

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-039-21758

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 1960' FSL x 815' FWL, Section 13, T-31-N, R-6-W
At proposed prod. zone
Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
47.9 miles northeast of Blanco, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 815'

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 400'

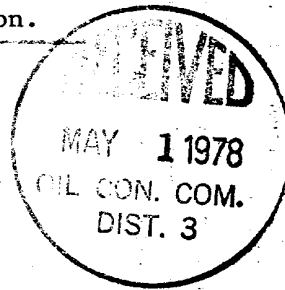
21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6346' GL

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'	315 sx - circ.
9-7/8"	7-5/8"	35#	3370'	1005 sx - circ.
6-3/4"	4-1/2"	13.5#	8075'	890 sx - circ.

The above well is being drilled to develop Dakota formation. Completion interval and stimulation program to be determined from study of open hole logs. The acreage 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.

The gas purchaser will be Northwest Pipeline Corporation.



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 J. L. Kurr TITLE Area Engineer DATE April 26, 1978

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY TITLE DATE

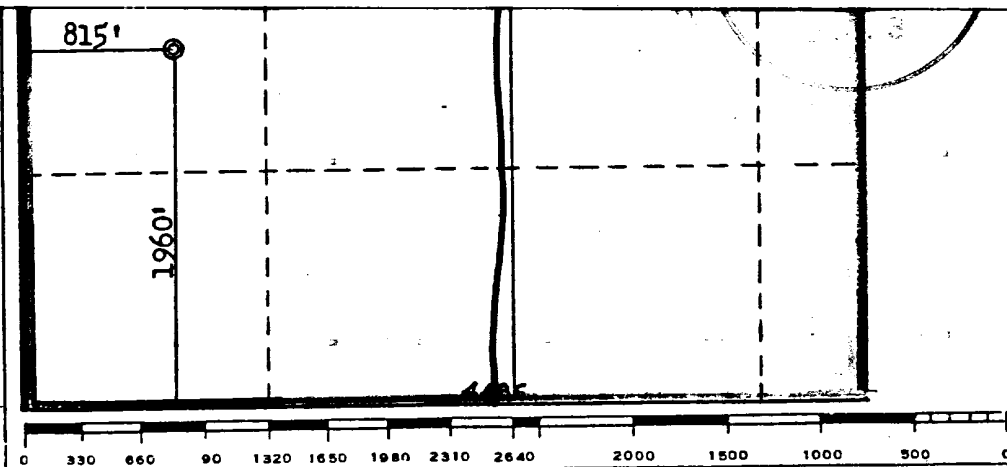
CONDITIONS OF APPROVAL, IF ANY:

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*See Instructions On Reverse Side

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U. S. GEOLOGICAL SURVEY
DURANGO, COLO.



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 13, 1978

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950

SUPPLEMENTAL INFORMATION TO FORM 9-331C
 REQUIRED BY NTL-6
 ROSA UNIT NO. 66
 1960' FSL x 815' FWL, SECTION 13, T-31-N, R-6-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	3170'	+3176'
Mesaverde	5510'	+ 836'
Main Dakota	7850'	-1504
Total Depth	8075'	

Estimated KB Elevation: 6358'

<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"	315 - Class "B", 2% CaCl ₂ .		
3370'	7-5/8"	35#	9-7/8"	1005 - Class "B", 6% Gel, 2# Med Tuf Plug/sx.		
8075'	4-1/2"	13.5#	6-3/4"	790 - Class "B", 6% Gel, 2# Med Tuf Plug/sx.		
				100 - Class "B" Neat.		

