Form 9-331 C (May 1963)

NMOCC COPY

SUBMIT IN TRIPLICATE* (Other instr[illegible] on reverse

Form approved. Budget Bureau No. 42-R1425.

Amended Location

ITED 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: Amoco Production Company

3. ADDRESS OF OPERATOR: P. O. Drawer A, Levelland, TX 79336

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2180' FNL and 660' FWL (Unit E, Sec. 6)
At proposed prod. zone

RECEIVED MAR 17 1978 U.S. GEOLOGICAL SURVEY ARTESIA, NEW MEXICO

5. LEASE DESIGNATION AND SERIAL NO.: NM 9553

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Federal "J"

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat-Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 6-26-27

12. COUNTY OR PARISH: Eddy

13. STATE: NM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 21 miles Southwest of Malaga.

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

16. NO. OF ACRES IN LEASE:

17. NO. OF ACRES ASSIGNED TO THIS WELL: ~~640~~ 320

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

19. PROPOSED DEPTH: 12,000

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3300.5 GR

RECEIVED MAR 23 1978 O. C. C. ARTESIA, OFFICE

22. APPROX. DATE WORK WILL START*: 3-21-78

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	16"	65#	450'	Circ. to Surface
14-3/4"	10-3/4"	40.5-45.50#	2,000'	Circ. to Surface
9-1/2"	7-5/8"	29.70-39#	10,500'	Enough to tie back to 10-3/4"csg
6-1/2"	5"	17.93#	12,000'	Enough to tie back to 7-5/8" csg

After reaching TD, logs and cores will be run and evaluated; perforate and/or stimulate as necessary in attempting commercial production.

Mud - 0' - 450' - Native mud x fresh water
450' - 2,000' - Brine water, native mud and sufficient commercial mud to maintain good hole conditions.
2,000' - 10,500' - Fresh water added to brine, native mud, and commercial mud.
10,500' - 12,000' - KCL added for 6% system. At 11,600' raise viscosity with commercial mud for Morrow penetration.

BOP Program attached.
Archaeological Survey attached.
Gas is not dedicated.

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 [signature] TITLE Administrative Analyst (SG) DATE 3-16-78

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE MAR 22 1978

APPROVED BY [signature] TITLE ACTING DISTRICT ENGINEER DATE MAR 22 1978

CONDITIONS OF APPROVAL, IF ANY:

0 + 5 - USGS-A
1 - Div.
1 - Susp.
1 - RC

*See Instructions On Reverse Side

THIS APPROVAL IS RESCINDED IF OPERATIONS ARE NOT COMMENCED WITHIN 3 MONTHS.
EXPIRES JUN 22 1978

NEW MEXICO OIL CONSERVATION COMMISS

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	Lease	Well No.
AMOCO PRODUCTION COMPANY	Federal "J"	1

Unit Letter	Section	Township	Range	County
E	6	26 South	27 East	Eddy

Actual Footage Location of Well: 2180 feet from the north line and 660 feet from the west line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3300.5	Morrow	Wildcat	320 ~~640~~ Acres

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).

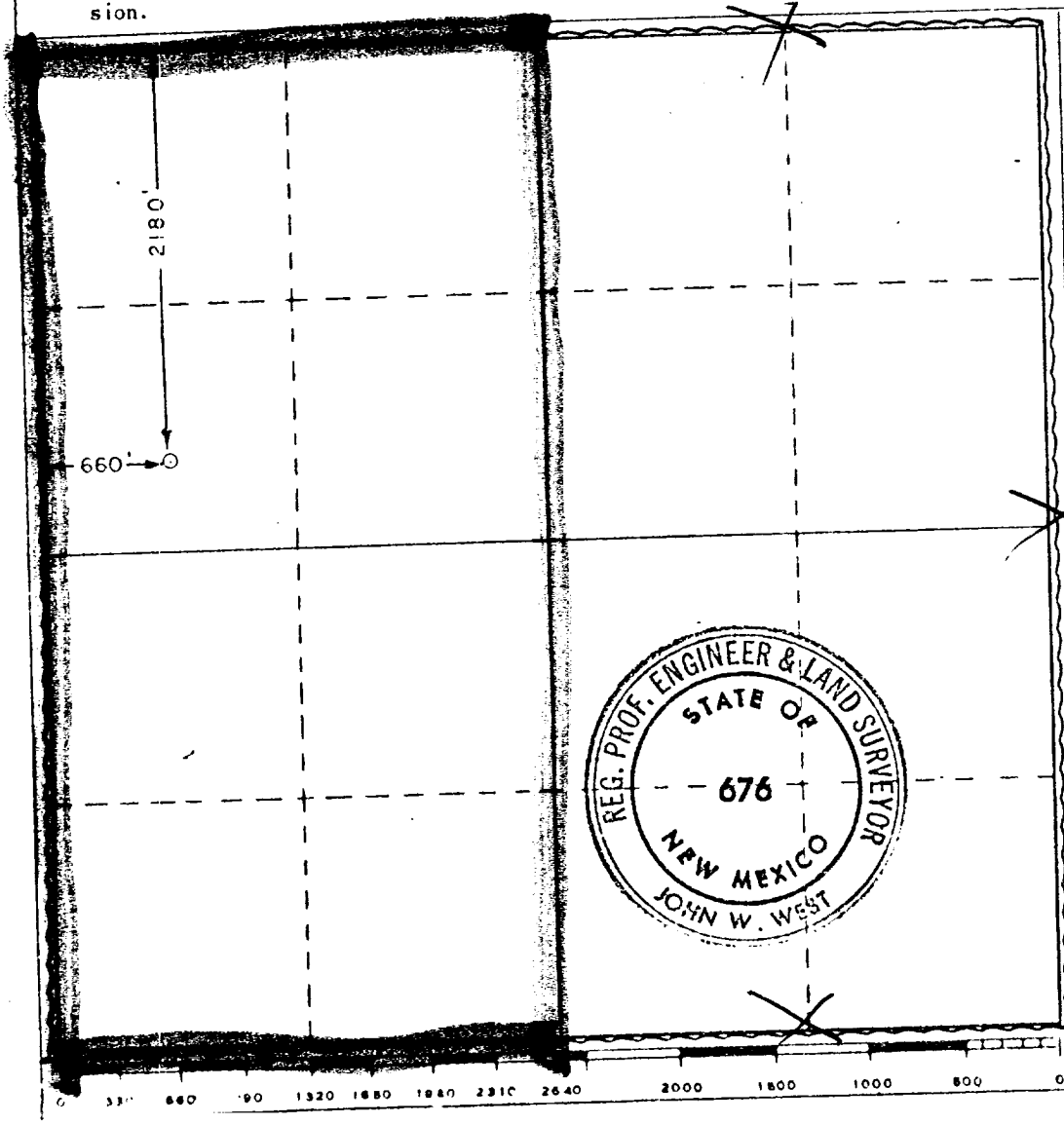
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ 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.

