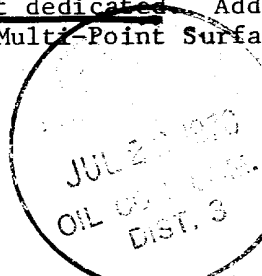


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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. SE 079758	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR AMOCO PRODUCTION COMPANY				7. UNIT AGREEMENT NAME San Juan 29-4 Unit	
3. ADDRESS OF OPERATOR 501 AIRPORT DRIVE, FARMINGTON, NM 87401				8. FARM OR LEASE NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 2180' FSL x 1580' FEL, Section 15, T29N, R4W At proposed prod. zone same				9. WELL NO. 23	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approximately 7 miles east of Gobernador, New Mexico				10. FIELD AND ZONE OR WILDCAT East Blanco Pictured Cliffs	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1580'				11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA NW/4 SE/4 Sec. 15, T29N, R4W	
16. NO. OF ACRES IN LEASE 2558.9				12. COUNTY OR PARISH 13. STATE Rio Arriba New Mexico	
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. First Well 4470'	
19. PROPOSED DEPTH 4470'				20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7401'				22. APPROX. DATE WORK WILL START* Within 90 days	
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#	350'	250 sx	
7-7/8"	4-1/2"	9.5#	4470'	1015 sx	

Amoco proposes to drill the above well to develop the East Blanco Pictured Cliffs Field more thoroughly. The well will be drilled through the Pictured Cliffs formation using Rotary tools and drilling mud. Completion design will be based on open hole logs. A diagram and acreage plat are attached. A copy of all logs will be filed with your office on completion. The gas from this well is not dedicated. Additional information required by NTL-6 for the application to drill and a Multi-Point Surface Use Plan are attached.



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>J. L. Knobel</u> TITLE <u>Area Engineer</u> DATE <u>July 26, 1978</u>	
(This space for Federal or State office use)	
PERMIT NO. _____	APPROVAL DATE _____
APPROVED BY <u>ok Frank</u> TITLE _____	DATE <u>JUL 27 1978</u>
CONDITIONS OF APPROVAL, IF ANY:	

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*See Instructions On Reverse Side

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NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-124
Effective 1-1-65

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

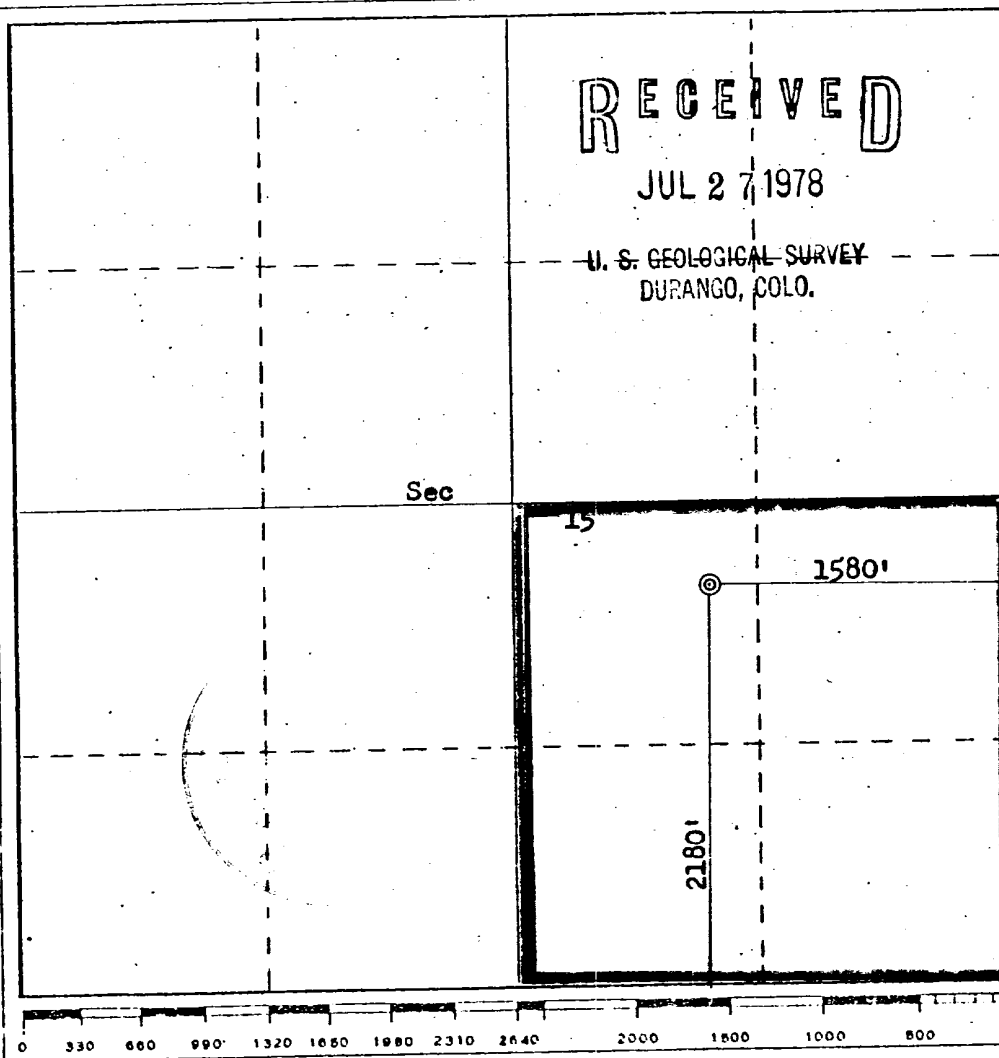
Operator AMOCO PRODUCTION COMPANY			Lease San Juan 29-4 Unit		Well No. 23
Unit Letter J	Section 15	Township 29N	Range 4W	County Rio Arriba	
Actual Footage Location of Well: 2180 feet from the South line and 1580 feet from the East line					
Ground Level Elev. 7401	Producing Formation Pictured Cliffs		Pool Willcat El Blanco Pictured Cliffs	Dedicated Acreage: 160 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.

