

Case. Number.

4443

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Application,  
Transcripts.

Sm all Exhibts.

ETC.



File in  
case 4443

**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

S. D. Blossom  
District Superintendent

August 17, 1983

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, NM 87501

File: SDB-155-502

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order No. R-4059, showing commingled production from the Dakota and Gallup formations, Jicarilla Apache 102 lease, well Nos. 7, 7E, 9, 11, 12, 12E, and 14E for the previous six months, January through June, 1983.

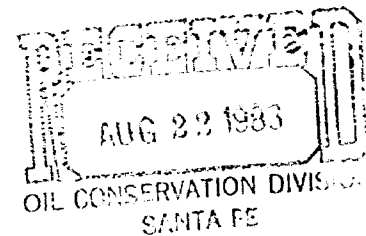
Very truly yours,

*S. D. Blossom*  
*md*

PJS/mp

Attachment

cc: New Mexico Oil Conservation Commission  
1000 Rio Bravos Road  
Aztec, NM 87410



Well No. 11

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	4	1	5	1302	1334	2636
February	22	5	27	1547	2143	3690
March	1	0	1	1819	3856	5675
April	5	1	6	1066	2244	3310
May	2	0	2	798	1669	2467
June	0	0	0	822	1722	2544

Well No. 12

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	64	11	75	1764	620	2384
February	61	10	71	2406	587	2993
March	38	6	44	2115	687	2802
April	56	9	65	952	291	1243
May	9	2	11	500	187	687
June	2	1	3	1168	414	1582

Well No. 12E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	67	27	94	4216	585	4801
February	84	34	118	5740	799	6539
March	39	16	55	4768	708	5476
April	65	26	91	3566	536	4102
May	46	19	65	3448	475	3923
June	65	26	91	5521	772	6293

Well No. 14E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	69	19	88	6050	863	6913
February	51	13	64	4574	637	5211
March	47	12	59	5636	798	6434
April	78	20	98	4357	612	4969
May	63	17	80	4712	688	5400
June	73	19	92	4833	685	5518

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 APACHE  
RIO ARriba COUNTY, NEW MEXICO  
JANURY THROUGH JUNE, 1983

Well No. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	2	0	2	2494	190	2684
February	64	16	80	3721	261	3982
March	61	15	76	1509	140	1649
April	6	1	7	859	93	952
May	19	5	24	2469	206	2675
June	3	1	4	3005	246	3251

Well No. 7E

	<u>Condensate</u>					
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	160	46	206	11470	2325	13795
February	180	51	231	13408	2720	16128
March	339	95	434	12729	2615	15344
April	0	0	0	5032	1039	6071
May	205	58	263	10408	2116	12524
June	184	52	236	9464	1914	11378

Well No. 9

	<u>Condensate</u>					
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls.</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	8	5	13	310	121	431
February	0	0	0	0	0	0
March	1	0	1	1519	473	1992
April	89	54	143	3641	1099	4740
May	94	57	151	3171	965	4136
June	23	14	37	2699	825	3524



**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

S. D. Blossom  
District Superintendent

May 12, 1983

New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, NM 87501

File: SDB-90-502

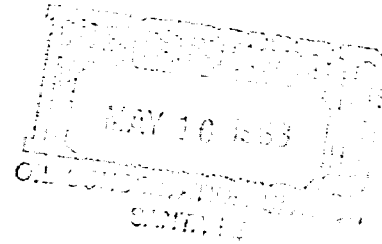
Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order No. R-4059, showing commingled production from the Dakota and Gallup formations, Jicarilla Apache 102 lease, well numbers 7, 7E, 9, 11, 12, 12E and 14E for the previous six months, July through December 1982.

Yours very truly,

PJS/tk  
Attachment

AM3



COMMINGLED PRODUCTION  
JICARILLA APACHE 102 APACHE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THROUGH DECEMBER 1982

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	0	0	0	1147	111	1258
August	0	0	0	1322	124	1446
September	0	0	0	616	74	590
October	0	0	0	2636	218	2854
November	45	11	56	2923	193	3116
December	37	9	46	2789	200	2989

WELL NO. 7E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	8	2	10	164	0	164
August	0	0	0	645	107	752
September	0	0	0	15867	3225	19092
October	157	44	201	13950	2832	16782
November	265	74	339	14792	3002	17794
December	186	53	239	11091	2246	13337

WELL NO. 9

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	23	14	37	2037	432	2469
August	34	21	55	2488	764	3252
September	8	5	13	441	161	602
October	0	0	0	0	0	0
November	0	0	0	0	0	0
December	0	0	0	0	0	0

WELL NO. 11

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	26	5	31	906	938	1844
August	13	3	16	1619	1673	3292
September	0	0	0	0	0	0
October	1	1	2	0	0	0
November	0	0	0	0	0	0
December	22	4	26	1331	2227	3558

WELL NO. 12

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	15	2	17	590	221	811
August	30	5	35	1015	365	1380
September	25	4	29	661	246	907
October	22	4	26	890	269	1159
November	54	9	63	1634	359	1993
December	91	15	106	2712	869	3581

WELL NO. 12E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	127	50	177	8697	1294	9991
August	44	17	61	2162	291	2453
September	36	14	50	2045	275	2320
October	55	22	77	3840	531	4371
November	81	33	114	7234	1016	8250
December	86	34	120	6556	918	7474

WELL NO. 14E

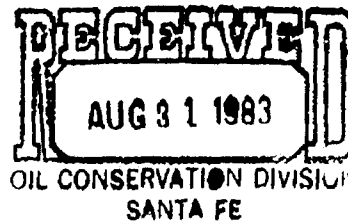
	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
July	12	3	15	2730	397	3127
August	21	5	26	3840	559	4399
September	0	0	0	1830	267	2097
October	2	1	3	4132	601	4733
November	161	42	203	6961	1012	7973
December	70	18	88	5557	789	6346



TONEY ANAYA  
GOVERNOR

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-6178



August 30, 1983

Amoco Production Company  
501 Airport Drive  
Farmington, NM 87401

Re: Order R-4059

Gentlemen:

The producing characteristics of the wells covered by the referenced order are now well established. Therefore, the reporting requirement of Paragraph 8 of said order is hereby waived until further notice.

If you have any questions, please contact this office.

Yours truly,

Frank T. Chavez  
District Supervisor

FTC/ca

✓cc: Santa Fe case file #4443





**Amoco Production Company (USA)**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

R. W. Schroeder  
District Superintendent

December 18, 1981

Mr. Joe D. Ramey  
Secretary-Director  
New Mexico Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87501

File: WLP-372-986.510

Commingling Allocation for Jicarilla Apache 102 Nos. 12E and 14E  
Rio Arriba County, New Mexico

On September 15, 1981, Amoco Production Company received approval to commingle production in Jicarilla Apache 102 Nos. 7E, 12E, and 14E (Administrative Order DHC-347).

Amoco commingled production from the Basin Dakota and B. S. Mesa Gallup pools in Jicarilla Apache 102 No. 12E and 14E on October 31, 1981. In accordance to Order R-4059 (Case No. 4443, November 10, 1970) the subject wells were flow tested before and after commingling to determine the allocation of production from each horizon. The results of these tests are recorded on the attached Form C-116's.

From these figures and the allocation formula in Order R-4059, a value for Gallup (f) was calculated for the oil and gas production from each well. These values, shown below, will be used for future allocation of production from the subject wells.

<u>Well Name</u>	<u>Gallup (f) for gas</u>	<u>Gallup (f) for oil</u>
Jicarilla Apache 102 No. 12E	.125	.286
Jicarilla Apache 102 No. 14E	.127	.207

Jicarilla Apache 102 No. 7E is not yet commingled because of freezing of the production unit during testing.

It is anticipated that this problem will be solved and production commingled by December 31, 1981. When the well is commingled, the flow test results and allocation factors will be forwarded to your office.

A copy of this letter and the attached Form 116's have been sent to the Aztec office of the NMOCD.

If you have any questions about the flow tests or production allocations,

DK 100-11700

Joe D. Ramey  
File: WLP-372-986.510  
Page 2  
December 18, 1981

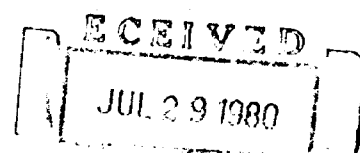
please call Randy Rickford at (505) 325-8841.

Very truly yours,

A handwritten signature in cursive script, appearing to read "R.W. Schroeder". The signature is written in dark ink and is positioned above the typed name "RLR/mp".

RLR/mp

cc: NMOCC  
1000 Rio Brazos Road  
Aztec, NM 87410



OIL CONSERVATION COMMISSION  
SANTA FE  
Apache Production Company  
Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

R. W. Schroeder  
District Superintendent

July 23, 1980

Oil Conservation Commission  
State of New Mexico  
P.O. Box 2088  
Santa Fe, NM 87501

File: RWS-526-502

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11, and 12, for the previous six months, January through June, 1980.

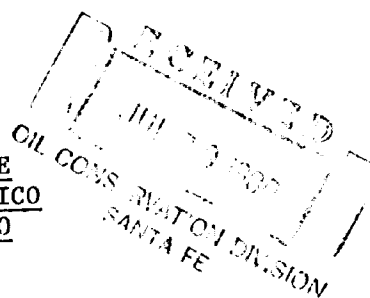
Yours very truly,

*R. W. Schroeder*  
MDD/rn

Attachment

*File  
Case 4443*

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THROUGH JUNE, 1980



WELL NO. 7

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	40	10	50	2892	236	3128
February	51	13	64	2382	200	2582
March	57	14	71	3729	296	4025
April	52	13	65	3400	272	3672
May	72	18	90	3479	278	3757
June	81	20	101	3232	320	3552

WELL NO. 9

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	66	39	105	4239	1279	5518
February	60	37	97	3200	973	4173
March	61	36	97	4008	1212	5220
April	55	33	88	4117	1243	5360
May	86	17	103	4566	1889	6455
June	51	31	82	3289	999	4288

WELL NO. 11

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	44	9	53	1613	3414	5027
February	30	6	36	1163	2450	3613
March	41	8	49	1581	3346	4927
April	21	4	25	1365	2882	4247
May	64	13	77	1337	2821	4158
June	64	13	77	1311	2768	4079

WELL NO. 12

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	49	9	58	1897	664	2561
February	51	9	60	1751	615	2366
March	49	8	57	2512	873	3385
April	45	7	52	1996	698	2694
May	36	6	42	2094	731	2825
June	37	6	43	2097	733	2830



R. W. Schroeder  
District Superintendent

July 19, 1982

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, NM 87501

File: RWS-598-502

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order No. R-4059, showing commingled production from the Dakota and Gallup formations, Jicarilla Apache 102 lease, well numbers 7, 7E, 9, 11, 12, 12E and 14E for the previous six months, January through June 1982.

