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.
NMNM016104

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.
MALAGA 13 B3CN FED COM
3H

2. Name of Operator
MEWBOURNE OIL COMPANY

9. API Well No.
30-015-47451

3a. Address
PO Box 5270 Hobbs NM 88240

3b. Phone No. *(include area code)*
(575)393-5905

10. Field and Pool, or Exploratory
SOUTHWEST WILLOW LAKE BONE SPR

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NENW / 157 FNL / 1602 FWL / LAT 32.1369764 / LONG -104.0442461
At proposed prod. zone SESW / 330 FSL / 1650 FWL / LAT 32.1237185 / LONG -104.0440578

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 13 / T25S / R28E / NMP

14. Distance in miles and direction from nearest town or post office*
15 miles

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
157 feet

16. No of acres in lease
1520.06

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
50 feet

19. Proposed Depth
9519 feet / 14134 feet

20. BLM/BIA Bond No. in file
FED: NM1693

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
2892 feet

22. Approximate date work will start*
09/29/2017

23. Estimated duration
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	06/30/2017

Title
Regulatory

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	08/26/2020

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.

Entered 9/12/2020 - JAG

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 08/26/2020

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-47451	96217	Southeast ~~SOUTHWEST~~ WILLOW LAKE BONE SPRING

4 Property Code	5 Property Name	6 Well Number
329340	MALAGA 13 B3CN FEDERAL COM	3H

7 OGRID NO.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	2892'

10 Surface Location

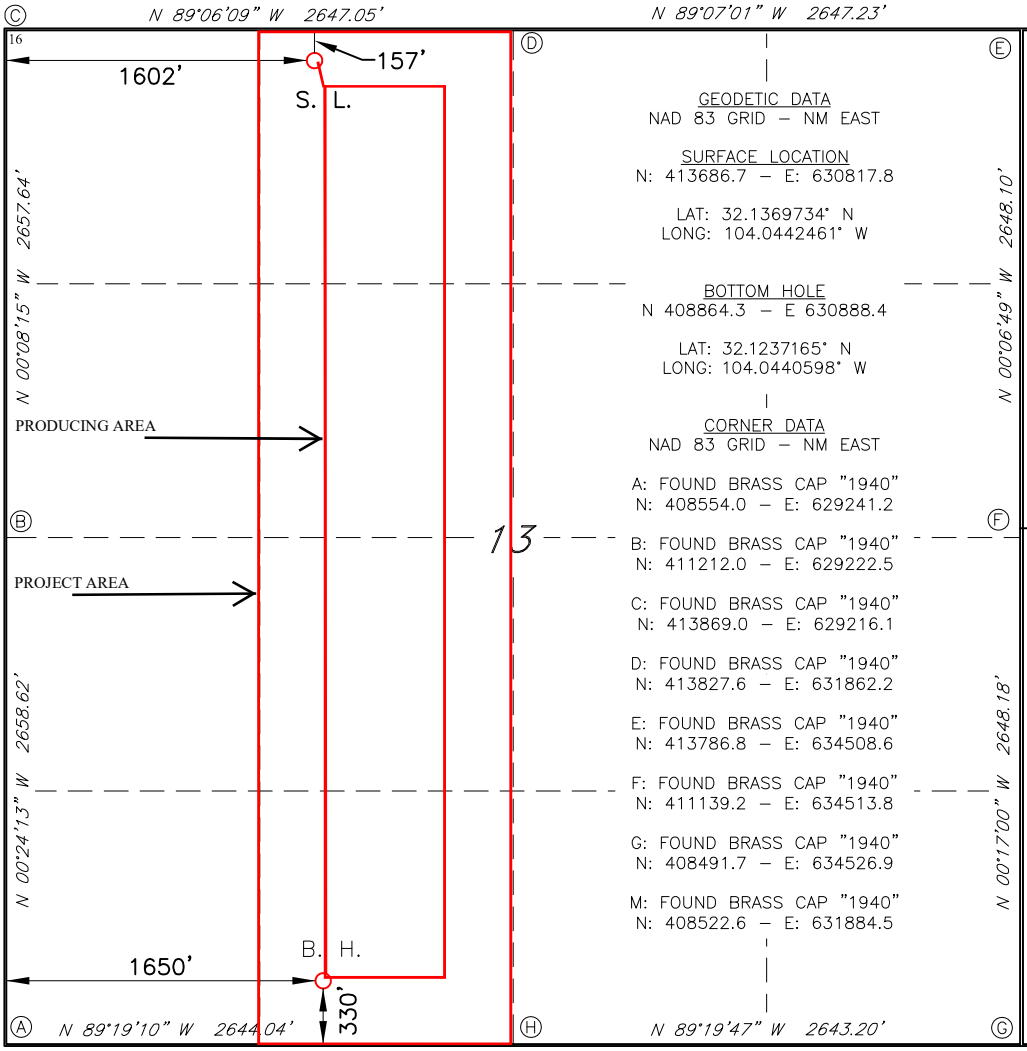
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
C	13	25S	28E		157	NORTH	1602	WEST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	13	25S	28E		330	SOUTH	1650	WEST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
160			

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



17 OPERATOR CERTIFICATION

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

Signature — Date: 7-5-18

BRADLEY BISHOP
Printed Name

BBISHOP@MEWBOURNE.COM
E-mail Address

18 SURVEYOR CERTIFICATION

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

5-22-2017
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

RRC – Job No.: LS1704218D

APD Package Report

Date Printed: 08/26/2020 01:33 PM

APD ID:	10400015611	Well Status:	AAPD
APD Received Date:	06/30/2017 02:32 PM	Well Name:	MALAGA 13 B3CN FED COM
Operator:	MEWBOURNE OIL COMPANY	Well Number:	3H

APD Package Report Contents

- Form 3160-3

- Operator Certification Report

- Application Report
- Application Attachments
  -- Operator Letter of Designation: 1 file(s)
  -- Well Plat: 1 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 2 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 2 file(s)
  -- Casing Design Assumptions and Worksheet(s): 4 file(s)
  -- Hydrogen sulfide drilling operations plan: 1 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  -- Other Facets: 2 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 1 file(s)
  -- Attach Well map: 1 file(s)
  -- Production Facilities map: 1 file(s)
  -- Water source and transportation map: 1 file(s)
  -- Construction Materials source location attachment: 1 file(s)
  -- Well Site Layout Diagram: 1 file(s)
  -- Other SUPO Attachment: 2 file(s)

