

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, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface 1850' FNL, 1590' FWL, Section 23, T-25-N, R-5-W  
At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
19 miles northwest of Counselors, New Mexico

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 1590'

16. NO. OF ACRES IN LEASE 2560.0

17. NO. OF ACRES ASSIGNED TO THIS WELL N/320

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2600'

19. PROPOSED DEPTH 8000'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
6815' GL

22. APPROX. DATE WORK WILL START\*  
April 4, 1979

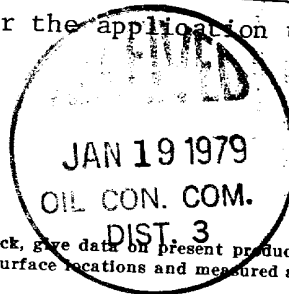
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	300'	200 SX
7-7/8"	4-1/2"	10.5#	8000'	2300 SX

The above well is being drilled to further develop the Basin Dakota Field. The well will be drilled with a low solids non-dispersed mud system. Completion design will be based on open hole logs. Copy of all logs will be filed upon completion.

The gas from this well is dedicated to Northwest Pipeline Corporation.

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 [Signature] TITLE District Engineer DATE January 15, 1979  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

ak Emh

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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-128  
Effective 1-1-65

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

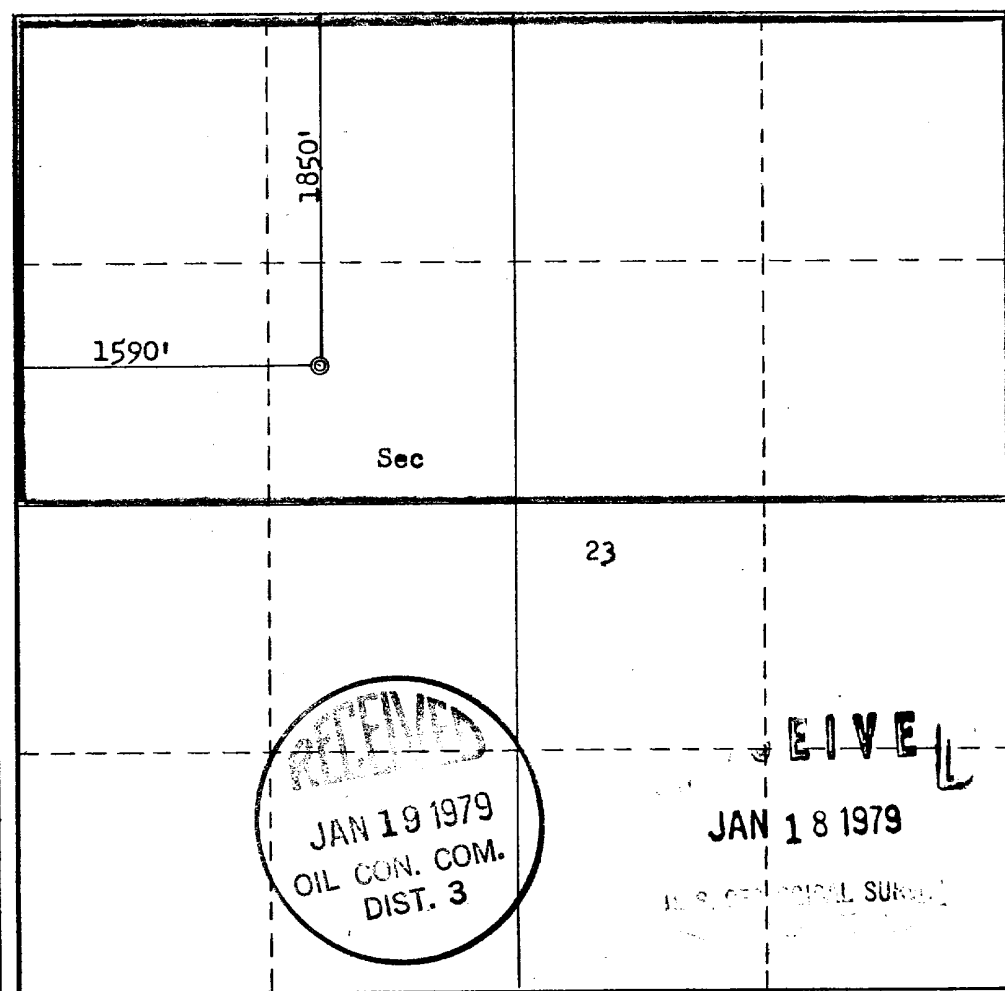
Operator <b>AMOCO PRODUCTION COMPANY</b>			Lease <b>JICARILLA CONTRACT 148</b>		Well No. <b>18</b>
Unit Letter <b>F</b>	Section <b>23</b>	Township <b>25N</b>	Range <b>5W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1850</b> feet from the <b>North</b> line and <b>1590</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6815</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin Dakota</b>		Dedicated Acreage: <b>320</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.

