

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 **1190' FSL x 850' FWL, Section 31, T30N, R9W**
At proposed prod. zone **Same**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* **4 miles North of Blanco, NM**

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) **850'**

16. NO. OF ACRES IN LEASE **308.56**

17. NO. OF ACRES ASSIGNED TO THIS WELL **308.56**

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. **5960'**

19. PROPOSED DEPTH **4801'**

20. ROTARY OR CABLE TOOLS **Rotary**

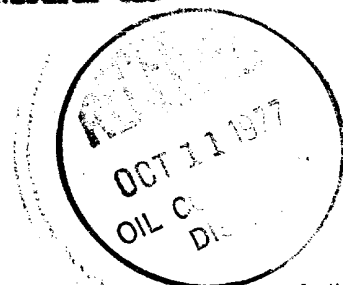
21. ELEVATIONS (Show whether DF, RT, GR, etc.) **5756' GL**

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"	9-5/8"	32.3#	350'	470 sx Class "B"
8-3/4"	7"	20#	2745'	310 sx Class "B"
6-1/4"	4-1/2"	11#	4801'	230 sx Class "B"

The above well is being drilled to further develop the Masaverde reservoir. The well will be drilled to the intermediate casing point using water and Benex. The well will then be gas drilled to TD. Completion design will be based on open hole logs. The acreage is dedicated to El Paso Natural Gas Company. Attached is a Development Plan required by NTL-6.



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. Knapton TITLE Area Engineer DATE 10/3/77
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

OCT 6 1977

*See Instructions On Reverse Side

inter OK
11/11/77 R-120

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.

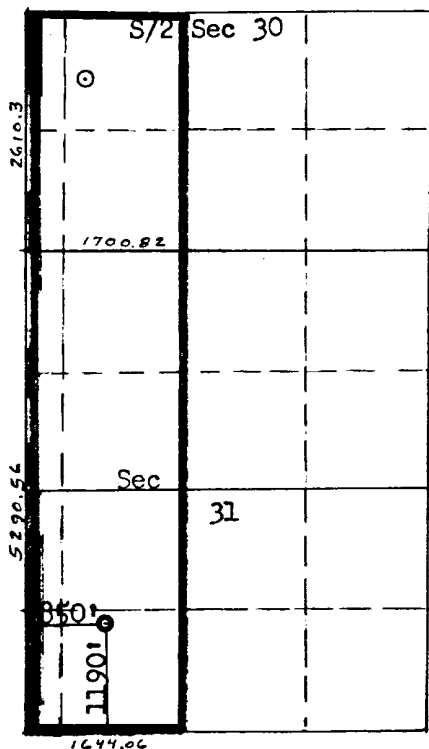
Operator Amoco Production Company			Lease Heath Gas Com "C"		Well No. 1A
Unit Letter N	Section 31	Township 30N	Range 9W	County San Juan	
Actual Footage Location of Well: 1190 feet from the South line and 850 feet from the West line					
Ground Level Elev. 5756	Producing Formation Mesa Verde		Pool Blanco Mesaverde		Dedicated Acreage: 308.56 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.



Scale: 1"=2000'



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
SEPTEMBER 21, 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
September 16, 1977
Registered Professional Engineer and Land Surveyor

Fred B. Kerr Jr.

Certificate No.
3950

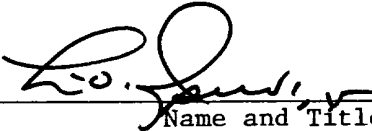
HEATH GAS COM "C" NO. 1A
1190 FSL & 850 FWL, SECTION 31, T-30-N, R-9-W
SAN JUAN COUNTY, NEW MEXICO

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.

