# NM OIL CONSERVATION

ARTESIA DISTRICT

Form 3160 -3 (March 2012)

SEP 26 2017

FORM APPROVED OMB No. 1004-0137 Expires October 31, 2014

DEPARTMENT OF THE BUREAU OF LAND MA	INTERIOR	RECEIVED	)	5. Lease Serial No. NMNM 11038		
APPLICATION FOR PERMIT TO		REENTER		6. If Indian, Allotee or	Tribe Name	
la. Type of work: DRILL REEN	TER			7. If Unit or CA Agreen	nent, Name and No.	
lb. Type of Well: Oil Well Gas Well Other	Sin	gle Zone	ole Zone	8. Lease Name and We FULLER 14/11 W1E	II No. D FED 1H 3196	
2. Name of Operator MEWBOURNE OIL COMPANY	14	1744		9. API Well No.	-44448	
3a. Address PO Box 5270 Hobbs NM 88240	3b. Phone No. (575)393-59	(înclude area code) 905		10. Field and Pool, or Ex PURPLE-SAGE WO	ploratory	
4. Location of Well (Report location clearly and in accordance with	any State requireme	nts.*)		11. Sec., T. R. M. or Blk.	and Survey or Area	
At surface SWNW / 2600 FNL / 500 FWL / LAT 32.04	22791 / LONG -	-103.9614428		SEC 14 / T26S / R29	E / NMP	
At proposed prod. zone NWNW / 330 FNL / 440 FWL / L.	AT 32.063228 /	LONG -103.9614	603			
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>miles</li> </ol>				12. County or Parish EDDY	13. State NM	
15. Distance from proposed* location to nearest 330 feet property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of ac 1240	res in lease	17. Spacii 480	ng Unit dedicated to this we	11	
<ol> <li>Distance from proposed location* to nearest well, drilling, completed, 50 feet applied for, on this lease, ft.</li> </ol>	19. Proposed 10407 feet	Depth / 17739 feet	20. BLM/ FED: N	BIA Bond No. on file M1693		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22 Approxim	nate date work will sta	rt*	23. Estimated duration		
2937 feet	10/07/2017	?		60 days		
	24. Attac	hments				
The following, completed in accordance with the requirements of Ons	shore Oil and Gas (	Order No.1, must be a	ttached to the	nis form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Systes SUPO must be filed with the appropriate Forest Service Office).</li> </ol>		Item 20 above). 5. Operator certific 6. Such other site	cation	ons unless covered by an exportance of the control	·	
25. Signature	Name	BLM. (Printed/Typed)		Tr	late	
(Electronic Submission)		ey Bishop / Ph: (57	75)393-59	1	07/28/2017	
Title Regulatory						
Approved by (Signature)		(Printed/Typed)		i i	Date	
(Electronic Submission)		_ayton / Ph: (575)2	234 <b>-</b> 5959		09/14/2017	
litle Supervisor Multiple Resources	Office CARL	SBAD				
Application approval does not warrant or certify that the applicant he conduct operations thereon. Conditions of approval, if any, are attached.			its in the su	bject lease which would ent	itle the applicant to	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations	a crime for any pe as to any matter w	erson knowingly and thin its jurisdiction.	willfully to	make to any department or	agency of the United	

(Continued on page 2)

\*(Instructions on page 2)



NSP-Reguired Rul 9-28-17

# PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME: | Mewbourne Oil Co

LEASE NO.: | NM011038

WELL NAME & NO.: | Fuller 14-11 W1ED Federal – 1H

SURFACE HOLE FOOTAGE: | 2600'/N & 500'/W

BOTTOM HOLE FOOTAGE | 330'/N & 440'/W, sec. 11 LOCATION: | Sec. 14, T. 26 S, R. 29 E

COUNTY: Eddy County

## I. 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.

#### 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.

## II. DRILLING OPERATIONS 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,

Operator has proposed DV tool at depth of 4185', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

- a. First stage to DV tool:
- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.
- b. Second stage above DV tool:
- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
- D. The minimum required fill of cement behind the 4-1/2 inch production Liner is:
  - Cement as proposed by operator. Operator shall provide method of verification.
- E. 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.

#### IV. PRESSURE CONTROL

- A. 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.
- B. Variance approved to use flex line from BOP to choke manifold. 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. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

- C. 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.
- D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - 1. 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).
  - 2. 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 (18 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).
  - 3. 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.
  - 4. The results of the test shall be reported to the appropriate BLM office.
  - 5. 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.
  - 6. 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.

#### V. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

## PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME: Mewbourne Oil Co

LEASE NO.: | NM011038

WELL NAME & NO.: | Fuller 14-11 W1ED Federal – 1H

SURFACE HOLE FOOTAGE: | 2600'/N & 500'/W

BOTTOM HOLE FOOTAGE 330'/N & 440'/W, sec. 11

LOCATION: Section 14, T. 26 S., R. 29 E., NMPM

COUNTY: Eddy County, New Mexico

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

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## I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

#### II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

#### IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

#### **Phantom Bank Heronries**

Surface disturbance will not be allowed within up to 200 meters of active heronries or by delaying activity for up to 120 days, or a combination of both.

Exhaust noise from engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

## **Cave Karst**

\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

## **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

#### Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

## No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

#### **Pad Berming:**

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.

• Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

## Tank Battery Liners and Berms:

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

## Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

## **Automatic Shut-off Systems:**

Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

## Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

## **Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

#### **Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

#### Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cavebearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

## **Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

## **Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

## Watershed

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

## VI. CONSTRUCTION

#### A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

#### B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

#### C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

## E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## F. EXCLOSURE FENCING (CELLARS & PITS)

#### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

#### G. ON LEASE ACCESS ROADS

#### Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

## Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

## Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

#### Ditching

Ditching shall be required on both sides of the road.

#### **Turnouts**

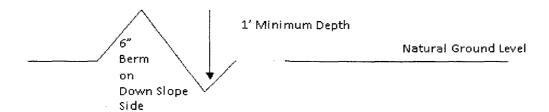
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

## Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

## Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 
$$\frac{400'}{40\%} + 100' = 200'$$
 lead-off ditch interval

## Cattle guards

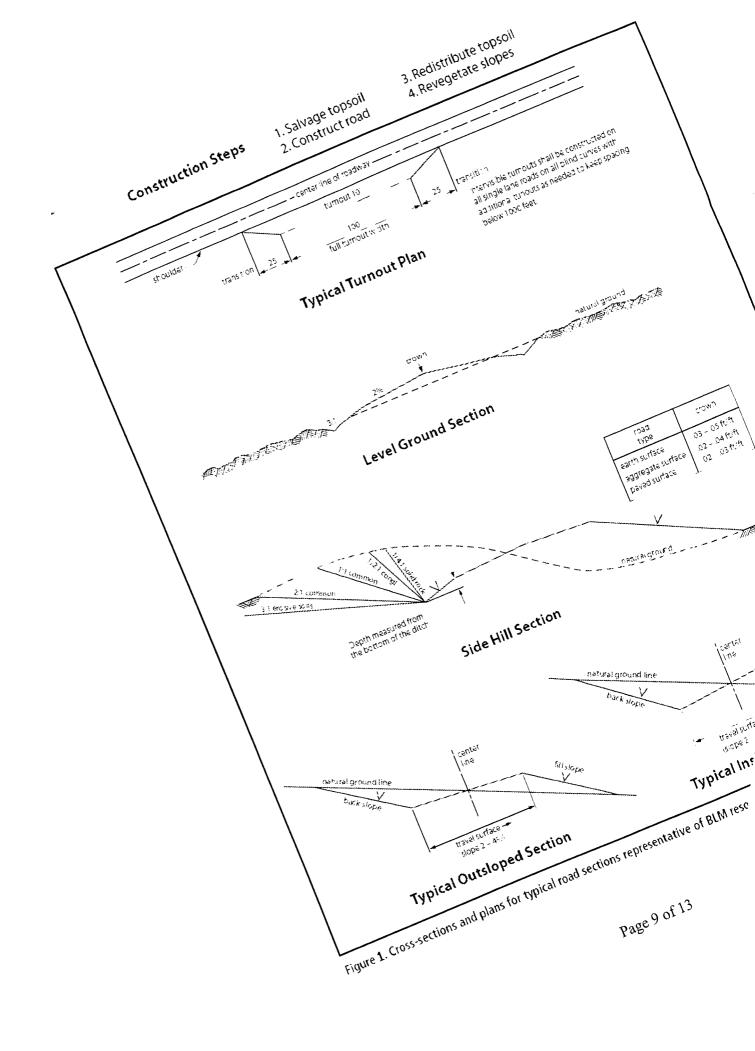
An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

## Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

## **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.



## VII. PRODUCTION (POST DRILLING)

#### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

## **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

## Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

## **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

#### VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

#### IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

#### Seed Mixture 3, for Shallow Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Species	lb/acre
Plains Bristlegrass (Setaria macrostachya)	1.0
Green Sprangletop (Leptochloa dubia)	2.0
Sideoats Grama (Bouteloua curtipendula)	5.0

<sup>\*</sup>Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed



Email address:

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



## **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: 07/28/2017
Title: Regulatory		
Street Address: PO Box 5270		
City: Hobbs	State: NM	<b>Zip:</b> 88240
Phone: (575)393-5905		
Email address: bbishop@mewbou	rne.com	
Field Representative		
Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		

## ≇AFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT Application Data Report 09/18/2017

APD ID: 10400017483

Submission Date: 07/28/2017

Highlighted data reflects the most

Operator Name: MEWBOURNE OIL COMPANY

Well Number: 1H

recent changes

Well Name: FULLER 14/11 W1ED FED

**Show Final Text** 

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

#### Section 1 - General

APD ID:

10400017483

Tie to previous NOS?

Submission Date: 07/28/2017

**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: NMNM 11038

Lease Acres: 1240

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:

Fuller14\_11W1EDFed1H operatorletterofdesignation 07-28-2017.pdf

## **Operator Info**

Operator Organization Name: MEWBOURNE OIL COMPANY

Operator Address: PO Box 5270

**Operator PO Box:** 

Zip: 88240

Operator City: Hobbs

State: NM

Operator Phone: (575)393-5905

**Operator Internet Address:** 

#### Section 2 - Well Information

Well in Master Development Plan? NO

Mater Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Field Name: PURPLE-SAGE

Well Name: FULLER 14/11 W1ED FED

Well Number: 1H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Pool Name: WOLFCAMP

WOLFCAMP GAS

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

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? YES New surface disturbance? Y

Type of Well Pad: MULTIPLE WELL Multiple Well Pad Name: Number: 8

Well Class: HORIZONTAL

FULLER 14/23 & FULLER 14/11

WELL PAD
Number of Legs:

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: APPRAISAL

Describe sub-type:

Distance to town: 25 Miles Distance to nearest well: 50 FT Distance to lease line: 330 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: Fuller14\_11W1EDFederal1H\_wellplat\_07-28-2017.pdf

Well work start Date: 10/07/2017 Duration: 60 DAYS

## Section 3 - Well Location Table

Survey Type: RECTANGULAR

**Describe Survey Type:** 

Datum: NAD83 Vertical Datum: NAVD88

Survey number:

	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	DVT
SHL Leg #1	260 0	FNL	500	FWL	26S	29E	14	Aliquot SWN W	32.04227 91	- 103.9614 428	EDD Y	MEXI	NEXI CO	F	NMNM 11038	293 7	0	0
} {	260 0	FNL	500	FWL	26S	29E	14	Aliquot SWN W	32.04227 91	- 103.9614 428	EDD Y	MEXI	IALA	F	NMNM 11038	- 685 5	979 2	979 2
PPP Leg #1	236 1	FNL	499	FWL	26S	29E	14	Aliquot SWN W	32.04300 1	- 103.9618 96	EDD Y	NEW MEXI CO	145-44	F	NMNM 11038	- 735 5	104 00	102 92

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

	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	DΛΤ
PPP	0	FSL	499	FWL	26S	29E	11	Aliquot	32.04943	(	EDD	!		F	MMMM	-	128	103
Leg		<u> </u>				}		SWS	6	103.9618	Y		MEXI		121953	744	00	77
#1								W		28		co	СО			U		
EXIT	330	FNL	440	FWL	26S	29E	11	Aliquot	32.06322	-	EDD	NEW	NEW	F	NMNM	-	177	104
Leg								NWN	8	103.9614	Υ	MEXI	MEXI		121953	747	39	07
#1	1							w		603		co	co			0		
BHL	330	FNL	440	FWL	26S	29E	11	Aliquot	32.06322	-	EDD	NEW	NEW	F	NMNM	-	177	104
Leg						{		NWN	8	103.9614	Υ	MEXI	MEXI		121953	747	39	07
#1								W		603		CO	co			0		

## United States Department of the Interior Bureau of Land Management Carlsbad Field Office 620 E Greene Street Carlsbad, New Mexico 88201-1287

## **Statement Accepting Responsibility for Operations**

Operator Name:

Mewbourne Oil Company

Street or Box:

P.O. Box 5270

City, State:

Hobbs, New Mexico

Zip Code:

88241

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number:

NMNM 11038, NMNM 121953

Legal Description of Land:

Section 14, T-26S, R-29E Eddy County, New Mexico.

Location @ 2600' FNL & 500' FWL

Formation (if applicable):

WOLFCAMP

Bond Coverage:

\$150,000

BLM Bond File:

NM1693 Nationwide, NMB - 000919

Approved by:

Name: Robin Terrell Title: District Manager Date: 07-28-2017

## **TAFMSS**

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



APD ID: 10400017483

Submission Date: 07/28/2017

Highlighted data reflects the most

Operator Name: MEWBOURNE OIL COMPANY

Well Number: 1H

recent changes
Show Final Text

Well Name: FULLER 14/11 W1ED FED
Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation	Pro Alexandra	F1	True Vertical	ì	}	Marian Barana	Producing
ID 17691	Formation Name UNKNOWN	Elevation 2937	Depth 27	Depth 27	Lithologies	Mineral Resources NONE	No
17091	UNKNOWN	2937	21	21		NONE	NO
17746	RUSTLER	2407	530	530	DOLOMITE,ANHY DRITE	USEABLE WATER	No
18574	SALADO	1612	1325	1325	SALT	NONE	No
17762	CASTILE	1422	1515	1515	SALT	NONE	No
17722	BASE OF SALT	108	2830	2830	SALT	NONE	No
17719	LAMAR	-92	3030	3030	LIMESTONE	NATURAL GAS,OIL	No
15332	BELL CANYON	-122	3060	3060	SANDSTONE	NATURAL GAS,OIL	No
15316	CHERRY CANYON	-997	3935	3935	SANDSTONE	NATURAL GAS,OIL	No
17766	MANZANITA	-1167	4105	4105		NONE	No
17713	BRUSHY CANYON	-2257	5195	5195	SANDSTONE	NATURAL GAS,OIL	No
17688	BONE SPRING	-3822	6760	6760	LIMESTONE,SHAL E	NATURAL GAS,OIL	No
15338	BONE SPRING 1ST	-4787	7725	7725	SANDSTONE	NATURAL GAS,OIL	No
17737	BONE SPRING 2ND	-5337	8275	8275	SANDSTONE	NATURAL GAS,OIL	. No
17738	BONE SPRING 3RD	-6678	9615	9615	SANDSTONE	NATURAL GAS,OIL	No
17709	WOLFCAMP	-7023	9960	9960	LIMESTONE,SHAL E,SANDSTONE	NATURAL GAS,OIL	Yes

## Section 2 - Blowout Prevention

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

Pressure Rating (PSI): 5M Rating Depth: 17750

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 are not required by manufacturer. A multibowl wellhead is being used. See attached schematic.

Testing Procedure: Test Annular to 2500# Test BOPE to 5000#

## **Choke Diagram Attachment:**

Fuller\_14\_11\_W1ED\_Fed\_1H\_5M\_BOPE\_Choke\_Diagram\_07-27-2017.pdf

#### **BOP Diagram Attachment:**

Fuller\_14\_11\_W1ED\_Fed\_1H\_5M\_BOPE\_Schematic\_07-27-2017.pdf Fuller\_14\_11\_W1ED\_Fed\_1H\_Multi\_Bowl\_WH\_07-27-2017.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	2	0	555	0	555	-6855	-7410	555	H-40	48	STC	2.96	6.65	DRY	12.0 9	DRY	20.3
t	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	2955	0	2955	-6855	-9810	2955	J <b>-</b> 55	36	LTC	1.31	2.29	DRY	4.26	DRY	5.3
1	PRODUCTI ON	8.75	7.0	NEW	API	N	0	10500	0	10333	-6855	- 17188	10500	P- 110	26	LTC	1.53	1.96	DRY	2.38	DRY	3.04
4	LINER	6.12 5	4.5	NEW	API	N	9792	17750	9792	10407	1	- 17262		P- 110	13.5	LTC	1,52	1,76	DRY	3.15	DRY	3.93

## **Casing Attachments**

**Casing Attachments** Casing ID: 1 String Type: SURFACE Inspection Document: **Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Fuller\_14\_11\_W1ED\_Fed\_1H\_Csg\_Assumptions\_07-27-2017.pdf Casing ID: 2 String Type: INTERMEDIATE Inspection Document: **Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Fuller\_14\_11\_W1ED\_Fed\_1H\_Csg\_Assumptions\_07-28-2017.pdf Casing ID: 3 String Type: PRODUCTION Inspection Document: **Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Fuller\_14\_11\_W1ED\_Fed\_1H\_Csg\_Assumptions\_07-28-2017.pdf

Well Number: 1H

Operator Name: 'MEWBOURNE OIL COMPANY

Well Name: FULLER 14/11 W1ED FED

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

## **Casing Attachments**

Casing ID: 4

String Type:LINER

Inspection Document:

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Fuller\_14\_11\_W1ED\_Fed\_1H\_Csg\_Assumptions\_07-28-2017.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	363	240	2.12	12.5	509	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		363	555	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead	,	0	2306	445	2.12	12.5	943	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		2306	2955	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	4105	2755	3440	65	2.12	12.5	138	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		3440	4105	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	4105	4105	8013	350	2.12	12.5	742	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		8013	1050 0	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		9792	1775 0	325	2.97	11.2	965	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

## **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 (Ibs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	Н	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	555	SPUD MUD	8.6	8.8							
555	2955	SALT SATURATED	10	10							
2955	9792	WATER-BASED MUD	8.6	9.7							
9792	1040 7	OIL-BASED MUD	10	13							Mud weight up to 13 ppg may be required for shale control. The highest mud weight needed to balance formation is expected to be 12 ppg.

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (9792') 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

Section 7 - Pressure

**Anticipated Bottom Hole Pressure: 6494** 

**Anticipated Surface Pressure: 4194.55** 

Anticipated Bottom Hole Temperature(F): 165

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:

Fuller\_14\_11\_W1ED\_Fed\_1H\_H2S\_Plan\_07-28-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

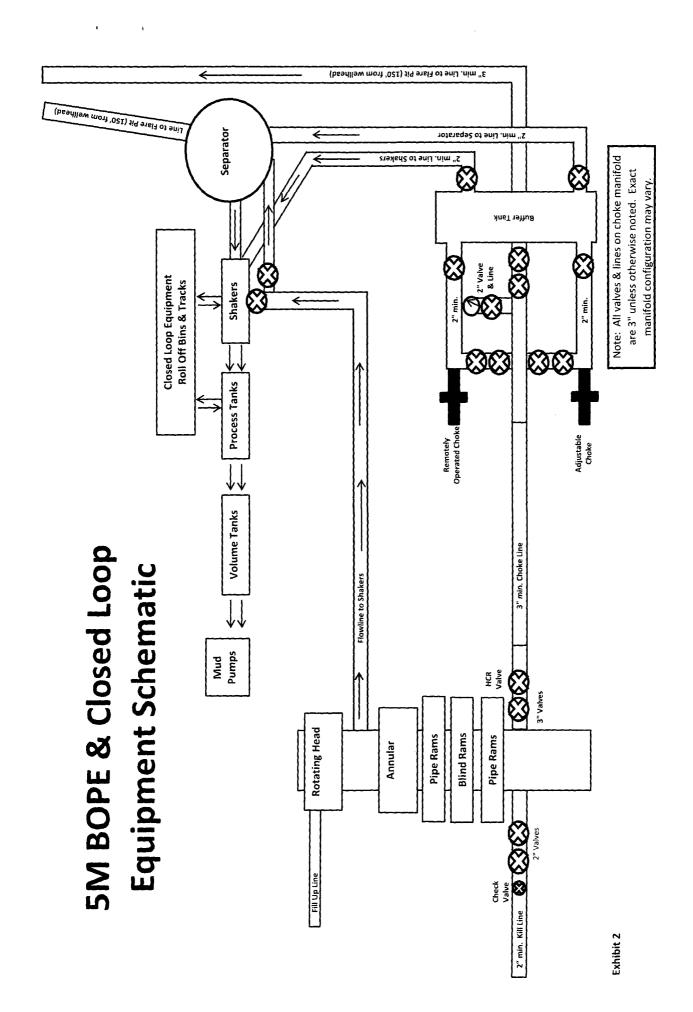
Fuller\_14\_11\_W1ED\_Fed\_1H\_Dir\_Plot\_07-28-2017.pdf Fuller\_14\_11\_W1ED\_Fed\_1H\_Dir\_Plan\_07-28-2017.pdf

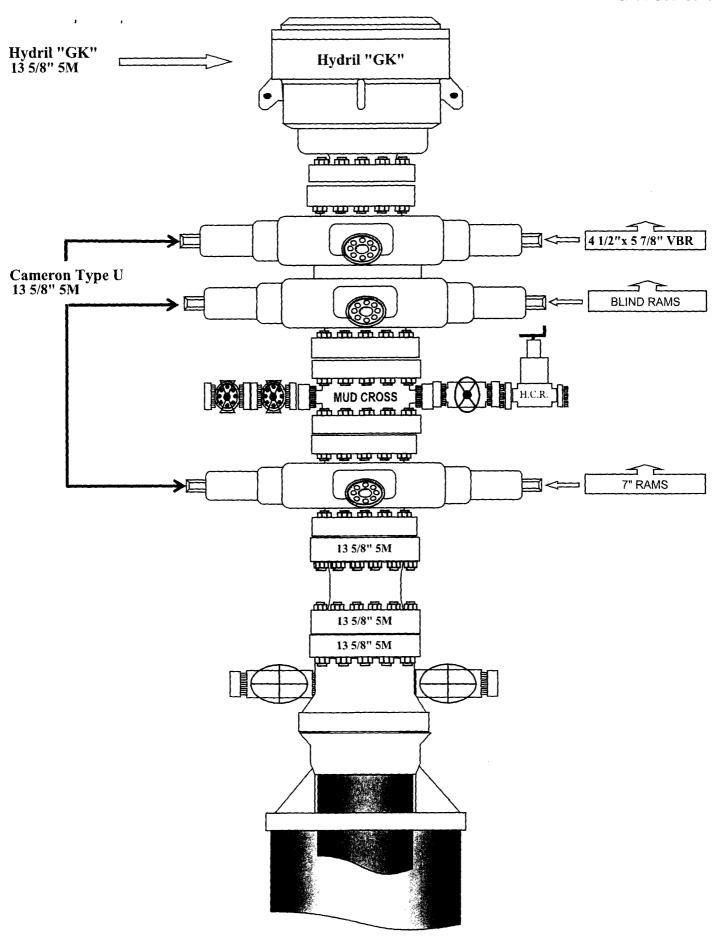
Other proposed operations facets description:

Other proposed operations facets attachment:

Fuller\_14\_11\_W1ED\_Fed\_1H\_Drlg\_Program\_07-28-2017.doc

Other Variance attachment:

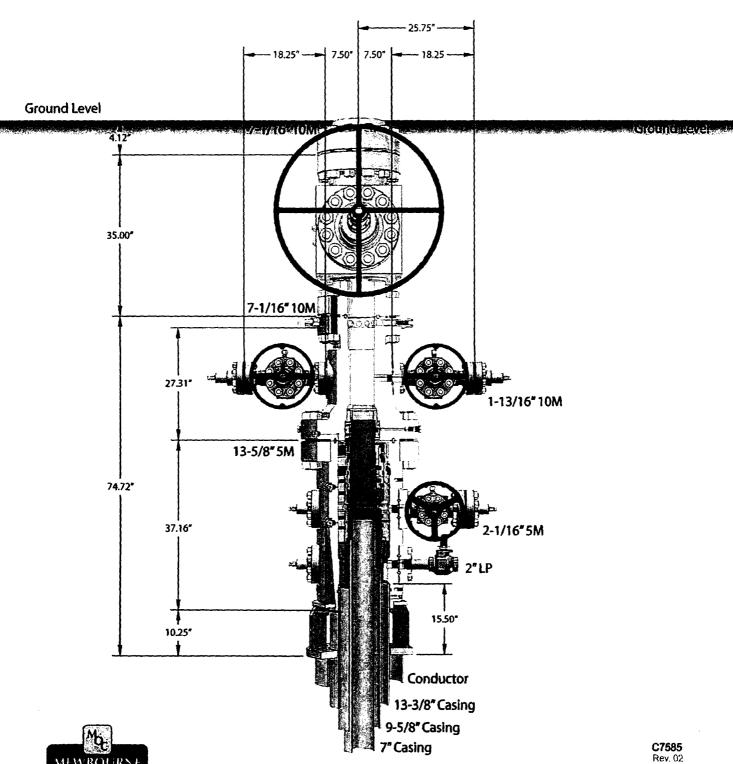




# **CAMERON**

A Schlümberger Company

# 13-5/8" MN-DS Wellhead System



Caffing Hange 57" conductor cut-off

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

## Mewbourne Oil Company, Fuller 14/11 W1ED Fed #1H Sec 14, T26S, R29E

SL: 2600' FNL & 500' FWL, Sec 14 BHL: 330' FNL & 440' FWL, Sec 11

## **Casing Program**

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	555'	13.375"	48	H40	STC	2.96	6.65	12.09	20.31
12.25"	0'	2955'	9.625"	36	J55	LTC	1.31	2.29	4.26	5.30
8.75"	0'	10500'	7"	26	HCP110	LTC	1.53	1.96	2.38	3.04
6.125"	9792'	17750'	4.5"	13.5	P110	LTC	1.52	1.76	3.15	3.93
				BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

	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 3 <sup>rd</sup> 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 2 <sup>nd</sup> 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, Fuller 14/11 W1ED Fed #1H Sec 14, T26S, R29E

SL: 2600' FNL & 500' FWL, Sec 14 BHL: 330' FNL & 440' FWL, Sec 11

## **Casing Program**

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	555'	13.375"	48	H40	STC	2.96	6.65	12.09	20.31
12.25"	0'	2955'	9.625"	36	J55	LTC	1.31	2.29	4.26	5.30
8.75"	0'	10500'	7"	26	HCP110	LTC	1.53	1.96	2.38	3.04
6.125"	9792'	17750'	4.5"	13.5	P110	LTC	1.52	1.76	3.15	3.93
<del></del>				BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
				}		Factor			1.8 Wet	1.8 Wet

	Y or N					
Is casing new? If used, attach certification as required in Onshore Order #1						
Is casing API approved? If no, attach casing specification sheet.						
Is premium or uncommon casing planned? If yes attach casing specification sheet.						
Does the above casing design meet or exceed BLM's minimum standards? If not provide						
justification (loading assumptions, casing design criteria).						
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y					
collapse pressure rating of the casing?						
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 3 <sup>rd</sup> 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 2 <sup>nd</sup> 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, Fuller 14/11 W1ED Fed #1H

Sec 14, T26S, R29E

SL: 2600' FNL & 500' FWL, Sec 14 BHL: 330' FNL & 440' FWL, Sec 11

## **Casing Program**

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	555'	13.375"	48	H40	STC	2.96	6.65	12.09	20.31
12.25"	0'	2955'	9.625"	36	J55	LTC	1.31	2.29	4.26	5.30
8.75"	0'	10500'	7"	26	HCP110	LTC	1.53	1.96	2.38	3.04
6.125"	9792'	17750'	4.5"	13.5	P110	LTC	1.52	1.76	3.15	3.93
	<del></del>			BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

	Y or N				
Is casing new? If used, attach certification as required in Onshore Order #1					
Is casing API approved? If no, attach casing specification sheet.					
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).					
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y				
collapse pressure rating of the casing?					
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 3 <sup>rd</sup> 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?					
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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?					
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If yes, are there three strings cemented to surface?					

## Mewbourne Oil Company, Fuller 14/11 W1ED Fed #1H Sec 14, T26S, R29E

SL: 2600' FNL & 500' FWL, Sec 14 BHL: 330' FNL & 440' FWL, Sec 11

## **Casing Program**

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	555'	13.375"	48	H40	STC	2.96	6.65	12.09	20.31
12.25"	0'	2955'	9.625"	36	J55	LTC	1.31	2.29	4.26	5.30
8.75"	0'	10500'	7"	26	HCP110	LTC	1.53	1.96	2.38	3.04
6.125"	9792'	17750'	4.5"	13.5	P110	LTC	1.52	1.76	3.15	3.93
			BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry	
				į		Factor	{		1.8 Wet	1.8 Wet

	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
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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
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Is 2 <sup>nd</sup> 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?	

## 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:

- 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.
- 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. <u>Visual Warning Systems</u>

- 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.

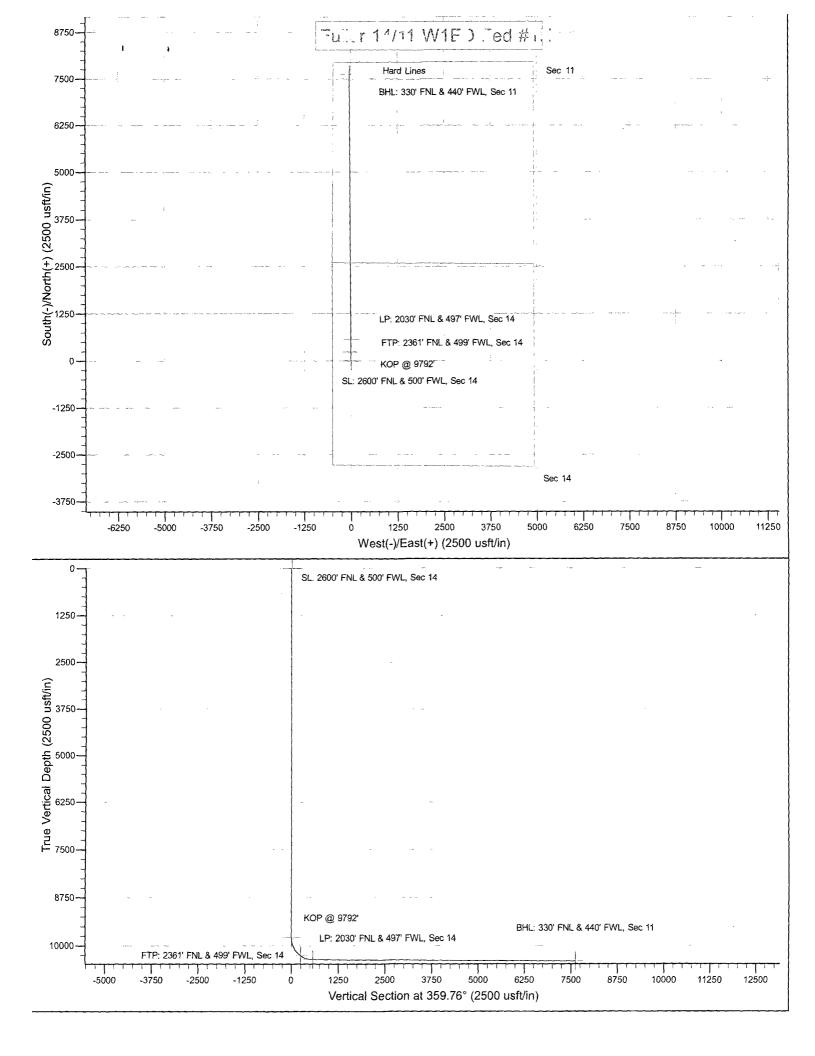
# 7. Well Testing

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	r of Carlsbad 575-492-5000

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



# **Mewbourne Oil Company**

Eddy County, New Mexico NAD 83 Fuller 14/11 W1ED Fed #1H

Sec 14, T26S, R29E

SL: 2600' FNL & 500' FWL, Sec 14 BHL: 330' FNL & 440' FWL, Sec 11

Plan: Design #1

# **Standard Planning Report**

27 July, 2017

Database:

Hobbs

Company:

Project:

Mewbourne Oil Company Eddy County, New Mexico NAD 83

Site:

Fuller 14/11 W1ED Fed #1H

Well: Wellbore: Sec 14, T26S, R29E

Design:

BHL: 330' FNL & 440' FWL, Sec 11

Design #1

Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference: MD Reference:

North Reference:

Site Fuller 14/11 W1ED Fed #1H

WELL @ 2964.0usft (Original Well Elev) WELL @ 2964.0usft (Original Well Elev)

Grid

Minimum Curvature

Project

Eddy County, New Mexico NAD 83

Map System: Geo Datum:

US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone

System Datum:

Mean Sea Level

Map Zone:

Site

Fuller 14/11 W1ED Fed #1H

Site Position: From:

Мар

Northing: Easting:

379,318.00 usft 656,567.00 usft

Latitude:

Longitude:

32° 2' 32.207 N 103° 57' 41.189 W

Position Uncertainty:

Stot Radius: 0.0 usft

13-3/16"

2,964.0 usft

Grid Convergence:

0.20°

Well

Sec 14, T26S, R29E

**Well Position** 

**Position Uncertainty** 

+N/-S +E/-W 0.0 usft 0.0 usft

0.0 usft

Northing: Easting:

379,318.00 usft 656,567.00 usft Latitude: Longitude:

Ground Level:

32° 2' 32,207 N

103° 57' 41.189 W 2,937.0 usft

Wellbore

BHL: 330' FNL & 440' FWL, Sec 11

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

7/27/2017

Wellhead Elevation:

7,00

59.80

47,859

Design

Design #1

**Audit Notes:** 

Version:

Phase:

**PROTOTYPE** 

Tie On Depth:

0.0

Vertical Section:

Depth From (TVD) (usft)

0.0

+N/-S (usft) 0.0

+E/-W (usft) 0.0

Direction (°) 359.76

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	
9,792.0	0.00	0.00	9,792.0	0.0	0.0	0.00	0.00	0.00	0.00 (	KOP @ 9792'
10,688.6	89.66	359.76	10,365,0	569.6	-2.4	10.00	10.00	0.00	-0.24	
17,739.3	89.66	359.76	10,407.0	7,620.0	-32.0	0.00	0.00	0.00	0.00	BHL: 330' FNL & 440'

Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site: Well: Fuller 14/11 W1ED Fed #1H

Wellbore:

Sec 14, T26S, R29E

Design:

BHL: 330' FNL & 440' FWL, Sec 11

Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Site Fuller 14/11 W1ED Fed #1H WELL @ 2964.0usft (Original Well Elev)

WELL @ 2964.0usft (Original Well Elev)

Grid

Minimum Curvature

# Planned Survey

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SL: 2600' FN	L & 500' FWL, S								
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
0.008	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	2,000.0	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
2,300.0	0.00	0.00	2,200.0	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	0.00 0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0 2,700.0	0.00	0.00	2,600.0	0.0 0.0	0.0 0.0	0.0	0.00 0.00	0.00 0.00	0.00 0.00
2,700.0	0.00	0.00	2,700.0 2,800.0	0.0		0.0		0.00	
2,900.0	0.00	0.00	2,800.0	0.0	0.0 0.0	0.0 0.0	00.00 00.00	0.00	0.00 0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00 0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0,00
3,200.0 3,300.0	0.00	0.00 0.00	3,200.0	0.0 0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,300.0 3,400.0	0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00 0.00	0.00 0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	00.0	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0 3,800.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00 0.00	0.00 0.00	3,800.0 3,900.0	0.0 0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00 0.00	0.00 0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0,00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	4.00
5,100.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site: Well: Fuller 14/11 W1ED Fed #1H

Wellbore: Design: Sec 14, T26S, R29E BHL: 330' FNL & 440' FWL, Sec 11

Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Site Fuller 14/11 W1ED Fed #1H

WELL @ 2964.0usft (Original Well Elev) WELL @ 2964.0usft (Original Well Elev)

Grid

Minimum Curvature

# Planned Survey

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00 0.00	0.00 0.00
5,800.0 5,900.0	0.00 0.00	0.00 0.00	5,800.0 5,900.0	0.0 0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0,0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	00,0	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0,00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900,0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0 7,900.0	0.00 0.00	0.00 0.00	7,800.0 7,900.0	0.0 0.0	0.0 0.0	0.0 0,0	0.00 0.00	0.00 0.00	0.00 0.00
8,000.0	0.00	0.00	0.000,8	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0,00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	0.008,8	0.0	0,0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00
9,792.0	0.00	0.00	9,792.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP @ 9792		2.55	-,,	•.•	2.0	2.3	2,20	5,50	0,00
9,800.0	0.80	359.76	9,800.0	0.1	0.0	0,1	10,00	10.00	0.00
9,900.0	10.80	359.76	9,899.4	10.1	0.0	10.1	10.00	10.00	0.00
10,000.0	20.80	359.76	9,995.5	37.3	-0.2	37.3	10.00	10.00	0.00
10,100.0	30.80	359.76	10,085.4	80.8	-0.3	80.8	10.00	10.00	0.00
10,200.0	40.80	359.76	10,166.4	139.2	-0.6	139.2	10.00	10.00	0.00
10,300,0	50.79	359.76	10,236.0	210.8	-0.9	210.8	10.00	10.00	0.00

Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site: Well: Fuller 14/11 W1ED Fed #1H Sec 14, T26S, R29E

Wellbore:

BHL: 330' FNL & 440' FWL, Sec 11

Design:

Design #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Site Fuller 14/11 W1ED Fed #1H

WELL @ 2964.0usft (Original Well Elev) WELL @ 2964.0usft (Original Well Elev)

