

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

MESA PETROLEUM CO.

3. ADDRESS OF OPERATOR

1660 Lincoln, 2800 Lincoln Center, Denver, Colorado 80264

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

At surface

1700'N & 1700'W

At proposed prod. zone

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

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

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

5641'

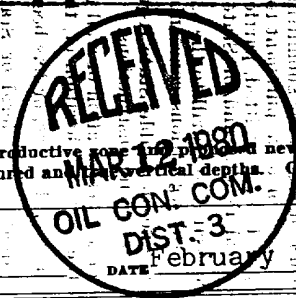
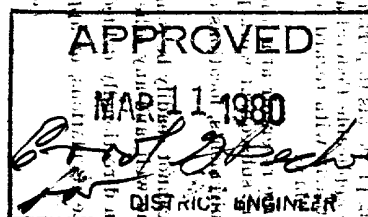
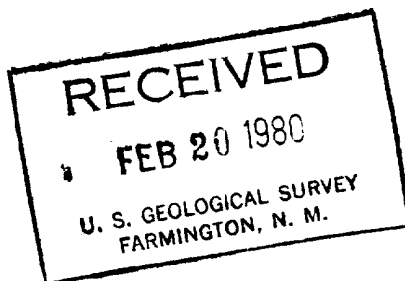
23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24	300	200
7 7/8	5 1/2	155	6500	675

(SEE ATTACHMENTS)

Gas under this lease is dedicated to a contract.



