

District I
1625 N. French Drive, Hobbs, NM 88240

District II

1301 W. Grand Avenue, Aracaja, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1230 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, New Mexico 87505

Original

Form C-107A
Revised June 10, 2003

APPLICATION TYPE

☒ Single Well

☐ Establish Pre-Approved Pools

EXISTING WELLS

☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

JUL 15 2004

Jicarilla Apache Energy Corp.
Operator

P.O. Box 710, Dulce, NM 87528
Address

JVA
Lease

2A
Well No.

D-Sec. 28- T27N - R2W
Unit Letter-Section-Township-Range

Rio Arriba OIL CONSERVATION
DIVISION

OGRID No. 11859 Property Code 5415 API No. 30-039-27408 Lease Type: ☒ Indian ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Gavilan PC		Blanco Mesaverde
Pool Code	77360		72319
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	3645' - 3867'		5658' - 6162'
Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	Estimated 1040 psi		Initial BHP ~ 1260 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	Estimated 1050 btu/scf		1258 btu/scf
Producing, Shut-In or New Zone	New Zone		Producing
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: Rates:	Date: Rates:	Date: 5/31/04 Rates: 1 BO/ 152 mcfpd / No
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas To be determined after test % %	Oil Gas % %	Oil Gas To be determined after PC tst % %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐

Will commingling decrease the value of production? Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands
or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐

NMOCD Reference Case No. applicable to this well: _____

Attachments:

- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

- List of other orders approving downhole commingling within the proposed Pre-Approved Pools
- List of all operators within the proposed Pre-Approved Pools
- Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
- Bottomhole pressure data.

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

SIGNATURE Charles Neeley TITLE Agent/PE DATE 7/15/04

TYPE OR PRINT NAME Charles Neeley TELEPHONE NO. (505) 486-0211

E-MAIL ADDRESS neelece@acnet.com

DATE <u>7/15/04</u>	SUSPENSE <u> </u>	ENGINEER <u>WVJ</u>	LOGGED IN <u>7/15/04</u>	DHC-3310	APP NO. <u>04142415</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR
- [D] Other: Specify _____
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply
- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached
- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate and complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Charles Neeley
Print or Type Name

Charles Neeley
Signature

Agent/PE
Title

7/15/04
Date

neelee@acmet.com
e-mail Address

NEELEY CONSULTING SERVICE, LLC

3001 Northridge Drive, Los Amigos Bldg
FARMINGTON, NEW MEXICO 87401
(505) 486-0211

July 12, 2004

New Mexico Oil Conservation Division
Mr. Mark Fesmire, Director
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Bureau of Land Management
Mr. Ed Singleton, Field Manager
435 Montano NE
Albuquerque, New Mexico 87107

RE: Jicarilla Apache Energy Corporation (JAECO)
JVA #2A NW/NW, Sec 28, T27N, R2W
Rio Arriba County, New Mexico

Downhole Commingling Request

Dear Mr. Fesmire and Mr. Singleton:

The Jicarilla Apache Energy Corporation is applying for administrative approval to downhole commingling production in the Gavilan Pictured Cliffs ext with production from the Blanco Mesaverde pool in the referenced well. The ownership of the zones to be commingled is common, JAECO.

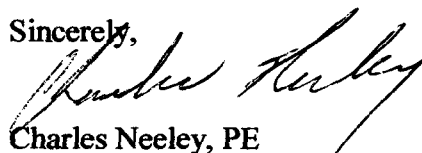
The Mesaverde wells in this area are marginal economic producers based on current rates of 10 – 160 MCFD. The closest Gavilan PC wells are in Sections 25, 35 and 36, of T27N, T3W and are also marginal economic producers based on current rates of 35 – 70 MCFD. A reserve study predicts an ultimate recovery of 270 MMSCF from the Mesaverde and 600 MMSCF for the Pictured Cliffs. These reserves and the low current producing rates are uneconomic as a separate zone well. The well is economic when commingled due to savings realized on surface facilities and tubulars. The only economical way to recover the Mesaverde and Pictured Cliffs reserves identified on lease is to downhole commingle production from both zones in the well as proposed.

The Mesaverde formation has been completed and produced in this well for 12 months – production data, including a production curve is attached for your review. It is proposed to set a bridge plug above the Mesaverde, perforate and stimulate the Pictured Cliffs, and test its production. The bridge plug will then be removed and both zones produced through a single string of tubing. The reservoir characteristics of each of the subject zones are such that underground waste will not be caused by the proposed commingling ie, the fluids are compatible with each other, the initial bottom-hole pressure for the Mesaverde and anticipated bottom-hole pressure for the Pictured Cliffs are 1260 psi and 1040 psi, respectively.

The allocation of the commingled production will be calculated using flow tests for the Pictured Cliffs during completion operations, production data from the Mesaverde, and reserve studies for both producing intervals. JAECO will consult with the NMOCD district supervisor of the Aztec NMOCD office for approval of the allocation.

Your respective approvals of this project are appreciated.

Sincerely,



Charles Neeley, PE

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State of New Mexico

Energy, Minerals & 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**

¹ API Number	² Pool Code 72319	³ Pool Name Blanco Mesa Verde
⁴ Property Code	⁵ Property Name Apache JVA	⁶ Well Number 2A
⁷ OGRID No. 11859	⁸ Operator Name Jicarilla Apache Energy Corporation	⁹ Elevation 7309' GE

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	28	27N	2W		895	North	673	West	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 215.52	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

¹⁶ Proposed New Location	5296.84'	¹⁷ 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
	28	
Apache JVA 2 790' FSL & 850' FWL API: 30-039-21460	5300.46'	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
920.04'		904.20'

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-27408		² Pool Code 77360		³ Pool Name Gavilan PC ext	
⁴ Property Code 5415		⁵ Property Name JVA			⁶ Well Number 2A
⁷ OGRID No. 11859		⁸ Operator Name Jicarilla Apache Energy Corporation			⁹ Elevation 7309' GL

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
D	28	27N	2W		895'	North	673'	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 160	¹³ Joint or 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>¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Charles Neeley</i> Signature</p> <p>Charles Neeley Printed Name</p> <p>Agent/PE neeley@acmet.com</p> <p>Title and E-mail Address</p> <p>July 6, 2004 Date</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>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>Certificate Number</p>

EUR

Production Data – Blanco Mesaverde Pool
JAECO JVA 2A
NW/NW Sec 18, T27N, R2W, NMPM
Rio Arriba County, New Mexico

<u>Month</u>	<u>Gas, mcf</u>	<u>Oil, bbls</u>	<u>Water, bbls</u>	<u>Cum Gas, mcf</u>	<u>Cum Oil, bbls</u>
6/03	18,559	No measure	0	18,559	No measure
7/03	12,034	A/A	0	30,593	A/A
8/03	9,736	A/A	0	40,329	A/A
9/03	8,024	A/A	0	48,353	A/A
10/03	7,322	A/A	0	55,675	A/A
11/03	5,674	A/A	0	61,349	A/A
12/03	6,384	190	0	67,733	190
1/04	6,068	No measure	0	73,801	190+
2/04	5,049	A/A	0	78,850	190+
3/04	4,900	A/A	0	83,750	190+
4/04	5,053	A/A	0	88,803	190+
5/04	4,698	141	0	93,501	331

Gas Reserves – Estimated by Hyperbolic Decline: ~ 176,624 mcf
 Estimate Ultimate Recovery (EUR) ~ 270,125 mcf

Gas Production Logarithmic Curve of Well:

Total Production

Oil: 331

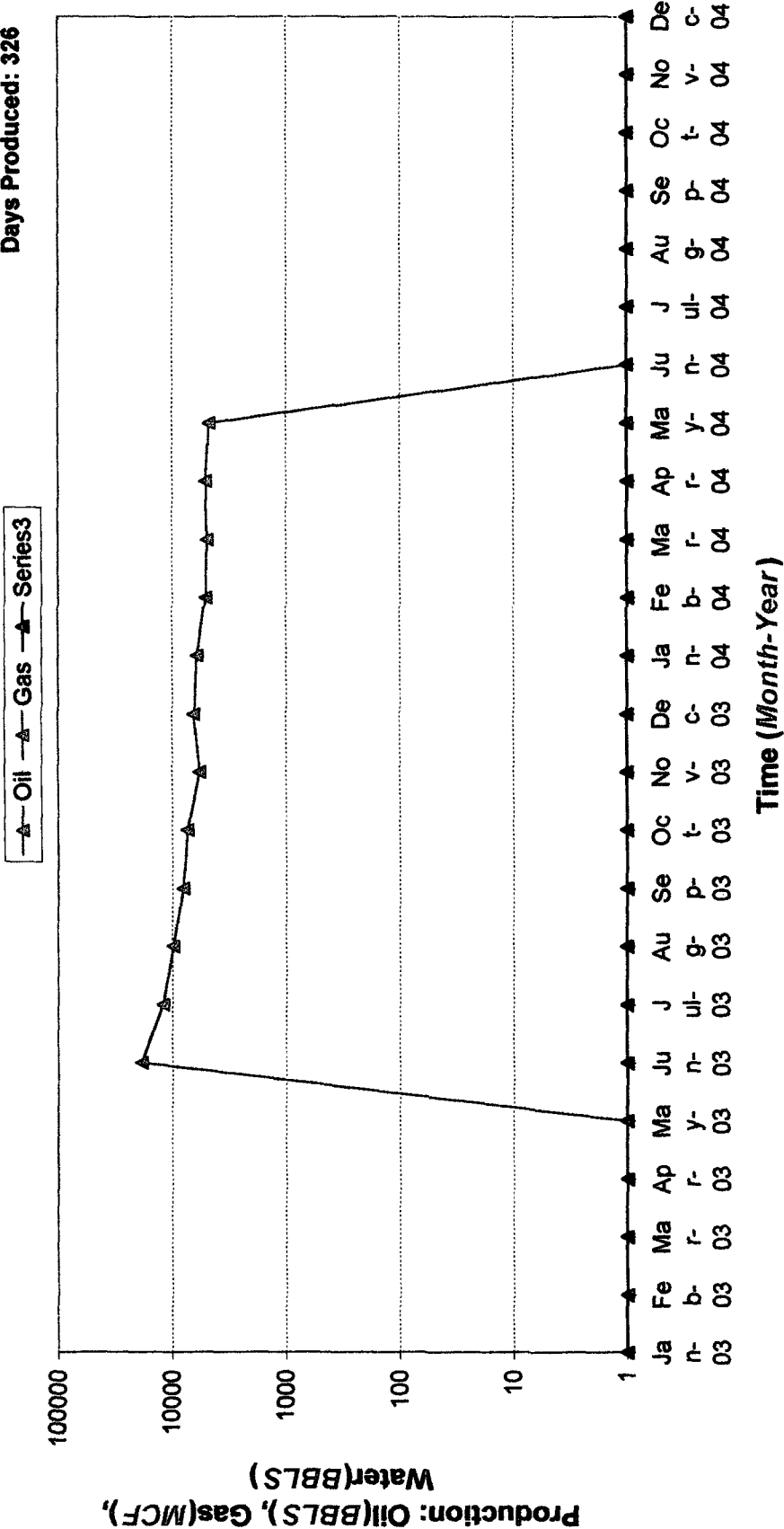
Gas: 88803

Water: 0

Days Produced: 326

APACHE JVA 2A

To make log function continuous, those production data points with value 0 are all set to 1



FUTURE PRODUCTION

Well ID : **JVA 2A**
Field : **Blanco MV**
Location : **New Mexico**
Company : **JAECO**

