

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-046-23404
5. LEASE DESIGNATION AND SERIAL NO.
SF 078135
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
Huerfanito Unit
8. FARM OR LEASE NAME
Huerfanito Unit
9. WELL NO.
87A
10. FIELD AND POOL, OR WILDCAT
Blanco Mesa Verde
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 1, T-26-N, R-9-W
NMPM
12. COUNTY OR PARISH 13. STATE
San Juan NM

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
El Paso Natural Gas Company

3. ADDRESS OF OPERATOR
PO Box 289, Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface 1640'N, 1750'W

F At proposed prod. zone
same

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

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1640'

16. NO. OF ACRES IN LEASE Unit
17. NO. OF ACRES ASSIGNED TO THIS WELL w/ 320.18

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1000'

19. PROPOSED DEPTH 4695'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6170'GL

22. APPROX. DATE WORK WILL START*

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"	24.0#	120'	106 cu.ft. to circulate
7 7/8"	4 1/2"	10.5#	4695'	868 cu.ft. - 2 stages

First stage cementing - 414 cu.ft. to cover Mesa Verde
Second stage cementing - 454 cu.ft. to cover Ojo Alamo

Selectively perforate and sandwater fracture the Mesa Verde formation.

A 3000 psi WP and 6000 psi test double gate preventer equipped with blind and pipe rams will be used for blow out prevention on this well.

This gas is dedicated.

The W/2 of Section 1 is dedicated to this well.



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. Also blowout preventer program, if any.

24. SIGNED D. G. Duce TITLE Drilling Clerk DATE March 19, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

ak Frank

DYMOX

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.

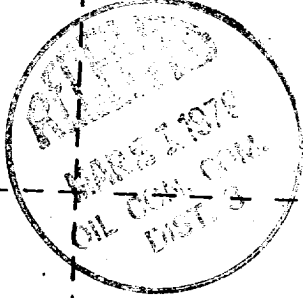
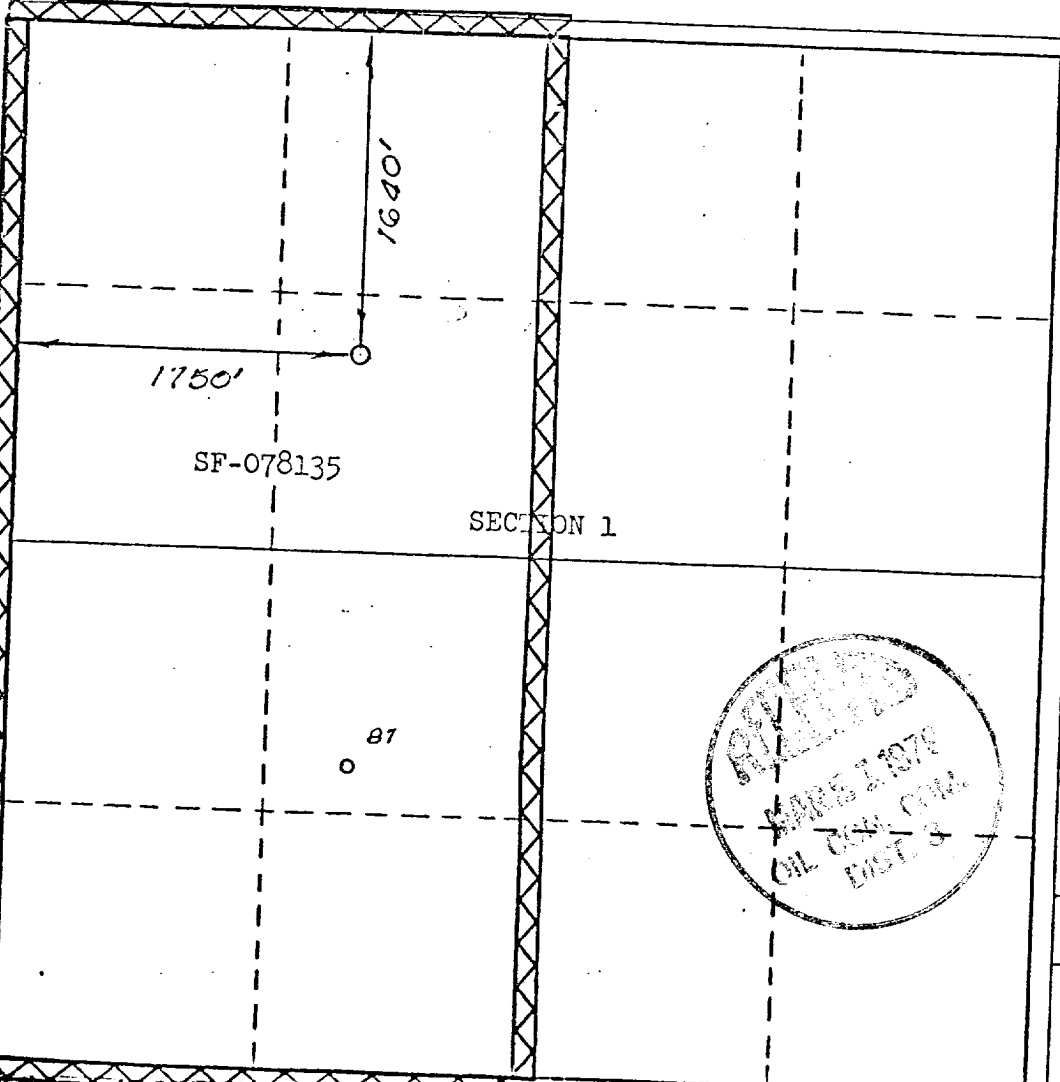
Operator EL PASO NATURAL GAS COMPANY		Lease HUERFANITO (SF-078135)		Well No. 87A
Unit Letter F	Section 1	Township 26-N	Range 9-W	County SAN JUAN
Actual Footage Location of Well: 1640 feet from the NORTH line and 1750 feet from the WEST line				
Ground Level Elev. 6170	Producing Formation MESA VERDE	Pool BLANCO MESA VERDE	Dedicated Acreage: 320.18 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?

