

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-039-21274

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
AMOCO PRODUCTION COMPANY

3. ADDRESS OF OPERATOR
301 Airport Drive, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface
1850' FWL & 790' FWL, Section 3, T-26-N, R-4-W
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
15.2 miles south southeast of Gobernador, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) **790**

16. NO. OF ACRES IN LEASE **2567.94**

17. NO. OF ACRES ASSIGNED TO THIS WELL **160 161.14**

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. **1600**

19. PROPOSED DEPTH **3800'**

20. ROTARY OR CABLE TOOLS **Rotary**

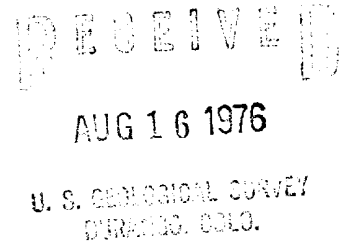
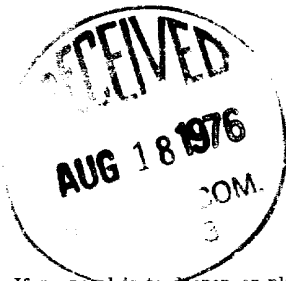
21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6963' GL est.

22. APPROX. DATE WORK WILL START*
September 20, 1976

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#	250'	175 sx
6-3/4"	4-1/2"	9.5#	3950'	650 sx

The subject well will be drilled through the Pictured Cliffs formation using rotary tools with a low solids non-dispersed mud system. Completion design will be based on open hole logs. A diagram and acreage plat are attached. The acreage is dedicated to Southern Union Gas. Also 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 [Signature] TITLE Area Engineer DATE August 13, 1976

(This space for Federal or State office use)
 PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:
[Signature] [Signature]

*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.

MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

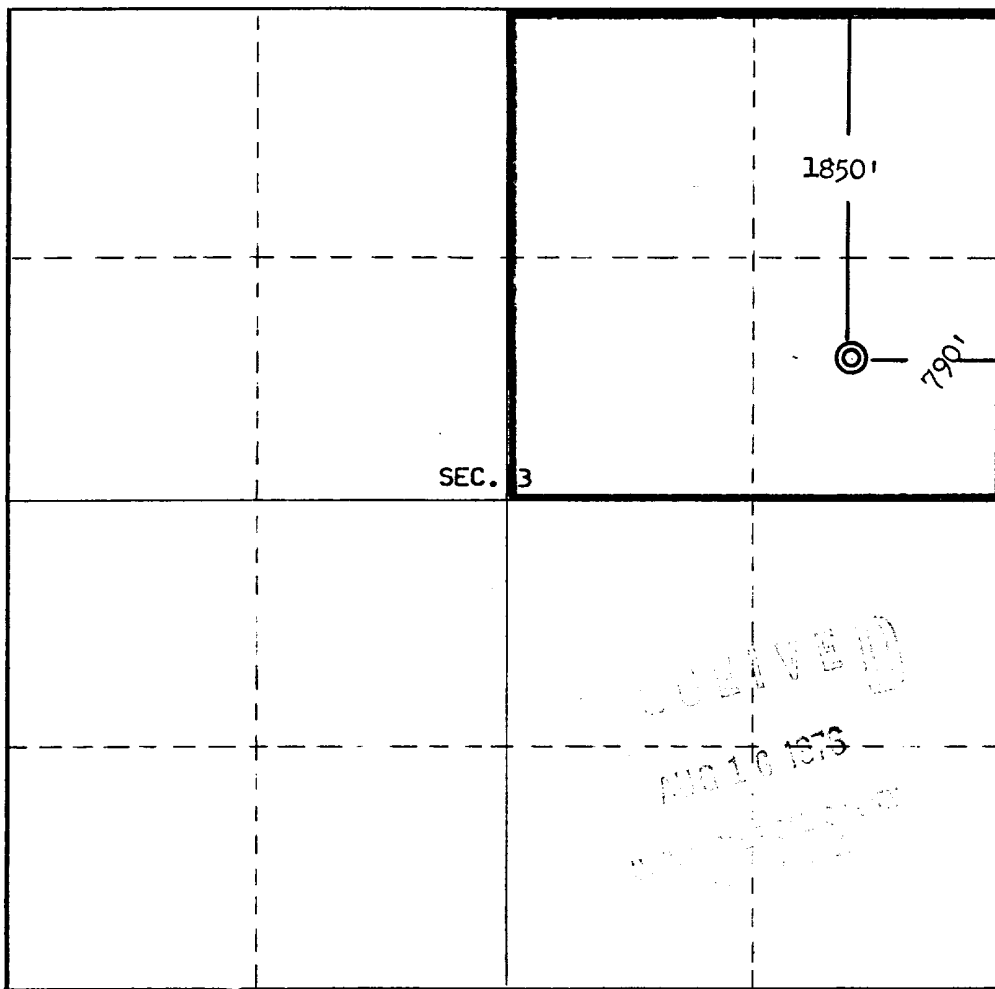
All distances must be from the outer boundaries of the Section.