10/1/77

Date

 Area Supt.
Name and Title

DEVELOPMENT PLAN
HEATH GAS COM "C" NO. 1A
1190 FSL x 850 FWL, SECTION 31, T-30-N, R-9-W
SAN JUAN COUNTY, NEW MEXICO

The proposed location has sagebrush, some rabbit brush, a few cedar trees, and the soil is very sandy. The geological name of the surface formation is Nacimiento. A new 300' x 20' road will be built to the new location from an existing road that serves the W. D. Heath "B" Well No. 5. Material from high points will be used to level location for proper drilling. No material of any kind will be hauled in. Verbal approval of the drill site has been obtained from Mr. Bob Moore, BLM; Mr. Ray Foster, USGS; and Ms. Dabney Ford, Archaeologist.

Water will be hauled from the Blanco irrigation ditch over existing roads. Drilling fluids to 2745' will be a low solids, non-dispersed drilling mud, and the well will be gas drilled from 2745' to TD (4801'). Upon completion, the location will be cleaned up and leveled. Drilling mud and water will be hauled away and bladed into existing roads. All trash will be covered in trash pit. Drainage ditches will be built along road to location. Attached is the BLM seeding plan to be followed for this well. In addition, all surface equipment will be painted green so as to follow BLM requirements.

There are neither airstrips nor camps in the vicinity.

The estimated tops of important geological formations bearing hydrocarbons are:

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Pictured Cliffs	2345'	+3474'
Cliffhouse	3934'	+1835'
Menefee	4098'	+1671'
Point Lookout	4539'	+1230'

Estimated KB elevation: 5769'

<u>EST. DEPTH</u>	<u>CASING SIZE</u>	<u>WEIGHT</u>	<u>HOLE SIZE</u>	<u>SACKS CEMENT - TYPE</u>
350'	9-5/8"	32.3#	13-3/4"	470 - Class "B", 2% CaCl ₂
2745'	7"	20#	8-3/4"	410 - Class "B", 6% Gel, 2# Med Tuf Plug per sx.
				100 - Class "B", 2% CaCl ₂
2545-4801'	4-1/2"	11#	6-1/4"	150 - Class "B", 50:50 Poz, 6% Gel, 2# Med Tuf Plug per sx, 0.2% Friction Reducer.
				100 - Class "B", 50:50 Poz, 6% Gel

Amoco's standard blowout prevention will be employed, see attached drawing for blowout preventer design.

Amoco plans to run the following logs from TD to the intermediate casing: Induction Gamma Ray, Density-Gamma Ray. No cores or drill stem tests will be taken.

Our experience drilling in this area has shown that no abnormal pressures, temperatures, or hydrogen sulfide gas will be encountered.

Our proposed starting date is as soon as well is permitted, and a three-week operation is anticipated.

BLM SEEDING REQUIREMENTS
IN THE FARMINGTON RESOURCE AREA

1. SEED MIXTURE 2

2. TIME:

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

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 (Agropyron desertorum) - $3\frac{1}{2}$ lbs.

