

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

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

1630' FNL x 1670' FEL, Section 23, T-28-N, R-4-W

At proposed prod. zone

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

Same

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

1630'

## 18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

2600'

## 16. NO. OF ACRES IN LEASE

640

## 19. PROPOSED DEPTH

4285'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

160

## 20. ROTARY OR CABLE TOOLS

Rotary

## 22. APPROX. DATE WORK WILL START\*

As soon as well permitted

## 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#	300'	250 sx
7-7/8"	4-1/2"	10.5#	4285'	1200 sx

The above well is being drilled to further develop the Chozas Mesa-Pictured Cliffs Field. The well will be drilled with a low solids non-dispersed mud system. Completion design will be based on open hole logs. This acreage 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

TITLE

Area Engineer

DATE

12/19/77

(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

U. S. GEOLOGICAL SURVEY  
FARMINGTON, N.M.

## 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.

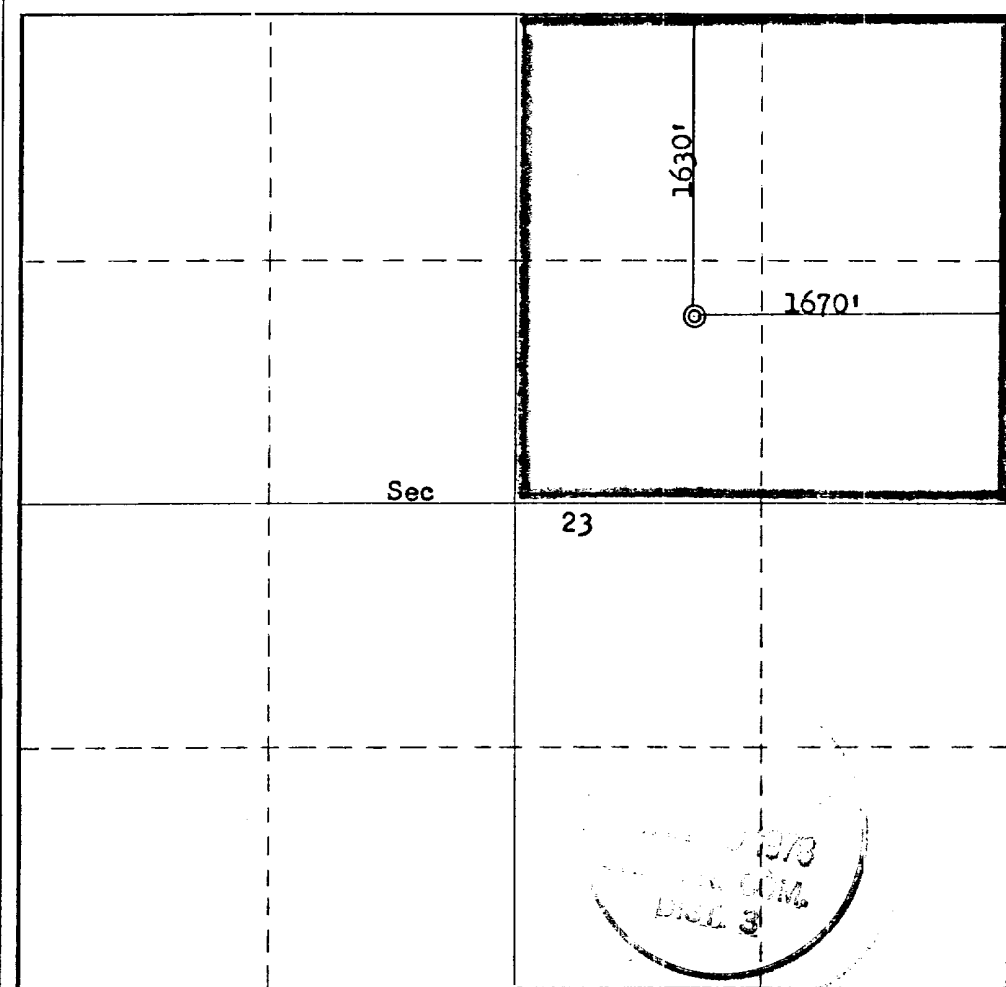
Operator <b>Amoco Production Company</b>			Lease <b>Valencia Canyon Unit</b>		Well No. <b>22</b>
Unit Letter <b>G</b>	Section <b>23</b>	Township <b>28N</b>	Range <b>4W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1630</b> feet from the <b>North</b> line and <b>1670</b> feet from the <b>East</b> line					
Ground Level Elev. <b>7174</b>	Producing Formation <b>Pictured Cliffs</b>		Pool <b>Choza Mesa Pictured Cliffs</b>		Dedicated Acreage: <b>16()</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.

