



CDX Gas, LLC  
4801 N. Butler Avenue, Suite 2000  
Farmington, NM 87401  
Main: 505-326-3003  
Fax: 505-325-4007

05.November.2004

Mr. William Jones  
New Mexico Oil Conservation Division  
Engineering Bureau  
1220 So. St. Francis Drive  
P.O. Box 6429  
Santa Fe, New Mexico 87505

RE: Application for Exception to Rule 303-A  
Downhole Commingling  
Jicarilla Apache Tribal 151 #8F  
API No. 30-0397-29204  
Basin Dakota / WC Mancos  
2600' FNL, 1215' FEL, Unit H Sec3-T26N-R5W  
Rio Arriba County, New Mexico

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Dear Mr. Jones;

CDX RIO, LLC hereby request administrative approval to downhole commingle production from the Basin Dakota and WC Mancos Pools in the above well.

The 151 #8F well will be drilled and the Gallup member of the Mancos Pool will be completed with the Dakota.

The Gallup is marginal in the area and not substantial enough to justify drilling a new well, but commingling with Dakota production through an existing wellbore can capture the additional reserves. Adding the Gallup production will have no detrimental effects and the fluids have no abnormal components that would prohibit commingling or promote the creation of emulsions or scale.

As an analogy the Southwest offset well Jicarilla 3E (NE/NW Sec 8, T26N, R5W) and Northeast offset well Jicarilla 151 #5 (SE/NW Sec 8, T26N, R5W) are all less than 1.5 miles and are currently commingled down hole in the Gallup and Dakota. These wells have been downhole commingled and producing for many years with no production problems or loss of value.

CDX RIO, LLC has 100% working interest in all zones of interest in the captioned well, however ExxonMobile has a overriding interest and will be notified by copy of this application by certified mail, return receipt requested. CDX is the only operator / working interest owner in all formations.

When the Dakota and Gallup are completed they will be isolated and separately tested thru tubing. The subtraction method will be used to determine the new allocation for the commingled production.

Estimated production from the Dakota is 150 mcf/d and 1 bopd, from the Gallup 58 mcf/d and 0 bopd (using the analogy offset data). New allocations should be similar to the offset data and is estimated at

Dakota	Oil 100%	Gas 72%
Gallup	Oil 0%	Gas 28%

Attached to aid in your review are plats showing the location of the well and offset wells in the same formation, a recent production plot for the commingled zones in the analogy wells (Jicarilla #3E and Jicarilla 151 #4) and historical plots for the Gallup and Dakota production, and form C-102 showing the location and spacing units. Also included is a cross section between the NE and SW offset wells indicating the continuity of the Gallup between the wells.

This spacing unit is located on an Indian lease (Jicarilla Apache Tribal #151) and a copy of this application package will be sent to the BLM / Jicarilla Tribe requesting their consent.

Should have any question concerning this application please contact the undersigned at (505) 326-3003.

Sincerely



Robert Lemmons  
Drilling / Operations Engineer  
CDX GAS, LLC  
505-326-3003 ext 2820  
[rob.lemmons@cdxgas.com](mailto:rob.lemmons@cdxgas.com)

cc BLM, Farmington  
Rich Corcoran, CDX Land  
R. Johnston, CDX Op Mgr.  
Fred Vigil, Jicarilla Oil & Gas Admin.  
ExxonMobile, Land

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 & 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**

<sup>1</sup> API Number 30-039-29204	<sup>2</sup> Pool Code 71599	<sup>3</sup> Pool Name BASIN DAKOTA
<sup>4</sup> Property Code	<sup>5</sup> Property Name JICARILLA 151	<sup>6</sup> Well Number 8F
<sup>7</sup> OGRID No. 222374	<sup>8</sup> Operator Name CDX RIO, LLC	<sup>9</sup> Elevation 7216' GR

<sup>10</sup> Surface Location

UL or lot no. H	Section 3	Township 26N	Range R5W	Lot Idn	Feet from the 2600	North/South line NORTH	Feet from the 1215	East/West line EAST	County RIO 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
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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><sup>17</sup> <b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature </p> <p>Printed Name Robert Lemmons</p> <p>Title and E-mail Address Operations Engineer, rob.lemmons@cdxgas.com</p> <p>Date 11/05/04</p>
	<p><sup>18</sup> <b>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.</p> <p>May 24, 2004</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>ON FILE</p> <p>Certificate Number 14831</p>

District I  
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**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-039-29204	<sup>2</sup> Pool Code 97232	<sup>3</sup> Pool Name WC BASIN MANCOS
<sup>4</sup> Property Code	<sup>5</sup> Property Name JICARILLA 151	<sup>6</sup> Well Number 8F
<sup>7</sup> OGRID No. 222374	<sup>8</sup> Operator Name CDX RIO, LLC	<sup>9</sup> Elevation 7216' GR