Name
J. L. KRUPKA
Position
AREA ENGINEER
Company
AMOCO PRODUCTION COMPANY
Date
JULY 18, 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
July 13, 1978

Registered Professional Engineer
and Land Surveyor



SUPPLEMENTAL INFORMATION TO FORM 9-331C
REQUIRED BY NTL-6
SAN JUAN 29-4 UNIT WELL NO. 23
2180' FSL & 1580' FEL, SECTION 15, T-29-N, R-4-W
RIO ARriba COUNTY, NEW MEXICO

The geologic name of the surface formation is the Tertiary San Jose. The estimated tops of important geological formations bearing hydrocarbons are:

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Pictured Cliffs	4200'	+3201'
Total Depth	4470'	

Estimated KB elevation is 7414'.

The casing program to be used will include all new casing:

<u>EST. DEPTH</u>	<u>CSG. SIZE</u>	<u>WEIGHT</u>	<u>HOLE SIZE</u>	<u>SACKS CEMENT</u>	<u>-</u>	<u>TYPE</u>
350'	8-5/8"	24#	12-1/4"	250 - Class "B" 2% CaCl ₂ .		
4470'	4-1/2"	9.5#	7-7/8"	915 - Class "B" 6% Gel,		
				2# Med Tuf Plug/sx.		
				100 - Class "B" Neat.		

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

Amoco will run an Induction Electric Survey from TD to 350' and a Density-Gamma Ray Log from TD to 3000'. No cores or drill stem tests will be taken.