*J. L. Krupka*  
Name  
**J. L. KRUPKA**

Position  
**AREA ENGINEER**

Company  
**AMOCO PRODUCTION COMPANY**

Date  
**DECEMBER 9, 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  
**December 6, 1977**

Registered Professional Engineer and/or Land Surveyor

*Fred B. Kerr Jr.*  
**Fred B. Kerr Jr.**

Certificate No.

**3950**

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

SUPPLEMENTAL INFORMATION TO FORM 9-331C  
 REQUIRED BY NTL-6  
 VALENCIA CANYON UNIT NO. 22  
 1630' FNL & 1670' FEL, SECTION 23, T-28-N, R-4-W  
 RIO ARriba COUNTY, NEW MEXICO

The geologic name of the surface formation is the Paleozoic San Juan.

The estimated tops of important geological formations bearing hydrocarbons are:

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Pictured Cliffs	3984'	+3200'
Lewis Shale	4184'	+3000'
TD	4285'	

Estimated KB Elevation: 7184'

<u>EST. DEPTH</u>	<u>CSG. SIZE</u>	<u>WEIGHT</u>	<u>HOLE SIZE</u>	<u>SACKS CEMENT - TYPE</u>
300'	8-5/8"	24#	12-1/4"	250 sx - Class "B", 2% CaCl <sub>2</sub> .
4285'	4-1/2"	10.5#	7-7/8"	1100 sx - Class "B", 6% Gel, 2# Med. Tuf Plug/sx.
				100 sx - Class "B" Neat.

