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DISTRICT II-ARTESIA O.C.D.

Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM117119

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.
DELAWARERANCH13/24 W1CN FEDCC 2H
326106

2. Name of Operator
MEWBOURNE OIL COMPANY

9. API Well No.
30-015-46280

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
PO Box 5270 Hobbs NM 88240	(575)393-5905	WILDCAT WOLFCAMP / LOWER 3RD BC

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NENW / 99 FNL / 2345 FWL / LAT 32.0495988 / LONG -104.0417613

At proposed prod. zone SESW / 330 FSL / 1650 FWL / LAT 32.0218299 / LONG -104.044334

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 13 / T26S / R28E / NMP

98220

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

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
210 feet	1440	640

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
330 feet	9828 feet / 19893 feet	FED: NM1693

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
2941 feet	05/13/2019	60 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Bradley Bishop / Ph: (575)393-5905	03/26/2019

Title
Regulatory

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	09/16/2019

Title	Office
Assistant Field Manager Lands & Minerals	CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED WITH CONDITIONS

Approval Date: 09/16/2019

(Continued on page 2)

*(Instructions on page 2)

RWP 9-17-19

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**MEWBOURNE OIL COMPANY**
LEASE NO.:	**NMNM117119**
WELL NAME & NO.:	**DELAWARERANCH 13/24 W1CN FED COM 2H**
SURFACE HOLE FOOTAGE:	**99' FNL & 2345' FWL**
BOTTOM HOLE FOOTAGE	**330' FSL & 1650' FWL**
LOCATION:	**Section 13, T. 26 S., R 28 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **300** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

include the lead cement)

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

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

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

❖ **In <u>Medium Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.**

Production casing must be kept at least 1/3 fluid filled to meet BLM Collapse Requirement.

3. The minimum required fill of cement behind the **7** inch production casing is:

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

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

    b. Second stage above DV tool:

        - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

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

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

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

JJP09112019

GENERAL REQUIREMENTS

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

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

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

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

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

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

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

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including

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

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

AFMSS

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

Operator Certification Data Report

09/16/2019

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Bradley Bishop **Signed on:** 03/26/2019

Title: Regulatory

Street Address: PO Box 5270

City: Hobbs **State:** NM **Zip:** 88240

Phone: (575)393-5905

Email address: bbishop@mewbourne.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

AFMSS

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

Application Data Report

09/16/2019

APD ID: 10400039922 **Submission Date:** 03/26/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

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Section 1 - General

APD ID: 10400039922 **Tie to previous NOS?** **Submission Date:** 03/26/2019

BLM Office: CARLSBAD **User:** Bradley Bishop **Title:** Regulatory

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

Lease number: NMNM117119 **Lease Acres:** 1440

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

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

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** MEWBOURNE OIL COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: MEWBOURNE OIL COMPANY

Operator Address: PO Box 5270

Zip: 88240

Operator PO Box:

Operator City: Hobbs **State:** NM

Operator Phone: (575)393-5905

Operator Internet Address:

Section 2 - Well Information

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

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

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

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** WILDCAT WOLFCAMP **Pool Name:** LOWER 3RD BONE SPRING (HARKY) SHALE

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

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

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** DELAWARE RANCH 13/24 W1CN FED COM WELLS **Number:** 2

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: APPRAISAL

Describe sub-type:

Distance to town: 10 Miles **Distance to nearest well:** 330 FT **Distance to lease line:** 210 FT

Reservoir well spacing assigned acres Measurement: 640 Acres

Well plat: DelawareRanch13_24W1CNFedCom2H_wellplat_20190313102247.pdf

Well work start Date: 05/13/2019 **Duration:** 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 1 **Reference Datum:**

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	99	FNL	2345	FWL	26S	28E	13	Aliquot NENW	32.0495988	-104.0417613	EDDY	NEW MEXICO	NEW MEXICO	F	FEE	2941	0	0
KOP Leg #1	10	FNL	1650	FWL	26S	28E	13	Aliquot NENW	32.0498458	-104.0440032	EDDY	NEW MEXICO	NEW MEXICO	F	FEE	-6394	9373	9335
PPP Leg	0	FNL	1650	FWL	26S	28E	24	Aliquot NENW	32.0353618	-104.0441	EDDY	NEW MEXICO	NEW MEXICO	F	FEE	-6928	14970	9869

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	1317	FNL	1650	FWL	26S	28E	24	Aliquot SENW	32.0317415	-104.0442165	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 012559	-6917	16287	9858
PPP Leg #1	2641	FSL	1650	FWL	26S	28E	13	Aliquot NESW	32.0426217	-104.0440883	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 012559	-6950	12328	9891
PPP Leg #1	1318	FNL	1650	FWL	26S	28E	13	Aliquot SENW	32.0462502	-104.0440456	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117119	-6961	11008	9902
PPP Leg #1	330	FNL	1650	FWL	26S	28E	13	Aliquot NENW	32.489689	-104.0440135	EDDY	NEW MEXICO	NEW MEXICO	F	FEE	-6908	10010	9849
EXIT Leg #1	330	FSL	1650	FWL	26S	28E	24	Aliquot SESW	32.0218299	-104.0443334	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 012559	-6887	19893	9828
BHL Leg #1	330	FSL	1650	FWL	26S	28E	24	Aliquot SESW	32.0218299	-104.0443334	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 012559	-6887	19893	9828

APD ID: 10400039922 **Submission Date:** 03/26/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	2941	27	27		NONE	N
2	BOTTOM SALT	441	2500	2500	SALT	NONE	N
3	LAMAR	278	2663	2663	LIMESTONE	NATURAL GAS,OIL	N
4	BELL CANYON	248	2693	2693	SANDSTONE	NATURAL GAS,OIL	N
5	CHERRY CANYON	-627	3568	3568	SANDSTONE	NATURAL GAS,OIL	N
6	MANZANITA	-772	3713	3713	LIMESTONE	NATURAL GAS,OIL	N
7	BRUSHY CANYON	-3188	6129	6129	SANDSTONE	NATURAL GAS,OIL	N
8	BONE SPRING LIME	-3446	6387	6387	LIMESTONE,SHALE	NATURAL GAS,OIL	N
9	BONE SPRING 1ST	-4332	7273	7273	SANDSTONE	NATURAL GAS,OIL	N
10	BONE SPRING 2ND	-5162	8103	8103	SANDSTONE	NATURAL GAS,OIL	N
11	BONE SPRING 3RD	-6284	9225	9225	SANDSTONE	NATURAL GAS,OIL	N
12	WOLFCAMP	-6568	9509	9509	LIMESTONE,SHALE,SANDSTONE	NATURAL GAS,OIL	Y

Section 2 - Blowout Prevention

ressure Rating (PSI): 5M **Rating Depth:** 19893

quipment: Annular, Pipe Ram, Blind Ram

equesting Variance? YES

ariance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Anchors ren't required by manufacturer. A multi-bowl wellhead is being used. See attached schematic

esting Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure ndicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

ested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out f the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly ock and floor safety valve (inside BOP) and choke lines and choke manifold.

hoke Diagram Attachment:

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_5M_BOPE_Choke_Diagram_20190321110536.pdf

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Flex_Line_Specs_20190321110537.pdf

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Flex_Line_Specs_API_16C_20190827084356.pdf

OP Diagram Attachment:

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_5M_BOPE_Schematic_20190321110550.pdf

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Multi_Bowl_WH_20190321110551.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	670	0	670	2968		670	H-40	48	ST&C	2.46	5.52	DRY	10.01	DRY	16.82
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2600	0	2600	2968		2600	J-55	36	LT&C	1.49	2.6	DRY	4.84	DRY	6.03
3	PRODUCTION	8.75	7.0	NEW	API	N	0	10100	0	9882	2968		10100	P-110	26	LT&C	1.52	2.04	DRY	2.46	DRY	3.16
4	LINER	6.125	4.5	NEW	API	N	9373	19893	9335	9908			10520	P-110	13.5	LT&C	1.59	1.85	DRY	2.38	DRY	2.97

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Csg_Assumptions_20190321111019.pdf

---

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Csg_Assumptions_20190321111027.pdf

---

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Csg_Assumptions_20190321111034.pdf

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Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Casing Attachments

Casing ID: 4 **String Type:**LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Csg_Assumptions_20190321111041.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	480	320	2.12	12.5	678	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		480	670	200	1.34	14.8	268	100	Class C	Retarder
NTERMEDIATE	Lead		0	1957	385	2.12	12.5	816	25	Class C	Salt, Gel, Extender, LCM
NTERMEDIATE	Tail		1957	2600	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	3713	2400	3039	60	2.12	12.5	127	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		3039	3713	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	3713	3713	7595	345	2.12	12.5	731	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		7595	10100	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		9373	19893	425	2.97	11.2	1262	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Section 5 - Circulating Medium

lud System Type: Closed

Will an air or gas system be Used? NO

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

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

escribe what will be on location to control well or mitigate other conditions: Lost circulation material Sweeps Mud cavengers in surface hole

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	670	SPUD MUD	8.6	8.8							
670	2600	SALT SATURATED	10	10							
2600	9882	WATER-BASED MUD	8.6	10							
9882	9908	OIL-BASED MUD	10	12							

Section 6 - Test, Logging, Coring

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

Will run GR/CNL in the deeper offset Delaware Ranch 13/24 W2CN Fed Com #3H

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

S,GR,MWD,MUDLOG

oring operation description for the well:

lone

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Section 7 - Pressure

nticipated Bottom Hole Pressure: 6183 **Anticipated Surface Pressure:** 4004.56

nticipated Bottom Hole Temperature(F): 165

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

escribe:

ontingency Plans geoharzards description:

ontingency Plans geohazards attachment:

ydrogen Sulfide drilling operations plan required? YES

ydrogen sulfide drilling operations plan:

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_H2S_Plan_20190321111625.pdf

Section 8 - Other Information

roposed horizontal/directional/multi-lateral plan submission:

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Dir_Plan_20190321111647.pdf

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Dir_Plot_20190321111647.pdf

ther proposed operations facets description:

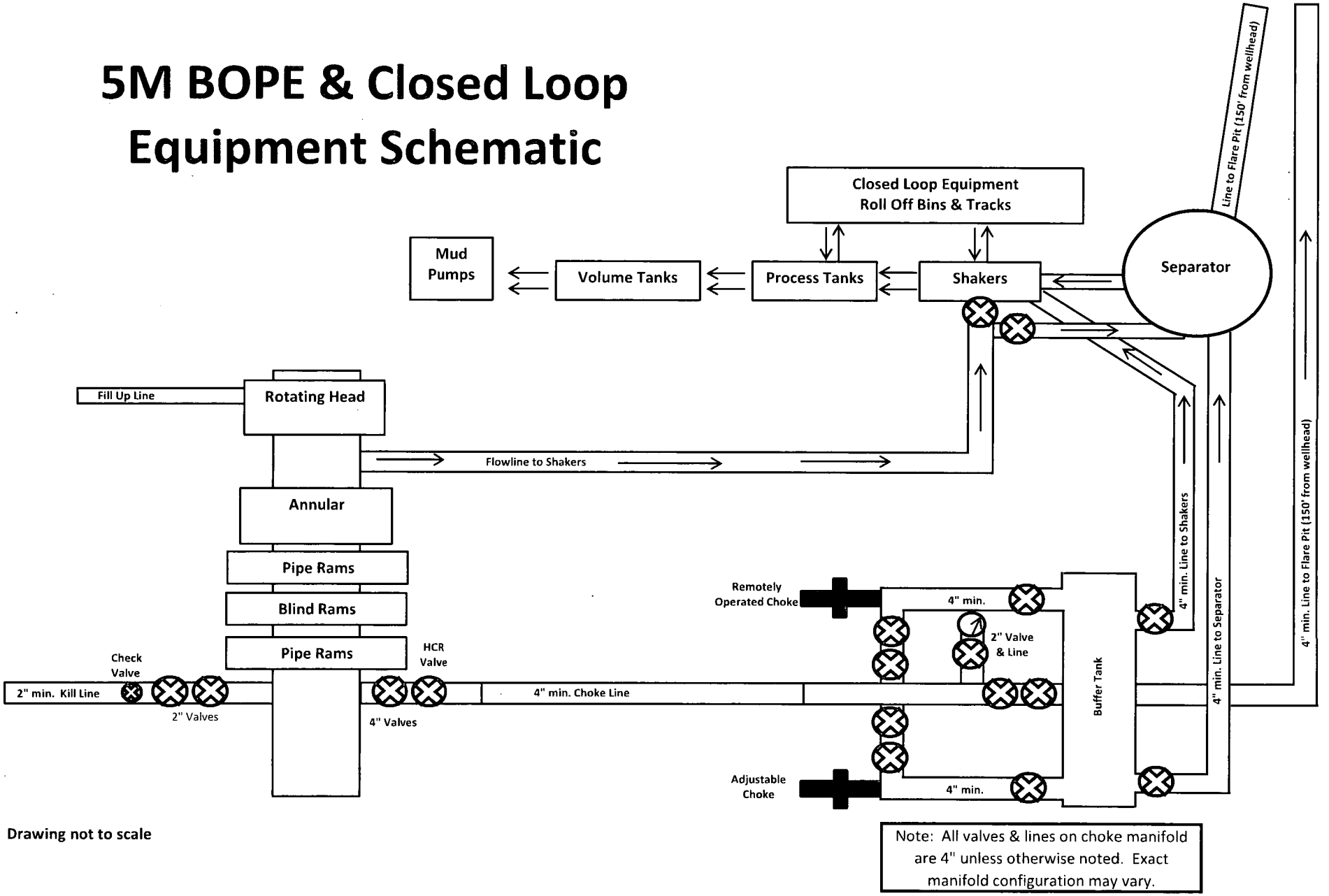
ther proposed operations facets attachment:

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Drlg_Program_20190321111700.doc

Delaware_Ranch_13_24_W1CN_Fed_Com_2H_Add_Info_20190321111710.pdf

ther Variance attachment:

5M BOPE & Closed Loop Equipment Schematic



Drawing not to scale

Note: All valves & lines on choke manifold are 4" unless otherwise noted. Exact manifold configuration may vary.

