Form 9-331 C
(May 1963)

N. M. O. C. C. COPY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-025-26283

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: ~~LC~~ NM 10470

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: Hat Mesa

8. FARM OR LEASE NAME: Hat Mesa (D)

2. NAME OF OPERATOR: Bass Enterprises Production Co.

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: P. O. Box 2760 Midland, Texas 79702

10. FIELD AND POOL, OR WILDCAT: Hat Mesa Morrow Field ~~UNDESIGNATED~~

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FNL & 660' FWL, Sec 10, T-21-S, R-32-E Lea County. N. M.
At proposed prod. zone: same as above

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 10,T-21-S,R-32-E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: approx 30 miles NE of Carlsbad, New Mexico

12. COUNTY OR PARISH: Lea County

13. STATE: N. Mex.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any):

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: 14,600'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3755 GL

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
20	16		40	Ready Mix
15	11-3/4	42	450	320 sx
11	8-5/8	24 & 32	5800	1250 sx
7-7/8	5-1/2	17	14600	1000 sx

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AUG 21 1978
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

RECEIVED
AUG 22 1978
U.S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

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

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

"APPROVAL TO FLARE GAS WHILE DRILLING AND TESTING."

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 Gene Young TITLE Engineer Assistant DATE Aug. 17, 1978

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

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HOBBS, NEW MEX

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U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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MAR 2 8 1979

OIL CONSERV
HOBBS, N. M.

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Bass Enterprises Production Co.	Hat Mesa	1

Unit Letter	Section	Township	Range	County
E	10	21 South	32 East	Lea

Actual Footage Location of Well:
1980 feet from the North line and 660 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3755.0	Morrow	~~UNDESIGNATED~~ Hat Mesa Morrow	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

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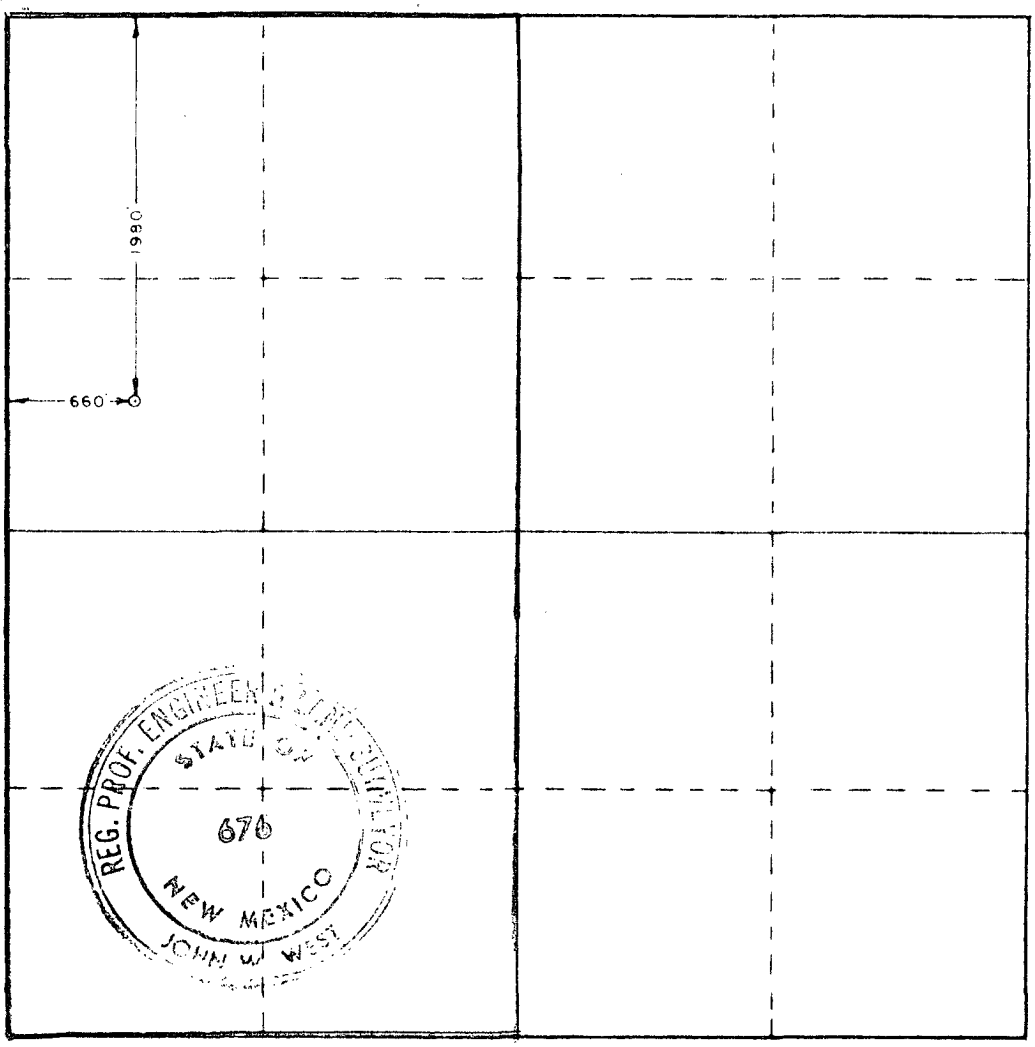
ROSWELL, NEW MEXICO



