

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

CONOCO INC.

## 3. ADDRESS OF OPERATOR

P. O. Box 460, Hobbs, N.M. 88240

O. C. D.

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

At surface

660' FNL &amp; 1650' FEL

At proposed prod. zone

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

10. 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 IN LEASE

## 19. PROPOSED DEPTH

8100'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

160

## 20. ROTARY OR CABLE TOOLS

Rotary

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

## 22. APPROX. DATE WORK WILL START\*

December 21, 1980

## 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"	54.5 #	400'	355 SK. CIRCULATE
12 1/4"	9 5/8"	36 #	1200'	562 SK. CIRCULATE
8 3/4"	7"	26 #	8100'	575 SK.

It is proposed to drill a straight hole to a TD of 8100' and complete it  
as a Cisco <sup>oil</sup> well.

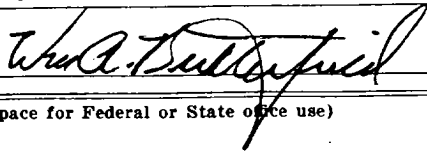
See attachments for 10-point well plan and 13-point Surface Use Plan.

This acreage is not dedicated to a purchaser.

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

Administrative Supervisor

DATE

10-16-80

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY GEORGE H. STEWART

TITLE

DATE

NOV 24 1980

CONDITIONS OF APPROVAL, IF ANY:

**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.

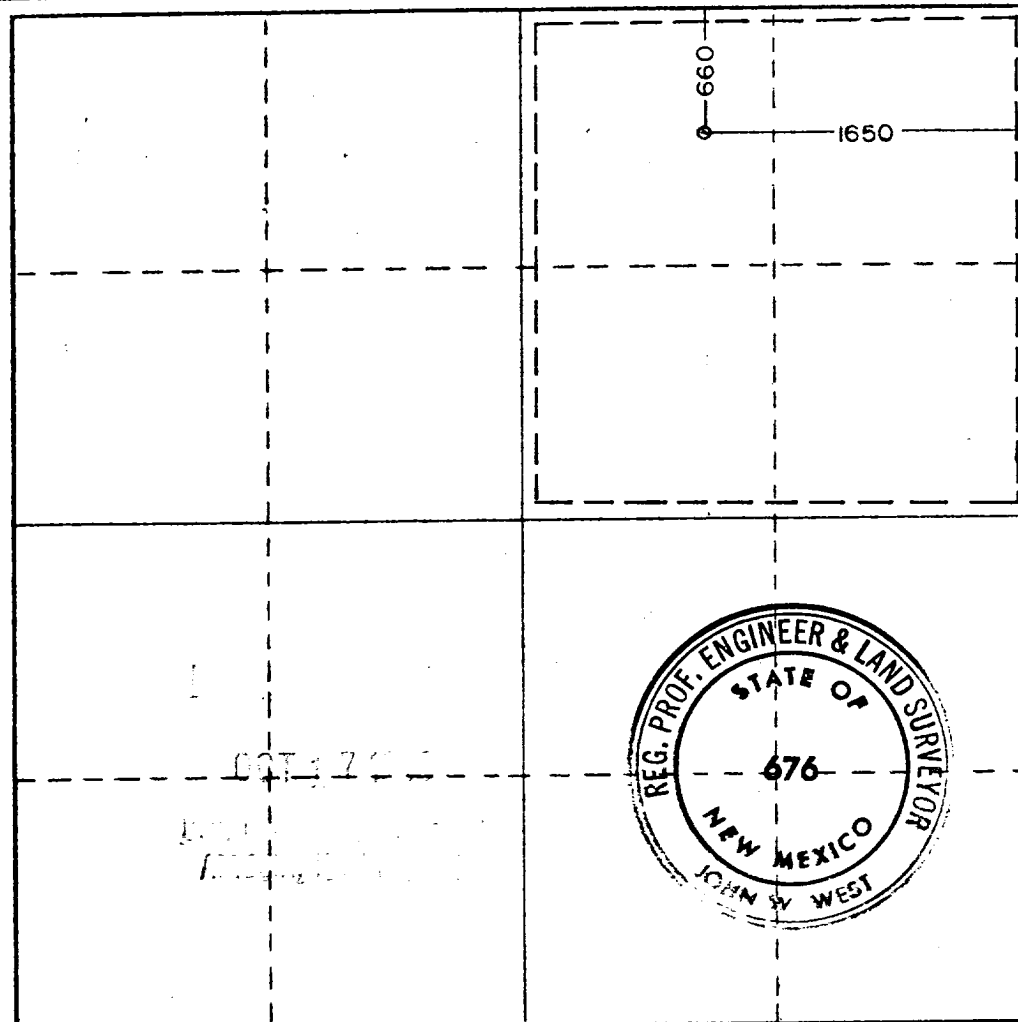
Operator <b>Conoco Inc.</b>			Lease <b>Dagger Draw</b>		Well No. <b>3</b>
Unit Letter <b>B</b>	Section <b>25</b>	Township <b>19 south</b>	Range <b>24 east</b>	County <b>Eddy</b>	
Actual Footage Location of Well: <b>660</b> feet from the <b>north</b> line and <b>1650</b> feet from the <b>east</b> line					
Ground Level Elev. <b>3578.3</b>	Producing Formation <b>CISCO</b>		Pool <b>NORTH DAGGER DRAW UPPER PENN</b>		Dedicated Acreage: <b>160</b> 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.