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

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

NM000

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

P. O. BOX 2088

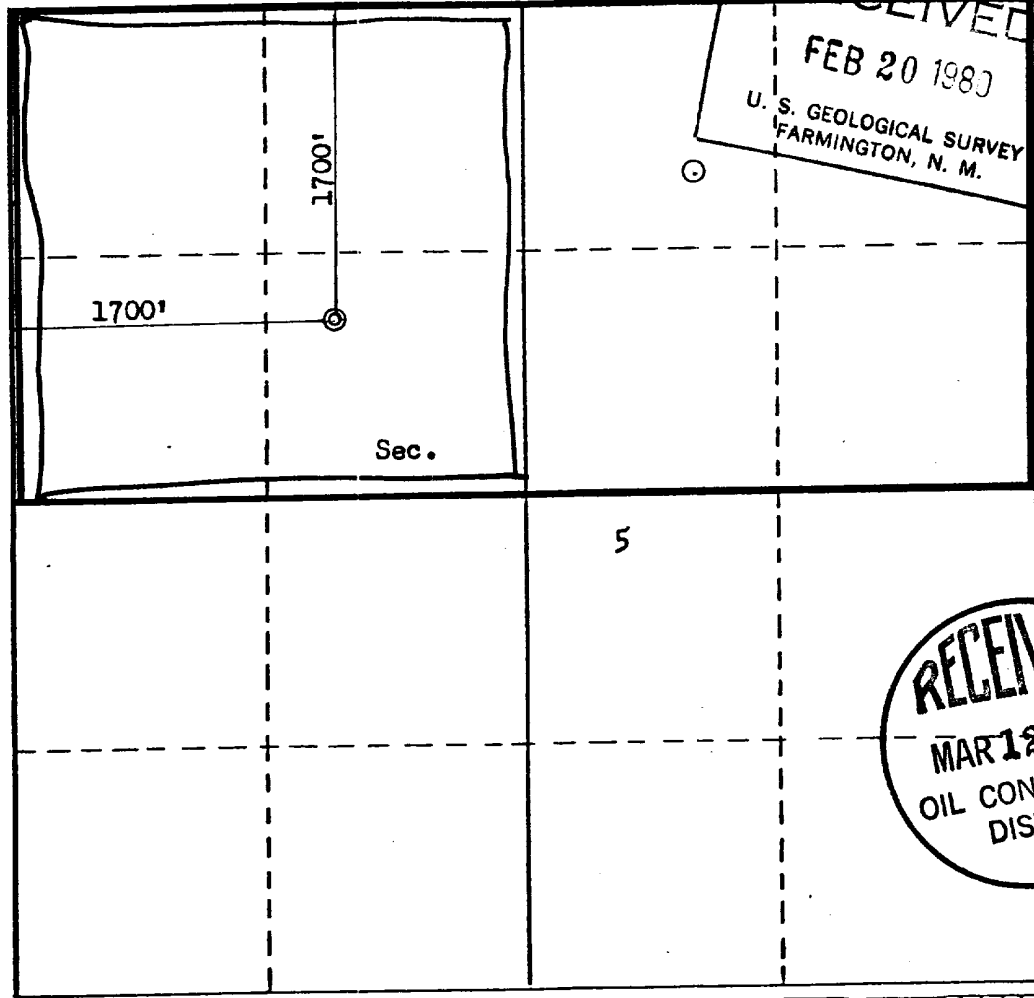
Form C-107

Revised 10-1-78

ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

All distances must be from the outer boundaries of the Section

Operator MESA PETROLEUM COMPANY		Lease FEDERAL		Well No. 5-E	
Unit Letter F	Section 5	Township 29N	Range 12W	County San Juan	
Actual Footage Location of Well: 1700 feet from the North line and 1700 feet from the West line					
Ground Level Elev. 5641	Producing Formation Dakota	Pool <i>Bulcher Katy PC</i> Basin Dakota		Dedicated Acreage: 320.21/160.49 Acres	
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.</p> <p>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).</p> <p>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?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes," type of consolidation <u>COMMUNITIZATION</u></p> <p>If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)</p> <p>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.</p>					
				CERTIFICATION	
				<p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>John Alexander</i> Name JOHN ALEXANDER Position AGENT Company MESA PETROLEUM Date February 19, 1980</p> <p>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.</p> <p><i>Fred B. Kerr, Jr.</i> Date Surveyed January 23, 1980 Registered Professional Engineer and/or Land Surveyor Fred B. Kerr, Jr. Certificate No. 3950</p>	

MESA PETROLEUM COMPANY

Formation Information and Drilling Practices

WELL:

Federal 5E

LOCATION:

1700'/N & 1700'/W

Sec.5-T29N-R12W

San Juan Co., NM

LEASE NUMBER:

NM 021118

1. Surface Formation

Nacimiento

2. Estimated Formation Tops

Ojo Alamo	215	Point Lookout	4075
Pictured Cliffs	1720	Greenhorn	6100
Cliff House	3260	Dakota	6200

3. Estimated Depth of Anticipated Water, Oil, Gas or Minerals

1720	gas	4075	gas
3260	gas	6200	gas

4. Proposed Casing Program

0-300' 8 5/8", 24#, K-55, ST&C new casing. Cement w/ 200 sk. Class "B" + 2% CaCl₂

0-6500 5 1/2", 15.5# ST&C new casing. Cement 1st stage w/ 325 sk 50-50 Pozmix + 2% gel. Cement 2nd stage 350 sk 50-50 Pozmix + 2% gel. Estimated cement tops 1500'. Stage tool below PC formation.

5. Pressure Control Equipment - Blowout Preventer

The attached schematic shows the type of blowout preventer to be used while drilling. The unit will be tested to 800 psi prior to drilling from under surface pipe by pressuring through casing valves with blind ram closed. This procedure will be repeated with the pipe rams closed on a joint of drill pipe. Operation of the hydraulic system will be checked daily.

6. Drilling Fluids

Depth	Type	Vis	Weight	Fluid Loss
0-300	Gel-lime	35-45	8.6-9.0	N/L
300-6500	Low-solids	30-40	8.6-11.5	10

7. Auxiliary Equipment

- a. bit float
- b. stabbing valve to be used in drill pipe when the kelly is not connected
- c. rotating drilling head

8. Logging - Coring - Testing

Logging: Intermediate: IES, FDC/CNL, Caliper, GR
Coring: None planned
Testing: None planned

9. Abnormal Temperatures, Pressures, or Potential Hazards

None expected.

10. Starting Date

Anticipated starting date is March 1, 1980. Approximately 15 days will be needed to build roads, location and drill to total depth. Completion will commence immediately and require approximately 20 days.

SHAFER HYDRAULIC BLOWOUT PREVENTERS

(Patented)

TYPE LWS PREVENTERS—8", 3000 lb. & 5000 lb.—10", 5000 lb.
12", 3000 lb.—13 3/8", 5000 lb.—16", 3000 lb.

