

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

MAY 04 2017  
OCD Artesia

Form 3160-3  
(March 2012)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**

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

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 134867
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator MEWBOURNE OIL COMPANY		7. If Unit or CA Agreement, Name and No.
3a. Address PO Box 5270 Hobbs NM 88240	3b. Phone No. (include area code) (575)393-5905 <i>Purple Sage</i>	8. Lease Name and Well No. HOSS 2/11 W2BO FED COM 1H
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface LOT 2 / 185 FNL / 1700 FEL / LAT 32.1659962 / LONG -104.0548633 At proposed prod. zone SWSE / 330 FSL / 1650 FEL / LAT 32.1383514 / LONG -104.0547529		9. API Well No. <i>30-015-44153</i>
14. Distance in miles and direction from nearest town or post office* 4 miles		10. Field and Pool, or Exploratory <i>98220</i> <b>SALT DRAW WOLFCAMP / WOLFCAMP</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 185 feet	16. No. of acres in lease 160.57	11. Sec., T. R. M. or Blk. and Survey or Area SEC 2 / T25S / R28E / NMP
17. Spacing Unit dedicated to this well 640	18. Distance from proposed location* to nearest well, drilling, completed, 50 feet applied for, on this lease, ft. 10725 feet / 20560 feet	12. County or Parish EDDY
19. Proposed Depth 10725 feet / 20560 feet	20. BLM/BIA Bond No. on file FED: NM1693	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2957 feet	22. Approximate date work will start* 01/25/2017	23. Estimated duration 60 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

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

25. Signature (Electronic Submission)	Name (Printed/Typed) Bradley Bishop / Ph: (575)393-5905	Date 11/09/2016
Title Regulatory		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 05/03/2017
Title Supervisor Multiple Resources		

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

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

(Continued on page 2)

\*(Instructions on page 2)

**APPROVED WITH CONDITIONS**

**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:** 11/09/2016**Title:** Regulatory**Street Address:** PO Box 5270**City:** Hobbs**State:** NM**Zip:** 88240**Phone:** (575)393-5905**Email address:** bbishop@mewbourne.com**Field Representative****Representative Name:****Street Address:****City:****State:****Zip:****Phone:****Email address:**

**APD ID:** 10400007586

**Submission Date:** 11/09/2016

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Well Type:** OIL WELL

**Well Work Type:** Drill

## Section 1 - General

**APD ID:** 10400007586

**Tie to previous NOS?**
**Submission Date:** 11/09/2016

**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 134867

**Lease Acres:** 160.57

**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:** Hoss 2-11 W2BO Fed Com 1H\_operatorletterofdesignation\_11-09-2016.pdf

**Keep application confidential?** YES

## Operator Info

**Operator Organization Name:** MEWBOURNE OIL COMPANY

**Operator Address:** PO Box 5270

**Zip:** 88240

**Operator PO Box:**
**Operator City:** Hobbs

**State:** NM

**Operator Phone:** (575)393-5905

**Operator Internet Address:**

## Section 2 - Well Information

**Well in Master Development Plan?** NO

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

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

**Master Drilling Plan name:**
**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Well API Number:**
**Field/Pool or Exploratory?** Field and Pool

**Field Name:** SALT DRAW  
WOLFCAMP

**Pool Name:** WOLFCAMP

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Is the proposed well in an area containing other mineral resources?** USEABLE WATER

**Describe other minerals:**

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

**Type of Well Pad:** SINGLE WELL

**Multiple Well Pad Name:**    **Number:**

**Well Class:** HORIZONTAL

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** APPRAISAL

**Describe sub-type:**

**Distance to town:** 4 Miles

**Distance to nearest well:** 50 FT

**Distance to lease line:** 185 FT

**Reservoir well spacing assigned acres Measurement:** 640 Acres

**Well plat:**    Hoss 2-11 W2BO Fed Com 1H\_well plat\_11-09-2016.pdf

**Well work start Date:** 01/25/2017

**Duration:** 60 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 1

	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> EDDY
	<b>Latitude:</b> 32.1659962	<b>Longitude:</b> -104.0548633	
SHL	<b>Elevation:</b> 2957	<b>MD:</b> 0	<b>TVD:</b> 0
<b>Leg #:</b> 1	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM134867	
	<b>NS-Foot:</b> 185	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 1700	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 28E	<b>Section:</b> 2
	<b>Aliquot:</b>	<b>Lot:</b> 2	<b>Tract:</b>

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> EDDY
	<b>Latitude:</b> 32.1659962	<b>Longitude:</b> -104.0548633	
KOP	<b>Elevation:</b> -7220	<b>MD:</b> 10177	<b>TVD:</b> 10177
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM134867	
	<b>NS-Foot:</b> 185	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 1700	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 28E	<b>Section:</b> 2
	<b>Aliquot:</b>	<b>Lot:</b> 2	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> EDDY
	<b>Latitude:</b> 32.1654761	<b>Longitude:</b> -104.0543725	
PPP	<b>Elevation:</b> -7601	<b>MD:</b> 10593	<b>TVD:</b> 10558
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM134867	
	<b>NS-Foot:</b> 185	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 1700	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 28E	<b>Section:</b> 2
	<b>Aliquot:</b>	<b>Lot:</b> 2	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> EDDY
	<b>Latitude:</b> 32.1383514	<b>Longitude:</b> -104.0547529	
EXIT	<b>Elevation:</b> -7768	<b>MD:</b> 20560	<b>TVD:</b> 10725
<b>Leg #: 1</b>	<b>Lease Type:</b> STATE	<b>Lease #:</b> STATE	
	<b>NS-Foot:</b> 330	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 1650	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 28E	<b>Section:</b> 11
	<b>Aliquot:</b> SWSE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> EDDY
	<b>Latitude:</b> 32.1383514	<b>Longitude:</b> -104.0547529	
BHL	<b>Elevation:</b> -7768	<b>MD:</b> 20560	<b>TVD:</b> 10725
<b>Leg #: 1</b>	<b>Lease Type:</b> STATE	<b>Lease #:</b> STATE	
	<b>NS-Foot:</b> 330	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 1650	<b>EW Indicator:</b> FEL	

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Twsp:** 25S

**Range:** 28E

**Section:** 11

**Aliquot:** SWSE

**Lot:**

**Tract:**

**United States Department of the Interior  
Bureau of Land Management  
Roswell Field Office  
2909 West Second Street  
Roswell, 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 134860 & State –VB-1417

Legal Description of Land: Section 2, T-25S, R-28E Eddy County, New Mexico.  
Location @ 185' FNL & 1650' FEL.

Formation (if applicable): Salt Draw Wolfcamp (97721)

Bond Coverage: \$150,000

BLM Bond File: NM1693 Nationwide, NMB 000919

Approved by:

Authorized Signature: \_\_\_\_\_

Name: Robin Terrell  
Title: District Manager  
Date: 11-9-2016

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**ID:** Formation 3

**Name:** BELL CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** 302

**True Vertical Depth:** 2655

**Measured Depth:** 2655

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 4

**Name:** CHERRY CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** -593

**True Vertical Depth:** 3550

**Measured Depth:** 3550

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 5

**Name:** MANZANITA

**Lithology(ies):**

LIMESTONE

**Elevation:** -713

**True Vertical Depth:** 3670

**Measured Depth:** 3670

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 6

**Name:** BRUSHY CANYON

**Lithology(ies):**

SANDSTONE



**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Elevation:** -1873

**True Vertical Depth:** 4830

**Measured Depth:** 4830

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 7

**Name:** BONE SPRING LIME

**Lithology(ies):**

LIMESTONE

SHALE

**Elevation:** -3428

**True Vertical Depth:** 6385

**Measured Depth:** 6385

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 8

**Name:** BONE SPRING 1ST

**Lithology(ies):**

SANDSTONE

**Elevation:** -4338

**True Vertical Depth:** 7295

**Measured Depth:** 7295

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 9

**Name:** BONE SPRING 2ND

**Lithology(ies):**

SANDSTONE

**Elevation:** -5188

**True Vertical Depth:** 8145

**Measured Depth:** 8145

**Mineral Resource(s):**

NATURAL GAS

OIL

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Is this a producing formation?** N

**ID:** Formation 10

**Name:** BONE SPRING 3RD

**Lithology(ies):**

SANDSTONE

**Elevation:** -6238

**True Vertical Depth:** 9195

**Measured Depth:** 9195

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 11

**Name:** WOLFCAMP

**Lithology(ies):**

LIMESTONE

SHALE

SANDSTONE

**Elevation:** -6618

**True Vertical Depth:** 9575

**Measured Depth:** 9575

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** Y

## Section 2 - Blowout Prevention

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

**Rating Depth:** 2550

**Equipment:** Annular

**Requesting Variance?** NO

**Variance request:**

**Testing Procedure:** Test to 1500#

**Choke Diagram Attachment:**

Hoss 2-11 W2BO Fed Com 1H\_3M Surface BOPE Choke Diagram\_11-07-2016.pdf

**BOP Diagram Attachment:**

Hoss 2-11 W2BO Fed Com 1H\_3M Surface BOPE Schematic\_11-07-2016.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

Hoss 2-11 W2BO Fed Com 1H\_3M Surface BOPE Choke Diagram\_11-07-2016.pdf

Hoss 2-11 W2BO Fed Com 1H\_3M Surface BOPE Schematic\_11-07-2016.pdf

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

**Rating Depth:** 20570

**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.

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

**Choke Diagram Attachment:**

Hoss 2-11 W2BO Fed Com 1H\_5M BOPE Choke Diagram\_11-07-2016.pdf

**BOP Diagram Attachment:**

Hoss 2-11 W2BO Fed Com 1H\_5M BOPE Schematic\_11-07-2016.pdf

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

**Rating Depth:** 10880

**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.

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

**Choke Diagram Attachment:**

Hoss 2-11 W2BO Fed Com 1H\_5M BOPE Choke Diagram\_11-07-2016.pdf

**BOP Diagram Attachment:**

Hoss 2-11 W2BO Fed Com 1H\_5M BOPE Schematic\_11-07-2016.pdf

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### Section 3 - Casing

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**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**String Type:** SURFACE

**Other String Type:**

**Hole Size:** 17.5

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -7768

**Bottom setting depth MD:** 425

**Bottom setting depth TVD:** 425

**Bottom setting depth MSL:** -8193

**Calculated casing length MD:** 425

**Casing Size:** 13.375

**Other Size**

**Grade:** H-40

**Other Grade:**

**Weight:** 48

**Joint Type:** STC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 3.48

**Burst Design Safety Factor:** 7.83

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 15.78

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 26.52

**Casing Design Assumptions and Worksheet(s):**

Hoss 2-11 W2BO Fed Com 1H\_Csg Assumptions\_11-08-2016.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**String Type:** INTERMEDIATE

**Other String Type:**

**Hole Size:** 12.25

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -7768

**Bottom setting depth MD:** 2550

**Bottom setting depth TVD:** 2550

**Bottom setting depth MSL:** -10318

**Calculated casing length MD:** 2550

**Casing Size:** 9.625

**Other Size**

**Grade:** J-55

**Other Grade:**

**Weight:** 36

**Joint Type:** LTC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.52

**Burst Design Safety Factor:** 2.65

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 4.93

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 6.14

**Casing Design Assumptions and Worksheet(s):**

Hoss 2-11 W2BO Fed Com 1H\_Csg Assumptions\_11-08-2016.pdf

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**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**String Type:** PRODUCTION

**Other String Type:**

**Hole Size:** 8.75

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -7768

**Bottom setting depth MD:** 10880

**Bottom setting depth TVD:** 10715

**Bottom setting depth MSL:** -18483

**Calculated casing length MD:** 10880

**Casing Size:** 7.0

**Other Size**

**Grade:** P-110

**Other Grade:**

**Weight:** 26

**Joint Type:** LTC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.47

**Burst Design Safety Factor:** 1.88

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 2.45

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 2.93

**Casing Design Assumptions and Worksheet(s):**

Hoss 2-11 W2BO Fed Com 1H\_Csg Assumptions\_11-08-2016.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**String Type:** LINER

