OCD Artesia

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM27279

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
BRADLEY 31 DA FED COM 1H

2. Name of Operator
MEWBOURNE OIL COMPANY
Contact: JACKIE LATHAN
E-Mail: jlathan@mewbourne.com

9. API Well No.
30-015-40562

3a. Address
PO BOX 5270
HOBBS, NM 88241

3b. Phone No. (include area code)
Ph: 575-393-5905
Fx: 575-397-6252

10. Field and Pool, or Exploratory
BONE SPRING
SANTO NINO; BS

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 31 T18S R30E NWNW 720FNL 10FWL

11. County or Parish, and State
EDDY COUNTY, NM

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

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

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

MOC has an approved APD for the above well. MOC would like to move the surface location & change the name to Bradley 31 B2DA Fed Com #1H. Please see attached surface diagrams, directional plan & drilling program. Please call Bradley Bishop with any questions.

Bond on file: NM1693 nationwide & NMB000919

Accepted for record
NMOCD 5.20.14

RECEIVED
MAY 19 2014
NMOCD ARTESIA

JAM-erg Review 4/28/14
OK - Surface - TEN 4/28/14

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #237870 verified by the BLM Well Information System
For MEWBOURNE OIL COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by JERRY BLAKLEY on 04/03/2014 ()

Name *(Printed/Typed)* JACKIE LATHAN — Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) — Date 03/05/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Stephen J Caffey — Title FOR FIELD MANAGER — Date 5/12/14

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

Office CARLSBAD FIELD OFFICE

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

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

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

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

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

☐ AMENDED REPORT

B2

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-40562	54600	SANTO NINO BONE SPRING

4 Property Code	5 Property Name	6 Well Number
	BRADLEY 31 DA FED COM	1H

7 OGRID No.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	3452'

10 Surface Location

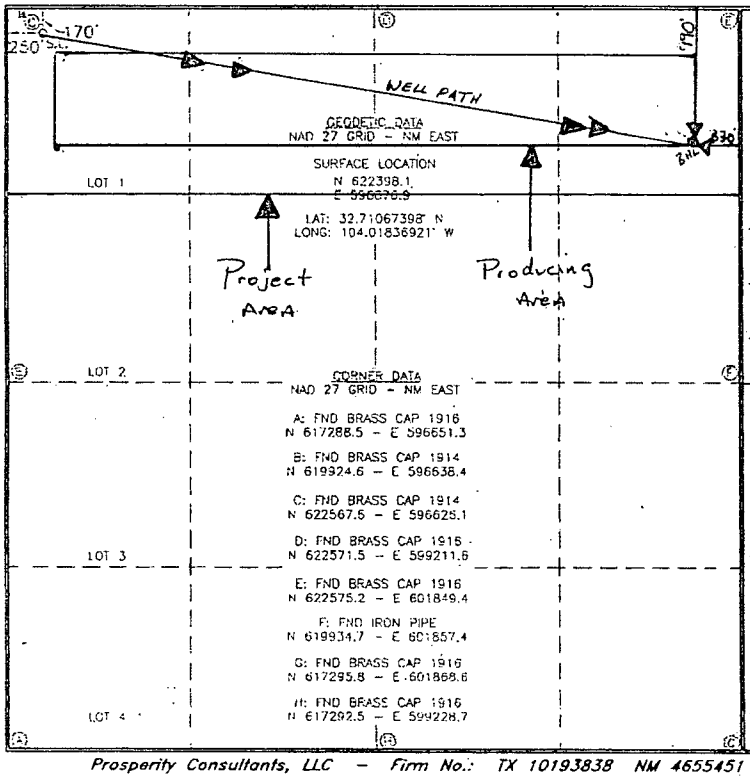
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	31	18-S	30-E		170	NORTH	250	WEST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	31	18-S	30-E		990	NORTH	330	EAST	EDDY

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

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



17 OPERATOR CERTIFICATION

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

Bradley Bishop 2-26-14
Signature Date

BRADLEY BISHOP
Printed Name

E-mail Address

18 SURVEYOR CERTIFICATION

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

11/12/13
Date of Survey

Signature and Seal of Professional Surveyor

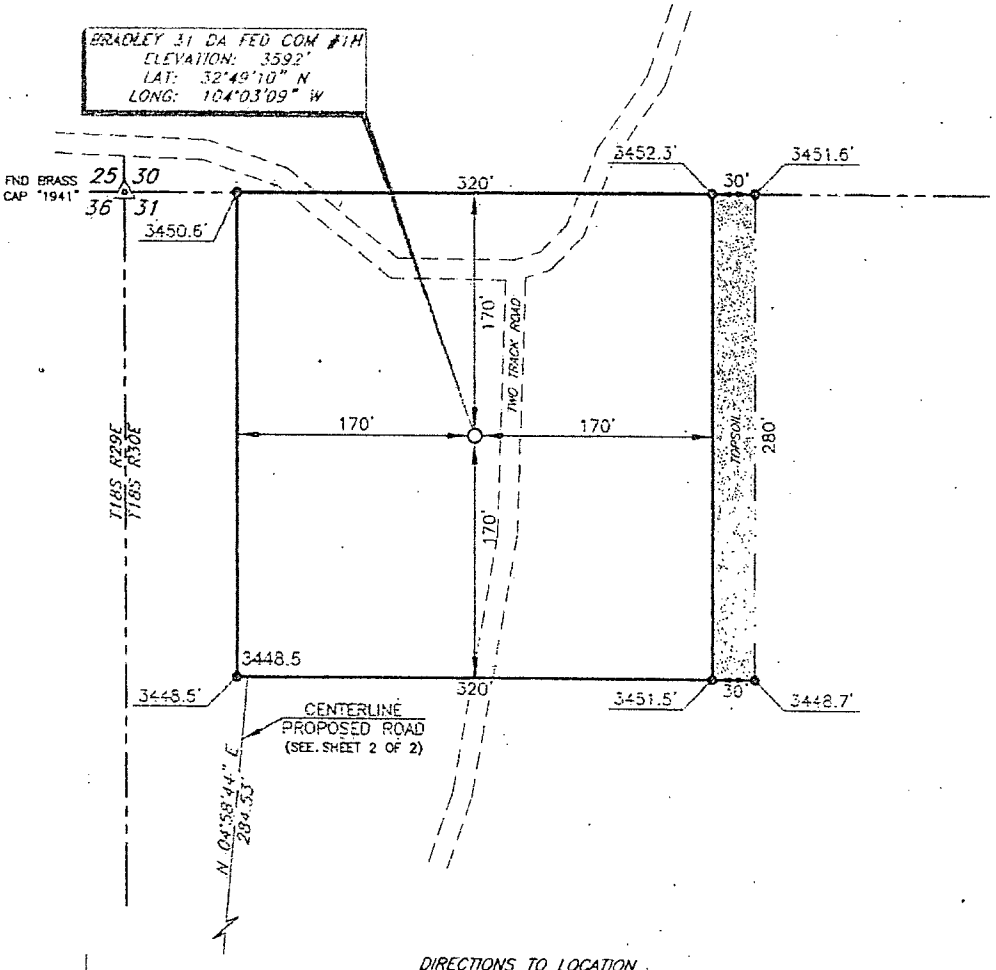
ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

Prosperity Consultants, LLC – Firm No.: TX 10193838 NM 4655451 – Job No.: 130276

MEWBOURNE OIL COMPANY

Bradley 31 DA Fed Com #1H
(170' FNL & 250' FWL)
Section 31, T-18-S, R-30-E,
N. M. P. M., Eddy Co., New Mexico



DIRECTIONS TO LOCATION

From the intersection of the U.S. Hwy. #62--180 & St. Hwy. #360:

Go North on St. Hwy. #360 approx. 14.0 miles to lease road.

Turn right and go Northeast approx. 0.4 mile to a road survey.

Follow road survey approx. 0.3 mile to this location.

N

SCALE: 1" = 100'
0 50 100

BEARINGS ARE NAD 27 GRID - NM EAST
DISTANCES ARE GROUND.

