

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-005-60888

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Great Western Drilling Co.

(Ph. 915-682-5241)

3. ADDRESS OF OPERATOR

P. O. Box 1659, Midland, Texas 79702

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

At surface

660' FSL & 1980' FEL of Section

At proposed prod. zone

same

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

30 air miles north-northeast of Roswell, New Mexico

15. DISTANCE FROM PROPOSED*

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

660'

16. NO. OF ACRES IN LEASE

1759.06

17. NO. OF ACRES ASSIGNED
TO THIS WELL

177.5

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

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19. PROPOSED DEPTH

5200' Penn

20. ROTARY OR CABLE TOOLS

Rotary

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

3932' G.L.

22. APPROX. DATE WORK WILL START*

March 1, 1981 (Spud)

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48 #	450	475 Class "C" (Circ.)
*				
7 7/8"	4 1/2"	9.5#	5200	1000' above Abo Zone

RECEIVED

* If drilling problems are encountered in the lower San Andres, 7 7/8" hole will be reamed to 11" or 12 1/4" and 8 5/8" (24#) casing will be run to 1500' and cemented.

MAR 05 1981

Well will be drilled to the base of the Pennsylvanian formations and all potential zones will be evaluated. If commercial production is indicated, well will be selectively perforated and stimulated. Gas is not dedicated.

O. C. D.
ARTESIAL OFFICE

Attachments are:

1. Well Location & Acreage Dedication Plat
2. Ten-Point Supplemental Drilling Data
3. Surface Use Plan

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



TITLE

Agent

DATE 2-10-81

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

MAR 04 1981

CONDITIONS OF APPROVAL, IF ANY:

NSP must be approved
prior to producing the well.

*See Instructions On Reverse Side

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 Great Western Drilling Company		Lease Quail Federal		Well No. 1
Unit Letter 0	Section 3	Township 6 South	Range 25 East	County Chaves
Actual Footage Location of Well: 660 feet from the South line and 1980 feet from the East line				
Ground Level Elev. 3932	Producing Formation Pennsylvanian	Pool Undesignated	Dedicated Acreage: 177.50 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
All of fractional Section 3 is dedicated to the well.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). Federal Lease NM-15862 is only lease involved.
- 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.

Fractional Sec. 3, T.6S., R.25E. contains
only 177.50 acres.

CERTIFICATION

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

Name
James A. Knauf

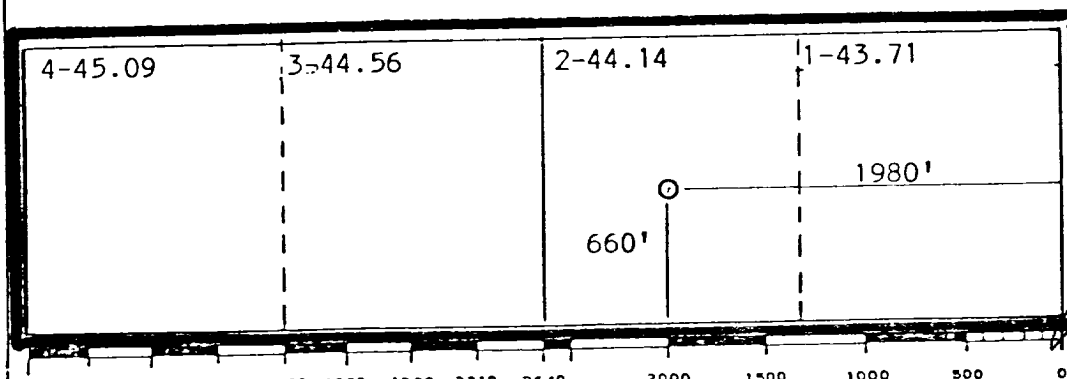
Position
Agent

Company
Great Western Drilling Co.

Date
2-10-81

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.