**Other String Type:**

**Hole Size:** 6.125

**Top setting depth MD:** 10177

**Top setting depth TVD:** 10177

**Top setting depth MSL:** -17945

**Bottom setting depth MD:** 20570

**Bottom setting depth TVD:** 10750

**Bottom setting depth MSL:** -18518

**Calculated casing length MD:** 10393

**Casing Size:** 4.5

**Other Size**

**Grade:** P-110

**Other Grade:**

**Weight:** 13.5

**Joint Type:** LTC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.47

**Burst Design Safety Factor:** 1.71

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 2.41

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 3.01

**Casing Design Assumptions and Worksheet(s):**

Hoss 2-11 W2BO Fed Com 1H\_Csg Assumptions\_11-08-2016.pdf

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### **Section 4 - Cement**

**Casing String Type:** SURFACE

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Stage Tool Depth:**

Lead

<b>Top MD of Segment:</b> 0	<b>Bottom MD Segment:</b> 232	<b>Cement Type:</b> Class C
<b>Additives:</b> Salt, Gel, Extender, LCM	<b>Quantity (sks):</b> 160	<b>Yield (cu.ff./sk):</b> 2.12
<b>Density:</b> 12.5	<b>Volume (cu.ft.):</b> 339	<b>Percent Excess:</b> 100

Tail

<b>Top MD of Segment:</b> 232	<b>Bottom MD Segment:</b> 415	<b>Cement Type:</b> Class C
<b>Additives:</b> Retarder	<b>Quantity (sks):</b> 200	<b>Yield (cu.ff./sk):</b> 1.34
<b>Density:</b> 14.8	<b>Volume (cu.ft.):</b> 268	<b>Percent Excess:</b> 100

**Casing String Type:** INTERMEDIATE

**Stage Tool Depth:**

Lead

<b>Top MD of Segment:</b> 0	<b>Bottom MD Segment:</b> 1907	<b>Cement Type:</b> Class C
<b>Additives:</b> Salt, Gel, Extender, LCM	<b>Quantity (sks):</b> 375	<b>Yield (cu.ff./sk):</b> 2.12
<b>Density:</b> 12.5	<b>Volume (cu.ft.):</b> 795	<b>Percent Excess:</b> 25

Tail

<b>Top MD of Segment:</b> 1907	<b>Bottom MD Segment:</b> 2550	<b>Cement Type:</b> Class C
<b>Additives:</b> Retarder	<b>Quantity (sks):</b> 200	<b>Yield (cu.ff./sk):</b> 1.34
<b>Density:</b> 14.8	<b>Volume (cu.ft.):</b> 268	<b>Percent Excess:</b> 25

**Casing String Type:** PRODUCTION

**Stage Tool Depth:** 3670

Lead

<b>Top MD of Segment:</b> 2350	<b>Bottom MD Segment:</b> 3043	<b>Cement Type:</b> Class C
<b>Additives:</b> Gel, Retarder, Defoamer, Extender	<b>Quantity (sks):</b> 70	<b>Yield (cu.ff./sk):</b> 2.12
<b>Density:</b> 12.5	<b>Volume (cu.ft.):</b> 148	<b>Percent Excess:</b> 25

Tail

<b>Top MD of Segment:</b> 3043	<b>Bottom MD Segment:</b> 3670	<b>Cement Type:</b> Class C
<b>Additives:</b> Retarder	<b>Quantity (sks):</b> 100	<b>Yield (cu.ff./sk):</b> 1.34
<b>Density:</b> 14.8	<b>Volume (cu.ft.):</b> 134	<b>Percent Excess:</b> 25



Operator Name: MEWBOURNE OIL COMPANY

Well Name: HOSS 2/11 W2BO FED COM

Well Number: 1H

Stage Tool Depth: 3670

Lead

Top MD of Segment: 3670

Bottom MD Segment: 8380

Cement Type: Class C

Additives: Gel, Retarder, Defoamer,  
Extender

Quantity (sks): 420

Yield (cu.ff./sk): 2.12

Density: 12.5

Volume (cu.ft.): 890

Percent Excess: 25

Tail

Top MD of Segment: 8380

Bottom MD Segment: 10880

Cement Type: Class H

Additives: Retarder, Fluid Loss,  
Defoamer

Quantity (sks): 400

Yield (cu.ff./sk): 1.18

Density: 15.6

Volume (cu.ft.): 472

Percent Excess: 25

Casing String Type: LINER

Stage Tool Depth:

Lead

Top MD of Segment: 10177

Bottom MD Segment: 20570

Cement Type: Class C

Additives: Salt, Gel, Fluid Loss,  
Retarder, Dispersant, Defoamer, Anti-  
Settling Agent

Quantity (sks): 420

Yield (cu.ff./sk): 2.97

Density: 11.2

Volume (cu.ft.): 1247

Percent Excess: 25

Tail

Top MD of Segment: 925

Bottom MD Segment:

Cement Type:

Quantity (sks):

Yield (cu.ff./sk):

Additives:

Volume (cu.ft.):

Percent Excess: 25

Density:

## 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

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Top Depth:** 0

**Bottom Depth:** 425

**Mud Type:** SPUD MUD

**Min Weight (lbs./gal.):** 8.6

**Max Weight (lbs./gal.):** 8.8

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):**

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

---

**Top Depth:** 425

**Bottom Depth:** 2550

**Mud Type:** SALT SATURATED

**Min Weight (lbs./gal.):** 10

**Max Weight (lbs./gal.):** 10

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):**

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

---

**Top Depth:** 2550

**Bottom Depth:** 10177

**Mud Type:** WATER-BASED MUD

**Min Weight (lbs./gal.):** 8.6

**Max Weight (lbs./gal.):** 9.5

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):**

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

---

**Top Depth:** 10177

**Bottom Depth:** 10750

**Mud Type:** OIL-BASED MUD

**Min Weight (lbs./gal.):** 10

**Max Weight (lbs./gal.):** 13

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):**

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:** 13.0 ppg mud may be required for shale control. The highest mud weight needed to balance formation pressure is expected to be 12.0 ppg.

---

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**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 (10177') 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:** 6708

**Anticipated Surface Pressure:** 6708

**Anticipated Bottom Hole Temperature(F):** 165

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Hoss 2-11 W2BO Fed Com 1H\_H2S Plan\_11-08-2016.pdf

## **Section 8 - Other Information**

**Proposed horizontal/directional/multi-lateral plan submission:**

Hoss 2-11 W2BO Fed Com 1H\_Dir Plan\_11-08-2016.pdf

Hoss 2-11 W2BO Fed Com 1H\_Dir Plot\_11-08-2016.pdf

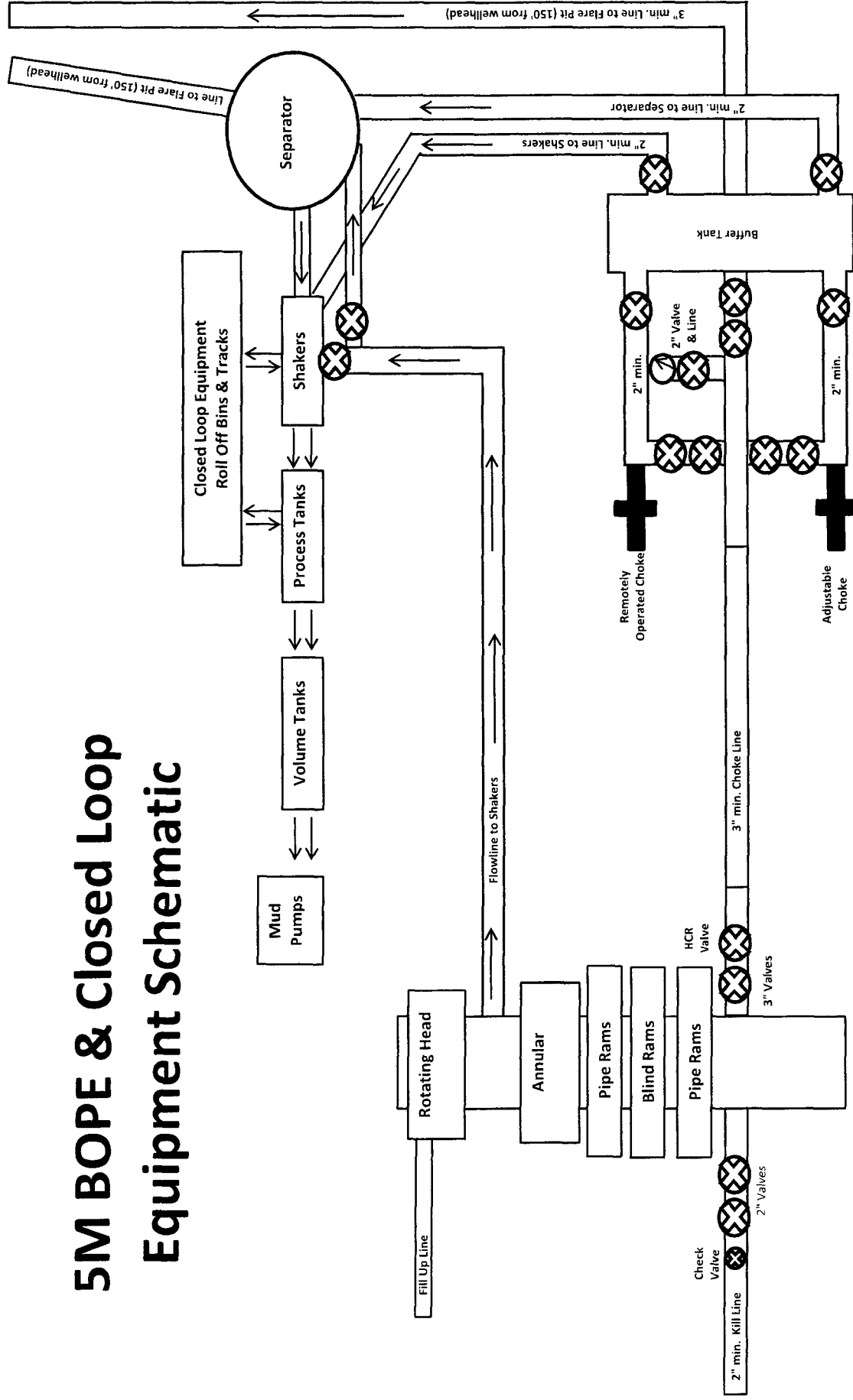
**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

