

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

| | | |
|---|--|---|
| 1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. Jicarilla Contract #101 |
| b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name Jicarilla Apache Tribe |
| 2. Name of Operator Ratina Cordillera Energy, Inc. | | 7. If Unit or CA Agreement, Name and No. |
| 3a. Address c/o Walsh Engineering, 7415 E. Main, Farmington, NM 87402 | | 8. Lease Name and Well No. McIntyre #1C |
| 3b. Phone No. (include area code) (505) 327-4892 | | 9. API Well No. 30039-29259 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1350' FNL and 660' FWL | | 10. Field and Pool, or Exploratory Basin DK/Blanco Mesa Verde |
| At proposed prod. Zone | | 11. Sec., T., R., M., or Blk. and Survey or Area E Sec. 11, T26N, R4W |
| 14. Distance in miles and direction from nearest town or post office* 21 miles south of Dulce, NM | | 12. County or Parish <input checked="" type="checkbox"/> Rio Arriba |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660' | | 13. State NM |
| 16. No. of Acres in lease 320+ | | 17. Spacing Unit dedicated to this well 320 acres W/2 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 200' | | 19. Proposed Depth 8285' +/- |
| 20. BLM/BIA Bond No. on file | | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7079' GL | | 22. Approximate date work will start* September 1, 2003 |
| 23. Estimated duration 3 weeks | | |

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized office. |

| | | |
|--|---|----------------------------|
| 25. Signature <i>Paul C. Thompson</i> | Name (Printed/Typed) Paul C. Thompson, P.E. | Date 8/5/03 |
| Title Agent | | |
| Approved by (Signature) /s/ David R. Sitzler | Name (Printed/Typed) | Date SEP 27 2004 |
| Title Assistant Field Manager | | |
| Office | | |

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, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

*(Instructions on reverse)

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

District II
PO Drawer 00, 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 30-039-29259 | *Pool Code 72319 \ 71599 | *Pool Name BLANCO MESAVERDE \ BASIN DAKOTA |
| *Property Code 24056 | *Property Name McINTYRE | *Well Number 1C |
| *OGRID No. 173252 | *Operator Name CORDILLERA ENERGY, INC. | *Elevation 7079' |

¹⁰ Surface Location

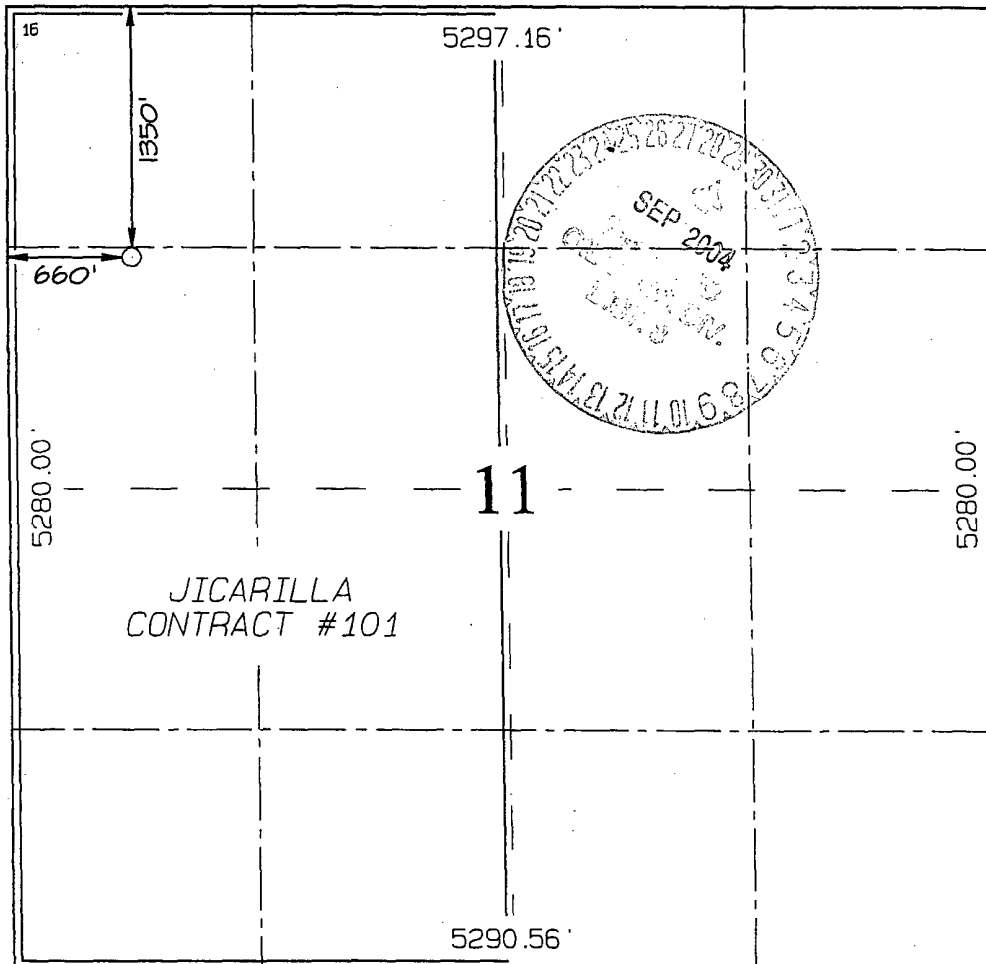
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| E | 11 | 26N | 4W | | 1350 | NORTH | 660 | WEST | RIO ARriba |