ENGINEERING & SERVICES

GATES E & S NORTH AMERICA, INC.
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: *Tim.Cantu@gates.com*
WEB: www.gates.com

10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

Customer :	AUSTIN DISTRIBUTING	Test Date:	4/30/2015
Customer Ref. :	4060578	Hose Serial No.:	D-043015-7
Invoice No. :	500506	Created By:	JUSTIN CROPPER

Product Description:	10K3.548.0CK4.1/1610KFLGE/E LE

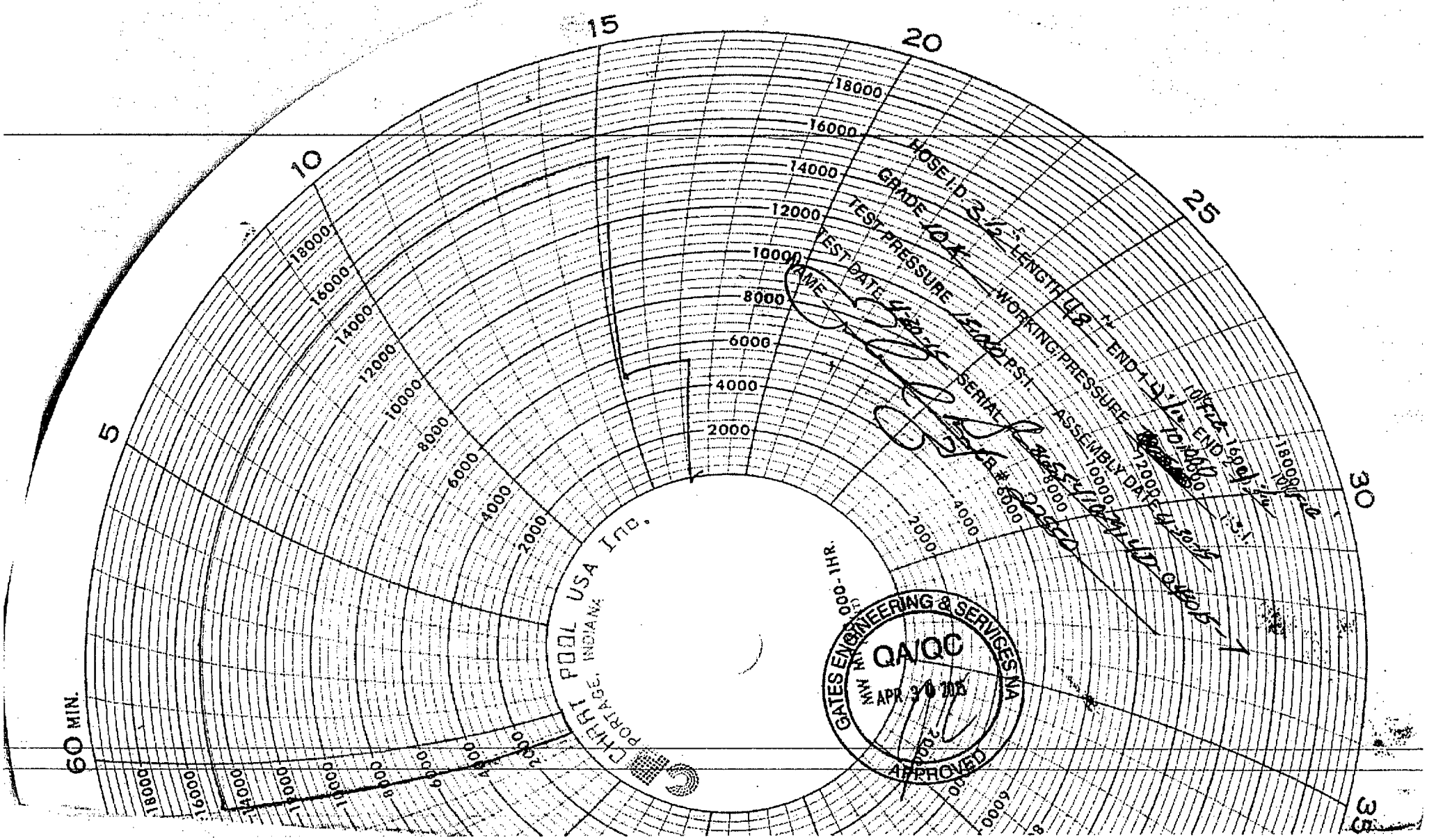
End Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG
Gates Part No. :	4773-6290	Assembly Code :	L36554102914D-043015-7
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager :	QUALITY	Produciton:	PRODUCTION
Date :	4/30/2015	Date :	4/30/2015
Signature :		Signature :	

Form PTC - 01 Rev.0 2

Gates BLUE GOLD


15
20
10
25
5
30
60 MIN.
35
18000
16000
14000
12000
10000
8000
6000
4000
2000
HOSE I.D. 3 1/2"
LENGTH 48'
WORKING PRESSURE
GRADE 10K
TEST PRESSURE 15000 P.S.I.
TEST DATE 4-20-15
NAME
SERIAL #
ASSEMBLY DATE 4-20-15
END 1
END 2
CHANT POOL USA Inc.
PORTAGE, INDIANA
GATES ENGINEERING & SERVICES NA
QA/QC
APR 30 2015
APPROVED

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX 77086

PHONE: (281) 602 - 4119
FAX:
EMAIL: Troy.Schmidt@gates.com
WEB: www.gates.com

10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE

Customer:	A-7 AUSTIN IHC DBA AUSTIN HOSE	Test Date:	8/20/2018
Customer Ref.:	4101801	Hose Serial No.:	H-082018-10
Invoice No.:	511958	Created By:	Moosa Naqvi

Product Description:	10KF3.035.0CK41/1610KFLGPXDxFLT L/E

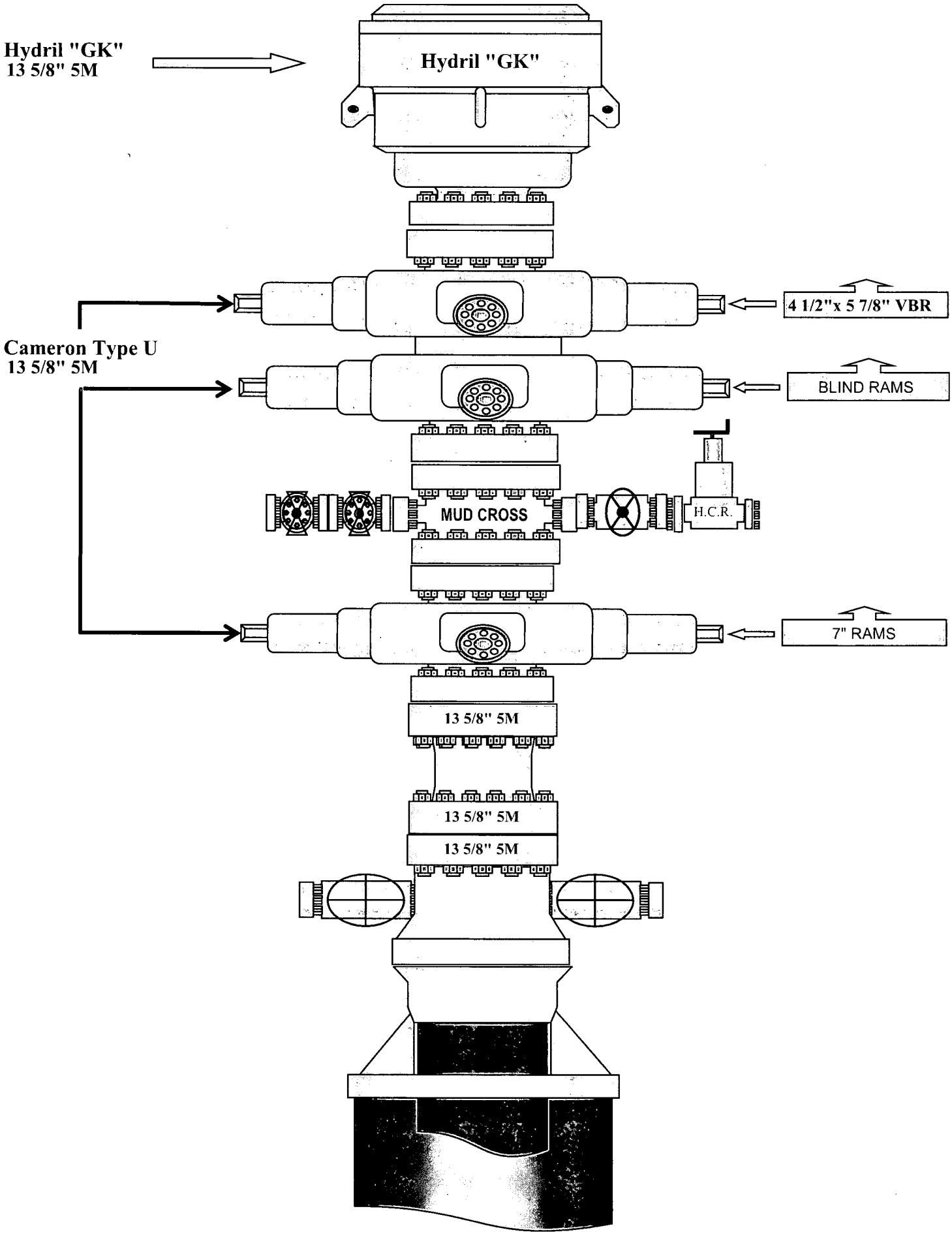
End Fitting 1:	4 1/16 in. Fixed Flange	End Fitting 2:	4 1/16 in. Float Flange
Gates Part No.:	68503010-9721632	Assembly Code:	L40695052218H-082018-10
Working Pressure:	10,000 psi.	Test Pressure:	15,000 psi.

Gates Engineering & Services North America certifies that the following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements.

Quality:	QUALITY	Production:	PRODUCTION
Date :	8/20/2018	Date :	8/20/2018
Signature :	Moosa Naqvi	Signature :	

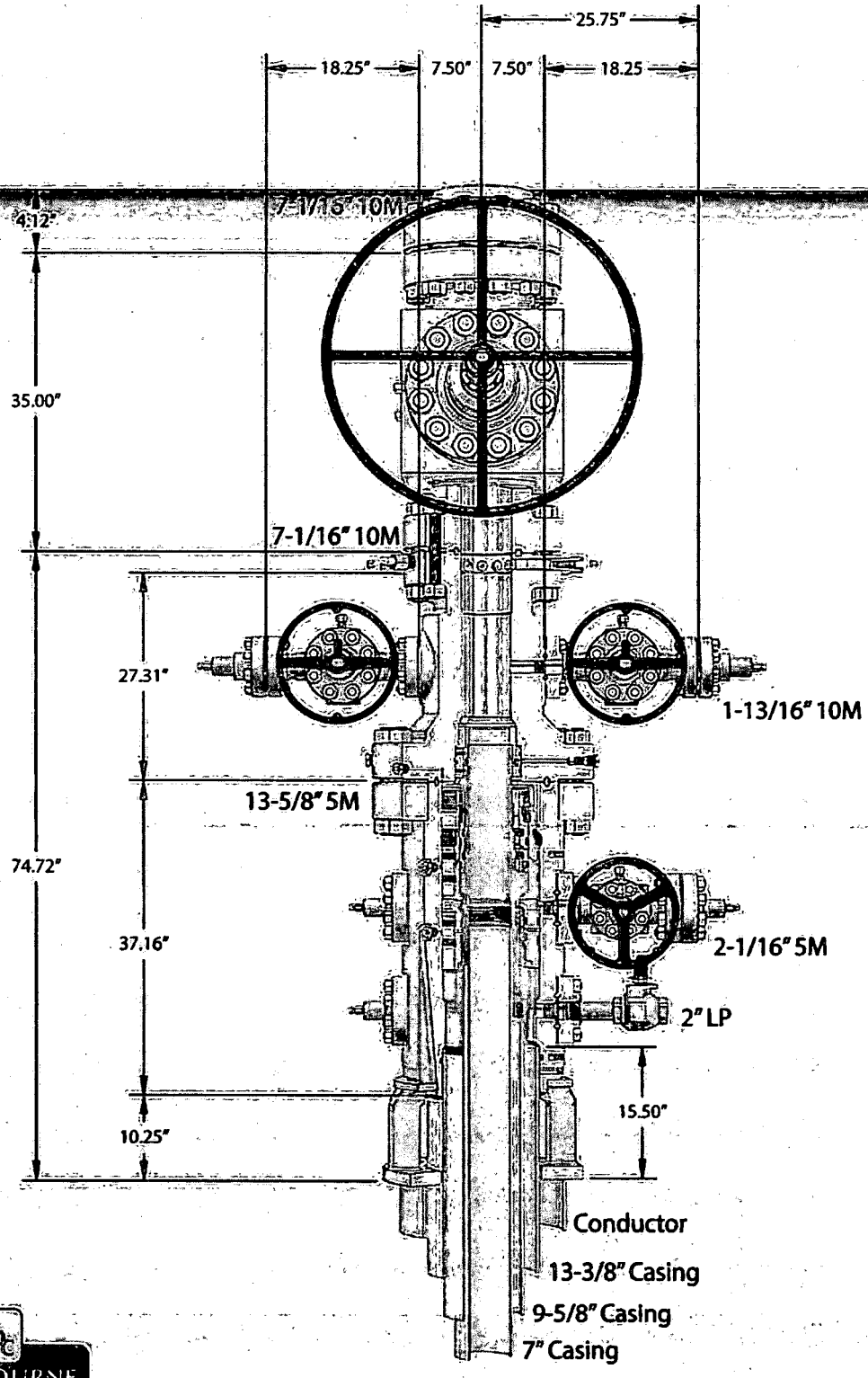
Form PTC - 01 Rev.0 2

BLACK GOLD


Hydril "GK"
13 5/8" 5M
Hydril "GK"
Cameron Type U
13 5/8" 5M
4 1/2"x 5 7/8" VBR
BLIND RAMS
MUD CROSS
H.C.R.
7" RAMS
13 5/8" 5M
13 5/8" 5M
13 5/8" 5M