NO.	REVISION	DATE

JOB NO.: LS130276
DWG. NO.: 130276

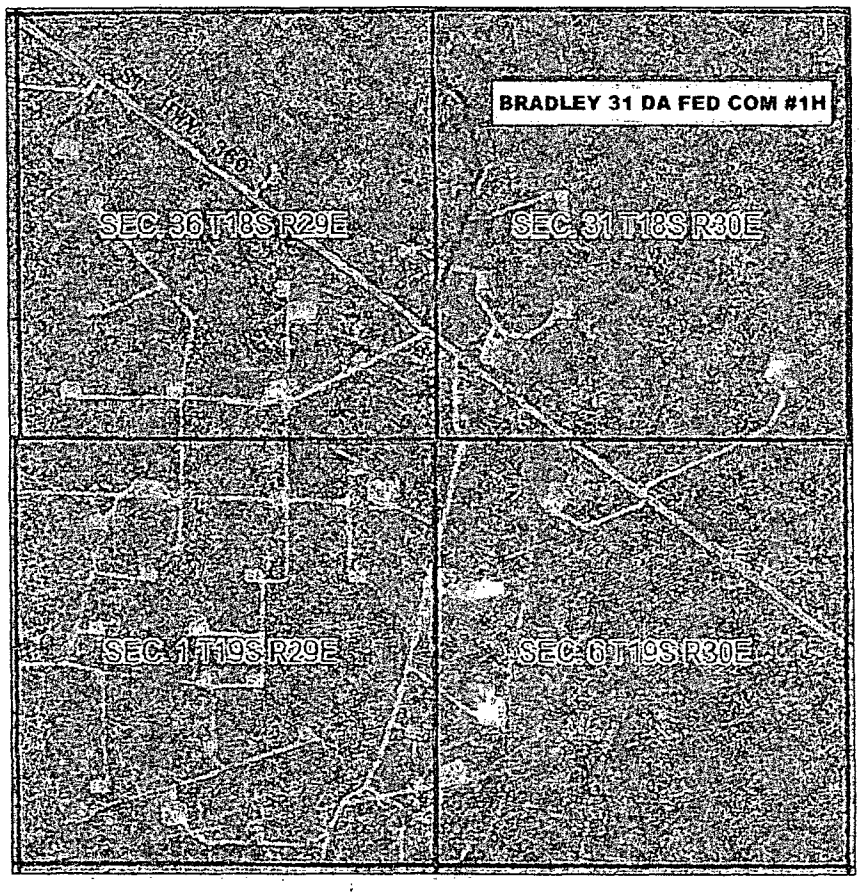
PROSPERITY CONSULTANTS, LLC

308 W. Broadway St., Hobbs, NM 88240 | Firm No.: TX 10193838 NM 4655451 | (575) 964-8200

SCALE: 1"=1000'
DATE: 11/12/13
SURVEYED BY: BC/BK
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

VICINITY MAP

NOT TO SCALE



SECTION 31, TWP. 18 SOUTH, RGE. 30 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Bradley 31 DA Fed Com
WELL NO.: 1H

LOCATION: 170' FNL & 250' FWL
ELEVATION: 3452'

NO.	REVISION	DATE

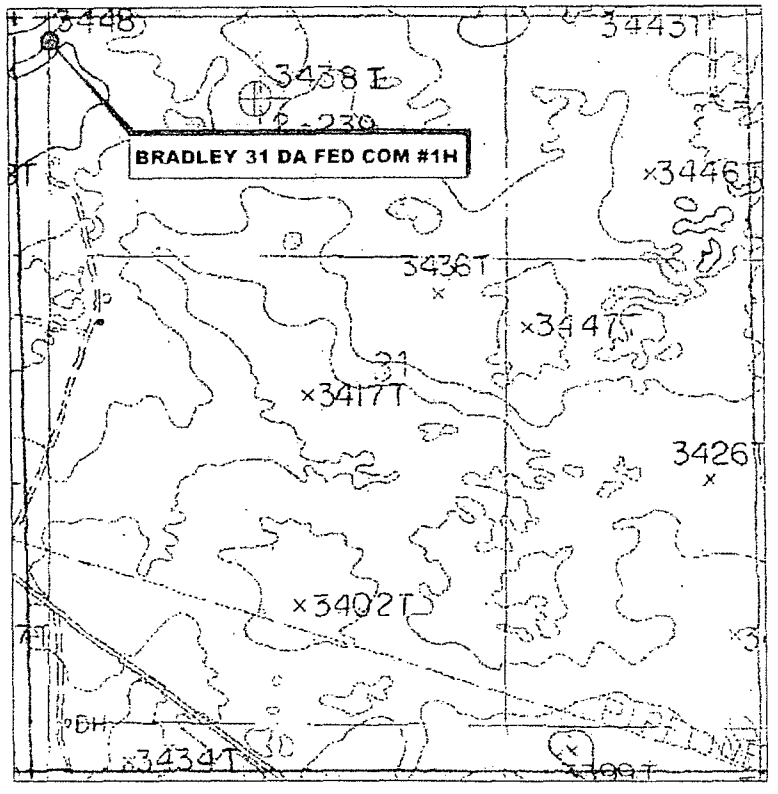
JOB NO.: LS130276
DWG. NO.: 130276

PROSPERITY CONSULTANTS, LLC

306 W. Broadway St., Hobbs, NM 88240 | Firm No. TX 10193838 NM 4655451 | (575) 964-8200

SCALE: N.T.S.
DATE: 11/12/13
SURVEYED BY: BK/IE
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

LOCATION VERIFICATION MAP



SECTION 31, TWP. 18 SOUTH, RGE. 30 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Bradley 31 DA Fed Com
WELL NO.: 1H
ELEVATION: 3452'

LOCATION: 170' FNL & 250' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Maljamar, NM (Prov. Ed. 1985)

NO.	REVISION	DATE

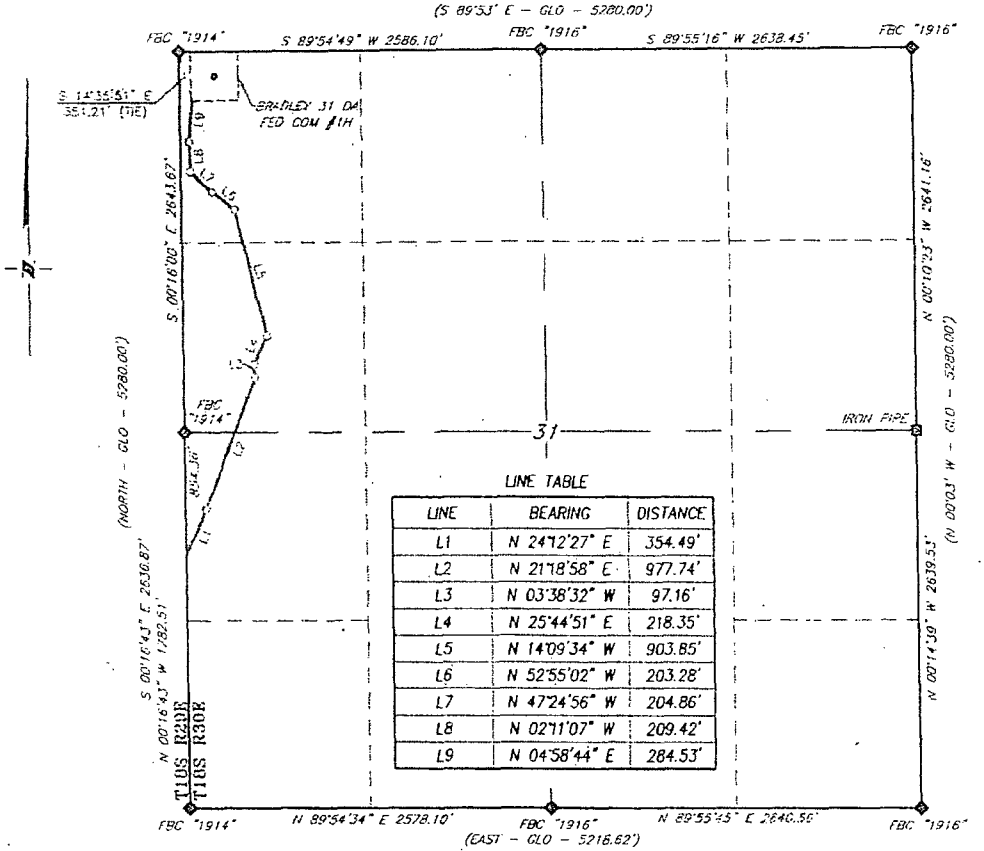
JOB NO.: LS130276
DWG. NO.: 130276

PROSPERITY CONSULTANTS, LLC

308 W. Broadway St., Hobbs, NM 88240 | Firm No. TX 10193838 NM 4655451 | (575) 964-8200

SCALE: 1"=1000'
DATE: 11/12/13
SURVEYED BY: BK/IE
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

