

SUBMIT IN TRIPLIC  
(Other instructions  
reverse side)Form approved.  
Budget Bureau No. 42-R1425.UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY30-041-20508  
5. LEASE DESIGNATION AND SERIAL NO.

NM 18846

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

U. S.

9. WELL NO.

3

10. FIELD AND POOL, OR WILDCAT

Chaveroo (SA)

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA

Sec 34-T7S-R32E

12. COUNTY OR PARISH 13. STATE

Roosevelt New Mexico

## 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

El Ran, Inc.

3. ADDRESS OF OPERATOR

1603 Broadway, Lubbock, Texas 79401

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

At surface

2000' FNL &amp; 2310' FWL

At proposed prod. zone

Same

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

19 Miles South of Elida, New Mexico

15. DISTANCE FROM PROPOSED\*

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

310

16. NO. OF ACRES IN LEASE

280

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

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

1630'

19. PROPOSED DEPTH

4325'

20. ROTARY OR CABLE TOOLS

Rotary

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

4473.9 GL

22. APPROX. DATE WORK WILL START\*

October 15, 1979

23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 7/8	8 5/8	23#	1700'	550 Sacks <b>CIRCULATE</b>
7 7/8	4 1/2	10.5	4325'	175 Sacks

Mud program: 10# mud - 35 viscosity, from 4000' to T.D.

BOP program: See Exhibits C, D, &amp; E

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SEP 6 1979U. S. GEOLOGICAL SURVEY  
HOBBS, NEW MEXICO

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 Vice-President

DATE September 4, 1979

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED  
AS AMENDED  
SEP 17 1979  
ACTING DISTRICT ENGINEER

\*See Instructions On Reverse Side

*Handwritten text, possibly a signature or date, is visible but illegible.*

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SEP 18 1961

O.C.D. HOBBS, OFFICE

*El Ran Inc.*

1603 BROADWAY  
806 763-0378

*Lubbock, Texas 79401*

September 4, 1979

U. S. G. S.  
P. O. Box 1157  
Hobbs, New Mexico

Re: U. S. No. 3 Well  
Roosevelt County, New Mexico


Gentlemen:

El Ran, Inc. has an agreement with the New Mexico Department of Game and Fish for surface damages. El Ran, Inc., will at the Department's option, upon abandonment of locations and roads, either leave all sites clean of trash and as clean as possible, or will rip all locations and roads and reseed with native grasses.

Sincerely,

EL RAN, INC.

BY

  
William W. Ranck, Jr.,  
Vice-President

WWR/kd

## APPLICATION FOR DRILLING

El Ran, Inc.  
U.S. Well No. 3  
Section 34-T7S-R32E  
Roosevelt County, New Mexico

In conjunction with Form 9-331C, Application for Permit to Drill subject well, El Ran, Inc. submits the following ten items of pertinent information:

1. The geologic surface formation is the Ogallala formation.
2. The estimated tops of geologic markers are as follows:  

Yates	2410'
San Andres	3458'
3. The depths at which anticipated water, oil or gas formations are expected to be encountered:  

Water:	No data available. Probably from Triassic formation at approximately 500 to 600 feet.
Oil or Gas:	San Andres at approximately 3458 to 4325 feet.
4. Proposed casing program: See Form 9-331C.
5. Pressure control equipment: See Exhibits C, D, and E.
6. Mud program: See Form 9-331C.
7. Auxiliary equipment: See Exhibit D.
8. Testing, logging and coring programs: None.
9. No abnormal temperatures or pressures are anticipated.
10. Anticipated starting date: As soon as possible.  
Anticipated completion of drilling operations: Approximately 7 days after starting date.

# MULTI-POINTS SURFACE USE AND OPERATION PLAN

El Ran, Inc.  
U.S. Well No. 3  
2000' FNL and 2310' FWL  
Section 34-T7S-R32E  
Roosevelt County, New Mexico  
(Development Well)

This plan is submitted with Form 9-331C, Application for Permit to Drill, covering the above described well. The purpose of this 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 operations, 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 BLM quad-color map No. SE-9, showing the area surrounding the proposed wellsite on a scale of 1/2 inch to a mile. The proposed location is situated at a driving distance of approximately 20.8 miles (excluding the proposed new access road) south of Elida, New Mexico, and the existing roads leading to the wellsite are indicated in red in Exhibit A.

- (1) Proceed south from Elida on Highway 114 for approximately 0.6 miles. At this point, take the right fork onto Highway 440.
- (2) Continue in a southward direction for an additional 19.8 miles (20.4 miles from Highway 70 in Elida). The road surface will change from blacktop to a dirt surface about 14.5 miles from Elida. You will pass over a number of cattleguards, including five cattleguards on the dirt road. Approximately 0.4 miles after crossing the fifth cattleguard, turn right (west).
- (3) Approximately 0.1 miles after this turn, you will pass a tank battery and a caliche pit on your left. Approximately 0.1 miles beyond this point, a well (Byron 1Y) is located. Approximately 0.2 miles beyond this well, you will reach the well pad of Byron #2. Approximately 0.3 miles beyond this well you will reach the pad for U.S. #1. Turn north at this point and you will reach the U.S. #2. Continue north past the US #2, 1600' to reach the proposed drilling pad for U.S. #3.

## 2. PLANNED ACCESS ROAD.

- A. The proposed new access road will be constructed in a South to North direction, from the northwestern corner at U.S. #2 to the southwestern corner of the drill pad at the proposed location.
- B. The route of the proposed road passes over a relatively level area and only very minor leveling will be required.
- C. The length of the proposed road will be approximately 1600'. It will have a driving surface width of 12 feet and the surface will be topped with six inches of compacted caliche. The center of the road will be crowned, with drainage on both sides.

