

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

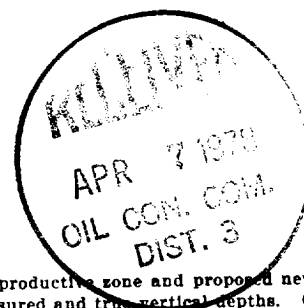
APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. Navajo 14-20-603-5024
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo Tribal
2. NAME OF OPERATOR Vista Resources, Inc.		7. UNIT AGREEMENT NAME N/A
3. ADDRESS OF OPERATOR 44 Union Blvd., Suite 619, Lakewood, Colorado 80228		8. FARM OR LEASE NAME Navajo Tract 20 31
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 660' FNL 1980' FEL - Section 31, T 29 N - R 17 W ✓ At proposed prod. zone San Juan County, New Mexico		9. WELL NO. 31
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 6.7 miles south of Shiprock, New Mexico		10. FIELD AND POOL, OR WILDCAT Pajarito - Penn D ext
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 660' FNL 2560	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 31, T 29 N - R 17 W
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH 1980' FEL 7300'	12. COUNTY OR PARISH San Juan
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5179' GL		13. STATE New Mexico
23. PROPOSED CASING AND CEMENTING PROGRAM		17. NO. OF ACRES ASSIGNED TO THIS WELL 40
20. ROTARY OR CABLE TOOLS Rotary		22. APPROX. DATE WORK WILL START* June 15, 1978

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 5/8"	48.0	40'	Circulated
12 1/4"	8 5/8"	24.0	2400'	As Required
7 7/8"	5 1/2"	15.5 & 17.0	TD	As Required

Proposed program is to drill 12 1/4" hole to approximately 2400' and set surface casing through high pressure water flows.

The well will then be drilled to approximately 7300' to test the Paradox formation which produces in the well west of this location.



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 K.L. Payne K.L. Payne TITLE Vice-President DATE 4/3/78

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE RECEIVED

CONDITIONS OF APPROVAL, IF ANY:

APR 6 1978

U.S. Geological Survey
Farmingington, N.M.

*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 Vista Resources Inc.			Lease Navajo Tract 20 31		Well No. 31
Unit Letter B	Section 31	Township 29N	Range 17W	County San Juan	
Actual Footage Location of Well:					
660 feet from the North line and 1980 feet from the East line					
Ground Level Elev. 5179	Producing Formation Penn D	Pool Pajarito ext	Dedicated Acreage 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

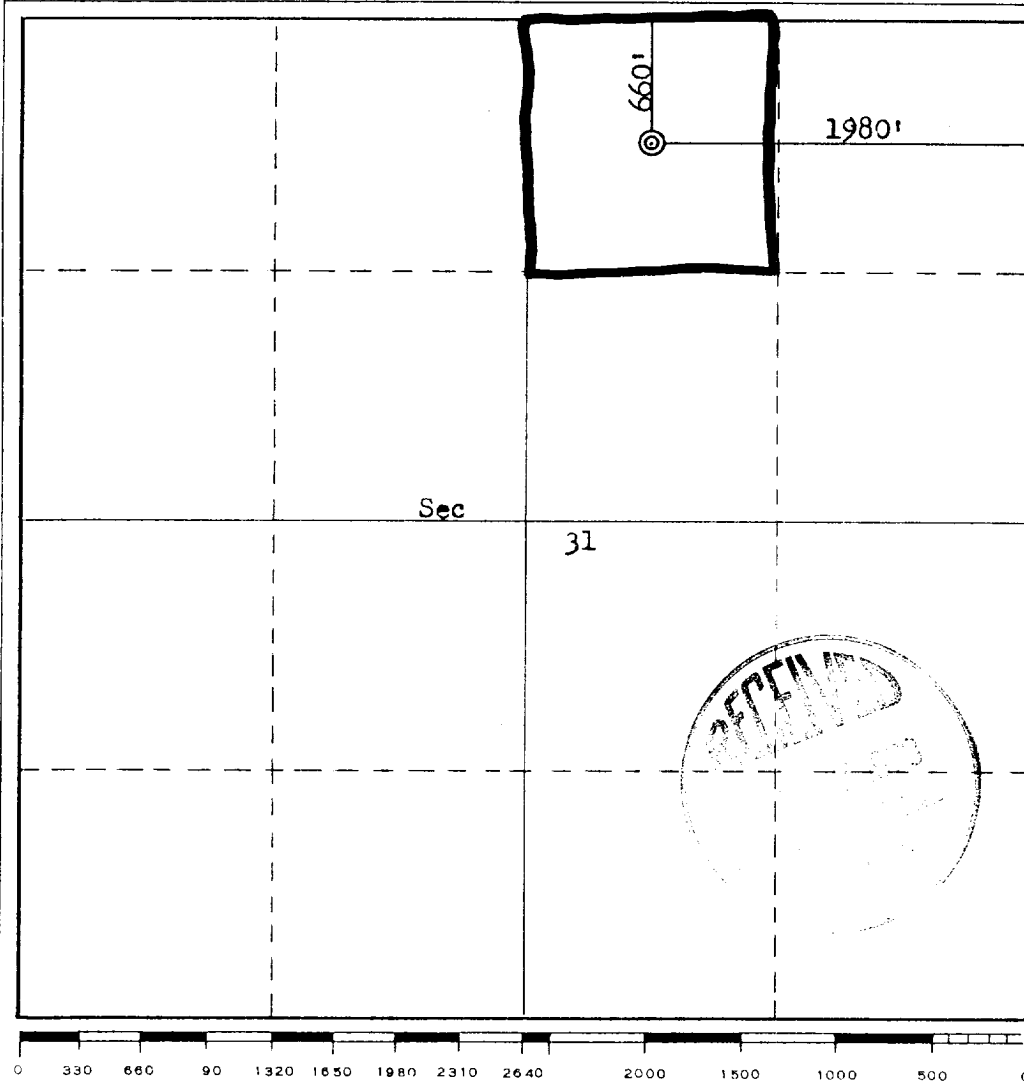
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.	
Name	Kenneth L. Payne
Position	Vice-President
Company	Vista Resources, Inc.
Date	April 3, 1978
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	March 10, 1978
Registered Professional Engineer and/or Land Surveyor	Fred B. Kerr Jr.
Certificate No.	3950

VISTA RESOURCES, INC.

SUITE 619

44 UNION BOULEVARD

LAKEWOOD, COLORADO 80228

TELEPHONE (303) 988-4223

April 3, 1978

Mr. Philip T. McGrath
District Oil and Gas Engineer
USGS, Conservation Division
P.O. Box 959
Farmington, New Mexico 87401

Re: Vista Resources, Inc.
Proposed Well Location
Navajo Tract 20 - #31-31
1980' FEL 660' FNL
NWNE Section, 31, T 29 N - R 17 W
San Juan County, New Mexico

Dear Mr. McGrath:

In accordance with the Department of the Interior (NTL-6) the following information is respectively submitted:

Paragraph A:

1. Existing roads. See attached Exhibit A.
2. Planned access roads. See attached Exhibit A.
3. Location of existing wells. See attached Exhibit A.
4. Location of tank batteries, production facilities, and production, gathering, and service lines. See attached Exhibit A.
5. Location and type of water supply. Hauling and produced water from conductor pipe, surface pipe annulus.
6. Source of construction materials. None needed.
7. Methods for handling waste disposal. All waste will be contained in fenced pits and covered as quickly as water level evaporates or as soon as usage ceases.
8. Ancillary facilities. None planned.
9. Well site layout. See attached Exhibit B.

10. Plans for restoration of the surface. When the drillsite construction starts, top soil will be striped and piled separately. If a productive well is completed the top soil will be utilized after reserve pit and garbage pits are backfilled. If the well is non-productive, the location will be contoured to original shape and top soil will be distributed over scared area. Grass seed recommended by appropriate authority will be sown. All fences will be removed.
11. Other Information. The area at and near the drill site is rolling gentle relief features with a thin veneer of alluvium on top of soft, dark gray shale. We plan to utilize the trail road technique due to wind erosion effects and install drainage pipe only if appropriate authority recommends.
12. Lessee's or operator's representative. Kenneth L. Payne
44 Union Boulevard, Suite 619
Lakewood, Colorado 80228
(303) 988-4223
13. Certification.

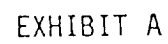
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Vista Resources, Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

4-3-78

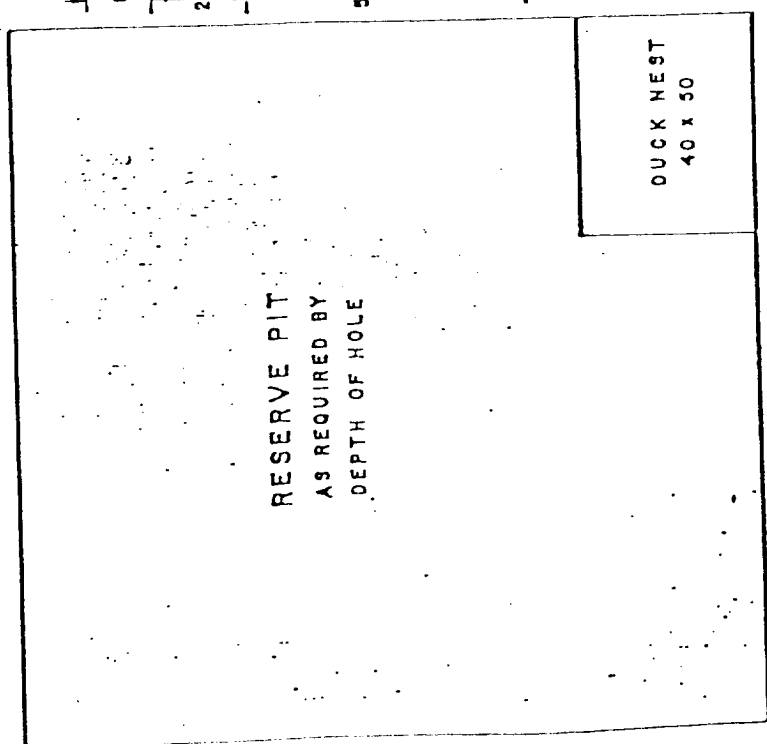
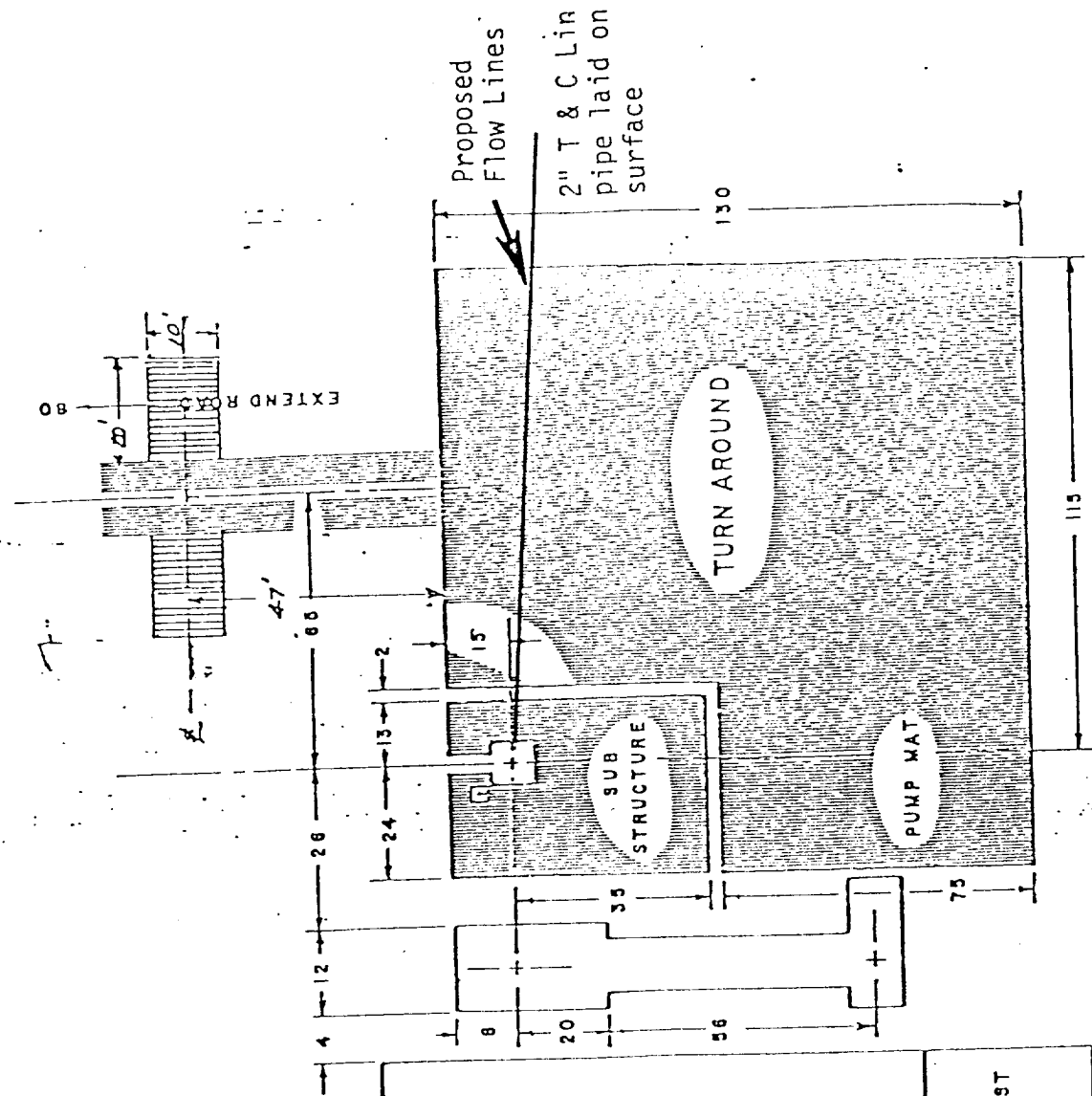
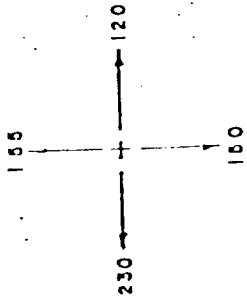
Date

Kenneth L. Payne vice-president

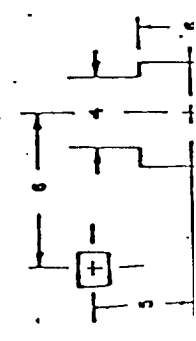
Name and Title



VEE DOOR
NE - SUMMER
S - WINTER



WATER WELL
150 TO REAR OF STAKE



ADDENDUM TO VICINITY MAP

The lateral road proceeding eastward to the location from U. S. Hwy. 666, 6.8 miles south of Shiprock will be maintained as necessary by a maintainer. At the point of departure from the existing road to the proposed well site only alteration as is necessary for heavy equipment to enter will be made. This road will be used only by traffic necessary to support the drilling operations. The roads will be maintained and altered to effect the least environmental impact possible. If the Navajo Tract 20, 31-31 well should be productive then this road will be improved after authority has been obtained from the necessary authorities.

OPERATIONS PLAN

In accordance with your letter dated July 1, 1976 from the U.S. Department of the Interior, Geological Survey, the following operations plan is respectively submitted: (The numerical headings correspond to the numbers of the July 1, 1976 letter.)

- 1) Mancos shale: Cretaceous Age
- 2) 0 to 1318' - Mancos Shale (Cretaceous)
1318 to 1538' - Dakota Formation (Cretaceous)
1538 to 2060' - Morrison Formation (Jurassic)
2060 to 2394' - Junction Creek Formation (Jurassic)
2394 to 2604' - Summerville Formation (Jurassic)
2604 to 2617' - Todilto Formation (Jurassic)
2617 to 2700' - Entrada Formation (Jurassic)
2700 to 2776' - Kayenta Formation (Jurassic)
2776 to 2840' - Wingate Formation (Jurassic)
2840 to 4043' - Chinle Formation (Triassic)
4043 to 4073' - Shinarump Formation (Triassic)
4073 to 4226' - Moenkopi Formation (Triassic)
4226 to 4672' - De Chelly Formation (Permian)
4672 to 5786' - Cutler Formation (Permian)
5786 to 6036' - Rico Formation (Permian)
6036 to 6684' - Hermosa Formation (Pennsylvanian)
6684 to 7300' - Paradox Formation (Pennsylvanian)
- 3) Water flow at approximately 2200 feet. Possible oil productive zone at 7000 feet. Primary objective for oil production at 7200 feet.
- 4) 40' (used) 16" conductor - 2,400'± (new) 9 5/8" - 36# K-55 ST&C casing.

- 5) (5000) (3000) Double gate and Hydril - hydraulic operated. Daily check on BOP closing and opening. Weekly BOP test with test plug inserted in place of wear flange and also crew training with BOP drills. Pressure test to API equipment rating.
- 6) Non-dispersed mud system with adequate viscosity to clean hole. No control on water loss except while drilling zones of interest, or unless hole dictates need for same. Weight mud up prior to drilling abnormally pressured zones using nearby wells as control points.
- 7) Upper and lower kelly cocks, string float, mud system monitoring equipment, and a sub on the floor with a full opening valve to be stabbed into drill pipe when kelly is not in the string will be incorporated as auxiliary equipment.
- 8) DST's may be run over important zones of hydrocarbon shows dependent upon hole conditions. Adequate logs will be run to allow a complete petrophysical evaluation of all potential hydrocarbon producing horizons. A Dual Induction resistivity log and one porosity device will be run as a minimum program, with additional porosity logs as required for complete definition of rock characteristics.
- 9) We plan to monitor mud system for gas, including H₂S monitor at all times with mud logging unit.
- 10) June 15, 1978 thru July 15, 1978.

ARCHAEOLOGICAL CLEARANCE SURVEY

of

proposed oil drill hole
6 miles south of Shiprock
San Juan County, New Mexico

21 March 1978

Field survey conducted by
Malcolm K. Sender, Supervisory Archaeologist
Cultural Resource Management Program
Navajo Nation

Submitted by
Richard A. Goddard, Coordinator
Cultural Resource Management Program
418K West Broadway
Farmington, New Mexico 87401

To
George G. West, Supervisory Archaeologist
Southwest Cultural Resources Center
Southwest Region
Box 728
Santa Fe, New Mexico 87501

Prepared for
Kenneth Payne
Vista Resources, Inc.
Suit 619
44 Union Boulevard
Lakewood, Colorado 80228

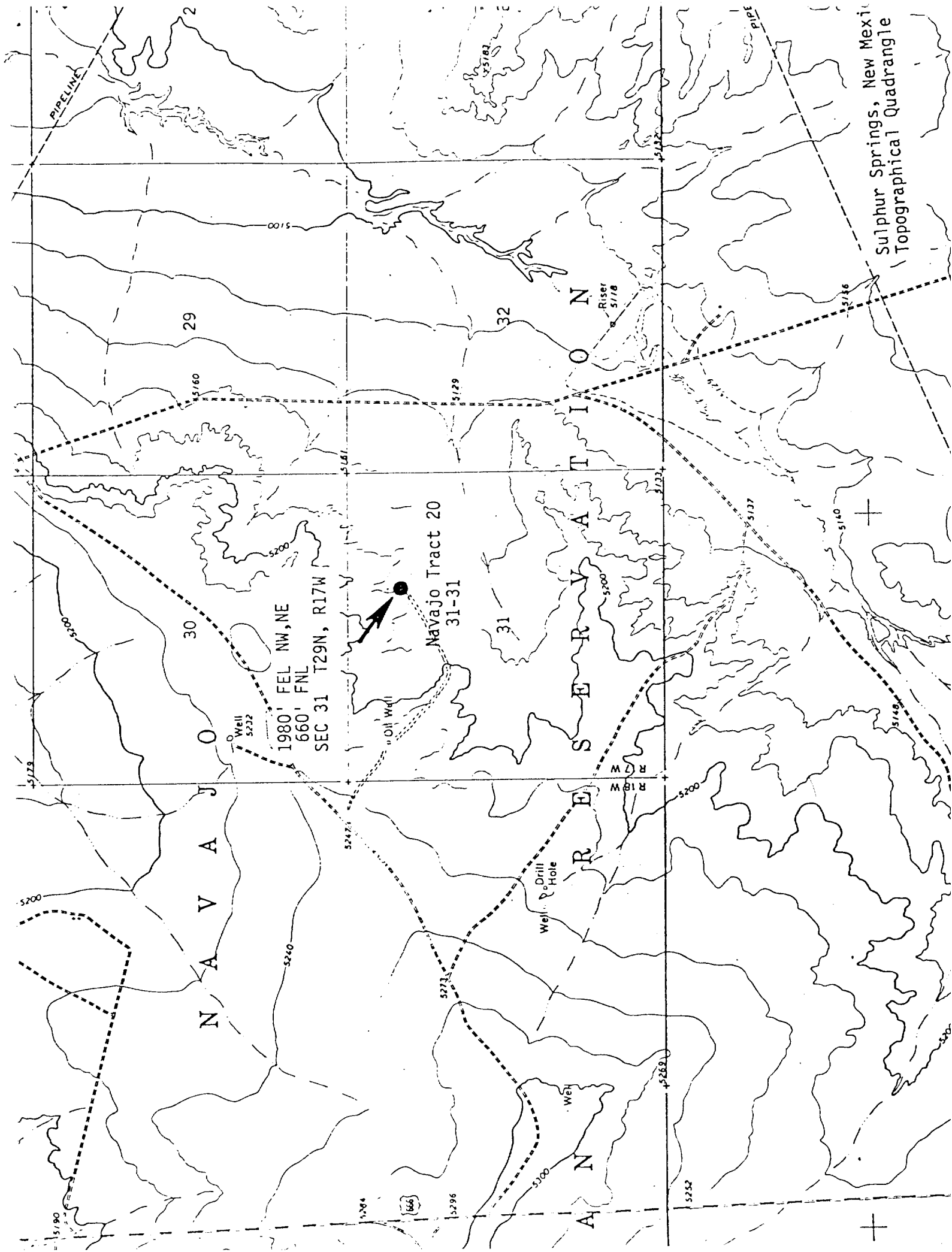
In response to a written request (March 10, 1978) from Mr. Kenneth Payne of Vista Resources, Inc. of Lakewood, Colorado, an archaeological survey for an oil drill hole was performed on March 14, 1978. The location of this oil well is in the center of the Northwest quarter of the Northeast quarter of Section 31, Township 29 north, Range 17 west, N.M.P.M. Included in the survey was an approximate 10 meters wide right-of-way for an access road (.3 mile long) and a 30 meter wide right-of-way for a pipeline 7 (14 mile long) should it be needed. The survey was conducted under Federal Antiquities Act Permit Number 77-AZ-070, expiration date June 20, 1979 and a Navajo Tribal Consent to Issuance Permit number 33 expiration date March 09, 1979.

The topography of this area, about six miles south of Shiprock and one mile east of Highway 666, is flat grassland with an absence of any significant slope. The sandy loam soil supports a vegetative community of grama (sp.) and other wild grasses which could not be identified due to overgrazing. Drainage is into a tributary of Dead Man's Wash, about 15 kilometers to the south, which flows to the east.

The method employed in the archaeological survey of the oil well site, which was conducted by one supervisory archaeologist and two technicians from the Cultural Resource Management Program of the Navajo Nation, consisted of the walking back and forth, in an orderly fashion, by the three investigators until the entire site area was traversed. Each man was spaced about 10 meters apart. The access road was surveyed in one sweep with a spacing of about 5 meters while the pipeline was done in a single sweep

with spacing between men of about 15 meters. The drill pad site was allowed an area of about 65 meters in diameter for the necessary drilling activities.

There were no archaeological resources noted in the area which will be impacted by drill hole activities, or in the surrounding area. Therefore, clearance is recommended.



Sulphur Springs, New Mexico
Topographical Quadrangle