Time (Days)	Flow Rate (Mscf/d)	Cum (Mscf)	Last Reported Production
357	151.54839	93501	
414.2845	137.78953	101210.9	
478.5725	124.16967	110806.7	
542.857	112.5826	119480.6	
607.1415	102.63369	127366.5	
671.4295	94.020304	134573.2	
735.714	86.508237	141188.8	
799.9985	79.912136	147289.5	
864.2865	74.085743	152933.8	
928.571	68.910097	158175.7	
992.8555	64.289827	163059.4	
1057.144	60.146075	167621.5	
1121.428	56.4138	171895.4	
1185.716	53.038745	175908.2	
1250.001	49.975415	179685.5	
1314.285	47.185729	183247.3	
1378.573	44.636998	186615.3	
1442.858	42.301588	189803	
1507.142	40.155909	192826.4	
1571.43	38.179067	195699	
1635.715	36.353538	198433	
1699.999	34.66382	201036.4	
1764.287	33.096231	203521.4	
1828.572	31.63911	205896	

1892.856	30.282011	208166.9
1957.144	29.015666	210342.2
2021.429	27.832021	212426
2085.713	26.723763	214427.7
2150.001	25.684455	216350
2214.286	24.708335	218198.3
2278.57	23.790279	219976.5
2342.858	22.925571	221690.1
2407.143	22.110098	223341.8
2471.427	21.340053	224935.6
2535.715	20.612066	226474.3
2600	19.922968	227960.4
2664.284	19.270031	229398.1
2728.572	18.650692	230788.6
2792.857	18.06256	232136.1
2857.145	17.503578	233440.5
2921.429	16.971758	234704.5
2985.714	16.465348	235930.8
3050.002	15.982663	237120.8
3114.286	15.52222	238277.1
3178.571	15.082671	239399.8
3242.859	14.662702	240490.2
3307.143	14.261099	241550.9
3371.428	13.876851	242583.4
3435.716	13.508881	243587.6
3500	13.156278	244566.2
4142.845	10.311122	253107.4
4785.725	8.3367397	259906.7
5428.57	6.9045908	265471.6
6071.415	5.8291227	270125.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0135
Expires: January 31, 2004**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Jicarilla Apache Energy Corporation

3a. Address

P.O. Box 710, Dulce, NM 87528

3b. Phone No. (include area code)

505-759-3224

4. Location of Well (Footage, Sec., T, R., M., or Survey Description)

895' FNL & 673' FWL, Sec 28, T27N, T2W, NMPM

5. Lease Serial No.

70190001

6. If Indian, Allottee or Tribe Name

Jicarilla Apache Tribe

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Apache JVA #2A

9. API Well No.

30-039-27408

10. Field and Pool, or Exploratory Area

Blanco-MesaVerde/Gavilan PC

11. County or Parish, State

Rio Arriba County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other Complete GavilanPC & DownholeCommingling w/MV

3. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The Jicarilla Apache Energy Corporation (JAECO) proposes to complete and test this well as a Gavilan PC extension and Downhole Commingling the PC production with the existing Blanco-MesaVerde production. Attached is NMOCD form C-102 dedicating the NW 1/4 of Sec 28, T27N, T2W to the Gavilan PC, the West 1/2 of said section is presently dedicated to the Blanco-MesaVerde. Ownership between the pools in the spacing units to be commingled is identical and controlled by JAECO, therefore notice of intent to downhole commingling to interest owners is not required. The Blanco-MesaVerde is producing from perfs 5658' - 6162'. It is proposed to perforate and stimulate the Gavilan PC: 3645' - 3867'. Production data from the Blanco-MesaVerde (completed 6/03) and test data from the Gavilan PC will be used to determine the allocation of production to each pool. Downhole commingling will not reduce the value of the total remaining production. A copy of the NMOCD application for downhole commingling Form C-107A is attached.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Charles Neeley, PE

Title Agent

Signature

Date

7/13/04

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by (Signature)

Name

(Printed/Typed)

Title

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

Date

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.

(Continued on next page)