N. M. O. C. C.

Form 9-331 C
(May 1963)

SUBMIT IN PLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-015-20945

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: PERRY R. BASS

3. ADDRESS OF OPERATOR: P. O. Box 1178 Monahans, Texas 79756

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FN & EL, Unit letter G
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: LC 059365

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Big Eddy

8. FARM OR LEASE NAME: Big Eddy Unit

9. WELL NO.: 39

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 29, T21S R28E

12. COUNTY OR PARISH: Eddy

13. STATE: N. Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 6 1/2 miles east of Carlsbad, 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: 2553.61

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320

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

19. PROPOSED DEPTH: 12300

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3182 GR

22. APPROX. DATE WORK WILL START*: 60 days after approved

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	11 3/4"	42	500	Sufficient to circulate annulus
10 5/8"	8 5/8"	24-28	3160	" " " "
7 7/8"	5 1/2"	17	12300	Sufficient to fill annulus to approximately 7800'; 1300' above Wolfcamp.

FOR COMPLETE DETAILS, SEE ATTACHED DRILLING PROGNOSIS.

RECEIVED
SEP 1 1973
O. C. C.
ARTESIA, OFFICE

RECEIVED
AUG 21 1973
U.S. GEOLOGICAL SURVEY
ROSWELL, 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 Jack Lemon TITLE Division Engineer DATE August 17, 1973

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE Subject to Compliance with Attached "General Requirements" dated 6-22-73 attached

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
SEP 5 1973
R. L. BEEKMAN
ACTING DISTRICT ENGINEER

THIS APPROVAL IS RESCINDED IF OPERATIONS ARE NOT COMMENCED WITHIN 3 MONTHS.
EXPIRES DEC 7 - 1973

*See Instructions On Reverse Side

ALL [illegible] ACREAGE DEDICATION PLAT

PERRY R. BASS		BIG EDDY UNIT	33
C	29	21 SOUTH	28 EAST	EDDY
1980	NORTH	1980	EAST	
3132.0	Morrow	Wildcat		320

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

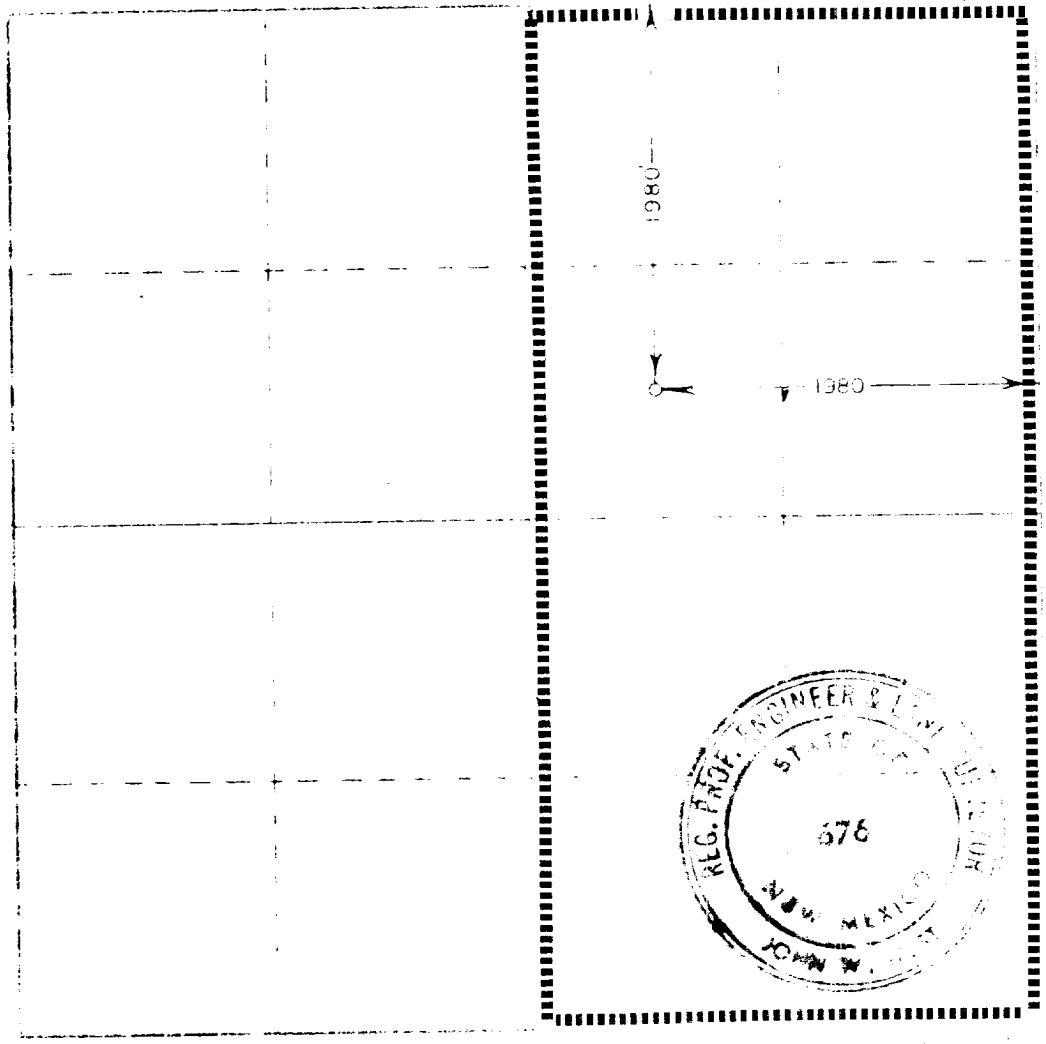
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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, forced-pooling.

