

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. SF-078771	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Amoco Production Company		7. UNIT AGREEMENT NAME Rosa 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 1520' FNL & 1510' FEL, Section 14, T31N, R6W At proposed prod. zone Same		9. WELL NO. 67	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 46.4 Miles Northeast of Blanco, New Mexico		10. FIELD AND POOL, OR WILDCAT Basin Dakota	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1510'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SW/4, NE/4, Section 14 T-31-N, R-6-W	
16. NO. OF ACRES IN LEASE 2560.		12. COUNTY OR PARISH 13. STATE Rio Arriba NM	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320		18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 4100'	
19. PROPOSED DEPTH 8050'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6365' GL		22. APPROX. DATE WORK WILL START* as soon as permitted	

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13 3/4	10 3/4	45#	300'	300 SX cmt
9 7/8	7 5/8	35#	3500'	850 SX CMT
6 3/4	4 1/2	13.5#	8050'	1200 SX CMT

The above well is being drilled to develop the Dakota Formation. Completion interval and stimulation program to be determined from study of open hole logs. The acreage is not dedicated to a gas sales contract. Additional information required by NTL-6 for the application to drill and a Multi-Point Surface Use Plan are attached.

RECEIVED

MAY 8 1979

U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

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 B E Lockwell TITLE District Engineer DATE May 7, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ok FrankStaten

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

Operator AMOCO PRODUCTION COMPANY			Lease ROSA UNIT		Well No. 67
Unit Letter G	Section 14	Township 31N	Range 6W	County Rio Arriba	
Actual Footage Location of Well: 1520 feet from the North line and 1510' feet from the East line					
Ground Level Elev. 6365	Producing Formation Dakota		Pool Basin Dakota	Dedicated Acreage: 320 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.

B. E. Fackrell

Name
B. E. FACKRELL

Position
DISTRICT ENGINEER

Company
AMOCO PRODUCTION COMPANY

Date
APRIL 20, 1979

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.

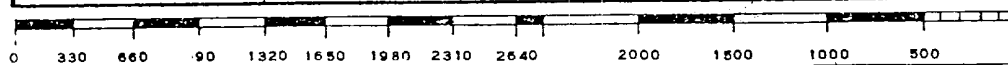
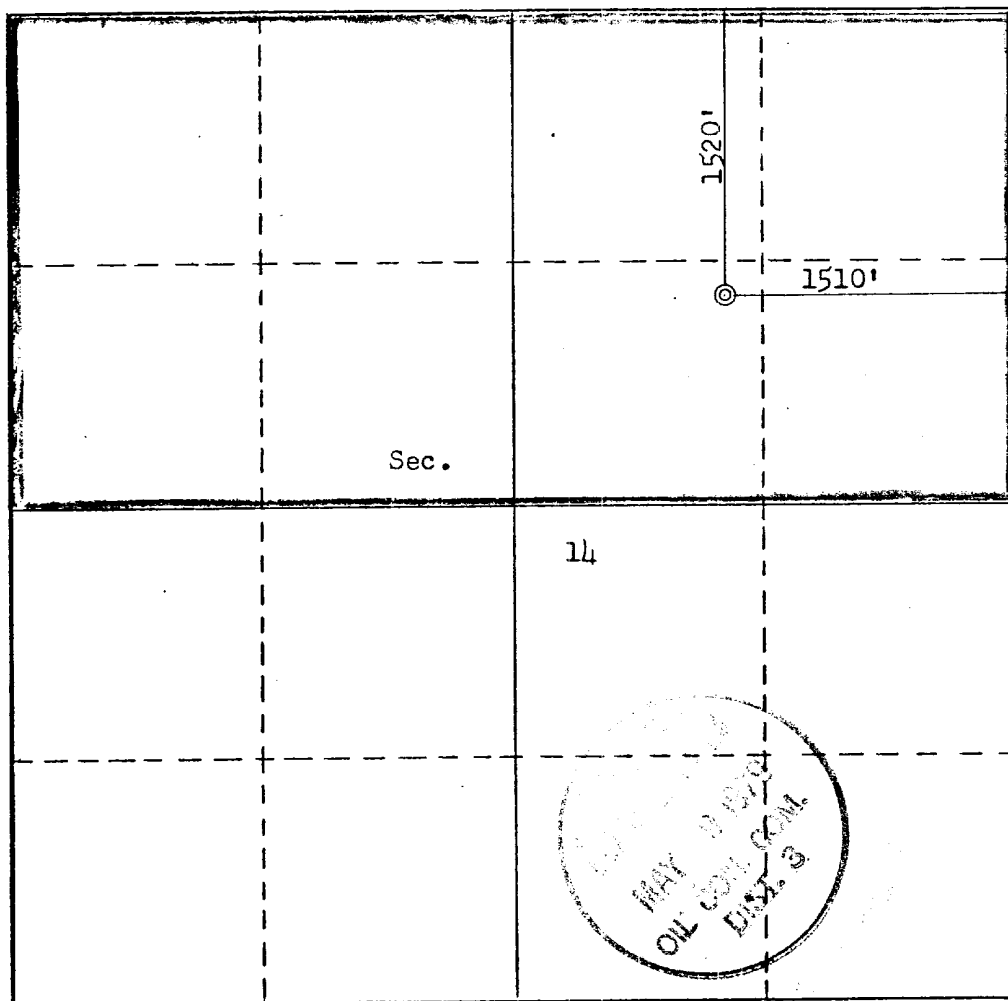
Date Surveyed

