

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

Form approved,
Budget Bureau No. 1004-0136
Expires: December 31, 1991

1a. TYPE OF WORK
b. TYPE OF WELL
OIL WELL ☐ GAS WELL ☒ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐
2. NAME OF OPERATOR
Amoco Production Company 778 Patty Haefele
3. ADDRESS AND TELEPHONE NO.
P.O. Box 800, Denver, Colorado 80201 (303) 830-4988
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 960' FNL 1710' FEL
At proposed prod. zone 1847' FNL 823' FEL BHL
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE
11 miles from Aztec, NM
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE (Also to nearest drilg. unit line, if any)
16. NO. OF ACRES IN LEASE 1680
17. NO. OF ACRES ASSIGNED TO THIS WELL E/ 319.51
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DRILLING COMPLETED OR APPLIED FOR, ON THIS LEASE, FT.
19. PROPOSED DEPTH 5800 TMD; 5330 TVD
20. ROTARY OR CABLE TOOLS Rotary
21. ELEVATIONS (Show whether DF, KT, GR., etc.)
6043' GR
22. APPROX. DATE WORK WILL START
9-95

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH
ATTACHED "GENERAL REQUIREMENTS"

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12.25"	9.625 J-55	36#	200'	150 ex Cl B Cement Circ. to surface
8.75"	7.000 J-55	20#	3150'	600 ex Cl B 50:50 poz mix
6.125"	4.500" N-80	11.6#	5800'	150 ex Cl B 50:50 poz mix

Notice of staking submitted on 9/21/95 as the Holmberg Gas Com 1R.

LEASE DESCRIPTION:

T31N-R10W: Sec. 15 NE/4 NE/4

T32N-R10W:

Sec 19: SE/4 SE/4
Sec 20: SW/4, E/2
Sec 21: W/2, NW/4 NE/4
Sec 22: E/2 E/2, W/2 NE/4, SW/4 SE/4
Sec 27: E/2
Sec 28: N/2 NW/4, W/2 NE/4

RECEIVED
OCT 30 1995
OIL CON. DIV.
DIST. 3

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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 Patty Haefele TITLE Staff Assistant DATE 09-22-1995
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____

APPROVED
AS AMENDED

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

OCT 26 1995
DISTRICT MANAGER

NMOCD

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

RECEIVED

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

070 FARMINGTON, NM AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APN Number <i>30-045-29299</i>		Pool Code 72319	Pool Name Blanco Mesaverde
Property Code <i>624</i>	Property Name HOLMBERG GAS COM		Well Number # 1 R
GRID No. 000778	Operator Name AMOCO PRODUCTION COMPANY		Elevation 6043

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Lot 1	28	32 N	10 W		960	NORTH	1710	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	28	32N	10W		1847	North	823	East	San Juan

Dedicated Acres 319.51	Joint or Infill	Consolidation Code	Order No.
---------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>16</p> <p>RECEIVED OCT 30 1995 OIL CON. DIV. DIST. 3</p>			<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Patty Haefele</i> Signature Patty Haefele Printed Name Staff Assistant Title 10/2/95 Date</p> <p>18 SURVEYOR CERTIFICATION</p> <p>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 belief.</p> <p>September 7, 1995 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>GARY D. VAUGHN</i> 7016 7016 Certificate Number</p>

FINAL COPY (REVISED)

AMOCO PRODUCTION COMPANY DRILLING AND COMPLETION PROGRAM

File No.:

Holmberg Jdr

Date:

9/21/85

Lease: Holmberg Gas Unit Com

Well No.

#1-4R

County: San Juan, New Mexico

Location:

NE Section 28, T32N, R10W

Former name: None

Field:

Basin Mesaverde

32

10

OBJECTIVE: Further exploit the Mesaverde.

