

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

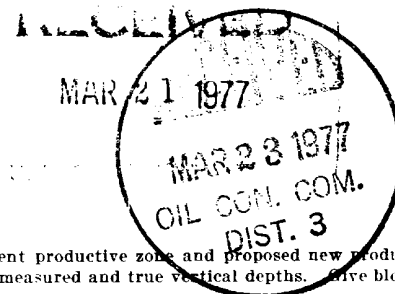
## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-0733	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo Tribe	
2. NAME OF OPERATOR AMOCO PRODUCTION COMPANY		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR 501 Airport Drive, Farmington, New Mexico 87401		8. FARM OR LEASE NAME Navajo Tribal "P"	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1980' FSL, 660' FEL, Section 5, T-26-N, R-18-W At proposed prod. zone		9. WELL NO. 8	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 23 miles south of Shiprock, New Mexico		10. FIELD AND POOL, OR WILDCAT Tocito Dome Penn. "D"	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	660'	16. NO. OF ACRES IN LEASE 2544'	17. NO. OF ACRES ASSIGNED TO THIS WELL 160
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	6875'	19. PROPOSED DEPTH 6530'	20. ROTARY OR CABLE TOOLS Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5718' est. GL		22. APPROX. DATE WORK WILL START* April, 1977	

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/4"	new 13-3/8"	54.5#/J-55	100'	100 sx (circ)
11"	new 8-5/8"	28# /H-40	1500'	500 sx (circ)
7-7/8"	new 5-1/2"	15.50#/J-55	6530'	1000 sx (circ - 2 stages)

Amoco Production Company proposes to drill the subject well to test the Pennsylvanian Formation. Intermediate casing will be set across the Morrison water zones. The well will be drilled through the Pennsylvanian and completed from open hole logs. A copy of all logs will be furnished to your office upon completion.

Attached is a Development Plan required by NTL-6.



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 <u>[Signature]</u>	TITLE <u>Area Engineer</u>	DATE <u>March 21, 1977</u>
(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

## 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 slide, 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.

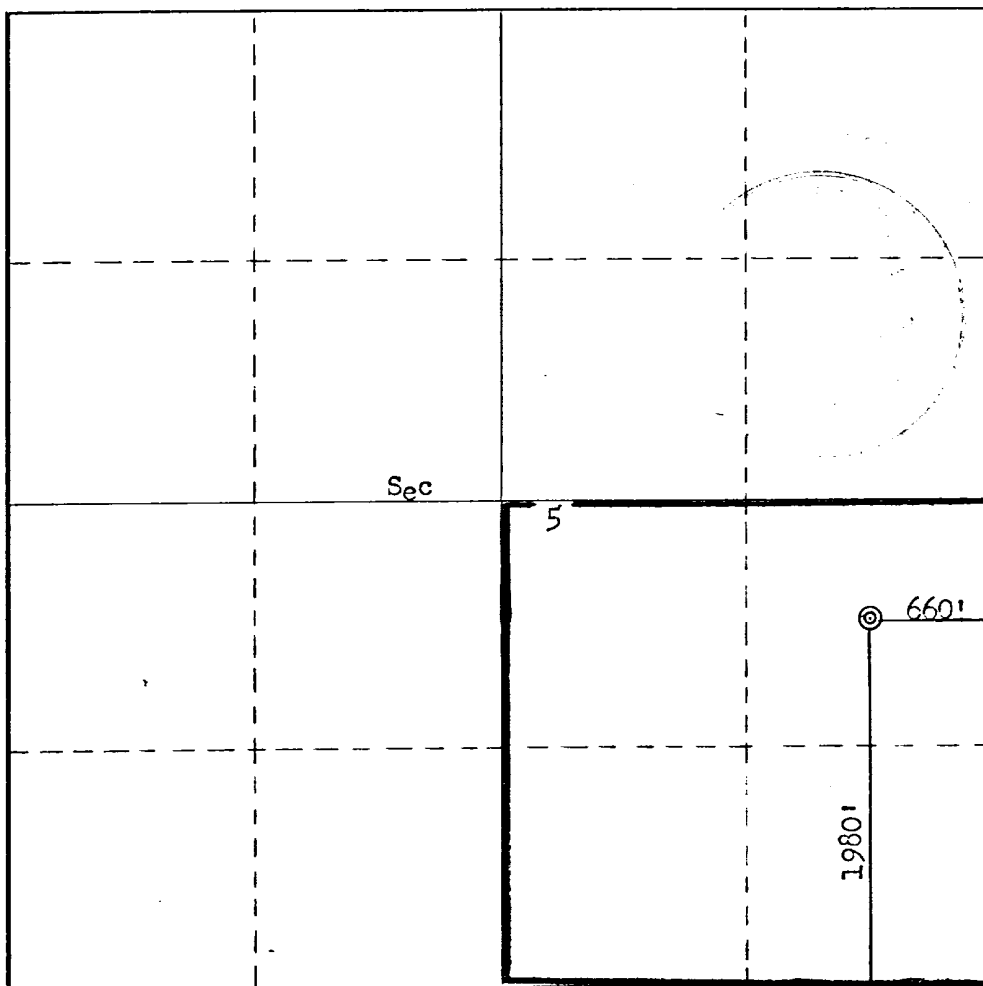
Operator <b>Amoco Production Company</b>			Lease <b>Navajo Tribal P</b>		Well No. <b>8</b>
Unit Letter <b>I</b>	Section <b>5</b>	Township <b>26N</b>	Range <b>18W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1980</b> feet from the <b>South</b> line and <b>660</b> feet from the <b>East</b> line					
Ground Level Elev. <b>5718 est.</b>	Producing Formation <b>Penn. "D"</b>		Pool <b>Tocito Dome Penn. "D"</b>	Dedicated Acreage: <b>160</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 \_\_\_\_\_