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Gene Young

Name: GENE Young

Position: Engineer Ass.'t MGR

Company: Bass Enterprises Pro. Co.

Date: 17 August 1978

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 knowledge and belief.

Date Surveyed: August 4, 1978

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. John W. West 676
Ronald J. Eidson 3239

DRILLING PROCEDURE

Hat Mesa No. 1 14,500' Morrow Development Well Permit 14,600'
Sec. 10, T21S, R32E, Lea County, New Mexico

Conductor pipe: 16" conductor will be set at 40'± with a rathole machine and cemented to the bottom of the cellar with ready-mix.

Surface casing: 11 3/4" casing will be set at 450' in a 15" hole. The drilling fluid will be a fresh water gel spud mud 40-50 vis 8.5#. LCM will be used if circulation is lost. It may be necessary to dry drill. The casing will be 11 3/4" 42 lb/ft H-40 ST&C run with a guide shoe, insert float and three centralizers. The casing is to be cemented to surface with 320 sx class C + 2% $CaCl_2$ 14.8 ppg 1.32 ft^3/sk 100% excess.

Nipple Up: The casing head will be a Gray CWC-F 11 3/4" SW x 12" 3,000 WP. Minimum BOP is 2 hydraulic operated rams 10" 3,000 WP BEPCo II (attached). Pressure test stack, choke manifold, and surface casing to 1,000 psi before drilling out.

Intermediate Casing: 8 5/8" casing will be set at 5,800' in an 11" hole. The drilling fluid will be 10 ppg brine 9+pH. From 3,300' to 5,800' viscosity should be maintained 34-37 sec. with salt gel. Lost circulation is expected in the Capitan Reef T/3,550. Ground paper has been a successful LCM for seepage losses. Gross losses usually result in dry drilling. A Caliper Survey should be run to determine the required cement volume.

8 5/8" casing design for 5,800'

0-120'	120'	32 lb/ft	K-55	ST&C
120-2660'	2540'	24 lb/ft	K-55	ST&C
2660-5800'	3140'	32 lb/ft	K-55	ST&C

The 8 5/8" casing will be run with a float shoe, float collar, DV Tool, and 2 cement baskets. Centralizers should be run on the bottom three joints, the two joints with cement baskets, and one just above the DV tool. The float collar should be one joint above the shoe and the baskets should be on the 2 joints below the DV tool. The DV tool should be run at the base of the salt 3,300'±. The first stage cement will be about 400 sx Halliburton Light + 3 lb/sk gilsonite + 1/4 lb/sk flocele 12.9 ppg 1.9 ft^3/sk tailed with 200 sx C + 2% $CaCl_2$ 14.8 ppg 1.32 ft^3/sk. The second stage cement will be about 550 sx Halliburton 'Light' + 3 lb/sk gilsonite + 1/4 lb/sk flocele + 15 lbs/sk salt + 1% $CaCl_2$ 13.2 ppg 1.96 ft^3/sk tailed with 100 sx C + 2% $CaCl_2$ 14.8 ppg 1.32 ft^3/sk. Displace cement with fresh water. While running casing assure that casing is full at least every 400'.

Nipple Up: The BOP's should be removed and the 11 3/4" head should be cut off and removed. A Gray CWC-F 8 5/8" SW x 10" 5,000 WP casing head will be welded on the 8 5/8". The 8 5/8" above the 11 3/4" cut off should be as short as possible. Cement should stand to the 11 3/4" cut off: a few sacks should be left on the ground to grout between the 8 5/8" and 11 3/4" if it is not full. Nipple up a 2 ram plus annular hydraulic operated BOP stack 10" 5,000 WP BEPCo. IV (attached). Pressure test rams and choke manifold to 5,000 psi. Drill out the shoe and 50' of new hole and pressure up to 1100 psi; 12 ppg equivalent at the shoe. Test in 250 psi increments if pump in is accomplished discontinue pressure test.

