

VISUAL WARNING SYSTEMS:

- A. High visibility Caution/Danger signs will be posted on roads providing direct access to the well location.
- B. Green, yellow, and red condition flags to be displayed to denote Normal Conditions, Potential Danger, and Danger, H2S Present.
- C. Wind socks to be located at the protection center and in the pit area to continuously indicate wind direction.

CIRCULATING MEDIUM:

- A. Drilling fluid to be conditioned to minimize the volume of H2S circulated to the surface,

SPECIAL WELL CONTROL EQUIPMENT:

- A. In addition to the normal BOP stack and choke manifold, a drilling head will be used to help control an H2S contaminated drilling fluid.

WELL TESTING:

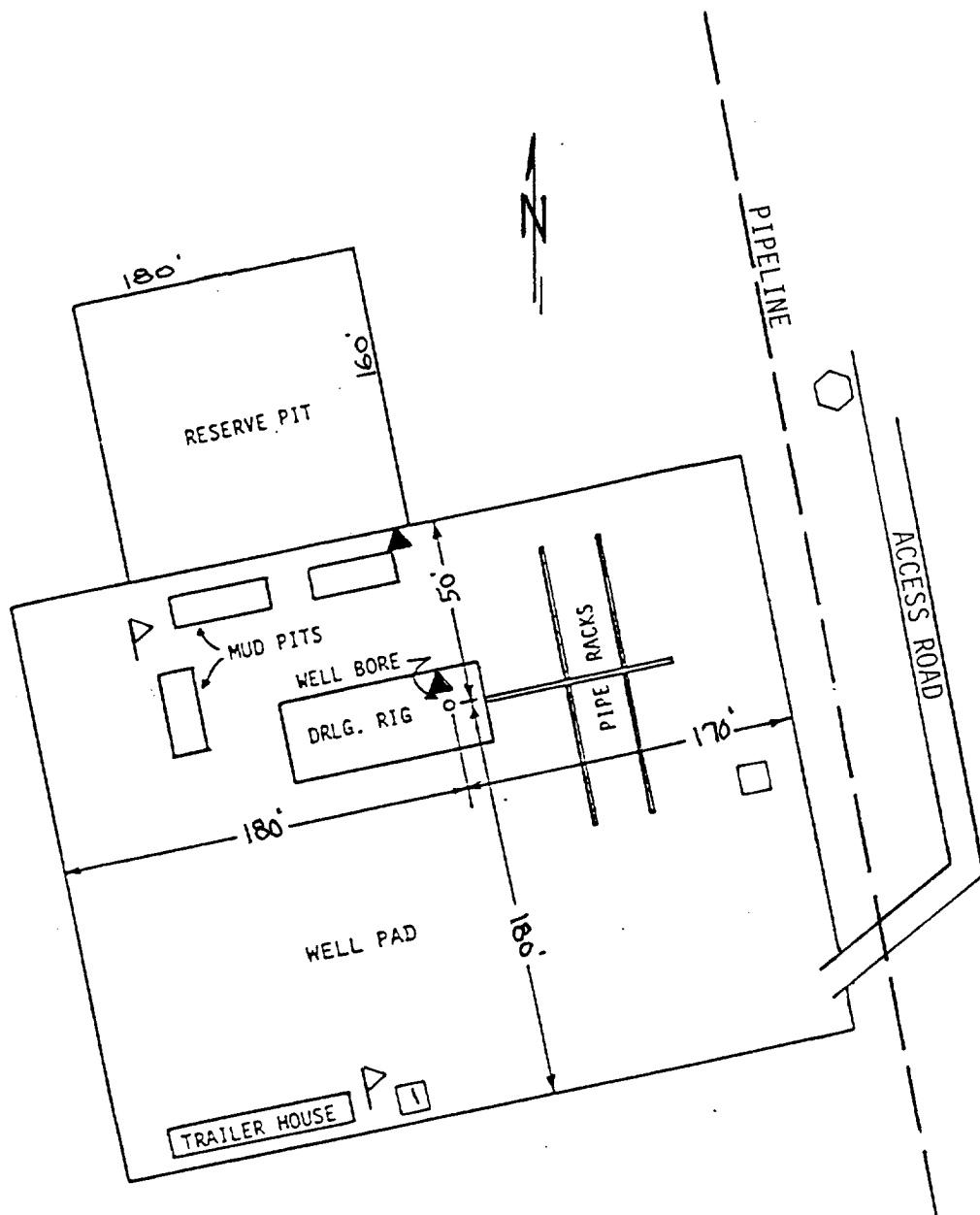
- A. Drill stem testing of zones known, or reasonably expected, to contain hydrogen sulfide in concentrations of 100 ppm or more will use the closed chamber method of testing.