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.

*H. D. Montgomery*  
Name  
**H. D. Montgomery**

Position  
**Area Engineer**

Company  
**AMOCO PRODUCTION COMPANY**

Date  
**March 21, 1977**

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 8, 1977**

Registered Professional Engineer and/or Land Surveyor

**Fred B. Kerr Jr.**

Certificate No.  
**3950**

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

NAVAJO TRIBAL "P" NO. 8  
1980' FSL, 660' FEL, SECTION 5, T-26N, R-18W  
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 the 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.

March 21, 1977

Date

*Phil Montgomery* Area Engineer  
Name and Title

DEVELOPMENT PLAN  
 NAVAJO TRIBAL "P" NO. 8  
 1980' FSL, 660' FEL, SECTION 5, T-26N, R-18W  
 SAN JUAN COUNTY, NEW MEXICO

The terrain where this well is to be located is flat with very sparse vegetation consisting of grasses. The soil is very sandy. There is evidence of grazing and small animal life. Access will be via a small existing trail to the east of the well. Only about 30 feet of new road will be made. Geological name of the surface formation is Gallup Sandstone. No construction materials will be used for building the location. No location cut will be required. Verbal approval of the drill site has been obtained from Mr. Leonard Feller of the Bureau of Indian Affairs, Mr. Don Miller and Mr. Bill Hoppe of the United States Geological Survey, and Mr. Charles Morrison of the Navajo Tribe. Archeological clearance has been granted by Ms. Pat Zarnowski, Archeologist.

Water will be hauled from Amoco's Navajo Tribal "P" No. 1 water well, about 1.5 miles. Drilling fluid to 1500' will be native mud and from 1500' to 6550' (TD) will be low solids mud. Upon completion the location will be cleaned up and leveled. Drilling mud and water will be hauled away and the reserve pit backfilled. Attached is the BLM seeding plan to be followed for this well. In addition, all surface equipment will be painted according to BLM requirements.

There are neither airstrips nor camps in the vicinity.

The estimated tops of important geological formations bearing hydrocarbons are:

<u>Formation</u>	<u>Depth</u>	<u>Elevation</u>
DeChelly	3770'	+1963'
Cutler	4360'	+1374'
Penn "D" Porosity	6370'	+ 640'

Estimated KB elevation: 5730'

<u>Est. Depth</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Hole Size</u>	<u>Sacks Cement - Type</u>
100'	13-3/8"	61#	17-1/4"	100 - Class "B", 2% CaCl <sub>2</sub> .
1500'	8-5/8"	28#	11"	450 - Class "B", 6% Gel, 2# Med. Tuf Plug/sx.
				50 - Class "B", 2% CaCl <sub>2</sub> .
6550'	5-1/2"	15.5#	7-7/8"	900 - Class "B", 6% Gel, 2# Med. Tuf Plug/sx, 0.2% friction reducer.
				100 - Class "B", 6% Gel.

