

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

30-015-23168
5. LEASE DESIGNATION AND SERIAL NO.

LC-028793-c

6. IF INDIAN, ALLOTMENT NAME RECEIVED

7. UNIT AGREEMENT NAME

FEB 7 1980

8. FARM OR LEASE NAME

O. C. D.

9. WELL NO. Burch C ARTESIA, OFFICE

#43

10. FIELD AND POOL, OR WILDCAT

Grayburg Jackson

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA41-5
Sec. 18, T-17-S, R-30-E

12. COUNTY OR PARISH 13. STATE

Eddy New Mexico

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

General American Oil Company of Texas ✓

3. ADDRESS OF OPERATOR

P. O. Box 128, Loco Hills, New Mexico 88255

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

At surface

1345' FSL and 1345' FEL

At proposed prod. zone

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

2.5 Miles Northwest of Loco Hills

15. DISTANCE FROM PROPOSED*

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

1345'

16. NO. OF ACRES IN LEASE

1115

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.

900'

19. PROPOSED DEPTH

3600'

20. ROTARY OR CABLE TOOLS

Rotary

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

3644.1 GR

22. APPROX. DATE WORK WILL START*

January 25, 1980

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#	500'	Circulate
7 7/8"	5 1/2"	15.5#	3600'	350 Sacks

We propose to drill this well to 3600' and complete in the Grayburg San Andres.

All zones indicating porosity will be acidized or sand fraced.

Mud Program: Water and native mud will be used and approximately 100' from T.D.
we will mud up to get the hole in shape to log.

A 10" 3000# blowout preventer will be used in drilling of this well.

NSL 1145
1-29-80

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 Rendell N. Hawkins TITLE Asst. Field Superintendent DATE December 27, 1979

(This space for Federal or State office use)

PERMIT NO. _____

APPROVAL DATE 2-6-80

APPROVED BY _____

TITLE _____

DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*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 GENERAL AMERICAN OIL CO. OF TEXAS		Lease Burch C		Well No. 43
Unit Letter J	Section 18	Township 17 South	Range 30 East	County Eddy
Actual Footage Location of Well: 1345 feet from the South line and 1345 feet from the East line				
Ground Level Elev. 3644.1	Producing Formation San Andres	Pool Grayburg-Jackson	Dedicated Acreage 40 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.) _____

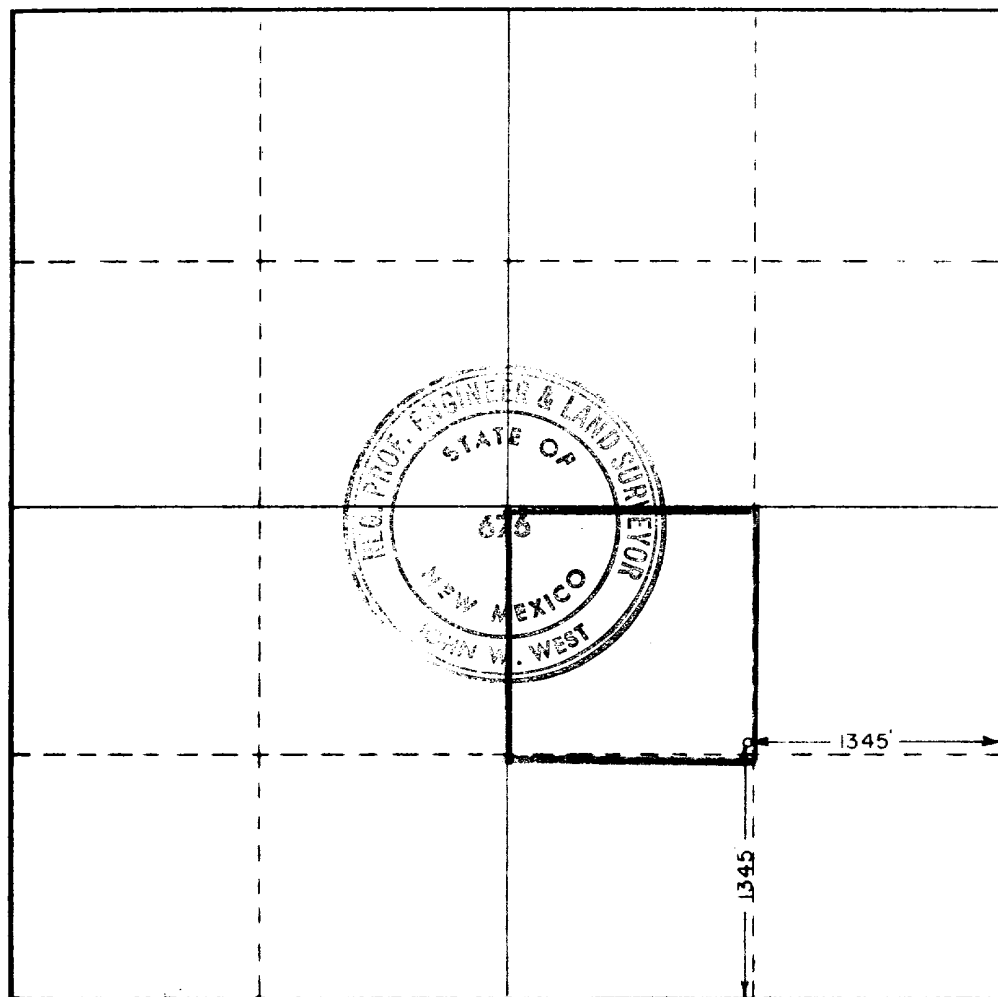
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

