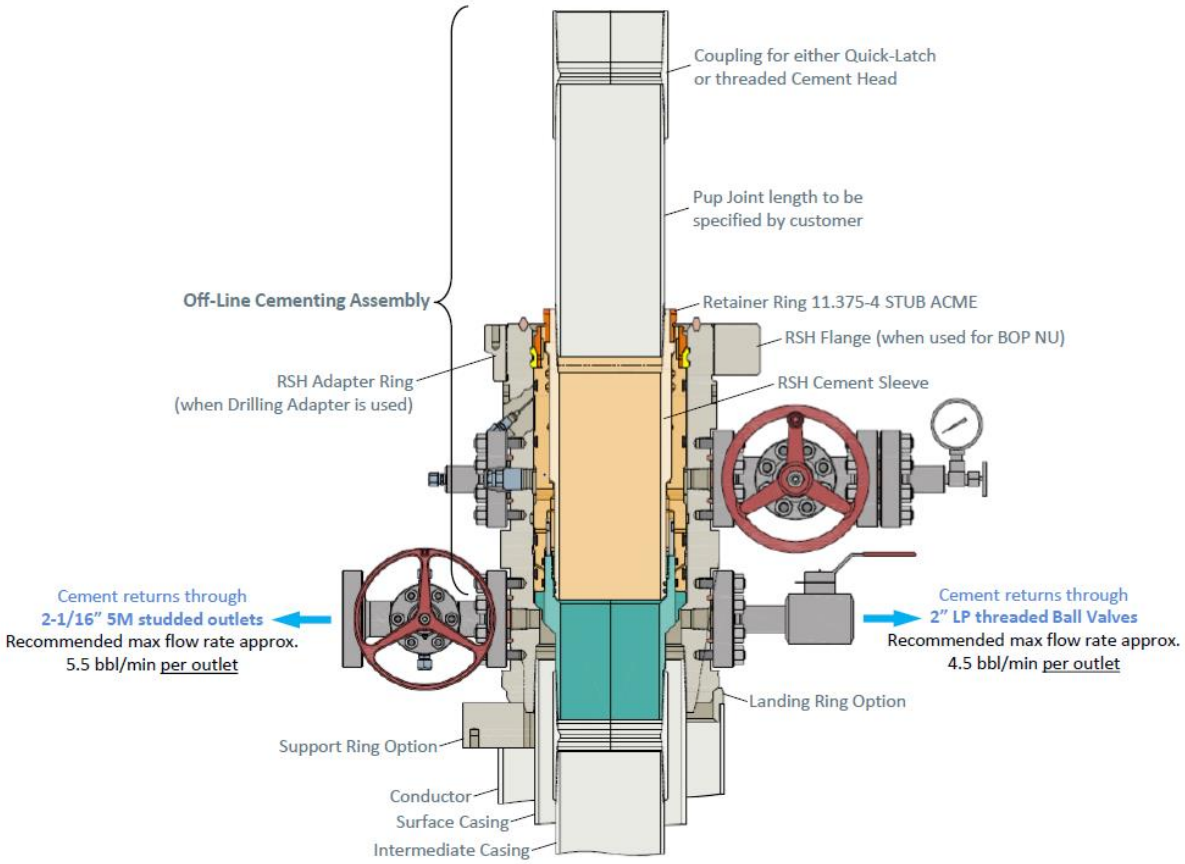

Figure 4. Vault 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

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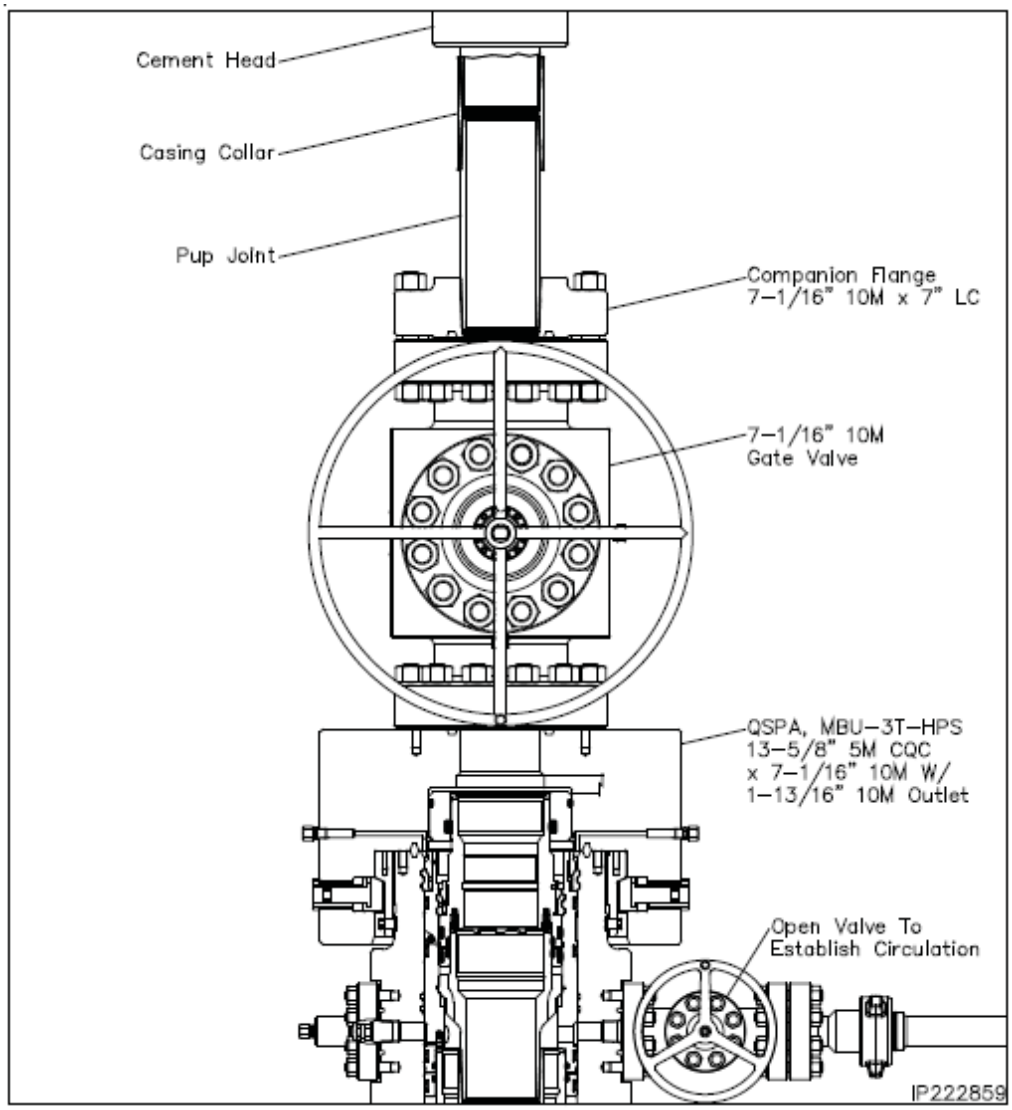

Figure 5. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

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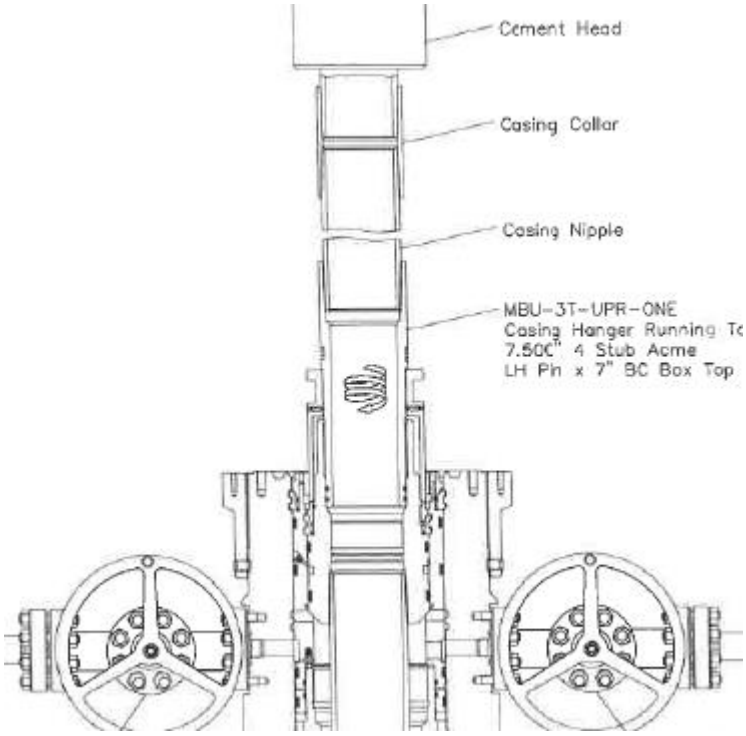

Figure 6. Cactus 7” 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7” pup joint and casing.

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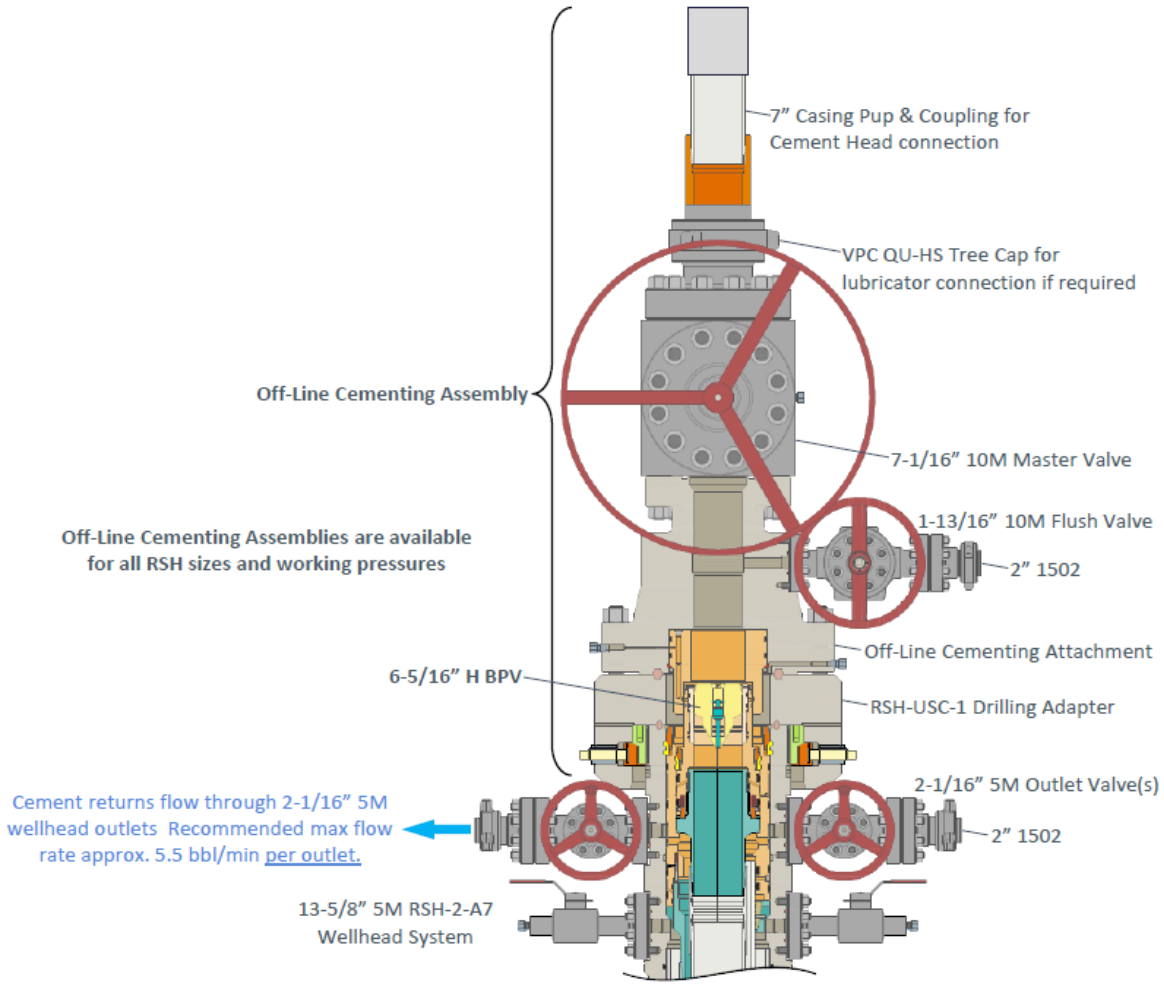