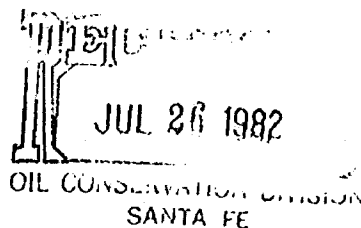
Yours very truly,

*R. W. Schroeder*  
RPM/de

Attachment

**Amoco Production Company (USA)**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841



COMMINGLED PRODUCTION  
JICARILLA APACHE 102 APACHE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THROUGH JUNE 1982

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Pbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	3	1	4	2172	172	2344
February	10	2	12	716	46	762
March	0	0	0	401	39	440
April	0	0	0	1614	89	1703
May	0	0	0	877	36	913
June	1	0	1	1201	115	1316

WELL NO. 7E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	0	0	0	870	0	870
February	22	23	45	1601	0	1601
March	1	1	2	0	0	0
April	390	389	779	15793	3048	18841
May	266	75	341	3211	470	3681
June	216	61	277	8036	1621	9657

WELL NO. 9

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	2	1	3	321	45	366
February	90	53	143	5342	1532	6874
March	4	3	7	2058	274	2332
April	60	36	96	4197	918	5115
May	34	56	90	4442	989	5431
June	35	21	56	3605	743	4346

WELL NO. 11

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	58	11	69	2252	3031	5283
February	31	6	37	1650	2702	4352
March	27	5	32	1067	1736	2803
April	21	4	25	1266	976	2242
May	9	44	53	1819	2158	3977
June	9	2	11	1612	1716	3328

WELL NO. 12

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	0	0	0	851	32	883
February	15	2	17	1339	224	1563
March	0	0	0	1142	131	1273
April	37	6	43	1066	113	1179
May	0	0	0	0	0	0
June	15	3	18	1164	147	1311

WELL NO. 12E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	72	29	101	122	0	122
February	44	18	62	626	3530	4156
March	4	2	6	332	0	332
April	0	0	0	0	0	0
May	57	23	80	3863	534	4397
June	46	19	65	4144	575	4719

WELL NO. 14E

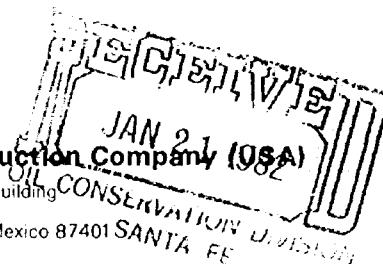
	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total Bbls</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total MCF</u>
January	100	26	126	0	0	0
February	87	23	110	6331	921	7252
March	16	4	20	1566	227	1793
April	119	31	150	5260	766	6026
May	59	15	74	5173	752	5925
June	33	8	41	3912	570	4482



R. W. Schroeder  
District Superintendent  
January 20, 1982

Amoco Production Company (USA)

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841



New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, NM 87501

File: RWS-70-502

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

File?  
Cot 4443

The attached semi-annual report is submitted in accordance with Section 8, Commission Order No. R-4059, showing commingled production from the Dakota and Gallup formations, Jicarilla Apache 102 lease, well numbers 7, 7E, 9, 11, 12, 12E and 14E for the previous six months, July through December 1981.

Yours very truly,

*R. W. Schroeder*

RLC/tk

Attachment

To: <b>OIL CONSERVATION COMMISSION</b>	Mail Code or Rm. No. _____
To: <b>BOX 2088</b>	Bldg. _____ Mail Code or Rm. No. _____
To: <b>SANTA FE, NEW MEXICO 87501</b>	Bldg. _____ Mail Code or Rm. No. _____
Location: _____	
<b>Route Ticket</b>	Remarks: _____
<input type="checkbox"/> Please Handle	_____
<input type="checkbox"/> Please Approve	_____
<input type="checkbox"/> Please Note and return	_____
<input type="checkbox"/> For Your Information	_____
<input type="checkbox"/> Please See Me	_____
<input type="checkbox"/> Please Advise	_____
<input type="checkbox"/> Your File	_____
Form 9 8-73	From: _____ Date: _____



COMINGLED PRODUCTION  
JICARILLA APACHE 102 APACHE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THROUGH DECEMBER 1981

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	18	123	141	973	41	1014
August	2	0	2	33	32	65
September	0	0	0	33	32	65
October	0	0	0	2429	583	3012
November	44	11	55	3898	252	4150
December	71	18	89	4807	314	5121

WELL NO. 7E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	628	0	628	0	0	0
August	191	0	191	4466	0	4466
September	0	0	0	122	0	122
October	519	0	519	7165	61	7226
November	0	0	0	9367	0	9367
December	298	0	298	9195	0	9195

WELL NO. 9

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	0	0	0	4071	1150	5221
August	37	22	59	94	58	152
September	0	0	0	43	43	86
October	51	30	81	2062	734	2796
November	67	40	107	3097	866	3963
December	3	2	5	316	43	359

WELL NO. 11

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	66	13	79	1589	2488	4077
August	0	0	0	304	609	913
September	0	0	0	33	32	65
October	3	0	3	685	1309	1994
November	46	9	55	1842	3055	4897
December	56	11	67	1653	2621	4274

WELL NO. 12

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	50	8	58	2115	600	2715
August	5	1	6	415	161	576
September	0	0	0	33	32	65
October	10	2	12	1829	776	2605
November	0	0	0	2896	869	3765
December	0	0	0	1555	271	1826

WELL NO. 12E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	0	0	0	0	0	0
August	134	0	134	3767	0	3767
September	155	0	155	7880	0	7880
October	173	0	173	7906	0	7906
November	184	0	184	9574	0	9574
December	121	48	169	9851	0	9851

WELL NO. 14E

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	0	0	0	0	0	0
August	144	0	144	5121	0	5121
September	232	0	232	8963	0	8963
October	185	0	185	9163	0	9163
November	157	0	157	5838	0	5838
December	68	18	86	10199	0	10199



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SANTA FE

Amoco Production Company  
Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

R. W. Schroeder  
District Superintendent

July 27, 1981

New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, NM 87501

File: RWS-587-502

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from the Dakota and Gallup formations, Jicarilla Apache 102 Lease, well numbers 7, 9, 11, and 12, for the previous six months, January through June, 1981.

Yours very truly,

*R. W. Schroeder*  
DDM/jd

Attachment

To: _____	Bldg. _____	Mail Code or Rm. No. _____
To: <b>OIL CONSERVATION COMMISSION</b>	Bldg. _____	Mail Code or Rm. No. _____
<b>BOX 2088</b>		
To: <b>SANTA FE, NEW MEXICO 87501</b>	Bldg. _____	Mail Code or Rm. No. _____
Location: _____		
Route Ticket	Please Handle	Remarks: _____
	Please Approve	_____
	Please Note and return	_____
	For Your Information	_____
	Please See Me	_____
	Please Advise	_____
Your File	From: _____	Date: _____

Form 9 8-73

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THROUGH JUNE, 1981

WELL NO. 7

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>
January	117	29	146	867	33	900
February	0	0	0	2903	189	3092
March	0	0	0	2960	211	3171
April	2	1	3	1685	150	1835
May	2	1	3	1892	164	2056
June	80	20	100	1121	81	1202

WELL NO. 9

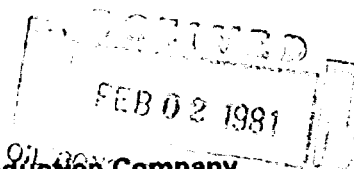
	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>
January	44	26	70	3073	695	3768
February	32	19	51	3503	865	4368
March	7	4	11	423	155	578
April	36	22	58	3898	1178	5076
May	122	73	195	3519	1068	4587
June	0	0	0	1999	541	2540

WELL NO. 11

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>
January	56	11	67	1690	2703	4393
February	50	10	60	1925	3362	5287
March	28	6	34	1540	2380	3920
April	50	10	60	1327	2801	4128
May	37	8	45	1163	2452	3615
June	29	5	34	1027	1311	2338

WELL NO. 12

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>	<u>DAKOTA</u>	<u>GALLUP</u>	<u>TOTAL</u>
January	43	7	50	1712	603	2315
February	66	11	77	2586	670	3256
March	24	4	28	1825	121	1946
April	37	6	43	1994	698	2692
May	26	4	30	1501	530	2031
June	38	6	44	1202	295	1497



Amoco Production Company  
Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841  
SANTA FE DIVISION

R. W. Schroeder  
District Superintendent

January 27, 1981

Case 4473

New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, NM 87501

File: RWS-57-502

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from the Dakota and Gallup formations, Jicarilla Apache 102 Lease, well numbers 7, 9, 11, and 12, for the previous six months, July through December, 1980.

Yours very truly,

CLH:jd

Attachment

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THROUGH DECEMBER, 1980

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WELL NO. 7

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	59	14	73	2557	165	2722
August	58	15	73	4005	257	4262
September	42	11	53	2901	208	3109
October	4	1	5	591	72	663
November	71	18	89	3676	269	3945
December	66	17	83	4288	278	4566

WELL NO. 9

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	39	24	63	3368	7790	4158
August	44	26	70	4552	1130	5682
September	55	33	88	4580	1147	5727
October	47	29	76	4516	1119	5635
November	38	23	61	3175	733	3908
December	31	24	55	3056	690	3746

WELL NO. 11

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	48	10	58	1880	1726	3606
August	7	1	8	1794	2926	4720
September	57	11	68	1496	2598	4094
October	6	1	7	231	457	688
November	6	1	7	1889	3325	5214
December	50	10	60	2099	3578	5677

WELL NO. 12

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	36	6	42	1803	632	2435
August	49	7	56	1976	414	2390
September	56	9	65	3423	913	4336
October	47	8	55	3146	811	3957
November	39	6	45	3113	835	3948
December	26	4	30	2196	488	2684

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

October 28, 1970

EXAMINER HEARING

IN THE MATTER OF:

Application of Pan American Petroleum  
Corporation for down-hole commingling,  
Rio Arriba County, New Mexico.

Case No. 4443

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

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MR. UTZ: Case 4443.

MR. HATCH: This is the application of Pan American Petroleum Corporation for down-hole commingling, Rio Arriba County, New Mexico.

MR. RYAN: I am Gordon D. Ryan, Denver, Colorado, appearing on behalf of Pan American Petroleum Corporation, soon to be Amoco Production Company. The file should also reflect that we are appearing on behalf of Pan American with Mr. Charles Malone of Roswell, New Mexico.

CHARLES BOYCE;

a witness, having been first duly sworn according to law, upon his oath, testified as follows:

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification. )

DIRECT EXAMINATION

BY MR. RYAN:

Q I have one witness. I ask that he state his name, by whom he is employed and in what capacity.

A My name is Charles Boyce. I am employed by Pan American Petroleum Corporation as a Senior Petroleum Engineer in the Denver Division office.

Q You have previously testified before the New Mexico Oil Conservation Commission and your qualifications have been



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admitted?

A Yes.

MR. RYAN: Any further qualification?

MR. UTZ: He is qualified.

Q Would you briefly state what Pan American seeks by this application?

A We request that an order be entered permitting Pan American to down-hole commingle gas and condensate produced from the Basin-Dakota and BS Mesa-Gallup Pools in the Jicarilla Apache 102 Wells Nos. 7, 9, 11, and 12; said order to provide for obtaining future approval by administrative action rather than by hearing of similar commingling other wells on this lease now producing from these two pools.

Q Would you please refer to what the reporter has marked as Exhibit No. 1 and identify and explain that exhibit?

A Yes, sir. Exhibit No. 1 is a plat of the general area. Our Jicarilla 102 Lease comprises 2,567 plus acres of Section 34, 9 and 10 of Township 26 North, Range 4 West.

The large arrows indicate the wells for which we request commingling; Well No. 7, 9, 11 and 12. The smaller arrows on both our leases and surrounding leases indicate other Gallup producers in the general area. Pan

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American owns one hundred percent of the working interest on these four sections. The royalty interest is common, held by the Jicarilla Apache tribe. There are no overriding royalties, no working interests and royalty is common to all four sections.

Q Would you please refer to Exhibit No. 2 and explain that exhibit?

A Exhibit 2 is a sketch of the wellbore and equipment therein in Well No. 7 in Section 3. The well is cased with four and a half inch casing set through the Dakota. Presently the Dakota and Gallup are perforated. A single string is set and a packer of 7,920 feet between the Gallup and Dakota perforations.

This well was completed in the Gallup in April of 1970. The initial Gallup shut-in pressure was 1,356 PSI.

The well was indicated to be very marginal. We had difficulty in maintaining any continuous production through the annulus. The well would not continue to hold itself. A major potential of 183 MCF per day was obtained and calculated potential of 183 MCF read.

The well has never produced due to its marginal nature. We do not feel the well is capable of producing up the annulus due to its marginal nature and inability

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to unload fluids. I believe that covers the main points on Exhibit No. 2

Q Now would you go to Exhibit No. 3 and explain that exhibit.