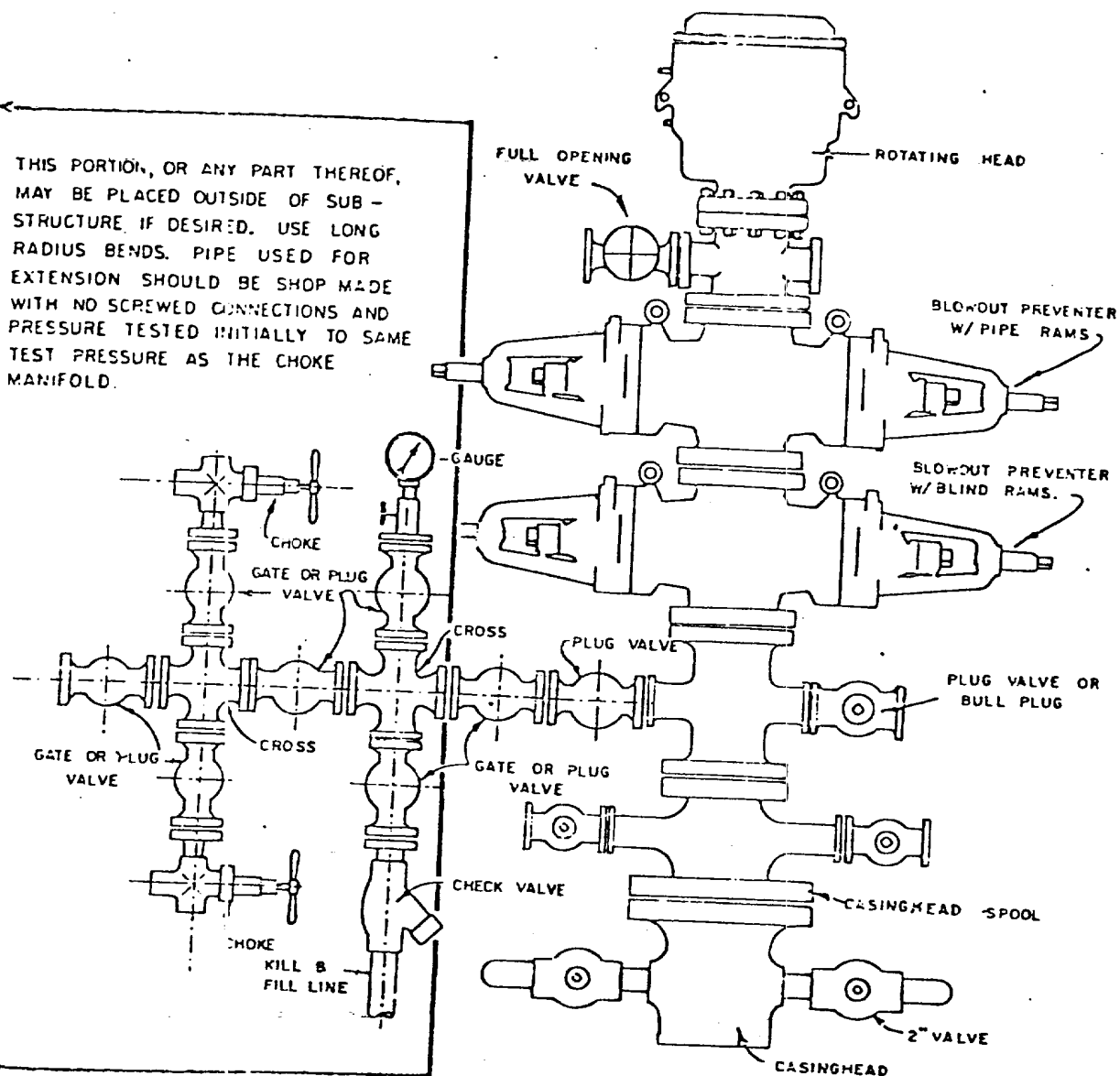
Amoco's standard blowout prevention will be employed; see attached drawing of our blowout preventer design.

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

Amoco plans to run the following logs: from TD to 300', Induction-Electric; from TD to 2285', Density-Gamma Ray. No Cores or Drill Stem Tests will be taken.

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

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.

