

N.M.O.C.D. COPY
UNIT STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE*
(Other instructions
reverse side)Form approved.
Budget Bureau No. 42-R1425.

30-015-23388

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

Amoco Production Company

3. ADDRESS OF OPERATOR

P. O. Box 68 Hobbs, NM 88240

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

At surface

600' FNL & 1980' FWL, Sec. 26

At proposed prod. zone (Unit C, NE/4, SW/4)

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

8 miles southeast of Loco Hills, NM

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.

16. NO. OF ACRES

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

19. PROPOSED DEPTH

12000'

20. ROTARY OR CABLE TOOLS

Rotary

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

3653.4 GL

22. APPROX. DATE WORK WILL START*

6-27-80

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	48#	800'	Circ. to surf.
12-1/4"	9-5/8"	36#	4900'	Circ. to surf.
8-3/4"	5-1/2"	17#, 20#, 23#	12000'	Tieback to 9-5/8"

Propose to drill and equip well in the Penn formation. After reaching TD logs will be run and evaluated; perforate and/or stimulate as necessary in attempting commercial production.

MUD PROGRAM: 0'- 800' Native mud and fresh water.
800'- 4900' Native mud and brine water.
4900'-TD Commercial mud and brine with minimum properties for safe hole conditions. Raise viscosity and reduce water loss prior to Morrow penetration.

BOP Program Attached
Archaeological Survey attached
Gas is not Dedicated

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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 without preventer program, if any.

24.

SIGNED

Bob Davis

TITLE

Admin. Analyst

DATE

6-9-80

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

0+5-USGS, A

1-Hou

1-Susp

1-BD

1-Conoco

*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 Amoco Production Co.			Lease Greenwood Pre Grayburg Unit D Com.		Well No. 14
Unit Letter C	Section 26	Township 18 South	Range 31 East	County Eddy	
Actual Footage Location of Well: 660 feet from the North line and 1980 feet from the West line					
Ground Level Elev. 3653.4	Producing Formation Shugart Penn		Pool Und. Shugart Penn	Dedicated Acreage: 320 Acres	

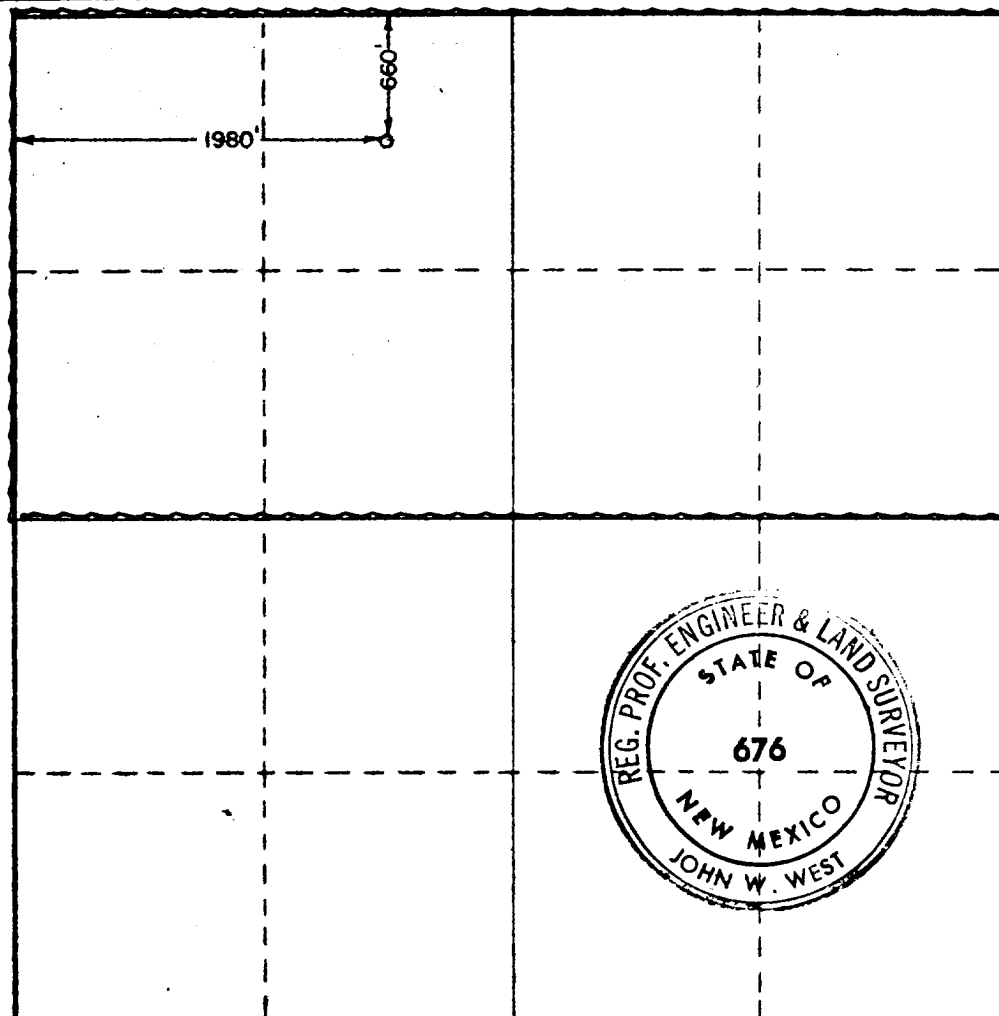
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is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

If answer is "no," list the owners and tract descriptions which have actual interests 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.

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CERTIFICATION

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

Name **Bob Davis**
Position **Admin. Analyst**
Company **Amoco Production Company**
Date **6-9-80**

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 **May 21, 1980**
Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6883
Ronald J. Elders 3239

0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000



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United States Department of the Interior

GEOLOGICAL SURVEY
P. O. Drawer U
Artesia, New Mexico 88210

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JUN 30 1980

O. C. D.

June 19, 1980 ARTESIA, OFFICE

Amoco Production Company
Post Office Box 68
Hobbs, New Mexico 88240

Gentlemen:

AMOCO PRODUCTION COMPANY
Greenwood PreGrayburg Unit D Com No. 14
660 FNL 1980 FWL Sec 26, T 18S, R 31E.
Eddy County Lease No. LC 029392-b

Above Data Required on Well Sign

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 12,000 feet to test the Penn. 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. All access roads will be limited to a 12 foot wide driving surface, excluding turnarounds. Surface disturbance associated with road construction will be limited to 20 feet in width.
4. 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.
5. 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) or Amoco's standard gray color.
6. Before drilling below the 9-5/8" casing, the blowout preventer assembly will consist of a minimum of one annular type and two ram type preventers.
7. A kelly cock will be installed and maintained in operable condition.

8. After setting the 9-5/8" casing string and before drilling into the Wolfcamp formation, the blowout preventers and related control equipment shall be pressure tested to rated working pressures by an independent service company. Any equipment failing to test satisfactorily shall be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.
9. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be installed and operating before 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.
10. Notify the Survey by telephone 24 hours prior to spudding well.
11. Cement behind the 13-3/8" casing must be circulated.
12. 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,