Name  
**J. L. KRUPKA**  
Position  
**DISTRICT ENGINEER**  
Company  
**AMOCO PRODUCTION COMPANY**  
Date  
**DECEMBER 12, 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  
**November 30, 1978**  
Registered Professional Engineer and/or Land Surveyor  
**Fred B. Kern Jr.**  
Certificate No.  
**3950**

SUPPLEMENTAL INFORMATION TO FORM 9-331C  
REQUIRED BY NTL-6  
JICARILLA CONTRACT 148 NO. 18  
1850' FNL, 1590' FWL, Section 23, T-25-N, R-5-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	3028'	+ 3800
Mesaverde	4678'	+ 2150
Gallup	6278'	+ 550
Dakota	7228'	- 400
TD 8000'		

Estimated KB elevation is 6828'.

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>TYPE</u>
300'	8-5/8"	24#	12-1/4"	200 Class "B" 2% CaCl <sub>2</sub> .	
8000'	4-1/2"	10.5#	7-7/8"	2200 Class "B" 6% Gel, 2# Med. Tuf Plug/sx.	
				100 Class "B" Neat.	
				DV tool below Mesaverde	

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 4500' and a Density - Gamma Ray Log from TD to 4500'. 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.

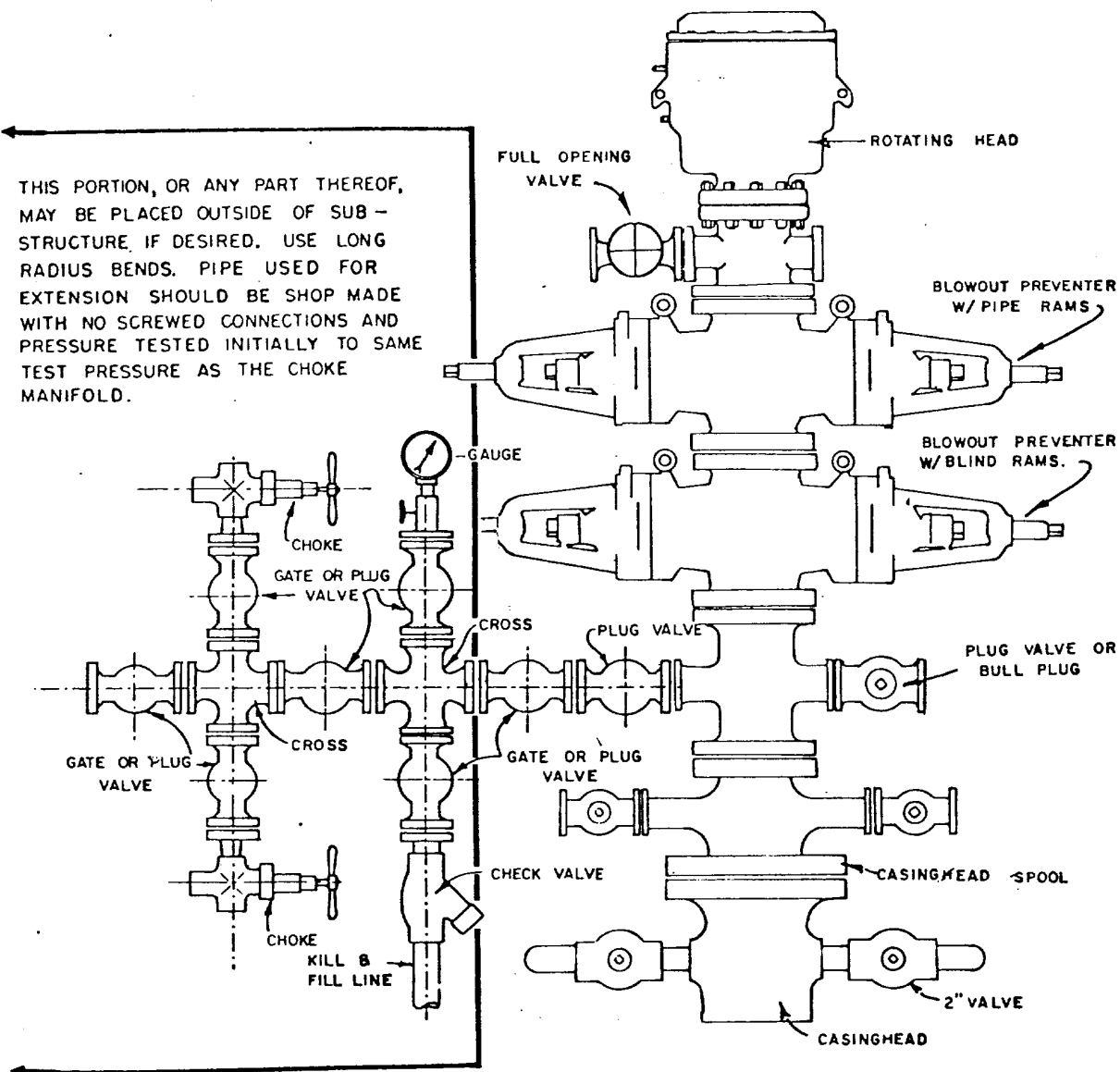
We will start operations as soon as well is permitted, and a three-week operation is anticipated.