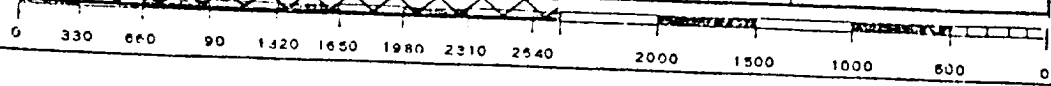
Yes No If answer is "yes," type of consolidation Unitization

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.	
<i>J. J. Biscoe</i>	
Name	Drilling Clerk
Position	El Paso Natural Gas
Company	March 19, 1979
Date	
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 16, 1978
Registered Professional Engineer and/or Land Surveyor	<i>[Signature]</i>
Certificate No.	1760



Multi-Point Surface Use Plan
Huerfanito Unit #87A

1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.
2. Planned Access Roads - Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed twenty feet (20') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained Company personnel to insure proper drainage. Gates and/or cattleguards will be installed if necessary.
3. Location of Existing Wells - Please refer to Map No. 2.
4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines - Please refer to Maps No. 1 and No. 2. Map No. 2 shows the existing gas gathering lines. Map No. 1 shows the existing roads and new proposed access roads. All known production facilities are shown on these two maps.
5. Location and Type of Water Supply - Water for the proposed project will be obtained from Huerfano Water Well #2.
6. Source of Construction Materials - No additional materials will be required to build either the access road or the proposed location.
7. Methods of Handling Waste Materials - All garbage and trash materials will be put into a burn pit shown on the attached Location Plat No. 1. When clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at least three feet (3'). A latrine, the location of which is also shown on Plat No. 1,