METHOD OF DRILLING

TYPE OF TOOLS

Rotary

DEPTH OF DRILLING

0 - TD

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Actual GL-----Estimated KB

6041

6054

Marker	True Vert Depth	Msd. Depth (ft.)	SS Elev. (ft.)
Ojo Alamo		1,534	4,520
Kirtland		1,654	4400
Fruitland*		2,529	3,525
Pictured Cliffs*		2,854	3,200
Lewis Shale		3,000	3,054
Cliff House*	4,727	4,850	1,327
Menefee	4,818	5,077	
Point Lookout	5,255	5,697	
KOP	3,600	3,600	
TOTAL DEPTH	5,330	5,800	

SPECIAL SURVEYS

TYPE

DEPTH

NONE

REMARKS:

Logs run as considered necessary.

TOTAL DEPTH

5,330

5,800

#Probable completion * Possible pay

OJO ALAMO IS POSSIBLE USEABLE WATER

SPECIAL TESTS

TYPE

DEPTH INTERVAL, ETC

None

DRILL CUTTING SAMPLES

FREQUENCY DEPTH

As penetration rate per ICP TD

DRILLING TIME

FREQUENCY

Geolograph

DEPTH

0 - TD

Remarks:

Mud Logging Program Two man unit from ICP to TD.

Coring Program: None

MUD PROGRAM:

Approx. Interval

Type Mud

Weight, #/gal

Vis, sec/qt.

W/L, cc's/30 min.

0-----SCP

SPUD

8.5-9.0

Sufficient to clean hole.

NC

SCP-----ICP

LSND

8.8-9.0*

Sufficient to clean hole and maintain integrity f/casing.

ICP-----TD

AIR/GAS

////

REMARKS:

* Use minimum mud weight to control formation pressures.

CASING PROGRAM:

Casing String

Estimated Depth

Casing Size

Hole Size

Landing Point, Cement, Etc

Conductor

Surface

200

9 5/8"

12 1/4"

1,2

Intermediate

3,150

7"

8 3/4"

1,2,3

Production

5,800

4 1/2"

6 1/8"

2. Cliff House horizontal lateral will be left open hole.

Remarks:

1. Circulate cement to surface.
2. Southern Rockies Drilling Team to design cement programs.
3. Casing set 150' into the Lewis Shale.

GENERAL REMARKS:

Southern Rockies Engineering staff to design completion program.

Form 46 Reviewed by:

Logging program reviewed by:

PREPARED BY:

APPROVED:

APPROVED:

St. John/TerBest/blyet

For Production Dept

For Exploration Dept.

Form 46 7-84bw

9/21/85

August 31, 1995
Revised--9/6/95
Revised--10/02/95 (cement)

Holmberg Gas Unit #1-A
Replacement/horizontal well
NE/4 Section 28, T32N, R10W
San Juan County, New Mexico

DRILLING PROCEDURE

This well will be a replacement high angle well designed to intersect the fracture system in the middle of the Cliff House at approximately 700' Southeast of the surface location. The well's design is set up to utilize the 4.750" air drill motors that have proven highly reliable in the last three horizontal wells drilled in 1994.