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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.



BLOWOUT PREVENTER HOOKUP

EXHIBIT D-4  
OCTOBER 16, 1969

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MULTI-POINT SURFACE USE PLAN

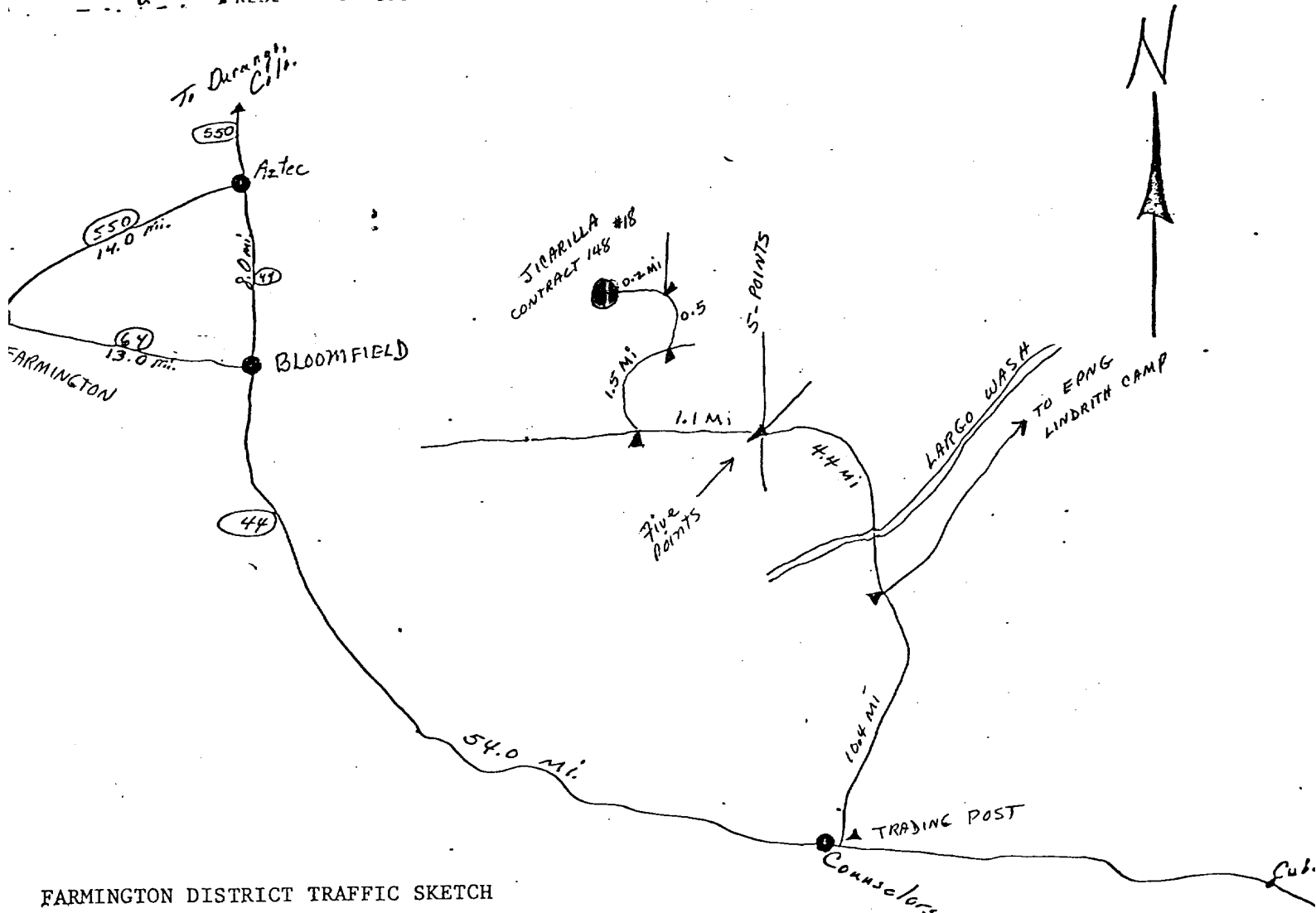
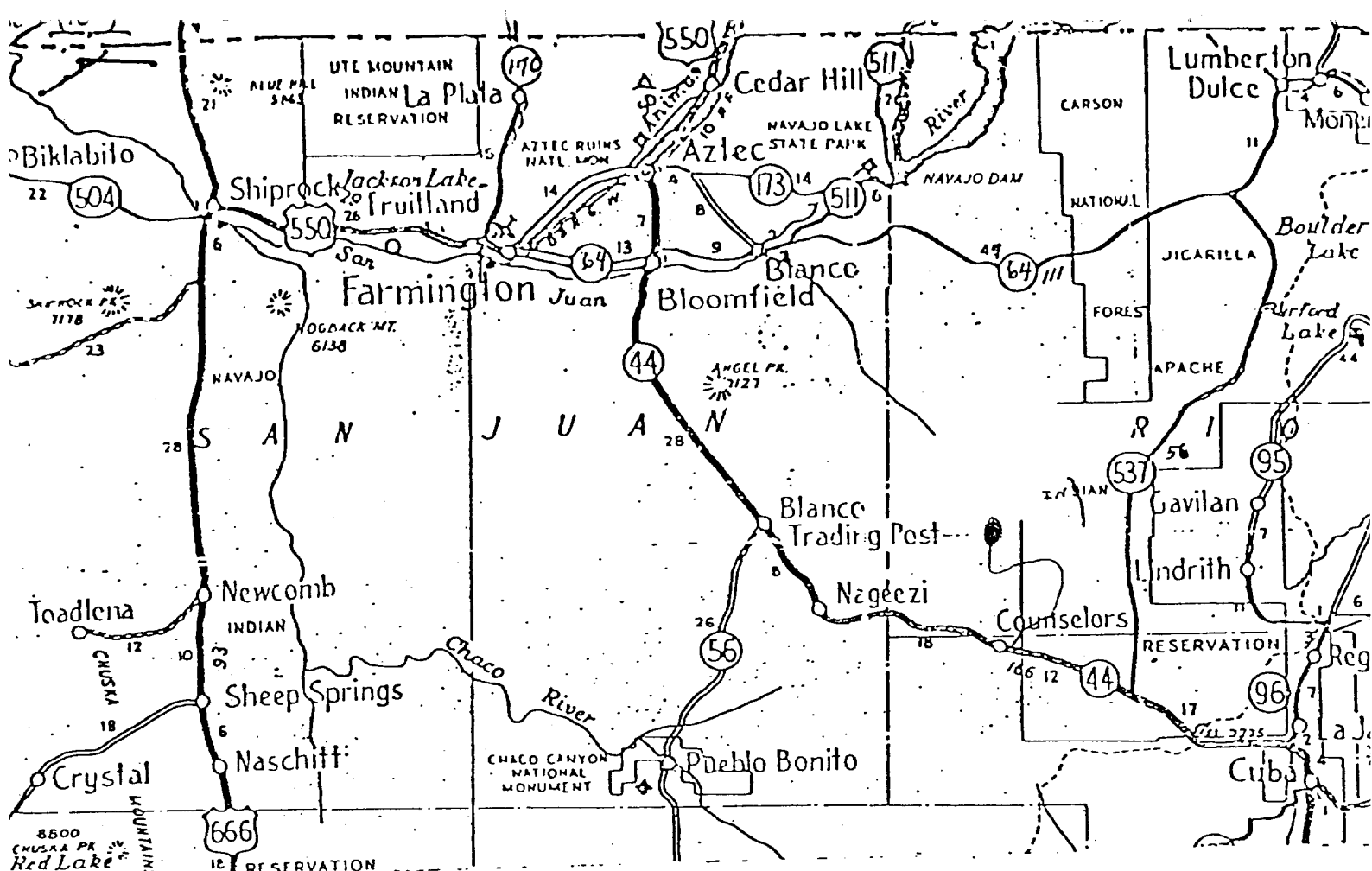
JICARILLA CONTRACT 148 NO. 18  
1850' FNL & 1590' FWL, SECTION 23, T25N, R5W  
RIO ARriba COUNTY, NEW MEXICO