7. cont'd. will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainages; all earthen pits will be so constructed as to prevent leakage from occurring.
8. Ancillary Facilities - No camps or airstrips will be associated with this project.
9. Wellsite Layout - Please refer to the attached Plat No. 1.
10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeded operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeded operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted as designated by the responsible government agency.
11. Other Information - The terrain is rolling hills and sagebrush flats with sagebrush and cedar growing. Cattle occasionally graze the proposed project site.
12. Operator's Representative - W.D. Dawson, PO Box 990, Farmington, NM
13. 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 the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by El Paso Natural Gas Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

L. A. Aimes

L. A. Aimes
Project Drilling Engineer

Operations Plan - Huerfanito Unit #87A

I. Location: 1640'N, 1750'W, Section 1, T-26-N, R-9-W, San Juan County, NM

Field: Blanco Mesa Verde

Elevation: 6170'GR

II. Geology:

A. <u>Formation Tops:</u>	Surface	Nacimiento	Lewis	2145'
	Ojo Alamo	1000'	Mesa Verde	3480'
	Kirtland	1220'	Menefee	3570'
	Fruitland	1730'	Point Lookout	4245'
	Pic.Cliffs	1930'	Total Depth	4695'

B. Logging Program: I-ES and GR-Density at Total Depth

C. Coring Program: none

III. Drilling:

A. Mud Program: mud from surface to total depth.

IV. Materials:

A. Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Csg.Size</u>	<u>Wt.&Grade</u>
	12 1/4"	120'	8 5/8"	24.0# K-55
	7 7/8"	4695'	4 1/2"	10.5# K-55

B. Float Equipment: 8 5/8" surface casing - Pathfinder guide shoe (Part #2006-1-010)

4 1/2" production casing - Howco guide shoe (Price Ref. 7A) and Howco self-fill insert float valve (Price Ref. 36A & 37), all Howco centralizers Model S-3 (Price Ref. 650) run one on shoe joint and on every other joint for a total of 6, run 1 below the stage tool and 5 above. Howco D.V. multiple stage cementer (Price Ref.558) set at 2245'.

C. Tubing: 4695' of 2 3/8", 4.7#, J-55, 8rd EUE tubing with a common pump seating nipple one joint above bottom. Tubing will be open ended.