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

UL or lot no. H	Section 3	Township 26N	Range R5W	Lot Idn	Feet from the 2600	North/South line NORTH	Feet from the 1215	East/West line EAST	County RIO ARRIBA
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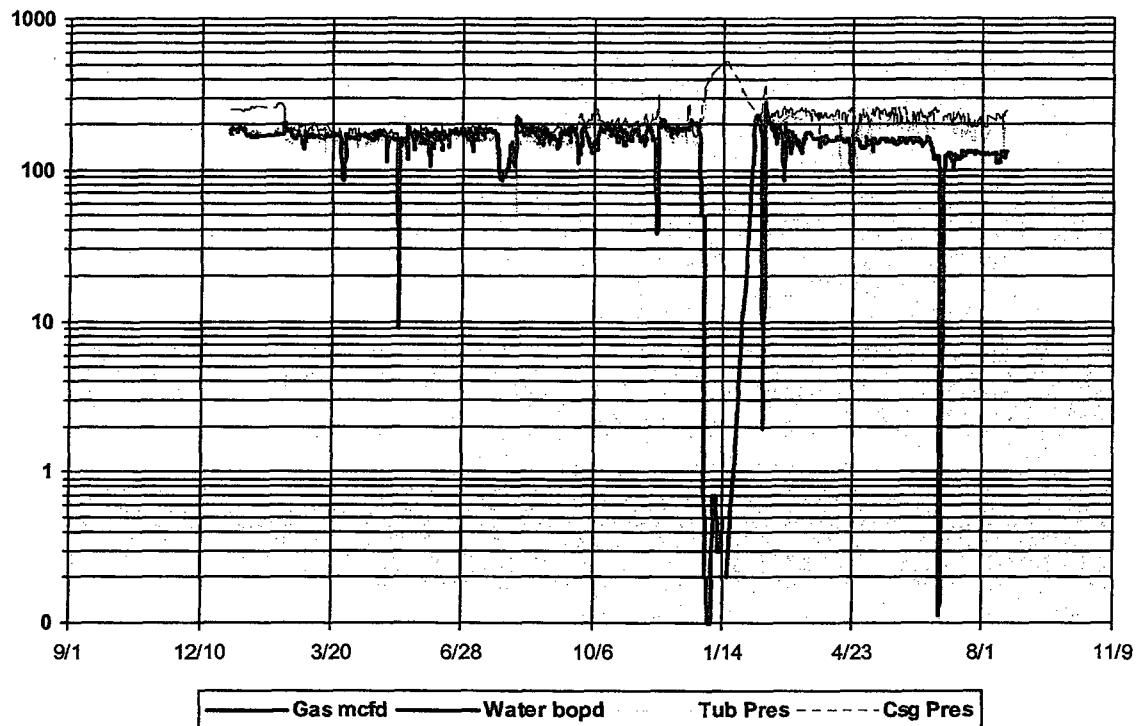
<sup>11</sup> **Bottom Hole Location If Different From Surface**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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	<p><sup>18</sup> <b>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.</p> <p>May 24, 2004</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>ON FILE</p> <p>Certificate Number 14831</p>	

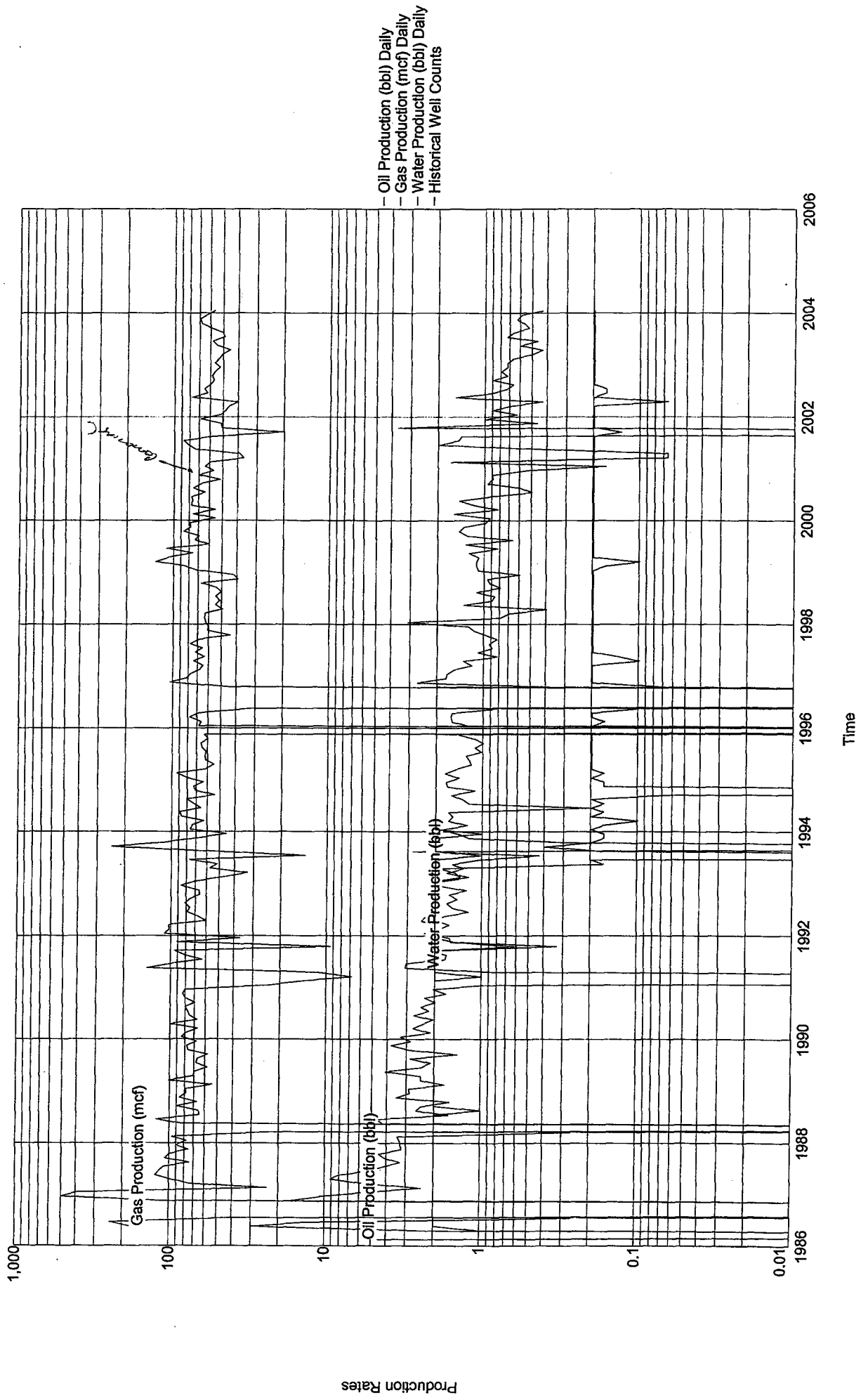
'JIC AP TRIBAL 151 004' (8/18/04 - 8/18/04)