A Yes. Exhibit 3 is a similar sketch of Well No. 9, an original Dakota completion which was open in the Gallup during July of 1968, the well potential at 533 MCF per day; initial shut-in pressure, 1,304 PSI. Dual completion of this well through strings of four and a half inch tubing for the Dakota and one inch for the Gallup was authorized under Order MC 1798 in December, 1967. The well has been on production for approximately two years. Current production is 93 MCF per day.

MR. UTZ: This is the Gallup you are talking about?

THE WITNESS: Yes. The Dakota is currently 197 MCF per day.

Since completion as a dual producer we have had trouble maintaining the Gallup on continuous production. The Gallup is currently intermitted twice a day for periods of thirty minutes. It is estimated that we are blowing approximately 20 MCF per day to the atmosphere in order to maintain the well in production.

With the one inch tubing, that certainly is not

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ideal means to produce a gas well, particularly one that does produce condensate.

With low production we are unable to produce continually through the annulus and the one inch tubing does offer severe restrictions. For that reason we are wasting gas in this on the Gallup side by intermitting the atmosphere.

I believe that covers the main points on Exhibit 3.

Q Would you go on to Exhibit 4 now, Well No. 11.

A Yes. Exhibit 4 is a similar diagram of Well No. 11. This, as was No. 7, is a single string dual completion. The Dakota is open to a string of two and three-eighths inch tubing. The Gallup above the packer -- pardon me -- is open to the annulus. The Gallup was opened in March of 1970. The initial potential was 595 MCF per day; flowing pressure of 40 PSIG on the annulus; shut-in pressure, 1,230 pounds. This potential was very similar to that obtained in Well No. 9.

Knowing that we had a marginal producer, we have not gone to the expense of installing production facilities and during initial completion we experienced difficulties in maintaining production through the annulus.

You will note that on each of these completions we

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have a sliding sleeve in the tubing string below the Gallup. It was used to blow the Gallup with Dakota gas in order to try to bring the Gallup in. However, this could not be continued, of course, and production out the annulus is erratic in this well. It has never been actually produced satisfactorily.

The Dakota is on production through the two and three-eighths tubing. It is producing 169 MCF per day.

I believe that covers No. 11.

Q Would you go on to Exhibit No. 5?

A Exhibit 5 is a sketch of Well No. 12. This is a dual completion with two strings. The Dakota currently is producing through the inch and half tubing set on a packer. The Gallup is equipped with a string of one inch tubing. However, due to its marginal nature, it has never produced a line.

The Gallup was opened in May of 1969. Dual completion and production was authorized under Order MC 1858 dated June 2nd, 1969.

The initial potential tests, 229 MCF per day, I think is indication of the very marginal nature of the well and the well has never actually produced a line.

Again, with four and a half inch casing, we were

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forced to go to inch and a half tubing through the Dakota and one through the Gallup and with a marginal well of this nature it has been possible to continue production for awhile.

I believe that covers No. 12.

MR. UTZ: How about the Dakota?

THE WITNESS: The Dakota is on production. It averaged 150 MCF per day during September of 1970.

I might add that during the current year packer leakage tests have been run on these wells and they satisfactorily passed the tests, so there is no communication between the zones currently.

Q In your opinion will the dual completion of 7, 11 and 12 be economical?

A It would not, for one reason -- due to the very marginal nature, the cost of installing production facilities cannot be, in my opinion, justified. We estimate the cost of production unit tank valves, fittings and installation labor would run approximately \$9,350.00. With the potential tests we have it doesn't appear that any of the wells, if they could be maintained on production continually, would average more than a 100 MCF per day at best. With this type of production, payout of the production facility

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would be in excess of two and a half years and we do not plan on installing those facilities since it is not profitable.

Q What about Well No. 9, is it economic to continue that with production?

A Well No. 9 is producing, segregated. We have production facilities installed for the Gallup. However, as I mentioned previously, it is impossible to maintain the well on the line continuously without intermitting to the atmosphere for varying periods. This, of course, does waste gas and in my opinion it would be beneficial to commingle production in this well and allow the two strings to produce together and eliminate this continuing intermitting.

Q In your opinion would commingling in any of these wells cause any reservoir damage or result in any waste?

A No. It would not.

Q Do you claim that --

A I might refer to Exhibit No. 6. This is a log of actually Well No. 8. It is not one of the wells currently considered. Referring to the map, Well No. 8 is located in the Southwest Quarter of Section 3, centrally located with respect to the four wells in question. The

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reason I picked this log, it does show typical sections for the Gallup and the Dakota representative of the other four wells. The original logs on all of these wells were gamma ray neutron. Both the Gallup and Dakota sands show typical log response as clean hard sandstone; low gamma ray and high neutron readings. The Gallup sand in Well No. 8 was cored during completion. That is the only well on the lease that we do have a core from the Gallup. Although recovery was poor, one sample in the interval from 7,372 to 75, which does cover one of the present perforated intervals, was analyzed. It was described as sandstone. In my opinion, from the logs we have, from the performance of the wells and from the core analysis, the two are comparable sandstone formations and to that extent commingling should not cause any problems.

Q Would you please refer to Exhibit No. 7 and explain that exhibit.

A Exhibit 7 shows the latest production and pressure data for the two zones and the four wells in question.

Of importance I'd like to refer first to column number one which shows the latest available shut-in pressures for the Gallup zone in each well.

We notice the Well Nos. 7, 11 and 12 are in the range



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of twelve to thirteen hundred pounds. These are virgin pressures. The wells have never been produced other than some minor testing.

Well No. 9, the latest pressure was measured in June, 1970, during a packer leakage test -- was eight hundred ninety-five pounds -- indicates some depletion over the last two years.

Referring to the first column under the Dakota data, that would be the fifth data column from the left, the pressures in the Dakota range from seven hundred ninety-nine pounds in No. 7 to a high of nine hundred forty-five pounds in No. 11. I believe these figures indicate that the pressures in the two zones are reasonably close; the closest two, of course, in No. 9 -- a variation of only eighty-three pounds between the Dakota and Gallup; the widest separation in current shut-in pressures at No. 7, a difference of five hundred fifty-seven pounds. The differential in each case is from the Gallup to the Dakota, the Gallup pressure being higher in each case, so during commingling during any period that there might be any cross flow -- this occurring only during shut-in periods -- the cross flow problem from the Gallup to the Dakota with the Gallup being an extremely marginal zone --

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any cross flow would be very minor. In this respect, the Dakota in these four wells is marginal and classified as such and has been for at least three years. The past history of the Dakota wells has been one of continuous production. Certainly every indication is that in the future, with marginal wells such as this, both the Gallup and Dakota, there will be no reason for any periods of shut-in.

I believe two weeks ago, before the Commission, the purchaser of the gas indicated it is their policy to produce marginal wells continuously so even though there are some differences in pressures between the zones, there should be very limited periods of shut-in which would lead to any possible cross flow.

Q Anything else in Exhibit 7?

A No. I believe the remainder of the data is self explanatory. The main point I wanted to make was the recurrent pressure in the two zones.

Possibly one further item -- column two does indicate the relative potentials of the Gallup in the four wells. It is interesting to note the potential in Well No. 11 was 596 compared to an original open flow of 615 MCF per day for Well No. 9 which produces 93 MCF per day. The

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potentials on No. 7 and 12 are somewhat lower. I would estimate from this that probably No. 11 will produce in a rate comparable to No. 9. No. 7 and 12 will be somewhat less, so the Gallup in all four wells is marginal but indications are it is capable of production in all four wells.

I believe that covers No. 7.

Q In your opinion will the granting of this application violate correlative rights?

A No. It will not.

Q In your opinion, will it prevent waste?

A It will. Yes.

Q Would you explain?

A I believe for two reasons. In the case of Well No. 9, we are intermitting the well now to maintain it on production. As these pressures and production decline, I am sure these periods of intermittence will decrease and further waste will result.

In the case of 7, 11 and 12, as I have stated, it is not economical to attempt to produce the wells and install production facilities and, in fact, I believe it is impossible to produce them with the present down-hole equipment, therefore, waste will occur if we are not

allowed to commingle these wells.

Q In your opinion, if this application is granted then, will the total recovery be greater from each of these wells?

A It will. Yes.

Q How do you propose allocating the proportionate share of production to each of these sources of supply?

A Since the two zones are segregated now, the Dakota is and has been on continuous production, I would propose that following a one week period of stabilized Dakota production, that a twenty-four hour test be obtained of gas and condensate; that is that the two zones be commingled and in each case this could be accomplished by opening the sliding sleeve down the well, then allowing the commingled zones to produce for at least one week in a stabilized rate and obtain a second twenty-four hour test. The future Gallup production would be determined by subtracting test number 2 with the combined production-- or, pardon me -- subtracting test number 1, the Dakota production, from test number 2, the combined production, dividing this by the combined production of this would give a decimal ratio which would be Gallup production. Further allocation would be determined by multiplying

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this ratio times the monthly combined production. The Dakota production would then be the total produced less the Gallup allocation.

This same formula would apply for both gas and condensate and I think would fairly represent the ratio of production in the wells.

Q Now, we also requested in our application an area for administrative approval. What area are you proposing for that?

A I would propose that it include the four section lease of Pan American. I couldn't go beyond that because I am not certain of the ownership and I think that is an important factor in commingling. We do have two other wells on the lease now producing as Gallup Dakota duals; Well No. 10 in the Northwest, Northwest of Section 4 and Well No. 3 in the Northeast, Southwest Quarter or -- pardon me -- Well No. 8 in the Northeast, Southwest Quarter of Section 3. These are both much better Gallup producers than the four in question, however, as production declines I am certain that, again, with the four and a half inch casing completion and one inch Gallup tubing, we will encounter the same problems we have in the four marginal wells and at that time commingling would be advisable.

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Q Is the ownership, both working interest and royalty ownership, in all four of these sections the same?

A Yes.

Q And in your opinion the characteristics of the other wells for future commingling are sufficient similar to this application?

A Yes. They are.

Q Do you have anything further?

A Well, I might point out one thing that I don't believe we touched on. The gas produced from the Gallup and Dakota in this area is essentially identical from analysis during the past year on both the Dakota and Gallup show essential no variations. There is no hydrogen sulphide in the stream. The methane content is 79.8 percent in the Gallup; 78.7 percent in the Dakota. Gravities are again almost identical. The Gallup in this sample was .711; the Dakota, .72. GPM's and BTU's are identical. Commingling the streams should therefore offer no problem whatsoever.

The wells do produce some condensate; the Gallup averaging approximately 7 to 9 barrels per million; the Dakota, higher at about 25 to 29 barrels per million. Based on the summary of three months tickets, corrected

gravity is very similar.

For the condensate, the Dakota ranges from 60.5 to 66.2; the Gallup from 66.0 to 69.8. The condensate, therefore, is nearly identical and, again, should cause no problem whatsoever either in the wellbore or if there is ever any interflow between formations, any problem there.

MR. STEVENS: That is all the direct testimony I have. I'd like to offer into evidence Exhibits 1 through 7.

MR. UTZ: Without objection, Exhibits 1 through 7 will be entered into the record of this case.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Boyce, I missed your core data on the one well you had core data on. Would you give me that again?

A Yes. This was on Well No. 8. The sample that was obtained was from the interval 7,372 to 75. Now, one foot out of that interval was analyzed. As I mentioned, it was described as sandstone. 6.5 percent porosity; permeability, .71 millidarcies with horizontal fractures.

Q Did you core the Dakota?

A No. We did not.

Q Do you have any idea what the porosity and particularly

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the permeability is in the Dakota in this area?

A I would imagine that the two are very similar--since .7 millidarcies is quite typical of the Dakota sand which is productive in this area. The four Dakota wells discussed here, the present production averages between 100 and 200 MCF per day.

Q Do you propose to pull packer?

