

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		APR 14 1993	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER IN-FILL WELL <input type="checkbox"/>		SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE <input type="checkbox"/>	
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 2625' FNL, 15' FWL, Sec. 10, T. 17S., R. 31E. At proposed prod. zone Same (Unit E) (SWNW)		5. LEASE DESIGNATION AND SERIAL NO. LC 029426-B	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 6.75 Air miles northeast of Loco Hills, New Mexico		6. IF INDIAN, ALLOTTEE OR TRIBE NAME ---	
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 2655'		7. UNIT AGREEMENT NAME Keel-West Waterflood Project	
18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 933'±		8. FARM OR LEASE NAME, WELL NO. H.E. West "B" No. 61	
16. NO. OF ACRES IN LEASE 1919.88 Ac.		9. AHWELL NO.	
19. PROPOSED DEPTH 4900'		10. FIELD AND POOL, OR WILDCAT Grayburg-Jackson Pool	
20. ROTARY OR CABLE TOOLS Rotary		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 10, T. 17S., R. 31E.	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3902.2 GL		12. COUNTY OR PARISH Eddy	
		13. STATE N.M.	
		22. APPROX. DATE WORK WILL START* As Soon As Possible	

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 (tie back)

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

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 1/4/93
(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. SGD.) RICHARD L. MANUS TITLE AREA MANAGER DATE 4/13/93

*See Instructions On Reverse Side

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

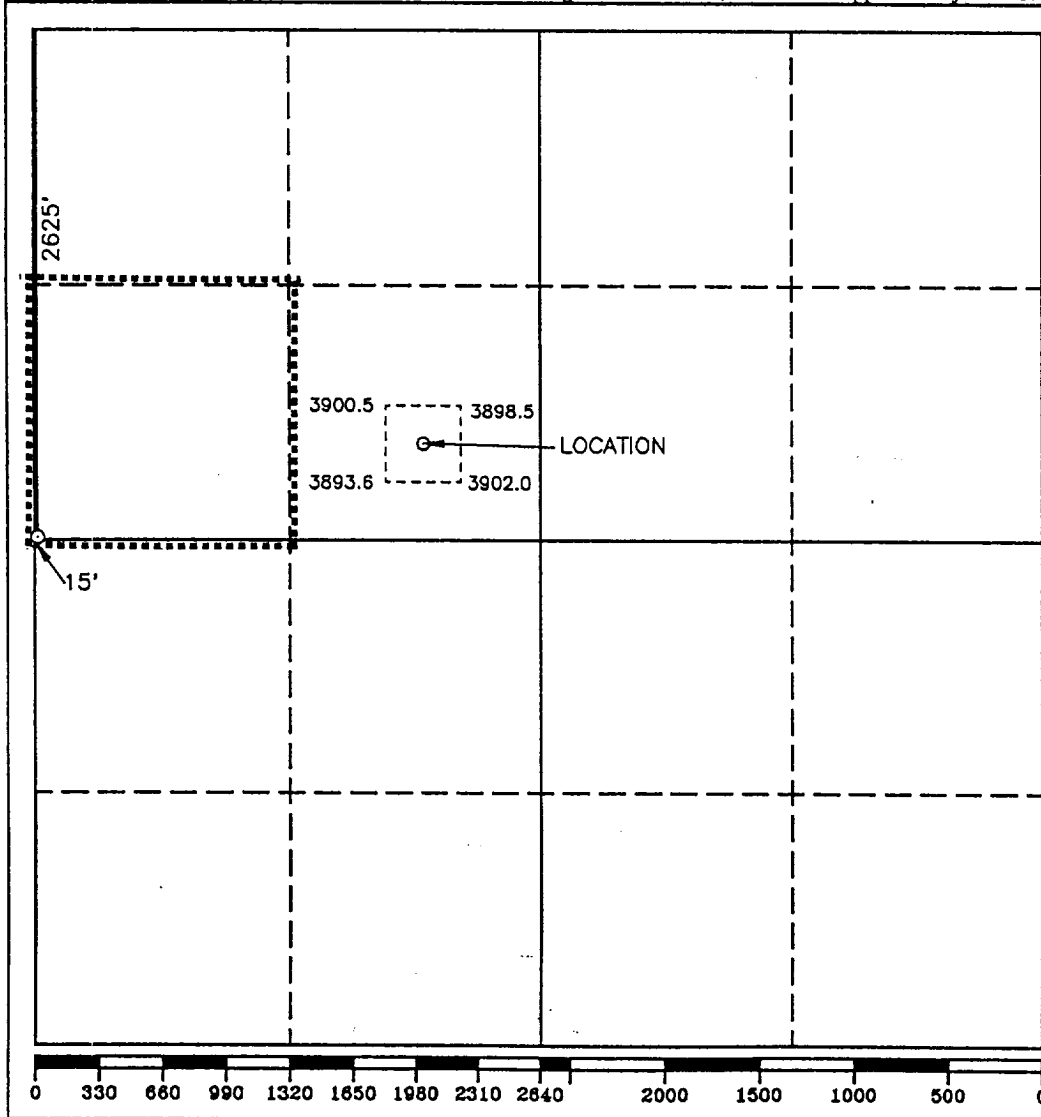
DISTRICT III
1000 Rio Brazos Rd., Artec, NM 87410

