

**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT****OIL CONSERVATION DIVISION**
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

January 28, 2000

Conoco, Inc.
P. O. Box 2197
Houston, Texas 77252**Attention: Marc Shannon****Re: Administrative Amendment to
Division Order No. R-11139**

Dear Mr. Shannon:

Reference is made to your letter of application dated January 21, 2000 for an exception to the well location requirements provided within the "*Special Rules and Regulations for the Basin-Dakota Pool*," as promulgated by New Mexico Oil Conservation Division ("Division") Order No. R-10987, for a certain well previously approved by Division Order No. R-11139, issued in Case No. 12122 and dated February 18, 1999.

Division Order No. R-11139 authorized Conoco, Inc. to conduct an 80-acre pilot infill drilling program within its San Juan "28-7" Unit, located in portions of Townships 27 and 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, by permitting six certain wells to be drilled at unorthodox infill gas well locations.

At this time Conoco, Inc. is seeking to change the proposed location for its San Juan "28-7" Unit Well No. 280-M in order to complete an infill drilling plan for Blanco-Mesaverde gas production in the immediate area and to utilize an existing wellbore for this development. The San Juan "28-7" Unit Well No. 280-M was originally to have been drilled 1310 feet from the South line and 10 feet from the West line (Unit M) of Section 16, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.

The application has been duly filed under the provisions of Division Rules 104.F and 605.B.

By the authority granted me under the provisions of Division Rule 104.F (2), Conoco, Inc.'s proposed well, currently designated the San Juan "28-7" Unit Well No. 280-M, to be drilled at an unorthodox infill gas well location 1310 feet from the South line and 10 feet from the East line (Unit P) of Section 17, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, is hereby approved.

Further, the above-described San Juan "28-7" Unit Well No. 280-M and existing: (i) San Juan "28-7" Unit Well No. 256 (API No. 30-039-21731), located at a standard gas well location 850 feet from the North line and 1845 feet from the East line (Unit B) of Section 17; and (ii) San Juan

2 Operator: APACHE CORPORATION	3 OGRID: 000873	4 Month/Year 03/00	6 Page 52 of 94
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		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER						
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
POOL NO. AND NAME Property NO. and Name Well No. & U-L-S-T-R API No.	C O D E 1	Volume	Pressure	C O D E 2	Barrels of oil/conden- sate produced	Barrels of water produced	MCF Gas Produced	Days Prod- uced	C O D E 3	Point of Disposition	Gas BTU or Oil API Gravity	Oil on hand at beginning of month	Volume (Bbls/mcf)	Transporter OGRID	C O D E 4	Oil on hand at end of month
39189 LINDRITH - GALLUP/DAKOTA, WEST 001429 APACHE	JES															
129 P-14-24N-4W 30-039-22046	P				87	1	259	31								
130 K-24-24N-4W 30-039-22047	P				97	0	579	31								
131 C-04-24N-4W 30-039-22215	P				149	3	905	31								
132 K-04-24N-4W 30-039-22216	P				0	0	218	31								
134 K-10-24N-4W 30-039-22658	S				0	0	0	00								
138 G-12-24N-4W 30-039-22810	F				33	6	1426	31								
143 G-02-24N-4W 30-039-23662	F				131	20	1742	31								
144 O-13-24N-4W 30-039-23663	F				81	18	1139	31								
145 J-11-24N-4W 30-039-23889	P				132	44	825	31								
146 G-24-24N-4W 30-039-23893	F				93	1	1418	31								
147 G-13-24N-4W 30-039-23892	F				23	20	1130	31								
149 P-01-24N-4W 30-039-23661	F				24	12	1426	31								
150 F-03-24N-4W 30-039-23912	P				70	14	1151	31								
151 G-12-24N-4W 30-039-23891	F					11	1712	31								

Conoco, Inc.

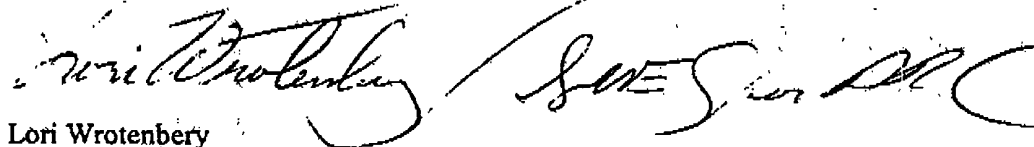
Administrative Amendment to Division Order No. R-11139

January 28, 2000

Page 2

"28-7" Unit Well No. 256-E (API No. 30-039-22363), located at a standard infill gas well location 1960 feet from the South line and 1390 feet from the East line (Unit J) of Section 17; are to be dedicated to the existing standard 320-acre stand-up gas spacing and proration unit comprising the S/2 of Section 17. These three wells and existing 320-acre unit will be subject to all existing rules, regulations, policies, and procedures applicable to prorated gas pools in Northwest, New Mexico and to the provisions of Division Order No. R-11139.