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 320.0 Acres - (W/2) | ¹³ Joint or Infill Y | ¹⁴ Consolidation Code | ¹⁵ 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



JICARILLA
CONTRACT #101

¹⁷ OPERATOR CERTIFICATION

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

Paul C. Thompson
Signature

PAUL C. THOMPSON
Printed Name

AGENT
Title

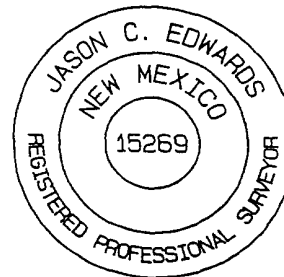
8/5/03
Date

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: APRIL 10, 2003

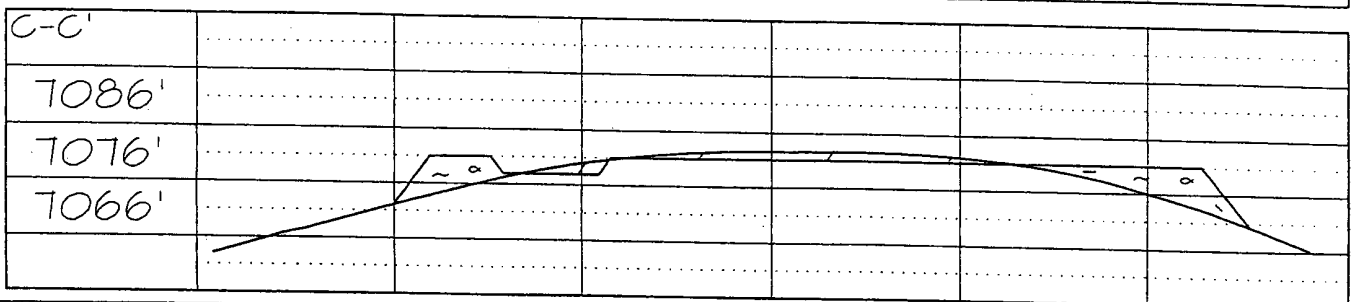
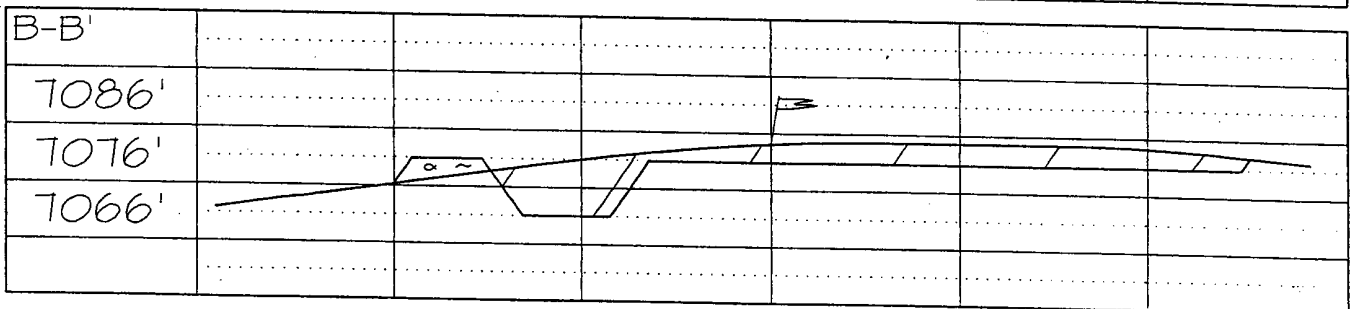
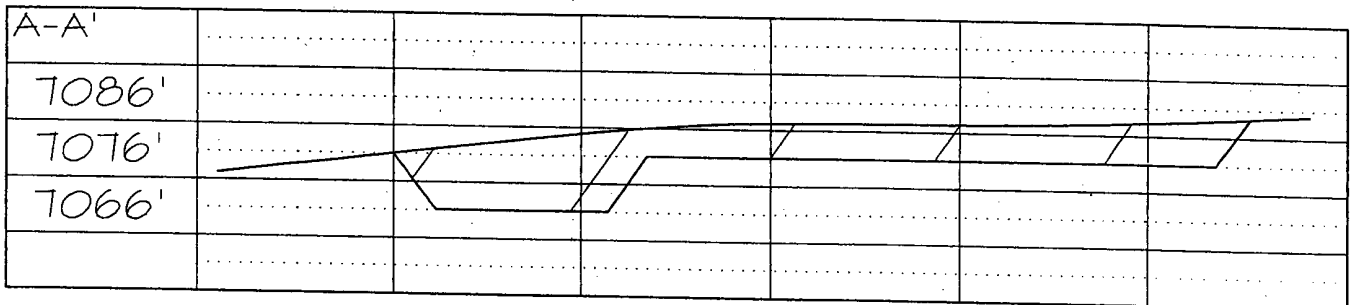
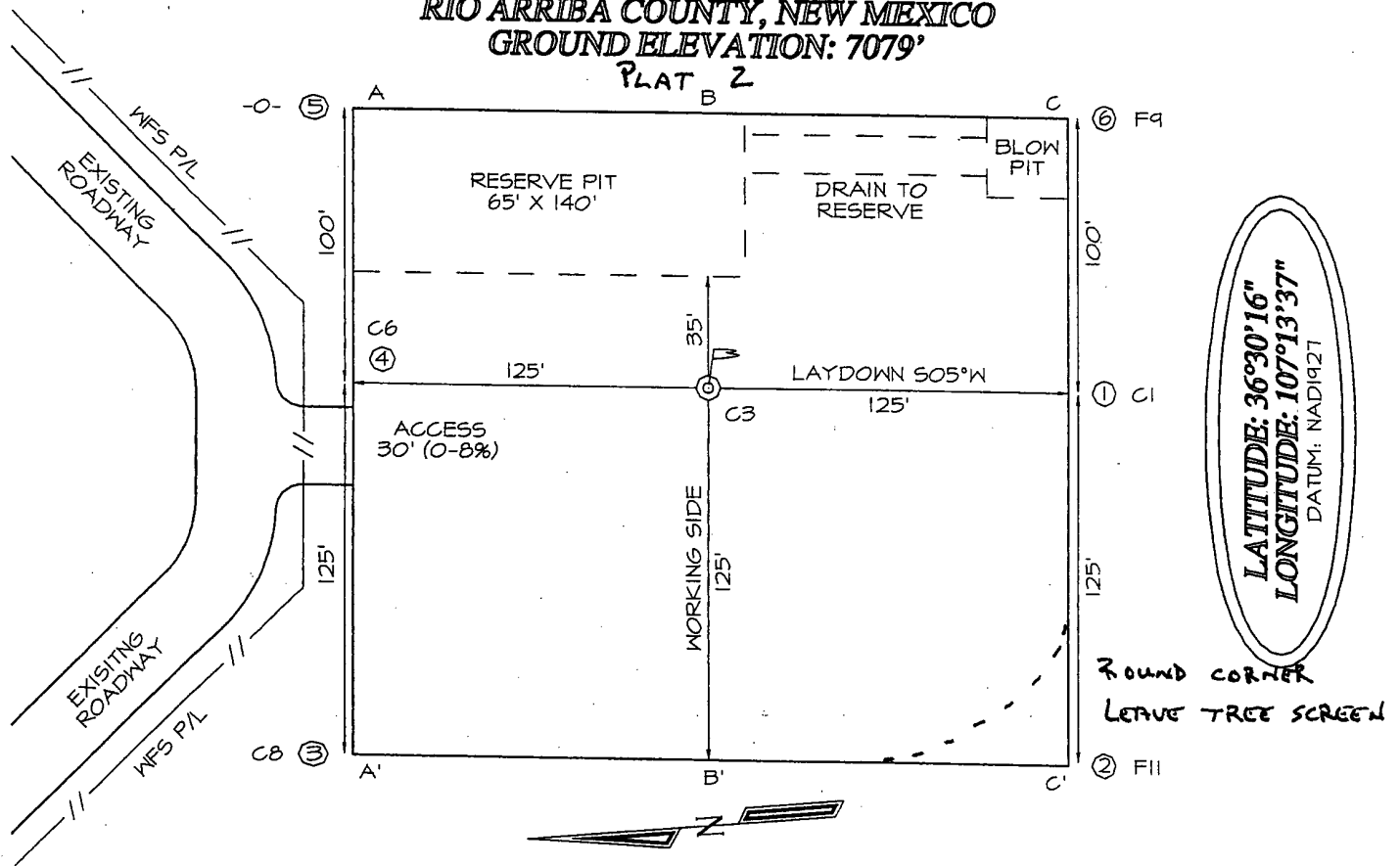
Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

