

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER IN-FILL WELL

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

SOCORRO PETROLEUM COMPANY

Ph. 505-677-3223

3. ADDRESS AND TELEPHONE NO.

P.O. Box 37

Loco Hills, New Mexico 88255

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

At surface

1335' FNL, 2555' FEL, Sec. 9, T. 17S., R. 31E.

At proposed prod. zone

Same

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

6.1 Air miles northeast of Loco Hills, New Mexico

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

1335'

16. NO. OF ACRES IN LEASE

1919.88 Ac.

18. DISTANCE FROM PROPOSED LOCATION*

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

900'±

19. PROPOSED DEPTH

4900'

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

3890.8 GL

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8" J-55	24.0#	560'	460± sx Class C (Circ)
7-7/8"	5-1/2" J-55	17.0#	4900'	1000± sx Class C (See Stipulations)

Propose to drill to about 4900' and complete as an in-fill non-standard Grayburg producer. State approval of the unorthodox location is pending. Set 5-1/2" production casing to TD, cemented with sufficient cement to isolate porous zones. Selectively perforate favorable Grayburg zones.

Run 2-7/8" tubing to perforations and treat formation with 15% HCL. Sand-frac formation and test to tanks.

See attached Drilling Data and Surface Use Plan.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

Location is
Subject to
Like Approval
by State

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen, 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

JERRY W. LONG

TITLE Permit Agent

DATE 1/12/93

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

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:

APPROVED BY (ORIG. SGN.) RICHARD L. MANUS TITLE AREA MANAGER

DATE

JUN 17 1993

*See Instructions On Reverse Side

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

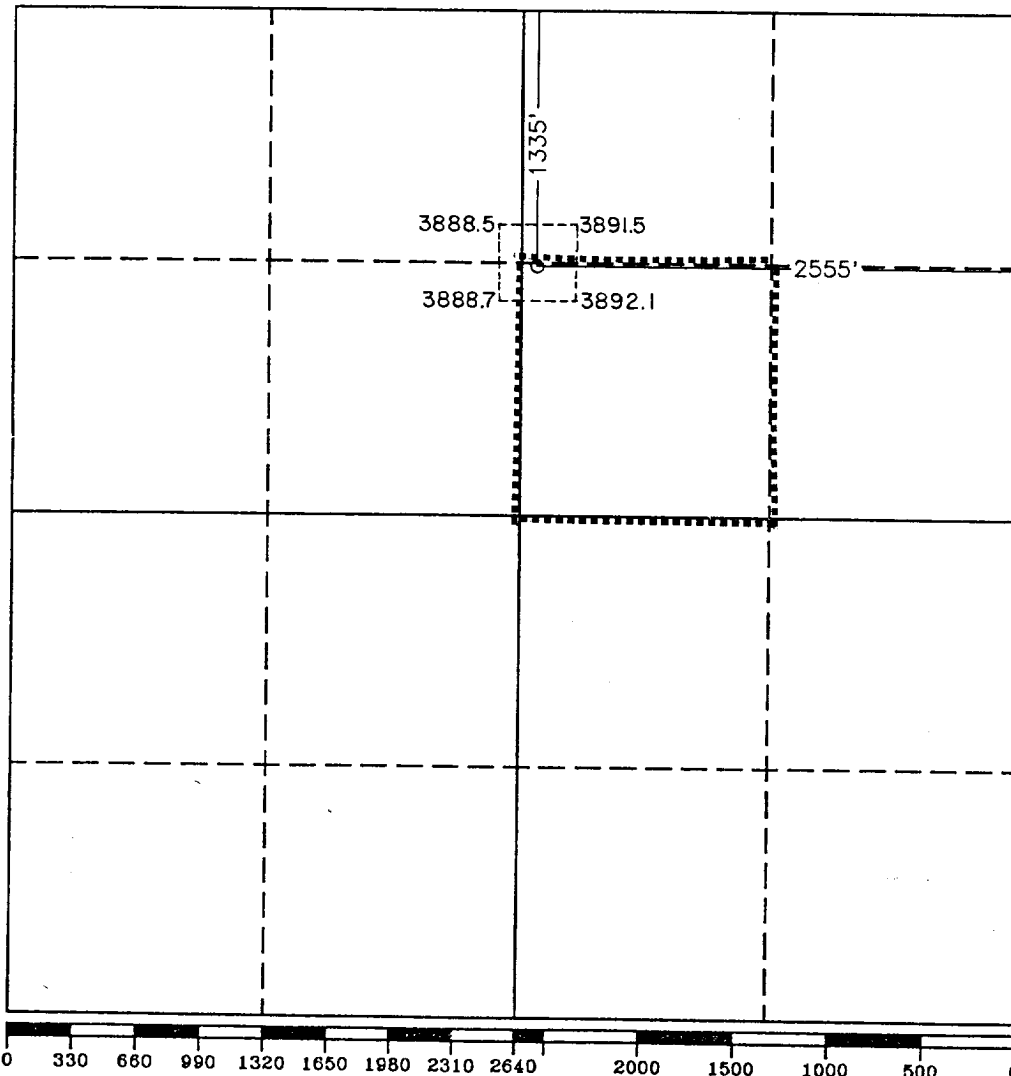
All Distances must be from the outer boundaries of the section