Lease Name: JICARILLA  
County, State: RIO ARBA, NM  
Operator: CORDILLERA ENERGY INCORPORATED  
Field: MULTIPLE  
Reservoir: MULTIPLE  
Location:

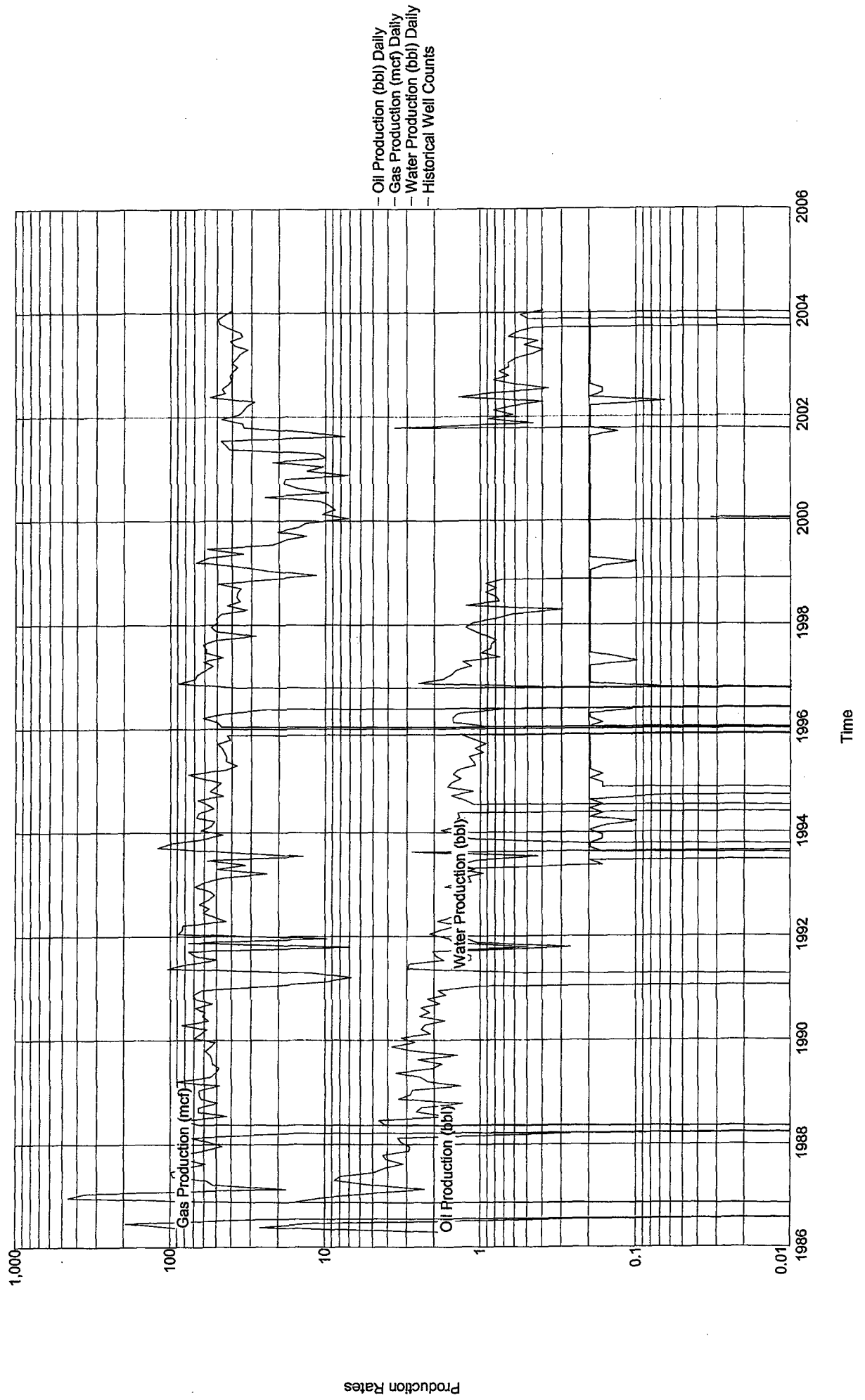
JICARILLA - #3E

JICARILLA - MULTIPLE



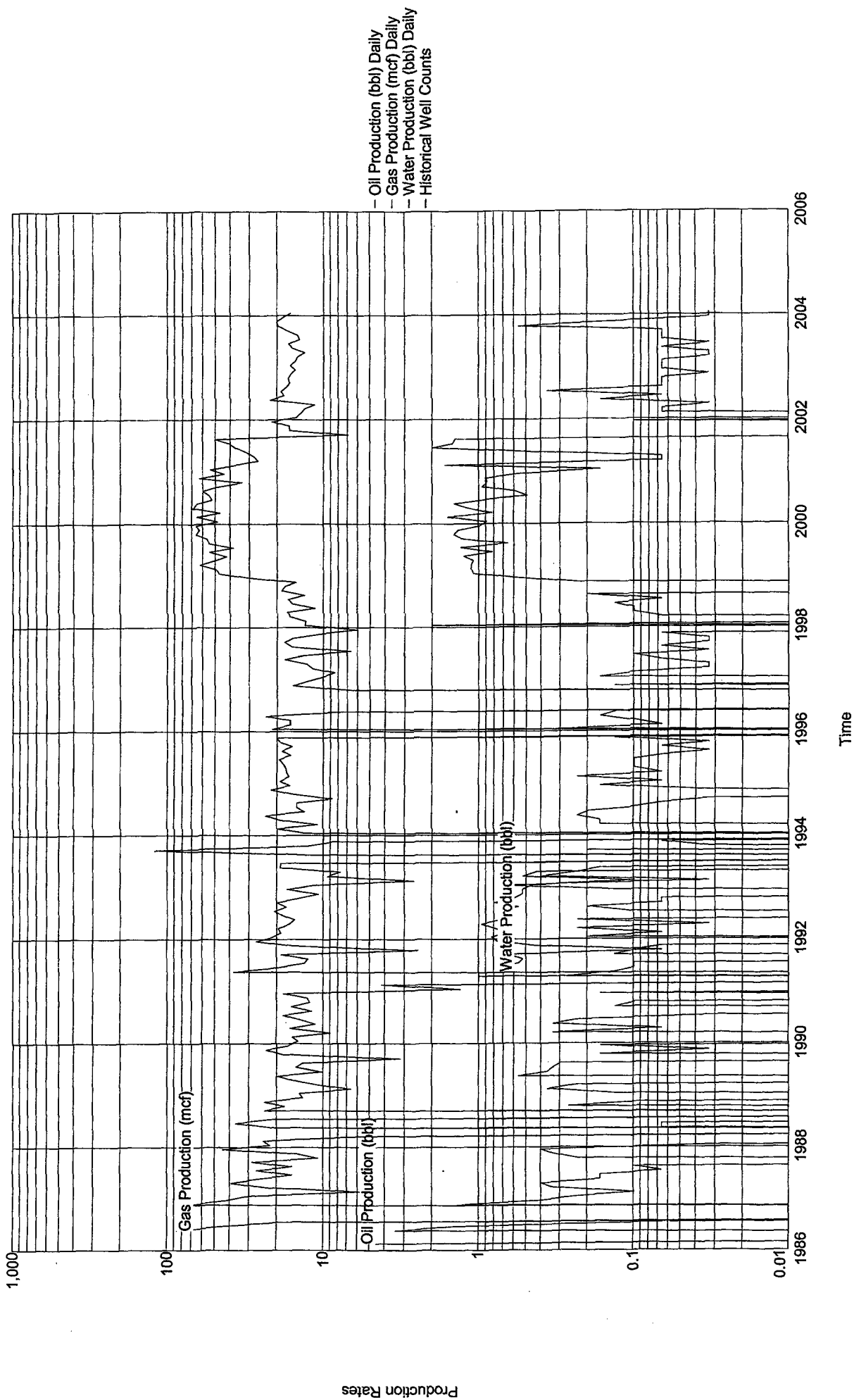
Lease Name: JICARILLA  
County, State: RIO ARBA, NM  
Operator: CORDILLERA ENERGY INCORPORATED  
Field: BASIN  
Reservoir: DAKOTA  
Location: 8 26N 5W NW SE NW

JICARILLA - BASIN 3E



Lease Name: JICARILLA  
County, State: RIO ARBA, NM  
Operator: CORDILLERA ENERGY INCORPORATED  
Field: TAPACITO  
Reservoir: GALLUP  
Location: 8 26N 5W NW SE NW