**Other Variance attachment:**

Hoss 2-11 W2BO Fed Com 1H\_Flex Line Specs\_11-08-2016.pdf

## Exhibit 2



Mewbourne Oil Company  
BOP Schematic for

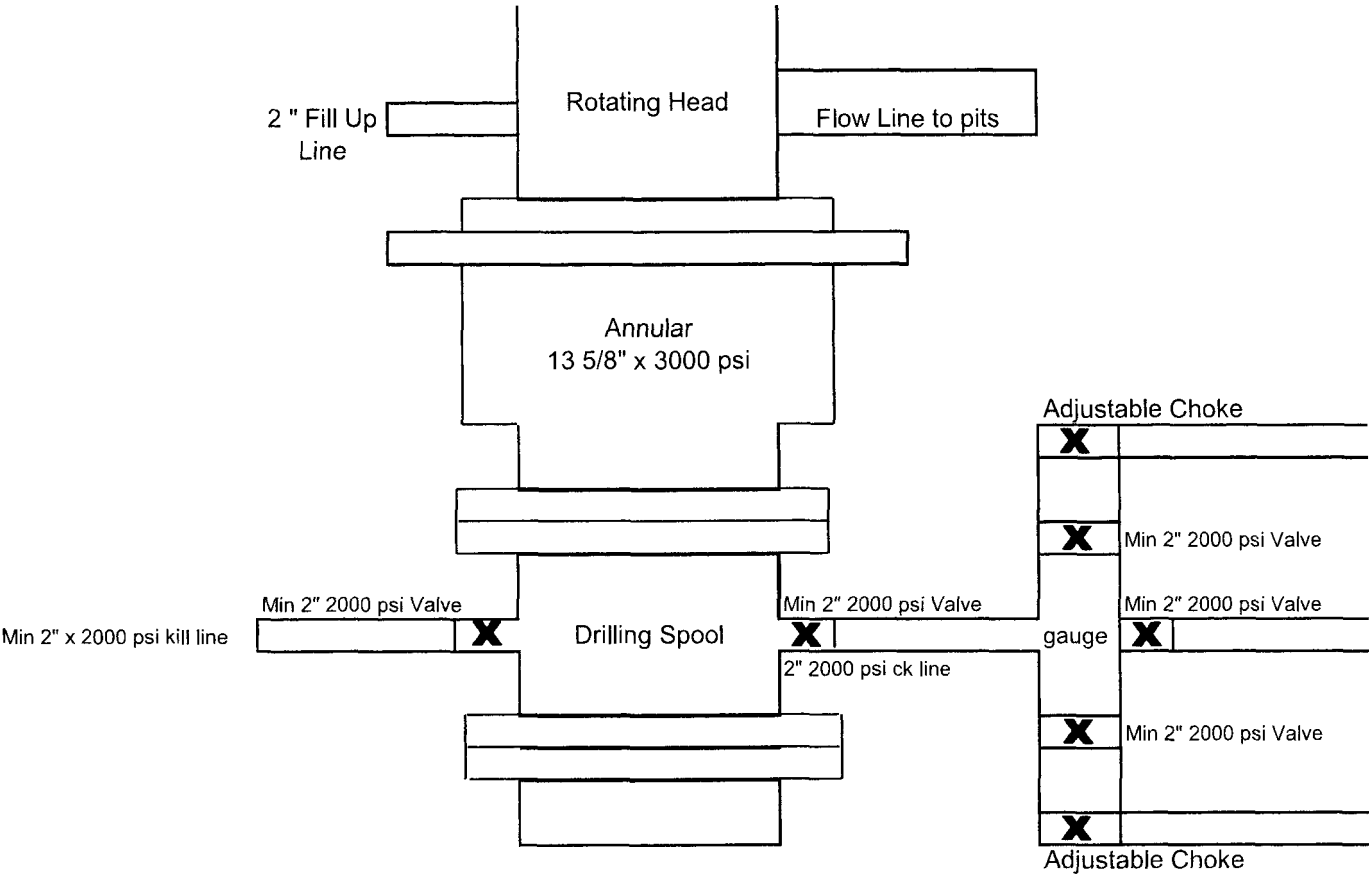
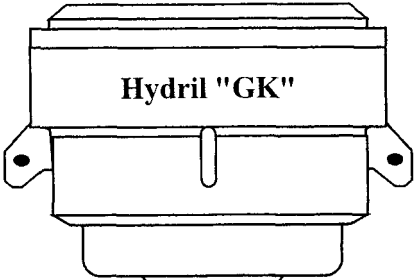
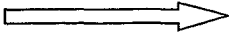
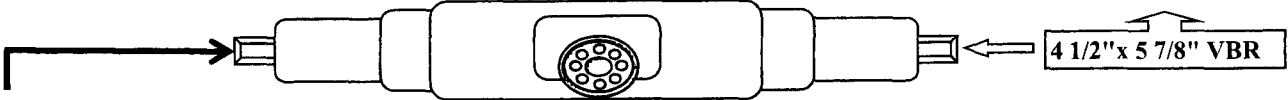
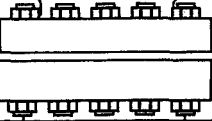


Exhibit #2

Hydril "GK"  
13 5/8" 5M



Hydril "GK"

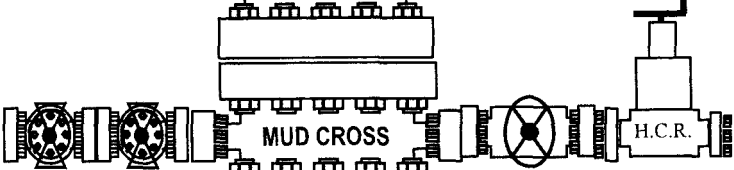


4 1/2" x 5 7/8" VBR

Cameron Type U  
13 5/8" 5M

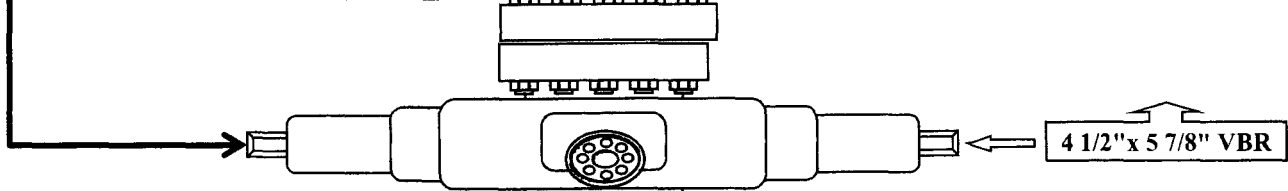


BLIND RAMS

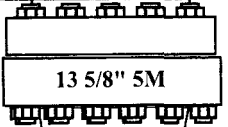


MUD CROSS

H.C.R.



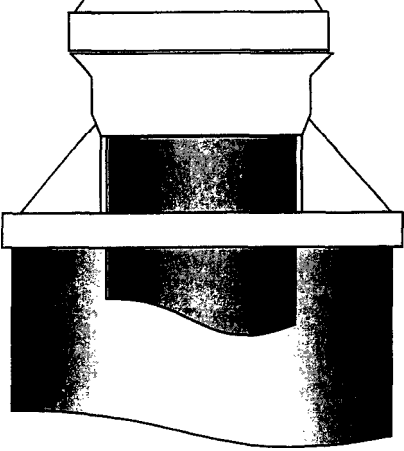
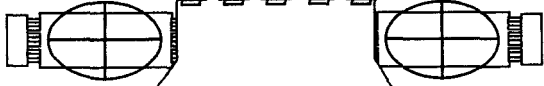
4 1/2" x 5 7/8" VBR



13 5/8" 5M

13 5/8" 5M

13 5/8" 5M



**Mewbourne Oil Company, Hoss 2/11 W2BO Fed Com #1H**  
**Sec 2, T25S, R28E**  
**SL: 185' FNL & 1700' FEL, Sec 2**  
**BHL: 330' FSL & 1650' FEL, Sec 11**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	425'	13.375"	48	H40	STC	3.48	7.83	15.78	26.52
12.25"	0'	2550'	9.625"	36	J55	LTC	1.52	2.65	4.93	6.14
8.75"	0'	10880'	7"	26	HCP110	LTC	1.47	1.88	2.45	2.93
6.125"	10177'	20570'	4.5"	13.5	P110	LTC	1.47	1.71	2.41	3.01
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 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?	

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 H<sub>2</sub>S were found. MOC will have on location and working all H<sub>2</sub>S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

**2. Hydrogen Sulfide Training**

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

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

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

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

There will be an initial training session prior to encountering a known 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 H<sub>2</sub>S 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 H<sub>2</sub>S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.



3. Hydrogen Sulfide Protection and Monitoring Equipment  
Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.
4. Visual Warning Systems
  - A. Wind direction indicators as indicated on the wellsite diagram.
  - B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

#### **4. Mud Program**

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

#### **5. Metallurgy**

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

#### **6. Communications**

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

#### **7. Well Testing**

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

#### **8. Emergency Phone Numbers**

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

Mewbourne Oil Company	Hobbs District Office	575-393-5905
	Fax	575-397-6252
	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
Drilling Foreman	Wesley Noseff	575-441-0729

# **Mewbourne Oil Company**

**Eddy County, New Mexico**

**Hoss 2/11 W2BO Fed Com #1H**

**Sec 2, T25S, R28E**

**SL: 185' FNL & 1700' FEL, Sec 2**

**BHL: 330' FSL & 1650' FEL, Sec 11**

**Plan: Design #1**

## **Standard Planning Report**

**07 November, 2016**

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico  
**Site:** Hoss 2/11 W2BO Fed Com #1H  
**Well:** Sec 2, T25S, R28E  
**Wellbore:** BHL: 330' FSL & 1650' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Hoss 2/11 W2BO Fed Com #1H  
**TVD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	Eddy County, New Mexico		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

**Site** Hoss 2/11 W2BO Fed Com #1H

<b>Site Position:</b>		<b>Northing:</b>	424,178.00 usft	<b>Latitude:</b>	32° 9' 57.149 N
<b>From:</b>	Map	<b>Easting:</b>	586,320.00 usft	<b>Longitude:</b>	104° 3' 15.747 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.15 °

**Well** Sec 2, T25S, R28E

<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	424,178.00 usft	<b>Latitude:</b>	32° 9' 57.149 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	586,320.00 usft	<b>Longitude:</b>	104° 3' 15.747 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	2,984.0 usft	<b>Ground Level:</b>	2,957.0 usft

**Wellbore** BHL: 330' FSL & 1650' FEL, Sec 11

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.96	60.10	48,707

**Design** Design #1

**Audit Notes:**

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.66

## 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	
10,177.0	0.00	0.00	10,177.0	0.0	0.0	0.00	0.00	0.00	0.00	KOP @ 10177'
11,078.6	90.15	179.66	10,750.0	-574.5	3.4	10.00	10.00	0.00	179.66	
20,560.3	90.15	179.66	10,725.0	-10,056.0	60.0	0.00	0.00	0.00	0.00	BHL: 330' FSL & 1650' FEL

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico  
**Site:** Hoss 2/11 W2BO Fed Com #1H  
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**MD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SL: 185' FNL &amp; 1700' FEL, Sec 2</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	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	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	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	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	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
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico  
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**MD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** 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)
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
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	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	0.00	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
7,200.0	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	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	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	8,800.0	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
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00
10,177.0	0.00	0.00	10,177.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP @ 10177'</b>									
10,200.0	2.30	179.66	10,200.0	-0.5	0.0	0.5	10.00	10.00	0.00
10,300.0	12.30	179.66	10,299.1	-13.1	0.1	13.1	10.00	10.00	0.00