MEWBOURNE OIL COMPANY
ROAD EASEMENT FOR BRADLEY 31 DA FED COM #1H
SEC. 31, T18S, R30E, N.M.P.M., EDDY CO., N.M.



LINE TABLE

LINE	BEARING	DISTANCE
L1	N 24°12'27" E	354.49'
L2	N 21°18'58" E	977.74'
L3	N 03°38'32" W	97.16'
L4	N 25°44'51" E	218.35'
L5	N 14°09'34" W	903.85'
L6	N 52°55'02" W	203.28'
L7	N 47°24'56" W	204.86'
L8	N 02°11'07" W	209.42'
L9	N 04°58'44" E	284.53'

DESCRIPTION

A strip of land being 20 feet wide, 3453.68 feet or 209.314 rods in length lying in Section 31, Township 18 South, Range 30 East, N. M. P. M., Eddy County, New Mexico, being 10 feet left and 10 feet right of the following described survey of a existing road centerline across State of New Mexico land:

Beginning at a point in Southwest quarter, of said Section 31, which bears S 00°16'43" E, 854.36 feet from a Brass Cap stamped "1914", found for the West quarter corner of said Section 31;

Thence N 24°12'27" E, 354.49 feet;
Thence N 21°18'58" E, 977.74 feet;
Thence N 03°38'32" W, 97.14 feet;
Thence N 25°44'51" E, 218.30 feet;
Thence N 14°09'34" W, 903.63 feet;
Thence N 52°55'02" W, 203.23 feet;
Thence N 47°24'56" W, 204.86 feet;
Thence N 02°11'07" W, 209.42 feet;

Thence N 04°58'44" E, 284.53 feet to the Point of Ending, a point in the Northwest quarter of said Section 31, which bears S 14°35'51" E 351.21 feet from a Brass Cap, stamped "1914", found for the Northwest corner of said Section 31.

Said strip of land contains 1.586 acres, more or less, and is allocated by forties as follows:

LOT 1	0.522 Acres
LOT 2	0.639 Acres
LOT 3	0.425 Acres

SCALE: 1" = 1000'
0 500 1000

BEARINGS: NAD 27 GRID--NM EAST
DISTANCES: HORIZ. GROUND

LEGEND
( ) RECORD DATA
FBC**** FOUND BRASS CAP "YEAR"
FND. MONUMENT AS NOTED

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

Robert M. Howett
Robert M. Howett NM PS 19680

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

NO.	REVISION	DATE

JOB NO.: LS130276
DWG. NO.: 130276RD

PROSPERITY CONSULTANTS, LLC

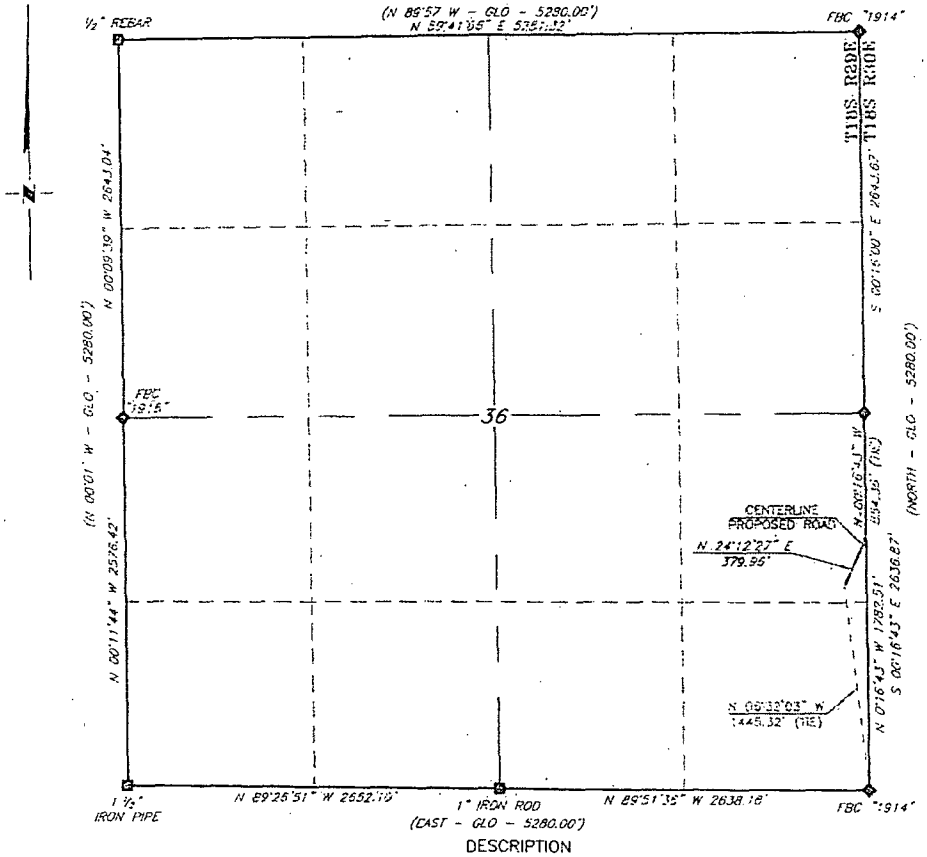
2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664 o (512) 992-2087 f (512) 251-2518

SCALE: 1" = 1000'
DATE: 11/12/13
SURVEYED BY: BK/IE
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 2 OF 2

MEWBOURNE OIL COMPANY

ROAD EASEMENT FOR BRADLEY 31 DA FED COM #1H

SEC. 36, T18S, R29E, N.M.P.M., EDDY CO., N.M.



DESCRIPTION

A strip of land being 20 feet wide, 379.96 feet or 23.028 rods in length lying in Section 36, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, being 10 feet left and 10 feet right of the following described survey of a existing road centerline across State of New Mexico land:

Beginning at a point in Southeast quarter, of said Section 36, which bears N 06°32'03" W, 1445.32 feet from a Brass Cap stamped "1914", found for the Southeast corner of said Section 36;

Thence N 24°12'27" E, 379.96 feet to the Point of Ending, a point on the East section line of said Section 36, which bears S 00°16'43" E 854.36 feet from a Brass Cap, stamped "1914", found for the Southeast corner of said Section 36.

Said strip of land contains 0.174 acres, more or less, and is allocated by forties as follows:

NW 1/4 SE 1/4 0.174 Ac.