A No. We don't. We would leave the equipment in hole and operate the sliding sleeve. These are permanent packers, so we could unsting, but certainly it would be more economical to open the sleeve and commingle in that manner.

Q The sleeves are are actually moved above the Gallup perforations, aren't they, in one instance here?

A Let me check. I don't believe they were.

Q It apparently opens in the other three.

A I believe the sleeve in every case is below the perforations.

Q Let's see --

A I notice in the one well it doesn't show the blast joint as being opposite the Gallup perforation. I am sure that is an error in the preparation of the diagram.

Q You wouldn't have liquids then over your perforation?



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A No.

Q Would you run that test by again that you proposed?

A I would test the Dakota which is currently on production for one week to assure stabilized production; obtain a twenty-four hour test at the end of that time. Next, open the sleeve and commingle the two zones; produce for a week at a stabilized rate, then obtain a twenty-four hour test of the combined production. Then the formula for determining the Gallup decimal percentage would be test number 2 minus test number 1 divided by test number 2. This would give a decimal percentage for Gallup allocation and future allocation would be this decimal times the total for Gallup and the difference for the Dakota and the same formula would be used for gas and condensate. I think it is necessary since the two zones do have quite a variation in condensate production.

Q How often do you propose to run this test?

A I would not propose running it any further after this initial test.

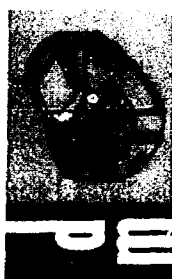
Q Don't your zones deplete?

A I am sure they possibly will. However, due to the marginal nature of the zones, I don't think there will be much variation in the rate of depletion. The Dakota has been

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on production for, I believe, about seven or eight years now and has reached a reasonably stabilized rate. The Gallup being somewhat marginal will decline rather slowly. We certainly see that in Well No. 9 there will be some variation, but I think within the range that it would occur, I wouldn't, myself, propose further tests.

Q Are all four of these Gallup or Dakota zones marginal?

A Yes. They are classified marginal, yes, and I looked back as far as three years and they have been marginal during that period.

Q You gave some reasons why you think you should be permitted to do this. One was to save the 20 MCF per day on the well. Another was economical due to the expense. Do you have any other reasons?

A I think probably the most important one in the case of Well No. 7, 11 and 12 is that we cannot produce them at the present time with the low rate of the Gallup and with the downhole equipment configuration that is necessary for four and a half inch casing. We cannot unload the wells.

Q The one you have one inch tubing in, your problem is the size of the tubing?

A That is right. As near as we can tell, with any type of



rate of liquid accumulation, the tubing restricts the flow and severe friction results. In attempting to produce out the annulus, due to the marginal nature, the wells won't unload themselves.

Q You feel that the inch and a half tubing, that it will allow your Gallup to produce?

A Well, no. By commingling we will produce both strings up the two and three-eighths inch tubing.

Q All of your Dakota string is two and three-eighths inch?

A Well, no. In the two single strings -- well, it is two and three-eighths inch. In the two dual string wells it is actually one and a half inch, yes, so we would produce the two zones up the inch and a half tubing and I believe the crosssectional area of inch and a half tubing is right at two and a half times that of one inch tubing, so we will have quite an increase in surface available and, one further thing, the Gallup, as I mentioned, is reasonably dry gas -- 7 to 9 barrels per million -- the Dakota is 25 to 29, so I think the two will actually aid each other. The Dakota being a stronger producing zone will help unload the Gallup and the Gallup will contribute some gas to assist the Dakota. I think the two together certainly will be mutually beneficially to each other.

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Q Now, you are asking, in this particular instance, for these four wells that you testified to and have exhibits on and you mentioned the four section area. Now, is it that you want administrative procedures for the four section area?

A Yes.

Q Plus approval of these four wells?

A That is correct, four other wells on the lease which actually is Well No. -- or, our Wells No. 8 and 10 which are currently producing as dual Gallup Dakota wells.

MR. UTZ: Any other questions of the witness?

MR. HATCH: Would you repeat those MC Orders for me?

THE WITNESS: Yes. I think I have got them here.

Well No. 9, dual Order MC 1798 and that was dated December 4, 1967 and Well No. 12, Order MC 1858 and that was dated June 2nd, 1969.

MR. HATCH: You don't have them on the other two wells?

THE WITNESS: No, since as soon as we completed the wells we found they would not produce and could not do a completion.

MR. UTZ: Any other questions?

The witness may be excused.

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E. R. MANNING: Mr. Examiner, I have a statement, if it is appropriate at this time.

MR. UTZ: I believe it is. I was just getting ready to call for them.

MR. MANNING: Excuse me for hurrying you. I am E. R. Manning with El Paso Natural Gas. I have a statement I would like to read at this time concerning this case.

El Paso Natural Gas Company is owner of interest in an operator of the 27-4 Unit which offsets to the north the Pan American lease which is the subject of this hearing. The necessity under existing rules to separate individual gas producing reservoirs in the San Juan Basin is, in some instances, causing waste. Such waste is attributable to the loss of recoverable gas reserves which will not be produced because it is not economic to: 1; initially multiply complete the well so that the gas is recoverable or, 2; rework a well so as to maintain the separation in a previously dually completed well.

Such waste can be avoided by the granting of the request of Pan American Petroleum Corporation in this case and El Paso Natural Gas supports the application of Pan American.

The necessity with this type of relief is not limited to the lease which is the subject of this hearing but is desirable in many instances throughout the San Juan Basin

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area. We urge the Commission to take such action as is necessary to adopt an administrative procedure throughout the San Juan Basin permitting the down-hole commingling of gas from two or more geologically separate reservoirs under circumstances where it can be shown to the Commission's satisfaction that creating or continuing multiple completion of the separate reservoirs is not economically feasible and that waste of recoverable gas reserves will result if relief is not granted.

El Paso, as a purchaser, wishes to state that it has a need for all recoverable reserves that can be made available to its pipe line from the San Juan Basin area and that the foreseeable need of its customers makes it important to receive the maximum volume of gas reserves from San Juan Basin reservoirs. Actions by the Commission to make such gas available will not only benefit El Paso, but, in El Paso's opinion, will be of benefit to the producer of the gas, to the royalty owners and to the state.

Thank you, sir.

MR. UTZ: Any other statements?

The case will be taken under advisement.

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STATE OF NEW MEXICO )  
 ) SS.  
COUNTY OF BERNALILLO )

I, PETER A. LUMIA, a Court Reporter, in and for the County of Bernalillo, State of New Mexico do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Peter A. Lumia  
Peter A. Lumia, C.S.R.

I do hereby certify that the foregoing is a complete record of the hearing held on the 10th day of June 1943, at 4443, heard by me on 10-75-703.  
[Signature]  
New Mexico Oil Conservation Commission

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I N D E X

WITNESS:

PAGE:

CHARLES BOYCE

Direct Examination by Mr. Ryan

2

Cross Examination by Mr. Utz

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E X H I B I T S

APPLICANT'S

MARKED

OFFERED AND  
ADMITTED

Exhibits 1 through 7

2

17



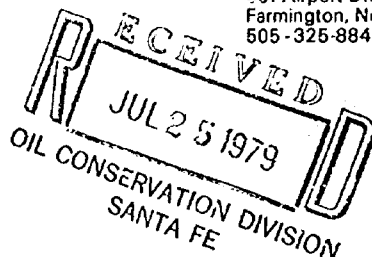


**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

R. W. Schroeder  
District Superintendent

July 23, 1979



Case 4443

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, NM 87501

File: RWS-427-502

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, January through December, 1979.

Yours very truly,

*R. W. Schroeder*  
JS

RAH/ph  
Attachment

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THROUGH JUNE, 1979

RECEIVED  
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OIL CONSERVATION DIVISION  
SANTA FE

WELL NO. 7

<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u> <u>Total</u>
Jan	70	17	87	3253	232 3485
Feb	35	9	44	2186	156 2342
Mar	52	13	65	3896	278 4174
Apr	43	3	46	2581	184 2765
May	49	12	61	2772	198 2970
Jun	64	16	80	3822	274 4096

WELL NO. 9

<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u> <u>Total</u>
Jan	54	33	87	2905	856 3761
Feb	44	26	70	3069	904 3973
Mar	10	5	15	445	131 576
Apr	73	22	95	4024	1185 5209
May	52	32	84	3645	1075 4720
Jun	56	33	89	4565	1345 5910

WELL NO. 11

<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u> <u>Total</u>
Jan	64	13	77	1485	3177 4662
Feb	55	12	67	1443	3089 4532
Mar	63	12	75	1512	3363 4935
Apr	18	40	58	1024	2191 3215
May	51	10	61	1101	2355 3456
Jun	68	14	82	1745	3735 5480

WELL NO. 12

<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u> <u>Total</u>
Jan	58	9	67	1647	559 2206
Feb	48	8	56	2067	701 2768
Mar	55	9	64	2436	826 3262
Apr	45	15	60	2335	792 3127
May	33	6	39	1084	369 1453
Jun	41	7	48	2506	851 3357

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SANTA FE



**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

L. O. Speer, Jr.  
District Superintendent

January 24, 1979

Oil Conservation Commission  
State of New Mexico  
P.O. Box 2088  
Santa Fe, NM 87501

File: LOS-51-502

Gentlemen:

Commingle of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

*Case 4443*

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12 for the previous six months, July through December, 1978.

Yours very truly,

TLS/ph  
Attachment

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THROUGH DECEMBER, 1978

WELL NO. 7

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jul	48	12	60	3107	222	3329
Aug	52	13	65	3180	227	3407
Sep	65	17	82	3147	225	3372
Oct	42	11	53	2754	197	2951
Nov	55	14	69	3985	285	4270
Dec	56	14	70	2877	206	3083

WELL NO. 9

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jul	36	21	57	1975	582	2557
Aug	40	24	64	3334	982	4316
Sep	41	24	65	3195	941	4136
Oct	43	25	68	2998	883	3881
Nov	36	22	58	2835	835	3670
Dec	53	32	85	3968	1170	4868

WELL NO. 11

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jul	71	14	85	1647	3525	5172
Aug	58	12	70	1640	3510	5150
Sep	64	13	77	1506	3223	4729
Oct	62	12	74	1409	3015	4424
Nov	72	14	86	1630	3488	5118
Dec	68	14	82	1209	2585	3794

WELL NO. 12

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jul	51	8	59	1924	653	2577
Aug	54	9	63	2528	858	3386
Sep	53	9	62	2461	835	3296
Oct	47	8	55	2332	791	3123
Nov	70	12	82	2338	793	3131
Dec	37	6	43	2537	862	3399



**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401

L. O. Speer, Jr.  
Area Superintendent

July 24, 1978

*Case 4443*

Oil Conservation Commission  
State of New Mexico  
P.O. Box 2088  
Santa Fe, NM 87501

*[Handwritten signature]*

File: LOS-430-502

Gentlemen:

Commingle of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

---

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, January through June, 1978.

Yours very truly,

*[Handwritten signature]*

TLS/ph

Attachment

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THROUGH JUNE, 1978

WELL NO. 7

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jan	42	10	52	2900	207	3107
Feb	23	44	67	3597	256	3853
Mar	55	14	69	3725	267	3992
Apr	36	9	45	3061	219	3280
May	40	10	50	1775	126	1901
Jun	45	12	57	2954	211	3165

WELL NO. 9

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jan	42	25	67	2867	845	3712
Feb	36	22	58	2682	790	3472
Mar	26	16	42	1326	391	1717
Apr	42	25	67	0	942	942
May	44	26	70	265	780	1045
Jun	39	24	63	3245	956	4201

WELL NO. 11

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jan	77	15	92	1645	3519	5164
Feb	55	11	66	1487	3181	4668
Mar	82	17	99	1800	3851	5651
Apr	54	11	65	1324	2832	4156
May	42	8	50	698	1493	2191
Jun	71	15	86	1453	3109	4562

WELL NO. 12

	<u>CONDENSATE</u>			<u>GAS</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
Jan	75	13	88	2791	947	3738
Feb	60	9	69	1873	635	2508
Mar	69	11	80	2472	839	3311
Apr	41	7	48	2062	700	2762
May	44	8	52	1514	514	2028
Jun	49	8	57	2465	836	3301



L. O. Speer, Jr.  
Area Superintendent

Amoco Production Company  
Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401

January 26, 1978

Oil Conservation Commission  
State of New Mexico  
P.O. Box 2088  
Santa Fe, NM 87501

File: LOS-64-502

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, July through December, 1977.

