



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

7-31-87

GARREY CARRUTHERS
 GOVERNOR

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

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

RECEIVED
 AUG - 7 1987
 OIL CONSERVATION DIVISION
 SANTA FE

RE: Proposed:

- MC _____
- DHC _____
- NSL X 2385
- NSP _____
- SWD _____
- WFX _____
- PMX _____

Gentlemen:

I have examined the application for the:

Sings-Collier *West Dollarhide Queen Sand pit #7.3-P*
 Operator Lease & Well No. Unit S-T-R *30-24-38*

and my recommendations are as follows:

OK J.S.

Yours very truly,

Jerry Sexton
 Jerry Sexton
 Supervisor, District 1

/ed

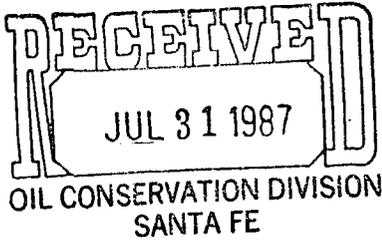
Release Date: July 31, 1987

By DRC



Sirgo-Collier, Inc.

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



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

NSL-2385
RULE-104F(I)
West Dollarhide Queen Sand
Unit Well No. 73

~~#~~ Dollarhide Queen Pool
40 Acres dedicated
SE/4 SE/4 Section 30

Re: Unorthodox Locations
WDQSU 30 #73
1050' FSL, 1250' FEL, Sec. 30
T24S, R38E, Lea Co., NM

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
 1050' FSL, 1250' FEL, Sec 30, T-24-S, R-38-E,
 At proposed prod. zone
 Queen

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 7 miles NE of Jal, NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
 320

16. NO. OF ACRES IN LEASE
 40

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.
 3900'

19. PROPOSED DEPTH
 3900'

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 GL 3146'

22. APPROX. DATE WORK WILL START*
 July 4, 1987

5. LEASE DESIGNATION AND SERIAL NO.
 LL 067968

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
 WDQSU

8. FARM OR LEASE NAME

9. WELL NO.
 30-73

10. FIELD AND POOL, OR WILDCAT
 WDQSU

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 30, T-24-S, R-38-E

12. COUNTY OR PARISH
 Lea

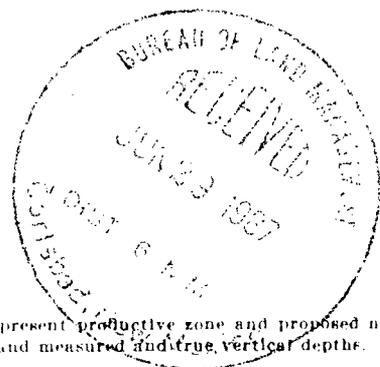
13. STATE
 NM

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#	400	250 sx. 100% excess
7-7/8	5-1/2	15.50#	3900	CIRC. 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.



APPROVAL OF THIS APPLICATION DOES NOT WARRANT OR CERTIFY THAT THE APPLICANT HOLDS LEGAL OR EQUITABLE TITLE TO THOSE RIGHTS IN THE SUBJECT LEASE WHICH WOULD ENTITLE THE APPLICANT TO

IN ABOVE SPACE DESCRIBE PROPOSED WORK. 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 Trinity O. Collier TITLE Agent DATE 6/23/87

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
 APPROVED BY Linda S. Phelan TITLE AREA MANAGER DATE 7-1-87
 CONDITIONS OF APPROVAL, IF ANY: _____

CER# 243

*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.

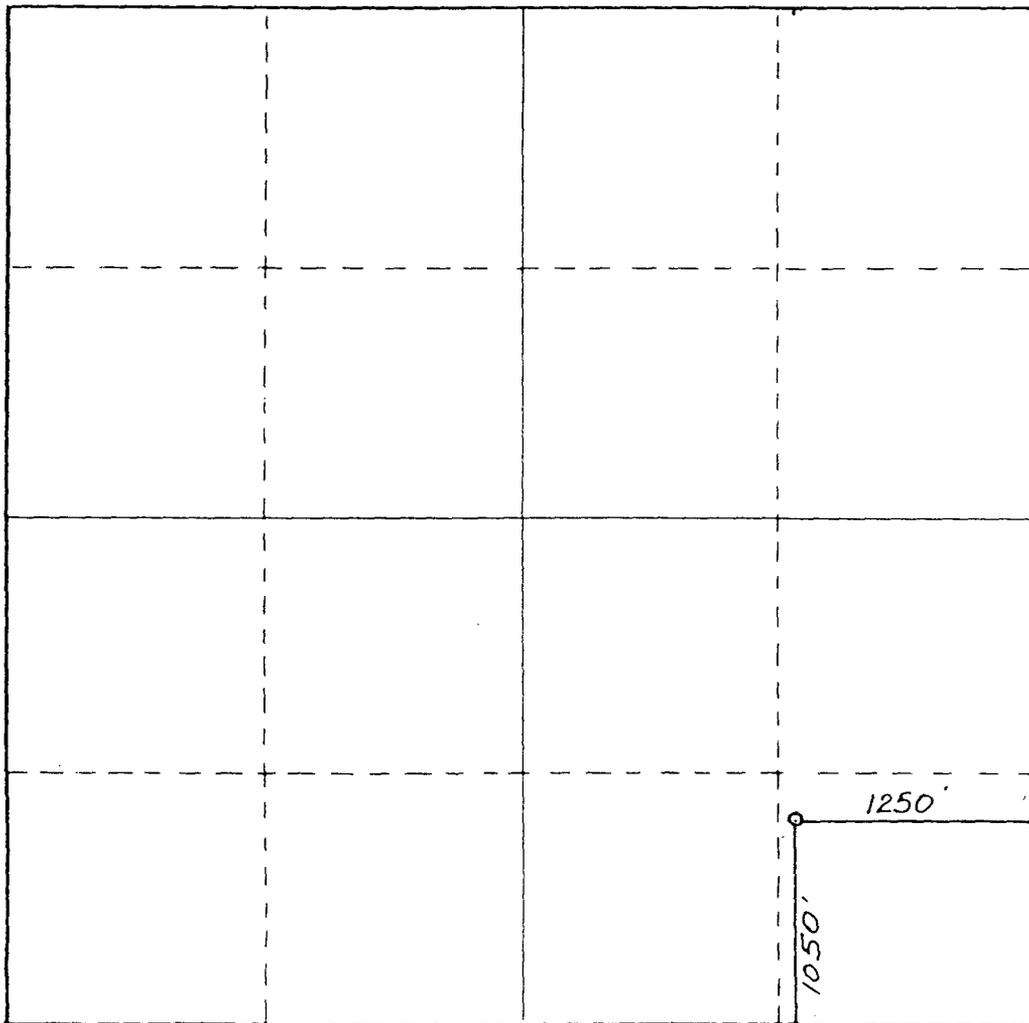
Operator SIRGO-COLLIER INC.		Lease WDQSU 30-73		Well No. 73	
Unit Letter P	Section 30	Township 24 South	Range 38 East	County Lea	
Actual Footage Location of Well: 1050 feet from the South line and 1250 feet from the East line					
Ground Level Elev. 3146.	Producing Formation Queen		Pool WDOSU	Dedicated 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: 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
Timothy D. Collier
Agent
Position
Sirgo-Collier, Inc.
Company
June 25, 1987
Date