Figure 7. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

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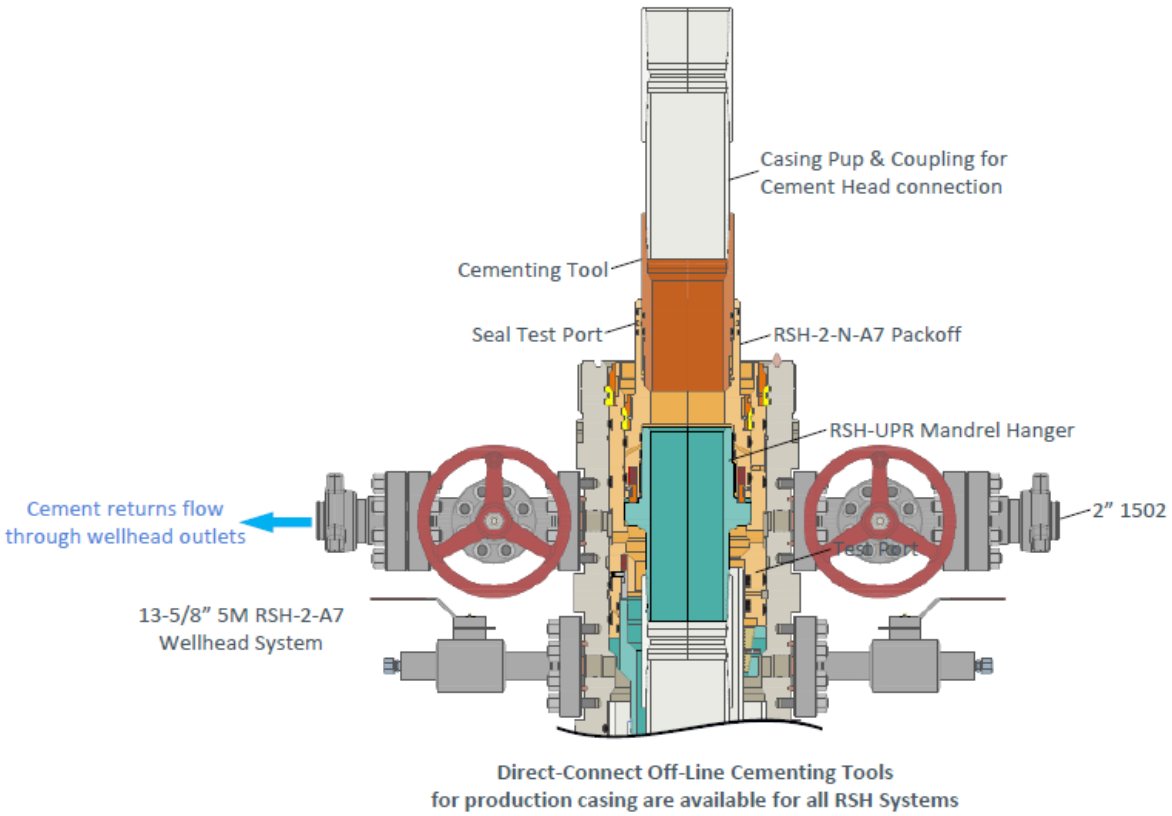

Figure 8. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

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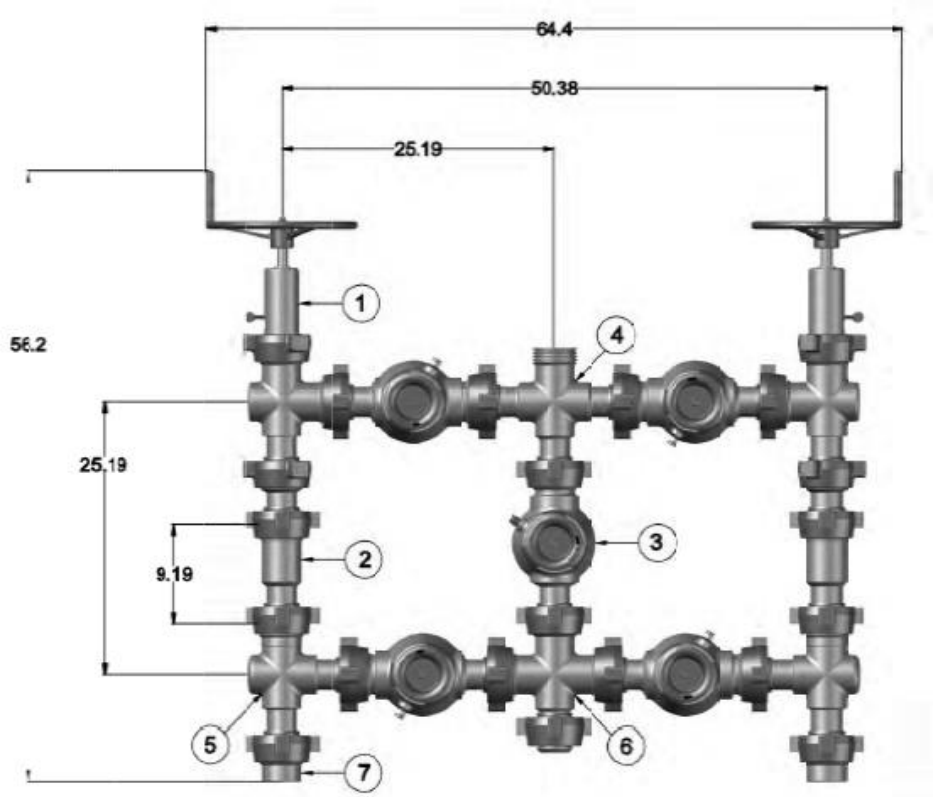


Figure 9. Five valve 15k choke manifold.

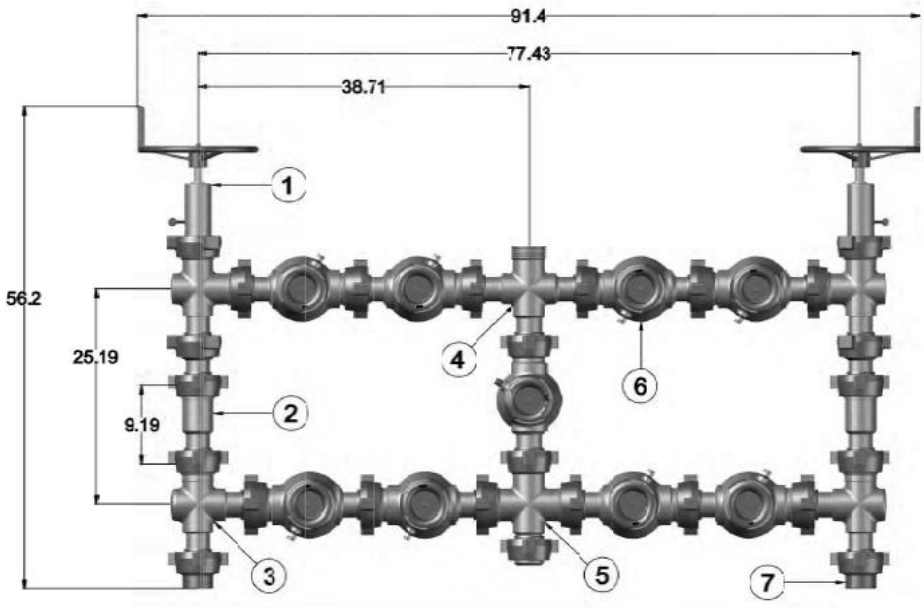


Figure 10. Nine valve 15k choke manifold.

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
	98313	WC-025 G-09 S213232A; UPR WOLFCAMP

4 Property Code	5 Property Name	6 Well Number
	CAPER 20/29 FED COM	722H

7 OGRID NO.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	3636'

10 Surface Location

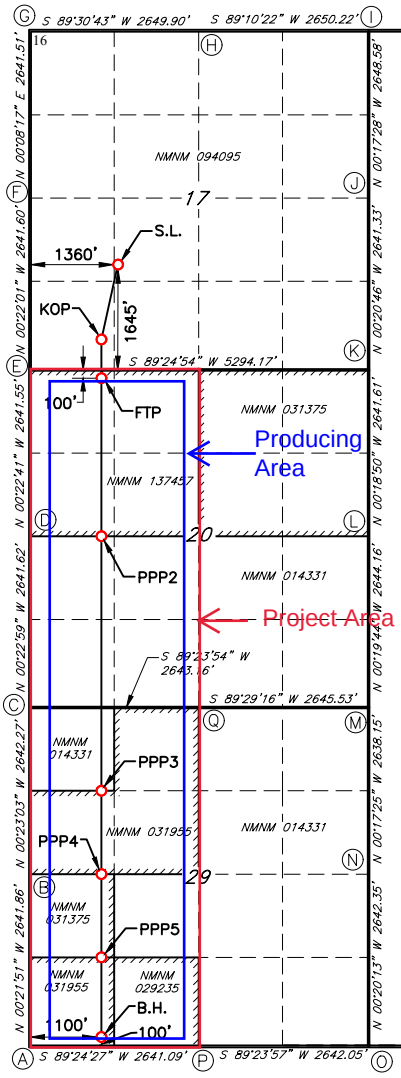
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
K	17	21S	32E		1645	SOUTH	1360	WEST	LEA

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
M	29	21S	32E		100	SOUTH	1100	WEST	LEA

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

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
N: 537455.4 – E: 736326.5
LAT: 32.4759395° N
LONG: 103.7010299° W

KICK OFF POINT (KOP)
473' FSL & 1100' FWL SEC.17
N: 536281.0 – E: 736074.0
LAT: 32.4727157° N
LONG: 103.7018710° W

FIRST TAKE POINT (FTP)
100' FNL & 1100' FWL SEC.20
N: 535708.1 – E: 736077.7
LAT: 32.4711410° N
LONG: 103.7018700° W

PROPOSED PENETRATION POINT 2 (PPP2)
2641' FSL – 1100' FWL SEC.20
N: 533167.2 – E: 736094.5
LAT: 32.4641566° N
LONG: 103.7018645° W

PROPOSED PENETRATION POINT 3 (PPP3)
1321' FNL – 1100' FWL SEC.29
N: 529205.7 – E: 736120.5
LAT: 32.4532675° N
LONG: 103.7018559° W

PROPOSED PENETRATION POINT 4 (PPP4)
2642' FSL – 1099' FWL SEC.29
N: 527884.9 – E: 736129.2
LAT: 32.4496370° N
LON: 103.7018530° W

PROPOSED PENETRATION POINT 5 (PPP5)
1321' FSL – 1100' FWL SEC.29
N: 526564.2 – E: 736138.0
LAT: 32.4460067° N
LONG: 103.7018501° W

BOTTOM HOLE (BH)
N: 525343.5 – E: 736146.0
LAT: 32.4426512° N
LONG: 103.7018474° W

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.

Bennett Hall 9/8/2023
Signature Date

Bennett Hall
Printed Name

bhall@mewbourne.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.