(Orig. Sgd.) GEORGE H. STEWART

George H. Stewart
Acting District Engineer

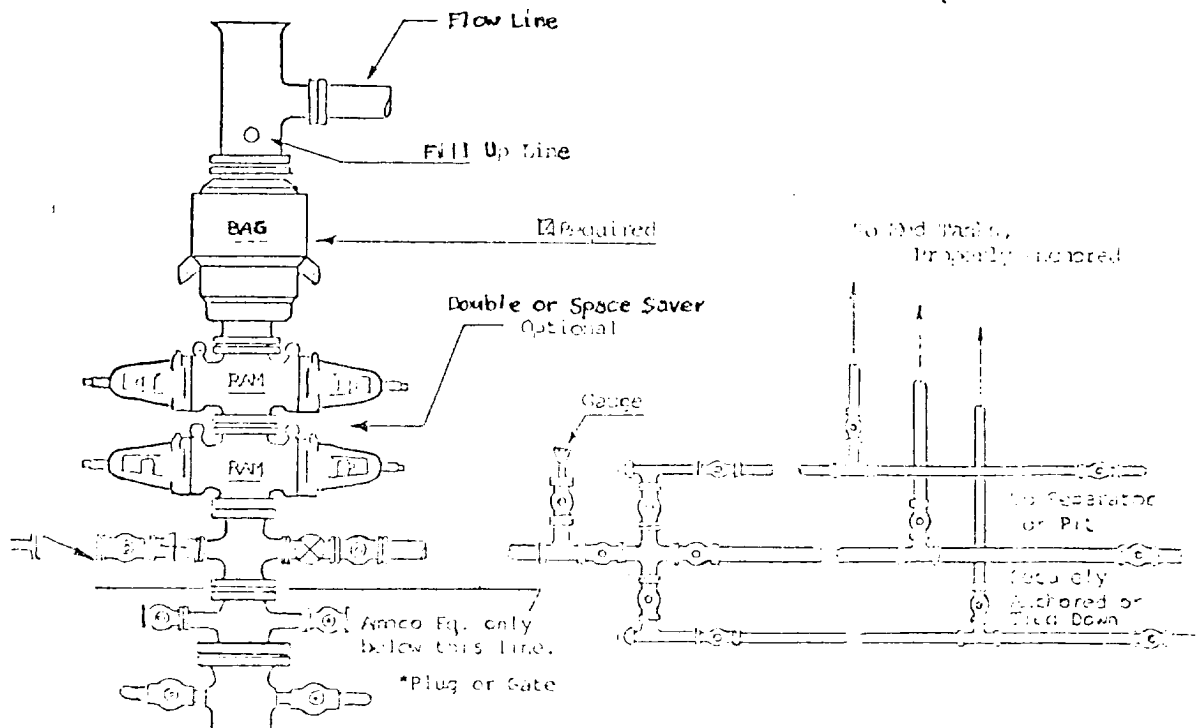
1. BOP'S TO BE FLUID OPERATED.
2. BOP'S AND ALL FITTINGS MUST BE IN GOOD CONDITION AND RATED AT 3000 PSI W.P. MINIMUM.
3. EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AT LEAST AS LARGE AS CASING SIZE BEING DRILLED THROUGH.
4. NIPPLE ABOVE BOP'S SHALL BE SAME SIZE AS LAST CASING SET.
5. UPPER KELLY COCK IS REQUIRED AND SHALL BE 3000# W.P. MINIMUM.
6. T. I. W. OR COMPARABLE 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 5000# MIN.
7. VALVE NEXT TO SPOOL SHALL BE 4". OTHER EQUIPMENT MAY BE 3" OR 4". ALL CHOKE MANIFOLD EQUIPMENT SHALL BE FLANGED. FLOW 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 IN BUNDLES AND ADEQUATELY PROTECTED FROM DAMAGE.
9. USE RAMS IN FOLLOWING POSITIONS:*

	<u>DRILLING</u>	<u>RUNNING CASING</u>
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 BRACED 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.



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

Greenwood PreGrayburg Unit D Com. #14
660' FNL & 1980' FWL, Sec. 26, T-18-S, R-31-E
Eddy County, NM

1. Location

See attached Form C-102

2. Elevation

See attached Form C-102

3. Geologic name of surface formation.

Quaternary

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	4915'	Atoka	10595'
Bone Springs	6485'	Morrow	11015'
Wolfcamp	9737'	Mississippian	11815'
Strawn	10447'		

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

Delaware	4915'	Atoka	10595'
Bone Springs	6485'	Morrow	11015'
Wolfcamp	9737'		

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

<u>Depth</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>New or Used</u>
800'	13-3/8"	48#	H-40	New
4900'	9-5/8"	36#	K-55	New
12000'	5-1/2"	17#, 20#, 23#	K-55 & N-80	New

9. Proposed cementing program.

13-3/8" - Circulate to surface
9-5/8" - Circulate to surface
5-1/2" - Tie back to 9-5/8"

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.
 - 0-800' Native mud and fresh water
 - 800'-4900' Native mud and brine water
 - 4900-'12000' Commercial mud and brine with minimum properties for safe hole conditions. Raise viscosity and reduce water loss prior to Morrow penetration.
12. Testing, logging and coring programs to be followed with provisions made for required flexibility.
 - 4900'-TD Compensated Neutron Formation Density
 - 4900'-TD Dual Laterolog Micro SFL
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.

6-27-80 8-15-80

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

Request exemptions from the painting stipulations of Sec. 102 (a) (8) of the "Federal Land Policy and Management Act of 1976" to paint any tanks, separators, and treaters required for the production of this well; Amoco's standard gray color. If a pumping unit is required for the continued production of this well, it will be painted black with orange safety color coding which conforms with your current painting guidelines.

Proposed Development Plan for Surface Use
Greenwood PreGrayburg Unit D Com. #14
660' FNL & 1980' FWL, Sec. 26, T-18-S, R-31-E
Eddy County, NM

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 Loco Hills go East on Highway #82 5.8 miles. Turn south on Highway #31 and go 3.9 miles. Turn east on a dirt road and go 2.9 miles. Well is 850 feet south.

2. Planned access roads.

Approx. 850' of access road will be built.

3. Location of existing wells.

All existing well within one mile radius are shown on Exhibit C.

4. Location of tank batteries and flow lines

If the well is commercially productive, the production facilities (i.e. tanks, separators, & treaters) will be located on existing pad.

5. Location and type of water supply.

Fresh & brine water to be hauled by commercial hauler.

6. Source of construction materials.

Caliche will be obtained from a pit located in the SW/4, SW/4, Sec. 23 & NW/4, NW/4, Sec. 26, T-18-S, R-31-E, Eddy County, NM.

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.

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ARTESIA, NEW MEXICO

- 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 - 330' x 210' x 6"
- b. Compacted - Caliche
- 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 - rolling plain with sand dunes
- b. Soil- sandy
- c. Vegetation- mesquite, oak brush, yucca, night shade, broom snakeweed
- d. Surface Use- grazing
- e. Ponds and Streams - none
- f. Water Wells - none
- g. Residences and Building - none
- h. Arroyos, Canyons, etc. - none
- i. Well Sign - Posted at drill site
- j. Open Pits - All pits containing liquid or mud will be fenced
- k. Archaeological Resources - none

12. OPERATOR'S REPRESENTATIVE -

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

J. H. Hankins, Drilling Supervisor
P. O. Box 68
Hobbs, NM 88240
Office Phone: (505) 393-2167

LEASE & WELL NUMBER Greenwood PreGrayburg Unit D Com. #14

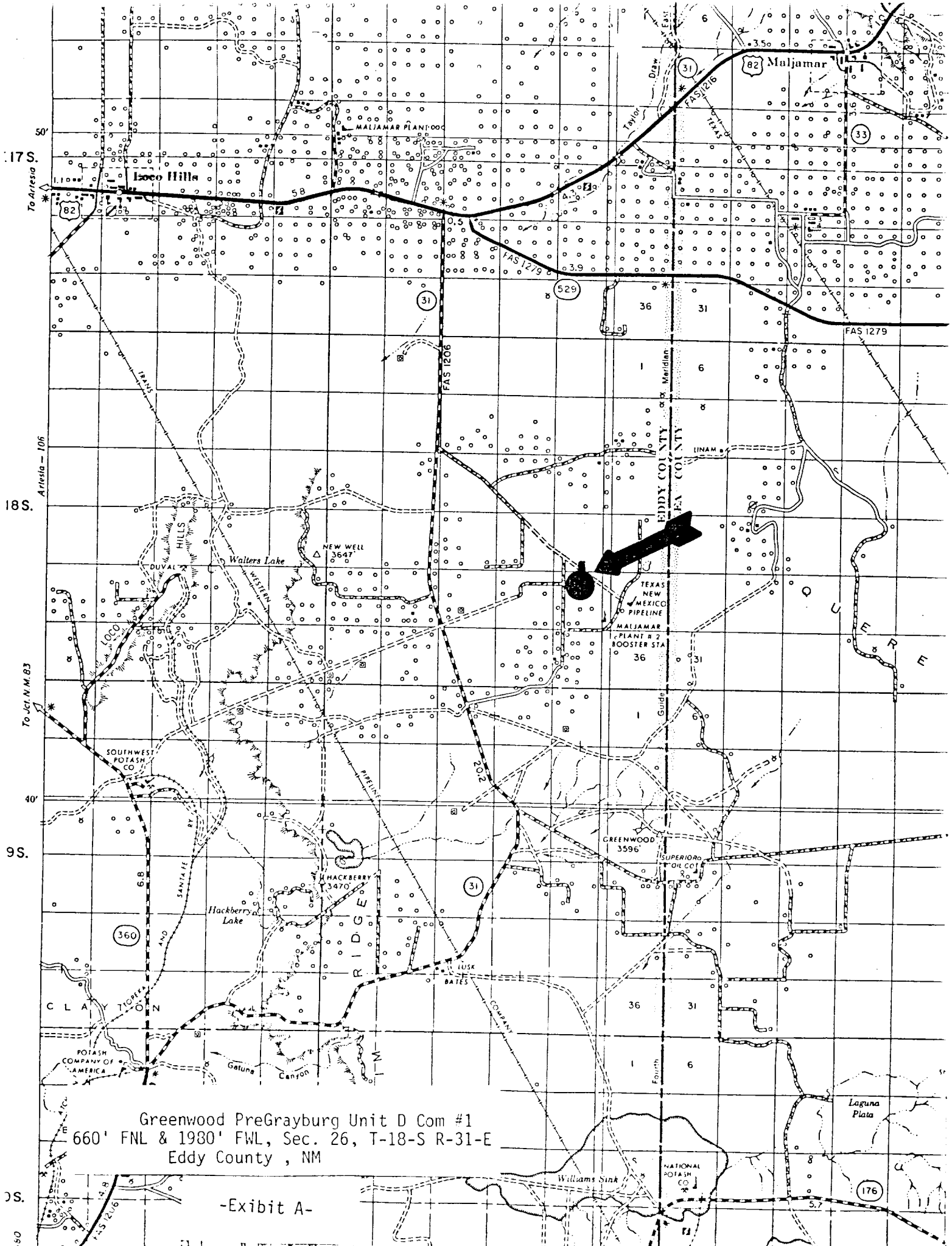
LOCATION 660' FNL & 1980' FWL, Sec. 26, T-18-S, R-31-E

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 conformity with this plan and the terms and conditions under which it is approved.