COMMUNICATION:

- A. Radio communication will be available at the drilling rig and also in company vehicles.

ADDITIONAL INFORMATION:

- A. Additional information concerning Emergency Reaction Steps, Ignition Procedures, Training Requirements, and Emergency Equipment Requirements will be available on location at the well site.



LEGEND:

- ⬡ Caution/Danger Sign
- Briefing Area
- ▢ Briefing Area - Primary
- ▲ H2S Monitor
- ▷ Wind Sock

Prevailing Wind
Direction - Southwest

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN
DRILL SITE DIAGRAM

POGO PRODUCING COMPANY
SABER FEDERAL WELL NO. 1

SCALE: None

SURFACE USE AND OPERATIONS PLAN

FOR

POGO PRODUCING COMPANY
SABER FEDERAL WELL NO. 1
720' FNL & 2005' FEL SEC. 11, T. 17 S., R. 29 E.
EDDY COUNTY, NEW MEXICO

LOCATED: 4.5 miles northwest of Loco Hills, New Mexico.

FEDERAL LEASE NUMBER: NM-016786.

LEASE DATE: February 1, 1955. Lease is in producing status.

ACRES IN LEASE: 200.

SURFACE OWNERSHIP: Federal.

GRAZING PERMITTEE: Bogle Farms, Inc.
P. O. Drawer 460
Dexter, New Mexico 88230

POOL: Undesignated South Empire Morrow Gas.

POOL RULES: Statewide Rules. 320 acre spacing for deep gas.

EXHIBITS: A. Road Map
B. Plat Showing Existing Wells
C. Drilling Rig Layout
D. Topo Plat

1. EXISTING ROADS:

A. Exhibit "A" is a portion of a road map showing the location of the proposed well as staked. Point "A" on the plat is on US 82 at Milepost 128.9, approximately 3.2 miles west of Loco Hills, New Mexico, where Eddy County road 215 goes north. Also see Exhibit "D". To go to the proposed well site from this point, exit US 82 to the north and go 2.5 miles to where a caliche road goes west. There is an electric power line on the north side of this road. Turn west and go 0.4 mile to arrive at Marbob Energy's Raper Federal well No. 2. The proposed well site is 390 feet south of this well.

B. Exhibit "D" shows existing pertinent roads in the vicinity of the proposed well site. Existing roads are color coded.

2. PLANNED ACCESS ROAD:

A. Length and Width: The new road will be 12 feet wide and about 500 feet long. It is shown labeled and color coded red on Exhibit "D" and in more detail on Exhibit "C".

B. Surfacing Material: Caliche. Watered, compacted, and graded.

C. Maximum Grade: Approximately one percent.

D. Road Turnouts: Probable one.

E. Drainage Design: The new road will be crowned with drainage to the side.

F. Culverts: Not needed.

G. Cuts and Fills: Not necessary.

H. Gates and Cattle Guards: Not needed. No fences involved.

3. LOCATION OF EXISTING WELLS:

A. Existing wells in the area are shown on Exhibit "B".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. Necessary production facilities for this well will be located on the well pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is not planned that a water well will be drilled. Water necessary for drilling operations will be purchased and trucked to the well site, or will be moved to the well site by temporary pipeline laid on the ground alongside existing and proposed roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche needed for construction work will be taken, if present, from a pit opened on-site within the archaeologically cleared work area adjacent to the reserve pit. Otherwise, caliche will be taken from an existing pit located on Federal land in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 14, T.17 S., R.29 E., Eddy County, New Mexico, and will be trucked to the well site over existing and proposed roads.

7. METHODS OF HANDLING WASTE MATERIAL:

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

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

C. Water produced during tests will be disposed of in the drilling pits or will be stored in tanks for disposal in an approved disposal system.

D. Oil produced during tests will be stored in test tanks until sold.

E. All trash, junk, and other waste material will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary land fill.

8. ANCILLARY FACILITIES:

A. None necessary.

9. WELL SITE LAYOUT:

A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, and reserve pit, and the location of major rig components.

B. There is an existing pipeline 195 feet east of the proposed well bore

as shown on Exhibit "C". The well pad is to be oriented parallel to the pipeline, as shown, and will be no less than 25 feet from the pipeline.