April 17, 1979

Registered Professional Engineer
and/or Land Surveyor

Fred B. Kerr
Fred B. Kerr, Jr.

Certificate No. ME 3950
FRED B. KERR, JR.



SUPPLEMENTAL INFORMATION TO FORM 9-331C
 REQUIRED BY NTL-6
 ROSA UNIT NO. 67
 1520' FNL & 1510' FEL, SECTION 14, T31N, R6W
 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	3100'	+3278'
Mesaverde	5300'	+1078'
Dakota	7850'	-1472'

TD 8050'

Estimated KB elevation is 6378'

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>
300	10-3/4	45#	13-3/4	300 SX Class	"B"	2% CaCl ₂
3500	7-5/8	35#	9-7/8	750 SX Class	"B"	50:50 Poz
				100 SX Class	"B"	Neat
8050	4-1/2	13.5#	6-3/4	1100 SX Class	"B"	50:50 Poz
				100 SX Class	"B"	Neat

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

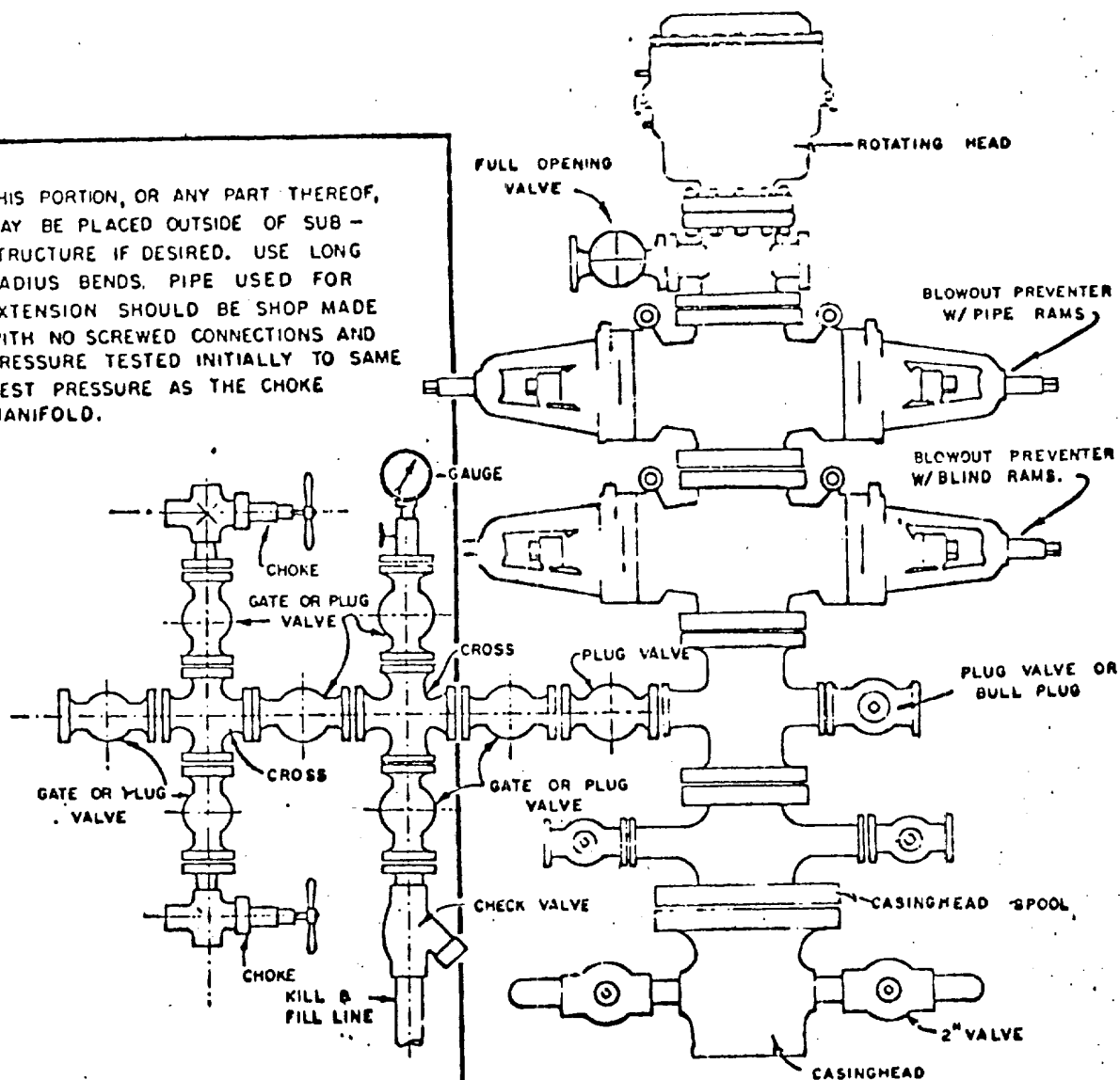
Drilling fluid to TD will be a low solids non-dispersed mud system.

Amoco will run an Induction Electric Survey from TD to 300' and a Density-Gamma Ray Log from TD to 300'. 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.