1-20-2021
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

19680
Certificate Number

REV: NAME & WELL CALLS 8/29/23

Job No.: LS21010035D

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
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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
	98313	WC-025 G-09 S213232A; UPR WOLFCAMP

4 Property Code	5 Property Name	6 Well Number
	CAPER 20/29 FED COM	722H

7 OGRID NO.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	3636'

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
K	17	21S	32E		1645	SOUTH	1360	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
M	29	21S	32E		100	SOUTH	1100	WEST	LEA

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

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

16

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1916"
N: 525232.1 – E: 735046.9

B: FOUND BRASS CAP "1916"
N: 527873.3 – E: 735030.1

C: FOUND BRASS CAP "1916"
N: 530515.0 – E: 735012.4

D: FOUND BRASS CAP "1916"
N: 533156.0 – E: 734994.8

E: FOUND BRASS CAP "1916"
N: 535796.9 – E: 734977.4

F: FOUND BRASS CAP "1916"
N: 538437.8 – E: 734960.4

G: CALCULATED CORNER
N: 541078.8 – E: 734942.1

H: FOUND BRASS CAP "1916"
N: 541101.3 – E: 737591.3

I: FOUND BRASS CAP "1916"
N: 541139.6 – E: 740240.7

J: FOUND BRASS CAP "1916"
N: 538491.6 – E: 740254.1

K: FOUND BRASS CAP "1916"
N: 535850.9 – E: 740270.1

L: FOUND BRASS CAP "1916"
N: 533209.9 – E: 740284.5

M: FOUND BRASS CAP "1916"
N: 530566.4 – E: 740299.7

N: FOUND BRASS CAP "1916"
N: 527928.8 – E: 740313.1

O: FOUND BRASS CAP "1916"
N: 525287.1 – E: 740328.6

P: FOUND BRASS CAP "1916"
N: 525259.4 – E: 737687.3

Q: FOUND BRASS CAP "1916"
N: 530542.7 – E: 737654.9

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.

Bennett Hall 9/8/2023
Signature Date

Bennett Hall
Printed Name

bhall@mewbourne.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.

1-20-2021
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

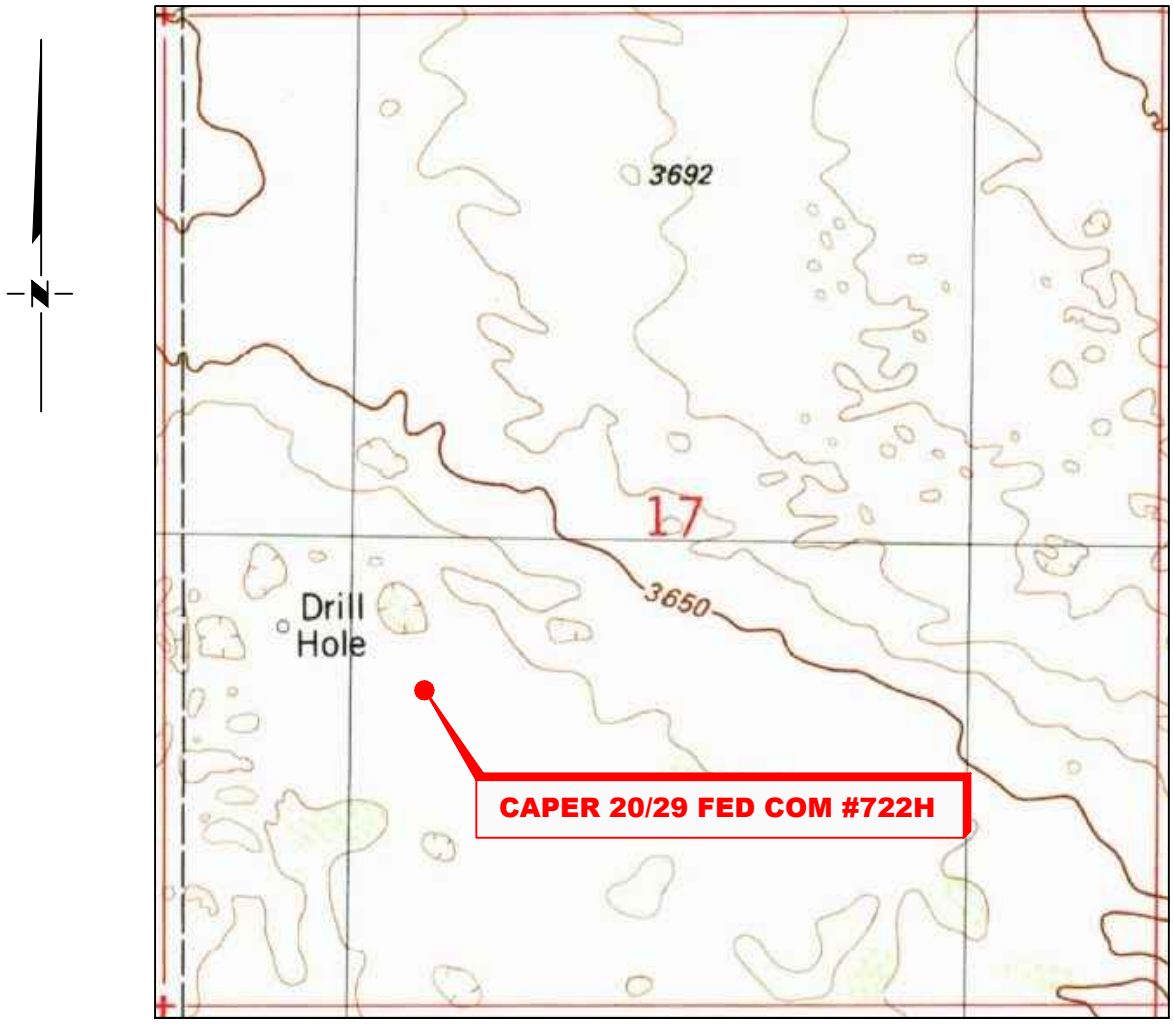
19680
Certificate Number

REV: NAME & WELL CALLS 8/29/23

Job No.: LS21010035D

LOCATION VERIFICATION MAP

NOT TO SCALE



SECTION 17, TWP. 21 SOUTH, RGE. 32 EAST, N. M. P. M., LEA CO., NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Caper 20/29 Fed Com
WELL NO.: 722H
ELEVATION: 3636'

LOCATION: 1645' FSL & 1360' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
The Divide, NM (P. E. 1984)

NO.	REVISION	DATE
1	NAME CHANGE	8/29/23

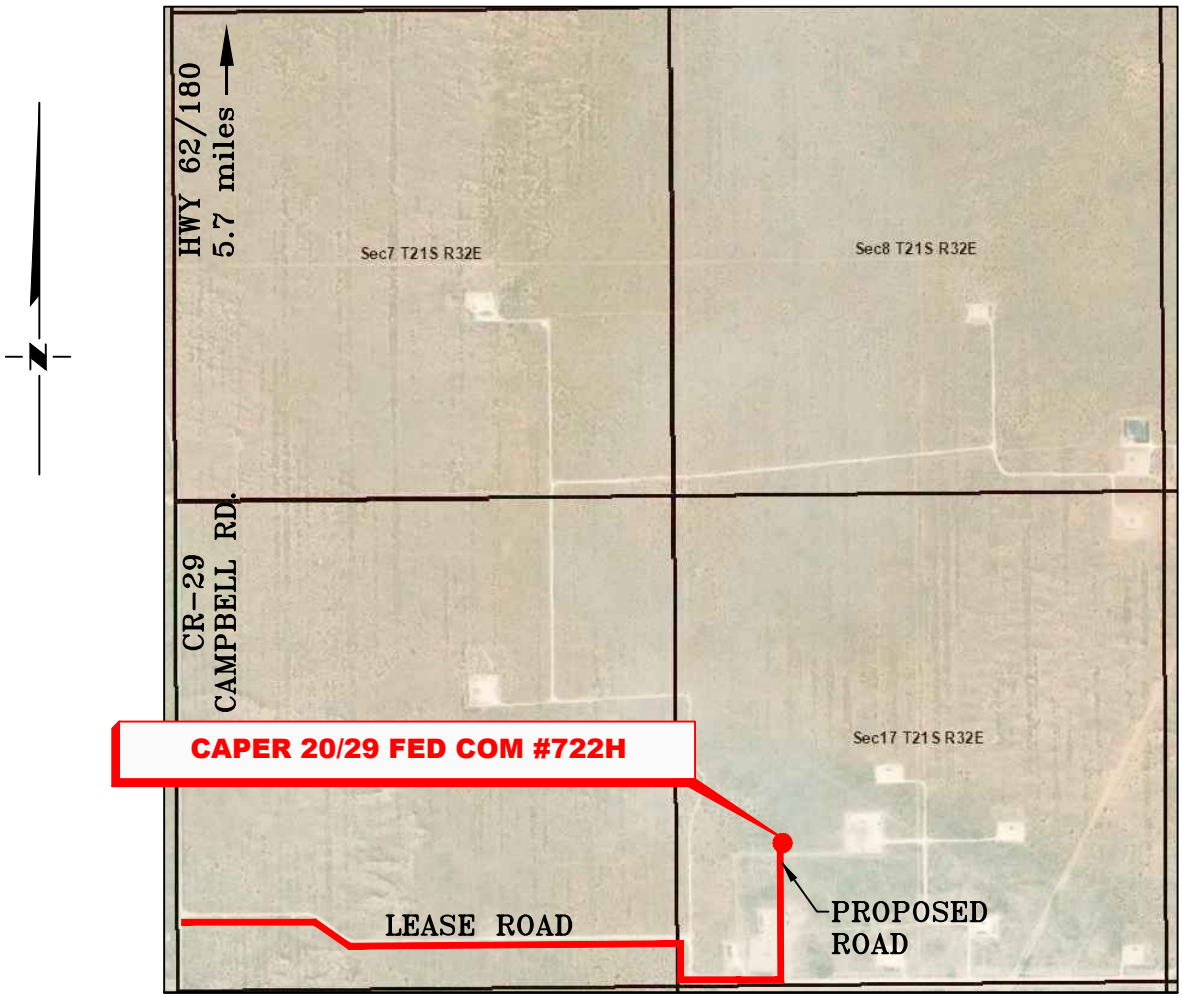
JOB NO.: LS21010035D
DWG. NO.: 21010035D-2

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 1-20-2021
SURVEYED BY: ML/JC
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



SECTION 17, TWP. 21 SOUTH, RGE. 32 EAST, N. M. P. M., LEA CO., NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Caper 20/29 Fed Com
WELL NO.: 722H

LOCATION: 1645' FSL & 1360' FWL
ELEVATION: 3636'

