

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

WILDCAT

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

AMOCO PRODUCTION COMPANY

3. ADDRESS OF OPERATOR

501 Airport Drive, Farmington, NM 87401

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

At surface

1550' FSL & 990' FEL, Section 21, T25N, R14W

At proposed prod. zone

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

Same
25 miles southwest of Farmington, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

990'

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

18 miles

16. NO. OF ACRES IN LEASE

1280

19. PROPOSED DEPTH

1000'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

20. ROTARY OR CABLE TOOLS

Rotary

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

5924'

22. APPROX. DATE WORK WILL START*

As Soon as Permitted

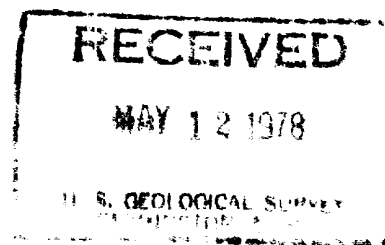
23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/8"	10-3/4"	32.75#	250'	250 Sx.
9-7/8"	7-5/8"	26.40#	1000'	275 Sx.

This wildcat will be drilled to a depth of 1000' to test the Pictured Cliffs zone. Completion plans will be made after logs are run. Additional information required by NTL-6 for the application to drill and a Multi-Point Surface Use Plan are attached.

This well is being drilled as a TITE hole. It is requested that well information be kept confidential.

*gas is not dehydrated**ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED*

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

J. L. Kneib

TITLE

Area Engineer

DATE

May 5, 1978

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

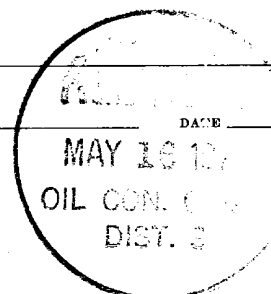
TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

ok Enab

*See Instructions On Reverse Side



Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**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.

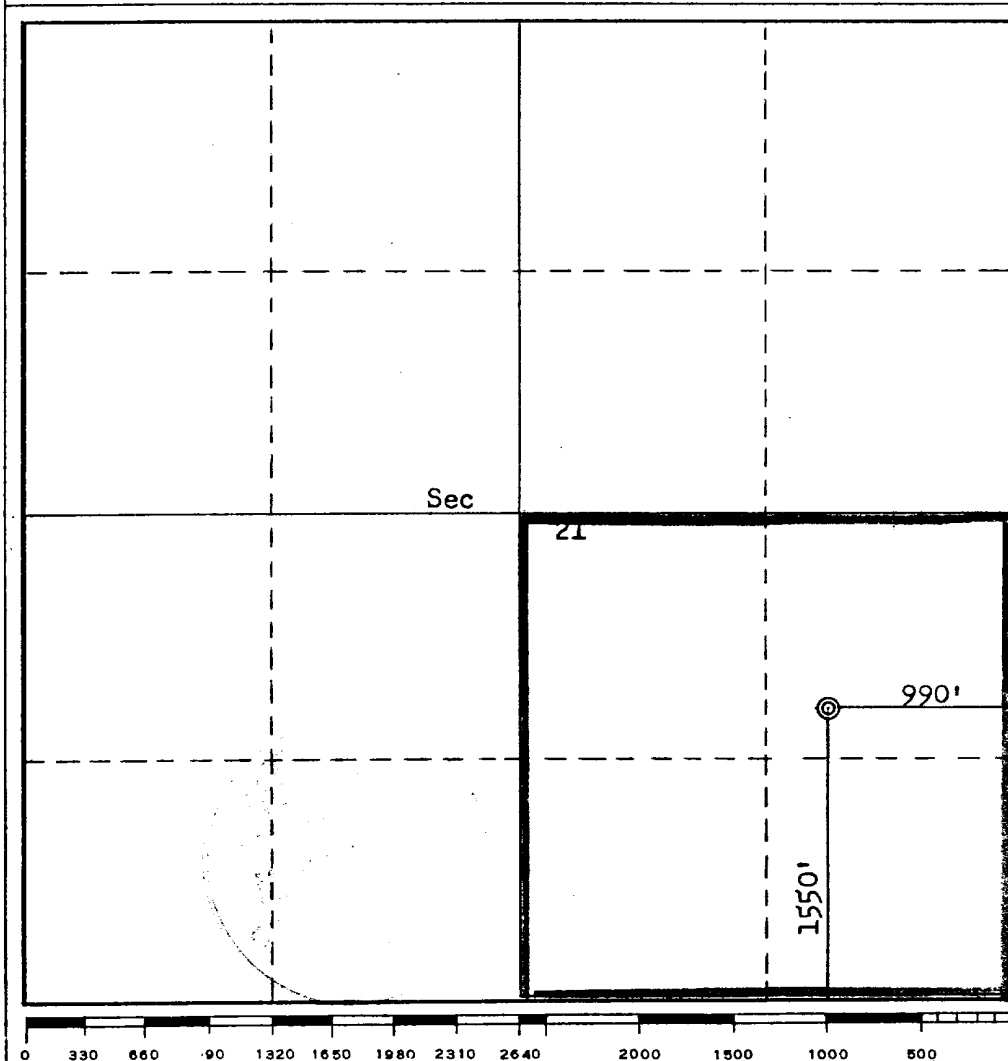
Operator AMOCO PRODUCTION COMPANY			Lease Navajo Tribal "AE"		Well No. 1
Unit Letter I	Section 21	Township 25N	Range 14W	County San Juan	
Actual Footage Location of Well: 1550 feet from the South line and 990 feet from the East line					
Ground Level Elev. 5924	Producing Formation Pictured Cliffs		Pool Wildcat		Dedicated Acreage: 16.0 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