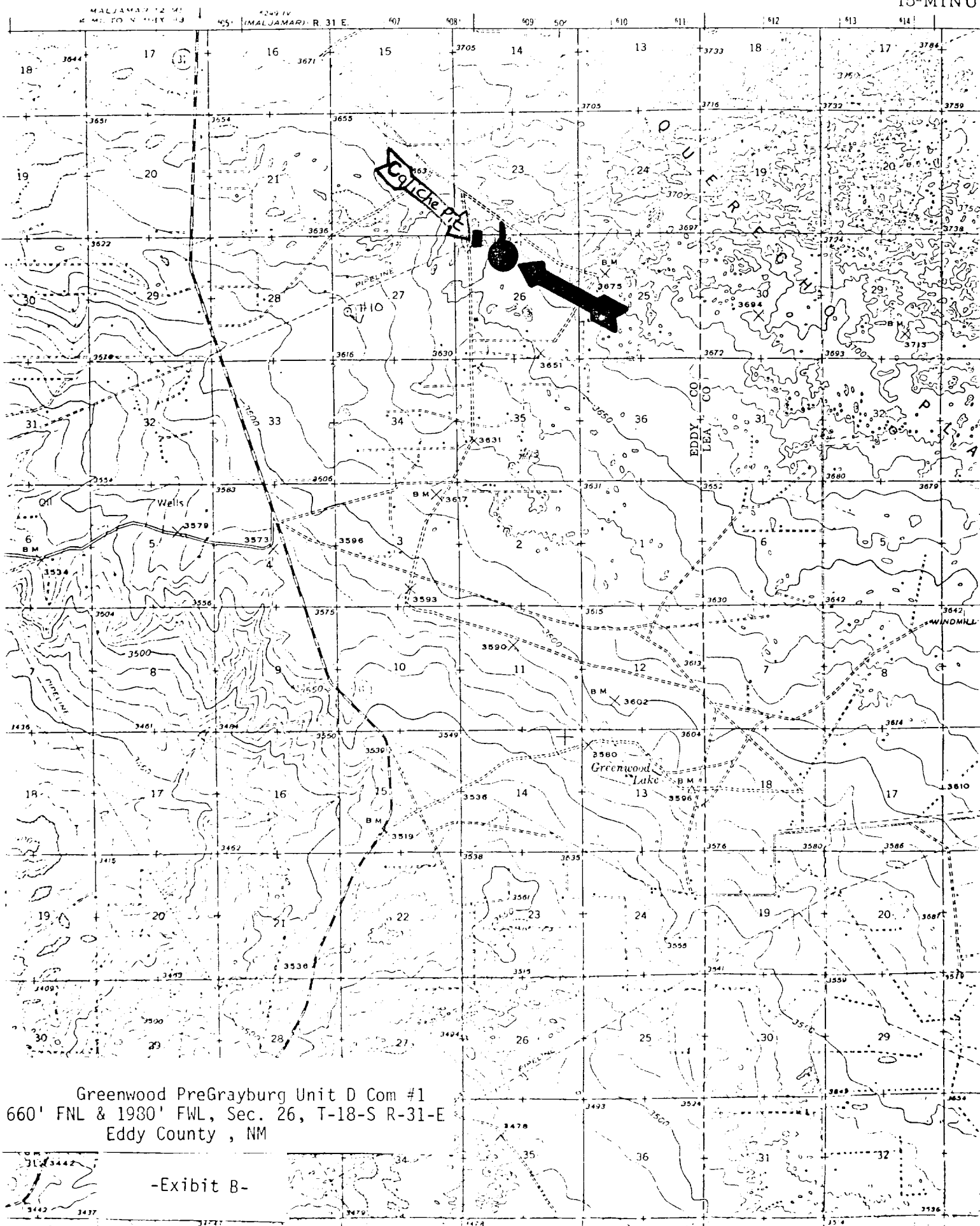
6-9-80
DATE

J. H. Hawkins Drilling Supervisor
NAME AND TITLE



Greenwood PreGrayburg Unit D Com #1
660' FNL & 1980' FWL, Sec. 26, T-18-S R-31-E
Eddy County , NM

-Exhibit A-



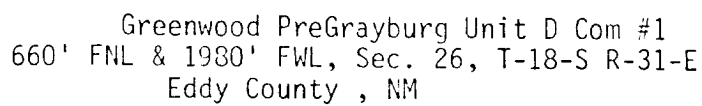
Greenwood PreGrayburg Unit D Com #1
660' FNL & 1980' FWL, Sec. 26, T-18-S R-31-E
Eddy County, NM

-Exhibit C-

T
18
S

T
19
S

8000' TO 14000'



A C A

Llano Estacado Center for Advanced
Professional Studies and Research
Eastern New Mexico University
Portales, New Mexico 88130



ARCHAEOLOGICAL CLEARANCE REPORT
FOR
AMCOO PRODUCTION COMPANY

GREENHOOB PREGRABURG CORP. NO. 14
ACCESS ROAD AND CALICHE PIT FOR GREENHOOB PREGRABURG CORP. NO. 14
FEDERAL "DCH" NO. 14
ACCESS ROAD, CALICHE PIT AND FORD BYPASS FOR FEDERAL "DCH" NO. 14

F20-256
BY
ROD KALLERMAN

DRAFTING BY
MILES LINDSEY

EDITED BY
FRANK TORRES, SCOTT SCHERNER AND MILES LINDSEY

SUBMITTED BY
SCOTT SCHERNER
ACTING DIRECTOR

22 DE 1990

INTRODUCTION

AN ARCHAEOLOGICAL RECONNAISSANCE WAS RECENTLY COMPLETED BY A.C.A. OF EASTERN NEW MEXICO UNIVERSITY FOR AMOCO PRODUCTION COMPANY, P.O. BOX 88, HOBBS, NEW MEXICO, 88240. IN EDDY COUNTY, NEW MEXICO. THE RECONNOITERED AREA WILL BE IMPACTED BY THE CONSTRUCTION OF 2 WELL PADS WITH ACCESS ROADS, CALICHE PITS AND A ROAD BYPASS. THE PROJECT WAS ADMINISTERED BY MR. BOB DAVIS, AMOCO PRODUCTION COMPANY AND SCOTT SCHERER, ACTING DIRECTOR, FOR ACR. THIS REPORT WAS PREPARED BY THE ROSWELL OFFICE OF ACR, ROD MACLENNAN, MANAGER.

THE FIELD WORK WAS CONDUCTED ON 28 AND 29 MAY 1980 BY ROD MACLENNAN. FIELD AND WEATHER CONDITIONS WERE EXCELLENT THROUGHOUT THE COURSE OF THIS RECONNAISSANCE. THIS SURVEY WAS CONDUCTED UNDER FEDERAL ANTIQUITY PERMIT NUMBER 79-NM-049. A SEARCH OF THE NATIONAL REGISTER HAS BEEN MADE AND PROPERTIES WITHIN THIS AREA ARE LISTED ON THE REGISTER.

SURVEY TECHNIQUE

VISUAL INSPECTION OF THE PROPOSED WELL PADS, CALICHE PITS AND ROAD BYPASS WERE COMPLETED BY WALKING A SERIES OF PARALLEL TRANSECTS. EACH TRANSECT WAS COVERED IN A TIGHTLY SPACED ZIG-ZAG. THE DISTANCE BETWEEN TRANSECTS WAS 25 FEET. BOTH ACCESS ROADS WERE EXAMINED AS INDIVIDUAL TRANSECTS, WITH TIGHTLY SPACED ZIG-ZAG PATTERNS COVERING THE LENGTH AND BREADTH. THIS METHOD MAXIMIZED THE OPPORTUNITY OF OBSERVING ANY CULTURAL RESOURCES WITHIN OR NEAR THE PROPOSED AREA OF IMPACT.