Operator SOCORRO PETROLEUM COMPANY			Lease H. E. WEST "B"		Well No. 63
Unit Letter G	Section 9	Township 17 SOUTH	Range 31 EAST	NMPM	County EDDY
Actual Footage Location of Well: 1335 feet from the NORTH line and 2555 feet from the EAST line					
Ground Level Elev. 3890.8	Producing Formation Grayburg-San Andres	Pool Grayburg-Jackson Pool		Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
Single Lease
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation NA

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

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



OPERATOR CERTIFICATION

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

Signature
Jerry W. Long
Printed Name
JERRY W. LONG
Position
Permit Agent
Company
SOCORRO PETROLEUM CO.
Date
1/12/93

SURVEYOR CERTIFICATION

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
DECEMBER 10, 1992
Signature & Seal of
Professional Surveyor

GARY L. JONES
NEW MEXICO
Professional Surveyor
Certificate No. 1878
JAN V. WEST, 878
RONALD EDSON, 8239
GARY L. JONES, 7977

PERTINENT INFORMATION

For

SOCORRO PETROLEUM COMPANY
No.63 H.E. West "B"
SWNE Sec.9-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B

LOCATED: 6.1 air miles northeast of
Loco Hills, New Mexico

FEDERAL LEASE NUMBER: LC 029426-B

LEASE ISSUED: 20 Year Renewal, Eff. March 1, 1991 - HBP

ACRES IN LEASE: 1919.88 Ac.

RECORD LESSEE: Atlantic Richfield Company

BOND COVERAGE: Alta Corporation Statewide Bond
(Includes Socorro Petroleum Company)

AUTHORITY TO OPERATE: Transfer of Operating Rights to Socorro

SURFACE OWNERSHIP: Federal

GRAZING PERMITTEE: Caswell Ranches
c/o Olane Caswell
P.O. Box 615
Meadow, Texas 79345

POOL RULES: Keel-West Waterflood Project

EXHIBITS: A. Road and Contour Map
B. Lease and Well Map
C. Drill Pad Layout
D. BOP Diagram
E. Flow Line/Power Map

SUPPLEMENTAL DRILLING DATA

SOCORRO PETROLEUM COMPANY
No.63 H.E. West "B"
SWNE Sec.9-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B

The following items supplement Form 3160-3 in accordance with instructions contained in Onshore Oil and Gas Order No.1:

1. SURFACE FORMATION: Recent

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

T. Salt	550'	Queen	2700'
B. Salt	1710'	Grayburg	3100'
Yates	1900'	San Andres	3500'
Seven Rivers	2100'		

3. ESTIMATED DEPTHS TO WATER, OIL OR GAS FORMATION:

Water - Possible groundwater from 0' to 300'

Oil - 2000' to TD

Gas - None anticipated

4. PROPOSED CASING PROGRAM:

8-5/8" Casing - Set 560' of 24#, J-55, Surface Casing
Cemented to surface with 460 sacks

5-1/2" Casing - Set 4900' of 17.0#, J-55, Production Casing
Cemented with 1000 sacks to isolate porosity zones.

All strings of casing will be satisfactorily tested to 1000 psi.

5. PRESSURE CONTROL EQUIPMENT: Install a 2M, Series 600, Type "E" Shaffer Double Hydraulic BOP on the 8-5/8" surface casing prior to drilling into the Queen. Due to depleted nature of the reservoir, it is requested that a waiver be granted to test pressure control equipment to 1000 psi. using rig pump, instead of the normal 2000 psi. test. Exhibit D is a diagramatic sketch of the BOP equipment.

