

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM SF 021125	
1b. TYPE OF WELL OIL <input type="checkbox"/> WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Cordillera Energy, Inc.		7. UNIT AGREEMENT NAME 24038	
3. ADDRESS OF OPERATOR c/o Walsh Engineering, 7415 E. Main St. Farmington, NM 87402 (505) 327-4892		8. FARM OR LEASE NAME, WELL NO. Jackson #2F	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At Surface 660' FNL and 760' FEL At proposed Prod. Zone Same		9. API WELL NO. 30-045-31102	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 6 miles northwest of Aztec, NM		10. FIELD AND POOL OR WILDCAT Basin Dakota	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 660'	16. NO. OF ACRES IN LEASE 320+	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA A Sec. 18, T31N, R12W	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. 400'	19. PROPOSED DEPTH 7000'	12. COUNTY OR PARISH San Juan	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5908' GR		13. STATE NM	
23. PROPOSED CASING AND CEMENTING PROGRAM		17. NO. OF ACRES ASSIGNED TO THIS WELL E/2 320 acres	
20. ROTARY OR CABLE TOOLS Rotary		22. APPROX. DATE WORK WILL START* June 2002	

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

Cordillera Energy, Inc. proposes to drill a vertical well to develop the Basin Dakota formation at the above described location in accordance with the attached drilling and surface use plans.

This location has been archaeologically surveyed by La Plata Archeological Service. Copies of their report have been submitted directly to your office. Nelson Consulting performed a T&E survey 5/15/02. Copies of their report have been submitted directly to your office.

The wellpad, access road, and pipeline will be located on BLM surface land. An on-site inspection was held with the BLM on 4/25/02.

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 Paul C. Thompson Agent DATE 5/17/02

(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 /s/ David J. Mankiewicz TITLE \_\_\_\_\_ DATE \_\_\_\_\_

\*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.

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

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

*API Number <b>30-045-31102</b>		*Pool Code <b>71599</b>	*Pool Name <b>BASIN DAKOTA</b>
*Property Code <b>24038</b>	*Property Name <b>JACKSON</b>		*Well Number <b>2F</b>
*OGRID No. <b>173252</b>	*Operator Name <b>CORDILLERA ENERGY, INC.</b>		*Elevation <b>5908'</b>

#### 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
<b>A</b>	<b>18</b>	<b>31N</b>	<b>12W</b>		<b>660</b>	<b>NORTH</b>	<b>760</b>	<b>EAST</b>	<b>SAN JUAN</b>

#### 11 Bottom Hole Location If Different From Surface

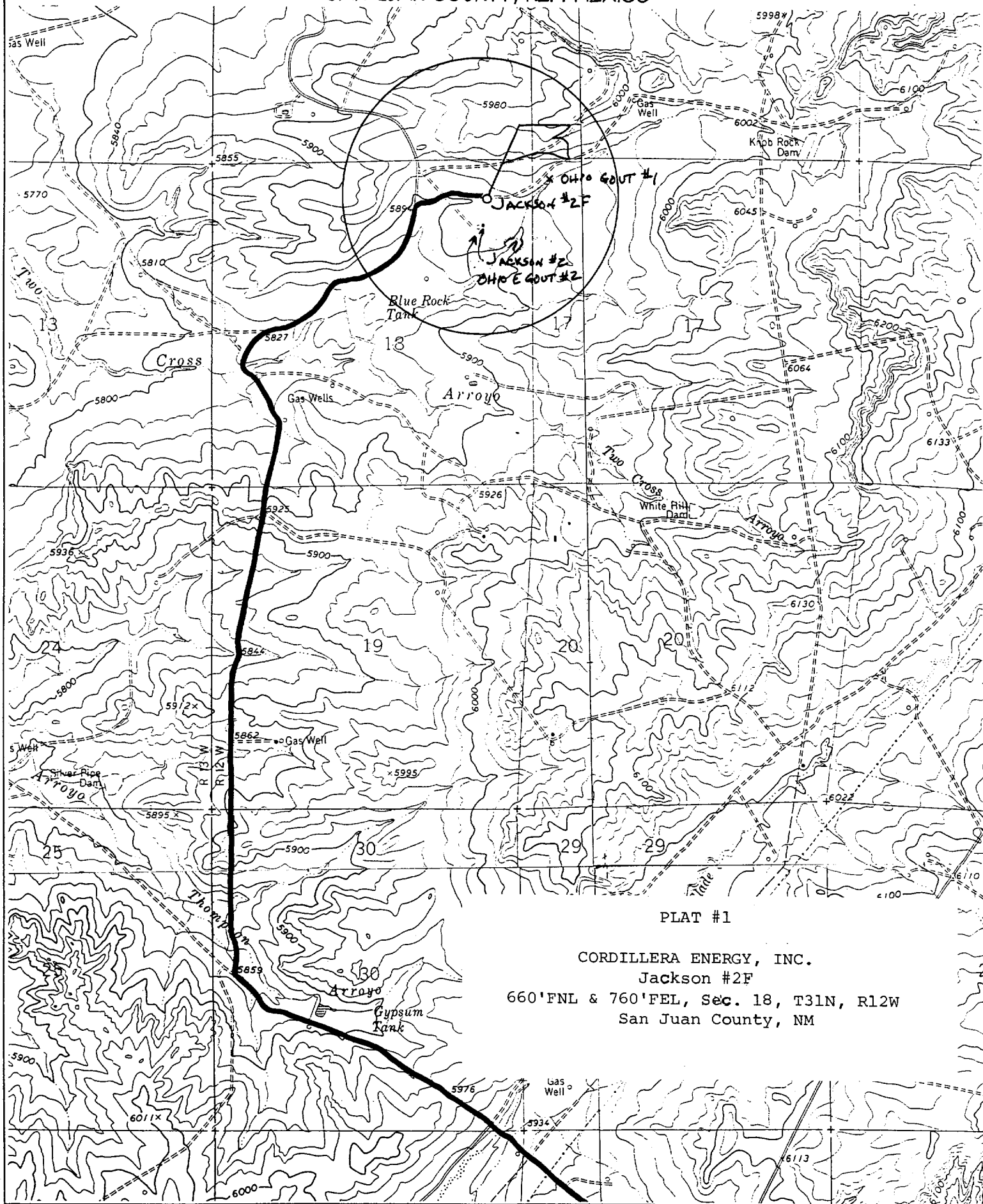
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