CORDILLERA ENERGY, INC. McINTYRE #1C
1350' FTL & 660' FWL, SECTION 11, T26N R4W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 7079'

PLAT B Z



CORDILLERA ENERGY, INC.
OPERATIONS PLAN
McIntyre #1C

I. Location: 1350' FNL & 660' FWL Date: August 5, 2003
 Sec 11, T26N, R4W
 Rio Arriba County, NM

Field: Blanco MV & Basin DK Elev: GL 7079'
Surface: Jicarilla Apache Tribe
Minerals: Jicarilla Contract #101

II. Geology: Surface formation _ Nacimiento

| <u>A. Formation Tops</u> | <u>Depths</u> |
|--------------------------|---------------|
| Ojo Alamo | |
| Kirtland | |
| Pictured Cliffs | 3750' |
| Cliff House | 5445' |
| Menefee | 5580' |
| Point Lookout | 5875' |
| Greenhorn | 7915' |
| Graneros | 7960' |
| Dakota | 8065' |
| Total Depth | 8285' |

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

Water and gas - 3750', 5445', 5875', 8065'.

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

C. No over pressured zones are expected in this well. No H₂S 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" | 4150' | 7" | 20# J-55 |
| 6-1/4" | 8285' | 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 2000'.

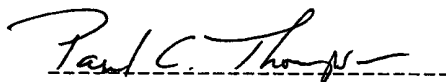
c) Production Casing: 4-1/2" whirler type cement nosed guide shoe and a float collar on top of the bottom joint.

V. Cementing:

Surface casing: 9-5/8" - Use 140 sx (165 cu. ft.) of Cl "B" with 2% 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 530 sx (1108 cu.ft) of Type III 65/35 poz with 8% gel, 1% 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% CaCl_2 , 1/4#/sk. Celloflake. (Yield = 1.39 cu. ft./sk; slurry weight = 14.5 PPG). Total cement volume is 1247 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 275 sx(545 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 741 cu.ft. (70% excess to circulate 100' above the intermediate casing shoe).



Paul C. Thompson, P.E.

Cordillera Energy, Inc.

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Typical BOP setup

EXHIBIT #1

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson