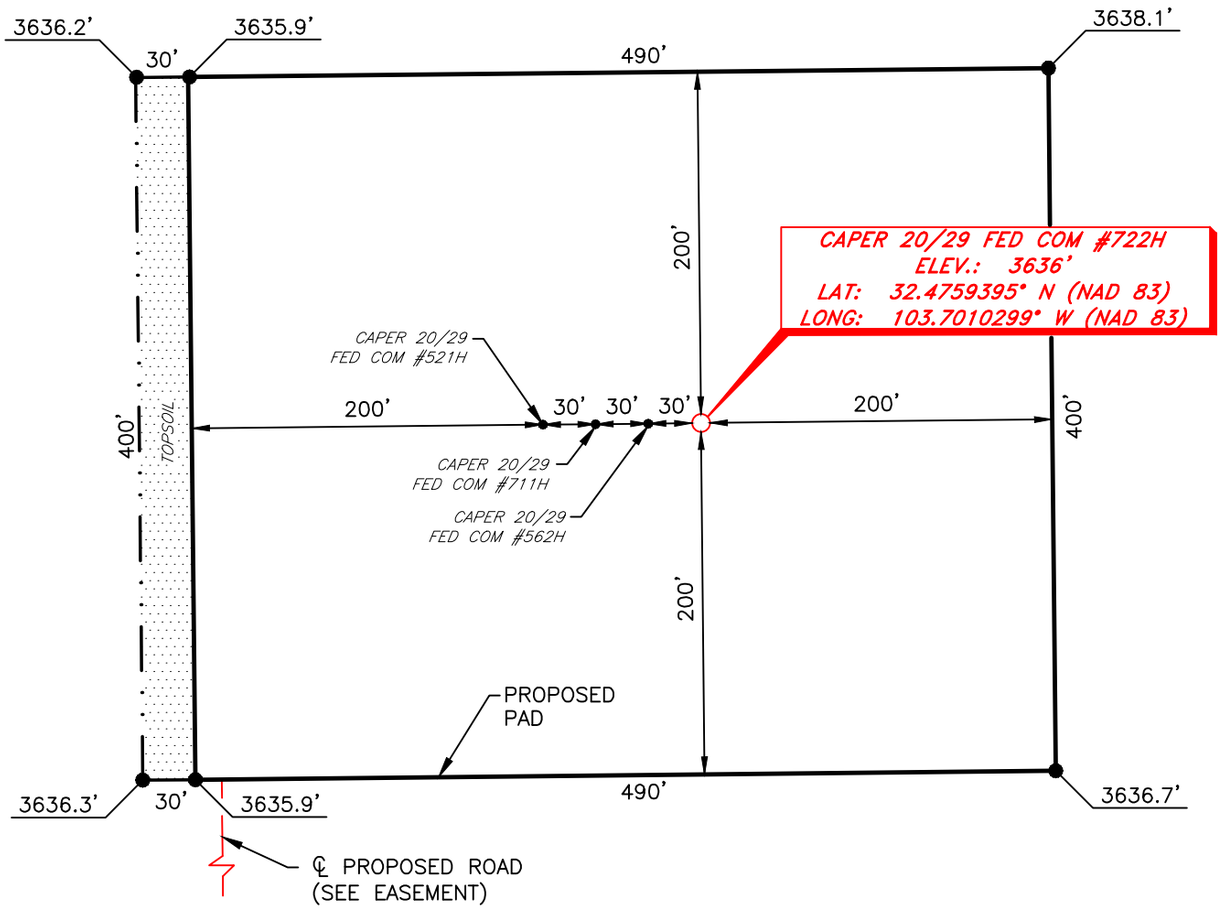
NO.	REVISION	DATE
1	NAME CHANGE	8/29/23

JOB NO.: LS21010035D
DWG. NO.: 21010035D-3

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 1-20-2021
SURVEYED BY: ML/JC
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

MEWBOURNE OIL COMPANY
CAPER 20/29 FED COM #722H
(1645' FSL & 1360' FWL)
SECTION 17, T21S, R32E
N. M. P. M., LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of Hwy 62/180 and CR-#29 (Campbell Rd.);

Go South on CR-#29 approx. 5.7 miles to a lease road on the left;

Turn left and go East approx. 1.0 miles to a lease road on the right;

Turn right and go South approx. 0.1 miles to curve to the left;

Turn left and go East approx. 0.2 miles to a lease road on the left;

Turn left and go North approx. 0.1 miles to a proposed road;

Continue North on proposed road approx. 0.1 miles to location on the right.

SCALE: 1" = 100'
0 50 100

BEARINGS ARE NAD 83 GRID – NM EAST
DISTANCES ARE GROUND

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680

ROBERT M. HOWETT NEW MEXICO 19680 1/25/21 PROFESSIONAL SURVEYOR

NO.	REVISION	DATE
1	NAME CHANGE	8/29/23
JOB NO.: LS21010035D		
DWG. NO.: 21010035D-4		

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 1-20-2021
SURVEYED BY: ML/JC
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

Mewbourne Oil Company

Lea County, New Mexico NAD 83
Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL & 1360' FWL (Sec 17)
BHL: 100' FSL & 1100' FWL (Sec 29)

Plan: Design #1

Standard Planning Report

11 September, 2023

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Project Lea County, New Mexico NAD 83

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

Site Caper 20/29 Fed Com #722H

Site Position:		**Northing:**	163,816.74 m	**Latitude:**	32° 28' 33.382 N
From:	Map	**Easting:**	224,432.76 m	**Longitude:**	103° 42' 3.707 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in		

Well Sec 17, T21S, R32E

Well Position	**+N/-S**	0.0 ft	**Northing:**	163,816.74 m	**Latitude:**	32° 28' 33.382 N
	+E/-W	0.0 ft	**Easting:**	224,432.76 m	**Longitude:**	103° 42' 3.707 W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	3,664.0 ft	**Ground Level:**	3,636.0 ft
Grid Convergence:		0.34 °				

Wellbore BHL: 100' FSL & 1100' FWL (Sec 29)

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.23	60.31	48,397.99866687

Design Design #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	180.85

Plan Survey Tool Program **Date** 9/11/2023

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,508.2	Design #1 (BHL: 100' FSL & 1100		

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,504.2	7.08	192.13	1,503.3	-21.4	-4.6	2.00	2.00	0.00	192.13	
10,890.3	7.08	192.13	10,817.7	-1,153.0	-247.9	0.00	0.00	0.00	0.00	
11,244.5	0.00	0.00	11,171.0	-1,174.4	-252.5	2.00	-2.00	0.00	180.00	KOP: 473' FSL & 111(
12,136.3	89.17	179.62	11,744.0	-1,739.2	-248.8	10.00	10.00	0.00	179.62	
22,510.4	89.17	179.62	11,894.0	-12,111.9	-180.5	0.00	0.00	0.00	0.00	BHL: 100' FSL & 110(

