OCD Hobbs

ATS-15-419

Form 3160-3
(March 2012)

SECRETARY'S POTASH
HOBBS OCD
JUL 20 2016
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FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM 99048
	6. If Indian, Allotee or Tribe Name
	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. (316522) Marathon Road 15 B3LD Fed #1H
2. Name of Operator Mewbourne Oil Company (14744)	9. API Well No. 30-025-43375
3a. Address PO Box 5270 Hobbs, NM 88241	3b. Phone No. (include area code) 575-393-5905
	10. Field and Pool, or Exploratory Lea Bone Spring (37570) KB
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 150' FSL & 500' FWL, Sec. 15 T20S R34E At proposed prod. zone 330' FNL & 330' FWL, Sec. 15 T20S R34E	11. Sec., T. R. M. or Blk. and Survey or Area Sec. 15 T20S R34E
14. Distance in miles and direction from nearest town or post office* 25 miles SW of Hobbs, 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) 150'	16. No. of acres in lease 280 acres / 17. Spacing Unit dedicated to this well 120 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 160' - Phillips Federal #1	19. Proposed Depth 10,970' - TVD 15,567' - MD / 20. BLM/BIA Bond No. on file NM-1693 nationwide, NMB-000919
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3642' - GL	22. Approximate date work will start* 04/17/2015 / 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 Bradley Bishop	Name (Printed/Typed) Bradley Bishop	Date 02/17/2015
Title		
Approved by (Signature) /s/George MacDonell	Name (Printed/Typed)	Date JUL 7 - 2016
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 a

See attached NMOCD Conditions of Approval

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title ... States any false, fictitious or fraudule... ly and willfully to make to any department or agency of the United ...iction.

(Continued on page 2)

*(Instructions on page 2)

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Capitan Controlled Water Basin

KB 07/21/16

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

REQUIRES NSP + NSL ADMIN ORDER FROM SANTA FE

KB

Mewbourne Oil Company, Marathon Road 15 B3LD Fed #1H
Sec 15, T20S, R34E
SL: 150' FSL & 500' FWL
BHL: 330' FNL & 330' FWL

1. Geologic Formations

TVD of target	10970'	Pilot hole depth	NA
MD at TD:	15567'	Deepest expected fresh water:	250'

Reef

Formation	Depth (TVD) from KB)	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Alluvium	Surface	Water	
Rustler	1610	Water	
Top of Salt	1800	Salt	
Tansill/Base Salt	3170		
Yates	3250	Oil	
Seven Rivers			
Capitan	3790		
Delaware Group	5390	Oil/Gas	
Bone Spring	8330	Oil/Gas	
3rd Bone Spring	10650	Target Zone	
Wolfcamp		Will Not Penetrate	
Cisco			
Canyon			
Strawn			
Atoka			
Morrow			
Barnett Shale			
Woodford Shale			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, Marathon Road 15 B3LD Fed #1H
Sec 15, T20S, R34E
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2. Casing Program

Hole Size	Casing Interval From	To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	1200	13.375"	48	H40	STC	1.19	2.77	3.96
17.5"	1200	1635	13.375	54.5	J55	STC	1635	1.33	3.21
12.25"	0	3400	9.625"	36	J55	LTC	1.14	1.99	2.29
12.25"	3400	4350	9.625"	40	J55	LTC	1.14	1.75	6.88
12.25	4350	5290	9.625"	40	N80	LTC	1.12	2.09	19.34
8.75"	0	2567	5.5"	17	P110	BTC	5.60	7.97	2.06
8.75"	2567	10493	5.5"	17	P110	LTC	1.37	1.95	2.01
8.75"	10493	11249	5.5"	17	P110	BTC	1.31	1.87	6.33
8.75"	11249	15567	5.5"	17	P110	LTC	1.31	1.87	6.05
				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
Does casing meet API specifications? 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 intermediate 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?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	N
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?	N
If yes, are there two strings cemented to surface?	
(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?	

Mewbourne Oil Company, Marathon Road 15 B3LD Fed #1H
Sec 15, T20S, R34E
SL: 150' FSL & 500' FWL
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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	945	12.5	2.12	11	10	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 5% Sodium Chloride +0.25lb/sk Cello-Flake
	200	14.8	1.34	6.3	5	Tail: Class C + 0.005pps Static Free + 1% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
2nd Inter.	160	12.5	2.12	11	10	1st Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 5% Sodium Chloride +0.25lb/sk Cello-Flake
	200	14.8	1.34	6.3	5	1st Tail: Class C + 0.005pps Static Free + 1% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
	DV Tool & ECP @ 3740'					
	565	12.5	2.12	11	10	2nd Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 5% Sodium Chloride +0.25lb/sk Cello-Flake
	415	14.8	1.32	8	5	2nd Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
Prod.	1254	11.2	2.97	17	33	Class C (60:40:0) + 4%MPA-5 + 1.2%BA10 + 10#/sk BA90 + 5%A10 + 0.65% ASA301 + 1.5% SMS + 1.2% R21

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	3740'	25%

4. Pressure Control Equipment

See COA

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	X	~~1500#~~ 2000 #S
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			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	1635	FW Gel	8.6-8.8	28-34	N/C
1635	5290	Brine*	10.0-10.2	29-34	N/C
5290	10493	Cut Brine	8.5-9.3	28-34	N/C
10493	15567	FW w/polymer	8.5-9.3	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.
*Aerated fluid will be used to drill 12 ¼" hole if circulation is lost.

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

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP 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	GR	KOP(10493') to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4717 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

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
	H2S Plan attached

See COA

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

Notes Regarding Blowout Preventer
Mewbourne Oil Company
Marathon Road 15 B3LD Federal #1H
150' FSL & 500' FWL (SHL)
Sec 15-T20S-R34E
Lea 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 3000 psi working pressure on 9 5/8" and 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.

13 ⅝" 2M BOPE & Closed Loop Equipment Schematic

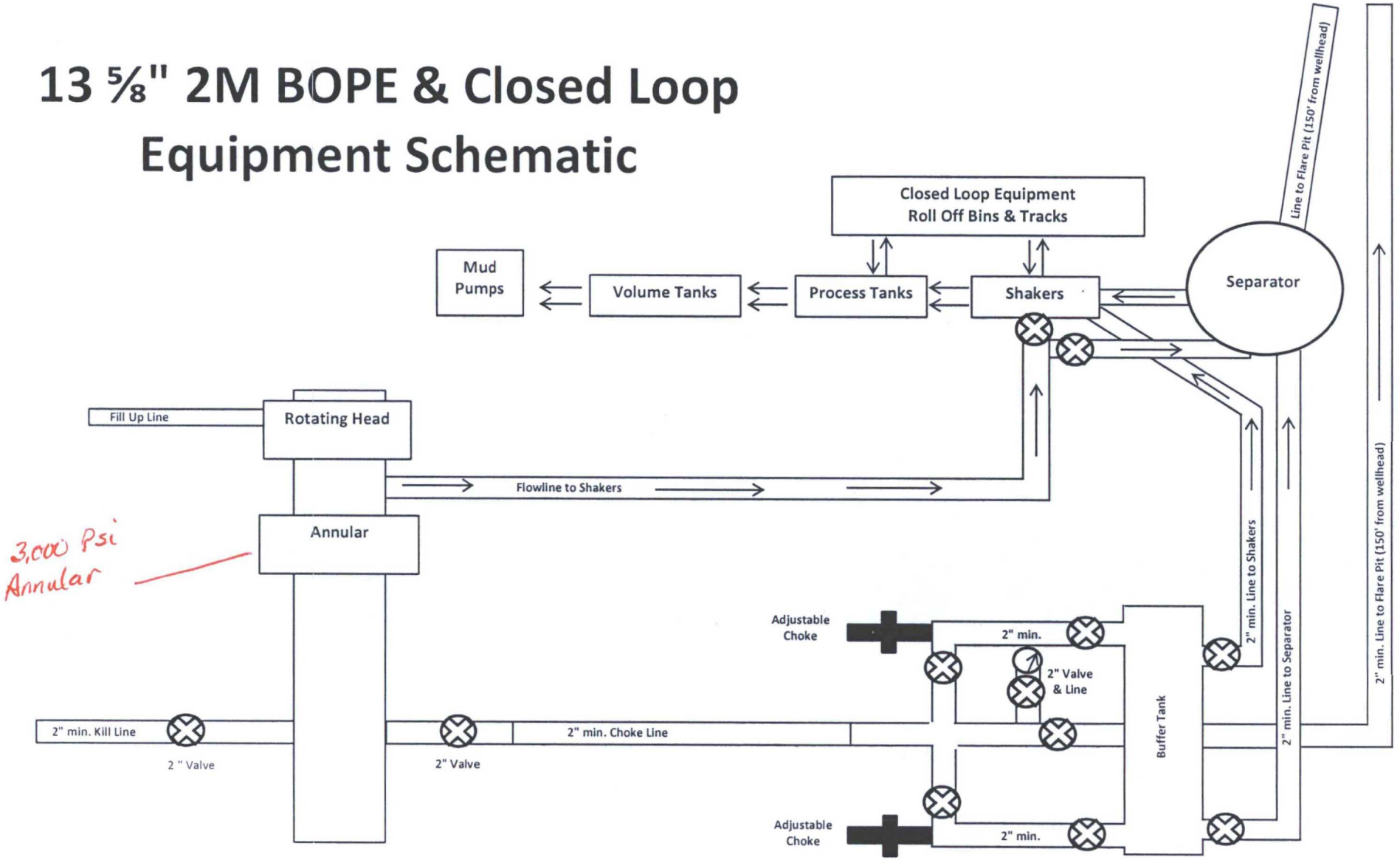


Exhibit 2A
Marathon Road 15 B3LD Fed #1H

5M BOPE & Closed Loop Equipment Schematic

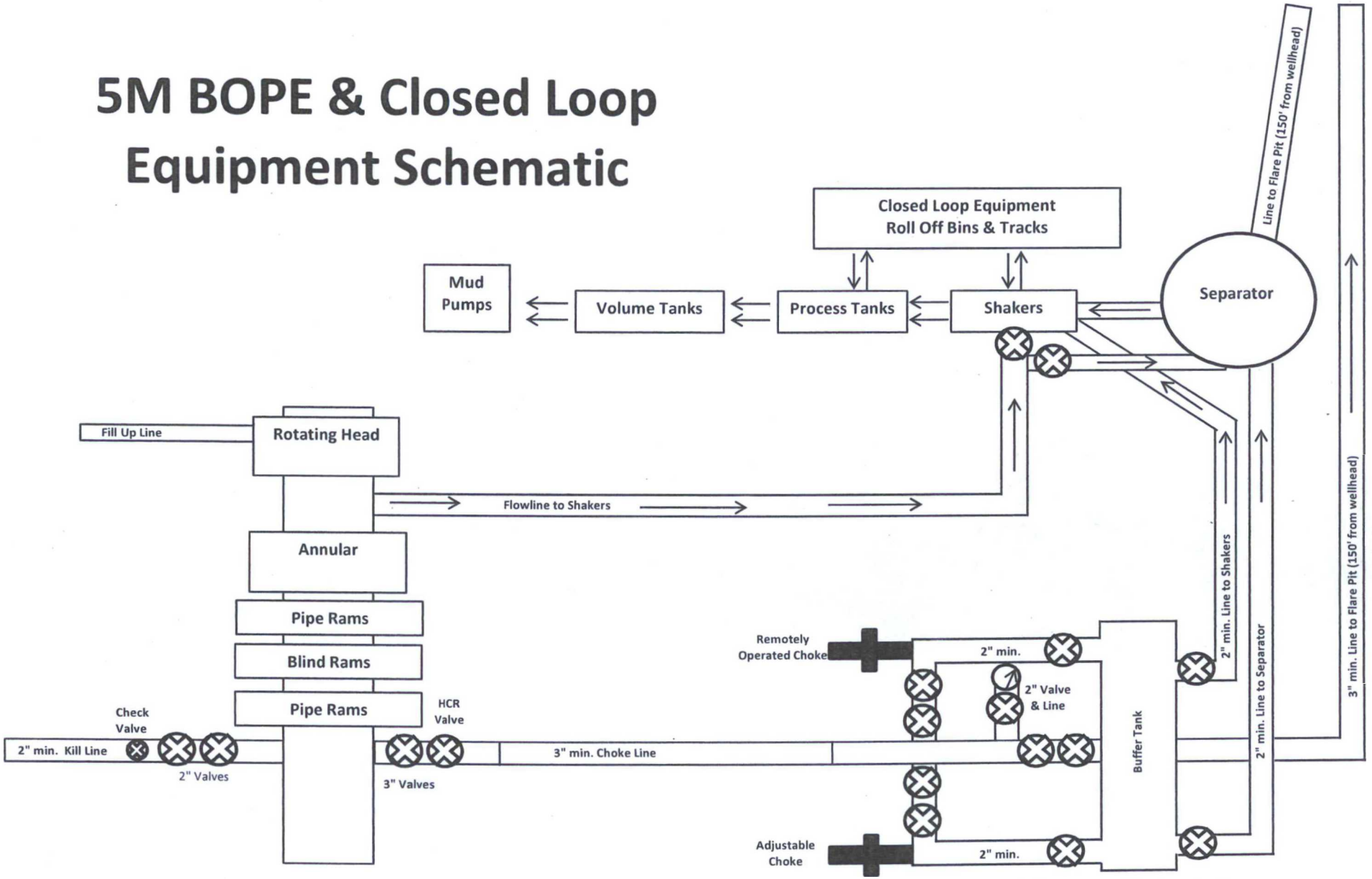


Exhibit 2

Note: All valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.

20" Diverter & Closed Loop Equipment Schematic

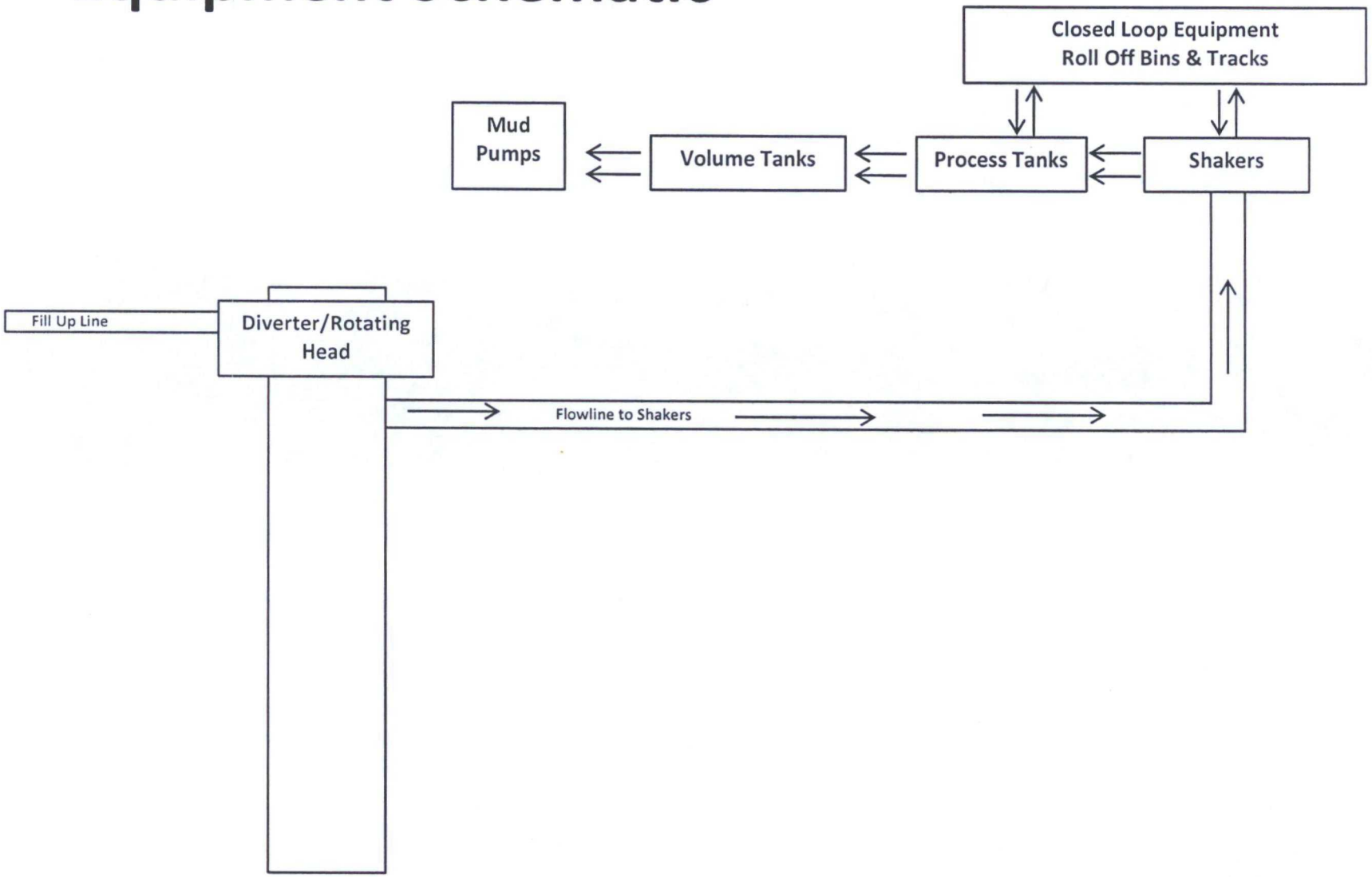


Exhibit 2B
Marathon Road 15 B3LD Fed #1H

H2S Diagram
Closed Loop Pad Dimensions 280' x 320'

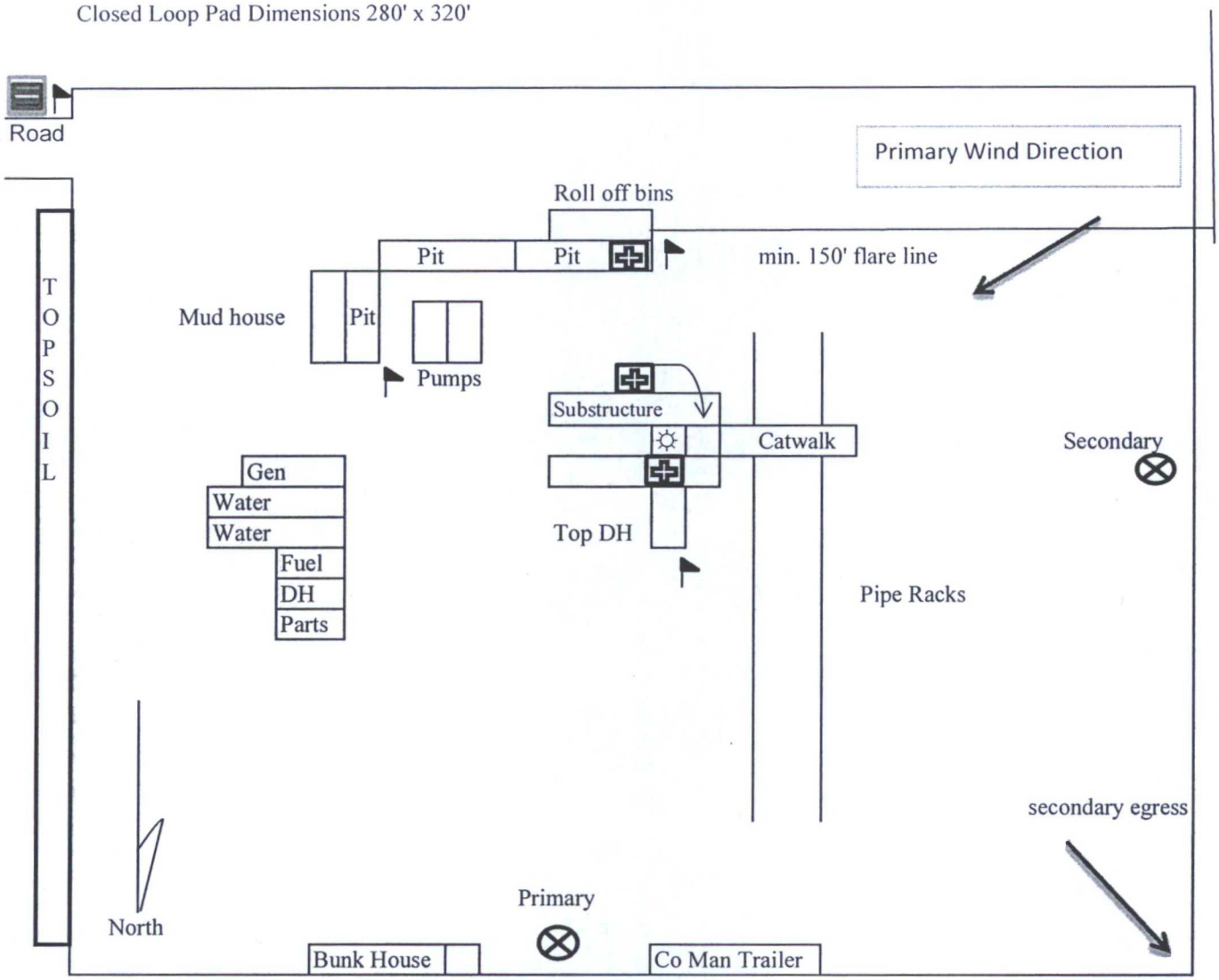


Exhibit 6

= Warning Signs

= Wind Markers

= H2S Monitors

= Safety Stations

Mewbourne Oil Company
Marathon Road 15 B3LD Fed #1H
150' FSL & 500' FWL
Sec. 15 T20S R34E
Lea County, NM

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Marathon Road 15 B3LD Federal #1H

150' FSL & 500' FWL (SHL)

Sec 15-T20S-R34E

Lea County, New Mexico

1. General Requirements

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

2. Hydrogen Sulfide Training

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

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

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

1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.

2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.

3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

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

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 9 5/8" intermediate casing.

1. Well Control Equipment
   - A. Choke manifold with minimum of one adjustable choke/remote 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 MOC will follow Onshore Order 6 and install a rotating head, mud/gas separator, remote choke 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

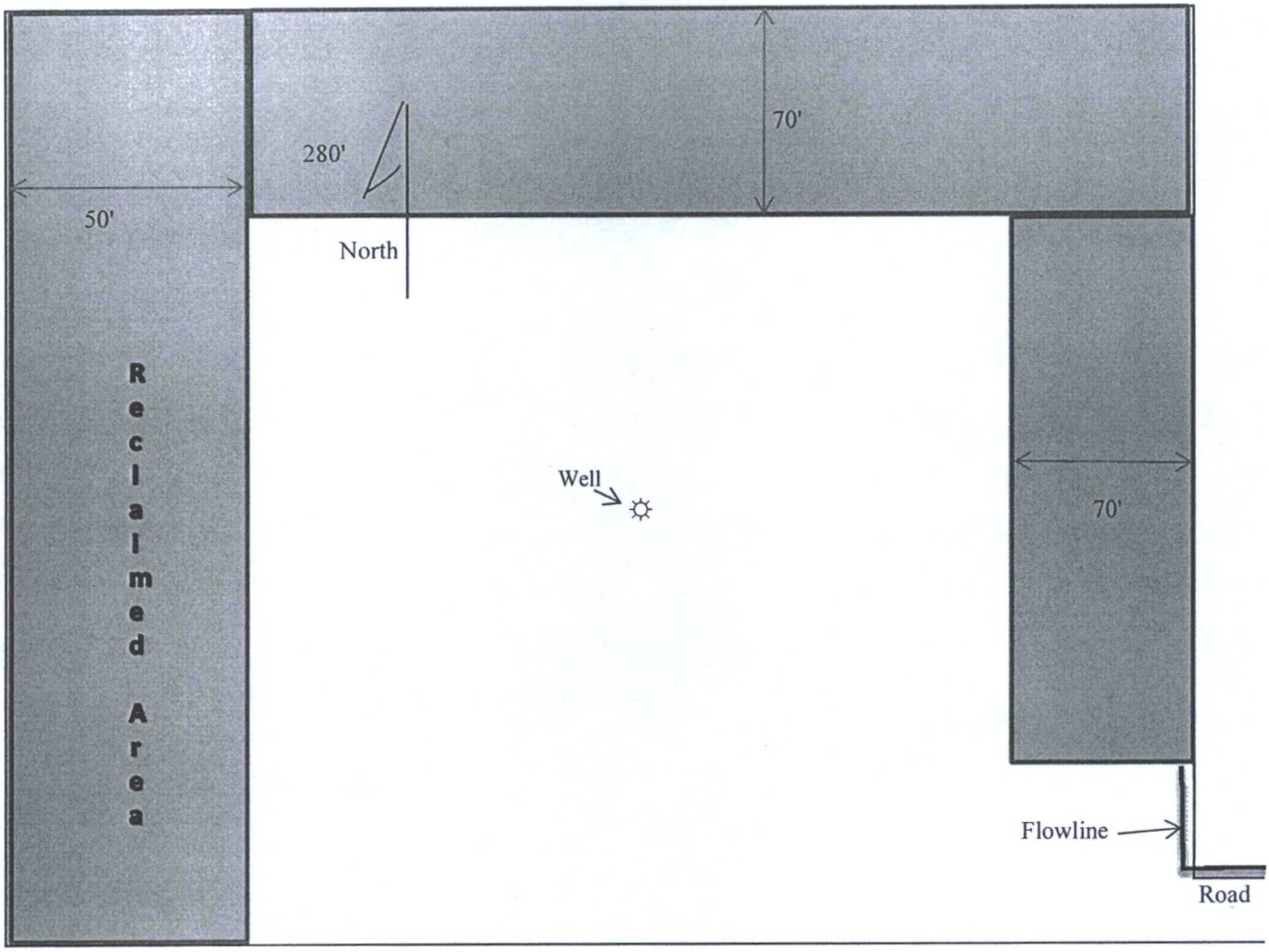
Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Lea County Sheriff's Office	**911 or 575-396-3611**
Ambulance Service	**911 or 575-885-2111**
Carlsbad Fire Dept	**911 or 575-885-2111**
Closest Medical Facility - Columbia Medical Center of Carlsbad	**575-492-5000**

Mewbourne Oil Company	**Hobbs District Office**	**575-393-5905**
	Fax	**575-397-6252**
	2nd Fax	**575-393-7259**
District Manager	**Robin Terrell**	**575-390-4816**
Drilling Superintendent	**Frosty Lathan**	**575-390-4103**
	Bradley Bishop	**575-390-6838**
Drilling Foreman	**Wesley Noseff**	**575-441-0729**

Closed Loop Pad Dimensions 280' x 320'



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