Yours very truly,

TLS/pl

Attachment

Case 4443

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THROUGH DECEMBER, 1977

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	43	11	54	2702	193	2895
August	69	17	86	4261	305	4566
September	48	12	60	4184	299	4483
October	45	11	56	3607	258	3865
November	41	10	51	3436	246	3682
December	42	11	53	3722	266	3988

WELL NO. 9

July	57	34	91	3016	889	3905
August	65	39	1044	2506	738	3244
September	50	30	80	3036	894	3930
October	46	27	73	3521	1037	4558
November	47	28	75	3498	1031	4529
December	38	22	60	2943	867	3810

WELL NO. 11

July	44	9	53	1607	3437	5044
August	78	16	94	1897	4059	5956
September	43	9	52	2326	4976	7302
October	49	10	59	2034	4353	6387
November	60	12	72	1818	3890	5708
December	56	11	67	1484	3176	4660

WELL NO. 12

July	58	10	68	1975	671	2646
August	58	10	68	2806	953	3759
September	51	9	60	2258	766	3024
October	74	12	86	2721	924	3645
November	53	9	62	2575	874	3449
December	36	6	42	2258	766	3024





**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401

L. O. Speer, Jr.  
Area Superintendent

January 19, 1977

*Case 4443*

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

File: LOS-54-501.1

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

---

The attached semi-annual report is submitted in accordance with section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, July through December, 1976.

Yours very truly,

TLS/kf

Attachment

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THRU DECEMBER, 1976

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>DAKOTA</u>	<u>GALLUP</u>	<u>Total</u>	<u>DAKOTA</u>	<u>GALLUP</u>	<u>Total</u>
July	69	17	86	4565	326	4891
August	58	14	72	3999	286	4285
September	71	18	89	3002	215	3217
October	83	21	103	4403	315	4718
November	58	14	72	4253	304	4557
December	52	13	65	3870	276	4146

WELL NO. 9

July	84	51	135	4727	1392	6119
August	58	35	93	3716	1095	4811
September	42	26	68	3736	1101	4837
October	57	35	92	4830	1424	6254
November	52	31	83	3491	1028	4519
December	34	21	55	4859	1432	6291

WELL NO. 11

July	72	15	87	2476	5297	7773
August	65	14	79	1923	4115	6038
September	72	15	87	1370	2929	4299
October	58	12	70	2282	4882	7164
November	67	13	80	2153	4608	6761
December	74	15	89	2073	4434	6507

WELL NO. 12

July	62	10	72	3080	1045	4125
August	57	10	67	2717	923	3640
September	48	8	56	2479	842	3321
October	54	9	63	2994	1017	4011
November	51	9	60	1994	676	2670
December	57	10	67	2580	875	3455



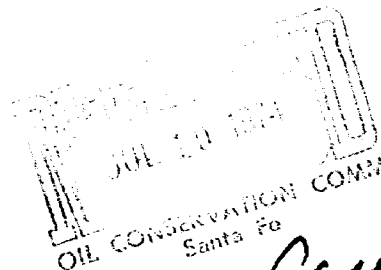
Amoco Production Company  
501 Airport Drive  
Farmington, New Mexico 87401

July 17, 1974

File: LOS-233-501.1

Subject: Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501



*Can File  
4/4/3*

Gentlemen:

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, January through June, 1974.

Yours very truly,

L. O. Speer, Jr.  
Area Superintendent

MFT:eb

Attachment

TO: _____	BLDG. _____	ROOM NO. _____
<b>OIL CONSERVATION COMMISSION</b>		
TO: _____	BLDG. _____	ROOM NO. _____
BOX 2088		
TO: SANTA FE, NEW MEXICO 87501	BLDG. _____	ROOM NO. _____
LOCATION: _____		
ROUTE TICKET	PLEASE HANDLE	Remarks: _____ _____ _____ _____ _____ _____ From: _____ DATE _____
	PLEASE APPROVE	
	PLEASE NOTE AND RETURN	
	FOR YOUR INFORMATION	
	PLEASE SEE ME	
	PLEASE ADVISE	
YOUR FILE		

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THRU JUNE 1974

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	79	20	99	3333	238	3571
February	30	7	37	658	47	705
March	90	23	113	4042	289	4331
April	83	21	104	4597	328	4925
May	74	19	93	4581	327	4908
June	68	17	85	4234	303	4537

WELL NO. 9

January	62	38	100	4251	1252	5503
February	26	16	42	3816	1125	4941
March	27	16	43	3271	964	4235
April	82	50	132	6609	1948	8557
May	76	47	123	4507	1328	5835
June	69	41	110	5516	1625	7141

WELL NO. 11

January	100	20	120	2915	6237	9152
February	87	17	104	1752	3749	5501
March	147	29	176	3300	7061	10361
April	125	25	150	3351	7170	10521
May	91	18	109	2945	6302	9247
June	156	31	187	2463	5271	7734

WELL NO. 12

January	70	12	82	3500	1188	4688
February	28	5	33	1332	452	1784
March	112	18	130	4262	1447	5709
April	86	14	100	4084	1386	5470
May	69	12	81	2642	897	3539
June	62	10	72	3017	1024	4041



Amoco Production Company  
501 Airport Drive  
Farmington, New Mexico 87401

January 17, 1974

File: LOS-27-501.1

Re: Semi-Annual Report of Commingling of Gas  
Jicarilla Apache 102 Lease  
Order No. R-4059

*File 1/17/74*  
*Per*

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

The attached is submitted in accordance with Section 8, Commission Order R-4059, which covers commingled production from Dakota and Gallup formations for the Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, July through December, 1973.

Yours very truly,

*L. O. Speer, Jr.*

L. O. Speer, Jr.  
Area Superintendent

MFT:eb

Attachment

*See*  
RECEIVED  
OIL CONSERVATION COMMISSION  
Santa Fe

TO: <b>OIL CONSERVATION COMMISSION</b>		ROOM NO.
TO: <b>BOX 2088</b>		ROOM NO.
TO: <b>SANTA FE, NEW MEXICO 87501</b>		ROOM NO.
TO: _____		ROOM NO.
LOCATION: _____		
ROUTE TICKET	PLEASE HANDLE	Remarks: _____ _____ _____ _____ _____ _____
	PLEASE APPROVE	
	PLEASE NOTE AND RETURN FOR YOUR INFORMATION	
	PLEASE SEE ME	
	PLEASE ADVISE	
	YOUR FILE	
From: _____		DATE _____

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THRU DECEMBER 1973

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	80	20	100 ✓	3990	285	4275
August	73	19	92	4155	297	4452
September	54	13	67	3496	250	3746
October	75	19	94	4965	355	5320
November	50	12	62	3463	247	3710
December	61	15	76	4420	316	4736 ✓

WELL NO. 9

July	44	26	70	4364	1286	5650
August	75	45	120 ✓	6407 ✓	1889	8296 ✓
September	56	33	89	5218	1537	6755
October	62	37	99	5230	1542	6772
November	74	45	119	4919	1450	6369
December	59	36	95	5435	1602	7037

WELL NO. 11

July	138	28	166	3002	6424	9426
August	118	23	141	2952	6315	9267
September	104	21	125	2874	6150	9024
October	140	28	168 ✓	3327 ✓	7121	10448 ✓
November	101	21	122	2380	5093	7473
December	125	25	150	3034	6491	9525

WELL NO. 12

July	94	16	110 ✓	2886	979	3865
August	81	14	95	3282	1114	4396 ✓
September	66	11	77	2996	1016	4012
October	80	13	93	2910	990	3900
November	75	12	87	2365	802	3167
December	82	14	96	2990	1016	4006



AMOCO Production Company  
501 Airport Drive  
Farmington, New Mexico 87401  
July 22, 1971

File: GLH-122-501.1

Re: Semi-Annual Report of  
Commingling of Gas  
Jicarilla Apache 102 Lease  
Order No. R-4059

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

The attached is submitted in accordance with Section 8, Commission  
Order R-4059

Commingled production from Dakota and Gallup formations, Jicarilla  
Apache 102 Lease, Well Nos. 7, 9, 11 and 12, is for the previous  
six months, January through June, 1971.

Yours very truly,

AMOCO PRODUCTION COMPANY

L. O. Speer, Jr.  
L. O. Speer, Jr.  
Area Superintendent

MFT:eb  
Attachment

Allocation Factors:

# 7	DK = .9333 of total
# 9	" .7724 " "
# 11	" .3185 " "
# 12	" .7465 " "

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THRU JUNE, 1971

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	95	24	119	4002	286	4288
February	84	21	105	5517	394	5911
March	98	24	122	5611	401	6012
April	76	19	95	3916	279	4195
May	117	29	146	5286	378	5664
June	101	25	126	5513	393	5906

WELL NO. 9

January	137	82	219	5324	1569	6893
February	124	75	199	6471	1907	8378
March	120	72	192	6921	2039	8960
April	113	69	182	5202	1532	6734
May	82	50	132	5716	1683	7399
June	103	62	165	7294	2150	9444

WELL NO. 11

January	271	55	326	4101	8774	12875
February	219	44	263	5357	11463	16820
March	311	61	372	4897	10479	15376
April	63	12	75	3537	7568	11105
May	168	34	202	3744	8010	11754
June	160	32	192	4092	8758	12850

WELL NO. 12

January	112	19	131	4293	1457	5750
February	94	16	110	3720	1262	4982
March	138	23	161	3884	1318	5202
April	104	17	121	2743	930	3673
May	86	14	100	3193	1084	4277
June	100	17	117	3692	1254	4946





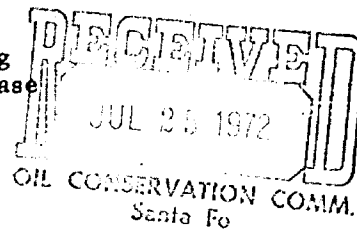
Amoco Production Company  
501 Airport Drive  
Farmington, New Mexico 87401

*File Case 4442*

July 21, 1972

File: LOS-191-501.1

Subject: Semi-Annual Report of Commingling  
of Gas - Jicarilla Apache 102 Lease  
Order No. R-4059



New Mexico Oil Conservation Commission  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

Gentlemen:

The attached is submitted in accordance with Section 8, Commission Order No. R-4059. Commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, January thru June, 1972.

Yours very truly,

*L.O. Speer, Jr. RCH*  
L. O. Speer, Jr.  
Area Superintendent

MFT:eb  
Attachment



COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THRU JUNE 1972

RECEIVED  
JUL 24 1972  
OIL CONSERVATION COMM.  
Santa Fe

WELL NO. 7

	Condensate			Gas		
	Dakota	Gallup	Total	Dakota	Gallup	Total
January	88	21	109	4336	309	4645
February	94	23	117	4761	340	5101
March	65	17	82	4689	335	5024
April	62	15	77	3441	246	3687
May	88	22	110	4635	332	4967
June	81	21	102	5053	362	5415

DK =  
9333

WELL NO. 9

January	69	41	110	5791	1707	7498
February	69	42	111	4257	1253	5510
March	76	45	121	5382	1586	6968
April	76	45	121	5491	1618	7109
May	74	44	118	5622	1657	7279
June	62	38	100	5096	1502	6598

DK =  
7724

WELL NO. 11

January	172	34	206	3706	7931	11637
February	110	22	132	2992	6404	9396
March	149	31	180	3378	7229	10607
April	106	21	127	2192	4690	6882
May	128	26	154	3156	6752	9908
June	155	31	186	3382	7238	10620

DK =  
3185

WELL NO. 12

January	103	17	120	3704	1259	4963
February	132	22	154	2472	855	3327
March	73	12	85	3266	1108	4374
April	101	17	118	3453	1173	4626
May	86	14	100	3326	1129	4455
June	67	11	78	2711	920	3631

DK =  
7465



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

07101

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMJO  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

November 10, 1970

Mr. Gordon Ryan  
Pan American Petroleum Corporation  
Security Life Building  
Denver, Colorado 80202

Re: Case No. 4443  
on Order No. R-4059  
Applicant:  
Pan American Petroleum Corp.