I hereby certify that the well location shown on this plat is plotted from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

Date Surveyed
June 15, 1987
Registered Professional Engineer and/or Land Surveyor
An R. Reddy
Certificate No.
NEW PE&LS NO. 5412

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 100' (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 drillsite 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).
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.

June 23, 1987


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

Supplemental Drilling Data
 Sirgo-Collier, Inc.
 WQSU 30 #73
 1050' FSL, 1250' FEL, Section 30, T-24-S, R-38-E
 Lea County, New Mexico

1. Surface Formation: Tertiary Pliocene, GL 3146'
2. Estimated Tops of Geologic Markers:

Rustler	1140'	T/Yates	2656'
Top/Salt	1300'	T/Queen	3586'
Base/Salt	2580'	B/Queen	3766'
		TD	3866'
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 - 3866'	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.
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 #73
1050' FSL, 1250' FEL, Section 30, T-24-S, R-38-E
Lea County, New Mexico
GL 3866'

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 #73

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: 1050' FSL, 1250' FEL, Section 30, T-24-S, R-38-E, Unit P

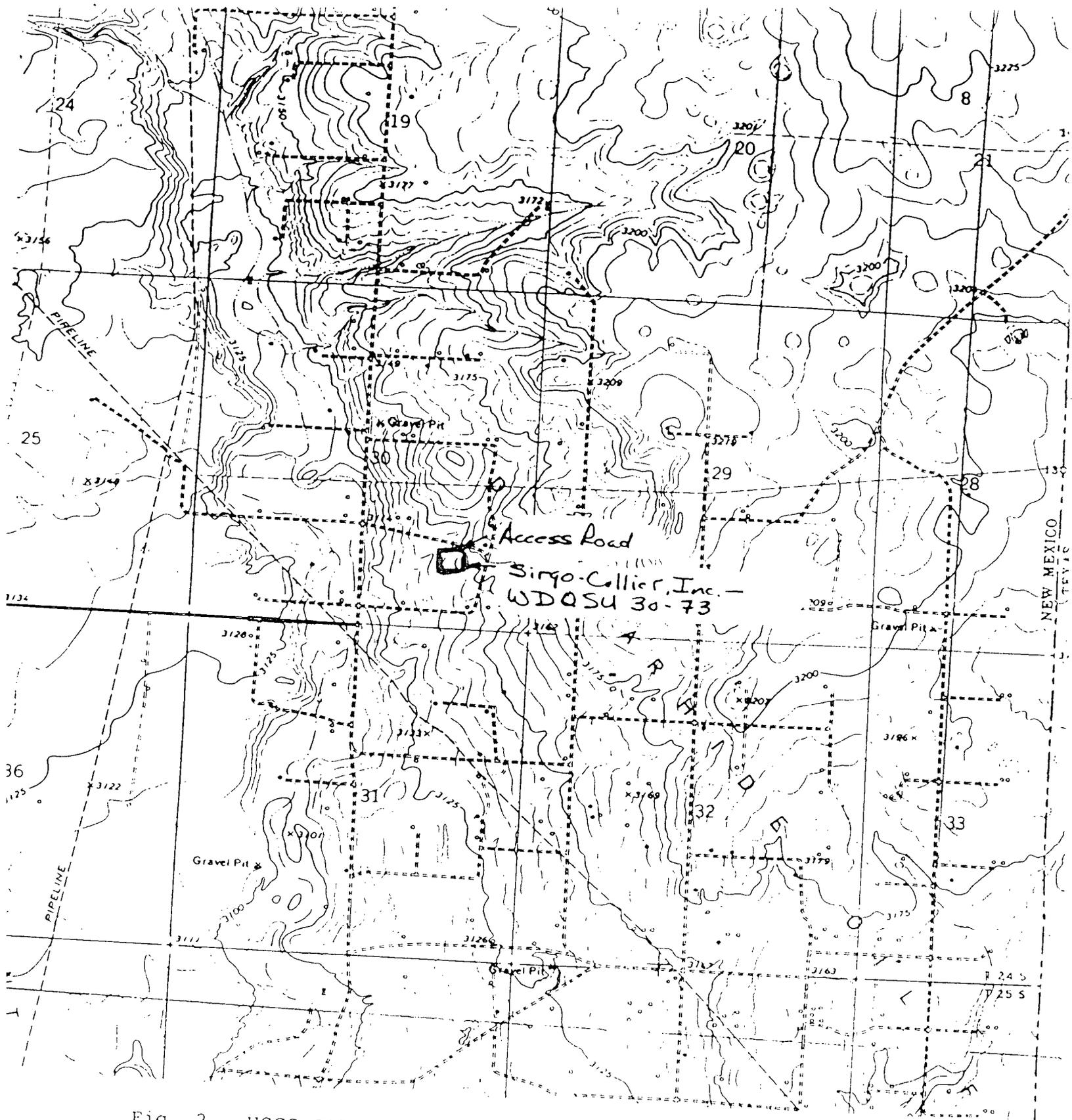


Fig. 2. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1969, photorevised, 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDO SU "30" Well No. 73, 1050 FSL, 1250 FEL, and access road, Section 30, T24S, R38E, NMPM, Lea County, New Mexico.

Peterson Drilling Company Rig 2 location plat

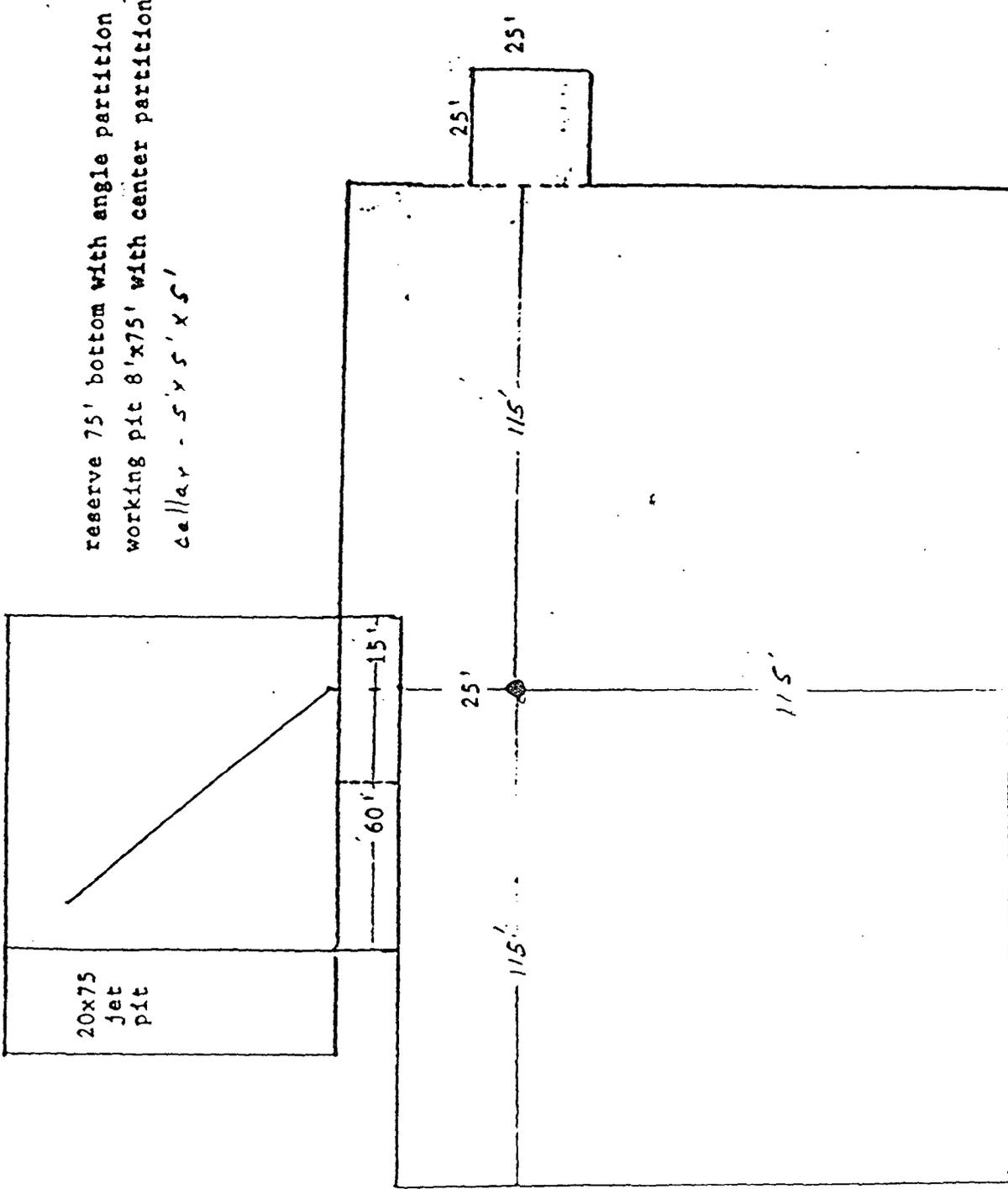
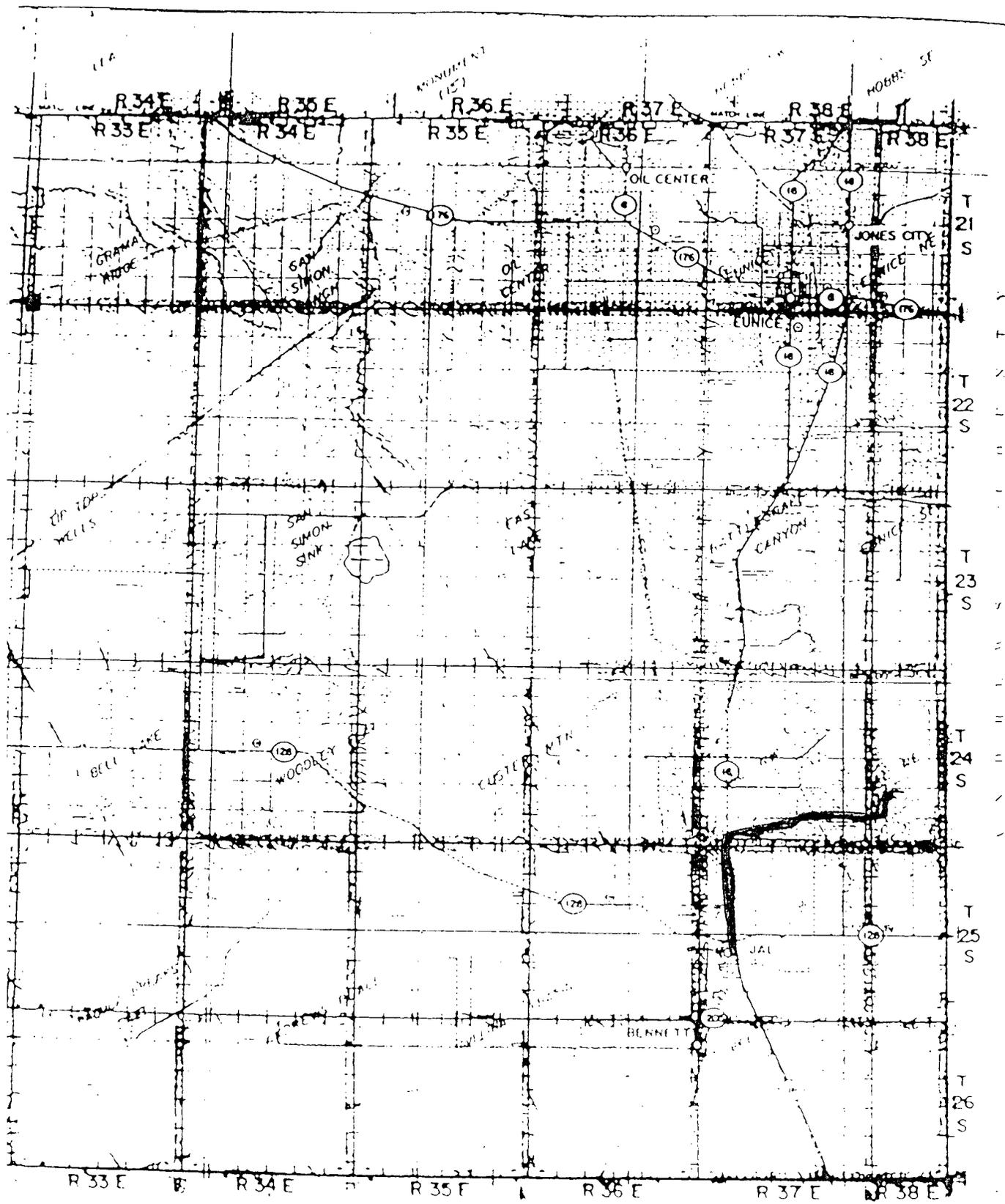