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. 61
Unit Letter E	Section 10	Township 17 SOUTH	Range 31 EAST	NMPM	County EDCY
Actual Footage Location of Well: 2625 feet from the NORTH line and 15 feet from the WEST line					
Ground Level Elev. 3902.2	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 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
1/4/93

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 11, 1992

Signature & Seal of
Professional Surveyor

[Signature]
GARV L. JONES
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
7977
Certificate No. 228 JOHN W. WEST, 676
RONALD J. EDSON, 2239
GARV L. JONES, 7977
92-11-1876

SUPPLEMENTAL DRILLING DATA

SOCORRO PETROLEUM COMPANY
No. 61 H.E. West "B"
SWNW Sec. 10-17S-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. (TIE BACK)

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 diagrammatic sketch of the BOP equipment.

OK

SJS

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.

PERTINENT INFORMATION

For

SOCORRO PETROLEUM COMPANY
No.61 H.E. West "B"
SWNW Sec.10-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B

LOCATED: 6.75 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

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

SOCORRO PETROLEUM COMPANY
No.61 H.E. West "B"
SWNW Sec.10-17S-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 6.75 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 2.2 miles on lease road to the No.40 well. Turn right (South) and go 0.25 Mi. The proposed well will be located about 900' southwest.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The new road will be about 800' 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 12' 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.61 well will be constructed beside the new road and then along the existing lease road to the H.E. WEST "B" No.4 battery, located in the SENW of Sec.10. The flow line will be 2" steel pipe laid on the surface.

B. The power line will be constructed from the No.61 well, beside the new road, a distance of 900' 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.

NOT
AUTHORIZED

(SJS)

- 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 southwest toward Cedar Lake Draw.
- B. Soil: The surface soil is fine sand with occasional caliche and chert inclusions.

- C. Flora and Fauna: Vegetation consists of oak shinners, mesquite, sagebrush, yucca, and various weeds and grasses. Ground cover is about 15%. Wildlife in the area is that typical of semi-arid desert land, such as coyotes, rodents, reptiles and birds.
- D. Ponds or Streams: None
- E. Residences and Other Structures: None in this area.
- F. Archaeological, Historical and Other Cultural Sites:
A review by Archaeological Survey Consultants indicated that there are no cultural sites within the project area. An Archaeological report has been furnished to BLM.
- G. Land Use: The surface is used for cattle grazing.
- H. Surface Ownership: The drillsite and access road are located on Federal surface. The grazing lessee is Caswell Ranches, P.O. Box 615, Meadows, Texas 79345.

12. OPERATOR'S REPRESENTATIVE:

Representative responsible for assuring compliance with the approved Surface Use Plan:

Mr. Robert Setzler
P.O. Box 37
Loco Hills, New Mexico 88255
Phone 505-677-2360

13. CERTIFICATION:

I hereby certify that I, or person under my direct supervision, have inspected the proposed drillsite 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; that the work associated with the operations proposed herein will be performed by SOCORRO PETROLEUM COMPANY and its 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.

