Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO. NMSF-078067

6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A

7. UNIT AGREEMENT NAME N/A

8. FARM OR LEASE NAME, WELL NO. Carson 14 324R

9. API WELL NO. 30-045-31007

10. FIELD AND POOL, OR WILDCAT Basin Fruit. Coal

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA N 14-25n-12w NMPM

12. COUNTY OR PARISH San Juan

13. STATE NM

1a. TYPE OF WORK: DRILL ☑ DEEPEN ☐

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER SINGLE ZONE ☑ MULTIPLE ZONE ☐

2. NAME OF OPERATOR: Elm Ridge Resources, Inc. (505) 632-3476

3. ADDRESS AND TELEPHONE NO.: P. O. Box 189, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 675' FSL & 1909' FWL
At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 23 air miles SSW of Bloomfield

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1,909'

16. NO. OF ACRES IN LEASE: 1,680

17. NO. OF ACRES ASSIGNED TO THIS WELL: S/2 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1,391'

19. PROPOSED DEPTH: 1,350'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6,423' ungraded

22. APPROX. DATE WORK WILL START*: Apr. 1, 2002

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-5/8"	K-55 7"	20	120'	≈35 cu. ft. & to surface
6-3/4"	J-55 4-1/2"	10.5	1,350'	≈340 cu. ft. & to surface

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

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

On sited with Bill Liess.
Archaeology report CASA 02-11 filed February 6, 2002.

MAR 2002

cc: BLM, Elm (D&F), OCD (via BLM)

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 [signature] TITLE Consultant (505) 466-8120 DATE 2-19-02

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE 3/25/02

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:

/s/ David J. Mankiewicz

APPROVED BY _____ TITLE _____ DATE MAR 25

*See Instructions On Reverse Side

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-31007	71629	BASIN FRUITLAND COAL GAS

[4] Property Code	[5] Property Name	[6] Well Number
~~015457~~ 29637	CARSON	14 324 R

[7] OGRID No.	[8] Operator Name	[9] Elevation
149052	ELM RIDGE RESOURCES, INC.	6423'

[10] Surface Location

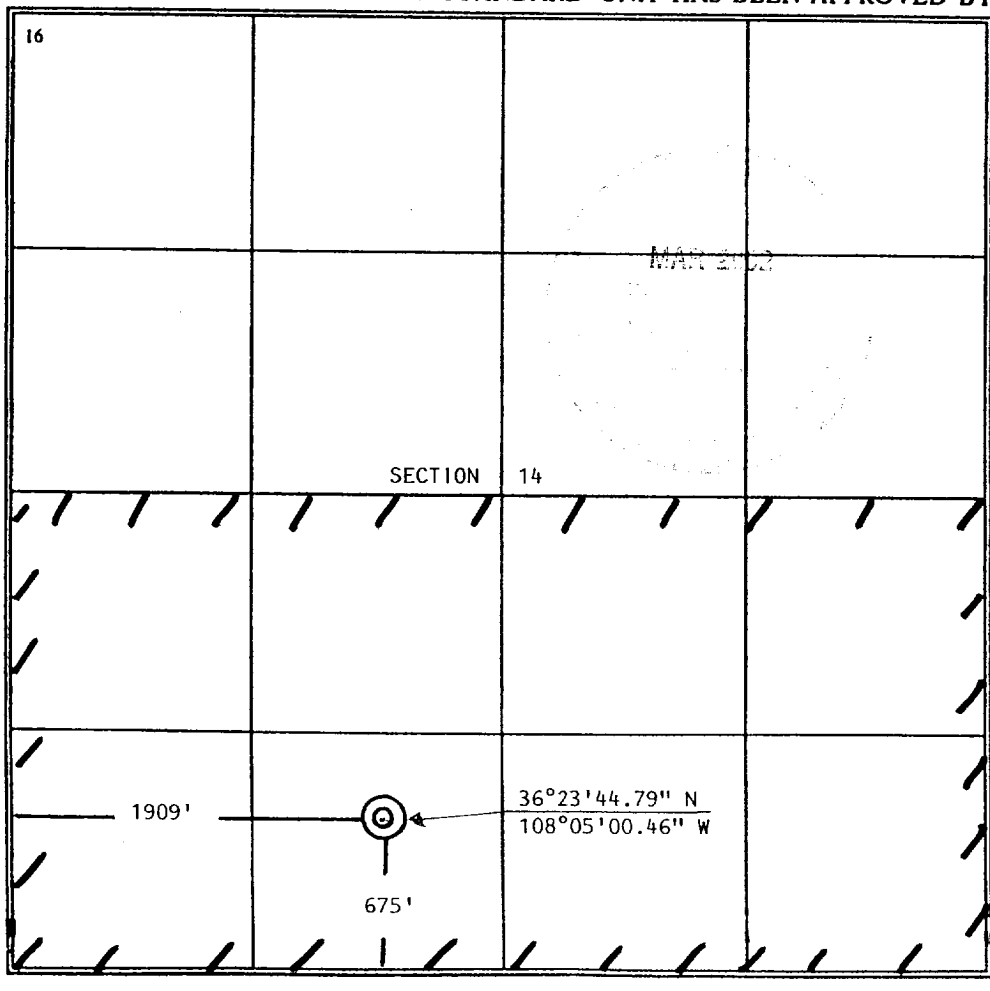
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	14	25N	12W	N	675	SOUTH	1909	WEST	SAN JUAN

[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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

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



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature: Brian Wood

Printed Name: BRIAN WOOD

Title: CONSULTANT

Date: FEB. 19, 2002

[18] SURVEYOR CERTIFICATION

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.

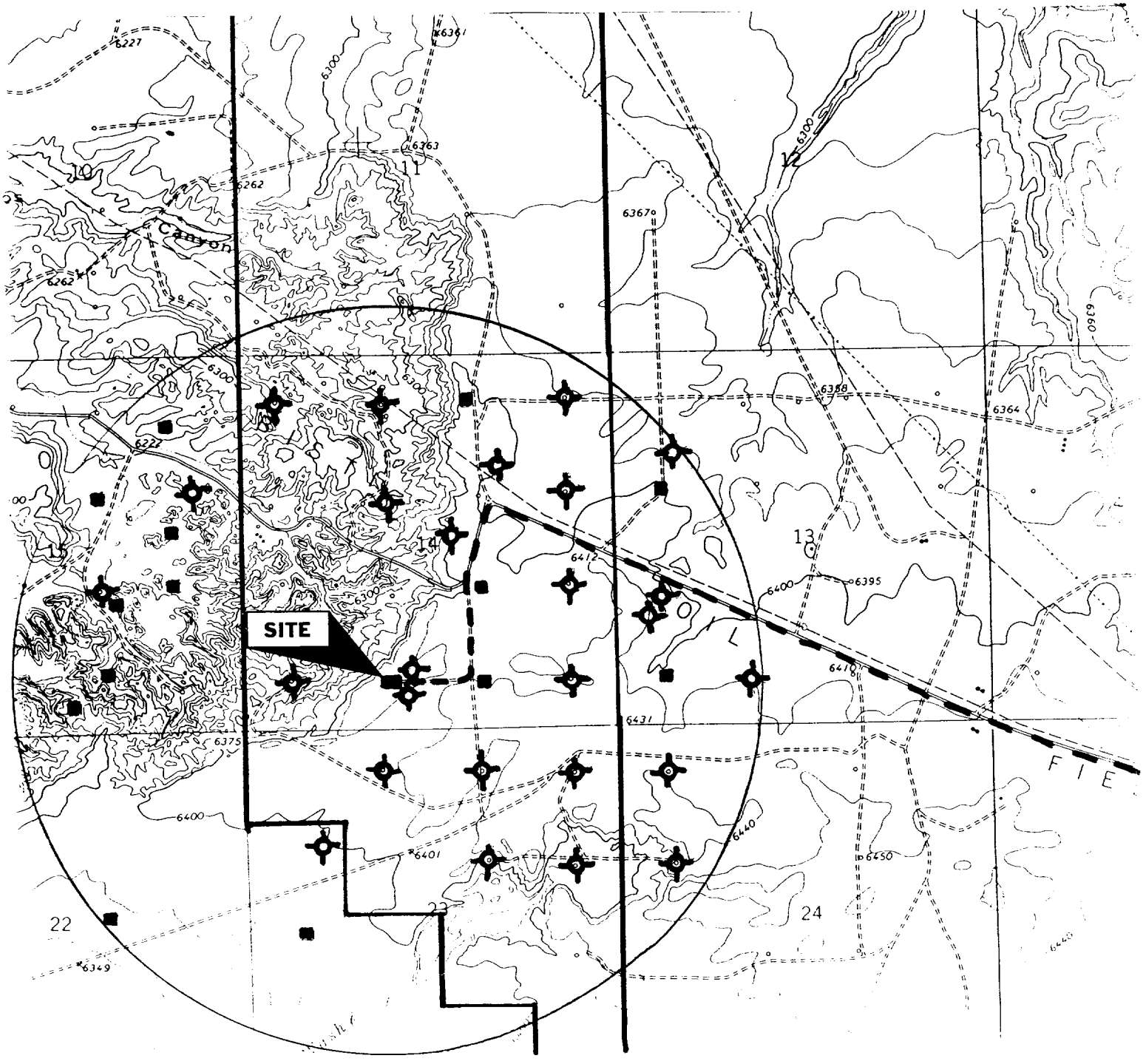
DECEMBER 31, 2001
Date of Survey

Signature and Seal of Professional Surveyor:

EDGAR L. RISENHOOVER
NEW MEXICO
5979

Certificate Number 5979

Elm Ridge Resources, Inc.
Carson 14 324R
675' FSL & 1909' FWL
Sec. 14, T. 25 N., R. 12 W.
San Juan County, New Mexico



PROPOSED WELL: EXISTING ROAD:
EXISTING WELL: LEASE:
P & A WELL:

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS

Elm Ridge Resources, Inc.
Carson 14 324R
675' FSL & 1909' FWL
Sec. 14, T. 25 N., R. 12 W.
San Juan County, New Mexico

Drilling Program

1. ESTIMATED FORMATION TOPS

Formation Name	GL Depth	KB Depth	Sub Sea Elevation
Nacimiento	000'	5'	+6,423'
Basal Fruitland Coal	1,168'	1,055'	+5,255'
Pictured Cliffs Ss	1,219'	1,105'	+5,204'
Total Depth (TD)*	1,350'	1,205'	+5,073'

* all elevations reflect the ungraded ground level of 6,423'

2. NOTABLE ZONES

Oil & Gas Zones	Water Zones	Coal Zones
Fruitland Coal (1,168')	Nacimiento (000')	Fruitland (1,168')
Pictured Cliffs (1,219')		

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

The exact drill rig and BOP model to be used are not yet known. (A typical 2,000 psi model is on PAGE 3.) BOP and choke manifold system will be installed and tested to 500 psi before drilling surface casing plug. It will remain in use until the well is completed or abandoned. A safety valve and sub with a full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

All BOP mechanical and pressure tests will be recorded on the driller's log. BOPs will be inspected and opened and closed at least daily to assure good mechanical working order. Inspections will be recorded on the daily drilling report. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place.

4. CASING & CEMENT

Hole Size	O. D.	Weight (lb/ft)	Grade	Type	Age	GL Setting Depth
8-5/8"	7"	20	K-55	ST&C	New	120'
6-3/4"	4-1/2"	10.5	J-55	LT&C	New	1,350'

Surface casing will be cemented to the surface with ≈35 cubic feet (≈30 sx) Class B + 1/4 pound per sack cello flake + 2% $CaCl_2$. Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Two centralizers will be run. Thread lock guide shoe and bottom of float collar.

Production casing hole will be cleaned of rock chips by circulating ≥150% of the hole volume with mud to the surface. Thirty-five barrels of fresh water will then be circulated. Lead with ≈215 cubic feet (≈105 sacks) of Class B with 2% metasilicate (yield = 2.06 cubic feet per sack and weight = 12.5 pounds per gallon). Tail with ≈125 cubic feet (≈105 sacks) of Class B with 2% $CaCl_2$ (yield = 1.18 cubic feet per sack and weight = 15.2 pounds per gallon). Total cement volume is ~~240~~ 339 cubic feet based on 75% excess and circulating to surface.

Production casing will be cemented to the surface with ≈290 cubic feet (≈345 sacks) Class B with 2% gel. Volume is based on 80% excess. At least four centralizers will be used.