- D. No turnouts will be required. One fence cut will be required, and a cattle guard placed in the road. No culverts are involved.
- E. The starting point of the new road is clearly marked with surveyor's ribbons, and the route of the road is staked and flagged.
- F. The route is on fee surface owned by the New Mexico State Department of Game and Fish. An application has been submitted to the New Mexico State Department of Game and Fish for use of that department's surface, both as part of the access route and as a drillsite.

### 3. LOCATION OF EXISTING WELLS.

- A. As indicated in Exhibit B. there has been considerable drilling activity in the area of the proposed well. The nearest producing well is the U.S. #2, located 1600' south of the proposed well. There are currently two wells on this lease.

### 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There is a tank battery located on the well pad of the U.S. #1.
- B. Electric power for production is located 1600' south on the well pad of U.S. #2.

### 5. LOCATION AND TYPE OF WATER SUPPLY.

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from privately owned or commercial sources and will be hauled to the location by truck over the existing and proposed roads described in Paragraphs 1 and 2, above.

### 6. SOURCE OF CONSTRUCTION MATERIALS.

- A. Caliche required for road and drilling pad surfaces will be obtained from a privately owned pit approximately 2/3 of a mile east of the proposed drillsite. This is the caliche pit referred to, in paragraph 1A (3), above.

### 7. METHODS OF HANDLING WASTE DISPOSAL.

- A. Drill cuttings will be disposed of, in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. All pits will be fenced with normal fencing material to prevent the entry of livestock into the pits.

- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the USGS for approval.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. Trash, waste paper, garbage and junk will be buried in a separate pit and covered with a minimum of 24 inches of dirt. All waste materials will be contained to prevent scattering by the wind.
- H. All trash and debris will be buried or removed from the wellsite within 90 days after drilling and/or completion operations have been finished.

8. ANCILLARY FACILITIES.

- A. None required.

9. WELLSITE LAYOUT.

- A. Exhibit C shows the relative location and dimensions of the well pad and reserve pits.
- B. The ground surface at the wellsite is comparatively flat, and very little cut or fill will be required to construct either the drilling pad or the reserve pits. The drilling surface will be covered with six inches of compacted caliche.
- C. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE.

- A. After drilling and/or completion operations have been finished, all equipment and other material not needed for further operations will be removed. Pits will be filled and the location cleaned of all trash and junk, so as to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they have been filled.
- C. If the proposed well is non-productive, all applicable rehabilitation and/or vegetation requirements of the BLM, the USGS, and the New Mexico State Department of Game and Fish will be complied with, and will be accomplished as expeditiously as possible. All pits will be filled and leveled within 90 days after abandonment.

11. OTHER INFORMATION.

- A. The proposed wellsite is located in an essentially level area. The proposed new access road crosses a generally level area, also, with only minor surface anomalies.
- B. The topsoil at the wellsite consists of moderately soft sand.
- C. Flora and Fauna: The vegetation cover at the proposed location is moderately sparse, consisting of miscellaneous weeds and grass, bear grass yucca, and a few cactus plants. No wildlife was observed, but it is likely that typical semi-arid desert wildlife inhabit the area, which is used for cattle grazing.
- D. There are no ponds, lakes, or flowing streams or rivers in the vicinity of the wellsite.
- E. There are no occupied dwellings within several miles of the wellsite. The nearest windmill is about a half-mile east of the location.
- F. The wellsite is on surface owned by the New Mexico State Department of Game and Fish, with federal ownership of minerals.
- G. There is no evidence of any significant archaeological, historical or cultural sites in the area of the proposed location. An archaeological survey has been conducted by the Agency for Conservation Archaeology, Eastern New Mexico University, Portales, New Mexico, and their report has been distributed to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVES.

- A. The field representatives of the operator responsible for assuring compliance with the approved surface use plan are:

W. W. Ranck  
El Ran, Inc.  
1603 Broadway  
Lubbock, Texas 79401  
Telephone: 806 763-4091

Robert R. Ranck  
El Ran, Inc.  
1603 Broadway  
Lubbock, Texas 79401  
Telephone: 806 763-4091

William W. Ranck, Jr.  
El Ran, Inc.  
1603 Broadway  
Lubbock, Texas 79401  
Telephone: 806 763-4091

13. CERTIFICATION

See attachment on next page.



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 El Ran, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

4/11/77  
DATE

William W. Ranck, Jr.  
William W. Ranck, Jr.  
Vice-President of El Ran, Inc.

EXHIBIT "A"

EL RAN, INC.