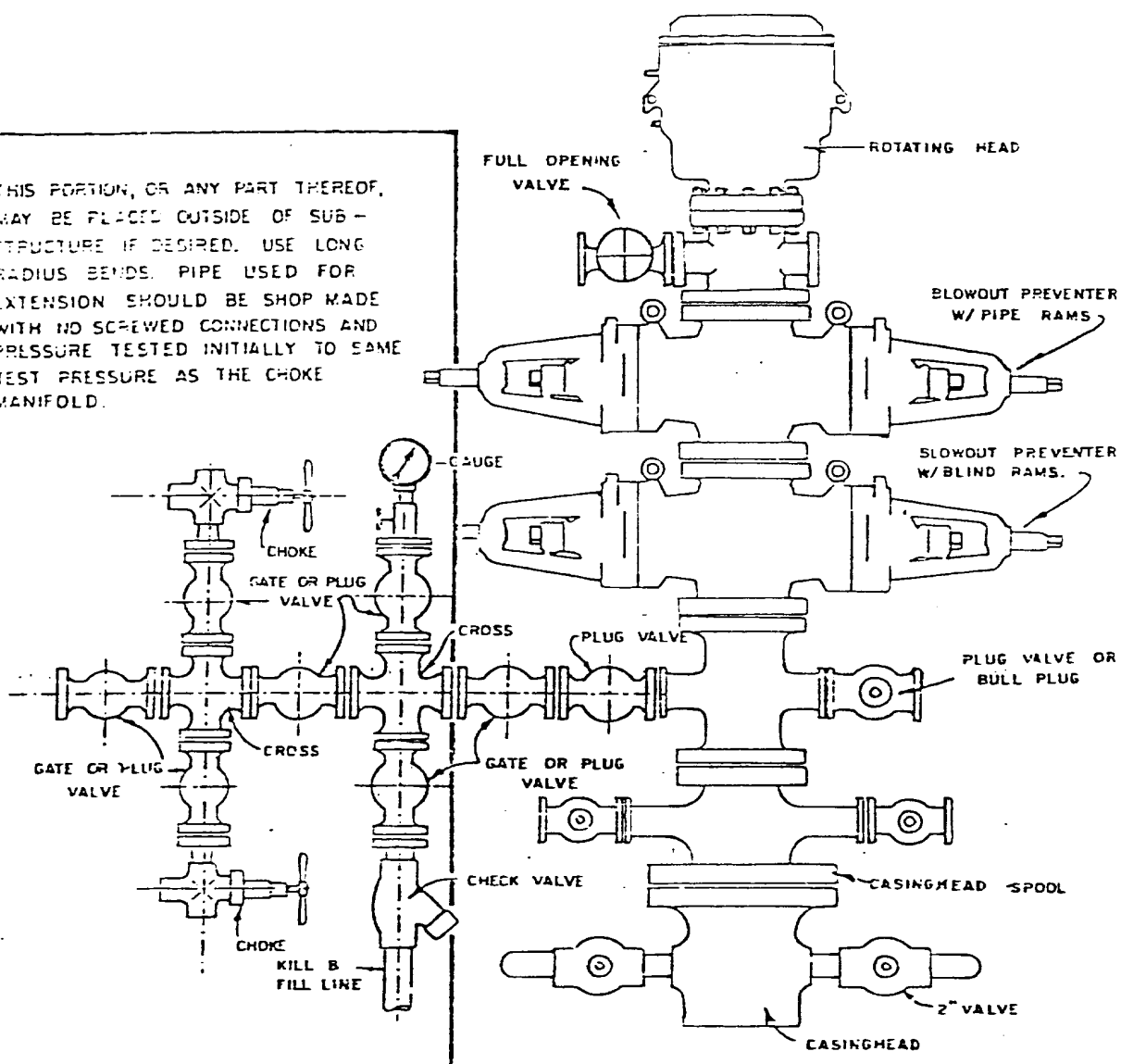
FOURWING SALTBUH (dewinged) (Atriplex conescens) - $\frac{1}{2}$ lb.

SAND DROPSEED (Sporobolus cryptandrus) - $\frac{3}{4}$ lb.