JOHN D. JAGUESS
NEW MEXICO
Date Surveyed
January 22, 1981
Registered Professional Engineer
and/or Land Surveyor
John D. Jaquess, P.E. & L.S.
Certificate No.
6290



SUPPLEMENTAL DRILLING DATA

GREAT WESTERN DRILLING COMPANY
WELL #1 QUAIL FEDERAL
660' FSL & 1980' FEL SEC 3-6S-25E
CHAVES COUNTY, NEW MEXICO

1. SURFACE FORMATION: Sandy alluvium (Artesia Group of Permian Age)

2. ESTIMATED GEOLOGIC TOPS:

San Andres	630'	Drinkard	3370'
Glorietta	1510'	Abo	3700'
Paddock	2560'	Wolfcamp	4485'
Blinebry	2860'	Pennsylvanian	4740'
Tubb	3160'	Mississippian	5300'

3. POSSIBLE WATER AND HYDROCARBON BEARING ZONES:

Water: 125 - 350'
Gas: 3740 - 3990'
Gas: 4750 - 4950'

4. PROPOSED CASING PROGRAM:

<u>Size</u>	<u>Interval</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>	<u>Condition</u>
13 3/8"	0 - 450'	48 #	H-40	STC	New
8 5/8"	0 - 1500'	24 #	K-55	STC	New
4 1/2"	0 - 5200'	9.5#	K-55	STC	New

5. PRESSURE CONTROL EQUIPMENT: Blowout preventer stack will consist of an annular-type preventer and a dual ram-type preventer with 2000 psi working pressure. A sketch of BOP is attached.

6. PROPOSED MUD PROGRAM:

0 - 450: Fresh water with gel and lime.
450 - 1500: Add lost circulation material as hole conditions dictate.
1500 - 3200: Add salt to bring weight up to 10-10.2#.
3200 - 3500: Bring fluid loss down to 15-20 cc.
3500 - 5200: Add Saltwater Gel or Sea Mud with Drispak (or starch, if warranted). MW 10-10.2#, Vis 35-40, WL 6-8.

7. AUXILIARY EQUIPMENT:

- A. Kelly cock will be kept in string.
- B. Full opening safety valve will be kept on rig floor in open position at all times.

8. TESTING, LOGGING AND CORING PROGRAMS:

- A. DST's: None planned.
- B. Coring: None planned.
- C. Logging: Compensated Neutron/Formation Density Log (O-TD)
Dual Laterolog (shoe-TD).

9. ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE GAS:

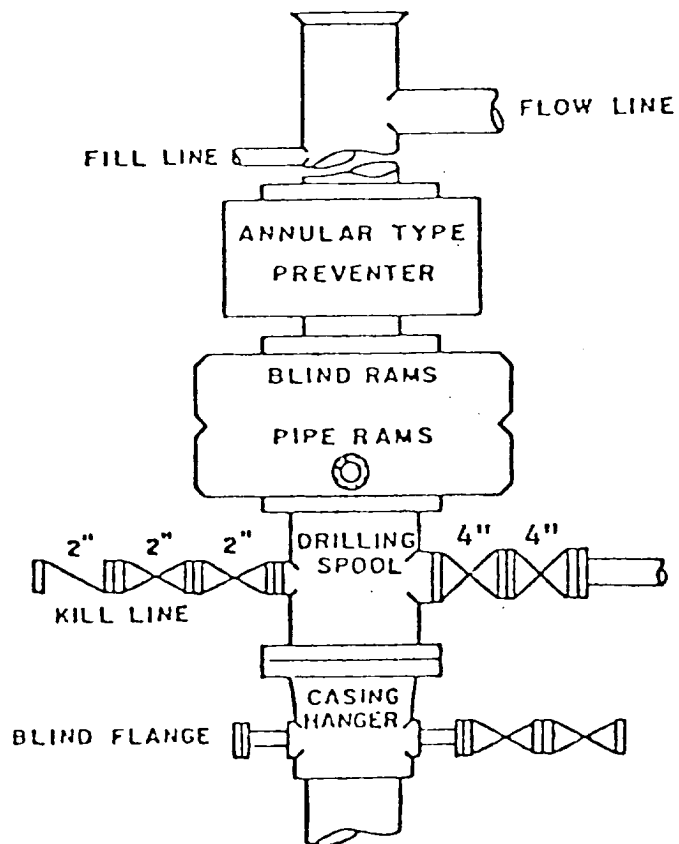
None anticipated.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

- A. Road and pad construction: February 25, 1981
- B. Spud well: March 1, 1981
- C. Duration of drilling and completion operations should be about 15-30 days.