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico  
**Site:** Hoss 2/11 W2BO Fed Com #1H  
**Well:** Sec 2, T25S, R28E  
**Wellbore:** BHL: 330' FSL & 1650' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Hoss 2/11 W2BO Fed Com #1H  
**TVD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** 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)
10,400.0	22.30	179.66	10,394.4	-42.8	0.3	42.8	10.00	10.00	0.00
10,500.0	32.30	179.66	10,483.2	-88.6	0.5	88.6	10.00	10.00	0.00
10,593.8	41.68	179.66	10,558.0	-145.0	0.9	145.0	10.00	10.00	0.00
<b>FTP: 330' FNL &amp; 1699' FEL, Sec 2</b>									
10,600.0	42.30	179.66	10,562.6	-149.1	0.9	149.2	10.00	10.00	0.00
10,700.0	52.30	179.66	10,630.4	-222.5	1.3	222.5	10.00	10.00	0.00
10,800.0	62.30	179.66	10,684.3	-306.6	1.8	306.6	10.00	10.00	0.00
10,900.0	72.30	179.66	10,722.9	-398.7	2.4	398.7	10.00	10.00	0.00
11,000.0	82.30	179.66	10,744.8	-496.1	3.0	496.1	10.00	10.00	0.00
11,078.6	90.15	179.66	10,750.0	-574.5	3.4	574.5	10.00	10.00	0.00
<b>LP: 760' FNL &amp; 1698' FEL, Sec 2</b>									
11,100.0	90.15	179.66	10,749.9	-595.9	3.6	595.9	0.00	0.00	0.00
11,200.0	90.15	179.66	10,749.7	-695.9	4.2	695.9	0.00	0.00	0.00
11,300.0	90.15	179.66	10,749.4	-795.9	4.7	795.9	0.00	0.00	0.00
11,400.0	90.15	179.66	10,749.2	-895.9	5.3	895.9	0.00	0.00	0.00
11,500.0	90.15	179.66	10,748.9	-995.9	5.9	995.9	0.00	0.00	0.00
11,600.0	90.15	179.66	10,748.6	-1,095.9	6.5	1,095.9	0.00	0.00	0.00
11,700.0	90.15	179.66	10,748.4	-1,195.9	7.1	1,195.9	0.00	0.00	0.00
11,800.0	90.15	179.66	10,748.1	-1,295.9	7.7	1,295.9	0.00	0.00	0.00
11,900.0	90.15	179.66	10,747.8	-1,395.9	8.3	1,395.9	0.00	0.00	0.00
12,000.0	90.15	179.66	10,747.6	-1,495.9	8.9	1,495.9	0.00	0.00	0.00
12,100.0	90.15	179.66	10,747.3	-1,595.9	9.5	1,595.9	0.00	0.00	0.00
12,200.0	90.15	179.66	10,747.0	-1,695.9	10.1	1,695.9	0.00	0.00	0.00
12,300.0	90.15	179.66	10,746.8	-1,795.9	10.7	1,795.9	0.00	0.00	0.00
12,400.0	90.15	179.66	10,746.5	-1,895.9	11.3	1,895.9	0.00	0.00	0.00
12,500.0	90.15	179.66	10,746.3	-1,995.9	11.9	1,995.9	0.00	0.00	0.00
12,600.0	90.15	179.66	10,746.0	-2,095.9	12.5	2,095.9	0.00	0.00	0.00
12,700.0	90.15	179.66	10,745.7	-2,195.9	13.1	2,195.9	0.00	0.00	0.00
12,800.0	90.15	179.66	10,745.5	-2,295.9	13.7	2,295.9	0.00	0.00	0.00
12,900.0	90.15	179.66	10,745.2	-2,395.9	14.3	2,395.9	0.00	0.00	0.00
13,000.0	90.15	179.66	10,744.9	-2,495.9	14.9	2,495.9	0.00	0.00	0.00
13,100.0	90.15	179.66	10,744.7	-2,595.9	15.5	2,595.9	0.00	0.00	0.00
13,200.0	90.15	179.66	10,744.4	-2,695.9	16.1	2,695.9	0.00	0.00	0.00
13,300.0	90.15	179.66	10,744.1	-2,795.9	16.7	2,795.9	0.00	0.00	0.00
13,400.0	90.15	179.66	10,743.9	-2,895.9	17.3	2,895.9	0.00	0.00	0.00
13,500.0	90.15	179.66	10,743.6	-2,995.9	17.9	2,995.9	0.00	0.00	0.00
13,600.0	90.15	179.66	10,743.4	-3,095.9	18.5	3,095.9	0.00	0.00	0.00
13,700.0	90.15	179.66	10,743.1	-3,195.8	19.1	3,195.9	0.00	0.00	0.00
13,800.0	90.15	179.66	10,742.8	-3,295.8	19.7	3,295.9	0.00	0.00	0.00
13,900.0	90.15	179.66	10,742.6	-3,395.8	20.3	3,395.9	0.00	0.00	0.00
14,000.0	90.15	179.66	10,742.3	-3,495.8	20.9	3,495.9	0.00	0.00	0.00
14,100.0	90.15	179.66	10,742.0	-3,595.8	21.5	3,595.9	0.00	0.00	0.00
14,200.0	90.15	179.66	10,741.8	-3,695.8	22.1	3,695.9	0.00	0.00	0.00
14,300.0	90.15	179.66	10,741.5	-3,795.8	22.6	3,795.9	0.00	0.00	0.00
14,400.0	90.15	179.66	10,741.2	-3,895.8	23.2	3,895.9	0.00	0.00	0.00
14,500.0	90.15	179.66	10,741.0	-3,995.8	23.8	3,995.9	0.00	0.00	0.00
14,600.0	90.15	179.66	10,740.7	-4,095.8	24.4	4,095.9	0.00	0.00	0.00
14,700.0	90.15	179.66	10,740.5	-4,195.8	25.0	4,195.9	0.00	0.00	0.00
14,800.0	90.15	179.66	10,740.2	-4,295.8	25.6	4,295.9	0.00	0.00	0.00
14,900.0	90.15	179.66	10,739.9	-4,395.8	26.2	4,395.9	0.00	0.00	0.00
15,000.0	90.15	179.66	10,739.7	-4,495.8	26.8	4,495.9	0.00	0.00	0.00
15,100.0	90.15	179.66	10,739.4	-4,595.8	27.4	4,595.9	0.00	0.00	0.00
15,200.0	90.15	179.66	10,739.1	-4,695.8	28.0	4,695.9	0.00	0.00	0.00
15,300.0	90.15	179.66	10,738.9	-4,795.8	28.6	4,795.9	0.00	0.00	0.00

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico  
**Site:** Hoss 2/11 W2BO Fed Com #1H  
**Well:** Sec 2, T25S, R28E  
**Wellbore:** BHL: 330' FSL & 1650' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Hoss 2/11 W2BO Fed Com #1H  
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**MD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** 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)
15,400.0	90.15	179.66	10,738.6	-4,895.8	29.2	4,895.9	0.00	0.00	0.00
15,500.0	90.15	179.66	10,738.3	-4,995.8	29.8	4,995.9	0.00	0.00	0.00
15,600.0	90.15	179.66	10,738.1	-5,095.8	30.4	5,095.9	0.00	0.00	0.00
15,700.0	90.15	179.66	10,737.8	-5,195.8	31.0	5,195.9	0.00	0.00	0.00
15,800.0	90.15	179.66	10,737.6	-5,295.8	31.6	5,295.9	0.00	0.00	0.00
15,900.0	90.15	179.66	10,737.3	-5,395.8	32.2	5,395.9	0.00	0.00	0.00
16,000.0	90.15	179.66	10,737.0	-5,495.8	32.8	5,495.9	0.00	0.00	0.00
16,100.0	90.15	179.66	10,736.8	-5,595.8	33.4	5,595.9	0.00	0.00	0.00
16,200.0	90.15	179.66	10,736.5	-5,695.8	34.0	5,695.9	0.00	0.00	0.00
16,300.0	90.15	179.66	10,736.2	-5,795.8	34.6	5,795.9	0.00	0.00	0.00
16,400.0	90.15	179.66	10,736.0	-5,895.8	35.2	5,895.9	0.00	0.00	0.00
16,500.0	90.15	179.66	10,735.7	-5,995.8	35.8	5,995.9	0.00	0.00	0.00
16,600.0	90.15	179.66	10,735.4	-6,095.8	36.4	6,095.9	0.00	0.00	0.00
16,700.0	90.15	179.66	10,735.2	-6,195.8	37.0	6,195.9	0.00	0.00	0.00
16,800.0	90.15	179.66	10,734.9	-6,295.8	37.6	6,295.9	0.00	0.00	0.00
16,900.0	90.15	179.66	10,734.7	-6,395.8	38.2	6,395.9	0.00	0.00	0.00
17,000.0	90.15	179.66	10,734.4	-6,495.8	38.8	6,495.9	0.00	0.00	0.00
17,100.0	90.15	179.66	10,734.1	-6,595.8	39.4	6,595.9	0.00	0.00	0.00
17,200.0	90.15	179.66	10,733.9	-6,695.8	40.0	6,695.9	0.00	0.00	0.00
17,300.0	90.15	179.66	10,733.6	-6,795.8	40.5	6,795.9	0.00	0.00	0.00
17,400.0	90.15	179.66	10,733.3	-6,895.8	41.1	6,895.9	0.00	0.00	0.00
17,500.0	90.15	179.66	10,733.1	-6,995.8	41.7	6,995.9	0.00	0.00	0.00
17,600.0	90.15	179.66	10,732.8	-7,095.8	42.3	7,095.9	0.00	0.00	0.00
17,700.0	90.15	179.66	10,732.5	-7,195.8	42.9	7,195.9	0.00	0.00	0.00
17,800.0	90.15	179.66	10,732.3	-7,295.8	43.5	7,295.9	0.00	0.00	0.00
17,900.0	90.15	179.66	10,732.0	-7,395.8	44.1	7,395.9	0.00	0.00	0.00
18,000.0	90.15	179.66	10,731.8	-7,495.8	44.7	7,495.9	0.00	0.00	0.00
18,100.0	90.15	179.66	10,731.5	-7,595.8	45.3	7,595.9	0.00	0.00	0.00
18,200.0	90.15	179.66	10,731.2	-7,695.8	45.9	7,695.9	0.00	0.00	0.00
18,300.0	90.15	179.66	10,731.0	-7,795.8	46.5	7,795.9	0.00	0.00	0.00
18,400.0	90.15	179.66	10,730.7	-7,895.7	47.1	7,895.9	0.00	0.00	0.00
18,500.0	90.15	179.66	10,730.4	-7,995.7	47.7	7,995.9	0.00	0.00	0.00
18,600.0	90.15	179.66	10,730.2	-8,095.7	48.3	8,095.9	0.00	0.00	0.00
18,700.0	90.15	179.66	10,729.9	-8,195.7	48.9	8,195.9	0.00	0.00	0.00
18,800.0	90.15	179.66	10,729.6	-8,295.7	49.5	8,295.9	0.00	0.00	0.00
18,900.0	90.15	179.66	10,729.4	-8,395.7	50.1	8,395.9	0.00	0.00	0.00
19,000.0	90.15	179.66	10,729.1	-8,495.7	50.7	8,495.9	0.00	0.00	0.00
19,100.0	90.15	179.66	10,728.9	-8,595.7	51.3	8,595.9	0.00	0.00	0.00
19,200.0	90.15	179.66	10,728.6	-8,695.7	51.9	8,695.9	0.00	0.00	0.00
19,300.0	90.15	179.66	10,728.3	-8,795.7	52.5	8,795.9	0.00	0.00	0.00
19,400.0	90.15	179.66	10,728.1	-8,895.7	53.1	8,895.9	0.00	0.00	0.00
19,500.0	90.15	179.66	10,727.8	-8,995.7	53.7	8,995.9	0.00	0.00	0.00
19,600.0	90.15	179.66	10,727.5	-9,095.7	54.3	9,095.9	0.00	0.00	0.00
19,700.0	90.15	179.66	10,727.3	-9,195.7	54.9	9,195.9	0.00	0.00	0.00
19,800.0	90.15	179.66	10,727.0	-9,295.7	55.5	9,295.9	0.00	0.00	0.00
19,900.0	90.15	179.66	10,726.7	-9,395.7	56.1	9,395.9	0.00	0.00	0.00
20,000.0	90.15	179.66	10,726.5	-9,495.7	56.7	9,495.9	0.00	0.00	0.00
20,100.0	90.15	179.66	10,726.2	-9,595.7	57.3	9,595.9	0.00	0.00	0.00
20,200.0	90.15	179.66	10,725.9	-9,695.7	57.9	9,695.9	0.00	0.00	0.00
20,300.0	90.15	179.66	10,725.7	-9,795.7	58.4	9,795.9	0.00	0.00	0.00
20,400.0	90.15	179.66	10,725.4	-9,895.7	59.0	9,895.9	0.00	0.00	0.00
20,500.0	90.15	179.66	10,725.2	-9,995.7	59.6	9,995.9	0.00	0.00	0.00
20,560.3	90.15	179.66	10,725.0	-10,056.0	60.0	10,056.2	0.00	0.00	0.00

BHL: 330' FSL & 1650' FEL, Sec11

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico  
**Site:** Hoss 2/11 W2BO Fed Com #1H  
**Well:** Sec 2, T25S, R28E  
**Wellbore:** BHL: 330' FSL & 1650' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Hoss 2/11 W2BO Fed Com #1H  
**TVD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2984.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