- PWD Report
- PWD Attachments
  -- None

- Bond Report

- Bond Attachments
  -- None

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

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

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

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: NENW / 157 FNL / 1602 FWL / TWSP: 25S / RANGE: 28E / SECTION: 13 / LAT: 32.1369764 / LONG: -104.0442461 (TVD: 27 feet, MD: 27 feet)
   PPP: NENW / 330 FNL / 1650 FWL / TWSP: 25S / RANGE: 28E / SECTION: 13 / LAT: 32.1364983 / LONG: -104.0440891 (TVD: 9408 feet, MD: 9459 feet)
   PPP: NENW / 2658 FSL / 1650 FWL / TWSP: 25S / RANGE: 28E / SECTION: 13 / LAT: 32.1301043 / LONG: -104.0440724 (TVD: 9518 feet, MD: 11811 feet)
   BHL: SESW / 330 FSL / 1650 FWL / TWSP: 25S / RANGE: 28E / SECTION: 13 / LAT: 32.1237185 / LONG: -104.0440578 (TVD: 9519 feet, MD: 14134 feet)

BLM Point of Contact

Name: Pamella Hernandez
Title:
Phone: 5752345954
Email: phermandez@blm.gov

Review and Appeal Rights

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM16104**
WELL NAME & NO.:	**3H-Malaga 13 B3CN Federal Com**
SURFACE HOLE FOOTAGE:	**157'/N & 1602'/W**
BOTTOM HOLE FOOTAGE	**330'/S & 1650'/W**
LOCATION:	**Section 13,T.25S, R.28E,NMPM**
COUNTY:	**Eddy, 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

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 **410** feet (a minimum of 25 feet 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. **Additional cement may be required. Excess calculates to be 24%**

   ❖ In <u>High 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.

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

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

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

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

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

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

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

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

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

B. PRESSURE CONTROL

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

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

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

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. 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.

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

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. 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.

f. 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. This test shall be performed prior to the test at full stack pressure.

g. 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.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 091118

APD ID: 10400015611 **Submission Date:** 06/30/2017

Operator Name: MEWBOURNE OIL COMPANY

Well Name: MALAGA 13 B3CN FED COM **Well Number:** 3H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
90765	UNKNOWN	2895	27	27		NONE	N
90769	CASTILE	1695	1200	1200	SALT	NONE	N
90766	BOTTOM SALT	470	2425	2425	SALT	NONE	N
90770	LAMAR	254	2641	2641	LIMESTONE	NATURAL GAS, OIL	N
90771	BELL CANYON	215	2680	2680	SANDSTONE	NATURAL GAS, OIL	N
90772	CHERRY CANYON	-675	3570	3570	SANDSTONE	NATURAL GAS, OIL	N
90773	MANZANITA	-790	3685	3685	LIMESTONE	NATURAL GAS, OIL	N
90774	BRUSHY CANYON	-1925	4820	4820	SANDSTONE	NATURAL GAS, OIL	N
90764	BONE SPRING LIME	-3490	6385	6385	LIMESTONE, SHALE	NATURAL GAS, OIL	N
90767	BONE SPRING 1ST	-4390	7285	7285	SANDSTONE	NATURAL GAS, OIL	N
90768	BONE SPRING 2ND	-5215	8110	8110	SANDSTONE	NATURAL GAS, OIL	N
90775	BONE SPRING 3RD	-6305	9200	9200	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 14134

Equipment: Annular, Pipe Ram, Blind Ram

Requesting Variance? YES

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

Testing Procedure: 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.

Choke Diagram Attachment:

Malaga_13_B3CN_Fed_Com_3H_3M_BOPE_Choke_Diagram_20180801141436.pdf

Malaga_13_B3CN_Fed_Com_3H_Flex_Line_Specs_20180801141437.pdf

BOP Diagram Attachment:

Malaga_13_B3CN_Fed_Com_3H_3M_BOPE_Schematic_20180801141505.pdf

Malaga_13_B3CN_Fed_Com_3H_Multi_Bowl_WH_20180801141506.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	410	0	410	-6771	-7181	410	H-40	48	ST&C	4.01	9.02	DRY	16.36	DRY	27.49
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2565	0	2565	-6771	-9336	2565	J-55	36	LT&C	1.51	2.64	DRY	4.91	DRY	6.11
3	PRODUCTION	8.75	7.0	NEW	API	N	0	9791	0	9518			9791	P-110	26	LT&C	1.66	2.12	DRY	2.53	DRY	3.26
4	LINER	6.125	4.5	NEW	API	N	9041	14134	9041	9519			5093	P-110	13.5	LT&C	2.16	2.51	DRY	4.78	DRY	5.96

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY

Well Name: MALAGA 13 B3CN FED COM **Well Number:** 3H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Malaga_13_B3CN_Fed_Com_3H_Csg_Assumptions_20180801145251.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Malaga_13_B3CN_Fed_Com_3H_Csg_Assumptions_20180801161310.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Malaga_13_B3CN_Fed_Com_3H_Csg_Assumptions_20180801161325.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: MALAGA 13 B3CN FED COM **Well Number:** 3H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Malaga_13_B3CN_Fed_Com_3H_Csg_Assumptions_20180801161333.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	222	150	2.12	12.5	318	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		222	410	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	1912	370	2.12	12.5	784	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1912	2565	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	3685	2365	3037	60	2.12	12.5	127	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		3037	3685	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	3685	3685	7314	320	2.12	12.5	678	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		7314	9791	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		9041	14134	215	2.97	11.2	639	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Operator Name: MEWBOURNE OIL COMPANY

Well Name: MALAGA 13 B3CN FED COM **Well Number:** 3H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

Describe 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	410	SPUD MUD	8.6	8.8							
410	2565	SALT SATURATED	10	10							
2565	9518	WATER-BASED MUD	8.6	9.7							
9518	9519	OIL-BASED MUD	8.6	10							

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (9041') to surface

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

CNL,DS,GR,MWD,MUDLOG

Coring operation description for the well:

None

Operator Name: MEWBOURNE OIL COMPANY

Well Name: MALAGA 13 B3CN FED COM **Well Number:** 3H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4950 **Anticipated Surface Pressure:** 2824.14

Anticipated Bottom Hole Temperature(F): 140

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Malaga_13_B3CN_Fed_Com_3H_H2S_Plan_20180801161737.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Malaga_13_B3CN_Fed_Com_3H_Dir_Plan_20180801161757.pdf
Malaga_13_B3CN_Fed_Com_3H_Dir_Plot_20180801161758.pdf