1. The attached road map and sketch show the proposed route to the location and distances from towns.
2. No new road will be constructed. Existing road serving Jicarilla Contract 148 No. 8 to be used.
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 storage tanks at Continental Oil Company wells located nearby.
5. Water will be hauled by truck over existing roads from pits dug alongside Tapacito Wash.
6. No construction materials will be hauled in for this location.
7. A 100' X 100' pit will be built on location to hold all drilling waste. Upon completion of well, all waste and liquid will be pumped out and fluids will be 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. An 8-foot cut will be made on the northwest corner.
10. Restoration of the surface will be accomplished by cleaning up and leveling upon completion of the well. Drainage ditches will be built to handle run-off. Reseeding of the site will be carried out as detailed in the attached Seeding Plan.
11. The general topography is a gently sloping terrain with soil of sandy loamy clay, with vegetation consisting of sagebrush, native grasses, and a few cedar and juniper trees.  
  
Representatives of the U. S. Geological Survey's Durango Office (John Keller) and the Jicarilla Tribe's Dulce Office (Gary Vicenti) inspected the site with Amoco personnel. Cultural resources inspection was conducted by Dabney Ford, Archaeologist from San Juan College.
12. A Certification Statement by Amoco's representative is included.

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DURANGO OFFICE



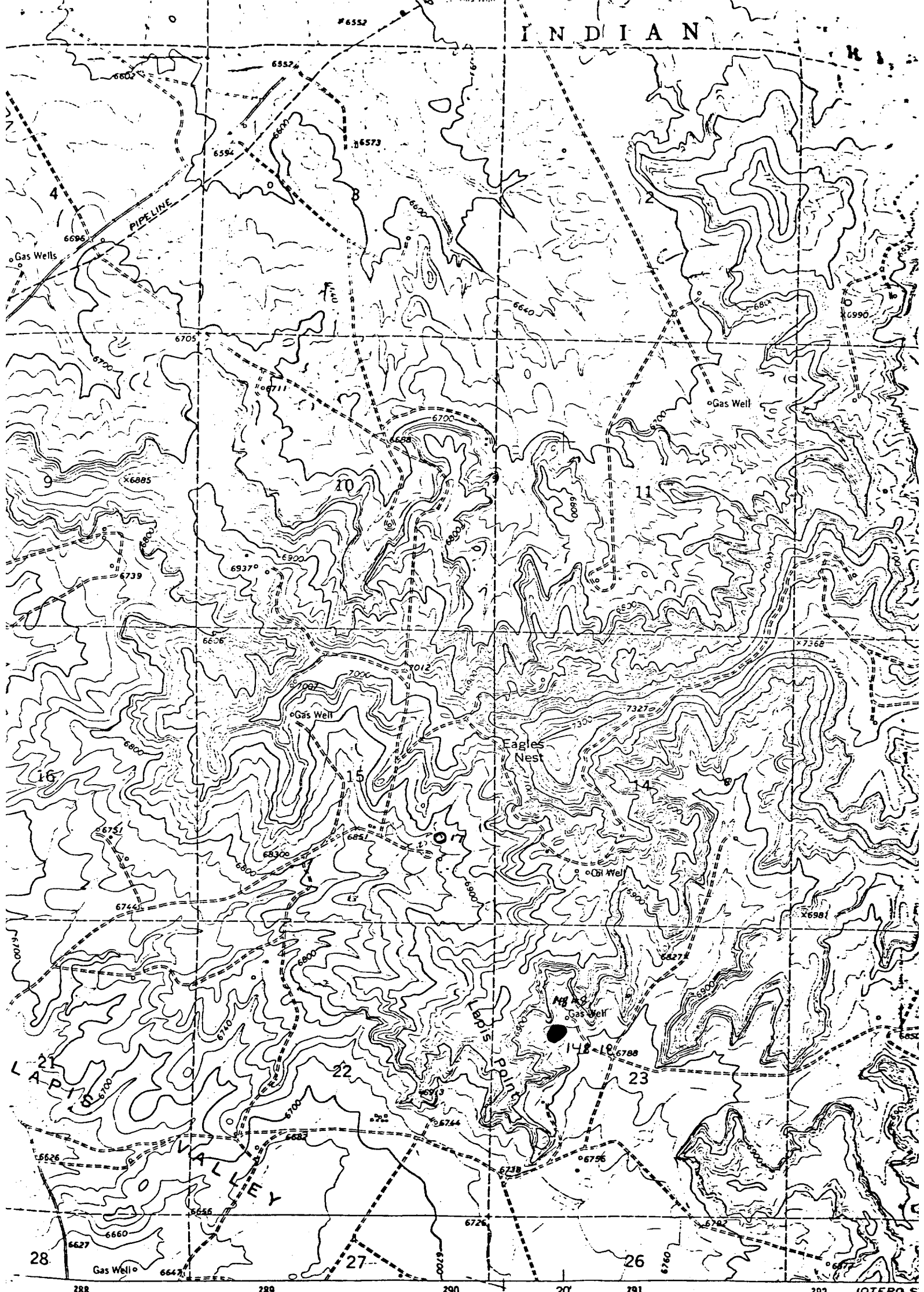
FARMINGTON DISTRICT TRAFFIC SKETCH  
DENVER REGION

JICARILLA CONTRACT 148 WELL NO. 18  
RIO ARRIBA COUNTY, NEW MEXICO  
AMOCO WI: 100%

- Rail Point, Aztec - 80 miles
- Mud Point, Aztec - 80 miles
- Cement Point, Farmington - 85 miles

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Published by the Geological Survey

Methods from aerial  
and 1963  
datum  
coordinate system, central zone  
grid ticks

Vicinity Map for  
AMOCO PRODUCTION COMPANY #18 JICARILLA CONTRACT 148  
1850'FNL 1590'FWL Sec 23-T25N-R5W  
RIO ARriba COUNTY, NEW MEXICO