U.S. Well No. 3

Section 34-T7S -R32E

Roosevelt County, New Mexico

Existing Road

Proposed New Access  
Road

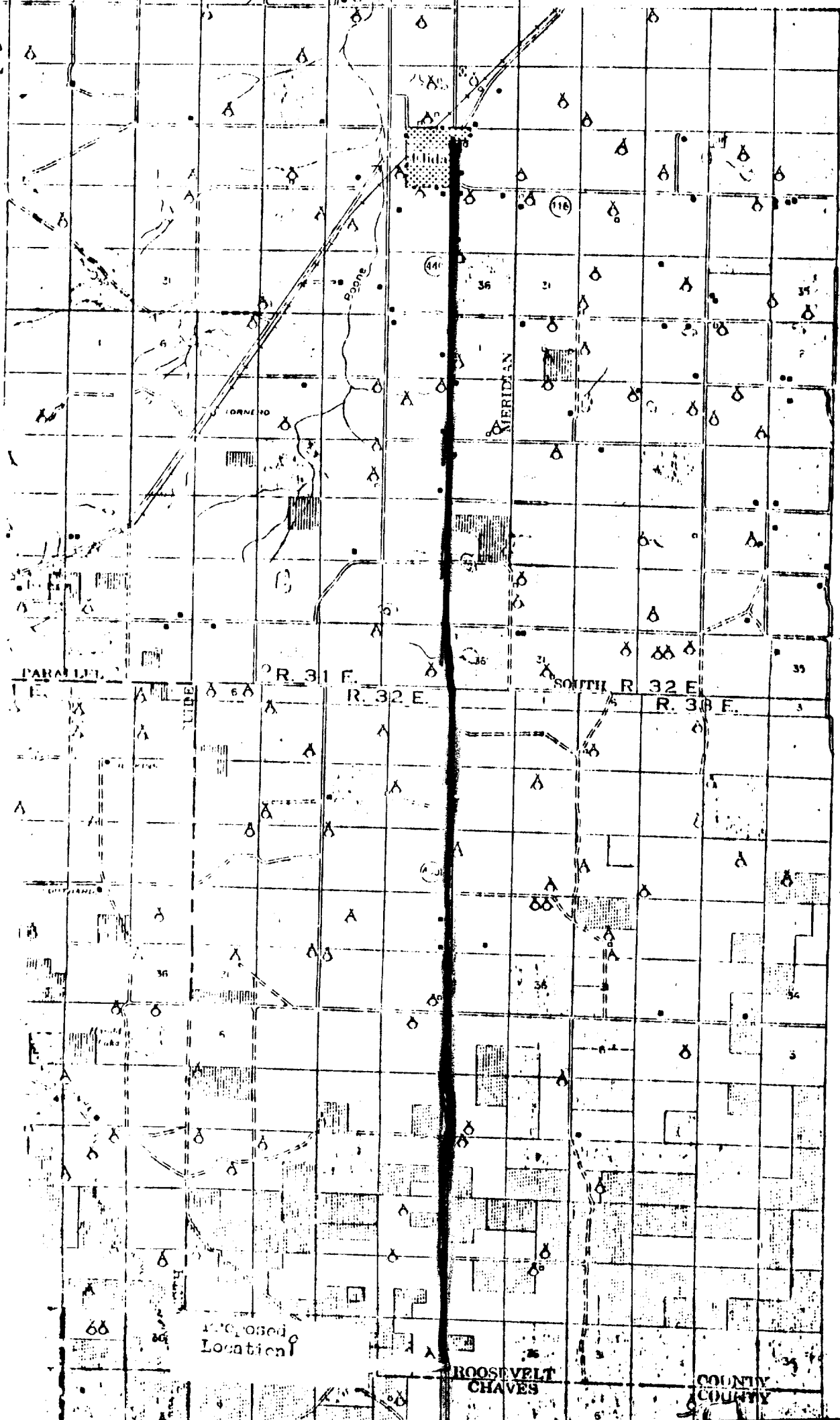
T. 3 S.

T. 4 S.

T. 5 S.

T. 6 S.

T. 7 S.



**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

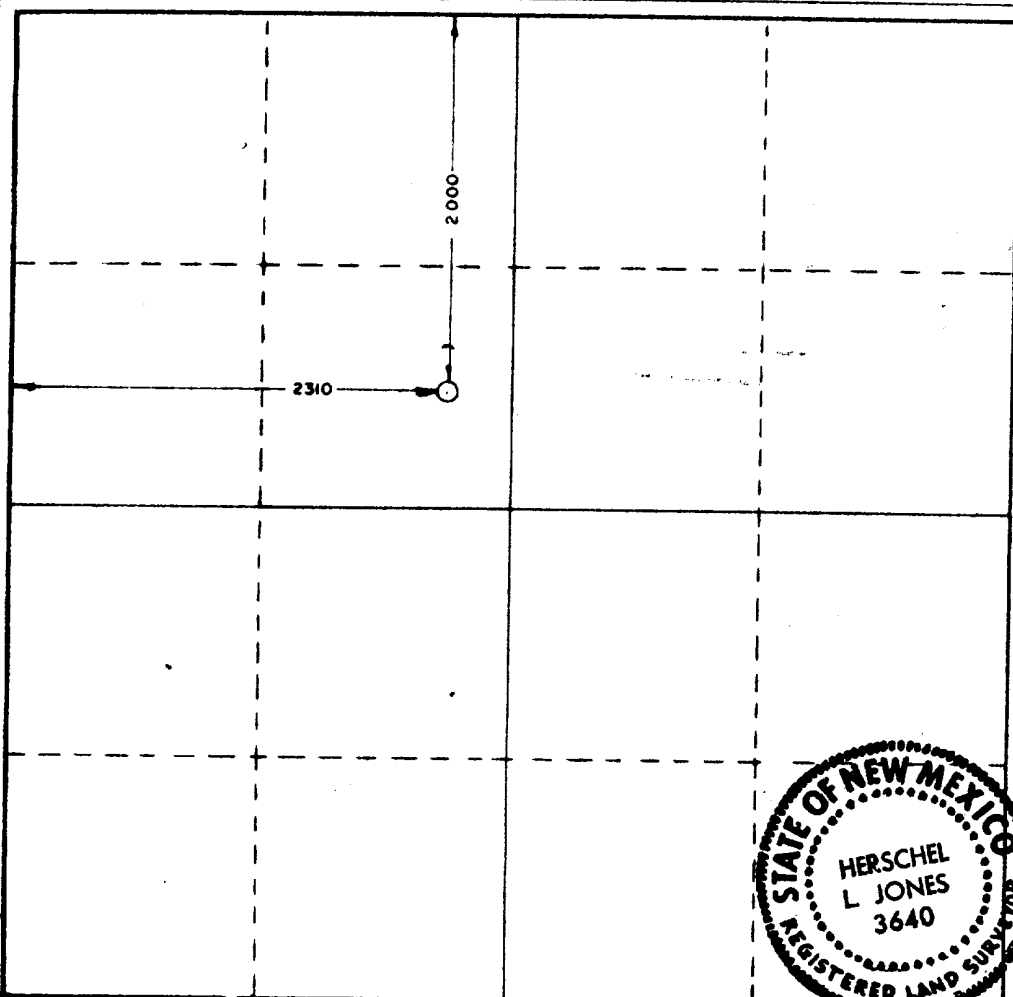
Operator <b>El Ran Inc. .</b>			Lease <b>U.S.</b>		Well No. <b>3</b>
Unit Letter <b>"f"</b>	Section <b>34</b>	Township <b>7 South</b>	Range <b>32 East</b>	County <b>Roosevelt</b>	
Actual Footage Location of Well:					
<b>2000'</b>		feet from the <b>North</b>		line and <b>2310'</b>	
feet from the <b>West</b>		line			
Ground Level Elev. <b>4473.9</b>	Producing Formation <b>San Andres</b>	Pool <b>Chaveroo</b>		Dedicated Acreage: <b>40</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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 **Federal**

