

11-808

SECRETARY'S POTASH

OCD-ARTESIA

Form 3160-3
(August 2007)

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

54 5 Lease Serial No.
NMNM 27279, NM 93478 BH

6 If Indian, Allottee or Tribe Name

7 If Unit or CA Agreement, Name and No.

8 Lease Name and Well No.
Aries "20" Fed Com #3H

9 API Well No.

10 Field and Pool, or Exploratory
Sand Tank Bone Spring

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

12 County or Parish
Eddy

13 State
NM

1a. Type of work: ☒ DRILL ☐ REENTER HO NOS

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

2. Name of Operator Mewbourne Oil Co

3a. Address PO BOX 5270
Hobbs, NM 88241

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 1770' FSL & 220' FWL

At proposed prod. zone 1980' FSL & 330' FEL

UNORTHODOX
LOCATION

14. Distance in miles and direction from nearest town or post office*
28 miles Northeast of Carlsbad, NM

15 Distance from proposed*
location to nearest
property or lease line, ft. 220'
(Also to nearest drig. unit line, if any)

16 No. of acres in lease
80

17. Spacing Unit dedicated to this well
160

18 Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft 1456'

19. Proposed Depth
8235' TVD
12669' MD

20. BLM/BIA Bond No. on file
NM1693, Nationwide

21 Elevations (Show whether DF, KDB, RT, GL, etc.)
3472'

22. Approximate date work will start*
10/15/2011

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

N.M. Young

Name (Printed/Typed)
N.M. Young

Date
07/01/2011

Title

Hobbs District Manager

Approved by (Signature)

/s/ Jesse J. Juen

Name (Printed/Typed)

Date
SEP 12 2011

Title

ACTING 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

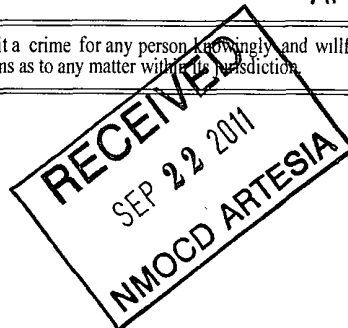
APPROVAL FOR TWO YEARS

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



SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

[Handwritten initials]

Drilling Program
Mewbourne Oil Company
Aries "20" Federal Com #3H
1770' FSL & 220' FWL (SHL)
Sec 20-T18S-R30E
Eddy County, New Mexico

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

Rustler	250'
Top Salt	420'
Base Salt	1000'
Yates	1375'
*Queen	2425'
Grayburg	2850'
San Andres	3325'
*Bone Springs	4440'

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 275' 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 7607' & kick off to horizontal @ 8180' TVD. The well will be drilled to 12669' MD (8235' 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'-275'	ST&C
12 1/4"	9 5/8" (new)	36#	J55	0'-1475'	LT&C
8 3/4"	7" (new)	26#	P110	0'-7600' MD	LT&C
8 3/4"	7" (new)	26#	P110	7600'-8500' MD	BT&C
6 1/8"	4 1/2" (new)	11.6#	P110	8300'-12669' MD	LT&C

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

*Subject to availability of casing.

See
GA

B. Cementing Program:

- See
COA
- i. Surface Casing: 285 sks Class "C" cement w/2% CaCl Yield @ 1.34 cuft/sk. Cmt circulated to surface w/100% excess.
 - ii. Intermediate Casing: 160 sacks Class "C" (35:65:4) light cement w/ salt & LCM additives. Yield @ 2.12 cuft/sk. 200 sacks Class "C" cement w/2% CaCl₂. Yield at 1.18 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. Yield @ 1.18 cuft/sk. Cmt circulated to surface w/25% excess. This casing string will provide lease line isolation.
 - 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' - 275'	FW spud mud	8.6-9.0	32-34	NA
275' - 1475'	Brine water	10.0-10.2	28-30	NA
1475' - 7600' (KOP)	FW	8.5-8.7	28-30	NA
7600' - TD	FW w/polymer	8.5-8.7	32-35	15

7. Evaluation Program:

Samples: 10' samples from surface casing to TD
Logging: CN, GR & Gyro from KOP -100' (7500') to surface. GR from 7500' 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 #3H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

09 June, 2011



DDC Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Aries 20 Fed Com #3H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3490.0usft (Patterson UTI #45/47)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3490.0usft (Patterson UTI #45/47)
Site:	Sec 20-18S-30E	North Reference:	Grid
Well:	Aries 20 Fed Com #3H	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 #3H		
Well Position	+N/-S	-1,456.4 usft	Northing: 629,625.93 usft
	+E/-W	24.1 usft	Easting: 602,038.25 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 43' 49.793 N
			Longitude: 104° 0' 5.455 W
			Ground Level: 3,472.0 usft

Wellbore:	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/9/2011	7.82	60.58	48,875

Design:	Design #1		
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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	87.39

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 (°)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00
7,607.1	0.00	0.00	7,607.1	0.0	0.0	0.00	0.00	0.00	0.00
8,499.5	89.24	87.39	8,180.0	25.7	564.8	10.00	10.00	9.79	87.39
12,668.7	89.24	87.39	8,235.0	215.3	4,729.3	0.00	0.00	0.00	0.00 PBHL Aries 20 Fed

DDC Well Planning Report



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Site:	Sec 20-18S-30E	North Reference:	Grid
Well:	Aries 20 Fed Com #3H	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

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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' @ 7607' MD										
7,607.1	0.00		7,607.1	0.0	0.0	0.0	0.00	0.00	0.00	
7,700.0	9.29	87.39	7,699.6	0.3	7.5	7.5	10.00	10.00	0.00	
7,800.0	19.29	87.39	7,796.4	1.5	32.1	32.2	10.00	10.00	0.00	
7,900.0	29.29	87.39	7,887.4	3.3	73.2	73.2	10.00	10.00	0.00	
8,000.0	39.29	87.39	7,969.9	5.9	129.4	129.5	10.00	10.00	0.00	
8,100.0	49.29	87.39	8,041.4	9.1	199.1	199.3	10.00	10.00	0.00	
8,200.0	59.29	87.39	8,099.7	12.7	280.1	280.4	10.00	10.00	0.00	
8,300.0	69.29	87.39	8,143.0	16.8	370.0	370.3	10.00	10.00	0.00	
8,400.0	79.29	87.39	8,170.1	21.2	466.0	466.5	10.00	10.00	0.00	
EOB @ 8500' MD / 89.24° Inc / 87.39° Azm / 8180' TVD										
8,499.5	89.24	87.39	8,180.0	25.7	564.8	565.4	10.00	10.00	0.00	
8,500.0	89.24	87.39	8,180.0	25.7	565.3	565.9	0.00	0.00	0.00	
8,600.0	89.24	87.39	8,181.3	30.3	665.2	665.8	0.00	0.00	0.00	
8,700.0	89.24	87.39	8,182.7	34.8	765.0	765.8	0.00	0.00	0.00	
8,800.0	89.24	87.39	8,184.0	39.4	864.9	865.8	0.00	0.00	0.00	
8,900.0	89.24	87.39	8,185.3	43.9	964.8	965.8	0.00	0.00	0.00	
9,000.0	89.24	87.39	8,186.6	48.5	1,064.7	1,065.8	0.00	0.00	0.00	
9,100.0	89.24	87.39	8,187.9	53.0	1,164.6	1,165.8	0.00	0.00	0.00	
9,200.0	89.24	87.39	8,189.2	57.6	1,264.5	1,265.8	0.00	0.00	0.00	
9,300.0	89.24	87.39	8,190.6	62.1	1,364.4	1,365.8	0.00	0.00	0.00	
9,400.0	89.24	87.39	8,191.9	66.7	1,464.3	1,465.8	0.00	0.00	0.00	
9,500.0	89.24	87.39	8,193.2	71.2	1,564.2	1,565.8	0.00	0.00	0.00	
9,600.0	89.24	87.39	8,194.5	75.7	1,664.0	1,665.8	0.00	0.00	0.00	
9,700.0	89.24	87.39	8,195.8	80.3	1,763.9	1,765.8	0.00	0.00	0.00	
9,800.0	89.24	87.39	8,197.2	84.8	1,863.8	1,865.7	0.00	0.00	0.00	
9,900.0	89.24	87.39	8,198.5	89.4	1,963.7	1,965.7	0.00	0.00	0.00	
10,000.0	89.24	87.39	8,199.8	93.9	2,063.6	2,065.7	0.00	0.00	0.00	
10,100.0	89.24	87.39	8,201.1	98.5	2,163.5	2,165.7	0.00	0.00	0.00	
10,200.0	89.24	87.39	8,202.4	103.0	2,263.4	2,265.7	0.00	0.00	0.00	

DDC Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Aries 20 Fed Com #3H
Company:	Mewbourne Oil Co	TVD Reference:	WELL @ 3490.0usft (Patterson UTI #45/47)
Project:	Eddy County, New Mexico	MD Reference:	WELL @ 3490.0usft (Patterson UTI #45/47)
Site:	Sec 20-18S-30E	North Reference:	Grid
Well:	Aries 20 Fed Com #3H	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	89.24	87.39	8,203.8	107.6	2,363.3	2,365.7	0.00	0.00	0.00	
10,400.0	89.24	87.39	8,205.1	112.1	2,463.1	2,465.7	0.00	0.00	0.00	
10,500.0	89.24	87.39	8,206.4	116.7	2,563.0	2,565.7	0.00	0.00	0.00	
10,600.0	89.24	87.39	8,207.7	121.2	2,662.9	2,665.7	0.00	0.00	0.00	
10,700.0	89.24	87.39	8,209.0	125.8	2,762.8	2,765.7	0.00	0.00	0.00	
10,800.0	89.24	87.39	8,210.4	130.3	2,862.7	2,865.7	0.00	0.00	0.00	
10,900.0	89.24	87.39	8,211.7	134.9	2,962.6	2,965.6	0.00	0.00	0.00	
11,000.0	89.24	87.39	8,213.0	139.4	3,062.5	3,065.6	0.00	0.00	0.00	
11,100.0	89.24	87.39	8,214.3	144.0	3,162.4	3,165.6	0.00	0.00	0.00	
11,200.0	89.24	87.39	8,215.6	148.5	3,262.2	3,265.6	0.00	0.00	0.00	
11,300.0	89.24	87.39	8,216.9	153.0	3,362.1	3,365.6	0.00	0.00	0.00	
11,400.0	89.24	87.39	8,218.3	157.6	3,462.0	3,465.6	0.00	0.00	0.00	
11,500.0	89.24	87.39	8,219.6	162.1	3,561.9	3,565.6	0.00	0.00	0.00	
11,600.0	89.24	87.39	8,220.9	166.7	3,661.8	3,665.6	0.00	0.00	0.00	
11,700.0	89.24	87.39	8,222.2	171.2	3,761.7	3,765.6	0.00	0.00	0.00	
11,800.0	89.24	87.39	8,223.5	175.8	3,861.6	3,865.6	0.00	0.00	0.00	
11,900.0	89.24	87.39	8,224.9	180.3	3,961.5	3,965.6	0.00	0.00	0.00	
12,000.0	89.24	87.39	8,226.2	184.9	4,061.3	4,065.6	0.00	0.00	0.00	
12,100.0	89.24	87.39	8,227.5	189.4	4,161.2	4,165.5	0.00	0.00	0.00	
12,200.0	89.24	87.39	8,228.8	194.0	4,261.1	4,265.5	0.00	0.00	0.00	
12,300.0	89.24	87.39	8,230.1	198.5	4,361.0	4,365.5	0.00	0.00	0.00	
12,400.0	89.24	87.39	8,231.5	203.1	4,460.9	4,465.5	0.00	0.00	0.00	
12,500.0	89.24	87.39	8,232.8	207.6	4,560.8	4,565.5	0.00	0.00	0.00	
12,600.0	89.24	87.39	8,234.1	212.2	4,660.7	4,665.5	0.00	0.00	0.00	
TD @ 12669' MD / 8235' TVD										
12,668.7	89.24	87.39	8,235.0	215.3	4,729.3	4,734.1	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 20 Fed C		0.00	0.00	8,235.0	215.3	4,729.3	629,841.20	606,767.50	32° 43' 51.774 N	103° 59' 10.083 W
- plan hits target center										
- Point										

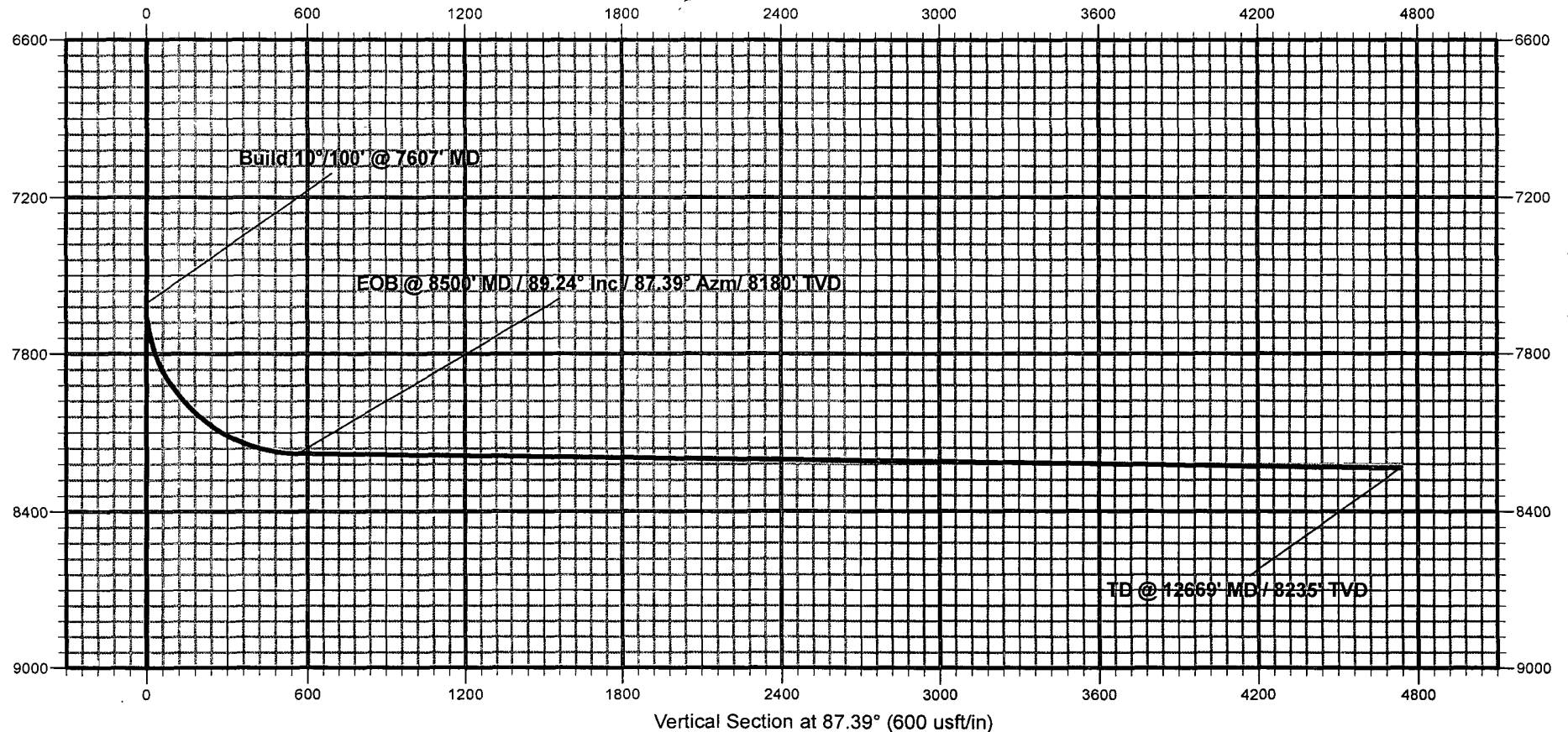
Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
7,607.1	7,607.1	0.0	0.0	Build 10°/100' @ 7607' MD	
8,499.5	8,180.0	25.7	564.8	EOB @ 8500' MD / 89.24° Inc / 87.39° Azm/ 8180' TVD	
12,668.7	8,235.0	215.3	4,729.3	TD @ 12669' MD / 8235' TVD	

Mewbourne Oil Company

Eddy County, New Mexico

Aries 20 Fed Com #3H

Quote 110421



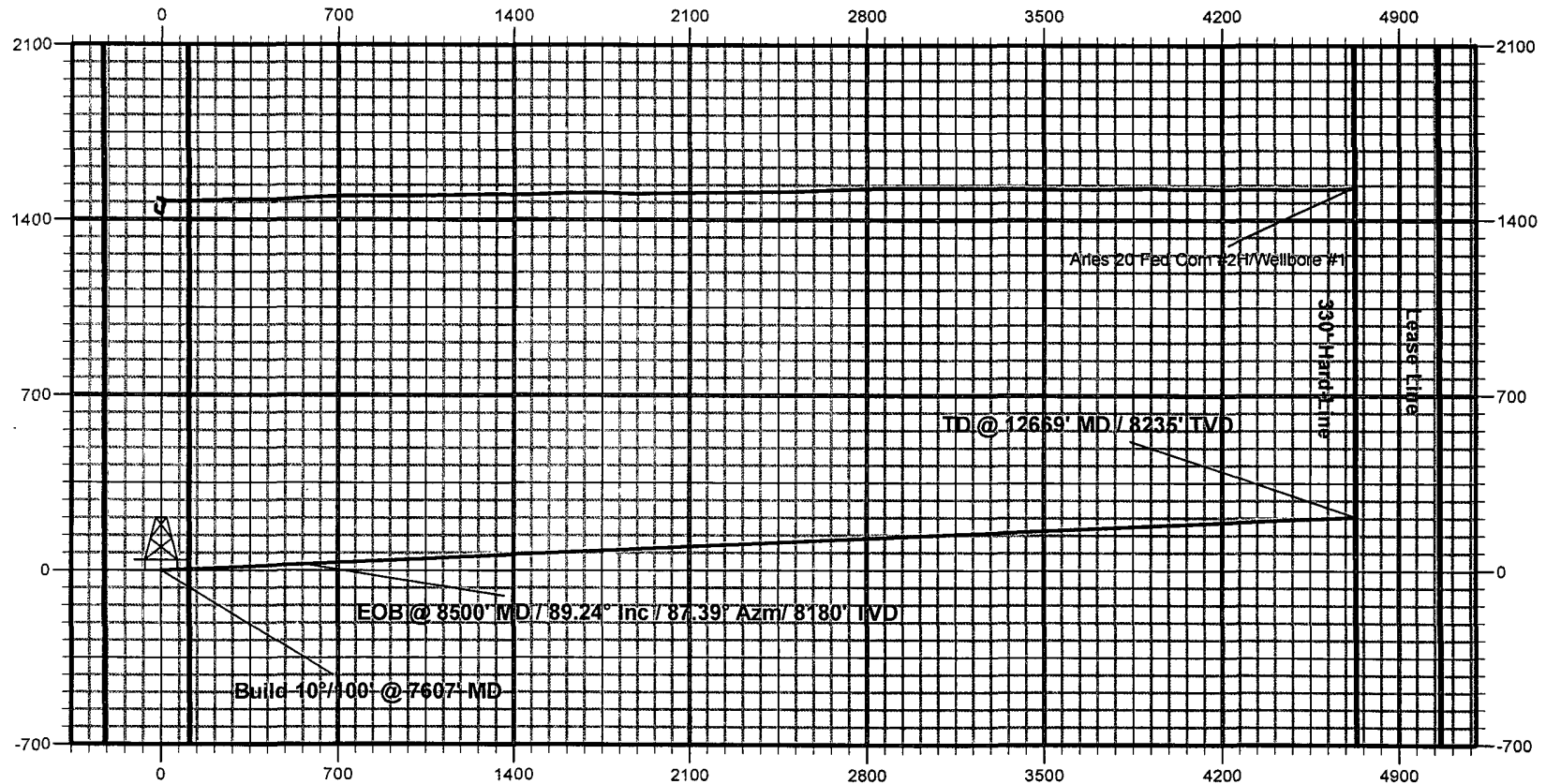
Mewbourne Oil Company



Eddy County, New Mexico

Aries 20 Fed Com #3H

Quote 110421



Notes Regarding Blowout Preventer

Mewbourne Oil Company

Aries "20" Federal Com #3H

1770' FSL & 220' 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 $\frac{3}{8}$ " casing and 3000 psi working pressure on 9 $\frac{5}{8}$ " & 7" casing strings.
- 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 Schematic for
12 1/4" Hole

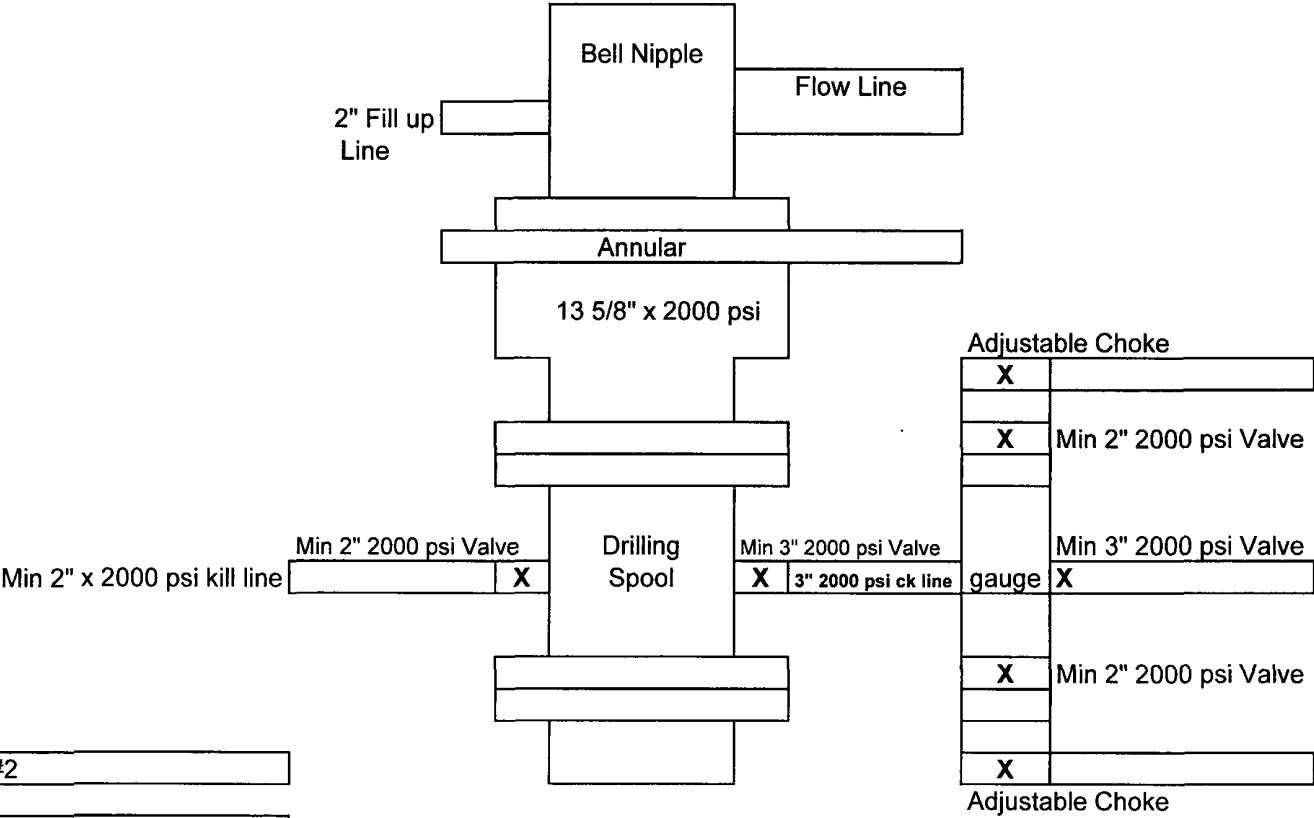


Exhibit #2

Aries "20" Fed Com #3H
1770' FSL & 220' FWL
Sec 20-T18S-R30E
Eddy, County
New Mexico

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

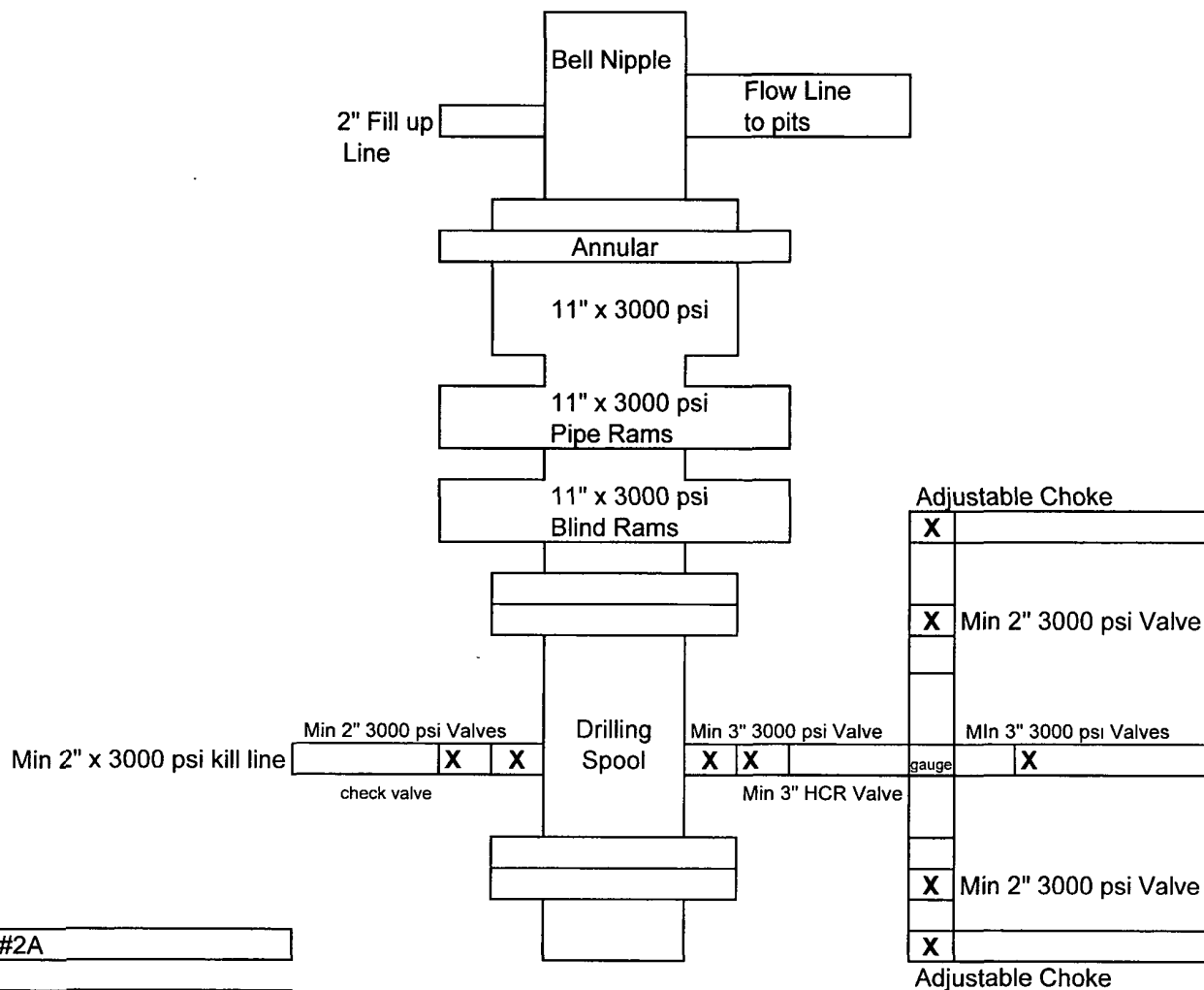
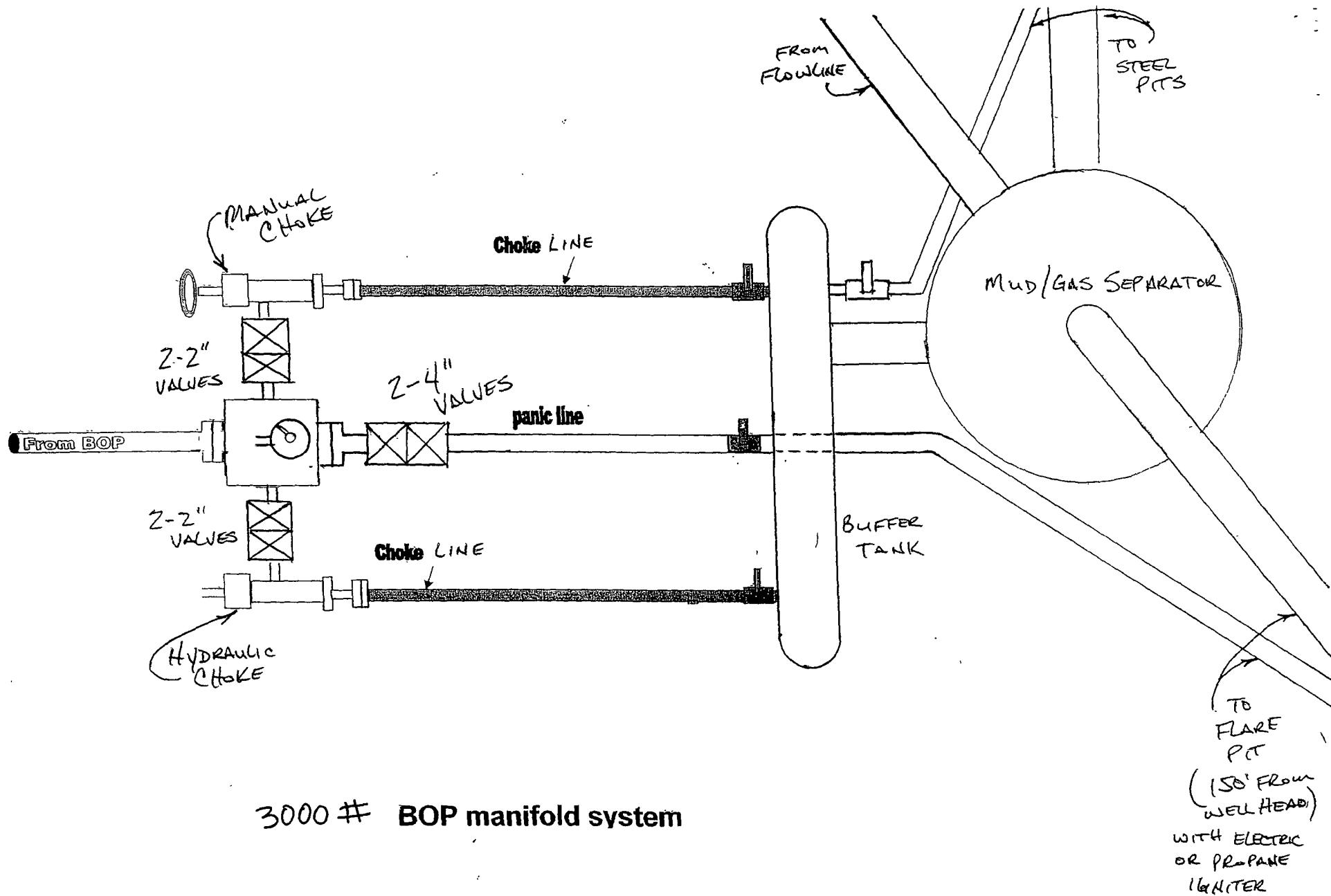
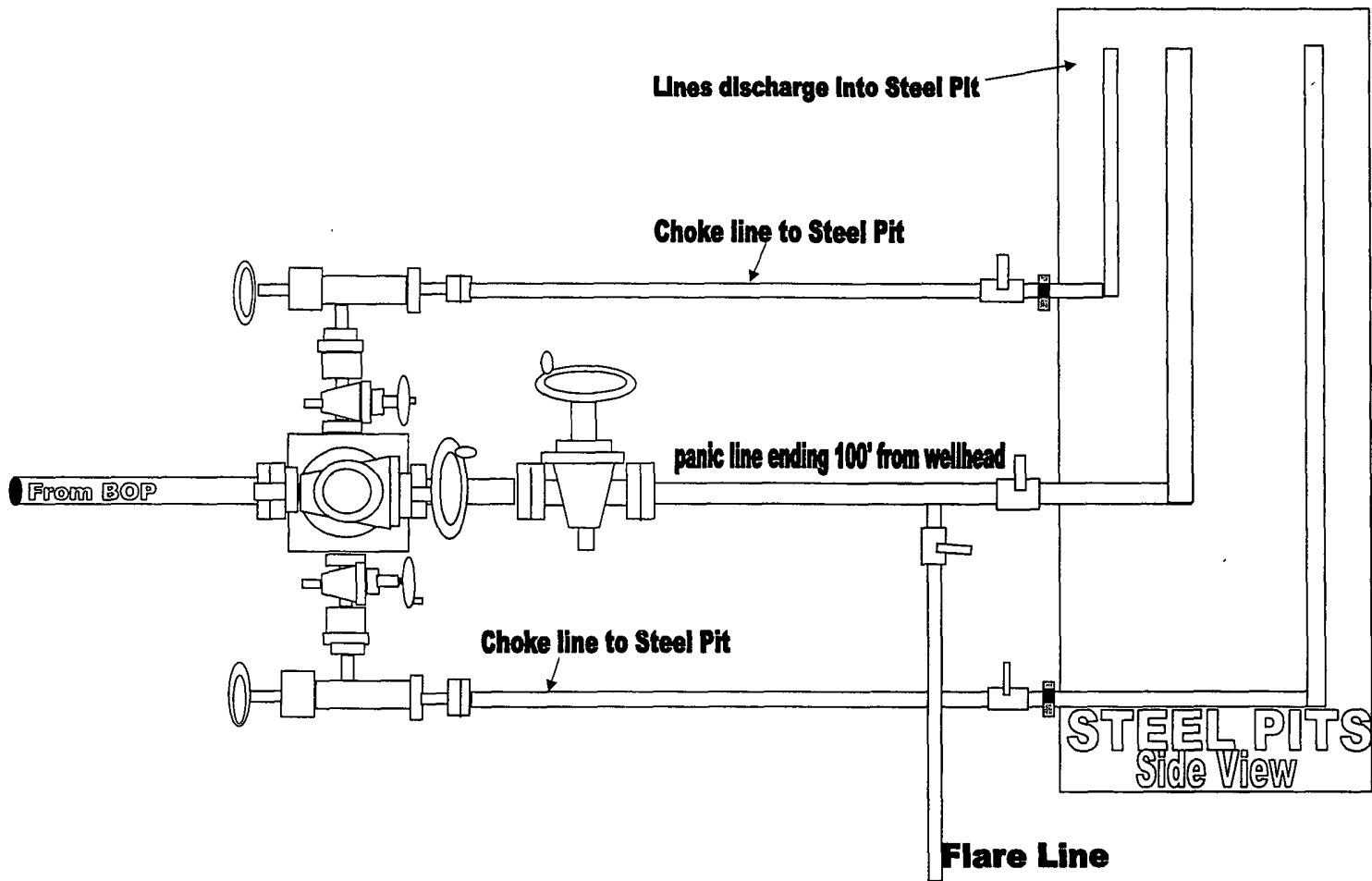


Exhibit #2A

Aries 20 Federal Com #3H
1770' FSL & 220' FWL
Sec 20-T18S-R30E
Eddy, County
New Mexico





3000# BOP manifold system for Exhibit 2 & 2A