J. L. Krupka
Name
J. L. KRUPKA

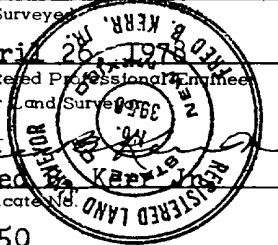
Position
AREA ENGINEER

Company
AMOCO PRODUCTION COMPANY

Date
APRIL 27, 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
April 26, 1978
 Registered Professional Engineer
 and/or Land Surveyor
Fred B. Kerpl
Fred B. KERPL
 Certificate No. **3950**



SUPPLEMENTAL INFORMATION TO FORM 9-331C
REQUIRED BY NTL-6
NAVAJO TRIBAL "AE" NO. 1
1550' FSL & 990' FEL, SECTION 21, T25N, R14W
SAN JUAN COUNTY, NEW MEXICO

The geologic name of the surface formation is the Upper Cretaceous Kirtland.

The estimated tops of important geological formations bearing hydrocarbons are:

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Fruitland SS	650'	+ 5288'
Pictured Cliffs	770'	+ 5168'
Lewis Shale	850'	+ 5088'
TD	1000'	+ 4938'

Estimated KB Elevation: 5938'

<u>EST. DEPTH</u>	<u>CSG. SIZE</u>	<u>WEIGHT</u>	<u>HOLE SIZE</u>	<u>SACKS CEMENT</u> - <u>TYPE</u>
250'	10-3/4"	32.75#	13-3/8"	250 sx - Class "B", 2% CaCl ₂ .
1000'	7-5/8"	26.40#	9-7/8"	175 sx - Class "B", 6% Gel, 2# Med. Tuf Plug/sx.
				100 sx - Class "B" Neat.