CAMERON
A Schlumberger Company

13-5/8" MN-DS Wellhead System



MEWBOURNE OIL COMPANY

C7585
Rev. 02

NOTE: All dimensions on this drawing are estimated measurements and should be evaluated by engineering.

Cutting Hanger 57" conductor cut-off

19

Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	670'	13.375"	48	H40	STC	2.46	5.52	10.01	16.82
12.25"	0'	2600'	9.625"	36	J55	LTC	1.49	2.60	4.84	6.03
8.75"	0'	10,100'	7"	26	HCP110	LTC	1.52	2.04	2.46	3.16
6.125"	9373'	19,893'	4.5"	13.5	P110	LTC	1.59	1.85	2.38	2.97
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

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.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Casing Program

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Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Casing Program

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12.25"	0'	2600'	9.625"	36	J55	LTC	1.49	2.60	4.84	6.03
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6.125"	9373'	19,893'	4.5"	13.5	P110	LTC	1.59	1.85	2.38	2.97
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

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
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Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
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12.25"	0'	2600'	9.625"	36	J55	LTC	1.49	2.60	4.84	6.03
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6.125"	9373'	19,893'	4.5"	13.5	P110	LTC	1.59	1.85	2.38	2.97
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

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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
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(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?	

Hydrogen Sulfide Drilling Operations Plan
Mewbourne Oil Company

1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

1. The hazards and characteristics of hydrogen sulfide gas.
2. The proper use of personal protective equipment and life support systems.
3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 9 5/8" intermediate casing.

1. Well Control Equipment
   - A. Choke manifold with minimum of one adjustable choke/remote choke.
   - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
   - C. Auxiliary equipment including annular type blowout preventer.
2. Protective Equipment for Essential Personnel
   Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.

3. Hydrogen Sulfide Protection and Monitoring Equipment
Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. Visual Warning Systems
A. Wind direction indicators as indicated on the wellsite diagram.
B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Eddy County Sheriff's Office	**911 or 575-887-7551**
Ambulance Service	**911 or 575-885-2111**
Carlsbad Fire Dept	**911 or 575-885-2111**
Loco Hills Volunteer Fire Dept.	**911 or 575-677-3266**
Closest Medical Facility - Columbia Medical Center of Carlsbad	**575-492-5000**

Mewbourne Oil Company	**Hobbs District Office**	**575-393-5905**
	Fax	**575-397-6252**
	2nd Fax	**575-393-7259**
District Manager	**Robin Terrell**	**575-390-4816**
Drilling Superintendent	**Frosty Lathan**	**575-390-4103**
	Bradley Bishop	**575-390-6838**
Drilling Foreman	**Wesley Noseff**	**575-441-0729**

Mewbourne Oil Company

Eddy County, New Mexico NAD 83
Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SHL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Plan: Design #1

Standard Planning Report

20 March, 2019

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Delaware Ranch 13/24 W1CN Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Site:	Delaware Ranch 13/24 W1CN Fed Com #2H	**North Reference:**	Grid
Well:	Sec 13, T26S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL, Sec 24		
Design:	Design #1		

Project	Eddy 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	Delaware Ranch 13/24 W1CN Fed Com #2H				
Site Position:		**Northing:**	381,904.00 usft	**Latitude:**	32.0495987
From:	Map	**Easting:**	631,673.00 usft	**Longitude:**	-104.0417607
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.15 °

Well	Sec 13, T26S, R28E					
Well Position	**+N/-S**	0.0 usft	**Northing:**	381,904.00 usft	**Latitude:**	32.0495987
	+E/-W	0.0 usft	**Easting:**	631,673.00 usft	**Longitude:**	-104.0417607
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	2,968.0 usft	**Ground Level:**	2,941.0 usft

Wellbore	BHL: 330' FSL & 1650' FWL, Sec 24				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	3/8/2019	6.84	59.75	47,696

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	184.36	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,650.0	0.00	0.00	2,650.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,075.8	6.39	277.22	3,074.9	3.0	-23.5	1.50	1.50	0.00	277.22	
8,947.5	6.39	277.22	8,910.2	85.0	-671.5	0.00	0.00	0.00	0.00	
9,373.2	0.00	0.00	9,335.0	88.0	-695.0	1.50	-1.50	0.00	180.00	KOP: 10' FNL & 1650'
10,278.0	90.48	180.42	9,908.0	-489.7	-699.3	10.00	10.00	0.00	-179.58	
19,892.9	90.48	180.42	9,828.0	-10,104.0	-770.0	0.00	0.00	0.00	0.00	BHL: 330' FSL & 165(

