

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. Jicarilla Contract #101
1b. TYPE OF WELL OIL WELL <input type="checkbox"/> <input checked="" type="checkbox"/> OTHER SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache Tribe
2. NAME OF OPERATOR Cordillera Energy, Inc. 173252		7. UNIT AGREEMENT NAME 24037
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. Huron #4C
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At Surface 2410' FNL and 2340' FEL At proposed Prod. Zone Same		9. API WELL NO. 30-039-27318
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 21 miles south of Dulce, NM		10. FIELD AND POOL OR WILDCAT Basin Dakota/Blanco MV
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 300'	16. NO. OF ACRES IN LEASE 320+	11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA G Sec. 2, T26N, R4W
17. NO. OF ACRES ASSIGNED TO THIS WELL E/2 320.58 acres	18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. 1600'	19. PROPOSED DEPTH 8350'
20. ROTARY OR CABLE TOOLS Rotary	21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7108' GR	22. APPROX. DATE WORK WILL START* August 1, 2002

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# J-55	250' +/-	165 cu ft. Cl "B" w/ 2% CaCl <sub>2</sub>
8-3/4"	7"	20# J-55	4060' +/-	1087 cu.ft. lead & 139 cu.ft. tail
6-1/4"	4-1/2"	11.6#, N-80	8350' +/-	574 cu.ft. lead & 196 cu.ft. tail

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

This location has been archaeologically surveyed by Valarde Energy Service. Copies of their report have been submitted directly to your office. Valarde Energy Service has also performed a T&E survey and prepared an EA. Copies of their reports have been submitted directly to your office.

The wellpad, access road, and pipeline will be located on Jicarilla Apache land. An on-site inspection was held on 6/24/02.

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 <i>Paul C. Thompson</i> TITLE Paul Thompson, Agent	DATE 7/1/02
(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: /s/ Steven W. Anderson Assistant Field Manager Division of Multi-Resource Management	
APPROVED BY	DATE FEB 12 2003

\*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

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>30-039-27318</b>		*Pool Code 72319 \ 71599	*Pool Name BLANCO MESAVERDE \ BASIN DAKOTA
*Property Code <b>24037</b>	*Property Name HURON		*Well Number 4C
*OGRID No. 173252	*Operator Name CORDILLERA ENERGY, INC.		*Elevation 7108'

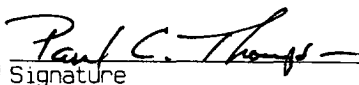

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	2	26N	4W		2410	NORTH	2340	EAST	RIO ARriba

<sup>11</sup> 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
<sup>12</sup> Dedicated Acres 320.58 Acres - (E/2)					<sup>13</sup> Joint or Infill Y	<sup>14</sup> Consolidation Code		<sup>15</sup> 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

<sup>16</sup> 1334.52' LOT 4 1320.00' 2640.00'	5280.00' LOT 3 2410' 2	LOT 2 2340'	LOT 1 1327.92' 1320.00' 2640.00'	<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  Signature Paul C. Thompson Printed Name Agent Title 7/2/02 Date
				<sup>18</sup> 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: MAY 7, 2002 Signature and Seal of Professional Surveyor  <b>JASON C. EDWARDS</b> Certificate Number 15269

**CORDILLERA ENERGY, INC.**  
**OPERATIONS PLAN**  
**Huron #4C**

I. Location: 2410' FNL & 2340' FEL  
Sec 2, T26N, R4W  
Rio Arriba County, NM

Date: July 1, 2002

Field: Blanco MV & Basin DK  
Surface: Jicarilla Apache Tribe  
Minerals: Jicarilla Contract #101

Elev: GL 7108'

II. Geology: Surface formation \_ Nacimiento

<u>A. Formation Tops</u>	<u>Depths</u>
Ojo Alamo	
Kirtland	
Pictured Cliffs	3855'
Cliff House	5545'
Menefee	5695'
Point Lookout	5995'
Greenhorn	7965'
Graneros	
Dakota	8050'
Total Depth	8350'

(D)

San Jose - Surface  
Nacimiento - 7496  
Ojo Alamo - 3186  
min TOC ~ 1440'

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

Water and gas - 3855', 5545', 5995', 8050'.

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:

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"	4060'	7"	20# J-55
6-1/4"	8350'	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'.

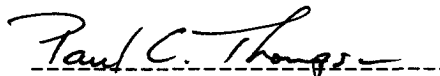
c) Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the bottom joint.

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%  $\text{CaCl}_2$ , ¼#/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%  $\text{CaCl}_2$ , ¼#/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 290 sx (574 cu.ft.) of Premium Lite HS with 0.65% FL-52, 0.32% CD-32, ¼ #/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 770 cu.ft. (70% excess to circulate 100' above the intermediate casing shoe).

  
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Paul C. Thompson, P.E.