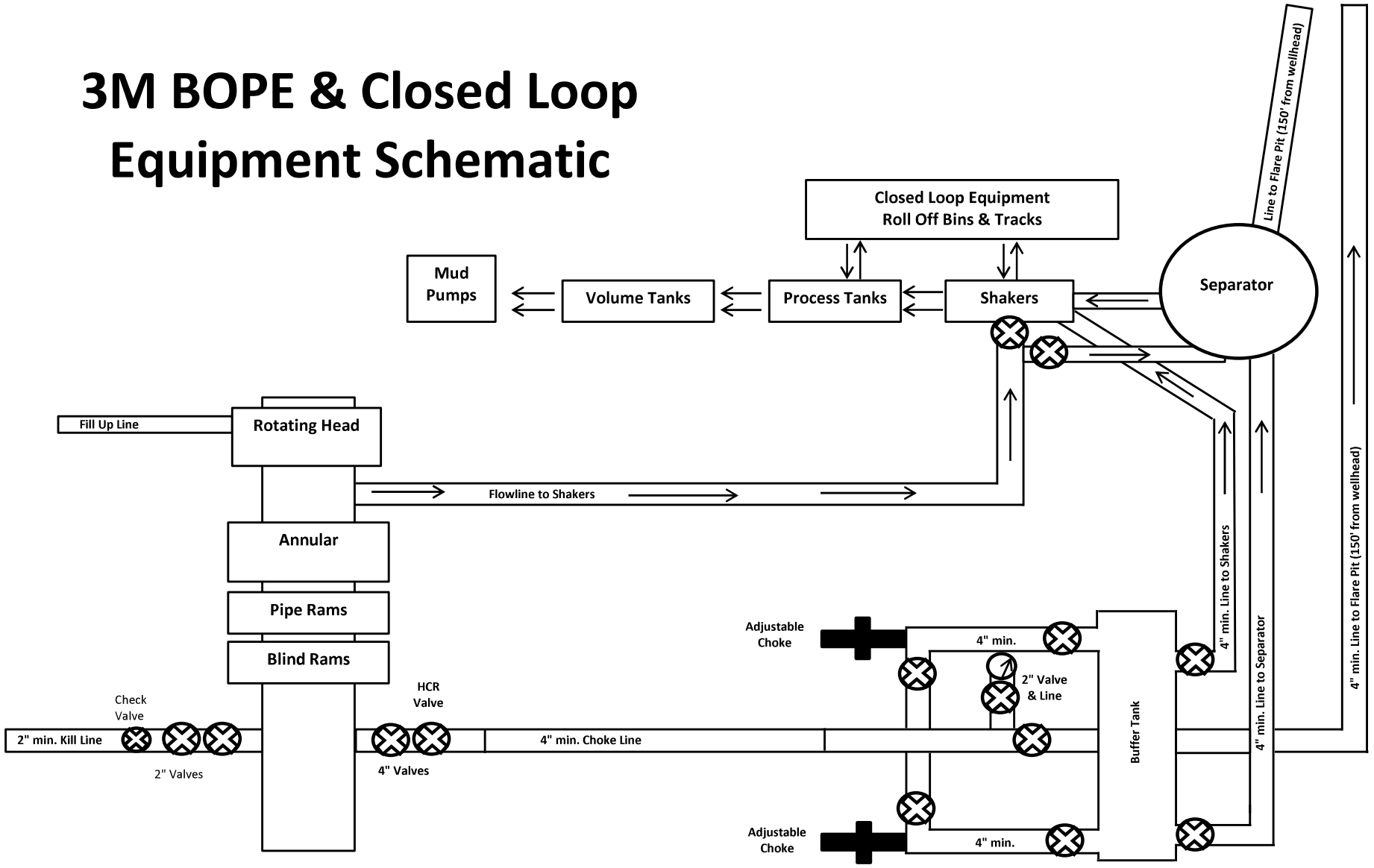
Other proposed operations facets description:

Other proposed operations facets attachment:

Malaga_13_B3CN_Fed_Com_3H_Drlg_Program_20180801161811.doc
Malaga_13_B3CN_Fed_Com_3H_C_101_20180801162027.pdf

Other Variance attachment:

3M BOPE & Closed Loop Equipment Schematic



Drawing not to scale

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

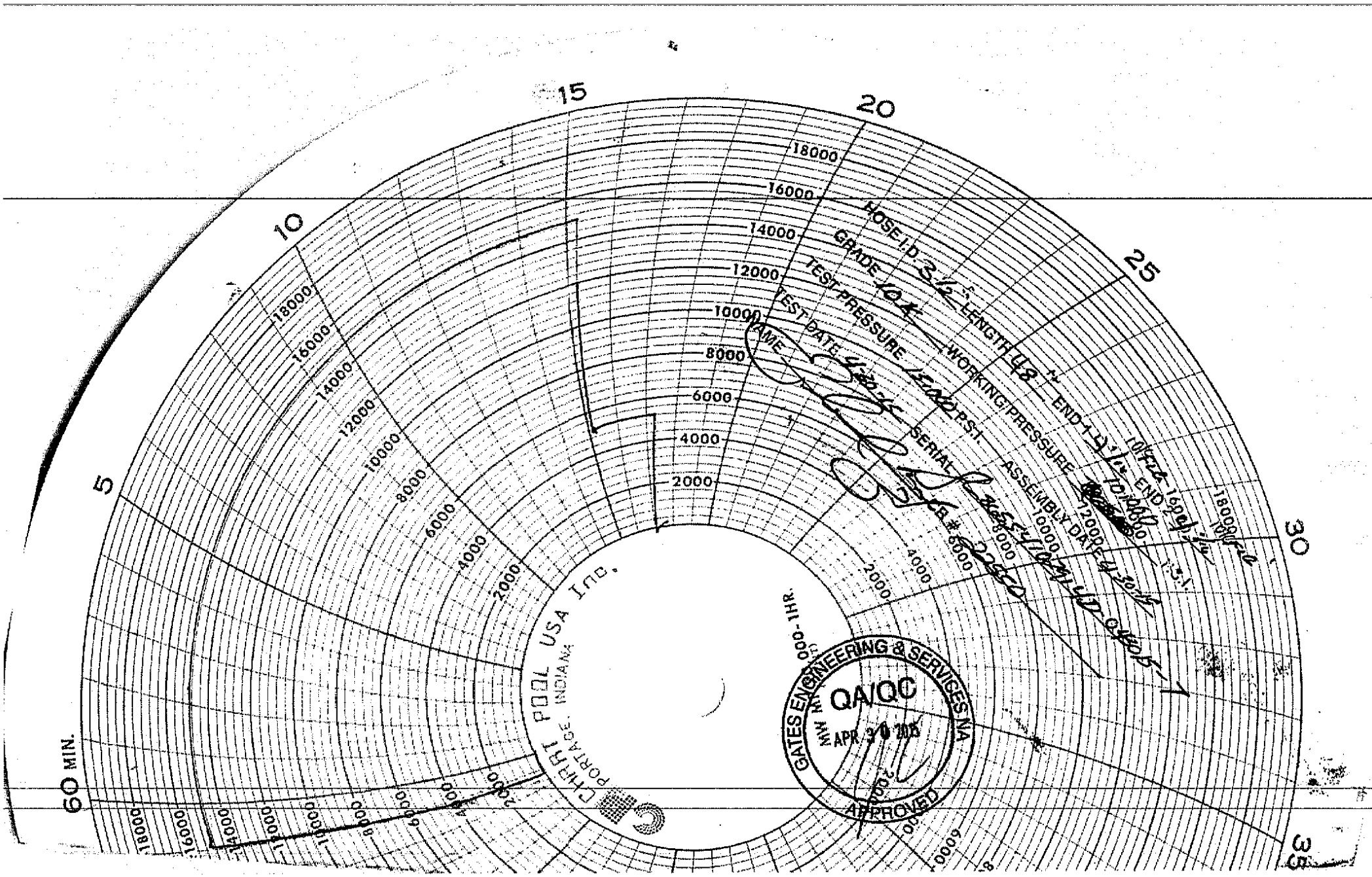
End Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG
Gates Part No. :	4773-6290	Assembly Code :	L36554102914D-043015-7
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