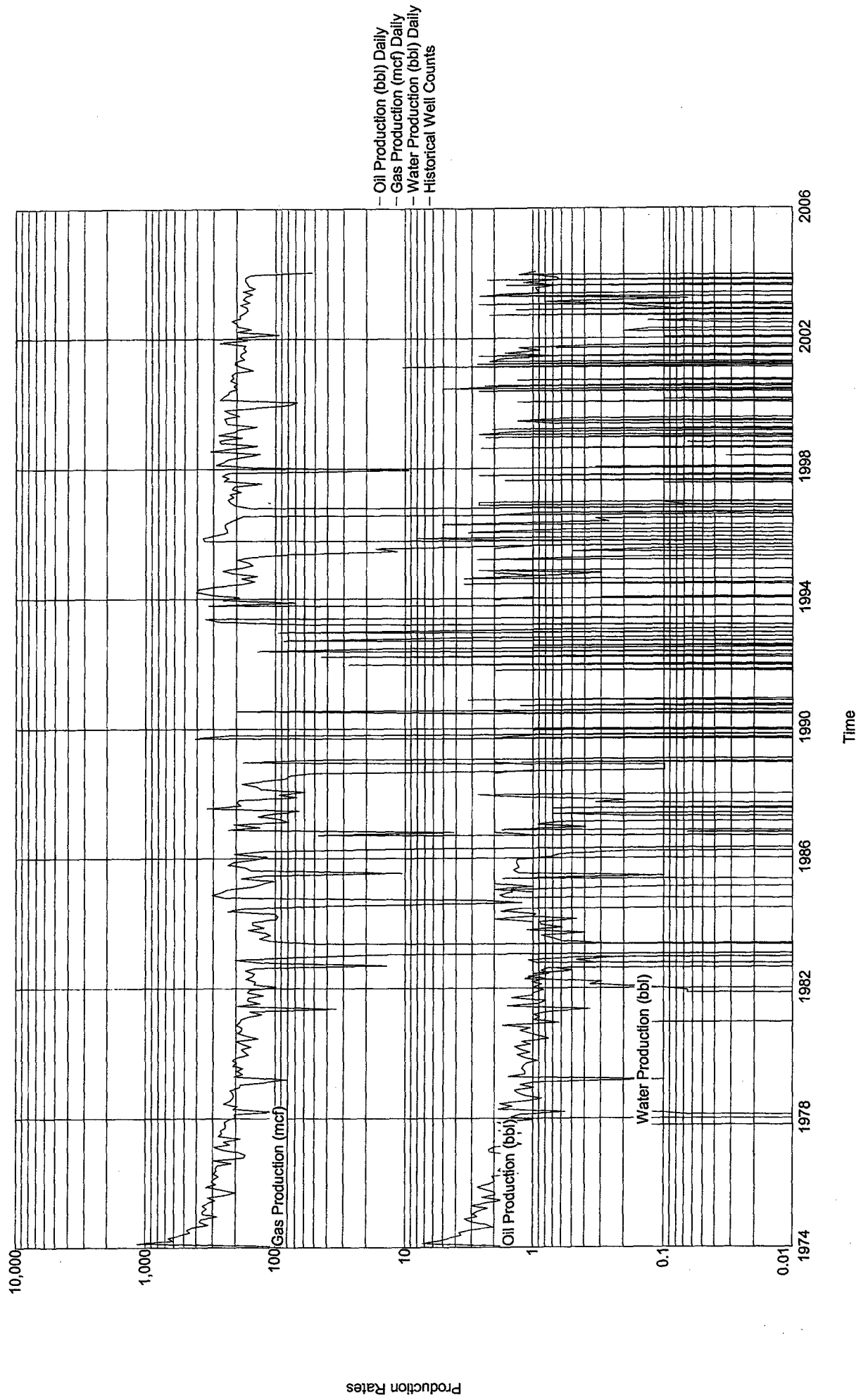
JICARILLA - TAPACITO 3E





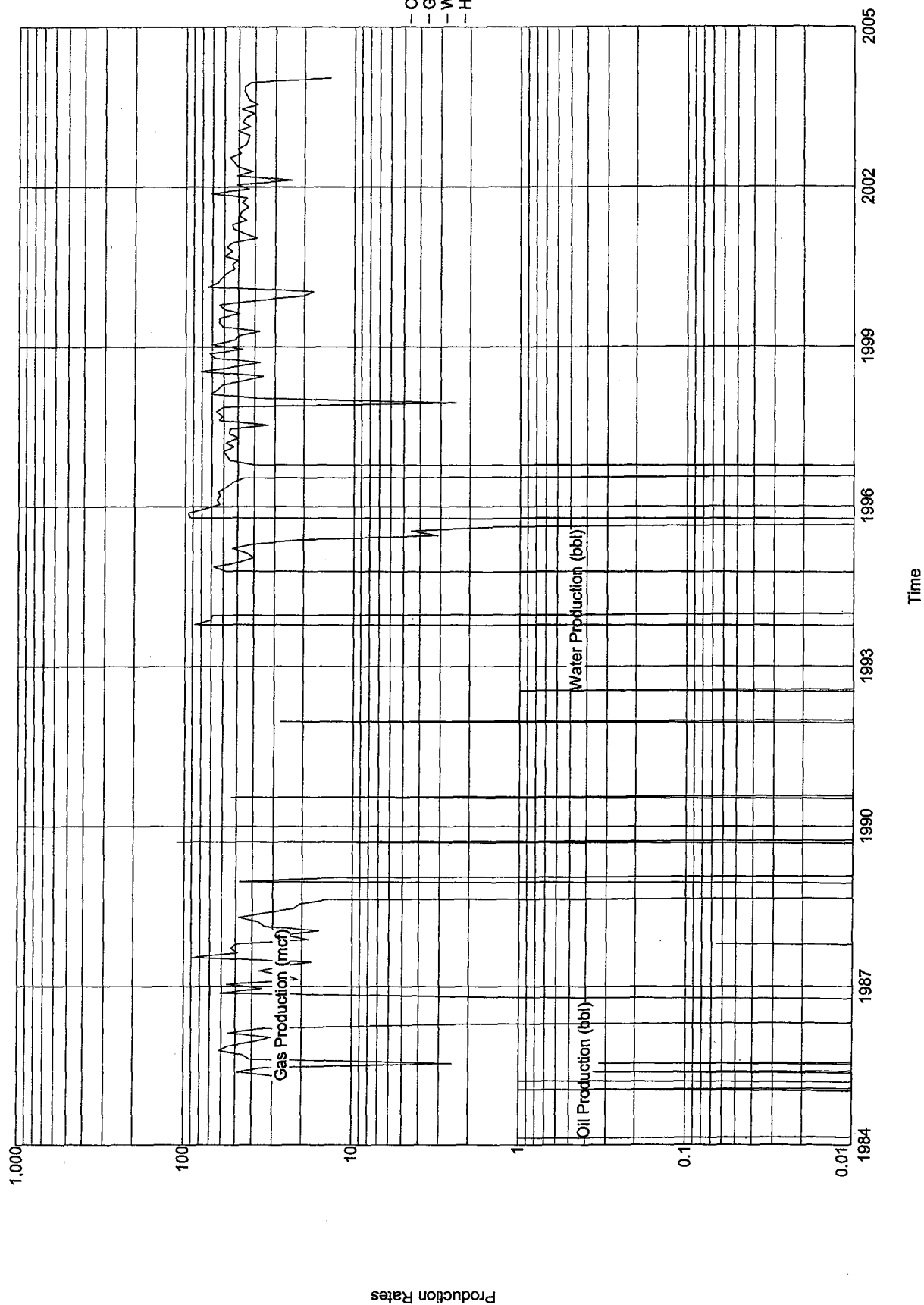
Lease Name: JICARILLA APACHE TRIBAL 151  
County, State: RIO ARBA, NM  
Operator: CDX RIO LIMITED LIABILITY CORPORATIO  
Field: MULTIPLE  
Reservoir: MULTIPLE  