PARTS AND DIMENSIONAL ILLUSTRATIONS

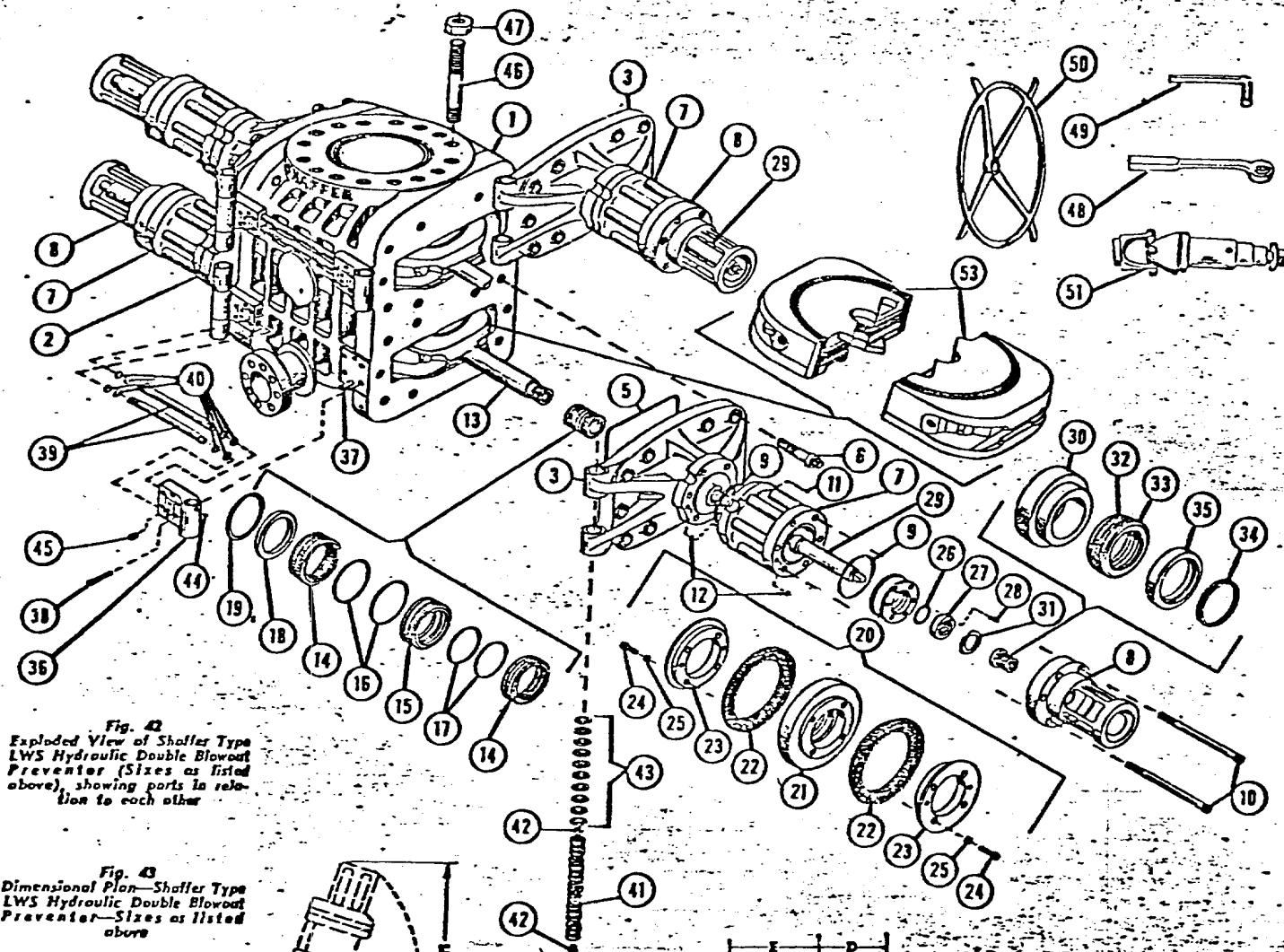


Fig. 42
Exploded View of Shaffer Type
LWS Hydraulic Double Blowout
Preventer (Sizes as listed
above), showing parts in rela-
tion to each other

Fig. 43
Dimensional Plan—Shaffer Type
LWS Hydraulic Double Blowout
Preventer—Sizes as listed
above

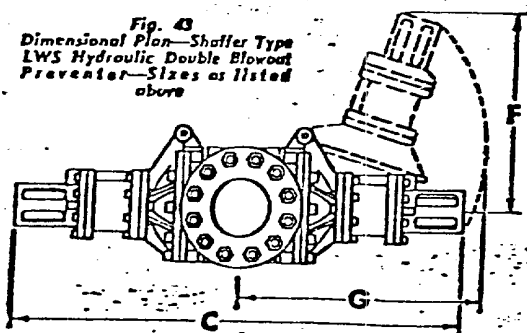
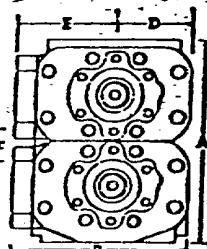