GREENWOOD PRE-GRAYBURG COM. NO. 14

THE PROPOSED WELL PAD AND ACCESS ROAD ARE LOCATED 15 MILES SOUTH OF ALBUQUERQUE, NEW MEXICO, ON THE QUERETERO PLAINS. THE PAD MEASURES 400 X 400 FEET AND THE ACCESS ROAD MEASURES 50 X 850 FEET. THEY ARE SITUATED AS FOLLOWS:

PAD:
NE 1/4 NW 1/4, SECTION 26, T18S, R31E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

ROAD:
NE 1/4 NW 1/4, SECTION 26, T18S, R31E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)
SE 1/4 SW 1/4, SECTION 23, T18S, R31E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

MAP REFERENCE: USGS CLAYTON EAST COORDINATE, 15 MINUTE SERIES, 1942 (1965)
FIGURES 1 AND 2

Figure 1

Agency for Conservation Archaeology

Well Location Schematic

Company: AMOCO PRODUCTION COMPANY Lease: Greenwood Pre-Grayburg Well No.: 14
Com.

660 feet from the North line

1980 feet from the West line

Section: 26

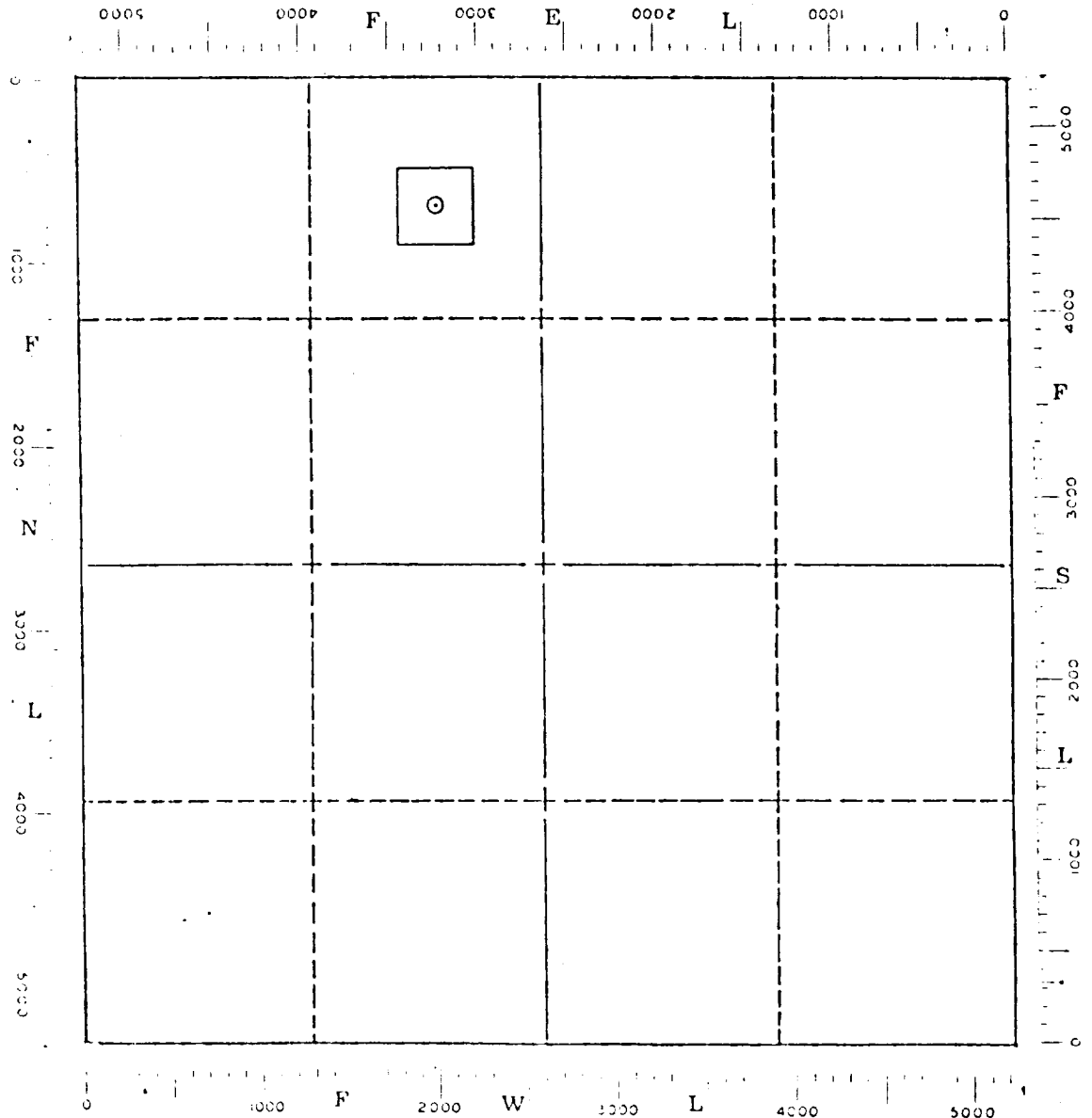
Township: T18S

Range: R31E

County: Eddy; State: NM

Ownership: BLM

SCALE: 1" = 1000'



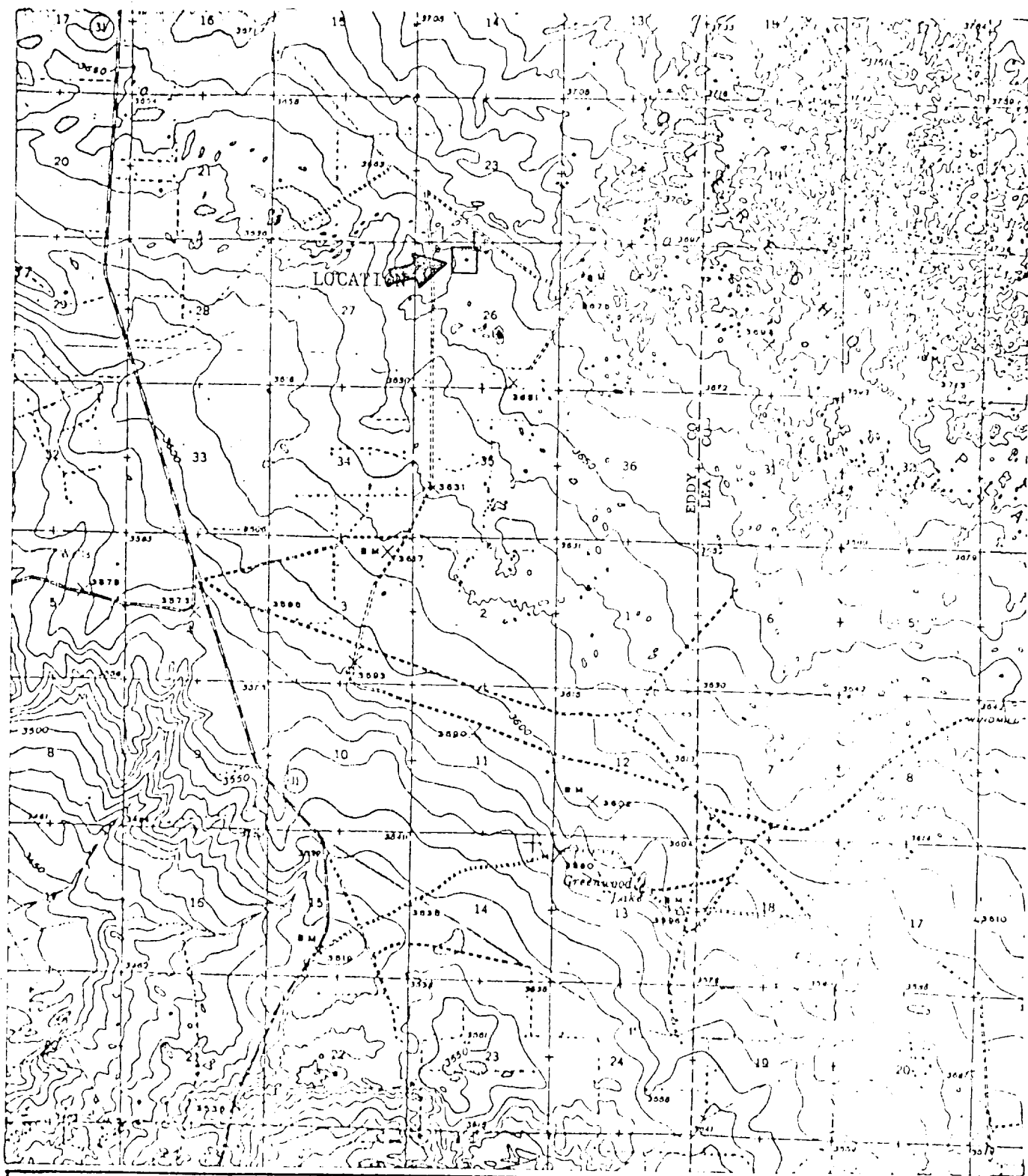
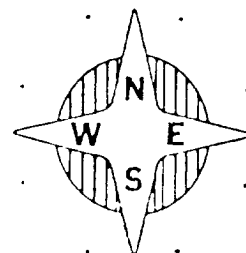


