

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

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

<b>1a. TYPE OF WORK</b> DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		<b>5. LEASE DESIGNATION AND SERIAL NO.</b> 701900001	
<b>b. TYPE OF WELL</b> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</b> Jicarilla Apache Tribe	
<b>2. NAME OF OPERATOR</b> Jicarilla Apache Energy Corporation		<b>7. UNIT AGREEMENT NAME</b> Joint Venture Agreement	
<b>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> 5415 Apache JVA #2A	
<b>4. LOCATION OF WELL</b> (Report location clearly and in accordance with any State requirements.) At surface 895' FNL & 673' FWL, Sec 28, T27N, R2W, NMPM At proposed prod. zone A/A		<b>9. API WELL NO.</b> 30-039-27408	
<b>14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE</b> 15.5 miles NNW of Lindrith, New Mexico		<b>10. FIELD AND POOL, OR WILDCAT</b> Blanco Mesa Verde	
<b>15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.</b> 673' (Also to nearest ddg. unit line, if any)		<b>11. SEC., T., R., M., OR BLK AND SURVEY OR AREA</b> Sec 28, T27N, R2W, NMPM	
<b>18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING COMPLETED, 1871' OR APPLIED FOR, ON THIS LEASE, FT.</b>		<b>12. COUNTY</b> Rio Arriba <b>13. STATE</b> New Mexico	
<b>16. NO. OF ACRES IN LEASE</b>		<b>17. NO. OF ACRES ASSIGNED TO THIS WELL</b> 215.52 W/L	
<b>19. PROPOSED DEPTH</b> 6265'		<b>20. ROTARY OR CABLE TOOLS</b> Rotary	
<b>21. ELEVATIONS</b> (Show whether DF, RT, GR, etc.) 7309' GL		<b>22. APPROX. DATE WORK WILL START</b> September 15, 2002	

**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, 9 5/8"	36	320'	170 sks (201cf) - Circ to surface 200%
8 3/4"	J-55, 7"	20	4025'	545 sks (967.6 cf) - 2 stg - circ to surface
6 1/4"	J-55, 4 1/2"	10.5	6265'	232 sks (308.6 cf) to 3905' (liner top)

Jicarilla 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. 9 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 15 minutes. A 8 3/4" hole will be drilled approximately 40' into the Lewis Shale formation using a fresh water non-dispersed mud system. 7.0" intermediate casing will be run and cemented in 2-stages with sufficient volume to circulate to surface. WOC 12 hours. Nipple up and test BOPE to 1500 psi for 15 minutes. Drill a 6 1/4" hole to TD using air/air mist. Run Induction and Density/Neutron logs at TD. All potential zones will be analyzed from intermediate casing to total depth, and if potentially commercial, a 4 1/2" production liner will be set to TD with at least 120' overlap into intermediate casing. The liner will be cemented with sufficient cement volume to circulate to the liner top. Release drilling rig. Move in completion unit. Run cased hole correlation logs. Pressure test casing to 3000 psi for 15 minutes. Perforate selected Mesa Verde intervals and fracture stimulate, if necessary.

Surface: Jicarilla Apache Reservation.

Adjud	AMJ
Engr	
Geol	
Surf	RWW
Appvl	RWW

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. *[Signature]* SIGNED \_\_\_\_\_ TITLE Agent DATE 5/20/02  
 (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/ Thomas E. Gow TITLE Assistant Field Manager DATE MAR 27 2003

**District I**

1000 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 30-039-27408		<sup>2</sup> Pool Code 72319	<sup>3</sup> Pool Name Blanco Mesa Verde
<sup>4</sup> Property Code 5415	<sup>5</sup> Property Name Apache JVA		<sup>6</sup> Well Number 2A
<sup>7</sup> OGRID No. 11859	<sup>8</sup> Operator Name Jicarilla Apache Energy Corporation		<sup>9</sup> Elevation 7309' GZ

<sup>10</sup> Surface Location

UL or lot no. D	Section 28	Township 27N	Range 2W	Lot Idn	Feet from the 895	North/South line North	Feet from the 673	East/West line West	Rio County Arriba
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<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
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<sup>12</sup> Dedicated Acres 215.52	<sup>13</sup> Joint or Infill Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. NWU 574
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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

<sup>10</sup> <p>Proposed New Location</p>		<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 Charles Neeley Printed Name Agent Title 05/21/02 Date	
<sup>11</sup> <p>Apache JVA 2 790' FSL &amp; 850' FWL API: 30-039-21460</p>		<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. May 9, 2002 Date of Survey  Signature and Seal of Professional Surveyor Certificate Number	

**Jicarilla Apache Energy Corp  
Apache JVA 2A  
895' FNL & 673' FWL  
Section 28, T27N, R2W, NMPM  
Rio Arriba County, New Mexico**

**TEN POINT DRILLING PROGRAM**

1. **Surface Formation:** San Jose
2. **Surface Elevation:** 7309 ' GL
3. **Estimated Formation Tops:**

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimiento	1845'	
Ojo Alamo	3335'	
Kirtland	3535'	
Fruitland	3636'	
Pictured Cliffs	3816'	GAS
Lewis	3986'	
Cliff House	5646'	GAS
Menefee	5705'	GAS
Pt. Lookout	5986'	GAS
Upper Mancos	6165'	
TOTAL DEPTH	6265'	

4. **Casing and Cementing Program:**

Drill a 12 1/4" Hole to 320'. A string of 9 5/8" 36# J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 170 sacks (201 cf) of Class "B" cement (yield = 1.18 cf/sk) containing 3% CaCl<sub>2</sub> and 1/4 lb/sack cellophane flake. 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. Clearance between couplings and hole is 1.625". 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 overpull, whichever is greater.

WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test surface casing and BOPE to 600 psi for 15 minutes.

Drill an 8 3/4" hole to 4025' feet, approximately 40' feet into the Lewis Shale.

Run Induction and Compensated density/neutron logs from 4025' to surface casing shoe.

**Drilling Program**  
**Jicarilla Apache Energy Corporation**  
**Apache JVA 2A**

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

A string of 7" 20#, J-55 Intermediate casing will be set at 4025' with a mechanical DV tool set at 1900', 55' below Nacimiento top. **Stage 1** ( 4025' TD' - 1900' ) will be cemented with 210 sacks (418 cf) of 35/65 Poz/B + 6% Gel + 5#/sk Gilsonite and 1/4 #/sk cellophane flake mixed at 12.1 ppg, yield 1.99 cf/sk. Followed by 100 sacks (121 cf) Class B with 5#/sk Gilsonite, 1/4#/sk cellophane flake and 2% CaCl<sub>2</sub> mixed at 15.4ppg, yield 1.21 cf/sk. **Circulate and WOC between stages for four ( 4 ) hours.** **Stage 2** ( 1900' - surface ) will be cemented with 185 sacks ( 368 cf) of 35/65 Poz/B + 6% Gel + 5#/sk Gilsonite and 1/4 #/sk cellophane flake mixed at 12.1 ppg, yield 1.99 cf/sk. Followed by 50 sks (60.5cf) Class B with 5#/sk Gilsonite and 1/4 #/sk cellophane flake, mixed at 15.4 ppg, yield 1.21cf/sk.

Slurry volumes assume a 70% excess over gauge hole volume for stage 1 and 50% over gauge volume for stage 2.

Cement volume is subject to change after review of open hole caliper logs..

Clearance between couplings and hole is 1.094 ". 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

WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test intermediate casing and BOPE to 1500 psi for 15 minutes.

Air drill a 6 1/4" hole from 4025' to 6265' TD, approximately 100' feet into the Upper Mancos.

Run Dual Induction and Compensated density/neutron logs from TD to intermediate casing shoe.

A 4 1/2" 10.5#, J-55 production liner will be run from 6265' TD to a minimum overlap of 120 feet inside the 7" intermediate casing. This string will be cemented in a single stage with 232 sacks 50/50 Poz/H containing 5#/sk Gilsonite, 1/4 #/sk Flocele, 0.4% Hallad 334 and 0.2% CFR<sub>2</sub>, mixed at 13.7 ppg, yield 1.33 cf/sk. Slurry volume assumes a 30% excess over gauge hole volume. Cement volume is subject to change after review of the open hole caliper log. Clearance between couplings and hole is 1.25". 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 overpull, whichever is greater.

**Drilling Program**  
**Jicarilla Apache Energy Corporation**  
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**Bits:** 12 1/4" surface hole - MT class 115 or 116 to ~320 feet.  
8 3/4" intermediate hole - TCI class 447 to ~4025'.  
6 1/4" production hole - Air hammer and bit - to TD.

**Centralizers:**

Surface string: 3 - 9 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'.

Intermediate string: 5 - 7" X 8 3/4" turbolizers will be spaced such that one is just below the Basal Fruitland Coal, three (3) across the Fruitland and one (1) into the Ojo Alamo. One centralizer will be run on the 1<sup>st</sup> jt of casing, a centralizer will be run above and one centralizer will be run below the DV tool.

Production string: 7 - 4 1/2" X 6 1/4" bow spring centralizers will be run across all prospective pays; provided well control conditions permit.

**Float Equipment:**

Surface string: Texas pattern guide shoe w/insert float, 1 jt above shoe.

Intermediate string: Cement nose guide shoe, float collar and DV tool with 2 cement baskets.

Production string: Cement nose float shoe, 1 jt of 4 1/2" csg, float collar.

**5. Pressure Control Equipment:**

A 2,000 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 of surface casing. The operating condition of the BOP will then be checked daily.

BOP's, intermediate casing and choke manifold will be pressure tested to 1500 psi prior to drill out of the 7" intermediate casing shoe.

7" & 4 1/2" casing rams will be installed prior to running intermediate and production casing, respectfully.

A full opening internal blowout preventor or drill pipe safety valve (capable of fitting all connections) will be on the rig floor at all times.