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 :	Justin Cropper	Signature :	

Form-PTC - 01 Rev.0 2

Gates BLACK GOLD


5
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18000
16000
14000
12000
10000
8000
6000
4000
2000
HOSE I.D.
GRADE
TEST PRESSURE
TEST DATE
WORKING PRESSURE
LENGTH
END 1
END 2
ASSEMBLY DATE
SERIAL #
P.S.I.
CHARLIE POOL USA Inc.
PORTAGE, INDIANA
GATES ENGINEERING & SERVICES NA
QA/QC
APR 30 2015
APPROVED
MW MAX 1,000-1HR.

Mewbourne Oil Company Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

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'	410'	13.375"	48	H40	STC	4.01	9.02	16.36	27.49
12.25"	0'	2565'	9.625"	36	J55	LTC	1.51	2.64	4.91	6.11
8.75"	0'	9791'	7"	26	P110	LTC	1.66	2.12	2.53	3.26
6.125"	9041'	14,134'	4.5"	13.5	P110	LTC	2.16	2.51	4.78	5.96
				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?	Y
If yes, are there two strings cemented to surface?	Y
(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 Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

Casing Program

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Mewbourne Oil Company Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

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Mewbourne Oil Company Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

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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
Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

Plan: Design #1

Standard Planning Report

01 August, 2018

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Malaga 13 B3CN Fed Com #3H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Site:	Malaga 13 B3CN Fed Com #3H	**North Reference:**	Grid
Well:	Sec 13, T25S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL		
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 Malaga 13 B3CN Fed Com #3H

Site Position:		**Northing:**	413,687.00 usft	**Latitude:**	32.1369742
From:	Map	**Easting:**	630,818.00 usft	**Longitude:**	-104.0442454
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.15 °

Well Sec 13, T25S, R28E

Well Position	**+N/-S**	0.0 usft	**Northing:**	413,687.00 usft	**Latitude:**	32.1369742
	+E/-W	0.0 usft	**Easting:**	630,818.00 usft	**Longitude:**	-104.0442454
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	2,919.0 usft	**Ground Level:**	2,892.0 usft

Wellbore BHL: 330' FSL & 1650' FWL

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/21/2018	6.94	59.85	47,827

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	179.16

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	
2,565.0	0.00	0.00	2,565.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,593.4	0.43	91.19	2,593.4	0.0	0.1	1.50	1.50	0.00	91.19	
9,012.3	0.43	91.19	9,012.1	-1.0	47.9	0.00	0.00	0.00	0.00	
9,040.7	0.00	0.00	9,040.5	-1.0	48.0	1.50	-1.50	0.00	180.00	KOP @ 9041'
9,790.6	89.99	179.73	9,518.0	-478.3	50.3	12.00	12.00	0.00	179.73	
14,134.3	89.99	179.73	9,519.0	-4,822.0	71.0	0.00	0.00	0.00	0.00	BHL: 330' FSL & 165(