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.



**CERTIFICATION**

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

Name  
**William W. Ranck, Jr.**

Position  
**Vice-President**

Company  
**El Ran, Inc.**

Date  
**September 4, 1979**

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  
**8/6/79**

Registered Professional Engineer  
and/or Land Surveyor

*Herschel L Jones*  
Certificate No.  
**3640**

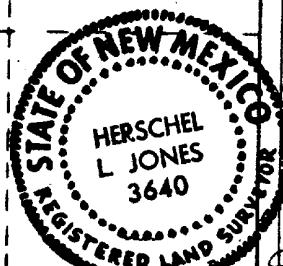
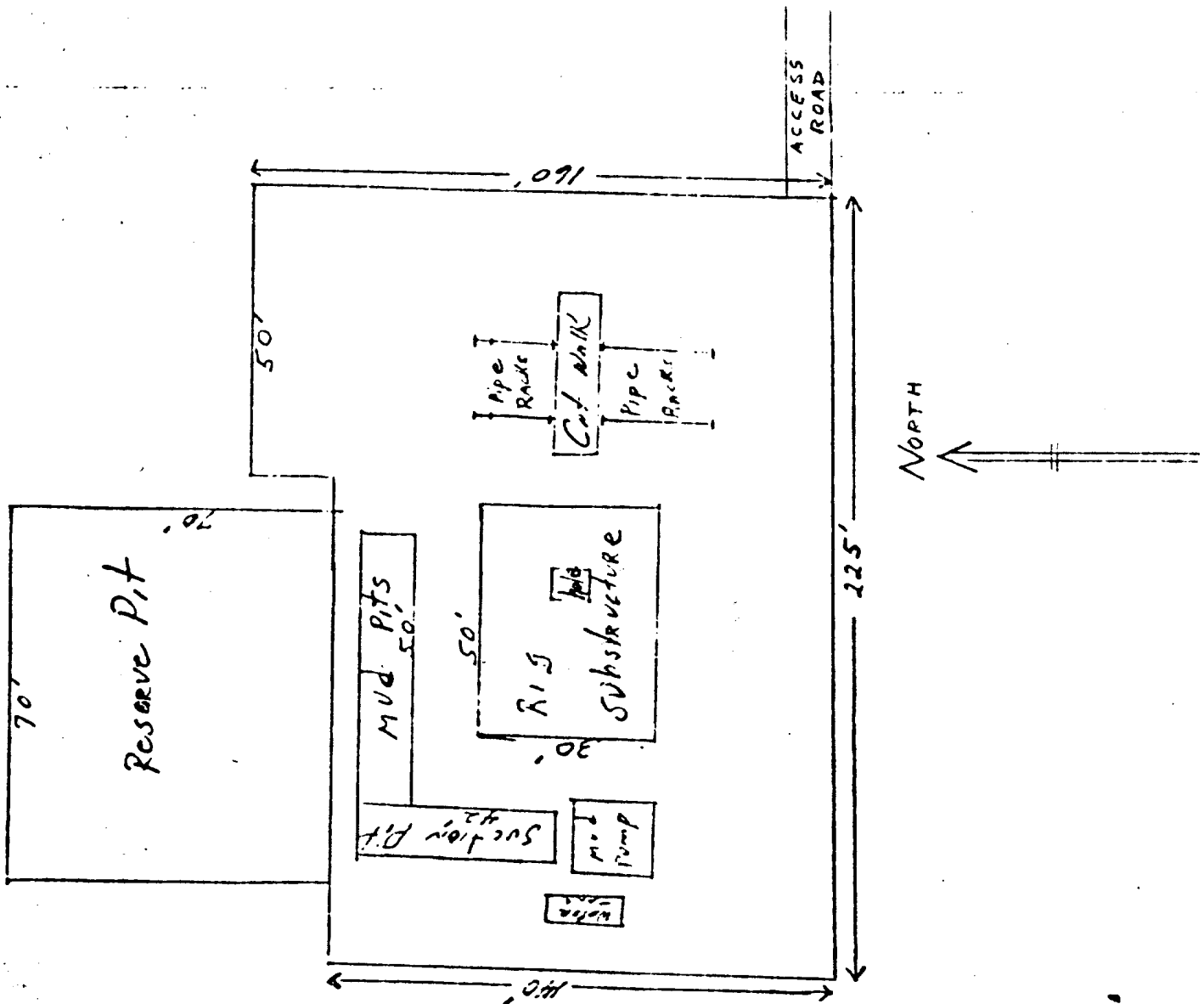




EXHIBIT "C"  
 EL RAN, INC.  
 U.S. Well No. 3  
 2000' FNL and 2310' FWL  
 Roosevelt County, New Mexico



This rig is equipped with a Shaffer LWS Series 900 Double 90P Hydraulic operated. With blanks, 4", 4½" and side connections.