RECEIVED
MAR 17 1978
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO



CERTIFICATION

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

Name D.R. Couch

Administrative Analyst (SG)

Company AMOCO PRODUCTION COMPANY

Date 3-16-78

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
March 13, 1978

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. John W. West 676
Ronald J. Eidson 3239

ATTACHMENT TO
3000# W.P. TWO RAM BOP

1. BOP'S TO BE FLUID OPERATED.

2. BOP'S AND ALL FITTINGS MUST BE FLUID OPERATED AND TESTED AT 3000 PSI W.P. MINIMUM.

3. EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AT LEAST AS LARGE AS CASING SIZE BEING DRILLED THROUGH.

4. NIPPLE ABOVE BOP'S SHALL BE SAME SIZE AS LAST CASING SET.

5. UPPER KELLY COCK IS REQUIRED AND SHALL BE 3000# W.P. MINIMUM.

6. T. I. W. OR OTHER SAFETY VALVE SHALL BE AVAILABLE ON RIG FLOOR WITH CONNECTION OR SUBS TO FIT ANY TOOL JOINT IN THE STRING. VALVE TO BE FULL BORE 3000# MIN.

7. VALVE NEXT TO SPOOL SHALL BE 4". OTHER EQUIPMENT MAY BE 3" OR 4". ALL CHOKE MANIFOLD EQUIPMENT SHALL BE FLANGED. BLOW LINE FROM MANIFOLD TO BE MINIMUM OF 3" AND STRAIGHT AS POSSIBLE WITH MINIMUM BENDS.

8. FLUID LINES FROM ACCUMULATOR TO BOP'S AND ALL REMOTE CONTROL FLUID LINES SHALL BE STEEL, AND RATED AT OR ABOVE MAXIMUM ACCUMULATOR PRESSURE. LINES SHALL BE ROUTED TO MINIMIZE ANY POSSIBILITY OF FIRE DAMAGE.

9. USE RAMS IN FOLLOWING POSITIONS:*

	DRILLING	RUNNING CASING
UPPER RAM	DRILL PIPE	CASING
LOWER RAM	BLIND	BLIND

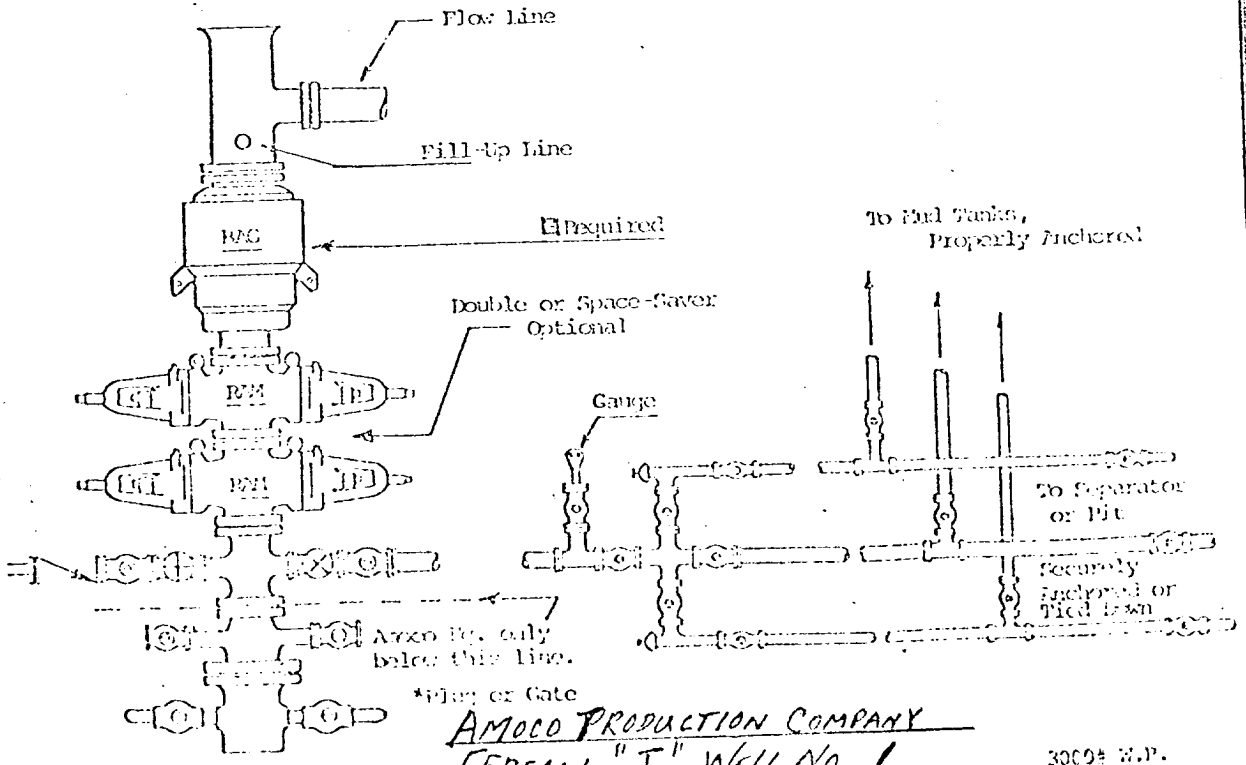
*AMOCO AREA SUPT. MAY REVERSE LOCATION OF RAMS.