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.



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

Jack Leman

Division Engineer

PERRY R. BASS

August 17, 1973

RECEIVED
AUG 21 1973
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

REG. PROF. ENGINEER & LAND SURVEYOR
STATE OF NEW MEXICO
676
JOHN W. WEST

AUGUST 2, 1973

John W. West

United States Department of the Interior

June 22, 1973

DRILLING ... DEEP WELLS

The ... with 30 CFR 221.24, ... equipment, drilling fluid ... drilling procedures ... any well. In addition ... accepted good ... the following

... casing string

... control equipment ... by an ... to test ... This office should ... to witness the ... test report. ... shall be actuated ... each time the drill

... reserve at all ... preventers.

... shall be maintained ... operations are being

... necessary to insure ... emergency

... and

drilling into the Wolfcamp Formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:

(1) A recording pit level indicator to determine pit volume gains and losses.

(2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.

(3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.

6. When coming out of the hole with drill pipe, the annulus shall be filled with mud before the mud level drops below 150 feet. The volume of mud required to fill the hole shall be watched, and any time there is an indication of swabbing, or influx of formation fluids, proper blowout prevention precautions must be taken. The mud shall not be circulated and conditioned except on or near bottom, unless well conditions prevent running the pipe to bottom.

7. A copy of these requirements shall be posted on the rig floor or in the dog house during the drilling of the well.

[signature]
James A. Knauf
District Engineer

Lease No. LC 055365
Well Perry R. Bass - No. 37 Big Eddy Unit
Drillsite 1980/N & [illegible] 29-21S-28E
Depth 12,300' Morrow
Approved September 7, 1972

ATTACHMENTS:

1. Form 9-331C, application to drill with complete drilling prognosis.
2. Location plat.
3. Plat of location layout.
4. Small scale map of existing roads with proposed access road.
5. Schematic diagram of BOP equipment, manifold, kill-lines, etc.

In addition, please be advised:

1. Mud pits will be of steel.
2. No camp site or air strip is proposed.
3. Tank battery will be located near or adjacent to a corner of the location pad.
4. Water supply will be trucked to the well, secured from a rancher in the immediate area, or a water well will be drilled near the southwest corner of the location pad.
5. The land surface will be restored to as near original conditions as possible, and to the satisfaction of the U. S. G. S. after drilling and completion operations have ceased.
6. All detrimental waste will be disposed of in accordance with good disposal practices.
7. Well control equipment with 5000 psi choke manifold. The drill pipe BOP's and Hydril BOP's are to be opened and closed daily. The blank BOP's are to be opened and closed each trip.
8. PVT equipment, flow line sensor, and pump stroke counter are to be utilized while drilling the proposed well.

PROPOSED DRILLING AND COMPLETION
PROCEDURE

for

PERRY R. BASS
BIG EDDY UNIT #39
EDDY COUNTY, NEW MEXICO

PROPOSED DRILLING AND COMPLETION PROCEDURE

Operator: PERRY R. BASS

Lease and Well No: Big Eddy Unit #39 (12300' Morrow Test)

Location: 1980' From the North line and 1980' from the East line of Section 29, T21S, R28E, Eddy County, New Mexico.

Surface Casing:

15" surface hole is to be drilled using a fresh water-gel-lime mud to an approximate depth of 500'. 11 3/4" OD casing setting is anticipated as follows:

No. Jts	Description	Thds Off Length	From	To
--	Rotary correction	16	0	16
12	11 3/4" OD 42#/ft, H-40 ST&C casing	444	16	460
--	Float collar	2	460	462
1	11 3/4" OD 42#/ft, H-40 ST&C casing	36	462	498
--	Float shoe*	2	498	500

* The float shoe is to be equipped with lateral exits for cement as it is intended to rest part of the casing weight on bottom.

The bottom three (3) joints are to be sand blasted to remove mill scale and lacquer and in addition are to be welded and sealed with HOWCO-weld. Positive type centralizers are recommended; one set on each of the bottom three (3) joints. API modified thread lubricant is to be used on the casing threads.

Casing is to be cemented to the surface using API class "C" containing 2% $CaCl_2$ mixed at 14.0 PPG (yield 1.53 CF/sk); an estimated 275 sacks will be required. A W.O.C. time of 24 hours will be observed after the plug is down.

Prior to drilling the float collar the casing is to be displaced with water (fresh water or brine) and the csg is to be pressure tested to 600 psi for 30 minutes. After drilling the shoe the casing is again to be pressure tested to 600 psi for 30 minutes.

PERRY R. BASS
BIG EDDY UNIT #39
PROPOSED DRILLING AND COMPLETION PROCEDURE

Intermediate Casing:

10 5/8" hole is to be drilled below the surface casing to an anticipated depth of 3160' (in top of Delaware) using fresh water. A partial loss of drilling fluid may occur in the Capitan Reef but lost circulation additives are expected to keep any loss at a minimum. Casing setting is anticipated as follows:

(Note: Hole conditions may require the use of a Halliburton DV tool and B.O.T. pin packer for stage cementing of the casing).

No. Jts	Description	Thds Off Length	From	To
--	Rotary correction	15	0	15
65	8 5/8" OD 24#/ft K-55 ST&C casing	2581	15	2596
13	8 5/8" OD 28#/ft H-40 ST&C casing	520	2596	3116
--	Float collar	2	3116	3118
1	8 5/8" OD 28#/ft H-40 ST&C casing	40	3118	3158
--	Float shoe*	2	3158	3160

* The float shoe is to be equipped with lateral exits for cement as it is intended to rest part of the casing weight on bottom.

The bottom three (3) joints are to be sand blasted to remove mill scale and lacquer and in addition are to be welded and sealed with HOWCO-weld. Positive type centralizers are to be recommended; one set on each of the bottom three (3) joints. API modified thread lubricant is to be used on the casing threads.

Prior to running the 8 5/8" casing, a caliper survey is to be run to determine actual cement volume required.

Assuming a single stage cement job, the 8 5/8" OD casing is to be cemented with sufficient Trinity "Lite-Wate" mixed @ 12.4 PPG (yield factor 1.57 CF/sk) to circulate to the surface, followed by 200 sx class "C" containing 2% $CaCl_2$ mixed at 14.0 PPG (yield factor 1.53 CF/sk). It is estimated that 440 sx Trinity "Lite-Wate" plus 200 sx class "C" 2% $CaCl_2$ will be required. A W.O.C. time of 24 hrs will be observed after the plug is down.

PERRY R. BASS
BIG EDDY UNIT #39
PROPOSED DRILLING AND COMPLETION PROCEDURE

Intermediate Casing: (continued)

Prior to drilling the float collar the 8 5/8" casing is to be displaced with fresh water and pressure tested to 1000 psi for 30 minutes. After drilling the float shoe the casing is again to be tested to 1000 psi for 30 minutes.

Production Casing:

7 7/8" hole is to be drilled from below the 8 5/8" OD csg point to total depth. Fresh water with flo-sal is to be used to the lower Bone Spring, about 8900'; then the hole is to be displaced with 10.0 brine water containing a minimum of 4% potassium chloride. Hole conditions below the Wolfcamp may require mudding up to fluid weights in excess of 10.0 PPG, however, minimum drilling fluid weights, sufficient to control the well are to be used to total depth. Water loss is to be reduced to 10 cc or less at the top of the Morrow formation.

5½" OD casing is to be set at total depth and is anticipated as follows:

No. Jts	Description	Thds Off Length	From	To
--	Rotary correction	14	0	14
306	5½" OD, 17#/ft, N-80 LT&C casing	12242	14	12256
--	Float collar	2	12256	12258
1	5½" OD, 17#/ft, N-80 LT&C casing	40	12258	12298
--	Float shoe*	2	12298	12300

* The float shoe is to be equipped with lateral exits as it is intended to rest part of the casing weight on bottom.

The bottom three (3) joints are to be sealed with HOWCO-weld. API modified thread lubricant is to be used on casing threads. Casing centralizers are recommended to be included over any pay zones in conjunction with sand blasting to remove mill scale and lacquer.

5½" casing is to be inspected using a combination mechanical optical and magnetic particle inspection-full length.

Prior to running the 5½" OD casing a caliper survey is to be made to determine actual cement volume required to fill the annulus back to 7800' (1300' above the expected top of Wolfcamp). Casing will be cemented as follows:

PERRY R. BASS
BIG EDDY UNIT #39
PROPOSED DRILLING AND COMPLETION PROCEDURE

Production Casing: (continued)

Cement is to be API class "H" containing 1% CFR-2 and 3# KCl per sack, mixed at 15.8 PPG, (yield of 1.10 CF/sk). An estimated 1075 sacks will be required to fill to 7800'.

After the plug is down, the 5½" casing is to be cut off, equipment nippled down and the drilling rig released.

Completion:

A well service unit is to be moved in and if necessary drilling-out equipment rigged up to drill out to a depth sufficient to test any potential pay zone.

It is anticipated that the well will be a single completed (Morrow gas) well. 2 7/8" OD, 6.50#/ft, N-80, EUE, 8 round thread tubing with ABC modified coupling is to be used with a suitable production packer. Tubing is to be inspected using a combination mechanical optical and magnetic particle inspection, full length.

Logging:

Logs are to be run prior to setting 5½" OD casing. The types of logs will be determined by the geological department.

A PDC (GR-N) Log is to be run after drilling out inside the 5½" OD casing to a depth sufficient to test any potential pay zone. The PDC Log is to be correlated to open hole logs to assist in perforating.

Drill Stem Test:

A maximum of three (3) DST's are anticipated, however, the exact number will be as required by the geological department when zones of interest are encountered.

Samples:

Ten foot samples from surface to total depth or as required by geological department.

PERRY R. BASS
BIG EDDY UNIT #39
PROPOSED DRILLING AND COMPLETION PROCEDURE

Estimated Formation Tops:

Elevation	3182 GR
T/Tansill	496'
T/Yates	635'
T/Capitan Reef	825'
T/Delaware Sand	3160'
T/Bone Springs	5620'
T/Wolfcamp	9110'
T/Strawn	10335'
T/Atoka	10675'
T/Morrow	11175'
B/Morrow Sand	11928'
T/Barnett	12126'

No potash or salt in this area.