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL: 1645' FSL & 1360' FWL (Sec 17)									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	1.00	192.13	1,200.0	-0.4	-0.1	0.4	2.00	2.00	0.00
1,300.0	3.00	192.13	1,299.9	-3.8	-0.8	3.9	2.00	2.00	0.00
1,400.0	5.00	192.13	1,399.7	-10.7	-2.3	10.7	2.00	2.00	0.00
1,504.2	7.08	192.13	1,503.3	-21.4	-4.6	21.4	2.00	2.00	0.00
1,600.0	7.08	192.13	1,598.4	-32.9	-7.1	33.0	0.00	0.00	0.00
1,700.0	7.08	192.13	1,697.6	-45.0	-9.7	45.1	0.00	0.00	0.00
1,800.0	7.08	192.13	1,796.8	-57.0	-12.3	57.2	0.00	0.00	0.00
1,900.0	7.08	192.13	1,896.1	-69.1	-14.9	69.3	0.00	0.00	0.00
2,000.0	7.08	192.13	1,995.3	-81.2	-17.4	81.4	0.00	0.00	0.00
2,100.0	7.08	192.13	2,094.6	-93.2	-20.0	93.5	0.00	0.00	0.00
2,200.0	7.08	192.13	2,193.8	-105.3	-22.6	105.6	0.00	0.00	0.00
2,300.0	7.08	192.13	2,293.0	-117.3	-25.2	117.7	0.00	0.00	0.00
2,400.0	7.08	192.13	2,392.3	-129.4	-27.8	129.8	0.00	0.00	0.00
2,500.0	7.08	192.13	2,491.5	-141.4	-30.4	141.9	0.00	0.00	0.00
2,600.0	7.08	192.13	2,590.7	-153.5	-33.0	154.0	0.00	0.00	0.00
2,700.0	7.08	192.13	2,690.0	-165.6	-35.6	166.1	0.00	0.00	0.00
2,800.0	7.08	192.13	2,789.2	-177.6	-38.2	178.2	0.00	0.00	0.00
2,900.0	7.08	192.13	2,888.4	-189.7	-40.8	190.3	0.00	0.00	0.00
3,000.0	7.08	192.13	2,987.7	-201.7	-43.4	202.3	0.00	0.00	0.00
3,100.0	7.08	192.13	3,086.9	-213.8	-46.0	214.4	0.00	0.00	0.00
3,200.0	7.08	192.13	3,186.2	-225.8	-48.6	226.5	0.00	0.00	0.00
3,300.0	7.08	192.13	3,285.4	-237.9	-51.1	238.6	0.00	0.00	0.00
3,400.0	7.08	192.13	3,384.6	-249.9	-53.7	250.7	0.00	0.00	0.00
3,500.0	7.08	192.13	3,483.9	-262.0	-56.3	262.8	0.00	0.00	0.00
3,600.0	7.08	192.13	3,583.1	-274.1	-58.9	274.9	0.00	0.00	0.00
3,700.0	7.08	192.13	3,682.3	-286.1	-61.5	287.0	0.00	0.00	0.00
3,800.0	7.08	192.13	3,781.6	-298.2	-64.1	299.1	0.00	0.00	0.00
3,900.0	7.08	192.13	3,880.8	-310.2	-66.7	311.2	0.00	0.00	0.00
4,000.0	7.08	192.13	3,980.0	-322.3	-69.3	323.3	0.00	0.00	0.00
4,100.0	7.08	192.13	4,079.3	-334.3	-71.9	335.4	0.00	0.00	0.00
4,200.0	7.08	192.13	4,178.5	-346.4	-74.5	347.5	0.00	0.00	0.00
4,300.0	7.08	192.13	4,277.8	-358.5	-77.1	359.6	0.00	0.00	0.00
4,400.0	7.08	192.13	4,377.0	-370.5	-79.7	371.7	0.00	0.00	0.00
4,500.0	7.08	192.13	4,476.2	-382.6	-82.3	383.8	0.00	0.00	0.00
4,600.0	7.08	192.13	4,575.5	-394.6	-84.8	395.8	0.00	0.00	0.00
4,700.0	7.08	192.13	4,674.7	-406.7	-87.4	407.9	0.00	0.00	0.00
4,800.0	7.08	192.13	4,773.9	-418.7	-90.0	420.0	0.00	0.00	0.00
4,900.0	7.08	192.13	4,873.2	-430.8	-92.6	432.1	0.00	0.00	0.00
5,000.0	7.08	192.13	4,972.4	-442.9	-95.2	444.2	0.00	0.00	0.00
5,100.0	7.08	192.13	5,071.7	-454.9	-97.8	456.3	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.0	7.08	192.13	5,170.9	-467.0	-100.4	468.4	0.00	0.00	0.00
5,300.0	7.08	192.13	5,270.1	-479.0	-103.0	480.5	0.00	0.00	0.00
5,400.0	7.08	192.13	5,369.4	-491.1	-105.6	492.6	0.00	0.00	0.00
5,500.0	7.08	192.13	5,468.6	-503.1	-108.2	504.7	0.00	0.00	0.00
5,600.0	7.08	192.13	5,567.8	-515.2	-110.8	516.8	0.00	0.00	0.00
5,700.0	7.08	192.13	5,667.1	-527.3	-113.4	528.9	0.00	0.00	0.00
5,800.0	7.08	192.13	5,766.3	-539.3	-116.0	541.0	0.00	0.00	0.00
5,900.0	7.08	192.13	5,865.5	-551.4	-118.5	553.1	0.00	0.00	0.00
6,000.0	7.08	192.13	5,964.8	-563.4	-121.1	565.2	0.00	0.00	0.00
6,100.0	7.08	192.13	6,064.0	-575.5	-123.7	577.3	0.00	0.00	0.00
6,200.0	7.08	192.13	6,163.3	-587.5	-126.3	589.4	0.00	0.00	0.00
6,300.0	7.08	192.13	6,262.5	-599.6	-128.9	601.4	0.00	0.00	0.00
6,400.0	7.08	192.13	6,361.7	-611.6	-131.5	613.5	0.00	0.00	0.00
6,500.0	7.08	192.13	6,461.0	-623.7	-134.1	625.6	0.00	0.00	0.00
6,600.0	7.08	192.13	6,560.2	-635.8	-136.7	637.7	0.00	0.00	0.00
6,700.0	7.08	192.13	6,659.4	-647.8	-139.3	649.8	0.00	0.00	0.00
6,800.0	7.08	192.13	6,758.7	-659.9	-141.9	661.9	0.00	0.00	0.00
6,900.0	7.08	192.13	6,857.9	-671.9	-144.5	674.0	0.00	0.00	0.00
7,000.0	7.08	192.13	6,957.1	-684.0	-147.1	686.1	0.00	0.00	0.00
7,100.0	7.08	192.13	7,056.4	-696.0	-149.7	698.2	0.00	0.00	0.00
7,200.0	7.08	192.13	7,155.6	-708.1	-152.2	710.3	0.00	0.00	0.00
7,300.0	7.08	192.13	7,254.9	-720.2	-154.8	722.4	0.00	0.00	0.00
7,400.0	7.08	192.13	7,354.1	-732.2	-157.4	734.5	0.00	0.00	0.00
7,500.0	7.08	192.13	7,453.3	-744.3	-160.0	746.6	0.00	0.00	0.00
7,600.0	7.08	192.13	7,552.6	-756.3	-162.6	758.7	0.00	0.00	0.00
7,700.0	7.08	192.13	7,651.8	-768.4	-165.2	770.8	0.00	0.00	0.00
7,800.0	7.08	192.13	7,751.0	-780.4	-167.8	782.9	0.00	0.00	0.00
7,900.0	7.08	192.13	7,850.3	-792.5	-170.4	794.9	0.00	0.00	0.00
8,000.0	7.08	192.13	7,949.5	-804.6	-173.0	807.0	0.00	0.00	0.00
8,100.0	7.08	192.13	8,048.8	-816.6	-175.6	819.1	0.00	0.00	0.00
8,200.0	7.08	192.13	8,148.0	-828.7	-178.2	831.2	0.00	0.00	0.00
8,300.0	7.08	192.13	8,247.2	-840.7	-180.8	843.3	0.00	0.00	0.00
8,400.0	7.08	192.13	8,346.5	-852.8	-183.4	855.4	0.00	0.00	0.00
8,500.0	7.08	192.13	8,445.7	-864.8	-185.9	867.5	0.00	0.00	0.00
8,600.0	7.08	192.13	8,544.9	-876.9	-188.5	879.6	0.00	0.00	0.00
8,700.0	7.08	192.13	8,644.2	-888.9	-191.1	891.7	0.00	0.00	0.00
8,800.0	7.08	192.13	8,743.4	-901.0	-193.7	903.8	0.00	0.00	0.00
8,900.0	7.08	192.13	8,842.6	-913.1	-196.3	915.9	0.00	0.00	0.00
9,000.0	7.08	192.13	8,941.9	-925.1	-198.9	928.0	0.00	0.00	0.00
9,100.0	7.08	192.13	9,041.1	-937.2	-201.5	940.1	0.00	0.00	0.00
9,200.0	7.08	192.13	9,140.4	-949.2	-204.1	952.2	0.00	0.00	0.00
9,300.0	7.08	192.13	9,239.6	-961.3	-206.7	964.3	0.00	0.00	0.00
9,400.0	7.08	192.13	9,338.8	-973.3	-209.3	976.4	0.00	0.00	0.00
9,500.0	7.08	192.13	9,438.1	-985.4	-211.9	988.5	0.00	0.00	0.00
9,600.0	7.08	192.13	9,537.3	-997.5	-214.5	1,000.5	0.00	0.00	0.00
9,700.0	7.08	192.13	9,636.5	-1,009.5	-217.0	1,012.6	0.00	0.00	0.00
9,800.0	7.08	192.13	9,735.8	-1,021.6	-219.6	1,024.7	0.00	0.00	0.00
9,900.0	7.08	192.13	9,835.0	-1,033.6	-222.2	1,036.8	0.00	0.00	0.00
10,000.0	7.08	192.13	9,934.2	-1,045.7	-224.8	1,048.9	0.00	0.00	0.00
10,100.0	7.08	192.13	10,033.5	-1,057.7	-227.4	1,061.0	0.00	0.00	0.00
10,200.0	7.08	192.13	10,132.7	-1,069.8	-230.0	1,073.1	0.00	0.00	0.00
10,300.0	7.08	192.13	10,232.0	-1,081.9	-232.6	1,085.2	0.00	0.00	0.00
10,400.0	7.08	192.13	10,331.2	-1,093.9	-235.2	1,097.3	0.00	0.00	0.00
10,500.0	7.08	192.13	10,430.4	-1,106.0	-237.8	1,109.4	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,600.0	7.08	192.13	10,529.7	-1,118.0	-240.4	1,121.5	0.00	0.00	0.00
10,700.0	7.08	192.13	10,628.9	-1,130.1	-243.0	1,133.6	0.00	0.00	0.00
10,800.0	7.08	192.13	10,728.1	-1,142.1	-245.6	1,145.7	0.00	0.00	0.00
10,890.3	7.08	192.13	10,817.7	-1,153.0	-247.9	1,156.6	0.00	0.00	0.00
10,900.0	6.89	192.13	10,827.4	-1,154.2	-248.2	1,157.7	2.00	-2.00	0.00
11,000.0	4.89	192.13	10,926.8	-1,164.2	-250.3	1,167.8	2.00	-2.00	0.00
11,100.0	2.89	192.13	11,026.6	-1,170.8	-251.7	1,174.5	2.00	-2.00	0.00
11,200.0	0.89	192.13	11,126.6	-1,174.1	-252.4	1,177.7	2.00	-2.00	0.00
11,244.5	0.00	0.00	11,171.0	-1,174.4	-252.5	1,178.0	2.00	-2.00	0.00
KOP: 473' FSL & 11100' FWL (Sec 17)									
11,250.0	0.55	179.62	11,176.6	-1,174.4	-252.5	1,178.1	10.00	10.00	0.00
11,300.0	5.55	179.62	11,226.5	-1,177.1	-252.5	1,180.7	10.00	10.00	0.00
11,350.0	10.55	179.62	11,276.0	-1,184.1	-252.4	1,187.7	10.00	10.00	0.00
11,400.0	15.55	179.62	11,324.6	-1,195.4	-252.4	1,199.0	10.00	10.00	0.00
11,450.0	20.55	179.62	11,372.2	-1,210.9	-252.3	1,214.5	10.00	10.00	0.00
11,500.0	25.55	179.62	11,418.2	-1,230.4	-252.1	1,234.1	10.00	10.00	0.00
11,550.0	30.55	179.62	11,462.3	-1,253.9	-252.0	1,257.6	10.00	10.00	0.00
11,600.0	35.55	179.62	11,504.2	-1,281.2	-251.8	1,284.8	10.00	10.00	0.00
11,650.0	40.55	179.62	11,543.5	-1,312.0	-251.6	1,315.6	10.00	10.00	0.00
11,700.0	45.54	179.62	11,580.1	-1,346.1	-251.4	1,349.7	10.00	10.00	0.00
11,750.0	50.54	179.62	11,613.5	-1,383.3	-251.1	1,386.9	10.00	10.00	0.00
11,800.0	55.54	179.62	11,643.5	-1,423.2	-250.9	1,426.8	10.00	10.00	0.00
11,850.0	60.54	179.62	11,670.0	-1,465.6	-250.6	1,469.2	10.00	10.00	0.00
11,900.0	65.54	179.62	11,692.7	-1,510.2	-250.3	1,513.7	10.00	10.00	0.00
11,950.0	70.54	179.62	11,711.3	-1,556.5	-250.0	1,560.1	10.00	10.00	0.00
12,000.0	75.54	179.62	11,725.9	-1,604.4	-249.7	1,607.9	10.00	10.00	0.00
12,050.0	80.54	179.62	11,736.3	-1,653.2	-249.3	1,656.8	10.00	10.00	0.00
12,100.0	85.54	179.62	11,742.3	-1,702.9	-249.0	1,706.4	10.00	10.00	0.00
12,136.3	89.17	179.62	11,744.0	-1,739.2	-248.8	1,742.7	10.00	10.00	0.00
12,144.5	89.17	179.62	11,744.1	-1,747.3	-248.7	1,750.8	0.00	0.00	0.00
FTP: 100' FNL & 1100' FWL (Sec 20)									
12,200.0	89.17	179.62	11,744.9	-1,802.8	-248.4	1,806.3	0.00	0.00	0.00
12,300.0	89.17	179.62	11,746.4	-1,902.8	-247.7	1,906.3	0.00	0.00	0.00
12,400.0	89.17	179.62	11,747.8	-2,002.8	-247.0	2,006.2	0.00	0.00	0.00
12,500.0	89.17	179.62	11,749.3	-2,102.8	-246.4	2,106.2	0.00	0.00	0.00
12,600.0	89.17	179.62	11,750.7	-2,202.8	-245.7	2,206.2	0.00	0.00	0.00
12,700.0	89.17	179.62	11,752.2	-2,302.7	-245.1	2,306.1	0.00	0.00	0.00
12,800.0	89.17	179.62	11,753.6	-2,402.7	-244.4	2,406.1	0.00	0.00	0.00
12,900.0	89.17	179.62	11,755.1	-2,502.7	-243.8	2,506.1	0.00	0.00	0.00
13,000.0	89.17	179.62	11,756.5	-2,602.7	-243.1	2,606.0	0.00	0.00	0.00
13,100.0	89.17	179.62	11,758.0	-2,702.7	-242.4	2,706.0	0.00	0.00	0.00
13,200.0	89.17	179.62	11,759.4	-2,802.7	-241.8	2,806.0	0.00	0.00	0.00
13,300.0	89.17	179.62	11,760.8	-2,902.7	-241.1	2,905.9	0.00	0.00	0.00
13,400.0	89.17	179.62	11,762.3	-3,002.7	-240.5	3,005.9	0.00	0.00	0.00
13,500.0	89.17	179.62	11,763.7	-3,102.6	-239.8	3,105.9	0.00	0.00	0.00
13,600.0	89.17	179.62	11,765.2	-3,202.6	-239.1	3,205.8	0.00	0.00	0.00
13,700.0	89.17	179.62	11,766.6	-3,302.6	-238.5	3,305.8	0.00	0.00	0.00
13,800.0	89.17	179.62	11,768.1	-3,402.6	-237.8	3,405.8	0.00	0.00	0.00
13,900.0	89.17	179.62	11,769.5	-3,502.6	-237.2	3,505.7	0.00	0.00	0.00
14,000.0	89.17	179.62	11,771.0	-3,602.6	-236.5	3,605.7	0.00	0.00	0.00
14,100.0	89.17	179.62	11,772.4	-3,702.6	-235.9	3,705.7	0.00	0.00	0.00
14,200.0	89.17	179.62	11,773.9	-3,802.6	-235.2	3,805.6	0.00	0.00	0.00
14,300.0	89.17	179.62	11,775.3	-3,902.5	-234.5	3,905.6	0.00	0.00	0.00
14,400.0	89.17	179.62	11,776.8	-4,002.5	-233.9	4,005.6	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,500.0	89.17	179.62	11,778.2	-4,102.5	-233.2	4,105.5	0.00	0.00	0.00
14,600.0	89.17	179.62	11,779.6	-4,202.5	-232.6	4,205.5	0.00	0.00	0.00
14,685.7	89.17	179.62	11,780.9	-4,288.2	-232.0	4,291.2	0.00	0.00	0.00
PPP2: 2641' FSL & 1100' FWL (Sec 20)									
14,700.0	89.17	179.62	11,781.1	-4,302.5	-231.9	4,305.5	0.00	0.00	0.00
14,800.0	89.17	179.62	11,782.5	-4,402.5	-231.3	4,405.4	0.00	0.00	0.00
14,900.0	89.17	179.62	11,784.0	-4,502.5	-230.6	4,505.4	0.00	0.00	0.00
15,000.0	89.17	179.62	11,785.4	-4,602.5	-229.9	4,605.4	0.00	0.00	0.00
15,100.0	89.17	179.62	11,786.9	-4,702.4	-229.3	4,705.3	0.00	0.00	0.00
15,200.0	89.17	179.62	11,788.3	-4,802.4	-228.6	4,805.3	0.00	0.00	0.00
15,300.0	89.17	179.62	11,789.8	-4,902.4	-228.0	4,905.3	0.00	0.00	0.00
15,400.0	89.17	179.62	11,791.2	-5,002.4	-227.3	5,005.2	0.00	0.00	0.00
15,500.0	89.17	179.62	11,792.7	-5,102.4	-226.6	5,105.2	0.00	0.00	0.00
15,600.0	89.17	179.62	11,794.1	-5,202.4	-226.0	5,205.2	0.00	0.00	0.00
15,700.0	89.17	179.62	11,795.6	-5,302.4	-225.3	5,305.1	0.00	0.00	0.00
15,800.0	89.17	179.62	11,797.0	-5,402.4	-224.7	5,405.1	0.00	0.00	0.00
15,900.0	89.17	179.62	11,798.4	-5,502.3	-224.0	5,505.1	0.00	0.00	0.00
16,000.0	89.17	179.62	11,799.9	-5,602.3	-223.4	5,605.0	0.00	0.00	0.00
16,100.0	89.17	179.62	11,801.3	-5,702.3	-222.7	5,705.0	0.00	0.00	0.00
16,200.0	89.17	179.62	11,802.8	-5,802.3	-222.0	5,805.0	0.00	0.00	0.00
16,300.0	89.17	179.62	11,804.2	-5,902.3	-221.4	5,904.9	0.00	0.00	0.00
16,400.0	89.17	179.62	11,805.7	-6,002.3	-220.7	6,004.9	0.00	0.00	0.00
16,500.0	89.17	179.62	11,807.1	-6,102.3	-220.1	6,104.9	0.00	0.00	0.00
16,600.0	89.17	179.62	11,808.6	-6,202.3	-219.4	6,204.8	0.00	0.00	0.00
16,700.0	89.17	179.62	11,810.0	-6,302.2	-218.7	6,304.8	0.00	0.00	0.00
16,800.0	89.17	179.62	11,811.5	-6,402.2	-218.1	6,404.8	0.00	0.00	0.00
16,900.0	89.17	179.62	11,812.9	-6,502.2	-217.4	6,504.7	0.00	0.00	0.00
17,000.0	89.17	179.62	11,814.3	-6,602.2	-216.8	6,604.7	0.00	0.00	0.00
17,100.0	89.17	179.62	11,815.8	-6,702.2	-216.1	6,704.7	0.00	0.00	0.00
17,200.0	89.17	179.62	11,817.2	-6,802.2	-215.5	6,804.6	0.00	0.00	0.00
17,300.0	89.17	179.62	11,818.7	-6,902.2	-214.8	6,904.6	0.00	0.00	0.00
17,400.0	89.17	179.62	11,820.1	-7,002.2	-214.1	7,004.6	0.00	0.00	0.00
17,500.0	89.17	179.62	11,821.6	-7,102.1	-213.5	7,104.5	0.00	0.00	0.00
17,600.0	89.17	179.62	11,823.0	-7,202.1	-212.8	7,204.5	0.00	0.00	0.00
17,700.0	89.17	179.62	11,824.5	-7,302.1	-212.2	7,304.5	0.00	0.00	0.00
17,800.0	89.17	179.62	11,825.9	-7,402.1	-211.5	7,404.4	0.00	0.00	0.00
17,900.0	89.17	179.62	11,827.4	-7,502.1	-210.8	7,504.4	0.00	0.00	0.00
18,000.0	89.17	179.62	11,828.8	-7,602.1	-210.2	7,604.4	0.00	0.00	0.00
18,100.0	89.17	179.62	11,830.3	-7,702.1	-209.5	7,704.3	0.00	0.00	0.00
18,200.0	89.17	179.62	11,831.7	-7,802.1	-208.9	7,804.3	0.00	0.00	0.00
18,300.0	89.17	179.62	11,833.1	-7,902.0	-208.2	7,904.3	0.00	0.00	0.00
18,400.0	89.17	179.62	11,834.6	-8,002.0	-207.6	8,004.2	0.00	0.00	0.00
18,500.0	89.17	179.62	11,836.0	-8,102.0	-206.9	8,104.2	0.00	0.00	0.00
18,600.0	89.17	179.62	11,837.5	-8,202.0	-206.2	8,204.2	0.00	0.00	0.00
18,647.7	89.17	179.62	11,838.2	-8,249.7	-205.9	8,251.9	0.00	0.00	0.00
PPP3: 1321' FNL & 1100' FWL (Sec 29)									
18,700.0	89.17	179.62	11,838.9	-8,302.0	-205.6	8,304.1	0.00	0.00	0.00
18,800.0	89.17	179.62	11,840.4	-8,402.0	-204.9	8,404.1	0.00	0.00	0.00
18,900.0	89.17	179.62	11,841.8	-8,502.0	-204.3	8,504.1	0.00	0.00	0.00
19,000.0	89.17	179.62	11,843.3	-8,602.0	-203.6	8,604.0	0.00	0.00	0.00
19,100.0	89.17	179.62	11,844.7	-8,701.9	-202.9	8,704.0	0.00	0.00	0.00
19,200.0	89.17	179.62	11,846.2	-8,801.9	-202.3	8,804.0	0.00	0.00	0.00
19,300.0	89.17	179.62	11,847.6	-8,901.9	-201.6	8,903.9	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
19,400.0	89.17	179.62	11,849.0	-9,001.9	-201.0	9,003.9	0.00	0.00	0.00
19,500.0	89.17	179.62	11,850.5	-9,101.9	-200.3	9,103.9	0.00	0.00	0.00
19,600.0	89.17	179.62	11,851.9	-9,201.9	-199.7	9,203.8	0.00	0.00	0.00
19,700.0	89.17	179.62	11,853.4	-9,301.9	-199.0	9,303.8	0.00	0.00	0.00
19,800.0	89.17	179.62	11,854.8	-9,401.9	-198.3	9,403.8	0.00	0.00	0.00
19,900.0	89.17	179.62	11,856.3	-9,501.8	-197.7	9,503.7	0.00	0.00	0.00
19,968.7	89.17	179.62	11,857.3	-9,570.5	-197.2	9,572.4	0.00	0.00	0.00
PPP4: 2642' FSL & 1099' FWL (Sec 29)									
20,000.0	89.17	179.62	11,857.7	-9,601.8	-197.0	9,603.7	0.00	0.00	0.00
20,100.0	89.17	179.62	11,859.2	-9,701.8	-196.4	9,703.7	0.00	0.00	0.00
20,200.0	89.17	179.62	11,860.6	-9,801.8	-195.7	9,803.6	0.00	0.00	0.00
20,300.0	89.17	179.62	11,862.1	-9,901.8	-195.0	9,903.6	0.00	0.00	0.00
20,400.0	89.17	179.62	11,863.5	-10,001.8	-194.4	10,003.6	0.00	0.00	0.00
20,500.0	89.17	179.62	11,865.0	-10,101.8	-193.7	10,103.5	0.00	0.00	0.00
20,600.0	89.17	179.62	11,866.4	-10,201.7	-193.1	10,203.5	0.00	0.00	0.00
20,700.0	89.17	179.62	11,867.8	-10,301.7	-192.4	10,303.5	0.00	0.00	0.00
20,800.0	89.17	179.62	11,869.3	-10,401.7	-191.8	10,403.4	0.00	0.00	0.00
20,900.0	89.17	179.62	11,870.7	-10,501.7	-191.1	10,503.4	0.00	0.00	0.00
21,000.0	89.17	179.62	11,872.2	-10,601.7	-190.4	10,603.4	0.00	0.00	0.00
21,100.0	89.17	179.62	11,873.6	-10,701.7	-189.8	10,703.3	0.00	0.00	0.00
21,200.0	89.17	179.62	11,875.1	-10,801.7	-189.1	10,803.3	0.00	0.00	0.00
21,289.6	89.17	179.62	11,876.4	-10,891.2	-188.5	10,892.8	0.00	0.00	0.00
PPP5: 1321' FSL & 1100' FWL (Sec 29)									
21,300.0	89.17	179.62	11,876.5	-10,901.7	-188.5	10,903.3	0.00	0.00	0.00
21,400.0	89.17	179.62	11,878.0	-11,001.6	-187.8	11,003.2	0.00	0.00	0.00
21,500.0	89.17	179.62	11,879.4	-11,101.6	-187.2	11,103.2	0.00	0.00	0.00
21,600.0	89.17	179.62	11,880.9	-11,201.6	-186.5	11,203.2	0.00	0.00	0.00
21,700.0	89.17	179.62	11,882.3	-11,301.6	-185.8	11,303.1	0.00	0.00	0.00
21,800.0	89.17	179.62	11,883.8	-11,401.6	-185.2	11,403.1	0.00	0.00	0.00
21,900.0	89.17	179.62	11,885.2	-11,501.6	-184.5	11,503.1	0.00	0.00	0.00
22,000.0	89.17	179.62	11,886.6	-11,601.6	-183.9	11,603.0	0.00	0.00	0.00
22,100.0	89.17	179.62	11,888.1	-11,701.6	-183.2	11,703.0	0.00	0.00	0.00
22,200.0	89.17	179.62	11,889.5	-11,801.5	-182.5	11,803.0	0.00	0.00	0.00
22,300.0	89.17	179.62	11,891.0	-11,901.5	-181.9	11,902.9	0.00	0.00	0.00
22,400.0	89.17	179.62	11,892.4	-12,001.5	-181.2	12,002.9	0.00	0.00	0.00
22,500.0	89.17	179.62	11,893.9	-12,101.5	-180.6	12,102.9	0.00	0.00	0.00
22,510.4	89.17	179.62	11,894.0	-12,111.9	-180.5	12,113.3	0.00	0.00	0.00
BHL: 100' FSL & 1100' FWL (Sec 29)									