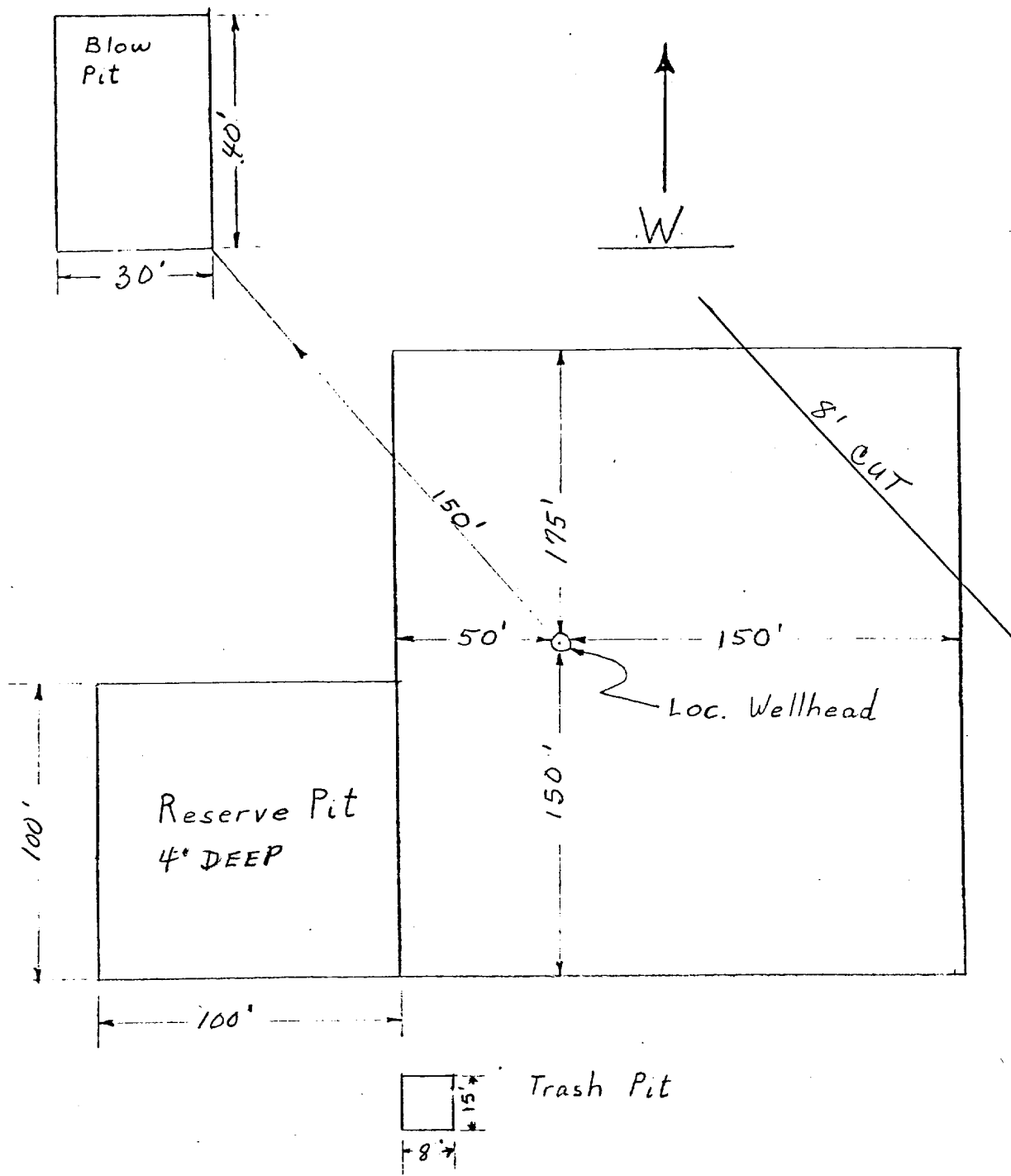
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BULLETIN 1480

SCALE 1:25000  
2000 3000  
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UTM GRID AND 1963 MAGNETIC NORTH



APPROXIMATELY 1.2 Acres

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Amoco Production Company	SCALE: NONE
DRILLING LOCATION SPECS JICARILLA CONTRACT 148 NO. 18	DRG. NO.



## SEEDING PLAN

### 1. TIME:

All seeding will take place between July 1 and September 15.

### 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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JICARILLA CONTRACT 148 NO. 18  
1850' FNL & 1590' FWL, SECTION 23, T-25-N, R-5-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.

January 16, 1979

Date

L. O. Speer, Jr. District 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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