C. The surface flow line serving Marbob Energy's Raper Federal well No. 2 is about 95 feet west of the proposed well bore. Marbob has been contacted and has no objection to the flow line being re-routed to be clear of the well pad and reserve pit area.

D. The pad and pit area is staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location will be cleaned of all trash and junk to leave the well site in an as aesthetically pleasing condition as possible.

B. Any unguarded pits containing fluids will be fenced until the pits are dry.

C. After abandonment, all equipment, trash and junk will be removed and the well site will be cleaned. Any special rehabilitation and/or special revegetation requirements of the surface management agency will be complied with and will be accomplished as rapidly as possible.

11. OTHER INFORMATION:

A. Topography: The land surface in the area is undulating and hummocky. In the immediate area of the well site, land slope is to the southwest.

B. Soil: Top soil at the well site is sand.

C. Flora and Fauna: The vegetative cover is moderate and includes mesquite, shinnery oak, sand sage, yucca, weeds, and range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove and quail.

D. Ponds and Streams: There are no rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures: There are no occupied dwellings or other structures within a mile of the proposed well site.

F. Archaeological, Historical, and Cultural Sites: None observed in the area. However, an archaeological reconnaissance is to be accomplished and a report furnished.

G. Land Use: Grazing and wildlife habitat.

H. Surface Ownership: Federal.

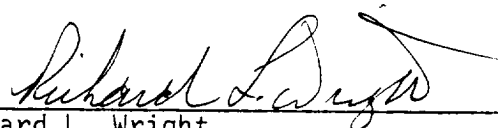
12. OPERATOR'S REPRESENTATIVE:

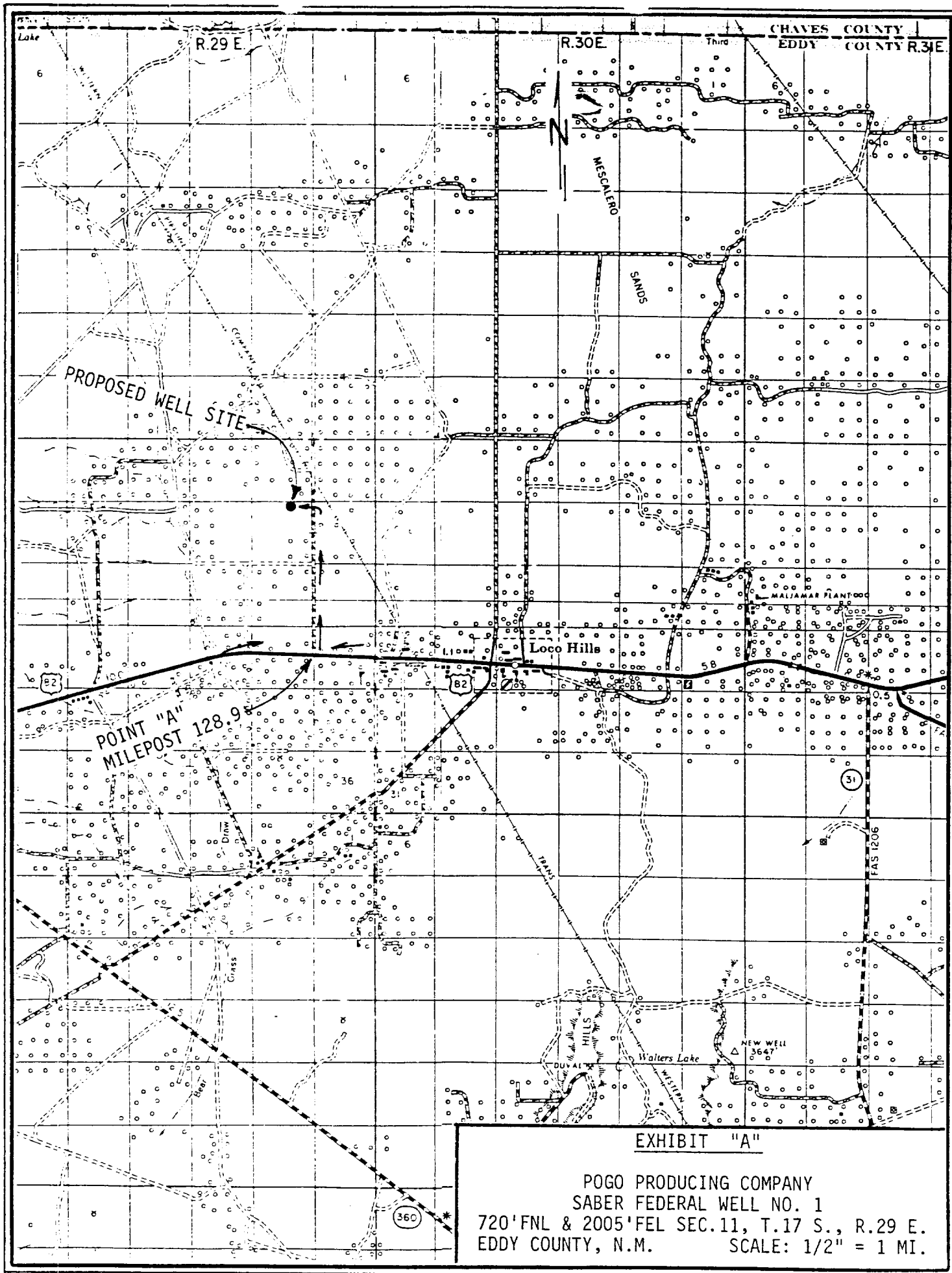
Richard L. Wright
Division Operations Manager
Pogo Producing Company
P. O. Box 10340
Midland, Texas 79702
Office Phone: 915-682-6822