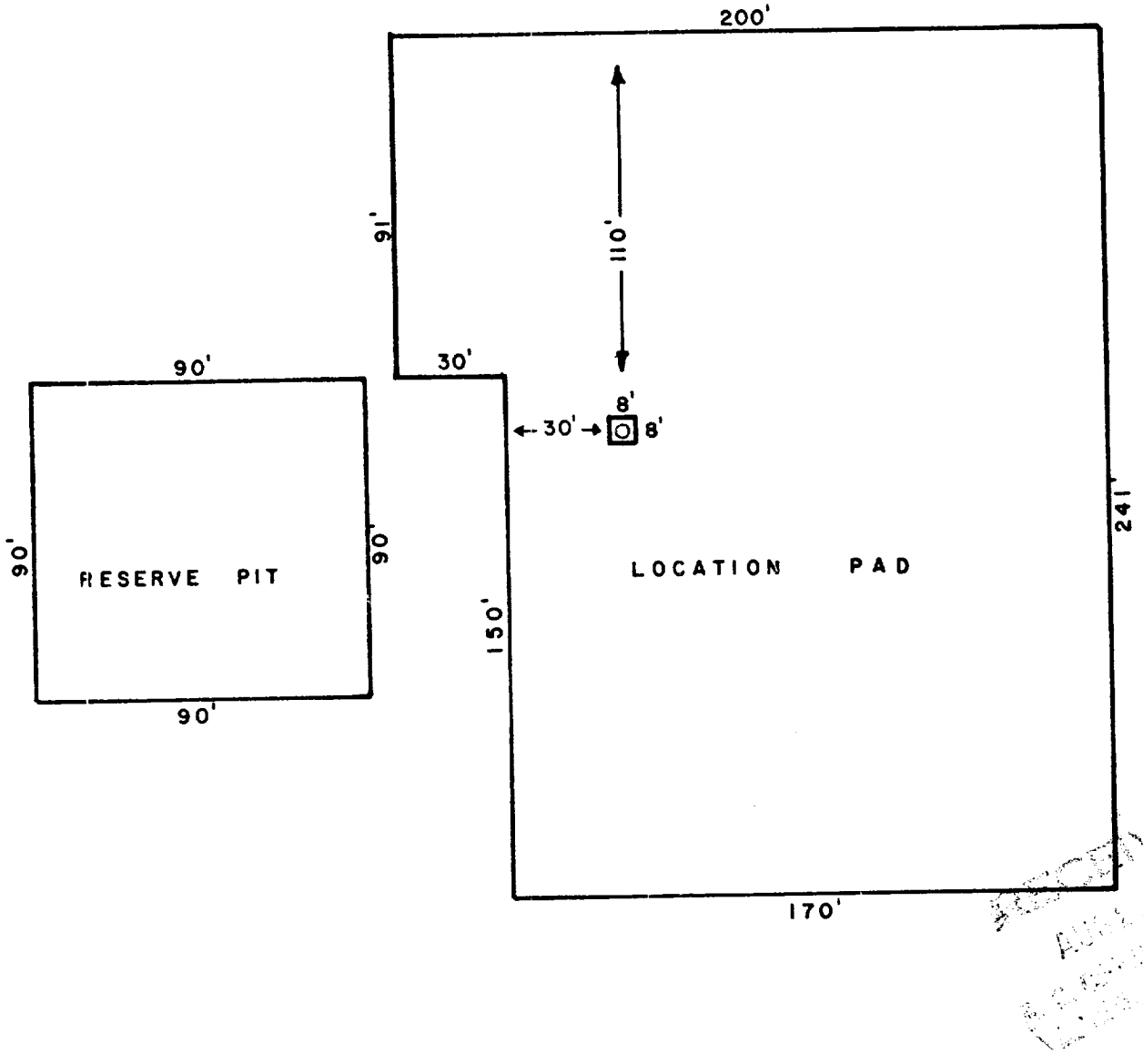
Blow Out Preventers:

The Hydril and BOP's containing pipe rams are to be opened and closed daily. The BOP's containing blank rams are to be opened and closed each time a trip is made.

PERRY R. BASS
BIG EDDY UNIT #39
PROPOSED DRILLING AND COMPLETION PROCEDURE

Casing and Tubing Data:

OD	Wt	Grade	Type Joint	Cplg or Jt OD	Min Collapse	Burst at MIY	ID	Drift Dia
11 3/4"	42#	H-40	ST&C	12.750	1070	1980	11.084	10.928
8 5/8"	24#	K-55	ST&C	9.625	1370	2950	8.097	7.972
	28#	H-40	ST&C	9.625	1640	2470	8.017	7.892
5½"	17#	N-80	LT&C	6.050	6280	7740	4.892	4.767
2 7/8"	6.50#	N-80	EUE T&C	3.668	9420	10570	2.441	2.347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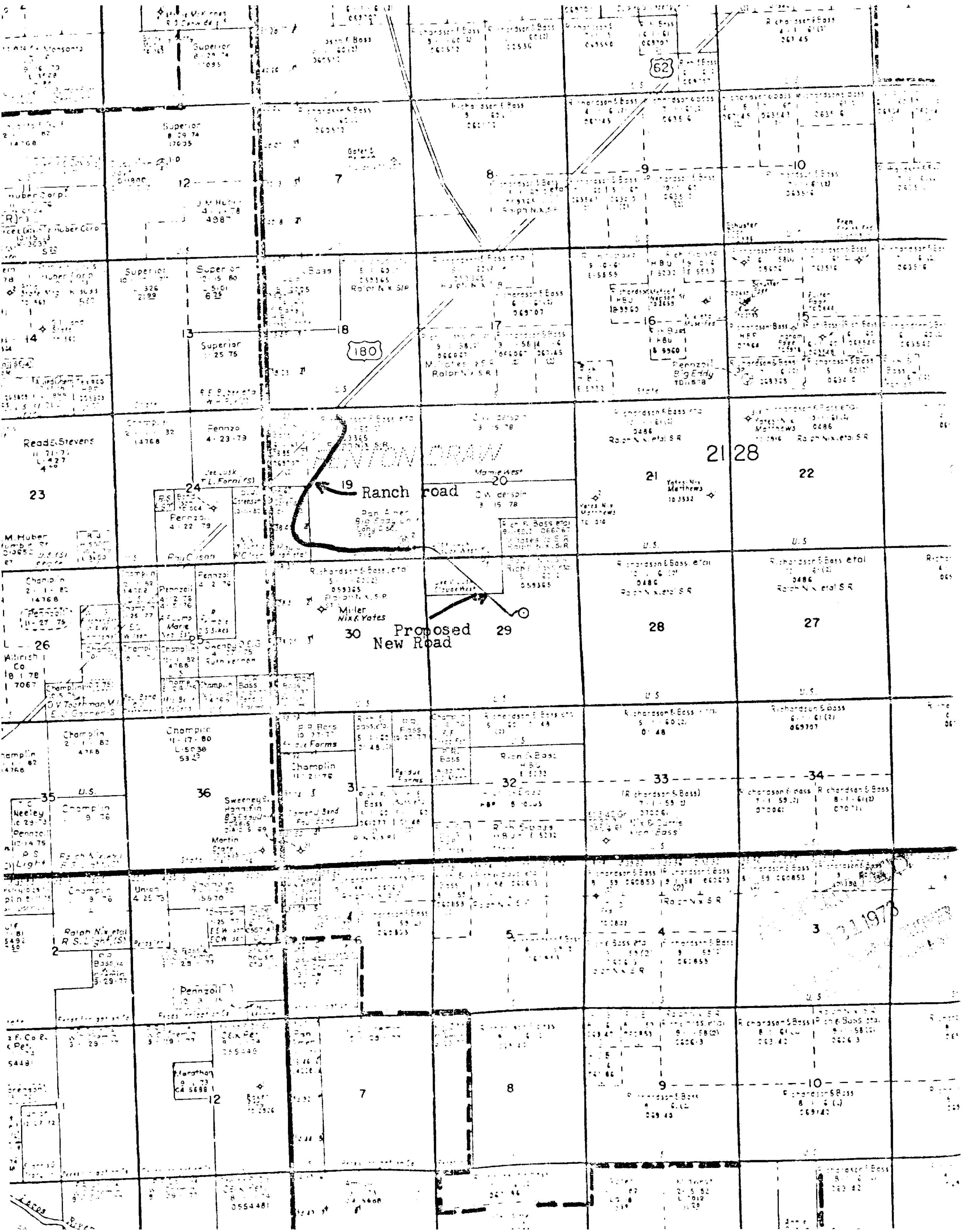
Scale


Ranch road
Proposed
New Road
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Superior
J. M. Huber
Read & Stevens
Champlin
Pennzoil
Richardson & Bass
Ralph Nix S.R
Miller
Nix & Yates
Marathon
Mamie West
C. W. dersoln
Yates Nix Matthews