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Malaga 13 B3CN Fed Com #3H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Site:	Malaga 13 B3CN Fed Com #3H	**North Reference:**	Grid
Well:	Sec 13, T25S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL		
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
SL: 157' FNL & 1602' FWL									
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
2,565.0	0.00	0.00	2,565.0	0.0	0.0	0.0	0.00	0.00	0.00
2,593.4	0.43	91.19	2,593.4	0.0	0.1	0.0	1.50	1.50	0.00
2,600.0	0.43	91.19	2,600.0	0.0	0.2	0.0	0.00	0.00	0.00
2,700.0	0.43	91.19	2,700.0	0.0	0.9	0.0	0.00	0.00	0.00
2,800.0	0.43	91.19	2,800.0	0.0	1.6	0.1	0.00	0.00	0.00
2,900.0	0.43	91.19	2,900.0	0.0	2.4	0.1	0.00	0.00	0.00
3,000.0	0.43	91.19	3,000.0	-0.1	3.1	0.1	0.00	0.00	0.00
3,100.0	0.43	91.19	3,100.0	-0.1	3.9	0.1	0.00	0.00	0.00
3,200.0	0.43	91.19	3,200.0	-0.1	4.6	0.2	0.00	0.00	0.00
3,300.0	0.43	91.19	3,300.0	-0.1	5.4	0.2	0.00	0.00	0.00
3,400.0	0.43	91.19	3,400.0	-0.1	6.1	0.2	0.00	0.00	0.00
3,500.0	0.43	91.19	3,500.0	-0.1	6.9	0.2	0.00	0.00	0.00
3,600.0	0.43	91.19	3,600.0	-0.2	7.6	0.3	0.00	0.00	0.00
3,700.0	0.43	91.19	3,700.0	-0.2	8.3	0.3	0.00	0.00	0.00
3,800.0	0.43	91.19	3,800.0	-0.2	9.1	0.3	0.00	0.00	0.00
3,900.0	0.43	91.19	3,900.0	-0.2	9.8	0.3	0.00	0.00	0.00
4,000.0	0.43	91.19	4,000.0	-0.2	10.6	0.4	0.00	0.00	0.00
4,100.0	0.43	91.19	4,100.0	-0.2	11.3	0.4	0.00	0.00	0.00
4,200.0	0.43	91.19	4,200.0	-0.3	12.1	0.4	0.00	0.00	0.00
4,300.0	0.43	91.19	4,300.0	-0.3	12.8	0.5	0.00	0.00	0.00
4,400.0	0.43	91.19	4,399.9	-0.3	13.6	0.5	0.00	0.00	0.00
4,500.0	0.43	91.19	4,499.9	-0.3	14.3	0.5	0.00	0.00	0.00
4,600.0	0.43	91.19	4,599.9	-0.3	15.0	0.5	0.00	0.00	0.00
4,700.0	0.43	91.19	4,699.9	-0.3	15.8	0.6	0.00	0.00	0.00
4,800.0	0.43	91.19	4,799.9	-0.3	16.5	0.6	0.00	0.00	0.00
4,900.0	0.43	91.19	4,899.9	-0.4	17.3	0.6	0.00	0.00	0.00
5,000.0	0.43	91.19	4,999.9	-0.4	18.0	0.6	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Malaga 13 B3CN Fed Com #3H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Site:	Malaga 13 B3CN Fed Com #3H	**North Reference:**	Grid
Well:	Sec 13, T25S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL		
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)
5,100.0	0.43	91.19	5,099.9	-0.4	18.8	0.7	0.00	0.00	0.00
5,200.0	0.43	91.19	5,199.9	-0.4	19.5	0.7	0.00	0.00	0.00
5,300.0	0.43	91.19	5,299.9	-0.4	20.3	0.7	0.00	0.00	0.00
5,400.0	0.43	91.19	5,399.9	-0.4	21.0	0.7	0.00	0.00	0.00
5,500.0	0.43	91.19	5,499.9	-0.5	21.7	0.8	0.00	0.00	0.00
5,600.0	0.43	91.19	5,599.9	-0.5	22.5	0.8	0.00	0.00	0.00
5,700.0	0.43	91.19	5,699.9	-0.5	23.2	0.8	0.00	0.00	0.00
5,800.0	0.43	91.19	5,799.9	-0.5	24.0	0.9	0.00	0.00	0.00
5,900.0	0.43	91.19	5,899.9	-0.5	24.7	0.9	0.00	0.00	0.00
6,000.0	0.43	91.19	5,999.9	-0.5	25.5	0.9	0.00	0.00	0.00
6,100.0	0.43	91.19	6,099.9	-0.5	26.2	0.9	0.00	0.00	0.00
6,200.0	0.43	91.19	6,199.9	-0.6	27.0	1.0	0.00	0.00	0.00
6,300.0	0.43	91.19	6,299.9	-0.6	27.7	1.0	0.00	0.00	0.00
6,400.0	0.43	91.19	6,399.9	-0.6	28.4	1.0	0.00	0.00	0.00
6,500.0	0.43	91.19	6,499.9	-0.6	29.2	1.0	0.00	0.00	0.00
6,600.0	0.43	91.19	6,599.9	-0.6	29.9	1.1	0.00	0.00	0.00
6,700.0	0.43	91.19	6,699.9	-0.6	30.7	1.1	0.00	0.00	0.00
6,800.0	0.43	91.19	6,799.9	-0.7	31.4	1.1	0.00	0.00	0.00
6,900.0	0.43	91.19	6,899.9	-0.7	32.2	1.1	0.00	0.00	0.00
7,000.0	0.43	91.19	6,999.9	-0.7	32.9	1.2	0.00	0.00	0.00
7,100.0	0.43	91.19	7,099.9	-0.7	33.7	1.2	0.00	0.00	0.00
7,200.0	0.43	91.19	7,199.9	-0.7	34.4	1.2	0.00	0.00	0.00
7,300.0	0.43	91.19	7,299.9	-0.7	35.1	1.2	0.00	0.00	0.00
7,400.0	0.43	91.19	7,399.9	-0.7	35.9	1.3	0.00	0.00	0.00
7,500.0	0.43	91.19	7,499.9	-0.8	36.6	1.3	0.00	0.00	0.00
7,600.0	0.43	91.19	7,599.9	-0.8	37.4	1.3	0.00	0.00	0.00
7,700.0	0.43	91.19	7,699.9	-0.8	38.1	1.4	0.00	0.00	0.00
7,800.0	0.43	91.19	7,799.9	-0.8	38.9	1.4	0.00	0.00	0.00
7,900.0	0.43	91.19	7,899.9	-0.8	39.6	1.4	0.00	0.00	0.00
8,000.0	0.43	91.19	7,999.8	-0.8	40.4	1.4	0.00	0.00	0.00
8,100.0	0.43	91.19	8,099.8	-0.9	41.1	1.5	0.00	0.00	0.00
8,200.0	0.43	91.19	8,199.8	-0.9	41.8	1.5	0.00	0.00	0.00
8,300.0	0.43	91.19	8,299.8	-0.9	42.6	1.5	0.00	0.00	0.00
8,400.0	0.43	91.19	8,399.8	-0.9	43.3	1.5	0.00	0.00	0.00
8,500.0	0.43	91.19	8,499.8	-0.9	44.1	1.6	0.00	0.00	0.00
8,600.0	0.43	91.19	8,599.8	-0.9	44.8	1.6	0.00	0.00	0.00
8,700.0	0.43	91.19	8,699.8	-0.9	45.6	1.6	0.00	0.00	0.00
8,800.0	0.43	91.19	8,799.8	-1.0	46.3	1.6	0.00	0.00	0.00
8,900.0	0.43	91.19	8,899.8	-1.0	47.1	1.7	0.00	0.00	0.00
9,000.0	0.43	91.19	8,999.8	-1.0	47.8	1.7	0.00	0.00	0.00
9,012.3	0.43	91.19	9,012.1	-1.0	47.9	1.7	0.00	0.00	0.00
9,040.7	0.00	0.00	9,040.5	-1.0	48.0	1.7	1.50	-1.50	0.00
KOP @ 9041'									
9,100.0	7.11	179.73	9,099.7	-4.7	48.0	5.4	12.00	12.00	0.00
9,200.0	19.11	179.73	9,196.9	-27.3	48.1	28.0	12.00	12.00	0.00
9,300.0	31.11	179.73	9,287.3	-69.7	48.3	70.4	12.00	12.00	0.00
9,400.0	43.11	179.73	9,366.9	-129.9	48.6	130.6	12.00	12.00	0.00
9,459.3	50.23	179.73	9,407.5	-173.0	48.8	173.7	12.00	12.00	0.00
FTP: 330' FNL & 1650' FWL									
9,500.0	55.11	179.73	9,432.2	-205.4	49.0	206.1	12.00	12.00	0.00
9,600.0	67.11	179.73	9,480.4	-292.8	49.4	293.5	12.00	12.00	0.00
9,700.0	79.11	179.73	9,509.4	-388.3	49.8	389.0	12.00	12.00	0.00
9,790.6	89.98	179.73	9,518.0	-478.3	50.3	479.0	12.00	12.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Malaga 13 B3CN Fed Com #3H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Site:	Malaga 13 B3CN Fed Com #3H	**North Reference:**	Grid
Well:	Sec 13, T25S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL		
Design:	Design #1		