**Dear Sir:**

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

G. L. Carter, Jr.

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

**Copy of order also sent to:**

Hobbs OCC X

Artesia OCC\_\_\_\_\_

**Aztec OCC** **x**

**Other** \_\_\_\_\_

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 4443  
Order No. R-4059

APPLICATION OF PAN AMERICAN PETROLEUM  
CORPORATION FOR DOWN-HOLE COMMINGLING,  
RIO ARriba COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 28, 1970,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz

NOW, on this 10th day of November, 1970, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Pan American Petroleum Corporation,  
is the owner and operator of the Jicarilla Apache 102 Lease com-  
prising Sections 3, 4, 9, and 10, Township 26 North, Range 4 West,  
NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle produc-  
tion from the BS Mesa-Gallup and Basin-Dakota Gas Pools in the  
well-bores of four wells located on said lease as follows:

Jicarilla Apache Well No. 7 - Unit G - Section 3  
Jicarilla Apache Well No. 9 - Unit G - Section 4  
Jicarilla Apache Well No. 12 - Unit G - Section 9  
Jicarilla Apache Well No. 11 - Unit C - Section 10

-2-

CASE No. 4443

Order No. R-4059

(4) That the applicant further seeks a procedure whereby other wells on said Jicarilla Apache 102 Lease may be approved administratively for down-hole commingling.

(5) That the applicant proposes, as to each of said wells, to produce the commingled production through a single string of tubing set in a packer just above the Dakota perforations.

(6) That each of the above-described four wells is capable of producing only a very small amount of gas from either or both of the subject pools.

(7) That it is uneconomical to produce each of the above-described four wells as dual completions.

(8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling.

(9) That the proposed commingling may result in the recovery of additional gas from each of the subject pools as to each of said four wells, thereby preventing waste, and will not violate correlative rights.

(10) That production tests should be conducted prior to commingling, to determine the production from each zone in each well.

(11) That a procedure should be adopted whereby other wells on said Jicarilla Apache 102 Lease having the same characteristics as the above-described four wells may be approved administratively for down-hole commingling.

(12) That Administrative Orders Nos. MC-1798 and MC-1858 should be superseded.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to complete each of the following-described four wells located in Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico, in such a manner as to produce gas from the BS Mesa-Gallup and Basin-Dakota Gas Pools through a

-3-

CASE No. 4443

Order No. R-4059

single string of tubing, commingling in the well-bore the production from each of said zones until further order of the Commission.

Jicarilla Apache Well No. 7 - Unit G - Section 3  
Jicarilla Apache Well No. 9 - Unit G - Section 4  
Jicarilla Apache Well No. 12 - Unit G - Section 9  
Jicarilla Apache Well No. 11 - Unit C - Section 10

(2) That the production of each zone in each of the above-described wells shall be established and future production allocated to the Gallup and Dakota zones in each of the subject wells in accordance with the following procedure:

1. Prior to commingling, the daily rate of flow from the Dakota formation shall be established by employing the last 24 hours of a seven-day flow period of said zone. (Test #1.)
2. Subsequent to commingling, the daily rate of flow from the commingled Dakota and Gallup zones shall be established by employing the final 24 hours of a seven-day flow test of the commingled zones. (Test #2.)
3. Determine the BS Mesa-Gallup allocation of production factor as follows:  
$$(\text{Gallup}_f) = \frac{\text{Test \#2} - \text{Test \#1}}{\text{Test \#2}}$$
4. Determine the monthly allocation of production as follows:
  - a. BS Mesa-Gallup gas production = Gallup<sub>f</sub> x commingled gas production.
  - b. Basin-Dakota gas production = commingled gas production less calculated BS Mesa-Gallup gas production.

(3) That the Secretary-Director of the Commission may approve the down-hole commingling of BS Mesa-Gallup and Basin-Dakota gas production in other wells located on the Jicarilla 102 Lease comprising Sections 3, 4, 9, and 10 of said Township and Range,

provided such commingling is reasonably necessary to prevent waste and will not violate correlative rights.

(4) To obtain approval for down-hole commingling, the operator of the well shall submit the following in duplicate to the Secretary-Director of the Commission plus one copy to the appropriate District Office of the Commission:

- (a) Name and address of the operator.
- (b) Lease name, well number, well location.
- (c) Names of the pools the well is completed in and the Commission order number which authorized the dual completion.
- (d) A current (within 30 days) 24-hour productivity test on Commission Form C-116 showing the amount of oil, gas, and water produced from each zone.
- (e) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete resume of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)
- (f) Estimated bottom-hole pressure for each artificially lifted zone. A current (within 30 days) measured bottom-hole pressure for each zone capable of flowing.
- (g) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.
- (h) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams.

-5-

CASE No. 4443

Order No. R-4059

(1) A statement that all offset operators and, in the case of a well on Federal land, the United States Geological Survey, have been notified in writing of the proposed commingling.

(5) The Secretary-Director of the Commission may approve the proposed down-hole commingling in the absence of a valid objection within 20 days after the receipt of the application if, in his opinion, there is no disqualifying disparity of bottom-hole pressures or other reservoir characteristics, waste will not result thereby, and correlative rights will not be violated. The 20-day waiting period may be dispensed with upon receipt of waivers of objection from all parties mentioned in Order (4), paragraph (1).

(6) Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling, and allocation of the commingled production from the well to each of the producing zones shall be in accordance with the allocation formula set forth in the order.

(7) The Secretary-Director may rescind authority to commingle production in the well-bore and require both zones to be produced separately, if, in his opinion, waste or reservoir damage is resulting thereby.

(8) That the operator shall file with the Santa Fe Office of the Commission semi-annually a report showing the monthly Gallup production, the monthly Dakota production, and the monthly commingled production for each well during the preceding six months. Said report to be filed as stated until further order of the Commission.

(9) That the provisions of Order No. R-333-F shall continue to apply to the subject wells.

(10) That Administrative Orders Nos. MC-1798 and MC-1858 are hereby superseded.

(11) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.



-6-

CASE No. 4443

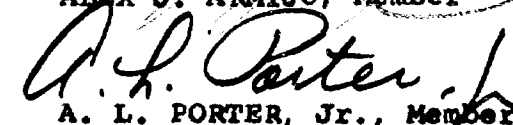
Order No. R-4059

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
ALEX J. ARMIJO, Member

  
A. L. PORTER, Jr., Member & Secretary

err/

4443

Heard 10-28-70

Rec. 10-31-70

Grant Pan Am permission to commingle the Gallup + Dakota Production in the wellbore of their Jicarilla Apache #02 lease Wells No:

7 H - 3 - 26 - 4

9 G - 4 - 26 - 4

11 C - 10 - 26 - 4

12 B - 9 - 26 - 4

All commingling shall be accomplished by opening the ~~production~~ Dakota production tubing sliding sleeve thereby causing the Gallup in the annulus to commingle with the Dakota in the tubing.

The reported production for each zone shall be ~~accepted~~ determined as follows:

(a) Flow segregated Dakota for seven days of which the last 24 hrs. shall be considered the <sup>Dakota</sup> daily rate of flow or No. 1 flow rate.

(b) Close the tubing sleeve and flow the Dakota - Gallup commingled production for seven days of which the last 24 hrs. shall be considered the commingled daily rate of flow or No. 2 flow rate.

(c) The ~~production~~ production division factors shall be determined as follows:

$$\frac{\text{No 2 flow rate} - \text{No 1 flow rate}}{\text{No 1 flow rate}}$$

Stallup put duct in division factor

~~Stallup division factor~~

$$1.00 - \text{Stallup division factor} = \text{Stallup production division factor}$$

Account an administrative procedure for the license reported 102 hours

inherently upon application we may find additional wells on the floor to be commingled in this manner.

Require a special report to be filed at 6 month intervals showing each year's production by month as well as total

commingled production. This report report should be filed with each time the communication

seems it is necessary.

Although in this order shall be considered as referring to the

of the revised Annual Statement

Stallup R-333-F

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 4118  
Order No. R-3752

APPLICATION OF DUGAN PRODUCTION  
CORPORATION FOR DOWNHOLE COMMINGLING,  
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 7, 1969,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 14th day of May, 1969, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Dugan Production Corporation, is  
the owner and operator of the Federal "I" Well No. 4, located in  
the NE/4 NW/4 of Section 1, Township 29 North, Range 14 West,  
NMPM, San Juan County, New Mexico.

(3) That the subject well is capable of producing only a  
very small amount of gas from either or both of the undesignated  
Fruitland and Pictured Cliffs gas pools in which it is completed.

(4) That the applicant proposes to produce both of the  
subject zones through a single string of 2 7/8-inch casing,  
commingling the production in said casing.

(5) That there is very little pressure differential between  
the low reservoir pressures existing in both of the subject zones.

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CASE No. 4118  
Order No. R-3752

(6) That it would be uneconomical to dually complete the subject well.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling in the well-bore.

(8) That the proposed commingling may result in the recovery of additional gas from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(9) That production tests should be conducted, prior to commingling, to determine the production from each zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Dugan Production Corporation, is hereby authorized to complete its Federal "I" Well No. 4, located in the NE/4 NW/4 of Section 1, Township 29 North, Range 14 West, NMPM, San Juan County, New Mexico, in such a manner as to produce gas from an undesignated Fruitland gas pool through perforations from 860 feet to 865 feet and to produce gas from an undesignated Pictured Cliffs formation through perforations from 1203 feet to 1208 feet, commingling the production from each of said zones in the well-bore until further order of the Commission;

PROVIDED HOWEVER, that the production of each zone shall be established and future production allocated to the Fruitland and Pictured Cliffs zones of the subject well in accordance with the following procedure:

1. Prior to commingling, a 3-hour initial potential test of the Fruitland zone shall be conducted. (Test #1.)
2. Subsequent to commingling, a 3-hour initial potential test of the commingled Fruitland and Pictured Cliffs zones shall be conducted. (Test #2.)
3. Determine the Pictured Cliffs allocation of production factor as follows:

$$(PC_f) = \frac{\text{Test \#2} - \text{Test \#1}}{\text{Test \#2}}$$

-3-

CASE No. 4118

Order No. R-3752

4. Determine the monthly allocation of production as follows:

- a. Pictured Cliffs gas production =  $PC_f \times$  commingled gas production.
- b. Fruitland gas production = commingled gas production less calculated Pictured Cliffs gas production.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 28, 1970

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or  
Daniel S. Nutter, Alternate Examiner:

- CASE 4443: Application of Pan American Petroleum Corporation for down-hole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the BS Mesa-Gallup and Basin-Dakota Gas Pools in the wellbores of its Jicarilla Apache 102 Wells Nos. 7, 9, 11, and 12, located respectively in Sections 3, 4, 10, and 9, Township 26 North, Range 4 West, Rio Arriba County, New Mexico. Applicant further seeks a procedure whereby other wells on said Jicarilla Apache 102 lease now dually completed in said pools may be approved administratively for downhole commingling.
- CASE 4444: Application of Tenneco Oil Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the rules governing the Allison-Pennsylvanian Pool to permit the completion of an oil well at an unorthodox location 1830 feet from the North line and 660 feet from the West line of Section 10, Township 9 South, Range 36 East, Lea County, New Mexico.
- CASE 4445: Application of Byron McKnight for an exception to Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A. Applicant proposes to drill two exploratory wells in the NW/4 NW/4 of Section 35 and the NE/4 NE/4 of Section 34, both in Township 19 South, Range 33 East, Lea County, New Mexico, in such a manner as to eliminate the necessity of running the salt protection string required by said Order No. R-111-A, provided the production string would be cemented to the surface.
- CASE 4446: Application of Ford Chapman for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the open-hole interval from 2899 feet to 2905 feet in his Gulf Pipkin Federal Well No. 1 located 330 feet from the South line and 605 feet from the East line of Section 34, Township 20 South, Range 29 East, Pecos-Delaware Pool, Eddy County, New Mexico.

