

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL ☐  
WELL

GAS ☒  
WELL

OTHER

SINGLE ☒  
ZONE

MULTIPLE ☐  
ZONE

2. NAME OF OPERATOR

ENERGEN RESOURCES CORPORATION

3. ADDRESS AND TELEPHONE NO.

2198 Bloomfield Highway; Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

1295' FNL, 1035' FWL

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

10 miles NE of Gobernador, NM

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) 1035'

18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT. 3600'

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

7606' GR

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	9 5/8	36#	200'	130 cu. ft., circ.
7 7/8	4 1/2	10.5#	4773'	1631 cu. ft., 2 stages

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3162.2.

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO ANY CHANGE WITH ATTACHED  
"GENERAL REQUIREMENTS"

Selectively perforate and sandwater fracture the Pictured Cliffs.

This gas is dedicated.

A Williams Field Service Pipeline ROW Plat is attached.

THIS IS AN EXPEDITED APD.

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

*Alan Graham*

TITLE

Drilling & Completion Foreman

DATE

12-8-00

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

10/1/01

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

*[Signature]*

TITLE

AFM (minerals)

DATE

10/1/01

\*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.

District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Revised February 21, 1994

District II  
PO Drawer 00, Artesia, NM 86211-0719

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

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

☐ AMENDED REPORT

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

200 DEC 11 PM 1:47

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-26606</b>	*Pool Code <b>72400</b>	*Pool Name <b>East Blanco Pictured Cliffs</b>
*Property Code <b>21185</b>	*Property Name <b>CARSON</b>	*Well Number <b>9</b>
*GRID No. <b>162928</b>	*Operator Name <b>ENERGEN RESOURCES CORPORATION</b>	*Elevation <b>7606'</b>