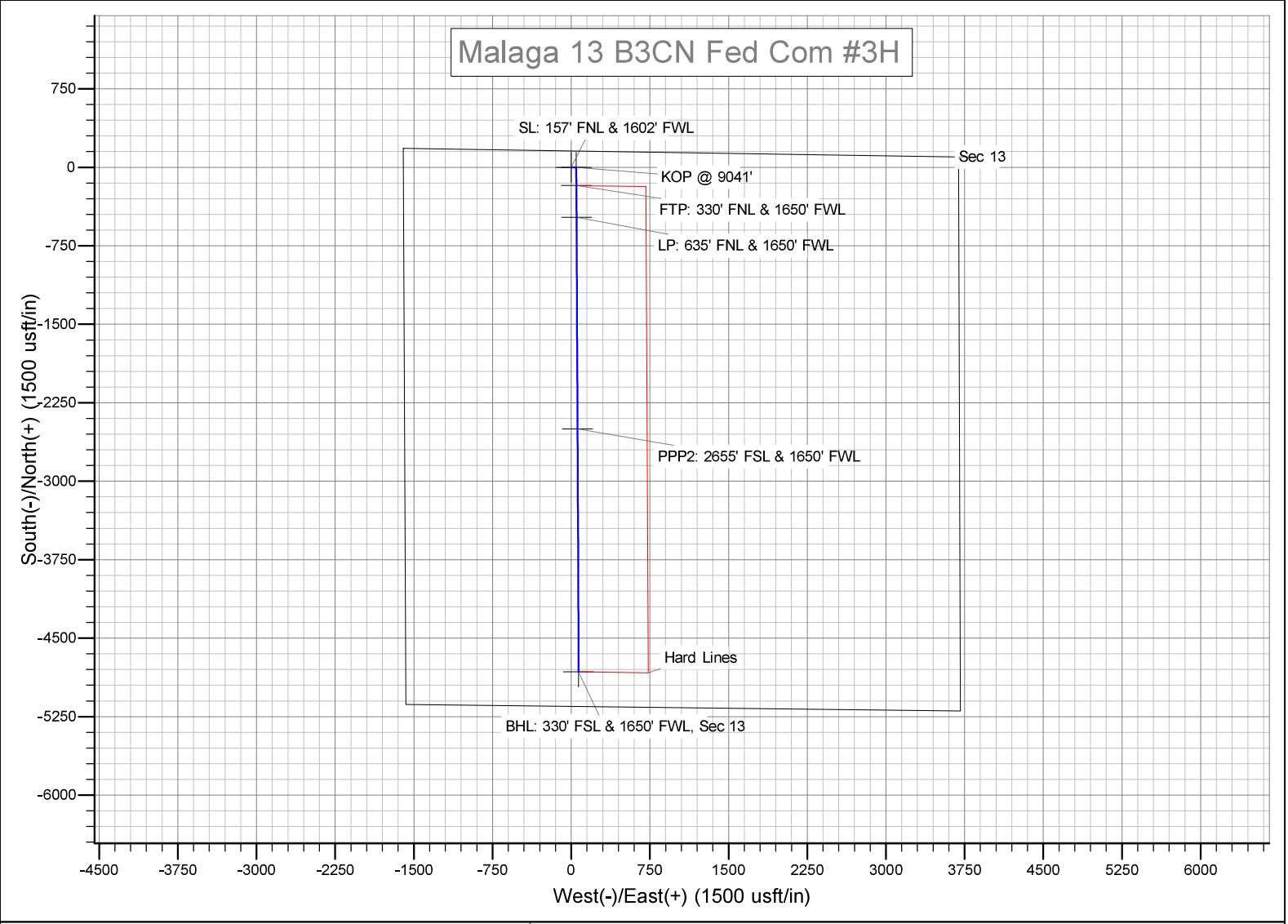
Planned Survey

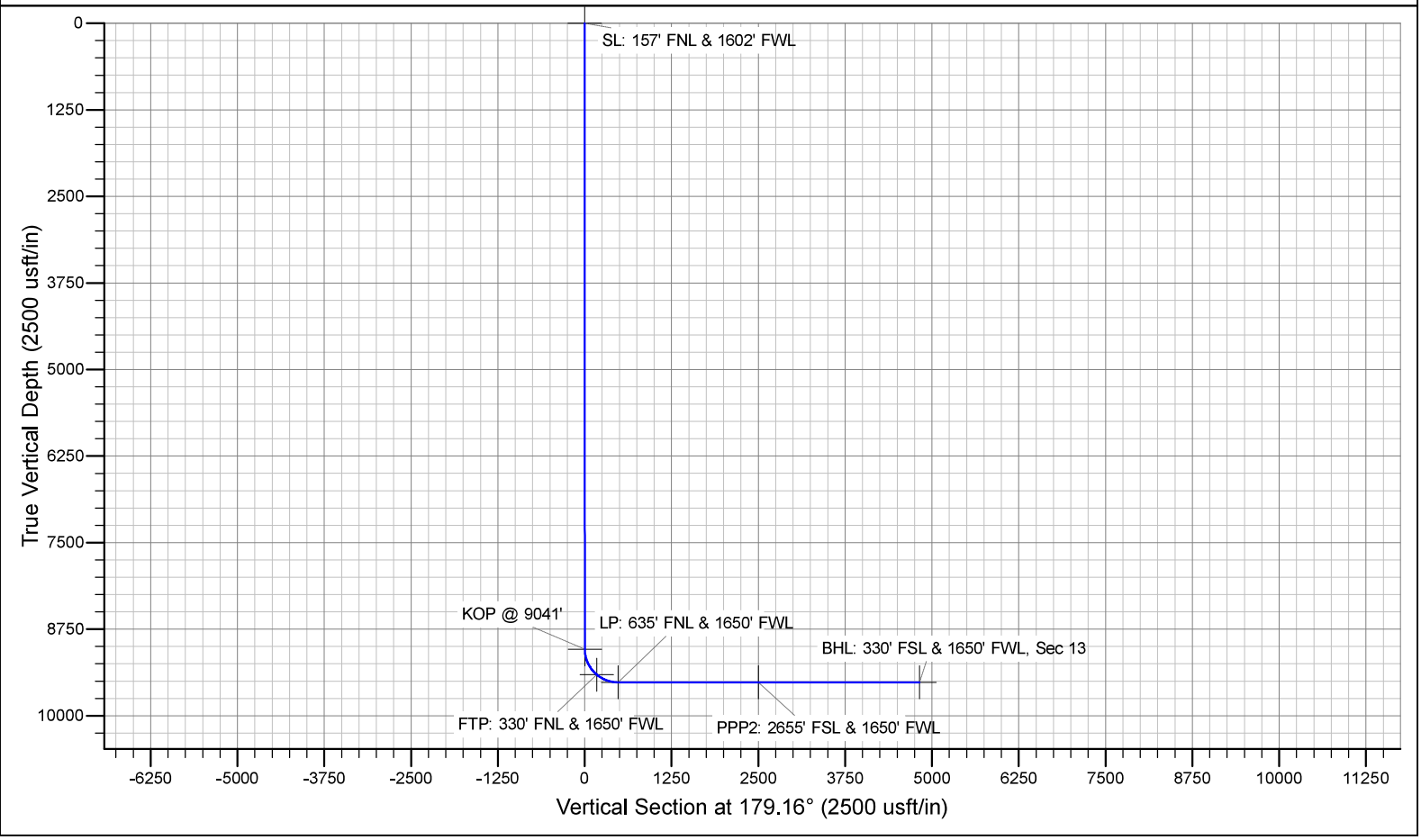
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
LP: 635' FNL & 1650' FWL									
9,800.0	89.99	179.73	9,518.0	-487.7	50.3	488.4	0.06	0.06	0.00
9,900.0	89.99	179.73	9,518.0	-587.7	50.8	588.4	0.00	0.00	0.00
10,000.0	89.99	179.73	9,518.0	-687.7	51.3	688.4	0.00	0.00	0.00
10,100.0	89.99	179.73	9,518.1	-787.7	51.8	788.4	0.00	0.00	0.00
10,200.0	89.99	179.73	9,518.1	-887.7	52.2	888.4	0.00	0.00	0.00
10,300.0	89.99	179.73	9,518.1	-987.7	52.7	988.4	0.00	0.00	0.00
10,400.0	89.99	179.73	9,518.1	-1,087.7	53.2	1,088.4	0.00	0.00	0.00
10,500.0	89.99	179.73	9,518.2	-1,187.7	53.7	1,188.4	0.00	0.00	0.00
10,600.0	89.99	179.73	9,518.2	-1,287.7	54.1	1,288.4	0.00	0.00	0.00
10,700.0	89.99	179.73	9,518.2	-1,387.7	54.6	1,388.4	0.00	0.00	0.00
10,800.0	89.99	179.73	9,518.2	-1,487.7	55.1	1,488.4	0.00	0.00	0.00
10,900.0	89.99	179.73	9,518.3	-1,587.7	55.6	1,588.4	0.00	0.00	0.00
11,000.0	89.99	179.73	9,518.3	-1,687.7	56.0	1,688.4	0.00	0.00	0.00
11,100.0	89.99	179.73	9,518.3	-1,787.7	56.5	1,788.4	0.00	0.00	0.00
11,200.0	89.99	179.73	9,518.3	-1,887.7	57.0	1,888.4	0.00	0.00	0.00
11,300.0	89.99	179.73	9,518.3	-1,987.7	57.5	1,988.4	0.00	0.00	0.00
11,400.0	89.99	179.73	9,518.4	-2,087.7	58.0	2,088.4	0.00	0.00	0.00
11,500.0	89.99	179.73	9,518.4	-2,187.7	58.4	2,188.3	0.00	0.00	0.00
11,600.0	89.99	179.73	9,518.4	-2,287.7	58.9	2,288.3	0.00	0.00	0.00
11,700.0	89.99	179.73	9,518.4	-2,387.7	59.4	2,388.3	0.00	0.00	0.00
11,800.0	89.99	179.73	9,518.5	-2,487.7	59.9	2,488.3	0.00	0.00	0.00
11,811.3	89.99	179.73	9,518.5	-2,499.0	59.9	2,499.6	0.00	0.00	0.00
PPP2: 2655' FSL & 1650' FWL									