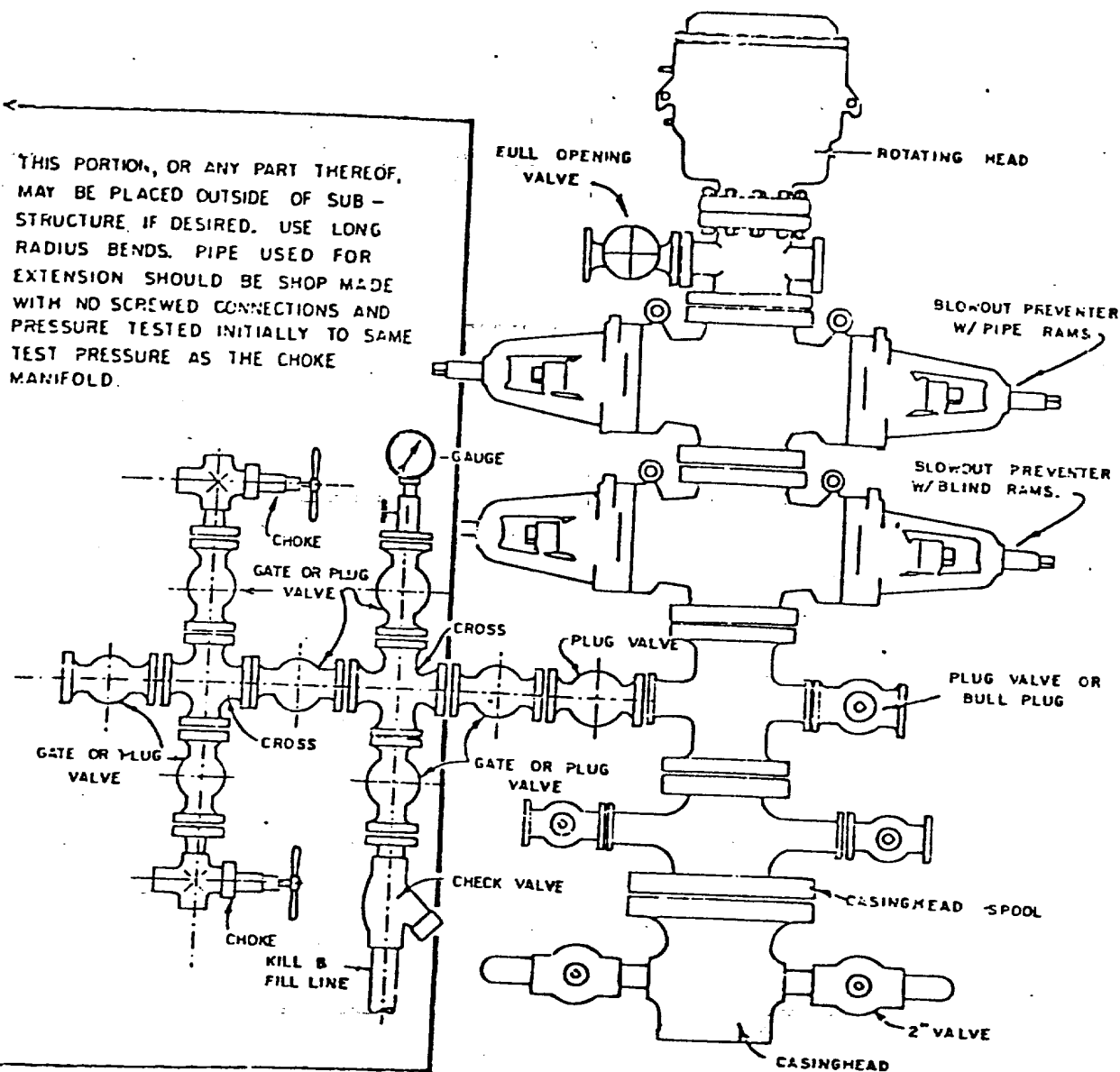
Amoco's standard blowout prevention will be employed; see attached drawing of our blowout preventer design.

Drilling fluid to TD will be a low solids non-dispersed mud system.

Amoco plans to run the following logs: Induction Electric and Density Gamma Ray from TD to 250'. One 20-foot core will be taken from 770-790' and one Drill Stem Test from 760-790'.

In the past, drilling in this area has shown that no abnormal pressures, temperatures, nor hydrogen sulfide gas will be encountered at these depths.

THIS PORTION, OR ANY PART THEREOF, MAY BE PLACED OUTSIDE OF SUB-STRUCTURE IF DESIRED. USE LONG RADIUS BENDS. PIPE USED FOR EXTENSION SHOULD BE SHOP MADE WITH NO SCREWED CONNECTIONS AND PRESSURE TESTED INITIALLY TO SAME TEST PRESSURE AS THE CHOKE MANIFOLD.



BLOWOUT PREVENTER HOOKUP

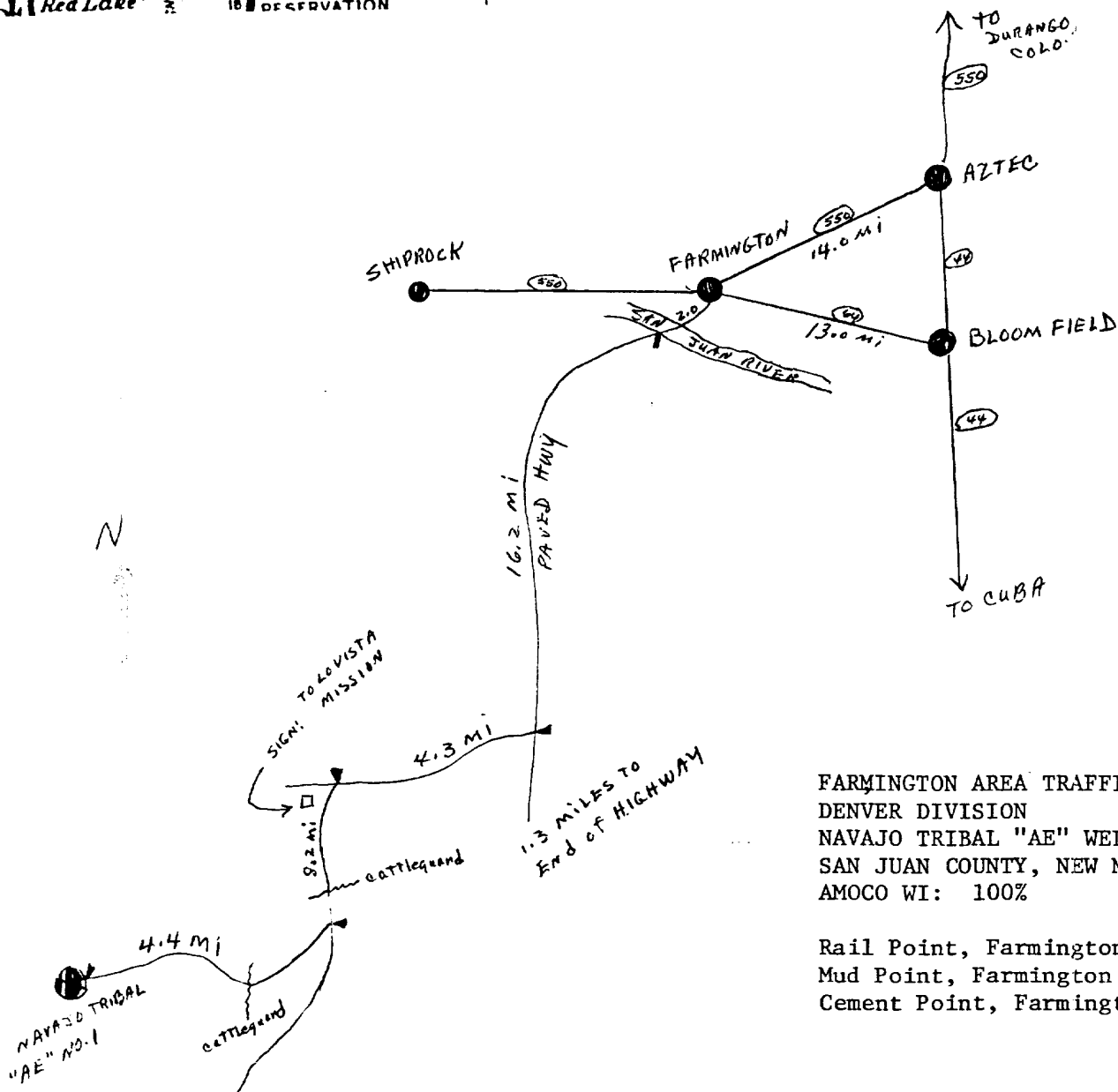
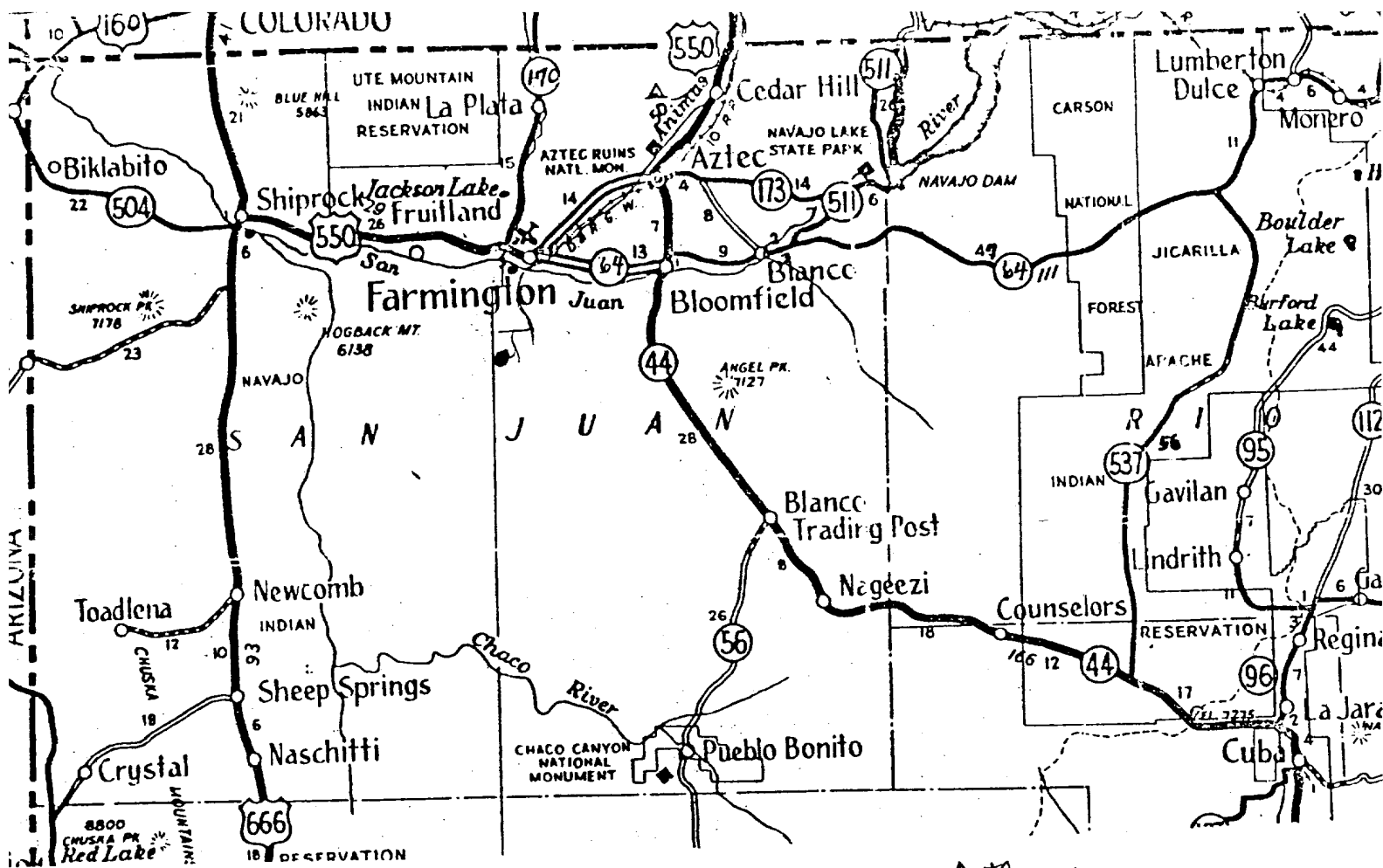
EXHIBIT D-4
OCTOBER 16, 1969

MULTI-POINT SURFACE USE PLAN

NAVAJO TRIBAL "AE" NO. 1
1550' FSL & 990' FEL, SECTION 21, T25N, R14W
SAN JUAN COUNTY, NEW MEXICO

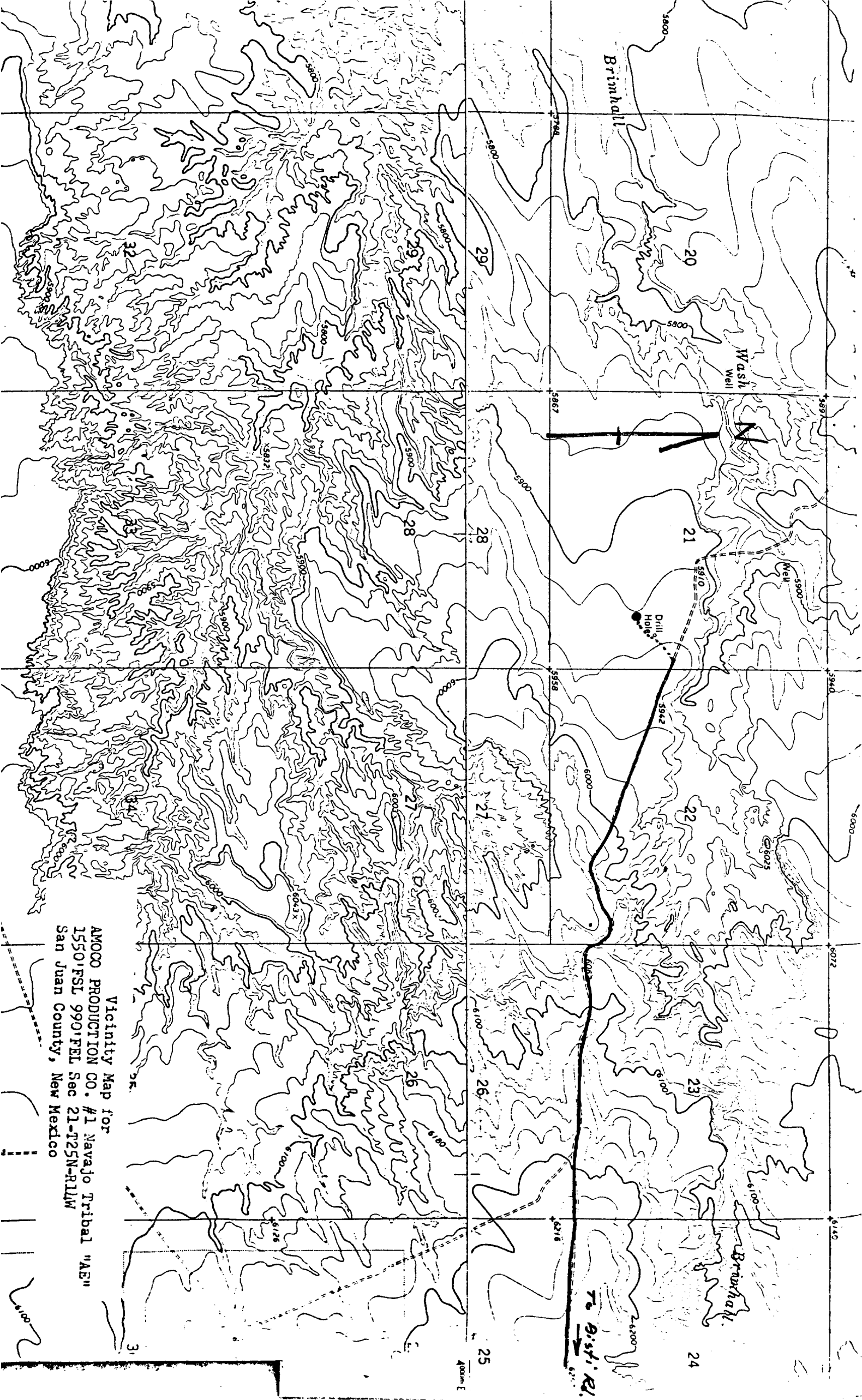
1. The attached road map and sketch show the proposed route to the location and distances from towns.
2. A new access road two-tenths of a mile in length will be built and an existing road 4.2 miles in length will be improved. The road is on flat and sandy terrain.
3. Existing oil and gas wells within a two-mile radius of our proposed well have been spotted on the vicinity map.
4. There are no tank battery facilities located at wells within a one-mile radius of the proposed location.
5. Water will be hauled from the San Juan River a distance of approximately 34 miles.
6. No construction materials will be hauled in for this location. The drilling site is on flat and sandy terrain.
7. A 75' X 75' pit will be built on location to hold all drilling waste. Upon completion, all waste and liquid will be hauled by truck and bladed into existing roads. All other waste will be covered in 75' X 75' pit.
8. There are neither airstrips nor camps in the vicinity.
9. The well site layout, reserve, burn and trash pits are shown on the attached Drill Site Specification Sheet.
10. Restoration of the surface will be accomplished by cleaning up and leveling upon completion of the well. Drilling mud will be hauled away and the reserve pit back filled. Reseeding of the site will be in accordance with instructions from the BIA.
11. The general topography and soil characteristics are a flat and sandy terrain with some native grasses.