Operator Amoco Production Company		Lease Jicarilla Apache 102		Well No. 17
Unit Letter H	Section 3	Township 26 North	Range 4 West	County Rio Arriba
Actual Footage Location of Well: 1850 feet from the North line and 790 feet from the East line				
Ground Level Elev. 6963 est.	Producing Formation Pictured Cliffs	Pool Tapacito Pictured Cliffs	Dedicated Acreage: 160 161.14 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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 _____

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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

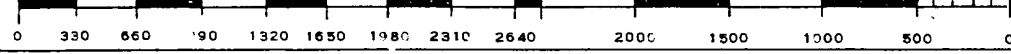
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

H. D. Montgomery
Name
H. D. Montgomery
Position
Area Engineer
Company
AMOCO PRODUCTION COMPANY
Date
August 12, 1976

REGISTERED LAND SURVEYOR
I certify that the location of this plat was plotted from field notes of a survey made by me or under my supervision, and that the same are true and correct to the best of my knowledge and belief.
ERNEST V. ECHOHAWK

Date Surveyed
July 29, 1976
Registered Professional Engineer and/or Land Surveyor

E. V. Echohawk
Certificate No. **3602**
E. V. Echohawk LS



DEVELOPMENT PLAN
 JICARILLA APACHE 102 NO. 17
 1850' FNL & 790' FEL, SECTION 3, T-26-N, R-4-W
 RIO ARRIBA COUNTY, NEW MEXICO

The proposed site for drilling is located on sandy clay soil with the vegetation being primarily brush. Juniper, Pinon and Ponderosa Pine are located on the perimeter of the location. These trees, however, will not be disturbed. The geologic name of the surface formation is Paleozoic San Jose. Approximately 1000 feet of new road will be constructed to the location from the existing road. Verbal approval of the drill site has been obtained from Mr. Harold Tecube, Jicarilla Apache Tribe; John Keller, U.S.G.S.; and Nancy Hewett, Archaeologist.

Arrangements are being made to haul water from the Tapacito Wash, approximately 5 miles. Drilling fluid to TD will be low solids, non-dispersed drilled mud. Upon completion the location will be cleaned up, leveled and reserve pit backfilled. Attached is the seeding plan to be followed for this well.

There are no airstrips or camps in the vicinity.

The estimated tops of important geological formations bearing hydrocarbons are:

<u>Formation</u>	<u>Depth</u>	<u>Elevation</u>
Kirtland	3065'	+3898'
Fruitland	3240'	+3723'
Pictured Cliffs	3755'	+3208'
Estimated KB Elevation	6976'	

The proposed setting depth of each casing string and type of cement to be used for each is as follows:

<u>Est. Depth</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Hole Size</u>	<u>Sx Cmt</u>	<u>Type Cement</u>
250'	8-5/8"	24#	12-1/4"	175	Class "B" 2% CaCl ₂ .
3800'	4-1/2"	9.5#	6-3/4"	600	Class "B" 2% Gel,
				50	Class "B" Neat.