1. Stake and clear location 60' directly South or Southeast of the plugged and abandoned original Holmberg Gas Unit #1. This should minimize the archeological and road/location building expense.
2. MIRURT (Aztec Rig #124) complete with air package, dual double ram preventers and cavitation blooie lines.
3. Drill 12.250" hole to 200', run and cement 9.625" 36 #/ft, J-55, ST & C casing back to surface with 150 sacks of type "B" containing 2 % CaCl (1.15 cubic feet per sack). Displace casing with clear water. Screw on casing head and 28" rental 11" x 3,000 psi spool. NUBOE and test to 2,000 psi. Drill 8.750" hole to 3,250' (150' into Lewis Shale) using fresh water to top of the Fruitland at 2,500' and LSND 8.8 ppg, 10.0 cc WL mud to total intermediate depth. Condition hole for casing, lay down the 4.500' drill string and run 7.000" 20.0 #/ft, J-55, LT & C casing. Flush with 20 bbls of water and cement with 600 sx (50% excess) of 50:50 Poxmix containing 0.4 % Halad 344, 2 % gel, 6 % salt and 0.25 #/sx flocele (1.40 cubic feet per sack). Mix and pump at 13.5 ppg and displace with fresh water. NU casing spool and BOE, test to 2,000 psi. Run gyro survey and pick up monel nonmagnetic collars while WOC. 172.5
4. Rig up air equipment, pick up 6.125" Smith F-57 DDP (fully diamond enhanced) on 3.500" drill string and drill vertically with dry air to KOP, estimated at 3,600' measured depth. Take surveys with singleshot to KOP; trip out, pick up a 4.750" air motor and steering equipment and begin drilling curve at 5 degrees per 100' at a 145 degree azimuth. 840
5. Build curve to 45 degrees at which time, the bottom hole location should be 4,410' TVD, 4,500' MD and 336' to the Southeast of the surface location. Trip out, lay down the directional equipment and pick up a stabilized rotating bottom hole assembly which should allow rotating ahead at the 45 degree angle. Maintain angle and azimuth to the intersection of the Cliff House at 4,775' TVD with approximately 700' of displacement. Should a major fracture be intersected, a decision may be made to curtail any further drilling; otherwise continue drilling at the same angle and azimuth through the Point Lookout to a TVD of 5,330'. At that point, the bottom hole location should be at 5,800' MD with 1,255' of lateral displacement. Run logs as required.

RECEIVED
BLM MAIL ROOM
95 OCT -3 AM 11:07
070 FARMINGTON, NM

page 2
Holmberg Gas Unit #1
Drilling Procedure

RECEIVED

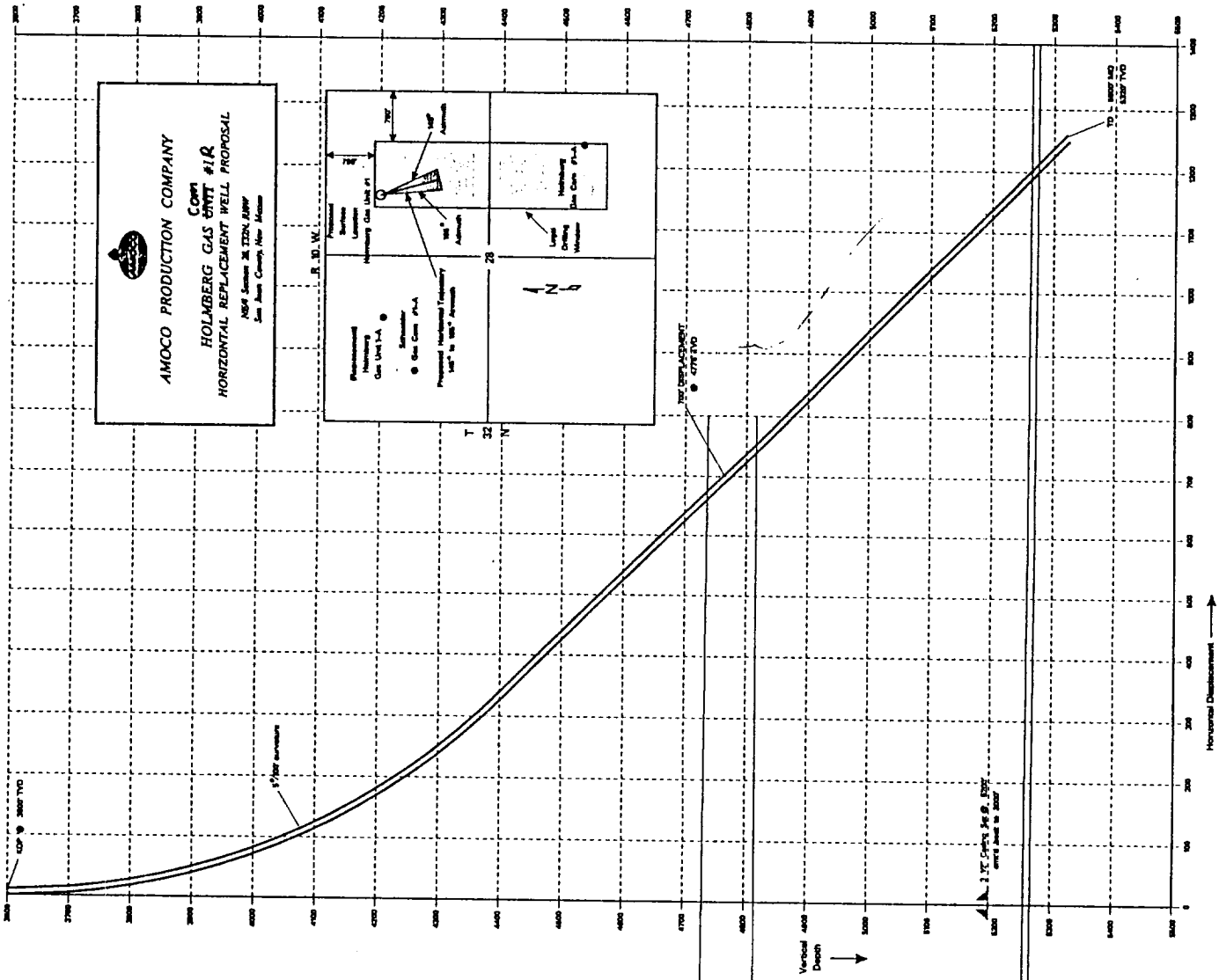
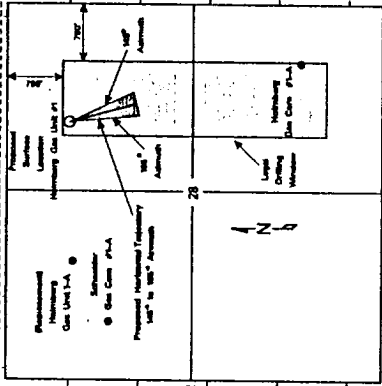
OCT 09 1995

BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE

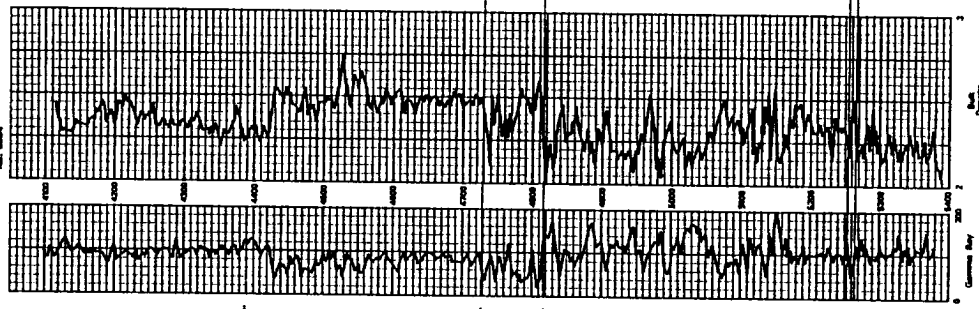
6. Clean up hole and trip out laying down the drilling assembly. Run 4.500" 11.6#/ft, N-80, LTC casing to TD. Cement back into the 5.500' intermediate casing at 3,000'. Utilize 20 bbls water ahead followed by 150 sx of 50:50 Pozmix containing .4 % Halad 344, 2 % gel and 6% salt (50% excess--1.35 cubic feet/sack). Mix and pump the cement at 13.70 to 13.90 ppg, displace with clear water. Should a major fracture be encountered, install one or more ECP's in place to protect it from the cement.
7. Determine best method of completion; dependent on fractures encountered, stimulation required and cement inside the 4.500" casing. Should extensive work be required, attempt to perform rigless. Run 2.375" tubing to +/- 5,740'.
8. RDMORT.

brad

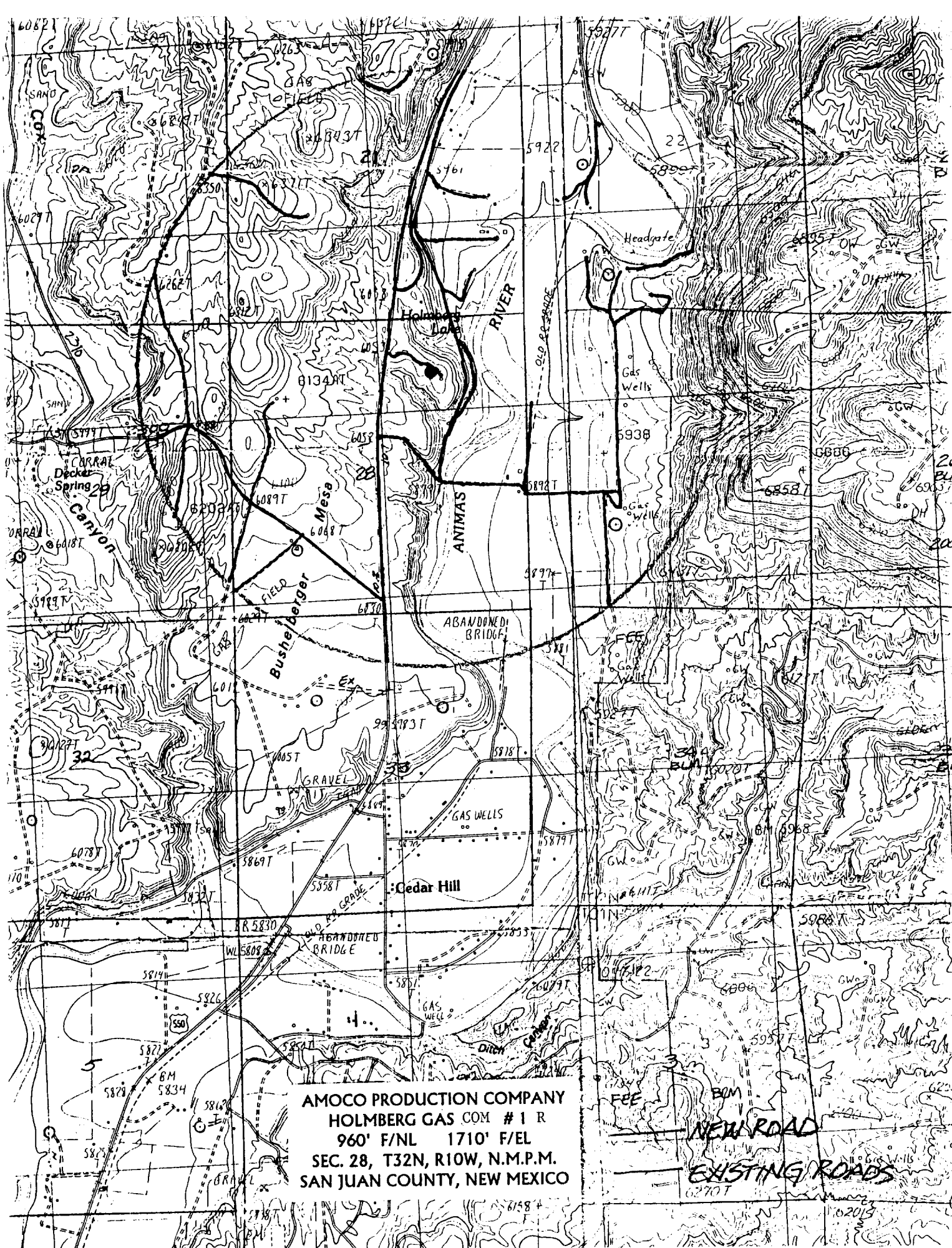
AMOCO PRODUCTION COMPANY
Com
HOLMBERG GAS UNIT #1R
HORIZONTAL REPLACEMENT WELL PROPOSAL
 1984 Section 28 T23N R29W
 San Juan County, New Mexico