11,900.0	89.99	179.73	9,518.5	-2,587.7	60.3	2,588.3	0.00	0.00	0.00
12,000.0	89.99	179.73	9,518.5	-2,687.7	60.8	2,688.3	0.00	0.00	0.00
12,100.0	89.99	179.73	9,518.5	-2,787.7	61.3	2,788.3	0.00	0.00	0.00
12,200.0	89.99	179.73	9,518.6	-2,887.7	61.8	2,888.3	0.00	0.00	0.00
12,300.0	89.99	179.73	9,518.6	-2,987.7	62.2	2,988.3	0.00	0.00	0.00
12,400.0	89.99	179.73	9,518.6	-3,087.7	62.7	3,088.3	0.00	0.00	0.00
12,500.0	89.99	179.73	9,518.6	-3,187.7	63.2	3,188.3	0.00	0.00	0.00
12,600.0	89.99	179.73	9,518.6	-3,287.7	63.7	3,288.3	0.00	0.00	0.00
12,700.0	89.99	179.73	9,518.7	-3,387.7	64.2	3,388.3	0.00	0.00	0.00
12,800.0	89.99	179.73	9,518.7	-3,487.7	64.6	3,488.3	0.00	0.00	0.00
12,900.0	89.99	179.73	9,518.7	-3,587.7	65.1	3,588.3	0.00	0.00	0.00
13,000.0	89.99	179.73	9,518.7	-3,687.7	65.6	3,688.3	0.00	0.00	0.00
13,100.0	89.99	179.73	9,518.8	-3,787.7	66.1	3,788.3	0.00	0.00	0.00
13,200.0	89.99	179.73	9,518.8	-3,887.7	66.5	3,888.3	0.00	0.00	0.00
13,300.0	89.99	179.73	9,518.8	-3,987.7	67.0	3,988.3	0.00	0.00	0.00
13,400.0	89.99	179.73	9,518.8	-4,087.7	67.5	4,088.3	0.00	0.00	0.00
13,500.0	89.99	179.73	9,518.9	-4,187.7	68.0	4,188.2	0.00	0.00	0.00
13,600.0	89.99	179.73	9,518.9	-4,287.7	68.5	4,288.2	0.00	0.00	0.00
13,700.0	89.99	179.73	9,518.9	-4,387.7	68.9	4,388.2	0.00	0.00	0.00
13,800.0	89.99	179.73	9,518.9	-4,487.7	69.4	4,488.2	0.00	0.00	0.00
13,900.0	89.99	179.73	9,518.9	-4,587.7	69.9	4,588.2	0.00	0.00	0.00
14,000.0	89.99	179.73	9,519.0	-4,687.7	70.4	4,688.2	0.00	0.00	0.00
14,100.0	89.99	179.73	9,519.0	-4,787.7	70.8	4,788.2	0.00	0.00	0.00
14,134.3	89.99	179.73	9,519.0	-4,822.0	71.0	4,822.5	0.00	0.00	0.00
BHL: 330' FSL & 1650' FWL, Sec 13									