1/4/93
Date:

Jerry W. Long
JERRY W. LONG, Permit Agent for:
SOCORRO PETROLEUM COMPANY

SOCORRO PETROLEUM COMPANY
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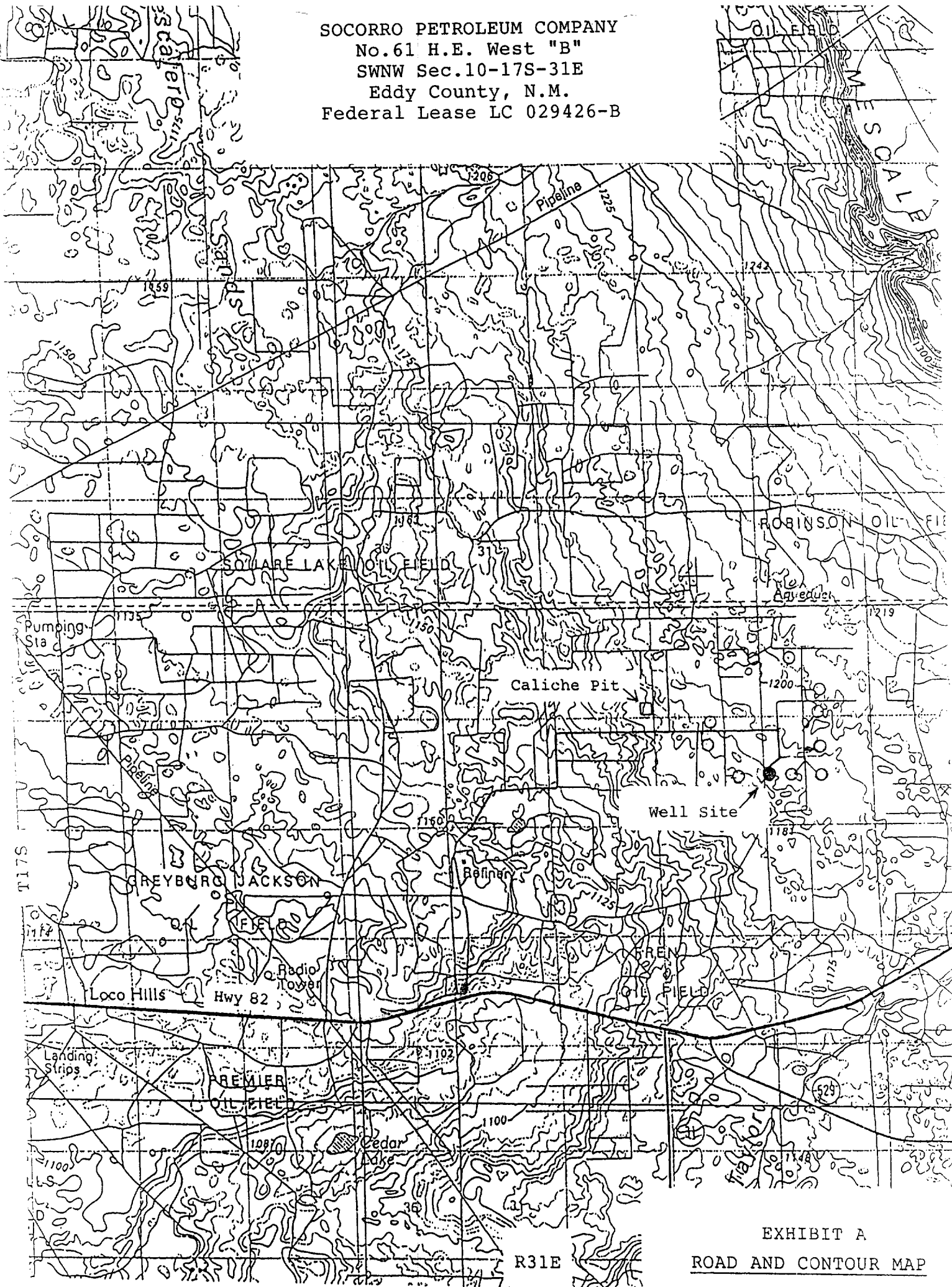
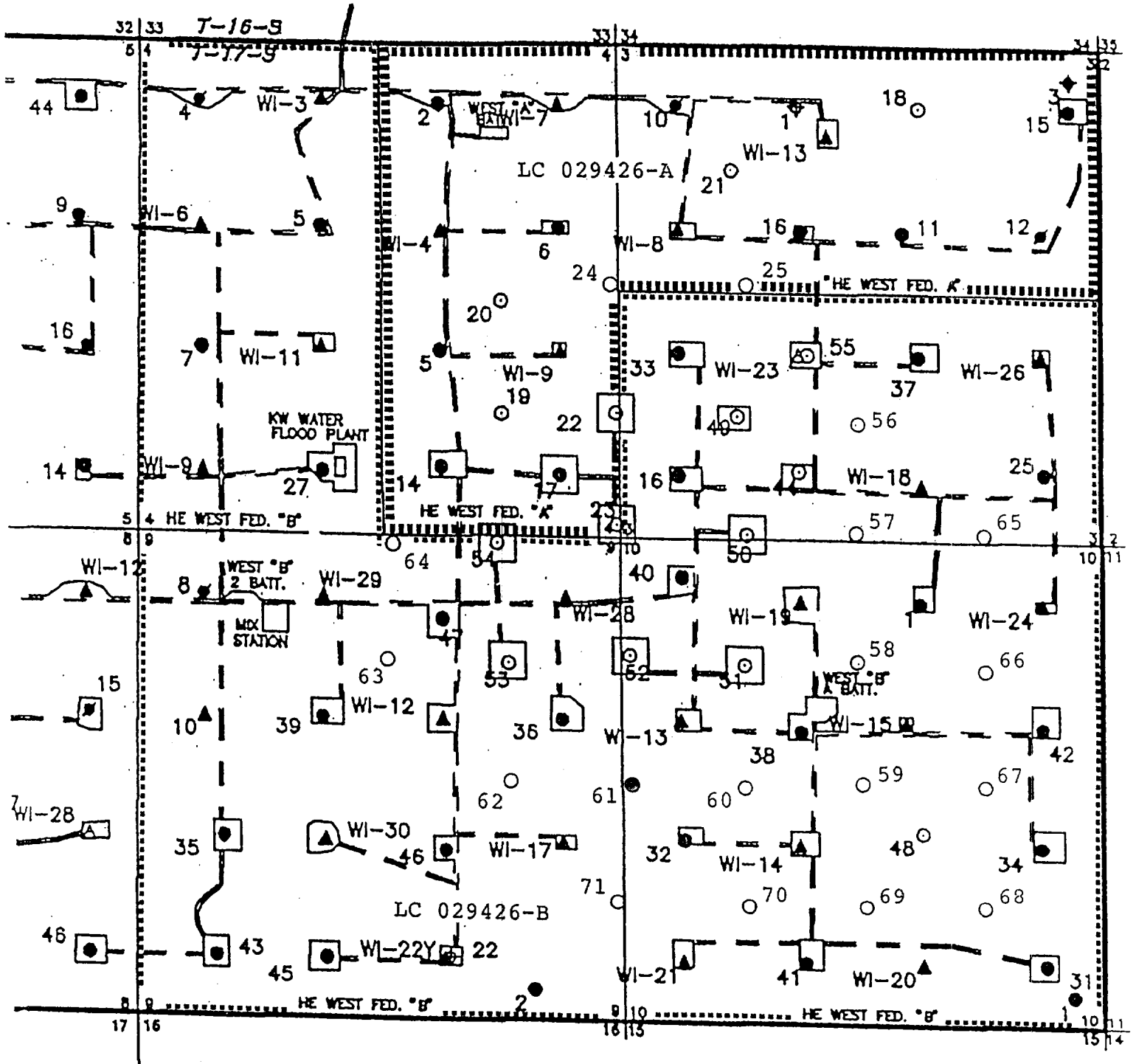


