

**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. 701900001	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache Tribe	
2. NAME OF OPERATOR Jicarilla Apache Energy Corporation		7. UNIT AGREEMENT NAME Joint Venture Agreement	
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. 5418 Apache JVA #5A	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 780' FNL & 1158' FWL, Sec 29, T27N, R2W, NMPM At proposed prod. zone A/A		9. API WELL NO. 30-039-27411	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 15.5 miles NNW of Lindrith, New Mexico		10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 780' <small>(Also to nearest ddg. unit line, if any)</small>		11. SEC., T., R., M., OR BLK AND SURVEY OR AREA Sec 29, T27N, R2W, NMPM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, 2618' OR APPLIED FOR, ON THIS LEASE, FT.		12. COUNTY Rio Arriba 13. STATE New Mexico	
16. NO. OF ACRES IN LEASE 303.8		17. NO. OF ACRES ASSIGNED TO THIS WELL 320 230.12 N/2	
19. PROPOSED DEPTH 6190'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7235' GL		22. APPROX. DATE WORK WILL START* 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
8 3/4"	J-55, 7"	20	3950'	545 sks (967.6 cf) - 2 stg - circ to surface
6 1/4"	J-55, 4 1/2"	10.5	6190'	232 sks (308.6 cf) to 3830' (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.

Adj'd	AMJ
Engr	
Geol	RWH
Surf	RWH
Appvl	RWH

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 Agent

DATE

5/22/02

(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

1625 N. French Dr., Hobbs, NM 88240

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 & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form 7-100

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**

1 API Number 30-039-27411		2 Pool Code 72319		3 Pool Name Blanco Mesa Verde	
4 Property Code 5415		5 Property Name Apache JVA			6 Well Number 5A
7 OGRID No. 11859		8 Operator Name Jicarilla Apache Energy Corporation			9 Elevation 7235' GT.

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Rio	County
D	29	27N	2W		780	North	1158	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	Country

12 Dedicated Acres 320	13 Joint or Infill Infill	14 Consolidation Code	15 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

<p>16</p> <p>5265.48'</p> <p>1158'</p> <p>780'</p> <p>2640.00'</p> <p>Proposed New Well</p> <p>Apache JVA 5 850' FNL & 1490' FEL API: 30-039-21553</p> <p>29</p>		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Charles Neeley Agent Date: 05/21/02
<p>953.04'</p> <p>5262.18'</p> <p>920.04'</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. May 9 2002 Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

Jicarilla Apache Energy Corp
Apache, N.M.
780' FNL & 1158' FWL
Section 29, T27N, R2W, NMPM
Rio Arriba County, New Mexico

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** San Jose
2. **Surface Elevation:** 7235 ' GL
3. **Estimated Formation Tops:**

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimiento	1770'	
Ojo Alamo	3260'	
Kirtland	3460'	
Fruitland	3560'	
Pictured Cliffs	3740'	
Lewis	3910'	GAS
Cliff House	5570'	GAS
Menefee	5630'	GAS
Pt. Lookout	5910'	GAS
Upper Mancos	6090'	
TOTAL DEPTH	6190'	

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% CaCl₂ 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 are: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb overpull, whichever is greater.

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

Run an 8 3/4" hole to 3950' feet, approximately 40' feet into the Lewis Shale.

Run Induction and Compensated density neutron logs from 3950' to surface casing shoe.

**Drilling Program
Jicarilla Apache Energy Corporation
Apache JVA 5A**

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4. Casing and Cementing Program: Continued

A string of 7" 20#, J-55 Intermediate casing will be set at 3950' with a mechanical DV tool set at 1900', 130' below Nacimiento top. **Stage 1** (3950' - 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% CaCl₂ 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 3950' to 6190' 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 6190' 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% CFR2, 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 ~3950'.
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 1st 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.