CASE 4447: Application of Morris R. Antweil for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of his Allen Well No. 1 located in Unit J of Section 31, Township 22 South, Range 27 East, Eddy County, New Mexico, in such a manner as to permit the production of gas from the South Carlsbad-Strawn and South Carlsbad-Morrow Gas Pools through parallel strings of tubing.

CASE 4173: Reopened - (Continued from the September 30, 1970 Examiner Hearing)

In the matter of Case 4173 being reopened pursuant to the provisions of Order No. R-3811-A, which order extended 80-acre spacing units and a limiting gas-oil ratio of 4000 cubic feet of gas per barrel of oil for the Hobbs-Drinkard Pool, Lea County, New Mexico, for a period of 90 days. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing, why the limiting gas-oil ratio should not revert to 2000 to one, and/or why all casinghead gas produced by wells in the pool should not be reinjected.

CASE 4448: Application of MWJ Producing Company for pool redelineation and the creation of a new pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the redelineation of the Mescalero Permo-Pennsylvanian Pool by the deletion of all lands in Sections 28 and 33, Township 10 South, Range 32 East, Lea County, New Mexico, from said pool. Applicant further seeks the creation of a new pool for the production of oil from the Permo-Pennsylvanian formation for its Huber State Well No. 1 located in Unit K of said Section 33, and for the promulgation of special rules therefor including a provision for 160-acre spacing units and the assignment of 80-acre allowables.

CASE 4449: Application of Petro-Thermo Corporation for authority to operate an oil treating plant, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to install and operate a water-bath and heat-treatment type oil treating plant in the SW/4 NW/4 of Section 31, Township 18 South, Range 37 East, Lea County, New Mexico, for the reclamation of sediment oil.

CASE 4450: Application of Anderson Oil and Gas Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete the New Mexico State B. T. (Q) Well No. 1 located 660 feet from the South and East lines of Section 33, Township 11 South, Range 33 East, Lea County, New Mexico, in such a manner as to permit the production of oil through tubing from the Bagley-Pennsylvanian Pool and the disposal of produced salt water through tubing into the Devonian formation, Bagley-Siluro-Devonian Pool at a depth of approximately 11,075 feet.



CASE 4451: Application of Union Oil Company of California for a non-standard oil proration unit, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for an 80-acre non-standard oil proration unit comprising the SW/4 SE/4 of Section 17 and the NW/4 NE/4 of Section 20, Township 8 South, Range 38 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico, to be dedicated to a well to be drilled at a standard location in the SW/4 SE/4 of said Section 17.

CASE 4423: Continued from the September 30, 1970 Examiner Hearing

Application of Union Oil Company of California for compulsory pooling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the San Andres formation underlying the N/2 NE/4 of Section 20, Township 8 South, Range 38 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico. Said acreage to be dedicated to a well to be drilled at an orthodox location in the NW/4 NE/4 of said Section 20. Also to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4434: (Continued from the September 30, 1970, Examiner Hearing)

Application of Union Oil Company of California for the creation of a new gas pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for its Pipeline Federal Well No. 1 located in Section 4, Township 19 South, Range 34 East, Lea County, New Mexico. Applicant further seeks the promulgation of special rules therefor, including a provision for 640-acre spacing and proration units and fixed well location requirements.

CASE 4452: Application of David C. Collier for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by injection into the Queen formation through 4 wells located in Sections 1 and 12 of Township 19 South, Range 29 East, and Section 6 of Township 19 South, Range 30 East, East Turkey Track-Queen Pool, Eddy, County, New Mexico.

STATEMENT OF EL PASO NATURAL GAS COMPANY  
IN CASE 4443

El Paso Natural Gas Company is owner of interest in and operator of the 27-4 Unit which offsets to the north the Pan American Lease which is the subject of this Hearing. The necessity under existing rules to separate individual gas producing reservoirs in the San Juan Basin is, in some instances, causing waste. Such waste is attributable to the loss of recoverable gas reserves which will not be produced because it is not economic to:

1. initially multiply complete the well so that the gas is recoverable or,
2. rework a well so as to maintain the separation in a previously dually completed well.

Such waste can be avoided by the granting of the request of Pan American Petroleum Corporation in this Case, and El Paso Natural Gas supports the application of Pan American.

The necessity for this type of relief is not limited to the lease which is the subject of this Hearing, but is desirable in many instances throughout the San Juan Basin area. We urge the Commission to take such action as is necessary to adopt an administrative procedure throughout the San Juan Basin permitting the downhole commingling of gas from two or more geologically separate reservoirs under circumstances where it can be shown to the Commission's satisfaction that creating or continuing multiple completion of the separate reservoirs is not economically feasible and that waste of recoverable gas reserves will result if relief is not granted.

El Paso, as a purchaser, wishes to state that it has a need for all recover-

able reserves that can be made available to its pipeline from the San Juan Basin area and that the foreseeable need of its customers makes it important to receive the maximum volume of gas reserves from San Juan Basin reservoirs. Action<sup>5</sup> by the Commission to make such gas available will not only benefit El Paso but, in El Paso's opinion, will be of benefit to the producer of the gas to the royalty owners and to the State.

ATWOOD, MALONE, MANN & COOTER  
LAWYERS

P. O. DRAWER 700  
SECURITY NATIONAL BANK BUILDING  
ROSWELL, NEW MEXICO 88201  
[505] 622-6221

October 21, 1970

JEFF D. ATWOOD [1883-1960]

CHARLES F. MALONE  
RUSSELL O. MANN  
PAUL A. COOTER  
BOB F. TURNER  
ROBERT A. JOHNSON  
JOHN W. BASSETT

ROBERT E. SABIN  
RUFUS E. THOMPSON

Mr. A. L. Porter, Jr., Director  
Oil Conservation Commission  
State Land Office Building  
Santa Fe, New Mexico 87501

Re: Examiner Hearing October 28, 1970

Dear Mr. Porter:

Please file our enclosed Entry of Appearance in  
Case No. 4443 for Pan American.

With regards.

Very truly yours,

*Charles F. Malone*  
Charles F. Malone

CFM:bc

Enc.

cc: Gordon Ryan, Esquire (w/Enc.)

73 OCT 26 AM 10 52

*PM*

RECEIVED  
OCT 28 1970  
STATE LAND OFFICE  
SANTA FE, N.M.

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION )  
OF PAN AMERICAN PETROLEUM CORPORA- )  
TION FOR DOWNHOLE COMMINGLING, RIO )  
ARRIBA COUNTY, NEW MEXICO, AND AD- )  
MINISTRATIVE APPROVAL OF FUTURE )  
COMMINGLING. BS MESA-GALLUP AND )  
BASIN-DAKOTA GAS POOLS. )

Case No. 4443

ENTRY OF APPEARANCE

The undersigned, Atwood, Malone, Mann & Cooter of Roswell,  
New Mexico, hereby enter their appearance herein for the Applicant,  
Pan American Petroleum Corporation, with Gordon Ryan, Esquire, of  
Denver, Colorado.

ATWOOD, MALONE, MANN & COOTER

By



Attorneys for Pan American  
Petroleum Corporation  
P. O. Drawer 700  
Roswell, New Mexico 88201



Amoco Production Company  
501 Airport Drive  
Farmington, New Mexico 87401

July 19, 1973

File: LOS-288-501.1

Subject: Commingling of Gas  
Jicarilla Apache 102 Lease  
Order No. R-4059

*File  
Case 4443*

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

The attached report is submitted in accordance with Section 8,  
Commission Order R-4059, showing commingled production from Dakota  
and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9,  
11 and 12, for the previous six months, January through June, 1973.

Yours very truly,

*L. O. Speer, Jr.*

L. O. Speer, Jr.  
Area Superintendent

MFT:eb

Attachment

TO: <b>OIL CONSERVATION COMMISSION</b>	BLDG. _____	ROOM NO. _____
TO: <b>BOX 2088</b>	BLDG. _____	ROOM NO. _____
TO: <b>SANTA FE, NEW MEXICO 87501</b>	BLDG. _____	ROOM NO. _____
LOCATION: _____		
ROUTE TICKET	PLEASE HANDLE	Remarks: _____ _____ _____ _____ _____ _____
	PLEASE APPROVE	
	PLEASE NOTE AND RETURN	
	FOR YOUR INFORMATION	
	PLEASE SEE ME	
	PLEASE ADVISE	
YOUR FILE	From: _____	DATE: _____

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THRU JUNE 1973

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	73	18	91	4422	316	4738
February	58	14	72	2875	206	3081
March	19	5	24	1877	135	2012
April	79	20	99	3208	229	3437
May	64	16	80	4938	353	5291
June	80	20	100	4226	302	4528

WELL NO. 9

January	96	58	154	6376	1879	8255
February	67	40	107	4672	1377	6049
March	65	39	104	6153	1812	7965
April	51	31	82	3646	1075	4721
May	74	44	118	6848	2019	8867
June	99	60	159	5918	1744	7662

WELL NO. 11

January	175	36	211	4168	8919	13087
February	120	25	145	2767	5921	8688
March	76	15	91	2249	4815	7064
April	42	9	51	1704	3645	5349
May	129	26	155	3551	7596	11147
June	127	26	153	3095	6620	9715

WELL NO. 12

January	100	17	117	3879	1316	5195
February	80	13	93	2768	939	3707
March	85	14	99	2644	897	3541
April	34	5	39	1689	572	2261
May	93	16	109	3857	1307	5164
June	89	15	104	3571	1211	4782



**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401

L. O. Speer, Jr.  
Area Superintendent

July 25, 1975

File: LOS-293-501.1

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

Re: Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, January through June, 1975.

Yours very truly,

Attachment

*File  
Case 4443*



COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THRU JUNE 1975

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	75	20	95	3159	225	3384
February	70	18	88	3719	265	3984
March	49	3	52	2395	171	2566
April	90	7	97	4504	322	4826
May	85	6	91	3387	222	3609
June	73	5	78	3841	275	4116

WELL NO. 9

January	70	42	112	5699	1679	7378
February	54	32	86	5545	1633	7178
March	68	20	88	5396	1590	6986
April	68	20	88	4238	1248	5486
May	53	15	68	4844	1428	6272
June	37	11	48	3846	1133	4979

WELL No. 11

January	53	12	65	1816	3886	5702
February	88	18	106	2874	6147	9021
March	68	14	82	2239	4791	7030
April	94	19	113	2523	5398	7921
May	83	17	100	1801	3854	5655
June	69	14	83	1950	4174	6124

WELL NO. 12

January	81	14	95	751	255	1006
February	77	13	90	3302	1121	4423
March	65	22	87	3046	1034	4080
April	66	23	89	2241	761	3002
May	32	11	43	2801	952	3753
June	44	15	59	2018	685	2703

*Mmm*

*[Handwritten signature]*



L. O. Speer, Jr.  
Area Superintendent

RECEIVED  
JAN 30 1976  
Amoco Production Company  
Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
OIL CONSERVATION COMM.  
Santa Fe

Page 4443

January 28, 1976

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

File: LOS-36-501.1

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, July through December 1975.