Sincerely,



Lori Wrotenbery
Director

LW/MES/kv

cc: New Mexico Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Farmington
File: Case No. 12122

2 Operator: APACHE CORPORATION	3 OGRID: 000873	4 Month/Year 03/00	6 Page 53 of 94
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		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER						
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
POOL NO. AND NAME Property NO. and Name Well No. & U-L-S-T-R API No.	C O D E 1	Volume	Pressure	C O D E 2	Barrels of oil/conden- sate produced	Barrels of water produced	MCF Gas Produced	Days Prod- uced	C O D E 3	Point of Disposition	Gas BTU or Oil API Gravity	Oil on hand at beginning of month	Volume (Bbls/mcf)	Transporter OGRID	C O D E 4	Oil on hand at end of month
39189 LINDRITH - GALLUP/DAKOTA, WES 001429 APACHE	JES															
152 E-12-24N-4W 30-039-23890	F				102	11	1994	31								
153 B-01-24N-4W 30-039-23929	F				63	5	1953	31								
154 O-03-24N-4W 30-039-23886	P				158	0	840	31								
155 H-03-24N-4W 30-039-23885	F				61	18	1081	31								
156 C-03-24N-4W 30-039-23930	F				72	2	1409	31								
157 G-04-24N-4W 30-039-23887	S				0	0	0	00								
158 D-11-24N-4W 30-039-23888	P				104	7	977	31								
										0461310		249				99
									0	2806444		28				99
									0	2806446		220				58
									0	2806448		196				289
									0	2806179		116				191
									0	2806514		217				209
									0	2806512		185				266
									0	2806510		245				135
									0	2806508		96				129
									0	2806503		0				0
									0	2806501		308				92
									0	2806499		116				80
									0	2806495		114				166
									0	2806493		165				129
									0	2806491		145				135
									0	2806487		137				198
									0	2806483		234				84
									0	2806481		29				71
									0	2806479		119				148
									0	2812439		101				82
									0	2806548		128				232
									0	2806546		57				57

MAY-23-99 TUE 14:37

P. 01

TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
ENGINEERING BUREAU
(505) 827-7131 (OFFICE)
(505) 827-1389 (FAX)

PLEASE DELIVER THIS FAX TO:

TO: Mr. Michael E. Stogner (505) 827-8185

FROM: Carole's Secretariat 28-7 Unit Will No. 280-A

SUBJECT: _____

DATE: 5-23-99
(INCLUDING COVER SHEET)

PAGES: 3

IF YOU HAVE ANY PROBLEMS RECEIVING THIS FAX, PLEASE CALL THE
OFFICE NUMBER ABOVE.

2 Operator: APACHE CORPORATION	3 OGRID: 000873	4 Month/Year 03/00	6 Page 51 of 94
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		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER							
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
POOL NO. AND NAME Property NO. and Name Well No. & U-L-S-T-R API No.	C O D E 1	Volume	Pressure	C O D E 2	Barrels of oil/conden- sate produced	Barrels of water produced	MCF Gas Produced	Days Prod- uced	C O D E 3	Point of Disposition	Gas BTU or Oil API Gravity	Oil on hand at beginning of month	Volume (Bbls/mcf)	Transporter OGRID	C O D E 4	Oil on hand at end of month	
39189 LINDRITH - GALLUP/DAKOTA, WEST 001429 APACHE																	
114 I-24-24N-4W 30-039-22017	F				30	28	1525	31									
115 M-03-24N-4W 30-039-21815	P				141	3	605	31									
116 C-12-24N-4W 30-039-21892	F				0	74	1564	31									
117 A-12-24N-4W 30-039-21891	F				0	35	1398	31									
118 K-12-24N-4W 30-039-21894	S				0	0	0	00									
119 I-12-24N-4W 30-039-21893	F				35	19	1074	31									
120 C-13-24N-4W 30-039-21896	S				0	0	0	00									
121 A-13-24N-4W 30-039-21895	F				29	0	966	31									
122 I-13-24N-4W 30-039-21897	F				43	45	1628	31									
123 A-04-24N-4W 30-039-21886	F				47	15	811	30									
124 I-04-24N-4W 30-039-21887	P				188	10	666	31									
125 C-10-24N-4W 30-039-21888	F				61	11	374	29									
127 N-11-24N-4W 30-039-21890	P				141	12	586	31									
128 H-14-24N-4W 30-039-21898	P				104	22	442	31									

