



GARREY CARRUTHERS  
GOVERNOR

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE  
OIL CONSERVATION DIVISION  
SANTA FE

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC \_\_\_\_\_  
DHC \_\_\_\_\_  
NSL X 2369  
NSP \_\_\_\_\_  
SWD \_\_\_\_\_  
WFX \_\_\_\_\_  
PMX \_\_\_\_\_

Gentlemen:

I have examined the application for the:

Sargo Collier West Dallachide Queen Sand ut # 77-0  
Operator Lease & Well No. Unit S-T-R 30-24-38

and my recommendations are as follows:

OK

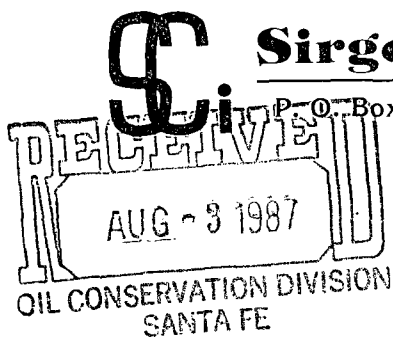
Yours very truly,

Jerry Sexton  
Jerry Sexton  
Supervisor, District 1

/ed

Release Date: Aug 3, 1987

By DL



**Sirgo-Collier, Inc.**

P.O. Box 3531, Midland, Texas 79702 (915) 685-0878

NSL-2369  
RULE-104 F(E)

State of New Mexico  
Energy and Mineral Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

West Dollarhide Queen Sand Unit  
Well No. 77  
Dollarhide Queen Pool  
40 Acre dead.  
SW1/4 SE1/4 Section 30

Re: Unorthodox Locations  
WDQSU 77-77  
2450' FEL, 1100' FSL  
Section 30, T24S, R38E  
Lea County, New Mexico

Ladies and Gentlemen:

This letter shall serve as our request to have the unorthodox locations described above approved by your office.

On the attached plat you will note our locations lie within the unit boundaries of the West Dollarhide Queen Sand Unit. We are requesting these locations be approved because these locations will allow us to establish a more efficient waterflood pattern in the field.

Should you have additional questions, please call.

Sincerely,

Brian M. Sirgo /ba  
Brian M. Sirgo

BMS:ba

attachment

cc: OCD - Hobbs  
Jerry Sexton

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

Sirgo-Collier, Inc.

3. ADDRESS OF OPERATOR

P.O. Box 3531, Midland, Texas 79702

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

At surface

2450' FEL, 1100' FSL, Section 30, T24S, R38E

At proposed prod. zone

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

7 miles NE of Jal, New Mexico

10. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drig. unit line, if any)

16. NO. OF ACRES IN LEASE

360

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.

19. PROPOSED DEPTH

3900

20. ROTARY OR CABLE TOOLS

rotary

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

GR 3120

22. APPROX. DATE WORK WILL START\*

August 1, 1987

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12½	8-5/8	24#	400	250 sx 100% excess
7-7/8	5½	17#	3900	Circulate to surface

Queen zone will be selectively perforated and stimulated as needed for optimum production.

ATTACHED: 1. Well location and acreage dedication plat.  
2. Supplemental drilling data.  
3. Surface use plan.

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

*Timothy D. Collier*

TITLE Agent

DATE 7/24/87

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

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.

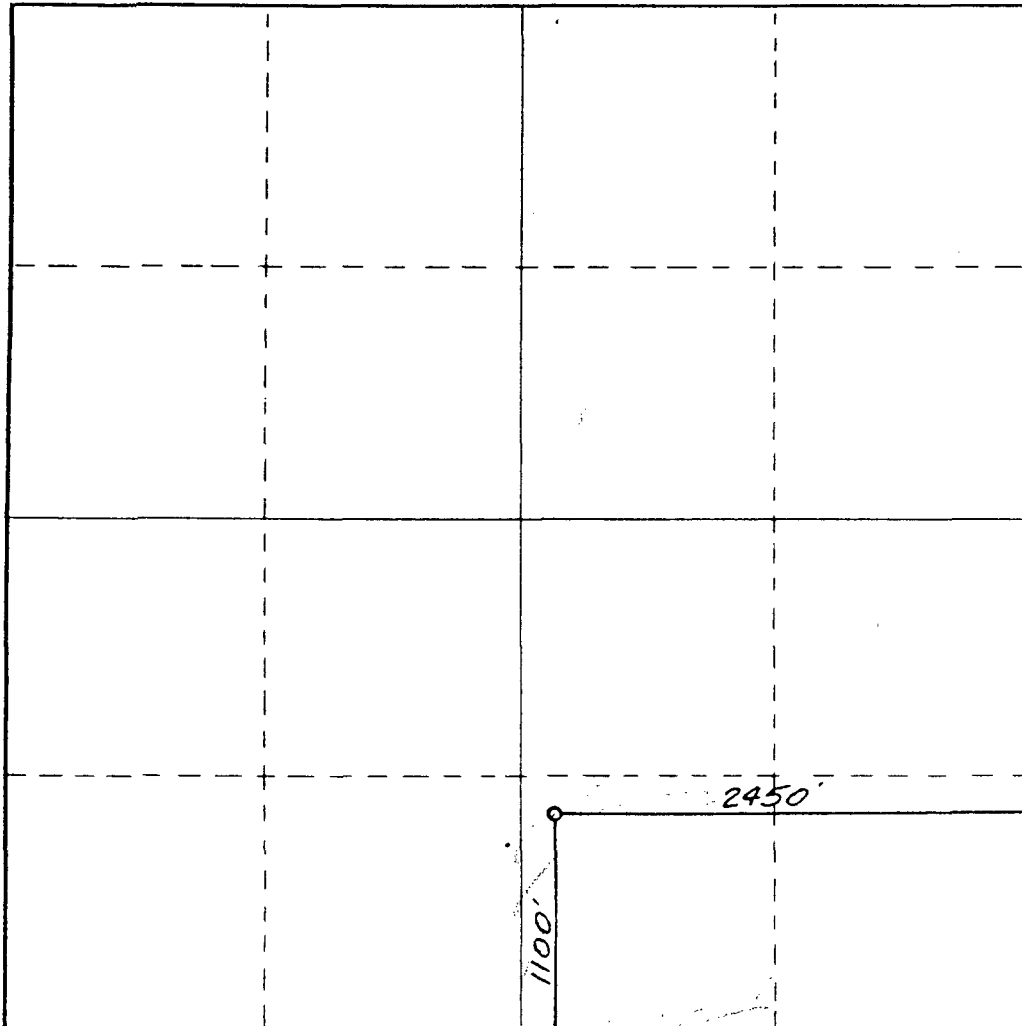
Operator <b>SIRGO-COLLIER INC.</b>			Lease <b>WDQSU 30-77</b>		Well No. <b>30-77</b>
Unit Letter <b>0</b>	Section <b>30</b>	Township <b>24 South</b>	Range <b>38 East</b>	County <b>Lea</b>	
Actual Footage Location of Well: <b>1100</b> feet from the <b>South</b> line and <b>2450</b> feet from the <b>East</b> line					
Ground Level Elev. <b>3120.</b>	Producing Formation <b>Queen</b>		Pool <b>WDQSU</b>		Dedicated Acreage: <b>40</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, R-2356

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.

**Timothy D. Collier**

Name

Agreed

Position

**Sirgo-Collier, Inc.**

Company

**July 24, 1987**

Date

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

**July 8, 1987**

Registered Professional Engineer and/or Land Surveyor

**Dan R. Reddy**

Certificate No.