All equipment should be at least 3,000 psi WP or higher unless otherwise specified.

- . Bell nipple.
- . Hydril bag type preventer
- . Ram type pressure operated blowout preventer with blind rams.
- . Flanged spool with one 3-inch and one 2-inch (minimum) outlet.
- . 2-inch (minimum) flanged plug or gate valve.
- . 2-inch by 2-inch by 2-inch (minimum) flanged tee.
- . 3-inch gate valve.
- . Ram type pressure operated blowout preventer with pipe rams.
- . Flanged type casing head with one side outlet.
- . 2-inch threaded (or flanged) plug or gate valve.
- . Flanged on 5000# WP, threaded on 3000# WP or less.
- . 3-inch flanged spacer spool.
- . 3-inch by 2-inch by 2-inch by 2-inch flanged cross.
- . 2-inch flanged plug or gate valve.
- . 2-inch flanged adjustable choke.
- . 2-inch threaded flange.
- . 2-inch XXH nipple.
- . 2-inch forged steel 90° Ell.
- . Cameron (or equal.) threaded pressure gage.
- . Threaded flange.
- . 2-inch flanged tee.
- . 2-inch flanged plug or gate valve.
- . 2½-inch pipe, 300' to pit, anchored.
- . 2½-inch SE valve.
- . 2½-inch line to steel pit or separator.

NOTES:

- . Items 3, 4 and 8 may be replaced with double ram type preventer with side outlets between the rams.
- . The two valves next to the stack on the fill and kill line to be closed unless drill string is being pulled.
- . Kill line is for emergency use only. This connection shall not be used for filling.
- . Replacement pipe rams and blind rams shall be on location at all times.
- . Only type U, LSW and QHC ram type preventers with secondary seals are acceptable for 5000 psi WP and higher BOP stacks.
- . Type E ram-type BOP's with factory modified side outlets may be used on 3000 psi or lower WP BOP stacks.

EXHIBIT "D"  
EL RAN, INC.  
U.S. Well No. 3  
Section 34-T7S-R32E  
Roosevelt County, New Mexico

WEK DRILLING CO., INC. - Rig 3  
**BLOWOUT PREVENTER SPECIFICATION**

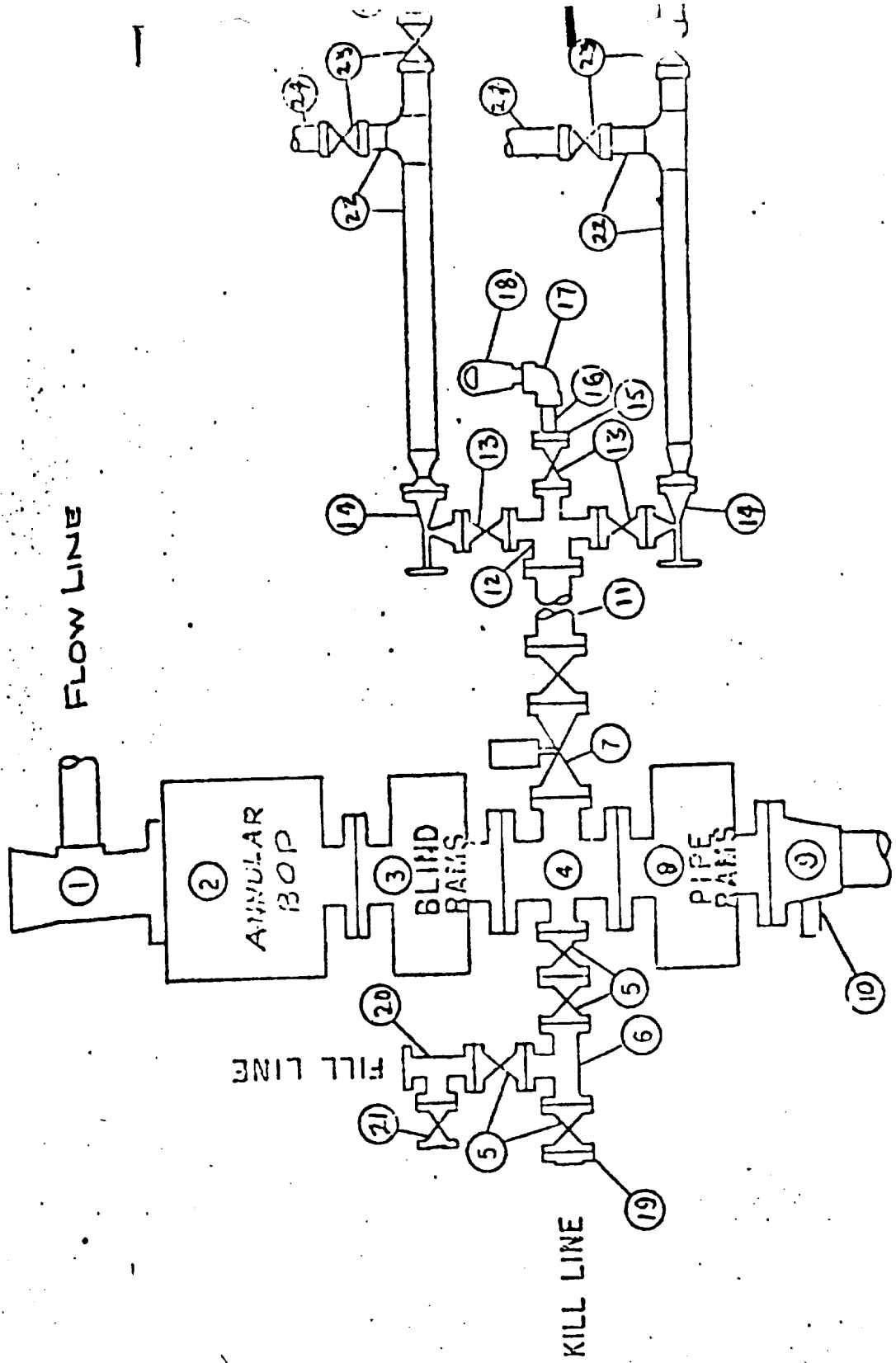
EXHIBIT "E"