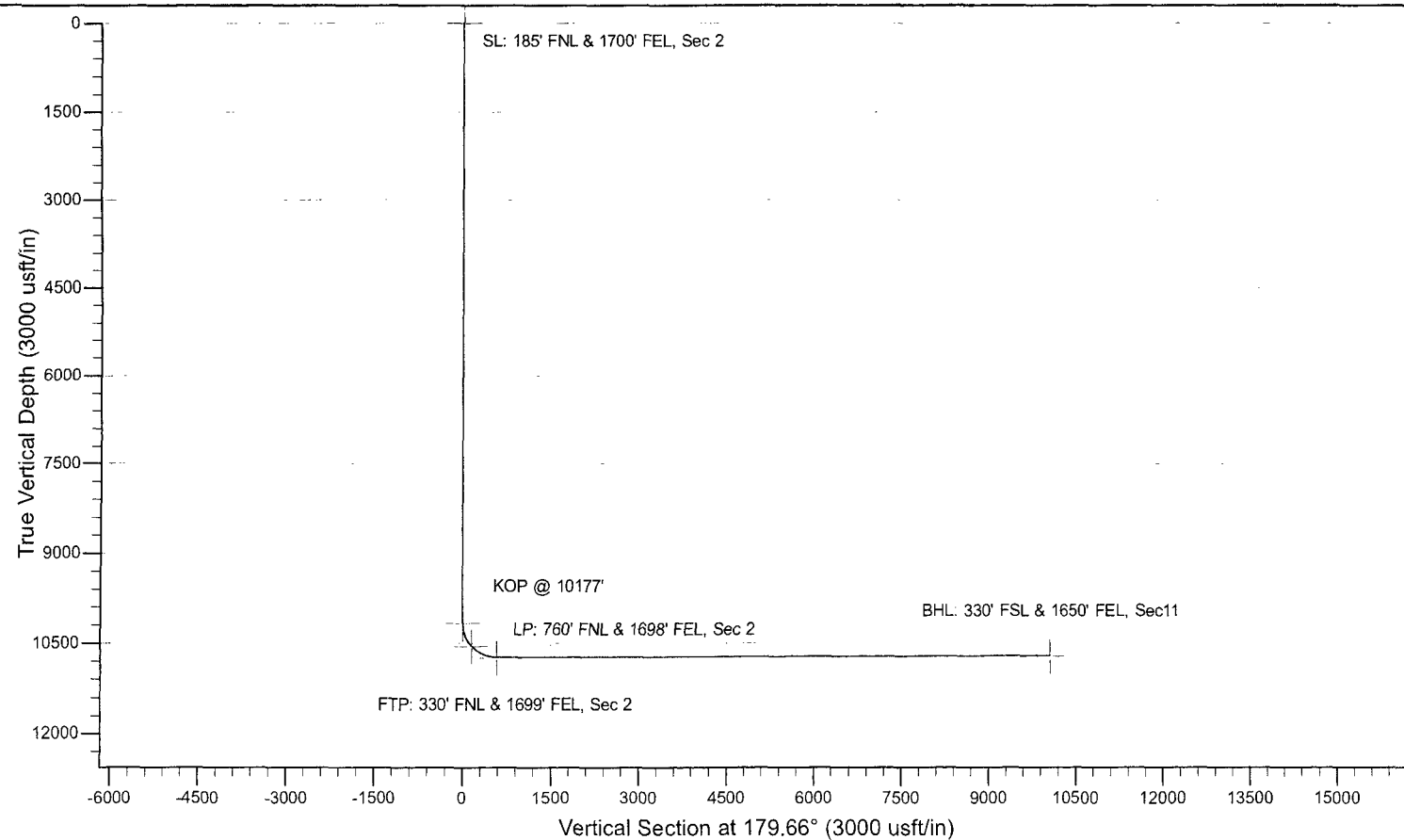
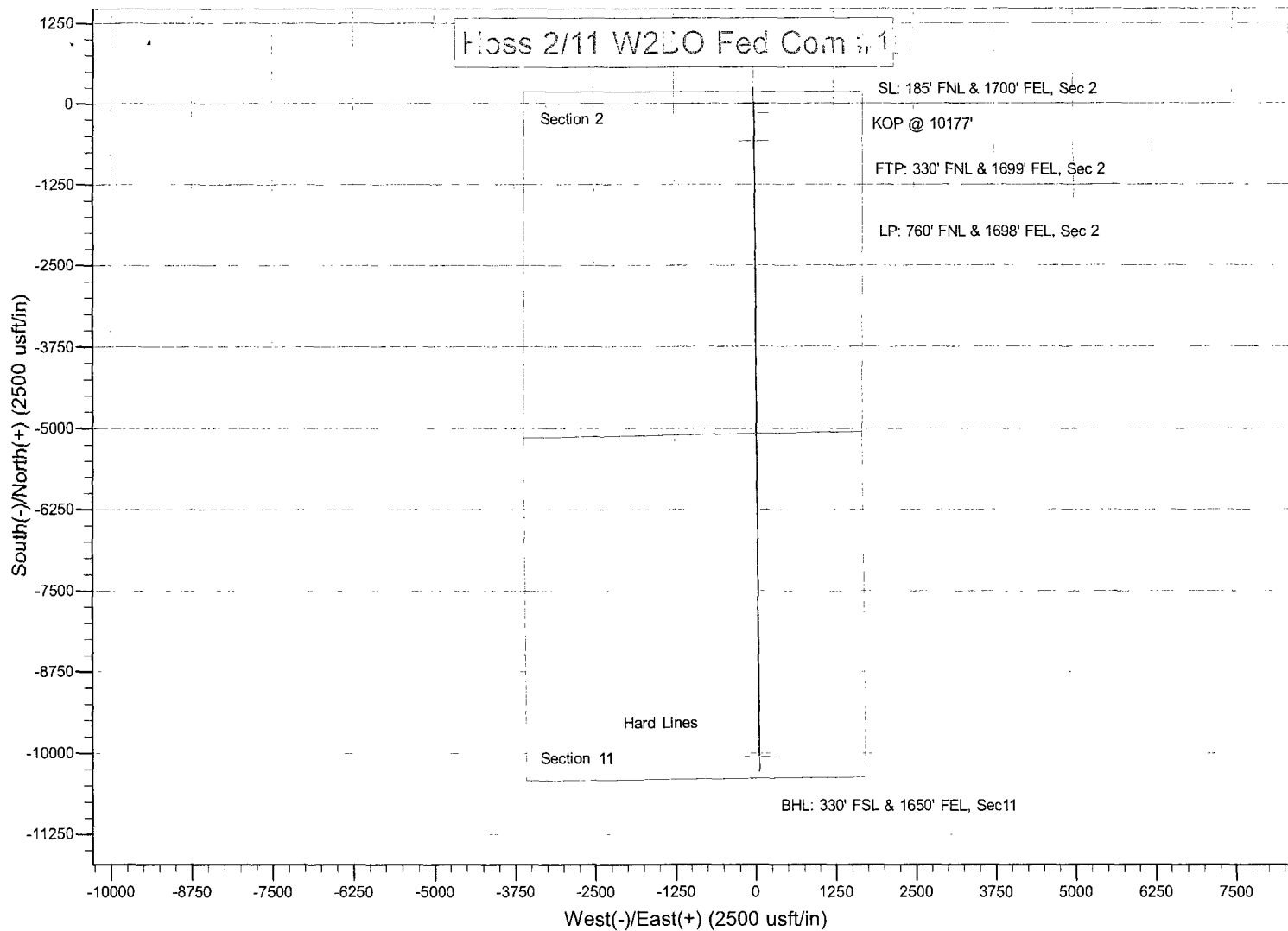
## Planned Survey

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)
-----------------------------	--------------------	----------------	-----------------------------	-----------------	-----------------	-------------------------------	-------------------------------	------------------------------	-----------------------------

## 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: 185' FNL & 1700' FE - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	424,178.00	586,320.00	32° 9' 57.149 N	104° 3' 15.747 W
KOP @ 10177' - plan hits target center - Point	0.00	0.00	10,177.0	0.0	0.0	424,178.00	586,320.00	32° 9' 57.149 N	104° 3' 15.747 W
FTP: 330' FNL & 1699' F - plan hits target center - Point	0.00	0.00	10,558.0	-145.0	0.9	424,033.00	586,320.87	32° 9' 55.714 N	104° 3' 15.741 W
BHL: 330' FSL & 1650' F - plan hits target center - Point	0.00	0.00	10,725.0	-10,056.0	60.0	414,122.00	586,380.00	32° 8' 17.629 N	104° 3' 15.352 W
LP: 760' FNL & 1698' FE - plan hits target center - Point	0.00	0.00	10,750.0	-574.5	3.4	423,603.50	586,323.40	32° 9' 51.463 N	104° 3' 15.724 W







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

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

## 10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

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

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

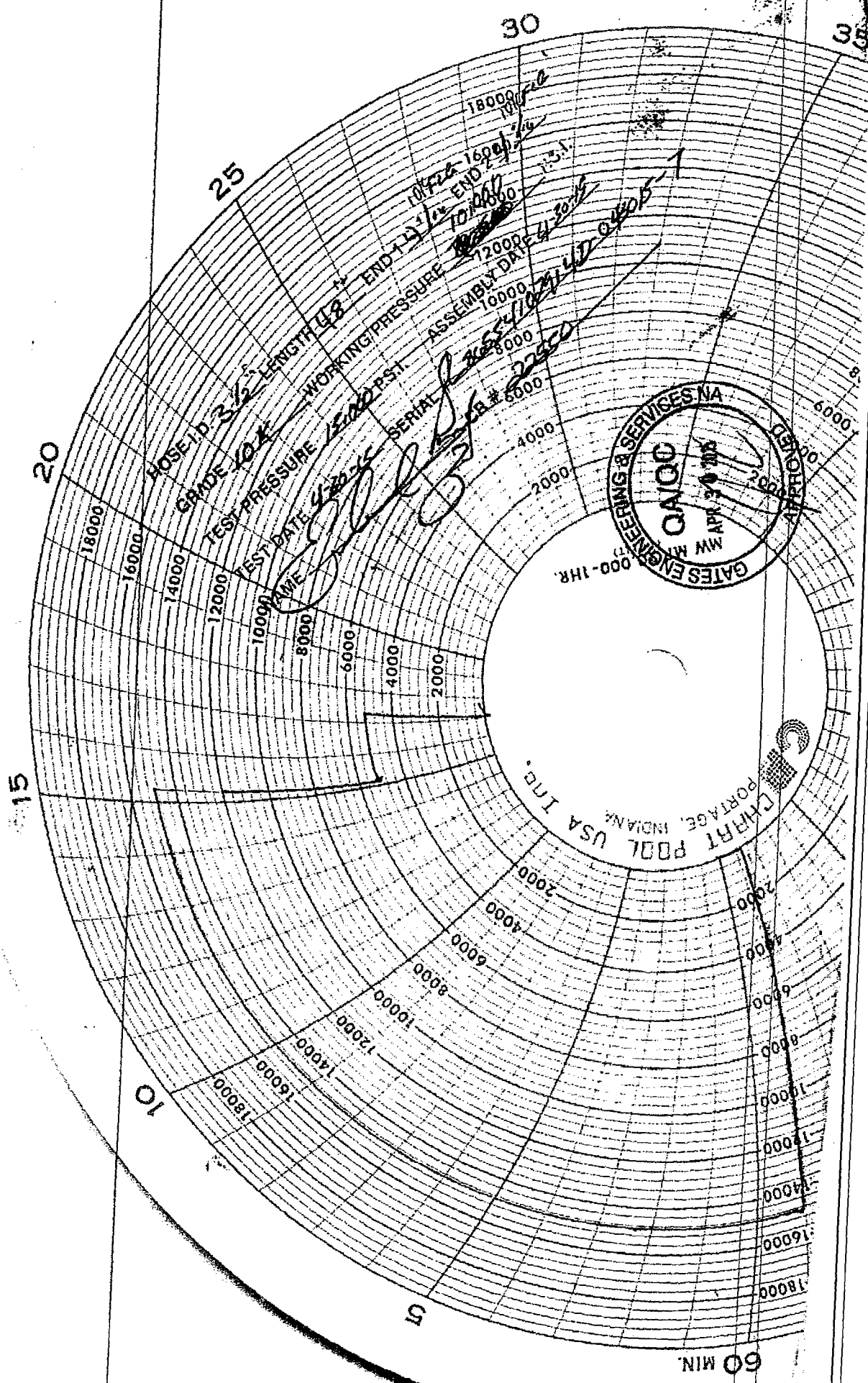
End Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG
Gates Part No. :	4773-6290	Assembly Code :	L36554102914D-043015-7
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

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

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

Form PTC - 01 Rev.02





HOSE ID 3 1/2" LENGTH 48' END 12 1/2" END 12 1/2"  
GRADE 10' TEST PRESSURE 12000 PSI WORKING PRESSURE 10000  
TEST DATE 4-23-75 ASSEMBLY DATE 4-20-75  
TIME 10:00 AM SERIAL # 6000  
22500

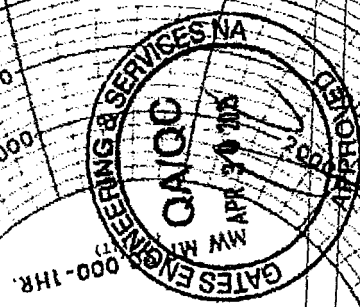


CHART POOL USA INC.  
PORTAGE, INDIANA

60 MIN

**APD ID:** 10400007586

**Submission Date:** 11/09/2016

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Well Type:** OIL WELL

**Well Work Type:** Drill

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

Hoss 2-11 W2BO Fed Com 1H\_existing road map\_11-09-2016.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:**

Hoss 2-11 W2BO Fed Com 1H\_existing well map\_11-09-2016.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**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:** a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color that blends in with the surrounding landscape. The paint color will be one of the colors from the BLM Standard Environmental Colors chart selected by the BLM authorized officer. b. All proposed production facilities that are located on the well pad will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location. c. Production from the proposed well will be located on the North edge of location. d. If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation of construction. e. An electric line will be applied for through a sundry notice or BLM right of way at a later date.