Grid

Minimum Curvature

# Planned Survey

10,353.5   S. 15   S. 15   S. 16   S	Measured Depth	lu atiu atia n	A =:4b	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
19.335.5 \$4.35 \$35.75 10.257.6 239.0 -1.0 239.0 10.00 10.00 0.00   FFT: 2391 FNL 4892 FWL, Sec 14   10.200.0 0.75   359.76 10.239.2 233.4   -1.2 233.4 10.00 10.00 0.00   10.800.0 0.79 359.76 10.331.3 384.5 -1.6 384.5 10.00 10.00 0.00   10.800.2 83.60 359.76 10.355.0 569.6 -2.4 569.6 9.99 9.99 9.99 0.00   LP: 2030*FNL 4.897*FWL, Sec 14   10.700.0 83.60 359.76 10.355.0 569.6 -2.4 569.6 9.99 0.00 0.00   LP: 2030*FNL 4.897*FWL, Sec 14   10.700.0 83.60 359.76 10.356.7 680.9 -2.9 880.9 0.00 0.00 0.00   10.800.0 83.60 359.76 10.356.7 680.9 -2.9 880.9 0.00 0.00 0.00 0.00   10.800.0 83.60 359.76 10.356.7 680.9 -2.9 880.9 0.00 0.00 0.00 0.00   11.000.0 83.60 359.76 10.356.7 680.9 -2.9 880.9 0.00 0.00 0.00 0.00   11.000.0 83.60 359.76 10.366.3 760.9 -4.1 880.9 0.00 0.00 0.00 0.00   11.1000.0 83.60 359.76 10.366.0 10.89.9 -4.1 880.9 0.00 0.00 0.00 0.00   11.1000.0 83.60 359.76 10.368.0 10.89.9 -4.1 880.9 0.00 0.00 0.00 0.00   11.1000.0 83.60 359.76 10.368.0 10.89.9 -4.1 880.9 0.00 0.00 0.00 0.00   11.1000.0 83.60 359.76 10.368.6 1.180.9 -4.5 1.080.9 0.00 0.00 0.00 0.00   11.1000.0 83.60 359.76 10.368.6 1.180.9 -4.5 1.080.9 0.00 0.00 0.00 0.00   11.1000.0 83.60 359.76 10.368.2 1.180.9 -4.5 1.080.9 0.00 0.00 0.00 0.00   11.300.0 83.60 359.76 10.368.2 1.180.9 -4.5 1.280.9 0.00 0.00 0.00 0.00   11.300.0 83.60 359.76 10.370.0 1.180.9 0.00 0.00 0.00 0.00 0.00 0.00   11.300.0 83.60 359.76 10.370.9 2.170.9 0.00 0.00 0.00 0.00 0.00 0.00 0.00	•	Inclination (°)	Azimuth (°)							
10,500,0 60,79 \$59,76 10,292,2 293,4 1.12 293,4 10,00 10,00 0.00 10,500,0 70,79 \$59,76 10,353,1 384,5 -1.6 384,5 10,00 10,00 0.00 10,888,7 89,66 \$59,76 10,357,6 481,3 -2.0 481,3 10,00 10,00 0.00 10,888,7 89,66 \$59,76 10,357,6 481,3 -2.0 481,3 10,00 10,00 0.00 10,888,6 39,79 \$59,76 10,355,7 689,6 -2.4 569,8 9.99 9,99 0.00 0.00 10,889,6 359,76 10,365,1 580,9 -2.4 589,8 0.00 0.00 0.00 0.00 10,900 89,86 359,76 10,365,3 768,9 -3.3 780,9 0.00 0.00 0.00 0.00 11,000 89,86 359,76 10,367,5 980,9 -3.7 880,9 0.00 0.00 0.00 0.00 11,000 89,86 359,76 10,367,5 980,9 -3.7 880,9 0.00 0.00 0.00 0.00 11,000 89,86 359,76 10,367,5 980,9 -4.1 980,9 0.00 0.00 0.00 0.00 11,000 89,86 359,76 10,386,3 780,9 -3.3 780,9 0.00 0.00 0.00 0.00 11,000 89,86 359,76 10,386,3 180,8 1	10,335.5		359.76	10,257.6	239.0	-1.0	239.0	10.00	10.00	0.00
10,500   70,79   359,76   10,333.1   384.5   -1.6   384.5   10.00   10.00   0.00   10,600   80,79   359,76   10,357.6   481.3   -2.0   481.3   10.00   10.00   0.00   10.00	FTP: 2361' F	NL & 499' FWL,	Sec 14							
10,500   70,79   359,76   10,333.1   394.5   -1.6   384.5   10.00   10.00   0.00   10,500   80,79   359,76   10,357.6   481.3   -2.0   481.3   10.00   10.00   0.00   10.00	10.400.0	60.79	359.76	10,292.2	293.4	-1.2	293.4	10.00	10.00	0.00
10,880,0 80,79 359,76 10,355,15 481,3 2.0 481,3 10,00 10,00 0.00 10,886,7 89,99 9,99 9,00 UD:  LP: 2000*FNL 8. 497* FWL, Sec 14  10,700,0 89,66 359,76 10,365,1 580,9 2.4 589,8 0.00 0.00 0.00 0.00 10,800,0 89,66 359,76 10,365,7 880,9 2.9 880,9 0.00 0.00 0.00 0.00 10,800,0 89,66 359,76 10,365,7 880,9 2.9 880,9 0.00 0.00 0.00 0.00 11,000,0 89,66 359,76 10,365,7 880,9 3.3 780,9 0.00 0.00 0.00 0.00 11,000,0 89,66 359,76 10,366,9 80,9 3.3 780,9 0.00 0.00 0.00 0.00 11,000,0 89,66 359,76 10,366,0 80,0 80,9 3.7 880,9 0.00 0.00 0.00 0.00 11,000,0 89,66 359,76 10,366,0 80,0 80,9 3.7 880,9 0.00 0.00 0.00 0.00 11,300,0 89,66 359,76 10,366,0 80,0 80,0 80,0 80,0 80,0 80,0 80,0		70.79	359.76	10,333.1	384.5	-1.6	384.5	10.00	10.00	0.00
10,688.7   89.86   359.76   10,365.0   569.6   -2.4   569.6   9.99   9.99   0.00										
1.00										
10,800.0 89.66 359.76 10,365.7 680.9 2.9 680.9 0.00 0.00 0.00 0.00 11,000.0 89.66 359.76 10,366.3 780.9 3.3 780.9 0.00 0.00 0.00 0.00 11,100.0 89.66 359.76 10,366.9 880.9 3.7 880.9 0.00 0.00 0.00 0.00 11,100.0 89.66 359.76 10,368.0 1,080.9 4.1 800.9 0.00 0.00 0.00 0.00 11,300.0 89.66 359.76 10,368.0 1,080.9 4.1 800.9 0.00 0.00 0.00 0.00 11,300.0 89.66 359.76 10,368.0 1,080.9 5.0 1,180.9 0.00 0.00 0.00 0.00 0.00 11,300.0 89.66 359.76 10,368.0 1,380.9 5.4 1,280.9 0.00 0.00 0.00 0.00 11,500.0 89.66 359.76 10,370.4 1,480.9 5.8 1,380.9 0.00 0.00 0.00 0.00 0.00 11,500.0 89.66 359.76 10,370.4 1,480.9 5.8 1,380.9 0.00 0.00 0.00 0.00 0.00 11,500.0 89.66 359.76 10,370.4 1,480.9 5.8 1,380.9 0.00 0.00 0.00 0.00 0.00 11,500.0 89.66 359.76 10,371.0 1,580.9 5.6 1,580.9 0.00 0.00 0.00 0.00 11,800.0 89.66 359.76 10,371.0 1,580.9 5.6 1,580.9 0.00 0.00 0.00 0.00 11,800.0 89.66 359.76 10,371.0 1,580.9 5.6 1,580.9 0.00 0.00 0.00 0.00 11,800.0 89.66 359.76 10,371.0 1,580.9 5.75 1,780.9 0.00 0.00 0.00 0.00 12,000.0 89.66 359.76 10,372.8 18.80.9 5.75 1,780.9 0.00 0.00 0.00 0.00 12,000.0 89.66 359.76 10,372.8 18.80.9 5.75 1,780.9 0.00 0.00 0.00 0.00 12,000.0 89.66 359.76 10,373.4 1,980.9 5.8 1,880.9 0.00 0.00 0.00 0.00 12,000.0 89.66 359.76 10,374.0 2,880.9 5.8 1,880.9 0.00 0.00 0.00 0.00 12,000.0 89.66 359.76 10,374.2 2,880.9 5.8 1,880.9 0.00 0.00 0.00 0.00 12,000 89.66 359.76 10,374.2 2,880.9 5.8 1,880.9 0.00 0.00 0.00 0.00 12,000 89.66 359.76 10,374.6 2,180.9 5.2 2,280.9 0.00 0.00 0.00 0.00 0.00 12,500.0 89.66 359.76 10,374.8 2,180.9 5.2 2,280.9 0.00 0.00 0.00 0.00 0.00 12,500.0 89.66 359.76 10,374.8 2,180.9 5.2 2,280.9 0.00 0.00 0.00 0.00 0.00 12,500.0 89.66 359.76 10,375.8 2,280.9 0.00 0.00 0.00 0.00 0.00 0.00 12,500.0 89.66 359.76 10,375.8 2,280.9 0.00 0.00 0.00 0.00 0.00 0.00 0.00				, , , , , , , , , , , , , , , , , , , ,			•••			
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12,100.0       89,66       359,76       10,373.4       1,980.9       -8.3       1,980.9       0.00       0.00       0.00         12,200.0       89,66       359,76       10,374.6       2,180.9       -9.2       2,180.9       0.00       0.00       0.00       0.00         12,300.0       89,66       359,76       10,375.2       2,280.9       -9.6       2,280.9       0.00       0.00       0.00       0.00         12,500.0       89,66       359,76       10,376.4       2,480.9       -10.4       2,480.9       0.00       0.00       0.00       0.00         12,500.0       89,66       359,76       10,377.0       2,580.9       -10.4       2,480.9       0.00       0.00       0.00       0.00         12,700.0       89,66       359,76       10,377.0       2,580.8       -11.3       2,680.9       0.00       0.00       0.00       0.00         12,800.0       89,66       359,76       10,378.8       2,880.8       -11.7       2,780.9       0.00       0.00       0.00       0.00         13,000.0       89,66       359,76       10,379.4       2,980.8       -12.5       2,980.9       0.00       0.00       0.00       0.00										
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12,300.0         89,66         359,76         10,374.6         2,180.9         -9.2         2,180.9         0.00         0.00         0.00           12,500.0         89,66         359,76         10,375.8         2,280.9         -10.0         2,380.9         0.00         0.00         0.00           12,500.0         89,66         359,76         10,376.8         2,380.9         -10.0         2,380.9         0.00         0.00         0.00           12,500.0         89,66         359,76         10,377.0         2,580.9         -10.8         2,580.9         0.00         0.00         0.00           12,800.0         89,66         359,76         10,377.6         2,580.8         -11.7         2,780.9         0.00         0.00         0.00         0.00           13,000.0         89,66         359,76         10,378.8         2,280.8         -11.7         2,780.9         0.00         0.00         0.00         0.00           13,000.0         89,66         359,76         10,379.4         2,980.8         -12.5         2,880.9         0.00         0.00         0.00         0.00           13,200.0         89,66         359,76         10,381.2         3,280.8         -12.5         2,980.9	12,100.0	89.66	359.76	10,373.4	1,980.9	-8.3	1,980.9	0.00	0.00	0.00
12,400.0         89.66         359.76         10,375.2         2,280.9         -9.6         2,280.9         0.00         0.00         0.00           12,500.0         89.66         359.76         10,375.8         2,380.9         -10.0         2,380.9         0.00         0.00         0.00           12,600.0         89.66         359.76         10,377.0         2,580.9         -10.8         2,580.9         0.00         0.00         0.00           12,600.0         89.66         359.76         10,377.6         2,680.8         -11.3         2,680.9         0.00         0.00         0.00         0.00           12,800.0         89.66         359.76         10,377.6         2,680.8         -11.7         2,780.9         0.00	12,200.0	89.66	359.76	10,374.0	2,080.9	-8.7	2,080.9	0.00	0.00	0.00
12,500.0         89.66         359.76         10,375.8         2,380.9         -10.0         2,380.9         0.00         0.00         0.00           12,600.0         89.66         359.76         10,377.0         2,580.9         -10.4         2,480.9         0.00         0.00         0.00         0.00           12,700.0         89.66         359.76         10,377.0         2,580.9         -10.8         2,580.9         0.00         0.00         0.00         0.00           12,800.0         89.66         359.76         10,378.2         2,780.8         -11.7         2,780.9         0.00         0.	12,300.0	89.66	359.76	10,374.6	2,180.9	-9.2	2,180.9	0.00	0.00	0.00
12,600.0         89.66         359.76         10,376.4         2,480.9         -10.4         2,480.9         0.00         0.00         0.00           12,700.0         89.66         359.76         10,377.0         2,580.9         -10.8         2,580.9         0.00         0.00         0.00           12,800.0         89.66         359.76         10,378.2         2,780.8         -11.7         2,780.9         0.00         0.00         0.00           13,000.0         89.66         359.76         10,378.8         2,880.8         -12.1         2,880.9         0.00         0.00         0.00           13,000.0         89.66         359.76         10,378.8         2,880.8         -12.1         2,880.9         0.00         0.00         0.00           13,200.0         89.66         359.76         10,380.0         3,080.8         -12.9         3,080.9         0.00         0.00         0.00           13,300.0         89.66         359.76         10,381.2         3,280.8         -13.4         3,180.9         0.00         0.00         0.00           13,500.0         89.66         359.76         10,381.2         3,280.8         -13.8         3,280.9         0.00         0.00         0.00 <td>12,400.0</td> <td>89.66</td> <td>359.76</td> <td>10,375.2</td> <td>2,280.9</td> <td>-9.6</td> <td>2,280.9</td> <td>0.00</td> <td>0.00</td> <td>0.00</td>	12,400.0	89.66	359.76	10,375.2	2,280.9	-9.6	2,280.9	0.00	0.00	0.00
12,700.0 89.66 359,76 10,377.0 2,580.9 -10.8 2,580.9 0.00 0.00 0.00 0.00 12,800.0 89.66 359,76 10,377.6 2,680.8 -11.3 2,680.9 0.00 0.00 0.00 0.00 12,900.0 89.66 359,76 10,378.2 2,780.8 -11.7 2,780.9 0.00 0.00 0.00 0.00 13,000.0 89.66 359,76 10,378.2 2,880.8 -12.1 2,880.9 0.00 0.00 0.00 0.00 13,100.0 89.66 359,76 10,379.4 2,980.8 -12.5 2,980.9 0.00 0.00 0.00 0.00 13,200.0 89.66 359,76 10,380.0 3,880.8 -12.9 3,080.9 0.00 0.00 0.00 0.00 13,300.0 89.66 359,76 10,381.2 3,280.8 -13.4 3,180.9 0.00 0.00 0.00 0.00 13,400.0 89.66 359,76 10,381.2 3,280.8 -13.8 3,280.9 0.00 0.00 0.00 0.00 13,500.0 89.66 359,76 10,381.7 3,380.8 -14.2 3,380.9 0.00 0.00 0.00 0.00 13,500.0 89.66 359,76 10,381.7 3,380.8 -14.2 3,380.9 0.00 0.00 0.00 0.00 13,500.0 89.66 359,76 10,382.3 3,480.8 -14.2 3,380.9 0.00 0.00 0.00 0.00 13,800.0 89.66 359,76 10,382.3 3,480.8 -14.6 3,480.9 0.00 0.00 0.00 0.00 13,800.0 89.66 359,76 10,382.9 3,580.8 -15.5 3,680.9 0.00 0.00 0.00 0.00 13,800.0 89.66 359,76 10,383.5 3,680.8 -15.5 3,680.9 0.00 0.00 0.00 0.00 13,800.0 89.66 359,76 10,383.5 3,680.8 -15.5 3,680.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,383.5 3,680.8 -15.5 3,880.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,383.5 3,680.8 -15.5 3,680.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,383.5 3,680.8 -15.5 3,880.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,383.5 3,680.8 -16.7 3,980.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.3 3,880.8 -16.7 3,980.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -16.7 3,980.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -16.7 3,980.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -16.7 3,980.9 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -18.8 4,880.8 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -18.8 4,880.8 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -19.2 4,580.8 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,385.7 4,380.8 -19.2 4,580.8 0.00 0.00 0.00 0.00 14,000.0 89.66 359,76 10,389.5 4,680.8 -19.7 4,680.8 0.00 0.00 0.00 0.00 15	12,500.0	89.66	359.76	10,375.8	2,380.9	-10.0	2,380.9	0.00	0.00	0.00
12,800.0       89.66       359.76       10,377.6       2,680.8       -11.3       2,680.9       0.00       0.00       0.00         12,900.0       89.66       359.76       10,378.2       2,780.8       -11.7       2,780.9       0.00       0.00       0.00       0.00         13,000.0       89.66       359.76       10,379.4       2,980.8       -12.5       2,980.9       0.00       0.00       0.00       0.00         13,200.0       89.66       359.76       10,380.0       3,080.8       -12.9       3,080.9       0.00       0.00       0.00         13,200.0       89.66       359.76       10,380.6       3,180.8       -13.4       3,180.9       0.00       0.00       0.00         13,400.0       89.66       359.76       10,381.7       3,280.8       -13.8       3,280.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,382.3       3,480.8       -14.2       3,380.9       0.00       0.00       0.00         13,600.0       89.66       359.76       10,382.3       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,385.3 <td>12,600.0</td> <td>89.66</td> <td>359.76</td> <td>10,376.4</td> <td>2,480.9</td> <td>-10.4</td> <td>2,480.9</td> <td>0.00</td> <td>0.00</td> <td>0.00</td>	12,600.0	89.66	359.76	10,376.4	2,480.9	-10.4	2,480.9	0.00	0.00	0.00
12,800.0       89.66       359.76       10,377.6       2,680.8       -11.3       2,680.9       0.00       0.00       0.00         12,900.0       89.66       359.76       10,378.2       2,780.8       -11.7       2,780.9       0.00       0.00       0.00         13,000.0       89.66       359.76       10,379.4       2,980.8       -12.5       2,980.9       0.00       0.00       0.00         13,200.0       89.66       359.76       10,380.0       3,080.8       -12.9       3,080.9       0.00       0.00       0.00         13,300.0       89.66       359.76       10,380.6       3,180.8       -13.4       3,180.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,381.7       3,280.8       -14.2       3,380.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,382.3       3,480.8       -14.2       3,380.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,382.3       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,382.3       3,580.8       -15.0	12,700.0	89.66	359.76	10,377.0	2,580.9	-10.8	2,580.9	0.00	0.00	0.00