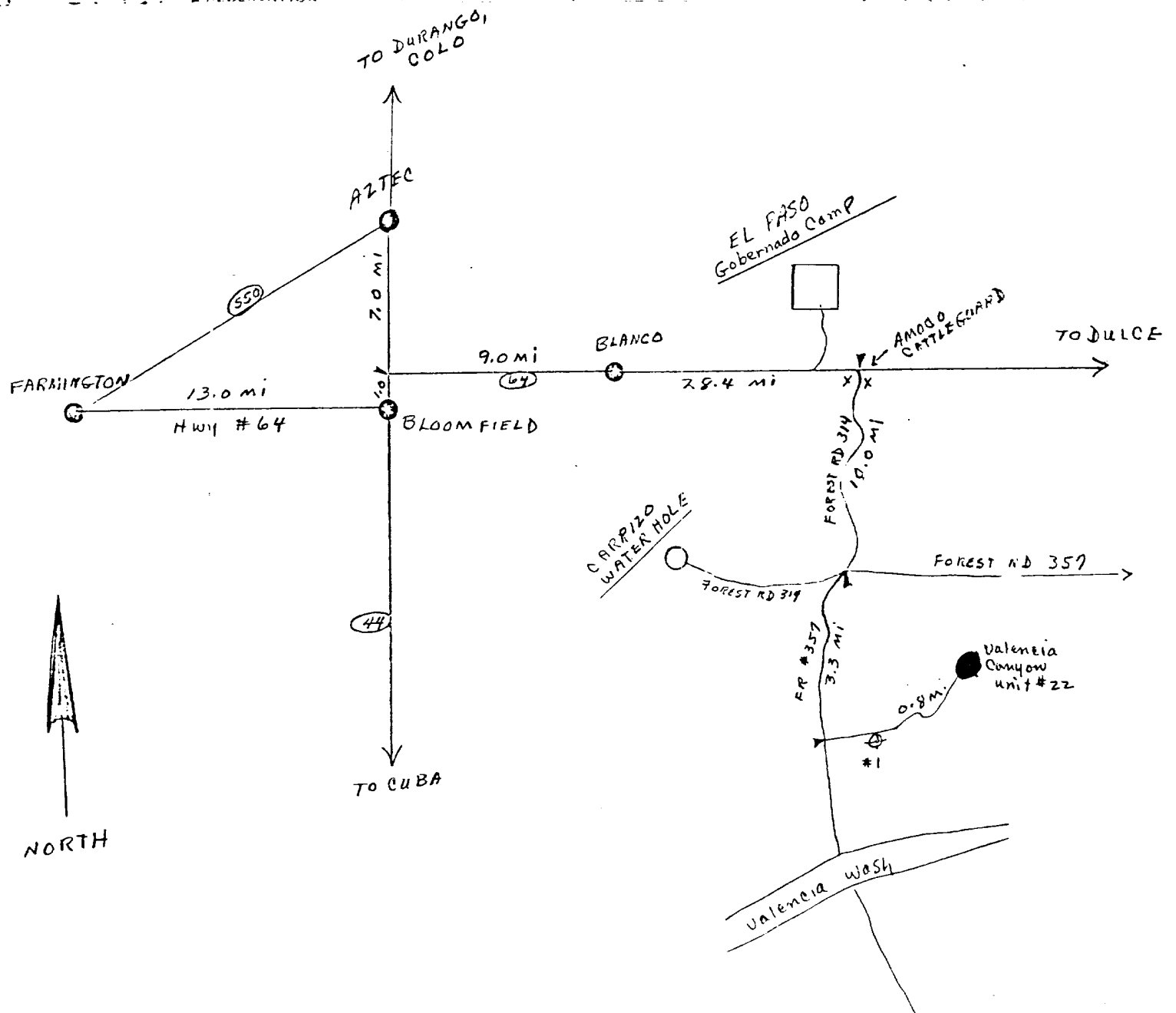