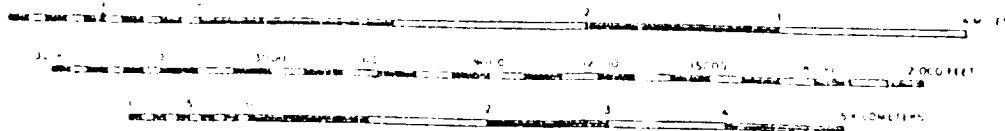
Figure 2: Location of Greenwood Pre-Grayburg Co. No. 14
Sections 26 & 23, T18S, R31E, Eddy County

Map Reference: USGS Clayton Basin Quadrangle, 1942/PR 1965

15 MINUTE
SERIES



SCALE 1:62500



TERRAIN

THE PROPOSED WELL PAD AND ACCESS ROAD ARE LOCATED ON THE QUERECHO PLAINS, 6 MILES EAST OF NIPENTIA RIDGE. THEY ARE LOCATED ON A SANDY PLAIN WITHIN A LOW DUNE FIELD. THE ELEVATION IS 2655 FEET. THE SOILS ENCOUNTERED IN THE AREA ARE FREE DOMINANTLY YELLOW SANDS. LITHIC INCLUSIONS WITHIN CONSIST OF CALICHE FRAGMENTS WHICH COMPOSE 2 PERCENT OF THE SOIL BY VOLUME. TAXONOMICALLY THIS SOIL CAN BE CLASSIFIED AS A MEMBER OF THE HAPLARGIDS-TORRIPSAMMENTS ASSOCIATION.

FLORISTICS

ACA ENCOUNTERED A MODERATE FLORAL ASSEMBLAGE IN THIS VICINITY. THE DENSITY OF THE VEGETATION IN THE AREA IS APPROXIMATELY 25 PERCENT, CONSISTING PRIMARILY OF SHRUBS. THE DOMINANT SPECIES ARE MESQUITE (PROSOPIA JULIFLORA) AND OAK BRUSH (QUERCUS BAYBERRY). AMONG OTHER SPECIES PRESENT ARE PLAINS YUCCA (YUCCA CHAMISARIS), SAND DROPSIDE (SPURGEON CRYPTANTHUS), NIGHTSHADE (SOLANUM ELAEAGNIFOLIUM), AND BROWN SNAKEWEED (GUTIERREZIA SARTORI).

CULTURAL RESOURCES

ACA DID NOT ENCOUNTER ANY ARCHAEOLOGICAL SITES OR ISOLATED MANIFESTATIONS, EITHER WITHIN OR NEAR THE PROPOSED FACILITIES. A REVIEW OF THE NATIONAL REGISTER DID NOT FIND 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.

CALICHE PIT FOR GREENWOOD PRE-GRAYBURG COM. NO. 14

THE PROPOSED CALICHE PIT IS LOCATED 14 MILES SOUTH OF MALJAMAR, NEW MEXICO, ON THE QUERECHO PLAINS. THE CALICHE PIT MEASURES 300 FEET NORTH-SOUTH BY 600 FEET EAST-WEST AND IS SITUATED AS FOLLOWS:

SW 1/4 SW 1/4, SECTION 23, T18S, R31E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)
NW 1/4 NW 1/4, SECTION 26, T18S, R31E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

MAP REFERENCE: USGS CLAYTON BASIN QUADRANGLE, 15 MINUTE SERIES, 1942 (PP-1965)
(FIGURE 3)

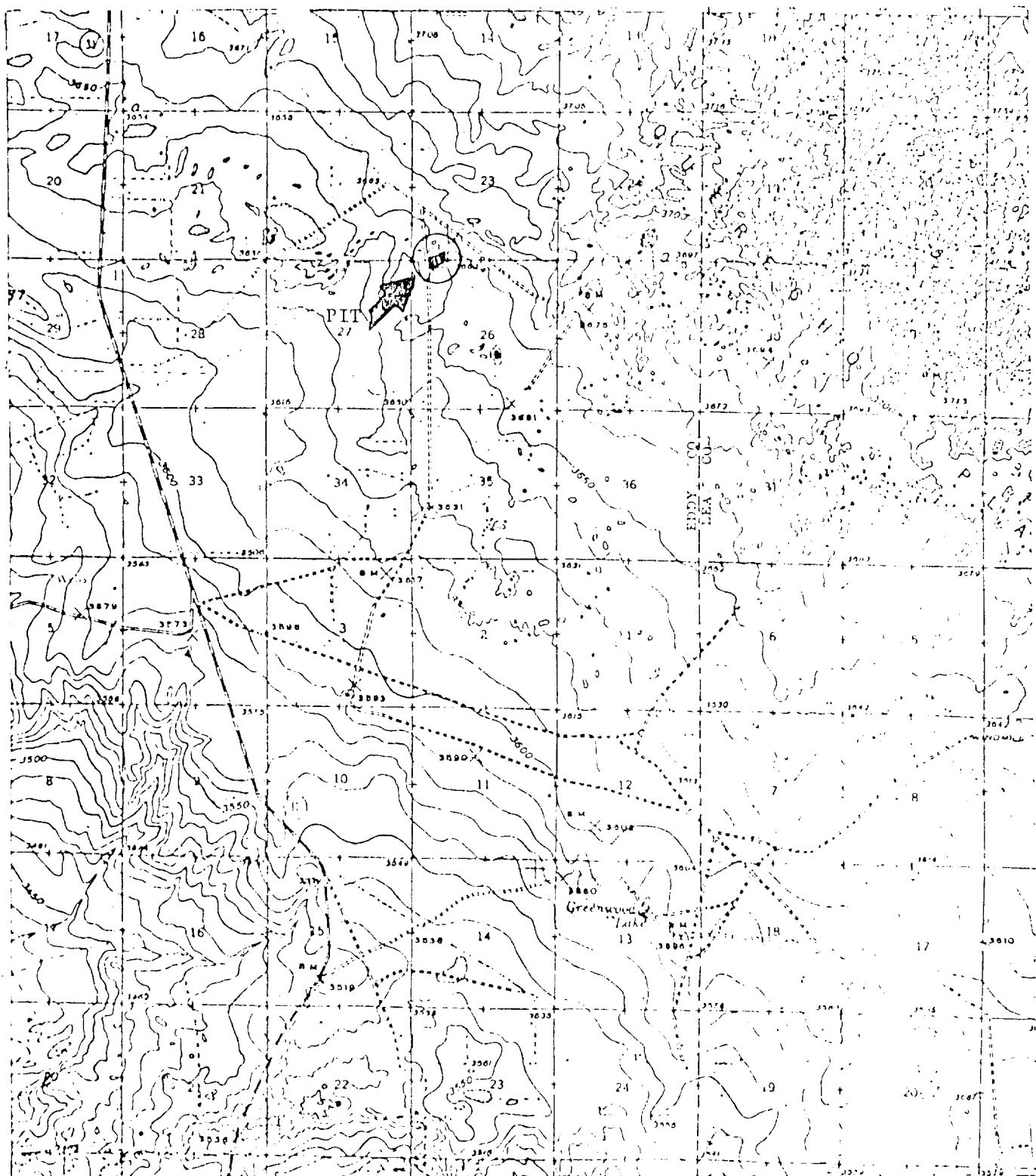
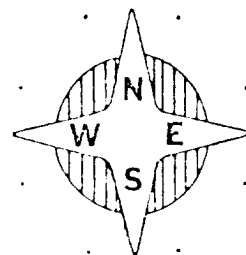


Figure 3: Location of a Caliche Pit
Sections 23 & 26, T18S, R31E, Eddy County

Map Reference: USGS Clayton Basin Quadrangle, 1942/PR 1965

SCALE 1:62500

15 MINUTE
SERIES



ACR F80-236

TERRAIN

THE PROPOSED CALICHE PIT IS LOCATED ON THE QUERECHO PLAINS AND IS 6 MILES EAST OF NIPENIM RIDGE. IT IS SITUATED IN A LOW DUNE FIELD ON A SANDY PLAIN. THE ELEVATION IS 3660 FEET. THE SOILS ENCOUNTERED IN THE AREA ARE PREDOMINANTLY YELLOW SANDS. LITHIC INCLUSIONS WITHIN THE SOIL CONSIST OF CALICHE FRAGMENTS WHICH COMPRISE 80 PERCENT OF THE SOIL VOLUME. TAXONOMICALLY THIS SOIL CAN BE CLASSIFIED AS A MEMBER OF THE HAPLARGIDS-TORRIPSMENTIS ASSOCIATION.

