

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <b>701990014</b>
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Jicarilla Apache Tribe</b>
2. NAME OF OPERATOR <b>Jicarilla Apache Energy Corporation</b> <i>11859</i>		7. UNIT AGREEMENT NAME
3. ADDRESS AND TELEPHONE NO. <b>P.O. Box 710, Dulce, New Mexico 87528 Mr. Jesse Evans (505) 759-3224</b>		8. FARM OR LEASE NAME, WELL NO. <b>JECO 83A #5</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface <b>2076' FNL &amp; 928' FEL, Sec 14, T22N, R3W, NMPM</b> At proposed prod. zone <b>A/A</b>		9. API WELL NO. <b>30-043-20987</b>
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE <b>15 miles SW of Lindrith, New Mexico</b>		10. FIELD AND POOL, OR WILDCAT <b>West Lindrith Gallup-Dakota</b>
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. <b>928'</b> (Also to nearest ddg. unit line, if any)		11. SEC., T., R., M., OR BLK AND SURVEY OR AREA <b>Sec 14, T22N, R3W, NMPM</b>
16. NO. OF ACRES IN LEASE		12. COUNTY <b>Sandoval</b>
17. NO. OF ACRES ASSIGNED TO THIS WELL <b>160 NE 1/4</b>		13. STATE <b>New Mexico</b>
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. <b>1233'</b>		20. ROTARY OR CABLE TOOLS <b>Rotary</b>
19. PROPOSED DEPTH <b>6910'</b>		21. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>7139' GL</b>
22. APPROX. DATE WORK WILL START <b>August, 2002</b>		

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	J-55, 8 5/8"	24	320'	225 sks (266cf) - Circ to surface
6 1/4"	K-55/N-80 4.5"	10.5, 11.6	6910'	1540 sks (2903 cf) - 2 stg - Circ to surface

Jicarilla Apache Energy Corporation will spud this well in the San Jose formation. A 12 1/4" hole will be drilled to 320' using a fresh water base gel mud. 8 5/8" surface casing will be run and cemented with sufficient volume to circulate cement to surface. WOC 12 hours. Nipple up 11" 2000# BOPE and test to a minimum of 600 psi for 30 minutes. A 7 7/8" hole will be drilled to TD using a fresh water non-dispersed mud system. Run Induction and Density/Neutron logs at TD. All Gal/DK zones will be analyzed to total depth, and if potentially commercial, a 4 1/2" production casing will be set to TD. The casing will be cemented in 2-stages with sufficient cement volume to circulate to surface. Release drilling rig. Move in completion unit. Run cased hole correlation logs. Pressure test casing to 3000 psi for 30 minutes. Perforate selected Gal/DK intervals and fracture stimulate, if necessary.

This APD includes a 50' right-of-way for access road/pipeline construction.

Surface: Jicarilla Apache Reservation.

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 true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

TITLE AgentDATE 6/3/02

(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 R. Sitzler

TITLE

Assistant Field Manager

DATE

JUN 16 2004

**District I**

1625 N. French Dr., Hobbs, NM 88240

**District II**

1301 W. Grand Avenue, Artesia, NM 88210

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410

**District IV**

1220 S. St. Francis Dr., Santa Fe, NM 87505

**State of New Mexico**

Energy, Minerals &amp; Natural Resources Department

**OIL CONSERVATION DIVISION**

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised August 15, 2000

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-043-20987		<sup>2</sup> Pool Code 39189	<sup>3</sup> Pool Name West Lindrith Gallup-Dakota
<sup>4</sup> Property Code 29799	<sup>5</sup> Property Name JECO 83A		<sup>6</sup> Well Number 5
<sup>7</sup> OGRID No. 11859	<sup>8</sup> Operator Name Jicarilla Apache Energy Corporation		<sup>9</sup> Elevation 7139'