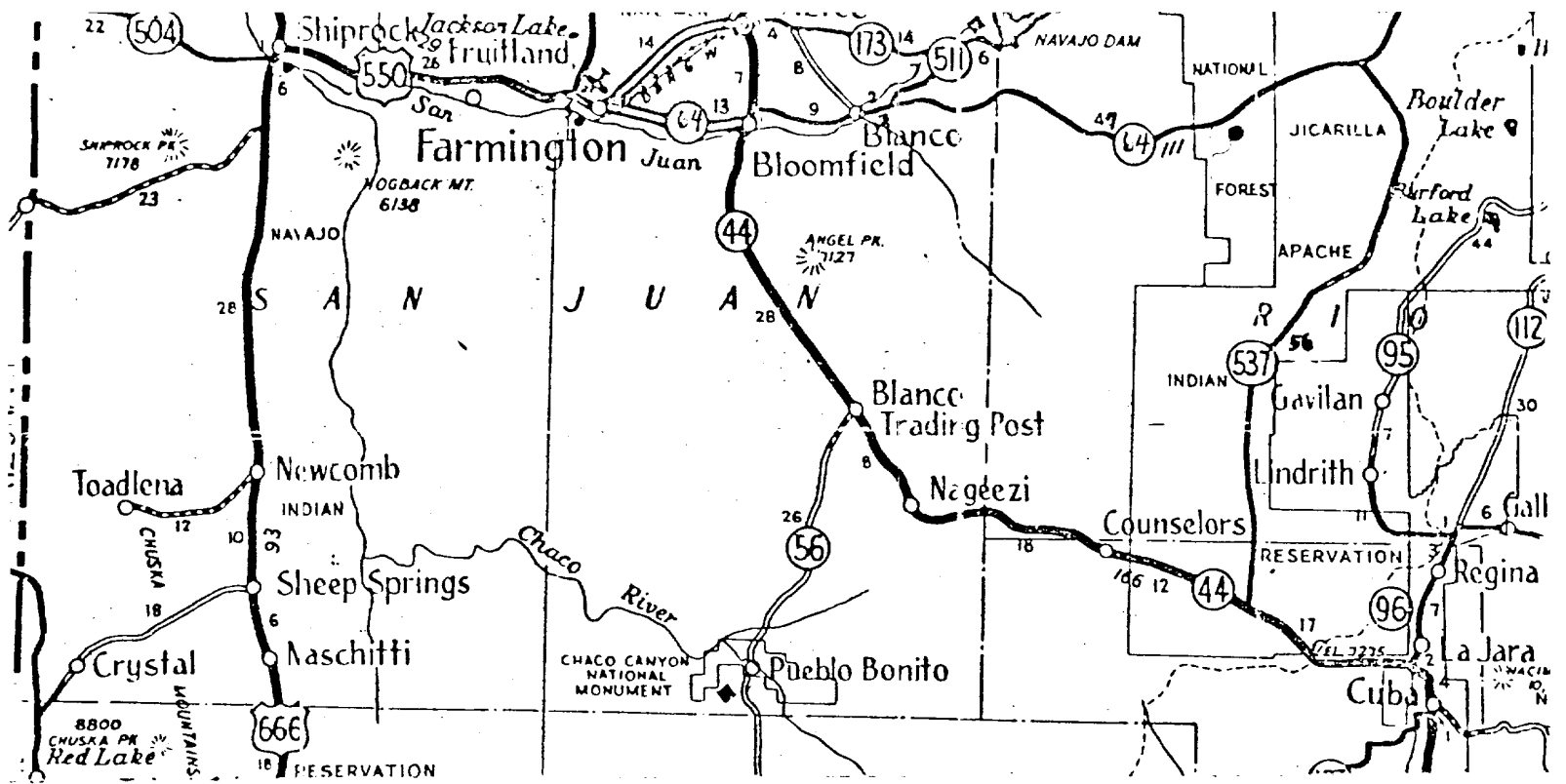


BLOWOUT PREVENTER HOOKUP

MULTI-POINT SURFACE USE PLAN

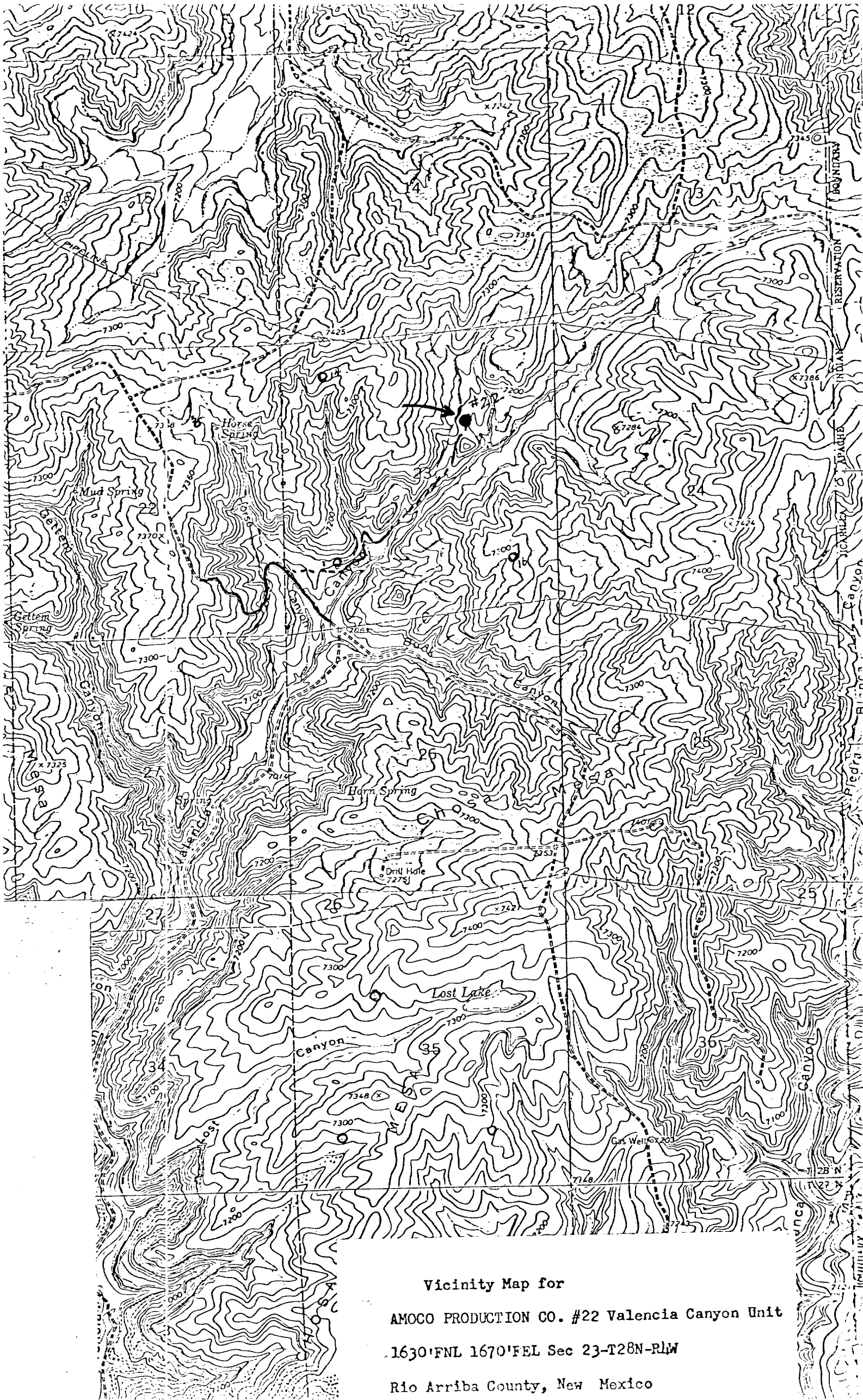
VALENCIA CANYON UNIT NO. 22  
1630' FNL & 1670' FEL, SECTION 23, T-28-N, R-4-W  
RIO ARriba COUNTY, NEW MEXICO

1. The attached road map and sketch show the proposed route to the location and distances from towns.
2. A 20-foot wide access road 2700 feet long following along a fence line and approaching location from the southwest to be built; a cattleguard, a 12-inch culvert and two 24-inch culverts will be installed.
3. Existing oil and gas wells within a one-mile radius of our proposed well have been spotted on the vicinity map.
4. There is a 300-barrel storage tank and facilities located at Valencia Canyon Unit No. 3 which is spotted on the vicinity map.
5. Water will be hauled from Carrizo Wash or from the El Paso water hole approximately 10 miles on existing roads.
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.
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. A cut of approximately 4 feet will be made on the west side of location.
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 carried out as detailed in the attached seeding plan.
11. The general topography and soil characteristics are a broken arroyo bottom and slope with east-southeasterly drainage and alluvial deposition with the soil a sandy clay loam. Vegetation consists of juniper, pinon, ponderosa pine, blue grama, sagebrush, Gambel's oak, loco weed, aster, and snakeweed.  
  
Representatives of the U. S. Geological Survey and U. S. Forest Service have inspected the site and found it suitable for drilling. No cultural resources were found when inspected by Ms. Dabney Ford, Archaeologist.
12. A Certification Statement by Amoco's representative is included.