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

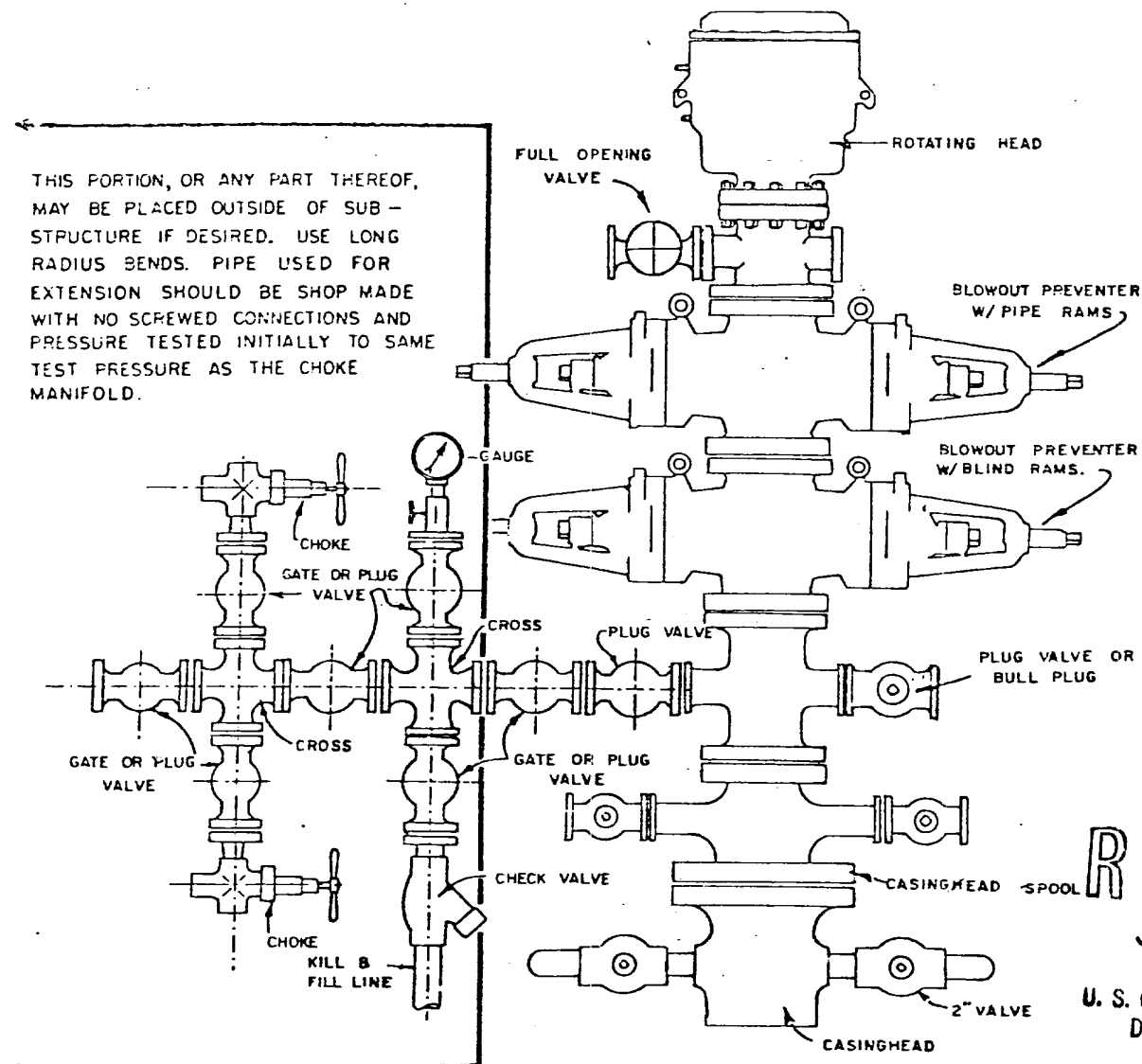
We will start operations as soon as well is permitted, and a three-week operation is anticipated.

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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.