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 surface casing to TD and Density-Gamma Ray from 1500' to TD. No cores or Drill Stem Tests will be taken.

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 ALBUQUERQUE, N.M.

Our experience with drilling in this area has shown that no abnormal pressure, temperatures nor hydrocarbon gas will be encountered.

Our proposed starting date is September 20, 1976, and a two week operation is anticipated.

SEEDING PLAN

1. TIME:

All seeding will take place between September 20 and October 31.

2. EQUIPMENT:

Seeding will be done with a disc-type drill with two boxes for various seed sizes. The drill rows will be eight to ten inches apart. The seed will be planted not less than one-half inch deep or more than one inch deep. The seeder will be followed with a drag, packer, or roller to insure uniform coverage of the seed, and adequate compaction. Drilling will be done on the contour where possible, not up and down the slope. Where slopes are too steep for contour drilling, a "cyclone" hand seeder or similar broadcast seeder will be used. Seed will then be covered to the depth described above by whatever means is practical.

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

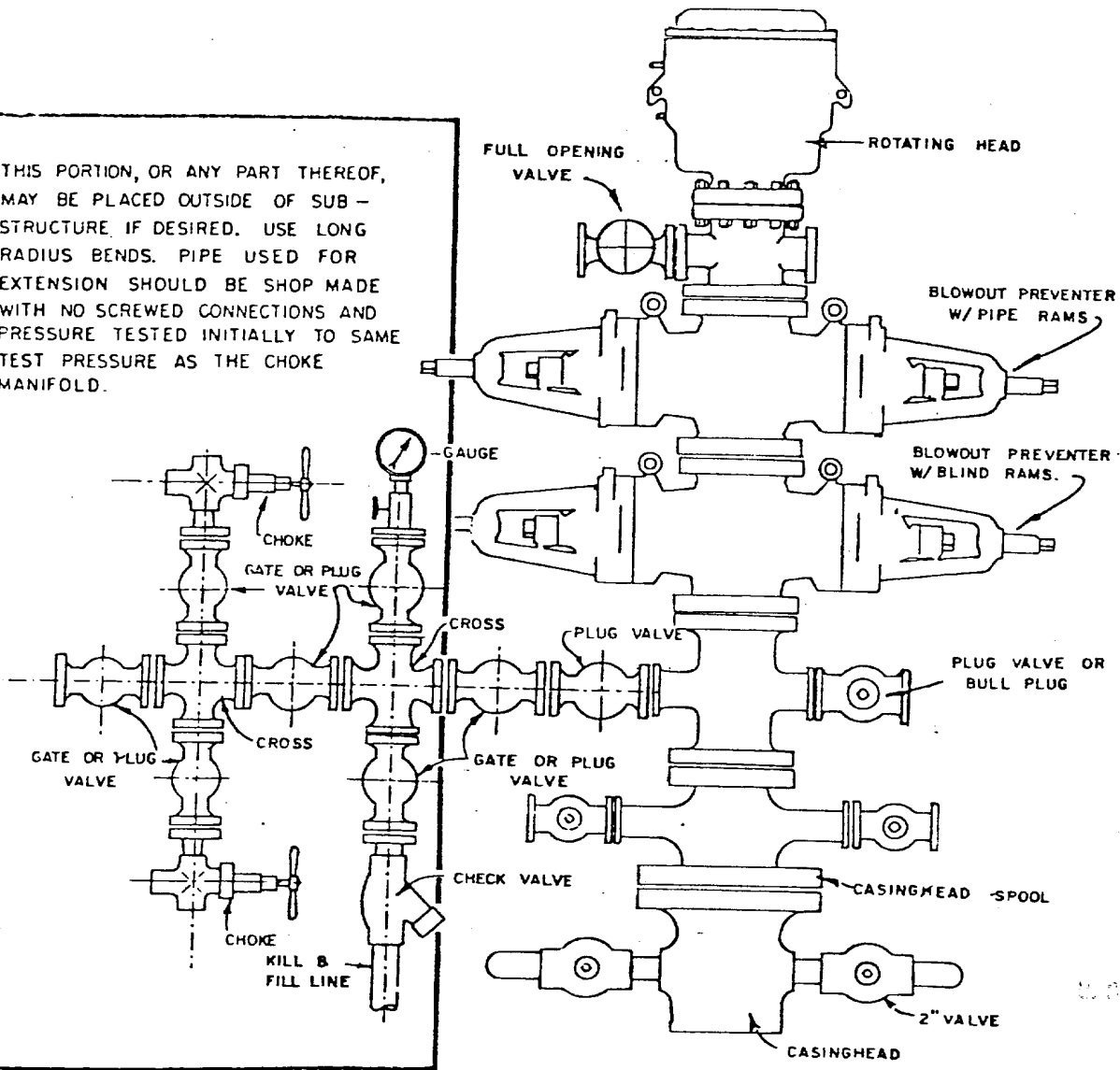
CRESTED WHEATGRASS	0.71 lbs.
RUSSIAN WILD RYE	0.86 lbs.
ORCHARD GRASS	0.298 lbs.
PERENNIAL RYE GRASS	0.57 lbs.
WESTERN WHEAT GRASS	1.43 lbs.
SMOOTH BROME	1.14 lbs.
INTERMEDIATE WHEAT	0.91 lbs.
PUBESCENT WHEAT GRASS	1.09 lbs.