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Delaware Ranch 13/24 W1CN Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Site:	Delaware Ranch 13/24 W1CN Fed Com #2H	**North Reference:**	Grid
Well:	Sec 13, T26S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL, Sec 24		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL: 99' FNL & 2345' FWL (13)									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,650.0	0.00	0.00	2,650.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.75	277.22	2,700.0	0.0	-0.3	0.0	1.50	1.50	0.00
2,800.0	2.25	277.22	2,800.0	0.4	-2.9	-0.1	1.50	1.50	0.00
2,900.0	3.75	277.22	2,899.8	1.0	-8.1	-0.4	1.50	1.50	0.00
3,000.0	5.25	277.22	2,999.5	2.0	-15.9	-0.8	1.50	1.50	0.00
3,075.8	6.39	277.22	3,074.9	3.0	-23.5	-1.2	1.50	1.50	0.00
3,100.0	6.39	277.22	3,099.0	3.3	-26.2	-1.3	0.00	0.00	0.00
3,200.0	6.39	277.22	3,198.3	4.7	-37.2	-1.9	0.00	0.00	0.00
3,300.0	6.39	277.22	3,297.7	6.1	-48.3	-2.4	0.00	0.00	0.00
3,400.0	6.39	277.22	3,397.1	7.5	-59.3	-3.0	0.00	0.00	0.00
3,500.0	6.39	277.22	3,496.5	8.9	-70.3	-3.5	0.00	0.00	0.00
3,600.0	6.39	277.22	3,595.9	10.3	-81.4	-4.1	0.00	0.00	0.00
3,700.0	6.39	277.22	3,695.2	11.7	-92.4	-4.6	0.00	0.00	0.00
3,800.0	6.39	277.22	3,794.6	13.1	-103.4	-5.2	0.00	0.00	0.00
3,900.0	6.39	277.22	3,894.0	14.5	-114.5	-5.8	0.00	0.00	0.00
4,000.0	6.39	277.22	3,993.4	15.9	-125.5	-6.3	0.00	0.00	0.00
4,100.0	6.39	277.22	4,092.8	17.3	-136.5	-6.9	0.00	0.00	0.00
4,200.0	6.39	277.22	4,192.1	18.7	-147.6	-7.4	0.00	0.00	0.00
4,300.0	6.39	277.22	4,291.5	20.1	-158.6	-8.0	0.00	0.00	0.00
4,400.0	6.39	277.22	4,390.9	21.5	-169.7	-8.5	0.00	0.00	0.00
4,500.0	6.39	277.22	4,490.3	22.9	-180.7	-9.1	0.00	0.00	0.00
4,600.0	6.39	277.22	4,589.7	24.3	-191.7	-9.6	0.00	0.00	0.00
4,700.0	6.39	277.22	4,689.0	25.7	-202.8	-10.2	0.00	0.00	0.00
4,800.0	6.39	277.22	4,788.4	27.1	-213.8	-10.7	0.00	0.00	0.00
4,900.0	6.39	277.22	4,887.8	28.5	-224.8	-11.3	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Delaware Ranch 13/24 W1CN Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Site:	Delaware Ranch 13/24 W1CN Fed Com #2H	**North Reference:**	Grid
Well:	Sec 13, T26S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL, Sec 24		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	6.39	277.22	4,987.2	29.9	-235.9	-11.9	0.00	0.00	0.00
5,100.0	6.39	277.22	5,086.6	31.3	-246.9	-12.4	0.00	0.00	0.00
5,200.0	6.39	277.22	5,185.9	32.7	-257.9	-13.0	0.00	0.00	0.00
5,300.0	6.39	277.22	5,285.3	34.1	-269.0	-13.5	0.00	0.00	0.00
5,400.0	6.39	277.22	5,384.7	35.5	-280.0	-14.1	0.00	0.00	0.00
5,500.0	6.39	277.22	5,484.1	36.9	-291.0	-14.6	0.00	0.00	0.00
5,600.0	6.39	277.22	5,583.5	38.2	-302.1	-15.2	0.00	0.00	0.00
5,700.0	6.39	277.22	5,682.8	39.6	-313.1	-15.7	0.00	0.00	0.00
5,800.0	6.39	277.22	5,782.2	41.0	-324.1	-16.3	0.00	0.00	0.00
5,900.0	6.39	277.22	5,881.6	42.4	-335.2	-16.8	0.00	0.00	0.00
6,000.0	6.39	277.22	5,981.0	43.8	-346.2	-17.4	0.00	0.00	0.00
6,100.0	6.39	277.22	6,080.4	45.2	-357.3	-18.0	0.00	0.00	0.00
6,200.0	6.39	277.22	6,179.7	46.6	-368.3	-18.5	0.00	0.00	0.00
6,300.0	6.39	277.22	6,279.1	48.0	-379.3	-19.1	0.00	0.00	0.00
6,400.0	6.39	277.22	6,378.5	49.4	-390.4	-19.6	0.00	0.00	0.00
6,500.0	6.39	277.22	6,477.9	50.8	-401.4	-20.2	0.00	0.00	0.00
6,600.0	6.39	277.22	6,577.2	52.2	-412.4	-20.7	0.00	0.00	0.00
6,700.0	6.39	277.22	6,676.6	53.6	-423.5	-21.3	0.00	0.00	0.00
6,800.0	6.39	277.22	6,776.0	55.0	-434.5	-21.8	0.00	0.00	0.00
6,900.0	6.39	277.22	6,875.4	56.4	-445.5	-22.4	0.00	0.00	0.00
7,000.0	6.39	277.22	6,974.8	57.8	-456.6	-22.9	0.00	0.00	0.00
7,100.0	6.39	277.22	7,074.1	59.2	-467.6	-23.5	0.00	0.00	0.00
7,200.0	6.39	277.22	7,173.5	60.6	-478.6	-24.1	0.00	0.00	0.00
7,300.0	6.39	277.22	7,272.9	62.0	-489.7	-24.6	0.00	0.00	0.00
7,400.0	6.39	277.22	7,372.3	63.4	-500.7	-25.2	0.00	0.00	0.00
7,500.0	6.39	277.22	7,471.7	64.8	-511.7	-25.7	0.00	0.00	0.00
7,600.0	6.39	277.22	7,571.0	66.2	-522.8	-26.3	0.00	0.00	0.00
7,700.0	6.39	277.22	7,670.4	67.6	-533.8	-26.8	0.00	0.00	0.00
7,800.0	6.39	277.22	7,769.8	69.0	-544.9	-27.4	0.00	0.00	0.00
7,900.0	6.39	277.22	7,869.2	70.4	-555.9	-27.9	0.00	0.00	0.00
8,000.0	6.39	277.22	7,968.6	71.8	-566.9	-28.5	0.00	0.00	0.00
8,100.0	6.39	277.22	8,067.9	73.2	-578.0	-29.1	0.00	0.00	0.00
8,200.0	6.39	277.22	8,167.3	74.6	-589.0	-29.6	0.00	0.00	0.00
8,300.0	6.39	277.22	8,266.7	76.0	-600.0	-30.2	0.00	0.00	0.00
8,400.0	6.39	277.22	8,366.1	77.4	-611.1	-30.7	0.00	0.00	0.00
8,500.0	6.39	277.22	8,465.5	78.8	-622.1	-31.3	0.00	0.00	0.00
8,600.0	6.39	277.22	8,564.8	80.2	-633.1	-31.8	0.00	0.00	0.00
8,700.0	6.39	277.22	8,664.2	81.6	-644.2	-32.4	0.00	0.00	0.00
8,800.0	6.39	277.22	8,763.6	83.0	-655.2	-32.9	0.00	0.00	0.00
8,900.0	6.39	277.22	8,863.0	84.4	-666.2	-33.5	0.00	0.00	0.00
8,947.5	6.39	277.22	8,910.2	85.0	-671.5	-33.8	0.00	0.00	0.00
9,000.0	5.60	277.22	8,962.4	85.7	-676.9	-34.0	1.50	-1.50	0.00
9,100.0	4.10	277.22	9,062.0	86.8	-685.3	-34.4	1.50	-1.50	0.00
9,200.0	2.60	277.22	9,161.9	87.5	-691.1	-34.7	1.50	-1.50	0.00
9,300.0	1.10	277.22	9,261.8	87.9	-694.3	-34.9	1.50	-1.50	0.00
9,373.2	0.00	0.00	9,335.0	88.0	-695.0	-34.9	1.50	-1.50	0.00
KOP: 10' FNL & 1650' FWL (13)									
9,400.0	2.68	180.42	9,361.8	87.4	-695.0	-34.3	10.00	10.00	0.00
9,500.0	12.68	180.42	9,460.8	74.0	-695.1	-21.0	10.00	10.00	0.00
9,600.0	22.67	180.42	9,555.9	43.7	-695.3	9.2	10.00	10.00	0.00
9,700.0	32.67	180.42	9,644.4	-2.7	-695.7	55.5	10.00	10.00	0.00
9,800.0	42.67	180.42	9,723.4	-63.7	-696.1	116.4	10.00	10.00	0.00
9,900.0	52.67	180.42	9,790.7	-137.5	-696.7	190.1	10.00	10.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Delaware Ranch 13/24 W1CN Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Site:	Delaware Ranch 13/24 W1CN Fed Com #2H	**North Reference:**	Grid
Well:	Sec 13, T26S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL, Sec 24		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	62.67	180.42	9,844.1	-221.9	-697.3	274.3	10.00	10.00	0.00
10,010.1	63.69	180.42	9,848.7	-231.0	-697.3	283.3	10.00	10.00	0.00
FTP: 330' FNL & 1650' FWL (13)									
10,100.0	72.67	180.42	9,882.0	-314.3	-698.0	366.4	10.00	10.00	0.00
10,200.0	82.67	180.42	9,903.3	-411.9	-698.7	463.8	10.00	10.00	0.00
10,278.0	90.47	180.42	9,908.0	-489.7	-699.3	541.4	10.00	10.00	0.00
LP: 589' FNL & 1650' FWL (13)									
10,300.0	90.48	180.42	9,907.8	-511.7	-699.4	563.4	0.01	0.01	0.00
10,400.0	90.48	180.42	9,907.0	-611.7	-700.1	663.1	0.00	0.00	0.00
10,500.0	90.48	180.42	9,906.2	-711.7	-700.9	762.9	0.00	0.00	0.00
10,600.0	90.48	180.42	9,905.3	-811.7	-701.6	862.6	0.00	0.00	0.00
10,700.0	90.48	180.42	9,904.5	-911.7	-702.4	962.4	0.00	0.00	0.00
10,800.0	90.48	180.42	9,903.7	-1,011.7	-703.1	1,062.2	0.00	0.00	0.00
10,900.0	90.48	180.42	9,902.8	-1,111.6	-703.8	1,161.9	0.00	0.00	0.00
11,000.0	90.48	180.42	9,902.0	-1,211.6	-704.6	1,261.7	0.00	0.00	0.00
11,008.4	90.48	180.42	9,901.9	-1,220.0	-704.6	1,270.0	0.00	0.00	0.00
PPP2: 1318' FNL & 1650' FWL (13)									
11,100.0	90.48	180.42	9,901.2	-1,311.6	-705.3	1,361.4	0.00	0.00	0.00
11,200.0	90.48	180.42	9,900.3	-1,411.6	-706.0	1,461.2	0.00	0.00	0.00
11,300.0	90.48	180.42	9,899.5	-1,511.6	-706.8	1,561.0	0.00	0.00	0.00
11,400.0	90.48	180.42	9,898.7	-1,611.6	-707.5	1,660.7	0.00	0.00	0.00
11,500.0	90.48	180.42	9,897.8	-1,711.6	-708.2	1,760.5	0.00	0.00	0.00
11,600.0	90.48	180.42	9,897.0	-1,811.6	-709.0	1,860.2	0.00	0.00	0.00
11,700.0	90.48	180.42	9,896.2	-1,911.6	-709.7	1,960.0	0.00	0.00	0.00
11,800.0	90.48	180.42	9,895.3	-2,011.6	-710.5	2,059.8	0.00	0.00	0.00
11,900.0	90.48	180.42	9,894.5	-2,111.6	-711.2	2,159.5	0.00	0.00	0.00
12,000.0	90.48	180.42	9,893.7	-2,211.6	-711.9	2,259.3	0.00	0.00	0.00
12,100.0	90.48	180.42	9,892.8	-2,311.6	-712.7	2,359.0	0.00	0.00	0.00
12,200.0	90.48	180.42	9,892.0	-2,411.6	-713.4	2,458.8	0.00	0.00	0.00
12,300.0	90.48	180.42	9,891.2	-2,511.6	-714.1	2,558.6	0.00	0.00	0.00
12,328.4	90.48	180.42	9,890.9	-2,540.0	-714.3	2,586.9	0.00	0.00	0.00
PPP3: 2641' FSL & 1650' FWL (13)									
12,400.0	90.48	180.42	9,890.3	-2,611.6	-714.9	2,658.3	0.00	0.00	0.00
12,500.0	90.48	180.42	9,889.5	-2,711.6	-715.6	2,758.1	0.00	0.00	0.00
12,600.0	90.48	180.42	9,888.7	-2,811.5	-716.3	2,857.8	0.00	0.00	0.00
12,700.0	90.48	180.42	9,887.8	-2,911.5	-717.1	2,957.6	0.00	0.00	0.00
12,800.0	90.48	180.42	9,887.0	-3,011.5	-717.8	3,057.4	0.00	0.00	0.00
12,900.0	90.48	180.42	9,886.2	-3,111.5	-718.5	3,157.1	0.00	0.00	0.00
13,000.0	90.48	180.42	9,885.4	-3,211.5	-719.3	3,256.9	0.00	0.00	0.00
13,100.0	90.48	180.42	9,884.5	-3,311.5	-720.0	3,356.7	0.00	0.00	0.00
13,200.0	90.48	180.42	9,883.7	-3,411.5	-720.8	3,456.4	0.00	0.00	0.00
13,300.0	90.48	180.42	9,882.9	-3,511.5	-721.5	3,556.2	0.00	0.00	0.00
13,400.0	90.48	180.42	9,882.0	-3,611.5	-722.2	3,655.9	0.00	0.00	0.00
13,500.0	90.48	180.42	9,881.2	-3,711.5	-723.0	3,755.7	0.00	0.00	0.00
13,600.0	90.48	180.42	9,880.4	-3,811.5	-723.7	3,855.5	0.00	0.00	0.00
13,700.0	90.48	180.42	9,879.5	-3,911.5	-724.4	3,955.2	0.00	0.00	0.00
13,800.0	90.48	180.42	9,878.7	-4,011.5	-725.2	4,055.0	0.00	0.00	0.00
13,900.0	90.48	180.42	9,877.9	-4,111.5	-725.9	4,154.7	0.00	0.00	0.00
14,000.0	90.48	180.42	9,877.0	-4,211.5	-726.6	4,254.5	0.00	0.00	0.00
14,100.0	90.48	180.42	9,876.2	-4,311.5	-727.4	4,354.3	0.00	0.00	0.00
14,200.0	90.48	180.42	9,875.4	-4,411.4	-728.1	4,454.0	0.00	0.00	0.00
14,300.0	90.48	180.42	9,874.5	-4,511.4	-728.8	4,553.8	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Delaware Ranch 13/24 W1CN Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Site:	Delaware Ranch 13/24 W1CN Fed Com #2H	**North Reference:**	Grid
Well:	Sec 13, T26S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL, Sec 24		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,400.0	90.48	180.42	9,873.7	-4,611.4	-729.6	4,653.5	0.00	0.00	0.00
14,500.0	90.48	180.42	9,872.9	-4,711.4	-730.3	4,753.3	0.00	0.00	0.00
14,600.0	90.48	180.42	9,872.0	-4,811.4	-731.1	4,853.1	0.00	0.00	0.00
14,700.0	90.48	180.42	9,871.2	-4,911.4	-731.8	4,952.8	0.00	0.00	0.00
14,800.0	90.48	180.42	9,870.4	-5,011.4	-732.5	5,052.6	0.00	0.00	0.00
14,900.0	90.48	180.42	9,869.5	-5,111.4	-733.3	5,152.3	0.00	0.00	0.00
14,969.6	90.48	180.42	9,869.0	-5,181.0	-733.8	5,221.8	0.00	0.00	0.00
PPP4: 0' FNL & 1650' FWL (24)									
15,000.0	90.48	180.42	9,868.7	-5,211.4	-734.0	5,252.1	0.00	0.00	0.00
15,100.0	90.48	180.42	9,867.9	-5,311.4	-734.7	5,351.9	0.00	0.00	0.00
15,200.0	90.48	180.42	9,867.0	-5,411.4	-735.5	5,451.6	0.00	0.00	0.00
15,300.0	90.48	180.42	9,866.2	-5,511.4	-736.2	5,551.4	0.00	0.00	0.00
15,400.0	90.48	180.42	9,865.4	-5,611.4	-736.9	5,651.1	0.00	0.00	0.00
15,500.0	90.48	180.42	9,864.6	-5,711.4	-737.7	5,750.9	0.00	0.00	0.00
15,600.0	90.48	180.42	9,863.7	-5,811.4	-738.4	5,850.7	0.00	0.00	0.00
15,700.0	90.48	180.42	9,862.9	-5,911.4	-739.1	5,950.4	0.00	0.00	0.00
15,800.0	90.48	180.42	9,862.1	-6,011.3	-739.9	6,050.2	0.00	0.00	0.00
15,900.0	90.48	180.42	9,861.2	-6,111.3	-740.6	6,149.9	0.00	0.00	0.00
16,000.0	90.48	180.42	9,860.4	-6,211.3	-741.4	6,249.7	0.00	0.00	0.00
16,100.0	90.48	180.42	9,859.6	-6,311.3	-742.1	6,349.5	0.00	0.00	0.00
16,200.0	90.48	180.42	9,858.7	-6,411.3	-742.8	6,449.2	0.00	0.00	0.00
16,286.7	90.48	180.42	9,858.0	-6,498.0	-743.5	6,535.7	0.00	0.00	0.00
PPP5: 1317' FNL & 1650' FWL (24)									
16,300.0	90.48	180.42	9,857.9	-6,511.3	-743.6	6,549.0	0.00	0.00	0.00
16,400.0	90.48	180.42	9,857.1	-6,611.3	-744.3	6,648.8	0.00	0.00	0.00
16,500.0	90.48	180.42	9,856.2	-6,711.3	-745.0	6,748.5	0.00	0.00	0.00
16,600.0	90.48	180.42	9,855.4	-6,811.3	-745.8	6,848.3	0.00	0.00	0.00
16,700.0	90.48	180.42	9,854.6	-6,911.3	-746.5	6,948.0	0.00	0.00	0.00
16,800.0	90.48	180.42	9,853.7	-7,011.3	-747.2	7,047.8	0.00	0.00	0.00
16,900.0	90.48	180.42	9,852.9	-7,111.3	-748.0	7,147.6	0.00	0.00	0.00
17,000.0	90.48	180.42	9,852.1	-7,211.3	-748.7	7,247.3	0.00	0.00	0.00
17,100.0	90.48	180.42	9,851.2	-7,311.3	-749.4	7,347.1	0.00	0.00	0.00
17,200.0	90.48	180.42	9,850.4	-7,411.3	-750.2	7,446.8	0.00	0.00	0.00
17,300.0	90.48	180.42	9,849.6	-7,511.3	-750.9	7,546.6	0.00	0.00	0.00
17,400.0	90.48	180.42	9,848.7	-7,611.2	-751.7	7,646.4	0.00	0.00	0.00
17,500.0	90.48	180.42	9,847.9	-7,711.2	-752.4	7,746.1	0.00	0.00	0.00
17,600.0	90.48	180.42	9,847.1	-7,811.2	-753.1	7,845.9	0.00	0.00	0.00
17,700.0	90.48	180.42	9,846.2	-7,911.2	-753.9	7,945.6	0.00	0.00	0.00
17,800.0	90.48	180.42	9,845.4	-8,011.2	-754.6	8,045.4	0.00	0.00	0.00
17,900.0	90.48	180.42	9,844.6	-8,111.2	-755.3	8,145.2	0.00	0.00	0.00
18,000.0	90.48	180.42	9,843.7	-8,211.2	-756.1	8,244.9	0.00	0.00	0.00
18,100.0	90.48	180.42	9,842.9	-8,311.2	-756.8	8,344.7	0.00	0.00	0.00
18,200.0	90.48	180.42	9,842.1	-8,411.2	-757.5	8,444.4	0.00	0.00	0.00
18,300.0	90.48	180.42	9,841.3	-8,511.2	-758.3	8,544.2	0.00	0.00	0.00
18,400.0	90.48	180.42	9,840.4	-8,611.2	-759.0	8,644.0	0.00	0.00	0.00
18,500.0	90.48	180.42	9,839.6	-8,711.2	-759.8	8,743.7	0.00	0.00	0.00
18,600.0	90.48	180.42	9,838.8	-8,811.2	-760.5	8,843.5	0.00	0.00	0.00
18,700.0	90.48	180.42	9,837.9	-8,911.2	-761.2	8,943.2	0.00	0.00	0.00
18,800.0	90.48	180.42	9,837.1	-9,011.2	-762.0	9,043.0	0.00	0.00	0.00
18,900.0	90.48	180.42	9,836.3	-9,111.2	-762.7	9,142.8	0.00	0.00	0.00
19,000.0	90.48	180.42	9,835.4	-9,211.1	-763.4	9,242.5	0.00	0.00	0.00
19,100.0	90.48	180.42	9,834.6	-9,311.1	-764.2	9,342.3	0.00	0.00	0.00
19,200.0	90.48	180.42	9,833.8	-9,411.1	-764.9	9,442.1	0.00	0.00	0.00