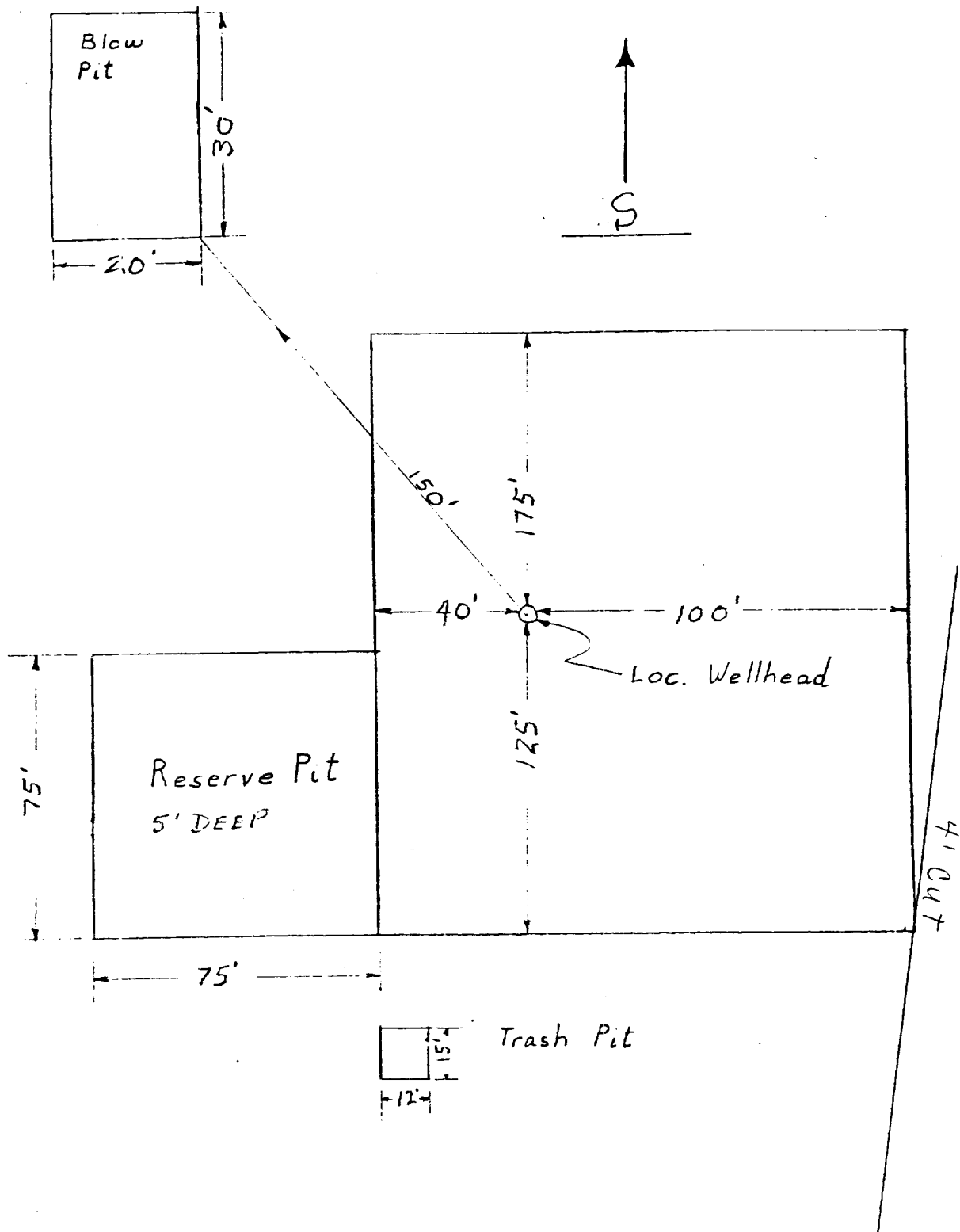


FARMINGTON AREA TRAFFIC SKETCH  
 DENVER DIVISION  
 VALENCIA CANYON UNIT NO. 22  
 RIO ARriba COUNTY, NEW MEXICO  
 AMOCO WI: 100%

Rail Point, Aztec - 58.5 miles  
 Mud Point, Aztec - 58.5 miles  
 Cement Point, Farmington - 65.5 miles







APPROXIMATELY 1.2 Acres

Amoco Production Company	SCALE: NONE
DRILLING LOCATION SPECS VALENCIA CANYON UNIT NO. 22	DRG. 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.
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.
Orchard Grass	.298 lbs.

VALENCIA CANYON UNIT NO. 22  
1630' FNL x 1670' FEL, SECTION 23, T-28-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.

December 19, 1977

Date

L. O. Speer 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