RECEIVED

FEB 7 1980

O. C. D.
ARTESIA, OFFICE

DEC 28 1979
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



CERTIFICATION

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

Lendell N. Hawkins
Name

Lendell N. Hawkins

Position

Assistant Field Superintendent

Company

General American Oil Co. of Texas

Date

December 26, 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

December 15, 1979

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. John W. West

676

Ronald J. Eidson

3239

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600 6930 7260 7590 7920 8250 8580 8910 9240 9570 9900 0



RECEIVED COPY

United States Department of the Interior

GEOLOGICAL SURVEY

P. O. Drawer U
Artesia, New Mexico 88210

RECEIVED

FEB 7 1980

O. C. D.
ARTESIA, OFFICE

February 6, 1980

General American Oil Co of Tex
P. O. Box 128
Loco Hills, New Mexico 88255

Gentlemen:

GENERAL AMERICAN OIL CO OF TEXAS
Burch C No. 43
1345 FSL 1345 FEL Sec. 18 T.17S R.30E
Eddy County Lease No. LC 028793-c

Above Data Required on Well Sign

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 3,600 feet to test the San Andres is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Oil and Gas Operations on Federal Leases, dated July 1, 1978.
2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the Surface Use Plan and these Conditions of Approval including the attached General Requirements.
3. Submit a Daily Report of Operations from spud date until the well is completed and the Well Completion Report (form 9-330) is filed. The report should not be less than 8" x 5" in size and each page should identify the well.
4. All permanent above-ground structures and equipment shall be painted in accordance with the attached Painting Guidelines. The color used should simulate Sandstone Brown (Federal Standard No. 595A, color 20318 or 30318).
5. Cement behind the 8-5/8" casing must be circulated.
6. Special stipulations:
 - A. Utilize caliche pit in SE/4 SW/4 Sec. 17, T.17S., R.30E.
 - B. Road will be built from well No. 22 in Sec. 18, (BLM).



7. Please have anyone contacting the Survey in regard to this well to identify the well with all of the information required above for the well sign.

Sincerely yours,

~~George H. Stewart~~

George H. Stewart
Acting District Engineer

I. Objective:

Drill 3 infill wells in the Grayburg Jackson Field, Eddy Co., New Mexico. Two of these wells will continue the infill pattern on 20 acre spacing as already established. The other well will be located inside the Grayburg Keely Unit area to develop Grayburg and San Andres production which can not be combined with Keely zone production.

II. Location:

Wells to be located as follows:

Burch C #42 1295' FNL & 1295' FEL Sec. 30-17S-30E
Burch C #43 1345' FSL & 1345' FEL Sec. 18-17S-30E
Burch B #33 1850' FSL & 1490' FWL Sec. 23-17S-29E

III. Budget Classification:

Developmental Drilling.

IV. Projected Total Depth, Hole Size, Slope Test:

- A. 12 $\frac{1}{4}$ " hole to the top of the salt to accommodate 8 5/8" surface casing (approximately 350'-500').
- B. 7 7/8" hole to approximately 3300'-3600' to accommodate 5 $\frac{1}{2}$ " production casing.
- C. Estimated drilling time 6-7 days per well.
- D. Slope test will be run on each bit trip or 500' intervals.
- E. If any coring or drill stem testing is done pipe will be strapped out of hole prior to coring or testing.

V. Drilling Contractor:

- A. Contractor: WEK Drilling Company, Inc. (probable)
- B. Type Contract: Footage
- C. Contract Depth: 3600'

VI. Mud Program:

Probably will be furnished by Marrs Mud Co.

Interval	Type Mud	Wt	Viscosity	wl
0' - 3400'	Fresh & Salt water	9-10	28-30	NC
3400' - 3600'	Salt Mud	10-11	36-38	NC
(will mud up 200' from TD)				

VII. Typical Geological Tops

(Middle of unit area)

<u>Tops</u>	<u>Vertical Depth</u>	<u>Subsea</u>
Queen	1880'	+ 1715'
Loco Hills	2340'	+ 1255'
Main Metex	2450'	+ 1145'
San Andres	2585'	+ 1010'
Lovington	2690'	+ 905'
Jackson Pays	2870'	+ 725'
Lower San Andres	3150'	+ 445'
Keely Pay	3330'	+ 265'
Sub Keely Pay	3450'	+ 145'

VIII. Samples:

A. 10' samples from 2200' to TD or as directed by company representative.

IX. Cores and Drill Stem Test:

A. At present time no cores or drill stem tests are planned.

X. Logs:

A. Proposed logging program consists of :
Sidewall Neutron-Gamma Ray-Caliper 0' - TD

XI. Casing and Tubing Program:

A. Surface: 8 5/8" 20# range 2 casing to be set just above the top of the salt section and cemented to the surface with class C cement with 2% CaCl. If cement does not surface the casing will be cemented down backside with 1".

B. Production: 5 1/2" K-55 15.5# ST&C casing. Sufficient volume of class H cement with 1/4" floccel, 3/4 of 1% CFR-2, 5# salt, 10# sand per sack will be pumped to cover well above all zones of interest.

XII. Safety Program:

A. Blow out preventors will be used as well as close observation by company personnel to assure the well is safely drilled.