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

AMOCO PRODUCTION COMPANY

EXHIBIT D-1
OCTOBER 16

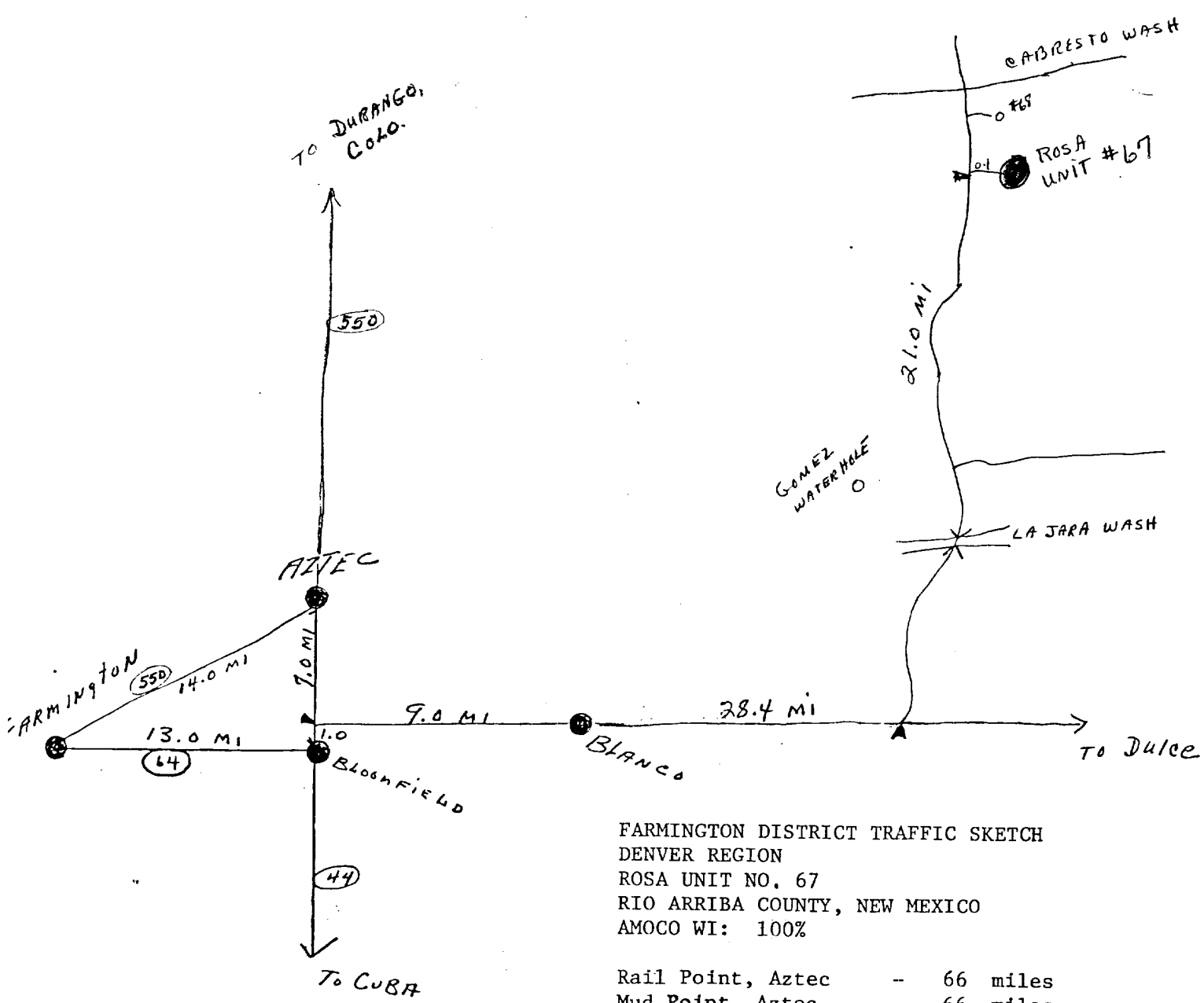
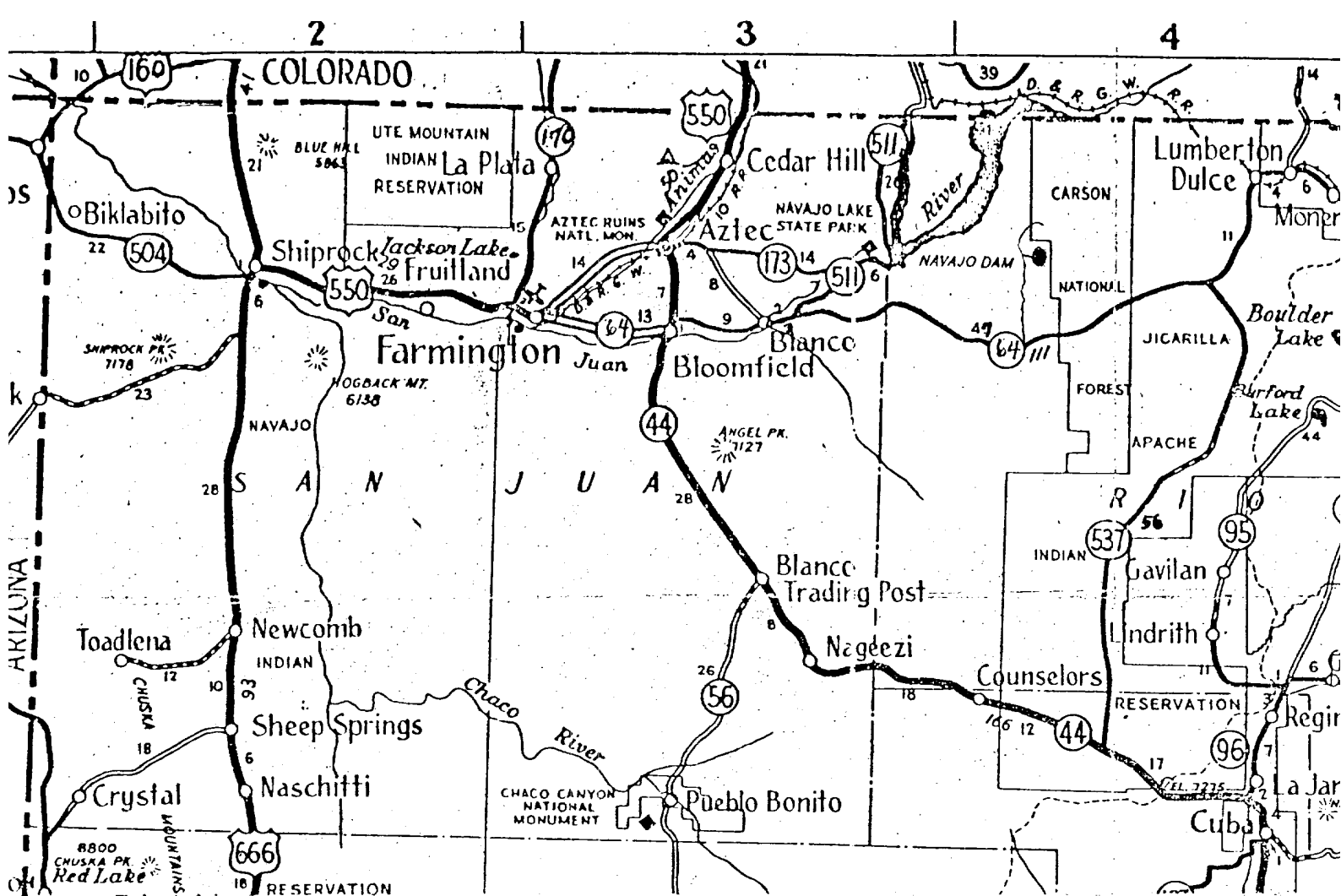
MULTI-POINT SURFACE USE PLAN