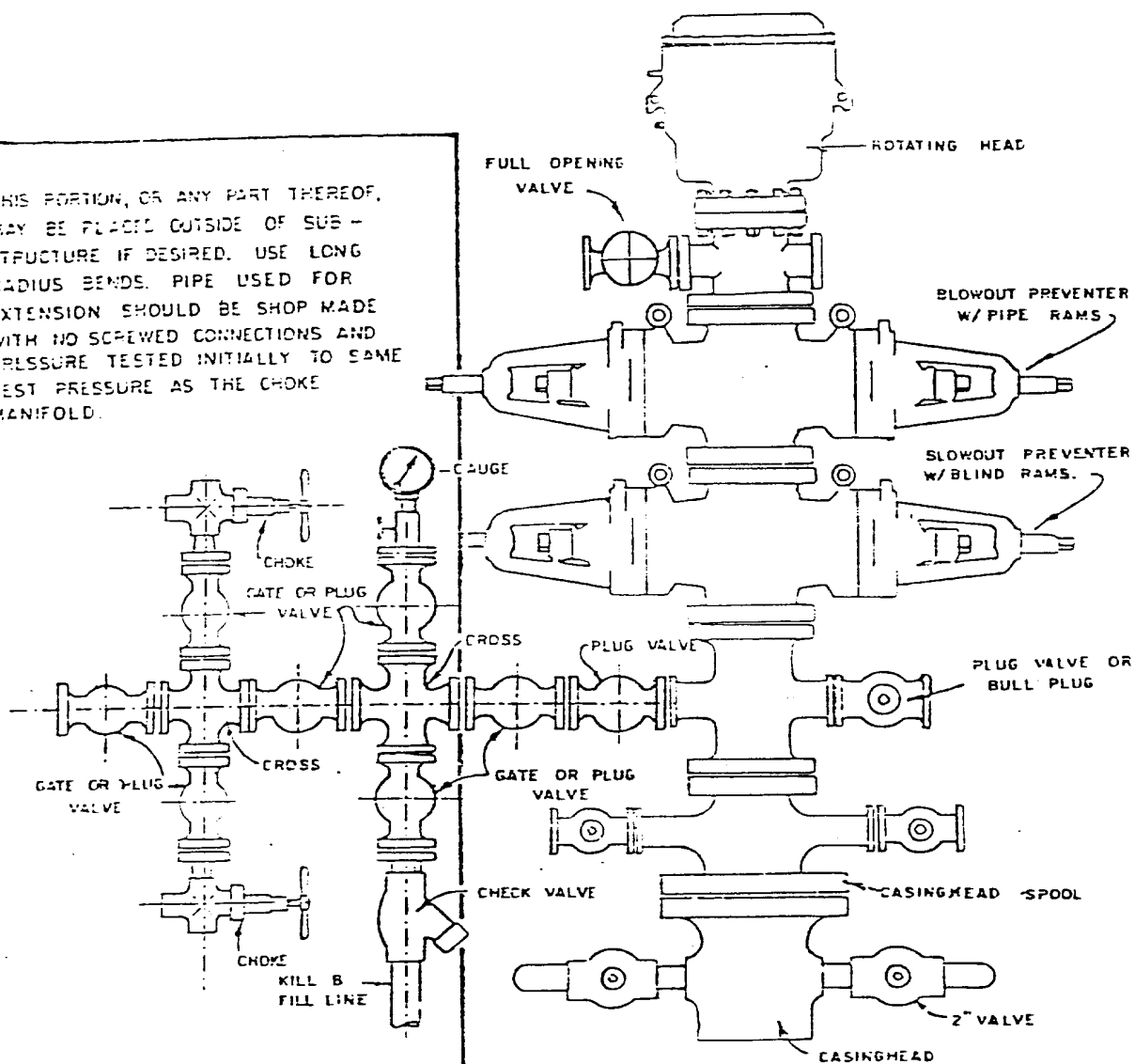
Amoco's standard blowout prevention will be employed; see attached drawing of our blowout preventer design.

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

Amoco plans to run the following logs: Induction-Electric and Density-Gamma Ray from 3370' to 300'; Induction and Density from TD to 3370'. No Cores or Drill Stem Tests will be taken.

In the past, drilling this area has shown that no abnormal pressures, temperatures, nor hydrogen sulfide 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.