Location:

JICARILLA APACHE TRIBAL 151 - MULTIPLE



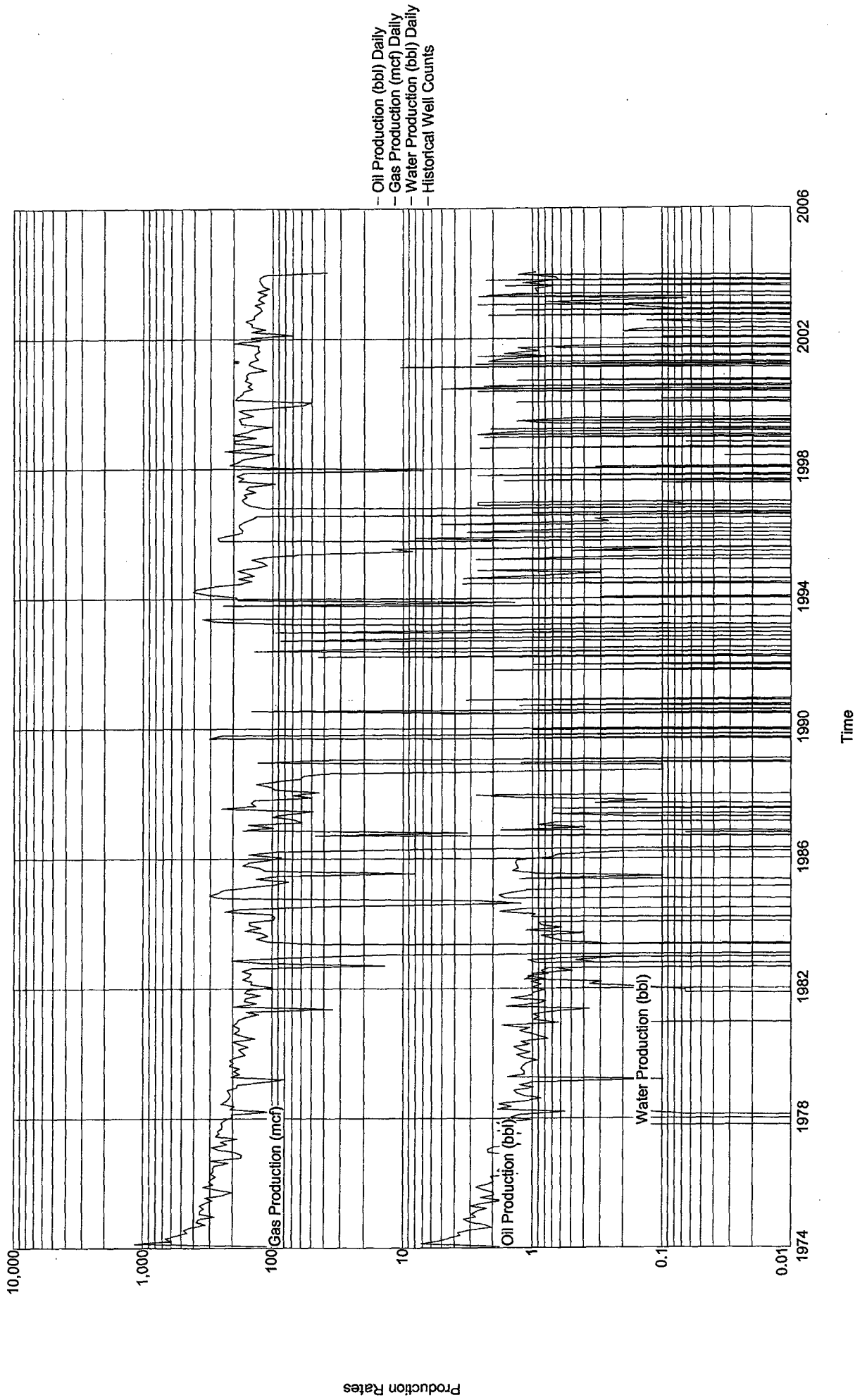
Lease Name: JICARILLA APACHE TRIBAL 151  
County, State: RIO ARBA, NM  
Operator: CDX RIO LIMITED LIABILITY CORPORATIO  
Field: B S MESA  
Reservoir: GALLUP  
Location: 3 26N 5W SW NE NW