10. CHOKE MANIFOLD, BEYOND SECOND VALVE FROM CROSS MAY BE OPTIONALLY POSITIONED OUTSIDE OF SUBSTRUCTURE.

11. EXTENSIONS AND HAND WHEELS TO BE INSTALLED AND PLACED AT ALL TIMES.

12. TWO INCH (2") LINES AND VALVES ARE PERMITTED ON THE KILL LINE.

NOTE: ALL UNMARKED VALVES MAY BE PLUG OR GATE VALVE, METAL TO METAL SEAL.



AMOCO PRODUCTION COMPANY
FEDERAL "J" WELL NO. 1
I-26-S, R-27-E, EDDY CO., N.M.

3000# W.P.

EXHIBIT

Attachment to "Application for Permit to Drill", Form 9-331 C

Federal "J" Well No. 1, Unit E, 1980' FNL x 660' FWL, Section 6, T-26-S, R-27-E, Eddy County, New Mexico

1. Location

   See attached Form C-102

2. Elevation

   See attached Form C-102

3. Geologic name of surface formation.

   Ochoan - (Dewey Lake, Rustler, Salado, Castille).

4. Type of drilling tools and associated equipment to be utilized.

   See Form 9-331 C

5. Proposed drilling depth.

   See Form 9-331 C

6. Estimated tops of important geologic markers.

Delaware	1975'	2nd Bone Springs	7600'	Atoka	10900'
Bone Springs	5750'	3rd Bone Springs	8600'	Morrow	11725'
1st Bone Springs	6700'	Wolfcamp	8850'		
		Strawn "C"	10700'		

7. Estimated depths at which anticipated water, oil, gas or other mineral-bearing formations are expected to be encountered.

Wolfcamp	8850'	Morrow	11725'
Strawn "C"	10700'		

8. Proposed casing program, including size, grade, and weight of each string and whether it is new or used.

Depth	Size	Weight	Grade	New or Used
450'	16"	65#	H-40 ST&C	New
2000'	10-3/4"	40.5-45.5#	K-55 ST&C	New
10500'	7-5/8"	29.70-29#	K-55 ST&C	New
12000'	5"	17.93#	K-55 ST&C	New

9. Proposed cementing program.

   16" Casing - Sufficient cement to circulate to surface.
   10-3/4" Casing - Sufficient cement to circulate to surface.
   7-5/8" Casing - Sufficient to tie back to 10-3/4" casing.
   5" Casing - Sufficient to tie back to 7-5/8" casing.

10. Blowout Preventer Program is attached.

11. Type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling, and the quantities and types of mud and weighting material to be maintained.

Surf to 450' - Native mud x fresh water.
200' to 2,000' - Brine water, native mud and sufficient commercial mud to maintain good hole conditions.
2,000' to 10,500' - Fresh water added to brine, native and commercial mud.
10,500' to 12,000' - KCL added for 6% system. At 11,600' raise viscosity and reduce water loss with commercial mud for Morrow Penetration.

12. Testing, logging and coring programs to be followed with provisions made for required flexibility.

450' to TD - GR-CNL-FDC-Caliper
450' to TD - GR-Dual Laterolog-Micro SFL - P
450' to TD - Sonic (BHC)
450' to TD - Velocity Survey

13. Any anticipated abnormal pressure or temperatures expected to be encountered or potential hazards, such as hydrogen sulfide gas, along with plans for mitigating such hazards.

None Anticipated.

14. Anticipated starting date and duration of operation.

Start March 4, 1978. Complete May 1, 1978.

15. Other facets of the proposed operation operator wishes to point out for the Geological Survey's consideration of the application.

None.

ATTACHMENT TO FORM 9-331C

APPLICATION FOR PERMIT TO DRILL

LEASE Federal "J" WELL NO. 1

LOCATION Unit E, Sec.6, T-26-S, R-27-E

POOL Undesignated Morrow (Wildcat)

COUNTY Eddy County, New Mexico

The undersigned hereby states that Amoco's representative, Mr. E. E. Pauley, personally contacted Earl Ray Forehand, the ~~xxxxx~~ lessee of the surface land where the proposed work is to be conducted and advised him of the proposed work, the construction site and pertinent roads included in the project. It is further stated that, upon being fully advised of the extent of the work and the effect upon the surface, said owner has consented to the said work.

If the well is a producer, all pits will be cut, filled and leveled as soon as practical after the pits are dry. If the well is a dry hole, pits will be filled as above, a dry hole marker will be installed, and the location and pad will remain intact.

D. R. Couch
Administrative Analyst (SG)

2-22-78
Date

Proposed Development Plan for Surface Use

Amoco Production Company's Federal "J" Well No. 1, Unit E, 1980' FNL x 660' FWL, Sec.6, T-26-S, R-27-E, Eddy County - (Exploratory Well).

1. Existing roads including location of exit from main highway.

   Detailed map showing drillsite location in relation to the nearest town and all existing roads within one mile of the wellsite are shown on Exhibit A. From Malaga, go south on Highway 285 approximately 11.4 miles. Turn west on dirt road and go 10 miles, north 7/10 mile, and west 1800' (New Road) to location.

2. Planned access roads.

   1800' new road required. Will be graded only.

3. Location of existing wells.

   All existing wells within ~~one~~ two mile radius are shown on Exhibit C .

4. Location of tank batteries and flow lines.

   If the well is commercially productive, the production facilities will be located on the southeast end of the drilling pad. See Exhibit D.

5. Location and type of water supply.

   Both fresh water and brine water will be trucked to location by commercial hauler.

6. Source of construction materials.

   No caliche will be required.

7. WASTE DISPOSAL -

   a. Drill cuttings will be disposed of in the reserve pit.
   b. Drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry.

c. Trash, waste paper, garbage and junk will be burned or buried with a minimum of 24" cover. Waste material will be contained to prevent scattering by wind prior to ultimate disposal.
d. Any produced water will be contained in tanks and be disposed of in an approved manner. Oil produced will be stored in tanks until sold, at which time it will be hauled from location.
e. Current laws and regulations pertaining to disposal of human waste will be complied with.
f. If productive, maintenance waste will be placed in special containers and buried or hauled away periodically.

8. ANCILLARY FACILITIES -

No camps, airstrips, etc. will be constructed.

9. WELLSITE LAYOUT -

a. Size of Drilling Pad - 340' x 290' x 6"
b. Compacted - (Caliche - Native)
c. Surfaced - No
d. 450' square area around wellsite has been cleared by archaeologist.
e. See Exhibit D .

10. RESTORATION OF SURFACE -

Producing Well - all pits will be cut, filled, and leveled as soon as practical to original condition with rehabilitation to commence following removal of drilling and completion equipment. Rehabilitation to be completed in 180 days if possible.

Dry Hole - same as above with dry hole marker to be installed and surface reseeded if required.

11. OTHER INFORMATION -

a. Terrain - Relatively flat adjacent to hilly country.

b. Soil - Hard clay and rocky.
c. Vegetation -Creosote bush, mesquite, cacti, yucca, fluffgrass, burrograss, mesquitegrass, tobosa grass
d. Surface Use - Grazing
e. Ponds and Streams - None.
f. Water Wells - None.
g. Residences and Buildings - None
h. Arroyos, Canyons, etc. - None
i. Well Sign - Posted at drillsite.
j. Open Pits - All pits containing liquid or mud will be fenced.
k. Archaeological Resources - Drillsite, which is relatively flat, semi-arid desert country, is in a low environmental risk area. The total effect of drilling and producing in this area would be minimal. No known archaeological, historical, or cultural sites exist in the drill or road areas.

12. OPERATOR'S REPRESENTATIVE -

Field personnel responsible for compliance with development plan for surface use is:

J. H. Hankins, Senior Drilling Foreman
P. O. Drawer "A"
Levelland, TX 79336
Office Phone: 806-894-3163

LEASE & WELL NUMBER _____

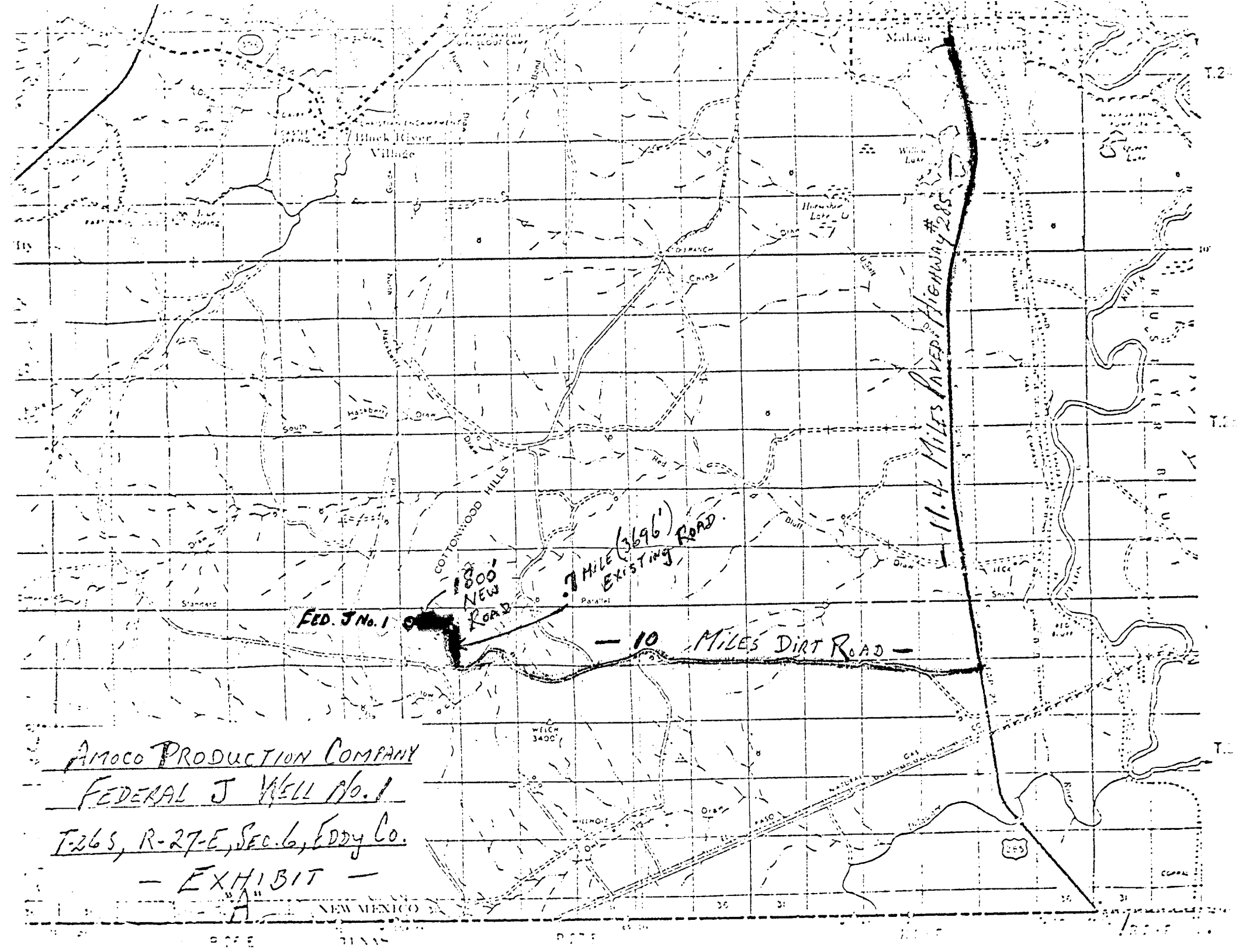
LOCATION Unit , ' F L X ' F L, Sec. , T- - , R- - , County

Certification: The following statement is to be incorporated in the plan and must be signed by the lessee's or operator's field representative who is identified in Item No. 12 of the plan.

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 AMOCO PRODUCTION COMPANY and its contractors and subcontractors in comformity with this plan and the terms and conditions under which it is approved.