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 12122
ORDER NO. R-11139**

**APPLICATION OF CONOCO INC FOR DOWNHOLE COMMINGLING,
UNORTHODOX GAS WELL LOCATIONS, AND APPROVAL OF A PILOT
PROJECT INCLUDING AN EXCEPTION FROM RULE 2(b) OF THE SPECIAL
RULES AND REGULATIONS FOR THE BASIN-DAKOTA GAS POOL, RIO
ARRIBA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on February 4, 1999, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 18th day of February, 1999, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

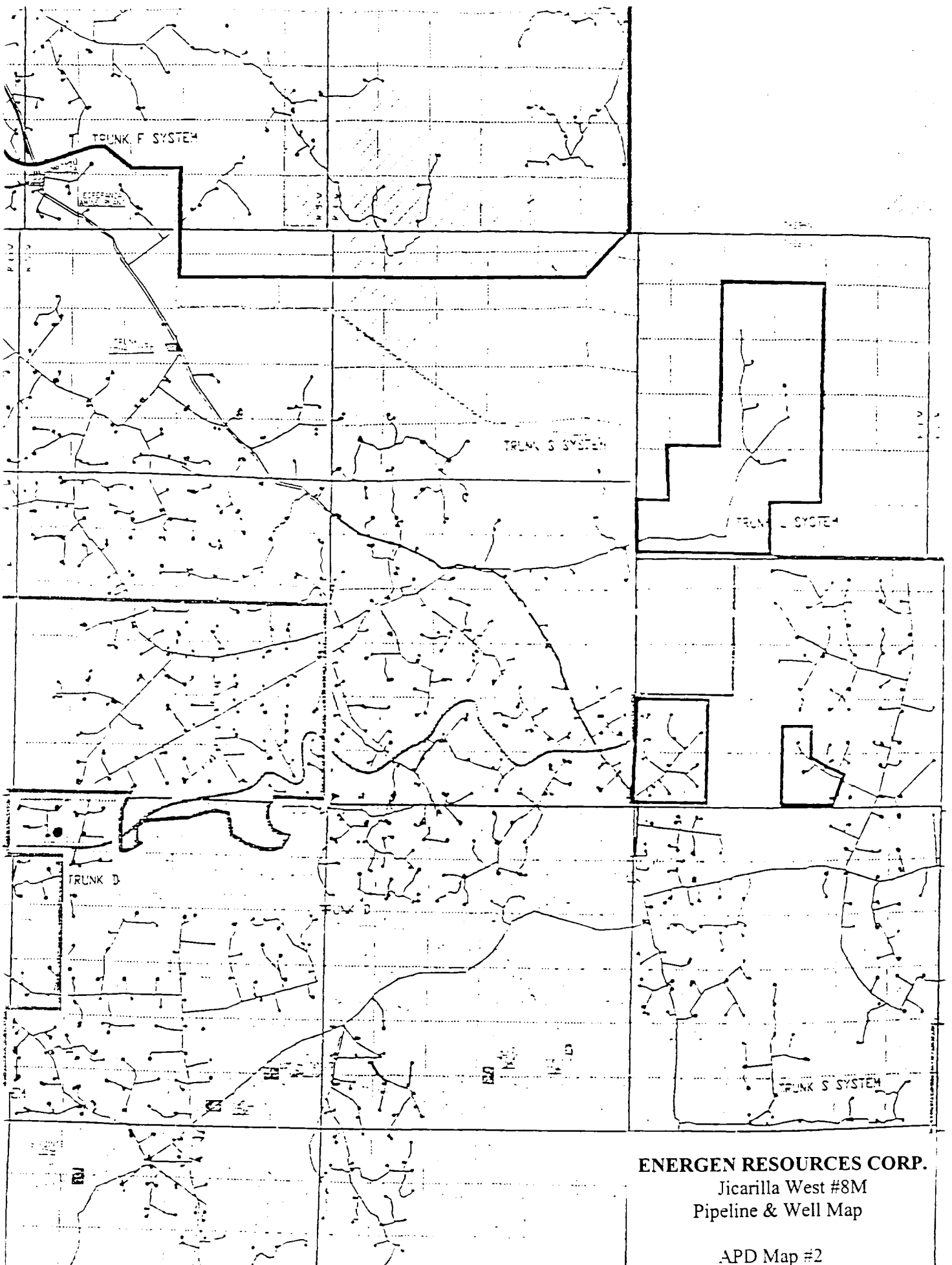
FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) The Basin-Dakota Gas Pool is currently governed by the “***SPECIAL RULES AND REGULATIONS FOR THE BASIN-DAKOTA GAS POOL***”, set forth in ***EXHIBIT “B”, “SPECIAL RULES FOR INDIVIDUAL PRORATED GAS POOLS***” of Division Order No. R-10987, dated May 7, 1998. The rules pertaining to well spacing and location requirements are set forth as follows:

WELL ACREAGE AND LOCATION REQUIREMENTS

The STANDARD GPU (Gas Proration Unit) in the Basin-Dakota Gas Pool shall be 320 acres.



WELL LOCATION:

- 1) THE INITIAL WELL drilled on a GPU shall be located not closer than 790 feet to any outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
- 2) THE INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Dakota well, and shall be located with respect to the GPU boundaries as described in the preceding paragraph.

No Dakota infill well shall be drilled nearer than 920 feet to an existing Dakota well on the same GPU.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or the federal form) for the subsequent well on a GPU shall have outlined thereon the boundaries of the GPU and shall show the location of all existing Dakota wells on the GPU plus the proposed new well.

In the event an infill well is drilled on any GPU, both wells shall be produced for so long as it is economically feasible to do so.

(3) The applicant, Conoco Inc., seeks authority to institute a pilot infill drilling program within its San Juan 28-7 Unit whereby up to four wells may be drilled on a standard 320-acre gas proration unit. The applicant further seeks:

- a) an exception to the well location requirements for the Basin-Dakota Gas Pool whereby its 80-acre infill wells may be drilled at unorthodox locations anywhere in the proration unit provided that such wells are located no closer than 10 feet from any section, quarter-section or quarter-quarter section line; and
- b) authority to downhole commingle Basin-Dakota and Blanco-Mesaverde Gas Pool production within the proposed 80-acre infill wells.

(4) At the hearing, the applicant requested that its pilot infill drilling project be initially limited to the drilling of the following described six wells:

<u>Well Name & Number</u>	<u>Well Location</u> <u>All in Township 28 North, Range 7 West</u>
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Standard Well Locations:

San Juan 28-7 Unit No. 234M	1020' FSL & 895' FEL (Unit P), Section 15
San Juan 28-7 Unit No. 135E	1270' FNL & 1850' FWL (Unit C), Section 27

Unorthodox Well Locations:

San Juan 28-7 Unit No. 280M	1320' FSL & 10' FWL, Section 16
San Juan 28-7 Unit No. 219M	1365' FSL & 690' FWL (Unit L), Section 20
San Juan 28-7 Unit No. 225E	1340' FSL & 2020' FEL (Unit J), Section 34
San Juan 28-7 Unit No. 226E	1500' FNL & 2400' FWL (Unit F), Section 36

(5) The Estate of Glen D. Hughes, an overriding royalty interest owner within the San Juan 28-7 Unit, appeared at the hearing through legal counsel.

(6) In addition to the parties of record, the hearing was attended by a representative of the United States Bureau of Land Management (BLM) and the Supervisor of the Division's Aztec District Office.

(7) Subsequent to the hearing, it was determined that the proposed location for the San Juan 28-7 Unit Well No. 280M fell on a quarter-quarter section line within Section 16. Upon being advised of the situation by the Division, the applicant requested that the well location be amended to 1310 feet from the South line and 10 feet from the West line (Unit M) of Section 16.

(8) Subsequent to the hearing, it was also determined that the proposed location for the San Juan 28-7 Unit Well No. 135E is unorthodox for the Basin-Dakota Gas Pool by virtue of being too close to an interior quarter-quarter section line.

(9) The San Juan 28-7 Unit Wells No. 280M and 135E are located within the interior of the San Juan 28-7 Unit and there are no affected offset operators and/or interest owners, therefore, no additional or amended notice of these well locations is necessary.