JICARILLA APACHE TRIBAL 151 - B S MESA 4



Lease Name: JICARILLA APACHE TRIBAL 151  
County, State: RIO ARBA, NM  
Operator: CDX RIO LIMITED LIABILITY CORPORATIO  
Field: BASIN  
Reservoir: DAKOTA  
Location: 3 26N 5W SW NE NW

JICARILLA APACHE TRIBAL 151 - BASIN 4



Station ID: 32991  
Station Name: JIC APACHE TR151

0004

Analysis No.:	243335	249619	267906	283743	290185	308053	320580
Analysis Source:	32991	32991	32991	32991	32991	32991	32991
Lab Identifier:	K320	K654	K587	K280	K565	K357	K030
Sample From Date:	09/01/98	02/05/99	02/29/00	02/28/01	07/19/01	09/06/02	07/31/03
Sample To Date:	09/01/98	02/05/99	02/29/00	02/28/01	07/19/01	09/06/02	07/31/03
Analyzed Date:	09/02/98	02/09/99	03/06/00	03/01/01	07/20/01	09/09/02	08/04/03
Effective Date:	10/01/98	03/01/99	03/06/00	03/02/01	07/25/01	09/13/02	08/05/03

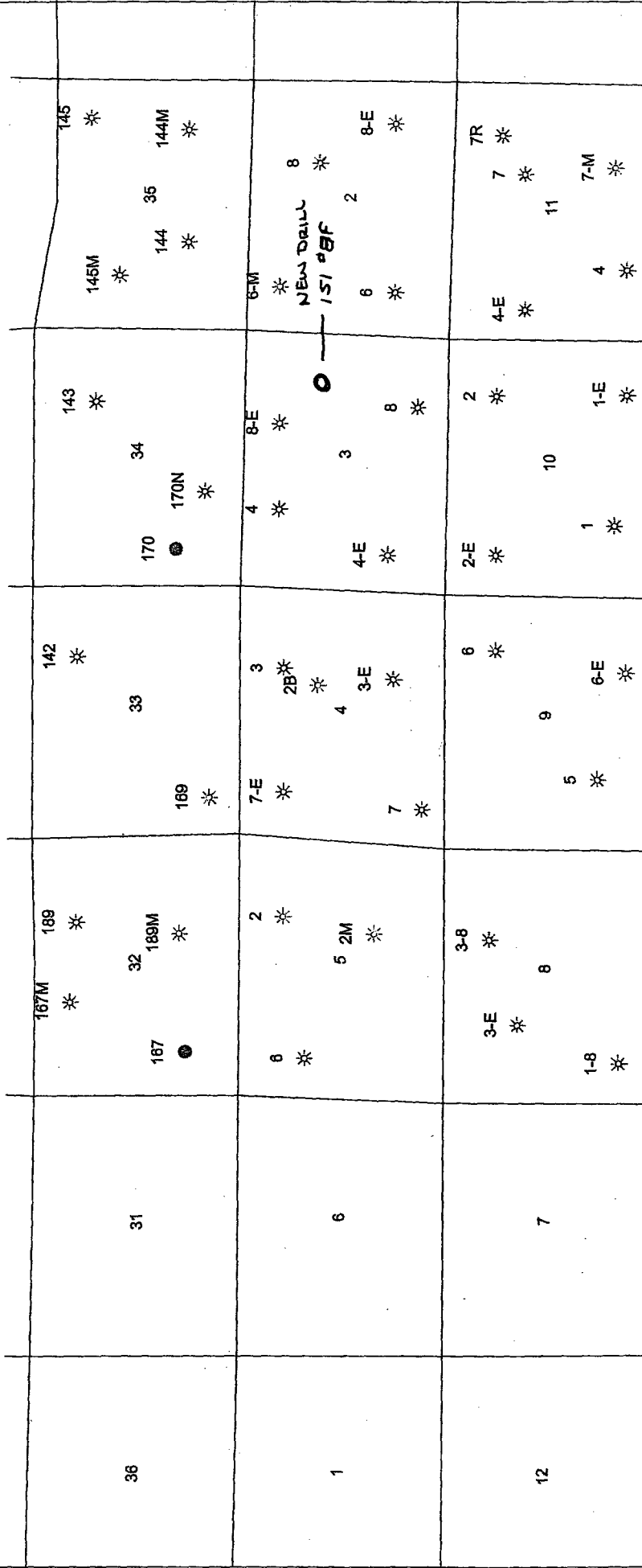
		Number 1	Number 2	Number 3	Number 4	Number 5	Number 6	Number 7
Components		Mol %	Mol %	Mol %	Mol %	Mol %	Mol %	Mol %
Methane	C1	83.8071	83.8060	83.7231	83.9811	81.9180	82.0721	81.9000
Ethane	C2	9.4019	8.9450	9.5719	9.4869	10.5040	10.4609	10.3750
Propane	C3	2.9200	2.2700	3.2410	3.2410	3.7310	3.7010	3.6720
Iso-butane	IC4	0.5670	0.4860	0.5520	0.5300	0.6150	0.5990	0.6140
Normal-butane	NC4	0.8890	0.8500	0.8910	0.8420	1.0000	0.9610	0.9910
Iso-pentane	IC5	0.3660	0.4560	0.3700	0.2980	0.4020	0.3930	0.4450
Normal-pentane	NC5	0.2370	0.3310	0.2870	0.2070	0.2760	0.2730	0.3110
Hexanes	C6	0.7630	1.8580	0.3610	0.3410	0.6330	0.6360	0.7530
Heptanes	C7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Octanes	C8							
Nonanes	C9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Decanes	C10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nitrogen	N2	0.2590	0.1780	0.2450	0.2240	0.2530	0.2620	0.2270
Carbon Dioxide	CO2	0.7900	0.8200	0.7580	0.8490	0.6680	0.6420	0.7120
Carbon Monoxide	CO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hydrogen Sulfide	H2S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Helium	HE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

<b>Specific Gravity:</b>	0.6915	0.7142	0.6852	0.6810	0.7040	0.7023	0.7077