12,900.0       89.66       359.76       10,378.2       2,780.8       -11.7       2,780.9       0.00       0.00       0.00         13,000.0       89.66       359.76       10,378.8       2,880.8       -12.1       2,880.9       0.00       0.00       0.00         13,100.0       89.66       359.76       10,380.0       3,080.8       -12.9       3,080.9       0.00       0.00       0.00         13,200.0       89.66       359.76       10,380.6       3,180.8       -13.4       3,180.9       0.00       0.00       0.00         13,400.0       89.66       359.76       10,381.2       3,280.8       -13.8       3,280.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,381.2       3,280.8       -13.8       3,280.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,382.3       3,480.8       -14.6       3,480.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,382.3       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,900.0       89.66       359.76       10,382.9       3,580.8       -15.0								0.00	0.00	
13,000.0       89.66       359.76       10,378.8       2,880.8       -12.1       2,880.9       0.00       0.00       0.00         13,100.0       89.66       359.76       10,379.4       2,980.8       -12.5       2,980.9       0.00       0.00       0.00         13,200.0       89.66       359.76       10,380.0       3,080.8       -12.9       3,080.9       0.00       0.00       0.00         13,300.0       89.66       359.76       10,381.2       3,280.8       -13.4       3,180.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,381.7       3,380.8       -14.2       3,380.9       0.00       0.00       0.00         13,600.0       89.66       359.76       10,382.3       3,480.8       -14.6       3,480.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,382.9       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,384.1       3,780.8       -15.5       3,680.9       0.00       0.00       0.00         13,900.0       89.66       359.76       10,384.7       3,880.8       -16.5				,						
13,100.0       89.66       359.76       10,379.4       2,980.8       -12.5       2,980.9       0.00       0.00       0.00         13,200.0       89.66       359.76       10,380.0       3,080.8       -12.9       3,080.9       0.00       0.00       0.00         13,400.0       89.66       359.76       10,381.2       3,280.8       -13.8       3,280.9       0.00       0.00       0.00         13,500.0       89.66       359.76       10,381.7       3,380.8       -14.2       3,380.9       0.00       0.00       0.00         13,600.0       89.66       359.76       10,382.3       3,480.8       -14.6       3,480.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,382.3       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,382.9       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,384.1       3,780.8       -15.5       3,680.9       0.00       0.00       0.00         14,000.0       89.66       359.76       10,384.7       3,880.8       -16.3										
13,300.0       89,66       359,76       10,380.6       3,180.8       -13.4       3,180.9       0.00       0.00       0.00         13,400.0       89,66       359,76       10,381.2       3,280.8       -13.8       3,280.9       0.00       0.00       0.00         13,500.0       89,66       359,76       10,382.3       3,480.8       -14.2       3,380.9       0.00       0.00       0.00         13,600.0       89,66       359,76       10,382.3       3,480.8       -14.6       3,480.9       0.00       0.00       0.00         13,700.0       89,66       359,76       10,382.9       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89,66       359,76       10,383.5       3,680.8       -15.5       3,680.9       0.00       0.00       0.00         14,000.0       89,66       359,76       10,384.1       3,780.8       -15.9       3,780.9       0.00       0.00       0.00         14,100.0       89,66       359,76       10,385.3       3,880.8       -16.3       3,880.9       0.00       0.00       0.00         14,200.0       89,66       359,76       10,385.3       4,880.8       -17.1										
13,400.0       89.66       359.76       10,381.2       3,280.8       -13.8       3,280.9       0.00       <	13,200.0	89.66	359.76	10,380.0	3,080.8	-12.9	3,080.9			
13,500.0       89.66       359.76       10,381.7       3,380.8       -14.2       3,380.9       0.00       0.00       0.00         13,600.0       89.66       359.76       10,382.3       3,480.8       -14.6       3,480.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,382.9       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,384.1       3,780.8       -15.5       3,680.9       0.00       0.00       0.00         14,000.0       89.66       359.76       10,384.1       3,780.8       -15.9       3,780.9       0.00       0.00       0.00         14,100.0       89.66       359.76       10,384.1       3,780.8       -16.3       3,880.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.3       3,980.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.1       4,280.8       -18.0	13,300.0	89.66	359.76	10,380.6	3,180.8	-13.4	3,180.9	0.00	0.00	0.00
13,600.0       89.66       359.76       10,382.3       3,480.8       -14.6       3,480.9       0.00       0.00       0.00         13,700.0       89.66       359.76       10,382.9       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,383.5       3,680.8       -15.5       3,680.9       0.00       0.00       0.00         13,900.0       89.66       359.76       10,384.1       3,780.8       -15.9       3,780.9       0.00       0.00       0.00         14,000.0       89.66       359.76       10,384.7       3,880.8       -16.3       3,880.9       0.00       0.00       0.00         14,100.0       89.66       359.76       10,385.9       4,080.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,387.1       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,388.7       4,380.8       -18.4	13,400.0	89.66	359.76	10,381.2	3,280.8	-13.8	3,280.9	0.00	0.00	0.00
13,700.0       89.66       359.76       10,382.9       3,580.8       -15.0       3,580.9       0.00       0.00       0.00         13,800.0       89.66       359.76       10,383.5       3,680.8       -15.5       3,680.9       0.00       0.00       0.00         13,900.0       89.66       359.76       10,384.1       3,780.8       -15.9       3,780.9       0.00       0.00       0.00         14,000.0       89.66       359.76       10,385.3       3,880.8       -16.3       3,880.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,387.1       4,280.8       -17.6       4,180.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.0       4,280.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.3       4,480.8       -18.4	13,500.0	89.66	359.76	10,381.7	3,380.8	-14.2	3,380.9	0.00	0.00	
13,800.0       89.66       359.76       10,383.5       3,680.8       -15.5       3,680.9       0.00       0.00       0.00         13,900.0       89.66       359.76       10,384.1       3,780.8       -15.9       3,780.9       0.00       0.00       0.00         14,000.0       89.66       359.76       10,384.7       3,880.8       -16.3       3,880.9       0.00       0.00       0.00         14,100.0       89.66       359.76       10,385.3       3,980.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,386.5       4,180.8       -17.6       4,180.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.1       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2	13,600.0	89.66	359.76	10,382.3	3,480.8	-14.6	3,480.9	0.00	0.00	0.00
13,900.0       89.66       359.76       10,384.1       3,780.8       -15.9       3,780.9       0.00       0.00       0.00         14,000.0       89.66       359.76       10,384.7       3,880.8       -16.3       3,880.9       0.00       0.00       0.00         14,100.0       89.66       359.76       10,385.3       3,980.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,385.5       4,180.8       -17.6       4,180.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.1       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.0       4,280.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.2	13,700.0	89.66	359.76	10,382.9	3,580.8	-15.0	3,580.9	0.00	0.00	0.00
14,000.0       89.66       359.76       10,384.7       3,880.8       -16.3       3,880.9       0.00       0.00       0.00         14,100.0       89.66       359.76       10,385.3       3,980.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,387.1       4,280.8       -17.6       4,180.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.0       4,280.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.3       4,480.8       -18.4       4,380.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.2       4,580.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,389.5       4,680.8       -19.7	13,800.0	89.66	359.76	10,383.5	3,680.8	-15.5	3,680.9	0.00	0.00	0.00
14,100.0       89.66       359.76       10,385.3       3,980.8       -16.7       3,980.9       0.00       0.00       0.00         14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,386.5       4,180.8       -17.6       4,180.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.7       4,380.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,388.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -18.8       4,480.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.7       4,680.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1	13,900.0	89.66	359.76	10,384.1	3,780.8	-15.9	3,780.9	0.00	0.00	0.00
14,200.0       89.66       359.76       10,385.9       4,080.8       -17.1       4,080.8       0.00       0.00       0.00         14,300.0       89.66       359.76       10,386.5       4,180.8       -17.6       4,180.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.7       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,388.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.3       4,480.8       -18.8       4,480.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.2       4,580.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,390.7       4,880.8       -20.5	14,000.0	89.66	359.76	10,384.7	3,880.8	-16.3	3,880.9	0.00	0.00	0.00
14,300.0       89.66       359.76       10,386.5       4,180.8       -17.6       4,180.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.1       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.2       4,580.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,390.7       4,880.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,391.3       4,980.8       -20.5       4,880.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,391.3       4,980.8       -20.5	14,100.0	89.66	359.76	10,385.3	3,980.8	-16.7	3,980.9	0.00	0.00	0.00
14,300.0       89.66       359.76       10,386.5       4,180.8       -17.6       4,180.8       0.00       0.00       0.00         14,400.0       89.66       359.76       10,387.1       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8        -19.2       4,580.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,390.7       4,880.8       -20.1       4,780.8       0.00       0.00       0.00         15,100.0       89.66       359.76       10,391.3       4,980.8       -20.5       4,880.8       0.00       0.00       0.00         15,200.0       89.66       359.76       10,391.3       4,980.8       -21.	14,200.0	89.66	359.76	10,385.9	4,080.8	-17.1	4,080.8	0.00	0.00	0.00
14,400.0       89.66       359.76       10,387.1       4,280.8       -18.0       4,280.8       0.00       0.00       0.00         14,500.0       89.66       359.76       10,387.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.3       4,480.8       -18.8       4,480.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.7       4,680.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,391.3       4,980.8       -20.5       4,880.8       0.00       0.00       0.00         15,100.0       89.66       359.76       10,391.3       4,980.8       -20.9       4,980.8       0.00       0.00       0.00         15,200.0       89.66       359.76       10,391.9       5,080.8       -21.3		89.66	359.76		4,180.8	-17.6		0.00	0.00	0.00
14,500.0       89.66       359.76       10,387.7       4,380.8       -18.4       4,380.8       0.00       0.00       0.00         14,600.0       89.66       359.76       10,388.3       4,480.8       -18.8       4,480.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.7       4,680.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,391.3       4,980.8       -20.5       4,880.8       0.00       0.00       0.00         15,100.0       89.66       359.76       10,391.3       4,980.8       -20.9       4,980.8       0.00       0.00       0.00         15,200.0       89.66       359.76       10,391.9       5,080.8       -21.3       5,080.8       0.00       0.00       0.00	14,400.0	89,66	359,76	10,387.1	4,280.8	-18.0		0.00	0.00	0.00
14,600.0       89.66       359.76       10,388.3       4,480.8       -18.8       4,480.8       0.00       0.00       0.00         14,700.0       89.66       359.76       10,388.9       4,580.8       -19.2       4,580.8       0.00       0.00       0.00         14,800.0       89.66       359.76       10,389.5       4,680.8       -19.7       4,680.8       0.00       0.00       0.00         14,900.0       89.66       359.76       10,390.1       4,780.8       -20.1       4,780.8       0.00       0.00       0.00         15,000.0       89.66       359.76       10,391.3       4,980.8       -20.5       4,880.8       0.00       0.00       0.00         15,200.0       89.66       359.76       10,391.3       4,980.8       -20.9       4,980.8       0.00       0.00       0.00         15,200.0       89.66       359.76       10,391.9       5,080.8       -21.3       5,080.8       0.00       0.00       0.00							•			
14,800.0     89.66     359.76     10,389.5     4,680.8     -19.7     4,680.8     0.00     0.00     0.00       14,900.0     89.66     359.76     10,390.1     4,780.8     -20.1     4,780.8     0.00     0.00     0.00       15,000.0     89.66     359.76     10,390.7     4,880.8     -20.5     4,880.8     0.00     0.00     0.00       15,100.0     89.66     359.76     10,391.3     4,980.8     -20.9     4,980.8     0.00     0.00     0.00       15,200.0     89.66     359.76     10,391.9     5,080.8     -21.3     5,080.8     0.00     0.00     0.00										
14,900.0     89.66     359.76     10,390.1     4,780.8     -20.1     4,780.8     0.00     0.00     0.00       15,000.0     89.66     359.76     10,390.7     4,880.8     -20.5     4,880.8     0.00     0.00     0.00       15,100.0     89.66     359.76     10,391.3     4,980.8     -20.9     4,980.8     0.00     0.00     0.00       15,200.0     89.66     359.76     10,391.9     5,080.8     -21.3     5,080.8     0.00     0.00     0.00	14,700.0	89.66	359.76	10,388.9	4,580.8	-19.2	4,580.8	0.00	0.00	0.00
14,900.0     89.66     359.76     10,390.1     4,780.8     -20.1     4,780.8     0.00     0.00     0.00       15,000.0     89.66     359.76     10,390.7     4,880.8     -20.5     4,880.8     0.00     0.00     0.00       15,100.0     89.66     359.76     10,391.3     4,980.8     -20.9     4,980.8     0.00     0.00     0.00       15,200.0     89.66     359.76     10,391.9     5,080.8     -21.3     5,080.8     0.00     0.00     0.00	14,800.0	89.66	359.76	10,389.5	4,680.8	-19.7	4,680.8	0.00	0.00	0.00
15,000.0     89,66     359,76     10,390.7     4,880.8     -20.5     4,880.8     0.00     0.00     0.00       15,100.0     89.66     359,76     10,391.3     4,980.8     -20.9     4,980.8     0.00     0.00     0.00       15,200.0     89.66     359,76     10,391.9     5,080.8     -21.3     5,080.8     0.00     0.00     0.00	14,900.0	89.66	359.76	10,390.1	4,780.8	-20.1	4,780.8	0.00	0.00	0.00
15,100.0 89.66 359.76 10,391.3 4,980.8 -20.9 4,980.8 0.00 0.00 0.00 15,200.0 89.66 359.76 10,391.9 5,080.8 -21.3 5,080.8 0.00 0.00 0.00										
				,						
	15,200.0	89.66	359.76	10,391.9	5,080.8	-21.3	5,080.8	0.00	0.00	0.00

Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site: Well: Fuller 14/11 W1ED Fed #1H

Wellbore:

Sec 14, T26S, R29E

Design:

BHL: 330' FNL & 440' FWL, Sec 11

Design #1

Local Co-ordinate Reference:

**Survey Calculation Method:** 

TVD Reference:

MD Reference:
North Reference:

Site Fuller 14/11 W1ED Fed #1H

WELL @ 2964.0usft (Original Well Elev) WELL @ 2964.0usft (Original Well Elev)

Grid

Minimum Curvature

#### 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)
i	15,400.0	89.66	359.76	10,393.1	5,280.8	-22.2	5,280.8	0.00	0.00	0.00
į	15,500.0	89.66	359.76	10,393.7	5,380.8	-22.6	5,380.8	0.00	0.00	0.00
-	15,600.0	89.66	359.76	10,394.3	5,480.8	-23.0	5,480.8	0.00	0.00	0.00
	15,700.0	89.66	359.76	10,394.9	5,580.8	-23.4	5,580.8	0.00	0.00	0.00
	15,800.0	89.66	359.76	10,395.4	5,680.8	-23.9	5,680.8	0.00	0.00	0.00
1	15,900.0	89,66	359,76	10,396.0	5,780.8	-24.3	5,780.8	0.00	0.00	0.00
	16,000.0	89.66	359.76	10,396.6	5,880.8	-24.7	5,880.8	0.00	0.00	0.00
	16,100.0	89.66	359.76	10,397.2	5,980.8	-25.1	5,980.8	0.00	0.00	0.00
į	16,200.0	89.66	359.76	10,397.8	6,080.8	-25.5	6,080.8	0.00	0.00	0.00
	16,300.0	89.66	359.76	10,398.4	6,180.8	-26.0	6,180.8	0.00	0.00	0.00
į.	16,400.0	89.66	359.76	10,399.0	6,280.8	-26.4	6,280.8	0.00	0.00	0.00
1	16,500.0	89.66	359.76	10,399.6	6,380.8	-26.8	6,380.8	0.00	0.00	0.00
	16,600.0	89.66	359.76	10,400.2	6,480.7	-27.2	6,480.8	0.00	0.00	0.00
	16,700.0	89.66	359.76	10,400.8	6,580.7	-27.6	6,580.8	0.00	0.00	0.00
	16,800.0	89.66	359.76	10,401.4	6,680.7	-28.1	6,680.8	0.00	0.00	0.00
1	16,900.0	89.66	359.76	10,402.0	6,780.7	<b>-</b> 28.5	6,780.8	0.00	0.00	0.00
	17,000.0	89.66	359.76	10,402.6	6,880.7	-28.9	6,880.8	0.00	0.00	0.00
í	17,100.0	89.66	359.76	10,403.2	6,980.7	-29.3	6,980.8	0.00	0.00	0.00
-	17,200.0	89.66	359.76	10,403.8	7,080.7	-29.7	7,080.8	0.00	0.00	0.00
	17,300.0	89.66	359.76	10,404.4	7,180.7	-30.2	7,180.8	0.00	0.00	0.00
	17,400.0	89.66	359.76	10,405.0	7,280.7	-30.6	7,280.8	0.00	0.00	0.00
	17,500.0	89.66	359.76	10,405.6	7,380.7	<b>-</b> 31.0	7,380.8	0.00	0.00	0.00
	17,600.0	89.66	359.76	10,406.2	7,480.7	-31.4	7,480.8	0.00	0.00	0.00
1	17,700.0	89.66	359.76	10,406.8	7,580.7	-31.8	7,580.8	0.00	0.00	0.00
1	17,739.3	89.66	359.76	10,407.0	7,620.0	-32.0	7,620.1	0.00	0.00	0.00
:	BHL: 330' FI	NL & 440' FWL, \$	Sec 11							

#### **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: 2600' FNL & 500' FV - plan hits target cente - Point	0.00 er	0.00	0.0	0.0	0.0	379,318.00	656,567.00	32° 2' 32.207 N	103° 57' 41.189 W
KOP @ 9792' - plan hits target cente - Point	0.00 er	0.00	9,792.0	0.0	0.0	379,318.00	656,567.00	32° 2' 32.207 N	103° 57' 41.189 W
FTP: 2361' FNL & 499' F - plan hits target cente - Point	0.00 er	0.00	10,257.6	239.0	-1.0	379,557.00	656,566.00	32° 2′ 34.572 N	103° 57' 41.191 W
LP: 2030' FNL & 497' FV - plan hits target cente - Point	0.00 er	0.00	10,365.0	569.6	-2.4	379,887.60	656,564.60	32° 2' 37.844 N	103° 57' 41.194 W
BHL: 330' FNL & 440' F\ - plan hits target cente - Point	0.00 er	0.00	10,407.0	7,620.0	-32.0	386,938.00	656,535.00	32° 3′ 47.617 N	103° 57' 41.256 W

# **⇒AFMSS**

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



APD ID: 10400017483

Operator Name: MEWBOURNE OIL COMPANY

Well Name: FULLER 14/11 W1ED FED

Well Type: CONVENTIONAL GAS WELL

Submission Date: 07/28/2017

Well Work Type: Drill

Highlighted data reflects the most

recent changes

Well Number: 1H **Show Final Text** 

Section 1 - Existing Roads

Will existing roads be used? YES

**Existing Road Map:** 

Fuller14\_11W1EDFederal1H existingroadmap\_07-28-2017.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:

Fuller14\_11W1EDFed1H\_existingwellmap\_07-28-2017.pdf

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

**Existing Wells description:** 

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

**Estimated Production Facilities description:** 

**Production Facilities description:** 

**Production Facilities map:** 

Fuller14\_11W1EDFed1H\_PRODUCTIONFACILITYMAP\_07-28-2017.pdf

# Section 5 - Location and Types of Water Supply

# **Water Source Table**

Water source use type: DUST CONTROL, Water source type: IRRIGATION

INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE

**CASING** 

Describe type:

Source longitude: -104.05763

Source latitude: 32.04928

Source datum: NAD83

Water source permit type: WATER WELL

Source land ownership: FEDERAL

Water source transport method: TRUCKING

Source transportation land ownership: COMMERCIAL

Course transportation land owneromp. Commenton te

Water source volume (barrels): 2014

Source volume (acre-feet): 0.2595907

Source volume (gal): 84588

Water source use type: DUST CONTROL,

Water source type: IRRIGATION

INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE

**CASING** 

Describe type:

Source longitude: -103.94242

Source latitude: 31.998123

Source datum: NAD83

Water source permit type: WATER WELL

Source land ownership: PRIVATE

Water source transport method: TRUCKING

Source transportation land ownership: COMMERCIAL

Water source volume (barrels): 2014 Source volume (acre-feet): 0.2595907

Source volume (gal): 84588

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

Water source and transportation map:

Fuller14\_11W1EDFed1H\_watersourceandtransportationmap\_07-28-2017.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.):

Well Production type:

**Completion Method:** 

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Caliche - both sources shown on one map.