**Production Facilities map:**

Hoss 2-11 W2BO Fed Com 1H\_prod facility map\_11-09-2016.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source use type:** CAMP USE, DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, SURFACE CASING  
**Describe type:**

**Source latitude:** 32.1661

**Source datum:** NAD83

**Water source permit type:** PRIVATE CONTRACT, WATER WELL

**Source land ownership:** PRIVATE

**Water source transport method:** TRUCKING

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 2915

**Source volume (gal):** 122430

**Water source type:** IRRIGATION

**Source longitude:** -104.059555

**Water source use type:** DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING  
**Describe type:**

**Source latitude:** 32.197838

**Source datum:** NAD83

**Water source permit type:** WATER WELL

**Source land ownership:** PRIVATE

**Water source transport method:** TRUCKING

**Water source type:** IRRIGATION

**Source longitude:** -104.02509

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 2915

**Source volume (acre-feet):** 0.37572336

**Source volume (gal):** 122430

**Water source and transportation map:**

Hoss 2-11 W2BO Fed Com 1H\_watersourcetransportationmap\_11-09-2016.pdf

**Water source comments:**

**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

**Construction Materials source location attachment:**

Hoss 2-11 W2BO Fed Com 1H\_calichesourcetransportationmap\_01-03-2017.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Drill cuttings

**Amount of waste:** 1810 barrels

**Waste disposal frequency :** One Time Only

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

**Safe containmant attachment:**

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

**Disposal type description:**

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

**Waste type:** SEWAGE

**Waste content description:** Human waste & grey water

**Amount of waste:** 1500 gallons

**Waste disposal frequency :** Weekly

**Safe containment description:** 2,000 gallon plastic container

**Safe containmant attachment:**

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

**Disposal type description:**

**Disposal location description:** City of Carlsbad Water Treatment facility

**Waste type:** GARBAGE

**Waste content description:** Garbage & trash

**Amount of waste:** 1500 pounds

**Waste disposal frequency :** One Time Only

**Safe containment description:** Enclosed trash trailer

**Safe containmant attachment:**

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

**Disposal type description:**

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

## Reserve Pit

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)**

**Reserve pit width (ft.)**

**Reserve pit depth (ft.)**

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

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

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### **Cuttings Area**

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

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

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

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### **Section 8 - Ancillary Facilities**

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### **Section 9 - Well Site Layout**

**Well Site Layout Diagram:**

Hoss 2-11 W2BO Fed Com 1H\_well site layout\_11-09-2016.pdf

**Comments:** None



**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

## 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):** 2.58

**Wellpad short term disturbance (acres):** 3.04

**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:** 2.58

**Total short term disturbance:** 3.04

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

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

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

### Seed Summary

**Total pounds/Acre:**

Seed Type	Pounds/Acre
-----------	-------------

**Seed reclamation attachment:**

### Operator Contact/Responsible Official Contact Info

**First Name:** Bradley

**Last Name:** Bishop

**Phone:** (575)393-5905

**Email:** bbishop@mewbourne.com

**Seedbed prep:** Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

**Seed BMP:** To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

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

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** NA

**Weed treatment plan attachment:**

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

**Monitoring plan attachment:**

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

**Pit closure description:** NA

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Fee Owner:** Devon Energy Production Company, LP **Fee Owner Address:** 333 West Sheridan Ave Oklahoma City, OK 73102

**Phone:** (405)228-4342

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** SUA in place

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Fee Owner:** Limestone Livestock, LLC

**Fee Owner Address:** PO Box 189 Lovington, NM 88260

**Phone:** (575)396-1742

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** Ranch wide surface use agreement in place with landowner.

**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:** NOV 03 2016 Met with Nick Franke (BLM), Jen & Paul (Boone Arc) & RRC Surveying & staked location at 185' FNL & 2200' FEL, Sec 2, T25S, R28E, Eddy, Co. NM. Location unacceptable due to buried DCP

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** HOSS 2/11 W2BO FED COM

**Well Number:** 1H

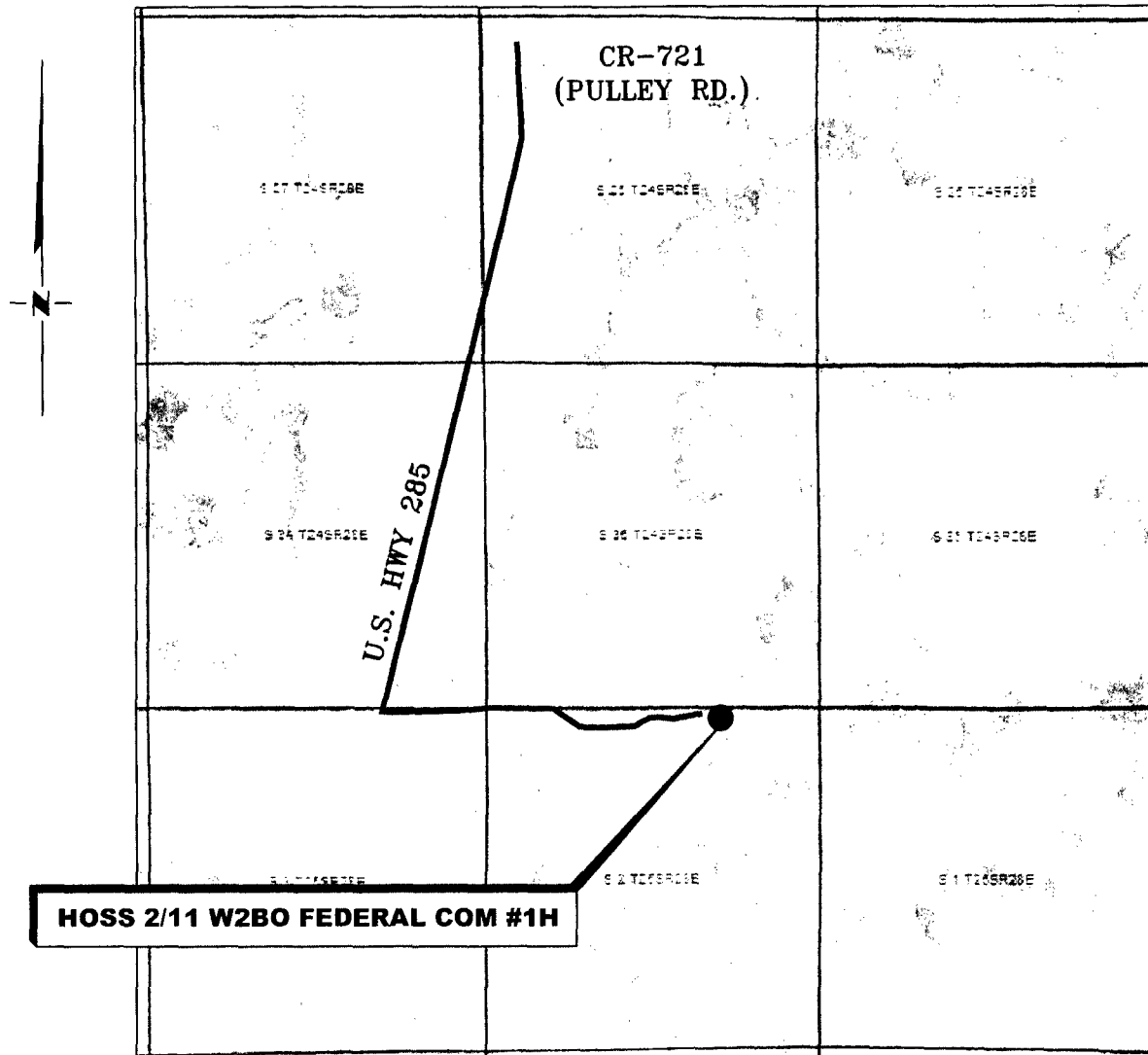
pipeline & COG SWD location. Moved location to 185' FNL & 1700' FEL, Sec 2, T25S, R28E, Eddy Co., NM. (Elevation @ 2957'). This appears to be a drillable location with pit area to the N. Topsoil stockpiled 30' wide on SE corner. Reclaim 60' S. Battery will be on N side. This will be a 340' x 390' pad. No road needed

### **Other SUPO Attachment**

Hoss 2-11 W2BO Fed Com 1H\_operatorletterofagreement\_01-03-2017.pdf

# VICINITY MAP

NOT TO SCALE



*SECTION 2, TWP. 25 SOUTH, RGE. 28 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: Mewbourne Oil Company

LEASE: Hoss 2/11 W2BO Federal Com

WELL NO.: 1H

LOCATION: 185' FNL & 1700' FEL

ELEVATION: 2957'

