AJS-12-234

OCD-ARTESIA SECRETARY'S POTASH

Form 3160-3
(August 2007)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SH/BH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 27279 & NM 93478 14

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Aries "20" Fed Com #4H <38153>

2. Name of Operator Mewbourne Oil Company <14744>

9. API Well No.
30-015-40427

3a. Address PO Box 5270
Hobbs, NM

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

10. Field and Pool, or Exploratory <54600>
~~Sand Tank Bone Spring~~ SANTO NINO; B.S.

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 450' FSL & 330' FWL (Unit M)
At proposed prod. zone 450' FSL & 330' FEL (Unit P)

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 20, T18S, R30E

14. Distance in miles and direction from nearest town or post office*
25 miles NE of Carlsbad, 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) 330'

16. No. of acres in lease
360 (Sec 20 only)
120 (Sec 20 only)

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 980' North of Bradley "29" Fed Com #4H

19. Proposed Depth
12582' MD
8248' TVD

20. BLM/BIA Bond No. on file
NM 1693, Nationwide

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3475' GL

22. Approximate date work will start*
02/15/2012

23. Estimated duration
40 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 12/21/2011

Title
Petroleum Engineer

Approved by *(Signature)* /s/ Felicia Probert — Name *(Printed/Typed)* — Date JUN 20 2012

Title STATE DIRECTOR — Office NM STATE 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.

(Continued on page 2)

*(Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN

RECEIVED
JUN 25 2012
NMOCD ARTESIA

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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 Dec., 2010.

Name: NM Young

Signature: for NM Young

Position Title: Hobbs District Manager

Address: PO Box 5270, Hobbs NM 88241

Telephone: 575-393-5905

E-mail: myoung@mewbourne.com

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
30-015-40427	~~96832~~ 54600	SANTO NIÑO; B.S. ~~Sand Tank Bone Spring~~

Property Code	Property Name	Well Number
38153	ARIES "20" FEDERAL COM	4H

OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	3475'

Surface Location

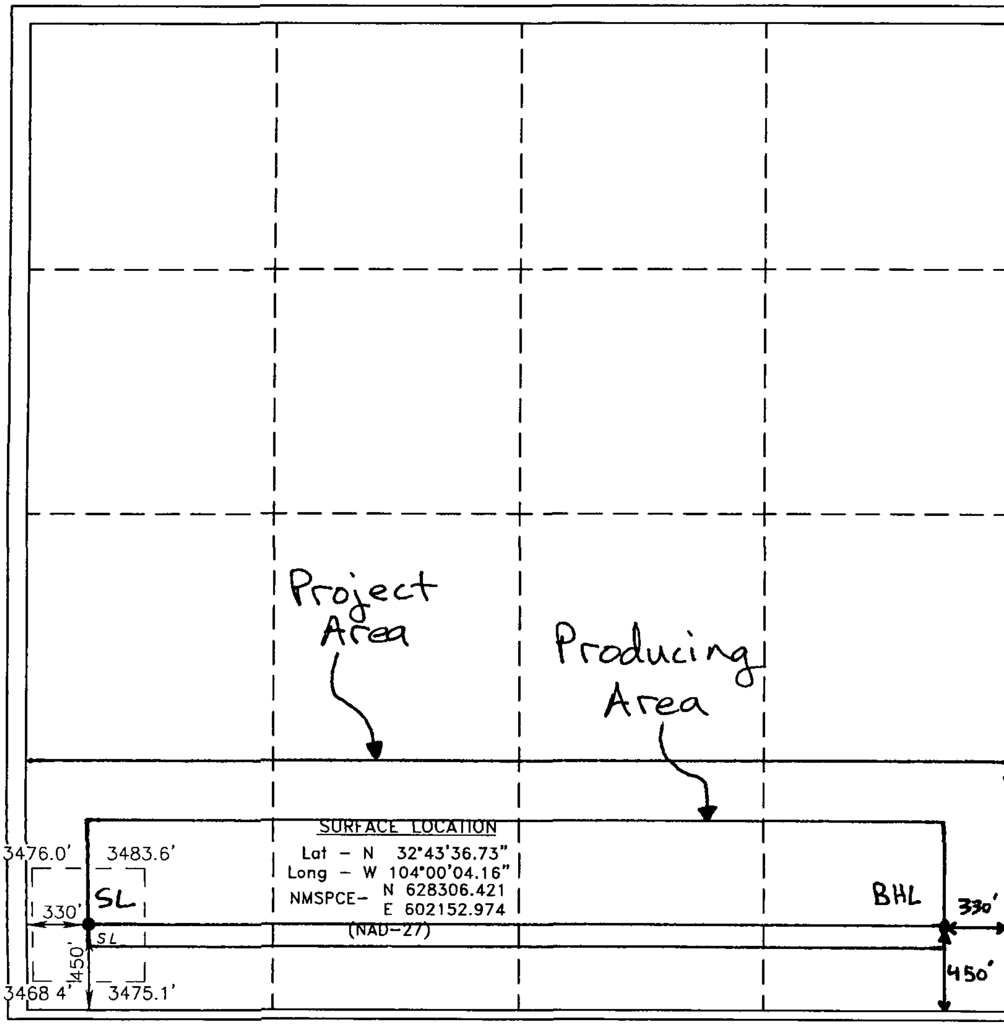
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	20	18 S	30 E		450	SOUTH	330	WEST	EDDY

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
P	20	18S	30E		450	South	330	East	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			6-20 12582'

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.

[Signature] 12-21-11
Signature Date

Brett Bednarz
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.

OCTOBER ... 2010
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 23534

Drilling Program
Mewbourne Oil Company
Aries "20" Fed Com #4H
450' FSL & 3300' FWL (SHL)
Sec 20-T18S-R30E
Eddy County, New Mexico

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

Rustler	300'
Top Salt	550'
Base Salt	1000'
Yates	1400'
Seven Rivers	1600'
Capitan	Not Present
*Queen	2450'
Grayburg	2870'
*San Andres	3350'
*Bone Springs	4460'

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

Water	Fresh water is anticipated @ 110' and will be protected by setting surface casing at 325' 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 7630' & kick off to horizontal @ 8203' TVD. The well will be drilled to 12582' MD (8248' 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'-325'	ST&C
12 ¼"	9 ⅝" (new)	36#	J55	0'-1500'	LT&C
8 ¾"	7" (new)	26#	P110	0'-7630' MD	LT&C
8 ¾"	7" (new)	26#	P110	7630'-8524' MD	BT&C
6 1/8"	4 ½" (new)	11.6#	P110	8324'-12582' 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% CaCl. Yield @ 1.34 cuft/sk. Cmt circulated to surface w/100% excess.

ii Intermediate Casing: 300 sacks Class"C" (35:65:4) light cement w/ salt & LCM additives. Yield @ 2.16 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: 800 sacks Class "H" (35:65:4) light cement w/ salt & LCM additives. Yield @ 2.12 cuft/sk. 400 sacks Class "H" cement w/ FL additives. Yield @ 1.18 cuft/sk. Cmt circulated to surface 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' - 325'	FW spud mud	8.6-9.0	32-34	NA
325' - 1500'	Brine water	10.0-10 2	28-30	NA
1500' - 7630' (KOP)	Cut Brine	8.5-8.7	28-30	NA
7630' - TD	Cut Brine w/polymer	8.5-8.7	32-35	15

7. Evaluation Program: See COA

Samples: 10' samples from surface casing to TD
Logging: CN, GR & Gyro from KOP -100' (7530') to surface. GR from 7530' 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 Oil Co

Eddy County, New Mexico
Sec 20-18S-30E
Aries 20 Fed Com #4H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

15 December, 2011

DDC
The DIRECTIONAL DRILLING COMPANY

DDC
Well Planning Report

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Aries 20 Fed Com #4H
Company:	Mewbourne Oil Co	**TVD Reference:**	WELL @ 3493.0usft (Patterson UTI #47)
Project:	Eddy County, New Mexico	**MD Reference:**	WELL @ 3493.0usft (Patterson UTI #47)
Site:	Sec 20-18S-30E	**North Reference:**	Grid
Well:	Aries 20 Fed Com #4H	**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 Sec 20-18S-30E

Site Position:		**Northing:**	631,082.30 usft	**Latitude:**	32° 44' 4.205 N
From:	Map	**Easting:**	602,014.20 usft	**Longitude:**	104° 0' 5.683 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.18 °

Well Aries 20 Fed Com #4H

Well Position	**+N/-S**	-2,775 9 usft	**Northing:**	628,306.43 usft	**Latitude:**	32° 43' 36.733 N
	+E/-W	138.8 usft	**Easting:**	602,152.98 usft	**Longitude:**	104° 0' 4.160 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,475.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/15/2011	7.76	60.57	48,821

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	87.34

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	
7,630.1	0.00	0.00	7,630 1	0.0	0 0	0.00	0.00	0.00	0 00	
8,523.7	89.36	87.34	8,203.0	26.3	566.0	10.00	10.00	9.77	87.34	
12,581 5	89.36	87 34	8,248.0	214.9	4,619.1	0 00	0 00	0 00	0.00	PBHL Aries 20 Fed

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Aries 20 Fed Com #4H
Company:	Mewbourne Oil Co	**TVD Reference:**	WELL @ 3493.0usft (Patterson UTI #47)
Project:	Eddy County, New Mexico	**MD Reference:**	WELL @ 3493.0usft (Patterson UTI #47)
Site:	Sec 20-18S-30E	**North Reference:**	Grid
Well:	Aries 20 Fed Com #4H	**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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0 00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0 00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0 00	0 00	500 0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0 00	700 0	0.0	0.0	0.0	0 00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0 0	0.0	0 00	0.00	0.00
1,000 0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0 00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0 0	0.0	0.00	0 00	0.00
1,300.0	0.00	0.00	1,300.0	0 0	0.0	0.0	0.00	0.00	0.00
1,400.0	0 00	0.00	1,400.0	0.0	0 0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0 0	0.0	0.0	0 00	0.00	0.00
1,600.0	0.00	0 00	1,600.0	0 0	0.0	0.0	0.00	0.00	0 00
1,700.0	0.00	0 00	1,700 0	0 0	0.0	0 0	0.00	0.00	0 00
1,800 0	0.00	0 00	1,800 0	0.0	0.0	0.0	0.00	0.00	0 00
1,900.0	0 00	0 00	1,900.0	0.0	0.0	0.0	0 00	0.00	0 00
2,000.0	0.00	0.00	2,000.0	0.0	0 0	0.0	0.00	0 00	0.00
2,100 0	0 00	0.00	2,100.0	0.0	0.0	0.0	0 00	0 00	0.00
2,200.0	0 00	0.00	2,200.0	0.0	0.0	0.0	0 00	0 00	0.00
2,300.0	0 00	0 00	2,300 0	0 0	0 0	0.0	0 00	0 00	0.00
2,400.0	0 00	0 00	2,400 0	0 0	0 0	0 0	0 00	0.00	0.00
2,500.0	0 00	0 00	2,500.0	0 0	0.0	0.0	0.00	0.00	0 00
2,600.0	0 00	0 00	2,600 0	0.0	0.0	0 0	0.00	0.00	0.00
2,700.0	0 00	0.00	2,700 0	0.0	0.0	0.0	0 00	0 00	0.00
2,800 0	0 00	0 00	2,800 0	0.0	0.0	0.0	0.00	0 00	0.00
2,900 0	0.00	0.00	2,900 0	0.0	0.0	0.0	0.00	0.00	0 00
3,000.0	0.00	0.00	3,000.0	0 0	0 0	0.0	0.00	0.00	0.00
3,100.0	0 00	0.00	3,100.0	0 0	0.0	0.0	0.00	0.00	0.00
3,200.0	0 00	0 00	3,200.0	0.0	0 0	0.0	0.00	0.00	0 00
3,300.0	0 00	0 00	3,300.0	0 0	0 0	0.0	0.00	0 00	0 00
3,400 0	0.00	0 00	3,400 0	0 0	0 0	0.0	0.00	0 00	0 00
3,500 0	0 00	0.00	3,500 0	0 0	0 0	0 0	0.00	0.00	0 00
3,600.0	0 00	0.00	3,600.0	0 0	0.0	0.0	0.00	0.00	0.00
3,700.0	0 00	0 00	3,700.0	0 0	0 0	0 0	0 00	0.00	0.00
3,800.0	0.00	0 00	3,800.0	0.0	0.0	0 0	0.00	0.00	0.00
3,900.0	0.00	0 00	3,900.0	0.0	0 0	0.0	0 00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0 0	0.0	0.0	0.00	0 00	0.00
4,100 0	0 00	0 00	4,100.0	0 0	0.0	0.0	0.00	0.00	0 00
4,200 0	0 00	0.00	4,200 0	0 0	0 0	0.0	0.00	0.00	0.00
4,300.0	0 00	0.00	4,300 0	0.0	0 0	0.0	0 00	0.00	0 00
4,400.0	0 00	0.00	4,400 0	0.0	0.0	0.0	0.00	0 00	0.00
4,500.0	0 00	0 00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600 0	0 00	0 00	4,600 0	0.0	0.0	0 0	0.00	0 00	0 00
4,700.0	0.00	0 00	4,700.0	0.0	0.0	0 0	0.00	0 00	0.00
4,800.0	0.00	0 00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900 0	0.00	0 00	4,900.0	0.0	0.0	0.0	0 00	0.00	0.00
5,000.0	0.00	0 00	5,000.0	0.0	0.0	0.0	0.00	0 00	0 00
5,100.0	0.00	0 00	5,100.0	0 0	0.0	0.0	0 00	0 00	0 00
5,200.0	0 00	0 00	5,200.0	0 0	0 0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0 0	0.0	0.0	0.00	0 00	0 00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Aries 20 Fed Com #4H
Company:	Mewbourne Oil Co	**TVD Reference:**	WELL @ 3493.0usft (Patterson UTI #47)
Project:	Eddy County, New Mexico	**MD Reference:**	WELL @ 3493.0usft (Patterson UTI #47)
Site:	Sec 20-18S-30E	**North Reference:**	Grid
Well:	Aries 20 Fed Com #4H	**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)
5,400.0	0.00	0.00	5,400.0	0 0	0.0	0.0	0.00	0 00	0.00
5,500.0	0 00	0.00	5,500.0	0.0	0 0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0 0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0 00
6,100.0	0.00	0.00	6,100.0	0.0	0 0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0 00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0 00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0 00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0 0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0 00	0.00	7,000.0	0.0	0.0	0 0	0.00	0.00	0.00
7,100.0	0.00	0 00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200 0	0.00	0 00	7,200.0	0 0	0.0	0.0	0 00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0 00
7,400.0	0 00	0.00	7,400.0	0.0	0 0	0.0	0.00	0 00	0.00
7,500.0	0 00	0.00	7,500.0	0 0	0 0	0 0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0 0	0.0	0 0	0.00	0 00	0.00
Build 10°/100' @ 7630' MD									
7,630 1	0.00	0 00	7,630 1	0.0	0.0	0.0	0.00	0.00	0 00
7,700.0	6 99	87.34	7,699.8	0 2	4 3	4.3	10.00	10.00	0.00
7,800.0	16.99	87 34	7,797.5	1 2	25 0	25.0	10.00	10 00	0.00
7,900.0	26.99	87.34	7,890.1	2.9	62.3	62.4	10.00	10.00	0 00
8,000.0	36.99	87.34	7,974.8	5.4	115.2	115.3	10.00	10.00	0.00
8,100.0	46.99	87 34	8,049 1	8.5	181.9	182.1	10.00	10.00	0.00
8,200.0	56.99	87 34	8,110.6	12 1	260 5	260.8	10.00	10 00	0 00
8,300.0	66.99	87.34	8,157.5	16 2	348.6	349 0	10.00	10 00	0.00
8,400.0	76.99	87.34	8,188.4	20.6	443 5	444 0	10 00	10.00	0.00
8,500 0	86.99	87 34	8,202 3	25 2	542.3	542.9	10 00	10.00	0.00
EOB @ 8524' MD / 89.36° Inc / 87.34° Azm / 8203' TVD									
8,523.7	89.36	87.34	8,203.0	26 3	566.0	566.6	10.00	10 00	0 00
8,600.0	89 36	87.34	8,203 9	29 9	642 2	642.9	0.00	0.00	0 00
8,700.0	89 36	87.34	8,205.0	34.5	742.0	742.8	0.00	0.00	0 00
8,800.0	89.36	87.34	8,206.1	39 2	841.9	842.8	0 00	0 00	0.00
8,900 0	89.36	87.34	8,207.2	43.8	941.8	942.8	0 00	0 00	0.00
9,000 0	89.36	87.34	8,208.3	48.5	1,041 7	1,042.8	0.00	0.00	0.00
9,100 0	89.36	87.34	8,209.4	53.1	1,141 6	1,142.8	0.00	0 00	0.00
9,200.0	89 36	87.34	8,210.5	57 8	1,241 5	1,242.8	0.00	0 00	0.00
9,300.0	89.36	87.34	8,211.6	62.4	1,341.4	1,342 8	0 00	0.00	0.00
9,400.0	89.36	87.34	8,212 7	67.1	1,441 2	1,442.8	0.00	0.00	0.00
9,500.0	89 36	87.34	8,213.8	71 7	1,541.1	1,542 8	0.00	0 00	0.00
9,600 0	89.36	87.34	8,215 0	76.3	1,641.0	1,642 8	0.00	0.00	0.00
9,700.0	89.36	87.34	8,216.1	81.0	1,740.9	1,742.8	0.00	0 00	0 00
9,800 0	89.36	87.34	8,217.2	85 6	1,840.8	1,842.8	0.00	0.00	0.00
9,900.0	89.36	87 34	8,218 3	90.3	1,940.7	1,942.8	0.00	0.00	0 00
10,000.0	89.36	87.34	8,219 4	94 9	2,040.6	2,042 8	0 00	0 00	0 00
10,100.0	89.36	87.34	8,220 5	99.6	2,140 4	2,142.8	0 00	0.00	0 00
10,200.0	89 36	87.34	8,221.6	104.2	2,240 3	2,242 8	0.00	0.00	0 00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Aries 20 Fed Com #4H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3493.0usft (Patterson UTI #47)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3493.0usft (Patterson UTI #47)
Site:	Sec 20-18S-30E	North Reference:	Grid
Well:	Aries 20 Fed Com #4H	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)
10,300.0	89.36	87.34	8,222 7	108.9	2,340.2	2,342.7	0.00	0.00	0.00
10,400.0	89.36	87.34	8,223.8	113.5	2,440.1	2,442.7	0.00	0.00	0.00
10,500.0	89.36	87.34	8,224.9	118.2	2,540.0	2,542.7	0.00	0.00	0.00
10,600.0	89.36	87.34	8,226 0	122.8	2,639.9	2,642.7	0.00	0.00	0.00
10,700.0	89.36	87.34	8,227.1	127.5	2,739.8	2,742.7	0 00	0.00	0.00
10,800.0	89.36	87.34	8,228.3	132.1	2,839.6	2,842.7	0.00	0.00	0.00
10,900.0	89.36	87.34	8,229.4	136.8	2,939 5	2,942.7	0.00	0.00	0.00
11,000.0	89.36	87.34	8,230.5	141.4	3,039.4	3,042.7	0.00	0.00	0.00
11,100.0	89.36	87.34	8,231 6	146.1	3,139.3	3,142 7	0.00	0.00	0.00
11,200.0	89.36	87.34	8,232.7	150.7	3,239.2	3,242.7	0.00	0 00	0.00
11,300.0	89.36	87.34	8,233.8	155.3	3,339.1	3,342.7	0.00	0.00	0.00
11,400.0	89.36	87.34	8,234.9	160.0	3,439 0	3,442.7	0.00	0.00	0.00
11,500.0	89.36	87.34	8,236.0	164 6	3,538 8	3,542.7	0.00	0.00	0.00
11,600.0	89.36	87.34	8,237.1	169.3	3,638.7	3,642.7	0.00	0.00	0.00
11,700.0	89 36	87.34	8,238.2	173.9	3,738.6	3,742.7	0 00	0 00	0.00
11,800.0	89.36	87.34	8,239 3	178.6	3,838 5	3,842 7	0.00	0.00	0.00
11,900.0	89.36	87.34	8,240 4	183.2	3,938 4	3,942.7	0.00	0.00	0.00
12,000 0	89.36	87.34	8,241.6	187.9	4,038.3	4,042.6	0.00	0.00	0.00
12,100.0	89.36	87 34	8,242.7	192 5	4,138.2	4,142 6	0.00	0.00	0.00
12,200.0	89.36	87 34	8,243 8	197 2	4,238 0	4,242.6	0.00	0.00	0.00
12,300.0	89 36	87.34	8,244 9	201.8	4,337 9	4,342.6	0.00	0.00	0.00
12,400.0	89.36	87 34	8,246.0	206.5	4,437.8	4,442 6	0 00	0.00	0.00
12,500.0	89.36	87.34	8,247.1	211.1	4,537 7	4,542 6	0 00	0.00	0.00
12,581.5	89.36	87.34	8,248.0	214 9	4,619 1	4,624.1	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 Aries 20 Fed C - plan hits target center - Point	0.00	0.00	8,248.0	214.9	4,619.1	628,521 33	606,772.08	32° 43' 38.713 N	103° 59' 10.080 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
7,630.1	7,630.1	0.0	0 0	Build 10°/100' @ 7630' MD
8,523.7	8,203.0	26.3	566.0	EOB @ 8524' MD / 89.36° Inc / 87.34° Azm / 8203' TVD
12,581.5	8,248 0	214.9	4,619.1	TD @ 12582' MD / 8248' TVD

Mewbourne Oil Company

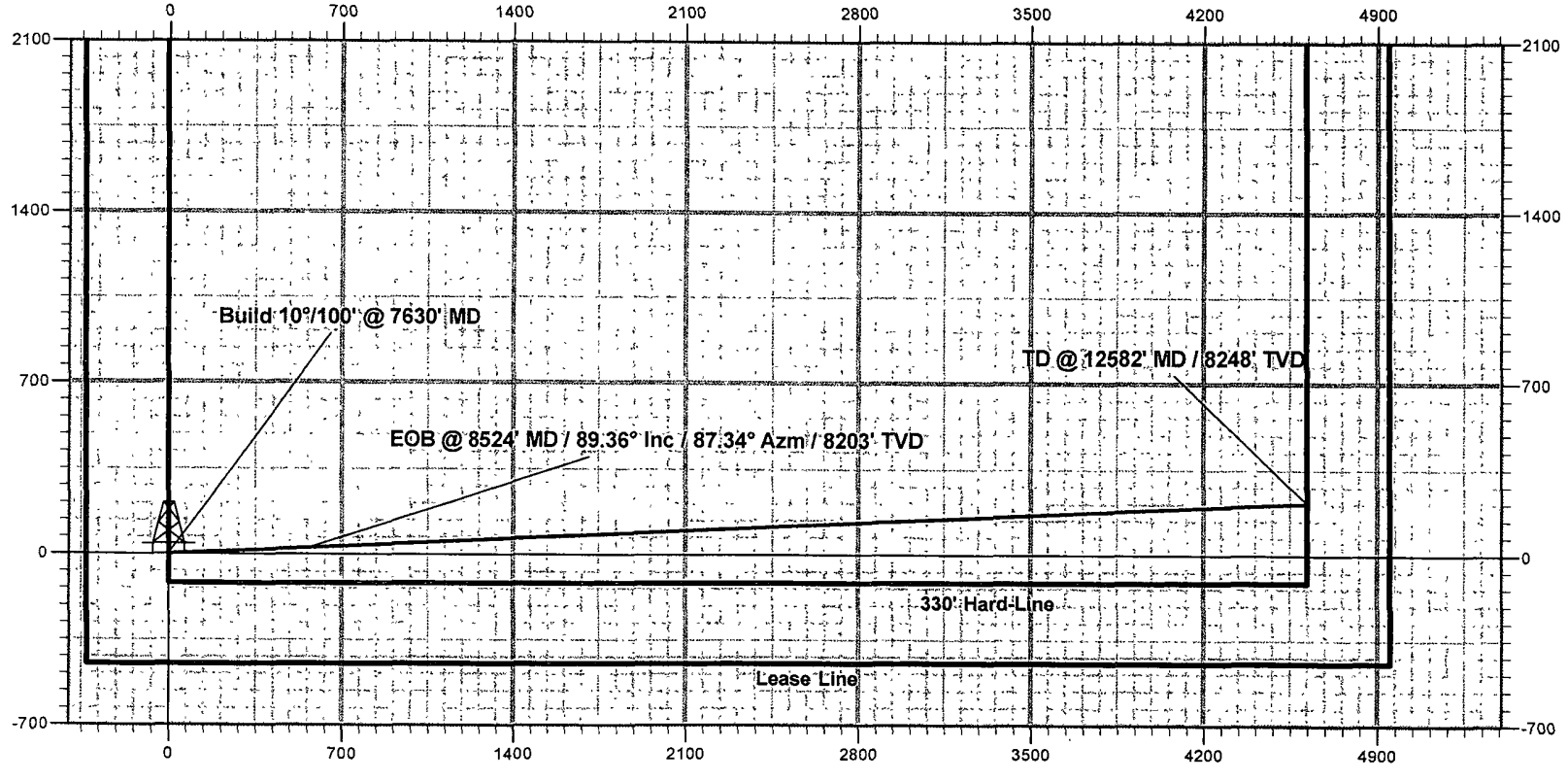
Eddy County, New Mexico

Aries 20 Fed Com #4H

Design #1

RDC

The DIRE NAL DRILLING COMPANY



Mewbourne Oil Company

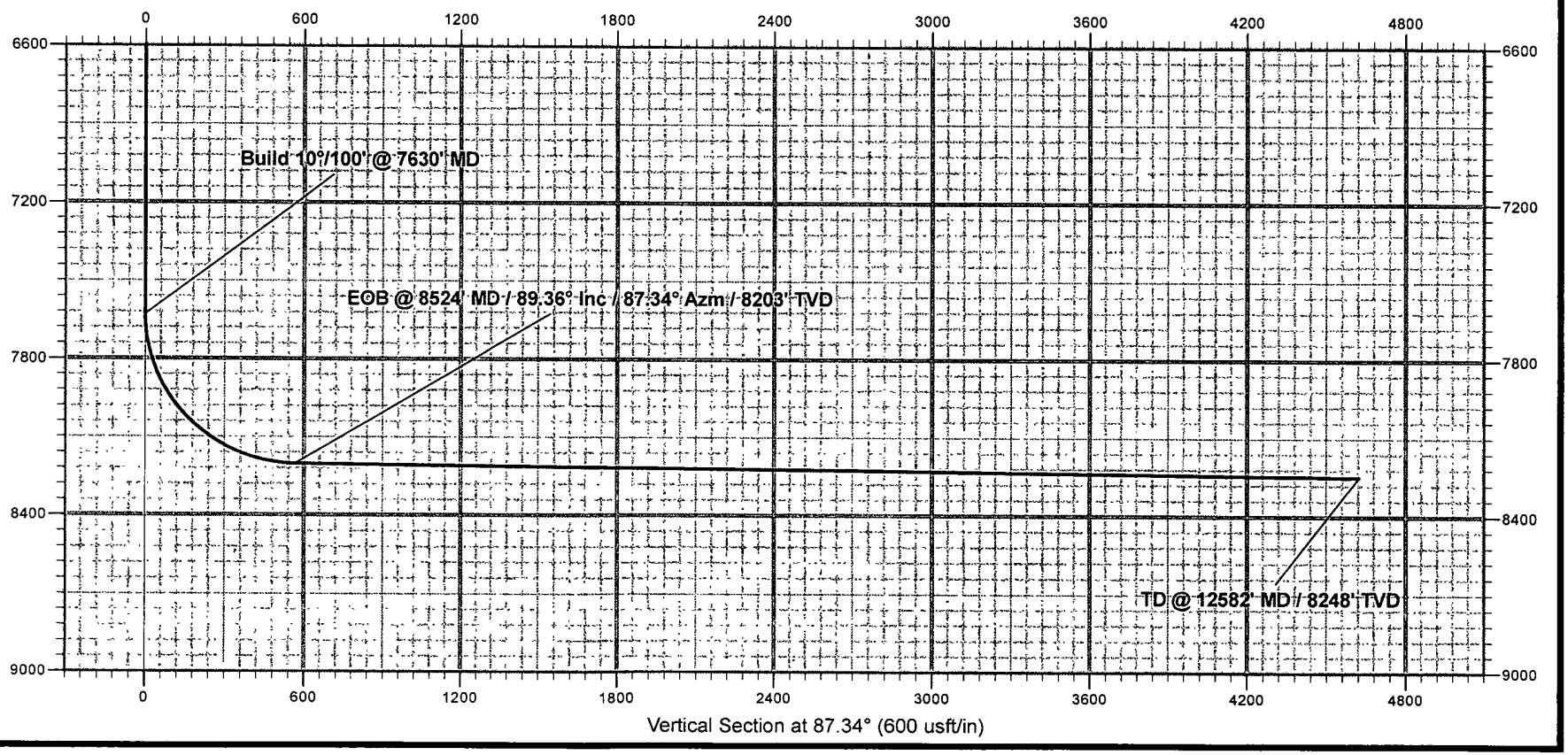
Eddy County, New Mexico

Aries 20 Fed Com #4H

Design #1

RDC

The DIRE[illegible]NAL DRILLING COMPANY



Mewbourne Oil Company
BOP Schematic for
12 1/4" Hole

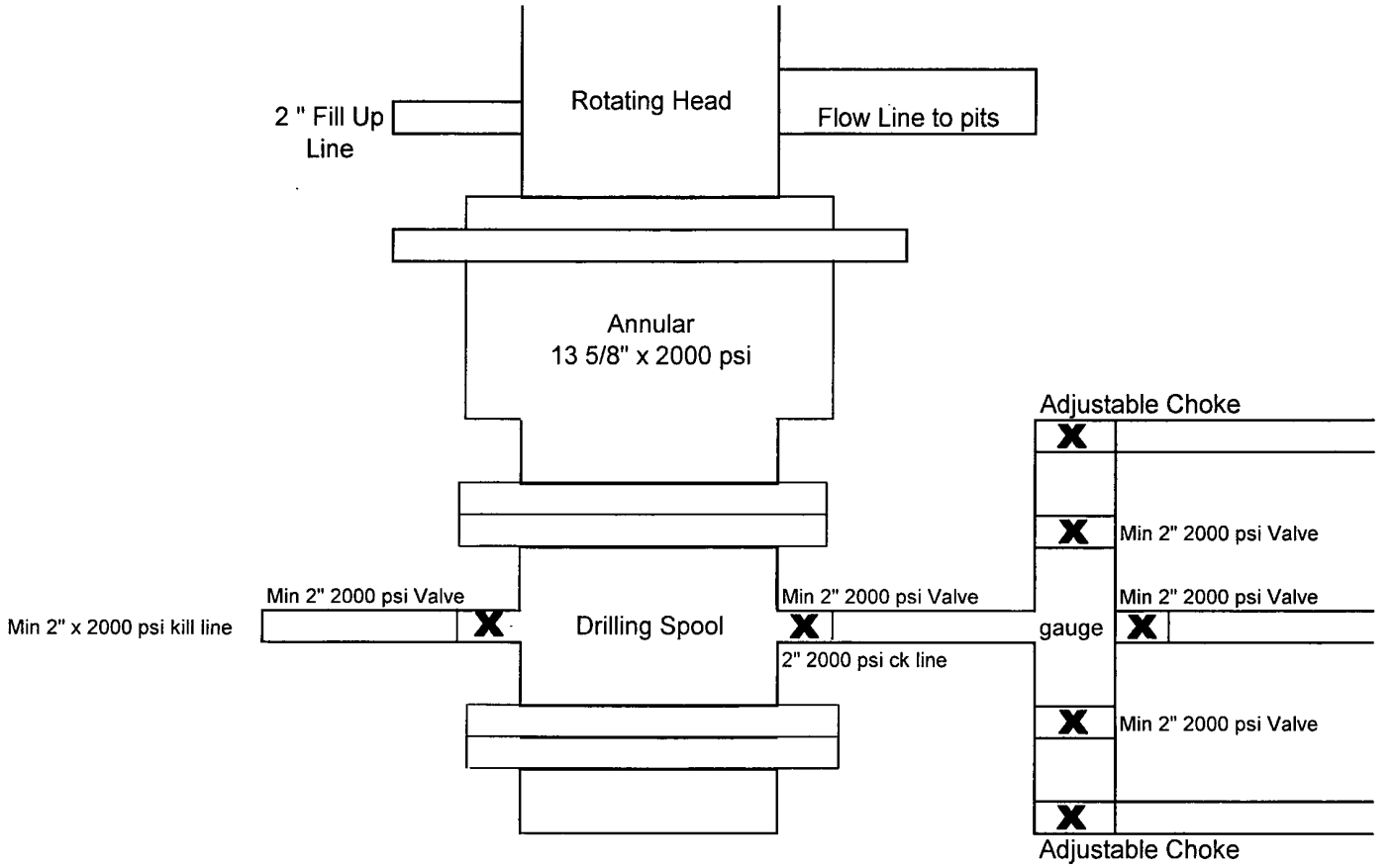


Exhibit #2

Aries "20" Fed Com #4H
450' FSL & 330' FWL
Sec 20-T18S-R30E
Eddy, County
New Mexico

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

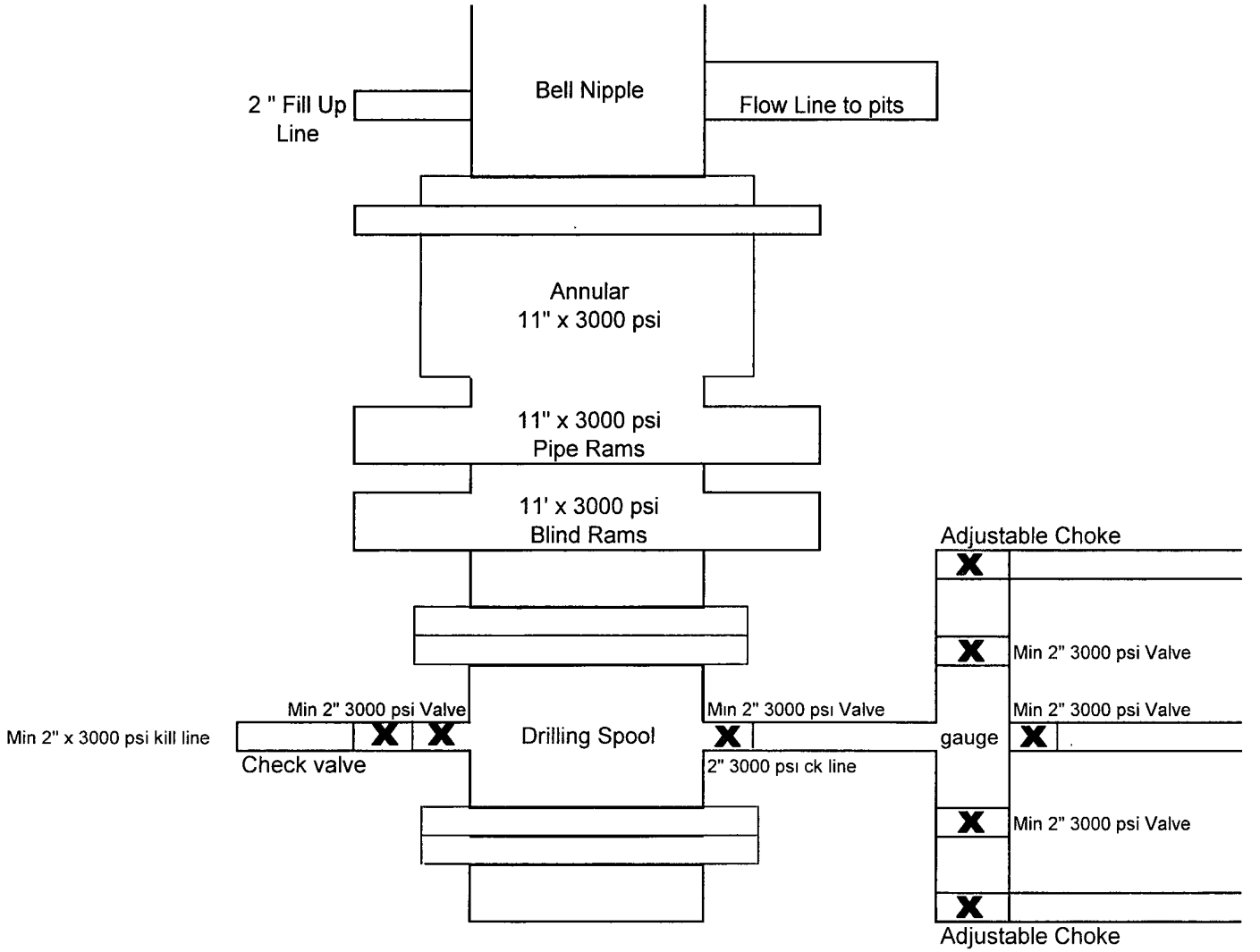


Exhibit #2

Aries "20" Fed Com #4H
450' FSL & 330' FWL
Sec 20-T18S-R30E
Eddy, County
New Mexico

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Aries "20" Federal Com #4H
450' FSL & 3300' FWL (SHL)
Sec 20-T18S-R30E
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.

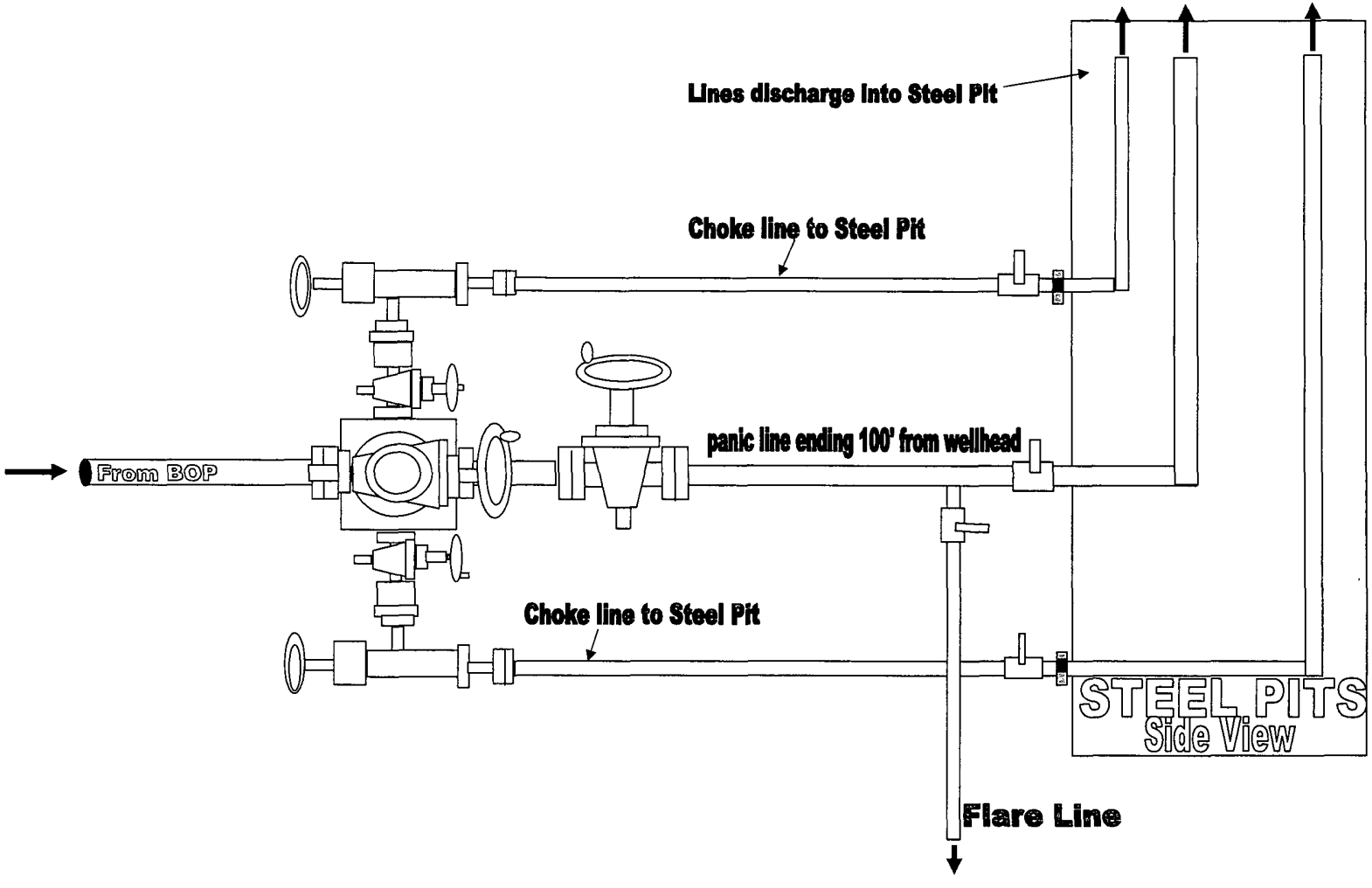
II. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure on 13 3/8" casing and 2000 psi working pressure on 9 5/8" & 7" casing.

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.

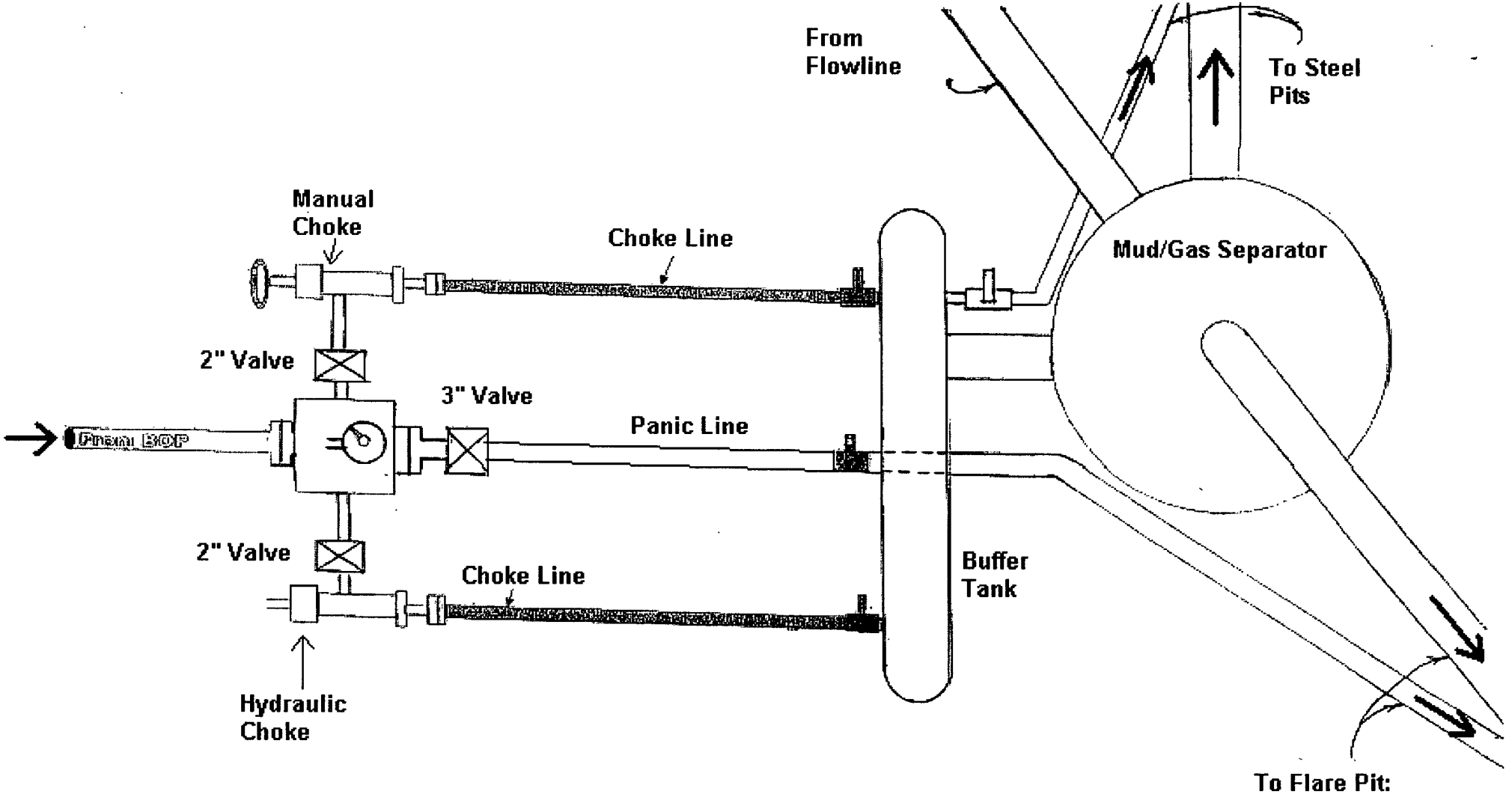
V. A kelly cock shall be installed on the kelly at all times.

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.



3000# BOP manifold system for Exhibit 2 & 2A

Aries "20" Fed Com #4H



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

Aries "20" Fed Com #4H

Closed Loop Pad Dimensions 280' x 320'
and H2S Plan

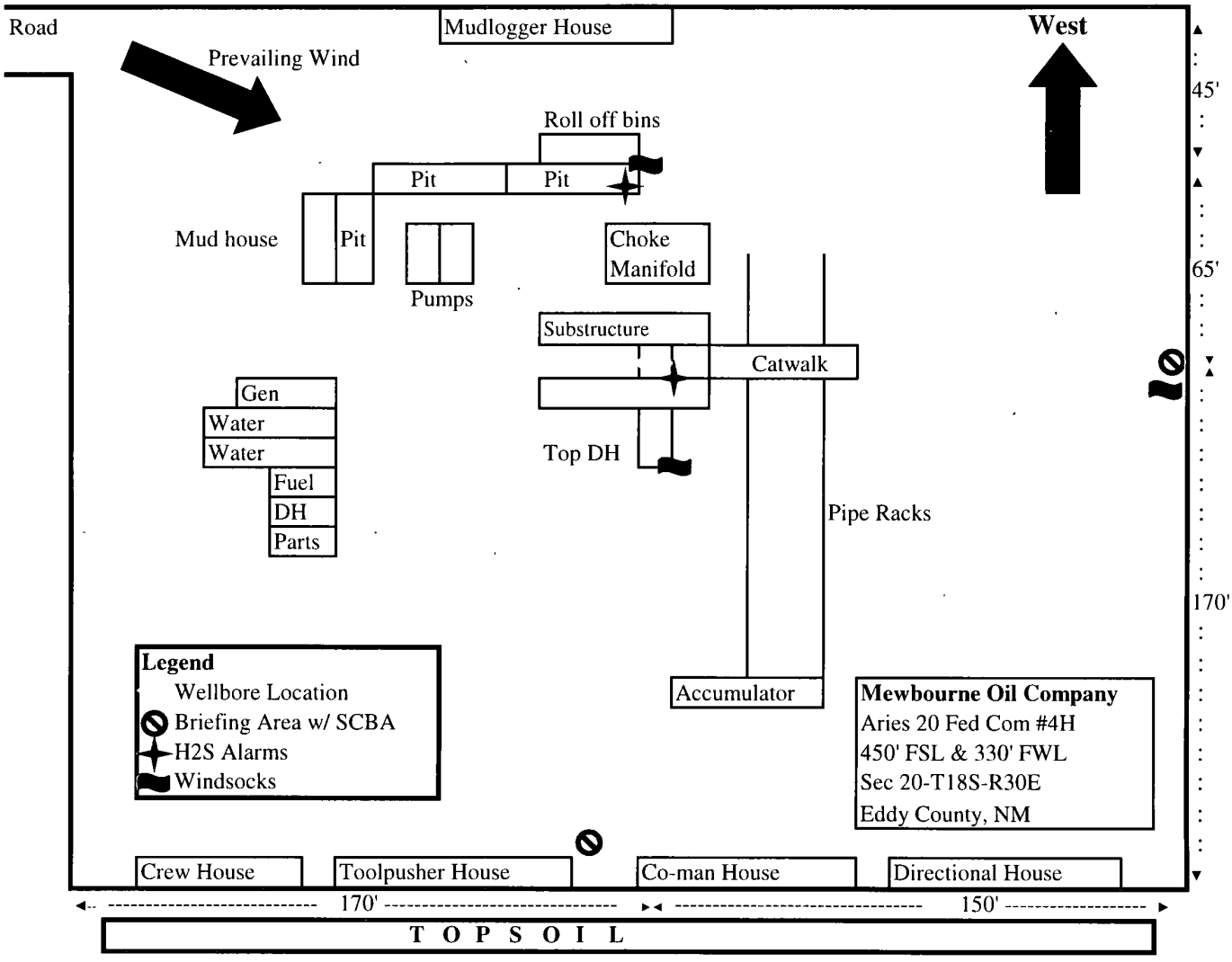


Exhibit 5

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Aries "20" Federal Com #4H

450' FSL & 330' FWL

Sec 20-T18S-R30E

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 Yates 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

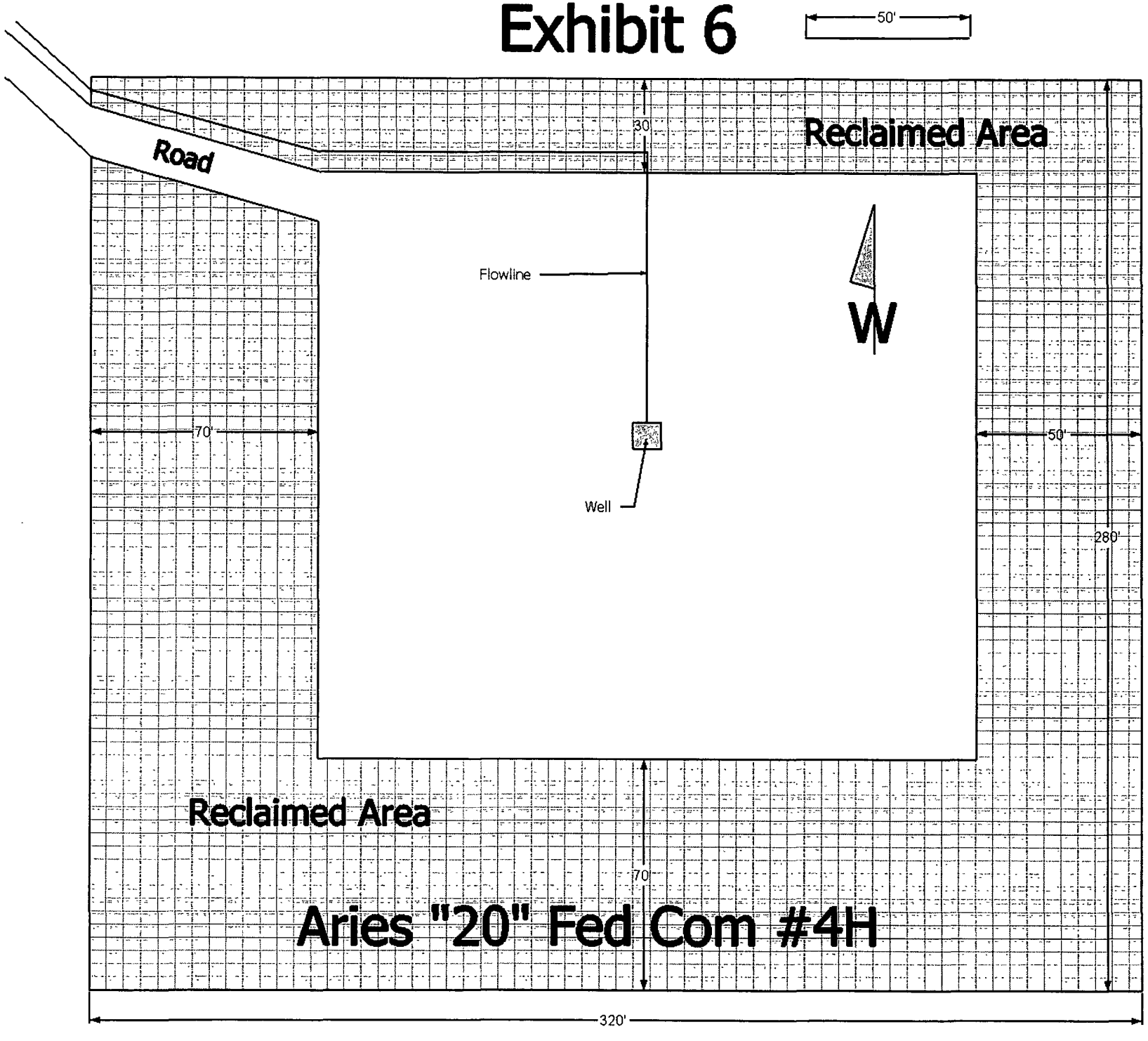
Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Eddy County Sheriff's Office	**911 or 575-887-7551**
Ambulance Service	**911 or 575-885-2111**
Artesia Fire Dept	**911 or 575-616-7155**
Loco Hills Volunteer Fire Dept.	**911 or 575-677-3266**
Closest Medical Facility – Artesia General Hospital	**575-748-3333**

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**
Drilling Engineer	**Jake Nave**	**575-602-1296**
Engineer	**Brett Bednarz**	**575-390-6838**

Exhibit 6


50'
Road
30
Reclaimed Area
Flowline
W
70'
50'
Well
280'
Reclaimed Area
70
Aries "20" Fed Com #4H
320'

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL COMPANY
LEASE NO.:	NM-27279
WELL NAME & NO.:	4H ARIES 20 FED COM
SURFACE HOLE FOOTAGE:	450' FSL & 330' FWL
BOTTOM HOLE FOOTAGE	450' FSL & 330' FEL
LOCATION:	Section 20, T.18 S., R.30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

☐ **General Provisions**
☐ **Permit Expiration**
☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- Lesser Prairie-Chicken Timing Stipulations
- Ground-level Abandoned Well Marker
- Communitization Agreement

☒ **Construction**
- Notification
- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
- Roads

☐ **Road Section Diagram**
☒ **Drilling**
- Secretary's Potash
- H_2S – Onshore Order #6
- Waste Material and Fluids

☒ **Production (Post Drilling)**
- Well Structures & Facilities
- Pipelines

☐ **Interim Reclamation**
☒ **Final Abandonment & Reclamation**