EL RAN, INC.

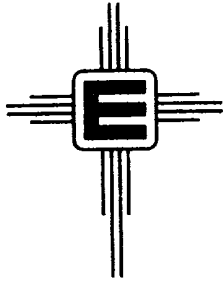
U.S. Well No. 3

Section 34 - T7S-R32E

Roosevelt County, New Mexico



10/15/74



September 4, 1979

Mr. Robert Ranck  
El Ran, Inc.  
1603 Broadway  
Lubbock, TX 79401

Dear Mr. Ranck:

Enclosed please find a copy of the Agency for Conservation Archaeology's State clearance report for El Ran, Inc. No archaeological sites or isolated manifestations were encountered during the course of this reconnaissance.

If I may be of further service to you, do not hesitate to call me at (505) 562-3332 or 2254.

Sincerely,

Dr. Peter S. Miller  
Director

bkm

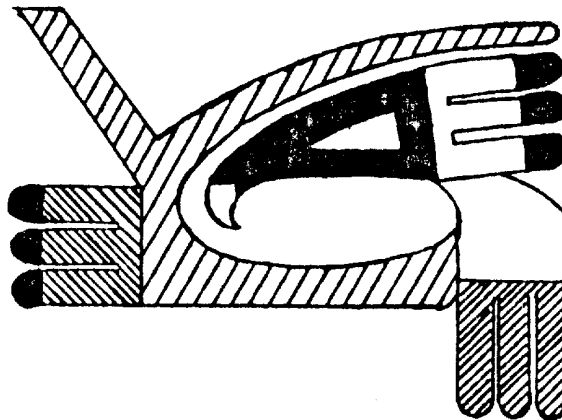
Enclosure



AN ARCHAEOLOGICAL RECONNAISSANCE FOR  
EL RAN, INC.

El Ran U.S. No. 3

80-111



by  
Rodrick B. MacLennan

Edited and Submitted by  
Dr. Peter S. Miller  
Director  
Agency for Conservation Archaeology  
Llano Estacado Center for Advanced  
Professional Studies and Research

Eastern New Mexico University

Portales, New Mexico 88130

(505) 562-3332/2254

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SEP 10 1970  
O.C.D. HOBBS, OFFICE

## Introduction

An archaeological reconnaissance was recently completed by the Agency for Conservation Archaeology, Eastern New Mexico University, Portales, New Mexico, for El Ran, Inc. in Roosevelt County, New Mexico. The reconnoitered area will be impacted by the construction of a well pad and an associated access road. The project was administered jointly by Mr. Robert Ranck of El Ran, Inc. and Dr. Peter S. Miller, Director, Agency for Conservation Archaeology. This report was prepared by the Roswell Office of ACA, Rod MacLennan, Manager.

The field work was conducted on August 20, 1979 by Rod MacLennan. Good field and weather conditions prevailed throughout the course of this survey. This survey was conducted under State Antiquities Permit No. SP-7. A search of the National Register has been made and properties within this area are not on the National Register.

## Survey Techniques

Visual inspection of the well pad was completed by walking a series of parallel transects. Each transect was covered in a tightly spaced zigzag pattern. The access road was examined as an individual transect using a tightly spaced zigzag pattern covering the length and breadth. The distance between transects was 20 feet. These methods maximized the opportunity of observing any cultural resources within or near the proposed area of impact.

### El Ran U.S. No. 3

## Location

The proposed well pad and associated access road are located 17 miles south of Elida, New Mexico, on the Llano Estacado. The pad measures 400 X 400 feet and the access road measures 15 X 1630 feet. They are situated as follows:

### Pad

SE $\frac{1}{4}$ NW $\frac{1}{4}$ , Section 34, T7S, R32E, NMPM, Roosevelt County, New Mexico (BLM)

### Access Road

SE $\frac{1}{4}$ NW $\frac{1}{4}$ , Section 34, T7S, R32E, NMPM, Roosevelt County, New Mexico (BLM)

NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 34, T7S, R32E, NMPM, Roosevelt County, New Mexico (BLM)

Map Reference: USGS Button Mesa North Quadrangle, 7.5 minute series, 1978 (Advanced Proof) (see Figures 1 & 2).

## Terrain

The proposed well pad and associated access road are located on the Llano Estacado and are 4.5 miles northeast of Button Mesa, on a gently undulating plain. The elevation is approximately 4473 feet.