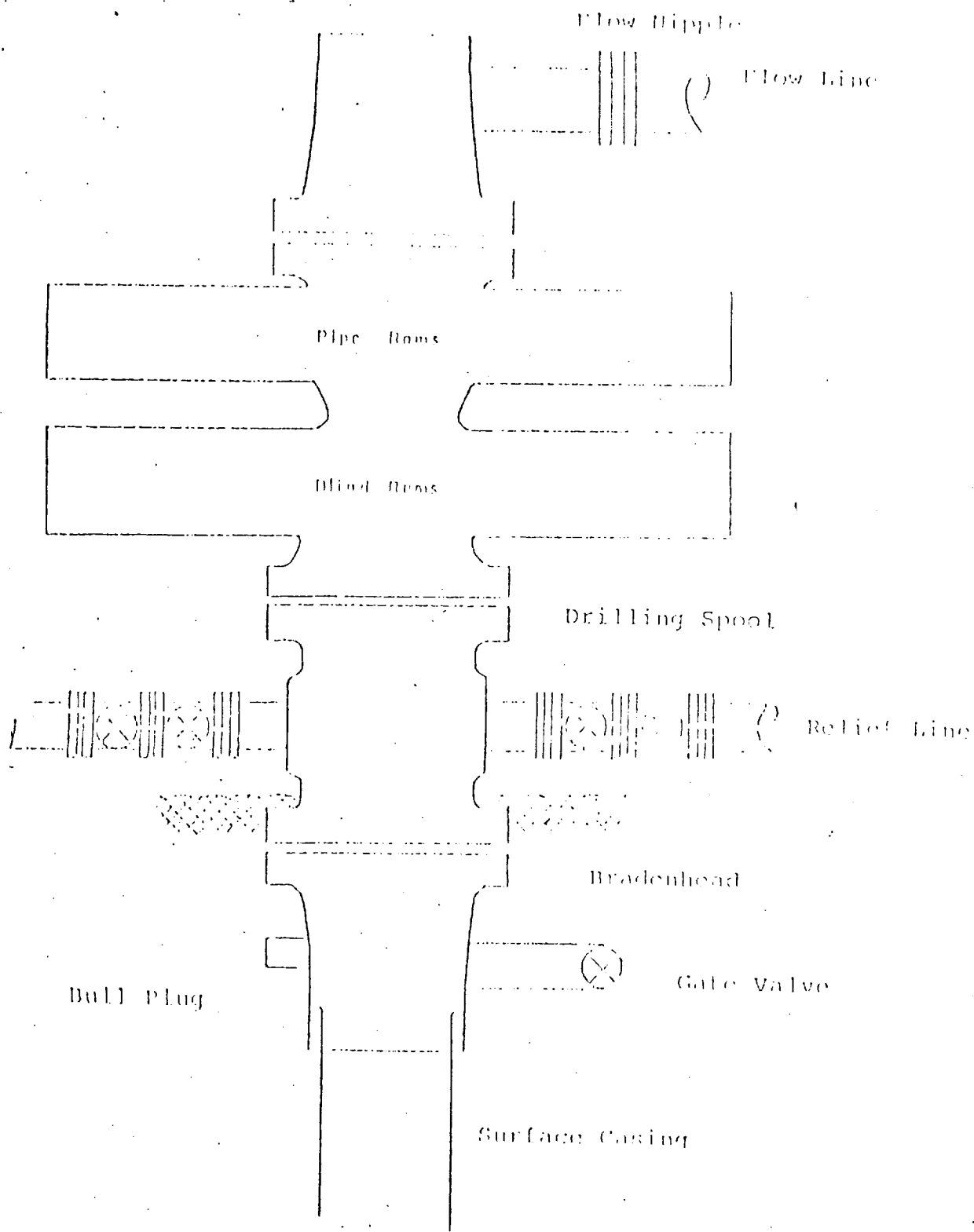
D. Wellhead Equipment: 10" 900 x 8 5/8" casing head. 10" 900 x 6" 900 xmas tree.

V. Cementing:

8 5/8" surace casing - use 90 sks. Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (106 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