**CERTIFICATION**

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

Name: John R. Butterfield  
 Position: Administrative Supervisor  
 Company: Conoco Inc.  
 Date: 10/17/80

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: 9-16-80  
 Registered Professional Engineer and/or Land Surveyor:  
John W. West  
 Certificate No. JOHN W. WEST 676  
PATRICK A. ROMERO 6863  
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

ATTACHMENT TO FORM 9-331 C  
APPLICATION FOR PERMIT TO DRILL

Conoco Inc.  
Dagger Draw No. 3  
Sec. 25, T-19S, R-24E  
Eddy County, New Mexico

1. The geologic name of the surface formation is Recent Sand.
2. The estimated tops of important geologic markers are shown on the attached Proposed Well Plan.
3. The estimated depths at which anticipated water, oil, gas or other mineral-bearing formations to be encountered are shown on attached Proposed Well Plan.
4. The proposed casing program is as follows:
  - 0' - 400' 13 3/8", 54.5#, K-55, STC
  - 0' - 1200' 9 5/8", 36#, K-55, STC
  - 0' - 8100' 7", 26#, K-55, LTC
5. A drawing of an API Series 900 Blowout Preventer Specification is attached. Pipe rams and blinds will be checked to 1,000 PSI for 30 minutes when BOP is installed. BOP will be checked when casing string is set and operated daily for checks.
6. The proposed mud program is as follows:
  - 0' - 400' 8.5 - 9.0 ppg spud mud
  - 400' - 1200' 8.5 - 9.0 ppg fresh water
  - 1200' - 7300' 8.5 - 8.8 ppg fresh water
  - 7300' - 8100' 8.5 - 9.0 ppg fresh water, low solids polymer
7. The auxiliary equipment to be used is:
  - (1) kelly cocks
  - (2) floats at the bit
8. It is proposed to run GR CAL CNL FDC PDC logs at selected intervals.
9. No abnormal pressures or temperatures are expected to be encountered in this well.
10. The anticipated starting date is December 21, 1980, with a duration of approximately 40 days.