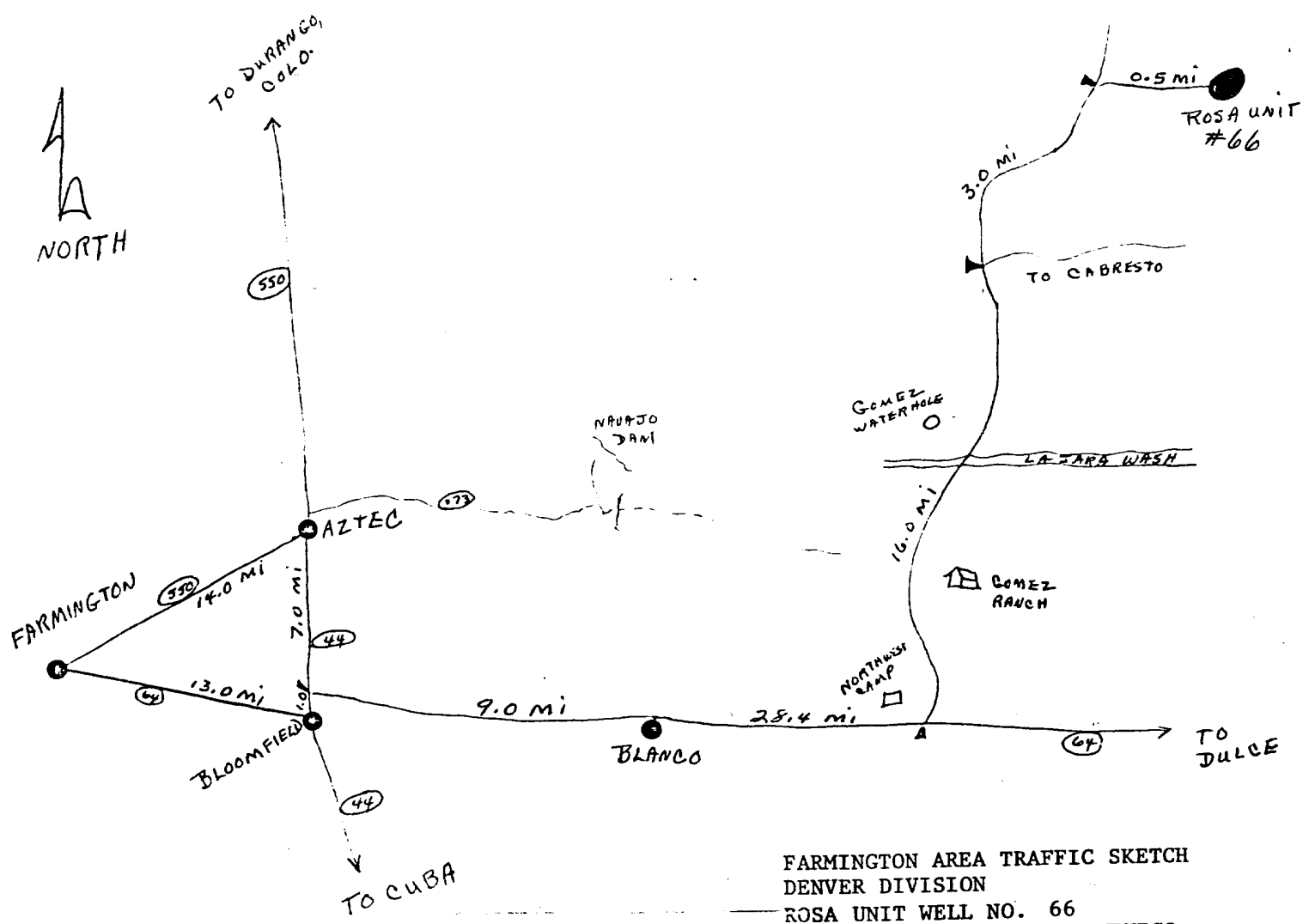