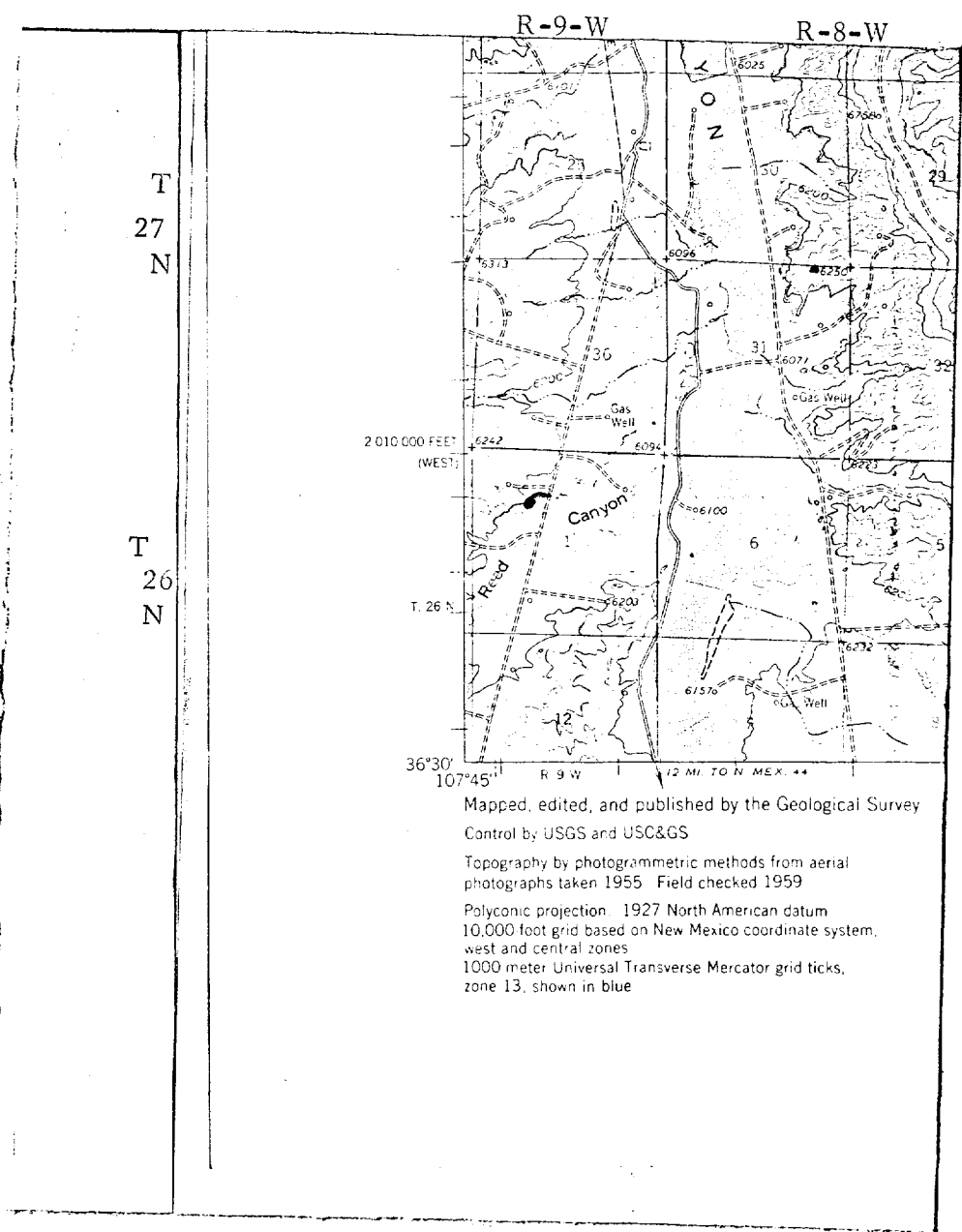
4 1/2" production casing- use 170 sks. 65/35 Class "B" Poz with 6% gel and 2% calcium chloride (8.3 gal. water/sack), followed by 100 sks. 50/50 Class "B" Poz with 2% gel, 2% calcium chloride and 1/4# fine tuf-plug/sk. (414 cu.ft. of slurry, 50% excess to cover Mesa Verde). Circulate 2 hrs. after opening stage tool before cementing. Cement second stage with 280 sks 65/35 Class "B" poz w/6% gel and 2% calcium chloride (8.3 gal.water/sack) (454 cu.ft. of slurry, 60% excess to cover Ojo Alamo). Run temperature survey at 8 hours. WOC 18 hours.

For Blow-Verde Well



Series 900 Double Gate BOP, rated at 3000 psi Working Pressure. When gas drilling operations begin a Shaffer type 50 or equivalent rotating head is installed on top of the flow nipple and the flow line is converted into a blowie line.





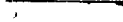
EL PASO NATURAL GAS COMPANY
 Huerfanito Unit #87A
 NW 1-26-9



Mapped, edited, and published by the Geological Survey
 Control by USGS and USC&GS
 Topography by photogrammetric methods from aerial
 photographs taken 1955 Field checked 1959
 Polyconic projection 1927 North American datum
 10,000 foot grid based on New Mexico coordinate system,
 west and central zones
 1000 meter Universal Transverse Mercator grid ticks,
 zone 13, shown in blue

MAP #1

LEGEND OF RIGHT-OF-WAYS

- EXISTING ROADS 
- EXISTING PIPELINES 
- EXISTING ROAD & PIPELINE 
- PROPOSED ROADS 
- PROPOSED PIPELINES 
- PROPOSED ROAD & PIPELINE 