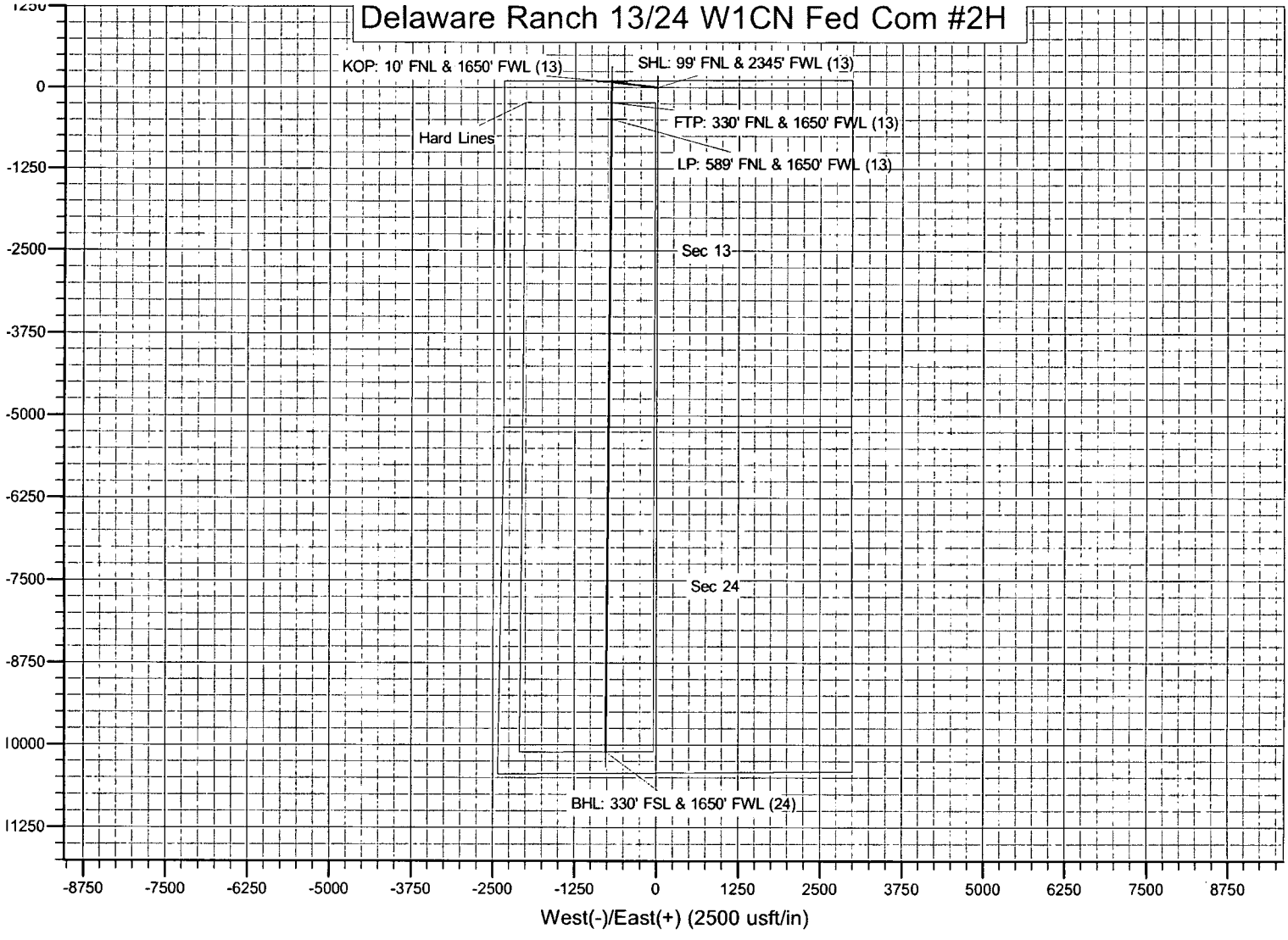
Database:	Hobbs	**Local Co-ordinate Reference:**	Site Delaware Ranch 13/24 W1CN Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2968.0usft (Original Well Elev)
Site:	Delaware Ranch 13/24 W1CN Fed Com #2H	**North Reference:**	Grid
Well:	Sec 13, T26S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL, Sec 24		
Design:	Design #1		

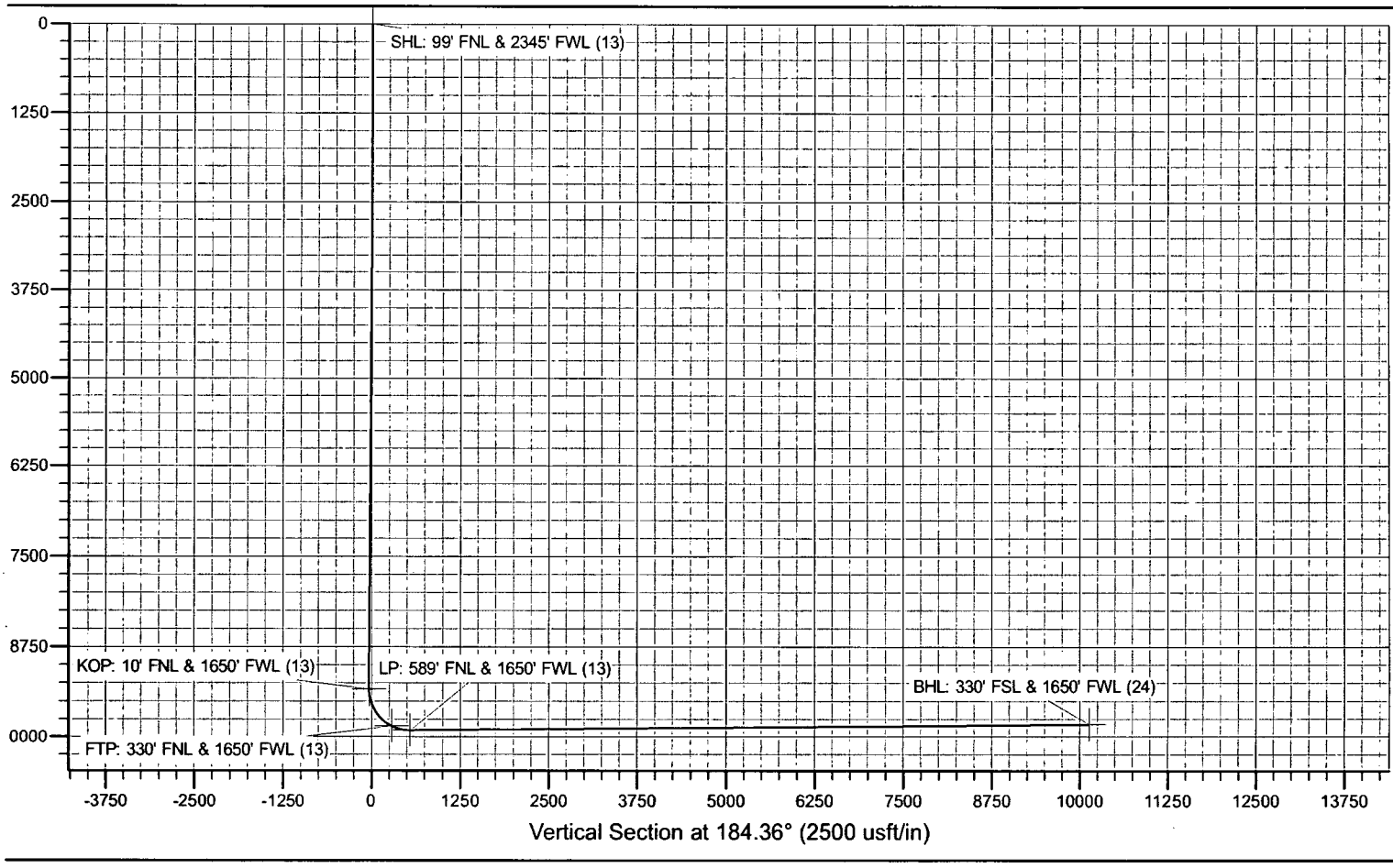
Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,300.0	90.48	180.42	9,832.9	-9,511.1	-765.6	9,541.8	0.00	0.00	0.00
19,400.0	90.48	180.42	9,832.1	-9,611.1	-766.4	9,641.6	0.00	0.00	0.00
19,500.0	90.48	180.42	9,831.3	-9,711.1	-767.1	9,741.3	0.00	0.00	0.00
19,600.0	90.48	180.42	9,830.4	-9,811.1	-767.8	9,841.1	0.00	0.00	0.00
19,700.0	90.48	180.42	9,829.6	-9,911.1	-768.6	9,940.9	0.00	0.00	0.00
19,800.0	90.48	180.42	9,828.8	-10,011.1	-769.3	10,040.6	0.00	0.00	0.00
19,892.9	90.48	180.42	9,828.0	-10,104.0	-770.0	10,133.3	0.00	0.00	0.00
BHL: 330' FSL & 1650' FWL (24)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL: 99' FNL & 2345' FV - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	381,904.00	631,673.00	32.0495987	-104.0417607
KOP: 10' FNL & 1650' F\ - plan hits target center - Point	0.00	0.00	9,335.0	88.0	-695.0	381,992.00	630,978.00	32.0498458	-104.0440032
BHL: 330' FSL & 1650' F - plan hits target center - Point	0.00	0.00	9,828.0	-10,104.0	-770.0	371,800.00	630,903.00	32.0218290	-104.0443333
FTP: 330' FNL & 1650' F - plan hits target center - Point	0.00	0.00	9,848.7	-231.0	-697.3	381,673.00	630,975.66	32.0489689	-104.0440135
PPP5: 1317' FNL & 165(- plan hits target center - Point	0.00	0.00	9,858.0	-6,498.0	-743.5	375,406.00	630,929.54	32.0317415	-104.0442165
PPP4: 0' FNL & 1650' F\ - plan hits target center - Point	0.00	0.00	9,869.0	-5,181.0	-733.8	376,723.00	630,939.23	32.0353618	-104.0441739
PPP3: 2641' FSL & 165(- plan hits target center - Point	0.00	0.00	9,890.9	-2,540.0	-714.3	379,364.00	630,958.67	32.0426217	-104.0440883
PPP2: 1318' FNL & 165(- plan hits target center - Point	0.00	0.00	9,901.9	-1,220.0	-704.6	380,684.00	630,968.38	32.0462502	-104.0440456
LP: 589' FNL & 1650' FV - plan hits target center - Point	0.00	0.00	9,908.0	-489.7	-699.3	381,414.30	630,973.70	32.0482577	-104.0440221


Delaware Ranch 13/24 W1CN Fed Com #2H
KOP: 10' FNL & 1650' FWL (13)
SHL: 99' FNL & 2345' FWL (13)
FTP: 330' FNL & 1650' FWL (13)
Hard Lines
LP: 589' FNL & 1650' FWL (13)
Sec 13
Sec 24
BHL: 330' FSL & 1650' FWL (24)
0
-1250
-2500
-3750
-5000
-6250
-7500
-8750
10000
11250
-8750 -7500 -6250 -5000 -3750 -2500 -1250 0 1250 2500 3750 5000 6250 7500 8750
West(-)/East(+) (2500 usft/in)


SHL: 99' FNL & 2345' FWL (13)
KOP: 10' FNL & 1650' FWL (13)
LP: 589' FNL & 1650' FWL (13)
BHL: 330' FSL & 1650' FWL (24)
FTP: 330' FNL & 1650' FWL (13)
0
1250
2500
3750
5000
6250
7500
8750
0000
-3750 -2500 -1250 0 1250 2500 3750 5000 6250 7500 8750 10000 11250 12500 13750
Vertical Section at 184.36° (2500 usft/in)

Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

1. Geologic Formations

TVD of target	9908'	Pilot hole depth	NA
MD at TD:	19,893'	Deepest expected fresh water:	75'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler			
Top of Salt			
Castile			
Base of Salt	2500		
Yates			
Capitan			
Lamar	2663	Oil	
Bell Canyon	2693		
Cherry Canyon	3568		
Manzanita Marker	3713		
Brushy Canyon	6129		
Bone Spring	6387	Oil/Gas	
1st Bone Spring Sand	7273		
2nd Bone Spring Sand	8103		
3rd Bone Spring Sand	9225		
Abo			
Wolfcamp	9509	Target Zone	
Devonian			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	670'	13.375"	48	H40	STC	2.46	5.52	10.01	16.82
12.25"	0'	2600'	9.625"	36	J55	LTC	1.49	2.60	4.84	6.03
8.75"	0'	10,100'	7"	26	HCP110	LTC	1.52	2.04	2.46	3.16
6.125"	9373'	19,893'	4.5"	13.5	P110	LTC	1.59	1.85	2.38	2.97
BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet		1.6 Dry 1.8 Wet			

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

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.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	

Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	320	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	385	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Prod. Stg 1	345	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
ECP/DV Tool @ 3713'						
Prod. Stg 2	60	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	425	11.2	2.97	18	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	2400'	25%
Liner	9373'	25%

4. Pressure Control Equipment

N	Variance: None

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 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. 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.