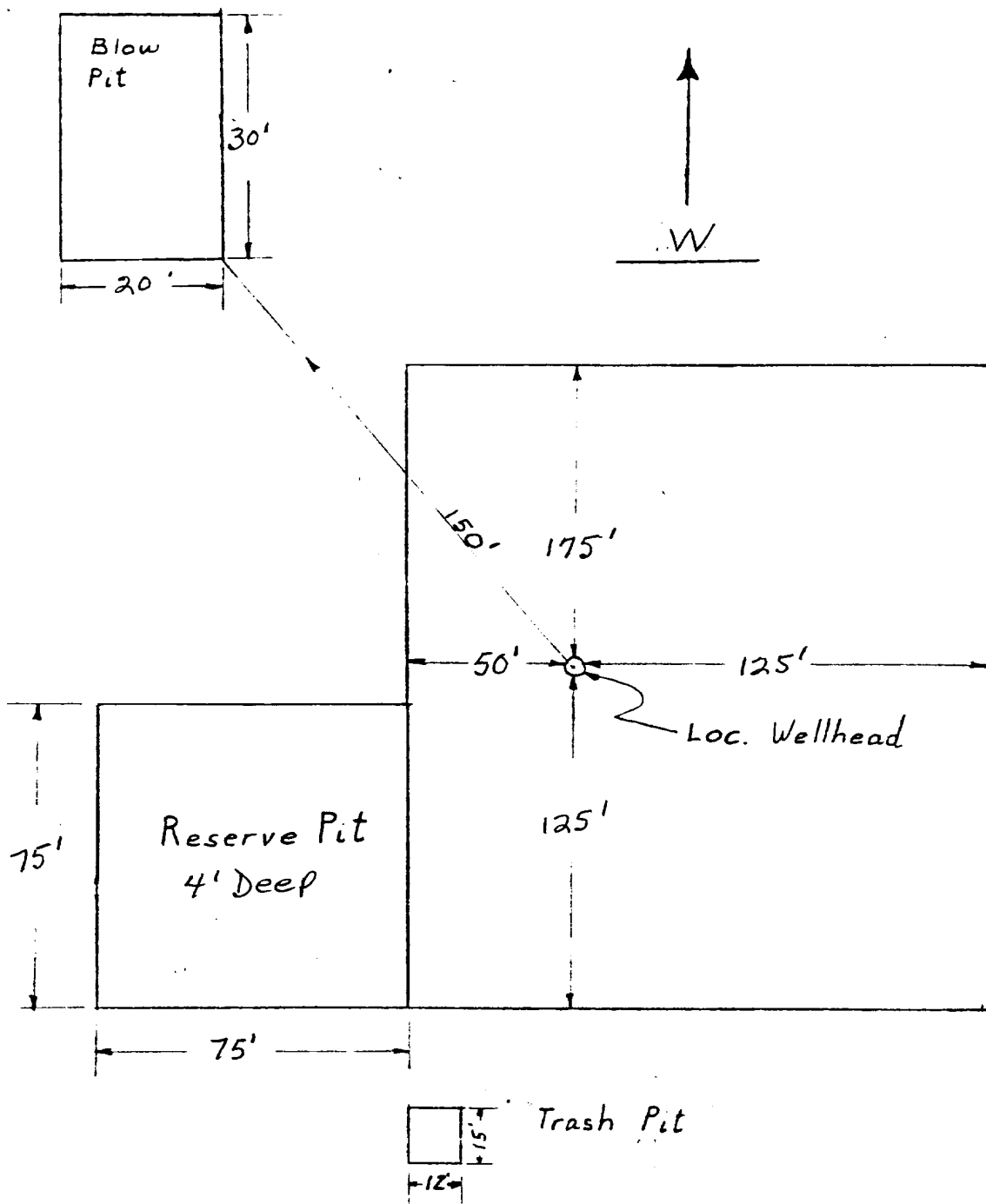
WINTERFAT (Eurotia lanata) - $\frac{1}{2}$ lb.

ALKALI SACATON (Sporobolus airoides) - $\frac{3}{4}$ lb.

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.