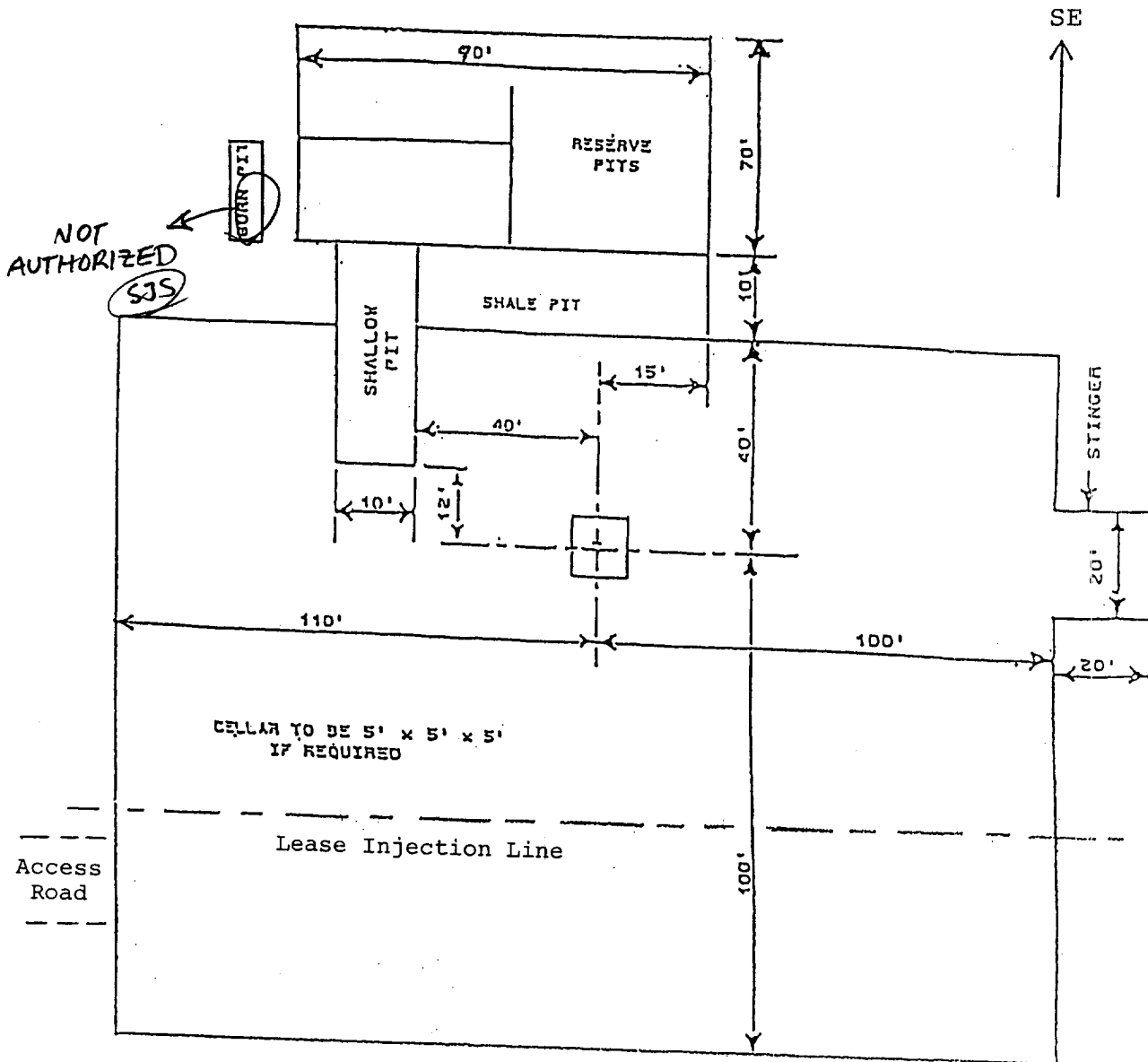
EXHIBIT A
ROAD AND CONTOUR MAP

SOCORRO PETROLEUM COMPANY
 No. 61 H.E. West "B"
 SWNW Sec. 10-17S-31E
 Eddy County, N.M.
 Federal Lease LC 029426-B



LEASE AND WELL MAP

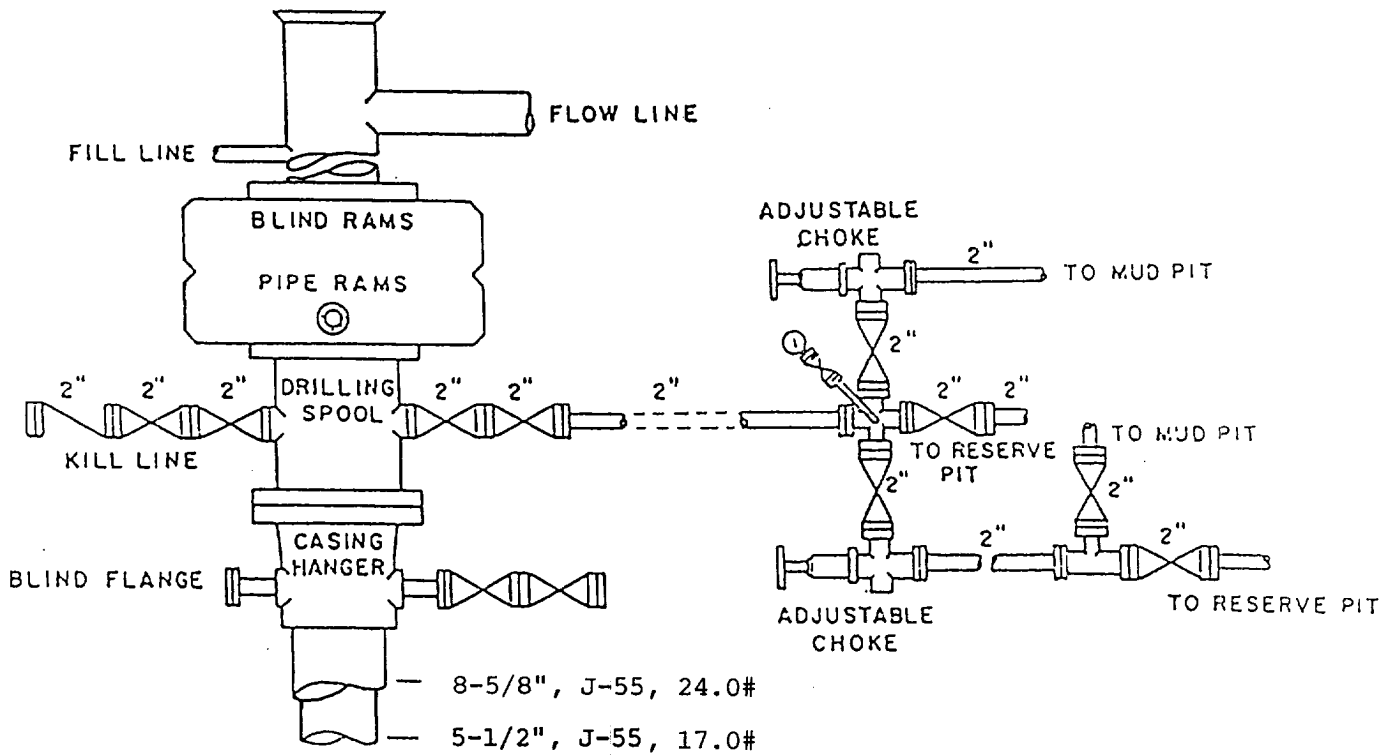
SOCORRO PETROLEUM COMPANY
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DRILL PAD LAYOUT