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Caper 20/29 Fed Com #722H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3664.0ft (Original Well Elev)
Site:	Caper 20/29 Fed Com #722H	**North Reference:**	Grid
Well:	Sec 17, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FSL & 1100' FWL (Sec 29)		
Design:	Design #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
SHL: 1645' FSL & 1360' - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	163,816.74	224,432.76	32° 28' 33.382 N	103° 42' 3.707 W
KOP: 473' FSL & 11100' - plan hits target center - Point	0.00	0.00	11,171.0	-1,174.4	-252.5	163,458.78	224,355.80	32° 28' 21.777 N	103° 42' 6.736 W
FTP: 100' FNL & 1100' F - plan hits target center - Point	0.00	0.00	11,744.1	-1,747.3	-248.7	163,284.16	224,356.95	32° 28' 16.107 N	103° 42' 6.731 W
PPP2: 2641' FSL & 110(- plan hits target center - Point	0.00	0.00	11,780.9	-4,288.2	-232.0	162,509.69	224,362.05	32° 27' 50.964 N	103° 42' 6.712 W
PPP3: 1321' FNL & 110(- plan hits target center - Point	0.00	0.00	11,838.2	-8,249.7	-205.9	161,302.22	224,370.00	32° 27' 11.763 N	103° 42' 6.681 W
PPP4: 2642' FSL & 109 - plan hits target center - Point	0.00	0.00	11,857.3	-9,570.5	-197.2	160,899.64	224,372.65	32° 26' 58.693 N	103° 42' 6.670 W
PPP5: 1321' FSL & 110(- plan hits target center - Point	0.00	0.00	11,876.4	-10,891.2	-188.5	160,497.09	224,375.30	32° 26' 45.624 N	103° 42' 6.660 W
BHL: 100' FSL & 1100' F - plan hits target center - Point	0.00	0.00	11,894.0	-12,111.9	-180.5	160,125.02	224,377.74	32° 26' 33.545 N	103° 42' 6.651 W

MEWBOURNE OIL COMPANY

Mewbourne Oil Co.