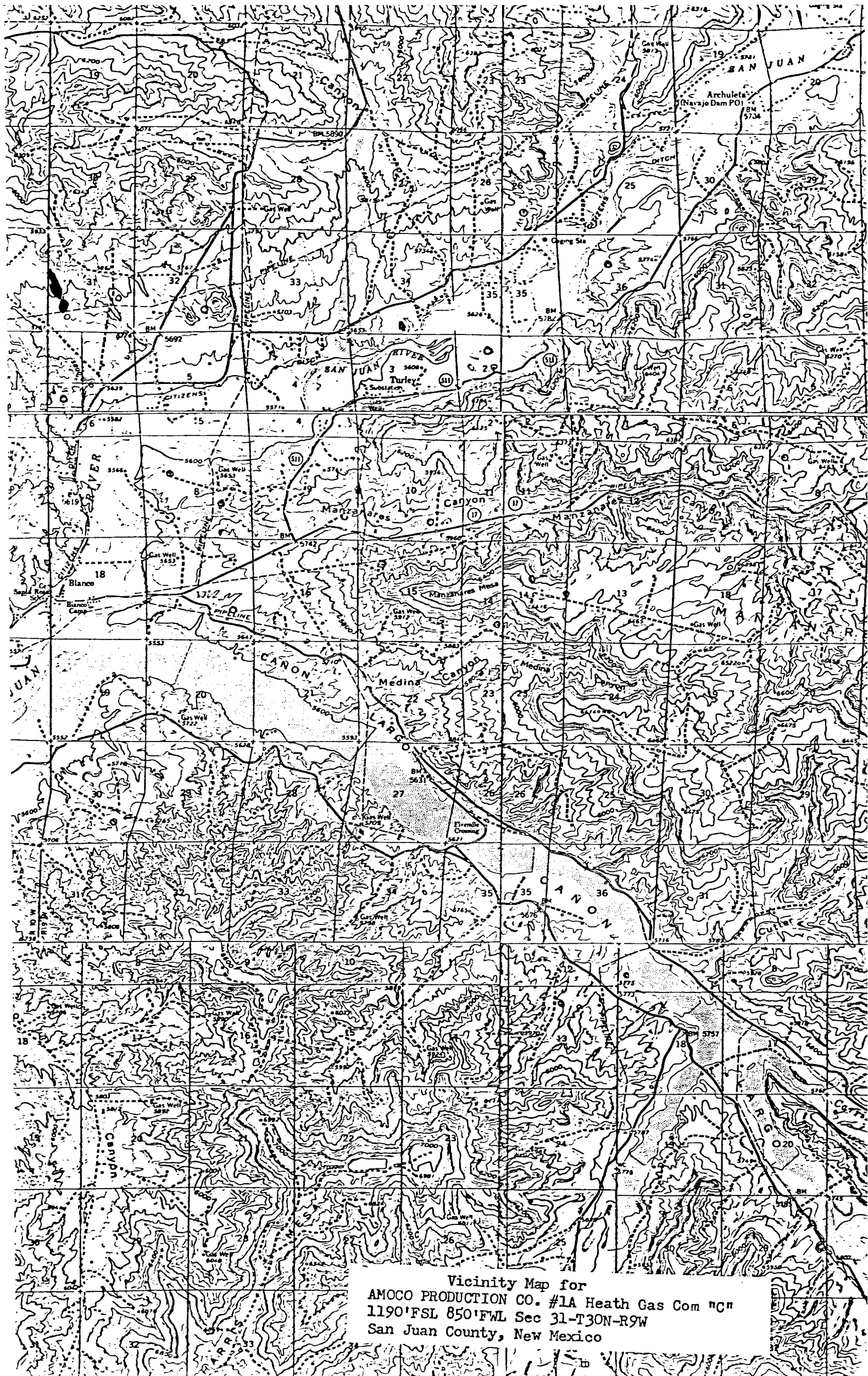


BLOWOUT PREVENTER HOOKUP

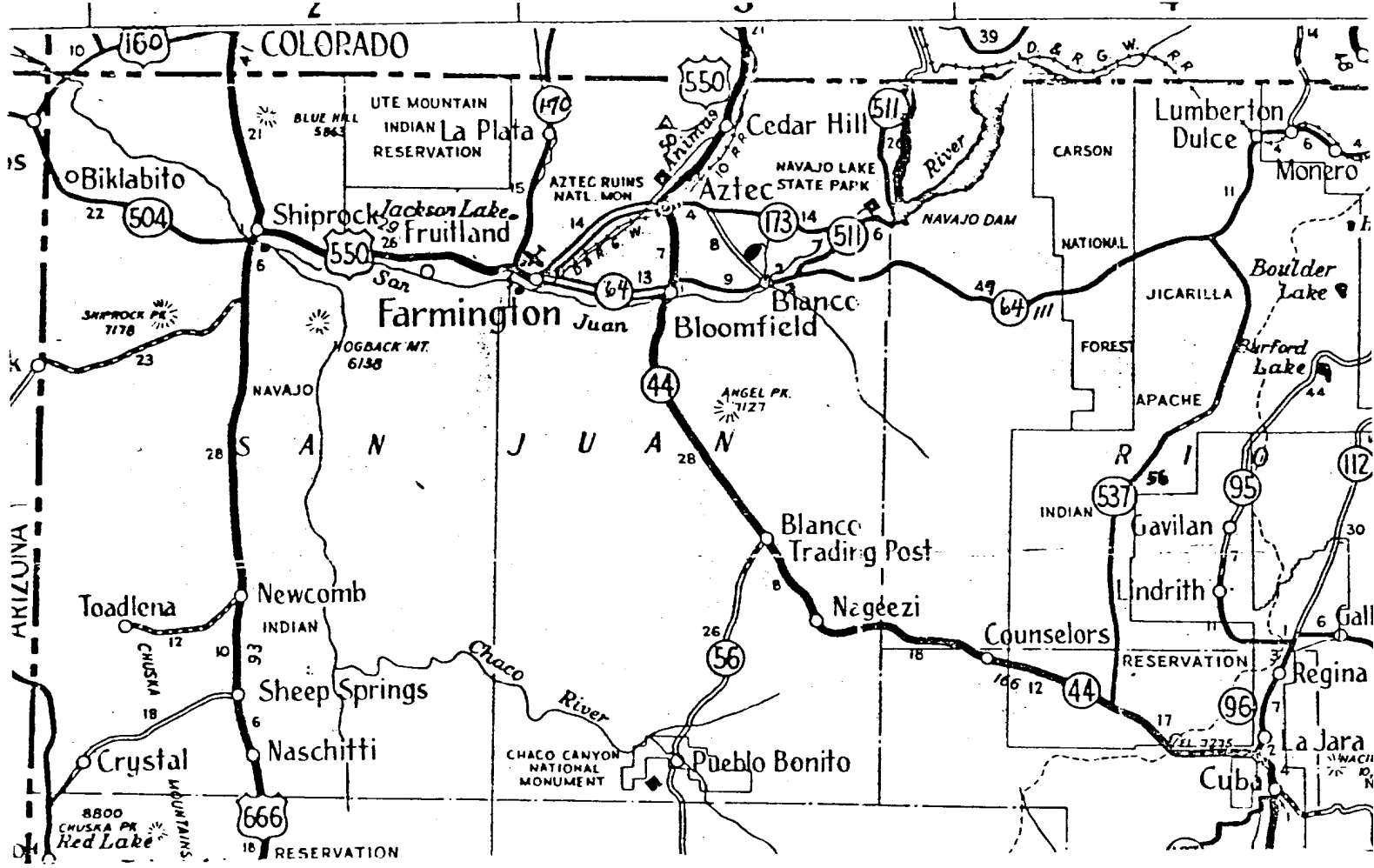


APPROXIMATELY 1.2 Acres

Amoco Production Company		SCALE: <i>NONE</i>
DRILLING LOCATION SPECS		
HEATH GAS COM "C" NO. 1A		DRG. NO.



Vicinity Map for
AMOCO PRODUCTION CO. #1A Heath Gas Com "C"
1190' FSL 850' FWL Sec 31-T30N-R9W
San Juan County, New Mexico



TO DURANGO, COLO.
NORTH

FARMINGTON AREA TRAFFIC SKETCH
DENVER DIVISION
HEATH GAS COM "C" WELL NO. 1A
San Juan County, New Mexico
Amoco WI: 66%

- Rail Point, Aztec - 20.0 miles
- Mud Point, Aztec - 20.0 miles
- Cement Point, Farmington - 27.0 miles

9-29-77