EXHIBIT C

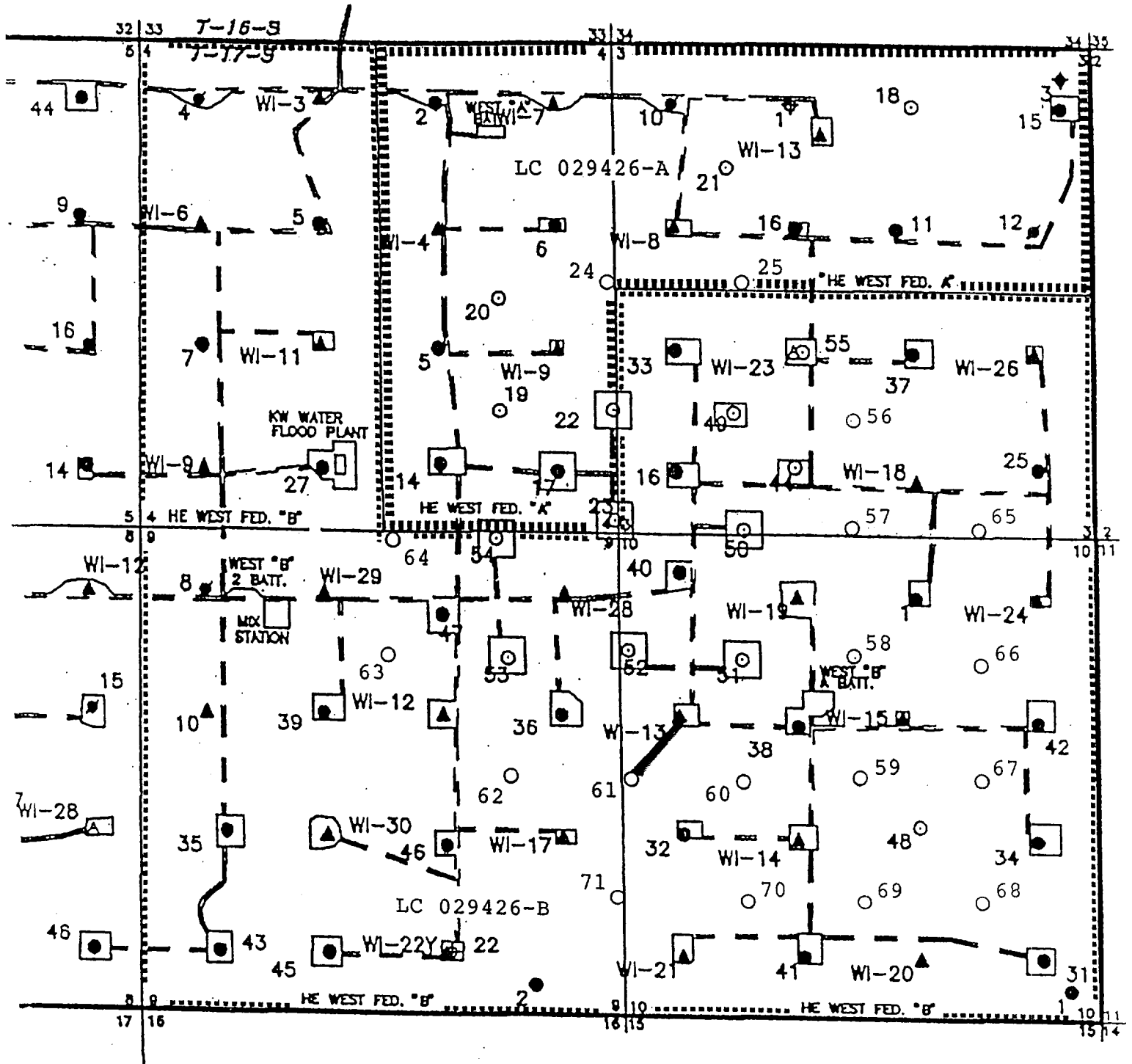
SOCORRO PETROLEUM COMPANY
No. 61 H.E. West "B"
SWNW Sec. 10-17S-31E
Eddy County, N.M.
Federal Lease LC 029426-B



BOP DIAGRAM

2000# Working Pressure
Rams Operated Daily

SOCORRO PETROLEUM COMPANY
 No.61 H.E. West "B"
 SWNW Sec.10-17S-31E
 Eddy County, N.M.
 Federal Lease LC 029426-B