XIII. Third Party Services:

Surveying:	Jones & Co. or John West Engineering
Dirt Work:	Jabo Rowland or Sweatt Construction
Cementing:	Halliburton or B.J.
Logging:	Dresser Atlas
Stimulation:	Western or Cardinal
Drilling Mud:	Marr's Mud Co.
Water & Trucking:	I & W or Caprock

SURFACE USE PLAN

GENERAL AMERICAN OIL COMPANY OF TEXAS WELL: Burch C #43
LEASE: LC-028793 (c) EDDY COUNTY, NEW MEXICO

The subject well is located approximately 24 miles East of Artesia, New Mexico on the north side of U.S. Highway 82. The following is a discussion of pertinent information concerning possible effect, which the proposed drilling of the well may have on the environment, of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

1. AERIAL ROAD MAP - Exhibit A is a portion of the Artesia Quadrangle Map #106 and Maljamar Quadrangle Map 107 showing well site in relation to U.S. Highway 82. Access road, which is shown on Exhibit B and colored in red, exits the highway about 25 miles East of Artesia, New Mexico.
2. LOCATION OF EXISTING WELLS - The location of existing wells in the immediate area of the proposed well is shown on Exhibit B.
3. PROPOSED WELL MAT AND IMMEDIATE AREA - Refer to Exhibit C for direction orientation and road access.
 - a. MAT SIZE - 140' x 180'.
 - b. SURFACED - Will be topped with 6" of caliche, bladed, watered and compacted. Caliche to be purchased from B.L.M. by dirt contractor.
 - c. RESERVE PIT - 60' x 70' pit unlined, joining mat to North.
 - d. CUT & FILL - Location is basically flat except for small sand dunes. No fill will be needed except existing sand dunes leveled and topped with caliche.
 - e. DRILL SITE LAYOUT - Exhibit C shows the location and layout including position of the Rig, Mud Tanks, Reserve Pits, Pipe Racks and etc. The Rig will be erected with the V-Door to the East.
 - f. SETTING AND ENVIRONMENT
 - (1) Terrain - Low rolling sand hills.
 - (2) Soil - Sandy Soil.
 - (3) Vegetation - Sparse vegetation, being mostly mesquite, shennery, weeds and other semi-desert plants, with some grass.
 - (4) Surface Use - Grazing.
 - (5) Other - Drillsite - Which is in sandy semi-arid desert country, is in a low environment risk area. The total effect of drilling and producing this and other wells in this area would be very minimal.

g. DISTANCES TO

- (1) Ponds and Streams - There are no surface waters within 3 miles.
- (2) Water Wells - There are no water wells within 1/2 mile.
- (3) Residences and Buildings - There are no residences or buildings within 1/2 mile.
- (4) Arroyos, Canyons, Hills and etc. - Outside of small sand dunes there are no surface features.

h. WELL SIGN - Sign identifying and locating proposed well will be maintained at the drill site commencing with the spudding of the well.

i. OPEN PITS - All pits containing mud or other liquids will be guarded.

4. ROADS

a. EXISTING ROADS - All existing roads within the immediate area of well site are shown on Exhibit B and are colored yellow.

b. PLANNED ROADS - Planned access road will require about 660 feet of new road that is 12 feet wide. The road will be surfaced with caliche. The proposed road is colored blue and a suggested route to the location colored red on Exhibit B.

c. FENCES, GATES AND CATTLE GUARDS - Will be maintained as General American Oil Company already operates several hundred wells in the immediate area.

5. TANK BATTERY - If production is encountered no additional battery will be required as sufficient facilities are already on the lease.

6. LEASE - PIPELINES

a. EXISTING - All existing pipelines are shown on Exhibit B.

b. PLANNED - If production is encountered, proposed flowline shown on Exhibit B, will consist of 2" steel line laid on top of the ground.

7. WASTE DISPOSAL - Barrel trash containers will be in accessible locations within the drill site area during the drilling and completion operations. A waste disposal pit will be deep enough to handle waste and will be covered with a minimum of 2 feet of top soil. See Exhibit C for pit location. If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. Any produced water will be disposed of through the currently existing S.W.D. systems.

8. WATER SUPPLY - Water supply to drill this well will be furnished through a 2" PVC line laid through the drilling area. Location of the water line is shown on Exhibit B.

9. ARCHEOLOGICAL RESOURCES - See attached Conservation Archaeology's Clearance Report.
10. RESTORATION OF SURFACE - If well is productive, pits will be backfilled and leveled as soon as practical. Upon final abandonment of well, well site will be leveled and cleaned, with land returned as near as practical to original condition.
11. OPERATOR'S REPRESENTATIVES - Field personnel who can be contacted concerning compliance of this surface use plan are as follows:

Drilling and Production

Lendell Hawkins
P. O. Box 128
Loco Hills, New Mexico 88255
Office Phone: 505-677-2481
Home Phone: 505-677-2277

OR

Fred Starkey
P. O. Box 128
Loco Hills, New Mexico 88255
Office Phone: 505-677-2481
Home Phone: 505-746-9397

12. CERTIFICATION

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 as they actually exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the proposed work performed by General American Oil Company and its Contractors and Sub-Contractors will conform to this plan.