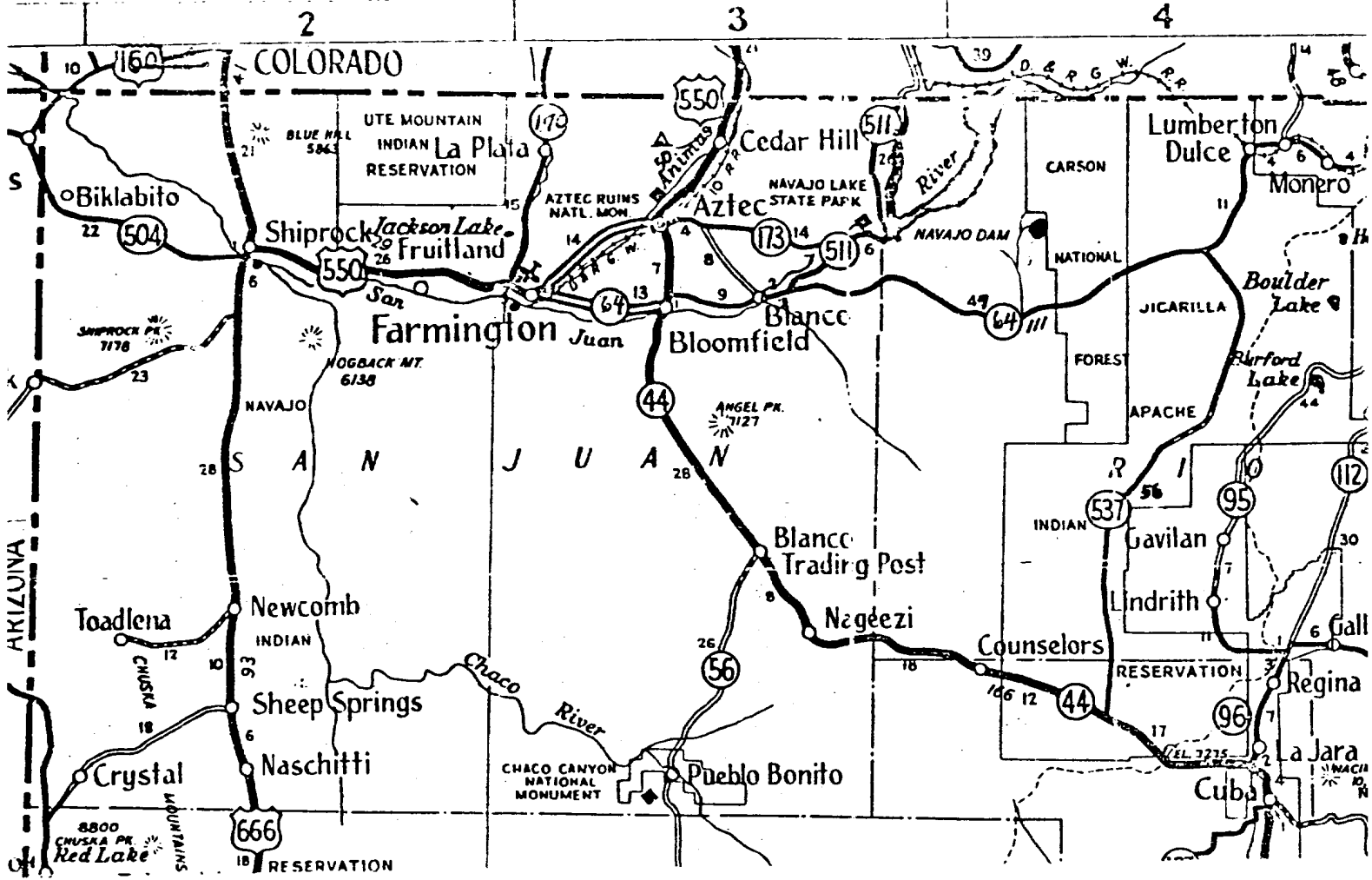