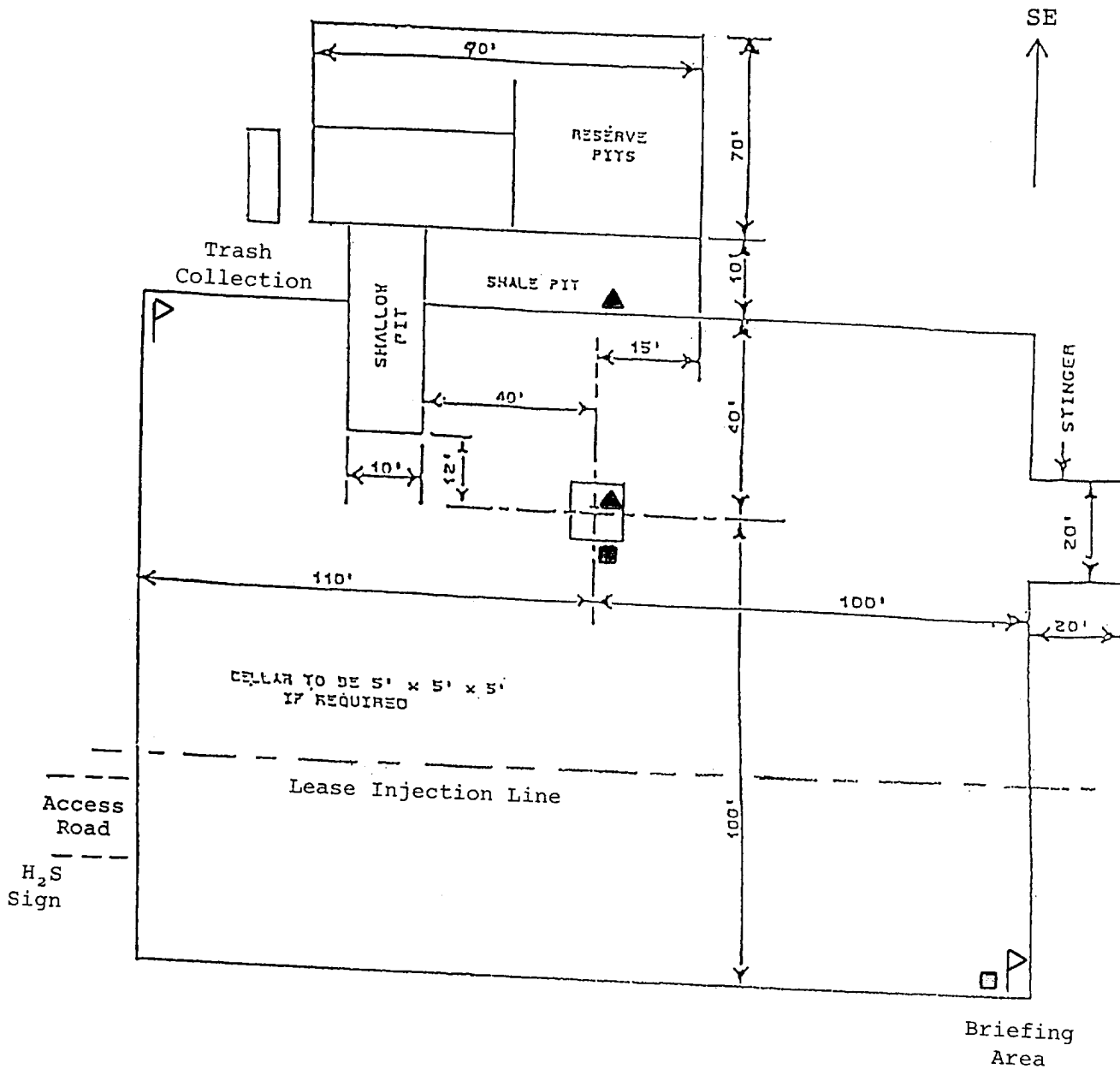


Flow Line - - - - -
 Power Line - - - - -

EXHIBIT E

POWER LINE/FLOW LINE MAP

SOCORRO PETROLEUM COMPANY
 No.61 H.E. West "B"
 SWNW Sec.10-17S-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