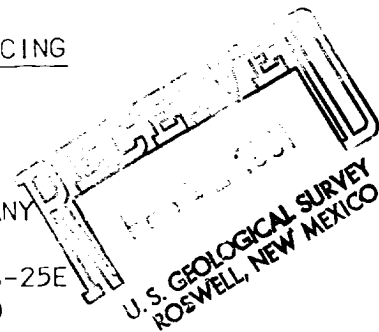
BLOWOUT PREVENTOR SKETCH

600 SERIES



SURFACE USE PLAN
FOR
DRILLING, COMPLETING AND PRODUCING

GREAT WESTERN DRILLING COMPANY
WELL #1 QUAIL FEDERAL
660' FSL & 1980' FEL Sec 3-6S-25E
CHAVES COUNTY, NEW MEXICO



LOCATED: 30 air miles north-northeast of Roswell, N. M.

FEDERAL LEASE NUMBER: NM-15862

LEASE ISSUED: 7-1-72 for a primary term of 10 years.

RECORD LESSEE: Great Western Drilling Co. (64.476%)
Davoil, Inc. (35.524%)

OPERATOR'S AUTHORITY: Record lessee and a Designation of Operator
from Davoil, Inc.

BOND COVERAGE: Lessees' \$150,000 Nationwide Bonds.

ACRES IN LEASE: 1759.06

SURFACE OWNERSHIP: Federal

GRAZING PERMITTEE: Brownson Corn
Dunlap Star Route
Roswell, New Mexico 88201

WELL SPACING: 320-acre (Undesignated area).

EXHIBITS:

- A. General Road Map
- B. Topographic Map
- C. Oil and Gas Map
- D. Sketch of Well Pad

ROAD LOG TO PROPOSED DRILLSITE

STARTING POINT is north of Roswell, N. M. on US-285 at Milepost-139.75. This point is 30.55 miles north of the intersection of US-285 and US-380 in Roswell.

- 0.00 Turn right (east) at cattleguard and follow main ranch road in an easterly direction for a distance of 7.90 miles to curve in road.
- 7.90 Bear to left (northeast) and follow main ranch road for a distance of 2.52 miles to the Mid-America Pipeline which runs northwest-southeast.
- 10.42 Turn right (southeast) and follow oilfield (pipeline) road in a southeasterly direction for a distance of 2.30 miles.
- 12.72 Turn right (west) and follow the two-track windmill road in a westerly direction for a distance of 0.38 miles.
- 13.10 Proposed new road starts at this point. Turn left (southwest) and proceed in a southwesterly direction for a distance of 0.33 miles to the southeast corner of the proposed well pad.
- 13.43 DRILLSITE (Well #1 Quail Federal).

THIRTEEN POINT PROGRAM

1. EXISTING ROADS:

- A. Existing roads, which lead to the proposed drillsite, are shown on Exhibits "A" & "B". The two-track windmill road from mileage 12.72 to mileage 13.10 on the road log will be upgraded with caliche or gravel.

2. PROPOSED NEW ACCESS ROAD:

- A. Dimensions: Proposed new road is shown on Exhibit "B" and will be 12' wide (20' ROW) and 0.33 miles in length. It will originate at mileage 13.10 on the road log and will terminate at the southeast corner of the proposed well pad. The center of the proposed new road has been staked and flagged.

- B. Surfacing Material: The new road will be surfaced with caliche or gravel.
- C. Maximum Grade: Less than one percent.
- D. Turnouts: One will be constructed at the start of the new road.
- E. Drainage Design: New road will be crowned with drainage to the side.
- F. Culverts: None required.
- G. Gates, Cattleguards: None required.

3. LOCATION OF EXISTING WELLS:

- A. Existing wells in the vicinity of the proposed drillsite are shown on Exhibit "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. There are no production facilities on the leasehold.
- B. If the well is productive, production and storage facilities will be located on the wellpad.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is not planned to drill a water supply well. Water for leasehold operations will be purchased from a commercial water hauler.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. Material for construction of the road and wellpad will be obtained from a pit located in the NE-NE 22-5S-24E or one in the NW-SE 7-6S-26E or from the access road or location itself. No surface materials will be disturbed except for those necessary for the actual grading and leveling the drillsite and access road.

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 tests will be disposed of in the drilling pits.
- D. Oil produced during tests will be produced into temporary test tanks.
- E. Trash, waste paper, garbage, and junk will be buried in a 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 "D".
- F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing each drilling and/or completion operation.

8. ANCILLARY FACILITIES:

- A. None anticipated.

9. WELLSITE LAYOUT:

- A. The wellsite has been surveyed, staked and flagged.
- B. The dimensions and relative location of the drill pad, mud pit, and trash pit with respect to the well bore are shown on Exhibit "D".
- C. The wellsite is nearly level and will hardly require any cut or fill.
- D. The well pad will be surfaced with caliche or gravel.

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 as aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.

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

11. OTHER INFORMATION:

- A. Topography: The land surface at the wellsite is nearly level. From an elevation of 3932 feet at the drillsite, the terrain slopes gently toward the east.
- B. Soil: Loam.
- C. Flora and Fauna: The vicinity surrounding the drillsite is semi-arid desert rangeland. Vegetation consists of native grasses interspersed with mesquite and other desert plants. No wildlife was observed, but wildlife in this habitat consists mostly of quail, dove, rabbits, rodents, coyotes, and skunks.
- D. Ponds and Streams: None. The Pecos River lies approximately 5 miles to the east.
- E. Residences and Other Structures: Nearest occupied dwelling is 4½ miles to the south-southeast. Nearest water well is 0.20 miles to the northeast.
- F. Archaeological, Historical and Other Cultural Sites: None were observed in the area. An archaeological reconnaissance of the well pad and road area was made by Eastern New Mexico University.
- G. Land Use: Grazing and occasional hunting.

12. OPERATOR'S REPRESENTATIVE:

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

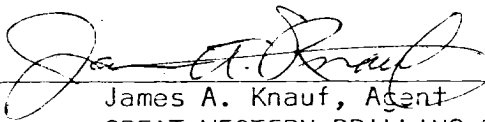
Kenneth W. Smith
Production Superintendent
Great Western Drilling Company
10 West Adams
Lovington, New Mexico 88260
Office 505-396-5538
Home 505-396-4180

13. CERTIFICATION:

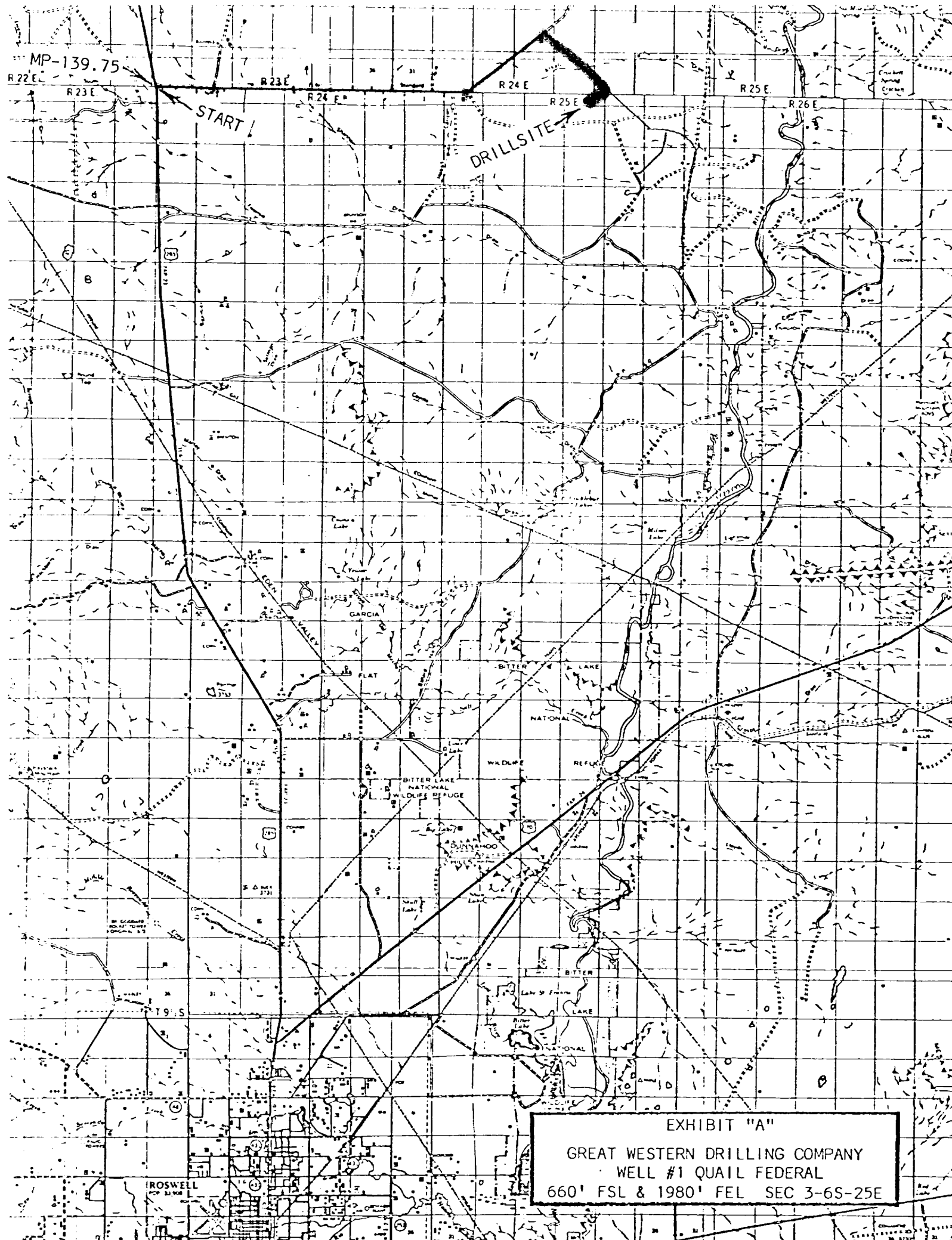
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge true and correct; and, that the work associated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

2-10-81

Date


James A. Knauf, Agent

GREAT WESTERN DRILLING CO.



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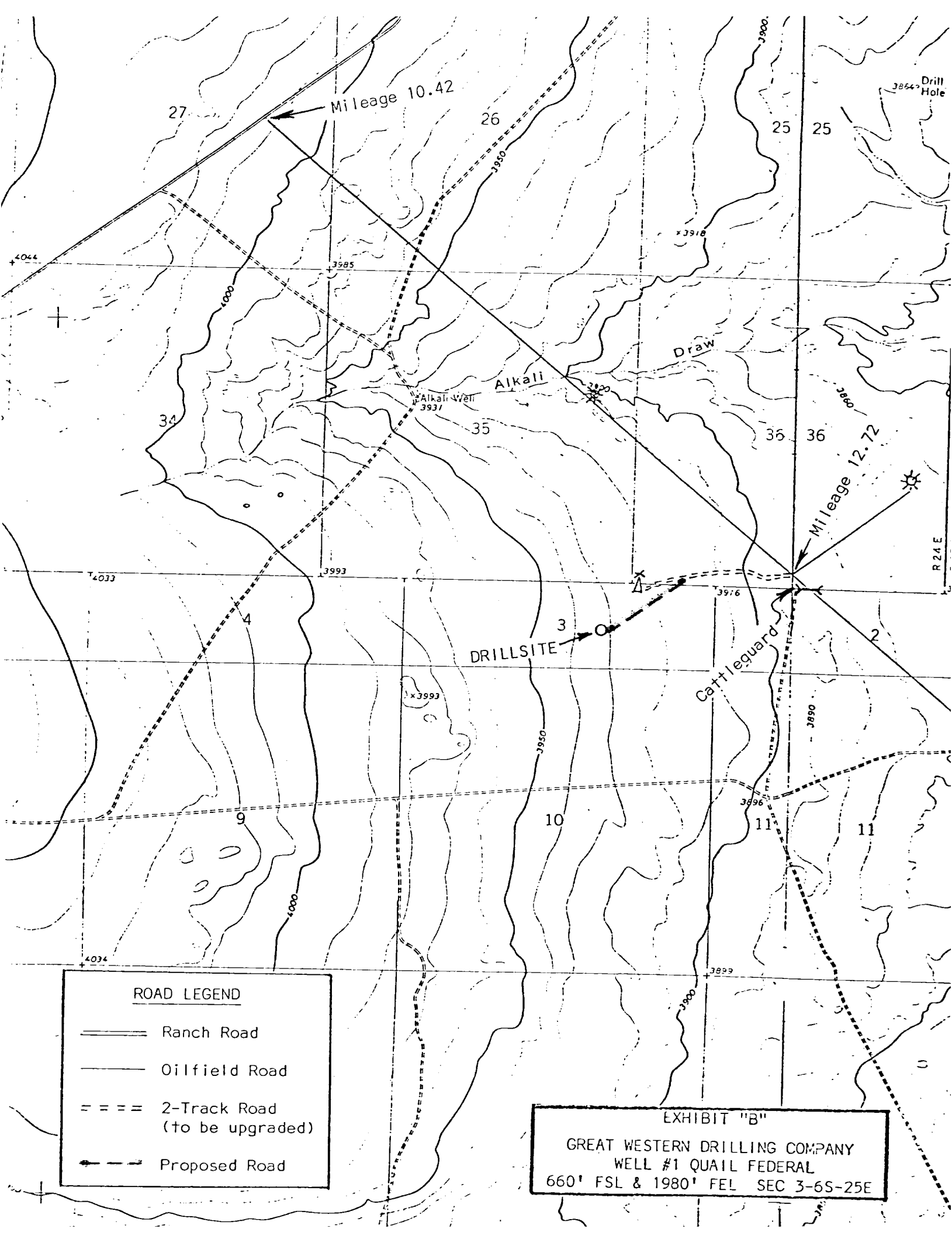
START

DRILLSITE

EXHIBIT "A"

GREAT WESTERN DRILLING COMPANY
WELL #1 QUAIL FEDERAL

660' FSL & 1980' FEL SEC 3-6S-25E



ROAD LEGEND

- Ranch Road
- Oilfield Road
- == 2-Track Road (to be upgraded)
- → Proposed Road

EXHIBIT "B"

GREAT WESTERN DRILLING COMPANY
WELL #1 QUAIL FEDERAL
660' FSL & 1980' FEL SEC 3-6S-25E

EXHIBIT "C"
GREAT WESTERN DRILLING COMPANY
WELL #1 QUAIL FEDERAL
660' FSL & 1980' FEL SEC 3-6S-25E

The map displays a grid of sections, each with a number and associated data. Key features include:

- Section 1:** Yates, et al. 2-1-82 14983. U.S.
- Section 2:** Yates, et al. 2-1-82 14983. U.S.
- Section 3:** Yates, et al. 2-1-82 14983. U.S.
- Section 4:** Yates, et al. 2-1-82 14983. U.S.
- Section 5:** Yates, et al. 2-1-82 14983. U.S.
- Section 6:** Yates, et al. 2-1-82 14983. U.S.
- Section 7:** Yates, et al. 2-1-82 14983. U.S.
- Section 8:** Yates, et al. 2-1-82 14983. U.S.
- Section 9:** Yates, et al. 2-1-82 14983. U.S.
- Section 10:** Yates, et al. 2-1-82 14983. U.S.
- Section 11:** Yates, et al. 2-1-82 14983. U.S.
- Section 12:** Yates, et al. 2-1-82 14983. U.S.
- Section 13:** Yates, et al. 2-1-82 14983. U.S.
- Section 14:** Yates, et al. 2-1-82 14983. U.S.
- Section 15:** Yates, et al. 2-1-82 14983. U.S.
- Section 16:** Yates, et al. 2-1-82 14983. U.S.
- Section 17:** Yates, et al. 2-1-82 14983. U.S.
- Section 18:** Yates, et al. 2-1-82 14983. U.S.
- Section 19:** Yates, et al. 2-1-82 14983. U.S.
- Section 20:** Yates, et al. 2-1-82 14983. U.S.
- Section 21:** Yates, et al. 2-1-82 14983. U.S.
- Section 22:** Yates, et al. 2-1-82 14983. U.S.
- Section 23:** Yates, et al. 2-1-82 14983. U.S.
- Section 24:** Yates, et al. 2-1-82 14983. U.S.
- Section 25:** Yates, et al. 2-1-82 14983. U.S.
- Section 26:** Yates, et al. 2-1-82 14983. U.S.
- Section 27:** Yates, et al. 2-1-82 14983. U.S.
- Section 28:** Yates, et al. 2-1-82 14983. U.S.
- Section 29:** Yates, et al. 2-1-82 14983. U.S.
- Section 30:** Yates, et al. 2-1-82 14983. U.S.
- Section 31:** Yates, et al. 2-1-82 14983. U.S.
- Section 32:** Yates, et al. 2-1-82 14983. U.S.
- Section 33:** Yates, et al. 2-1-82 14983. U.S.
- Section 34:** Yates, et al. 2-1-82 14983. U.S.
- Section 35:** Yates, et al. 2-1-82 14983. U.S.
- Section 36:** Yates, et al. 2-1-82 14983. U.S.