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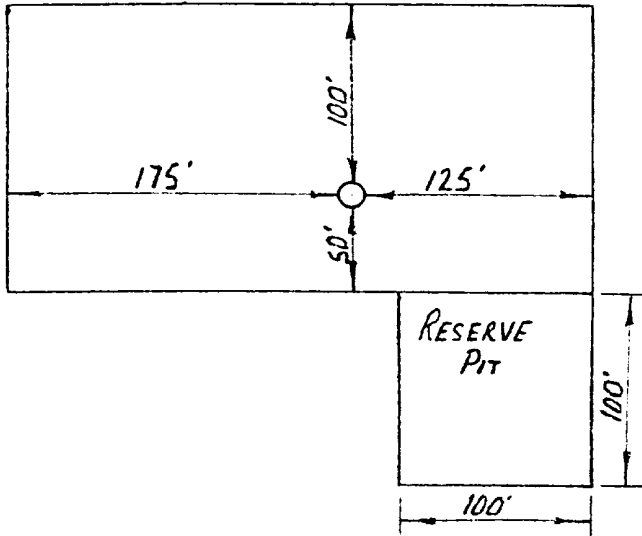
U. S. NATIONAL BUREAU OF
PLANT INDUSTRY

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

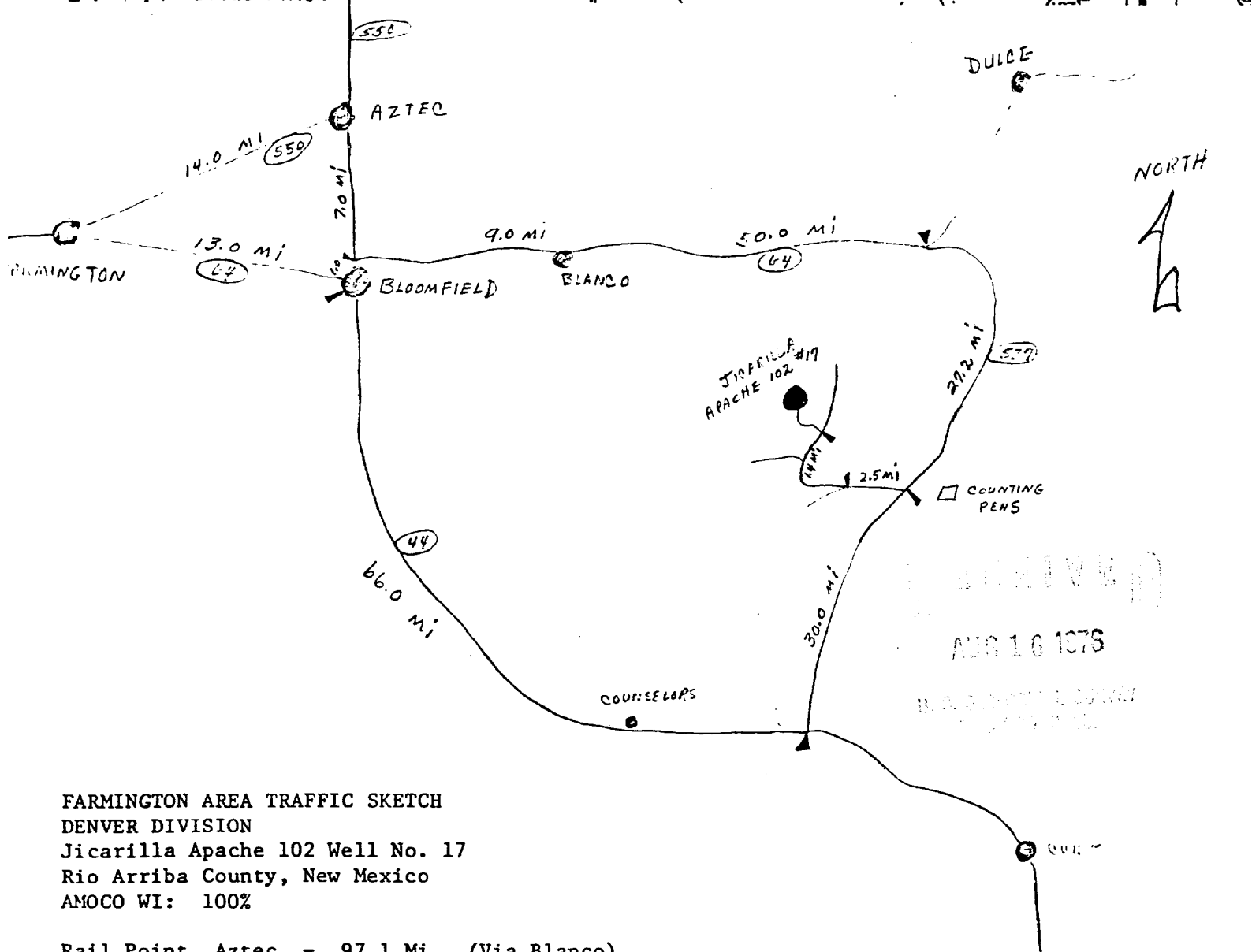
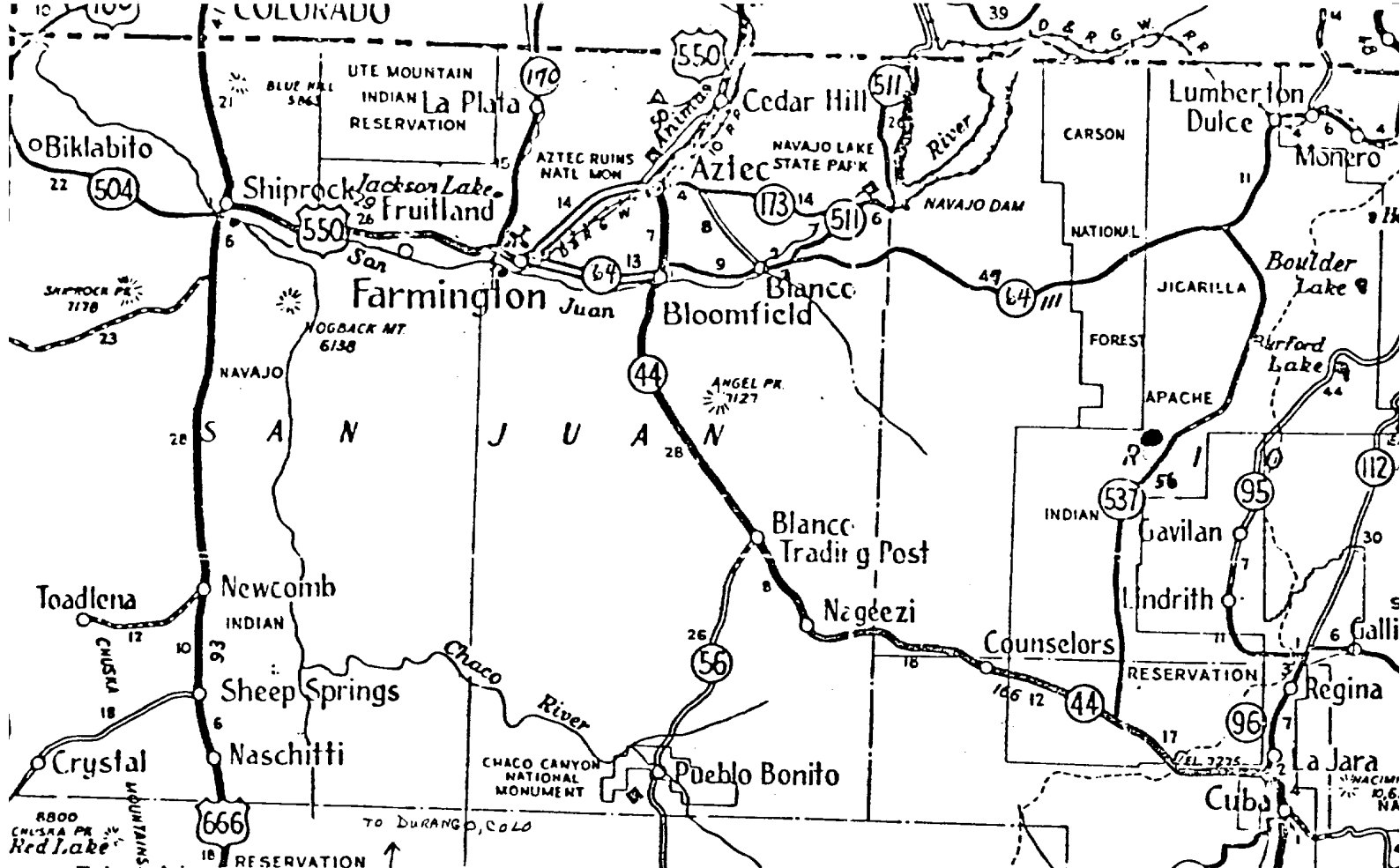
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 WASHINGTON, D.C.



LOCATION DIAGRAM
 LICARILLA APACHE 102 # 17
 1850 FNL. 790 FEL. SEC 3. 26N. 4W

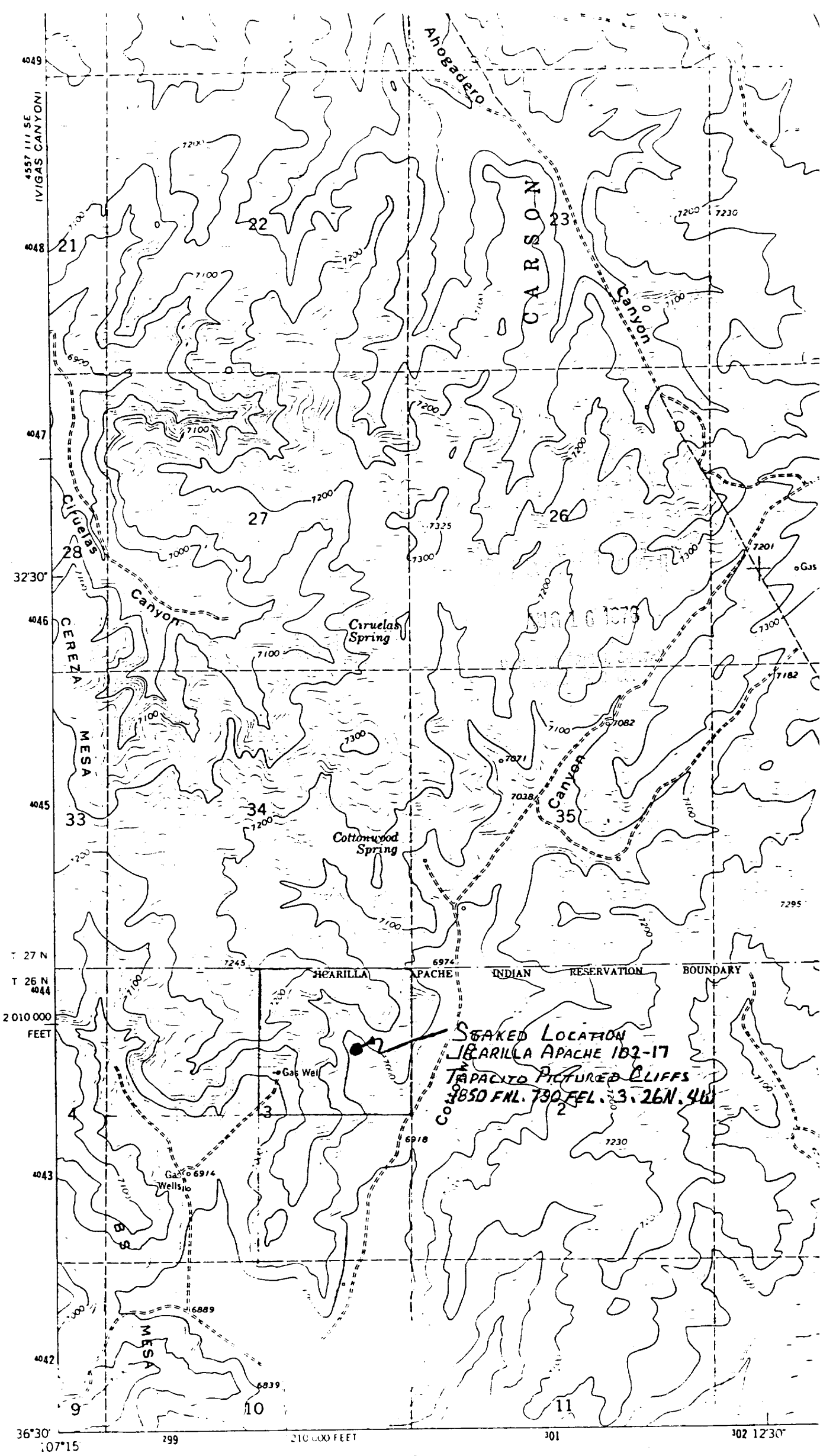
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 AMOCO PRODUCTION COMPANY

Amoco Production Company				
DR.	CK.	AP.	AP.	NO.
SCALE 1" = 100'				
DATE 8-11-76				



FARMINGTON AREA TRAFFIC SKETCH
 DENVER DIVISION
 Jicarilla Apache 102 Well No. 17
 Rio Arriba County, New Mexico
 AMOCO WI: 100%

Rail Point, Aztec - 97.1 Mi. (Via Blanco)
 Mud Point, Aztec - 97.1 Mi. "
 Cement Point, Farmington - 104.1 Mi. (Via Blanco)



Mapped, edited, and published by the Geological Survey
 Central, USGS and USC&GS

Topograph. by photogrammetric methods from aerial
 photography, 1963 and 1962. Contour interval 100 feet.



TAPACITO POINT
 107°15' 111 SE