December 27, 1979
Date

Lendell Hawkins
Lendell Hawkins, Asst. Field Superintendent

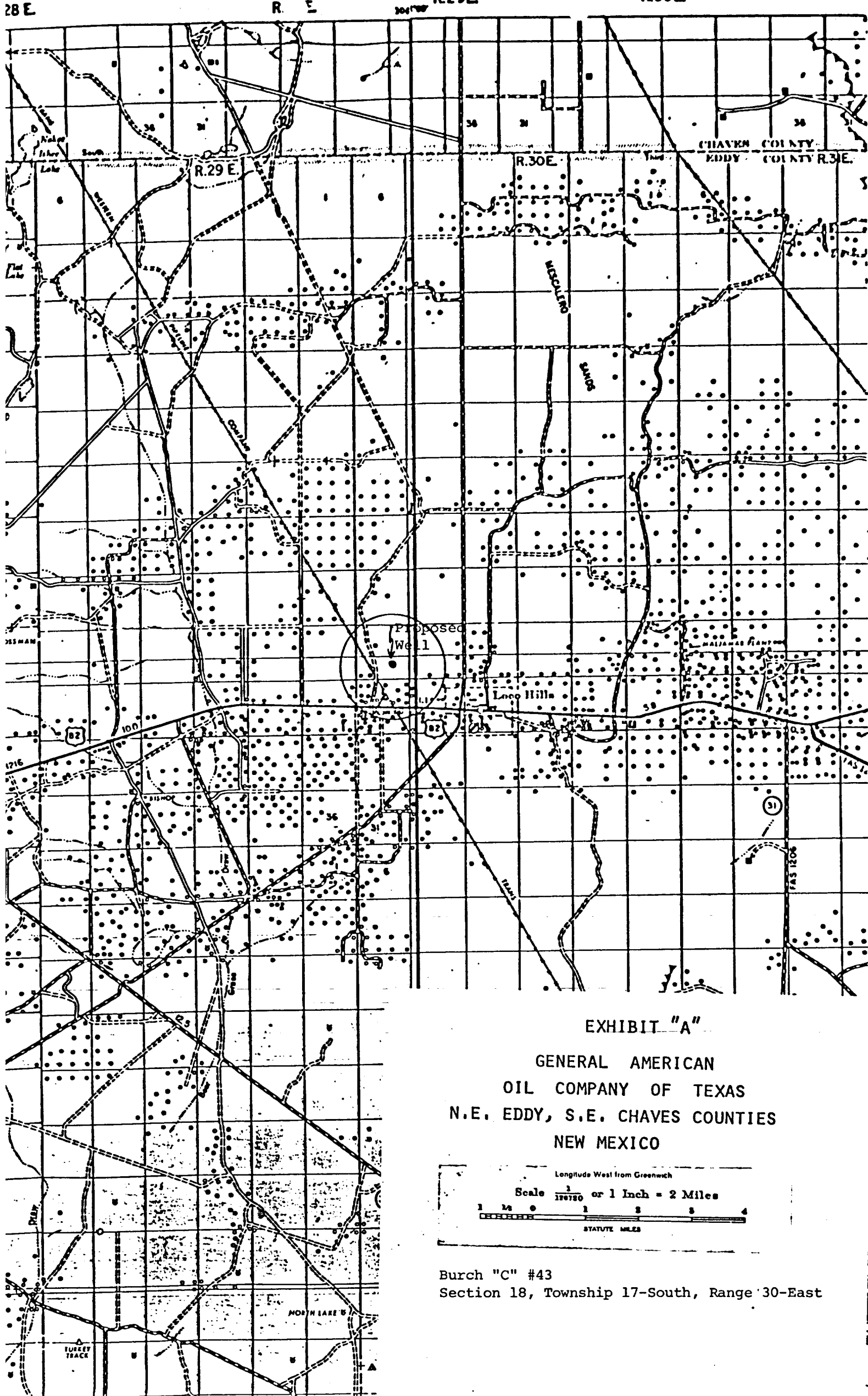
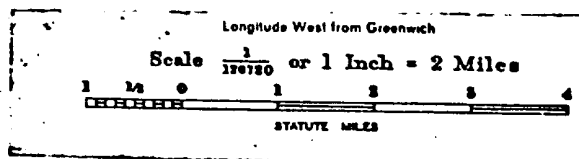
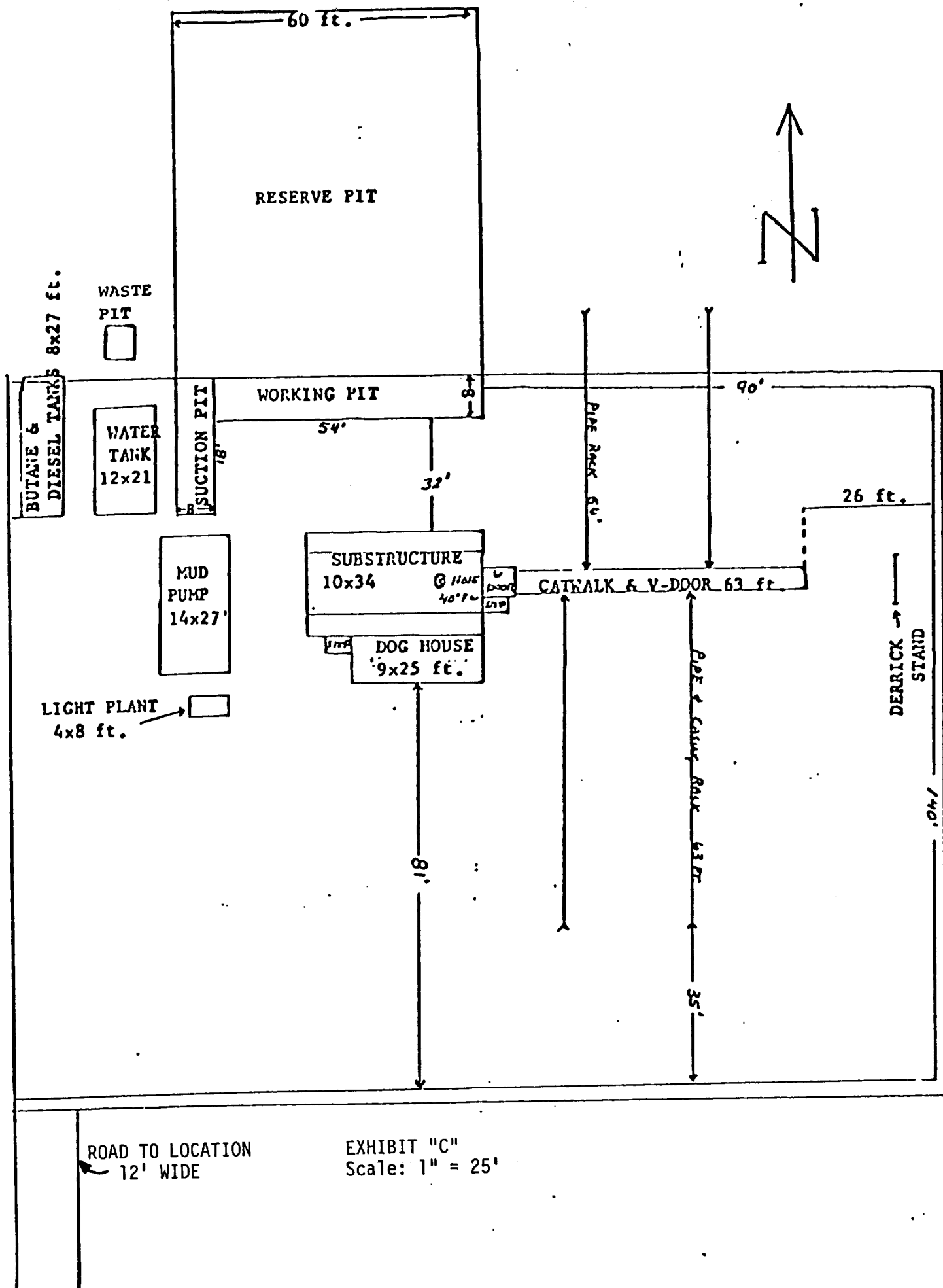


