

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

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 701990014
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 Jicarilla Apache Tribe
2. NAME OF OPERATOR Jicarilla Apache Energy Corporation <i>11859</i>		7. UNIT AGREEMENT NAME
3. ADDRESS AND TELEPHONE NO. P.O. Box 710, Dulce, New Mexico 87528 Mr. Jesse Evans (505) 759-3224		8. FARM OR LEASE NAME, WELL NO. JECO 83A #4
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1835' FNL & 786' FWL, Sec 13, T22N, R3W, NMPM At proposed prod. zone A/A		9. AP# WELL N# 30-043-20986
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 12 miles SW of Lindrith, New Mexico		10. FIELD AND POOL, OR WILDCAT West Lindrith Gallup-Dakota
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 786' <small>(Also to nearest drg. unit line, if any)</small>	16. NO. OF ACRES IN LEASE	11. SEC., T., R., M., OR BLK AND SURVEY OR AREA Sec 13, T22N, R3W, NMPM
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1731'	19. PROPOSED DEPTH 6950'	12. COUNTY Sandoval
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7175' GL	17. NO. OF ACRES ASSIGNED TO THIS WELL 160 NW/4	13. STATE New Mexico
20. ROTARY OR CABLE TOOLS Rotary		22. APPROX. DATE WORK WILL START August, 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"	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	6950'	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 pipeline construction adjacent to the lease/access road.

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 *Charles Bailey* TITLE Agent DATE 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 *David R. Stabler* 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 and 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

API Number 30-043-20986		Pool Code 39189	Pool Name West Lindrith Gallup-Dakota
Property Code 29799	Property Name JECO 83A		Well Number 4
OGRID No. 11859	Operator Name Jicarilla Apache Energy Corporation		Elevation 7175'

10 Surface Location

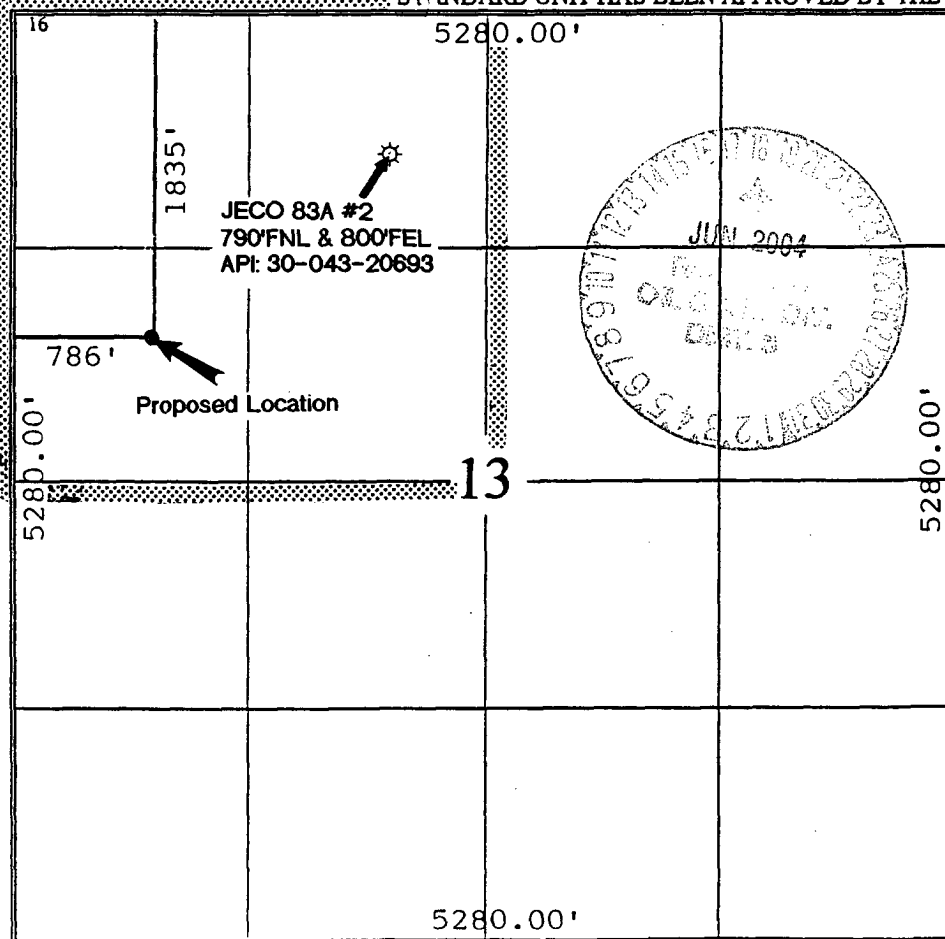
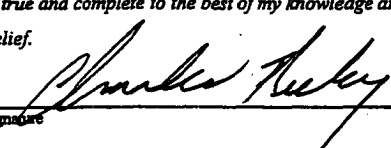
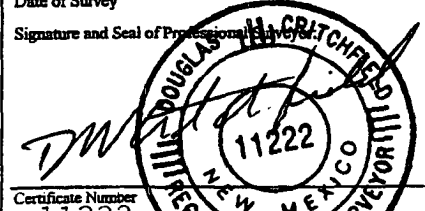
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	13	22N	3W		1835	North	786	West	Sandoval