WELL NAME     DAGGER DRAW NO. 3                      FIELD     DAGGER DRAW                      DATE     9/4/80

ELEVATION     EST.     GRD     3587'     KB     3605'     PROPOSED T.D.     8100'

LOCATION (SURFACE)     660' FNL     &     1650' FEL OF SECTION 25     T-19S     R-24E

COUNTY     EDDY     STATE     NM                      SPACING     160 ACRES

GEOLOGICAL ESTIMATES

<u>ZONE</u>	<u>TOP</u>	<u>CONTENT</u> (O=Oil, G=Gas, W=Water)
SAN ANDRES DOLO.	400'	O,W,G
GLORIETA SS.	1925'	O,W,G
YESO DOLO.	2075'	O,W,G
ABO DOLO.	4130'	—
WOLFCAMP DOLO.	5295'	—
CISCO REEF LS.	7480'	O,W,G
CISCO REEF DOLO.	7620'	O,W,G

WELL SURVEYS - (List types by code numbers as follows: Directional and/or Deviation (1); Deflection (2); Caliper (3); Temperature (4); Electrical (5); Radioactive (6); Geolograph (7) Photoclinometer (8); Mudlogging (9); Other (10) and name of that type)

<u>DEPTH POINTS</u>	<u>TYPE</u>	<u>HOLE SIZE</u>	<u>REMARKS</u>
0'-8100'	(1) Deviation	17-1/2, 12-1/4, 8-3/4	One every 250' to 1200' One every 500' thereafter
0'-8100'	(7) Geolograph	17-1/2, 12-1/4, 8-3/4	
1200'-8100'	(5) DLL-GR	8-3/4	2" & 5" Scales
1200'-8100'	(6) CNL-FDC-GR-CAL.	8-3/4	2" & 5" Scales
6100'-8100'	(6) PDC (GR-COLLAR)	7" Casing	Depth control
0'-8100'	(4) Temperature	7" Casing	Determine top of cement

CONOCO TO FURNISH WATER, CONTRACTOR TO FURNISH FUEL.

PROPOSED WELL PLAN

WELL NAME	DAGGER DRAW NO. 3	FIELD	DAGGER DRAW
<u>ATTACHMENT</u>	<u>NO.</u>	<u>REQUIRED</u>	<u>NOT REQUIRED</u>
CASING CENTRALIZERS, SCRATCHERS	_____	<u>X</u>	_____
CEMENTING	_____	<u>X</u>	_____
MUD PROGRAM	_____	<u>X</u>	_____
WELL PLAN OUTLINE	_____	<u>X</u>	_____
PORE PRESSURE - FRAC GRADIENT	_____	_____	_____
PROJECTED PROGRESS	_____	_____	_____
CROSS SECTION OR WELL COURSE	_____	_____	_____
HYDRAULICS PROGRAM	_____	_____	_____
BIT PROGRAM	_____	_____	_____
VENDER USAGE LIST	_____	_____	_____

DRILLING AND COMPLETION PROCEDURE

1. 0'-400' - Drill a 17-1/2" hole. Run and cement 13-3/8" casing (see cement & casing programs). WOC 18 hours. Pressure test casing to 600 psi for 30 mins.
2. 400'-1200' - Drill a 12-1/4" hole. Run and cement 9-5/8" casing (see cement & casing programs). WOC 18 hours. Pressure test casing to 600 psi for 30 mins.
3. 1200'-8100' - Drill a 8-3/4" hole. Drill out 9-5/8" shoe and pressure test formation to 200 psi. Run open hole logs. Run and cement 7" casing (see cement & casing programs).
4. Detailed completion procedure to be prepared after open hole logs are analyzed. Anticipate a Cisco single completion.

SPECIAL DRILLING EQUIPMENT

TO BE IN OPERATION BEFORE DRILLING Wolfcamp (5295')

Totco Drilling Recorder (or equivalent)

Record depth and drilling rate, weight (hook load), rotary RPM, rotary torque (or AMPS), stand pipe pressure, and pump SPM. Unit installed at driller's position.

Flow Sensor and Pump Stroke Counter

Dial indicator and control unit at driller's position. High and low alarms for percent flow installed in dog house.

Pit Volume Totalizer

Dial indicator at driller's position. Recorder with alarms for volume increase or decrease installed in dog house.

Mud Degasser

Installed after shale shaker.

Mud Gas Separator

Installed in mud return line.

Swaco (Cameron) Adjustable Shoke

Manifold along with a manually adjustable choke so that each choke can be isolated from flow stream. Turns in choke line to be kept to a minimum. Lines to be tied down to prevent excessive movement under flow conditions. Control console to be in view of driller.

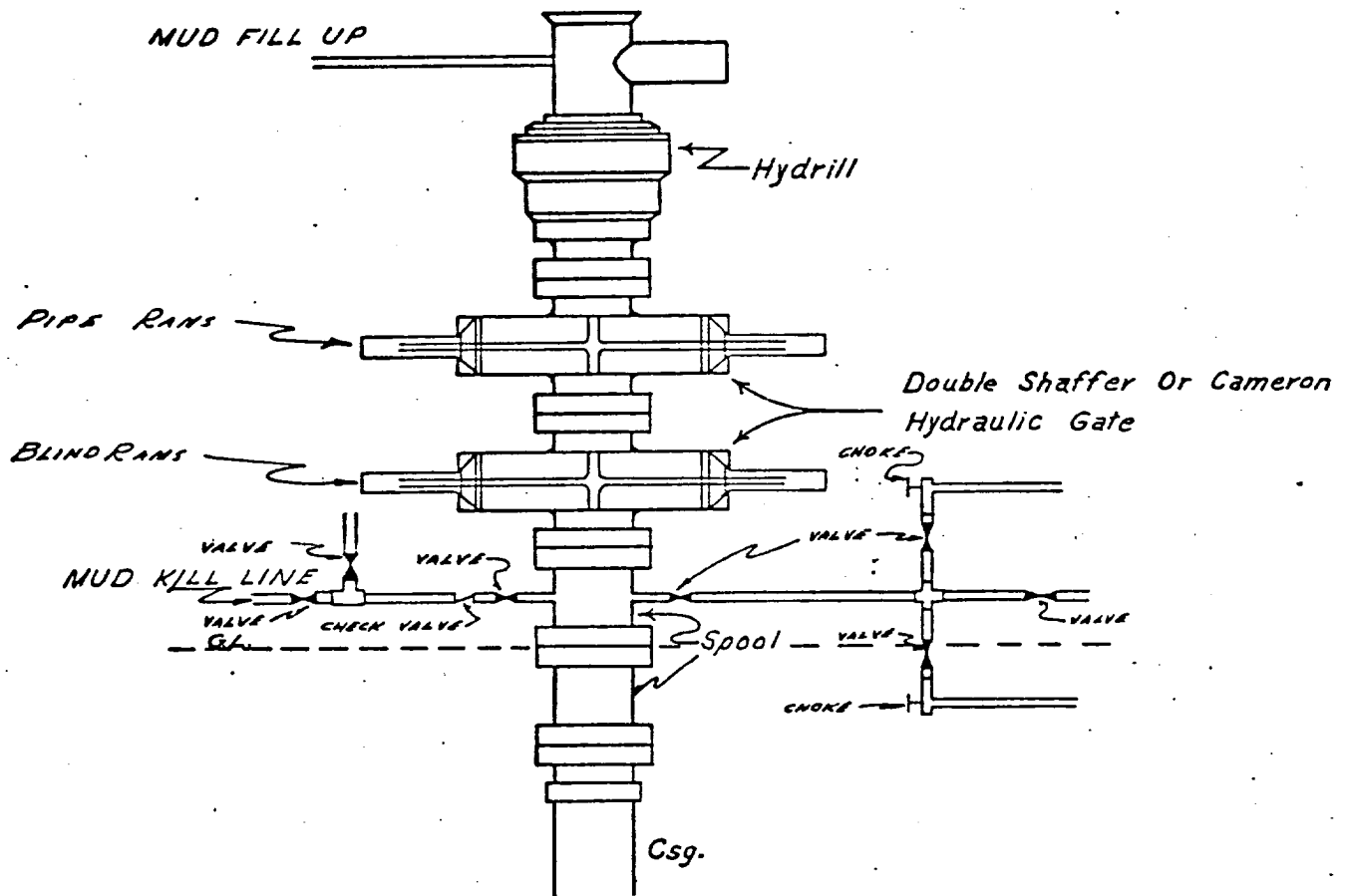
Double Deck Shaker and Centrifuge

Installed for use from 1200' to 8100' to help reduce solids in the mud.

Drilling Head

To allow for drilling ahead while encountering a pressure kick.

CONTINENTAL OIL COMPANY  
Blow-out Preventer Specifications



API Series 900

NOTE:

Manual and Hydraulic controls with closing unit no less than 75' from well head.  
Remote controls on rig floor.

DUE TO SUBSTRUCTURE CLEARANCE,  
HYDRILL MAY OR MAY NOT BE USED.

Archaeological Clearance Report  
for

CONOCO, INCORPORATED

Dagger Draw Well No. 3 ✓  
Dagger Draw Well No. 4  
Penny Federal Well No. 2 ✓  
Quarry, Section 30, T19S, R25E, NMPM,  
Eddy County, New Mexico

Prepared

By

Dr. J. Loring Haskell

Submitted

By

Dr. J. Loring Haskell  
Principal Investigator  
New Mexico Archaeological Services, Inc.  
Carlsbad, New Mexico

18 September 1980

Permit No. 79-NM-166



# ABSTRACT

New Mexico Archaeological Services, Inc., representing CONOCO, INCORPORATED, Hobbs, undertook an archaeological reconnaissance of Bureau of Land Management lands scheduled to be impacted by the construction of three drill locations and the quarry are situated in Section 25, T19S, R24E; Section 23, T20S, R24E; and Section 30, T19S, R25E, NMPM, Eddy County, New Mexico. No cultural resources were recorded during this reconnaissance, and hence NMAS is *suggesting* clearance for all CONOCO work.

## Introduction

On 17 September 1980, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, undertook for CONOCO, INCORPORATED, Hobbs, an archaeological reconnaissance of federal lands administered by the Bureau of Land Management in Eddy County, New Mexico. Reconnoitered areas will be impacted by the construction of three drill locations and expansion of an existing quarry. This project was advanced by Mr. Pat DeFoe, Production Foreman, CONOCO, INCORPORATED, and administered by Dr. J. Loring Haskell, Principal Investigator, NMAS, Inc. This reconnaissance was undertaken by Dr. Haskell.

## Survey Technique

For this investigation, CONOCO's proposed locations were reconnoitered for evidence of man's past activities by walking them in a series of 20 ft wide, close interval (15° or less), zigzag transects. In addition an added zone embracing to 20 ft on each side of the staked 400 X 400 ft locations, and hence lying outside the bounds of their proposed work areas, was reconnoitered by a similar means as was the environs of the existing quarry. This zone extends backward from the edge of the quarry, on each side, for a distance of 100 ft. Methodologically, this procedure served to promote optimal conditions for the visual examination of areas to be impacted by construction-related activities.

Dagger Draw Well No. 3 N

## Location

The proposed location will measure 400 X 400 ft on federal lands and will be situated 660 ft from the north line and 1650 ft from the

east line of:

Section 25, T19S, R24E, NMPM, Eddy County, NM

Thus it will be situated in the:

NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 25, T19S, R24E, NMPM, Eddy County, NM

Map Reference: USGS PARISH RANCH QUADRANGLE, 7.5 Minute Series, 1956.

### Terrain

CONOCO's proposed location will be situated on the flood plain of North Seven Rivers. This feature, universally overlain by alluvial deposits, is bordered on the south by a prominent ridge whose shoulder and crest are mantled by a scree of limestone cobbles and gravels. Areal soil individuals belong to the Typic Paleorthid and Pachic Haplustol subgroups. Pedons are composed of generally compacted, fine textured, silt loams and silty clay loams. River cobbles occupy the North Seven Rivers drainage.

### Floristics

Chief denizens of local soils include: *Prosopis juliflora*, *Acacia greggii*, *Yucca elata*, *Rhus microphylla*, *Flourensia cernua*, and *Larrea tridentata*. To the north within the Seven River drainage system, *Juglaus microcarpa*, *Fallugia paradoxa*, and *Chilopsis linearis* predominate. Principal forbs occurring locally include: *Euphorbia* sp., *Lepidium* sp., *Solanum elaeagnifolium*, *Gutierrezia sarothrae*, *Tradescantia* sp., *Psilostrophe* sp., *Hoffmannseggia* sp., and *Croton* sp. The Gramineae is represented by *Aristida* sp., *Bouteloua* sp., *Hilaria mutica*, and *Sporobolus airoides*.

### Cultural Resources

No cultural resources were recorded during this reconnaissance. Their overall absence is due to the fact that the reconnoitered tract

of land is situated on the flood plain of North Seven Rivers which is subject to heavy flooding during periods of excessive runoff. Excepting limestone, invariably not suited for flaked-tool manufacture, lithic material of a silicious character is lacking on this landform. Prehistoric land usage focused principally on hunting- and hunting-related pursuits.

### Recommendations

NMAS recommends clearance for CONOCO, INCORPORATED's proposed Dagger Draw Well No. 3 location and *suggests* that work-related activities proceed in accordance with company plans. Clearance, of course, is granted by the Bureau of Land Management.

Dagger Draw Well No. 4

### Location

The proposed location will measure 400 X 400 ft on federal lands and will be situated 1980 ft from the south line and 1650 ft from the east line of:

Section 25, T19S, R24E, NMPM, Eddy County, NM

Thus it will be situated in the:

NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 25, T19S, R24E, NMPM, Eddy County, NM

Map Reference: USGS PARISH RANCH QUADRANGLE, 7.5 Minute Series, 1956.

### Terrain

This location will be situated on the shoulder of a southward-trending slope overlain by Pleistocene- and Holocene-aged alluvial deposits. Drainage is toward the south to south-southeast. Locally, much of the reconnoitered tract of land is subject to ephemeral sheet-wash. Soil individuals are dominated by the silt and clay separates

reflecting the nature of task-specific hunting parties. Resources generally occur on or near the shoulders of areal ridges.

### Recommendations

NMAS recommends clearance for CONOCO, INCORPORATED's proposed Penny Federal Well No. 2 and *suggests* that work-related activities proceed in accordance with company plans. Clearance, of course, is granted by the Bureau of Land Management.

Quarry, Section 30, T19S, R25E,  
Eddy County, New Mexico

### Location

The existing quarry is situated in the:

NE $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 30, T19S, R25E, NMPM, Eddy County, NM

Map Reference: USGS PARISH RANCH QUADRANGLE, 7.5 Minute Series, 1956.

### Terrain

Located immediately west of a minor draw, the environs of the investigated quarry are marked by limestone outcroppings and a more or less general scree of limestone cobbles and gravels. Pedons are composed of thin, generally compacted, silt loams and silty clay loams belonging to the Typic Paleorthid subgroup.