Firm No.: TX 10193838 NM 4655451

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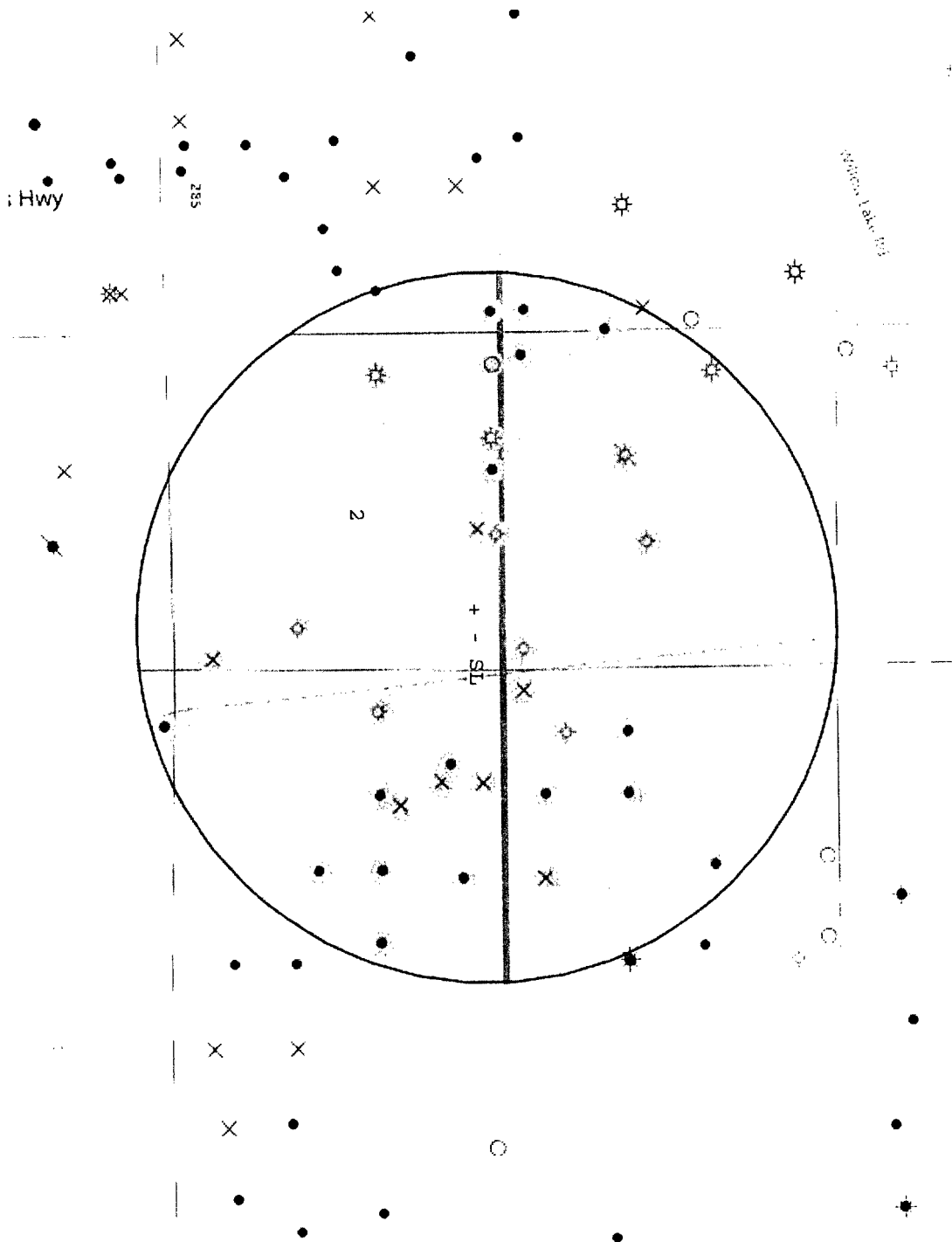
NO.	REVISION	DATE
JOB NO.: LS1610331		
DWG. NO.: 1610331VM		

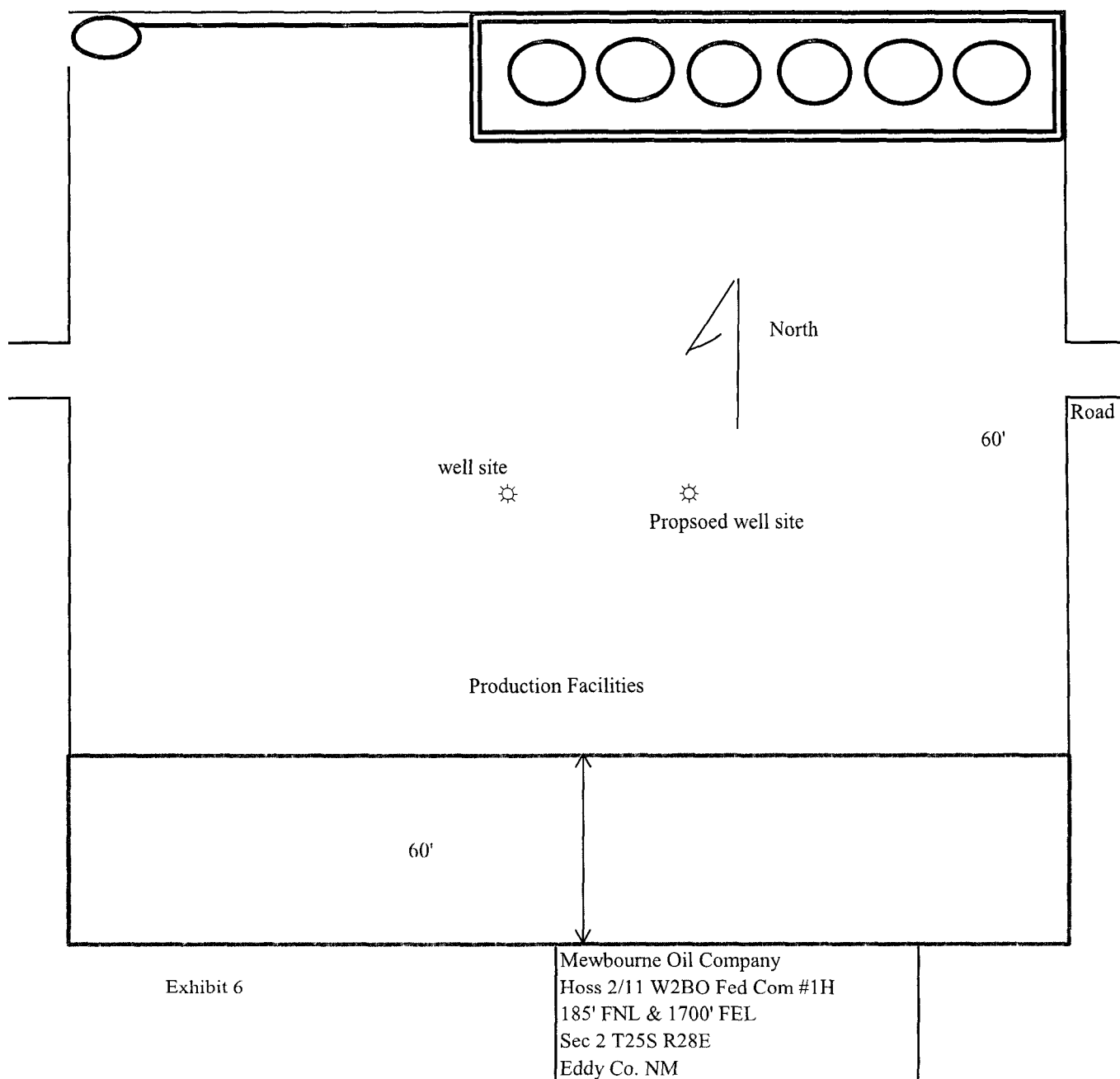


303 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

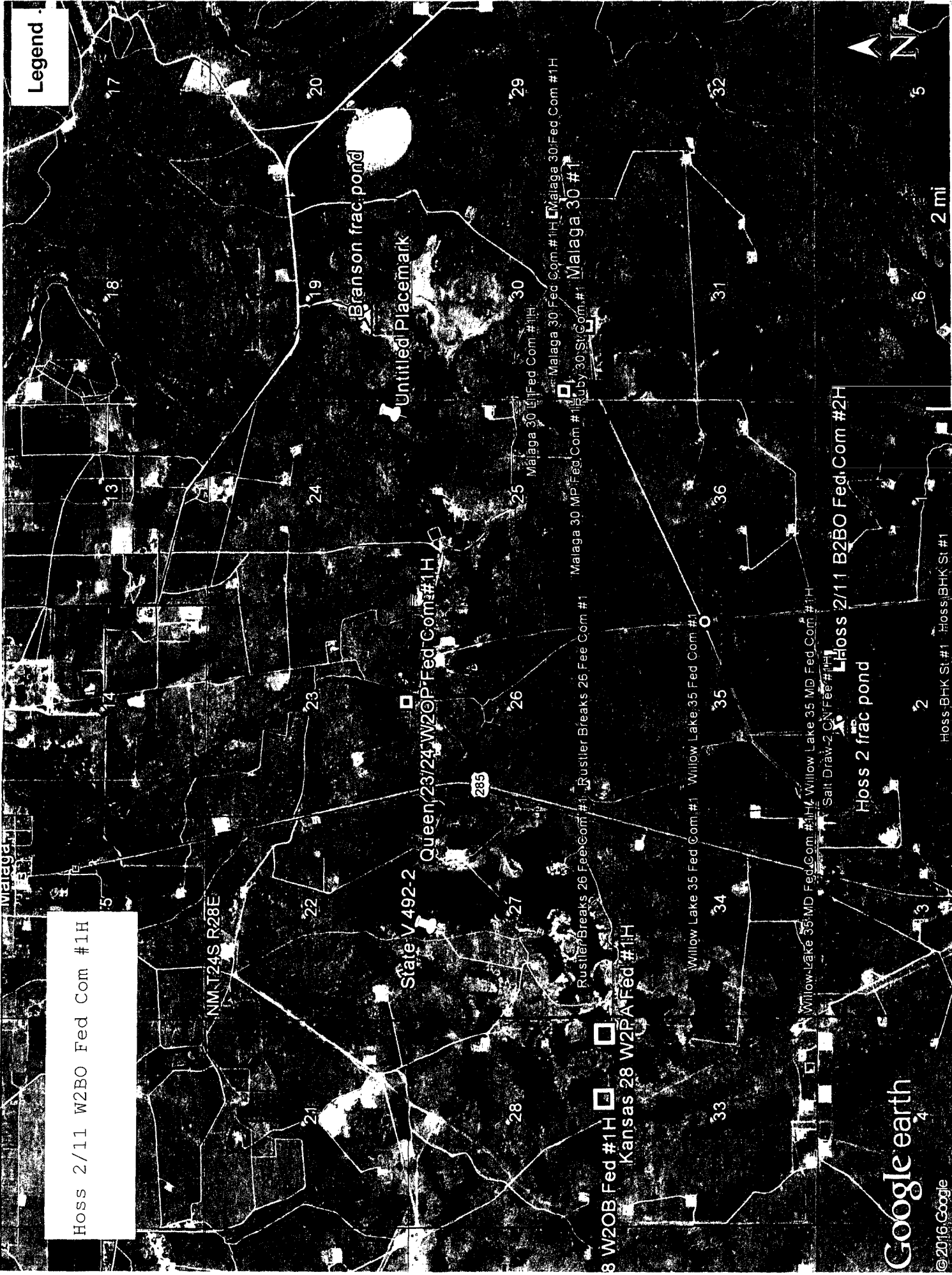
SCALE: N. T. S.
DATE: 11-2-2016
SURVEYED BY: ML/HD
DRAWN BY: CMJ
APPROVED BY: RMH
SHEET: 1 OF 1