ROSA UNIT NO. 67
1520' FNL & 1510' FEL, SECTION 14, T31N, R6W
RIO ARriba COUNTY, NEW MEXICO

1. The attached road map and sketch show the proposed route to the location and distances from towns.
2. It will be necessary to blade and improve one-tenth mile of road south of existing pipeline.
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 pipeline 180 feet north of location; also, a dogleg 250 feet northwest which can be tied into for gas drilling.
5. Water will be hauled out of Amoco water holes 11 miles east.
6. No construction materials will be hauled in for this location. Will use existing material at 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. A 4-foot cut will be made on west side.
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 attached Seeding Plan.
11. The general topography and soil characteristics are fairly level terrain with sandy loam and vegetation consisting of a few cedar trees.

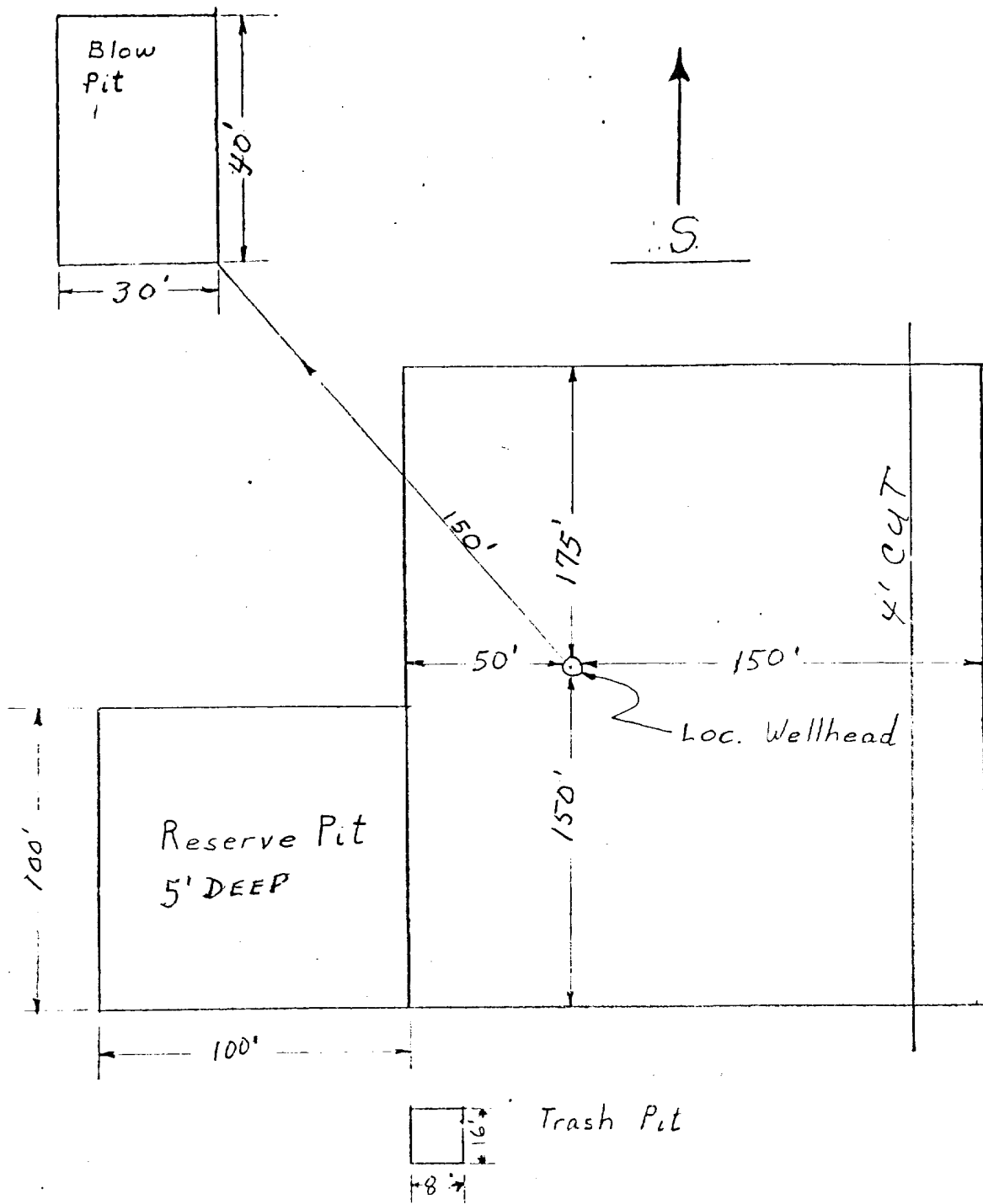
Representatives of the U. S. Geological Survey's Durango Office and Bureau of Land Management's Farmington Office inspected the site with Amoco personnel. Cultural resources inspection was conducted by Pam Smith, Archaeologist, from San Juan College.