6. CIRCULATING MEDIUM: Drill with fresh water from surface to setting depth of surface casing. Drill remainder of hole with brine water, using additives to control water loss, viscosity and mud weight.
7. AUXILIARY EQUIPMENT: Equipment will include a gas detector, pit level monitor and a full-opening safety valve.
8. TESTING, LOGGING AND CORING PROGRAM:
 - Samples: Samples will be caught at 10' intervals from below the surface casing to total depth.
 - DST and Cores: None anticipated
 - Logging: Density-Neutron log
Gamma Ray-Neutron log
9. ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE:
 - No abnormal pressures or temperatures anticipated.
 - Precautions will be taken to monitor possible traces hydrogen sulfide gas in the Grayburg.
10. ANTICIPATED STARTING DATE: Drilling will commence upon Federal and State approval. Drilling and completion will require about 30 days.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

SOCORRO PETROLEUM COMPANY
No.63 H.E. West "B"
SWNE Sec.9-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B

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 be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:

- A. Exhibit "A" is a portion of a road map showing the location of the proposed well as staked. The well is approximately 6.1 air miles northeast of Loco Hills, New Mexico.
- B. Directions: Go east from Loco Hills, N.M. on Hwy. 82 for a distance of 3.5 miles. Turn north on Skelly Road, which is County Road 221. Go 1.4 miles to caliche lease road. Follow lease road northeast and east a distance of 1.3 miles. Go 0.5 mile north. Turn east and go 1.5 miles on lease road to the No.47 well. Turn right (South) and go 0.3 Mi. The proposed well will be located about 600' east.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The new road will be about 600' long and about 12' wide.
- B. Surfacing Material: The new road and well pad will be surfaced with 6" of caliche.
- C. Maximum Grade: Less than 1%
- D. Turnouts: No traffic turnouts are necessary.
- E. Drainage Design: The road will be constructed with a 6" crown to provide proper drainage.

F. Culverts: None necessary

G. Cuts and Fills: Construction of the drill pad will require leveling of 6' sand dunes.

H. Gates, Cattle Guards: None necessary

3. LOCATION OF EXISTING WELLS:

A. See Exhibit B

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. The flow line for the No.63 well will be constructed beside the new road and then along the existing lease road to the H.E. WEST "B" No.2 battery, located in the NWNW of Sec.9. The flow line will be 2" steel pipe laid on the surface.

B. The power line will be constructed from the No.63 well, beside the new road, a distance of 500' to the existing lease power line. See EXHIBIT E.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. Fresh water for drilling from surface to 560' will be obtained from a commercial source and trucked over existing roads. Lease brine water will be used to finish drilling and completing.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for surfacing the road and pad will be purchased from a Federal pit located in the SESE Sec.5-17S-31E.

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 the pits are dry.

C. Water produced during test will be disposed of in the drilling pits. Oil produced during test 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, waste paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of the trash pit is shown on Exhibit "C".

F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required

9. WELL SITE LAYOUT:

A. The wellsite, surrounded by a 400' X 400' area has been surveyed and flagged.

B. Dimensions and relative location of the drill pad and pit are shown on Exhibit C.

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 cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing condition as possible.

B. Any unguarded pits containing fluids will be fenced until they are filled.

C. If the well is non-productive the disturbed area will be rehabilitated to surface owner requirements and will be accomplished as expeditiously as possible.

11. OTHER INFORMATION:

A. Topography: The wellsite and access road are flat, except for sand dunes. The project area generally drains south-west toward Cedar Lake Draw.

B. Soil: The surface soil is fine sand with occasional caliche and chert inclusions.

SOCORRO PETROLEUM COMPANY
No.63 H.E. West "B"
SWNE Sec.9-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B



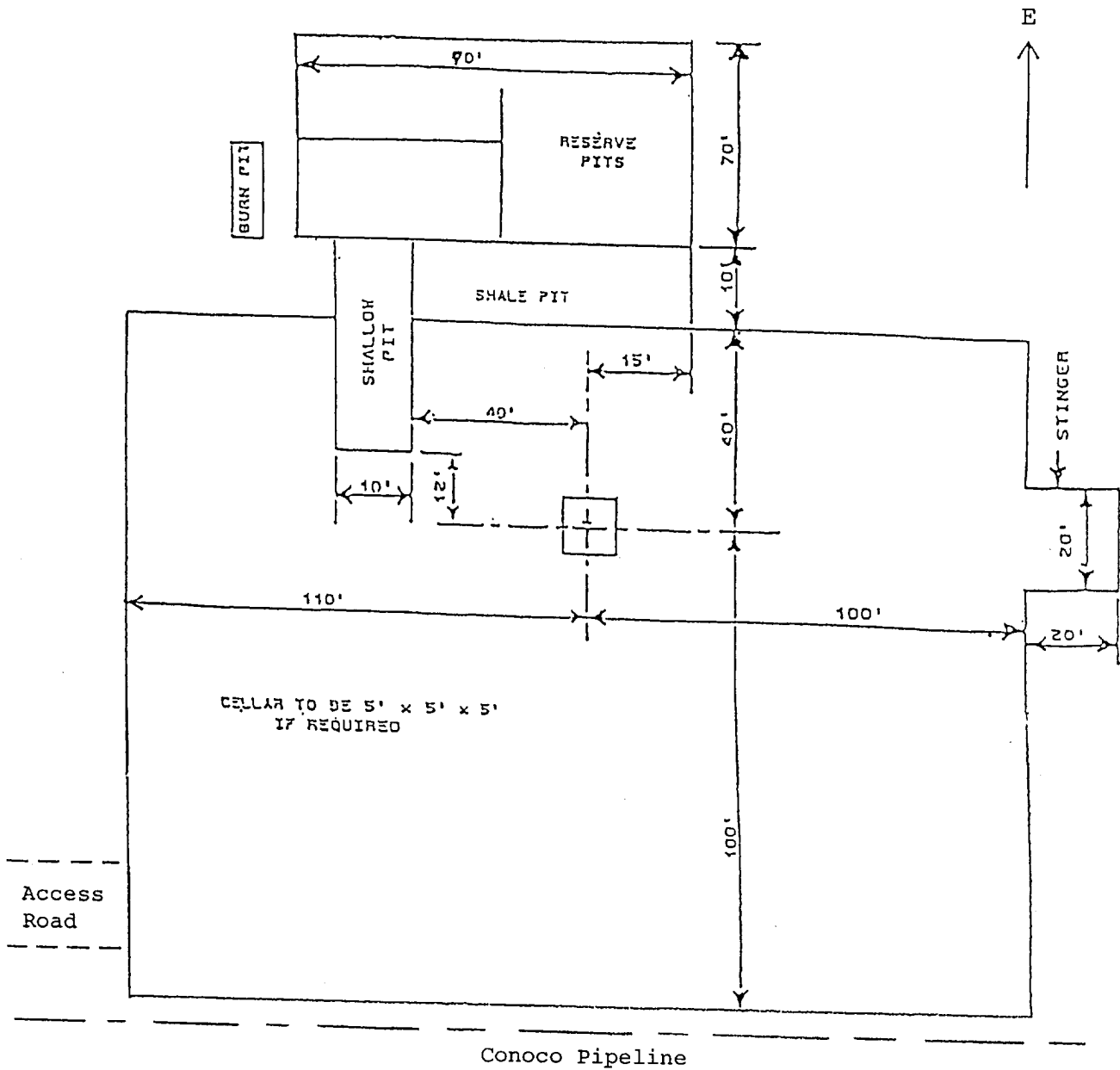
EXHIBIT A
ROAD AND CONTOUR MAP

SOCORRO PETROLEUM COMPANY
No.63 H.E. West "B"
SWNE Sec.9-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B



EXHIBIT B

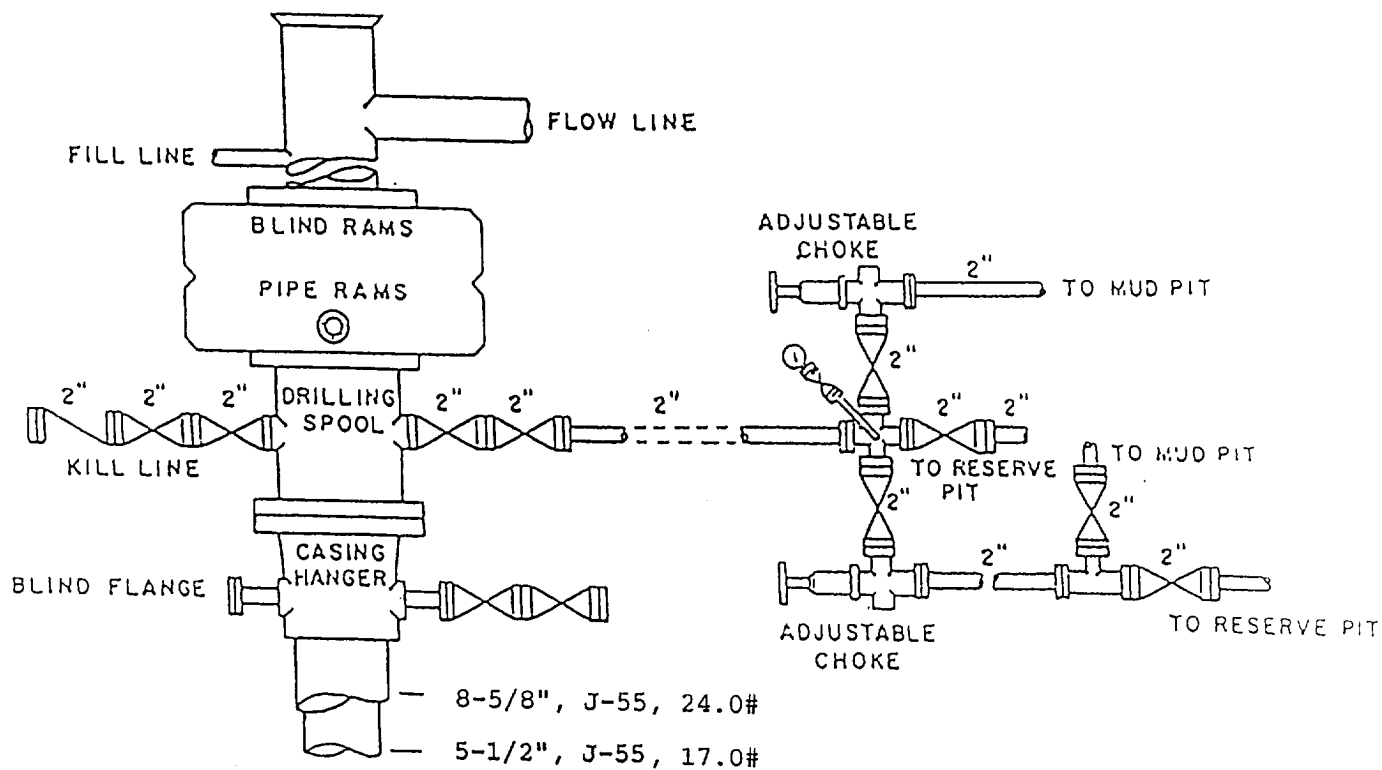
CORRO PETROLEUM COMPANY
No.63 H.E. West "B"
SWNE Sec.9-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B



DRILL PAD LAYOUT

EXHIBIT C

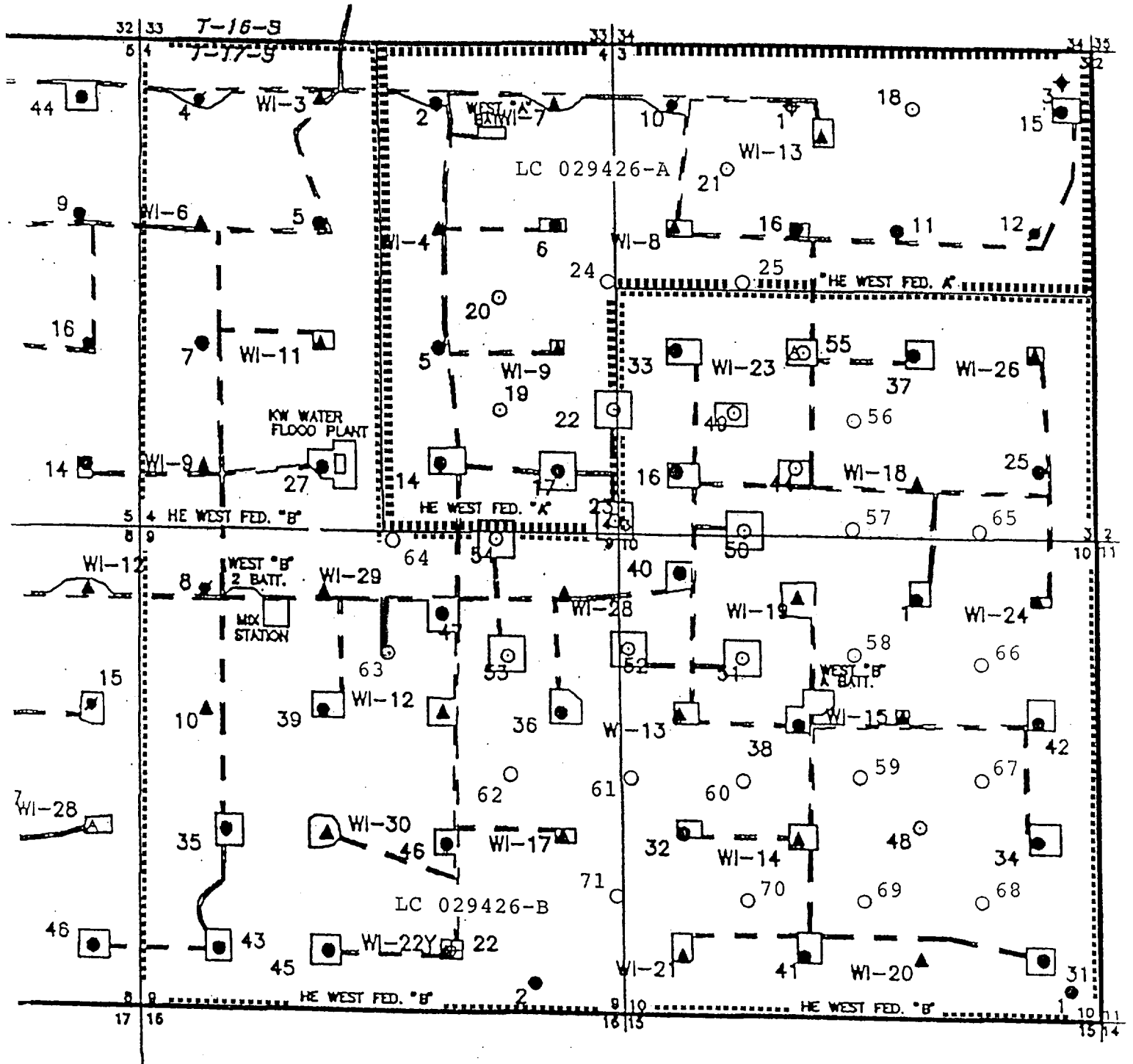
SOCORRO PETROLEUM COMPANY
 No.63 H.E. West "B"
 SWNE Sec.9-17S-31E
 Eddy County, N.M.
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BOP DIAGRAM

2000# Working Pressure
 Rams Operated Daily

SOCORRO PETROLEUM COMPANY
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Flow Line ———
 Power Line ———

EXHIBIT E

POWER LINE/FLOW LINE MAP

SOCORRO PETROLEUM COMPANY
KEEL-WEST WATERFLOOD

Drilling operations on the following wells will comply with this Hydrogen Sulfide Plan:

H.E. West "A" No.24 and No.25
H.E. West "B" No.56 thru No.71

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All personnel will receive training from a qualified instructor in the following areas 24 hours prior to drilling into a probable H2S zone on this well:

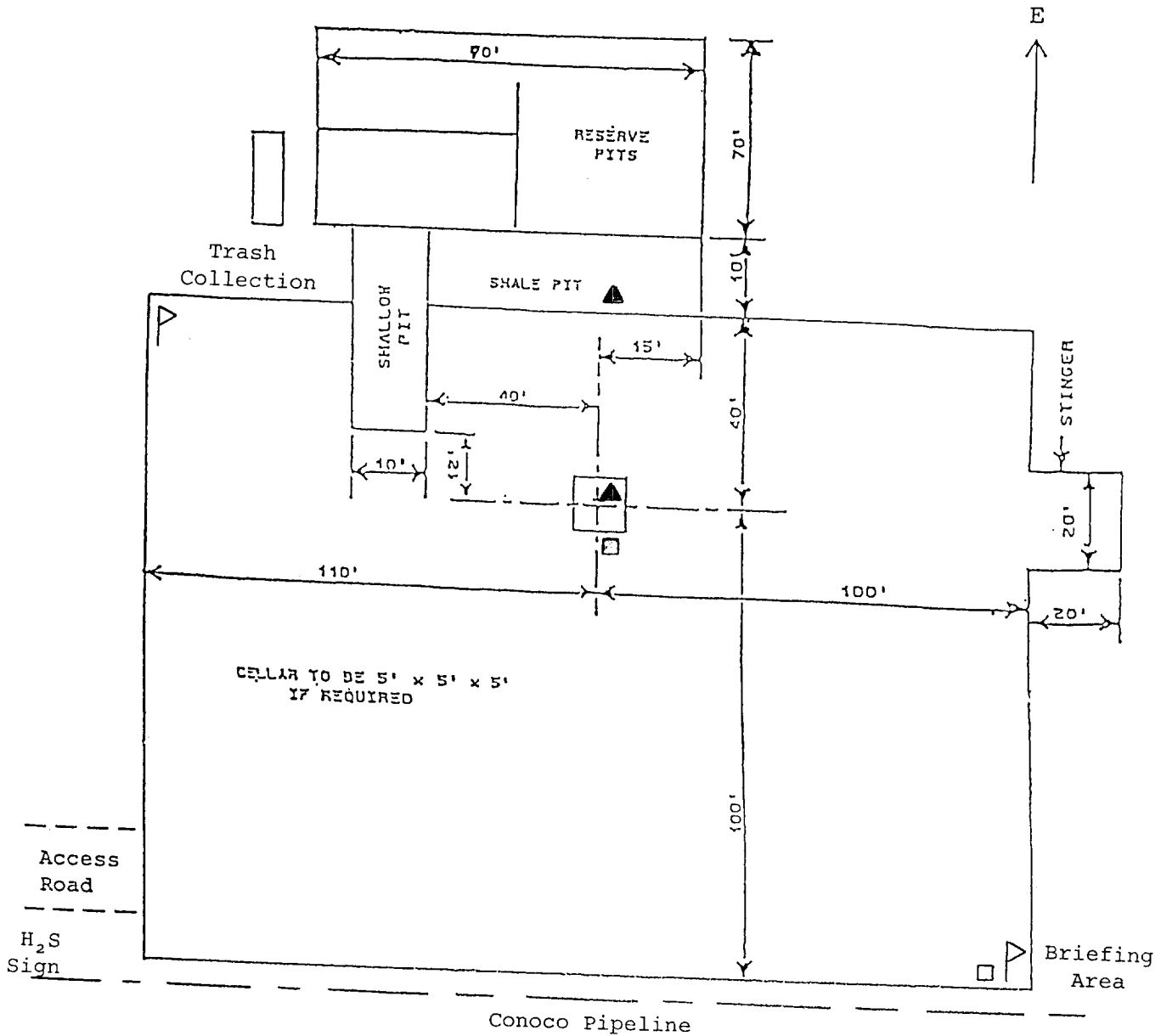
1. Hazards and characteristics of H2S.
2. Proper use of personal protective equipment.
3. Proper use of H2S detectors, warning systems, briefing areas and evacuation procedures.
4. A copy of this plan will be available at the well site.

II. H2S SAFETY EQUIPMENT

H2S equipment and systems will be installed and maintained by Indian Fire and Safety Company. The system will be operational 24 hours prior to drilling into a probable H2S zone.

1. Double-ram BOP and choke manifold will be installed prior to drilling the surface casing plug.
2. 30-minute Air Pack breathing equipment will be located at the doghouse and briefing area, as indicated on the rig plat.
3. Four 5-minute Air Packs will located on the rig floor.
4. H2S monitors with audible warning devices will be located on
5. Wind direction indicators will be located on opposite sides of the drill pad.
6. H2S Danger sign will be installed on the well access road.
7. Rig radio and/or mobile car phones will be available at all times.
8. Indian Fire and Safety Company will instruct each crew regarding use of the protective equipment.

GOCORRO PETROLEUM COMPANY
 No. 63 H.E. West "B"
 SWNE Sec. 9-17S-31E
 Eddy County, N.M.
 Federal Lease LC 029426-B



Prevailing Wind From Southwest

- ▲ H₂S Monitor
- ▢ Wind Indicator
- Protective Equipment

(REVISED)
DRILL PAD LAYOUT

EXHIBIT C