SL - Hoss 2/11 W2B0 Fed Com #1H









Legend

Hoss 2/11 W2BO Fed Com #1H

NM T24S R28E

State V 492-2

Queen/23/24 W2OP Fed Com #1H

Rustler Breaks 26 Fed Com #1

Kansas 28 W2PA Fed #1H

3 W2OB Fed #1H

Willow Lake 35 Fed Com #1

Willow Lake 35 MD Fed Com #1H

Hoss 2/11 B2BO Fed Com #2H

Hoss 2 frac pond

Hoss BHK St #1

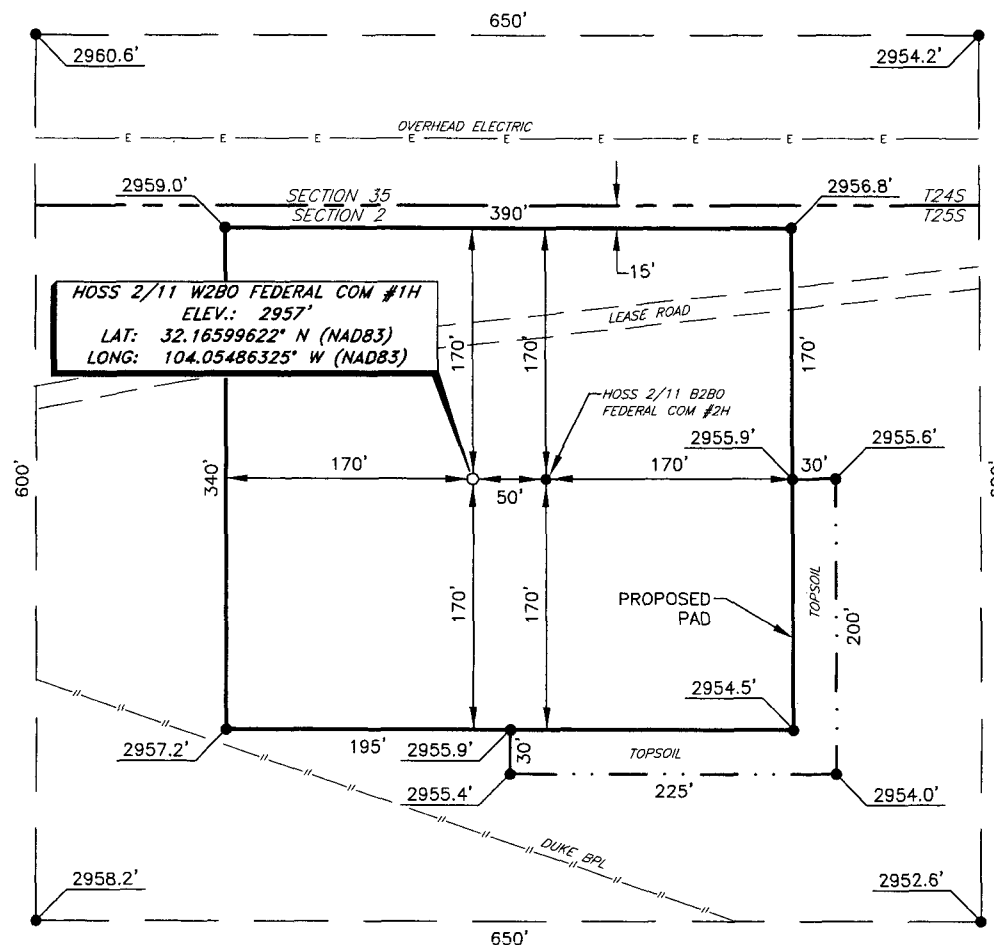
2 mi

Google earth

©2016 Google



HOSS 2/11 W2B0 FEDERAL COM #1H  
(185' FNL & 1700' FEL)  
SECTION 2, T25S, R28E  
N. M. P. M., EDDY CO., NEW MEXICO




From the intersection of U.S. HWY 285 and CR-721 (Pulley Rd.);

Go South on U.S. Hwy 285 approx. 2.0 miles to a lease road on the left;

Turn left and go East approx. 1.0 miles, to location on the right.



SCALE: 1" = 100'

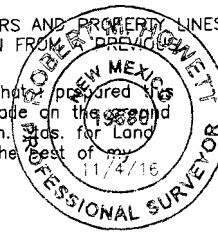
A horizontal graphic scale bar with a black background and white markings. It is labeled with '0' at the left end, '50' in the middle, and '100' at the right end. The bar is divided into two equal segments by the '50' mark.

BEARINGS ARE  
NAD 83 GRID - NM EAST  
DISTANCES ARE  
GROUND.

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

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

Robert M. Howett NM PS 19680



Firm No.. TX 10193838 NM 4655451

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NO.	REVISION	DATE
JOB NO.: LS1610331		
DWG. NO.: 1610331PAD		

# RRC

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

SCALE: 1" = 100'
DATE: 11-2-2016
SURVEYED BY: ML/HD
DRAWN BY: CMJ
APPROVED BY: RMH
SHEET: 1 OF 1

**APD Attachment: Hoss 2/11 W2BO Fed Com #1H**

BLM Serial No.: NMNM 13413 – T25S, R28E, Section 11: SW/4NE/4 & NW/4SE/4, Eddy County, NM

Current Record Title owner: Chevron U.S.A. Inc.

Current Operating Rights Owner: Magnum Hunter Production, Inc., et al

Mewbourne Oil Company currently has a contractual interest in these tracts via Joint Operating Agreement dated February 1, 1981

Mewbourne Oil Company is currently working with Magnum Hunter Production, Inc., et al to form a working interest unit including this lease that will allow for the development of all lands covering the E/2 of Section 2 and the E/2 of Section 11, both in T25S, R28E, Eddy County, New Mexico.

Magnum Hunter Production, Inc., et al, 600 N. Marienfeld St., Suite 600, Midland, TX 79701  
Attn: Kelly Reese 432-620-1966

BLM Serial No.: NMNM 16104 – T25S, R28E, Section 11: NE/4SE/4, Eddy County, NM

Current Record Title owner: Magnum Hunter Production, Inc. (50%) & Burlington Resources Oil and Gas Company, LP (50%)

Current Operating Rights Owner: Magnum Hunter Production, Inc., et al

Mewbourne Oil Company currently has a contractual interest in these tracts via Joint Operating Agreement dated February 1, 1981

Mewbourne Oil Company is currently working with Magnum Hunter Production, Inc., et al to form a working interest unit including this lease that will allow for the development of all lands covering the E/2 of Section 2 and the E/2 of Section 11, both in T25S, R28E, Eddy County, New Mexico.

Magnum Hunter Production, Inc., et al, 600 N. Marienfeld St., Suite 600, Midland, TX 79701  
Attn: Kelly Reese 432-620-1966

## Section 1 - General

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

## Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe 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:

### **Section 3 - Unlined Pits**

**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:**

**Describe 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 mineral owner:**

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

## Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

## Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



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

## Bond Info Data Report

05/04/2017

### 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:



**PECOS DISTRICT  
DRILLING OPERATIONS  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Mewbourne
LEASE NO.:	NMNM134867
WELL NAME & NO.:	1H- Hoss 2 11 W2BO Federal Com
SURFACE HOLE FOOTAGE:	185'/N & 1700'/E
BOTTOM HOLE FOOTAGE:	330'/S & 1650'/E, 11
LOCATION:	Section 2 T.25 S., R.28 E., NMPM
COUNTY:	Eddy County, New Mexico

**A. 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,  
(575) 361-2822

1. **Operator has stated that Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

## **B. CASING**

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

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

### **Wait on cement (WOC) for Water Basin:**

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

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

### **High Cave/Karst**

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

**A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. ON A THREE STRING DESIGN; IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.**

1. The 13-3/8 inch surface casing shall be set at approximately **425** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

**Operator has proposed DV tool at depth of 3670', 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. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.**

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 circulation on the next stage.

b. Second stage above DV tool:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

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

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

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

- ☒ Cement as proposed. Operator shall provide method of verification.

5. 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.

### C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
2. 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).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13 3/8** inch surface casing shoe shall be **2000 (2M)** psi.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9 5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

**5M/10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength,

whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes 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.

#### **D. DRILL STEM TEST**

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

#### **E. WASTE MATERIAL AND FLUIDS**

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

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

#### **F. SPECIAL REQUIREMENT**

##### **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.

**TMAK 03222017**

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Mewbourne
LEASE NO.:	NMNM134867
WELL NAME & NO.:	1H- Hoss 2 11 W2BO Federal Com
SURFACE HOLE FOOTAGE:	185'/N & 1700'/E
BOTTOM HOLE FOOTAGE	330'/S & 1650'/E, 11
LOCATION:	Section 2 T.25 S., R.28 E., NMPM
COUNTY:	Eddy County, New Mexico

**TABLE OF CONTENTS**

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

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☐ **Special Requirements**
  - Cave/Karst
  - Watershed
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **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)**

### **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.

### **Cave and Karst Conditions of Approval**

**\*\*** 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, or equivalent, 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 valves, 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 cave-bearing 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.

## **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**

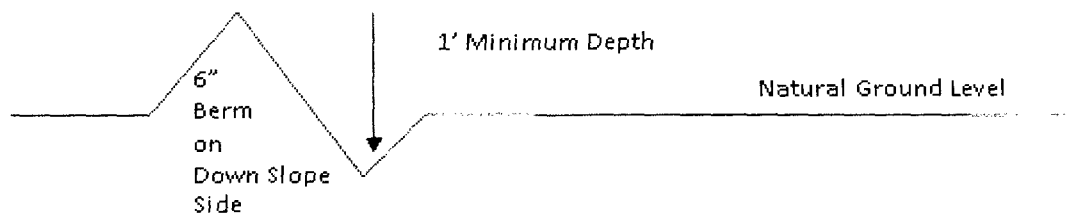
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping 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:

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

#### **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.

### Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

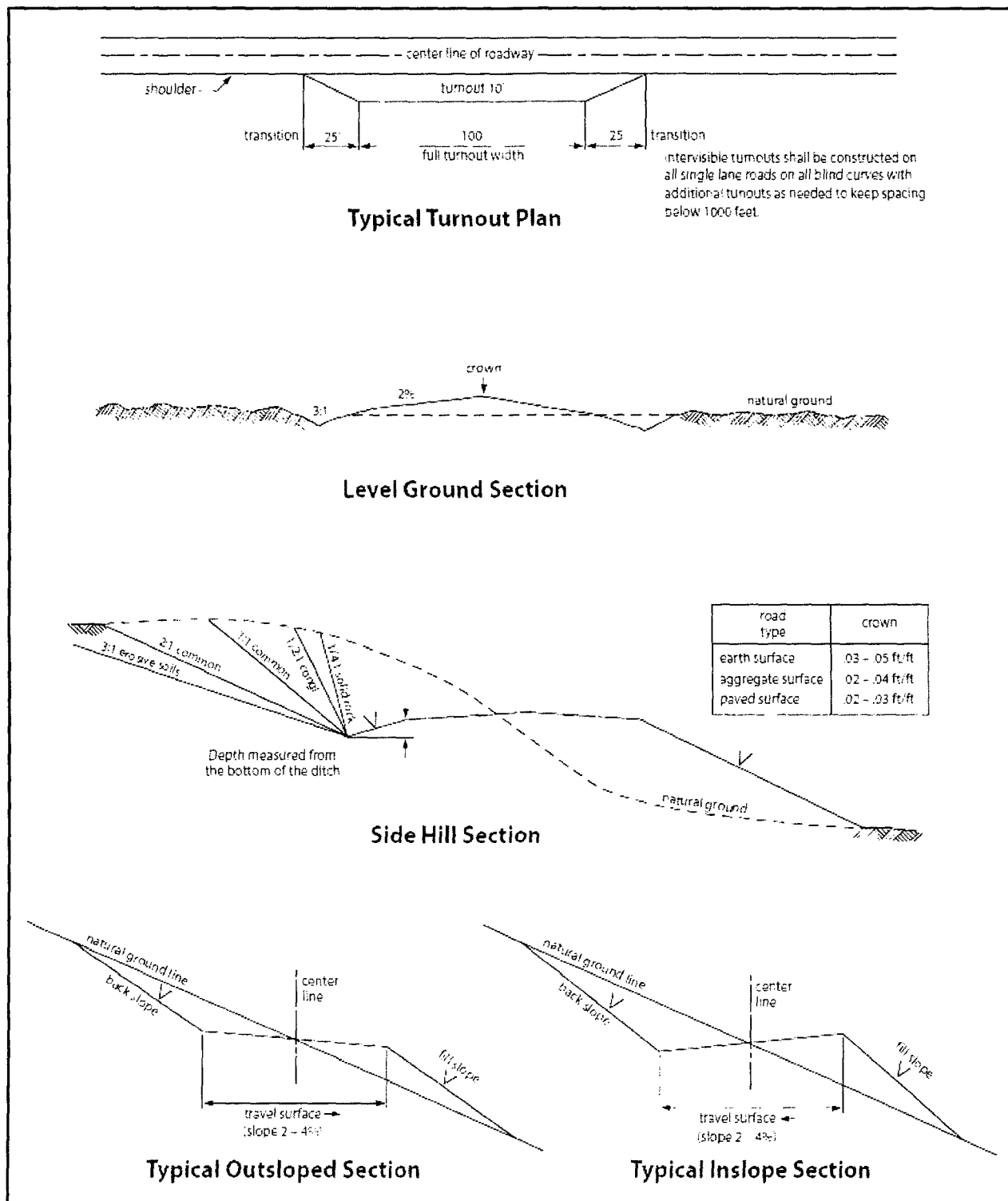


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **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 1 ½ 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 1 for Loamy Sites

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 no primary or secondary noxious weeds in the seed mixture. Seed shall 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 shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may 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:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass ( <i>Eragrostis intermedia</i> )	0.5
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sideoats grama ( <i>Bouteloua curtipendula</i> )	5.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

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