**<sup>10</sup> Surface Location**

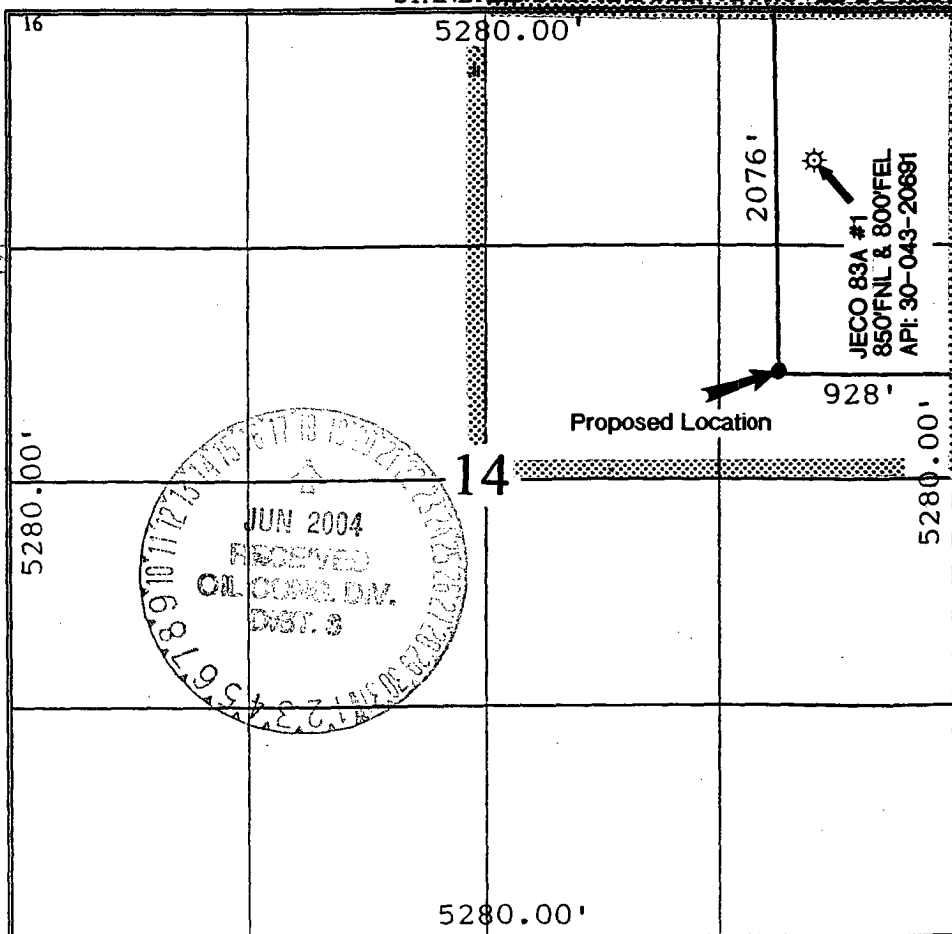
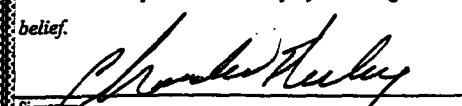
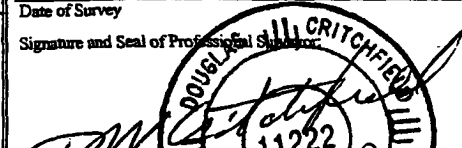
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	14	22N	3W		2076	North	928	East	Sandoval

**<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 160	<sup>13</sup> Joint or Infill Y	<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

	<b><sup>17</sup> OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  _____ Charles Neeley Printed Name Agent Title 05/28/02 Date
	<b><sup>18</sup> SURVEYOR CERTIFICATION</b> 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. May 22, 2002 Date of Survey  _____ Douglas M. Critchfield 11222 Certificate Number 11222

**JICARILLA APACHE ENERGY CORPORATION**  
**JECO 83A 5**  
**2076' FNL & 928' FEL**  
**Section 14, T22N, R3W, NMPM**  
**Rio Arriba County, New Mexico**

**TEN POINT DRILLING PROGRAM**

1. **Surface Formation:** San Jose

2. **Surface Elevation:** 7139' GL.

3. **Estimated Formation Tops:**

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimiento	1010'	
Ojo Alamo	2075'	
Fruitland	2365'	
Pictured Cliffs	2430'	GAS
Lewis	2515'	
Chacra ?	3340'	
Huerfanito	2730'	
Mesa Verde (OCD)	3480'	
Cliff House	3925'	GAS
Menefee	3990'	GAS
Pt. Lookout	4525'	GAS
Upper Mancos	4720'	
Gallup	5550'	GAS / OIL
Lower Mancos	5860'	
Greenhorn	6565'	
Graneros	6630'	
Dakota:	6655'	GAS / OIL
Burro Canyon	6845'	
Morrison	6910'	
TOTAL DEPTH	6910'	

4. **Casing and Cementing Program:**

- Drill a 12 1/4" Hole to 320'. A string of 8 5/8" 24# J-55 ST&C casing will be set and cemented to the surface in a single stage with 225 sacks (266 cf) of Class "B" cement (yield = 1.18 cf/sk) containing 3% CaCl<sub>2</sub> and 1/4 lb/sack celloflake. Slurry volume assumes 100% excess over calculated hole volume. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 123" by 95/8" annulus. Minimum clearance between couplings and hole is 2.625". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 600 psig. Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb over pull, whichever is greater.

• **Drilling Program**  
**Jicarilla Apache Energy Corporation**  
**JECO 83A 4**

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4. **Casing and Cementing Program:** - Continued

- WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test surface casing and BOPE to 600 psi for 30 minutes.
- Drill an 7 7/8" hole through the Dakota formation.
- Run Induction and Compensated density/neutron logs from TD to surface casing shoe.
- Run 4 1/2" 10.5/11.6# K-55 & 11.6# N - 80 production casing from surface to Total Depth and cement in 2 stages with DV tool installed at 3350'. **Stage 1** ( TD - 4064' ) will be cemented with 660sacks (1274cf) 65/35 Class "B"/Poz containing 6% gel, 0.6% Halad 9 and 1/2 cf Perlite/sack - mixed at 12.7 PPG, 1.93 yield. Followed with 100 sks 50/50 Class "B"/Poz with 2% gel, 10 1/4 #/sk Gilsonite and 10% NaCl mixed at 13.4 PPG, 1.24 yield (Total: 1398 cf of slurry; 70% excess to 3350'). Circulate with mud for 4 hours. **Stage 2** ( 3350' - 0' ) will be cemented with 780 sacks (1505 cf) 65/35 Class "B"/Poz containing 6% gel, 2% CaCl, 1/2 cf Perlite/sack - mixed at 12.7 PPG, 1.93 yield (1505 cf of slurry, 100% excess to Surface).
- Run temperature survey after 12 hours if cement does not circulate to surface.
- WOC 18 hours.