FLORISTICS

ACR ENCOUNTERED A SPARSE FLORAL ASSEMBLAGE IN THIS LOCALITY. THE DENSITY OF THE VEGETATION IN THE AREA IS APPROXIMATELY 10 PERCENT, CONSISTING PRIMARILY OF SHRUBS. THE DOMINANT SPECIES IS BROOM SNAKEWEED (GUTIERREZIA SEROTINAE). AMONG OTHER SPECIES PRESENT ARE MESQUITE (PROSOPIS JULIFLORA), OAK BRUSH (QUERCUS BIVERTILLO), PLAINS YUCCA (YUCCA CHAMERISIS), SAND DROPSEED (SPOROBOOLUS CRYPTANTHUS), AND NIGHTSHADE (SOLANUM ELEAGNIFOLIUM).

CULTURAL RESOURCES

ACR DID NOT ENCOUNTER ANY ARCHAEOLOGICAL SITES OR ISOLATED MANIFESTATIONS, EITHER WITHIN OR NEAR THE PROPOSED FACILITIES. A REVIEW OF THE NATIONAL REGISTER DID NOT FIND ANY PROPERTIES LISTED FOR THIS LOCATION.

RECOMMENDATIONS

ACR RECOMMENDS CLEARANCE FOR THE PROPOSED CALICHE PIT AND SUGGESTS THAT CONSTRUCTION BE ALLOWED TO PROCEED AS CURRENTLY PLANNED.

FEDERAL "B" NO. 1

THE PROPOSED WELL PAD AND ACCESS ROAD ARE LOCATED 12 MILES EAST NORTHEAST OF EL PASO GNP, NEW MEXICO, NEAR GUADALUPE RIDGE. THE PAD MEASURES 400 X 400 FEET AND THE ACCESS ROAD MEASURES 50 X 5000 FEET. THEY ARE SITUATED AS FOLLOWS:

PAD:

SE 1/4 NE 1/4, SECTION 08, 1265, R23E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

ROAD:

SE 1/4 NE 1/4, SECTION 08, 1265, R23E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

NW 1/4 SW 1/4, SECTION 09, 1265, R23E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

NE 1/4 SW 1/4, SECTION 09, 1265, R23E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

NW 1/4 SE 1/4, SECTION 09, 1265, R23E, N4PM, EDDY COUNTY, NEW MEXICO (BLM)

MAP REFERENCE: USGS GRAPEVINE DRAW QUADRANGLE, 7.5 MINUTE SERIES, 1978
(FIGURES 4 AND 5)

TERRAIN

THE PROPOSED WELL PAD AND ACCESS ROAD ARE LOCATED NEAR THE GUADALUPE RIDGE, AND ARE 1500 FEET SOUTH OF DOUBLE CANYON DRAW. THEY ARE SITUATED ON THE SIDE OF A DRAW. THE ELEVATION VARIES FROM 4460 TO 4468 FEET. THE SOILS ENCOUNTERED IN THE AREA ARE PREDOMINANTLY CLAY LOAM. LITHIC INCLUSIONS WITHIN THE SOIL CONSIST OF 80 PERCENT, BY SOIL VOLUME, FRAGMENTED LIMESTONE. TAXONOMICALLY THIS SOIL CAN BE CLASSIFIED AS A MEMBER OF THE CALCUSTOLLS-ROCK LAND ASSOCIATION.

FLORISTICS

ACA ENCOUNTERED A MODERATE FLORAL ASSEMBLAGE IN THIS LOCALE. THE DENSITY OF THE VEGETATION IN THE AREA IS APPROXIMATELY 15 PERCENT, CONSISTING PRIMARILY OF SHRUBS. THE DOMINANT SPECIES IS LECHEGUILLA AGAVE (~~AGAVE~~ LECHEGUILLA). AMONG OTHER SPECIES PRESENT ARE AGAVE (~~AGAVE~~ SCABRO), ENGLEMAN PRICKLYPEAR (COENOTIA PINELANDIA), FOUR WING SALTBUSH (CHRYPLEX CANESCENS), OAK BRUSH (QUERCUS HAYRATI), OCOTILLO (CHOUQUERIA SELENDENS), PARRY AGAVE (~~AGAVE~~ PARRYI), PURPLE PRICKLYPEAR (COENOTIA MACROCENTRA), SOTOL (CASTILLEJA WHEELERI), SAND DROPSIDE (SPURGEOLUS CRISTATUS), AND JUNIPER (JUNIPERUS PINCHOLII).

CULTURAL RESOURCES

ACA DID NOT ENCOUNTER ANY ARCHAEOLOGICAL SITES OR ISOLATED MANIFESTATIONS, EITHER WITHIN OR NEAR THE PROPOSED FACILITIES. A REVIEW OF THE NATIONAL REGISTER SHOWS THAT THE BOUNDARY OF THE CARLSBAD CHURCHES ARCHAEOLOGICAL DISTRICT IS APPROXIMATELY FIVE MILES NORTH OF THIS PROPOSED LOCATION.

RECOMMENDATIONS

ACA RECOMMENDS CLEARANCE FOR THE PROPOSED WELL PAD AND ACCESS ROAD AND SUGGESTS THAT CONSTRUCTION BE ALLOWED TO PROCEED AS CURRENTLY PLANNED.

CHLICHE PIT FOR FEDERAL "BH" NO. 1

THE PROPOSED CHLICHE PIT IS LOCATED 13 MILES EAST NORTHEAST OF EL PASO GAP, NEW MEXICO, NEAR THE GUADALUPE RIDGE. THE PROPOSED CHLICHE PIT IS TRIANGULAR AND MEASURES APPROXIMATELY 100 FEET ON EACH SIDE. IT IS SITUATED AS FOLLOWS:

R4 1/4 SE 1/4, SECTION 09, T26S, R23E, NMPM, EDDY COUNTY, NEW MEXICO (SEE MAP REFERENCE: USGS GRAPEVINE DRAW QUADRANGLE, 7.5 MINUTE SERIES, 1978)