BOP Break Testing Variance

Mewbourne Oil Company requests a variance from the minimum standards for well control equipment testing of 43 CFR 3172 to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with batch drilling & offline cementing operations. Modern rig upgrades which facilitate pad drilling allow the BOP stack to be moved between wells on a multi-well pad without breaking any BOP stack components apart. Widespread use of these technologies has led to break testing BOPE being endorsed as safe and reliable. American Petroleum Institute (API) best practices are frequently used by regulators to develop their regulations. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (5th Ed., Dec. 2018) Section 5.3.7.1 states "A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component."

Procedures

1. Full BOPE test at first installation on the pad.
   - Full BOPE test at least every 21 days.
   - Function test BOP elements per 43 CFR 3172.
   - Contact the BLM if a well control event occurs.
2. After the well section is secured and the well is confirmed to be static, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad. Two breaks on the BOPE will be made (Fig. 1).
   - Connection between the flex line and the HCR valve
   - Connection between the wellhead and the BOP quick connect (Fig. 5 & 6).
3. A capping flange will be installed after cementing per wellhead vendor procedure & casing pressure will be monitored via wellhead valve.
4. The BOP will be removed and carried by a hydraulic carrier (Fig. 3 & 4).
5. The rig will then walk to the next well.
6. Confirm that the well is static and remove the capping flange.
7. The connection between the flex line and HCR valve and the connection between the wellhead and the BOP quick connect will be reconnected.
8. Install a test plug into the wellhead.
9. A test will then be conducted against the upper pipe rams and choke, testing both breaks (Fig. 1 & 2).
10. The test will be held at 250 psi low and to the high value submitted in the APD, not to exceed 5000 psi.
11. The annular, blind rams and lower pipe rams will then be function tested.
12. If a pad consists of three or more wells, steps 4 through 11 will be repeated.

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13. A break test will only be conducted if the intermediate section can be drilled and cased within 21 days of the last full BOPE test.

Barriers

Before Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

After Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool and/or cement head
- Capping flange after cementing

Summary

A variance is requested to only test broken pressure seals on the BOPE when moving between wells on a multi-well pad if the following conditions are met:

- A full BOPE test is conducted on the first well on the pad. API Standard 53 requires testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater.
- If the first well on the pad is not the well with the deepest intermediate section, a full BOPE test will also be performed when moving to a deeper well.
- The hole section being drilled has a MASP under 5000 psi.
- If a well control event occurs, Mewbourne will contact BLM for permission to continue break testing.
- If significant (>50%) losses occur, full BOPE testing will be required going forward.
- Full BOPE test will be required prior to drilling the production hole.

While walking the rig, the BOP stack will be secured via hydraulic winch or hydraulic carrier. A full BOPE test will be performed at least every 21 days.

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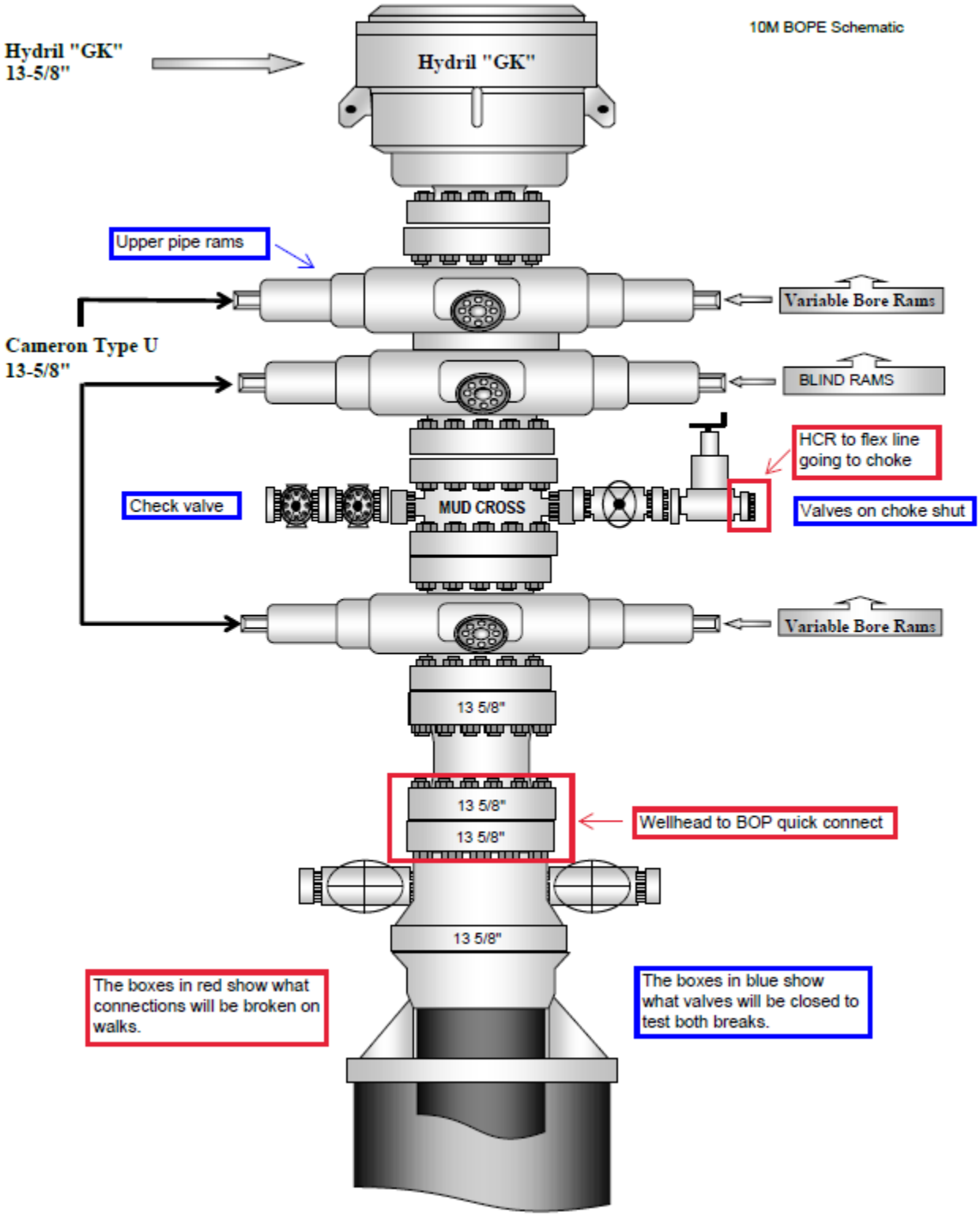

Figure 1. BOP diagram

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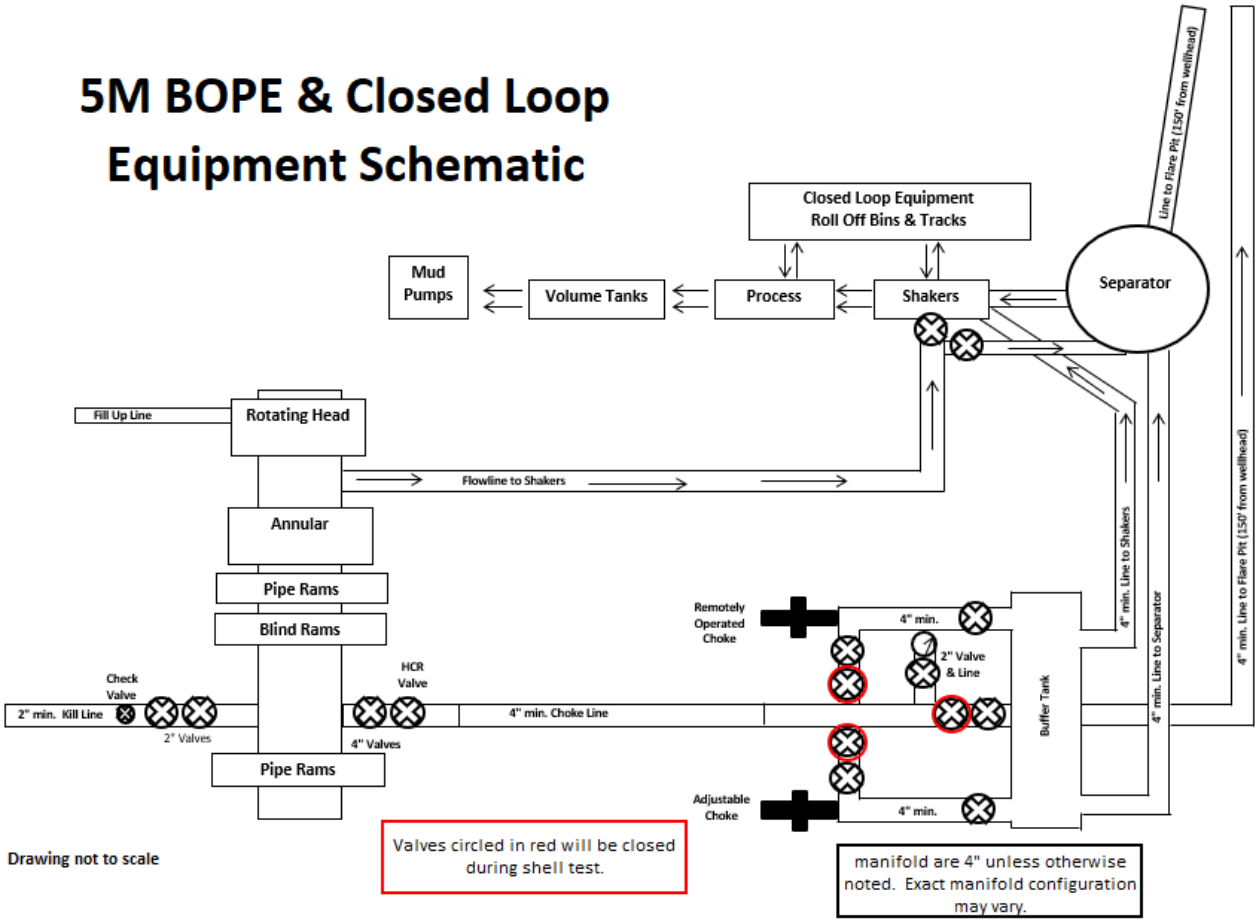

Figure 2. BOPE diagram

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Figure 3. BOP handling system

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Figure 4. BOP handling system