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

SCALE: 1" = 1000'
0 500 1000

BEARINGS: NAD 27 GRID-NM EAST
DISTANCES: HORIZ. GROUND

LEGEND
( ) RECORD DATA
FBC**** FOUND BRASS CAP "YEAR"
■ FND. MONUMENT AS NOTED

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

Robert M. Howett
Robert M. Howett NM PS 19680

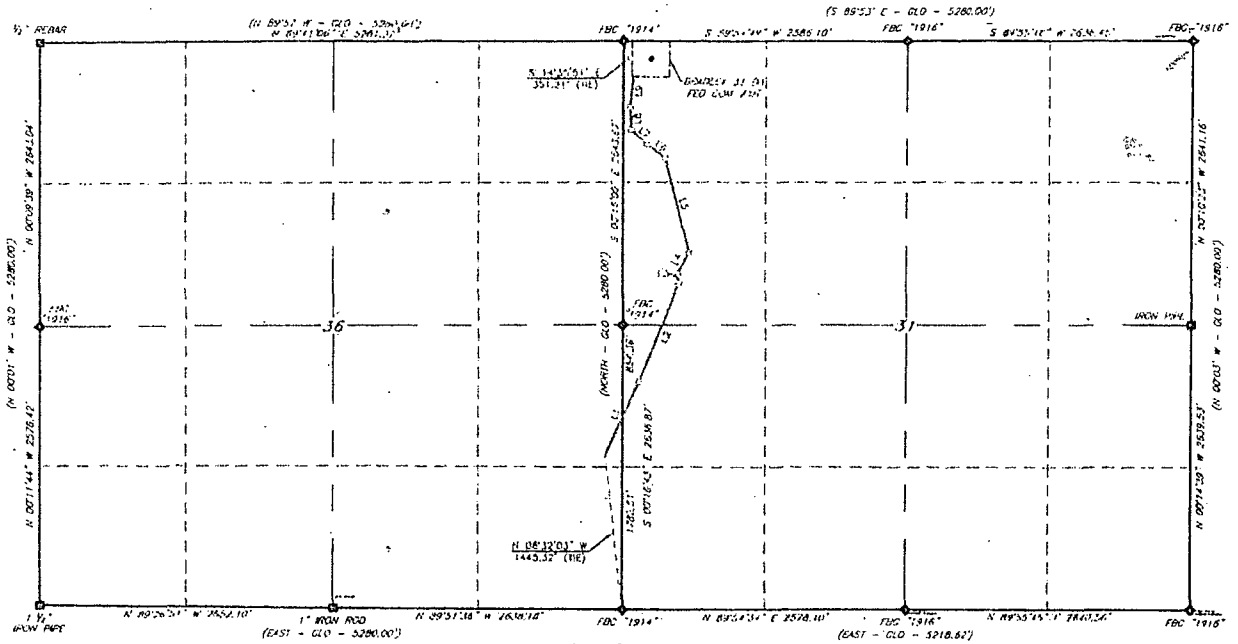
NO.	REVISION	DATE

JOB NO.: LS130276
DWG. NO.: 130276RD

PROSPERITY CONSULTANTS, LLC

2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664 o (512) 992-2087 f (512) 251-2518

SCALE: 1" = 1000'
DATE: 11/12/13
SURVEYED BY: BK/IE
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 2



OVERVIEW

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 24°12'27" E	734.45'
L2	N 21°18'58" E	977.74'
L3	N 03°38'32" W	97.16'
L4	N 25°44'51" E	218.35'
L5	N 14°09'34" W	903.85'
L6	N 52°55'02" W	203.28'
L7	N 47°24'56" W	204.86'
L8	N 02°11'07" W	209.42'
L9	N 04°58'44" E	284.53'

N

BEARINGS: NAD 27 GRID-NM EAST
DISTANCES: HORIZ. GROUND

LEGEND

( ) RECORD DATA
FBC**** FOUND BRASS CAP "YEAR"
FND. MONUMENT AS NOTED
D.R.E.C.N.M. DEED OF RECORDS EDDY COUNTY, NEW MEXICO

MEWBOURNE OIL COMPANY

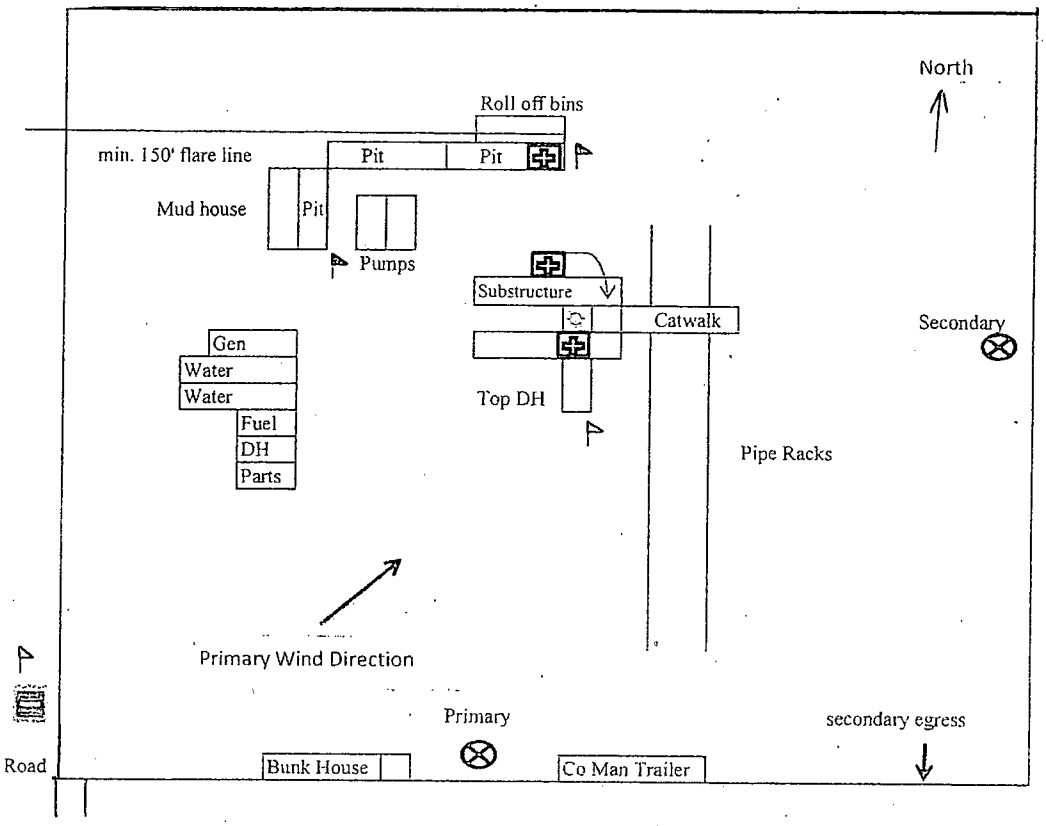
ROAD EASEMENT FOR BRADLEY 31 DA FED COM #1H

SECTION 36, T18S, R29E &
SECTION 31, T18S, R30E N.M.P.M., EDDY CO., N.M.

PROSPERITY CONSULTANTS, LLC
7731 Double Creek Drive, Suite 602, Round Rock, Texas 78664 o(512) 992-2067 f(512) 251-2516

DATE: 11/12/13	SURVEYED BY: BK/IE	
DWG. NO.: 1302760V	DRAWN BY: AF	SCALE: 1"=1000'
JOB NO.: LS130276	APPR. BY: LWB	SHEET : 1 OF 1

H2S Diagram
Closed Loop Pad Dimensions 280' x 320'



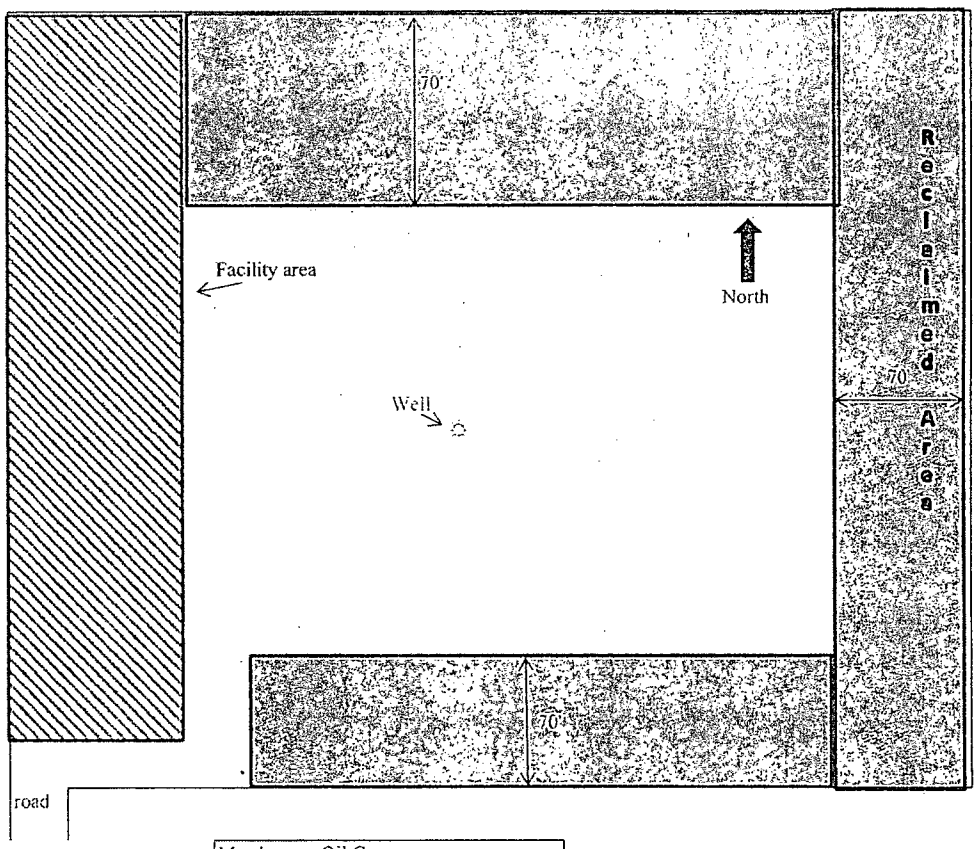
Was Revised

Exhibit 6

= Warning Signs
= Wind Markers
= H2S Monitors
= Safety Stations

Mewbourne Oil Company
Bradley 31 B2DA Fed Com #1H
170' FNL & 250' FWL
Sec. 31 T18S R30E
Eddy Co. NM

Closed Loop Pad Dimensions 280' x 320'



Mewbourne Oil Company
Bradley 31 B2DA Fed Com #1H
170' FNL & 250' FWL
Sec. 31 T18S R20E
Eddy Co. NM

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MEWBOURNE OIL COMPANY

Bradley 31 B2DA Fed Com #1H
170' FNL & 250' FWL
Sec. 31 T18S R30E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, Covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved, and the procedures to be followed in restoring the surface so that a complete appraisal can be made of the environmental impact associated with the proposed operations.

1. Existing Roads:

A. Exhibit #3 is a road map showing the location of the proposed well. Existing roads are highlighted in black. Exhibits #3-#3C are maps showing the location of the proposed well and access road. Existing and proposed roads are highlighted in black.

B. Directions to location: From the intersection of HWY 62-180 & HWY 360 go north on HWY 360 14 miles to a lease road. Turn NE aprox. .4 mile to beginning road survey. Follow .3 mile to location.

C. Existing roads will be maintained in a condition the same as or better than before operations begin.

2. Proposed Access Road:

A Approx. 3453.68' of new road construction will be needed.

B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The road will be surfaced with 6" of rolled and compacted caliche.

C. Mewbourne Oil Co. will cooperate with other operators in the maintenance of lease roads.

D. A ROW application has been filed with NMSLO for the portion of road in Sec. 36 T18S R29E.

3. Location of Existing Wells:

There are producing wells within the immediate vicinity of the well site. Exhibit #4 shows existing wells within a one mile radius.

4. Location of Existing and/or Proposed Facilities:

A. There are production facilities on this lease at the present time.

B. In the event that the well is productive, production facilities will be on the West side of location.

C. All production vessels left on location will be painted to conform to BLM painting stipulations within 180 days of installation.

5. Location and Type of Water Supply

The well will be drilled with a combination of fresh water and brine water based mud systems. The water will be obtained from commercial suppliers in the area and/or hauled to the location by

transport trucks over existing and proposed roads as indicated in Exhibit #3.

6. Source of Construction Materials

All material required for construction of the drill pad and access roads will be obtained from private, state, or federal pits. The construction contractor will be solely responsible for securing construction materials required for this operation and paying any royalties that may be required on those materials.

7. Methods of Handling Waste Disposal:

A. Drill cuttings not retained for evaluation purposed will be hauled to an off-site permitted facility.
B. Water produced during operations will be hauled to an off-site permitted SWD in the area.
C. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
D. Sewage and gray water will be safely contained on-site, and then waste will be disposed at an approved off-site facility.
E. All trash, junk, and other waste materials will be stored in proper containers to prevent dispersal and will be removed to an appropriate facility within one week of cessation of drilling and completion activities.
F. MOC will utilize a closed loop system for drilling operations.

8. Ancillary Facilities

There are no ancillary facilities within the immediate vicinity of the proposed well site.

9. Well Site Layout

A A diagram of the drill pad is shown in Exhibit #5. Dimensions of the pad and location of major rig components are shown.
B. The pad dimension of 340' x 340' has been staked and flagged.

10. Plans for Restoration of Surface

A. Within 120 days of cessation of drilling and completion operations, all equipment not necessary for production operations will be removed. The location and surrounding area will be cleaned of all trash and junk to assure the well site is left as esthetically pleasing as reasonably possible.

B. Interim reclamation:
i. All areas not needed for production operations will be reclaimed as shown in the interim reclamation layout, exhibit #6.

ii. In these areas, caliche will be removed, the land will be recontoured to match the surrounding area, the topsoil from the stockpile will be spread over these areas.

iii. The disturbed area will be restored by seeding during the proper growing season.

iv. Any additional caliche required for production facilities will be obtained from the reclaimed areas.

C. Final Reclamation:

i. Upon cessation of the proposed operations, if the well is abandoned, all equipment and trash will be removed and taken to a proper facility.

ii. The location and road surfacing material will be removed and used to patch area lease roads.

iii. The entire location will be restored to the original contour as much as reasonable possible.

iv. The topsoil used for interim reclamation will be spread over the entire location.

v. The disturbed area will be restored by seeding during the proper growing season.

All restoration work will be completed within 180 days of cessation of activities.

11. Surface Ownership:

The surface is owned by BLM.

12. Other Information:

A. The primary use of the surface at the location is for grazing of livestock.

13. Operators Representative:

A. Through APD approval, drilling, completion and production operations:

N.M. Young, District Manager
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
575-393-5905

Drilling Program
Mewbourne Oil Company
Bradley 31 B2DA Fed Com #1H
170' FNL & 250' FWL (SHL)
Sec 31-T18S-R30E
Eddy County, New Mexico

1. **The estimated tops of geological markers are as follows:**

Rustler	285'
Top Salt	450'
Base Salt	1180'
Yates	1360'
Seven Rivers	1590'
Queen	2420'
Capitan	NP
Grayburg	2900'
San Andres	3260'
Glorieta	NP
Yeso	NP
Lamar	3760'
Bone Springs	4210'
1st Bone Spring Sand	7100'
2nd Bone Spring Sand	7700'
3rd Bone Spring Sand	will not penetrate
Wolfcamp	will not penetrate

2. **Estimated depths of anticipated fresh water, oil, or gas:**

Water	Fresh water is anticipated @ 90' & will be protected by setting surface casing at 310' and cementing to surface.
Hydrocarbons	Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary.

3. **Pressure control equipment:**

A 2000# WP Annular will be installed after running 13 ⅜" casing. A 3000# WP Double Ram BOP and 3000# WP Annular will be installed after running 9 ⅝" & 7" casing strings. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOPE will be inspected and operated as recommended in Onshore Order #2. A kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the kelly is not in use.
Will test the 7" & 9 ⅝" BOPE to 3000# and both Annular BOPs to 1500# with a third party testing company before drilling below each shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

4. MOC proposes to drill a vertical wellbore to 7413' & kick off to horizontal @ 8182' TVD. The well will be drilled to 12,754' MD (8242' TVD). See attached directional plan.