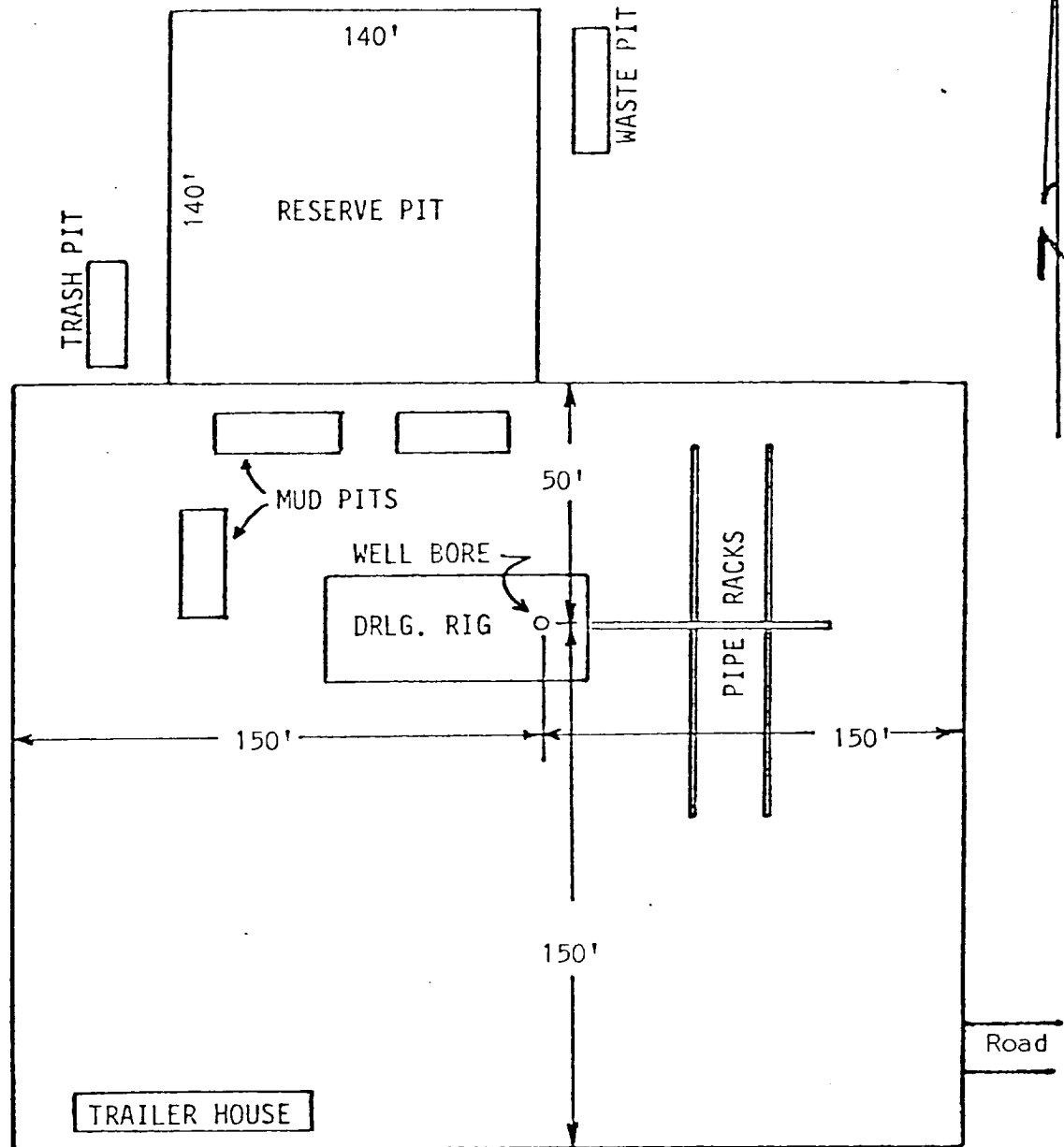


EXHIBIT "D"

GREAT WESTERN DRILLING COMPANY
 WELL #1 QUAIL FEDERAL
 660' FSL & 1980' FEL SEC 3-6S-25E