### Floristics

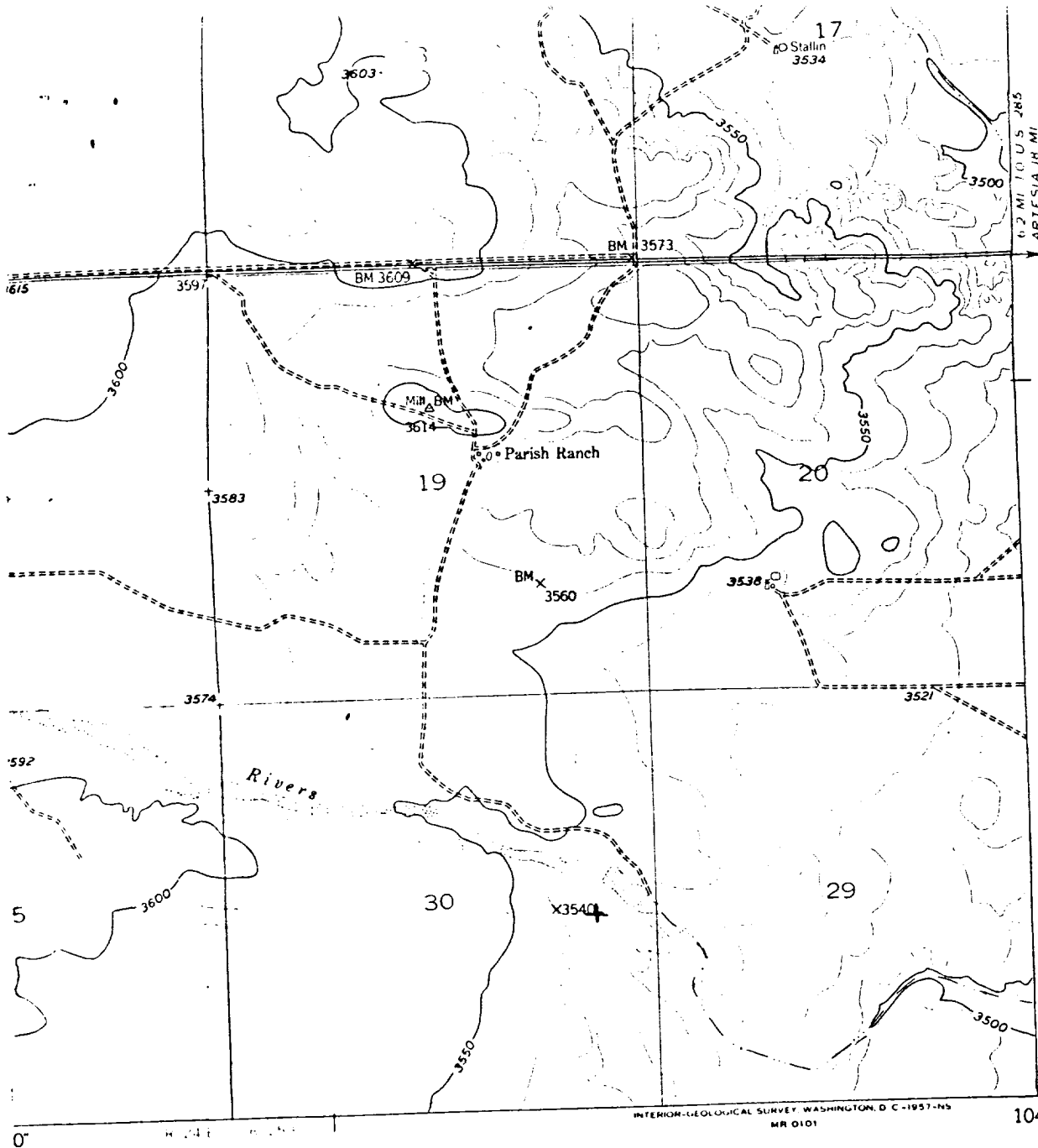
*Flourensia cernua* and *Larrea tridentata* are the major plants occurring locally. *Juglans microcarpa* and *Chilopsis linearis* are confined to the drainage of the adjoining arroyo. Forbs are represented by *Croton* sp., *Euphorbia* sp., *Perezia nana*, *Senecio longilobus*, and *Solanum elaeagnifolium*. *Sporobolus airoides*, *Aristida* sp., and *Bouteloua* sp.

### Cultural Resources

No cultural properties were observed during this reconnaissance. Lack of a potable water supply, shelter, and lithic material, precluded all but ephemeral usage of this landform in the past. While actual usage undoubtedly dates back to Paleo-Indian times (12,000 BP) most usage occurred between 750 and 1350 A.D.

### Recommendations

NMAS recommends clearance for the proposed expansion of the quarry and *suggests* that CONOCO, INCORPORATED proceed with its existing plans. Clearance, of course, is granted by the Bureau of Land Management.



6.2 MI TO U.S. 285  
ARTESIA IN MI

INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D. C. 1957-NS  
MR 0101

32°37'30"  
104°30'

(SEVEN RIVERS)

#### ROAD CLASSIFICATION

Light-duty ————— Unimproved dirt - - - - -



QUADRANGLE LOCATION

PARISH RANCH, N. MEX.

N3237.5—W10430/7.5

1956