*Dedicated Acres <b>320.0 Acres - (E/2)</b>	*Joint or Infill <b>Y</b>	*Consolidation Code	*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

16 1260.60' <b>LOT 1</b>	1320.66'	2640.66' 660' 760'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <i>Paul C. Thompson</i> Signature <b>Paul C. Thompson</b> Printed Name <b>Agent</b> Title <b>5/17/02</b> Date
5258.88' <b>LOT 2</b>		<b>NM SF-021125</b>	
<b>LOT 3</b>	<b>18</b>		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. Date of Survey: <b>APRIL 8, 2002</b> Signature and Seal of Professional Surveyor  <b>JASON C. EDWARDS</b> Certificate Number <b>15269</b>
<b>LOT 4</b> 1284.36'	1316.70'	2633.40'	

CORDILLERA ENERGY, INC. JACKSON #2F  
660' FNL & 760' FEL, SECTION 18, T31N, R12W, N.M.P.M.  
SAN JUAN COUNTY, NEW MEXICO



PLAT #1

CORDILLERA ENERGY, INC.  
Jackson #2F  
660' FNL & 760' FEL, Sec. 18, T31N, R12W  
San Juan County, NM

CORDILLERA ENERGY, INC.  
OPERATIONS PLAN  
Jackson #2F

I. Location: 660 FNL & 760' FEL  
Sec 18 T31N R12W  
San Juan County, NM

Date: May 16, 2002

Field: Basin DK  
Surface: BLM  
Minerals: SF 021125

Elev: GL 5908'

II. Geology: Surface formation \_ Nacimiento

A. Formation Tops	Depths
Ojo Alamo	410'
Fruitland	1755'
Pictured Cliffs	2100'
Cliff House	3860'
Menefee	4060'
Point Lookout	4590'
Dakota	6775'
Total Depth	7000'

Estimated depths of anticipated water, oil, gas, and other mineral bearing formations which are expected to be encountered:

Water and gas - 3860'; gas - 2100', 4060', 4590', 6775'.

B. Logging Program: Induction/GR and density logs at TD.

C. No over pressured zones are expected in this well. No H<sub>2</sub>S zones will be penetrated in this well. Max. BHP = 2500 psig.

III. Drilling

A. Contractor: Key Energy

B. Mud Program:

The surface hole will be drilled with a fresh water mud.

The intermediate hole will be drilled with a fresh water polymer mud. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 8.5 ppg.

The production hole will be drilled with air or air/mist.

C. Minimum Blowout Control Specifications:

Double ram type 2000 psi working pressure BOP with a rotating head. See the attached Exhibit #1 for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1000 psi.

The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade
12-1/4"	250'	9-5/8"	36# J-55
8-3/4"	4070'	7"	20# J-55
6-1/4"	7000'	4-1/2"	11.6# N-80

B. Float Equipment:

a) Surface Casing: Notched collar on bottom and 3 centralizers on the bottom 3 joints.

b) Intermediate Casing: 7" cement guide shoe and self fill insert float collar. Place float one joint above shoe. Ten centralizers spaced every other joint above shoe and ten turbolizers every other joint from 1500'.

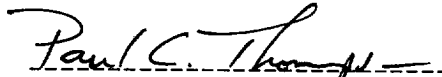
c) Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the bottom joint.

V. Cementing:

**Surface casing: 9-5/8"** - Use 140 sx (165 cu. ft.) of Cl "B" with 2%  $\text{CaCl}_2$  (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). 100% excess to circulate cement to surface. WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

**Intermediate Casing: 7"** - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. **Lead** with 520 sx (1087 cu.ft) of Type III 65/35 poz with 8% gel, 1%  $\text{CaCl}_2$ , 1/4#/sk. Celloflake. (Yield = 2.09 cu.ft./sk; slurry weight = 12.1 PPG). **Tail** with 100 sx (139 cu.ft.) of Type III with 1%  $\text{CaCl}_2$ , 1/4#/sk. Celloflake. (Yield = 1.39 cu. ft./sk; slurry weight = 14.5 PPG). Total cement volume is 1226 cu.ft. (100% excess to circulate cement to surface). WOC for 12 hrs. Pressure test the BOP and casing to 1500 psi.

**Production Casing: 4-1/2"** - Blow hole clean. Precede cement with 20 bbls of gel water and 10 bbls of water. **Lead** with 170 sx (337 cu.ft.) of Premium Lite HS with 0.65% FL-52, 0.32% CD-32, 1/4 #/sk celloflake, and 4% phenoseal. (Yield = 1.98 cu.ft./sk; slurry weight = 12.5 PPG). **Tail** with 100 sx (196 cu.ft.) of Premium Lite HS with 0.65% FL-52, and 0.32% CD-32. (Yield = 1.96 cu.ft./sk; slurry weight = 12.5 PPG). Total cement volume is 533 cu.ft. (70% excess to circulate 100' above the intermediate casing shoe).

  
Paul C. Thompson, P.E.