X	Formation integrity test will be performed per Onshore Order #2. 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 Onshore Oil and Gas Order #2 III.B.1.i.

Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here: See attached schematic.	

5. Mud Program

TVD		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	670'	FW Gel	8.6-8.8	28-34	N/C
670'	2600'	Saturated Brine	10.0	28-34	N/C
2600'	9882'	Cut Brine	8.6-10	28-34	N/C
9882'	9908'	OBM	10.0-12.0	30-40	<10cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. MW up to 13.0 ppg may be required for shale control. The highest MW needed to balance formation pressure is expected to be 12.0 ppg.

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

6. Logging and Testing Procedures

Logging, Coring and Testing.	
	Will run GR/CNL from KOP (9373') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Mewbourne Oil Company, Delaware Ranch 13/24 W1CN Fed Com #2H
Sec 13, T26S, R28E
SL: 99' FNL & 2345' FWL, Sec 13
BHL: 330' FSL & 1650' FWL, Sec 24

Additional logs planned		Interval
X	Gamma Ray	9373' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6183 psi
Abnormal Temperature	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

8. Other facets of operation

Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments

___ Directional Plan
___ Other, describe

APD ID: 10400039922

Submission Date: 03/26/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM

Well Number: 2H

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

DelawareRanch13_24W1CNFedCom2H_existingroadmap_20190313102319.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

DelawareRanch13_24W1CNFedCom2H_existingwellmap_20190313102356.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: PRODUCTION FACILITY WILL BE ON THE SOUTH EDGE OF WELL PAD.

Production Facilities map:

DelawareRanch13_24W1CNFedCom2H_productionfacilitymap_20190313102410.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: IRRIGATION

Water source use type: INTERMEDIATE/PRODUCTION CASING
STIMULATION
DUST CONTROL
CAMP USE
SURFACE CASING

Source latitude: 32.25549 **Source longitude:** -104.31985

Source datum: NAD83

Water source permit type: WATER WELL

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: STATE

Water source volume (barrels): 1940 **Source volume (acre-feet):** 0.2500526

Source volume (gal): 81480

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Water source type: IRRIGATION

Water source use type: SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

STIMULATION

DUST CONTROL

Source latitude: 32.32698 **Source longitude:** -104.21917

Source datum: NAD83

Water source permit type: WATER WELL

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 1940 **Source volume (acre-feet):** 0.2500526

Source volume (gal): 81480

Water source and transportation map:

DelawareRanch13_24W1CNFedCom2H_watersourceandtransmap_20190313102832.pdf

Water source comments: Both sources shown on one map.

New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche

Construction Materials source location attachment:

DelawareRanch13_24W1CNFedCom2H_calichesourceandtransmap_20190313102432.pdf

Section 7 - Methods for Handling Waste

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency : Weekly

Safe containment description: 2,000 gallon plastic container

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL **Disposal location ownership:** PRIVATE FACILITY

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment facility

Waste type: GARBAGE

Waste content description: Garbage & trash

Amount of waste: 1500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Enclosed trash trailer

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL **Disposal location ownership:** PRIVATE FACILITY

Disposal type description:

Disposal location description: Waste Management facility in Carlsbad.

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Waste type: DRILLING

Waste content description: Drill cuttings

Amount of waste: 940 barrels

Waste disposal frequency : One Time Only

Safe containment description: Drill cuttings will be properly contained in steel tanks (20 yard roll off bins.)

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: NMOCD approved waste disposal locations are CRI or Lea Land, both facilities are located on HWY 62/180, Sec. 27 T20S R32E.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

DelawareRanch13_24W1CNFedCom2H_wellsitelayout_20190313102448.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: DELAWARE RANCH 13/24 W1CN FED COM WELLS

Multiple Well Pad Number: 2

Recontouring attachment:

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Well pad proposed disturbance (acres): 4.12	**Well pad interim reclamation (acres):** 0.82	**Well pad long term disturbance (acres):** 3.3
Road proposed disturbance (acres): 0	**Road interim reclamation (acres):** 0.062	**Road long term disturbance (acres):** 0.062
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 0	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 4.12	**Total interim reclamation:** 0.882	**Total long term disturbance:** 3.362

Disturbance Comments: In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

Reconstruction method: The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not

weeds, will be used.

Soil treatment: NA

Existing Vegetation at the well pad: Various brush & grasses

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Various brush & grasses

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: NA

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: NA

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Seed Summary	
Seed Type	**Pounds/Acre**

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Bradley **Last Name:** Bishop

Phone: (575)393-5905 **Email:** bbishop@mewbourne.com

Seedbed prep: Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
Seed BMP: To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

Seed method: drilling or broadcasting seed over entire reclaimed area.

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: NA

Weed treatment plan attachment:

Monitoring plan description: vii. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion and invasive/noxious weeds are controlled.
Monitoring plan attachment:

Success standards: regrowth within 1 full growing season of reclamation.

Pit closure description: NA

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Fee Owner: Barnhart Family Trust **Fee Owner Address:**

Phone: (505)281-2626 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SUA in place

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Fee Owner: Barnhart Family Trust **Fee Owner Address:**

Phone: (505)281-2626 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SUA in place

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: NONE

Use a previously conducted onsite? YES

Previous Onsite information: FEB 01 2019 Met w/RRC Surveying & staked location @ 30' FSL & 2297' FWL, Sec 12, T26S, R28E, Eddy Co. NM. This location was unacceptable due to electric line, fence, buried Plains line, & draw. Re-staked location @ 99' FNL & 2345' FWL, Sec 13, T26S, R28E, Eddy Co. NM. (Elevation @ 2941'). Pad size 390' x 460'. No topsoil at this time. No new road needed. Road enters on SE corner. Reclaim 60' to the N & E. A 250 x 350 offsite battery staked to the S w/ approx. 100 of road. Will require a BLM onsite for approval. Will require arch PA payment. Lat.: 32.04295987 N, Long.: -104.0417608 N NAD83.

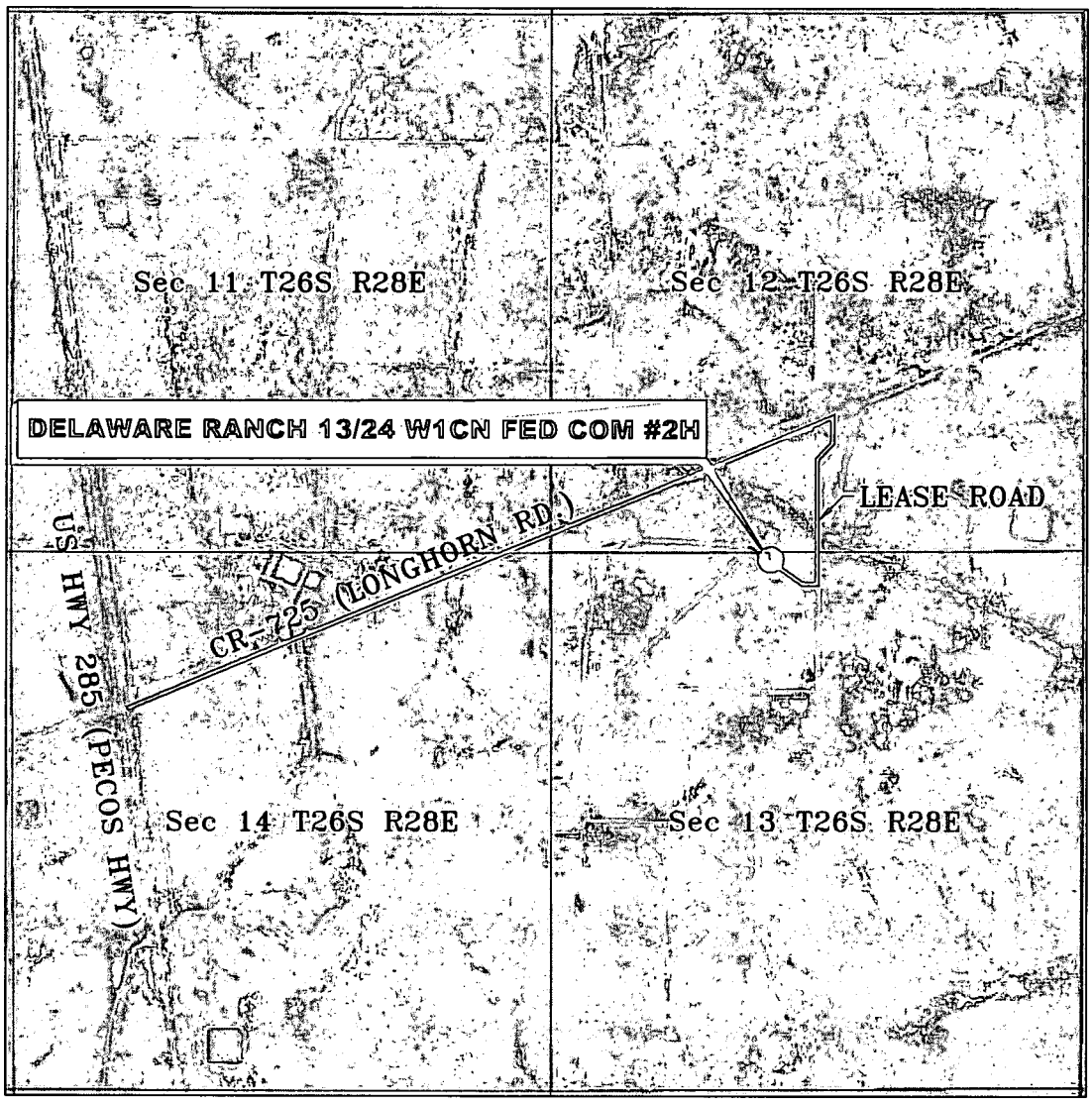
Other SUPO Attachment

DelawareRanch13_24W1CNFedCom2H_gascaptureplan_20190313102532.pdf

DelawareRanch13_24W1CNFedCom2H_interimreclamationdiagram_20190313102542.pdf

VICINITY MAP

NOT TO SCALE



SECTION 13, TWP. 26 SOUTH, RGE. 28 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Delaware Ranch 13/24 W1CN Fed Com
WELL NO.: 2H

LOCATION: 99' FNL & 2345' FWL
ELEVATION: 2941'