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**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION FORM**

Form C-102  
Supersedes C-128  
Effective 1-1-63

All distances must be from the corner boundaries of the Section

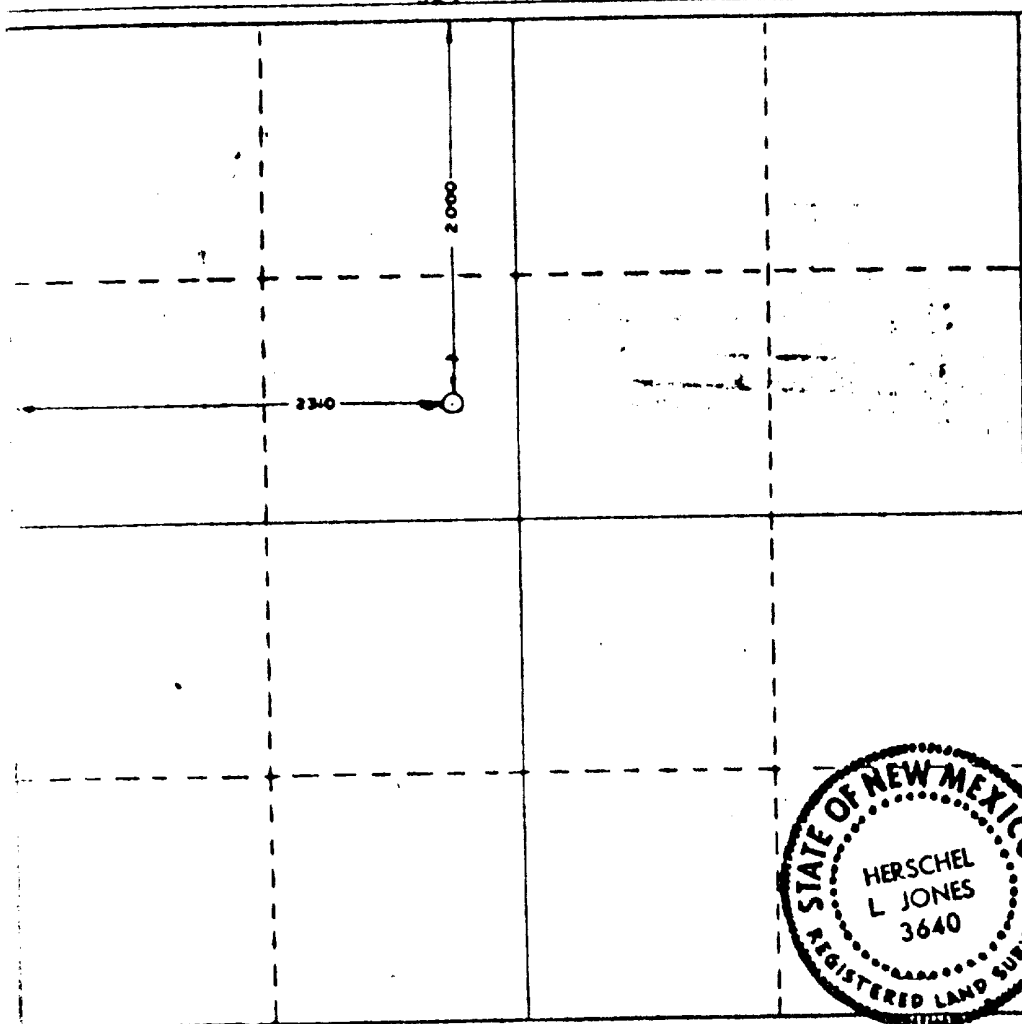
Operator <b>El Ran Inc.</b>		Lease <b>U.S.</b>		Well No. <b>3</b>	
Section <b>34</b>	Township <b>7 South</b>	Range <b>32 East</b>	County <b>Roosevelt</b>		
Actual Footage Location of Well: <b>2000'</b> feet from the <b>North</b> line and <b>2310'</b> feet from the <b>West</b> line Ground Level Elev. <b>4473.9</b> Producing Formation <b>SAN ANDRES</b> Pool <b>CHAVEZ</b> Dedicated Acreage: <b>6.0</b> 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).
- 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 FEDERAL LEASE

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.



**CERTIFICATION**

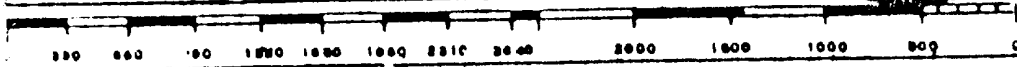
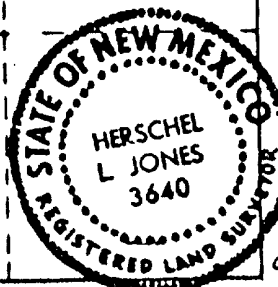
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name Robert R. Jones  
 Position Vice Pres.  
 Company El Ran Inc.  
 Date \_\_\_\_\_

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 8/6/79  
 Registered Professional Engineer and/or Land Surveyor