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 currently 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 Pogo Producing Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

February 1, 1994
Date:


Richard L. Wright
Division Operations Manager





MARBOB RAPER FED. NO. 2
330' FNL & 1980' FEL
SEC. 11, T. 17 S., R. 29 E.

MARBOB FLOW LINE

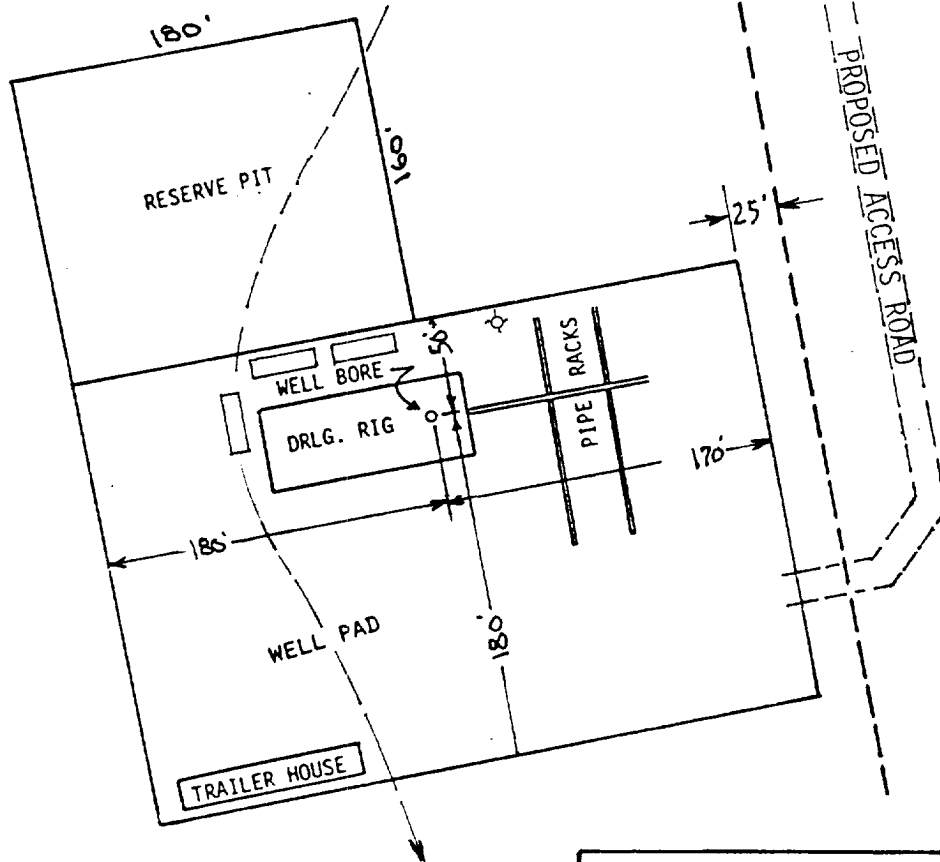


EXHIBIT "C"

POGO PRODUCING COMPANY
SABER FEDERAL WELL NO. 1

DRILLING RIG LAYOUT
Scale: 1" = 100'