Cement volume is subject to change after review of open hole caliper log to caliper volume + 30%. Minimum clearance between couplings and hole is 2.875". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb over pull, whichever is greater.

Bits: 12 1/4" surface hole - MT class 115 or 116 to ~ 320'.

7 7/8" production hole - PDC to ~ 6750' - To top of 'B' Sd.

7 7/8" production hole - TCI class 637 to ~ 6910' TD.

**Centralizers:**

Surface string: 3 - 8 5/8" x 12 1/4": One centralizers run in middle of shoe joint with lock ring and two centralizers spaced evenly between shoe joint and 100'.

• **Drilling Program**  
**Jicarilla Apache Energy Corporation**  
**JECO 83A 4**

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4. **Casing and Cementing Program:** - continued

**Centralizers – Continued**

Production string: 25 - 4 ½" x 7 7/8" centralizers will be run across all prospective pays in the Dakota and Mesa Verde formations. 1 - 4 ½" x 7 7/8" centralizer will run below the DV tool and 5 - 4 ½" x 7 7/8" centralizers will be run every other joint above DV tool. In addition 5 - 4 1/2" x 7 7/8" turbolizers will be spaced such that one (1) is just below the Basal Fruitland Coal, three (3) across the Fruitland and one (1) into the Ojo Alamo.

**Float Equipment:**

Surface string: Saw tooth guide shoe w/insert float, 1 jt above shoe.

Production string: Cement nose float shoe, 1 jt 4 ½" csg, float collar, and DV tool set at 3350' with 2 cement baskets below DV.

5. **Pressure Control Equipment:**

A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 600 psig before drilling out from under surface casing. The mechanical operating condition of the BOP will be checked daily. 4 1/2" rams will be installed before running production casing. A full opening internal blowout preventor or drill pipe safety valve, capable of fitting all connections, will be on the drill floor at all times.

6. **Mud Program:**

The well will be spudded and drilled to surface casing depth with a high viscosity slurry of bentonite, lime and fresh water. A fresh water PHPA polymer, low solids, non-dispersed mud system will be utilized to drill the well from surface casing to total depth. Sufficient mud materials will be on location at all times to maintain mud properties and to control any lost circulation problem or unforeseen abnormal pressures. The mud volume will be visually monitored and recorded on a routine basis.

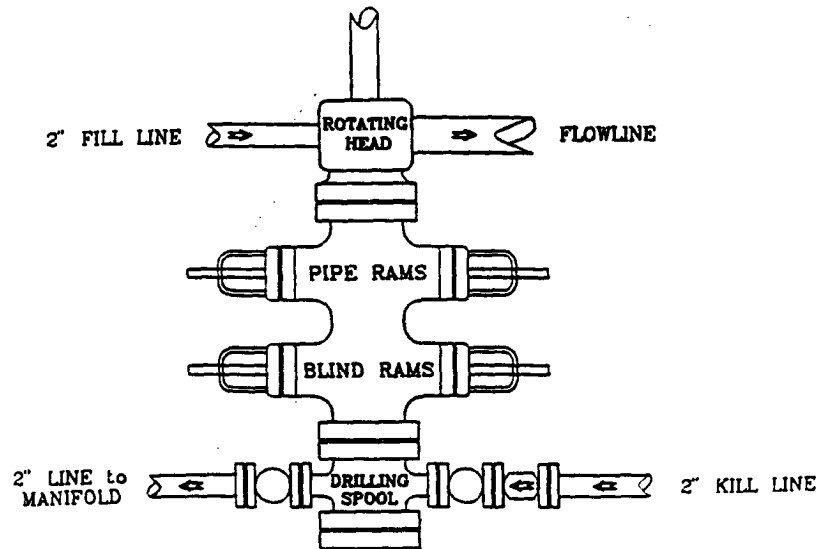
**Mud Property Guidelines:**

<u>Interval (ft)</u>	<u>Weight (ppg)</u>	<u>Vis (sec/qt)</u>	<u>pH</u>	<u>Fluid Loss (cc/30 min)</u>
0 - 320'	8.6 - 9.2	40 - 35	9 - 9.5	No Control
350' - 3430'	8.6 - 9.0	30 - 35	9 - 9.5	15 - 20
3430' - 6910'	8.8 - 9.0	40 - 45	9 - 9.5	8 - 10

Note: Raise mud viscosity to 45 - 60 for logging. Thin mud viscosity to 40 - 45 to run casing.

# PRESSURE CONTROL

## Wellhead Assembly



Preventer and Spools are to have a  
6" Bore or larger and a 2000 PSI  
or higher Pressure Rating

## Choke Manifold