Figure 4

Agency for Conservation Archaeology

Well Location Schematic

Company: AMOCO PRODUCTION COMPANY Lease: Federal "BH" Well No.: 1

2310 feet from the North line

735 feet from the East line

Section: 8

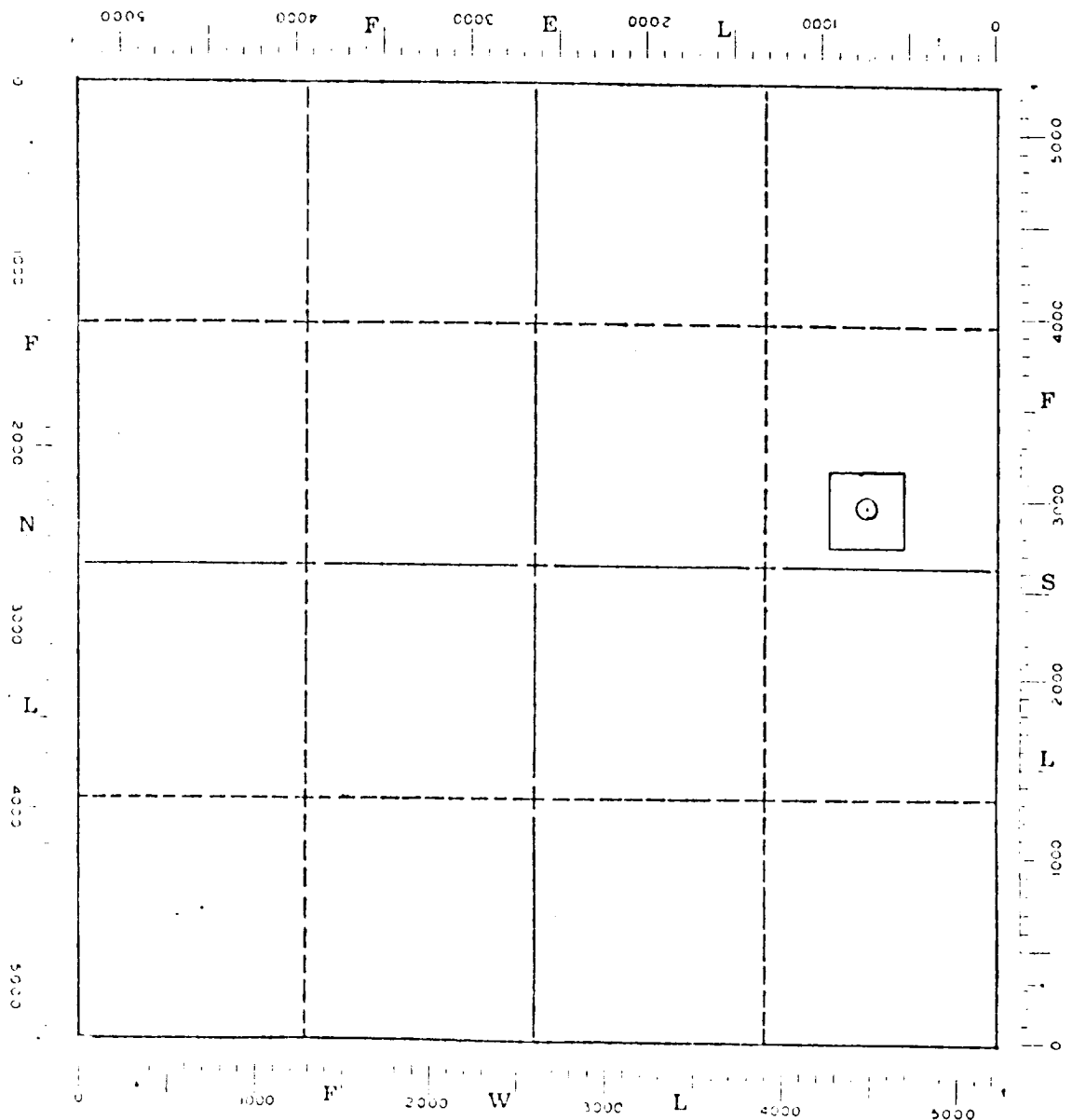
Township: T26S

Range: R23E

County: Eddy; State: NM

Ownership: BLM

SCALE: 1" = 1000'



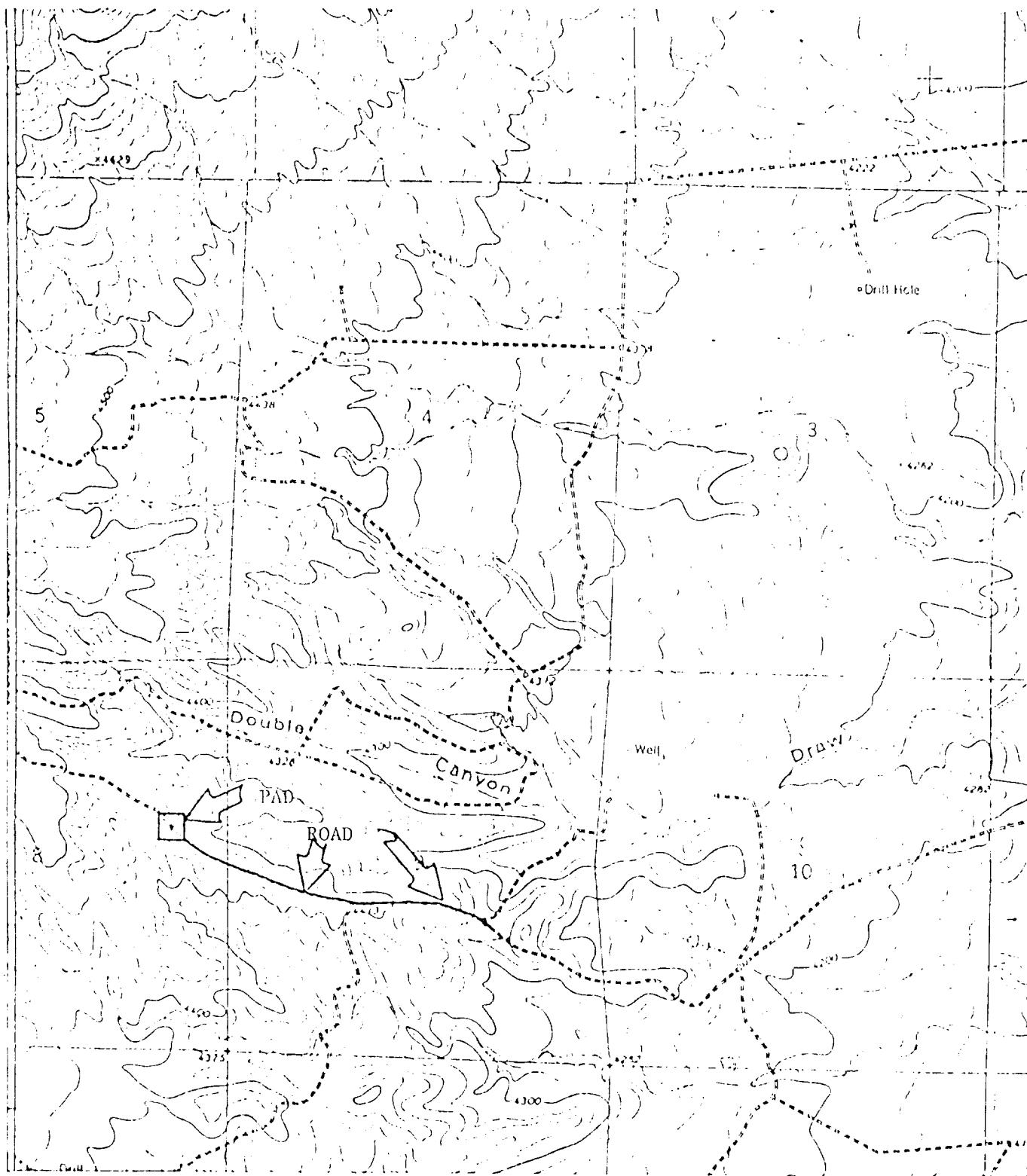
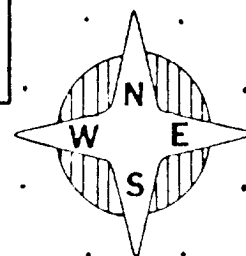
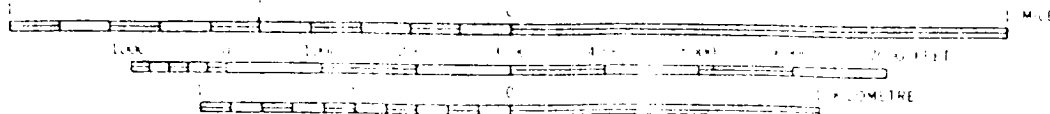


Figure 5: Location of Federal "BH" No. 1 and Road
Sections 8 & 9, T26S, R23E, Eddy County

Map Reference: USGS Grapevine Draw Quadrangle, 1978

7.5 MINUTE
SERIES

SCALE 1:24,000



(FIGURE 6)

TEKWIN

THE PROPOSED CRUISE PIT IS LOCATED NEAR GUADALUPE RIDGE, AND IS 1500 FEET SOUTH OF DOUBLE CANYON DRAIN. IT IS SITUATED ON THE SOUTH SIDE OF THE DRAIN. THE ELEVATION IS 4466 FEET. THE SOILS ENCOUNTERED IN THE AREA ARE PREDOMINANTLY CLAY LOAM LITHIC INCLUSIONS WITHIN THE SOIL. CONSIST OF FRAGMENTED LIMESTONE, WHICH COMPRISES 80 PERCENT OF THE SOIL VOLUME. TAXONOMICALLY THIS SOIL CAN BE CLASSIFIED AS A MEMBER OF THE CALCIUSTOLLS-ROCK LAND ASSOCIATION.

FLORISTICS

ACH ENCOUNTERED A MODERATE FLORAL ASSEMBLAGE IN THIS POSITION. THE DENSITY OF THE VEGETATION IN THE AREA IS APPROXIMATELY 15 PERCENT, CONSISTING PRIMARILY OF SHRUBS. THE DOMINANT SPECIES IS LECHUGUILLA AGAVE (AGAVE LECHUGUILLA). OTHER SPECIES PRESENT ARE AGAVE (AGAVE SP.), ENGLEMAN PRICKLYPEAR (COCCINIA MICROCENTRA), FOUR WING SALTBUSH (ARTEMISIA CANESCENS), LECHUGUILLA AGAVE (AGAVE LECHUGUILLA), OAK BRUSH (QUERCUS HEMISPHERICA), OLIVELLO (OLIVELLA SP.), PINKY AGAVE (AGAVE PINKY), PURPLE PRICKLYPEAR (COCCINIA MICROCENTRA), SOUTHERN CACTUS (CHOLISIA SP.), SAND DROPSIDE (SPERMATOPHYTES), AND JUNIPER (JUNIPERUS SP.).