Production Hole: A 7 7/8" hole will be drilled from 5,800' to TD. The drilling fluid will be fresh-water lime 9 + pH to 11,000'; 10# brine + 3% KCl + lime 9 + pH to 13,000'; 10# - 10.2# brine + 3% KCl + drispac 32-34 vis, 9 + pH, < 10 cc WL to TD. A mud-gas separator and rotating head should be installed before reaching 11,000'.

Evaluation: Samples should be sacked each 30' from 5,800' to 11,000' and each 10' from 11,000' to TD. ~~The hole will be logged through the Delaware from the top of the Bone Springs at 8,650' with Sonic GR, DLL-LLS-Sp, and Sidewall cores~~. A one man mud log unit will be put on the well from 11,000' to TD. Likely DST's are 1 in the Atoka at ± 13,000' and 2 in the Morrow below 13,500'. The hole will be logged at TD with FDC-CNL-GR and DLL with MSFL. SNR 12-22-77

Production Casing: 5 1/2" casing will be set in 7 7/8" hole

5 1/2" casing design for 14,500'

0-1,730'	1730'	17 lb/ft	N-80	Buttress
1,730-10,770'	9040'	17 lb/ft	N-80	LT&C
10,770-14,500'	3730'	17 lb/ft	S-95	LT&C

the casing will be run with a float shoe and a float collar. The casing will be centralized and ruff-coated across potential pay zones. The cement volume should be calculated from the caliper log to return cement to 1,000' above the T/Wolfcamp, or to about 10,600'. The cement will be about 1,000 sx 50-50 class H-pozmix A - 2% gel + 0.5% CFR-2 + 0.8% Halad 22 + 6 lbs/sk KCl 14.6 ppg 1.3 ft^3/sk.

Nipple Up: The tubing head will be a Gray CWC-F 7" nominal 10" 5,000 WP X 6" 5,000 WP. The rig will be moved off after the tubing head is installed.

Time: This well is estimated to require 55 rig days from spud to move out.

Lance M. Cure
L. M. Cure

LMC:gp/am

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Hat Mesa No. 1

1980' FNL & 660' FWL, Sec 10, T-21-S, R-32-E

Lea County, New Mexico

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction, activities, and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to rehabilitate the surface after completion of operations so that an appraisal can be made on environmental effects.

1. Existing roads including location of exit from main highway From Highways U.S. 180-62, turn southeast onto Highway 176. Go approximately 5 miles and turn south on existing caliche road. Go 2 miles south and 1/2 mile west to existing well site. See Exhibit "A".

2. Planned access road (Width, maximum grade, turnout, drainage design, location & size of culverts & surfacing material, where fences will be cut, & where gates or cattleguard will be used.) Proposed access to well site will take off of existing caliche road. The road will be 12' wide and 2700' long with one turnout. Caliche will be watered, rolled & compacted. See Exhibit "B".

3. Location of existing wells Exhibit "B" shows locations of existing wells in a two-mile radius.

4. Location of tank battery and flow lines Production facilities will be located on the well pad if the well is found to be productive.

5. Location and type of water supply Water supply will be hauled from Carlsbad, N. M. via Highways 62-180, 176 & existing field road.

6. Source of construction material Quarry is located one mile northeast of location in Section 2. See Exhibit "B".

7. Methods of handling waste disposal:

   A. Drill cuttings will be disposed of in the drilling pits.

   B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.

   C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

   D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

   E. Trash, paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste materials will be contained to prevent scattering by the wind. Location of trash pit is shown in Exhibit "C".

   F. Trash and debris will be buried or removed from the well site within 30 days after finishing drilling and/or completion operations. (Note: All trash left on well site to be removed or buried within 30 days must be contained to prevent scattering.)

8. Ancillary facilities none required.

9. Well site layout Exhibit "C" shows the dimensions of the well pad and reserve pits. The relative location of the major rig components, trash pit, burn pit, etc., are also shown. Only minor leveling of the well site will be required. The reserve pit will be lined. The pit and pad area have been staked and flagged.

10. Plans for restoration of surface:

A. Producing well - all pits will be cut, filled, and leveled as soon as practical to original conditions with rehabilitation to commence following removal of drilling and completion equipment.

B. Dry hole - same as above with dry hole marker to be installed and surface reseeded if required. At the time of final abandonment, both USGS and BLM restoration stipulations will be complied with.