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.
160	Y		

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

	<p>16 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature:  Charles Neeley Printed Name Agent Title Date: 05/28/02</p>
	<p>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.</p> <p>May 22, 2002 Date of Survey Signature and Seal of Professional Surveyor:  Certificate Number 11222</p>

JICARILLA APACHE ENERGY CORPORATION
JECO 83A 4
1835' FNL & 786' FEL
Section 13, T22N, R3W, NMPM
Rio Arriba County, New Mexico

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** San Jose
2. **Surface Elevation:** 7175' GL.
3. **Estimated Formation Tops:**

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimiento	1050'	
Ojo Alamo	2115'	
Fruitland	2405'	
Pictured Cliffs	2470'	GAS
Lewis	2555'	
Chacra ?	3380'	
Huerfanito	2770'	
Mesa Verde (OCD)	3520'	
Cliff House	3965'	GAS
Menefee	4030'	GAS
Pt. Lookout	4565'	GAS
Upper Mancos	4760'	
Gallup	5590'	GAS / OIL
Lower Mancos	5900'	
Greenhorn	6605'	
Graneros	6670'	
Dakota:	6695'	GAS / OIL
Burro Canyon	6885'	
Morrison	6950'	
TOTAL DEPTH	6950'	

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% CaCl₂ 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 12 1/4" by 9 5/8" 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

Page Two

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 ~ 6790' - To top of 'B' Sd.

7 7/8" production hole - TCI class 637 to ~ 6950' 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

Page Three

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.

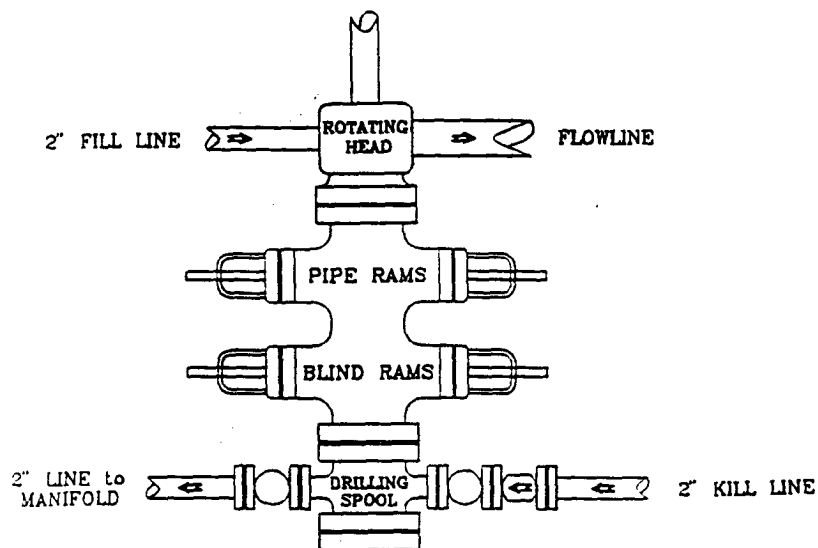
Mud Property Guidelines:

<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' - 3470'	8.6 - 9.0	30 - 35	9 - 9.5	15 - 20
3470' - 6950'	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