**Construction Materials source location attachment:** 

Fuller14 11W1EDFed1H calichesourceandtransportationmap 07-28-2017.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 containment attachment:

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

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 containment attachment:

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

**FACILITY** 

Disposal type description:

**Disposal location description:** Waste Management facility in Carlsbad.

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 containment attachment:

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

**FACILITY** 

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

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

# **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

# **Section 8 - Ancillary Facilities**

Are you requesting any Ancillary Facilities?: NO

**Ancillary Facilities attachment:** 

#### Comments:

# Section 9 - Well Site Layout

#### Well Site Layout Diagram:

Fuller14 11W1EDFederal1H\_wellsitelayout 07-28-2017.pdf

#### Comments:

# Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Wellpad long term disturbance (acres): 1.414

Wellpad short term disturbance (acres): 2.65

Access road long term disturbance (acres): 0

Access road short term disturbance (acres): 0

Pipeline long term disturbance (acres): 0

Pipeline short term disturbance (acres): 0

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 1.414

Total short term disturbance: 2.65

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

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

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 needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious 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 type:
Seed source:
Seed name:
Source name:
Source phone:
Seed cultivar:
Seed use location:
PLS pounds per acre:
Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type

Pounds/Acre

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

#### 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: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

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:

Operator Name: MEWBOURNE OIL COMPANY Well Name: FULLER 14/11 W1ED FED Well Number: 1H **USFS** Region: **USFS** Forest/Grassland: **USFS Ranger District:** Fee Owner Address: PO Box 1346 Roswell NM 88202 Fee Owner: Pecos Valley Artesian Convservation District Email: Phone: (575)622-7000 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: BUREAU OF LAND MANAGEMENT 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 Ranger District:** 

USFS Forest/Grassland:

Well Name: FULLER 14/11 W1ED FED Well Number: 1H

Fee Owner: Pecos Valley Artesian Conservation

District

Phone: (575)622-7000

Fee Owner Address: PO Box 1346 Roswell NM 88202

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

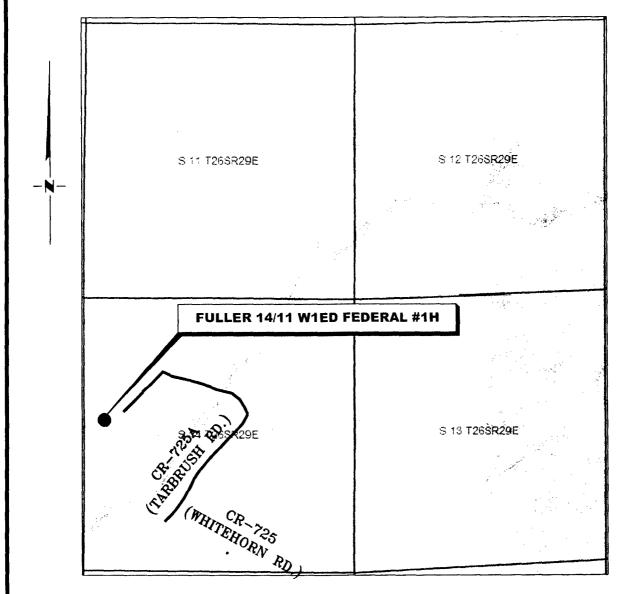
**Previous Onsite information**: Location will be on existing pad. Pad will need to be extended. Will go to existing battery to NE of pad. Lat 32.0422790 N, Long 103.961442 W NAD83. Locations are MOA. MAY 22 2017 Met with Brooke Wilson (BLM) & RRC Surveying and staked location @ 2600' FNL & 500' FWL, Sec 14, T26S, R29E, Eddy Co., NM. (Elevation @ 2937'). This appears to be a drillable location with pit area to N. Topsoil S.

#### Other SUPO Attachment

Fuller14\_11W1EDFederal1H\_INTERIMRECLAMATIONAREA\_08-16-2017.pdf Fuller14\_11W1EDFederal1H\_GASCAPTUREPLAN\_08-16-2017.pdf

# VICINITY MAP

NOT TO SCALE



SECTION 14, TWP. 26 SOUTH, RGE. 29 EAST, N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company	LOCATION:	2600'	FNL	&	500'	FWL
LEASE: Fuller 14/11 W1ED Federal	<b>ELEVATION:</b>	2937	7'			
WELL NO.: 1H						

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NO. REVISION DATE
JOB NO.: LS1703146

DWG. NO.: 1703146VM



308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.

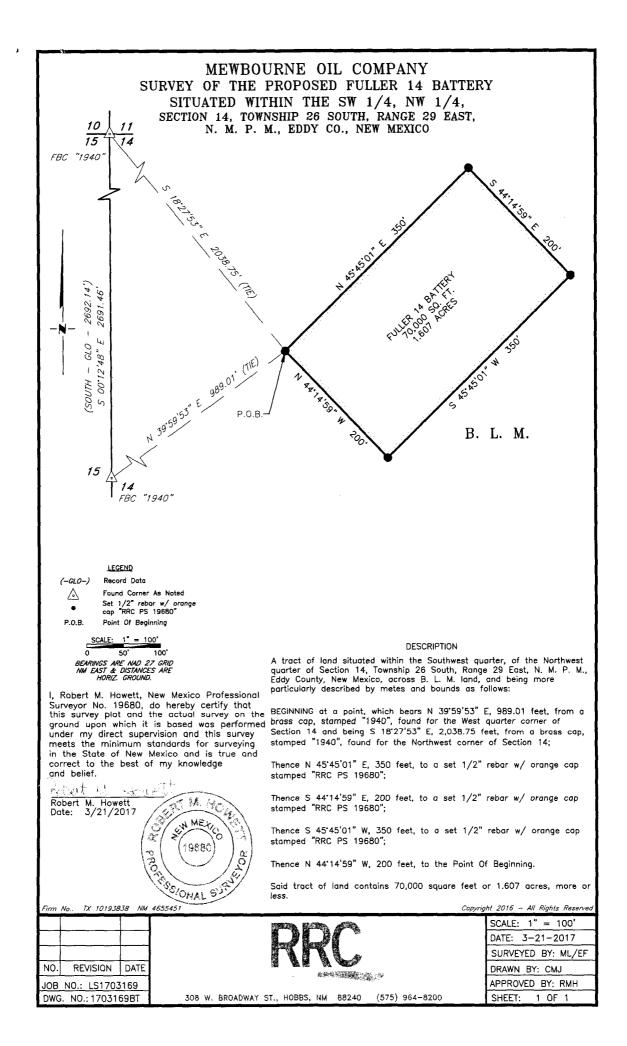
DATE: 4-13-2017

SURVEYED BY: ML/JL

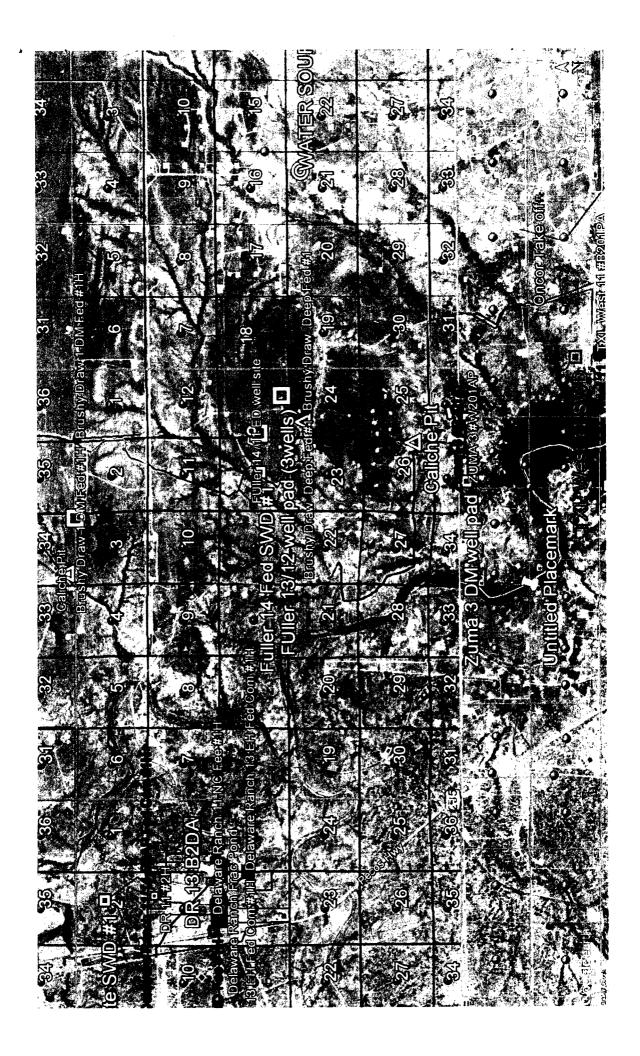
DRAWN BY: LA

APPROVED BY: RMH
SHEET: 1 OF 1

7-

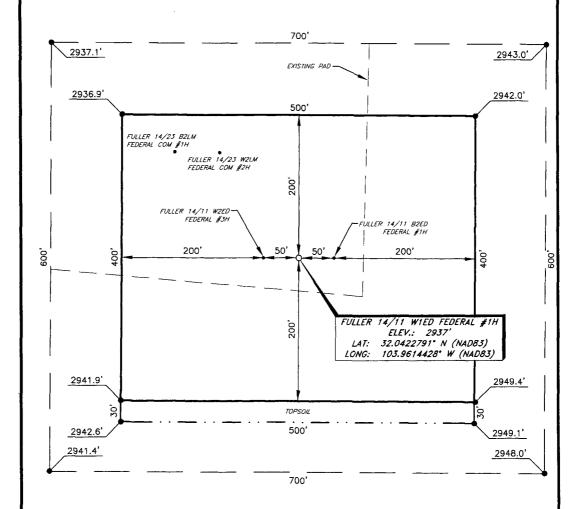


7/28/2017





# MEWBOURNE OIL COMPANY FULLER 14/11 W1ED FEDERAL #1H (2600' FNL & 500' FWL) SECTION 14, T26S, R29E N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of CR-725 (Whitehorn Rd.) and CR-725A (Tarbrush Rd.);

Go Northeast on CR-725A approx. 0.5 miles to a lease road on the left;

Turn left and go Northwest approx. 0.4 miles to a lease road on the left;

Turn left and go Southwest approx. 0.3 miles to this location.

SCALE: 1" = 100'
0 50 100
BEARINGS ARE
NAD 83 GRID - NM EAST
DISTANCES ARE

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

Robert M. Howett NM PS 19680

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GOIONAL SUR

NO. REVISION DATE

JOB NO.: L\$1703148

DWG. NO.: 1703148PAD



308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 5-18-2017
SURVEYED BY: ML/JL
DRAWN BY: LA
APPROVED BY: RMH
SHEET: 1 OF 1

# MEWBOURNE OIL COMPANY FULLER 14/11 B2ED FEDERAL #1H (2600' FNL & 550' FWL) SECTION 14, T26S, R29E N. M. P. M., EDDY CO., NEW MEXICO 700' 2937.1' 2943.0 EXISTING PAD 2936.9 2942.0' 500' FULLER 14/23 B2LM FEDERAL COM #1H FULLER 14/23 W2LM FEDERAL COM #2H 200 FULLER 14/11 W1ED FEDERAL #1H FULLER 14/11 W2ED-FEDERAL #3H 200' 50 200' 9 FULLER 14, DERAL #1H 200, LAT: 32. (NAD83) W (NAD83) 60' RECLAIMED AREA 2941.9 2942.0' TOPSOIL 2942.6 500 2949.1' 2941.4 2948.0' 700 DIRECTIONS TO LOCATION From the intersection of CR-725 (Whitehorn Rd.) and CR-725A (Tarbrush Rd.); Go Northeast on CR-725A approx. 0.5 miles to a lease road on the left; Turn left and go Northwest approx. 0.4 miles to a lease road on the left; Turn left and go Southwest approx. 0.3 to this location. I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I preferred this unclassified survey of a well location from an actual survey made on the creek and under my direct supervision, said survey and plat meet the Min. Stas. for Land Surveying in the State of N. M. and are true and correct to the left of my knowledge and belief. BEARINGS ARE SUPPAL SUP e but it is not the NAD 83 GRID - NM EAST DISTANCES ARE GROUND. Robert M. Howett NM PS 19680 SCALE: 1" = 100 DATE: 5-18-2017 SURVEYED BY: ML/JL DRAWN BY: LA REVISION DATE e a tachallango APPROVED BY: RMH JOB NO.: LS1504123R SHEET: 1 OF 1 DWG. NO.1504123RPAD 308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200



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



#### 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:

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:

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:

PWD disturbance (acres):

# Section 3 - Unlined Pits

Injection well mineral owner:

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location: PWD surface owner: PWD disturbance (acres): 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? 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 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 dischárge 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):
Other PWD discharge volume (bbl/day):	
Other PWD type description:	
Other PWD type attachment:	
Have other regulatory requirements been met?	
Other regulatory requirements attachment:	



1.S. Department of the Interior UREAU OF LAND MANAGEMENT

# **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:

