ATS-11-1034

OCD-Artesia

Form 3160-3
(August 2007)

RECEIVED
FEB 01 2012
NMOCD ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

1a. Type of work. ☑ DRILL ☐ REENTER	5 Lease Serial No. Fee & NM 117119
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator Mewbourne Oil Company 14744	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
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 330' FNL & 170' FWL (Unit D) At proposed prod. zone 380' FNL & 330' FEL (Unit A) UNORTHODOX LOCATION	8. Lease Name and Well No Delaware Ranch "13" Fed Com #1H [39059]
	9. API Well No. 30-015-39901
	10. Field and Pool, or Exploratory WILDCAT; Bone Spring [96408]
	11. Sec., T. R. M. or Blk. and Survey or Area Sec 13, T26S, R28E
14 Distance in miles and direction from nearest town or post office* 12.2 miles South of Malaga, NM	12. County or Parish Eddy / 13. State NM
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 170'	16. No. of acres in lease 160 / 17. Spacing Unit dedicated to this well 160
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1291' SE of Clark #1	19. Proposed Depth 11596' MD 7061' TVD / 20 BLM/BIA Bond No. on file NM1693, Nationwide
21. Elevations (Show whether DF, KDB, RT, GL, etc) 2948' GL	22. Approximate date work will start* 01/15/2012 / 23. Estimated duration 42 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.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Brett Bednarz	Name (Printed/Typed) Brett Bednarz	Date 10/21/2011
Title Petroleum Engineer		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date JAN 30 2012
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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.

APPROVAL FOR TWO YEARS

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

Bureau of Land Management
RECEIVED

(Continued on page 2)

(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

NOV 21 2011

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Carlsbad Field Office
Carlsbad, NM

Mewbourne Oil Company

PO Box 5270
Hobbs, NM 88241
(575) 393-5905

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.

Executed this 21st day of October, 2010.

Name: NM Young

Signature: Brett Bucy for Jim Young

Position Title: Hobbs District Manager

Address: PO Box 5270, Hobbs NM 88241

Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

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: Lease Number # NM 117119 & Fee

Legal Description of Land: Section 13, T-26S, R-28E Eddy County, New Mexico.
Location @ 330' FNL & 170' FWL.

Formation (if applicable): Bone Springs

Bond Coverage: $150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: for NM Young

Name: NM (Micky) Young
Title: District Manager
Date: 10-21-11

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-39901	96463	WILDCAT; BONE SPRING

Property Code	Property Name	Well Number
39059	DELAWARE RANCH "13" FEDERAL COM	1H

OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	2948'

Surface Location

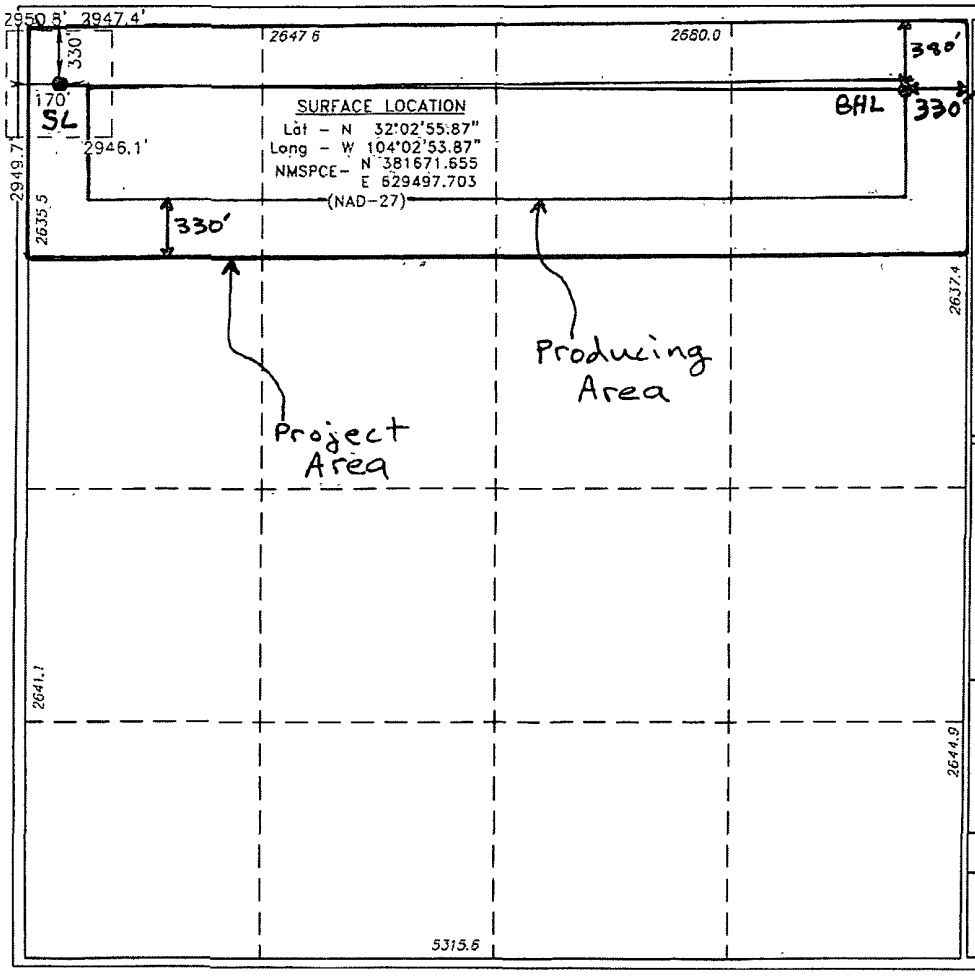
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	13	26 S	28 E		330	NORTH	170	WEST	EDDY

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	13	26S	28E		380	North	330	East	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	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



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.

Brett Bedrarz 10-21-11
Signature Date

Brett Bedrarz
Printed Name

Email Address

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 supervison, and that the same is true and correct to the best of my belief

SEPTEMBER 23, 2011
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. 25337

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25337

Drilling Program
Mewbourne Oil Company
Delaware Ranch "13" Fed Com #1H
330' FNL & 170' FWL (SHL)
Sec 13-T26S-R28E
Eddy County, New Mexico

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

Rustler	600'
Top Salt	900'
Base Salt	2400'
Lamar	2600'
*Bell Canyon	2650'
*Cherry Canyon	3500'
*Brushy Canyon	5200'
*Bone Springs	6330'

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

Water	Fresh water is anticipated @ 60' & will be protected by setting surface casing at 625' 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 7" & 9 ⅝" casing. 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 the Annular 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 6448' & kick off to horizontal @ 7021' TVD. The well will be drilled to 11596' MD (7061' TVD). See attached directional plan.

5. Proposed casing and cementing program:

See COA

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
17 ½"	13 ⅜" (new)	48#	H40	0'-~~625'~~ 350	ST&C
12 ¼"	9 ⅝" (new)	36#	J55	0'-2600'	LT&C
8 ¾"	7" (new)	26#	P110	0'-6448' MD	LT&C
8 ¾"	7" (new)	26#	P110	6448'-7342' MD	BT&C
6 1/8"	4 ½" (new)	11.6#	P110	7142'-11596' 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: 400 sks Class "C" cement w/ 2% CaCl2 & LCM additives. Yield at 1.72 cuft/sk. 200 sks Class "C" cement w/ 2% CaCl2. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 100% excess.

ii. Intermediate Casing: 400 sacks Class "C" light cement w/ 2% CaCl2, salt & LCM additives. Yield at 2.01 cuft/sk. 200 sacks Class "C" cement w/ 2% CaCl2. Yield at 1.34 cuft/sk. Cmt circulated to surface w/ 25% excess.

See COA

iii Production Casing: 200 sacks Class "H" light cement w/ salt & LCM additives. Yield at 2.11 cuft/sk. 400 sacks Class "H" cement w/ salt & FLA additives. Yield at 1.20 cuft/sk. Cmt calculated to tie back 200' into 9 5/8" csg w/ 25% escess.

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' - ~~625'~~ 350	FW spud mud	8.6-9.0	32-34	NA
~~625'~~ - 2600'	Brine water	10.0-10.2	28-30	NA
2600' - 6448' (KOP)	FW	8.5-8.7	28-30	NA
6448' - TD	FW w/Polymer	8.5-8.7	32-35	15

7. Evaluation Program: See COA

Samples:	10' samples from surface casing to TD
Logging:	GR & Gyro from KOP -100' (6348') to surface. GR from 6348' 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

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

Project: Eddy County, NM (NAD 27)
Site: Deleware Ranch "13" Fed Com
Well: #1H
Wellbore: OH
Plan: Plan #2 (#1H/OH)

PATHFINDER®
A Schlumberger Company

WELL DETAILS: #1H

Ground Elevation: 2948.00
RKB Elevation: KB = 23' @ 2971.00ft (UTI Rig 75)
Rig Name: UTI Rig 75

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	381614.17	588312.69	32° 2' 55.8666253 N	104° 2' 53.8731277 W	

COMPANY DETAILS: Mewbourne

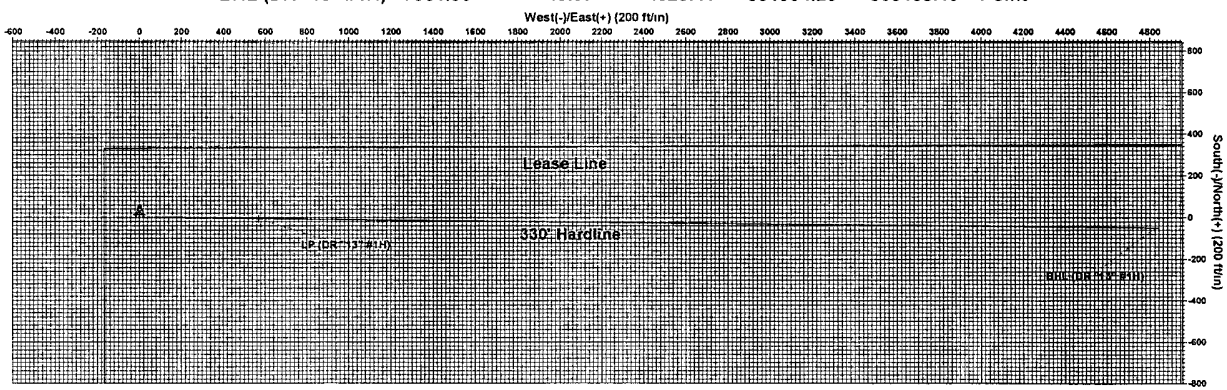
Calculation Method: Minimum Curvature
Error System: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

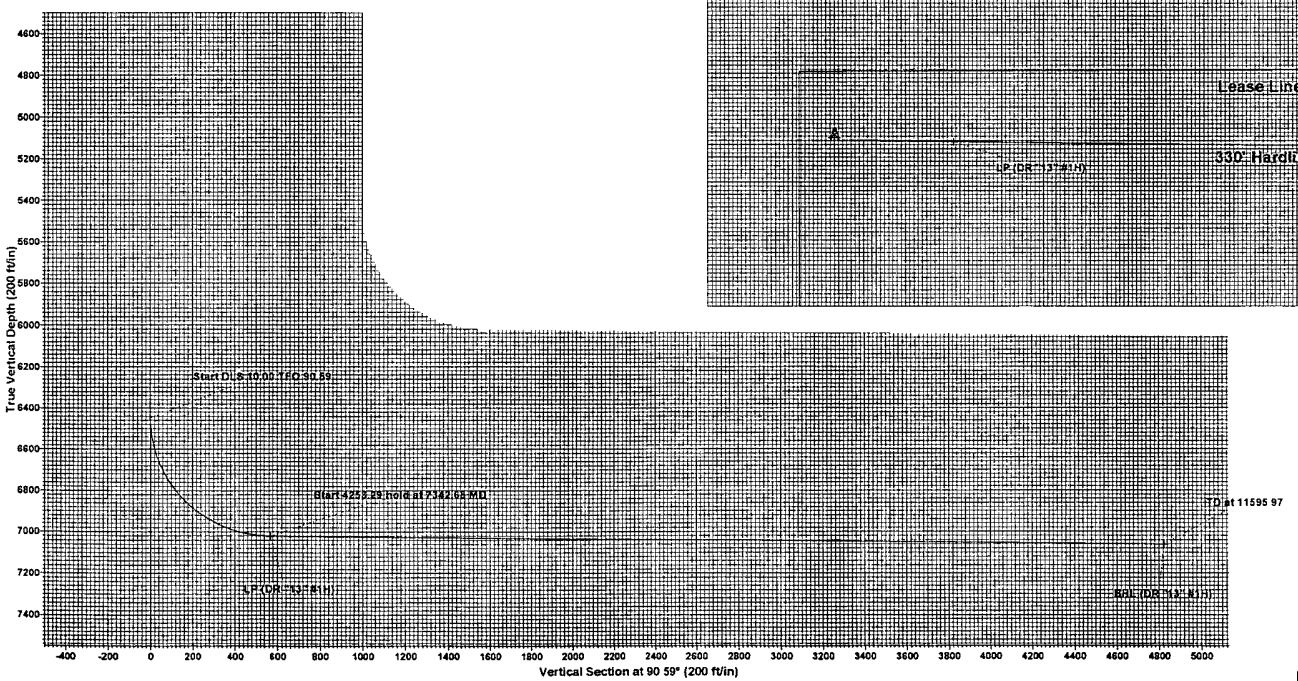
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6448.07	0.00	0.00	6448.07	0.00	0.00	0.00	0.00	0.00	
3	7342.68	89.46	90.59	7021.00	-5.88	567.54	10.00	90.59	567.57	
4	11595.97	89.46	90.59	7061.00	-49.97	4820.41	0.00	0.00	4820.67	BHL (DR "13" #1H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
LP (DR "13" #1H)	7021.00	-5.97	567.31	381608.20	588880.00	Point
BHL (DR "13" #1H)	7061.00	-49.97	4820.41	381564.20	593133.10	Point





MAzimuths to Grid North
True North: -0.15°
Magnetic North: 7.60°

Magnetic Field
Strength: 48424.8snT
Dip Angle: 59.93°
Date: 10/19/2011
Model: IGRF2010

All lease and hard lines are estimates only and are subject to customers approval.

Plan Plan #2 (#1H/OH)
Created By: Sherman Sholars Date 9:33, October 20 2011

Mewbourne

Eddy County, NM (NAD 27)
Deleware Ranch "13" Fed Com
#1H
OH

Plan: Plan #2

PathFinder X&Y Report

20 October, 2011

PATHFINDER®
A Schlumberger Company

Pathfinder

PathFinder X&Y Report

PATHFINDER
A Schlumberger Company

Company:	Mewbourne	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County, NM (NAD 27)	**TVD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	**MD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	1 Smith Database

Project Eddy County, NM (NAD 27)

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 Deleware Ranch "13" Fed Com

Site Position:		**Northing:**	381,614.17 ft	**Latitude:**	32° 2' 55.8666253 N
From:	Map	**Easting:**	588,312.69 ft	**Longitude:**	104° 2' 53.8731277 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.15 °

Well #1H

Well Position	**+N/-S**	0.00 ft	**Northing:**	381,614.17 ft	**Latitude:**	32° 2' 55.8666253 N
	+E/-W	0.00 ft	**Easting:**	588,312.69 ft	**Longitude:**	104° 2' 53.8731277 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	2,948.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/19/11	7.75	59.93	48,425

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	90.59

Survey Tool Program **Date** 10/20/11

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	11,595 90	Plan #2 (OH)		

Company:	Mewbourne	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County, NM (NAD 27)	**TVD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	**MD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	1 Smith Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0 00	0.00	0.00	-2,971.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
100.00	0.00	0.00	100.00	-2,871.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
200.00	0 00	0.00	200.00	-2,771.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
300.00	0.00	0.00	300.00	-2,671.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
400.00	0 00	0.00	400.00	-2,571.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
500.00	0.00	0.00	500.00	-2,471.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
600.00	0 00	0.00	600.00	-2,371.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
700.00	0 00	0.00	700.00	-2,271.00	0.00	0.00	0.00	0 00	381,614.17	588,312.69
800.00	0 00	0.00	800 00	-2,171.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
900.00	0 00	0 00	900 00	-2,071.00	0.00	0.00	0 00	0.00	381,614.17	588,312.69
1,000.00	0 00	0.00	1,000.00	-1,971.00	0.00	0.00	0 00	0.00	381,614.17	588,312 69
1,100.00	0 00	0.00	1,100.00	-1,871 00	0.00	0.00	0.00	0 00	381,614.17	588,312.69
1,200.00	0 00	0 00	1,200.00	-1,771 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
1,300.00	0 00	0 00	1,300 00	-1,671 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
1,400 00	0.00	0.00	1,400 00	-1,571 00	0 00	0.00	0.00	0.00	381,614.17	588,312.69
1,500.00	0.00	0.00	1,500.00	-1,471 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
1,600 00	0 00	0.00	1,600 00	-1,371 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
1,700.00	0 00	0.00	1,700.00	-1,271.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
1,800.00	0 00	0 00	1,800 00	-1,171.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
1,900.00	0.00	0.00	1,900.00	-1,071.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
2,000.00	0.00	0.00	2,000.00	-971.00	0 00	0 00	0.00	0.00	381,614.17	588,312.69
2,100.00	0.00	0.00	2,100 00	-871.00	0.00	0.00	0.00	0 00	381,614.17	588,312.69
2,200.00	0.00	0.00	2,200.00	-771.00	0.00	0 00	0.00	0 00	381,614.17	588,312.69
2,300.00	0.00	0.00	2,300.00	-671.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
2,400.00	0.00	0.00	2,400 00	-571.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
2,500 00	0.00	0.00	2,500.00	-471.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
2,600.00	0.00	0 00	2,600.00	-371.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69

Company:	Mewbourne	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County, NM (NAD 27)	**TVD Reference:**	KB = 23' @ 2971 00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	**MD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	1 Smith Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,700.00	0 00	0.00	2,700.00	-271.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
2,800.00	0.00	0.00	2,800 00	-171 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
2,900.00	0 00	0.00	2,900 00	-71.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
3,000.00	0 00	0.00	3,000.00	29.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
3,100.00	0.00	0.00	3,100 00	129.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
3,200.00	0.00	0.00	3,200.00	229.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
3,300.00	0.00	0.00	3,300.00	329 00	0 00	0.00	0.00	0.00	381,614.17	588,312.69
3,400.00	0.00	0.00	3,400.00	429 00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
3,500.00	0 00	0.00	3,500.00	529.00	0.00	0 00	0.00	0.00	381,614.17	588,312.69
3,600.00	0 00	0.00	3,600.00	629.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
3,700.00	0 00	0.00	3,700.00	729.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
3,800.00	0 00	0.00	3,800.00	829.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
3,900.00	0.00	0.00	3,900.00	929.00	0.00	0.00	0.00	0 00	381,614.17	588,312 69
4,000.00	0 00	0 00	4,000 00	1,029.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
4,100.00	0 00	0 00	4,100 00	1,129.00	0.00	0.00	0 00	0.00	381,614.17	588,312.69
4,200.00	0 00	0 00	4,200.00	1,229.00	0.00	0.00	0 00	0.00	381,614.17	588,312 69
4,300.00	0 00	0 00	4,300.00	1,329.00	0.00	0 00	0.00	0.00	381,614 17	588,312.69
4,400.00	0 00	0 00	4,400.00	1,429.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
4,500.00	0 00	0 00	4,500 00	1,529 00	0.00	0 00	0.00	0.00	381,614.17	588,312.69
4,600 00	0.00	0 00	4,600 00	1,629 00	0 00	0.00	0.00	0 00	381,614.17	588,312 69
4,700.00	0 00	0.00	4,700 00	1,729 00	0 00	0 00	0.00	0.00	381,614.17	588,312 69
4,800 00	0.00	0 00	4,800.00	1,829.00	0 00	0 00	0.00	0.00	381,614.17	588,312 69
4,900 00	0 00	0.00	4,900 00	1,929.00	0 00	0 00	0.00	0.00	381,614.17	588,312 69
5,000.00	0 00	0.00	5,000.00	2,029.00	0.00	0.00	0 00	0.00	381,614.17	588,312.69
5,100.00	0 00	0.00	5,100.00	2,129 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
5,200.00	0 00	0.00	5,200.00	2,229.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
5,300.00	0 00	0.00	5,300 00	2,329 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69

Company:	Mewbourne	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County, NM (NAD 27)	**TVD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	**MD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	1 Smith Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,400.00	0 00	0.00	5,400.00	2,429.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
5,500.00	0.00	0.00	5,500 00	2,529.00	0.00	0 00	0.00	0.00	381,614.17	588,312.69
5,600 00	0 00	0.00	5,600.00	2,629.00	0.00	0 00	0.00	0.00	381,614.17	588,312 69
5,700 00	0 00	0.00	5,700 00	2,729.00	0.00	0 00	0.00	0.00	381,614.17	588,312 69
5,800.00	0 00	0.00	5,800 00	2,829.00	0.00	0.00	0 00	0.00	381,614.17	588,312.69
5,900.00	0.00	0.00	5,900.00	2,929 00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
6,000.00	0.00	0 00	6,000.00	3,029.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
6,100.00	0.00	0.00	6,100 00	3,129 00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
6,200.00	0.00	0.00	6,200.00	3,229.00	0.00	0.00	0.00	0.00	381,614.17	588,312.69
6,300.00	0 00	0 00	6,300.00	3,329.00	0.00	0.00	0.00	0.00	381,614.17	588,312 69
6,400.00	0.00	0.00	6,400.00	3,429.00	0.00	0 00	0.00	0 00	381,614.17	588,312 69
6,448.07	0 00	0.00	6,448 07	3,477 07	0.00	0.00	0.00	0.00	381,614.17	588,312.69
6,450 00	0.19	90.59	6,450 00	3,479.00	0 00	0.00	0.00	10.00	381,614.17	588,312.69
6,500.00	5.19	90.59	6,499 93	3,528.93	-0 02	2.35	2.35	10.00	381,614.15	588,315.04
6,550 00	10.19	90.59	6,549.46	3,578.46	-0.09	9.04	9.04	10.00	381,614.08	588,321.73
6,600.00	15.19	90.59	6,598.23	3,627.23	-0.21	20.02	20.03	10.00	381,613.96	588,332.71
6,650.00	20.19	90.59	6,645.85	3,674.85	-0.37	35.21	35.22	10.00	381,613.80	588,347 90
6,700.00	25.19	90.59	6,691.96	3,720.96	-0.56	54.50	54.50	10.00	381,613.61	588,367.19
6,750.00	30 19	90.59	6,736.22	3,765.22	-0.81	77.73	77.73	10.00	381,613.36	588,390.42
6,800.00	35 19	90.59	6,778.28	3,807.28	-1 09	104.72	104.73	10.00	381,613.08	588,417.41
6,850.00	40 19	90.59	6,817.84	3,846 84	-1.40	135.28	135.29	10.00	381,612.77	588,447.97
6,900.00	45.19	90.59	6,854.57	3,883.57	-1.75	169 17	169.18	10.00	381,612.42	588,481 86
6,950.00	50 19	90.59	6,888 22	3,917.22	-2.14	206 14	206.15	10.00	381,612.03	588,518.83
7,000.00	55 19	90.59	6,918.51	3,947.51	-2 55	245.89	245.91	10.00	381,611.62	588,558.58
7,050.00	60 19	90.59	6,945.23	3,974 23	-2.99	288 14	288.15	10.00	381,611.18	588,600 83
7,100.00	65 19	90.59	6,968 16	3,997.16	-3.45	332.55	332.57	10.00	381,610.72	588,645 24
7,150.00	70 19	90.59	6,987.13	4,016.13	-3.93	378.79	378.81	10.00	381,610.24	588,691.48

Company:	Mewbourne	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County, NM (NAD 27)	TVD Reference:	KB = 23' @ 2971.00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	MD Reference:	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	1 Smith Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
7,200.00	75.19	90.59	7,002.00	4,031.00	-4.42	426.51	426.53	10.00	381,609.75	588,739.20
7,250.00	80 19	90.59	7,012.65	4,041.65	-4.93	475.34	475.37	10.00	381,609.24	588,788.03
7,300 00	85 19	90.59	7,019 01	4,048.01	-5.44	524 92	524.94	10.00	381,608.73	588,837.61
7,342.45	89.44	90 59	7,021.00	4,050 00	-5.88	567.31	567.34	10.00	381,608.29	588,880.00
LP (DR "13" #1H)										
7,342.68	89.46	90.59	7,021 00	4,050.00	-5.88	567 54	567.57	10.00	381,608.29	588,880.23
7,400 00	89.46	90.59	7,021.54	4,050.54	-6.48	624.85	624 89	0.00	381,607.69	588,937 54
7,500.00	89.46	90.59	7,022.48	4,051 48	-7.51	724 84	724.88	0.00	381,606.66	589,037 53
7,600.00	89.46	90.59	7,023.42	4,052.42	-8.55	824 83	824.88	0.00	381,605.62	589,137.52
7,700.00	89.46	90.59	7,024.36	4,053 36	-9.59	924.82	924.87	0.00	381,604.58	589,237 51
7,800.00	89 46	90.59	7,025.30	4,054.30	-10.62	1,024.81	1,024.87	0.00	381,603.55	589,337.50
7,900.00	89.46	90.59	7,026 24	4,055.24	-11.66	1,124 80	1,124.86	0.00	381,602.51	589,437.49
8,000.00	89 46	90 59	7,027.18	4,056.18	-12.70	1,224.79	1,224.86	0.00	381,601.47	589,537.48
8,100.00	89 46	90 59	7,028 12	4,057.12	-13.73	1,324 78	1,324.86	0.00	381,600.44	589,637.47
8,200.00	89.46	90 59	7,029.06	4,058 06	-14.77	1,424.77	1,424.85	0.00	381,599.40	589,737.46
8,300 00	89.46	90.59	7,030.00	4,059.00	-15.81	1,524 76	1,524.85	0.00	381,598.36	589,837.45
8,400 00	89.46	90.59	7,030.94	4,059.94	-16.84	1,624 75	1,624.84	0.00	381,597.33	589,937.44
8,500.00	89 46	90.59	7,031.88	4,060 88	-17.88	1,724.74	1,724.84	0.00	381,596.29	590,037.43
8,600 00	89.46	90.59	7,032.83	4,061 83	-18 92	1,824.73	1,824 83	0.00	381,595.25	590,137.42
8,700.00	89 46	90.59	7,033.77	4,062.77	-19.95	1,924.73	1,924.83	0.00	381,594.22	590,237.42
8,800.00	89.46	90.59	7,034.71	4,063.71	-20.99	2,024.72	2,024.82	0.00	381,593.18	590,337.41
8,900 00	89.46	90.59	7,035.65	4,064 65	-22 03	2,124.71	2,124.82	0.00	381,592.14	590,437.40
9,000.00	89.46	90 59	7,036 59	4,065.59	-23.06	2,224 70	2,224.82	0.00	381,591.11	590,537.39
9,100.00	89 46	90.59	7,037.53	4,066 53	-24 10	2,324.69	2,324.81	0.00	381,590.07	590,637.38
9,200.00	89.46	90.59	7,038.47	4,067.47	-25.14	2,424.68	2,424.81	0.00	381,589.03	590,737.37
9,300.00	89 46	90.59	7,039.41	4,068.41	-26.17	2,524 67	2,524.80	0 00	381,588.00	590,837.36
9,400 00	89 46	90 59	7,040.35	4,069 35	-27.21	2,624.66	2,624.80	0.00	381,586.96	590,937.35

Company:	Mewbourne	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County, NM (NAD 27)	**TVD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	**MD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	1 Smith Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,500.00	89 46	90.59	7,041.29	4,070 29	-28 24	2,724.65	2,724.79	0.00	381,585.93	591,037.34
9,600.00	89.46	90.59	7,042.23	4,071.23	-29.28	2,824.64	2,824.79	0.00	381,584.89	591,137.33
9,700.00	89.46	90.59	7,043.17	4,072.17	-30.32	2,924.63	2,924.78	0.00	381,583.85	591,237.32
9,800.00	89 46	90.59	7,044.11	4,073.11	-31 35	3,024.62	3,024.78	0.00	381,582.82	591,337.31
9,900.00	89 46	90 59	7,045.05	4,074.05	-32.39	3,124.61	3,124.78	0.00	381,581 78	591,437 30
10,000.00	89.46	90 59	7,045.99	4,074.99	-33.43	3,224.60	3,224.77	0.00	381,580.74	591,537.29
10,100 00	89 46	90.59	7,046.93	4,075.93	-34.46	3,324.59	3,324.77	0.00	381,579.71	591,637.28
10,200.00	89 46	90.59	7,047 87	4,076 87	-35 50	3,424.58	3,424.76	0.00	381,578.67	591,737 27
10,300.00	89.46	90 59	7,048.81	4,077 81	-36 54	3,524.57	3,524.76	0.00	381,577.63	591,837.26
10,400.00	89.46	90 59	7,049 75	4,078 75	-37 57	3,624 56	3,624.75	0.00	381,576.60	591,937.25
10,500.00	89 46	90 59	7,050.69	4,079 69	-38 61	3,724 55	3,724 75	0.00	381,575.56	592,037 24
10,600.00	89 46	90 59	7,051 63	4,080 63	-39.65	3,824.54	3,824.74	0.00	381,574.52	592,137.23
10,700.00	89.46	90 59	7,052.57	4,081.57	-40.68	3,924 53	3,924 74	0.00	381,573.49	592,237.22
10,800 00	89 46	90.59	7,053.51	4,082 51	-41.72	4,024 52	4,024.74	0.00	381,572.45	592,337 21
10,900.00	89 46	90.59	7,054 45	4,083 45	-42 76	4,124.51	4,124.73	0.00	381,571.41	592,437.20
11,000.00	89.46	90 59	7,055.40	4,084.40	-43.79	4,224.50	4,224.73	0 00	381,570 38	592,537.19
11,100.00	89 46	90 59	7,056.34	4,085.34	-44.83	4,324.49	4,324.72	0 00	381,569.34	592,637.18
11,200.00	89.46	90.59	7,057 28	4,086.28	-45.87	4,424.48	4,424.72	0.00	381,568.30	592,737.17
11,300.00	89.46	90.59	7,058.22	4,087.22	-46.90	4,524.47	4,524.71	0.00	381,567.27	592,837.16
11,400.00	89.46	90 59	7,059.16	4,088.16	-47.94	4,624 46	4,624.71	0.00	381,566.23	592,937.15
11,500.00	89 46	90 59	7,060.10	4,089.10	-48 98	4,724 45	4,724.70	0.00	381,565.19	593,037.14
11,595.97	89.46	90.59	7,061.00	4,090 00	-49.97	4,820.41	4,820.67	0.00	381,564.20	593,133.10
BHL (DR "13" #1H)										

Pathfinder

PathFinder X&Y Report

PATHFINDER
A Schlumberger Company

Company:	Mewbourne	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County, NM (NAD 27)	**TVD Reference:**	KB = 23' @ 2971 00ft (UTI Rig 75)
Site:	Deleware Ranch "13" Fed Com	**MD Reference:**	KB = 23' @ 2971.00ft (UTI Rig 75)
Well:	#1H	**North Reference:**	Grid,
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**Database:**	1 Smith Database

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
LP (DR "13" #1H) - plan hits target center - Point	0.00	0.00	7,021.00	-5.97	567.31	381,608.20	588,880.00	32° 2' 55.7926741 N	4° 2' 47.2816680 W
BHL (DR "13" #1H) - plan hits target center - Point	0.00	0 00	7,061.00	-49.97	4,820.41	381,564.20	593,133.10	32° 2' 55.2427235 N	4° 1' 57.8658576 W

Checked By: _____ Approved By: _____ Date: _____

Notes Regarding Blowout Preventer
Mewbourne Oil Company
Delaware Ranch "13" Fed Com #1H
330' FNL & 170' FWL (SHL)
Sec 13-T26S-R28E
Eddy County, New Mexico

I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.

II. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure on 13 3/8" casing and 3000 psi working pressure on 9 5/8" & 7" casing.

III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.

IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.

V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.

Mewbourne Oil Company
BOP Scematic for
12 ¼" Hole

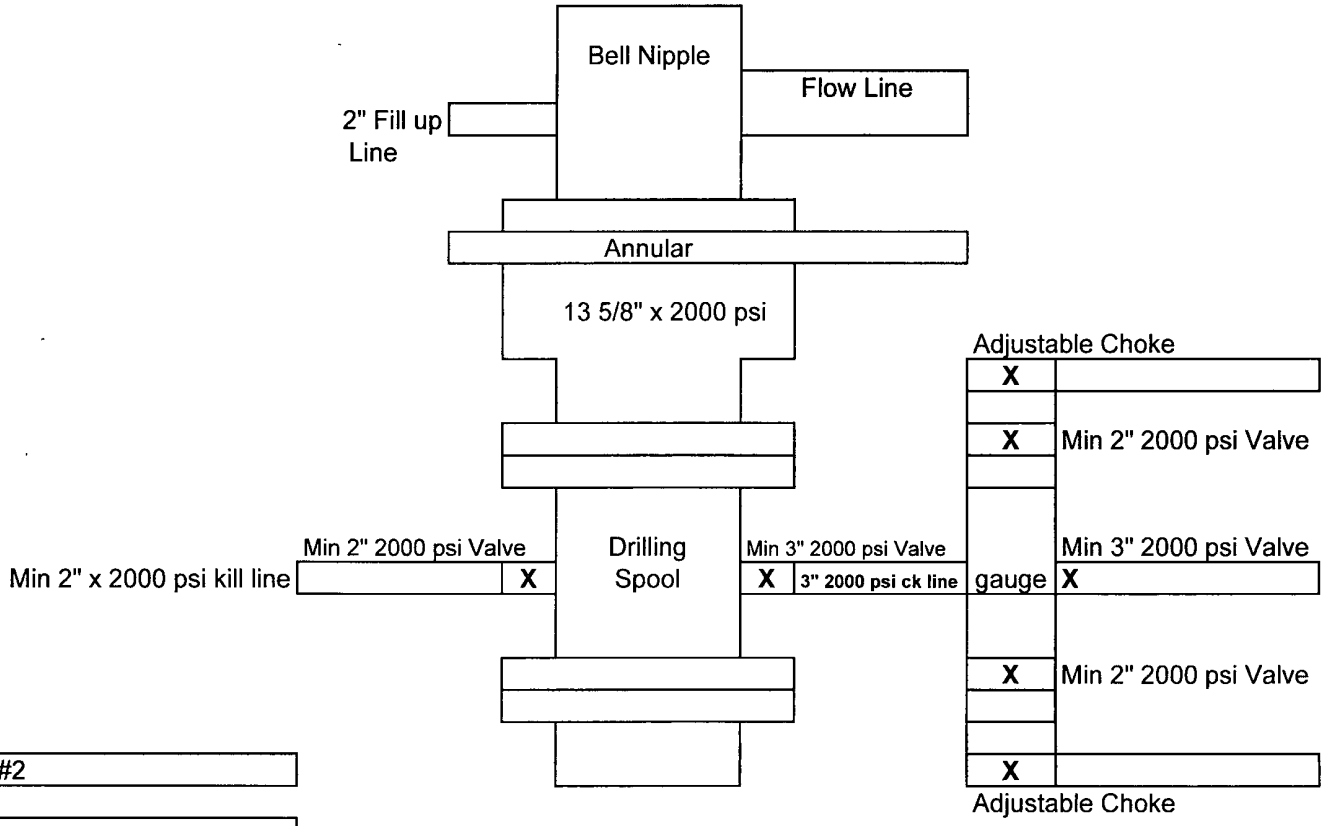


Exhibit #2

Delaware Ranch "13" Fed Com #1H
330' FNL & 170' FWL
Sec 13-T26S-R28E
Eddy, County
New Mexico

Mewbourne Oil Company
BOP Scematic for
8 3/4" & 6 1/8" Hole

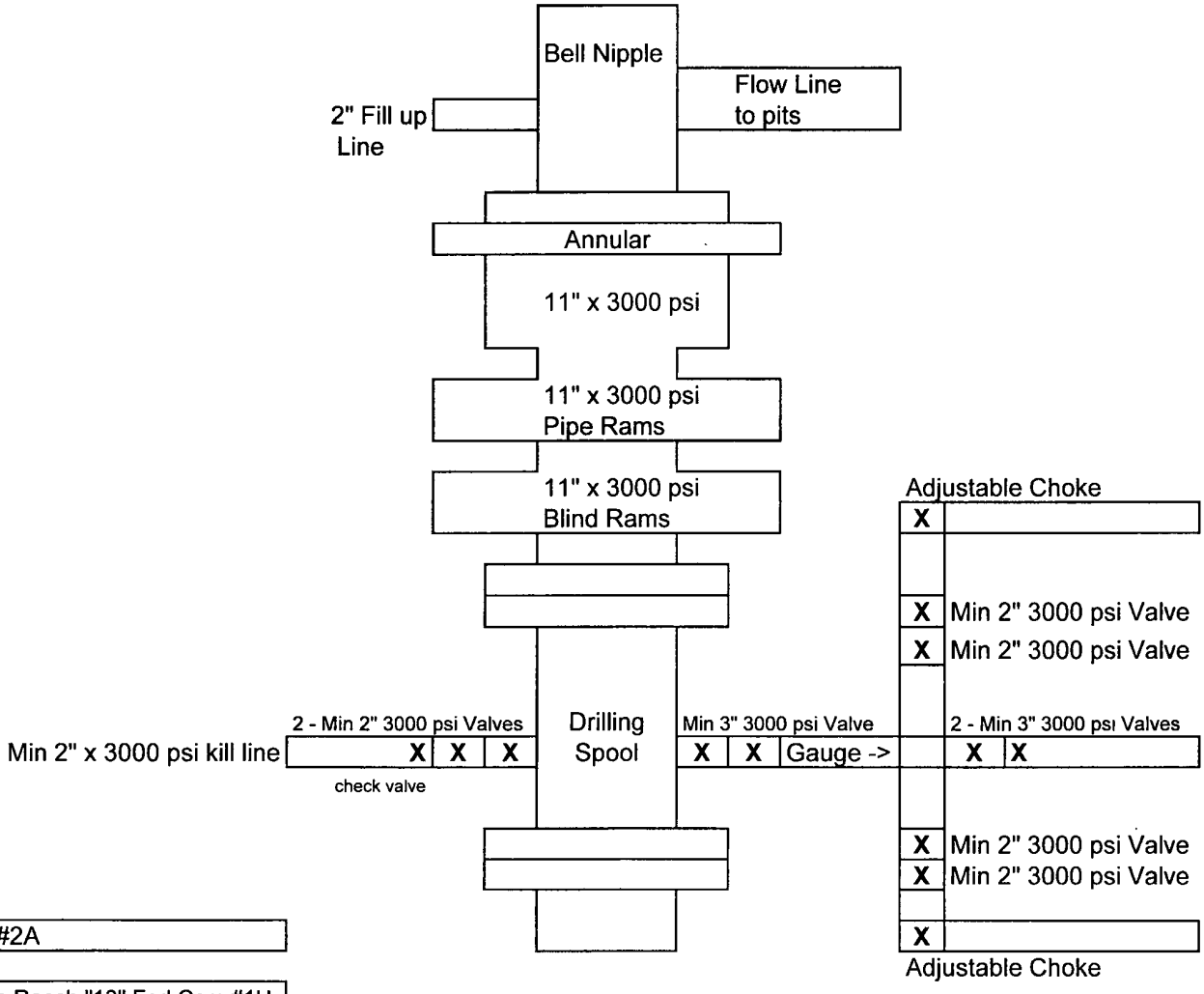
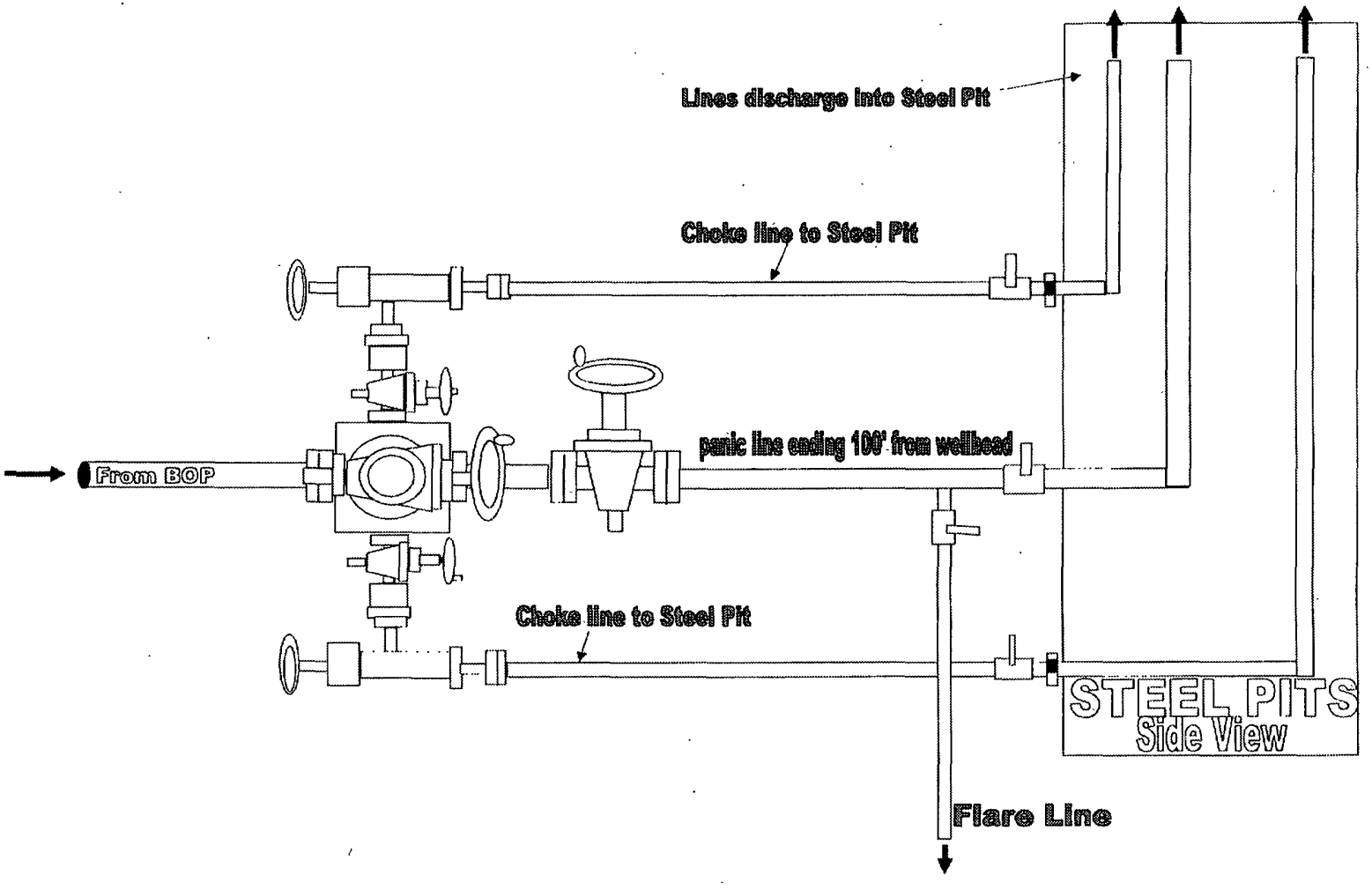


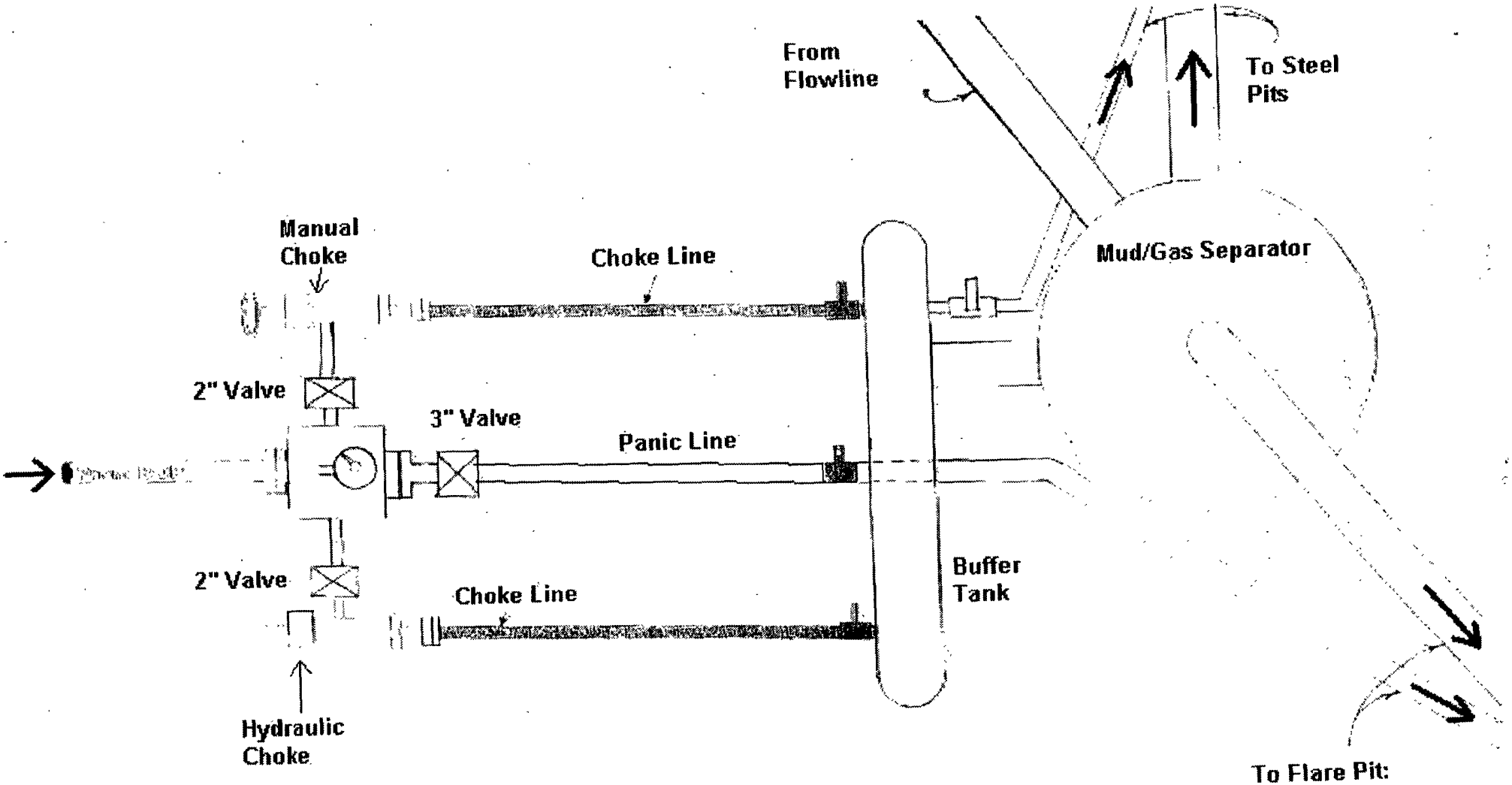
Exhibit #2A

Delaware Ranch "13" Fed Com #1H
330' FNL & 170' FWL
Sec 13-T26S-R28E
Eddy County,
New Mexico



3000# BOP manifold system for Exhibit 2 & 2A

Delaware Ranch 13 Fed Com #1H



3000# BOP manifold system for Exhibit 2 & 2A
(only if Mud/Gas Separator is needed)

Delaware Ranch 13 Fed Com #1H

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company
Delaware Ranch "13" Fed Com #1H
330' FNL & 170' FWL
Sec 13-T26S-R28E
Eddy County, New Mexico

1. General Requirements

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

2. Hydrogen Sulfide Training

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

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

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

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

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

3. Hydrogen Sulfide Safety Equipment and Systems

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

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

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

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

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

4. Mud Program

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

5. Metallurgy

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

6. Communications

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

7. Well Testing

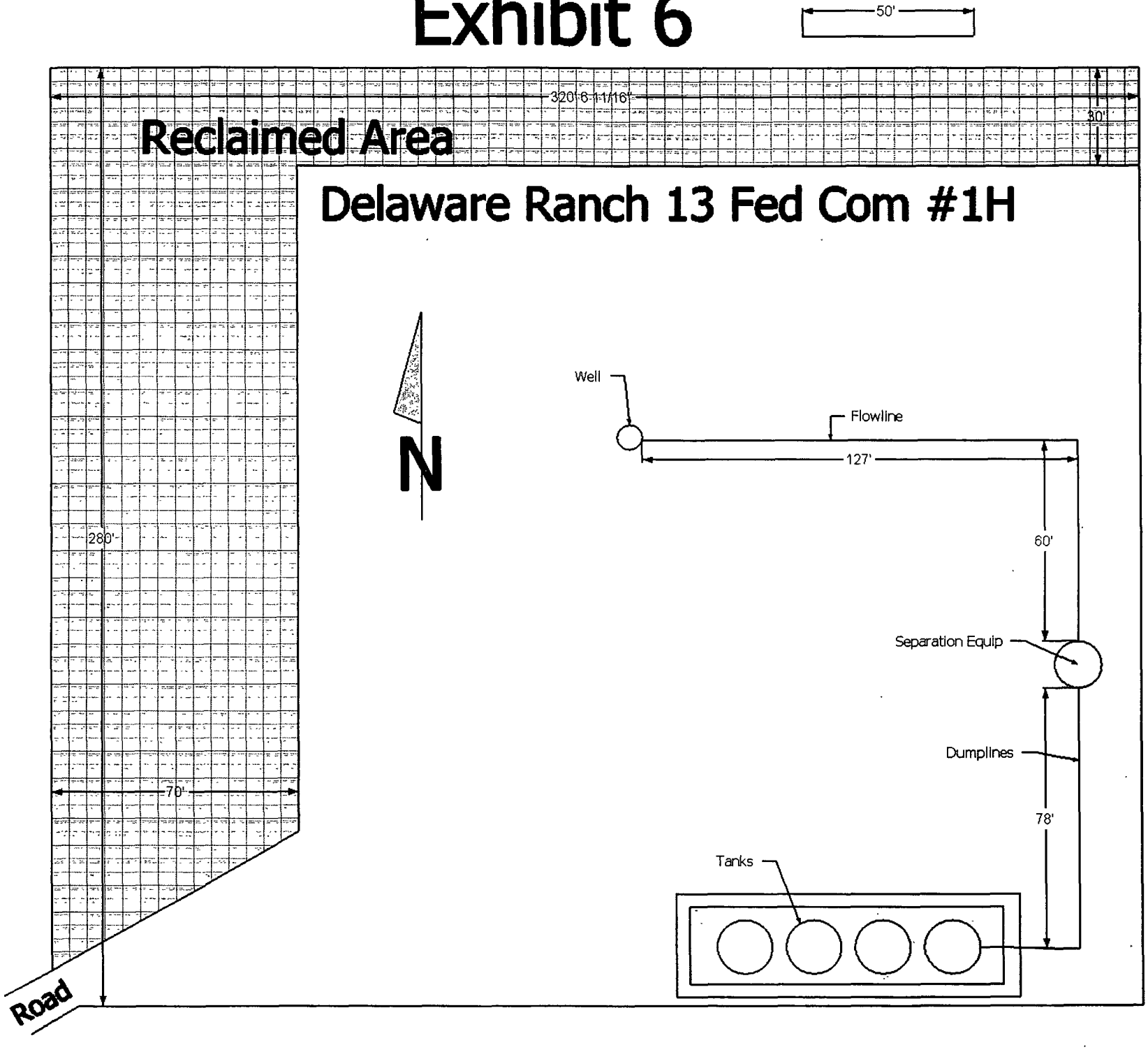
Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

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

Mewbourne Oil Company	**Hobbs District Office**	**575-393-5905**
	Fax	**575-397-6252**
	2nd Fax	**575-393-7259**
District Manager	**Micky Young**	**575-390-0999**
Drilling Superintendent	**Frosty Lathan**	**575-390-4103**
Engineer	**Brett Bednarz**	**575-390-6838**
Drilling Foreman	**Wesley Noseff**	**575-441-0729**

Exhibit 6


50'
320' 6 11/16"
30'
Reclaimed Area
Delaware Ranch 13 Fed Com #1H
N
Well
Flowline
127'
60'
Separation Equip
Dumplines
78'
Tanks
280'
70'
Road

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Co
LEASE NO.:	NM117119
WELL NAME & NO.:	1H Delaware Ranch 13 Fed Com
SURFACE HOLE FOOTAGE:	330' FNL & 170' FWL
BOTTOM HOLE FOOTAGE	380' FNL & 330' FWL
LOCATION:	Section 13, T.26 S., R.28 E., NMPM
COUNTY:	Eddy County, New Mexico

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

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)

Electric Line Requirement:
The entire route of the electric line shall be installed no farther than 15 feet from and parallel to the access road.

Cattleguard Requirement:
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement:
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Cave and Karst

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

Cave/Karst Surface Mitigation

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

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

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

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

Leak Detection System:

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

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

Cave/Karst Subsurface Mitigation

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

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

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

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

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any 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.

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.

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) 234-6235 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 stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used 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. 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 (20) 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.

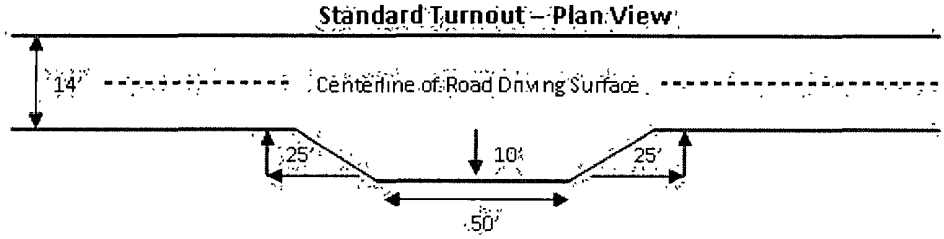
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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.

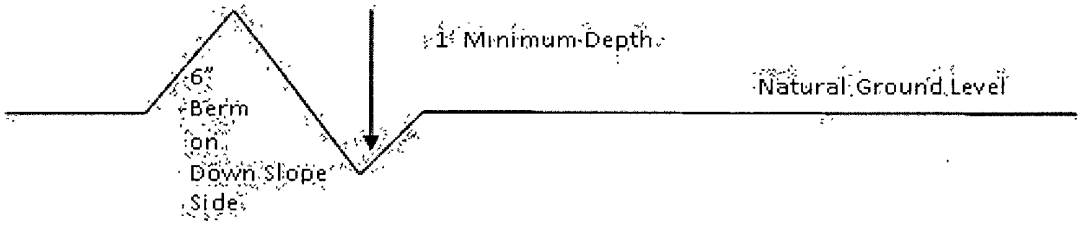
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

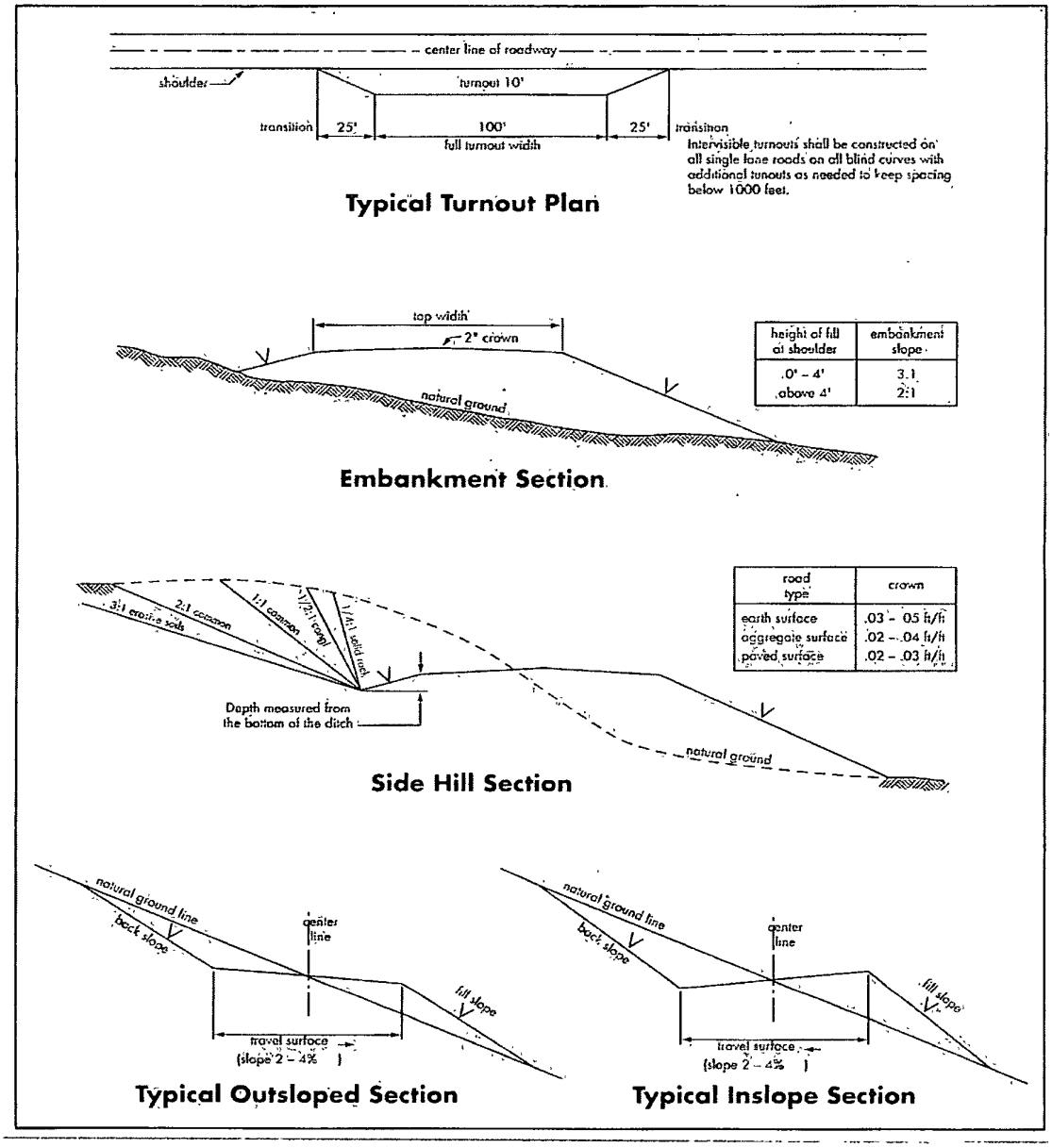
Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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 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. 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.

Medium cave/karst potential.
Possible lost circulation in the Delaware and Bones Springs formations.

1. The 13-3/8 inch surface casing shall be set at approximately **350** feet (in a competent bed above the salt) and cemented to the surface. **If the salt is encountered set the surface casing 25 feet above the top of the salt.**

    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.
    Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

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. **Additional cement may be required – excess calculates to 19%.**

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

d. 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.**

e. 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.

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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VIII. 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.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

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, Munsell Soil Color Chart # 5Y 4/2

B. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land

shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
    - For reclamation remove poles, lines, transformer, etc. and dispose of properly.
    - Fill in any holes from the poles removed.

IX. 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).

X. 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

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

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

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

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

*Pounds of pure live seed:

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