Exhibit C



MONUMENT (15)

MOBR: 3E

MONUMENT (15)

R 34 E

R 35 E

R 36 E

R 37 E

R 38 E

R 33 E

R 34 E

R 35 E

R 36 E

R 37 E

R 38 E

T 21 S

T 22 S

T 23 S

T 24 S

T 25 S

T 26 S

R 33 E

R 34 E

R 35 E

R 36 E

R 37 E

R 38 E

GRAWA WADGE

SAN SIMON SINK

OIL CENTER

JONES CITY

EUNICE

TIP TOP WELLS

SAN SIMON SINK

CANYON

BELL

WOODLEY

CUSTER RTR

JAL

BENNETT

126

176

178

18

19

20

21

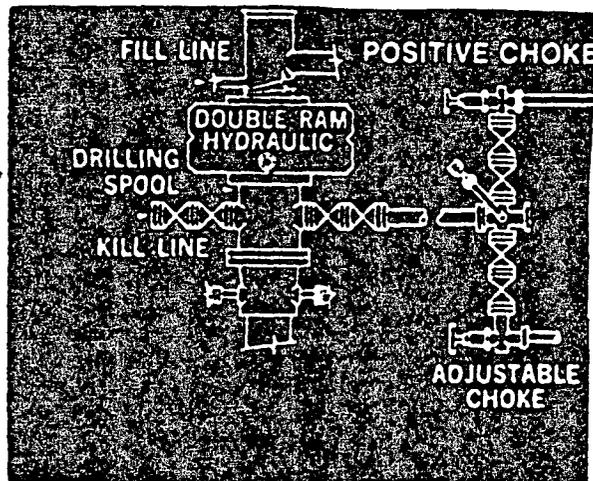
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RECEIVED JUN 23 1987



NMAS
New Mexico Archaeological Services, Inc.

P. O. Box 1341

Carlsbad, New Mexico 88220

(505) 887-7646

19 June 1987

Reconnaissance
Excavation
Analysis
Explanation
Curation

Mr. Brain Sirgo
SIRGO-COLLIER, INCORPORATED
P.O. Box 3531
Midland, Texas 79702

Dear Mr. Sirgo:

Enclosed please find NMAS' Archaeological Clearance Report for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 72, WDQSU "30" Well No. 73, WDQSU "30" Well No. 75, WDQSU "31" Well No. 74 and associated access roads in Lea County, New Mexico. No cultural resources were recorded during these surveys; therefore, NMAS is suggesting clearance for these projects.

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

Yours sincerely,

J. Loring Haskell
Dr. J. Loring Haskell
Principal Investigator

Enclosure

cc: Mr. Mark Calamia, BLM, Carlsbad

as

Archaeological Clearance Report

for

SIRGO-COLLIER, INCORPORATED

WDQSU "30" Well No. 72
WDQSU "30" Well No. 73
WDQSU "30" Well No. 75
WDQSU "31" Well No. 74

Prepared

By

Dr. J. Loring Haskell

Submitted

By

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

19 June 1987

Permit No. 14-2920-87-F

Report Number: NMAS-1987-19-JE

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 four drill locations and associated access roads. Field work was conducted under clear, sunny and calm conditions during the afternoon. The proposed locations will measure 400 X 400 feet (actual area surveyed 17.76 acres. WDQSU "30" Well No. 72's access road will measure 100 X 300 feet (actual area surveyed 0.69 acre). WDQSU "30" Well No. 73's access road will measure 100 X 100 feet (actual area surveyed 0.23 acres). WDQSU "30" Well No. 75 will measure 100 X 500 feet (actual area surveyed 1.15 acres). WDQSU "31" Well No. 74 will be situated beside an existing lease road. Total acreage 19.83 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 clearance for all SIRGO-COLLIER's work.

Introduction

On 18 June 1987, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, 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 four drill locations and their associated access roads. These projects were advanced by Mr. Brain Sirgo, SIRGO-COLLIER, INCORPORATED, and administered by Dr. J. Loring Haskell, Principal Investigator, NMAS, Inc. These surveys were undertaken by Dr. Haskell. Field work was conducted under clear, sunny and calm conditions during the afternoon. Ground visibility ranges between 75 and 80%. Field time four hours.

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 25 foot wide, close interval (15° or less), zigzag transects. In addition, added zones extending 20 feet on each side of the staked 400 X 400 foot locations, were reconnoitered by a similar means. The access roads were walked in two, 50 foot wide transects. Lathe is considered to be the center of the proposed roads. Methodologically, these procedures served to promote optimal conditions for the visual examination of the areas to be impacted by construction-related activities.

WDQSU "30" Well No. 72

Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal lands and will be situated 150 feet from the south line and 150 feet from the east line.

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

Thus it will be situated in the:

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

The associated access road will measure approximately 100 X 300 feet (actual area surveyed 0.69 acre).

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

The proposed location has been impacted on the east and south by fences.

Terrain

SIRGO-COLLIER, INCORPORATED's proposed location will be situated on the west-facing shoulder of a prominent ridge system overlooking Monument Draw. Surficial deposits are composed of sandy clay loams and commonly harbor caliche inclusions. Caliche commonly constitutes a light scree. Soil individuals fall within the Typic Torripsamment subgroup. Drainage is by ephemeral sheetwash with runoff being tributary to the Monument Draw catchment. Overall, drainage is of an internal nature owing to the Karst landform. Seeps and springs may occur along the drainage. Water is locally scarce throughout the year. Elevation is approximately 3,155 feet.

Floristics

Local soil individuals are supportive of a very diminutive overstory of Prosopis juliflora. Associated forbs include Psilostrophe sp., Croton sp., Solanum elaeagnifolium, Dyssodia sp., Euphorbia spp., Oenothera sp., Nama sp., Gaillardia sp., Dithyrea sp., Guitierrezia sarothrae and several unidentified members of the Compositae. Grasses of this association are Chloris cuculata, Aristida sp., Panicum sp., Sporobolus flexuosus, Bouteloua sp., Muhlenbergia porterii and Cenchrus incertus. Opuntia polyacantha is present on a sporadic basis.

Cultural Resources

Prefield 17 June 1987, Arita K. Slate, no archaeological sites.

No cultural properties were recorded during the course of this survey. Shortages of siliceous lithic material, a paucity of potable water and a bona fide lack of shelter combined to restrict land usage to hunting- and hunting- related tasks. Actual utilization, therefore, was brief and transitory at any one time. Temporally, occupancy dates back to at least the Paleoindian horizon. Land usage increases toward the south.

Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 72 and its 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.

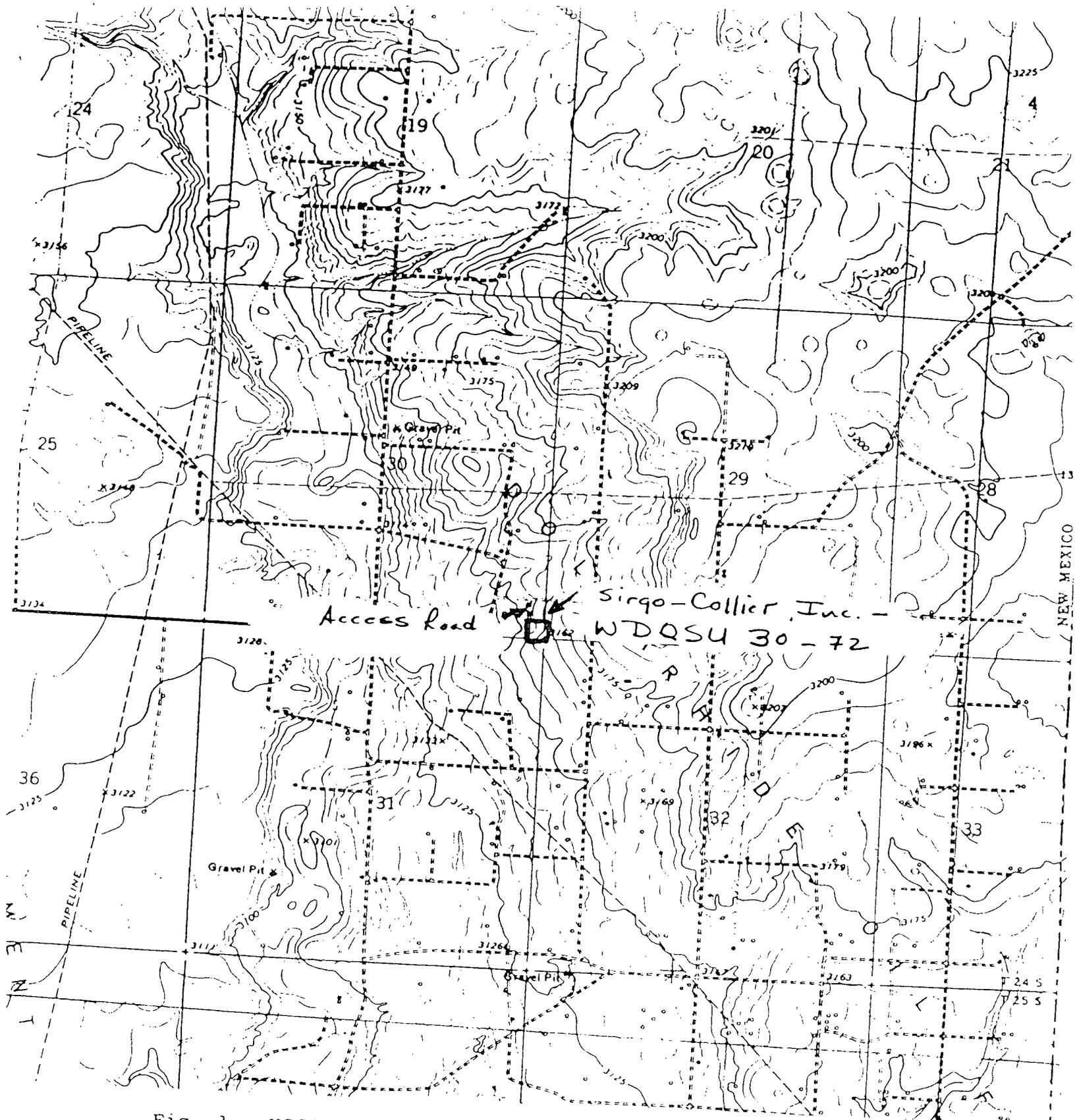


Fig. 1. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, photorevised 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 72, 150 FSL, 150 FEL, and access road, Section 30, T24S, R38E, NMPM, Lea County, New Mexico.

Duned settings are notorious for covering and uncovering cultural properties.

WDQSU "30" Well No. 73

Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal lands and will be situated 1050 feet from the south line and 1250 feet from the east line.

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

Thus it will be situated in the:

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

The associated access road will measure approximately 100 X 100 feet (actual area surveyed 0.46 acre) and is situated in the:

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

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

The proposed location has been previously impacted by a flow line.

Terrain

SIRGO-COLLIER, INCORPORATED's proposed location will be situated on the shoulder of a locally prominent ridge system lying due east of Monument Draw. Associated soil individuals are made up of sandy clay loams which harbor caliche inclusions. Croute calcaire underlies the surficial deposits. Taxonomically, pedons fall within the Typic Torripsamment subgroup. In general,

this area is the object of intense sheetwash with runoff being to the west into the Monument Draw catchment. Water is universally scarce and limited to possible seeps and springs occurring within the Monument Draw catchment. Elevation is approximately 3,146 feet.

Floristics

Areal soils host a grassland, floral assemblage. Major grasses are Cenchrus incertus, Aristida sp., Chloris cuculata, Setaria macrostachys, Muhlenbergia porterii and Sporobolus flexuosus. Forbs of this association are Hymenoxys sp., Gutierrezia sarothrae sarothrae, Nama sp., Lesqurella sp., Gaillardia sp., Psilostrophe sp., Zinnia acerosa, Croton sp., Hoffmanseggia sp., Oenothera sp. and Aster sp. and several unidentified members of the Compositae. The Gramineae is represented by Aristida sp., Chloris cuculata, Muhlenbergia porterii, Sporobolus flexuosus and Setaria macrostachys. Cyperus onerosus, a member of the Cyperaceae, is present on a regular basis. Prosopis juliflora and Yucca glauca are present on a regular basis.

Cultural Resources

Prefield 17 June 1987, Arita K. Slate, no archaeological sites.

No cultural properties were recorded during the course of this survey. Albeit not encountered, expected cultural properties should be of type reflecting en passant utilization of the landform, e.g., finished artifacts such as projectile points, scrapers, gravers, etc. Occupancy, while brief and transitory, was repetitive throughout prehistory.

Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 73 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. Duned settings are notorious for covering and uncovering cultural properties.

WDQSU "30" Well No. 75

Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal lands and will be situated 2300 feet from the south line and 1450 feet from the east line.

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 associated access road will measure approximately 100 X 500 feet (actual area surveyed 1.15 acres) and is situated in the:

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

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

The proposed location is cut by several flow lines as is the access road.

Terrain

SIRGO-COLLIER, INCORPORATED's proposed location will be situ-

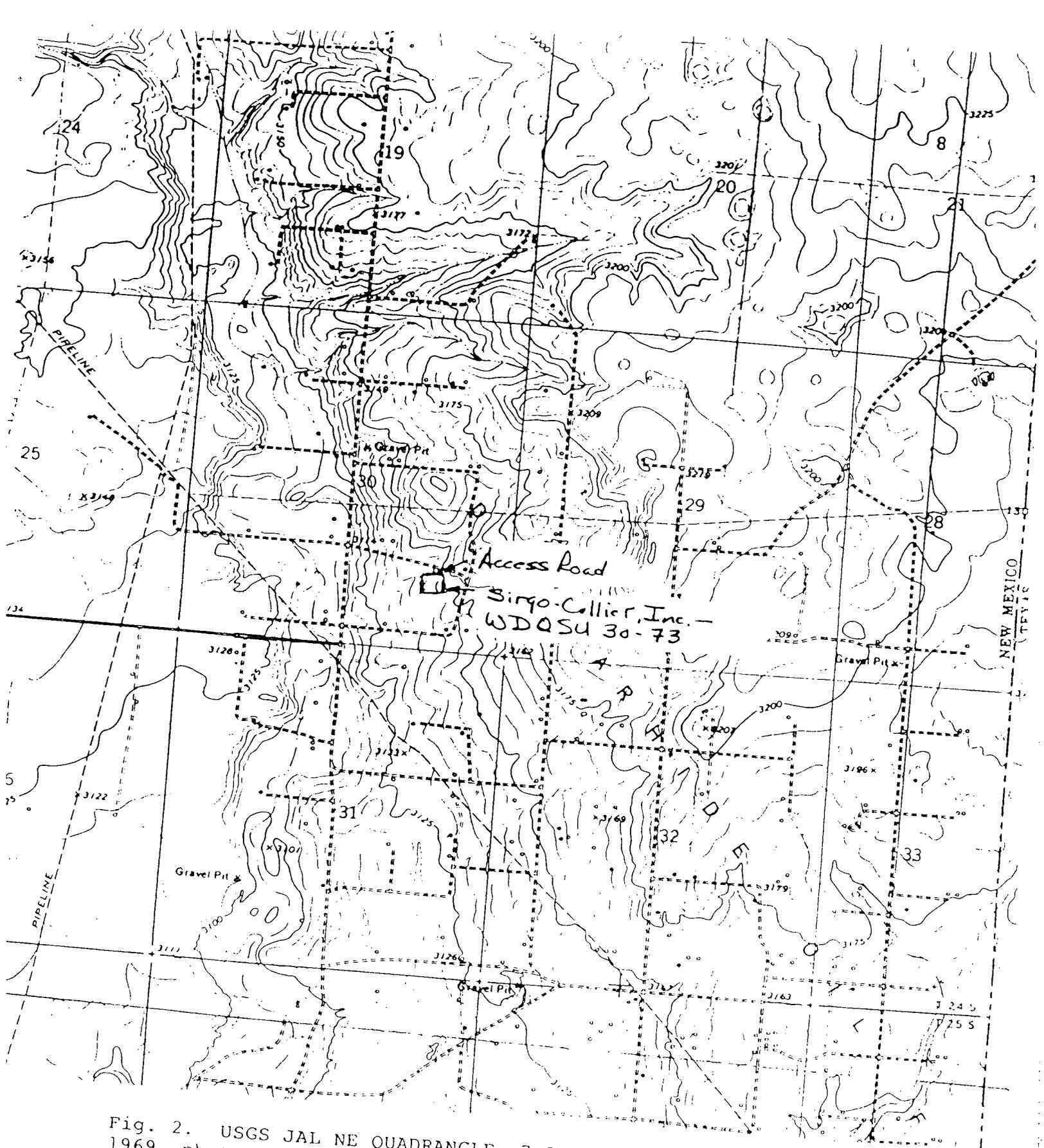


Fig. 2. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, photorevised, 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 73, 1050 FSL, 1250 FEL, and access road, Section 30, T24S, R38E, NMPM, Lea County, New Mexico.

ated on a low eminence which rises above the shoulder of the accompanying ridge system. Lying due east of Monument Draw, the coeval surface is distinguished by sandy clay loams and clay loam soils and accompanying caliche inclusions. Soil individuals fall within the Typic Calciorthid/Typic Paleorthisid subgroups. Subject to sheetwash, drainage is to the west into Monument Draw. Water is universally scarce. Seeps and springs may occur in Monument Draw. Elevation is approximately 3,165 feet.

Floristics

Areal soil individuals are supportive of a mixed, scrub-grassland, floral community. Plants of the overstory are Yucca glauca, Prosopis juliflora and rare Condalia ericoides. Cacti of this association are Opuntia leptocaulis and Opuntia polyacantha. Forbs include Gutierrezia sarothrae, Salsola kali, Hymenoxys sp., Mentzelia sp., Gaillardia sp., Cassia sp., Dithyrea sp., Plantago sp. and Aster sp. The Gramineae is represented by Aristida sp., Cenchrus incertus and Sporobolus flexuosus.

Cultural Resources

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

No cultural properties were recorded during the course of this survey. An overall absence of siliceous lithic sources, the open character of the landform itself, and a bona fide deficiency of potable water limited land usage to hunting- and hunting-related tasks. While brief and transitory was repetitive from Paleoindian times onward.

Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 75 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. Duned settings are notorious for covering and uncovering cultural properties.

WDQSU "31" Well No. 74

Location

The proposed location will measure 400 X 400 feet (actual area surveyed 4.44 acres) on federal lands and will be situated 1250 feet from the north and 2500 feet from the east line.

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

Thus it will be situated in the:

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

The proposed location will be situated beside an existing lease road.

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

The proposed location is bordered by a lease road on the west and is cut by a flow line on the south.

Terrain

SIRGO-COLLIER, INCORPORATED's proposed location will be situated due east of Mounment Draw on the shoulder of a locally prominent ridge system. Being coextensive with South Plain the coeval surface is distinguished by sandy clay loam soils and caliche

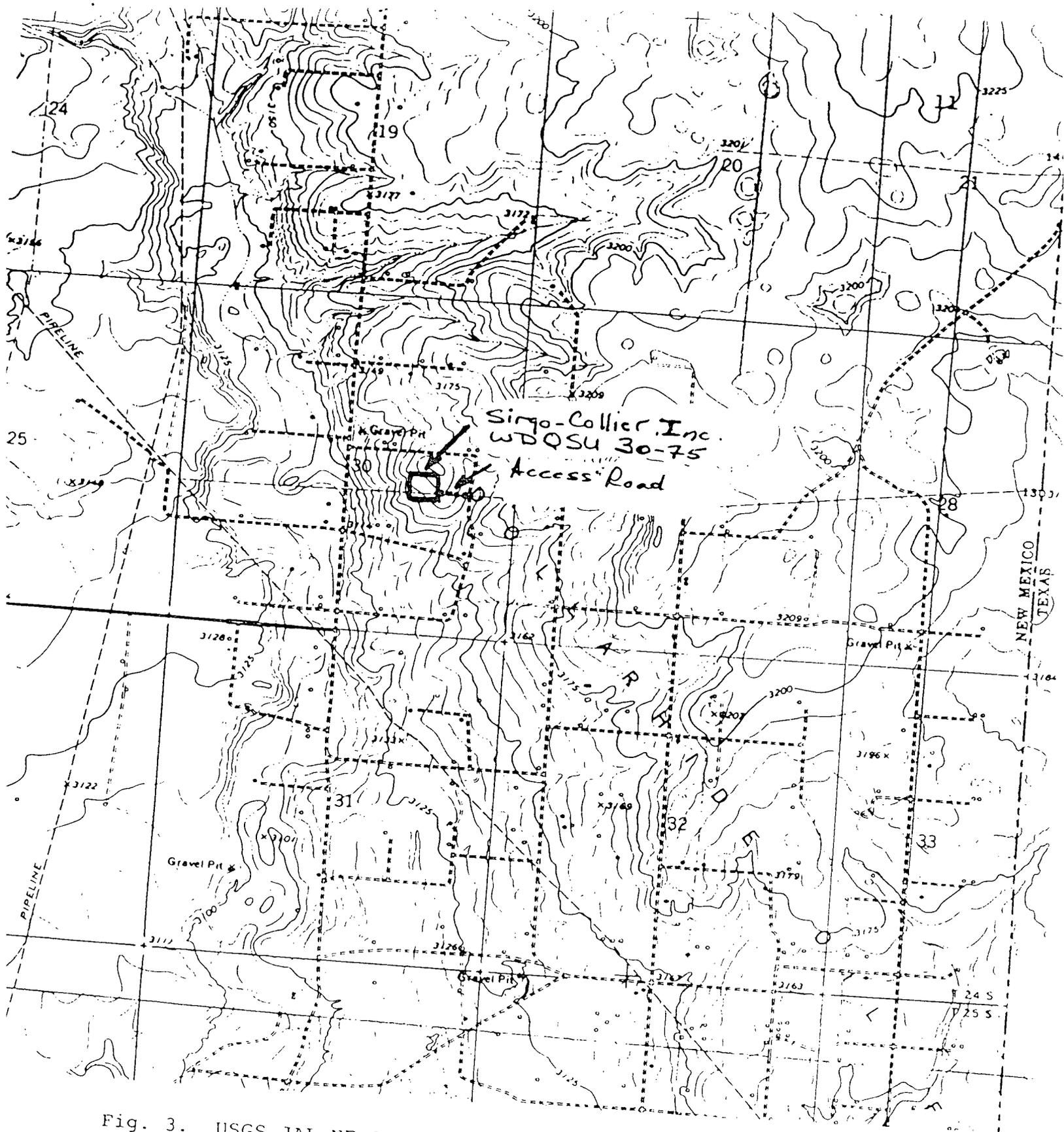


Fig. 3. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, Photorevised, 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDQSU "30" Well No. 75, 2300 FSL, 1450 FEL, and access road, Section 30, T24S, R38E, NMPM, Lea County, New Mexico.

inclusions. Soils are assignable to an intergrade of the Typic Torripsamment subgroup. Subject to sheetwash, drainage is to the west into Monument Draw. Some gullying occurs on the south. Nearest water may occur in the form of seeps and springs within the Monument Draw catchment. Water is locally very scarce.

Floristics

Local soils are supportive of grassland-type, floral community. Grasses include: Aristida sp., Chloris cuculata, Sporobolus flexuosus, Panicum sp. and Cenchrus incertus. Forbs of this association are Gutierrezia sarothrae, Solanum elaeagnifolium, Psilostrophe sp., Zinnia acerosa, Croton sp., Chamarasaracha sp., Perezia nana and Plantago sp. Yucca glauca is present on a sporadic basis as is Opuntia polyacantha.

Cultural Resources

Prefield 17 June 1987, Arita K. Slate, no archaeological sites.

No cultural properties were recorded during the course of this survey. Shortages of locally available siliceous lithic sources, the openness of the landform, and a deficiency of water limited occupancy to hunting- and related tasks. Principal mammalian forms taken in the past included Lepus, Sylvilagus, Antilocapra, Odocoileus and Bison. More intensive land usage occurs in the duned country to the south. Expected remains, should they occur, should be of a type reflecting en passant utilization of the landform in the past.

Recommendations

NMAS recommends clearance for SIRGO-COLLIER, INCORPORATED's

proposed WDQSU "31" Well No. 74 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. Duned settings are notorious for covering and uncovering cultural properties.

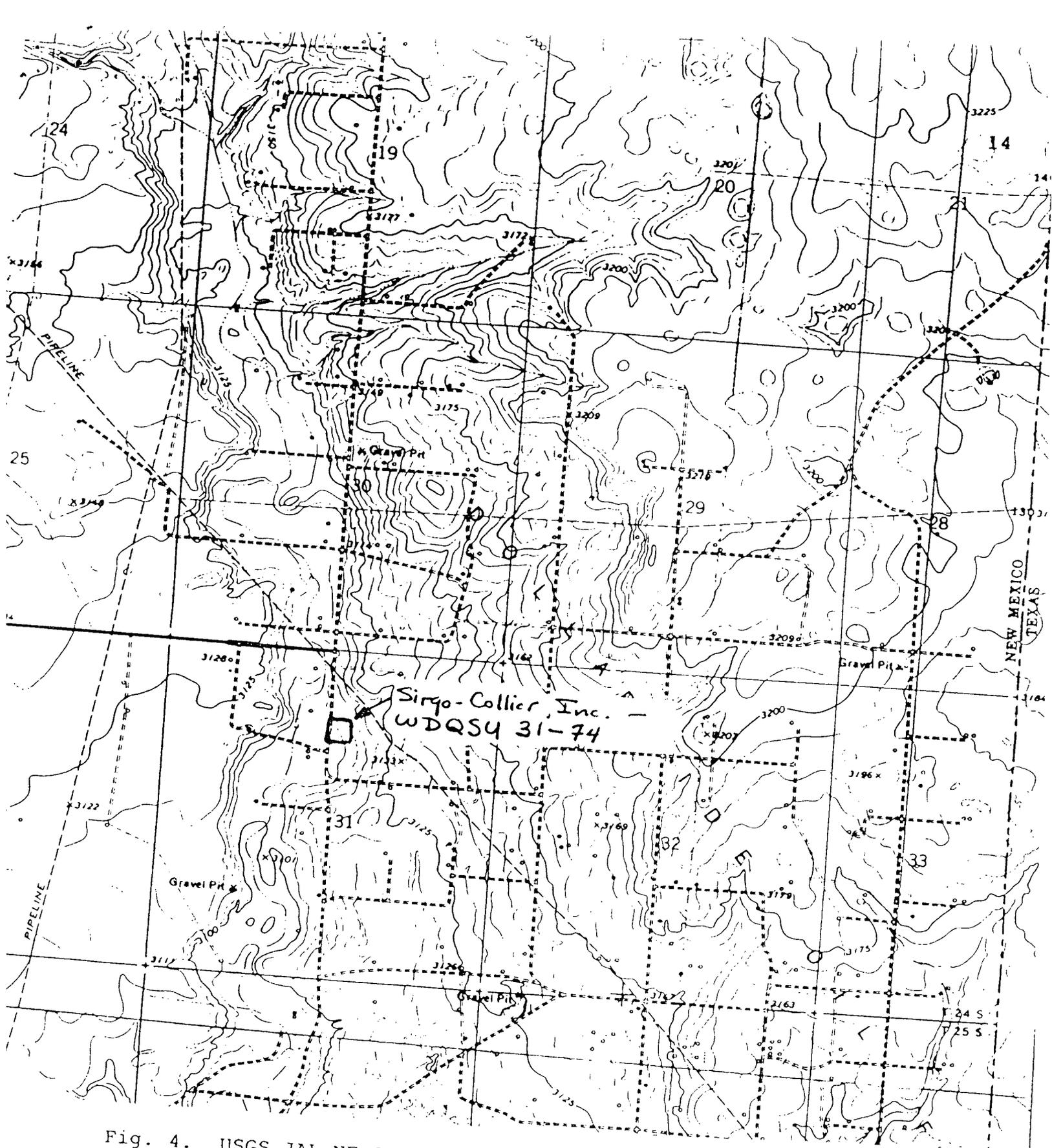


Fig. 4. USGS JAL NE QUADRANGLE, 7.5 Minute Series, 1:24,000, 1969, Photorevised, 1979, showing SIRGO-COLLIER, INCORPORATED's proposed WDQSU "31" Well No. 74, 1250 FNL, 2500 FEL, Section 31, T24S, R38E, NMPM, Lea County, New Mexico.