12. A Certification Statement by Amoco's representative is included.



FARMINGTON DISTRICT TRAFFIC SKETCH
 DENVER REGION
 ROSA UNIT NO. 67
 RIO ARRIBA COUNTY, NEW MEXICO
 AMOCO WI: 100%

Rail Point, Aztec - 66 miles
 Mud Point, Aztec - 66 miles
 Cement Point, Farmington - 73 miles



APPROXIMATELY 1.2 Acres

Amoco Production Company	SCALE: NONE
DRILLING LOCATION SPECS	DRG. NO.
ROSA UNIT NO. 67	

BLM SEEDING REQUIREMENTS
IN THE FARMINGTON RESOURCE AREA

1. SEED MIXTURE 1

2. TIME:

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

3. 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.

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

CRESTED WHEATGRASS (<u>Agropyron desertorum</u>)	2½ lbs.
SMOOTH BROME (<u>Bromus inermis</u>)	2½ lbs.
FOURWING SALTBUSH (dewinged) (<u>Atriplex conescens</u>)	½ lb.
NOMAD ALFALFA (<u>Medicago sitiva</u>)	1 lb.


ROSA UNIT NO. 67
1520' FNL & 1510' FEL, SECTION 14, T31N, R6W
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.

May 7, 1979

Date

 District Supt.
Name and Title

Amoco Production Company's Representative:

R. W. Schroeder
Phone: Office: 505-325-8841; Home: 505-325-6164.
Address: 501 Airport Drive
Farmington, NM 87401