Amoco's standard blowout prevention will be employed, see attached drawing for blowout preventer design.

Amoco plans to run the following logs: Induction-Electric from 1500' - TD; Sonic Gamma Ray from 4360' - TD. No drill stem tests will be taken. Conventional core will be cut from 6230-6280' in the Penn. "D".

In the past, drilling in this area has shown that no abnormal pressure, temperatures or hydrocarbon gas will be encountered.

Our proposed starting date is April, 1977, and a four-week operation is anticipated.

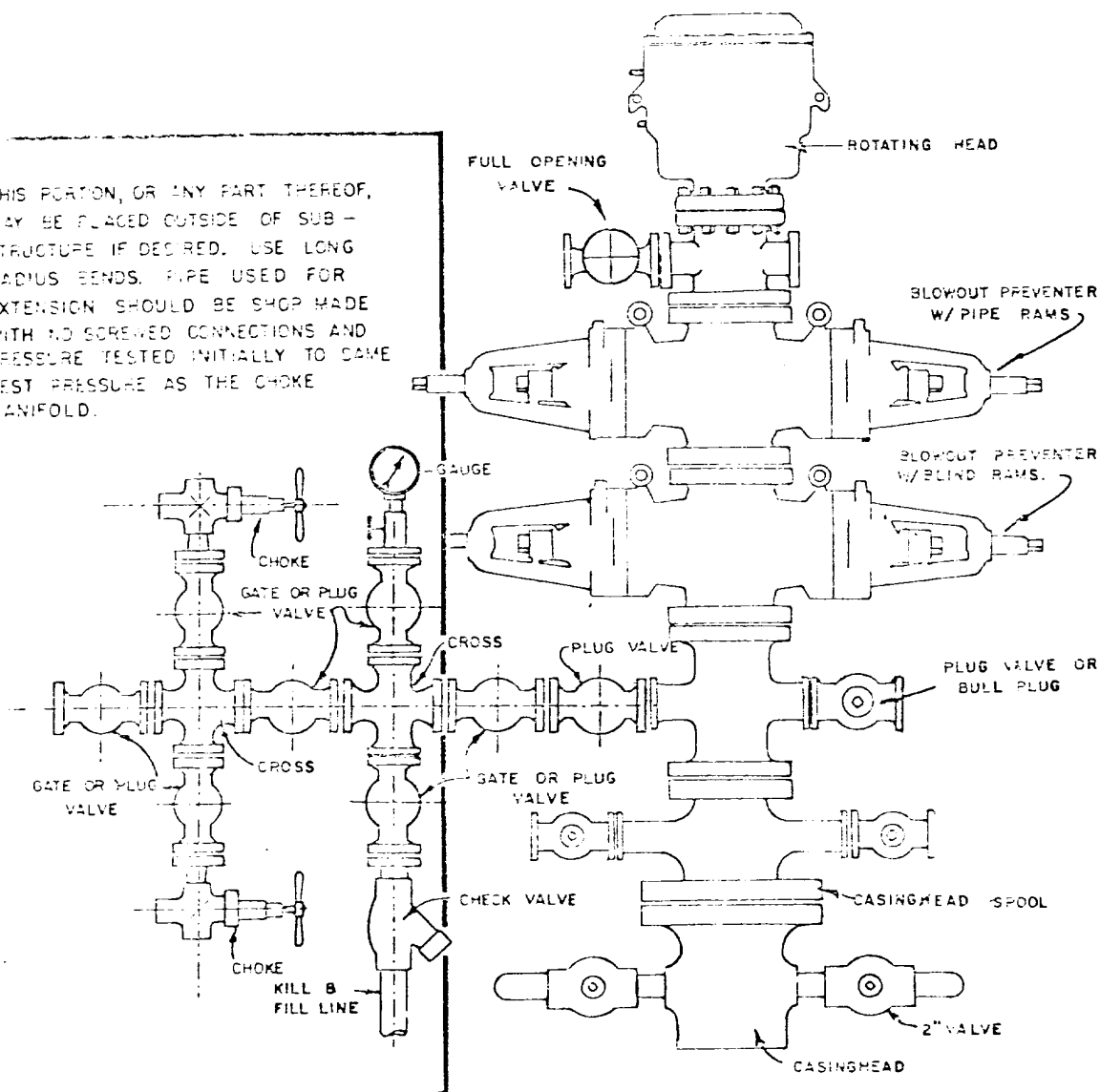
BLM SEEDING REQUIREMENTS  
IN THE FARMINGTON RESOURCE AREA

MIXTURE 3

SPECIES TO BE PLANTED IN POUNDS PURE-LIVE-SEED PER ACRE:

FOURWING SALTBUSH (dewinged) ( <i>Atriplex conescens</i> )	1/2 lb.
SAND DROPSEED ( <i>Sporobolus cryptandrus</i> )	1-1/2 lbs.
WINTERFAT ( <i>Eurotia lanata</i> )	1/2 lb.
ALKALI SACATON ( <i>Sporobolus airoides</i> )	1-1/2 lbs.
SHADSCALE ( <i>Atriplex confertifolia</i> )	3/4 lb.

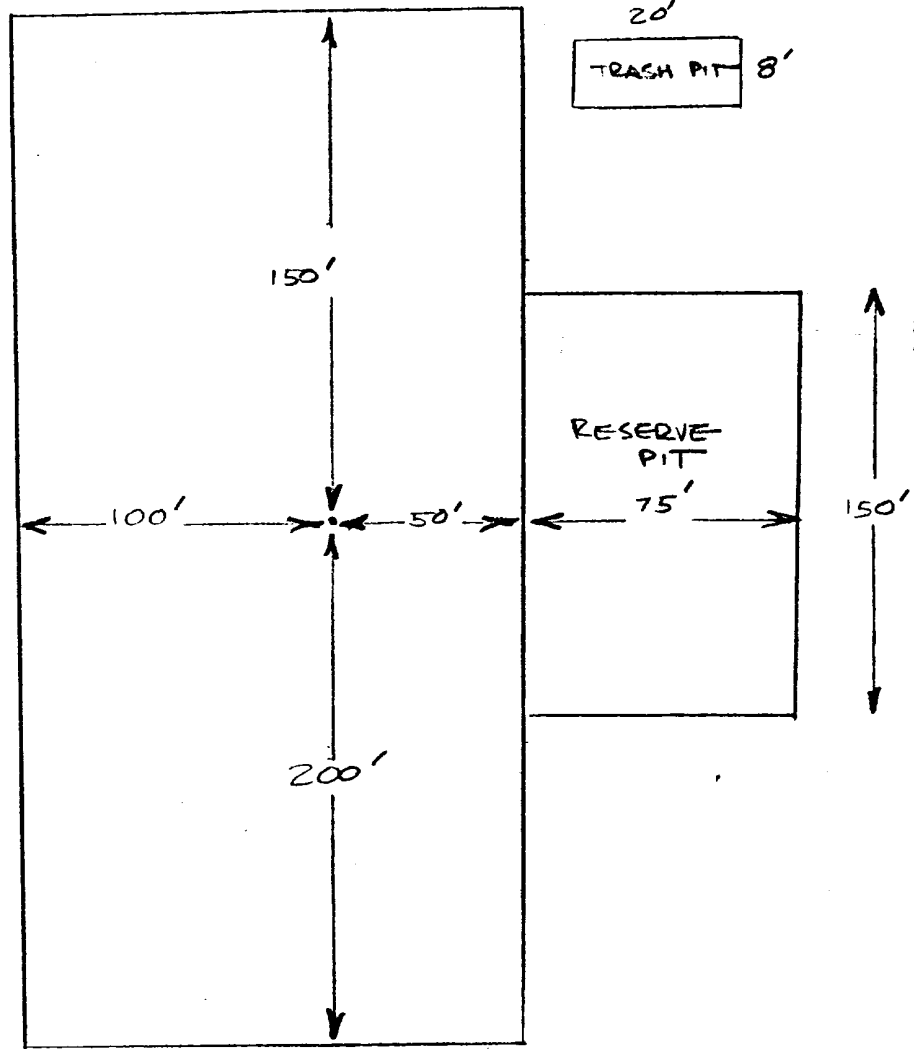
THIS PORTION, OR ANY PART THEREOF, MAY BE PLACED OUTSIDE OF SUB-STRUCTURE IF DECIDED. USE LONG RADIUS BENDS. PIPE USED FOR EXTENSION SHOULD BE SHOP MADE WITH NO SCREWED CONNECTIONS AND PRESSURE TESTED INITIALLY TO SAME TEST PRESSURE AS THE CHOKE MANIFOLD.



BLOWOUT PREVENTER HOOKUP



N →



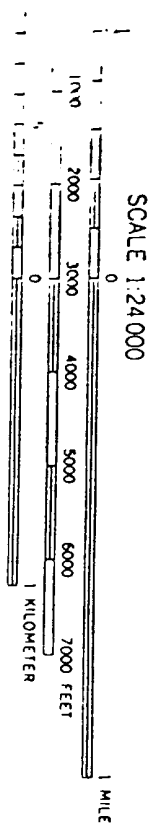
Amoco Production Company

SCALE: ~~NONE~~

NAVAJO TRIBAL "P" NO. 8 - LOCATION SKETCH

ORG.  
NO.

CONTOUR INTERVAL 20 FEET  
DATUM IS MEAN SEA LEVEL

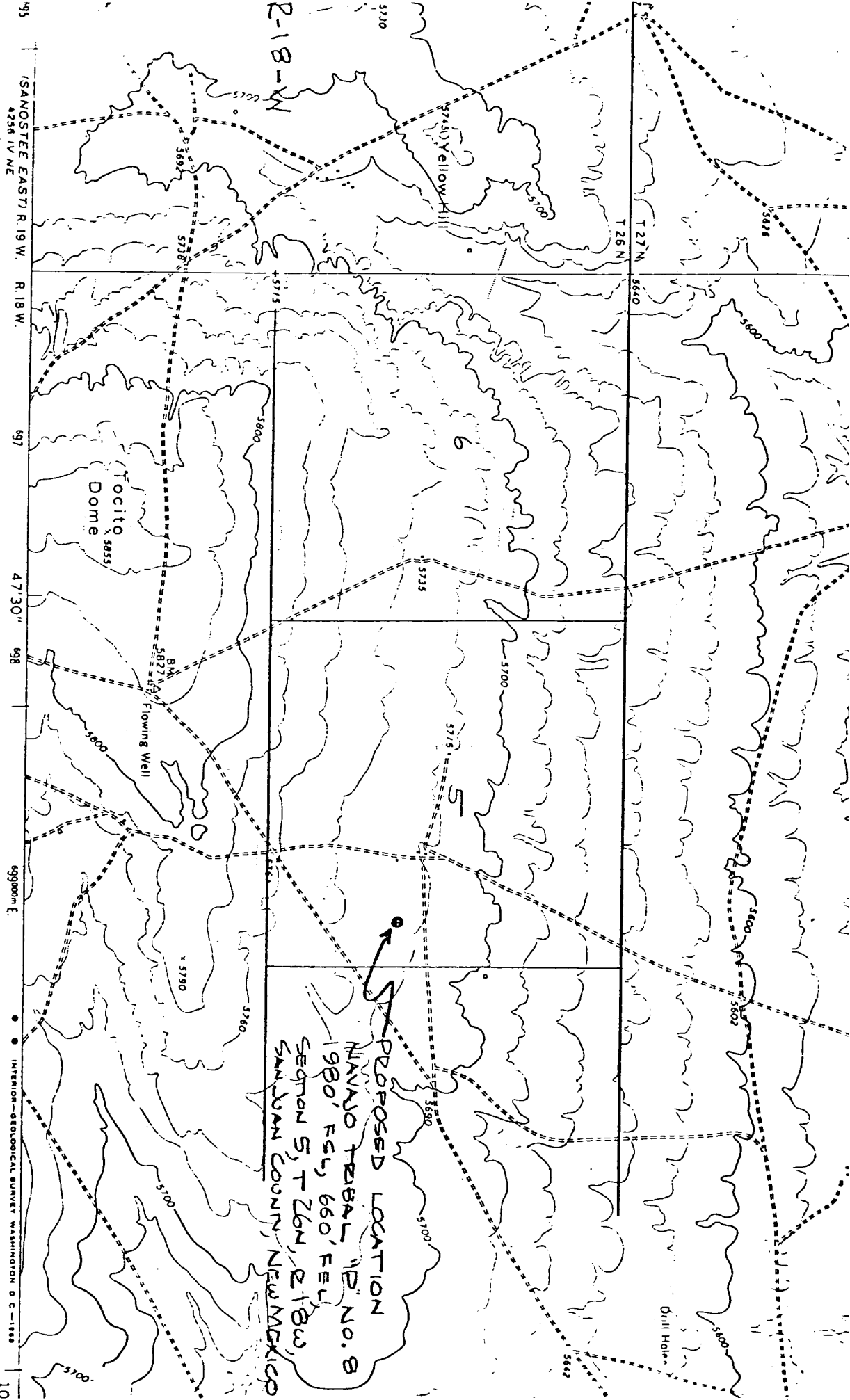


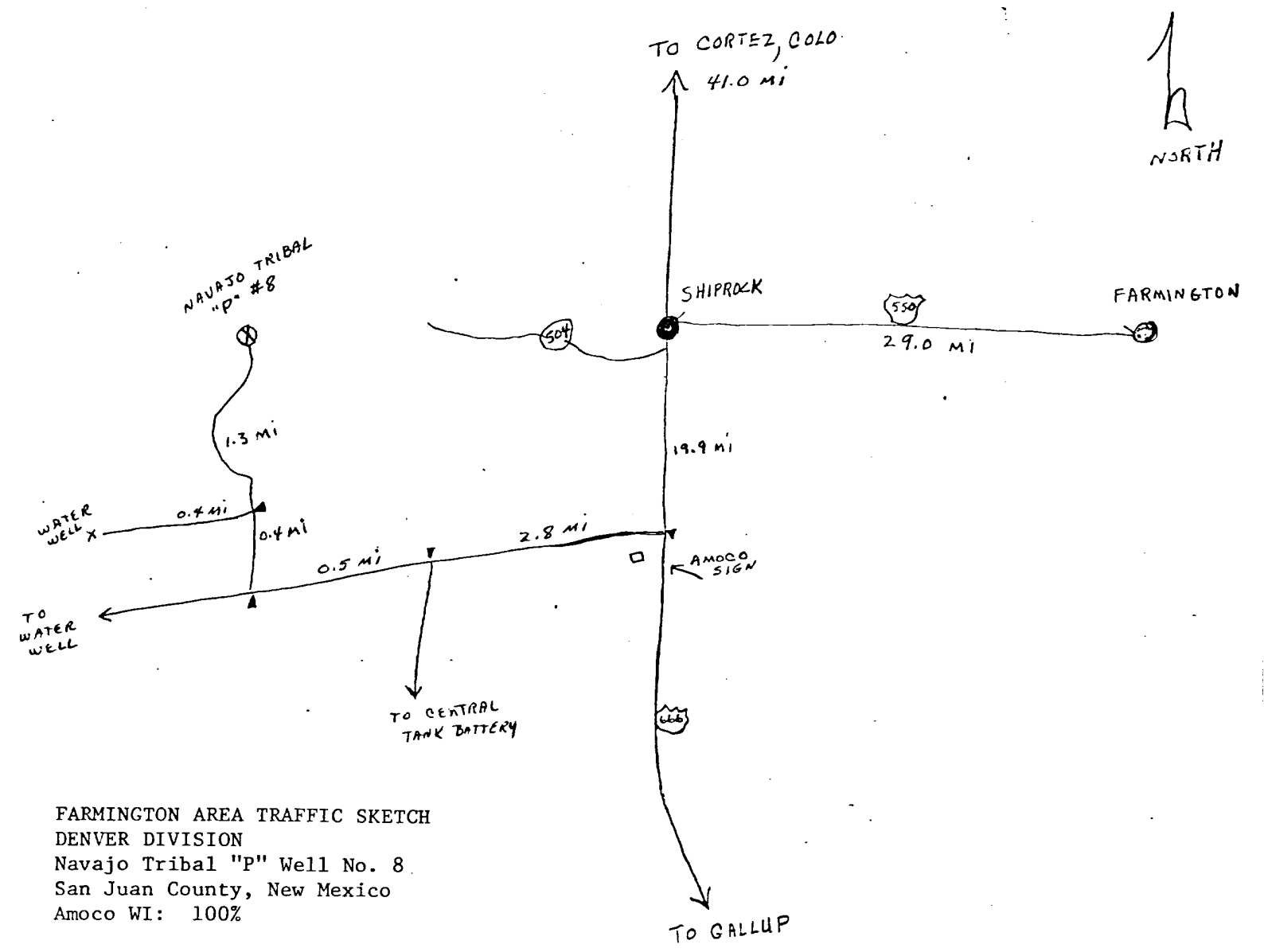
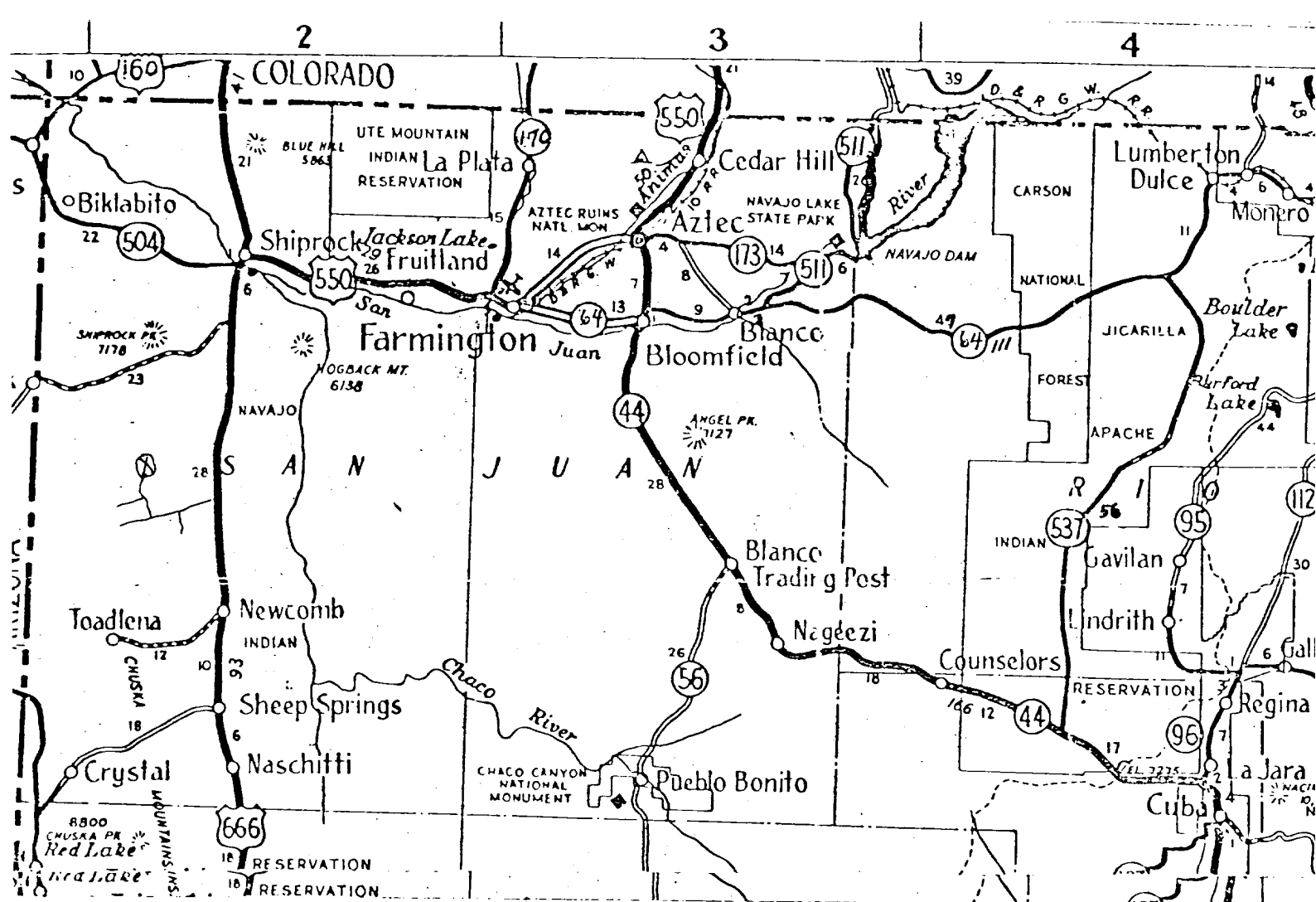
Light-duty

## ROAD CLASSIFICATION

Unimproved dirt

YELLOW HILL, N. MEX  
SEA SHIP ROCK IS. QUADRANGLE  
N 2630—W 10845 7 E





FARMINGTON AREA TRAFFIC SKETCH  
 DENVER DIVISION  
 Navajo Tribal "P" Well No. 8  
 San Juan County, New Mexico  
 Amoco WI: 100%

Rail Point, Farmington - 53.9 miles  
 Mud point, Farmington - 53.9 miles  
 Cement Point, Farmington - 53.9 miles