(10) The applicant is the current operator of the San Juan 28-7 Unit, a Federal exploratory unit comprising some 31,000 acres, more or less, and encompassing Sections 7 through 36, Township 28 North, Range 7 West, and Sections 1 through 12, and all or portions of Sections 15 through 22 and 27 through 30, Township 27 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.

(11) According to applicant's testimony, the San Juan 28-7 Unit is not fully developed in the Basin-Dakota Gas Pool at this time with 160-acre infill wells.

(12) The applicant testified that the Dakota Participating Area (PA) currently encompasses the entire San Juan 28-7 Unit area with the exception of a 160-acre tract comprising the SW/4 of Section 18 and a 320-acre tract comprising the E/2 of Section 21, both in Township 27 North, Range 7 West. These tracts were excluded from the Dakota PA apparently due to the presence of Dakota wells that were deemed non-commercial by the BLM.

(13) The evidence and testimony presented indicates that the applicant has undertaken a study to analyze the drainage efficiency of Dakota gas wells in the San Juan 28-7 Unit area. As part of this study, the applicant has examined various geologic and engineering factors that may affect ultimate gas recoveries.

(14) In its investigation, the applicant gathered initial shut-in wellhead pressure data from both the initial and infill wells within the San Juan 28-7 Unit area. Applicant then utilized this data to construct a pressure-drop map.

(15) Applicant's data indicates that there are considerable pressure-drop differences between areas in the San Juan 28-7 Unit. Pressure drops range from greater than 60 psi/year to less than 5 psi/year.

(16) The applicant presented geologic evidence and testimony indicating that:

- a) the Dakota formation generally exhibits low permeability in the area of the San Juan 28-7 Unit, typically in the range of .005 md. to .03 md.;
- b) the calculated pressure drops are a good indication of effective permeability in the Dakota reservoir;
- c) areas with low pressure drops are most likely not being efficiently and effectively drained by existing well density;
- d) the difference between areas of high and low pressure drop cannot be attributed to differences in matrix porosity and permeability, reservoir structure or reservoir thickness; and

District I
1625 N. French Drive, Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos, Aztec, NM 84710
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505
OPERATOR'S MONTHLY REPORT

Form C-115 First Page
Revised May, 1997
Instructions on Reverse Side
☐ Amended Report

Operator: Great Western Drilling Co.

OGRID: 009338

Month/Year 02/00

Address: P O BOX 1659, Midland, Texas 79702-1659

Page 1 of

	INJECTION	PRODUCTION		DISPOSITION OF OIL, GAS, AND WATER											
POOL NO. AND NAME Prop. No. and Name Well No. & ULSTR API No.	C O D E	Volume Pres. D	C O D E	barrels of oil/ cond. prod.	barrels of water prod.	MCF gas prod.	D A Y S E	C O D E	Point of Dispos.	Gas BTU or Oil API Gravity	Oil on hand @ BOM	Volume (bbls/ mcf)	Transp. OGRID	C O D E	Oil on hand @ EOM
05200 BENSON BONE SPR															
004777 Hale Fed, Mabel															
001 F-11-19S-30E															
30-015-24338	P			172	100	284	29								
002 C-11-19S-30E															
30-015-24766	P			202	75	284	29								
003 B-11-19S-30E															
30-015-25019	P			166	75	285	29	O	1028610	38.4	603	342	015694		801

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Maggie Selling

Maggie Selling, Production Acct Clerk

04/14/00

915/6825241

Printed Name & Title

Date

Phone Number

- e) the presence and density of natural fractures in the Dakota reservoir appear to account for the differences between areas of high and low pressure drop and the resulting differences in drainage efficiency.

(17) The applicant presented the results of a reservoir simulation study it has conducted within the San Juan 28-7 Unit area. The results of this study show that 80-acre infill wells in the San Juan 28-7 Unit area should ultimately recover approximately 829 MMCF of gas from the Basin-Dakota Gas Pool. Of this amount, approximately 704 MMCFG will be new gas reserves that would otherwise not be recovered by the existing wells (160-acre well density), and 125 MMCFG will be accelerated reserves.

(18) The evidence and testimony indicate that various geologic and engineering criteria were utilized by the applicant in its selection of locations for the proposed infill wells.

(19) The proposed unorthodox infill well locations should be approved.

(20) The applicant notified all interest owners in the San Juan 28-7 Unit and all offset operators of its application in this case.