<b>Ideal Specific Grav:</b>	0.6896	0.7120	0.6833	0.6792	0.7019	0.7002	0.7056
<b>Dry BTU :</b>	1203.6287	1239.2647	1194.8810	1186.4673	1226.2972	1224.1852	1231.3699
<b>Pressure Base:</b>	14.7300	14.7300	14.7300	14.7300	14.7300	14.7300	14.7300
<b>Ideal BTU:</b>	1199.7875	1235.0454	1191.1267	1182.7950	1222.2009	1220.1158	1227.2155
<b>Z-Factor:</b>	0.9966	0.9966	0.9966	0.9966	0.9966	0.9966	0.9966

GPM

[illegible]

# T26N - RSW DAKOTA



T26N - RSW  
GALLUP

36	31	32	33	34	35
12	7	3-E *	8	10	11
1	6	5	4	3	2
			4	4	8
				0	NEW DEIN 151 #BF
				4	8
				*	*
					8-E
					*

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PW 50432367922  
State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107A  
Revised June 10, 2003

**Oil Conservation Division**

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

APPLICATION TYPE

☒ Single Well

☐ Establish Pre-Approved Pools

EXISTING WELLBORE

☒ Yes ☐ No

**APPLICATION FOR DOWNHOLE COMMINGLING**

CDX RIO, LLC

4801 North butler Ave., Suite 2000, Farmington, NM 87401

Operator Address

JICARILLA 151 #8F H - 3 - T26N - R5W RIO ARRIBA  
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 222374 Property Code API No. 30-039-29204 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	WC BASIN MANCOS		BASIN DAKOTA
Pool Code	97232		71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	7302 - 7825 (To be confirmed after logs)		8136 - 8436 (To be confirmed after logs)
Method of Production (Flowing or Artificial Lift)	Plunger Lift		Plunger Lift
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)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1222 BTU		1222 BTU
Producing, Shut-In or New Zone	NEW ZONE		NEW ZONE
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: 50 mcf/d (estimated) Rates: 0 bopd 0 bwpd	Date:  Rates:	Date: 150 mcf/d (estimated) Rates: 2 bopd 0 bwpd
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 0 % 28 %	Oil Gas % %	Oil Gas 100% 72 %

**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  TITLE Operations Engineer DATE 11/05/04

TYPE OR PRINT NAME Robert Lemmons TELEPHONE NO. (505) 326-3003

E-MAIL ADDRESS rob.lemmons@cdxgas.com