Herschel L. Jones  
 Certificate No. 3640





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SEP 18 1971

O.C.D. HOBBS, OFFICE

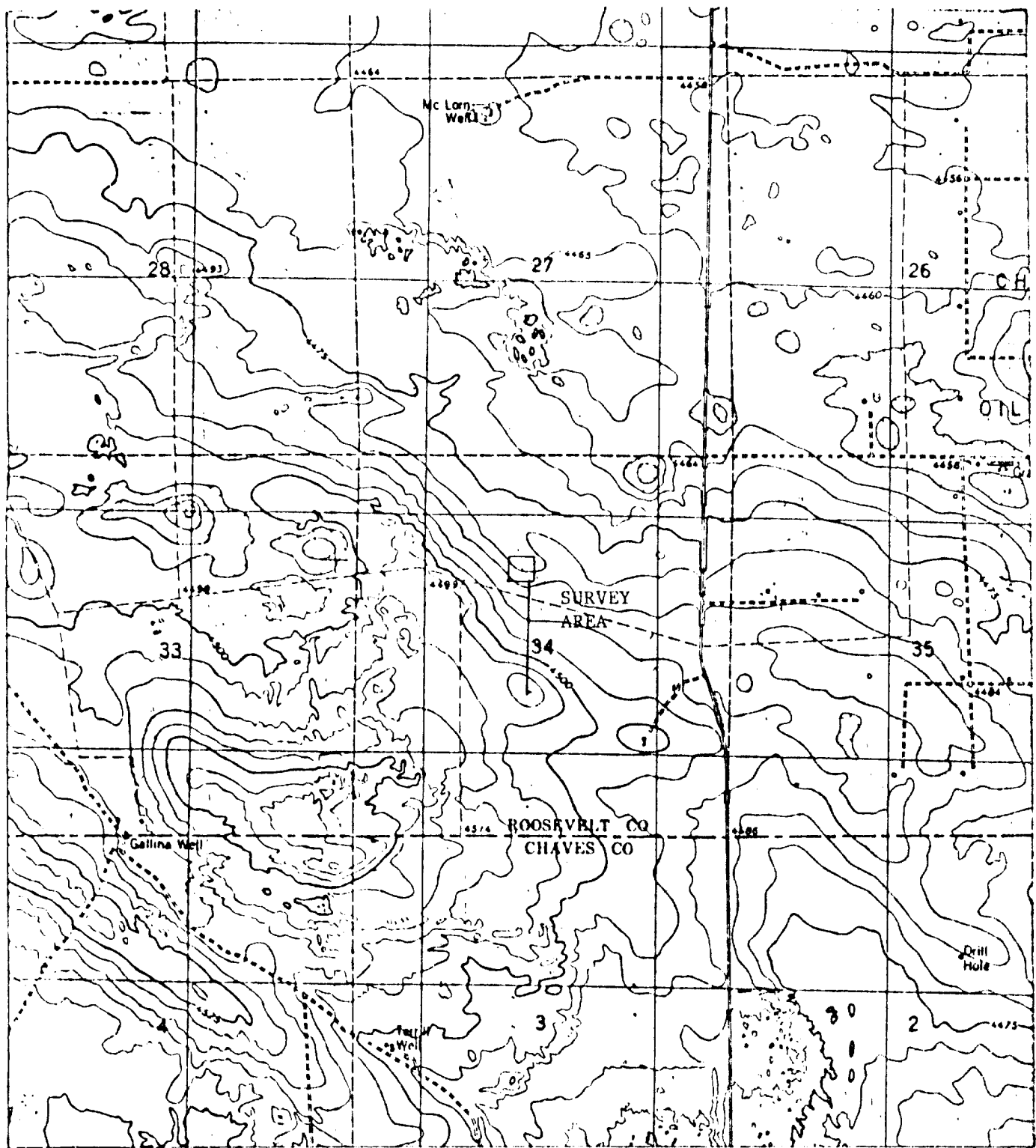
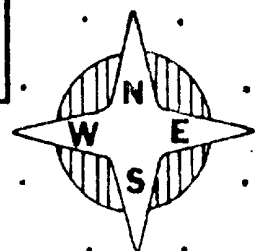


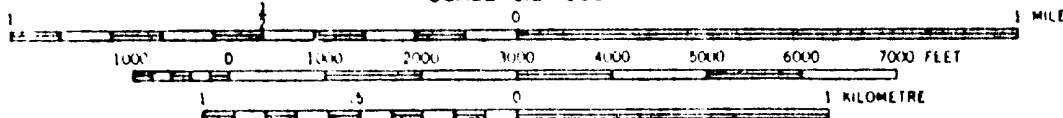
Figure 2: Location of El Ran's survey location El Ran U.S. No. 3  
Section 34, T7S, R32E, NMPM, Roosevelt County

Map Reference: USGS Button Mesa North Quadrangle, 1978 (AP)

7.5 MINUTE  
SERIES



SCALE 1:24 000





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O.C.D. HOBBS, OFFICE



The soils encountered in the area are predominantly loamy sands. Lithic inclusions within this soil consist of small to moderate volumes of fragmented caliche. Taxonomically, this soil can be classified as a member of the Paleustalfs-Ustipsamments-Paleargids association.

### Floristics

ACA encountered a moderate floral assemblage in this vicinity. The density of the vegetation in the area is approximately 25 percent, dominated by grasses. Among the species present are: oak brush (Quercus havardii), plains yucca (Yucca campestris), purple pricklypear (Opuntia macrocentra), winterfat (Eurotia lanata), black grama (Bouteloua eriopoda), blue grama (Bouteloua gracilis), buffalo grass (Buchloe dactyloides), hairy grama (Bouteloua hirsuta), little bluestem (Andropogon scoparius), sideoats grama (Bouteloua curtipendula), tabosa (Hilaria mutica), western wheatgrass (Agropyron smithii), Indian wheat (Plantago purshii), and leatherweed croton (Croton potsii).

### Cultural Resources

ACA did not encounter any archaeological sites or isolated manifestations either within or near the proposed area of impact. A review of ACA's site files and the National Register did not show any properties listed for this location.

### Recommendations

ACA recommends clearance for the proposed well pad and access road and suggests that construction be allowed to proceed as currently planned.



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