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Malaga 13 B3CN Fed Com #3H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2919.0usft (Original Well Elev)
Site:	Malaga 13 B3CN Fed Com #3H	**North Reference:**	Grid
Well:	Sec 13, T25S, R28E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330' FSL & 1650' FWL		
Design:	Design #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 157' FNL & 1602' FV - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	413,687.00	630,818.00	32.1369742	-104.0442454
KOP @ 9041' - plan hits target center - Point	0.00	0.01	9,040.5	-1.0	48.0	413,686.00	630,866.00	32.1369711	-104.0440903
FTP: 330' FNL & 1650' F - plan hits target center - Point	0.00	0.00	9,407.5	-173.0	48.8	413,514.00	630,866.82	32.1364983	-104.0440891
LP: 635' FNL & 1650' FV - plan hits target center - Point	0.00	0.00	9,518.0	-478.3	50.3	413,208.70	630,868.30	32.1356591	-104.0440870
PPP2: 2655' FSL & 165(- plan misses target center by 0.3usft at 11811.3usft MD (9518.5 TVD, -2499.0 N, 59.9 E) - Point	0.00	0.00	9,518.5	-2,499.0	60.2	411,188.00	630,878.25	32.1301043	-104.0440724
BHL: 330' FSL & 1650' F - plan hits target center - Point	0.00	0.00	9,519.0	-4,822.0	71.0	408,865.00	630,889.00	32.1237185	-104.0440578


Malaga 13 B3CN Fed Com #3H
SL: 157' FNL & 1602' FWL
Sec 13
KOP @ 9041'
FTP: 330' FNL & 1650' FWL
LP: 635' FNL & 1650' FWL
PPP2: 2655' FSL & 1650' FWL
Hard Lines
BHL: 330' FSL & 1650' FWL, Sec 13
South(-)/North(+) (1500 usft/in)
West(-)/East(+) (1500 usft/in)


SL: 157' FNL & 1602' FWL
KOP @ 9041'
LP: 635' FNL & 1650' FWL
BHL: 330' FSL & 1650' FWL, Sec 13
FTP: 330' FNL & 1650' FWL
PPP2: 2655' FSL & 1650' FWL
True Vertical Depth (2500 usft/in)
Vertical Section at 179.16° (2500 usft/in)

Mewbourne Oil Company Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

1. Geologic Formations

TVD of target	9519'	Pilot hole depth	NA
MD at TD:	14,134'	Deepest expected fresh water:	75'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler		Water	
Top Salt			
Castile	1200		
Base Salt	2425		
Yates		Oil/Gas	
Seven Rivers			
Queen			
Lamar	2641	Oil/Gas	
Bell Canyon	2680	Oil/Gas	
Cherry Canyon	3570	Oil/Gas	
Manzanita Marker	3685		
Brushy Canyon	4820	Oil/Gas	
Bone Spring	6385	Oil/Gas	
1st Bone Spring Sand	7285		
2nd Bone Spring Sand	8110		
3rd Bone Spring Sand	9200	Target Zone	
Abo			
Wolfcamp			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company Malaga 13 B3CN Fed Com #3H
Sec 13, T25S, R28E
SL: 157' FNL & 1602' FWL
BHL: 330' FSL & 1650' FWL

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'	410'	13.375"	48	H40	STC	4.01	9.02	16.36	27.49
12.25"	0'	2565'	9.625"	36	J55	LTC	1.51	2.64	4.91	6.11
8.75"	0'	9791'	7"	26	P110	LTC	1.66	2.12	2.53	3.26
6.125"	9041'	14,134'	4.5"	13.5	P110	LTC	2.16	2.51	4.78	5.96
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?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N

If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	150	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.	370	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	320	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 @ 3685'						
Prod. Stg 2	60	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	215	11.2	2.97	17	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, etc.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	2365'	25%
Liner	9042'	25%

4. Pressure Control Equipment

	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'	410'	Spud Mud	8.6-8.8	28-34	N/C
410'	2565'	BW	10.0	28-34	N/C
2565'	9041'	FW w/ Polymer	8.6-9.7	28-34	N/C
9041'	9519'	OBM	8.6-10.0	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.

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.	
X	Will run GR/CNL from KOP (9042') 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

Additional logs planned	Interval

X	Gamma Ray	9042' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4950 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

Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Malaga 13 B3CN Fed Com	3H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	13	25S	28E		110	N	1650	W	Eddy

Latitude	Longitude	NAD
32.1369711	-104.0440903	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	13	25S	28E		330	N	1650	W	Eddy

Latitude	Longitude	NAD
32.1364983	-104.0440891	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	13	25S	28E		330	S	1650	W	Eddy

Latitude	Longitude	NAD
32.1237185	-104.0440578	83

Is this well the defining well for the Horizontal Spacing Unit? [ ]

Is this well an infill well? [Y]

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

API #
30-015-40974

Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Malaga 13 CN Fed Com	1H