

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN
(Attached to Form 3160-3)

Mewbourne Oil Company
Santo Nino "29" Federal #1
Lease # NM-27279
Unit Letter "E"
510' FWL & 1980' FNL
Section 29 - T18S - R30E
Eddy County, New Mexico

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I. 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 on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S).
2. The proper use of personal protective equipment and life support systems.
3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- A. The effects of H_2S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
- B. Corrective action and shut-in procedures, blowout prevention, and well control procedures when drilling a well.
- C. The contents and requirements of the H_2S Drilling Operations Plan.

There will be an initial training session just prior to encountering a known H_2S zone. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan.

II. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational before drilling out from under intermediate casing.

1. Well Control Equipment:

- A. Flare line with diesel fueled igniter or continuous propane pilot.
- B. Choke manifold with a minimum of one adjustable choke.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment to include annular preventer and rotating head.

2. Protective Equipment for Essential Personnel:

- A. Mark II Surviveair 30 minute unit or equivalent located at briefing area as indicated on well site diagram.

3. H₂S Detection and Monitoring Equipment:

- A. Two portable H₂S monitors positioned on location for best coverage and response. These units have audible sirens when H₂S levels of 20 ppm are reached.

4. Visual Warning Systems:

- A. Wind direction indicators as shown on well site diagram.
- B. Caution/Danger signs will be posted on roads providing direct access to location. Signs will be painted a high visibility color with lettering of sufficient size to be readable at at reasonable distance from the immediate location.

5. Mud Program:

- A. The mud program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H₂S scavengers will minimize hazards while drilling the well.

6. Metallurgy:

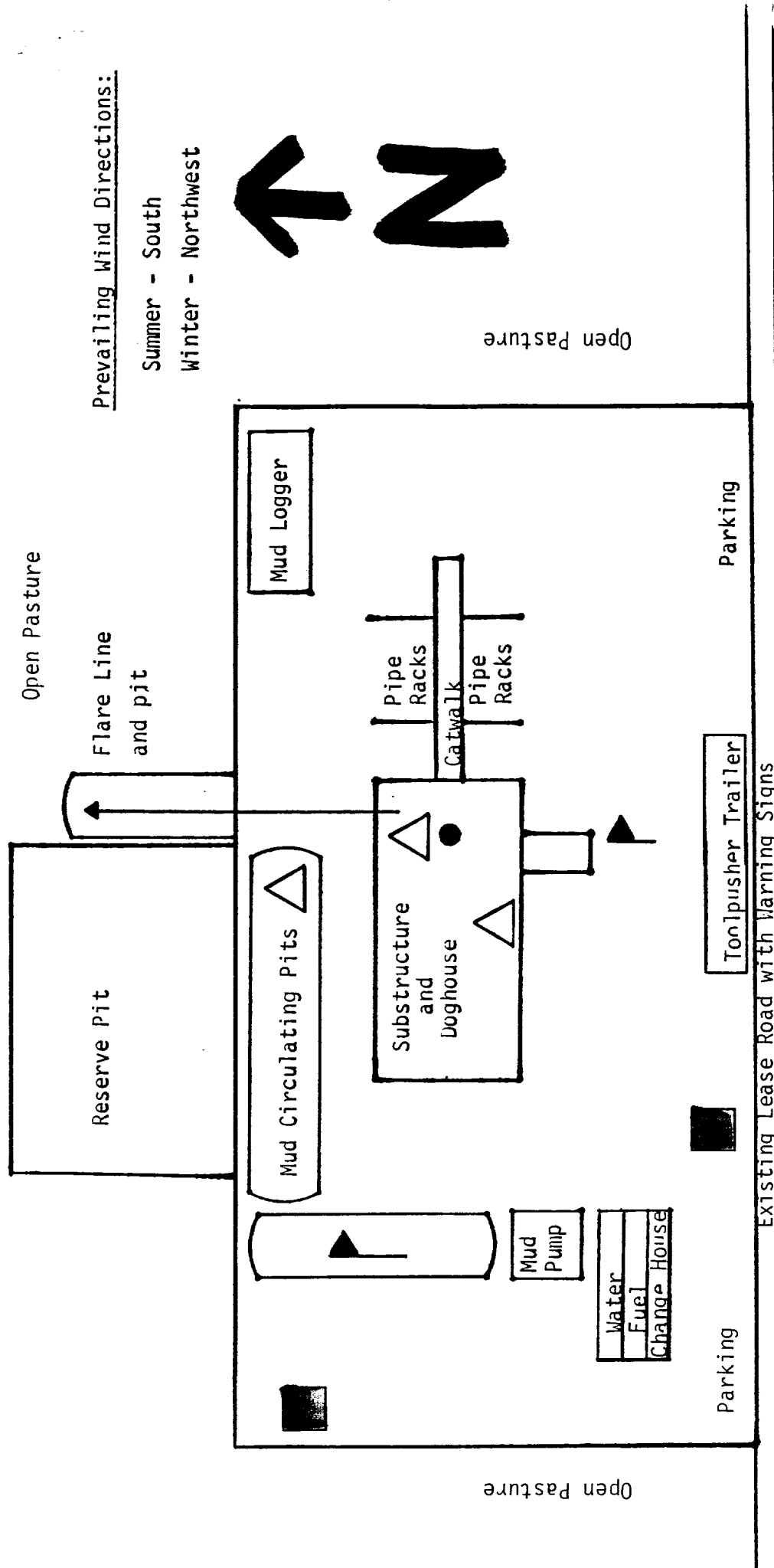
- A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines choke manifold and lines, and valves shall be suitable for H₂S service when chemically treated.

7. Communications:

- A. Communications in company vehicles, mud logging trailer, and toolpushers vehicle may be cellular telephone or two way radio.

8. Well Testing:

Drill Stem testing is not anticipated in this well. If a DST is required, it will be conducted with a minimum number of personnel in the immediate vicinity which are necessary to conduct the test. The test will be conducted during daylight hours only.



△ --- H₂S Monitors with alarms at the bell nipple and shale shaker

--- Wind Direction Indicators

--- Safe briefing areas with caution signs and protective breathing equipment. Minimum distance from wellhead is 100 feet. T in box indicates primary area.

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Drilling Pad Layout Configured for H₂S.