5. Proposed casing and cementing program:

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
17 ½"	13 ⅜" (new)	48#	H40	0'-310'	ST&C
12 ¼"	9 ⅝" (new)	36#	J55	0'-1310'	LT&C
8 ¾"	7" (new)	26#	P110	0'-7413' MD	LT&C
8 ¾"	7" (new)	26#	P110	7410'-8182' MD	BT&C
6 1/8"	4 ½" (new)	11.6#	P110	7982'-12754' MD	LT&C

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.
*Subject to availability of casing.

B. Cementing Program:

i. Surface Casing: 330 sks Class "C" cement w/ LCM additives. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 100% excess.

ii. Intermediate Casing: 210 sacks Class "C" light cement w/ salt & LCM additives. Yield at 2.10 cuft/sk. 200 sacks Class "C" cement w/ 2% CaCl2. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 25% excess.

iii Production Casing: 600 sacks Class "H" light cement w/ salt & LCM additives. Yield at 2.12 cuft/sk. 400 sacks Class "H" cement w/ salt & FLA additives. Yield at 1.18 cuft/sk. Cmt calculated to tie back 200' into 9 5/8" csg w/ 25% excess.

iv. Production Liner: This will be a Packer/Port completion from TD up inside 7" casing with packer type liner hanger.

*Referring to above blends of light cement: (wt% fly ash : wt% cement : wt% bentonite of the total of first two numbers). Generic names of additives are used since the availability of specific company and products are unknown at this time.

6. Mud Program:

Interval	Type System	Weight	Viscosity	Fluid Loss
0' - 310'	FW spud mud	8.6-9.0	32-34	NA
310' - 1310'	Brine water	10.0-10.2	28-30	NA
1310' - 7413' (KOP)	FW	8.7-9.2	28-30	15
7413' - TD	FW w/Polymer	9.2-10.0	32-35	15

**Visual mud monitoring system shall be in place to detect volume changes indicating loss or gain of circulation fluid volume. Sufficient mud materials will be kept on location at all times to combat abnormal conditions.

7. Evaluation Program:

Samples:	10' samples from surface casing to TD
Logging:	GR & Gyro from KOP -100' (7313') to surface. GR from 7313' to TD.

8. Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	120 degree F
Maximum bottom hole pressure:	8.3 lbs/gal gradient or less (.43368 x 8242' = 3574 psi)

9. Anticipated Starting Date:

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 40 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Mewbourne Oil Co

Eddy County, New Mexico
Section 31 - 18S-30E
Bradley 31 B2 DA Federal Com #1H (NEW SHL)

Wellbore #1

Plan: Design #1

DDC Well Planning Report

25 February, 2014

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bradley 31 B2 DA Federal Com #1H (NEW SHL)
Company:	Mewbourne Oil Co	TVD Reference:	Well @ 3472.0usft (Patterson #46)
Project:	Eddy County, New Mexico	MD Reference:	Well @ 3472.0usft (Patterson #46)
Site:	Section 31 - 18S-30E	North Reference:	Grid
Well:	Bradley 31 B2 DA Federal Com #1H (NEW SHL)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project Eddy County, New Mexico

Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Section 31 - 18S-30E

Site Position:		Northing:	621,850.47 usft	Latitude:	32° 42' 33.015 N
From:	Map	Easting:	596,632.92 usft	Longitude:	104° 1' 9.003 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well Bradley 31 B2 DA Federal Com #1H (NEW SHL)

Well Position	+N/-S	547.6 usft	Northing:	622,398.10 usft	Latitude:	32° 42' 38.427 N
	+E/-W	244.0 usft	Easting:	596,876.90 usft	Longitude:	104° 1' 6.129 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,452.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/25/2014	7.50	60.49	48,590

Design Design #1

Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	99.94	

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	
7,413.0	0.00	0.00	7,413.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,788.0	45.00	160.00	7,750.6	-131.4	47.8	12.00	12.00	0.00	160.00	
8,038.0	45.00	160.00	7,927.4	-297.5	108.3	0.00	0.00	0.00	0.00	
8,645.7	89.16	93.62	8,182.0	-554.2	545.7	12.00	7.27	-10.92	-73.41	
12,754.1	89.16	93.62	8,242.0	-813.7	4,645.5	0.00	0.00	0.00	0.00	PBHL Bradley 31 B2 I