<sup>10</sup> Surface Location

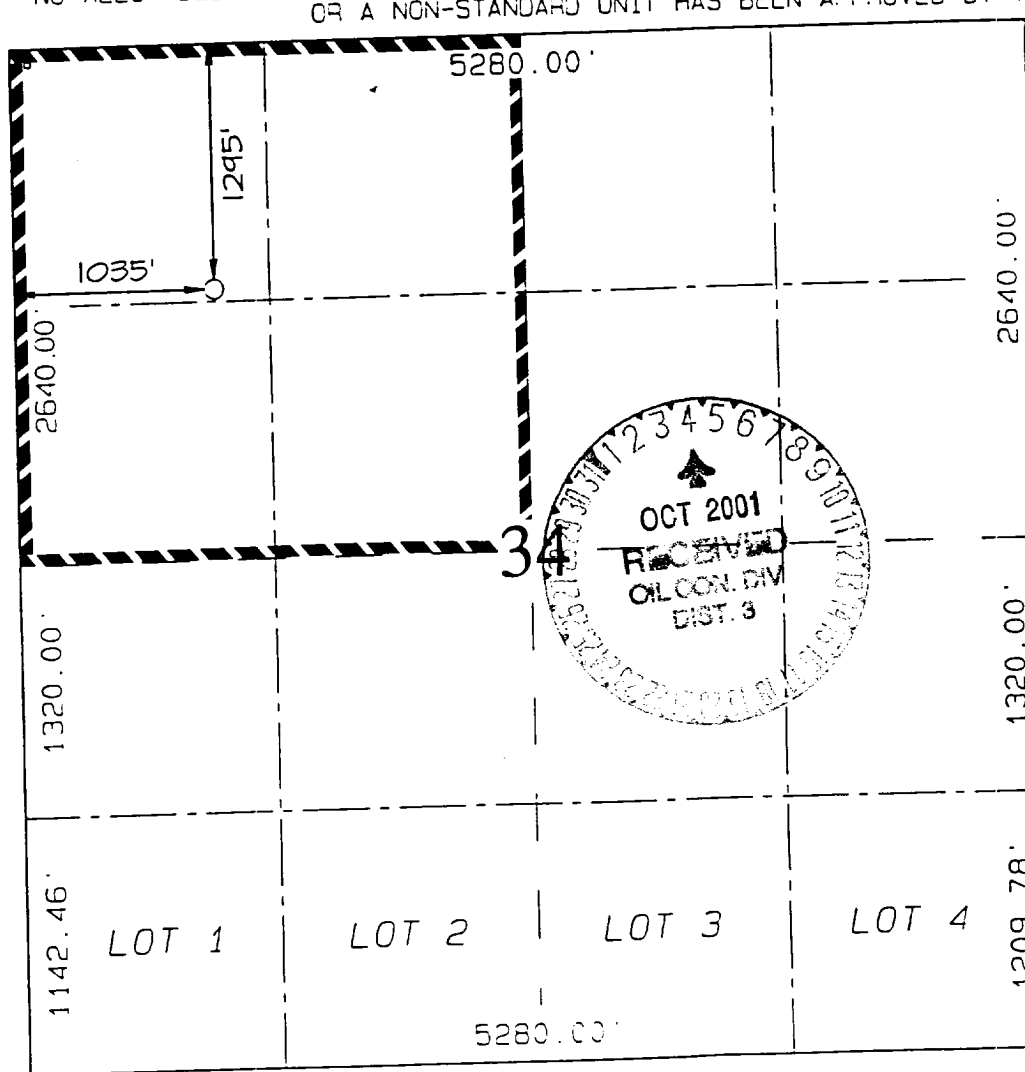

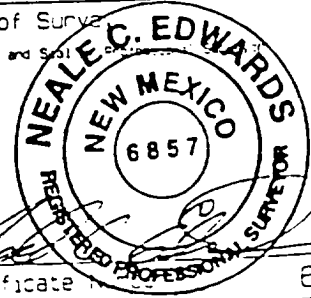
UL or lot no.	Section	Township	Range	Lot 10	Feet from the	North/South line	Feet from the	East/West line	County
<b>D</b>	<b>34</b>	<b>30N</b>	<b>4W</b>		<b>1295</b>	<b>NORTH</b>	<b>1035</b>	<b>WEST</b>	<b>RIO ARriba</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 10	Feet from the	North/South line	Feet from the	East/West line	County

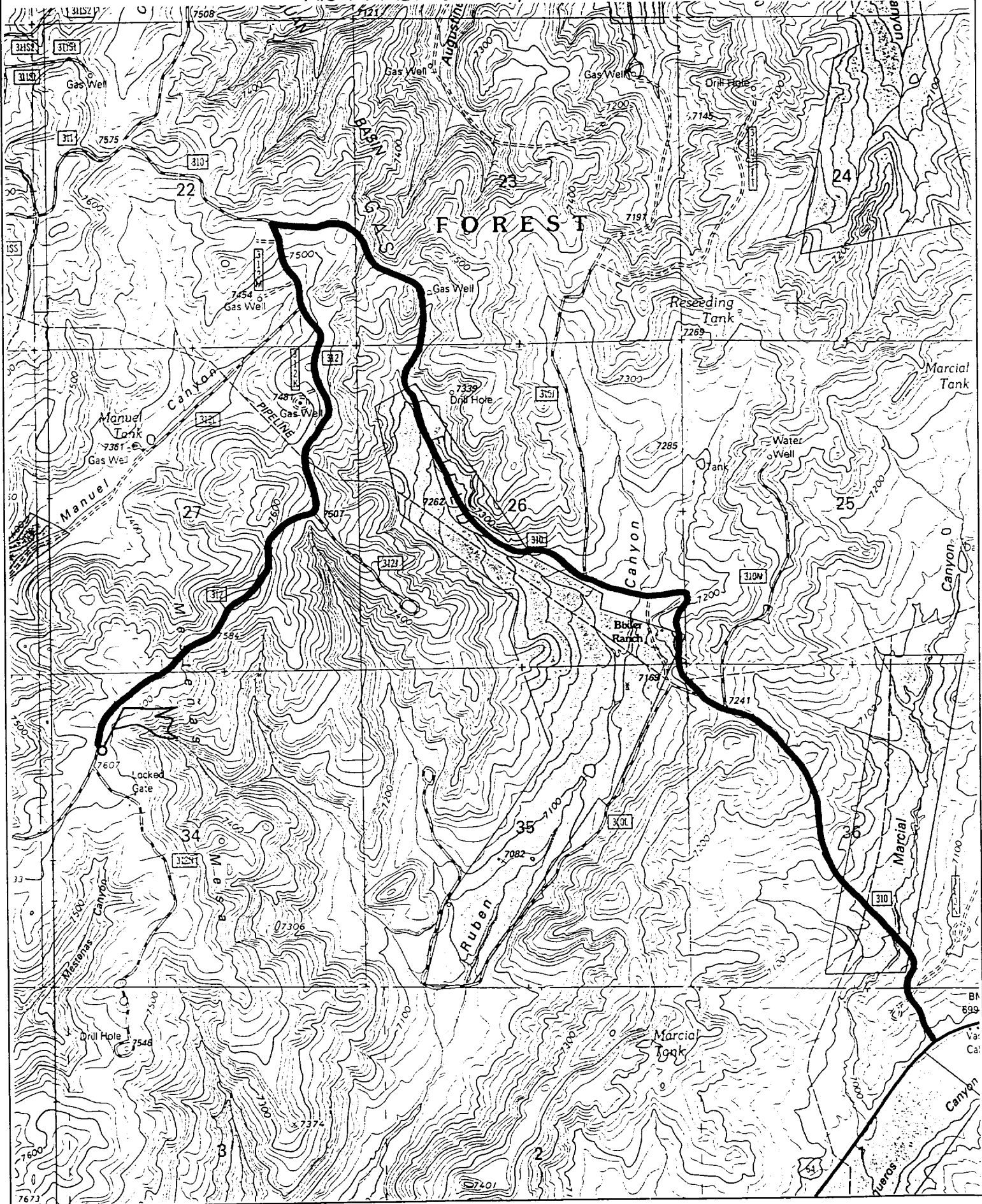
<sup>12</sup> Dedicated Acres <b>160</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p><sup>17</sup> 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></p> <p>Signature <b>Gary Brink</b></p> <p>Printed Name <b>Production Superintendent</b></p> <p>Title <b>12/8/00</b></p> <p>Date</p>
	<p><sup>18</sup> 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><b>AUGUST 15, 2000</b></p> <p>Date of Survey</p> <p>Signature and Seal </p> <p>Certificate No. <b>6857</b></p>

# ENERGEN RESOURCES CORPORATION CARSON #9

1295' FNL & 1035' FNL, SECTION 34, T30N, R4W, N.M.P.M.  
RIO ARriba COUNTY, NEW MEXICO



## OPERATIONS PLAN

WELL NAME: Carson 9

LOCATION: 1295' FNL, 1035' FWL, Section 34, T30N, R4W, Rio Arriba County, NM

FIELD: East Blanco Pictured Cliffs      ELEVATION: 7606' GL

### FORMATION TOPS:

Surface	San Jose
Nacimiento	2548
Ojo Alamo	3843
Kirtland	3963
Fruitland	4133
Pictured Cliffs	4323
Lewis	4668
Total Depth	4773

### LOGGING PROGRAM:

Open Hole Logs:

Surface to TD: HRI/SP/GR, CNT/LDT/MLT

Mud Logs: 200' above Ojo Alamo to total depth

Coring: None

Natural Gauges: None

MUD PROGRAM: Fresh water low solids mud from surface to T. D. 9.0-9.2 PPG.

### CASING PROGRAM:

<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CSG SIZE</u>	<u>WT.</u>	<u>GRADE</u>
12 ¼"	200'	9 5/8"	36#	J-55
7 7/8"	4773'	4- ½"	10.5#	J-55

### TUBING PROGRAM:

4700	2-3/8"	4.7#	J-55
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WELLHEAD: 9 5/8" 2000 x 4 ½" Larkin Fig. 92 casing head. 4 ½" 2000 x 2" tubing head.

### BOP SPECIFICATIONS:

An 11" 2000 psi minimum double gate BOP stack (Figure 1) will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. A 2" nominal, 2000 psi minimum choke manifold will be used. An upper Kelly Cock valve with handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

### CEMENTING:

9 5/8" surface casing - Cement with 110 sks Class B Cement with 1/4# flocele/sk and 2% calcium chloride (130 cu. ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 600# for 30 minutes.

Texas Pattern Guide Shoe on bottom.

4 1/2" production casing:

First Stage - cement with 180 sks Class B with 2% Calcium Chloride, 10% Gilsonite and 1/4# flocele/sks (230 cu. ft. of slurry, 50% excess to circulate stage tool @ 4100).

Second Stage - cement with 730 sks 65/35 Class B Poz with 6% gel, 2% calcium chloride, 10% gilsonite, and 1/4# flocele/sk. Tail with 50 sks Class B w/2% calcium chloride, 10% gilsonite and 1/4# flocele/sk. (1401 cu. ft. of slurry, 50% excess to circulate to surface). WOC 12 hrs.

Cement nose guide shoe on bottom with a self-fill insert float valve on top of shoe joint. 8 bow spring centralizers spaced every 3rd joint off bottom. One bow spring centralizer below and eight above stage tool at 3700. Two turbolating centralizers at the base of the Ojo Alamo.

### OTHER INFORMATION:

- 1) No abnormal temperatures or pressures are anticipated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control.
- 3) This gas is dedicated.
- 4) Anticipated pore pressure for the Fruitland is 900 psi and the Pictured Cliffs is 1000 psi.