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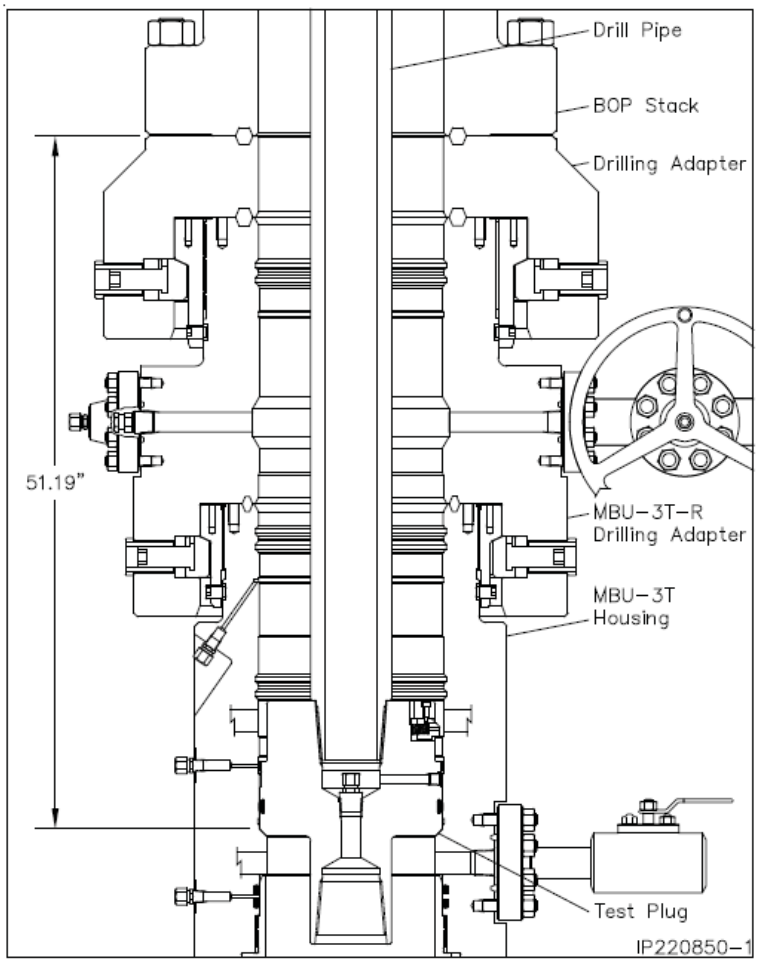


Figure 5. Cactus 5M wellhead with BOP quick connect

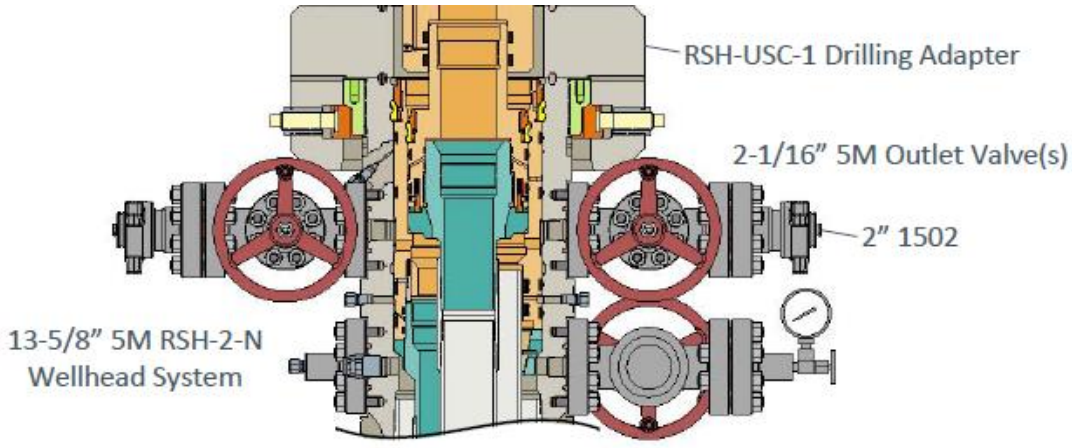
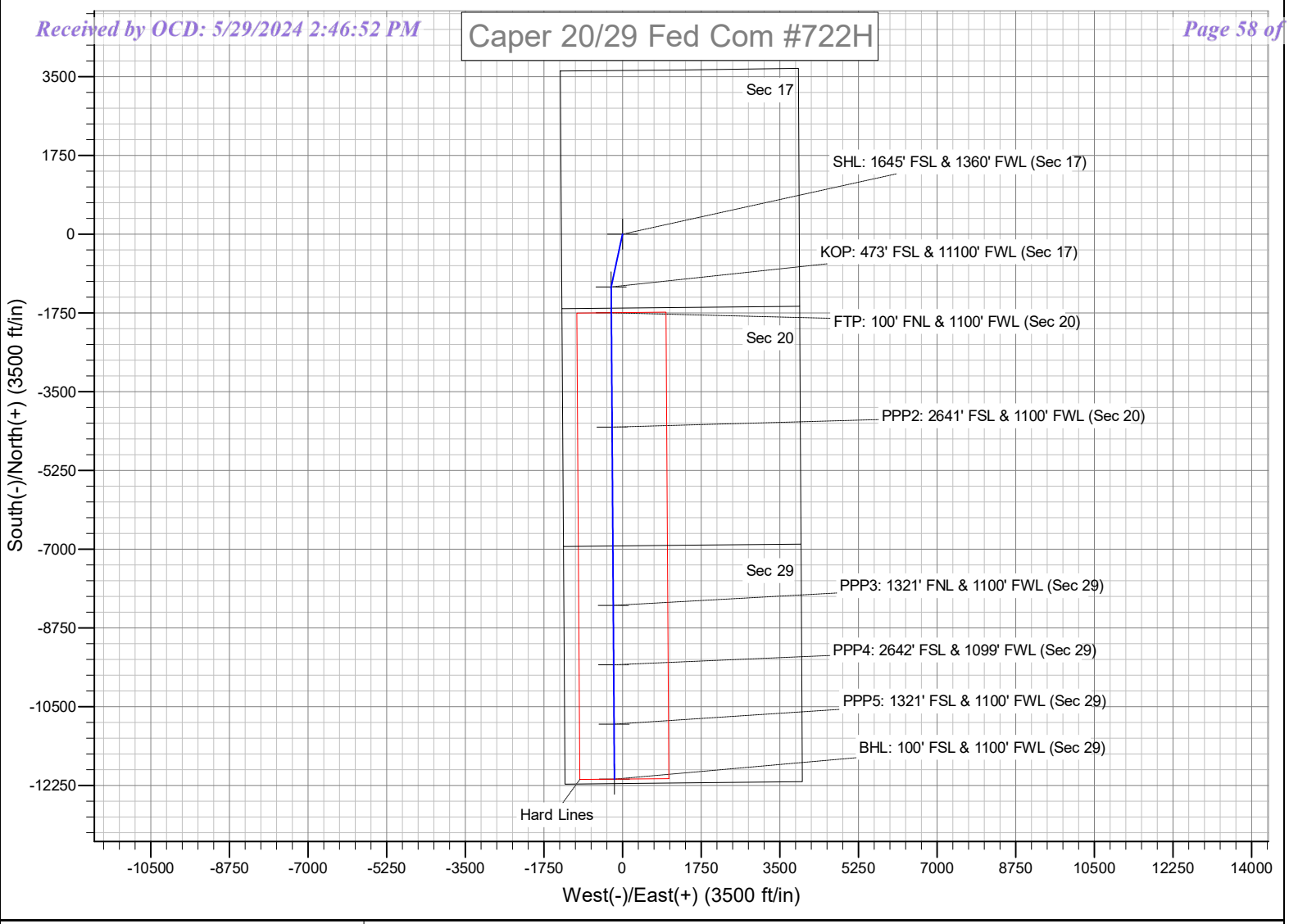
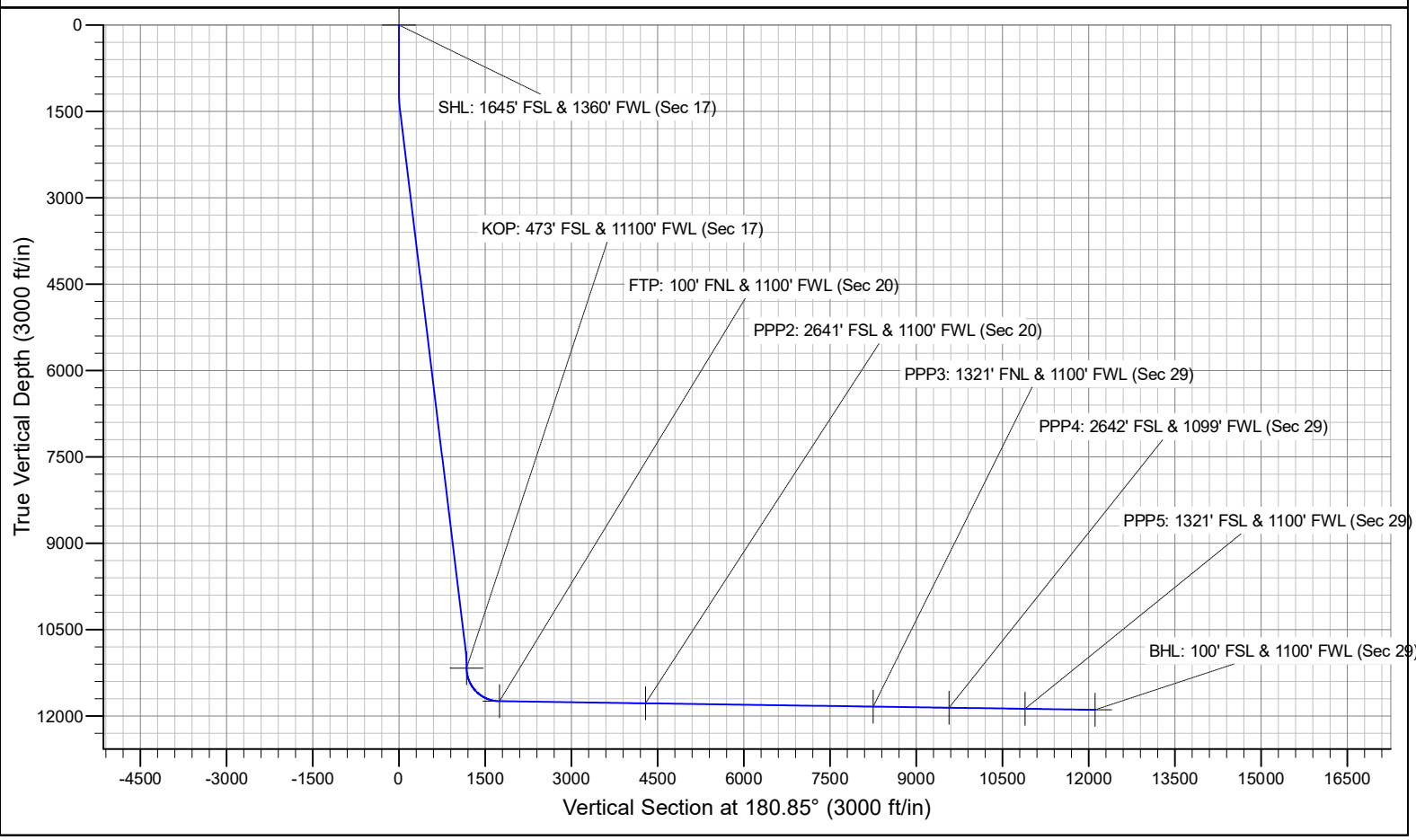


Figure 6. Vault 5M wellhead with BOP quick connect

Caper 20/29 Fed Com #722H





Mewbourne Oil Company, Caper 20/29 Fed Com #722H
Sec 17, T21S, R32E
SHL: 1645' FSL 1360' FWL (Sec 17)
BHL: 100' FSL 1100' FWL (Sec 29)

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Caper 20/29 Fed Com	#722H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	17	21S	32E	-	473'	FSL	11100'	FWL	Lea
Latitude					Longitude				NAD
32.4727157					-103.7018710				83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	20	21S	32E	-	100'	FNL	1100'	FWL	Lea
Latitude					Longitude				NAD
32.471141					-032.4711410				83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	29	21S	32E	-	100'	FSL	1100'	FWL	Lea
Latitude					Longitude				NAD
32.4426512					-103.7018474				83

Is this well the defining well for the Horizontal Spacing Unit? Y
Is this well an infill well? N

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

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

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

CONDITIONS

Action 348963

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 348963
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	MUST COMPLY WITH REQUIREMENTS OF R-111-Q	7/5/2024