2-22-78
DATE

J. H. Hansen Sr. Drlg. Foreman
NAME AND TITLE



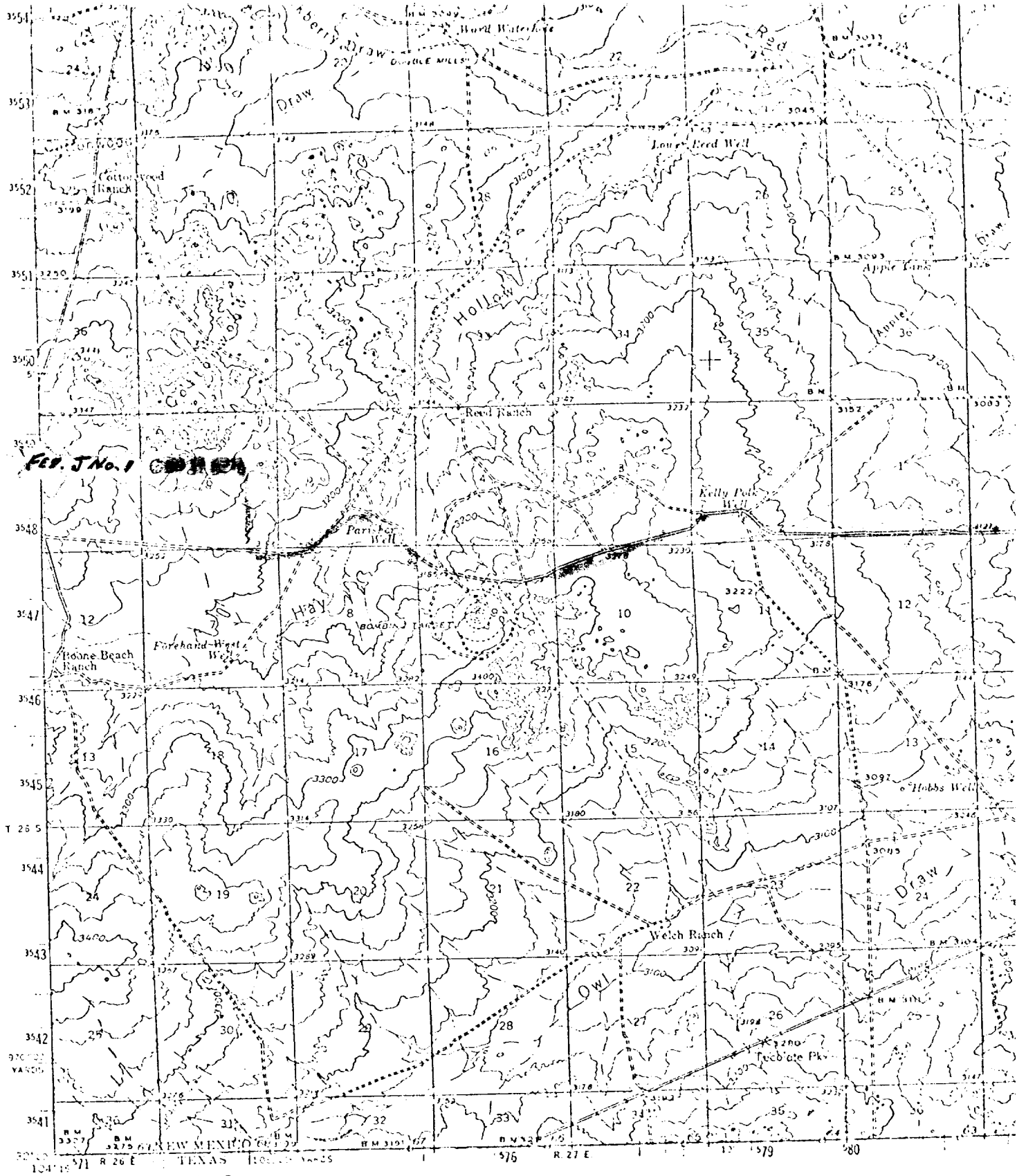
AMOCO PRODUCTION COMPANY

FEDERAL J WELL NO. 1

T-26S, R-27-E, SEC. 6, EDDY CO.

— EXHIBIT —

"A"



Mapped by the Geological Survey
1945

1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue

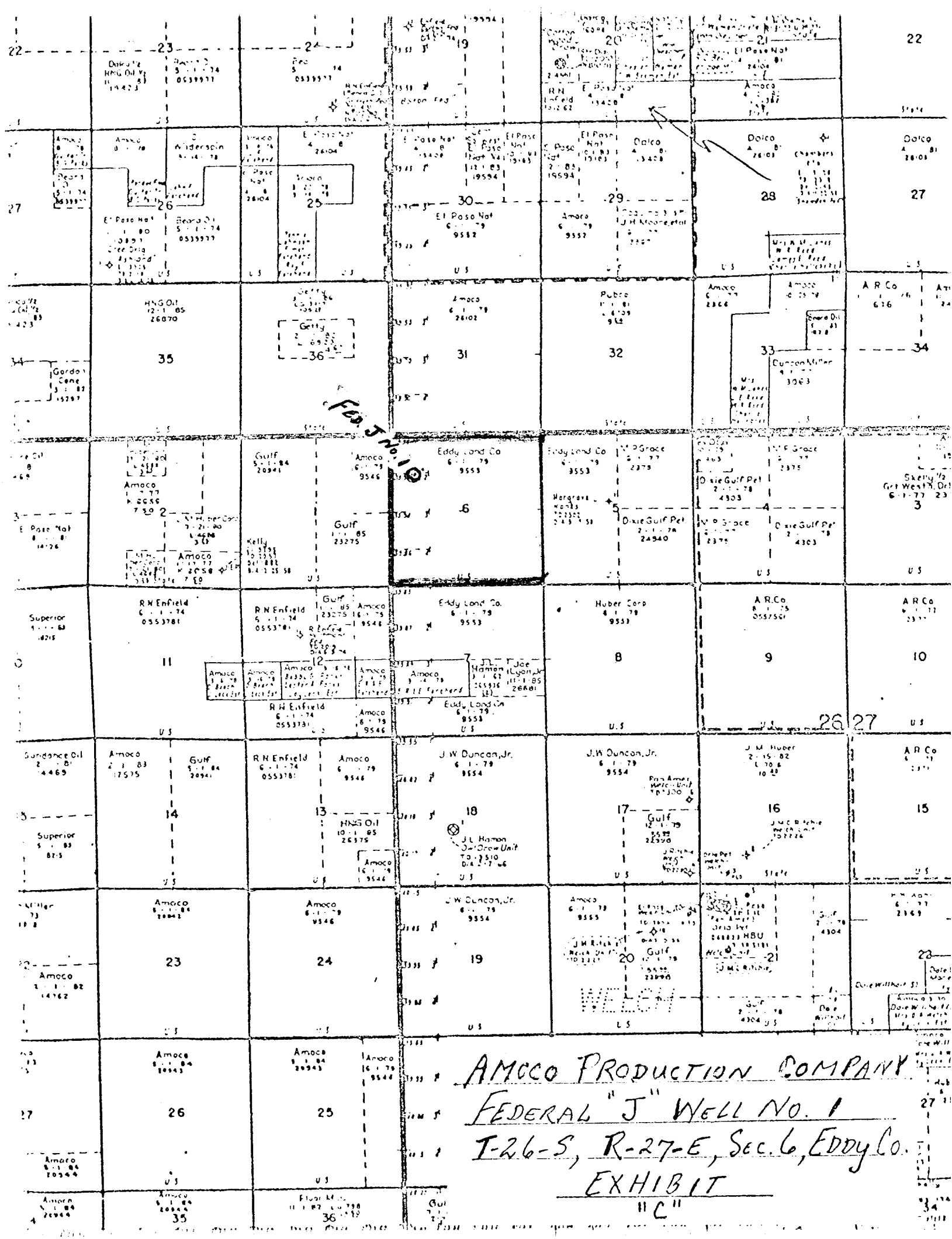
AMOCO PRODUCTION COMPANY
FEDERAL "J" WELL NO. 1
T-26-S, R-27-E, Sec. 6, EDDY Co.

— EXHIBIT —

UTM GRID AND 1965 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

CONTOUR DATU

FOR SALE BY U. S. GEOLOGICAL SURVEY, A FOLDER DESCRIBING TOPOGRAPH


Fed J No 1
AMOCO PRODUCTION COMPANY
FEDERAL "J" WELL NO. 1
I-26-S, R-27-E, Sec. 6, Eddy Co.
EXHIBIT
"C"

SHEET NO. 01

Amoco Production Company

ENGINEERING CHART

FILE

APPN

DATE 10-15-76

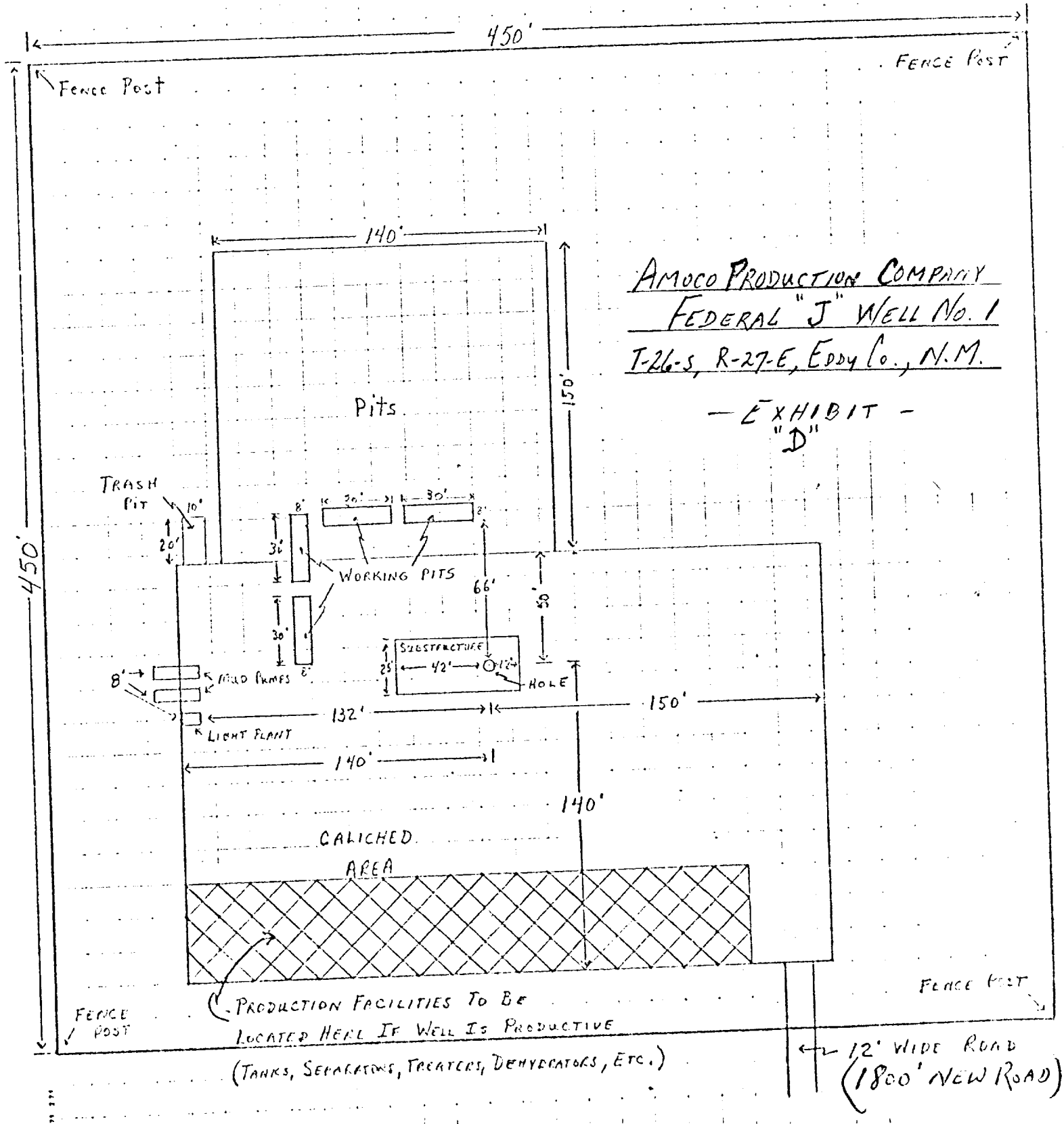
BY RC

SCALE - 1" = 60'

SUBJECT DRILL SITE DIMENSIONS

MEDIUM DEEP WELL (7500' to 14,000')

12000



EASTERN NEW MEXICO UNIVERSITY
Portales 88130

Agency for Conservation
Archaeology

21 February 1978

Mr. Bob Couch
Amoco Production Company
P. O. Drawer A
Levelland, Texas 79336

Dear Mr. Couch:

Enclosed please find the Agency for Conservation Archaeology's clearance report for Amoco Production Company. No cultural resources were recorded 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.

Yours sincerely,

J. Loring Haskell

Dr. J. Loring Haskell
Director - Principal Investigator

dlg

Enclosure

Archaeological Clearance Report
for
Amoco Production Company

Myers B Federal Well #32
Federal J Well #1

by

Dr. J. Loring Haskell

Submitted by

Dr. J. Loring Haskell
Director - Principal Investigator
Agency for Conservation Archaeology
Eastern New Mexico University
Portales, New Mexico

21 February 1978

INTRODUCTION

An archaeological reconnaissance was recently completed by the Agency for Conservation Archaeology, Eastern New Mexico University, Portales, for Amoco Production Company in Lea and Eddy Counties, New Mexico. Investigated areas will be impacted by the construction of drill locations. The proposed project was completed under Federal Antiquities Permit No. 78-NM-015. This project was administered by Mr. Bob Couch, Amoco Production Company, and Dr. J. Loring Haskell, Director - Principal Investigator, Agency for Conservation Archaeology. The reconnaissance was conducted by Dr. Haskell on 20 February 1978 under excellent weather conditions.

SURVEY TECHNIQUE

Each drill location was walked in a series of 15 ft wide, parallel transects. In addition, a 20 ft strip of land bordering all sides of these locations was investigated as well. Proposed accesses were walked in a close interval zigzag pattern over their length and breadth. The zone of coverage measured 30 ft in width. These techniques combined served to maximize the visual investigation of areas to be impacted on a primary and secondary basis.

Myers B Federal Well No. 32

Location

The proposed location measures 300 X 300 ft and is situated 330 ft from the south line and 1980 ft from the west line of Section 9, T24S, R37E, Lea County. The access will measure 12 X 1056 ft or 2 miles. The work area will be located in the:

SE¼SW¼, Section 9, T24S, R37E, NMPM, Lea County, New Mexico (BLM)

Map Reference: USGS Jal NW Quadrangle, 7.5 Minute Series, 1969.

Terrain

Local terrain is distinguished by a gently undulating plain which trends toward the west into a depressional trough which is oriented on a north-south axis. Soils are sandy clay loam and contain caliche fragments. Soil individuals are Typic Haplargids and are redish brown (5YR 5/3 moist).

Floristics

Observed plants include a nearly pure stand of Gutierrezia sarothrae which is mixed in often complex associations with Croton sp., Prosopis juliflora, Artemisia filifolia, Quercus havardii, and Ephedra trifurca in terms of decreasing occurrence. Eriogonum wrightii, Senecio longilobus, Solanum spp., and Solsola kali. The area has been chained in the recent past for the removal of Prosopis juliflora.

Cultural Resources

No archaeological sites, or isolated manifestations, were recorded during this reconnaissance.

Recommendations

ACA recommends clearance for the proposed drill location and access road and suggests that construction proceed without modification of existing plans.

Federal J Well No. 1

Location

The proposed location measures 450 X 450 ft and is situated 660 ft from the west line and 1980 ft from the north line. The pad will be constructed in the: SW¼NW¼, Section 6, T26S, R27E, NMPM, Eddy County, New Mexico (~~Private~~ BLM Surface/BLM-Mineral)

Owing to the nature of local topography, two access roads were reconnoitered for this location. The primary and preferred route will follow an existing

seismological road for a distance of .7 miles and thence turn toward the west for an additional 600 yards entering the drill location at its southeastern corner. It will measure 12 X 5496 ft and pass through the:

E½E½, Section 6, T26S, R27E, NMPM, Eddy County, NM (~~Private~~ Surface/BLM-Minerals)
S½W½, Section 6, T26S, R27E, NMPM, Eddy County, NM (~~Private~~ Surface/BLM-Minerals)

The alternate route measures 12 X 3200 ft and passes through the:

SW¼SW¼, Section 6, T26S, R27E, NMPM, Eddy County, NM (~~Private~~ Surface/BLM-Minerals)
NW¼SW¼, Section 6, T26S, R27E, NMPM, Eddy County, NM (~~Private~~ Surface/BLM-Minerals)
SW¼NW¼, Section 6, T26S, R27E, NMPM, Eddy County, NM (~~Private~~ Surface/BLM-Minerals)

Map Reference: USGS Malaga Quadrangle, 7.5 Minute Series, 1945.

Terrain

This location is situated at the south end of the Cottonwood Hills southwest of Malaga, New Mexico. The area is distinguished by a pediment which trends toward the south. Small, but differentially eroded rills and arroyos, course through the area averaging between 1 and 2 ft in depth. Soils are sandy loams and loamy sands with pea-sized gravels on the south and angular limestone inclusions on the flanks of the Cottonwood Hills. Soils there are rocky. Typic Calciorthids are associated with several intergrades in the area.

Floristics

This locality is dominated by Larrea tridentata which often occurs in pure stands, but does associate with a variety of plants on the south, i.e., in areas of deeper soils. Frequently, observed plants in addition to Larrea tridentata include Prosopis juliflora, Opuntia imbricata, Opuntia macrocentra, Yucca elata, Acacia vernicosa, Koeberlinia spinosa, Croton sp., Tridens pulchellus, Scleropogon brevifolius, Panicum obtusum, and Hilaria mutica. In addition to the aforementioned, Dalia fomosa, Condalia ericoides, and Ferocactus sp. were noted on the flanks of the Cottonwood Hills.

Cultural Resources

No archaeological sites were recorded during ACA's reconnaissance of this location and its preferred access road. An old car body, metal tubs, tin cans, and a 1946 license plate were observed west of the alternate access at a point approximately 1500 ft from its beginning point.

Recommendations

ACA recommends clearance for the proposed drill location and accesses and suggests that construction proceed without modification of existing plans.