**NM PE&LS NO, 5412**

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

THIRTEEN POINT PROGRAM

1. Existing Roads: Existing roads which lead to the proposed drillsite are shown on Exhibit "B".
2. Proposed New Road: Proposed new access road will be (see Exhibit "B"). Road will terminate at south end of proposed well pad. The road has been flaged and staked.
  - A. Width: 15 feet with 25 feet Right of Way.
  - B. Surfacing Material: Caliche
  - C. Road Design: New road will be constructed by grading Right of Way and surfacing driving area with caliche.
  - D. Culverts: None Necessary
  - E. Gates, Cattleguards: None Necessary
3. Location of Existing Wells: Existing wells in vacinity of proposed drill-site are shown on Exhibit "F".
4. Location of Existing and/or Proposed Facilities:
  - A. This is a producing unit and a tank battery is located in the NW/SW section 32-24-38 Unit L.
  - B. If the well is productive, a flow line will be laid on top of the ground to existing facility via nearest flow line.
5. Location and Type of Water Supply: It is not planned to drill a water supply well. Water for operations will be transported via 3" line from existing battery. Temporary line will be laid on surface along existing road right of way.
6. Source of Construction Materials: Materials for construction of the proposed new well pad and road will be obtained from an existing pit on private land (Clyde Cooper Pit) if any.
7. Methods of Handling Waste Disposal:
  - A. Drill cuttings will be disposed of in the drilling pits.
  - B. Drilling fluids will be allowed to evaporate.
  - C. Water produced during test will be disposed in drill pit.
  - D. Oil produced during test will be stored in test tank to sell.
  - E. Trash, waste paper, garbage, and junk will be buried in trash pit with a minimum of 24" of dirt. All waste material will be contained to prevent scattering by wind. Location of trash pit see Exhibit "C".

7. Methods of Handling Waste Disposal: (Continued)

F. All trash and debris will be buried or removed from wellsite in a prudent manner upon completion.

8. Auxiliary Facilities: None Anticipated

9. Wellsite Layout:

A. The wellsite has been surveyed and a 400' X 400' area has been staked and flagged.

B. The dimensions and relative location of the wellsite are shown on Exhibit "C".

10. Plans for Restoration of the Surface:

A. After completion, materials not needed will be removed. Pits will be filled and the location cleaned.

B. Any unguarded pits will be fenced until filled.

C. After abandonment, all equipment, trash and junk will be removed. Fee surface land will be rehabilitated as to owners agreement.

11. Other Information:

A. Topography: Undisturbed wellsite elevation is 3161' situated on the west-facing shoulder of a prominent ridge system which overlooks monument draw.

B. Soil: Sandy clay loam soils hosting caliche inclusions.

C. Land Type and Use: The vicinity surrounding drillsite is semi-arid rangeland and its primary use is for the production of oil and gas for grazing.

D. Flora: Vegetation cover is grassland type.

E. Fauna: None Observed

F. Ponds and Streams: None

G. Water Wells: One mile to south, water for flood operations not known if portable.

H. Residences and Other Structures: None in area.

I. Archaeological, Historical and Cultural Sites: No sites observed.

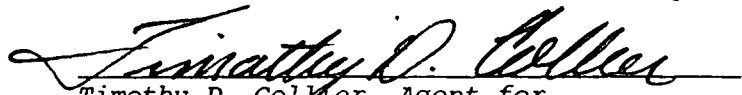
12. Operator's Representative: Representative responsible for assuring compliance with the approved surface use plan.

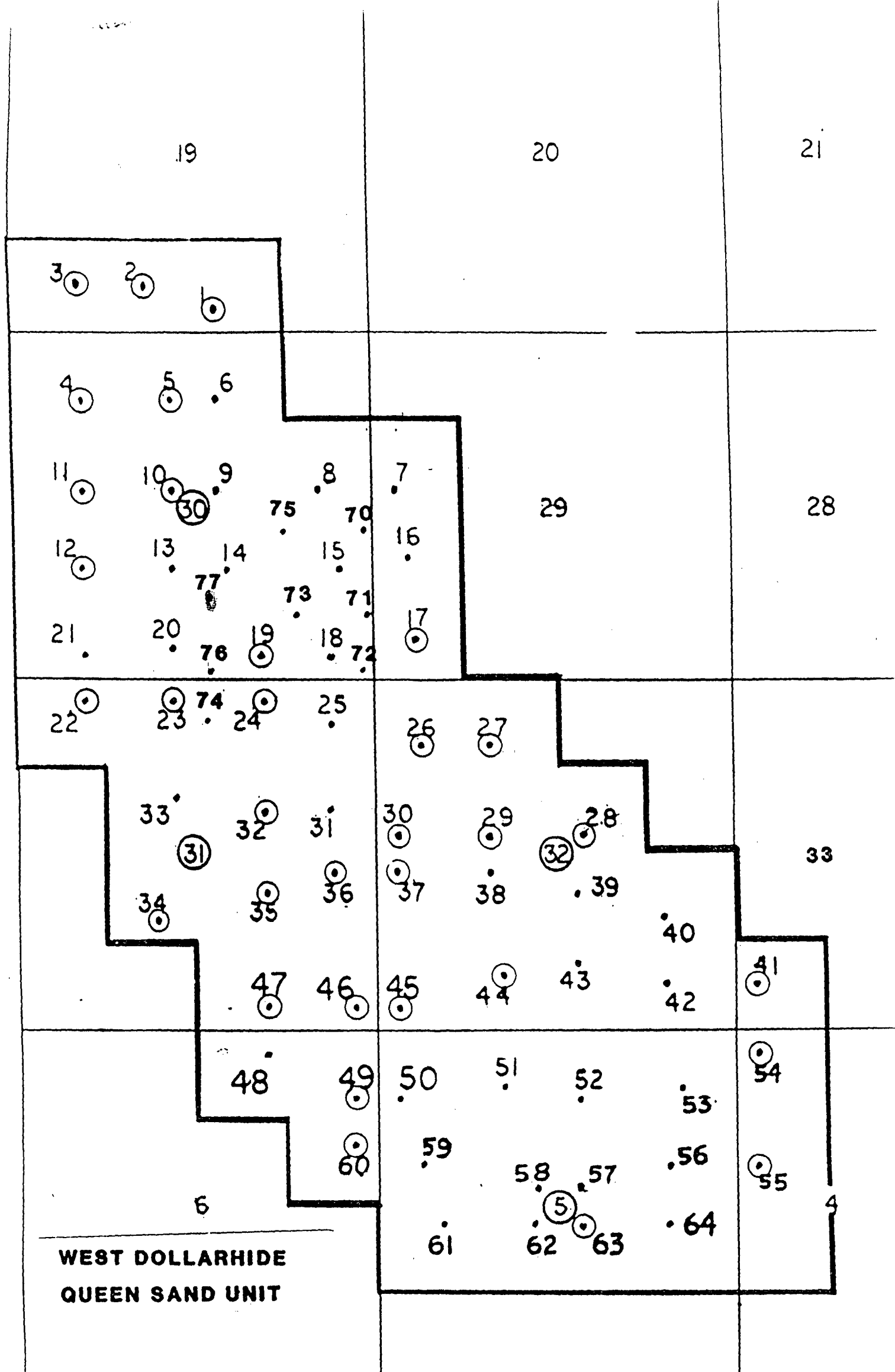
Timothy D. Collier  
P.O. Box 3531  
Midland, Texas 79702  
Work - 915/685-0878  
Home - 915/684-7757

13. Certification:

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 knowledge true and correct; and, that the work associated with the operations proposed herein will be performed by SIRGO-COLLIER, INC. and its sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

July 24, 1987

  
Timothy D. Collier, Agent for  
Sirgo-Collier, Inc.



Plat of Unit wells by Unit well number.



Supplemental Drilling Data  
Sirgo-Collier, Inc.  
WDQSU 30-77  
2450' FEL, 1100' FSL, Section 30, T-24-S, R-38-E  
Lea County, New Mexico

1. Surface Formation: Tertiary Pliocene, GL3120

2. Estimated Tops of Geologic Markers:

Rustler	1140'	T/Yates	2450
Top/Salt	1300'	T/Queen	3400
Base/Salt	2580'	B/Queen	3795
		TD	8900

3. Anticipated Porosity Zones: Queen 3677'. Oil

4. Casing Design:

<u>Size</u>	<u>Interval</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>
8-5/8"	0 - 400'	24.00#	J-55	STC
5-1/2"	0 - 3900	15.50#	J-55	STC

5. Surface Control Equipment: Double RAM-type, Series 900 + BOP with annular (See Exhibit).

6. Circulating Medium: Native, cut brine conditioned as necessary for control of viscosity and water loss.

7. Auxiliary Equipment: None

8. Testing, Logging and Coring Programs: Electric Logs - Dual Laterlog/MICRO Laterlog/Gamma Ray/Caliper Compensated Density Log. Possible core from 3750' - 3850'.

9. Abnormal Pressure, Temperature of Gases: None anticipated.

10. Anticipated Starting Date: Operations will commence upon approval approximately May 5, 1987. Duration of drilling, completion and testing, about 5 weeks.

Surface Use Plan For  
Drilling, Completing and Producing

Sirgo-Collier, Inc.  
WDQSU 30 - 77  
2450' FEL, 1100' FSL, Section 30, T-24-S, R-38-E  
Lea County, New Mexico  
GL 3120'

Located: Approximately 5 air miles northeast of Jal, New Mexico

Lease Number: LC-067968

Record Lessee: Sinclair

Bond Coverage: Sirgo-Collier, Inc., Federal Statewide

Acres in Lease: 320

Surface Owner: Bill & L.B. Grove and Estate of Clyde Cooper, Jal, New Mexico

Well Spacing: 40 acre West Dollarhide Queen Sand Unit

Exhibits:

- A - WDQSU Lease Map
- B - Topo
- C - Sketch of Well Pad
- D - Sketch of electrical lines if any and flow lines
- E - Road Map
- F - Well locations adjacent to drill location

ROAD LOG TO SIRGO-COLLIER, INC.  
WDQSU 30 - 77

Starting Point is Jal, New Mexico. Go north on State Road 18  $3\frac{1}{2}$  miles to El Paso Natural Gas Plant #3 road. (If you check road mile marker #13 is about a  $\frac{1}{2}$  mile north of this turn off.)

Turn east at plant #3 road, follow black top approximately 5 miles until it dead ends, turn north for one mile, turn east and continue  $1\frac{1}{2}$  miles. You enter WDQSU about 300' north of well #22.

Drill Site: 2450' FEL, 1100' FSL, Section 30, T-24-S, R-38-E  
Lea County, New Mexico

Peterson Drilling Company Rig 2 location plat

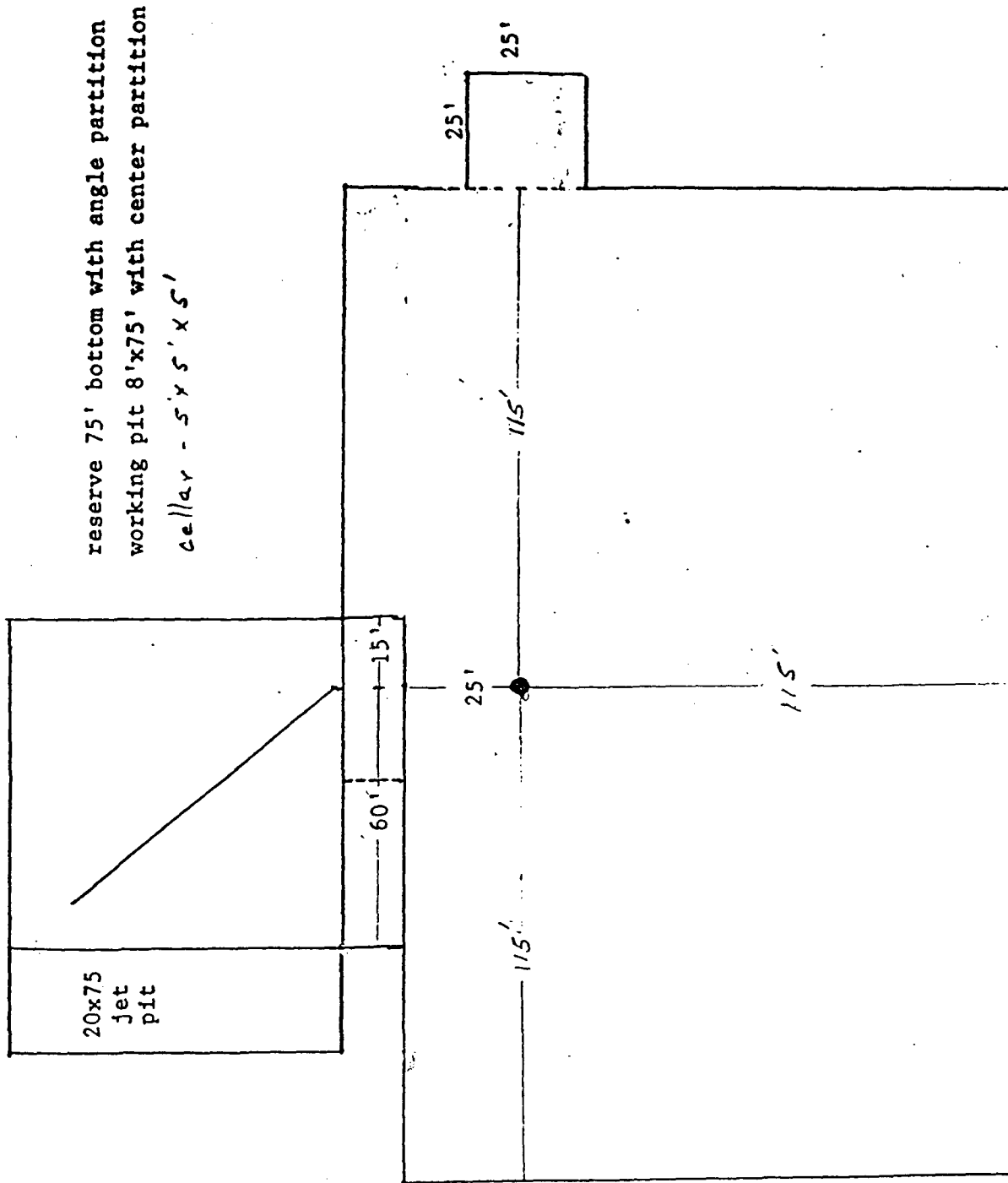
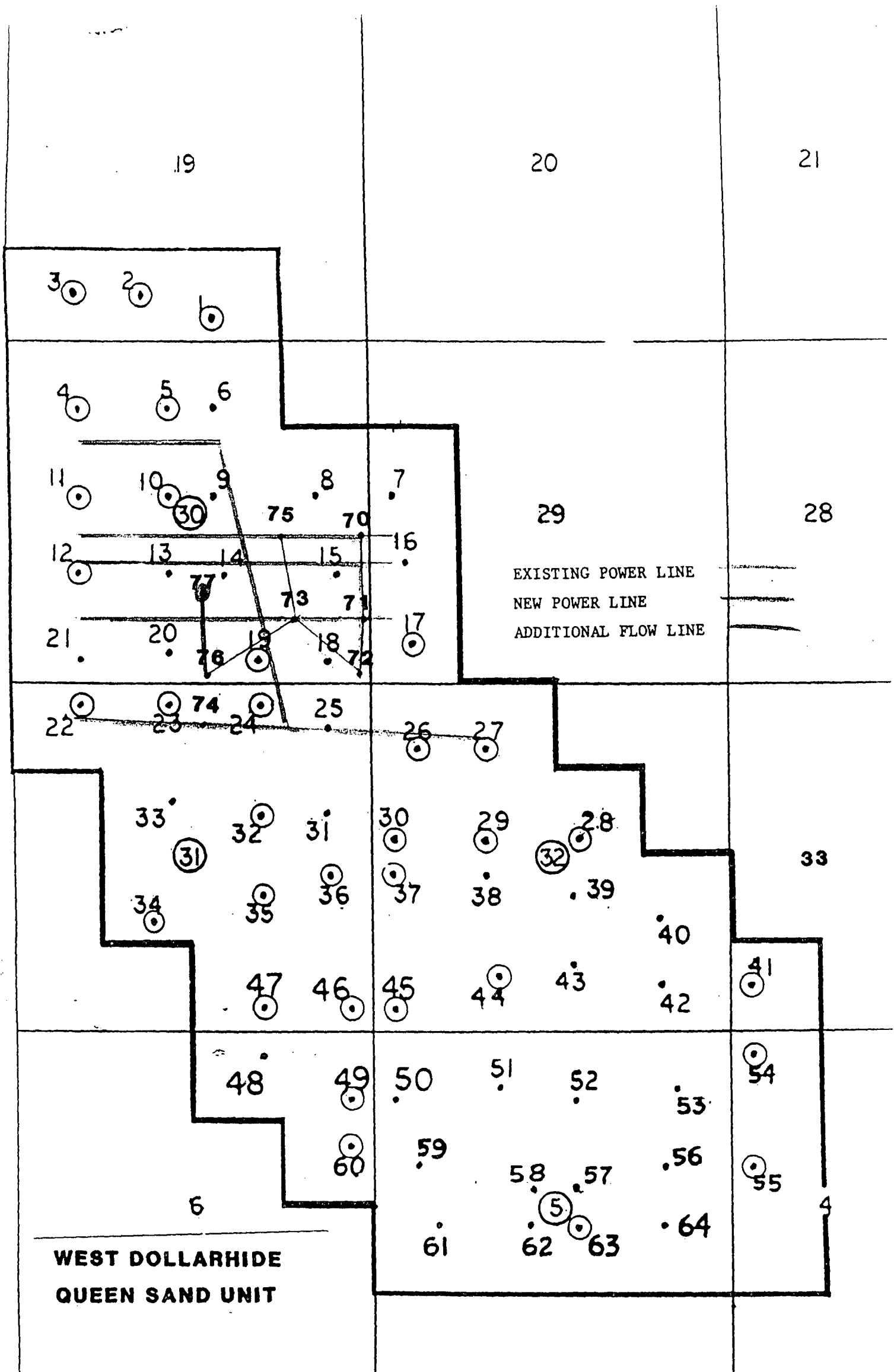
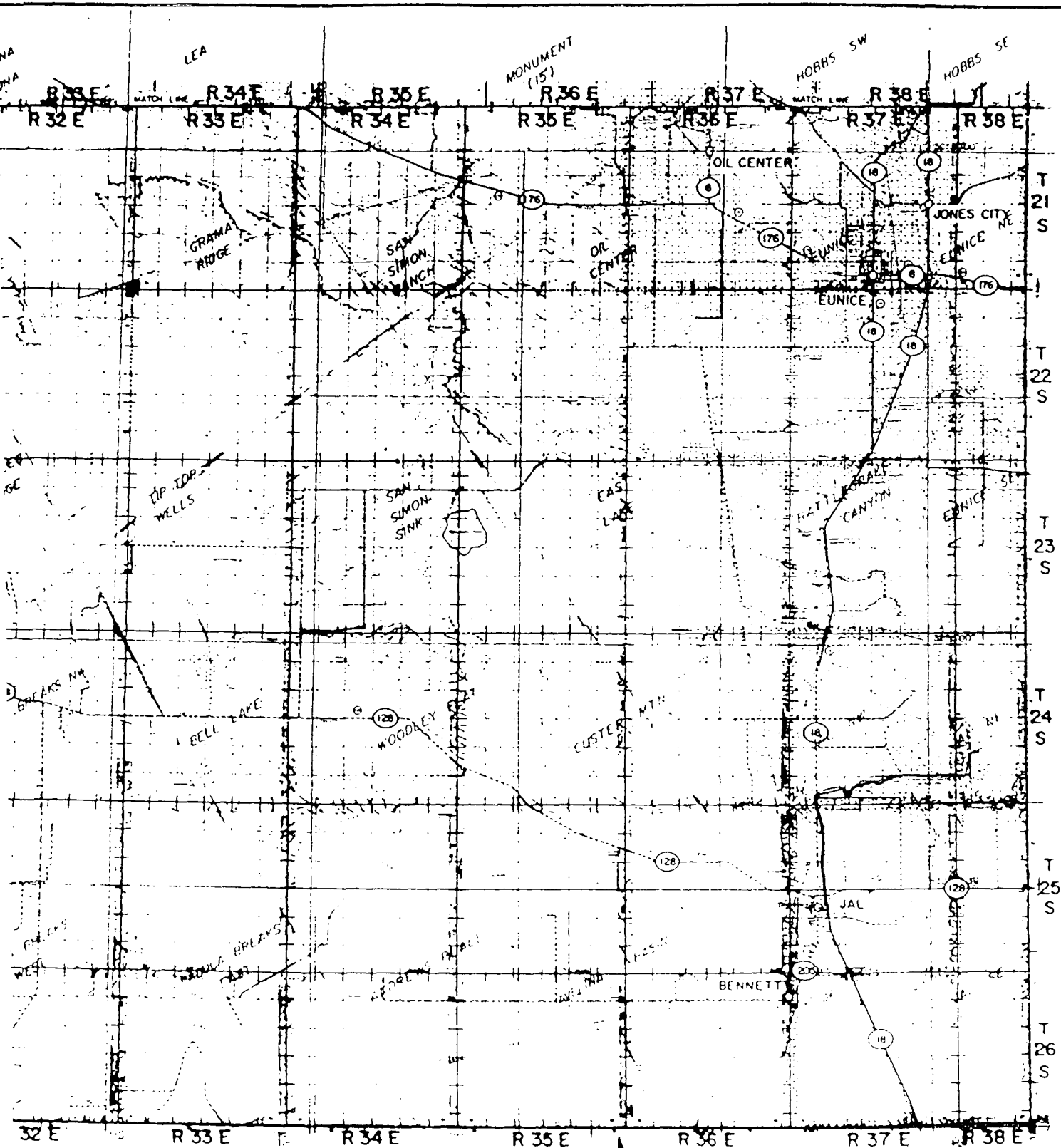


Exhibit C



Plat of Unit wells by Unit well number.



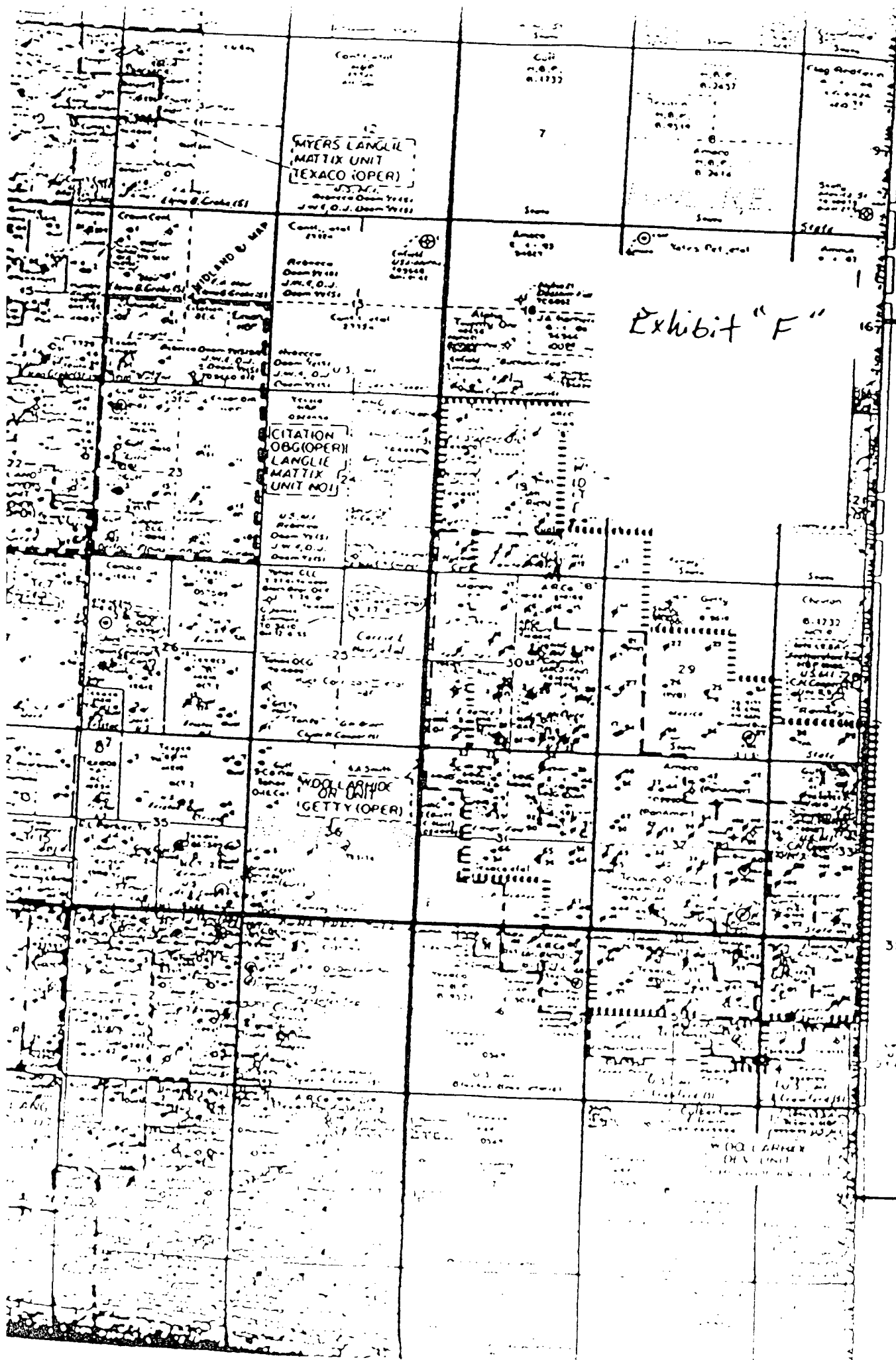


Exhibit "F"

T  
24  
S

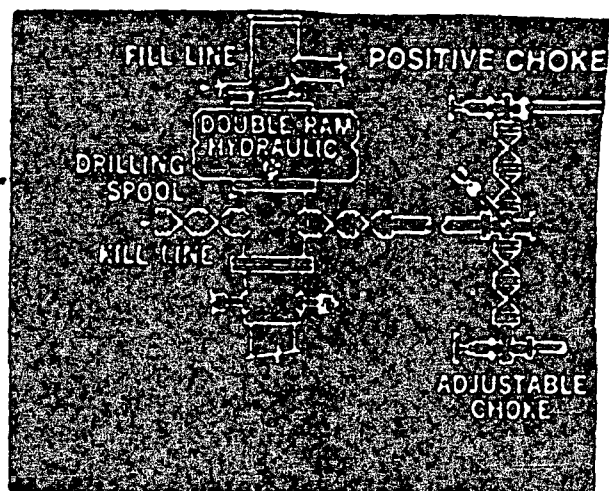
BLX. A-52

38°10'

**BOP Description**

**PETERSON DRILLING COMPANY**

**Rig #2**







# NMAS

## New Mexico Archaeological Services, Inc.

P. O. Box 1341

Carlsbad, New Mexico 88220

(505) 887-7646

21 July 1987

Reconnaissance

Excavation

Analysis

Explanation

Curation

Mr. Timothy D. Collier

Agent

SIRGO-COLLIER, INCORPORATED

P.O. Box 3531

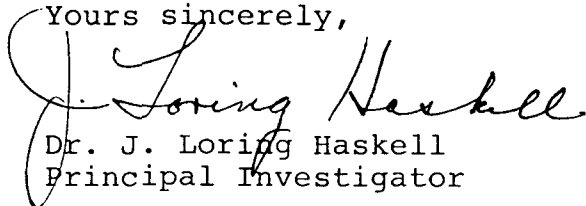
Midland, Texas 79702

Dear Mr. Collier:

Enclosed please find NMAS' Archaeological Clearance Report for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 77, WDQSU "31" Well No. 78, WDQSU "31" Well No. 78 Alternate, WDQSU "30" Well No. 79 and WDQSU "30" Well No. 80 and their associated access roads in Lea County, New Mexico. No cultural resources were recorded during these surveys; therefore, NMAS is suggesting clearance for these well pads and access roads.

If you have any questions pertaining to this report, please call my office. Thank you for asking NMAS to do these surveys.

Yours sincerely,



Dr. J. Loring Haskell  
Principal Investigator

Enclosure

cc: Mr. Dave Kayser, BLM, Carlsbad

as

Archaeological Clearance Report  
for  
SIERGO-COLLIER, INCORPORATED

WDQSU "30" Well No. 77  
WDQSU "31" Well No. 78  
WDQSU "31" Well No. 78 Alternate  
WDQSU "30" Well No. 79  
WDQSU "30" Well No. 80

Prepared  
By  
Dr. J. Loring Haskell

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

21 July 1987

Permit No. 14-2920-87-G

Report Number: NMAS-1987- 6 -87

# ABSTRACT

New Mexico Archaeological Services, Inc., representing SIRGO-COLLIER, INCORPORATED, Midland, undertook a Class III survey of Bureau of Land Management lands scheduled to be impacted by the construction of five locations and access roads. Field work was conducted under partly cloudy and calm conditions during the afternoon. The proposed locations will measure 400 X 400 feet (actual area surveyed 18.77 acres). WDQSU "30" Well No. 77's access road will measure 100 X 150 feet (actual area surveyed 0.34 acre). WDQSU "31" Well No. 78's access road will measure 100 X 350 feet (actual area surveyed 0.80 acre). WDQSU "31" Well No. 78 Alternate's access road is included with WDQSU "31" Well No. 78. WDQSU "30" Well No. 79 will be situated next to an existing lease road. WDQSU "30" Well No. 80's access road will measure 100 X 250 feet (actual area surveyed 0.68 acre). Total acreage 20.59 acres. They will be situated in Sections 30 and 31, T24S, R38E, NMPM, Lea County, New Mexico. No cultural properties were recorded during these surveys; therefore, NMAS is suggesting for all proposed work as presently staked.

## Introduction

On 17 July 1987, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, (Permit Number 14-2920-87-G), undertook for SIRGO-COLLIER, INCORPORATED, Midland, an archaeological survey of federal lands administered by the Bureau of Land Management in Lea County, New Mexico. Reconnoitered areas will be impacted by the construction of five drill locations and their associated access roads. These projects were advanced by Mr. Timothy D. Collier, Agent, SIRGO-COLLIER, INCORPORATED. These surveys were undertaken by Dr. Haskell.

## Survey Technique

For these investigations, SIRGO-COLLIER, INCORPORATED's proposed locations were reconnoitered for evidence of man's past activities by walking them in a series of 8.0 m wide, close intervals (15° or less), zigzag transects. In addition, an added zone extending 20 feet on each side of the staked 400 X 400 foot locations, and lying outside the bounds of their proposed work areas, were reconnoitered by a similar means. Access roads were walked in two, 15 m wide transects. At their juncture with existing lease roads, surveyed areas broadened to embrace an area measuring 100 X 150 feet. Lathe is considered to be the center of the proposed roads. Methodologically, these procedures served to promote optimal conditions for the visual examination of areas to be impacted by construction-related activities. Field work was conducted under partly cloudy and calm conditions during the afternoon. Areal ground visibility ranges between 75 and 90%. Field time four hours.

## WDQSU "30" Well No. 77

Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal lands and will be situated 1100 feet from the south line and 2450 feet from the east line.

Section 30, T24S, R38E, NMPM, Lea County, NM

Thus it will be situated in the:

SW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM

The associated access road will measure 100 X 150 feet (actual area surveyed 0.34 acre) and is situated in the:

SW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM

Map Reference: USGS JAL NE QUADRANGLE, 7.5 Minute Series,  
1969, Photorevised 1979.

*Excepting chaining, the proposed location has not been previously impacted by mechanical means.*

Environmental Setting

SIRGO-COLLIER, INCORPORATED's proposed location will situated on the west-facing shoulder of a prominent ridge system which forms the east side of the Monument Draw catchment. Elevation is approximately 3,120 feet. Slope averages 2°/aspect is west. Nearest water probably occurs in the form of seeps and springs within Monument Draw. Additionally, seasonal sources occur in the form of runoff collecting in basal portions of Monument Draw. As a whole, the contemporary surface is subject to the effects of ephemeral sheetwash. Overall, soil individuals, dominated by the sand and clay separates, are composed of loose, non-calcareous, sandy clay loams and commonly harbor caliche

gravels and cobbles. Taxonomically, pedons fall within an inter-grade of the Typic Torripsamment subgroup/Berino Series. Angular caliche gravels and cobbles occur on a regular basis. Owing to sheetwash and colluvial movement, deposits thicken on the lower slope and beyond. Aeolian processes are minimal.

#### Cultural Resources

*Prefield 17 July 1987, Arita K. Slate, no archaeological sites.*

No archaeological remains were recorded during the course of this survey. Their absence is due to shortages of siliceous lithic source, the openness of the landform, and a paucity of potable water. Occupancy, therefore, was brief and transitory at any one time. Temporally, most utilization should have centered ~~between~~ Late Archaic and Eastern Jornada Mogollon times. Land usage, however, dates back to Paleoindian times. Economic pursuits centered on hunting- and hunting-related tasks throughout prehistory.

#### Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 77 and its associated access road and suggests that work-related activities proceed in accordance with company plans (Fig. 1). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately.

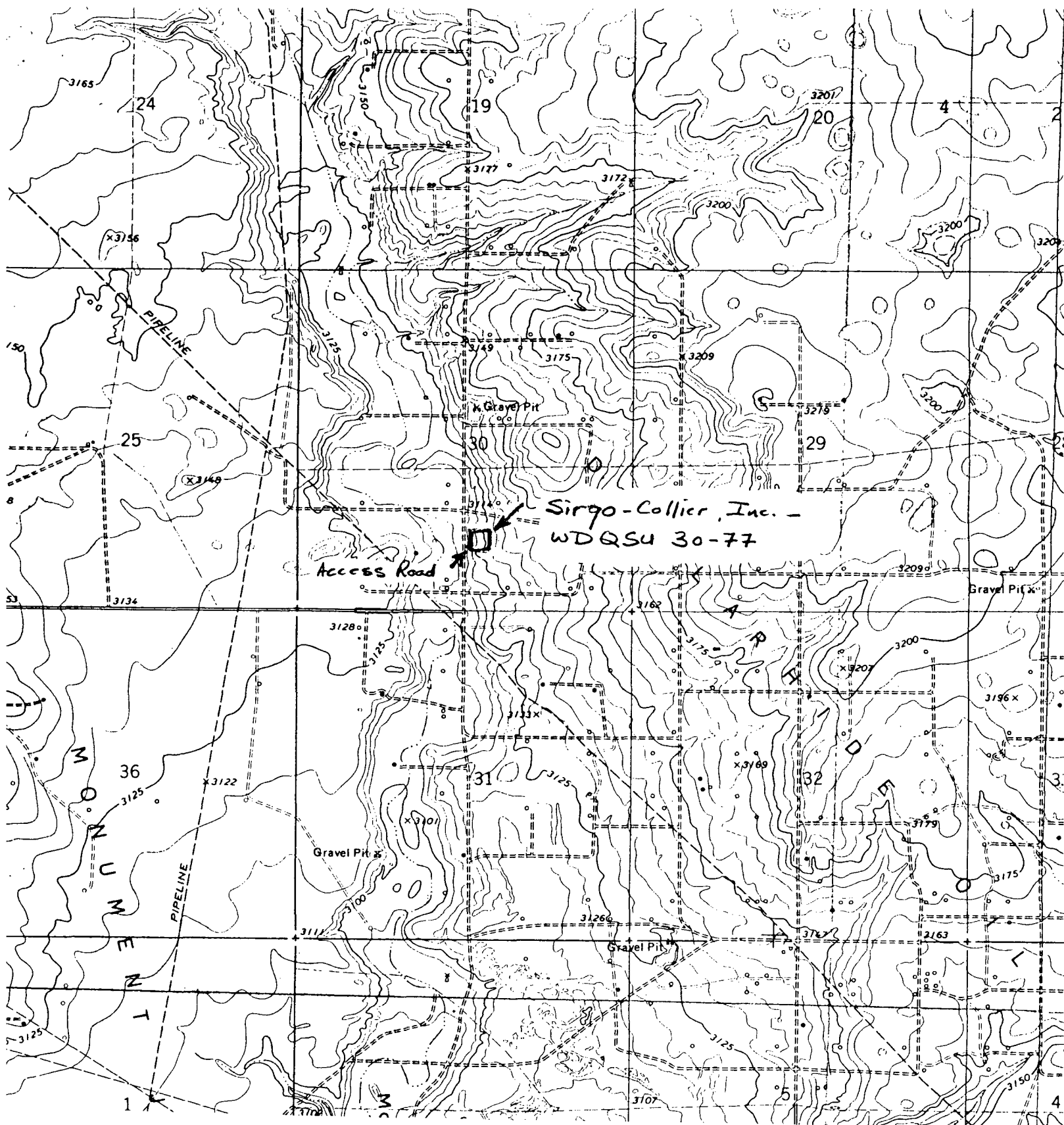


Fig. 1. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, photorevised 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 77, 1100 FSL, 2450 FEL, and access road on federal land situated in Section 30, T24S, R38E, NMPM, Lea County, New Mexico.

## WDQSU "31" Well No. 78

Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal land and will be situated 200 feet from the north line and 1180 feet from the east line.

Section 31, T24S, R38E, NMPM, Lea County, NM

Thus it will be situated in the:

NE $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 31, T24S, R38E, NMPM, Lea County, NM

The associated access road will measure approximately 100 X 350 feet (actual area surveyed 0.80 acre) and will be situated in the:

NE $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 31, T24S, R38E, NMPM, Lea County, NM

NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 31, T24S, R38E, NMPM, Lea County, NM

Map reference: USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1969, Photorevised 1979.

*The proposed location has been previously impacted by a power line and five flow lines. Additionally, the area has been chained.*

Environmental Setting

SIRGO-COLLIER, INCORPORATED's proposed location will be situated on the west-facing shoulder of a locally prominent ridge system which serves to mark the east side of the Monument Draw catchment. Elevation is 3,138 feet. Slope averages 0.50°/aspect is to the west. Water is locally scarce. Seeps and springs may occur in the Monument Draw catchment. Runoff collects in basal portions of the draw. Overall, the coeval surface is subject to ephemeral sheetwash. Soil individuals are composed of sandy clay loams which typically harbor calcareous inclusions. Croute calcaire underlies surficial deposits at variable depths. Pedons are assignable to an intergrade of the Typic Torripsamment



subgroup. Local soils are supportive of a grassland floral community. Owing to colluvial movement; surficial deposits thicken downslope. To the west, a thick deposit of alluvium distinguishes the floor of Monument Draw. Additionally, aeolian processes add to the depositional makeup of the coeval surface.

#### Cultural Resources

*17 July 1987, Arita K. Slate, no archaeological sites.*

No cultural properties were recorded during the course of this survey. Their absence is due to a dearth of siliceous lithic material, the areal lack of potable water. Land usage throughout prehistory should have focused on hunting. Areal archaeological sites, should they occur, should be of the task locus variety, i.e., task specific manifestations. Usage was brief. Principal mammalian forms taken in the past should have included Lepus, Sylvilagus, Odocoileus, Antilocapra and at various times Bison.

#### Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "31" Well No. 78 and its access road and suggests that work-related activities proceed in accordance with company plans (Fig. 2). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately.

WSQSU "31" Well No. 78 Alternate

#### Location

The proposed location will measure 400 X 400 feet (actual

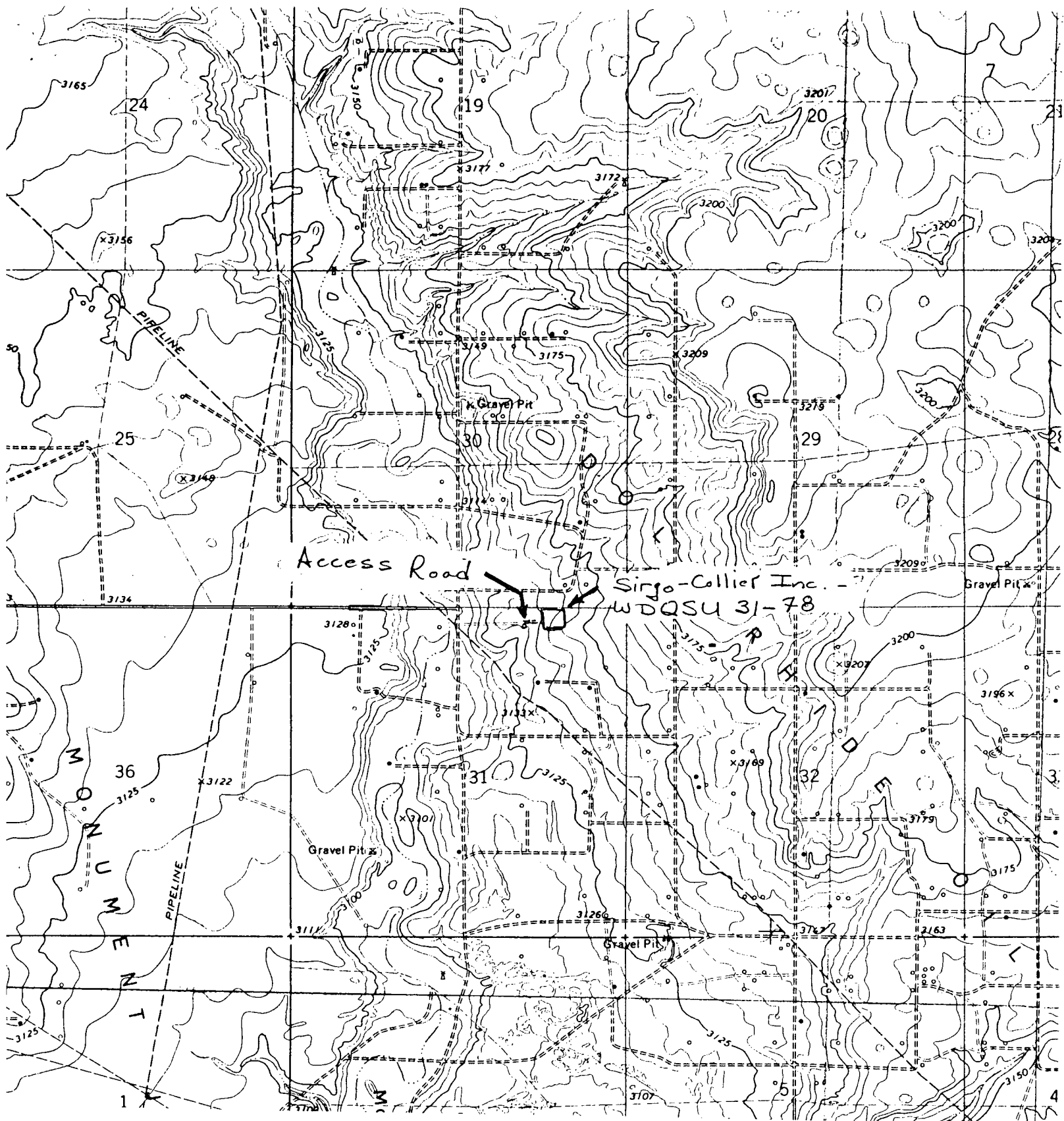


Fig. 2. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, photorevised 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDQSU "31" Well No. 78, 200 FNL, 1180 FEL, and access road, on federal land situated in Section 31, T24S, R38E, NMPM, Lea County, New Mexico.

area surveyed 0.33 acre) on federal land and will be situated 100 feet from the north line and 1180 feet from the east line.

Section 31, T24S, R38E, NMPM, Lea County, NM

Thus it will be situated in the:

NE $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 31, T24S, R38E, NMPM, Lea County, NM

The associated access road will measure approximately 100 X 400 feet (included with preferred) is situated in the:

NE $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 31, T24S, R38E, NMPM, Lea County, NM

NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 31, T24S, R38E, NMPM, Lea County, NM

Map Reference: USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1969, Photorevised 1979.

*The proposed location is crossed by a fence line, a pipe line, a two track road and a flow line. Four flow lines cross the access road.*

#### Environmental Setting

SIRGO-COLLIER, INCORPORATED's proposed location will occupy the mid-slope of a well-developed ridge system lying immediately east of Monument Draw. Elevation is approximately 3,138 feet. Slope averages .50°/aspect is west. In general, water is locally scarce and limited to runoff collecting in basal portions of Monument Draw. Seeps and springs may occur within Monument Draw. Ephemeral sheetwash characterizes the coeval surface. Soil individuals are distinguished by sandy clay loams hosting angular caliche gravels and cobbles. Overall, soils fall within an intergrade of the Typic Torripsamment subgroup. Croute calcarie underlies surficial deposits at variable depths. Attendant soils host a plains grassland community. Colluvial movement, along with limited aeolian activity, have combined to determine the

depositional makeup of the landform.

### Cultural Resources

*17 July 1987, Arita K. Slate, no archaeological sites.*

No cultural properties were recorded during the course of this survey. A lack of siliceous lithic material in associated soils, the general openness of the landform, and a perennial lack of potable water combined to restrict land usage to ephemeral and transitory tasks centering on hunting. Expected cultural properties, reflecting this type of activity, should include isolated, random occurrences of débitage, multidirectional- and exhausted- cores, finished artifacts such as projectile points, gravers, scrapers, etc.

### Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "31" Well No. 78 Alternate and its access road and suggests that work-related activities proceed in accordance with company plans (Fig. 3). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately.

WDQSU "30" Well No. 79

### Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal land and will be situated 2310 feet from the south line and 2600 feet from the east line.

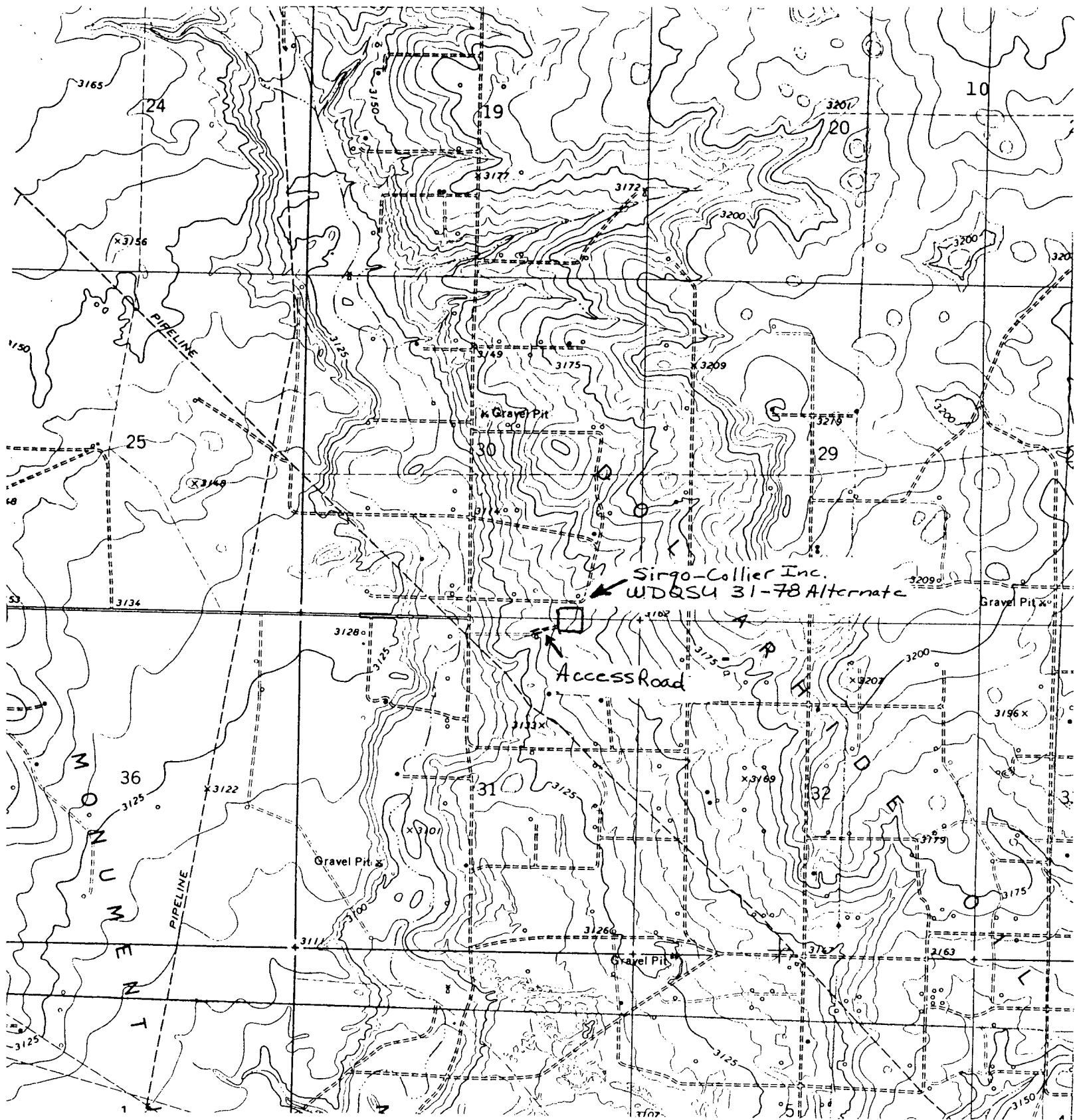


Fig. 3. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, photorevised 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDSU "30" Well No. 78 Alternate, 100 FNL, 1180 FEL, and access road, Section 31, T24S, R38E, NMPM, Lea County, New Mexico.

Section 30, T24S, R38E, NMPM, Lea County, NM

Thus it will be situated in the:

NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM

The proposed location will be situated next to an existing lease road.

Map Reference: USGS JAL NE QUADRANGLE, 7.5 Minute Series,  
1969, Photorevised 1979.

*The proposed location is crossed on the west by an existing lease road.*

#### Environmental Setting

SIRGO-COLLIER, INCORPORATED's proposed location will be situated on the lower shoulder of a locally prominent ridge system lying immediately east of Monument Draw. Elevation is approximately 3,123 feet. Slope averages 0.20°/aspect is west, northwest and south. Water is locally scarce and limited to runoff collecting within basal portions of Monument Draw. Seeps and springs may occur within the catchment as well. Elevation areas, as a whole, are subject to ephemeral sheetwash. Soil individuals are composed of sandy clay loam soils which commonly harbor angular caliche inclusions of gravel and cobble size. Soils are assignable to an intergrade of the Typic Torripsamment subgroup. Croute calcaire underlies surficial deposits. A plains - grassland floral community predominates locally. Depositional processes represented here are predominately colluvial in nature with a secondary aeolian focus.

#### Cultural Resources

*Prefield 17 July 1987, Arita K. Slate, no archaeological sites.*

No archaeological sites were recorded during the course of

this survey. Reasons cited for their absence include dearths of siliceous lithic sources, the lack of shelter locally, and a usual shortage of potable water. Land usage invariably focused on hunting- and hunting-related tasks throughout prehistory. Locally, archaeological sites tend to occur along rim areas of subsidence structures. Land usage tends to increase in frequency toward the south.

#### Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30-" Well No. 79 and suggests that work-related activities proceed in accordance with company plans (Fig. 4). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately.

WDQSU "30" Well No. 80

#### Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal land and will be situated 1650 feet from the north line and 1600 feet from the east line.

Section 30, T24S, R38E, NMPM, Lea County, NM

Thus it will be situated in the:

SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM

SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM

The associated access road will measure approximately 100 X 250 feet (actual area surveyed 0.68 acre) and is situated in the:





SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM  
 NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 30, T24S, R38E, NMPM, Lea County, NM

Map Reference: USGS JAL NE QUADRANGLE, 7.5 Minute Series,  
 1969, Photorevised 1979.

*The proposed location has been impacted on the west by an existing flow line.*

### Environmental Setting

SIRGO-COLLIER, INCORPORATED's proposed location will be situated on the west facing shoulder of a locally prominent ridge system which overlooks Monument Draw. Being coextensive with South Plain, elevation is approximately 3,165 feet. Slope averages 0.50°/aspect is to the west. Water is locally scarce and limited to runoff collecting in basal portions of Monument Draw. Seeps and springs may occur in the draw. Overall, the coeval surface is the object of intense sheetwash. Soil individuals are composed of loose sandy clay loams which commonly host caliche gravels and cobbles. Pedons fall within an intergrade of the Typic Torirpsamment subgroup. Croute calcaire underlies surface deposits at variable depths. A plains - grassland, floral community is hosted by local soils. The depositional make-up of the landform is primarily due to colluvial movement of clays and sands downslope along with continued, but limited in scope, aeolian activity. Sheetwash is a significant contributing factor to mass wasting.

### Cultural Resources

*Prefield 17 July 1987, Arita K. Slate, no archaeological sites.*

No cultural properties were recorded during the course of this survey. A bona fide lack of siliceous lithic material, the

openness of the landform, and a deficiency of potable water combined to orient the economy toward hunting throughout prehistory. Exploited game included Lepus, Sylvilagus, Antilocapra and Bison. Land usage brackets the period from Paleoindian times, circa 10,000 BP, up to the historic Comanche of the nineteenth century A.D.

#### Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 80 and its access road and suggests that work-related activities proceed in accordance with company plans (Fig. 5). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately.

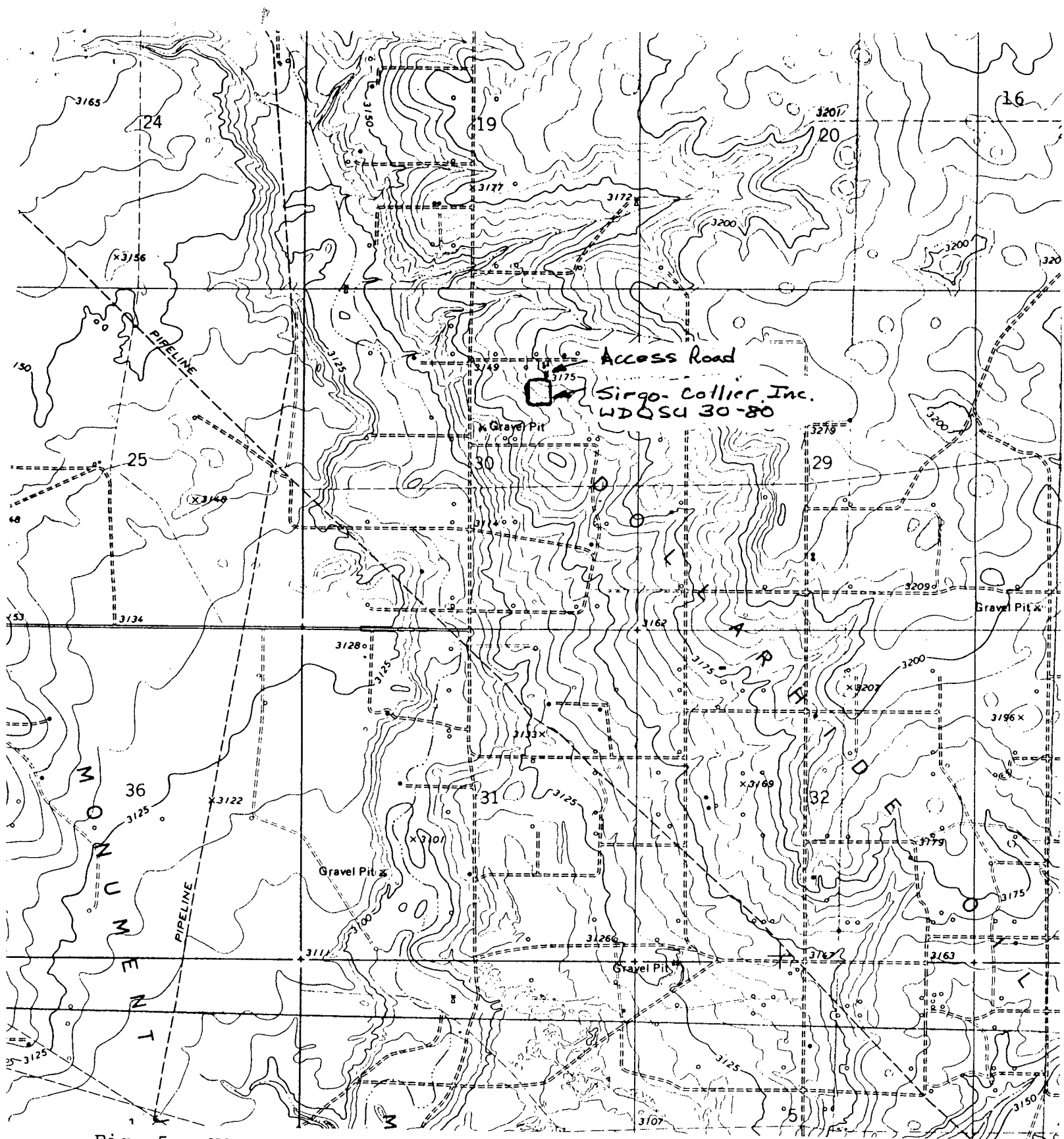


Fig. 5. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, photorevised 1979, showing SIRGO-COLLIER, INCORPORATED's proposed Well No. 80, 1650 FNL, 1600 FEL, and access road, on federal land situated in Section 30, T24S, R38E, NMPM, Lea County, New Mexico.