Fig. 44
Dimensional End Elevation—
Shaffer Type LWS Hydraulic
Double Blowout Preventer—
Sizes as listed above



STANDARD ACCESSORIES

- (50) 4 Hand Wheels
- (48) 1 Door Wrench
- (49) 1 Cylinder & Cylinder Head Wrench
- (51) 4 Universal Joints

DIMENSIONAL AND ENGINEERING DATA ON ABOVE SIZES OF TYPE LWS PREVENTERS

Refer to Figs. 43 and 44

Size	Max. Service Pressure, Rating psi	Test Pressure, psi	Vertical Bore	Max. Ram Size	Approx. Weight Lbs.	A						B	C	D	E	F	G	Closing Ratio	Opening Ratio	U.S. Gals. Fluid To Close Rams	U.S. Gals. Fluid To Open Rams
						Studded Flange		Height													
								Single		Double											
Single	Double	Studded Flange	Belled Flange	Studded Flange	Belled Flange	Width	Length	Center To Front	Center To Rear	Door Open To Change Rams	Door Open To Change Rams										
8"	3,000	6,000	8"	7"	2,900	----	----	26 3/4"	41 3/4"	25 3/4"	76 1/4"	11 1/4"	14 1/4"	22"	46"	5.5 to 1	1.25 to 1	2.75	2.5		
10"	5,000	10,000	10"	8 1/2"	2,900	----	----	26 3/4"	45 1/4"	25 3/4"	76 1/4"	11 1/4"	14 1/4"	22"	46"	5.5 to 1	1.25 to 1	2.75	2.5		
12"	3,000	6,000	12 1/4"	10 3/4"	5,500	24 3/4"	24 3/4"	30 3/4"	60 1/4"	28 3/4"	82 1/4"	12 1/4"	16 1/4"	24"	48"	5.5 to 1	1.5 to 1	2.25	2.7		
13 3/8"	5,000	10,000	13 3/8"	10 3/4"	8,300	24 3/4"	24 3/4"	34 1/4"	47 3/4"	28 3/4"	82 1/4"	12 1/4"	16 1/4"	24"	48"	5.56 to 1	1.25 to 1	2.55	2.9		
16"	3,000	6,000	16"	13 3/4"	8,500	26 3/4"	26 3/4"	38 3/4"	49 3/4"	28 3/4"	82 1/4"	14 1/4"	18 1/4"	24"	48"	5.56 to 1	1.5 to 1	2.55	2.9		
18"	2,000	4,000	18"	15 1/2"	8,500	----	----	38 3/4"	81"	28 3/4"	106 1/4"	18 1/4"	20 1/4"	24"	60"	5.56 to 1	1.25 to 1	3.5	3.5		

MESA PETROLEUM COMPANY

Surface Use Plan

WELL:

Federal 5E

LOCATION:

1700'/N & 1700'/W

Sec.5-T29N-R12W

San Juan Co., NM

LEASE NUMBER:

NM 021118

1. Existing Roads (shown in green)

The attached topographic map shows all existing roads within one mile of the proposed location. The access road will join an existing lease road.

2. Planned Access Road

The access road will be approximately 2300' long and 20' wide. No turnouts will be needed. Water bars will be used to aid drainage and prevent erosion. Maximum grade will be about 5%. No fences or cattleguards will be crossed.

3. Location of Existing Wells

All wells (water, oil, gas, disposal and drilling) are shown and so labeled on the attached topographic map.

4. Location of Tank Batteries, Prod. Facilities & Prod. Gathering & Service Lines

All production facilities are to be contained within the proposed site. Other facilities operated by Mesa are shown on the attached topographic map.

5. Location of Water Supply

Water for drilling will be trucked from Aztec, NM, approximately 6 miles southwest of the location. Water is privately owned.

6. Source of Construction Materials

Any construction material required for road or location will be excess material accumulated from building such sites.

7. Methods of Handling Waste Disposal (Refer to attached well site layout)

All burnable material will be burned in the trash pit when conditions permit. All nonburnable material (drilling fluids, cuttings, chemicals, etc.) will be held in the reserve pit and buried when dry. Any oil produced while drilling will be trucked from the location prior to leaving the pit to dry. Pits will be fenced during dryout time, then completely backfilled with dirt prior to preparing the location for production or abandonment. Material that cannot be otherwise safely disposed of will be carried to a sanitary land fill.

8. Ancillary Facilities

No ancillary facilities are planned.

9. Well Site Layout

The attached layout shows the drilling rig with all facilities. Cut and fill required is also indicated.

10. Plans for Restoration of Surface

Restoration of well site and access road will begin within 90 days of well completion, weather permitting. Should the well be abandoned, the drilling site will be reshaped to its approximate former contour. The access road will be plowed and leveled. Both site and road will have topsoil replaced and will be reseeded when germination can occur.

Should the well be commercial, that portion of the location not needed for operation will be repaired as above. The portion needed for daily production operations, and the access road, will be maintained in good repair.

In either case, cleanup of the site will include burning any safely burnable material, filling of all pits, carrying away of all nonburnable material and chemicals that cannot be buried. Any oil that has accumulated on the pits will be trucked away.

11. Other Information

This well is located about 1½ miles east of Farmington, NM. The area is rugged and covered with sagebrush, yucca, and Cedar trees. The soil is a sandy clay. Small animals and rodents inhabit the area.

Surface belongs to the Bureau of Land Management. There are no occupied dwellings in the area. No artifacts were noticed.

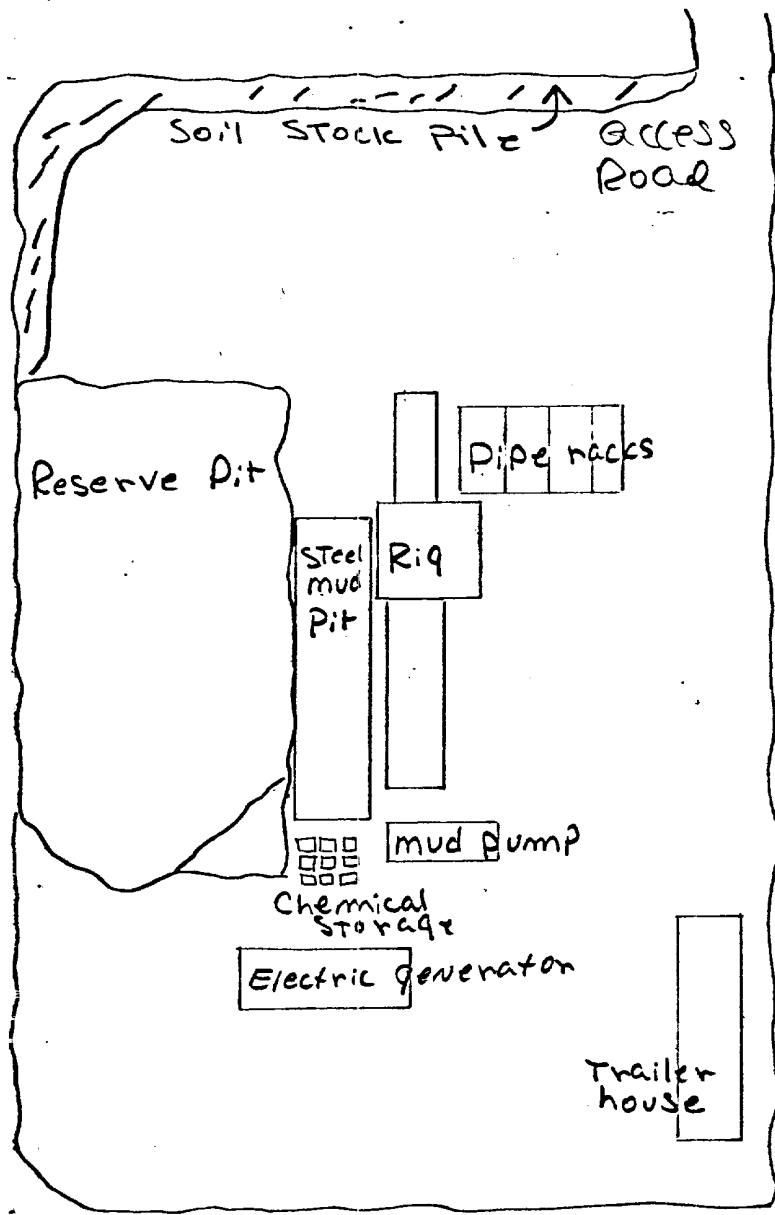
12. John Alexander
3E Company, Inc.
P.O. Box 190
Farmington, NM 87401
Phone: 505-327-4020

13. I hereby certify that I or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the 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 Mesa Petroleum Co and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