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bradley 31 S2 DA Federal Com #1H (NEW SHL)
Company:	Mewbourne Oil Co	TVD Reference:	Well @ 3472.0usft (Patterson #46)
Project:	Eddy County, New Mexico	MD Reference:	Well @ 3472.0usft (Patterson #46)
Site:	Section 31 - 16S-30E	North Reference:	Grid
Well:	Bradley 31 S2 DA Federal Com #1H (NEW SHL)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Build 12° / 100'									
7,413.0	0.00	0.00	7,413.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	10.44	160.00	7,499.5	-7.4	2.7	3.9	12.00	12.00	0.00
7,600.0	22.44	160.00	7,595.3	-34.0	12.4	18.0	12.00	12.00	0.00
7,700.0	34.44	160.00	7,683.0	-78.6	28.6	41.8	12.00	12.00	0.00
End of Build 45° Inc / 160° Azm									
7,788.0	45.00	160.00	7,750.6	-131.4	47.8	69.8	12.00	12.00	0.00
7,800.0	45.00	160.00	7,759.1	-139.4	50.7	74.0	0.00	0.00	0.00
7,900.0	45.00	160.00	7,829.8	-205.8	74.9	109.3	0.00	0.00	0.00
8,000.0	45.00	160.00	7,900.5	-272.3	99.1	144.6	0.00	0.00	0.00
Build & Turn 12° / 100'									
8,038.0	45.00	160.00	7,927.4	-297.5	108.3	158.0	0.00	0.00	0.00
8,100.0	47.55	150.32	7,970.3	-338.1	127.1	183.6	12.00	4.11	-15.62
8,200.0	53.16	136.51	8,034.3	-399.4	173.1	239.4	12.00	5.61	-13.80
8,300.0	60.13	124.60	8,089.3	-453.3	236.5	311.2	12.00	6.97	-11.71
8,400.0	68.00	114.71	8,133.1	-497.6	314.5	395.6	12.00	7.87	-10.09
8,500.0	76.42	105.71	8,163.7	-530.3	403.7	489.2	12.00	8.42	-8.99
8,600.0	85.13	97.35	8,179.8	-549.9	500.3	587.6	12.00	8.72	-8.36
End of Curve / 89.16° Inc / 93.62° Azm / 8182' TVD									
8,645.7	89.16	93.62	8,182.0	-554.2	545.7	633.1	12.00	8.81	-8.16
8,700.0	89.16	93.62	8,182.8	-557.7	599.9	687.1	0.00	0.00	0.00
8,800.0	89.16	93.62	8,184.3	-564.0	699.7	786.5	0.00	0.00	0.00
8,900.0	89.16	93.62	8,185.7	-570.3	799.5	885.9	0.00	0.00	0.00
9,000.0	89.16	93.62	8,187.2	-576.6	899.2	985.2	0.00	0.00	0.00
9,100.0	89.16	93.62	8,188.7	-582.9	999.0	1,084.6	0.00	0.00	0.00
9,200.0	89.16	93.62	8,190.1	-589.3	1,098.8	1,184.0	0.00	0.00	0.00
9,300.0	89.16	93.62	8,191.6	-595.6	1,198.6	1,283.4	0.00	0.00	0.00
9,400.0	89.16	93.62	8,193.0	-601.9	1,298.4	1,382.8	0.00	0.00	0.00
9,500.0	89.16	93.62	8,194.5	-608.2	1,398.2	1,482.2	0.00	0.00	0.00
9,600.0	89.16	93.62	8,196.0	-614.5	1,498.0	1,581.5	0.00	0.00	0.00
9,700.0	89.16	93.62	8,197.4	-620.8	1,597.8	1,680.9	0.00	0.00	0.00
9,800.0	89.16	93.62	8,198.9	-627.1	1,697.6	1,780.3	0.00	0.00	0.00
9,900.0	89.16	93.62	8,200.3	-633.5	1,797.4	1,879.7	0.00	0.00	0.00
10,000.0	89.16	93.62	8,201.8	-639.8	1,897.1	1,979.1	0.00	0.00	0.00
10,100.0	89.16	93.62	8,203.3	-646.1	1,996.9	2,078.5	0.00	0.00	0.00
10,200.0	89.16	93.62	8,204.7	-652.4	2,096.7	2,177.8	0.00	0.00	0.00
10,300.0	89.16	93.62	8,206.2	-658.7	2,196.5	2,277.2	0.00	0.00	0.00
10,400.0	89.16	93.62	8,207.6	-665.0	2,296.3	2,376.6	0.00	0.00	0.00
10,500.0	89.16	93.62	8,209.1	-671.4	2,396.1	2,476.0	0.00	0.00	0.00
10,600.0	89.16	93.62	8,210.6	-677.7	2,495.9	2,575.4	0.00	0.00	0.00
10,700.0	89.16	93.62	8,212.0	-684.0	2,595.7	2,674.8	0.00	0.00	0.00
10,800.0	89.16	93.62	8,213.5	-690.3	2,695.5	2,774.1	0.00	0.00	0.00
10,900.0	89.16	93.62	8,214.9	-696.6	2,795.3	2,873.5	0.00	0.00	0.00
11,000.0	89.16	93.62	8,216.4	-702.9	2,895.0	2,972.9	0.00	0.00	0.00
11,100.0	89.16	93.62	8,217.9	-709.2	2,994.8	3,072.3	0.00	0.00	0.00
11,200.0	89.16	93.62	8,219.3	-715.6	3,094.6	3,171.7	0.00	0.00	0.00
11,300.0	89.16	93.62	8,220.8	-721.9	3,194.4	3,271.1	0.00	0.00	0.00
11,400.0	89.16	93.62	8,222.2	-728.2	3,294.2	3,370.4	0.00	0.00	0.00
11,500.0	89.16	93.62	8,223.7	-734.5	3,394.0	3,469.8	0.00	0.00	0.00
11,600.0	89.16	93.62	8,225.2	-740.8	3,493.8	3,569.2	0.00	0.00	0.00
11,700.0	89.16	93.62	8,226.6	-747.1	3,593.6	3,668.6	0.00	0.00	0.00
11,800.0	89.16	93.62	8,228.1	-753.5	3,693.4	3,768.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Bradley 31 B2 DA Federal Com #1H (NEW SHL)
Company:	Mewbourne Oil Co	TVD Reference:	Well @ 3472.0usft (Patterson #46)
Project:	Eddy County, New Mexico	MD Reference:	Well @ 3472.0usft (Patterson #46)
Site:	Section 31 - 18S-30E	North Reference:	Grid
Well:	Bradley 31 B2 DA Federal Com #1H (NEW SHL)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,900.0	89.16	93.62	8,229.5	-759.8	3,793.1	3,867.3	0.00	0.00	0.00
12,000.0	89.16	93.62	8,231.0	-766.1	3,892.9	3,966.7	0.00	0.00	0.00
12,100.0	89.16	93.62	8,232.5	-772.4	3,992.7	4,066.1	0.00	0.00	0.00
12,200.0	89.16	93.62	8,233.9	-778.7	4,092.5	4,165.5	0.00	0.00	0.00
12,300.0	89.16	93.62	8,235.4	-785.0	4,192.3	4,264.9	0.00	0.00	0.00
12,400.0	89.16	93.62	8,236.8	-791.3	4,292.1	4,364.3	0.00	0.00	0.00
12,500.0	89.16	93.62	8,238.3	-797.7	4,391.9	4,463.6	0.00	0.00	0.00
12,600.0	89.16	93.62	8,239.7	-804.0	4,491.7	4,563.0	0.00	0.00	0.00
12,700.0	89.16	93.62	8,241.2	-810.3	4,591.5	4,662.4	0.00	0.00	0.00
TD @ 12754' MD / 8242' TVD									
12,754.1	89.16	93.62	8,242.0	-813.7	4,645.5	4,716.2	0.00	0.00	0.00

Design Targets

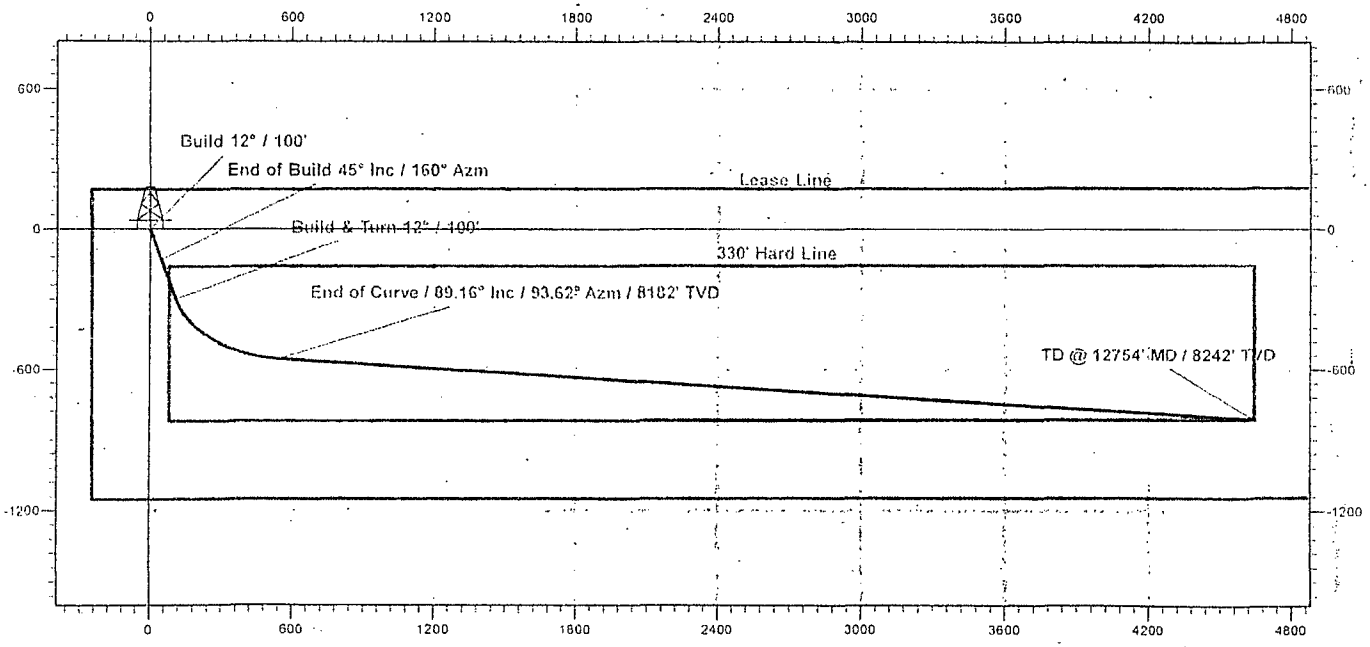
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Bradley 31 B2 DA - plan hits target center - Point	0.00	0.00	8,242.0	-813.7	4,645.5	621,584.39	601,522.40	32° 42' 30.235 N	104° 0' 11.787 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
7,413.0	7,413.0	0.0	0.0	Build 12° / 100'
7,788.0	7,750.6	-131.4	47.8	End of Build 45° Inc / 160° Azm
8,038.0	7,927.4	-297.5	108.3	Build & Turn 12° / 100'
8,645.7	8,182.0	-554.2	545.7	End of Curve / 89.16° Inc / 93.62° Azm / 8182' TVD
12,754.1	8,242.0	-813.7	4,645.5	TD @ 12754' MD / 8242' TVD

Mewbourne Oil Co

Eddy County, New Mexico
Bradley 31 B2 DA Fed Com #1H
Design #1



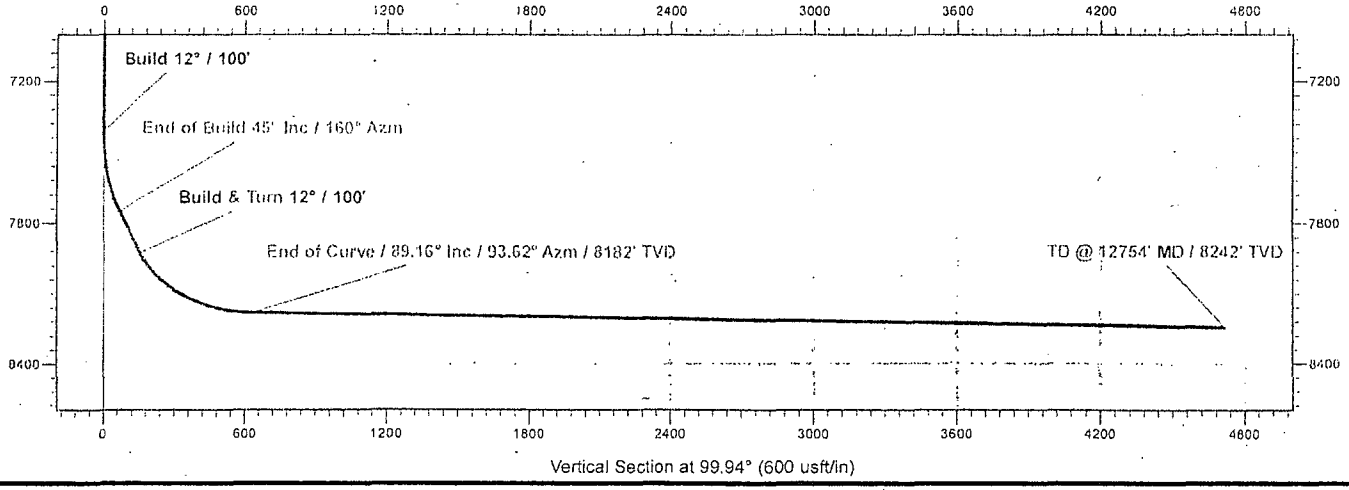
Mewbourne Oil Company

Eddy County, New Mexico

Bradley 31 B2 DA Fed Com #1H

Design #1

RDC
The DIRECTIONAL DRILLING COMPANY



Fwd: Tops Bradley 31 B2DA Fed Com 1H
Bradley Bishop
to:
Levi Jackson
02/27/2014 08:38 AM
Hide Details
From: Bradley Bishop/Mewbourne

To: Levi Jackson/Mewbourne

1 Attachment

0.3E8.gif

Sent from my iPhone

Begin forwarded message:

> **From:** "David Rawlins" <drawlins@mewbourne.com>
> **Date:** February 27, 2014, 8:37:44 AM MST
> **To:** "Bradley Bishop" <bbishop@mewbourne.com>
> **Subject: Tops Bradley 31 B2DA Fed Com 1H**
>
> Bradley,
> Here are the tops:
>
> Rustler 285
> T. Salt 450
> B. Salt 1180
> Yates 1360
> Seven Rivers 1590
> Queen 2420
> Grayburg 2900
> San Andres 3260
> Delaware 3760

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Company
LEASE NO.:	NMNM27279
WELL NAME & NO.:	Bradley 31 DA Fed Com #1H
SURFACE HOLE FOOTAGE:	170' FNL & 250' FWL
BOTTOM HOLE FOOTAGE	990' FNL & 330' FEL
LOCATION:	Section 31, T. 18 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

The Pecos District Conditions of Approval (COA) that were approved with the APD on 07/31/2012 apply to the sundry notice submitted to relocate the well. The following conditions apply to the sundry notice as well.

☒ **Special Requirements**
- Lesser Prairie-Chicken Timing Stipulations
- Ground-level Abandoned Well Marker
- Road Width
- Communitization Agreement

☒ **Drilling**
- Cement Requirements
- H_2S – Onshore Order #6
- Waste Material and Fluids
- Logging Requirements

☐ **Production (Post Drilling)**
- Well Structures & Facilities

I. SPECIAL REQUIREMENT(S)

Road Width:
As stated in the APD, the access road shall have a driving surface that does not exceed twelve (12) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed sixteen (16) feet.

LPC: Conditions of Approval
Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Upon abandonment, a low profile abandoned well marker will be installed to prevent raptor perching.

The proponent of the proposed action is a Participating Cooperator in the Candidate Conservation Agreement (CCA) for the lesser prairie-chicken (*Tympanuchus pallidicinctus*) and dunes sagebrush lizard (*Sceloporus arenicolus*).

The goal of the Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), Center of Excellence for Hazardous Materials Management (CEHMM) and the Participating Cooperator is to reduce and/or eliminate threats to the LPC and/ or SDL. By agreeing to conduct the conservation measures described by the CCA, and contribute funding or providing in-kind services for conservation.

The Certificate of Participation (CP) associate with the CCA is voluntary between CEHMM, BLM, USFWS and the Participating Cooperator. Through the CP, the Participating Cooperator voluntarily commits to implement or fund specific conservation actions that will reduce and/or eliminate threats to the SDL and /or the LPC. Funds contributed as part of the CP will be used to implement conservation measures and associated activities. The funds will be directed to the highest priority projects to restore or reclaim habitat at the sole discretion of BLM and USFWS.

The following Conservation Measures are to be accomplished in addition to those described in the CCA and Pecos District Special Status Species Resource Management Plan Amendment (RMPA):

1. To the extent determined by the BLM representative at the Plan of Development stage, all infrastructures supporting the development of a well (including roads, power lines, and pipelines) will be constructed within the same corridor.

2. On enrolled parcels that contain inactive wells, roads and/or facilities that are not reclaimed to current standards, the Participating Cooperator shall remediate and reclaim their facilities within three years of executing this CP, unless the Cooperator can demonstrate they will put the facilities back to beneficial use for the enrolled parcel(s). If an extension is requested by the Cooperator, they shall submit a detailed plan (including dates) and receive BLM approval prior to the three year deadline. All remediation and reclamation shall be performed in accordance with BLM requirements and be approved in advance by the Authorized Officer.

3. Utilize alternative techniques to minimize new surface disturbance when required and as determined by the BLM representative at the Plan of Development stage.

4. Install fence markings along fences owned, controlled, or constructed by the Participating Cooperator that cross through occupied habitat within two miles of an active LPC lek.

5. Bury new powerlines that are within two (2) miles of LPC lek sites active at least once within the past 5 years (measured from the lek). The avoidance distance is subject to change based on new information received from peer reviewed science.

6. Bury new powerlines that are within one (1) mile of historic LPC lek sites where at least one LPC has been observed within the past three years (measured from the historic lek). The avoidance distance is subject to change based on new information received from peer reviewed science.

7. Management recommendations may be developed based on new information received from peer reviewed science to mitigate impacts from H2S and/or the accumulation of sulfates in the soil related to production of gas containing H2S on the SDL and LPC. Such management recommendations will be applied by the Participating Cooperator as Conservation Measures under this

CI/CP in suitable and occupied SDL/LPC habitat where peer-reviewed science has shown that H2S levels threaten the LPC/SDL.

Drilling:

Communitization Agreement

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. In addition, the well sign shall include the surface and bottom hole lease numbers. If the Communitization Agreement number is known, it shall also be on the sign. If not, it shall be placed on the sign when the sign is replaced.

II. DRILLING

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. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Grayburg** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please 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. 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.).

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. 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.

Possible brine flows in the Salado and Artesia groups.
Possible lost circulation in the Artesia group.

1. The **13-3/8** inch surface casing shall be set at approximately **310** 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:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Centralizers required through the curve and a minimum of one every other joint.

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 not required – Port/Packer system to be used.

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 RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

3. 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 **3000 (3M)** psi.

4. 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 (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

   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.

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II. 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).