(21) No offset operator and/or interest owner appeared at the hearing in opposition to the application.

(22) Preliminary geologic and engineering data indicate that the proposed pilot infill drilling program within the San Juan 28-7 Unit will allow the applicant the opportunity to gather additional geologic and engineering data to determine proper well density in this portion of the Basin-Dakota Gas Pool, will allow the recovery of additional gas reserves from the San Juan 28-7 Unit that may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(23) The applicant does not seek an increase in the gas allowable for the GPU's in which the pilot infill drilling program is to be conducted.

(24) By Order No. R-10476-B issued in Case No. 11815 on October 17, 1997, the Division, upon application of Conoco Inc., established a downhole commingling "reference case" within the San Juan 28-7 Unit whereby the Dakota formation was determined to be "marginal" with regards to economically drilling a well to produce singly from this formation.

(25) The data presented by the applicant in the immediate case and in Case No. 11815 demonstrate that the commingling of Basin-Dakota and Blanco-Mesaverde Gas Pool production within the proposed pilot infill wells is necessary in order to economically recover the remaining gas reserves within these formations.

(26) Prior to downhole commingling, the applicant should file a Form C-107-A (Application for Downhole Commingling) for the six wells within the pilot infill drilling area.

(27) The applicant should conduct a production test on the Dakota and Mesaverde formations within the six pilot infill wells for a sufficient period of time to obtain stabilized production rates.

IT IS THEREFORE ORDERED THAT:

(1) As an exception to the “***SPECIAL RULES AND REGULATIONS FOR THE BASIN-DAKOTA GAS POOL,***” the applicant, Conoco Inc., is hereby authorized to conduct an 80-acre pilot infill drilling program within its San Juan 28-7 Unit, located in portions of Townships 27 & 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, by drilling the following described Basin-Dakota Gas Pool wells within existing GPU’s:

<u>Well Name & Number</u>	<u>Well Location</u> <u>All in Township 28 North, Range 7 West</u>
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Standard Well Locations:

San Juan 28-7 Unit No. 234M	1020' FSL & 895' FEL (Unit P), Section 15
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Unorthodox Well Locations:

San Juan 28-7 Unit No. 135E	1270' FNL & 1850' FWL (Unit C), Section 27
San Juan 28-7 Unit No. 280M	1310' FSL & 10' FWL (Unit M), Section 16
San Juan 28-7 Unit No. 219M	1365' FSL & 690' FWL (Unit L), Section 20
San Juan 28-7 Unit No. 225E	1340' FSL & 2020' FEL (Unit J), Section 34
San Juan 28-7 Unit No. 226E	1500' FNL & 2400' FWL (Unit F), Section 36

(2) The pilot infill drilling program shall be initially limited to the drilling of these six wells.

(3) These GPU's shall not receive a gas allowable greater than that normally assigned a proration unit containing two wells in the Basin-Dakota Gas Pool.

(4) The applicant is further authorized to downhole commingle Basin-Dakota and Blanco-Mesaverde Gas Pool production within the six pilot infill wells, provided however, the applicant shall, prior to commingling, file a Form C-107-A for each of the wells.

(5) The applicant shall conduct a production test on the Dakota and Mesaverde formations within the six pilot infill wells for a sufficient period in order to obtain stabilized production rates.

(6) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY
Director

S E A L

INJECTION			PRODUCTION			DISPOSITION OF OIL, GAS, AND WATER									
POOL NO. AND NAME Prop. No. and Name Well No. & ULSTR API No.	C O D E	Volume Pres. E	C O D E	barrels of oil/ cond. prod.	barrels of water prod.	MCF gas prod.	D A Y S	C O D E	Point of Dispos.	Gas BTU or Oil API Gravity	Oil on hand @ BOM	Volume (bbls/ mcf)	Trnsp. OGRID	C O D E	Oil on hand @ EOM
60620 TULK UPPER WOLF 004797 Town 001 C-18-15S-35E 30-025-02694	P			282	0	664	29	O G	1031010 1031030		321	88 576		U	603
71439 BALLARD PICTURE 004769 Bond Fed #1E-U 001 J-13-26N-08W 30-045-28284	F			0	0	3393	28	G G	1030430	1175		1 3392	007057	U	
71599 BASIN DAKOTA 004769 Bond Fed #1E-L 001 J-13-26N-08W 30-045-28284	F			0	8	1148	29								