February 19, 1980
DATE

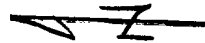

JOHN ALEXANDER

JA:cp



horizontal scale: 1" = 50'

300



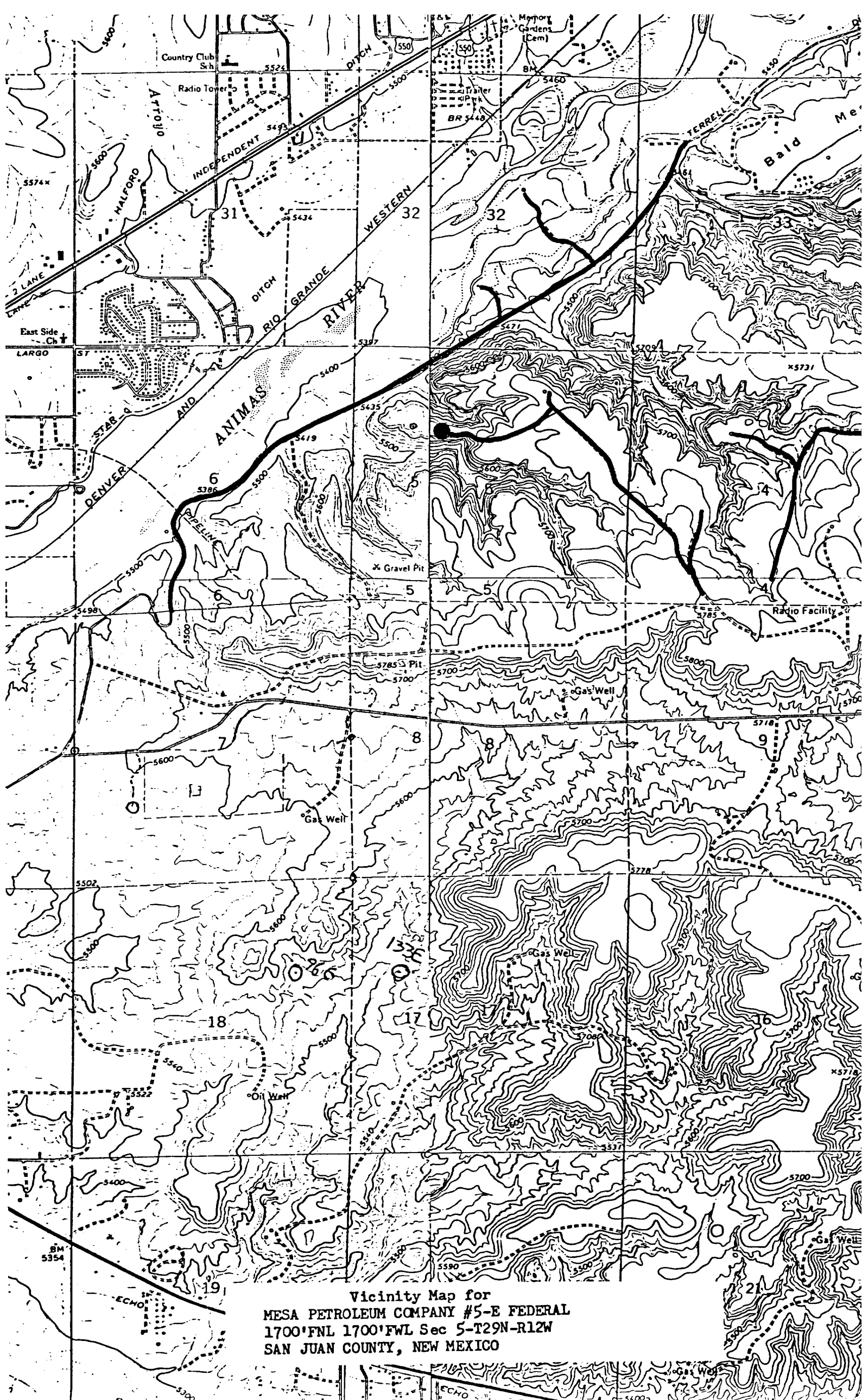
location GRADE

vertical scale:
1" = 10'

MESA Petroleum Co.
FEDERAL # SE

NW 1/5 - 29N - 12W
SAN JUAN CO, NM

location GRADE



Vicinity Map for
MESA PETROLEUM COMPANY #5-E FEDERAL
1700'FNL 1700'FWL Sec 5-T29N-R12W
SAN JUAN COUNTY, NEW MEXICO