

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM-5452	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo	
2. NAME OF OPERATOR Kirby Exploration Company			7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR P.O. Box 1745, Houston, Texas 77001			8. FARM OR LEASE NAME Navajo 18	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface 790' FSL & 1810' FWL At proposed prod. zone same			9. WELL NO. 1	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 12 miles west of Counselors Trading Post			10. FIELD AND POOL, OR WILDCAT Rusty Chacra Extension	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 18, T22N, R6W	
16. NO. OF ACRES IN LEASE 641.26			12. COUNTY OR PARISH Sandoval	
17. NO. OF ACRES ASSIGNED TO THIS WELL 160 161.2			13. STATE New Mexico	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2500'			19. PROPOSED DEPTH 2500'	
20. ROTARY OR CABLE TOOLS rotary			21. APPROX. DATE WORK WILL START* August 1, 1977	
22. ELEVATIONS (Show whether DF, RT, GR, etc.) 6899 GR			23. PROPOSED CASING AND CEMENTING PROGRAM	

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24#	90'	100 sacks class "B"
6 3/4	4 1/2	10.5#	2500'	200 sacks class "B"

Spud 12 1/4" hole with native mud. Set 8 5/8" surface casing as above. Install 6" 900 series blow out preventer prior to drilling from under surface.

Drill 6 3/4" hole to 2500'. Mud properties approximately as follows: wt. 9.0# per gallon, vis. 35 seconds per quart, water loss 10± cc per 30 minutes. Open hole logs to consist of IES, FDC/CNL with GR-Caliper.

If commercial run 4 1/2" casing and cement as above.

If non-commercial, well will be plugged according to U.S.G.S. specifications.

Gas under this lease is not committed to a contract.

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 John Alexander TITLE Agent DATE 7-20-77
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

**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.

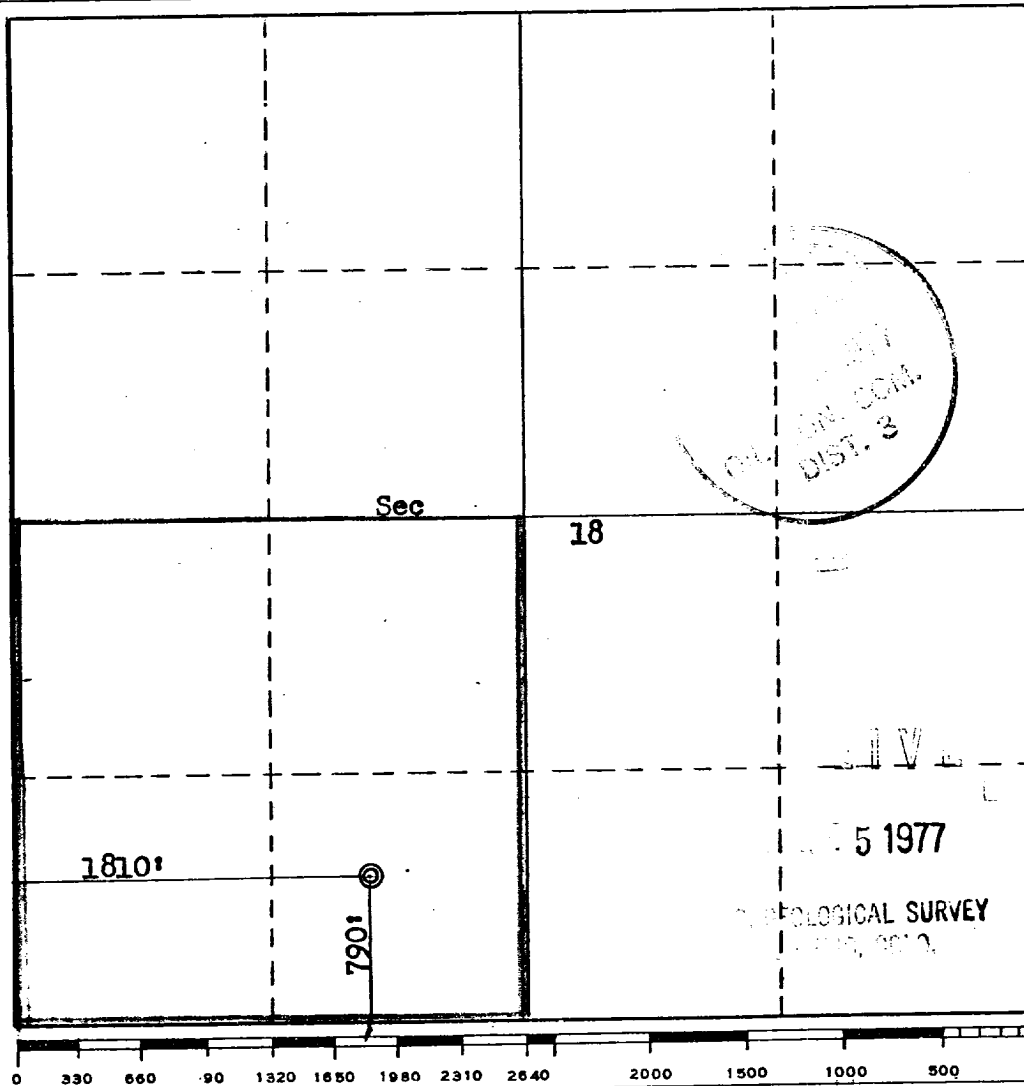
Operator Kirby Exploration Company			Lease Navajo 18		Well No. 1
Unit Letter N	Section 18	Township 22N	Range 6W	County Sandoval	
Actual Footage Location of Well:					
790 feet from the South line and		1810 feet from the West line			
Ground Level Elev. 6899	Producing Formation Chacra	Pool Rusty Chacra Extension		Dedicated Acreage: 160 1/2 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 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.

John Alexander

Name

Agent

Position

Kirby Exploration Company

Company

7-20-77

Date

John Alexander

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 9, 1977

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.
Fred B. Kerr Jr.

Certificate No.

3950

3E COMPANY, INC.

Engineering • Energy • Exploration

P. O. Box 190 — 505/327-4020

FARMINGTON, NEW MEXICO 87401

July 20, 1977

RECEIVED

JUL 25 1977

U.S. Department of Interior
Geological Survey
P.O. Box 1809
Durango, CO 81301

U.S. GEOLOGICAL SURVEY
DURANGO, CO

Attention: Mr. Jerry Long
District Engineer

RE: Development Plan for Surface Use
Kirby Exploration Company
Navajo 18 #1
790' FSL & 1810' FWL
Sec 18, T22N, R6W
Rusty Chacra Field Extension
Sandoval County, New Mexico

Gentlemen:

Attached is the "Application for Permit to Drill" (form #9-331C) for the subject well. Also enclosed are the following items: surveyor's plat, drill site plat, vicinity map and archaeologists report. Mr. Bob Moore of the Bureau of Land Management, Mr. Lee Freeman of the United States Geological Survey, Ms. Pat Zarnowski of the Agency of Conservation Archaeology, and David Morris of the Bureau of Indian Affairs have inspected the site.

The development plan for surface use is as follows:

Points 1, 3, 4, 6, & 9 Vicinity map and drill site plat attached.

Point 2. Water bars will be used on all roads where necessary.

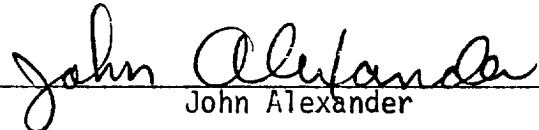
Point 5. Water for drilling will be trucked from Escrito approximately 25 miles to the north.

Point 7. A waste disposal pit will be provided for the garbage and trash. Location shown on drill site plat. Drilling fluids will be contained in reserve pit until such time as evaporation occurs and then pits will be covered.

Point 8. No camps or airstrip.

- Point 10. Should the well be a commercial producer, it will be equipped to facilitate producing operations with all drilling pits filled, location leveled and well site reseeded in compliance with current Bureau of Land Management seeding requirements. During dry out time required for the reserve pit it will be fenced to eliminate livestock entry. All facilities will be painted Grey: Federal Standard 595-36357
- Point 11. The location is in a rocky badland formation with only small amounts of snake weed and sladscale. The access road will take off from an existing road and cross the wash and enter the badland area.
- Point 12. John Alexander
3E Company, Inc.
P.O. Box 190
Farmington, NM 87401
Phone: 505-327-4020
- Point 13. I hereby certify that I or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the 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 Kirby Exploration Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

7-20-77


John Alexander

Should further information be desired, please advise.

Yours very truly,


John Alexander

JA:st

Attachments

Archaeological Clearance Survey Report
for
Kirby Exploration Company

Well Locations

Navajo 15 No. 1
Navajo 18 No. 1
Navajo 21 No. 1
Navajo 26 No. 1
Navajo 26 No. 2
Navajo 28 No. 1

Prepared by

Pat Zarnowski

Submitted by

Dr. J. Loring Haskell
Operations Director and
Principal Investigator

AGENCY OF CONSERVATION ARCHAEOLOGY

July 15, 1977

RECEIVED

JUL 25 1977

U.S. GEOLOGICAL SURVEY
FEDERAL BUREAU OF GEOLOGY

Introduction

The Agency of Conservation Archaeology of the San Juan County Museum Association and Eastern New Mexico University recently completed an archaeological clearance survey north of Canada Alemita in the Rusty Oil Field. This land is to be impacted by the scheduled construction of six wells by Kirby Exploration Company of Houston, Texas.

The survey project was initiated at the request of Mr. Bill Jones of the 3E Company of Farmington, representing Kirby Exploration Company on July 11, 1977. It was administered by Mr. Jones and by Dr. J. Haskell of the Agency of Conservation Archaeology in Portales, New Mexico.

The field work was conducted by Ms. Pat Zarnowski of the Agency of Conservation Archaeology in Farmington on July 14, 1977 under provisions of Federal Antiquities Permits No. 77-NM-030, which expires on December 31, 1977, and No. 77-AZ-033, which expires on March 15, 1978. Other representatives in the field were Mr. Bill Jones of 3E Company, Mr. Jim Hill of Allen Construction, Mr. Bob Moore of the Bureau of Land Management, and Mr. Lee Freeman of the United States Geological Survey.

Survey

The requested archaeological clearance survey involved the six well locations described below located on land under the jurisdiction of the Bureau of Land Management with the exception of the Navajo 18 No. 1 well which is located on Navajo Tribal land. For specific details of location please see the attached maps and the Recommendations section of this report.

The general survey method used was to walk the area of proposed construction in a zigzag manner and to visually inspect the ground surface for signs of archaeological remains either of historic or pre-historic origin. Floral, faunal and geological observations were made to briefly describe the environmental situation.

Navajo 15 No. 1 Bureau of Land Management

This well is to be located approximately one and a quarter mile north of Canada Alemita. The terrain consists of rolling hills covered with sagebrush (*Artemisia tridentata*), snakeweed (*Grutierrezia sarothrae*), blue gramma (*Bouteloua gracilis*), and a few scattered prickly pear cactus (*Opuntia* sp.). There are two hogans just north of this proposed well location, the closest being just under 700 feet away. The access road for this well will come in from a dirt road to the east, and about 1,200 feet of new road will be necessary.

No cultural material sighted.

Navajo 18 No. 1 Navajo Tribal Land

The eastern end of Cañada Alemita is the proposed location for this well. It will be situated in a badland formation where there is almost no vegetation at all, just a few scattered snakeweed plants and shadscale (Atriplex confertifolia). There are large deposits of a variety of rocks and pebbles in this formation. The road to this well will take off from an existing dirt road, cross Cañada Alemita, cross a small sagebrush area and then enter the badland formation to connect to the well.

No artifacts were sighted.

Navajo 21 No. 1 Bureau of Land Management

This well will be located about one and a half miles west and south of the Navajo 15 No. 1 well. Rolling sage covered hills make up the terrain here. The soil is a loamy sand and there is evidence of cattle, horses, sheep and small game. The well will be situated on the eastern slope of a small hill. About 1,000 feet of new road will be graded for access to this well. It will come in from an existing dirt trail to the west.

No archaeological material located.

Navajo 26 No. 1 Bureau of Land Management

This well will be located just south of Cañada Alemita adjacent to a tributary drainage of that wash. The terrain is quite flat here with the predominant vegetation being sagebrush and blue gramma. Along the drainage rabbitbrush (Chrysothamnus nauseosus) can be found in moderate quantities. About 400 feet of new road will be needed for access to this well and it will come in from an existing road to the west.

No artifacts found.

Navajo 26 No. 2 Bureau of Land Management

About three quarters of a mile south of the above item is the proposed location for this unit. It is slightly higher in elevation here and the terrain is sloping gently to the northwest. The environment is basically the same as described for the other locations, rolling hills covered with sagebrush. No access road will be necessary as the well will be situated in the "Y" of two already existing roads bordering the pad area on the east and west.

No cultural material sighted.

Navajo 28 No. 1 Bureau of Land Management

The top of a small peninsula bordered on the south by Canada Alemita is the proposed location for this well. The main vegetation is sagebrush and blue gramma, but in addition there are quite a few juniper (*Juniperus sp.*) trees on this knoll. Cattle were grazing in the area at the time of the survey, and there is also evidence of horses, sheep and small game. The soil continues to be quite sandy here also. There is an existing trail that goes to the well location and probably only about 900 feet will have to be bladed.

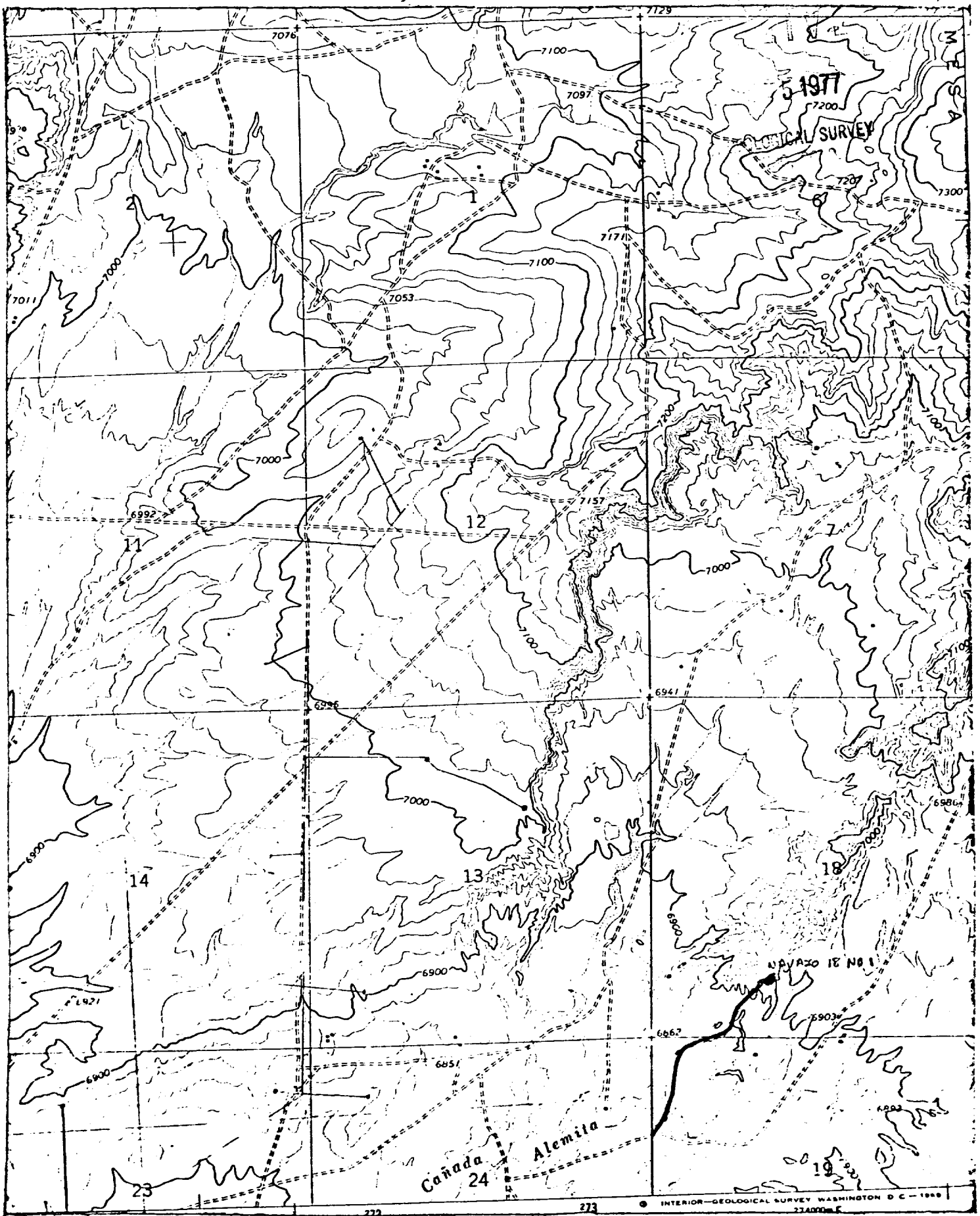
Just west of the proposed pad area the blade of a shovel and a blue metal coffee pot were sighted. Some of the juniper trees here have been cut down and it appears that this ridge has probably been used for camp areas in recent times in connection with sheep and cattle activities. However, no hearths, temporary structures, or large deposits of trash were sighted.

Recommendations

<u>Well</u>	<u>Area</u>	<u>Location</u>	<u>Clearance Status</u>
Navajo 15 No. 1	Pad: 100' x 130' Road: 20' x 1200'	900 feet from the South line, 1190 feet from the East line in the Southeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 15, Township 22 North, Range 7 West, Sandoval County, New Mexico. Map source: U. S. G. S. 7.5 minute Lybrook quadrangle.	Recommended
Navajo 18 No. 1	Pad: 100' x 130' Road: 20' x 3000'	790 feet from the South line, 1810 feet from the West line in the Southeast $\frac{1}{4}$ of the Southwest $\frac{1}{4}$ of Section 18, Township 22 North, Range 6 West, Sandoval County, New Mexico. Map source: U. S. G. S. 7.5 minute Lybrook Quadrangle.	Recommended
Navajo 21 No. 1	Pad: 100' x 130' Road: 20' x 1000'	1000 feet from the North line, 1850 feet from the West line in the Northeast $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of Section 21, Township 22 North, Range 7 West, Sandoval County, New Mexico. Map source: U. S. G. S. 7.5 minute Lybrook Quadrangle.	Recommended
Navajo 26 No. 1	Pad: 100' x 130' Road: 20' x 400'	790 feet from the North line, 790 feet from the East line in the Northeast $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ of Section 26, Township 22 North,	Recommended

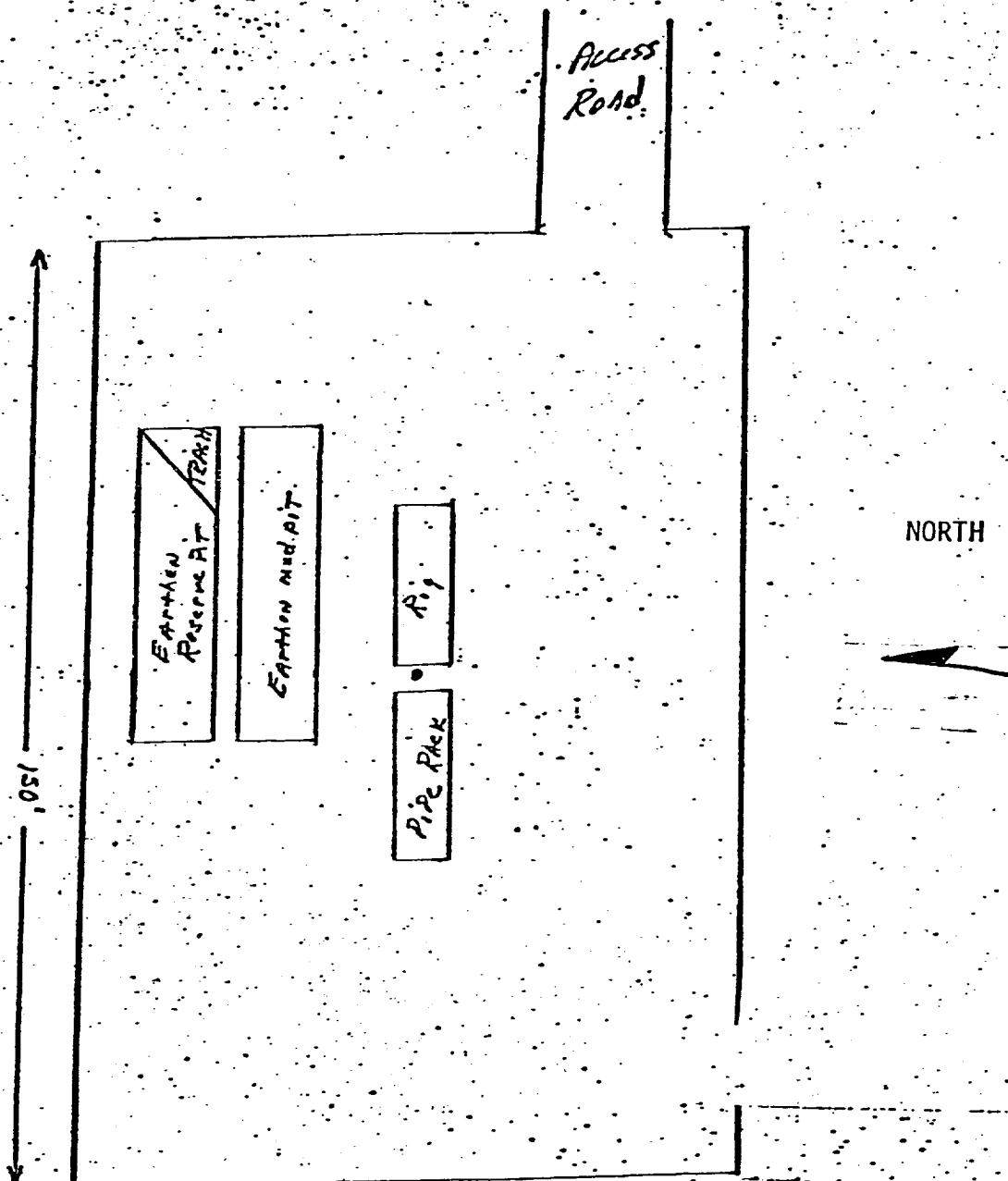
<u>Well</u>	<u>Area</u>	<u>Location</u>	<u>Clearance Status</u>
		Sandoval County, New Mexico. Map source: U. S. G. S. 7.5 minute Lybrook S. E. quadrangle.	
Navajo 26 No. 2	Pad: 100' x 130' Road: Existing	790 feet from the South line 925 feet from the East line in the Southeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 26, Township 22 North, Range 7 West, Sandoval County, New Mexico. Map source: U. S. G. S. 7.5 minute Lybrook S. E. quadrangle.	Recommended
Navajo 28 No. 1	Pad: 100' x 130' Road: 20' x 900'	1600 feet from the North line, 790 feet from the East line in the Southeast $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ of Section 28, Township 22 North, Range 7 West, Sandoval County, New Mexico. Map source: U. S. G. S. 7.5 minute Lybrook S. E. quadrangle.	Recommended

Because the only cultural material located during this survey was of a fairly recent nature and really could not be classified as a site, it is recommended that archaeological clearance be granted for these proposed wells and access roads. It is felt that there will be no adverse effect upon on cultural resources as a result of this work.



Lybrook Quadrangle

Well Site Plat

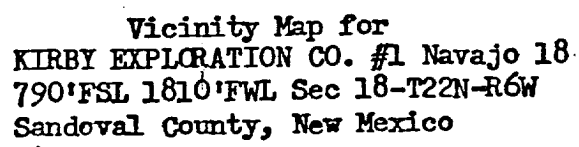


Scale 1" = 30'

KIRBY EXPLORATION COMPANY
 NAVAJO 18 #1
 790' FSL & 1810' FWL
 Sec 18 - 22N - 6W
 Sandoval County, New Mexico

5 1977

GEOLOGICAL SURVEY



U. S. GEOLOGICAL SURVEY
WASHINGTON, D. C.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BUDGET BUREAU NO. 42-R1424
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-5452	
2. NAME OF OPERATOR Dome Petroleum Corporation		6. IF INDIAN, ALIOTTEE OR TRIBE NAME Navajo	
3. ADDRESS OF OPERATOR %Minerals Management Incorporated 501 Airport Drive, Farmington, New Mexico 87401		7. UNIT AGREEMENT NAME 	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 790' FSL & 1810" FWL		8. FARM OR LEASE NAME Navajo 18	
14. PERMIT NO.		9. WELL NO. 1	
15. ELEVATIONS (Show whether DF, RT, CR, etc.) 6899 GR		10. FIELD AND POOL, OR WILDCAT Rusty Chacra Extension	
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 18, T22N, R6W	
NOTICE OF INTENTION TO: TEST WATER SHUT-OFF <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> SHOOT OR ACIDIZE <input type="checkbox"/> REPAIR WELL <input type="checkbox"/> (Other) <input checked="" type="checkbox"/> Change of Operator		SUBSEQUENT REPORT OF: WATER SHUT-OFF <input type="checkbox"/> FRACTURE TREATMENT <input type="checkbox"/> SHOOTING OR ACIDIZING <input type="checkbox"/> (Other) <input type="checkbox"/>	
17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*		12. COUNTY OR PARISH Sandoval	
18. I hereby certify that the foregoing is true and correct SIGNED <u>W. E. Landry</u> TITLE <u>Area Manager</u> DATE <u>3-2-78</u>		13. STATE N.M.	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐ FRACTURE TREAT ☐ SHOOT OR ACIDIZE ☐ REPAIR WELL ☐ (Other) ☒ Change of Operator

PULL OR ALTER CASING ☐ MULTIPLE COMPLETE ☐ ABANDON* ☐ CHANGE PLANS ☐

WATER SHUT-OFF ☐ FRACTURE TREATMENT ☐ SHOOTING OR ACIDIZING ☐ (Other) ☐

REPAIRING WELL ☐ ALTERING CASING ☐ ABANDONMENT* ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Dome Petroleum Corporation is now the operator of this lease formerly operated by Kirby Exploration Company, P. O. Box 1745, Houston, Texas 77001.

The thirteen-point development plan remains intact except that point 12 should be changed to contact W. E. Landry, Minerals Management Inc., 501 Airport Drive, Farmington, New Mexico, 87401. Telephone 505-327-4441.

Unopened loc.



18. I hereby certify that the foregoing is true and correct

SIGNED W. E. Landry TITLE Area Manager DATE 3-2-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ST
*See Instructions on Reverse Side