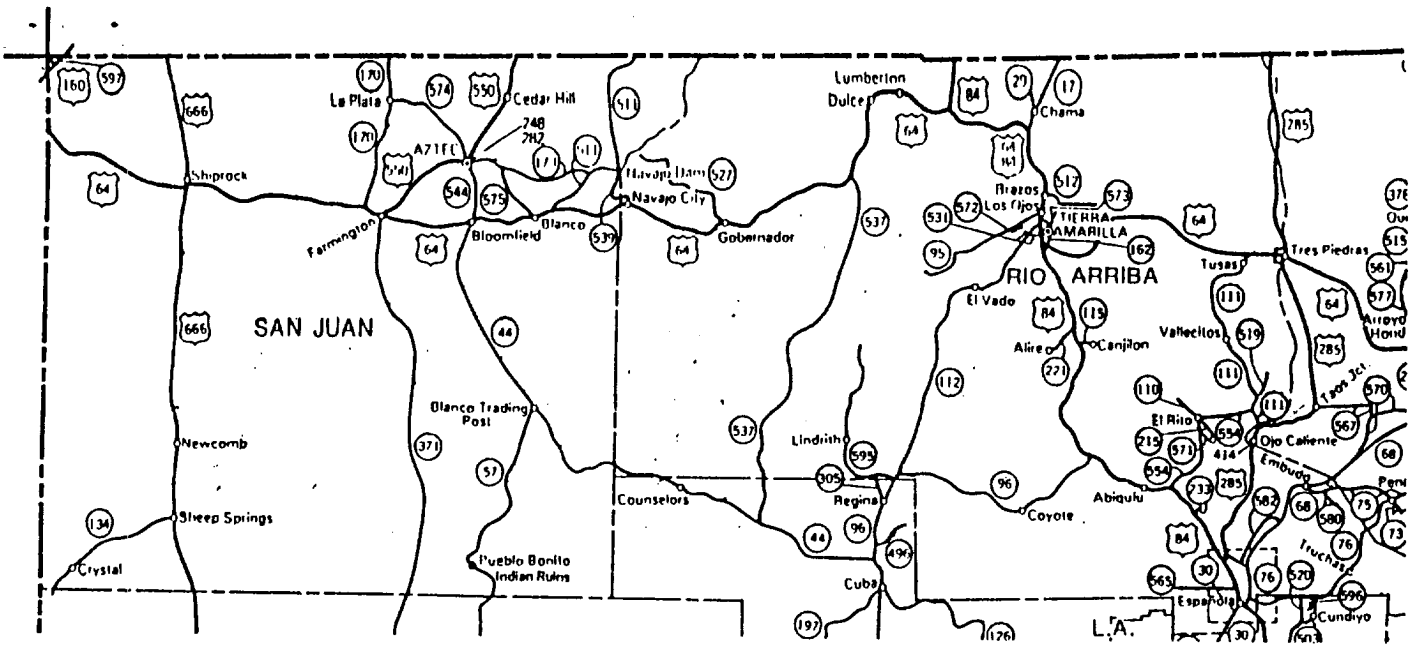
Standard
 Holmberg Gas Unit #1
 1984 P.M. 1984 F.E.L. Sec. 28 T23N R29W
 San Juan County, New Mexico
 12-15-84



CLIP SCALE
 CLIP INCHES
 CLIP INCHES
 MEASURE
 PUMP LOGOUT



AMOCO PRODUCTION COMPANY
HOLMBERG GAS COM #1 R
960' F/NL 1710' F/EL
SEC. 28, T32N, R10W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO



HOLMBERG GAS com # 1R
 960' F/NL 1710' F/EL
 SEC. 28, T32N, R10W, N.M.P.M.
 RAIL POINT:
 MUD POINT:
 CEMENT POINT:

