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OCD-ARTESIA

Form 3160-3
(August 2007)

JUL 17 2012

NMOCD ARTESIA

UNITED STATES

SECRETARY'S POTENTIAL

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

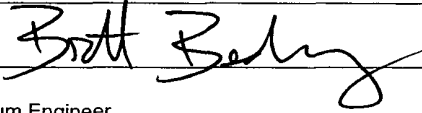
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 27279 & NMNM 28097 BH	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Mewbourne Oil Company		7. If Unit or CA Agreement, Name and No.	
3a. Address PO Box 5270 Hobbs, NM 88240		8. Lease Name and Well No. Aries "19" IL Fed Com #1H <39354>	
3b. Phone No. (include area code) (575) 393-5905		9. API Well No. 30-015-40497 TO 7/18/2012	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1770' FSL & 110' FWL (Unit L) Sec 20 At proposed prod. zone 1770' FSL & 330' FWL (Unit L) Sec 19		10. Field and Pool, or Exploratory Sand Tank Bone Spring SANTO NINO; BS. <54600>	
14. Distance in miles and direction from nearest town or post office* 25 miles NE of Carlsbad, NM		11. Sec., T. R. M. or Blk. and Survey or Area Sec 20, T18S, R30E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 110'		12. County or Parish Eddy	
16. No. of acres in lease 1751.53 1076.65		13. State NM	
17. Spacing Unit dedicated to this well 158.25			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 110' West of the Aries 20 Fed Com #3H		19. Proposed Depth 12991' MD 8164' TVD	
20. BLM/BIA Bond No. on file NM1693, Nationwide			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3474' GL		22. Approximate date work will start* 08/15/2012	
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature 	Name (Printed/Typed) Brett Bednarz	Date 02/09/2012
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Title
Petroleum Engineer

Approved by (Signature)	Name (Printed/Typed)	Date
-------------------------	----------------------	------

Title
STATE DIRECTOROffice
NM STATE OFFICE

JUL 06 2012

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 BasinApproval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

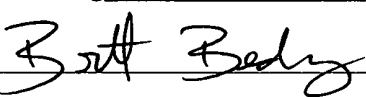
Mewbourne Oil Company

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 9th day of Feb., 2012.

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
Phone (505) 393-6191 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 748-8720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-8170

DISTRICT IV
1220 S. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3480 Fax: (505) 478-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-40497	Pool Code 96832	Pool Name Santo Domingo Sand Tank; Bone Spring
Property Code 39354	Property Name ARIES 19 IL Fed Com	Well Number 1H
OGMD No. 14744	Operator Name MEWBOURNE OIL COMPANY	Elevation 3474'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	20	18 S	30 E		1770	SOUTH	110	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
L	19	18 S	30 E		1770	South	330	West	Eddy
Dedicated Acres 158.25	Joint or Infill	Consolidation Code	Order No.						

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

12991 7/6

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 Bednarz 2-9-12
Signature Date

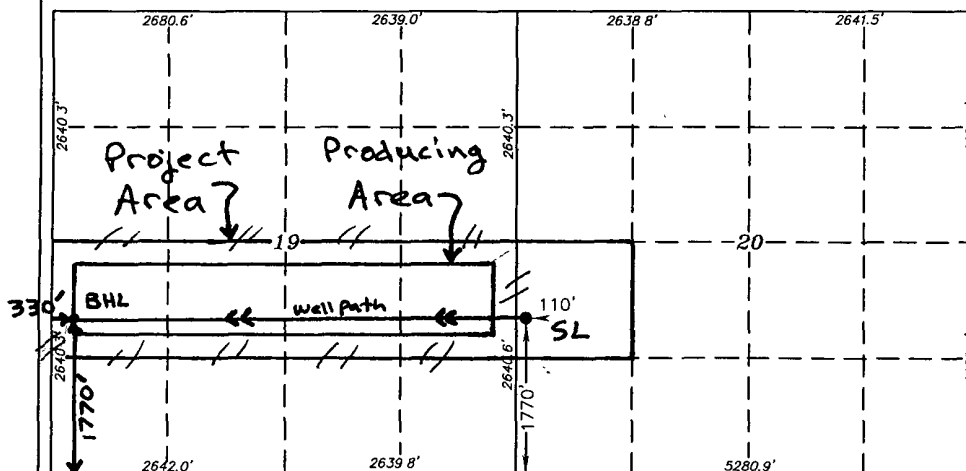
Brett Bednarz
Printed Name

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

JANUARY 18 2012
Date Surveyed
Signature
Professional Surveyor
7977
Certificate No. Gary L. Jones 7977
BASIN SURVEYS 26040



2000 0 2000 4000 FEET
SCALE: 1" = 2000'

Drilling Program
Mewbourne Oil Company
Aries "19" IL Fed Com #1H
1770' FSL & 110' FWL (SHL)
Sec 20-T18S-R30E
Eddy County, New Mexico

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

Rustler	300'
Top Salt	400'
Base Salt	1170'
Yates	1350'
Seven Rivers	1600'
*Queen	2400'
Grayburg	2760'
*San Andres	3230'
*Delaware	3690'
*Bone Springs	4150'

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

Water	Fresh water is anticipated @ 180' 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 3/8" casing. A 3000# WP Double Ram BOP and 3000# WP Annular will be installed after running 7" & 9 5/8" 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 5/8" 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 7687' & kick off to horizontal @ 8164' TVD. The well will be drilled to 12991' MD (8089' TVD). See attached directional plan.

5. Proposed casing and cementing program:

A. Casing Program:

<u>Hole Size</u>	<u>Casing</u>	<u>Wt/Ft.</u>	<u>Grade</u>	<u>Depth</u>	<u>Jt Type</u>
17 1/2"	13 3/8" (new)	48#	H40	0'-325'	ST&C
12 1/4"	9 5/8" (new)	36#	J55	0'-1450'	LT&C
8 3/4"	7" (new)	26#	P110	0'-7687' MD	LT&C
8 3/4"	7" (new)	26#	P110	7687'-8445' MD	BT&C
6 1/8"	4 1/2" (new)	11.6#	P110	8245'-12991' 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: 350 sks Class "C" cement w/2% CaCl. Yield @ 1.34 cuft/sk. Cmt circulated to surface w/100% excess.
- ii. Intermediate Casing: 150 sks 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: 515 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' - 1450'	Brine water	10.0-10.2	28-30	NA
1450' - 7687' (KOP)	Cut Brine	8.5-8.7	28-30	NA
7687' - 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' (7587') to surface. GR from 7587' 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 19-18S-30E

Aries 19 Fed Com #1H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

31 January, 2012



DDC Well Planning Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well Aries 19 Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3494.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3494.0usft (Patterson)
Site:	Sec 19-18S-30E	North Reference:	Grid
Well:	Aries 19 Fed Com #1H	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 19-18S-30E		
Site Position:		Northing:	629,625.90 usft
From:	Map	Easting:	601,928.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 43' 49.796 N
		Longitude:	104° 0' 6.741 W
		Grid Convergence:	0.18 °

Well:	Aries 19 Fed Com #1H					
Well Position	+N/-S	0.0 usft	Northing:	629,625.90 usft	Latitude:	32° 43' 49.796 N
	+E/-W	0.0 usft	Easting:	601,928.40 usft	Longitude:	104° 0' 6.741 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,474.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/31/2012	7.75	60.57	48,810

Design:	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	275.78

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	
7,686 6	0 00	0.00	7,686.6	0.0	0.0	0.00	0 00	0 00	0.00	
8,444 5	90.95	275.78	8,164 0	48 9	-482.9	12.00	12 00	-11 11	275 78	
12,990.5	90.95	275.78	8,089 0	506 5	-5,005 2	0 00	0 00	0.00	0 00	PBHL Aries 19 Fed

DDC Well Planning Report



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Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3494.0usft (Patterson)
Site:	Sec 19-18S-30E	North Reference:	Grid
Well:	Aries 19 Fed Com #1H	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	
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1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
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2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
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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	
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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	

DDC Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Aries 19 Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3494.0usft (Patterson)
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Well:	Aries 19 Fed Com #1H	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 12°/100' @ 7687' MD									
7,686.6	0.00	0.00	7,686.6	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	1.61	275.78	7,700.0	0.0	-0.2	0.2	12.00	12.00	0.00
7,800.0	13.61	275.78	7,798.9	1.3	-13.3	13.4	12.00	12.00	0.00
7,900.0	25.61	275.78	7,893.0	4.7	-46.7	46.9	12.00	12.00	0.00
8,000.0	37.61	275.78	7,978.0	10.0	-98.7	99.2	12.00	12.00	0.00
8,100.0	49.61	275.78	8,050.3	16.9	-167.2	168.1	12.00	12.00	0.00
8,200.0	61.61	275.78	8,106.6	25.2	-249.2	250.4	12.00	12.00	0.00
8,300.0	73.61	275.78	8,144.7	34.5	-341.0	342.7	12.00	12.00	0.00
8,400.0	85.61	275.78	8,162.7	44.4	-438.7	440.9	12.00	12.00	0.00
EOB @ 8445' MD / 90.95° Inc / 275.78° Azm / 8164' TVD									
8,444.5	90.95	275.78	8,164.0	48.9	-482.9	485.3	12.00	12.00	0.00
8,500.0	90.95	275.78	8,163.1	54.5	-538.1	540.9	0.00	0.00	0.00
8,600.0	90.95	275.78	8,161.4	64.5	-637.6	640.8	0.00	0.00	0.00
8,700.0	90.95	275.78	8,159.8	74.6	-737.1	740.8	0.00	0.00	0.00
8,800.0	90.95	275.78	8,158.1	84.7	-836.5	840.8	0.00	0.00	0.00
8,900.0	90.95	275.78	8,156.5	94.7	-936.0	940.8	0.00	0.00	0.00
9,000.0	90.95	275.78	8,154.8	104.8	-1,035.5	1,040.8	0.00	0.00	0.00
9,100.0	90.95	275.78	8,153.2	114.9	-1,135.0	1,140.8	0.00	0.00	0.00
9,200.0	90.95	275.78	8,151.5	124.9	-1,234.5	1,240.8	0.00	0.00	0.00
9,300.0	90.95	275.78	8,149.9	135.0	-1,333.9	1,340.7	0.00	0.00	0.00
9,400.0	90.95	275.78	8,148.2	145.1	-1,433.4	1,440.7	0.00	0.00	0.00
9,500.0	90.95	275.78	8,146.6	155.1	-1,532.9	1,540.7	0.00	0.00	0.00
9,600.0	90.95	275.78	8,144.9	165.2	-1,632.4	1,640.7	0.00	0.00	0.00
9,700.0	90.95	275.78	8,143.3	175.3	-1,731.8	1,740.7	0.00	0.00	0.00
9,800.0	90.95	275.78	8,141.6	185.3	-1,831.3	1,840.7	0.00	0.00	0.00
9,900.0	90.95	275.78	8,140.0	195.4	-1,930.8	1,940.7	0.00	0.00	0.00
10,000.0	90.95	275.78	8,138.3	205.5	-2,030.3	2,040.7	0.00	0.00	0.00
10,100.0	90.95	275.78	8,136.7	215.5	-2,129.8	2,140.6	0.00	0.00	0.00
10,200.0	90.95	275.78	8,135.0	225.6	-2,229.2	2,240.6	0.00	0.00	0.00

DDC Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Aries 19 Fed Com #1H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3494.0usft (Patterson)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3494.0usft (Patterson)
Site:	Sec 19-18S-30E	North Reference:	Grid
Well:	Aries 19 Fed Com #1H	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	90.95	275.78	8,133.4	235.7	-2,328.7	2,340.6	0.00	0.00	0.00
10,400.0	90.95	275.78	8,131.7	245.7	-2,428.2	2,440.6	0.00	0.00	0.00
10,500.0	90.95	275.78	8,130.1	255.8	-2,527.7	2,540.6	0.00	0.00	0.00
10,600.0	90.95	275.78	8,128.4	265.9	-2,627.2	2,640.6	0.00	0.00	0.00
10,700.0	90.95	275.78	8,126.8	275.9	-2,726.6	2,740.6	0.00	0.00	0.00
10,800.0	90.95	275.78	8,125.1	286.0	-2,826.1	2,840.5	0.00	0.00	0.00
10,900.0	90.95	275.78	8,123.5	296.1	-2,925.6	2,940.5	0.00	0.00	0.00
11,000.0	90.95	275.78	8,121.8	306.1	-3,025.1	3,040.5	0.00	0.00	0.00
11,100.0	90.95	275.78	8,120.2	316.2	-3,124.5	3,140.5	0.00	0.00	0.00
11,200.0	90.95	275.78	8,118.5	326.3	-3,224.0	3,240.5	0.00	0.00	0.00
11,300.0	90.95	275.78	8,116.9	336.3	-3,323.5	3,340.5	0.00	0.00	0.00
11,400.0	90.95	275.78	8,115.2	346.4	-3,423.0	3,440.5	0.00	0.00	0.00
11,500.0	90.95	275.78	8,113.6	356.5	-3,522.5	3,540.4	0.00	0.00	0.00
11,600.0	90.95	275.78	8,111.9	366.5	-3,621.9	3,640.4	0.00	0.00	0.00
11,700.0	90.95	275.78	8,110.3	376.6	-3,721.4	3,740.4	0.00	0.00	0.00
11,800.0	90.95	275.78	8,108.6	386.7	-3,820.9	3,840.4	0.00	0.00	0.00
11,900.0	90.95	275.78	8,107.0	396.7	-3,920.4	3,940.4	0.00	0.00	0.00
12,000.0	90.95	275.78	8,105.3	406.8	-4,019.9	4,040.4	0.00	0.00	0.00
12,100.0	90.95	275.78	8,103.7	416.9	-4,119.3	4,140.4	0.00	0.00	0.00
12,200.0	90.95	275.78	8,102.0	426.9	-4,218.8	4,240.4	0.00	0.00	0.00
12,300.0	90.95	275.78	8,100.4	437.0	-4,318.3	4,340.3	0.00	0.00	0.00
12,400.0	90.95	275.78	8,098.7	447.1	-4,417.8	4,440.3	0.00	0.00	0.00
12,500.0	90.95	275.78	8,097.1	457.1	-4,517.2	4,540.3	0.00	0.00	0.00
12,600.0	90.95	275.78	8,095.4	467.2	-4,616.7	4,640.3	0.00	0.00	0.00
12,700.0	90.95	275.78	8,093.8	477.3	-4,716.2	4,740.3	0.00	0.00	0.00
12,800.0	90.95	275.78	8,092.1	487.3	-4,815.7	4,840.3	0.00	0.00	0.00
12,900.0	90.95	275.78	8,090.5	497.4	-4,915.2	4,940.3	0.00	0.00	0.00
TD @ 12991' MD / 8089' TVD									
12,990.5	90.95	275.78	8,089.0	506.5	-5,005.2	5,030.8	0.00	0.00	0.00

Design Targets

Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Aries 19 Fed C	-	0.00	0.00	8,089.0	506.5	-5,005.2	630,132.40	596,923.20	32° 43' 54.960 N	104° 1' 5.317 W
- plan hits target center	-									
- Point	-									

Plan Annotations

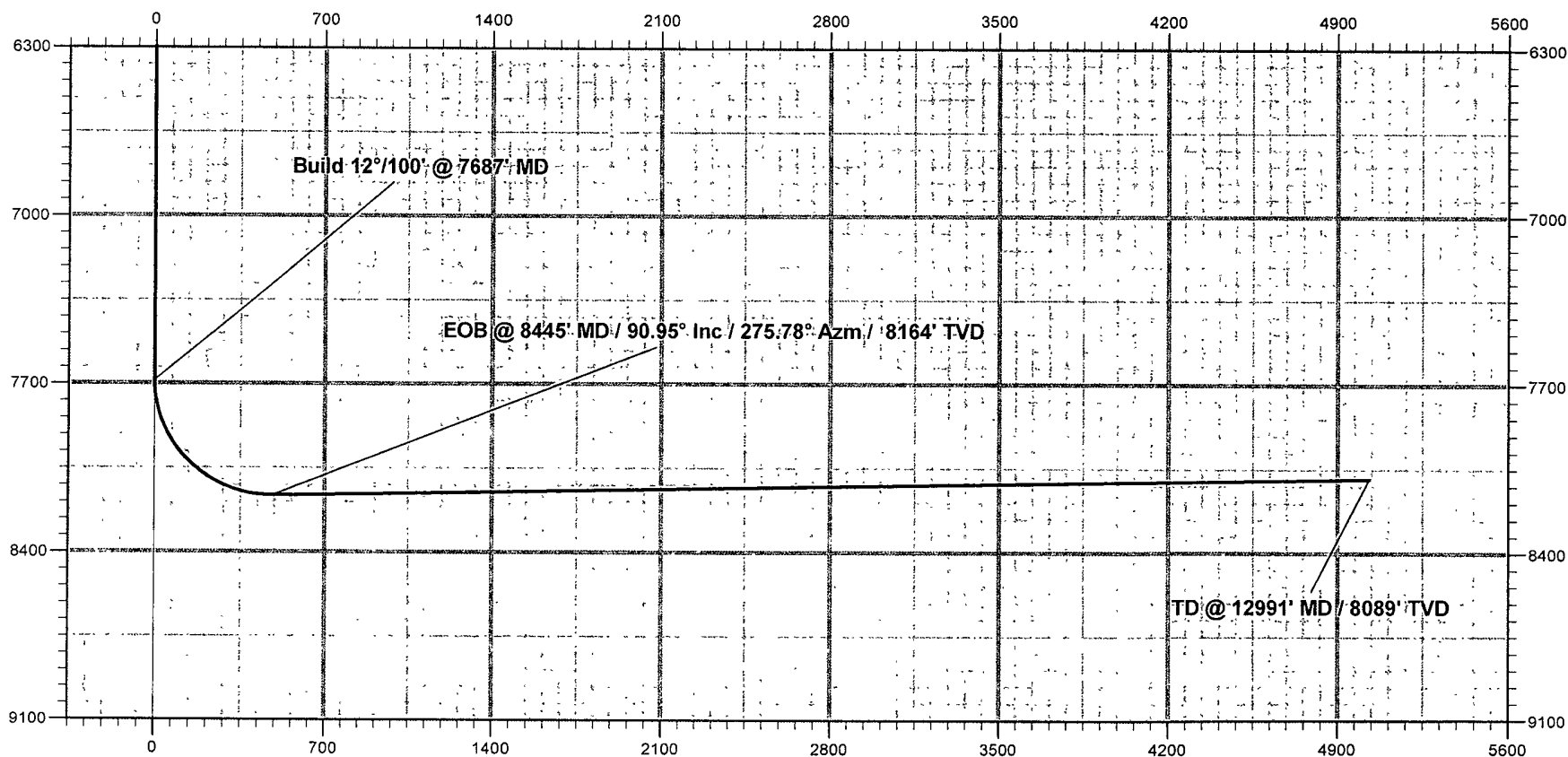
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,686.6	7,686.6	0.0	0.0	Build 12"/100' @ 7687' MD
8,444.5	8,164.0	48.9	-482.9	EOB @ 8445' MD / 90.95° Inc / 275.78° Azm / 8164' TVD
12,990.5	8,089.0	506.5	-5,005.2	TD @ 12991' MD / 8089' TVD

Mewbourne Oil Company

Eddy County, New Mexico

Aries 19 Fed Com #1H

Quote 120068



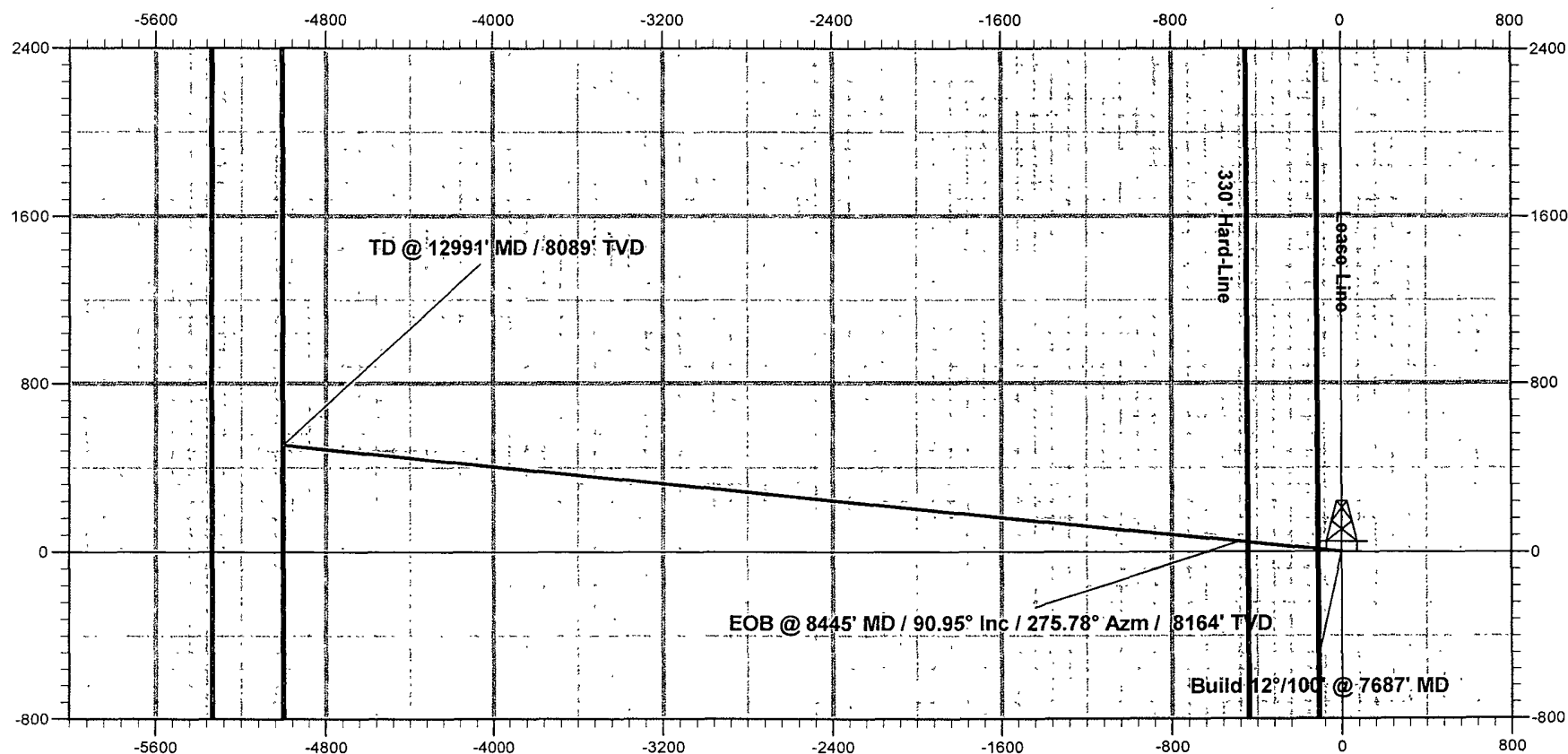
Vertical Section at 275.78° (700 usft/in)

Mewbourne Oil Company

Eddy County, New Mexico

Aries 19 Fed Com #1H

Quote 120068



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

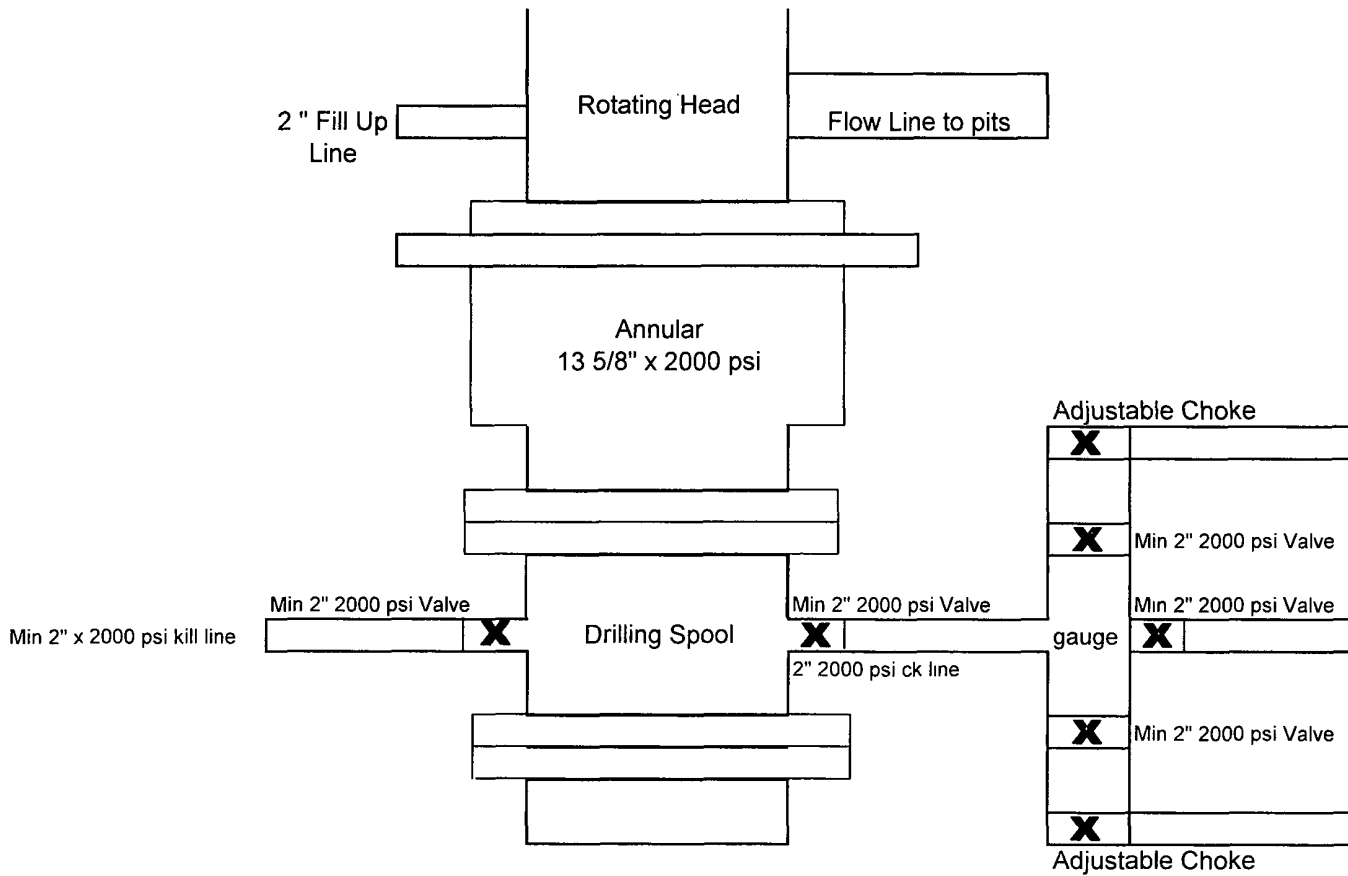


Exhibit #2

Aries "19" IL Fed Com #14
 1770' FSL & 110' FWL
 Sec 20-T18S-R30E
 Eddy, County
 New Mexico

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

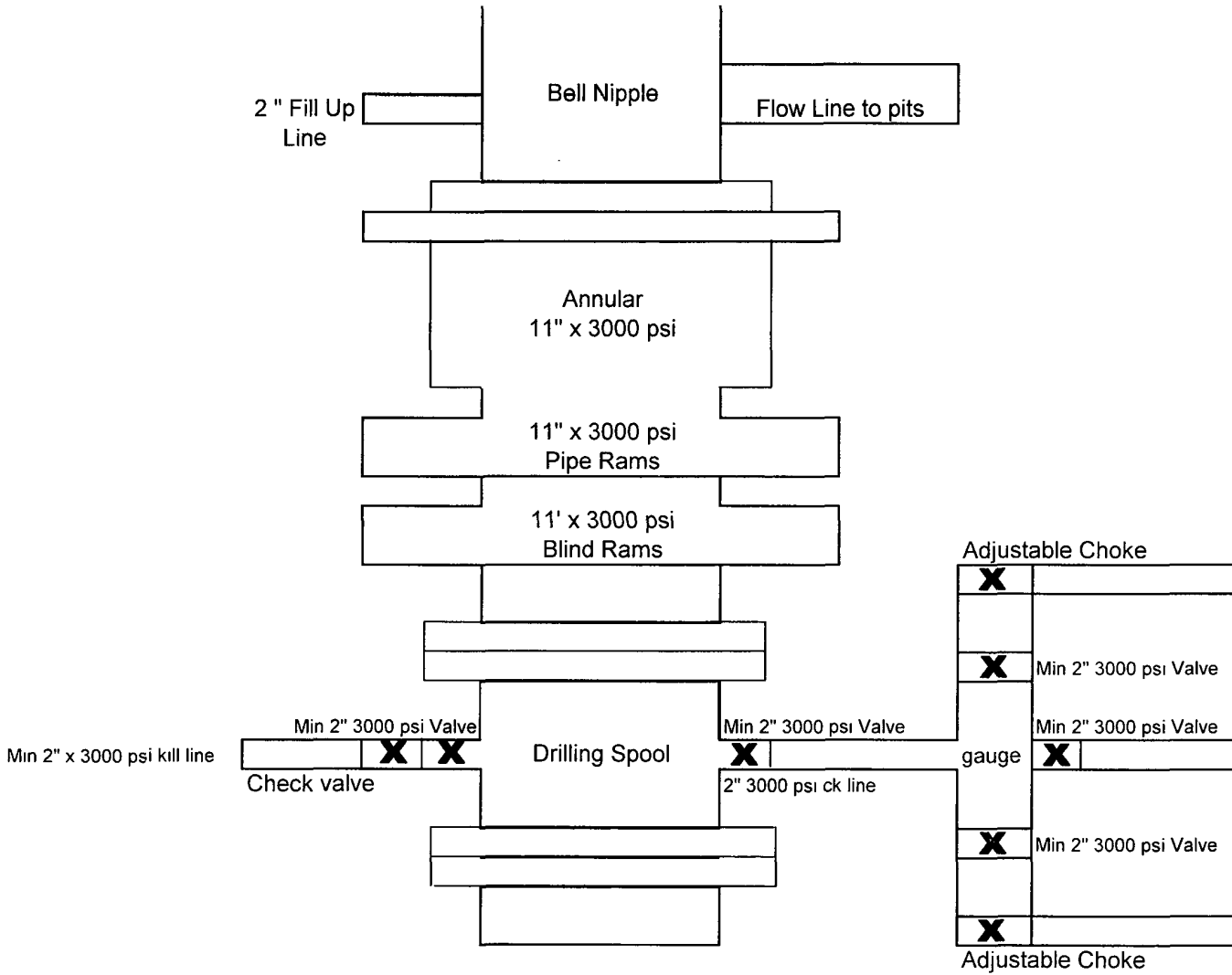


Exhibit #2

Aries "19" IL Fed Com #1A
 1770' FSL & 110' FWL
 Sec 20-T18S-R30E
 Eddy, County
 New Mexico

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Aries "19" IL Fed Com #14

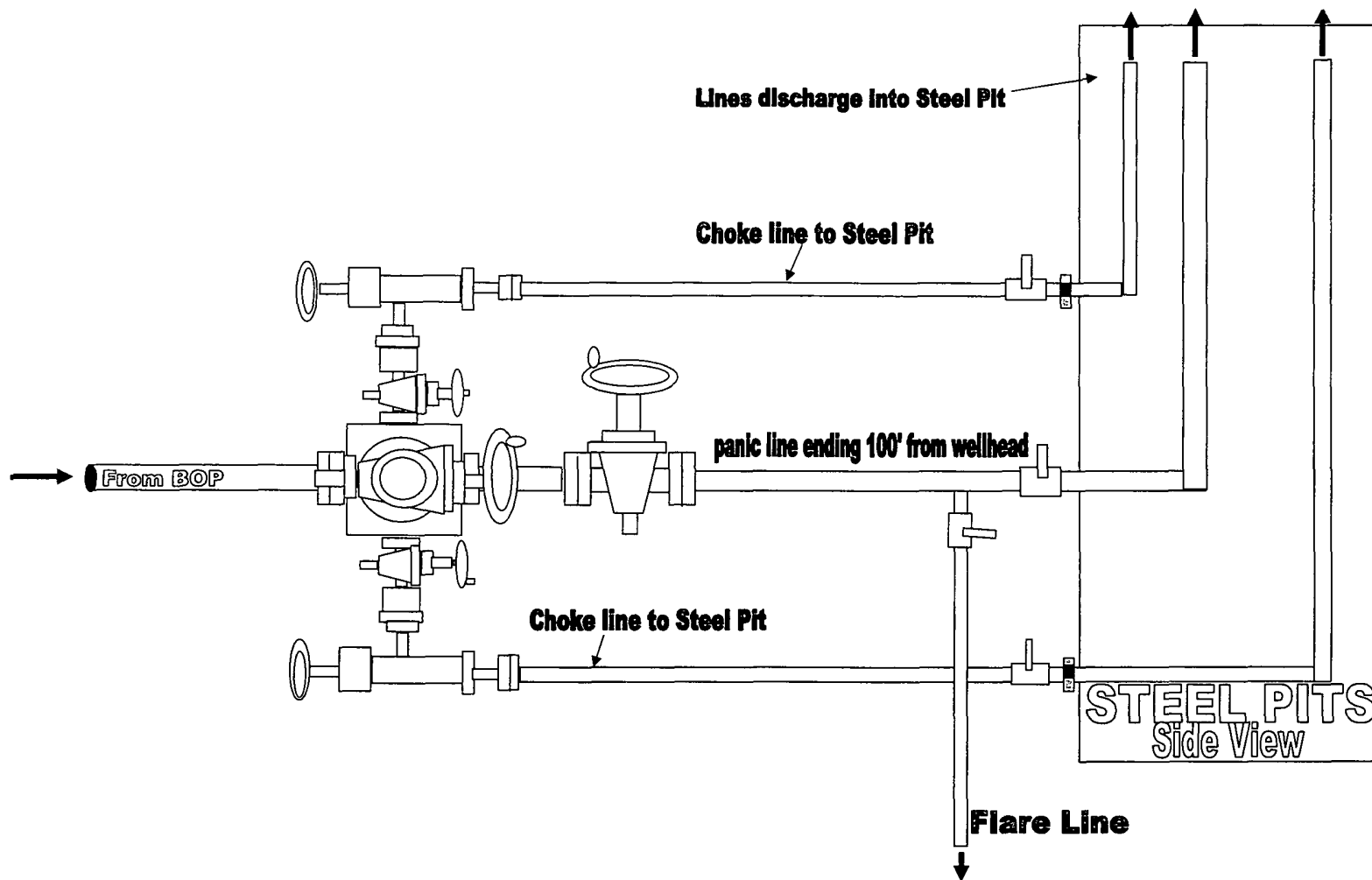
1770' FSL & 110' FWL (SHL)

Sec 20-T18S-R30E

Eddy County, New Mexico

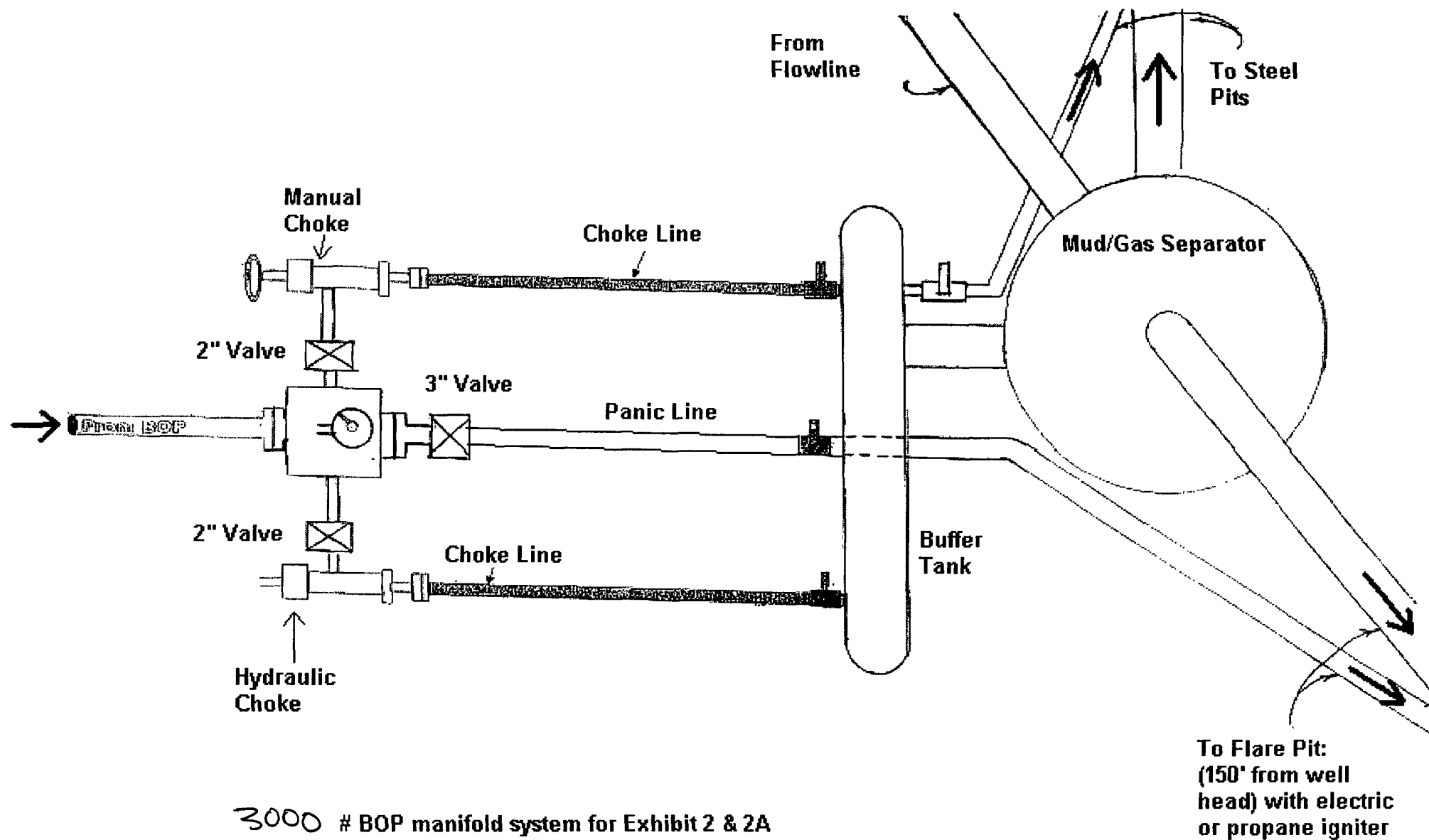
- I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.
- II. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure on 13 3/8" casing and 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.



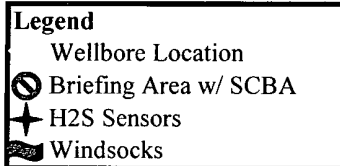
3000# BOP manifold system for Exhibit 2 & 2A

Aries "19" IL Fed Com #1H



Aries "19" ILFed Com #1H

Aries "20" Fed Com #3H



Mewbourne Oil Company
Aries "19" IL Fed Com #11
1770' FSL & 110' FWL
Sec 20-T18S-R30E
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Aries "19" IL Fed Com #14

1770' FSL & 110' 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 known hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

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

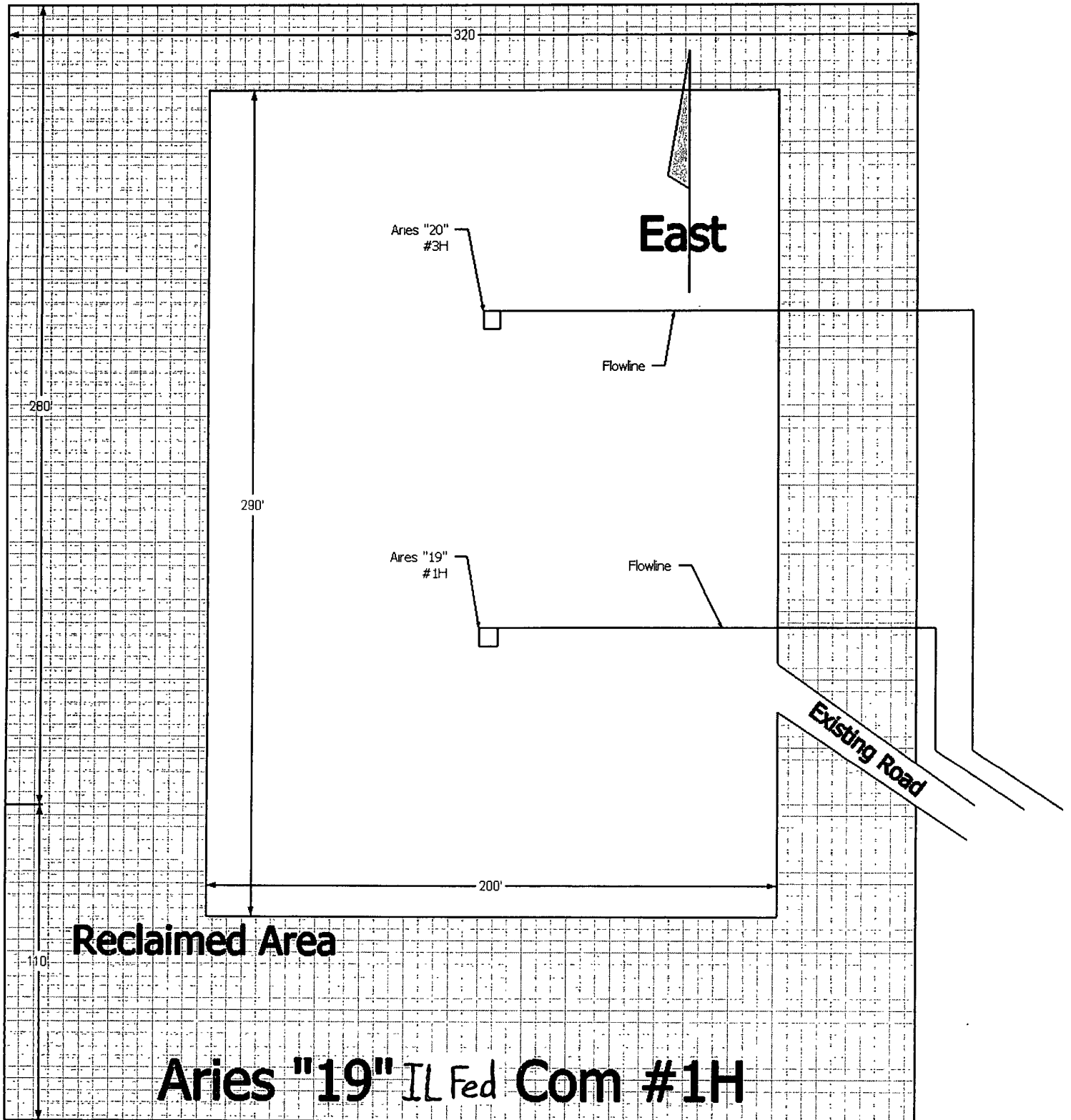
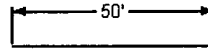
8. **Emergency Phone Numbers**

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



PECOS DISTRICT

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL COMPANY
LEASE NO.:	NM28097
WELL NAME & NO.:	1H ARIES 19 IL FED COM
SURFACE HOLE FOOTAGE:	1770' FSL & 110' FWL
BOTTOM HOLE FOOTAGE:	1770' FSL & 330' FWL (Sec. 19)
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**
 - Buried Pipeline Stipulation
 - Surface Pipeline Stipulation
 - 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
 - H₂S – Onshore Order #6
 - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
- ☐ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**