Representatives of the U. S. Geological Survey's Farmington Office and Bureau of Indian Affairs Agency will inspect the site. Cultural resources inspection will be conducted by an Archeologist from San Juan College or Salmon Ruins.
12. A Certification Statement by Amoco's Representative is included.

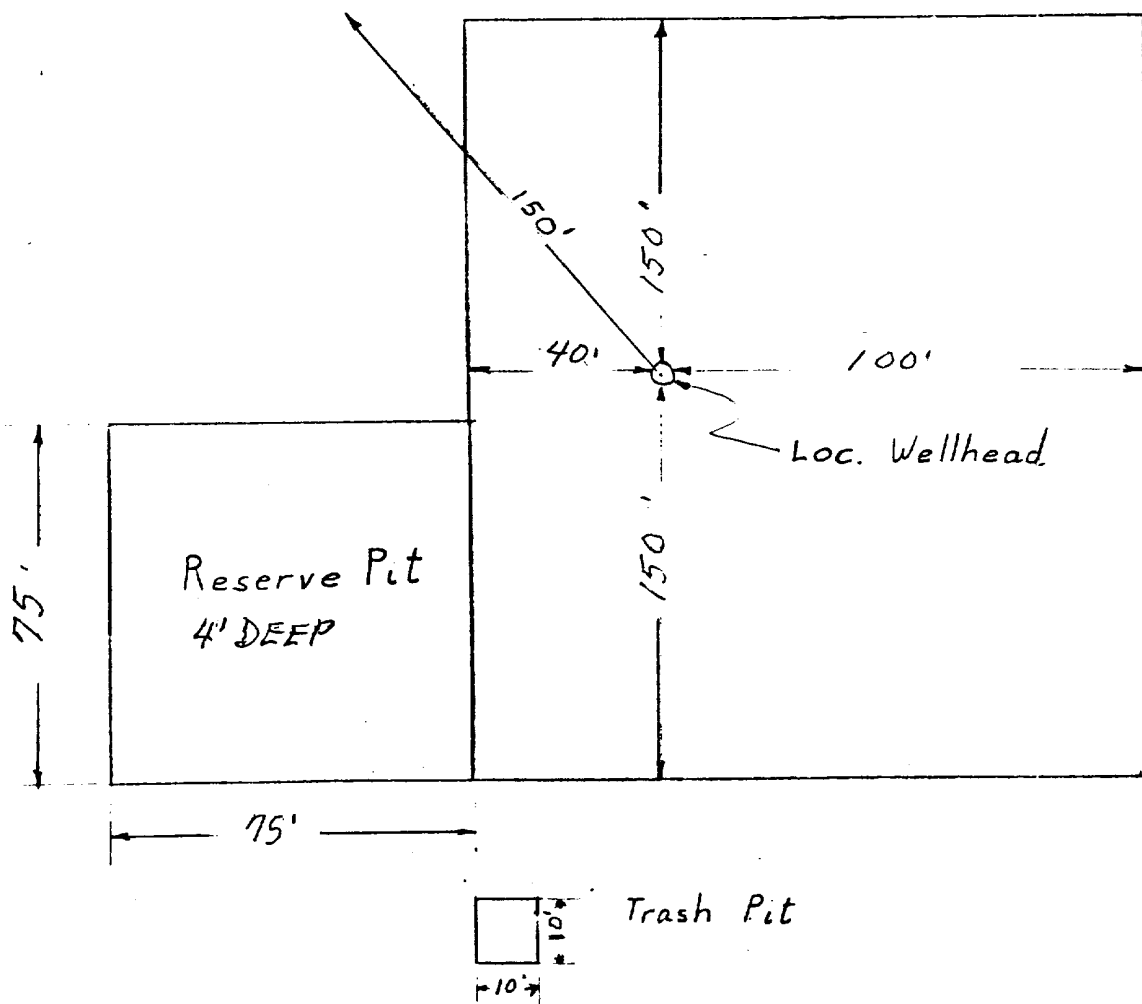
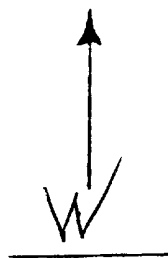
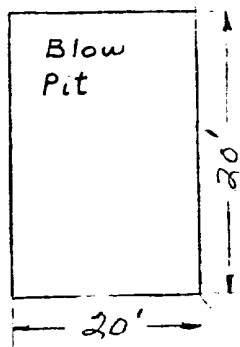


FARMINGTON AREA TRAFFIC SKETCH
DENVER DIVISION
NAVAJO TRIBAL "AE" WELL NO. 1
SAN JUAN COUNTY, NEW MEXICO
AMOCO WI: 100%

Rail Point, Farmington - 36 miles
Mud Point, Farmington - 36 miles
Cement Point, Farmington - 36 miles



Vicinity Map for
AMOCO PRODUCTION CO. #1 Navajo Tribal "AE"
1550'FSL 990'FEL Sec 21-T25N-R14W
San Juan County, New Mexico



APPROXIMATELY 1.2 Acres

Amoco Production Company	SCALE: NONE
DRILLING LOCATION SPECS	
NAVAJO TRIBAL "AE" NO. 1	DRG. NO.

NAVAJO TRIBAL "AE" NO. 1
1550' FSL & 990' FEL, SECTION 21, T25N, R14W
SAN JUAN COUNTY, NEW MEXICO

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 be best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by AMOCO PRODUCTION COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

May 5, 1978
Date

L. O. Speer, Jr. - Area Supt.
Name and Title

Amoco Production Company's Representative:

L. O. Speer, Jr.
Phone: Office: 505-325-8841; Home: 505-325-3247
Address: 501 Airport Drive
Farmington, NM 87401