11. Other information:

A. Terrain relatively flat

B. Soil sandy

C. Vegetation sparse, primarily mesquite with very little grass

D. Surface use grazing

E. Surface water none

F. Water wells none within one mile

G. Residences and buildings none within one mile

H. Surface ownership The well site and access road are on federal land.

I. Well signs posted at each drilling site.

J. Open pits - all pits containing liquid or mud will be fenced.

K. Archaeological resources none observed.

12. Operator's representative
(Field personnel responsible for compliance with development plan for surface use)

DRILLING
Mike Cure
Box 2760
Midland, Texas 79702
915-684-5723

PRODUCTION
Al Gallas
Box 1043
Kermit, Texas 79745
915-563-0656
(or) Alan Roberts
Box 2760
Midland, Texas 79702
915-684-5723

13. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Bass Enterprises Production Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

August 17, 1978
(Date)

Gene Young
(Name)

Engineer Assistant
(Title)

CEB:gp

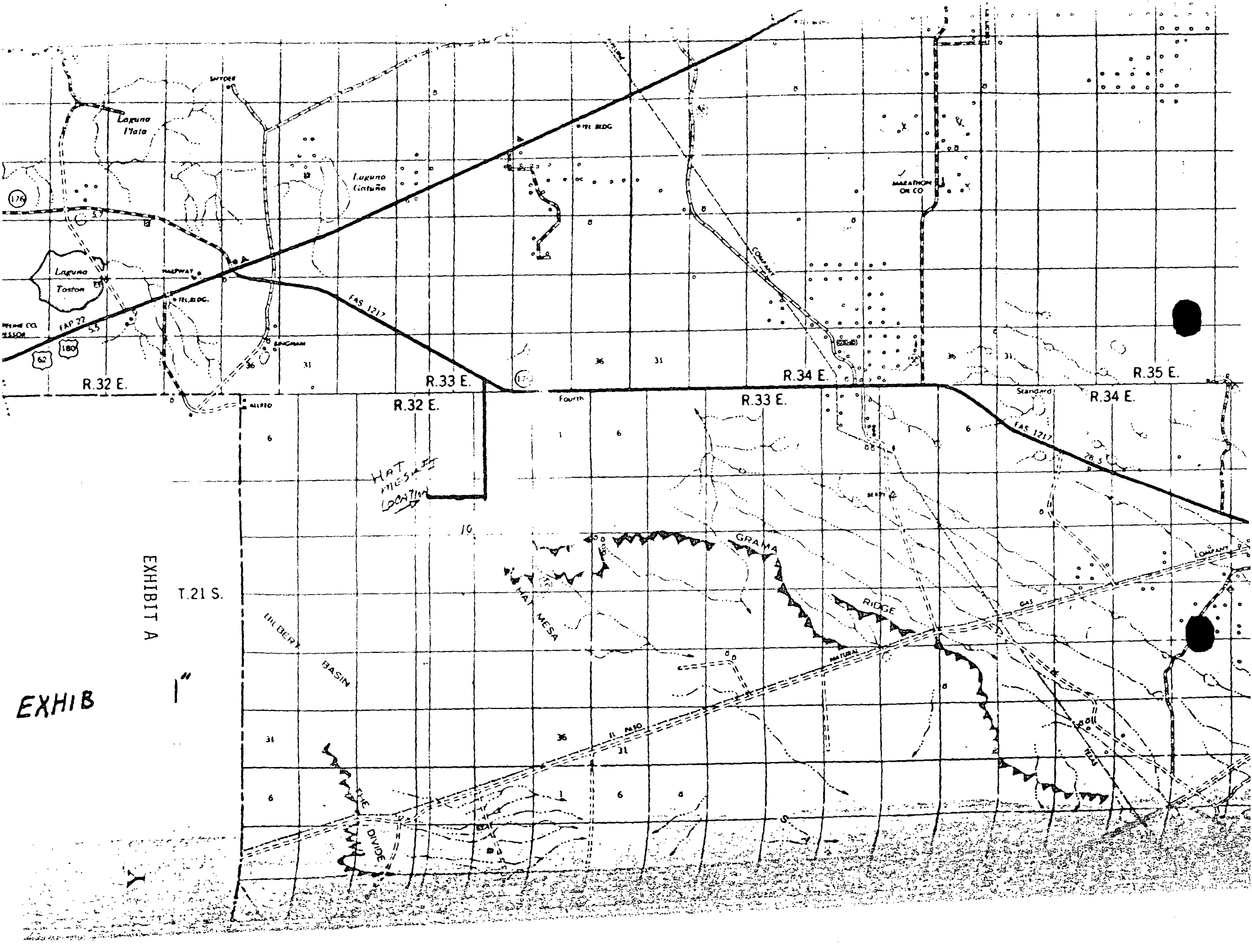
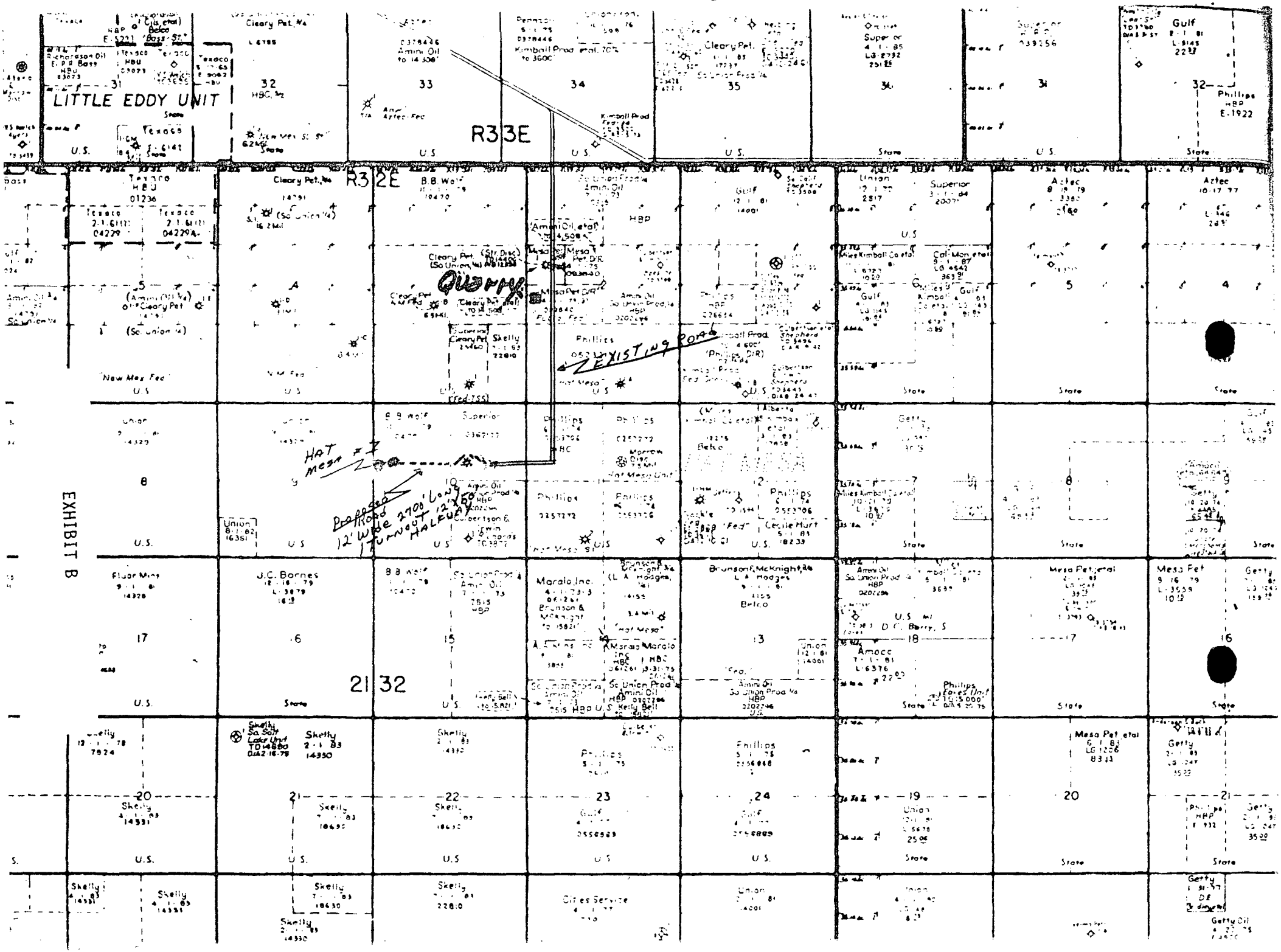

R.32 E.
R.33 E.
R.34 E.
R.35 E.
R.32 E.
R.33 E.
R.34 E.
T.21 S.
EXHIBIT A
EXHIB
1"
HAT MESA II LOCATION
Laguna Plata
Laguna Gatuña
Laguna Toston
FAS 1217
FAP 22
MARATHON OIL CO
COMPANY
Standard
Fourth
GRAMA
RIDGE
HAT MESA
GILBERT
BASIN
THE
DIVIDE
EL PASO
NATURAL
GAS
TEXAS
SNYDER
HALFWAY
TEL BLDG.
BINGHAM
ALLRED
176
62
180

Exhibit D


LITTLE EDDY UNIT
R33E
R32E
31
32
33
34
35
36
5
4
8
9
17
16
20
21
22
23
24
19
Quarry
EXISTING ROAD
HAT MESA #1
Proposed 12' Wide 2700' Long 12' X 50' Turnout Halfway
EXHIBIT B
21 32

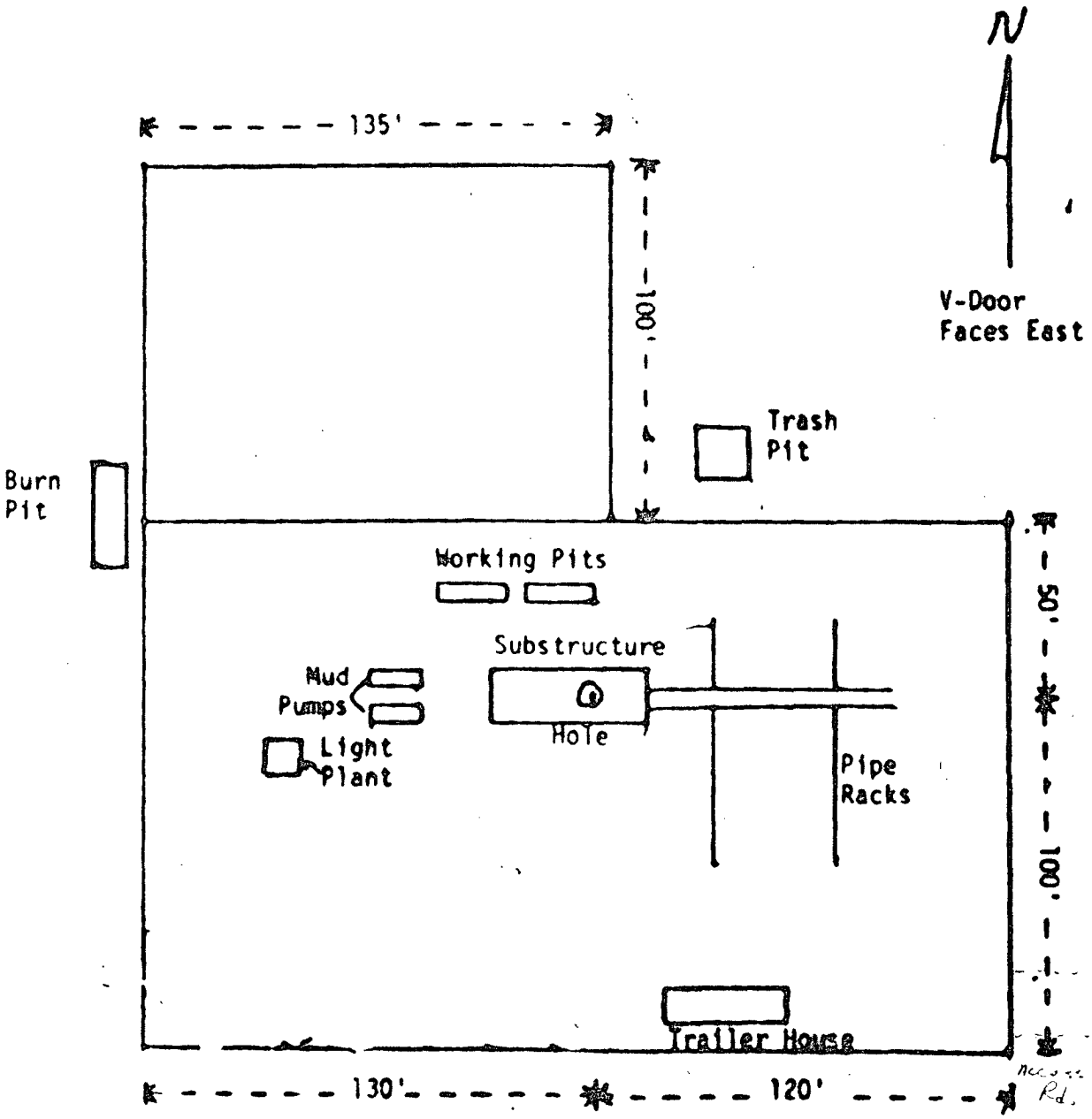
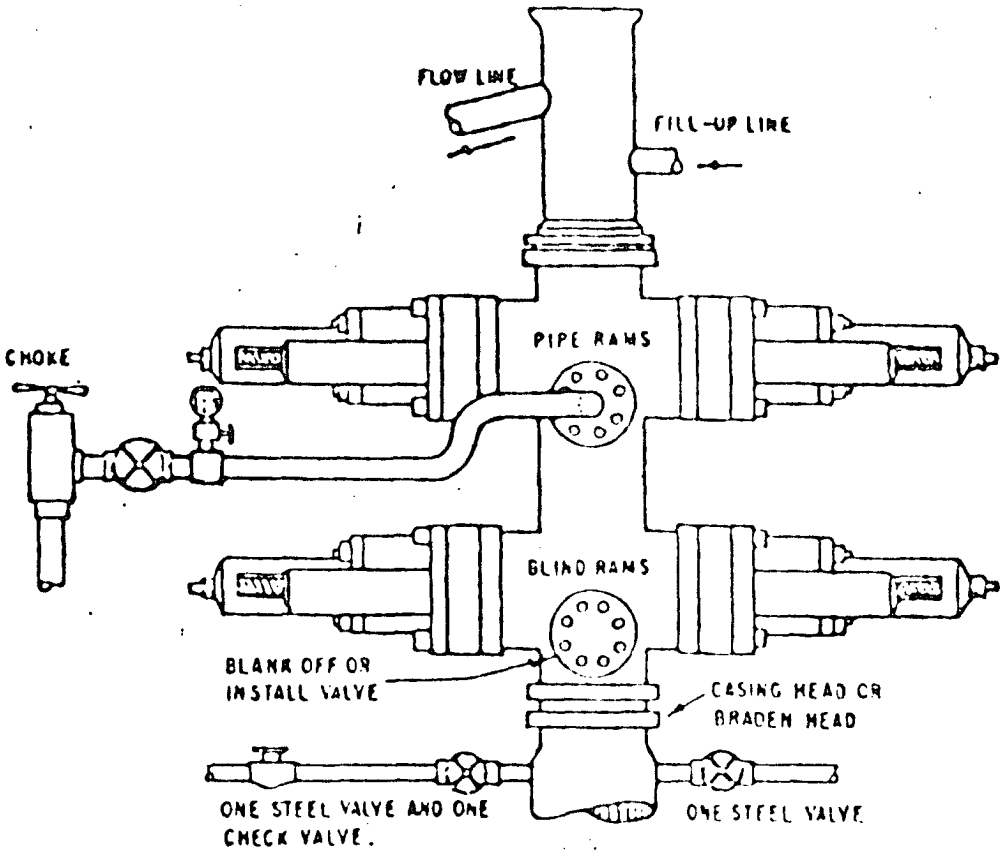

N
135'
100'
V-Door
Faces East
Trash
Pit
Burn
Pit
Working Pits
Substructure
Mud
Pumps
Hole
Light
Plant
Pipe
Racks
50'
100'
Trailer House
130'
120'

EXHIBIT C



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.'s.

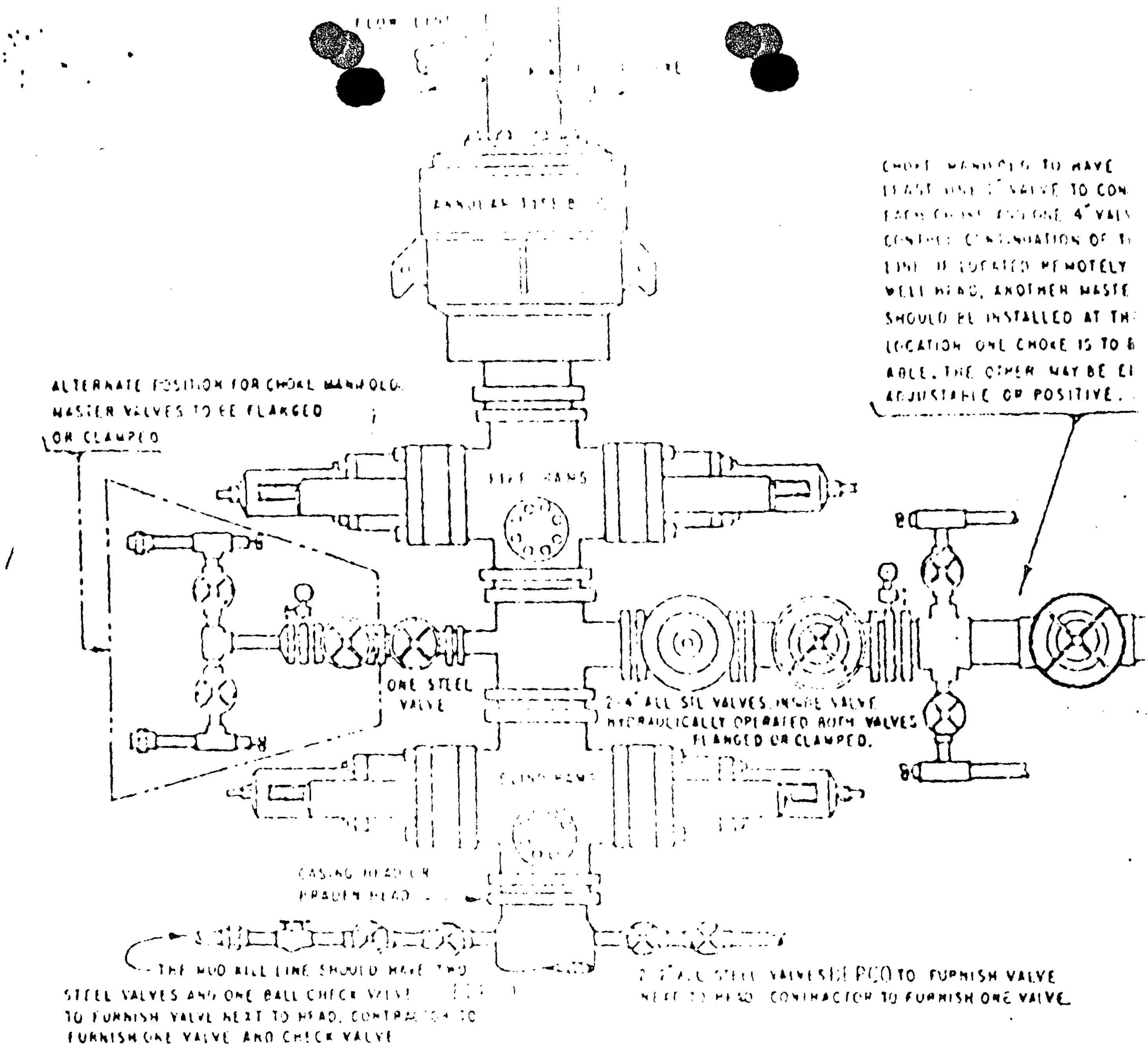
F. MANUAL CONTROLS TO BE INSTALLED BEFORE DRILLING CEMENT PLUG.

G. VALVE TO CONTROL FLOW THROUGH DRILL PIPE TO BE LOCATED ON RIG FLOOR.

H. CHOKE MAY BE EITHER POSITIVE OR ADJUSTABLE.

BEPCO II

ONE HYDRAULIC DUAL BLOWOUT PREVENTER



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. CONDITIONS MAY BE MET BY AN ANNULAR TYPE BLOWOUT PREVENTER ON TOP AND A CHOKE SPOOL BELOW AND EITHER
   (1) TWO RAM TYPE BLOWOUT PREVENTERS BELOW THE SPOOL, THE LOWER UNIT CONTAINING BLIND RAMS AND THE UPPER UNIT CONTAI[illegible] PIPE RAMS, OR
   (2) A DUAL BLOWOUT PREVENTER BELOW THE SPOOL WITH BLIND RAMS ON BOTTOM AND PIPE RAMS ON TOP.

B. OPENING ON CHOKE SPOOL TO BE FLANGED, STUDDED OR CLAMPED.

C. ALL CONNECTIONS FROM OPERATING MANIFOLDS TO PREVENTERS TO BE ALL STEEL HOSE OR TUBE A MINIMUM OF ONE INCH IN DIAMET[illegible]

D. THE AVAILABLE CLOSING PRESSURE SHALL BE AT LEAST [illegible] IN EXCESS OF THAT REQUIRED WITH SUFFICIENT VOLUME TO OPERATE TH[illegible]

E. ALL CONNECTIONS TO AND FROM PREVENTER TO HAVE A [illegible] RATING EQUIVALENT TO THAT OF THE B.O.P.'S.

F. MANUAL CONTROLS TO BE INSTALLED BEFORE [illegible]

G. KELLY COCK [illegible] INSTALLED ON KELLY

H. INSIDE BLOWOUT PREVENTER TO BE AVAILABLE ON R[illegible]

I. DUAL OPERATING CONTROLS ONE LOCATED BY DRILLERS POSITION AND THE OTHER LOCATED A SAFE DISTANCE FROM THE RIG FLOO[illegible]

[illegible] IV

THREE CLOSURE HYDRAULIC BLOWOUT PREVENTERS

ESTIMATED FORMATION TOPS

T/Rustler	1400'
B/Salt	3250'
T/Yates	3370'
T/Capital Reef	3550'
T/Delaware Sand	5600'
T/Bone Springs	8650'
T/Wolfcamp	11610'
T/Strawn	12800'
T/Atoka	13030'
T/Morrow Ls	13260'
T/Morrow Sd	13530'