NO.	REVISION	DATE

JOB NO.: LS19010145
DWG. NO.: 19010145-3

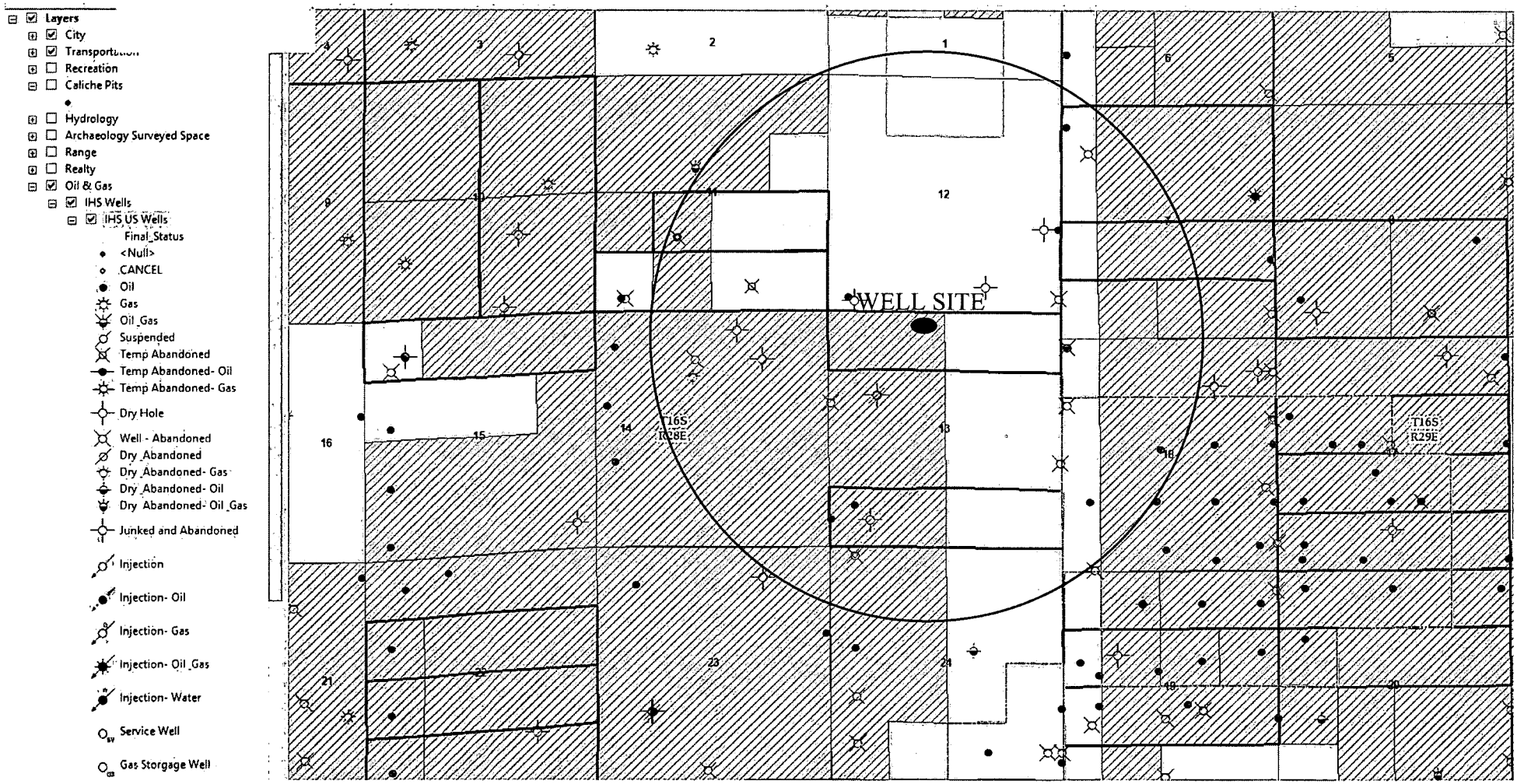
RRC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

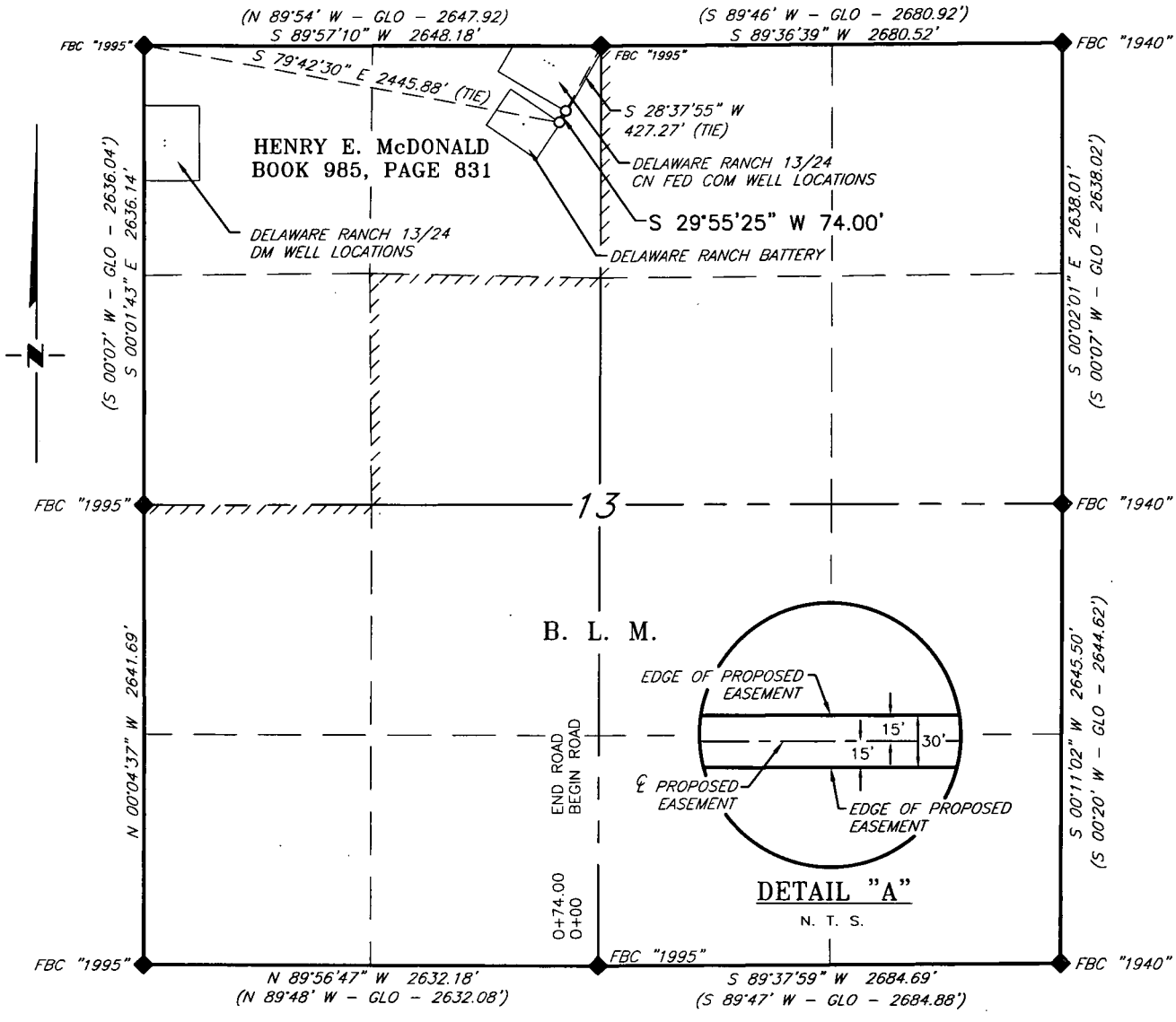
SCALE: N. T. S.
DATE: 1-31-19
SURVEYED BY: ML/JC
DRAWN BY: GA
APPROVED BY: RMH
SHEET: 1 OF 1

DELAWARE RANCH 13/24 W1CN FED COM #2H

EXISTING WELL MAP



MEWBOURNE OIL COMPANY
PROPOSED ACCESS ROAD FOR THE DELAWARE RANCH 13/24 CN FED COM WELL LOCATIONS
SECTION 13, T26S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DESCRIPTION

A strip of land 30 feet wide, being 74.00 feet or 4.485 rods in length, lying in Section 13, Township 26, South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across the lands of Henry E. McDonald, according to a deed filed for record in Book 985, Page 831, of the Deed Records of Eddy County, New Mexico:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter of Section 13, which bears, S 28°37'55" W, 427.27 feet from a brass cap, stamped "1995", found for the North quarter corner of Section 13;

Thence S 29°55'25" W, 74.00 feet, to Engr. Sta. 0+74.00, the End of Survey, a point in the Northwest quarter of Section 13, which bears, S 79°42'30" E, 2,445.88 feet from a brass cap, stamped "1995", found for the Northwest corner of Section 13.

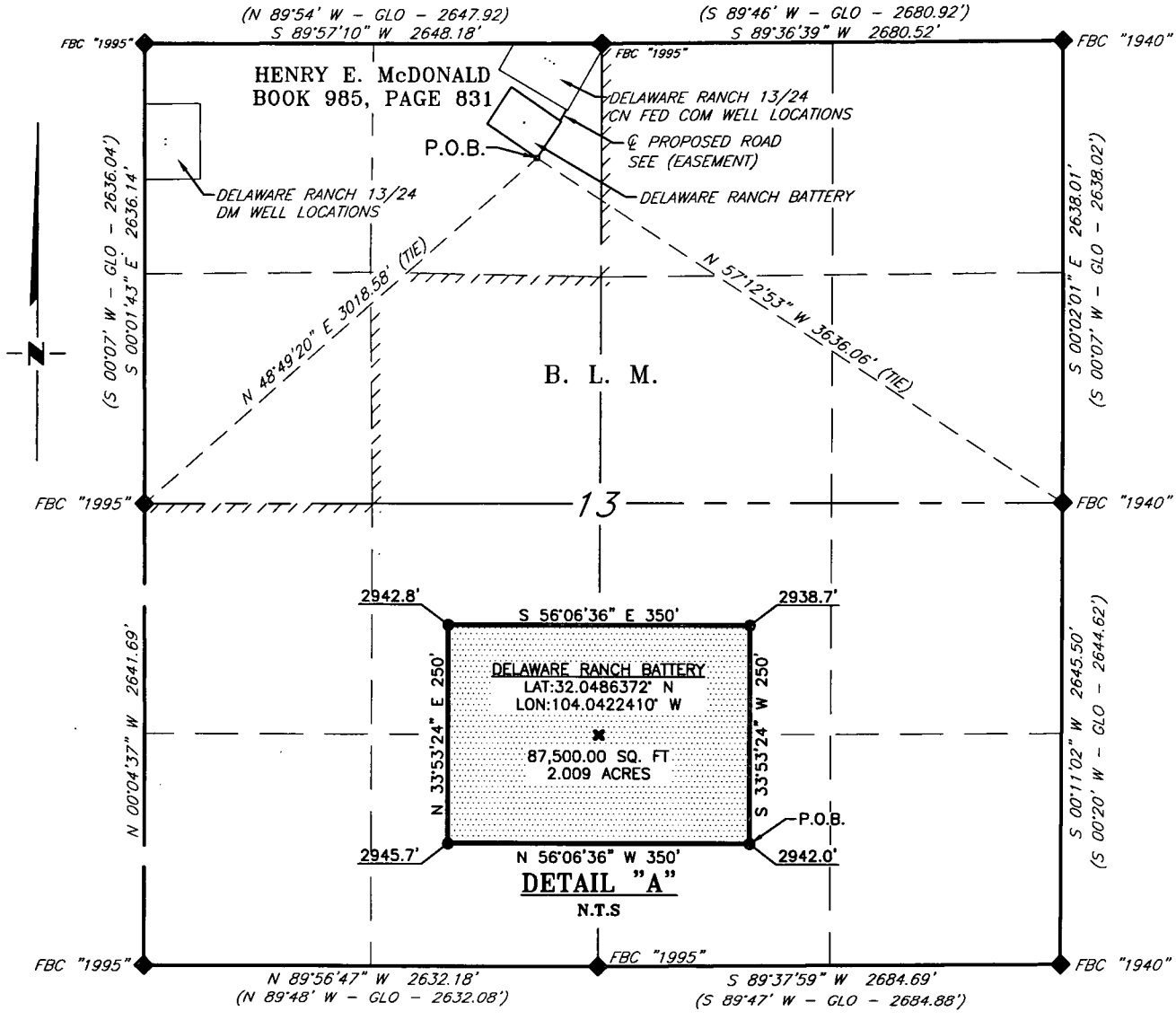
Said strip of land contains 0.051 acres, more or less, and is allocated by forties as follows:

NE 1/4 NW 1/4	4.485 Rods	0.051 Acres

SCALE: 1" = 1000'

ROBERT M. HOWE

MEWBOURNE OIL COMPANY
SURVEY OF THE PROPOSED DELAWARE RANCH BATTERY
SECTION 13, T26S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DESCRIPTION

A tract of land situated within the Northwest quarter of Section 13, Township 26 South, Range 28 East, N. M. P. M. Eddy County, New Mexico, across the lands of Henry E. McDonald, according to a deed filed for record in Book 985, Page 831, of the Deed Records of Eddy County, New Mexico, and being more particularly described by metes and bounds as follows:

BEGINNING at a point which bears, N 48°49'20" E, 3,018.58 feet from a brass cap, stamped "1995", found for the West quarter corner of Section 13 and being N 57°12'53" W, 3,636.06 feet from a brass cap, stamped "1940", found for the East quarter corner of Section 13;

Thence N 56°06'36" W, 350.00 feet, to a point;

Thence N 33°53'24" E, 250.00 feet, to a point;

Thence S 56°06'36" E, 350.00 feet, to a point;