BLOWOUT PREVENTER HOOKUP

MULTI-POINT SURFACE USE PLAN

ROSA UNIT NO. 66
1960' FSL & 815' FWL, SECTION 13, 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. A new access road 1500 feet in length will be constructed off an existing road serving Northwest Pipeline's Rosa No. 10-13.
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 storage tanks or facilities located within a one-mile radius of the proposed location.
5. Water will be hauled by truck from the Cabresto water hole over existing roads.
6. No construction materials will be hauled in for this location. Material from high points on location will be used to level location for proper drilling.
7. A 150' X 150' pit will be built on location to hold all drilling waste. Upon completion of well, all waste and liquid will be hauled by truck and bladed into existing roads. All other waste will be covered in 150' X 150' 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.
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 fairly level, sandy soil, with vegetation consisting of sagebrush and native grasses. Representatives of the U. S. Geological Survey's Durango Office and Bureau of Land Management's Farmington Office have inspected the site. Cultural resources inspection was conducted by an Archaeologist from Salmons Ruins.
12. A Certification Statement by Amoco's representative is included.



FARMINGTON AREA TRAFFIC SKETCH
DENVER DIVISION
ROSA UNIT WELL NO. 66
RIO ARriba COUNTY, NEW MEXICO
AMOCO WI; 50%

- Rail Point, Aztec - 63.9 miles
- Mud Point, Aztec - 63.9 miles
- Cement Point, Farmington - 70.9 miles



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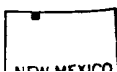
Vicinity Map for
AMOCO PRODUCTION CO. #66 Rosa Unit
1960' FSL 815' FWL Sec 13-T31N-R6W
Rio Arriba County, New Mexico

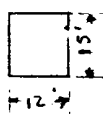
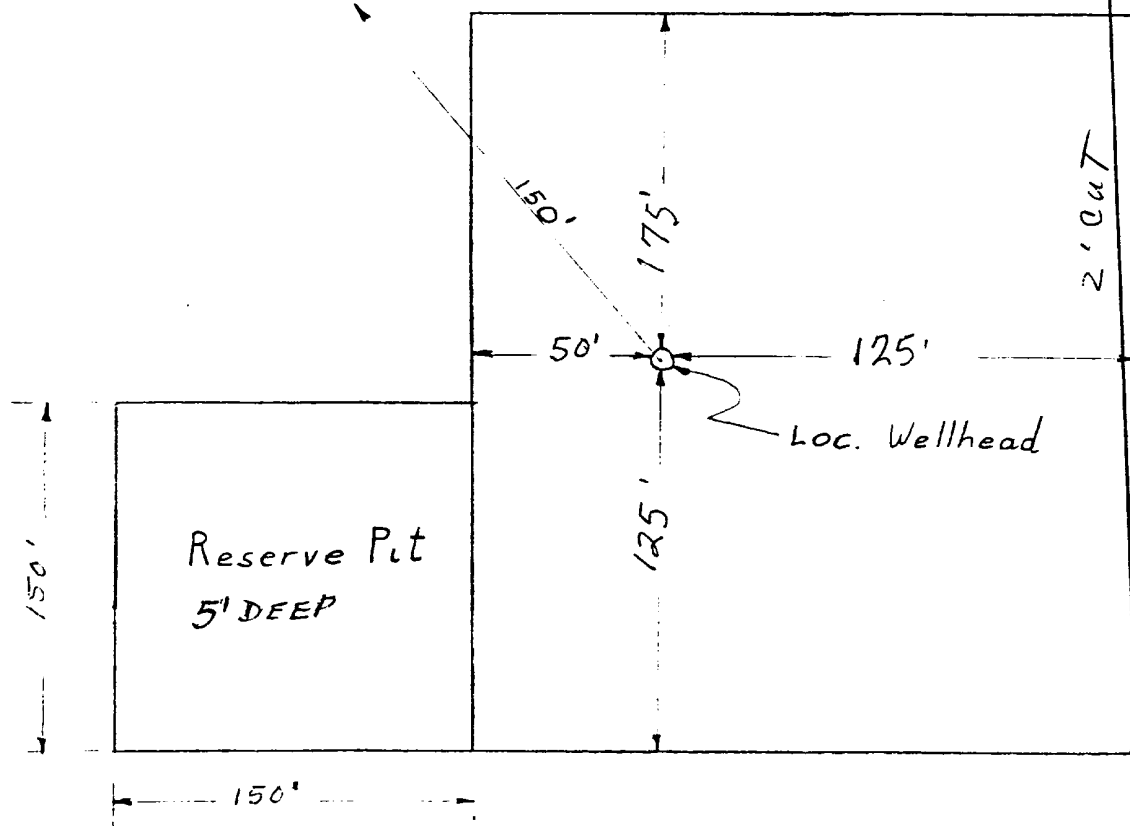
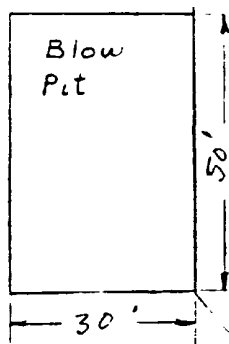
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1 KILOMETER

ROAD CLASSIFICATION

Light-duty

Unimproved dirt





APPROXIMATELY 1.2 Acres

Amoco Production Company	SCALE: NONE
DRILLING LOCATION SPECS ROSA UNIT NO. 66	DRG. NO.

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.