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BLOWOUT PREVENTER HOOKUP

MULTI-POINT SURFACE USE PLAN

SAN JUAN 29-4 UNIT WELL NO. 23
2180' FSL & 1580' FEL, SECTION 15, T-29-N, R-4-W
RIO ARRIBA COUNTY, NEW MEXICO

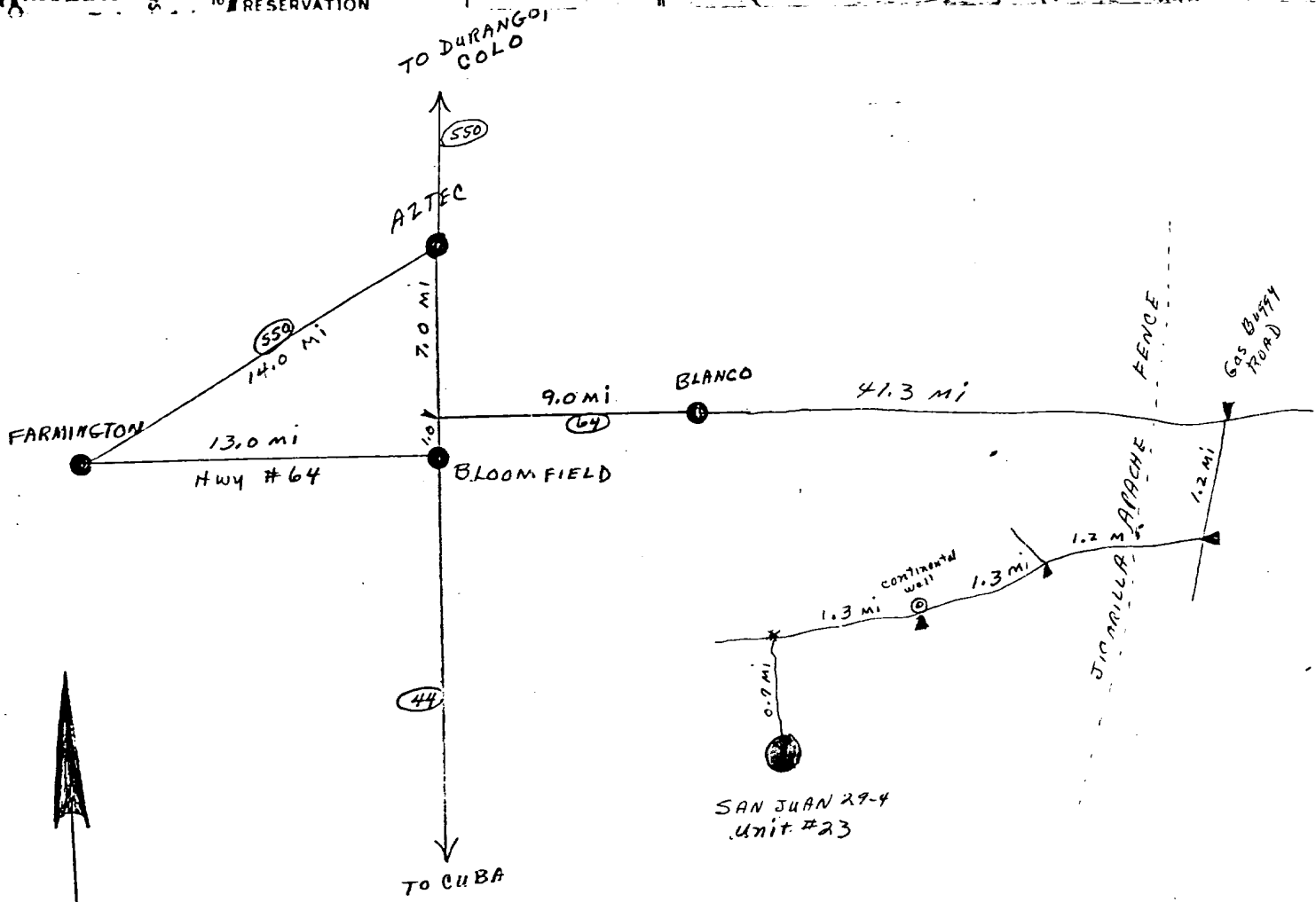
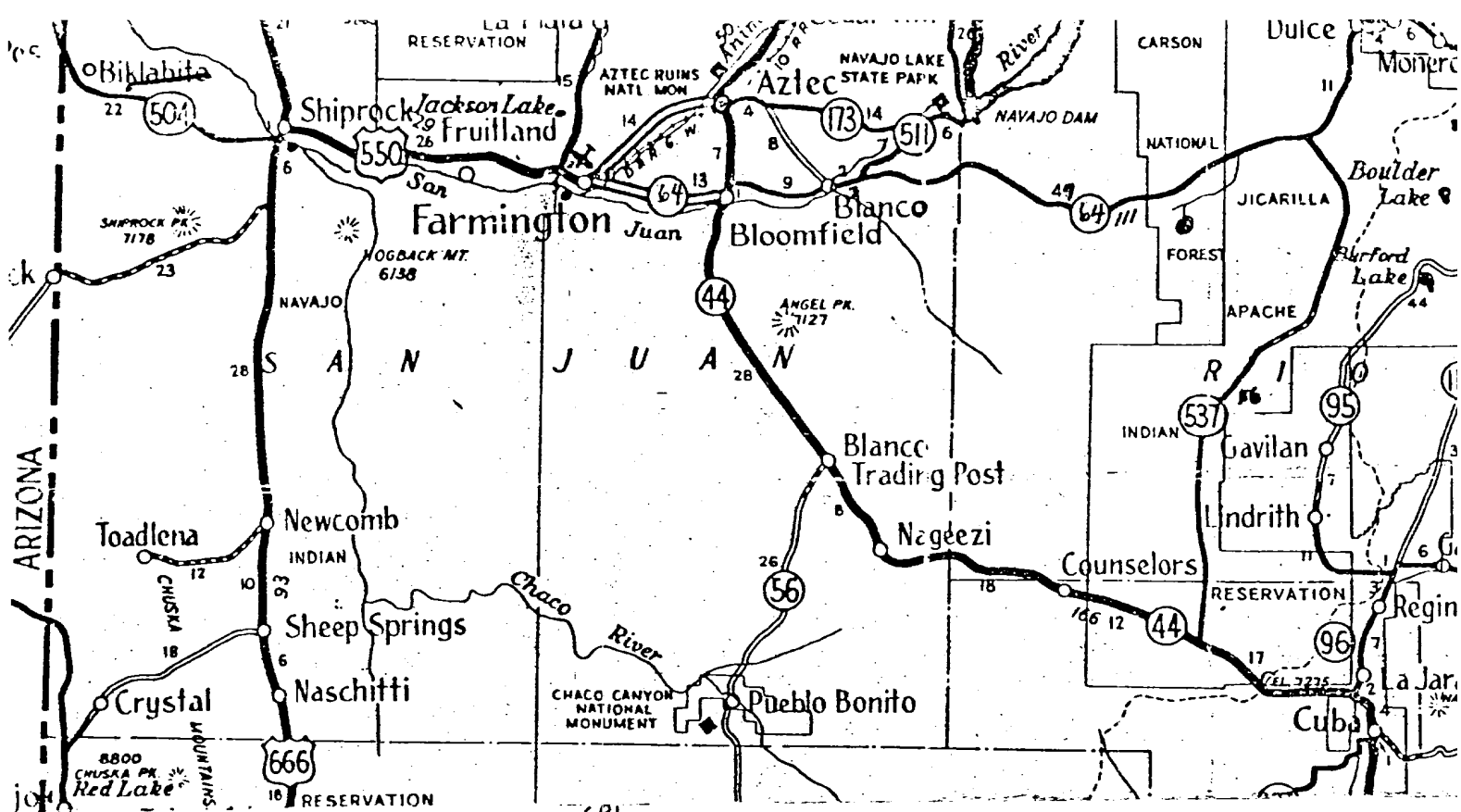
1. The attached road map and sketch show the proposed route to the location and distances from towns.
2. A new access road 2 miles in length will be built and will extend from an existing road serving a Continental Oil Company well. The location is on level ground on top of Devils Mesa, one mile west of Devils Canyon.
3. Existing oil and gas wells within a one-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 La Jara water hole located on Gas Buggy road a distance of approximately 5-1/2 miles.
6. No construction materials will be hauled in for this location.
7. Excess mud will be hauled out of the reserve pit and bladed into existing roads. The Forest Ranger will be notified before mud is bladed into roads. All other waste will be covered in 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. No cuts are needed.
10. Restoration of the surface will be accomplished by cleaning up and levelling upon completion of the well. Reseeding of the site will be carried out as detailed in the attached Seeding Plan.
11. The general topography and soil characteristics are a sandy, clay mix with vegetation consisting of pinon and cedar trees, with sagebrush and native grasses.

Representatives of the U. S. Geological Survey's Durango Office and U. S. Forest Service 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.

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NORTH

FARMINGTON AREA TRAFFIC SKETCH
DENVER DIVISION
SAN JUAN 29-4 UNIT WELL NO. 23
RIO ARriba COUNTY, NEW MEXICO
AMOCO WI: 100%

Rail Point, Aztec - 63 miles
Mud Point, Aztec - 63 miles
Cement Point, Farmington - 70 miles

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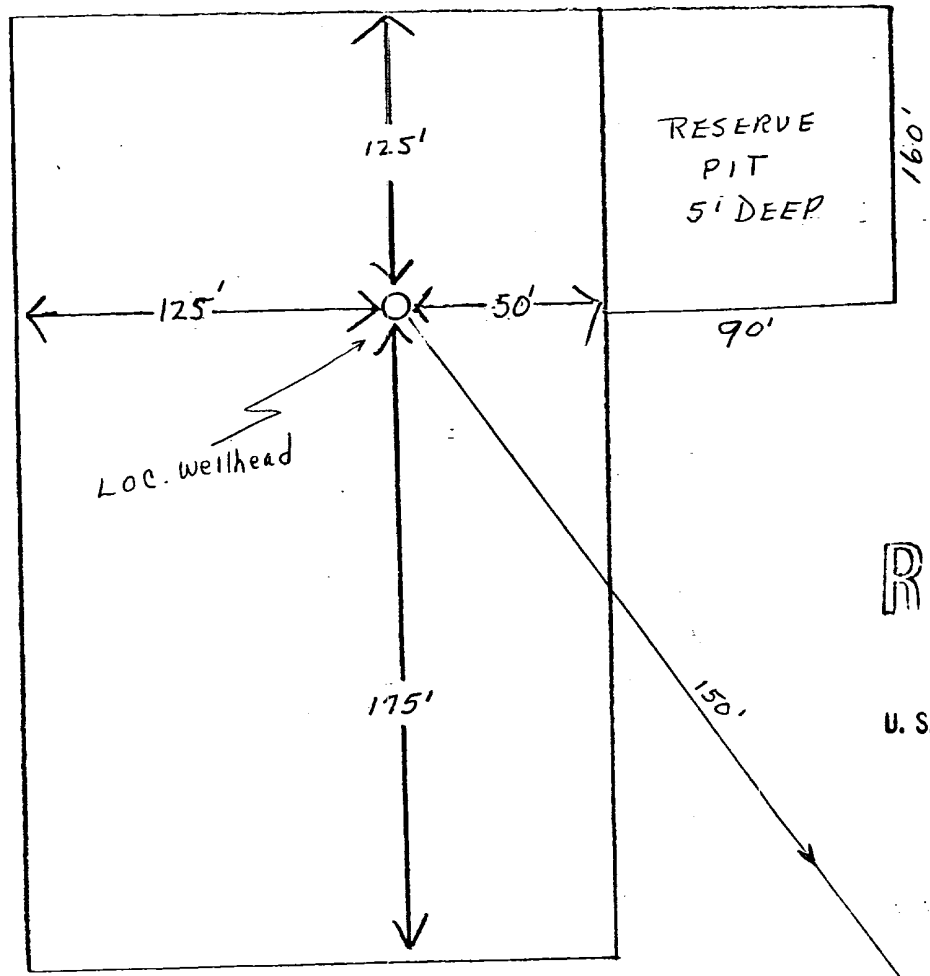
Vicinity Map for
AMOCO PRODUCTION CO. #23 San Juan 29-4 Unit
2180' FSL 1580' FEL Sec 15-T29N-R1W
RIO ARriba COUNTY, NEW MEXICO

Legend
Sera



NE

TRASH PIT
15' x 25'



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APPROXIMATELY 1.2 ACRES

Amoco Production Company		SCALE: NONE
DRILLING LOCATION SPECS		DRG.
SAN JUAN 29-4 UNIT NO. 23		NO.

SEEDING PLAN

1. TIME:

All seeding will take place between July 1, and September 15, 1978, or as required by the U. S. Forest Service.

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, no 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.
Ladak Alfalfa	0.50 lbs.
Sweet Clover	0.50 lbs.
Perennial Rye Grass	0.57 lbs.
Western Wheatgrass	1.43 lbs.
Smooth Brome	1.14 lbs.
Intermediate Wheat	0.91 lbs.
Pubescent Wheatgrass	1.09 lbs.

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U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

SAN JUAN 29-4 UNIT WELL NO. 23
2180' FSL & 1580' FEL, SECTION 15, T-29-N, R-4-W
RIO ARriba 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.

July 26, 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

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