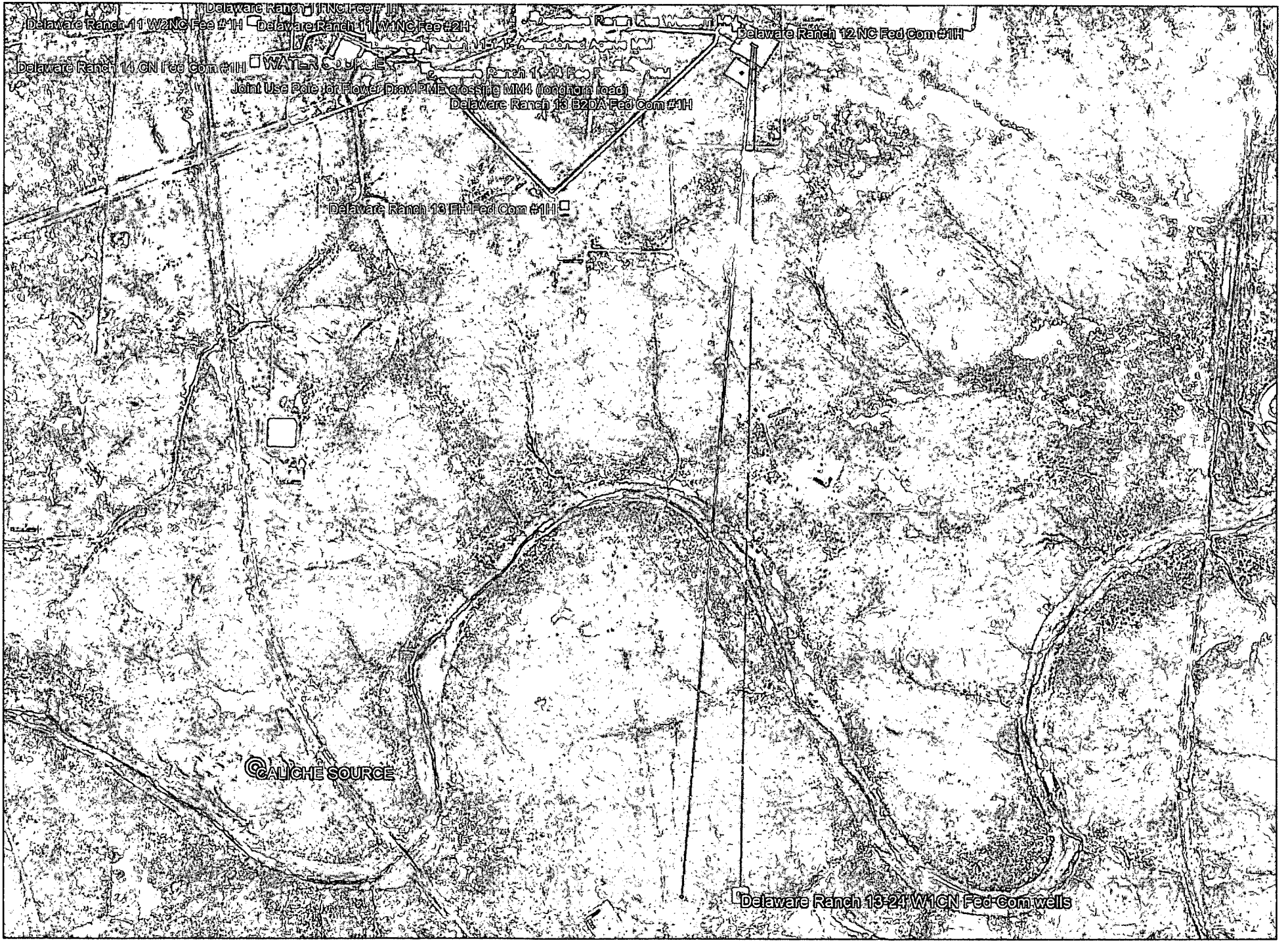
Thence S 33°53'24" W, 250.00 feet, to the Point of Beginning.

Said tract of land contains 87,500.00 square feet or 2.009 acres, more or less, and is allocated by forties as follows:

SCALE: 1" = 1000'

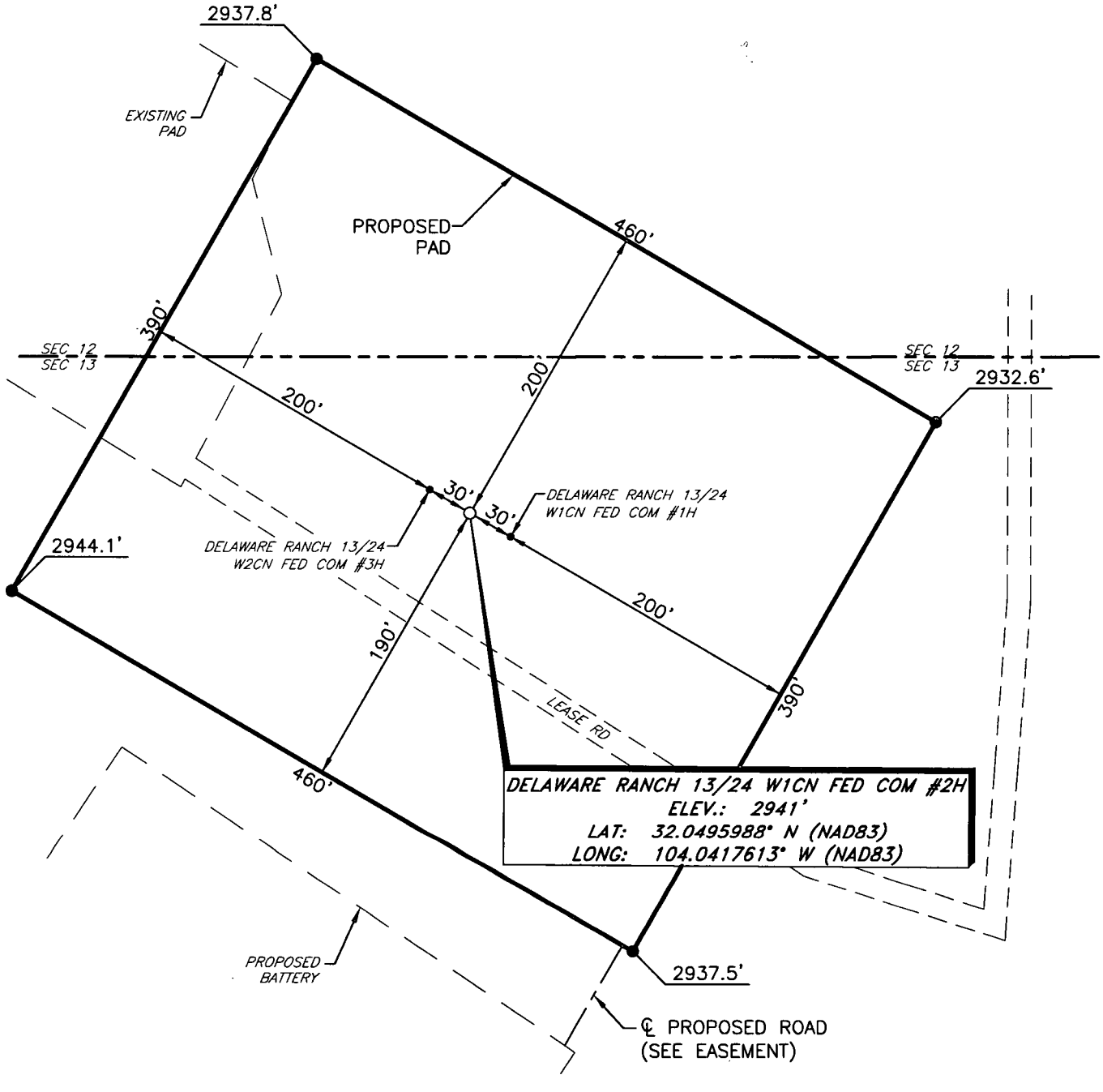
NE 1/4 NW 1/4 87,500.00 Sq. Ft. 2.009 Acres

ERT M. HOW


Delaware Ranch 11 W2NC Fee #1H
Delaware Ranch 11 W1NC Fee #2H
Delaware Ranch 12 NC Fed Com #1H
Delaware Ranch 14 CN Fed Com #1H
WATER SOURCE
Joint Use Pole for Flower Draw PME crossing MM4 (longhorn road)
Delaware Ranch 13 E2DA Fed Com #1H
Delaware Ranch 13 EH Fed Com #1H
CALICHE SOURCE
Delaware Ranch 13-24 W1CN Fed Com wells


Delaware Ranch 11 NC Fed #1H
Delaware Ranch 11 W2NC Fee #1H
Delaware Ranch 11 W1NC Fee #2H
Delaware Ranch 12 NC Fed Com #1H
Delaware Ranch 14 CN Fed Com #1H
WATER
Ranch 11
Joint Use Pole for Flower Draw PME crossing MM4 (longhorn road)
Delaware Ranch 13 B2DA Fed Com #1H
Delaware Ranch 13 EH Fed Com #1H
CALICHE SOURCE
Delaware Ranch 13 24 W1CN Fed Com wells

MEWBOURNE OIL COMPANY
DELAWARE RANCH 13/24 W1CN FED COM #2H
(99' FNL & 2345' FWL)
SECTION 13, T26S, R28E
N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of US Hwy 285 (Pecos Hwy) & CR-725 (Longhorn Rd.);

Go Northeast on CR-725 approx. 1.4 miles to a lease road on the right;

Turn right and go South approx. 0.3 miles to a lease road on the right;

Turn right and go Northwest approx. 400 feet to location on the right.

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

N

ERT M. HOL

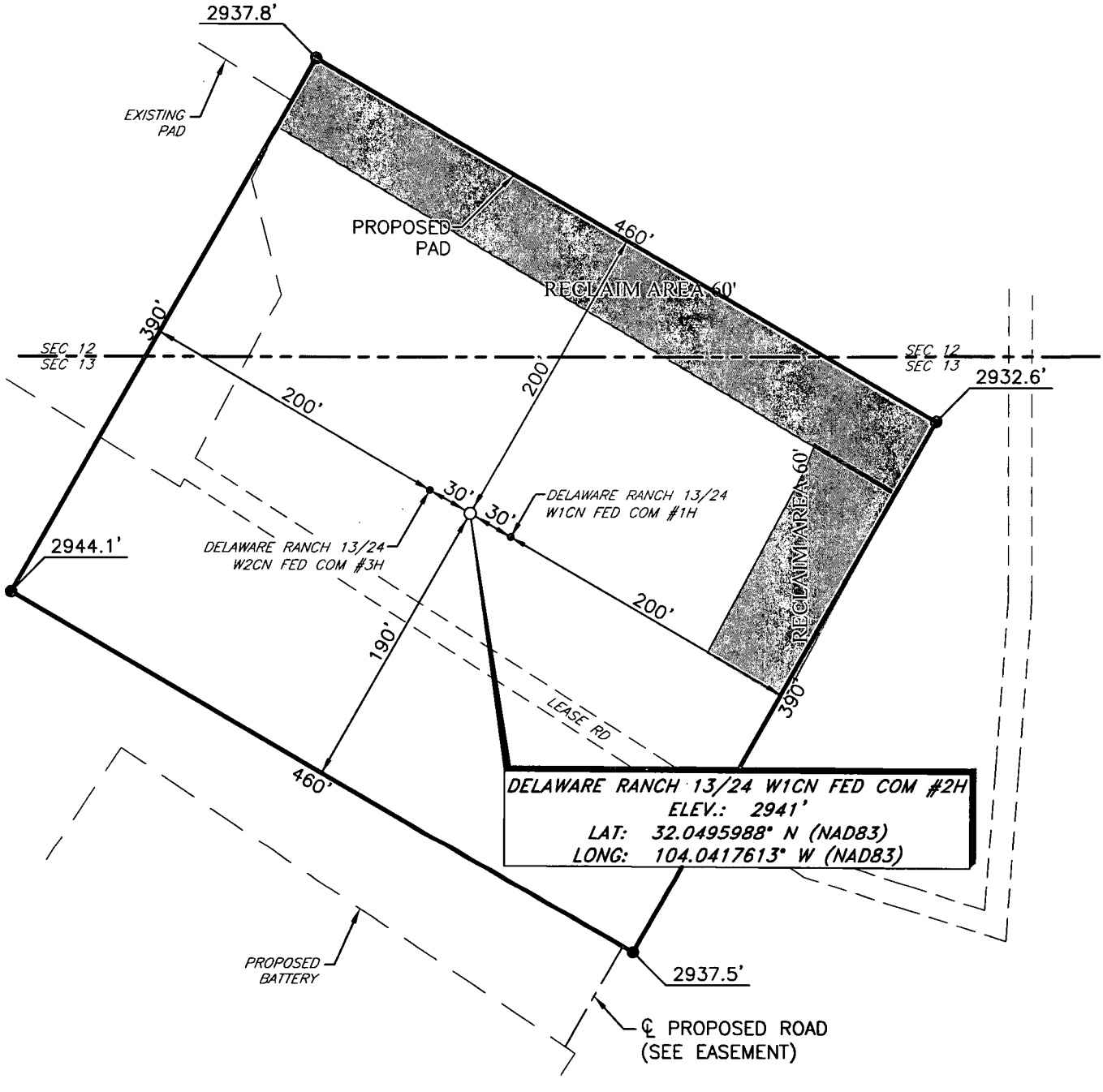
MEWBOURNE OIL COMPANY

DELAWARE RANCH 13/24 W1CN FED COM #2H

(99' FNL & 2345' FWL)

SECTION 13, T26S, R28E

N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of US Hwy 285 (Pecos Hwy) & CR-725 (Longhorn Rd.);

Go Northeast on CR-725 approx. 1.4 miles to a lease road on the right;

Turn right and go South approx. 0.3 miles to a lease road on the right;

Turn right and go Northwest approx. 400 feet to location on the right.

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

ERT M. HOL

AFMSS

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

PWD Data Report

09/16/2019

APD ID: 10400039922 **Submission Date:** 03/26/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM **Well Number:** 2H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

09/16/2019

APD ID: 10400039922

Submission Date: 03/26/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: DELAWARERANCH13/24 W1CN FEDCOM

Well Number: 2H

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NM1693

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: