

Drawer DD

Artesia, NM 88210

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

PERRY R. BASS

RECEIVED

3. ADDRESS OF OPERATOR

P. O. BOX 2760 MIDLAND, TEXAS 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface

1980' FSL & 660' FWL, SEC 18, T-22S, R-29-E

At proposed prod. zone

same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

10 miles east of Carlsbad, N. M.

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

13,400

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

GL 3249.9'

22. APPROX. DATE WORK WILL START*

Upon Approval

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	11 3/4"	42#	350' ±	400 sx circulate to surf.
11"	8 5/8"	24#	2800' ±	1150 sx circulate to surf.
7 7/8"	5 1/2"	17#	TD	1000 sx

Drilling procedure, BOPE Diagrams, anticipated formation tops and surface use plans are attached.

Gas is dedicated.

RECEIVED
SEP 29 1981OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Stephen Smith

TITLE Engineering Assistant

DATE September 18, 1981

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED

APPROVED BY

TITLE

OCT 30 1981

DATE

CONDITIONS OF APPROVAL, IF ANY:

JAMES A. CICHAM
DISTRICT SUPERVISOR

*See Instructions On Reverse Side

3249.9'

Morrow

Wildcat

$$\begin{array}{r} 314.52 \\ - 320 \\ \hline \end{array}$$

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X Y Z

Unit

It is noted that the United States has not been able to secure this form of assistance from the United Kingdom, and that the United States is not prepared to allow the United Kingdom to use the United States' financial resources for the purpose of financing the United Kingdom's foreign aid program. It is noted that the United States is not prepared to allow the United Kingdom to use the United States' financial resources for the purpose of financing the United Kingdom's foreign aid program.

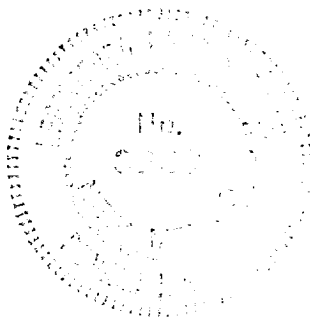
Stephen Smith

Stephen Smith

Engineering Assistant

Perry R. Bass

September 18, 1981



DRILLING PROCEDURE

BIG EDDY UNIT NO. 88

Location: 1980' FSL, 660' FWL, Sec. 18, T22S, R29E

Conductor Casing: 40' $\pm$ of 16" conductor casing will be set with a rathole machine and cemented to the surface with ready-mix.

Surface Hole: A 15" OH will be drilled to 350' $\pm$ (T/Salt) and 11-3/4" casing run to total depth. The surface casing will be cemented with 400 sx Class "C" plus 2% CaCl_2 . Cement must be circulated to the surface.

Total WOC time is 12 hours.

Nippling Up 11-3/4" Casing: After waiting 4 hours, nipping up procedures may begin. A 11-3/4" SW 3000# WP x 12" 3000# RJT casinghead will be welded in place. A set of hydraulic operated pipe and blind rams will then be installed (see BEPCO Drawing II attached) and tested to 1000 psi with the rig pump.

The results of this test must be reported in the daily drillers' log.

Intermediate Hole: A 11" OH will then be drilled to 2800' (T/Delaware Mtn. Group). 8-5/8" casing will be run to total depth. The casing should be cemented in one stage as follows: Cement with $\pm$ 1000 sx Halliburton Lite tailed with 150 sx Class "C" plus 2% CaCl_2 . Cement must be circulated to the surface.

Total WOC time for this casing string will be 12 hours.

Nippling Up 8-5/8" Casing: After waiting 4 hours, nipping up procedures may begin. A 12" 3000# WP x 10" 5000# WP RJT casing spool with bit guide and seal assembly will be installed.

A BOP stack consisting of hydril, pipe rams, and blind rams will be installed as per BEPCO Drawing IV (attached). This BOP stack will be hydrostatically tested to 5000 psi (hydril 1500#) by Yellow Jacket. The USGS will be notified in sufficient time to witness the testing of the 8-5/8" BOP stack. A copy of the test results will also be furnished the USGS.

The results of this test will be recorded in the daily drillers' log.

Production Hole: A 7-7/8" OH will then be drilled to TD (12,950' $\pm$). A PVT recorder, flow-show sensor and rotating head will be installed before drilling the Wolfcamp.

5-1/2" casing will then be run to TD. This casing string will be cemented with 1000 sx Class "H" plus 5# KCl per sack. The cement volume should be sufficient to bring the cement top 1000' above the Wolfcamp.

Time: This well is estimated to take 55 days from spud to TD.

CASING DESIGN
BIG EDDY UNIT NO. 28

SURFACE CASING

<u>Segment</u>	<u>Size</u>	<u>Grade</u>	<u>Thread</u>	<u>Weight</u>	<u>Top</u>	<u>Bottom</u>	<u>Length</u>
1	11 3/4	H-40	ST & C	42 #	0' ±	350' ±	350' ±

INTERMEDIATE CASING

<u>Segment</u>	<u>Size</u>	<u>Grade</u>	<u>Thread</u>	<u>Weight</u>	<u>Top</u>	<u>Bottom</u>	<u>Length</u>
1	8 5/8	S80	ST & C	24 #	2400' ±	2800' ±	400' ±
2	8 5/8	K55	ST & C	24 #	0' ±	2400' ±	2400' ±

PRODUCTION CASING

<u>Segment</u>	<u>Size</u>	<u>Grade</u>	<u>Thread</u>	<u>Weight</u>	<u>Top</u>	<u>Bottom</u>	<u>Length</u>
1	5 1/2	S95	LT & C	17 #	9660' ±	13000' ±	3340' ±
2	5 1/2	N80	LT & C	17 #	230' ±	9660' ±	9430' ±
3	5 1/2	S95	LT & C	17 #	0' ±	230' ±	230' ±

Stephen Smith
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Big Eddy Unit #88

Anticipated Formation Tops (GL 3250')

T/Salt	240'	(+3010')
B/Salt	2610'	(+640')
T/Dela. Group	2780'	(+470')
T/Dela. Sand	2860'	(+390')
T/Indian Draw	3700'	(-450')
T/Bone Springs	6410'	(-3160')
T/Wolfcamp	9670'	(-6420')
T/Strawn	11,120'	(-7870')
T/Atoka	11,470'	(-8220')
T/M. Morrow	12,320'	(-9070')
T/L. Morrow	12,630'	(-9380')

Stephen Smith
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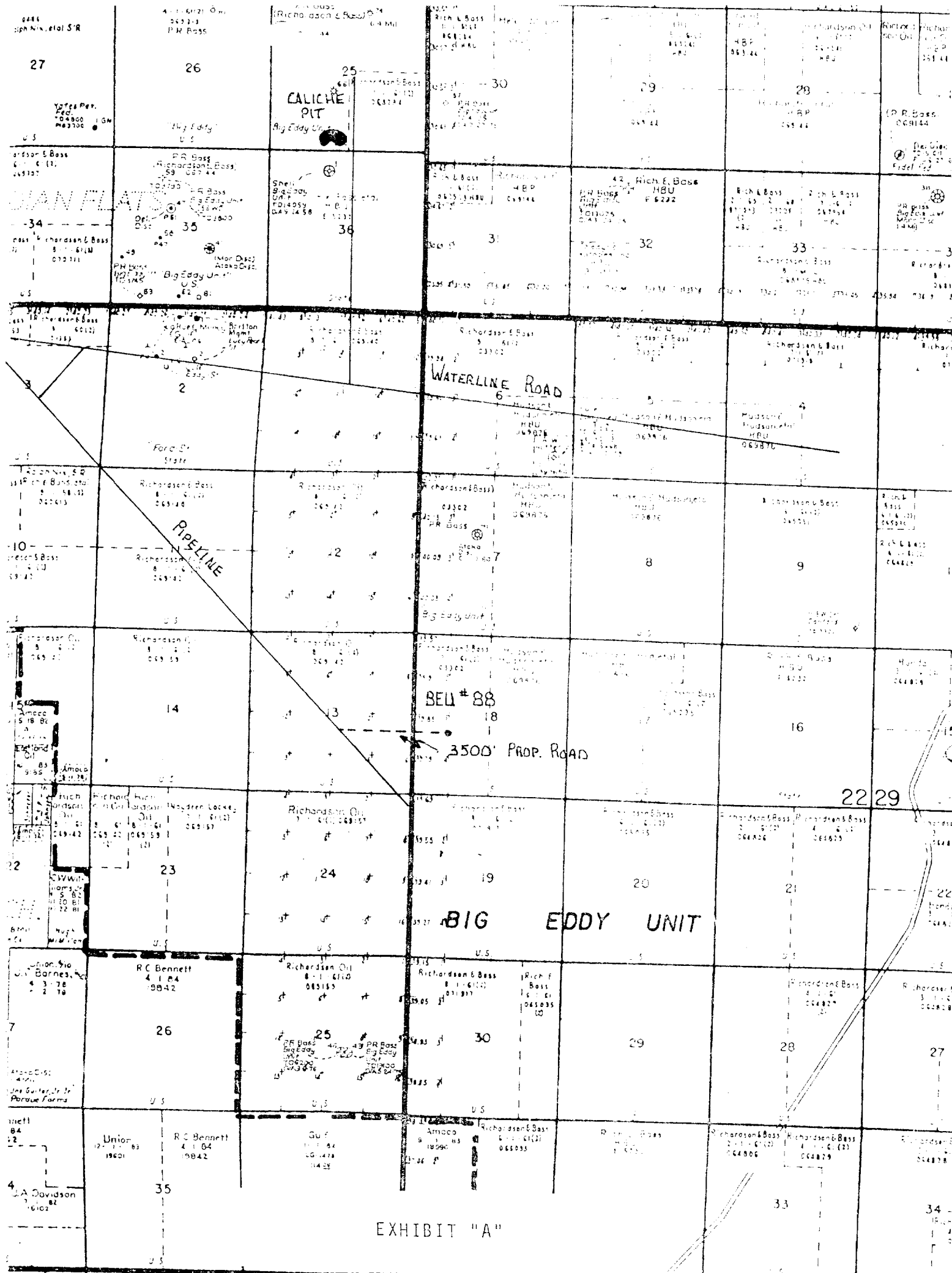
BIG EDDY UNIT #88

Mud Program

<u>Interval</u>	<u>Type</u>	<u>Wt. (Approx.)</u>	<u>Vis.</u>	<u>Wtr. Loss</u>
0' - 350'±	Fresh Wtr.	8.4 - 8.8#	34 - 40	NC
350'± - 2,800'±	Brine Wtr.	10.0#	28 - 30	NC
2,800'± - 9,670'±	Fresh Wtr.	8.4 - 9.0#	28 - 30	NC
9,670'± - 11,120'±	Brine Wtr.	10.0#	28 - 30	NC
11,120'± - 11,470'±	Brine Wtr.	10.3#	28 - 30	NC
11,470'± - 12,300'±	Brine Wtr.	11.5#	34 - 40	15 CC
12,300'± - TD	Brine Wtr.	11.5#	34 - 40	10 CC or Less

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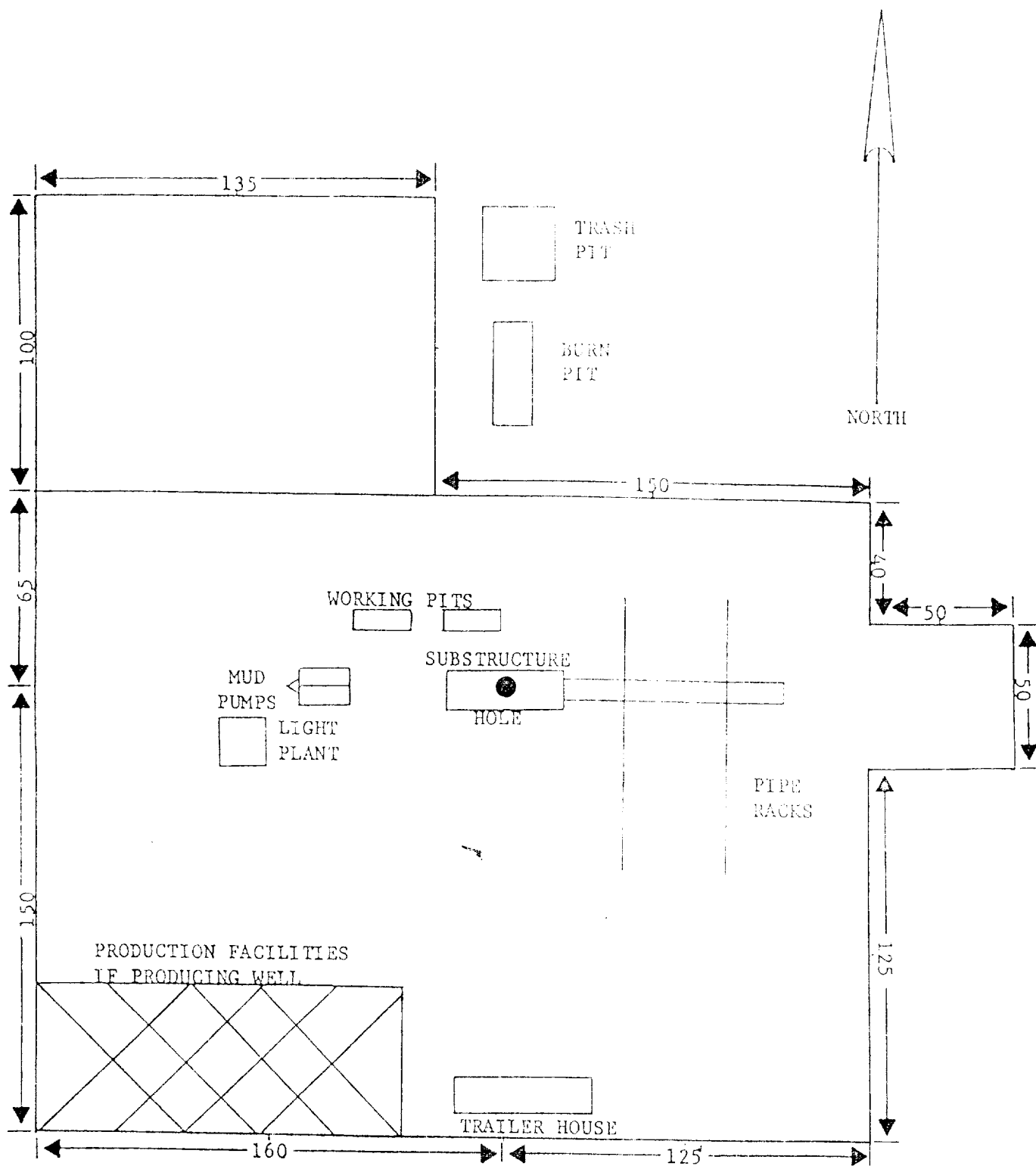
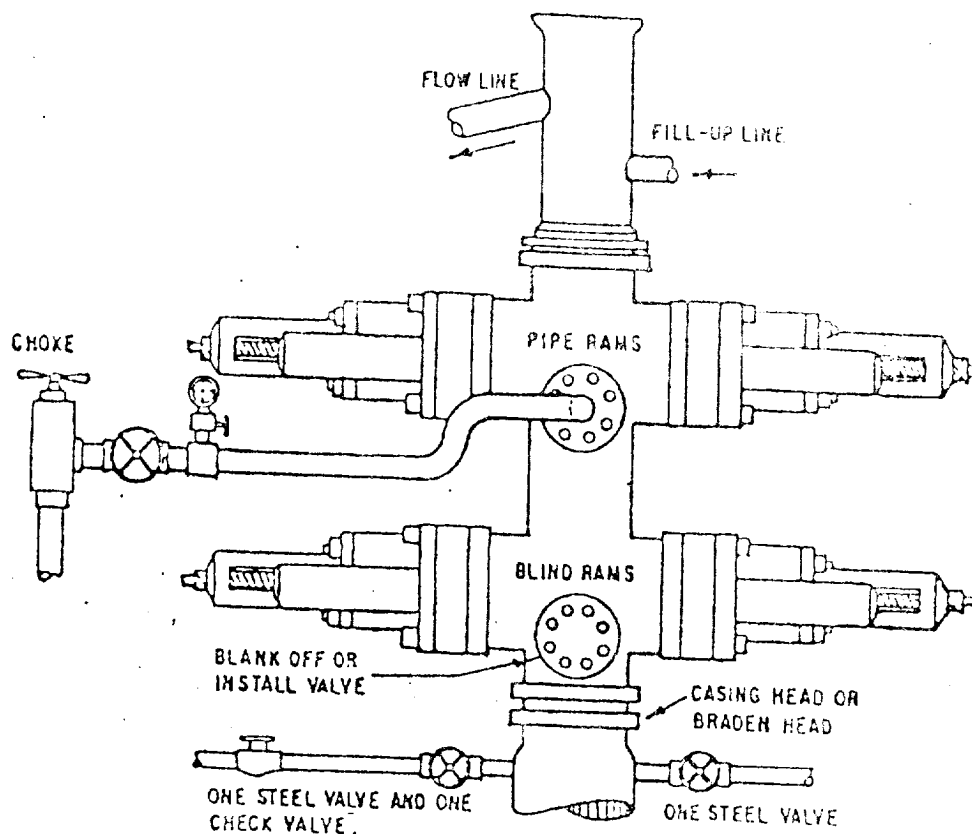
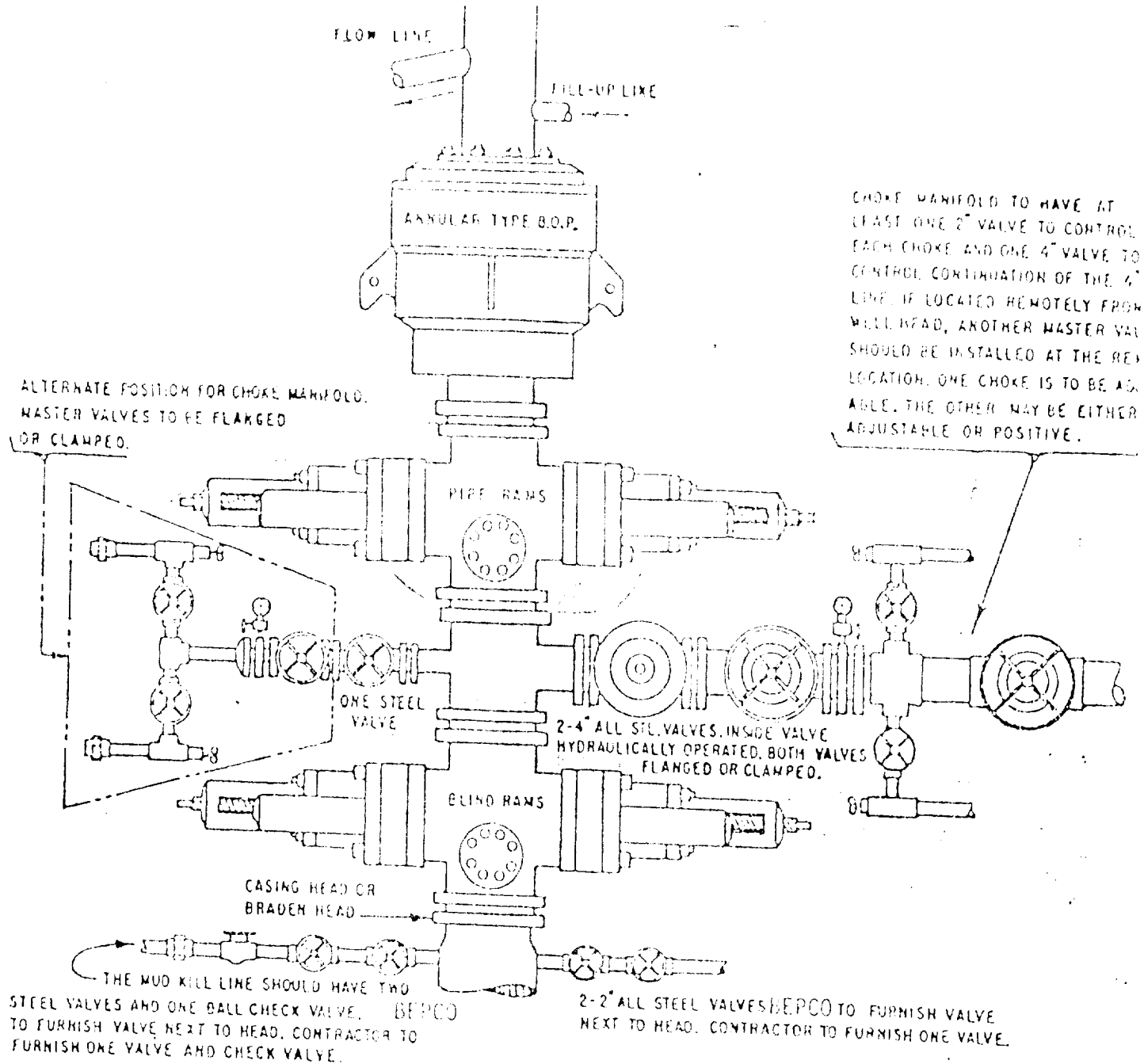


Exhibit "B"



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

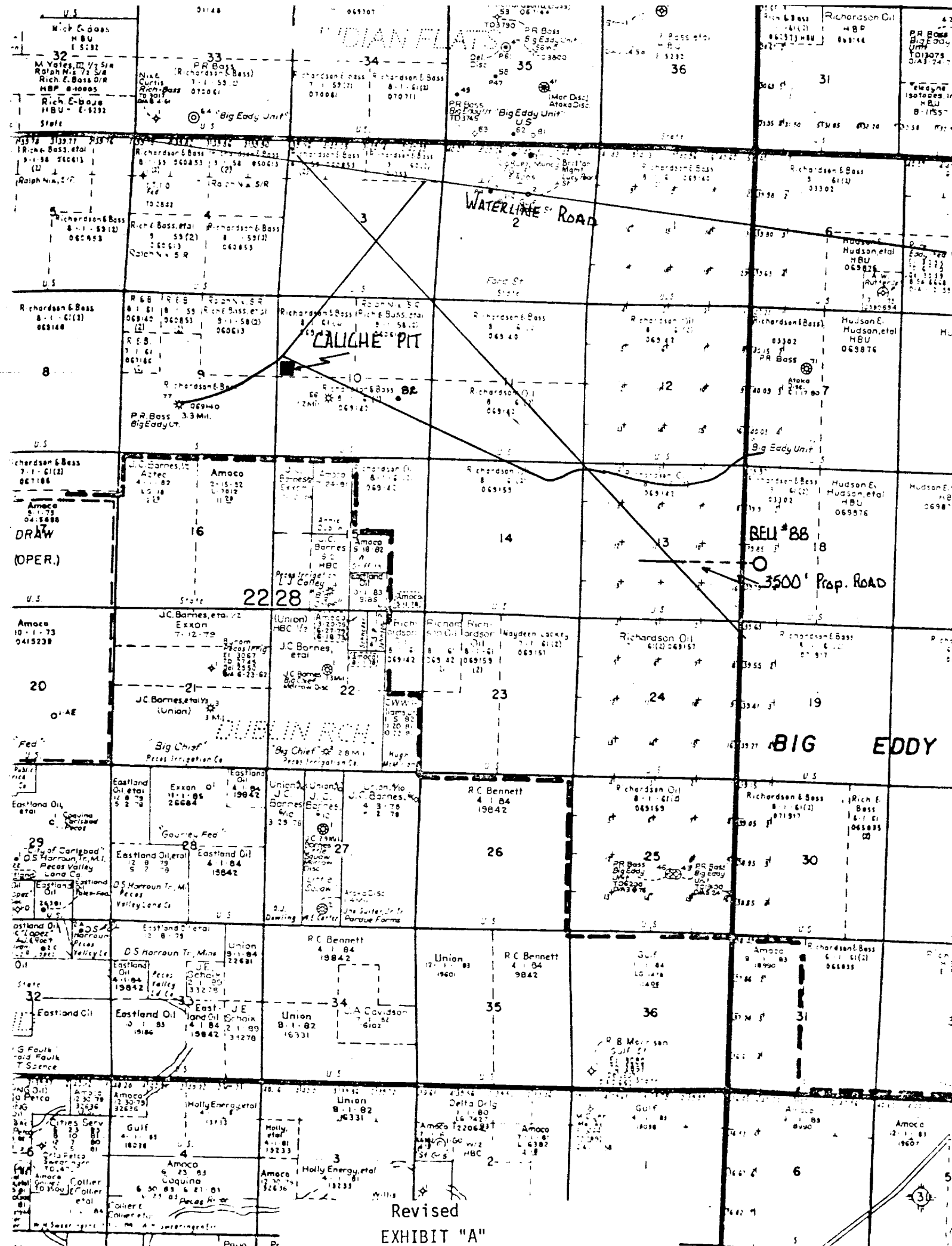
- A. ONE DOUBLE GATE BLOWOUT PREVENTER WITH LOWER RAMS BLIND AND UPPER RAMS FOR PIPE, ALL HYDRAULICALLY CONTROLLED. OPENING ON PREVENTERS BETWEEN RAMS.
- B. OPENING TO BE FLANGED, STUDDED OR CLAMPED AND AT LEAST TWO INCHES DIAMETER.
- C. ALL CONNECTIONS FROM OPERATING MANIFOLD TO PREVENTERS TO BE ALL STEEL HOSE OR TUBE A MINIMUM OF ONE INCH IN DIAMETER.
- D. THE AVAILABLE CLOSING PRESSURE SHALL BE AT LEAST 15% IN EXCESS OF THAT REQUIRED WITH SUFFICIENT VOLUME TO OPERATE THE PREVENTERS.
- E. ALL CONNECTIONS TO AND FROM PREVENTERS TO HAVE A PRESSURE RATING EQUIVALENT TO THAT OF THE B.O.P.
- F. MANUAL CONTROLS TO BE INSTALLED BEFORE DRILLING CEMENT PLUG.
- G. VALVE TO CONTROL FLOW THROUGH DRILL PIPE TO BE LOCATED ON RIG FLOOR.
- H. CHOKE MAY BE EITHER POSITIVE OR ADJUSTABLE. Choke spool may be used between rams.



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- CONDITIONS MAY BE MET BY AN ANNULAR TYPE BLOWOUT PREVENTER ON TOP AND A CHOKER SPOOL BELOW AND EITHER
 - (1) TWO RAM TYPE BLOWOUT PREVENTERS BELOW THE SPOOL, THE LOWER UNIT CONTAINING BLIND RAMS AND THE UPPER UNIT CONTAINING PIPE RAMS, OR
 - (2) A DUAL BLOWOUT PREVENTER BELOW THE SPOOL WITH BLIND RAMS ON BOTTOM AND PIPE RAMS ON TOP.
- OPENING ON CHOKER SPOOL TO BE FLANGED, STUDDED OR CLAMPED.
- ALL CONNECTIONS FROM OPERATING MANIFOLDS TO PREVENTERS TO BE ALL STEEL HOSE OR TUBE A MINIMUM OF ONE INCH IN DIAMETER.
- THE AVAILABLE CLOSING PRESSURE SHALL BE AT LEAST 15% IN EXCESS OF THAT REQUIRED WITH SUFFICIENT VOLUME TO OPERATE THE B.O.P.
- ALL CONNECTIONS TO AND FROM PREVENTER TO HAVE A PRESSURE RATING EQUIVALENT TO THAT OF THE B.O.P.
- MANUAL CONTROLS TO BE INSTALLED BEFORE GRILLING CEMENT PLUG.
- KELLY COCK TO BE INSTALLED ON KELLY.
- INSIDE BLOWOUT PREVENTER TO BE AVAILABLE ON RIG FLOOR.
- DUAL OPERATING CONTROLS ONE LOCATED BY DRILLERS POSITION AND THE OTHER LOCATED A SAFE DISTANCE FROM THE RIG FLOOR.

BEPCO IV
THREE CLOSURE HYDRAULIC BLOWOUT PREVENTERS



Revised
EXHIBIT "A"