EXHIBIT "A"

GENERAL AMERICAN
OIL COMPANY OF TEXAS
N.E. EDDY, S.E. CHAVES COUNTIES
NEW MEXICO



Burch "C" #43
Section 18, Township 17-South, Range 30-East

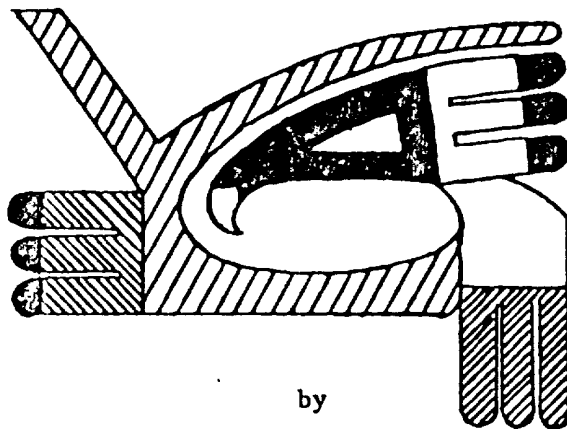


ARCHAEOLOGICAL CLEARANCE REPORT

For

GENERAL AMERICAN OIL COMPANY

80-166



by

Rodrick 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

December 22, 1979

INTRODUCTION

An archaeological reconnaissance was recently completed by the Agency for Conservation Archaeology, Eastern New Mexico University, Portales, New Mexico, for General American Oil Company in Eddy County, New Mexico. The reconnoitered area will be impacted by the construction of 4 well pads, 3 roads and 5 caliche pits. The project was administered jointly by Mr. Lendell Hawkins of General American Oil Company and Dr. Peter S. Miller, Director, Agency for Conservation Archaeology. This report was prepared by the Roswell Office of ACA, Rodrick MacLennan, Manager.

The field work was conducted on December 21, 1979 by Rod MacLennan. Good field and weather conditions prevailed throughout the course of this reconnaissance. The survey was completed under Federal Antiquities Permit No. 79-NM-049. A search of the National Register has been made and properties within this location are not listed on the Register.

SURVEY TECHNIQUES

Visual inspection of the well pads was completed by walking a series of parallel transects. Each transect was covered in a tightly spaced zigzag pattern. All access roads were examined as individual transects, with tightly spaced zigzag patterns covering the length and breadth. The caliche pits were inspected by walking a series of parallel transects. Each transect was covered in a tightly spaced zigzag pattern. The distance between the transects was 20 feet. These methods maximized the opportunity of observing any cultural resources within or near the proposed areas of impact.

Burch "C" No. 43

Location

The proposed well pad and associated access corridor are located 2.5 miles northwest of Loco Hills, New Mexico, near the Querecho Plains. The well pad measures 400 X 400 feet and the access right-of-way measures 15 X 660 feet. They are situated in the:

NW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 18, T17S, R30E, NMPM, Eddy County, New Mexico (BLM)

Map Reference: USGS Red Lake SE Quadrangle, 7.5 minute series, 1955
(see Figures 5 & 6).

Terrain

The proposed well pad and access road are located near the Querecho Plains and are 2.5 miles east of Bear Grass Draw. They are located on a gently undulating plain which is overlain by a dune field. The elevation is 3644 feet.

The soils encountered in the area are predominantly calcareous sands. Taxonomically, this soil can be classified as a member of the Haplargid-Torripsamment association.

WELL LOCATION AND ACREAGE DEDICATION PLAN

Supersedes G.O.
Effective 1-4-65

All distances must be from the outer boundaries of the Section.

GENERAL AMERICAN OIL COMPANY		Lease		Burch "C"		Well No.	43
Section	18	Township	17 South	Range	30 East	County	Eddy
Stage Location of Well							
660	feet from the	South	line end	660	feet from the	East	line
Well Elev.	Producing Formation		Pool		Dedicated Acreage		
3644							

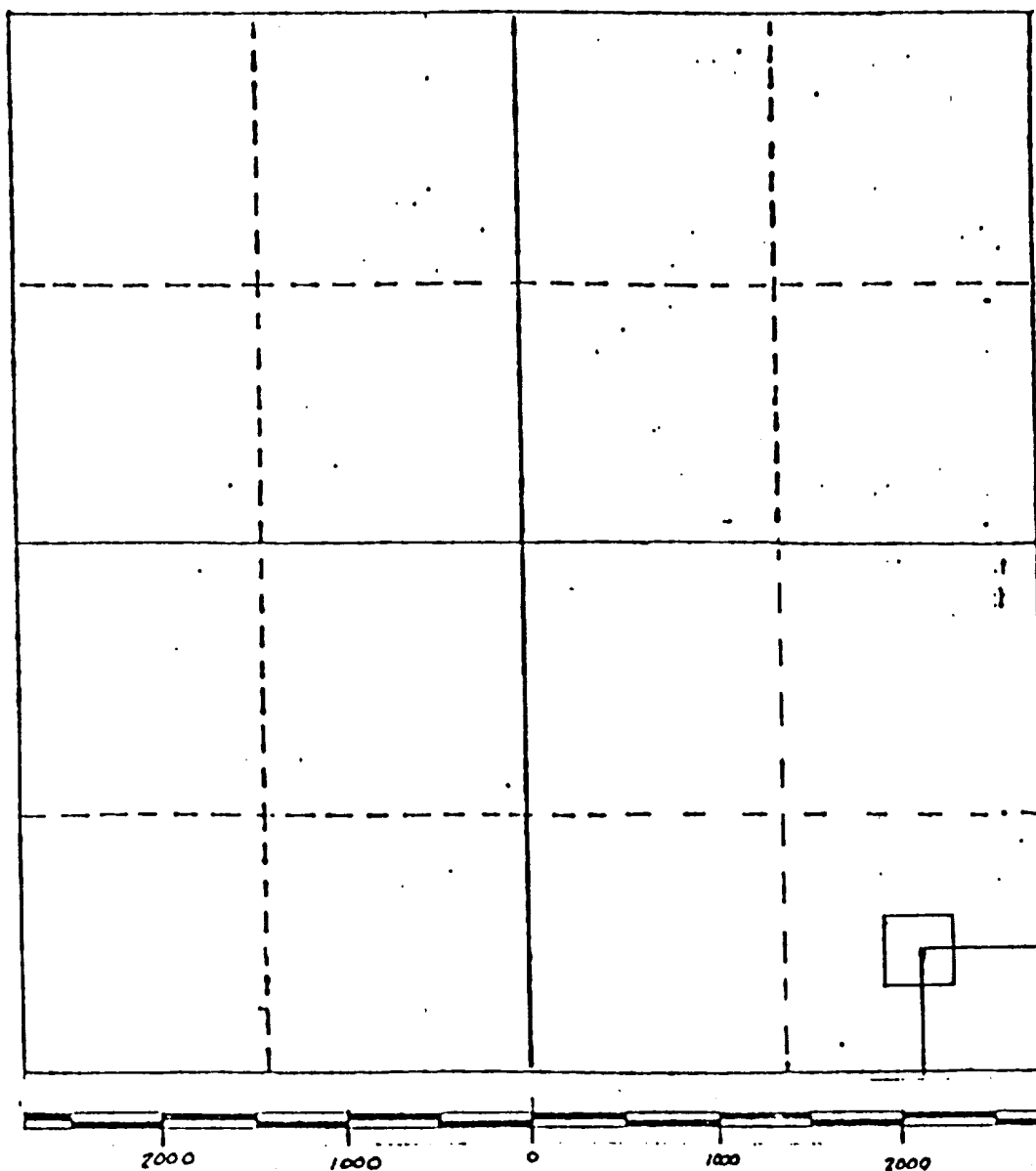


Figure 5

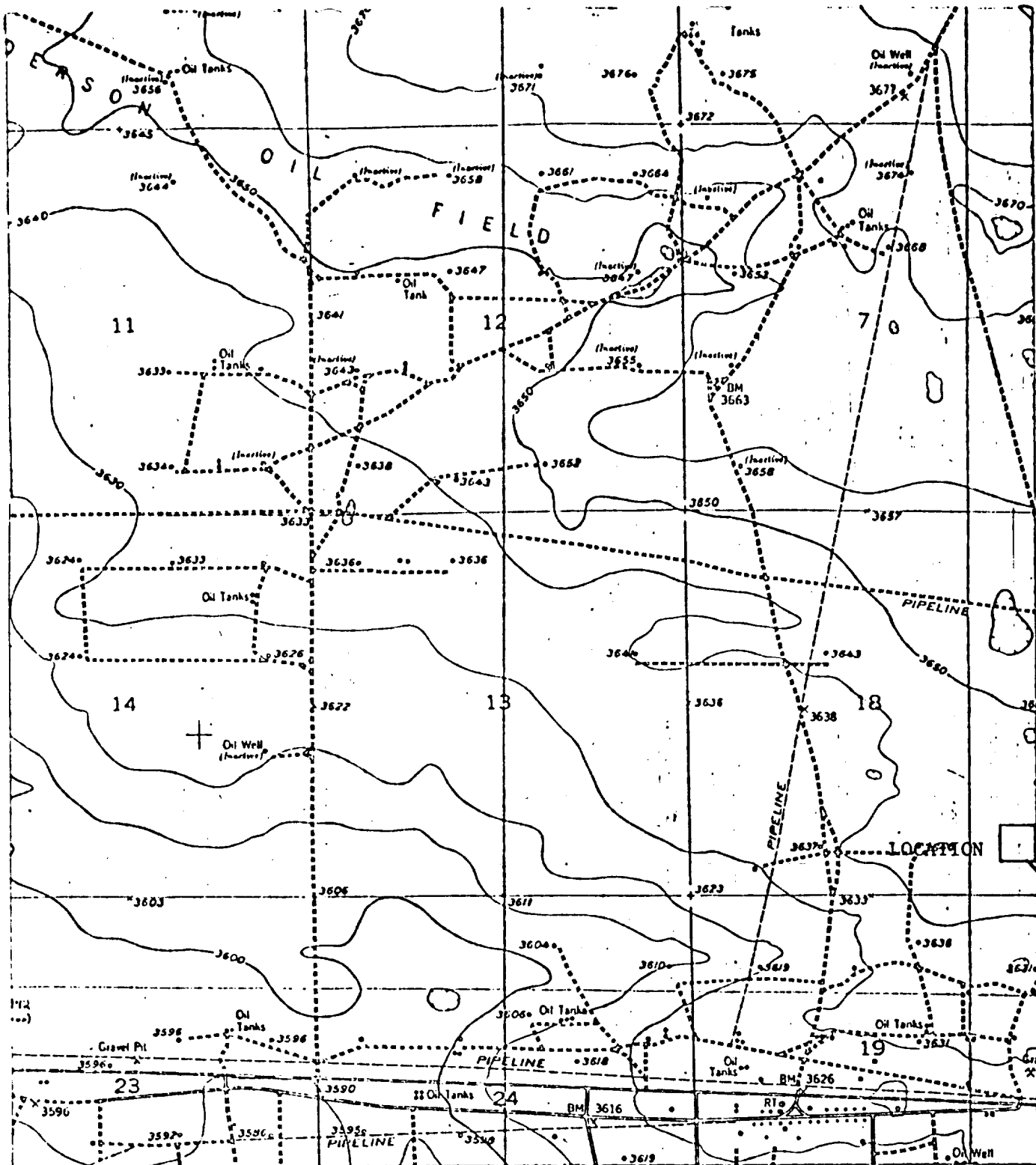
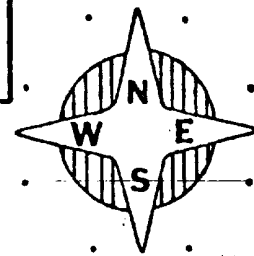


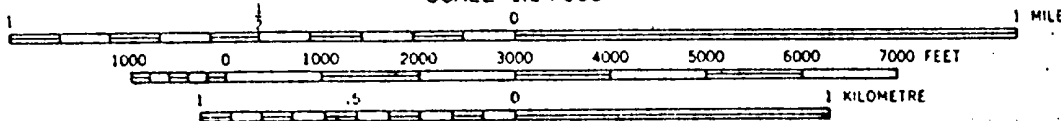
Figure 6: Location of Burch "C" No. 43
Section 18, T17S, R30E, Eddy County

Map Reference: USGS Red Lake SE Quadrangle, 1955

7.5 MINUTE
SERIES



SCALE 1:24 000



Floristics

ACA encountered a sparse floral assemblage in the vicinity of the pad and access line. The density of the ground cover in the area is approximately ten percent, consisting primarily of shrubs. Among the species present are: mesquite (Prosopis juliflora), black grama (Bouteloua eriopoda), blue grama (Bouteloua gracilis), sand dropseed (Sporobolus cryptandrus), tabosa (Hilaria mutica), western wheatgrass (Agropyron smithii), and broom snakeweed (Gutierrezia sarothrae).

Cultural Resources

ACA did not encounter any archaeological sites or isolated manifestations either within or near the proposed facilities. 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 facilities and suggests that construction be allowed to proceed as currently planned.

Caliche Pit No. 4

Location

The proposed caliche pit is located 1 mile northwest of 'Loco Hills, New Mexico, near the Querecho Plains. The caliche pit measures 260 X 120 feet and is situated as follows:

SE $\frac{1}{4}$ SW $\frac{1}{4}$, Section 17, T17S, R30E, NMPM, Eddy County, New Mexico (BLM)

Map Reference: USGS Maljamar Quadrangle, 15 minute series, 1963
(see Figure 12).

Terrain

The proposed caliche pit is located near the Querecho Plains and is 3.5 miles east of Bear Grass Draw. The pit is situated on a gently undulating plain which is overlain by sand dunes. The elevation in the area is approximately 3650 feet.

The soils encountered in the area are predominantly calcareous sands. No lithic inclusions were noted during the course of this survey. Taxonomically, this soil, with no lithic inclusions, can be classified as a member of the Haplargid-Torripsamment association.

Floristics

The Agency for Conservation Archaeology encountered a sparse floral assemblage in this vicinity. The density of the vegetation in the area is ten percent, consisting mostly of shrub species. Among the species present are: mesquite (Prosopis juliflora), oak brush (Quercus havardii), western wheatgrass (Agropyron smithii), and broom snakeweed (Gutierrezia sarothrae).

Cultural Resources

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

Recommendations

ACA recommends clearance for the proposed caliche pit facility and suggests that construction be allowed to proceed as currently planned.