CULTURAL RESOURCES

ACH DID NOT ENCOUNTER ANY ARCHAEOLOGICAL SITES OR ISOLATED MANIFESTATIONS, EITHER WITHIN OR NEAR THE PROPOSED FACILITIES. HOWEVER A REVIEW OF THE NATIONAL REGISTER INDICATES THAT THE BOUNDARY OF THE CARLSBAD CAVERNS ARCHAEOLOGICAL DISTRICT LIES APPROXIMATELY FIVE MILES TO THE NORTH.

RECOMMENDATIONS

ACH RECOMMENDS CLEARANCE FOR THE PROPOSED CRUISE PIT AND SUGGESTS THAT CONSTRUCTION BE ALLOWED TO PROCEED AS CURRENTLY PLANNED.

ROAD BYPASS FOR FEDERAL "RD" NO. 1

THE PROPOSED ROAD BYPASS IS LOCATED 12 MILES SOUTHWEST OF WHITE CITY, NEW MEXICO, NEAR THE GUADALUPE RIDGE. THE ROAD BYPASS MEASURES 100 FEET AND IS SITUATED AS FOLLOWS:

NE 1/4 NE 1/4, SECTION 06, T26S, R21E, N40W, Eddy County, NEW MEXICO (BLM)
 NW 1/4 NW 1/4, SECTION 06, T26S, R21E, N40W, Eddy County, NEW MEXICO (BLM)

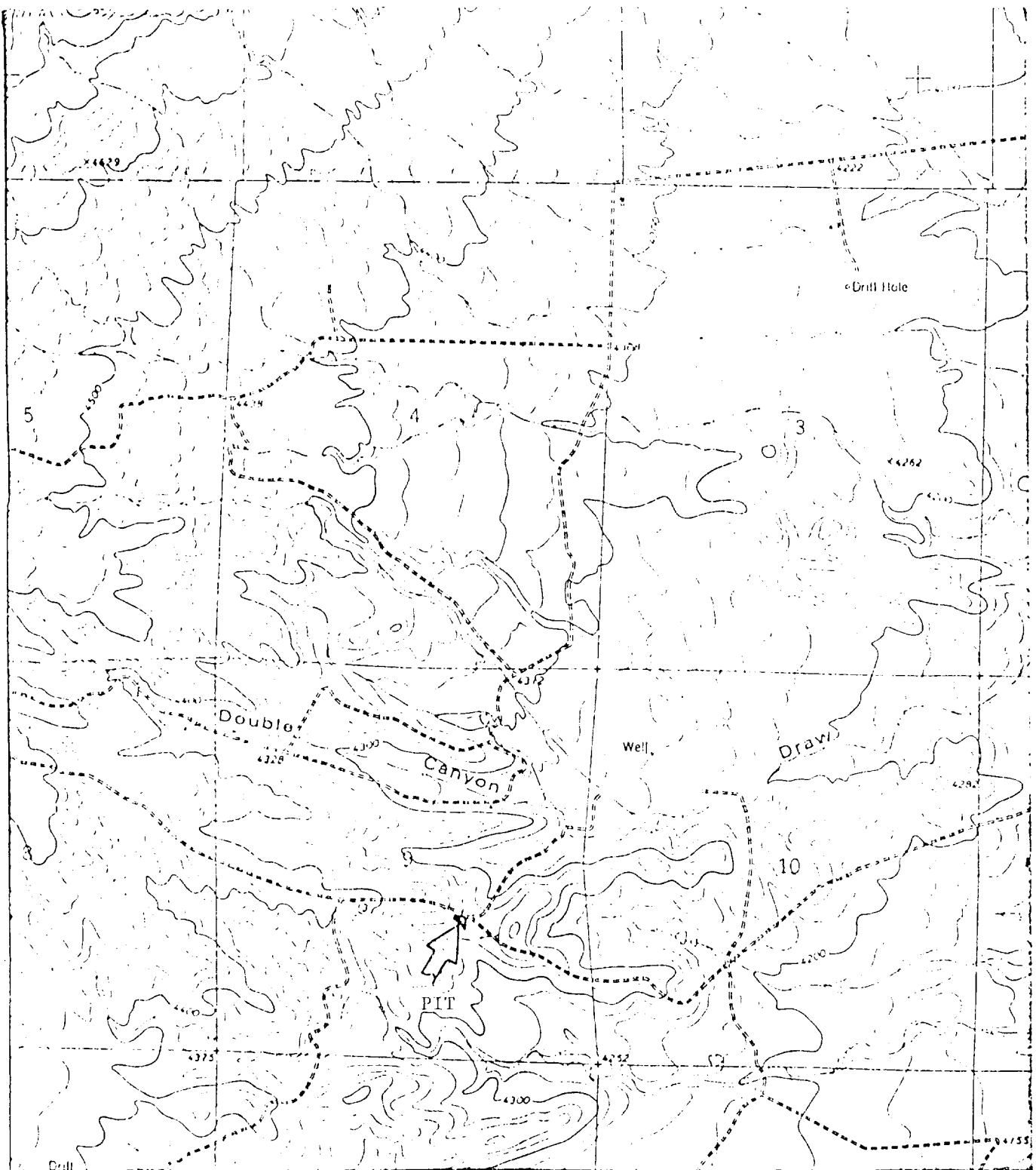
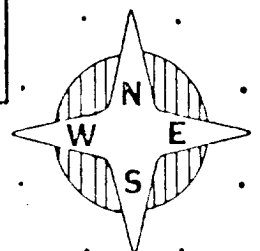


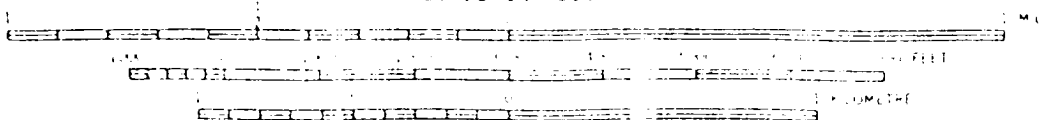
Figure 6: Location of a Caliche Pit
Section 9, T26S, R23E, Eddy County

Map Reference: USGS Grapevine Quadrangle, 1978

7.5 MINUTE
SERIES



SCALE 1:24,000



MAP REFERENCE: USGS GRAPEVINE DRAIN QUADRANGLE 7.5 MINUTE SERIES, 1978

(FIGURES 7 AND 8)

TERRAIN

THE PROPOSED ROAD BYPASS IS LOCATED NEAR THE GORDALUPE RIDGE, 600 FEET SOUTH OF DOUBLE CANYON DRAIN. IT IS SITUATED IN THE BOTTOM OF A SHALLOW CANYON. THE ELEVATION IS 2000 FEET. THE SOILS ENCOUNTERED IN THE AREA ARE PREDOMINANTLY CLAY LOAMS WITHOUT LITHIC INCLUSIONS. TAXONOMICALLY THIS SOIL CAN BE CLASSIFIED AS A MEMBER OF THE TROUSADILL-ROCK LAND ASSOCIATION.

FLORISTICS

ACH ENCOUNTERED A SPARSE FLORAL ASSEMBLAGE IN THIS VICINITY. THE DENSITY OF THE VEGETATION IN THE AREA IS APPROXIMATELY 10 PERCENT, CONSISTING PRIMARILY OF SHRUBS. THE DOMINANT SPECIES IS BROOM SNAKEWEED (GUTIERREZIA SPECTABILIS). AMONG OTHER SPECIES PRESENT ARE CREOSOTE BUSH (LEADER IDENTIFIED), LEAFY GRASS (NEOTILOM IDENTIFIED), SAND DROPSIDE (CEPHALOPUS CRYPTOPHYLLUS) AND RIGIDGRASS (SOLANUM ELEGANTIFOLIUM).

CULTURAL RESOURCES

ACH DID NOT ENCOUNTER ANY ARCHAEOLOGICAL SITES OR ISOLATED MANIFESTATIONS, EITHER WITHIN OR NEAR THE PROPOSED FACILITIES. A REVIEW OF THE NATIONAL REGISTER SHOWS THAT THE CHUKSHO CAVERNS ARCHAEOLOGICAL DISTRICT LIES FIVE MILES NORTHWEST.

RECOMMENDATIONS

ACH RECOMMENDS CLEARANCE FOR THE PROPOSED ROAD BYPASS AND SUGGESTS THAT CONSTRUCTION BE ALLOWED TO PROCEED AS CURRENTLY PLANNED.

