ATS-16-46

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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

5. Lease Serial No. ~~NMNM-20965A~~ NM 02965A

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. (317386)
Pepper Ridge15/22 W1AH FedCom#2H

2. Name of Operator Mewbourne Oil Company (14744)

9. API Well No.
30-025-43577

3a. Address
PO Box 5270
Hobbs, NM 88241

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

10. Field and Pool, or Exploratory WC-025 G09 S263525P; WC-098
Red Hills Wolfcamp Gas (83600)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface 185' FNL & 580' FEL, Sec 15 T26S R33E

At proposed prod. zone ~~2310~~ 330' FNL & ~~500~~ 990' FEL, Sec ~~22~~ 10 T26S R33E

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 15 T26S R33E

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

12. County or Parish
Lea

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
185'

16. No. of acres in lease
NMNM020965A - 2,174.12

17. Spacing Unit dedicated to this well
640

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
60' - Pepper Ridge 15 B2AP #3H

19. Proposed Depth
12,677' - TVD
19,775' - MD

20. BLM/BIA Bond No. on file
NM1693 nationwide & NMB-000919

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3325' - GL

22. Approximate date work will start*
11/30/2015

23. Estimated duration
60 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

Name *(Printed/Typed)*
Bradley Bishop

Date
09/30/2015

Title

Approved by *(Signature)*
/s/Cody Layton

Name *(Printed/Typed)*

Date
FEB - 2 2017

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.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

KZ 02/06/17

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

Mewbourne Oil Company, Pepper Ridge 15/22 W1AH Fed Com #2H
Sec 15, T26S, R33E
SL: 185' FNL & 580' FEL, Sec 15
BHL: 330' FNL & 990' FEL, Sec 10

1. Geologic Formations

TVD of target	12457'	Pilot hole depth	NA
MD at TD:	17515'	Deepest expected fresh water:	125'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	951		
Top of Salt	1291	Salt	
Castile	3222		
Base of Salt	4791		
Lamar	5038		
Cherry Canyon	6187		
Manzanita Marker	6308		
Brushy Canyon	7683		
Bone Spring	9198	Oil/Gas	
1st Bone Spring Sand	10140	Oil/Gas	
2nd Bone Spring Sand	10685	Oil/Gas	
3rd Bone Spring Sand	10785	Oil/Gas	
Abo			
Wolfcamp	12225	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size	Casing Interval From	To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension
17.5"	0'	1030'	13.375"	48	H40	STC	1.44	3.23	6.51
12.25"	0'	3453'	9.625"	36	J55	LTC	1.13	1.96	2.45
12.25"	3453'	4393'	9.625"	40	J55	LTC	1.13	1.73	8.60
12.25"	4393'	4965'	9.625"	40	N80	LTC	1.20	2.23	32.22
8.75"	0'	12700'	7"	26	HCP110	LTC	1.30	1.67	1.92
6.125"	11898'	17515'	4.5"	13.5	P110	LTC	1.27	1.47	4.16
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	555	12.5	2.12	11	10	Class C + 0.005pps Static Free + 1% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
	200	14.8	1.34	6.3	8	Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
Inter.	790	12.5	2.12	11	10	Lead: Class C (35:65:4) + 5% Sodium Chloride +5#/sk LCM +0.25lb/sk Cello-Flake
	200	14.8	1.34	6.3	8	Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
Prod.	490	12.5	2.12	11	9	Lead: 60:40:0 Class C + 15.00 lb/sk BA-90 + 4.00% MPS-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sk Static Free
	400	15.6	1.18	5.2	10	Tail: Class H + 0.65% FL-52 + 0.10% R-3 + 0.005 lb/sk Static Free
Liner	250	11.2	2.97	18	16	Class C (60:40:0)+4% MPA5+1.2% BA10A+10#/sk BA90+5%A10+0.65%ASA301+1.5%SMS+1.2%R21

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	4765'	25%
Liner	11500'	25%

4. Pressure Control Equipment

	Variance: None

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	~~3M~~ 2M	Annular	X	1250#
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	10M	Annular	X	5000#
			Blind Ram	X	10000#
			Pipe Ram	X	
			Double Ram		
			Other*		
6-1/8"	13-5/8"	10M	Annular	X	5000#
			Blind Ram	X	10000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.

Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?
N	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here See attached schematic.	

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1030	FW Gel	8.6-8.8	28-34	N/C
1030	4965	Saturated Brine	10.0	28-34	N/C
4965	12700	Cut Brine	8.6-9.5	28-34	N/C
12700	17515	OBM	10.0-13.0	30-40	<20cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	Pason/PVT/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (11500') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Gamma Ray	11500' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	8421 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

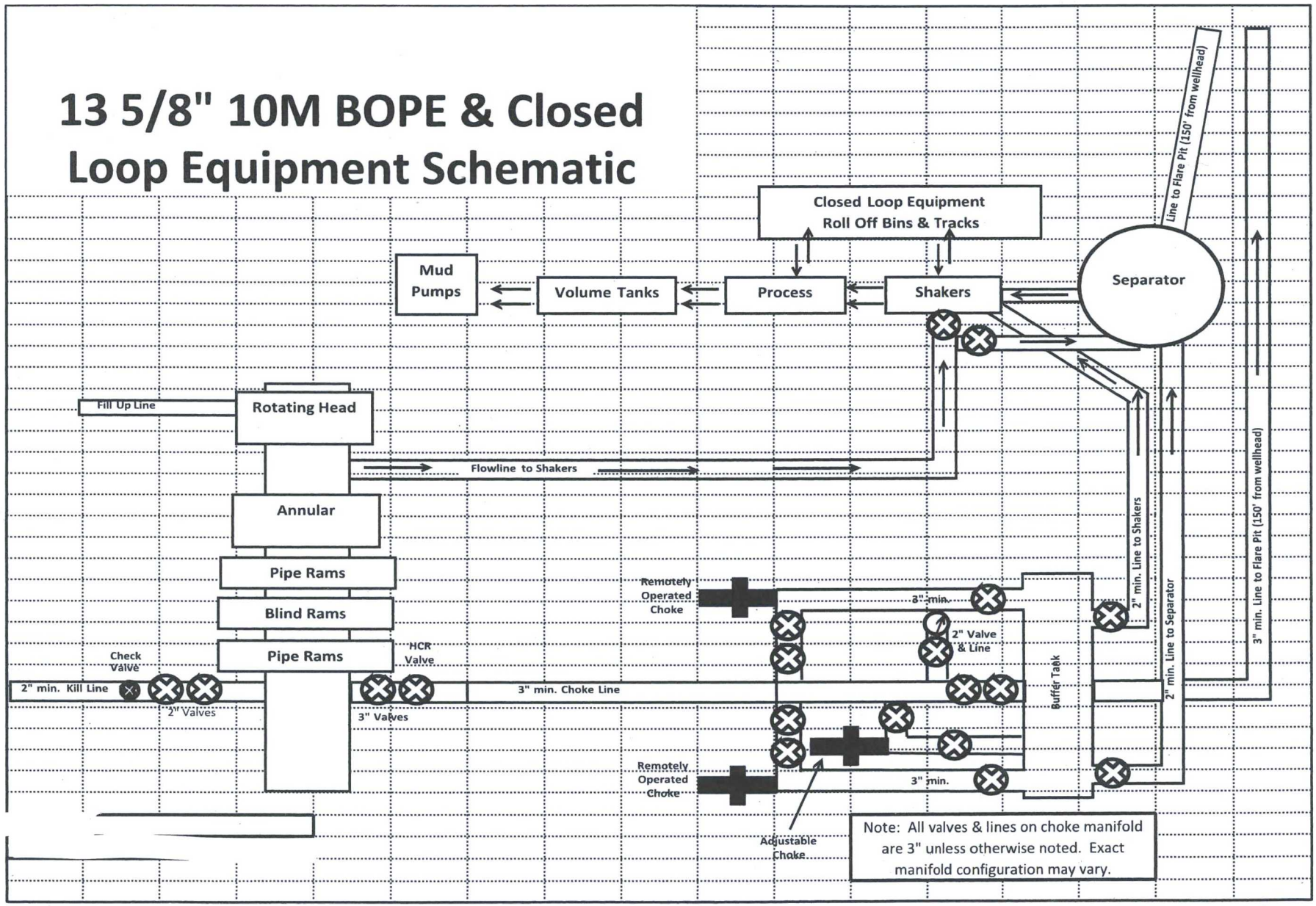
Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
	H2S is present
X	H2S Plan attached

8. Other facets of operation

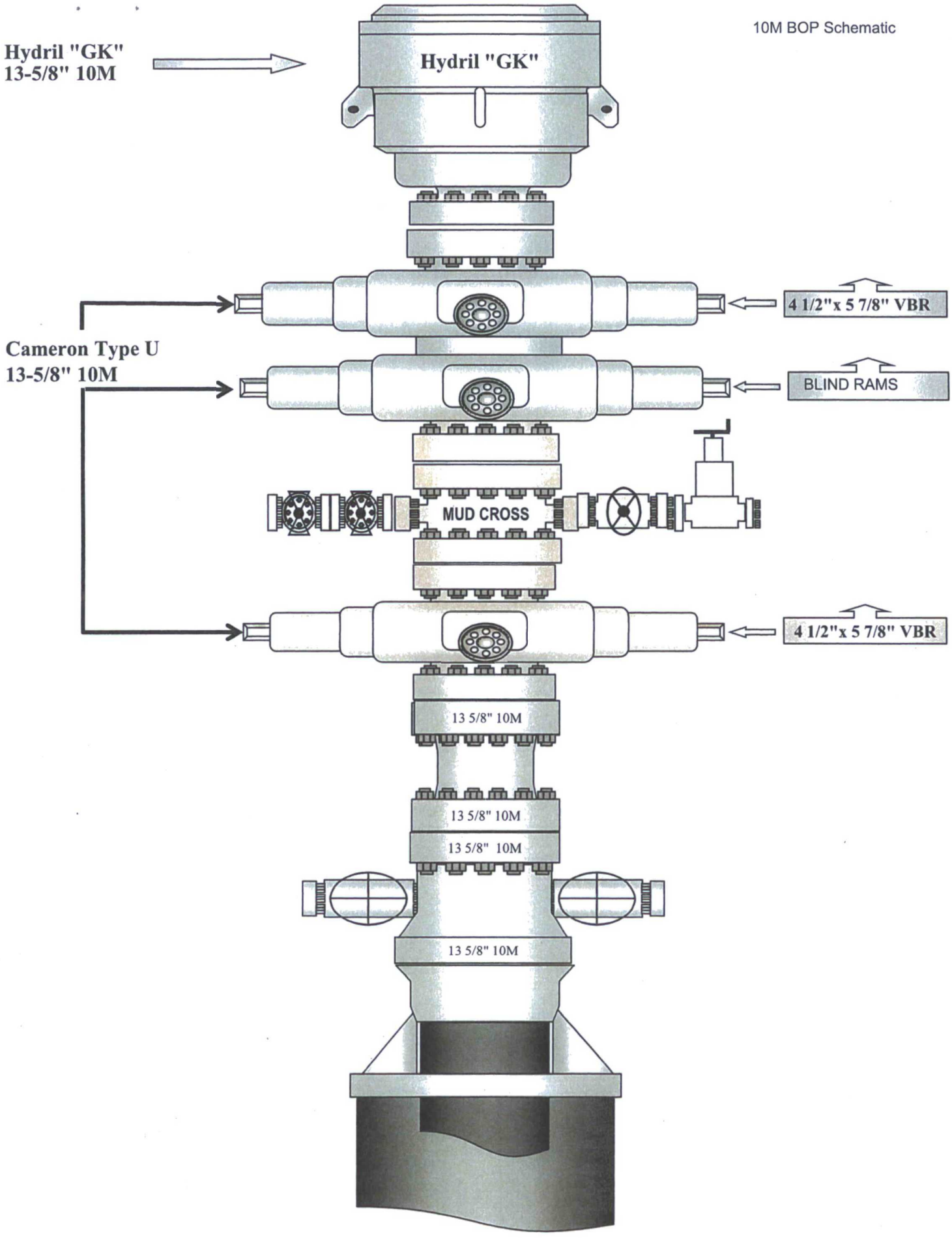
Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments
___ Directional Plan
___ Other, describe

13 5/8" 10M BOPE & Closed Loop Equipment Schematic



10M BOP Schematic



13 ⅝" 2M BOPE & Closed Loop Equipment Schematic

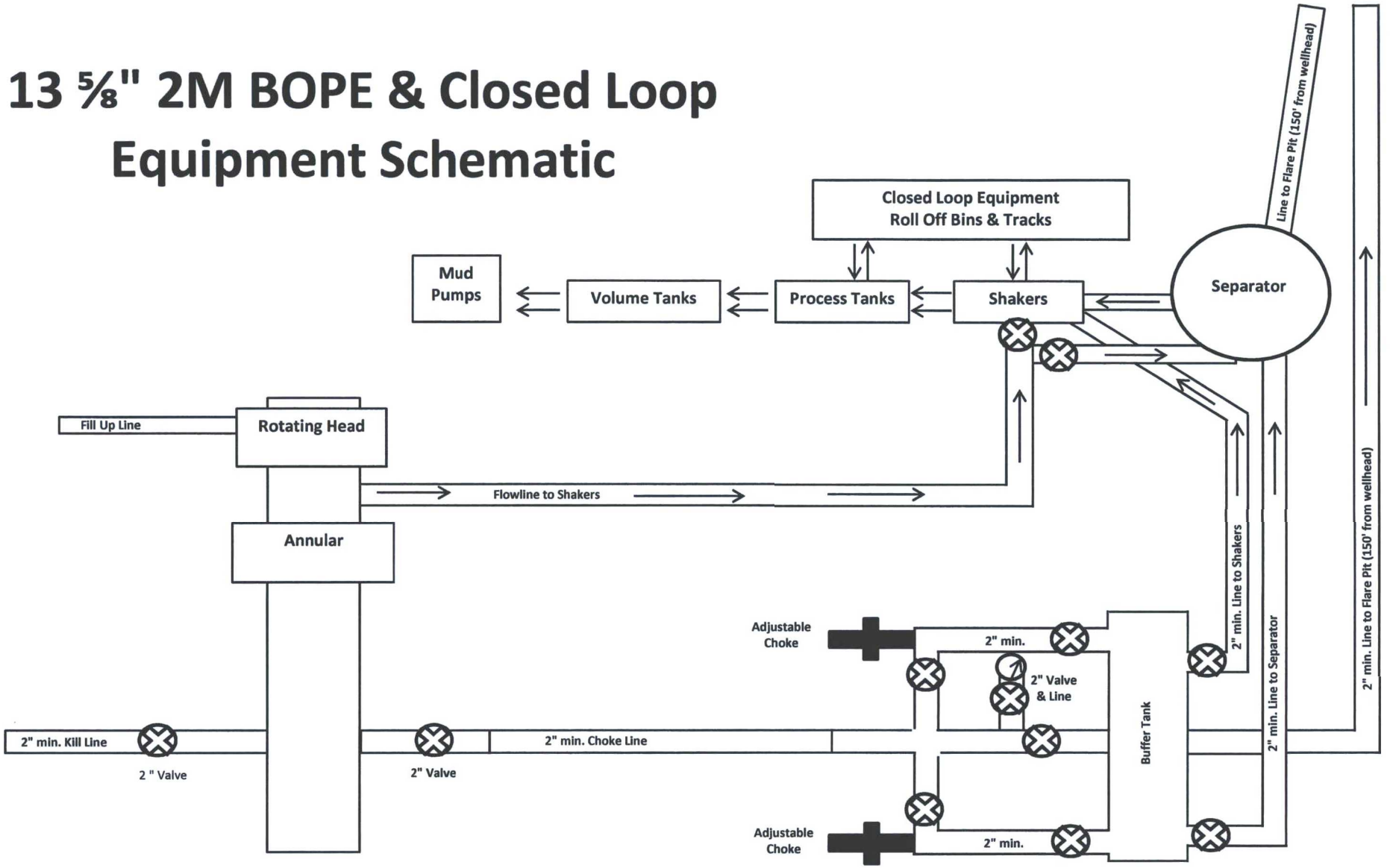
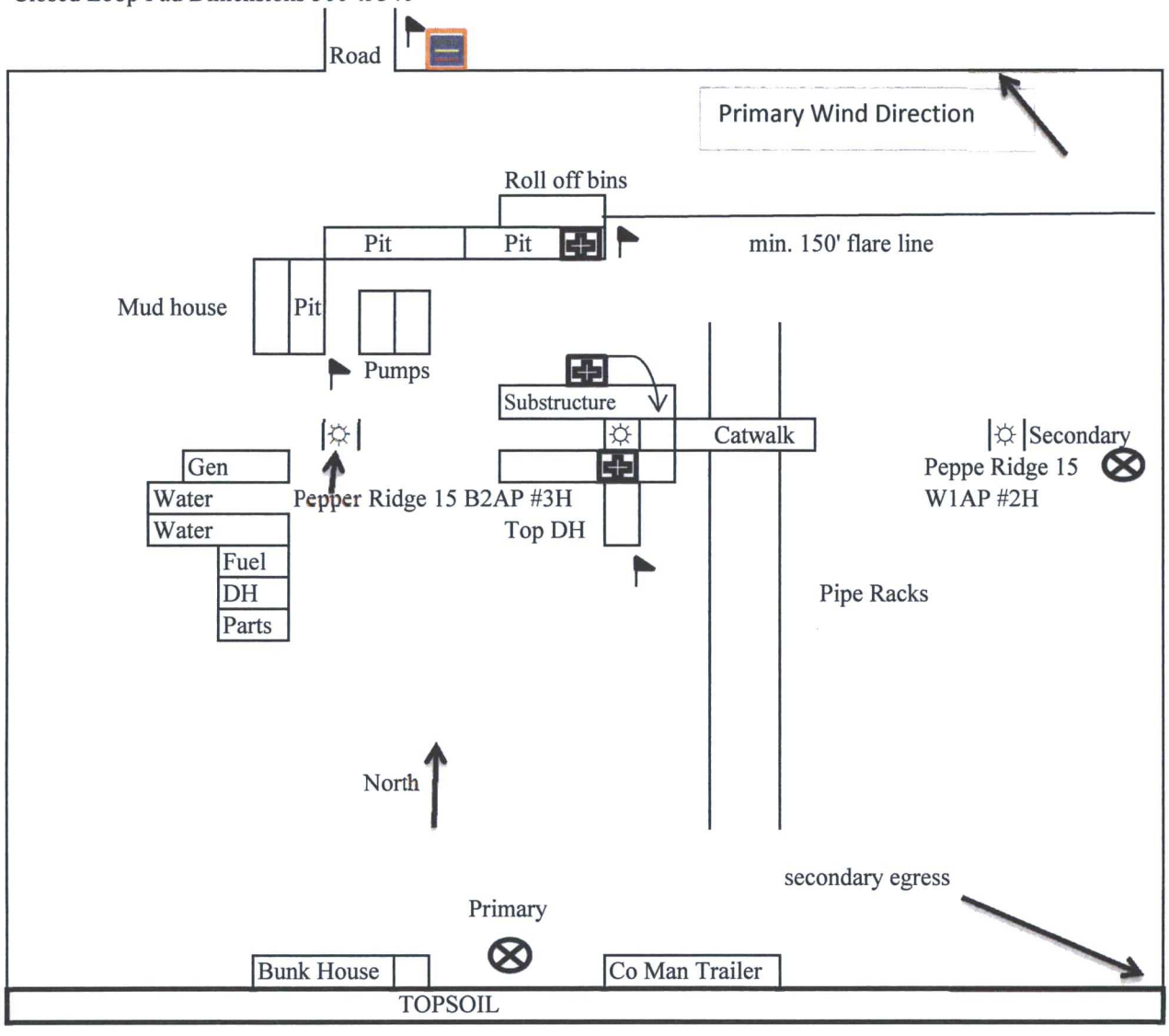


Exhibit 2A

Well Name: Pepper Ridge 15/22 W1AH Fed Com #2H

H2S Diagram
Closed Loop Pad Dimensions 500' x 340'



= Warning Signs

= Wind Markers

= H2S Monitors

= Safety Stations

Mewbourne Oil Company
Pepper Ridge 15 W1AH Fed Com #2H
185' FNL & 580' FEL
Sec. 15 T26S R33E
Lea County, NM