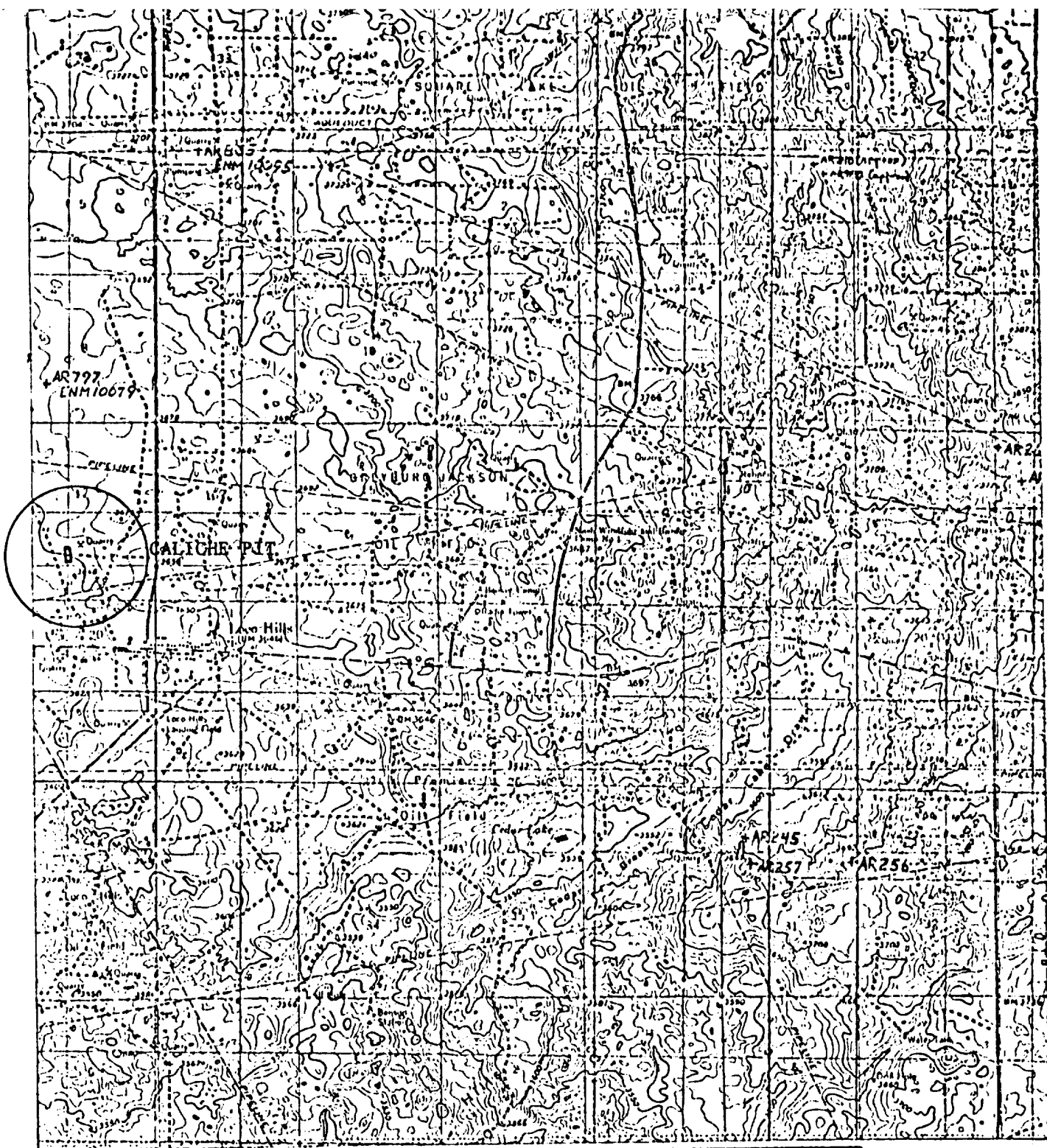
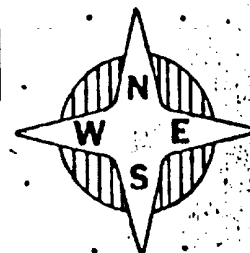


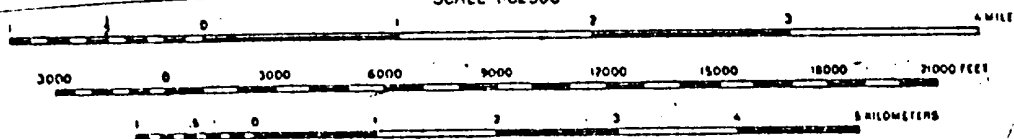
Figure 12: Location of Caliche Pit No. 4
Section 17, T17S, R30E, Eddy County

Map Reference: USGS Maljamar Quadrangle, 1963.

15 MINUTE
SERIES



SCALE 1:62500



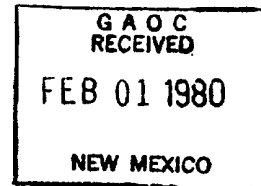


STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

January 29, 1980



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

General American Oil
Company of Texas
P. O. Box 416
Loco Hills, New Mexico 88255

Attention: Mr. Harold Hannah

Administrative Order NSL-1145

Gentlemen:

Reference is made to your application for non-standard locations in the Grayburg Jackson Field, Eddy County, New Mexico, as follows:

Burch B Well No. 33, located 1850' FSL and 1490' FWL,
Sec. 23, T-17-S, R-29-E;
Burch C Well No. 42, located 1295' FNL and 1295' FEL,
Sec. 30, T-17-S, R-30-E; and your
Burch C Well No. 43, located 1345' FSL and 1345' FEL,
Sec. 18, T-17-S, R-30-E.

By authority granted me under the provisions of Order No. R-4798, the above-described unorthodox locations are hereby approved.

Sincerely,

JOE D. RAMEY,
Director

JDR/RLS/dr

cc: Oil Conservation Division - Artesia
Oil & Gas Engineering Committee - Hobbs
U. S. Geological Survey - Artesia