Yours very truly,

PGS/lis

Attachment

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JULY THRU DECEMBER 1975

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
July	80	20	100	4395	314	4709
August	78	20	98	4555	325	4880
September	75	19	94	3846	275	4121
October	62	16	78	4041	289	4330
November	74	18	92	2685	192	2877
December	55	14	69	3570	255	3825

WELL NO. 9

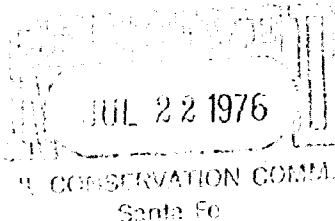
July	63	36	99	5038	1472	6510
August	37	23	60	3202	943	4145
September	80	48	128	6115	1802	7917
October	49	29	78	4035	1189	5224
November	52	32	84	5137	1514	6651
December	51	31	82	5026	1480	6506

WELL NO. 11

July	75	15	90	2121	4537	6658
August	92	18	110	2460	5262	7722
September	87	18	105	2356	5041	7397
October	85	17	102	2354	5037	7391
November	80	16	96	2012	4305	6317
December	78	16	94	2421	5180	7601

WELL NO. 12

July	65	11	76	2826	960	3786
August	70	12	82	3141	1066	4207
September	47	8	55	3084	1047	4131
October	60	10	70	2652	900	3552
November	63	10	73	3129	1062	4191
December	65	11	76	3144	1067	4211



**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401

L. O. Spear, Jr.  
Area Superintendent

*File  
Case No. 4443*

July 19, 1976

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

File: LOS-245-501.1

Gentlemen:

Commingling of Gas - Semi-Annual Report  
Jicarilla Apache 102 Lease  
Order No. R-4059

The attached semi-annual report is submitted in accordance with Section 8, Commission Order R-4059, showing commingled production from Dakota and Gallup formations, Jicarilla Apache 102 Lease, Well Nos. 7, 9, 11 and 12, for the previous six months, January through June, 1976.

Yours very truly,

TLS/rmk

Attachment

JUL 22 1976

NEW MEXICO COMMISSION

COMMINGLED PRODUCTION  
JICARILLA APACHE 102 LEASE  
RIO ARriba COUNTY, NEW MEXICO  
JANUARY THRU JUNE, 1976

WELL NO. 7

	<u>Condensate</u>			<u>Gas</u>		
	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>	<u>Dakota</u>	<u>Gallup</u>	<u>Total</u>
January	63	16	79	3988	286	4274
February	69	17	86	4177	298	4475
March	75	19	94	4013	287	4300
April	66	16	82	2960	212	3172
May	49	12	61	3677	262	3939
June	70	17	87	4569	326	4895

WELL NO. 9

January	52	31	83	3562	1050	4612
February	52	31	83	4559	1343	5902
March	64	38	102	5001	1474	6475
April	63	37	100	4836	1425	6261
May	64	39	103	3464	1020	4484
June	68	41	109	4816	1419	6235

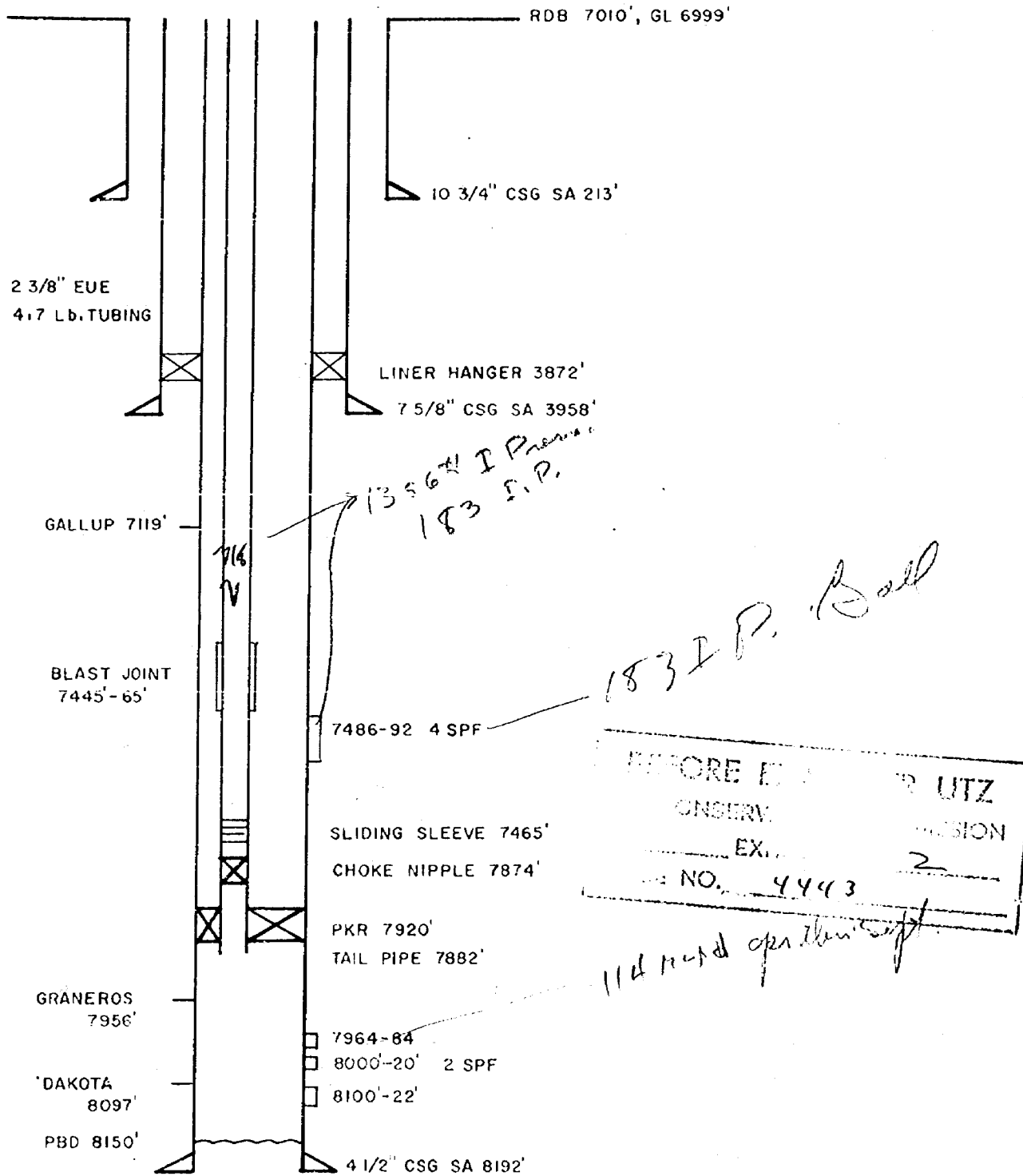
WELL NO. 11

January	81	16	97	2094	4479	6573
February	74	16	90	2048	4379	6427
March	86	13	99	2167	4637	6804
April	34	7	41	1691	3620	5311
May	58	12	70	1804	3861	5665
June	68	14	82	2328	4981	7309

WELL NO. 12

January	63	10	73	1567	532	2099
February	58	10	68	2693	915	3608
March	64	10	74	2728	926	3654
April	60	10	70	2764	938	3702
May	60	10	70	1893	643	2536
June	55	9	64	3035	1030	4065

PAN AMERICAN PETROLEUM CORPORATION  
 JICARILLA APACHE 102 WELL NO.7  
 SEC. 3, T 26 N - R 4 W  
 Rio Arriba County, New Mexico  
 Dual Completion (Gallup-Dakota)



PAN AMERICAN PETROLEUM CORPORATION  
 JICARILLA APACHE 102 WELL NO.9  
 SEC. 4, T 26 N - R 4 W  
 Rio Arriba County, New Mexico  
 Dual Completion (Gallup-Dakota)

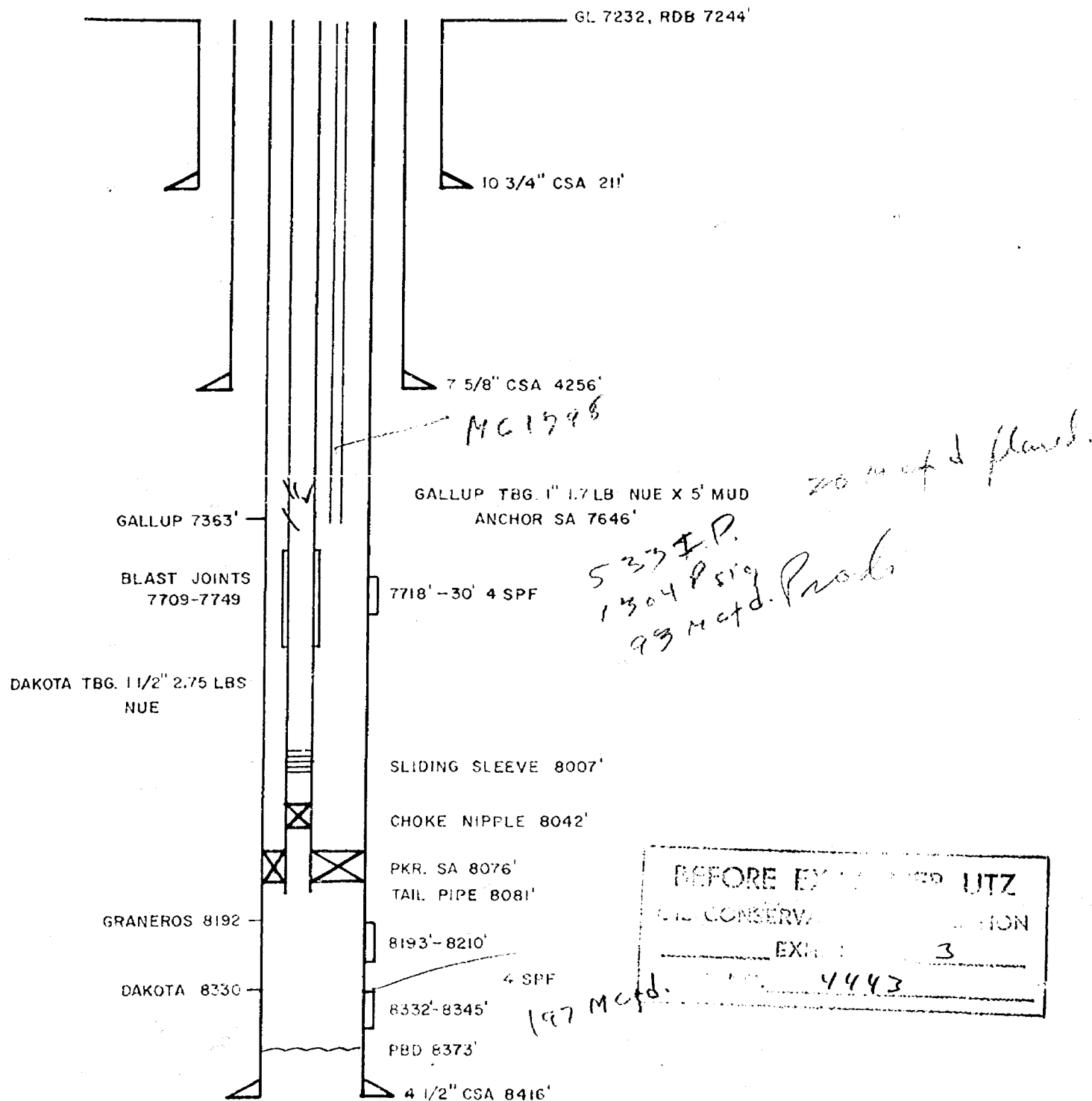


EXHIBIT NO. 3

PAN AMERICAN PETROLEUM CORPORATION  
 JICARILLA APACHE 102 WELL NO. II  
 SEC. 10, T26N-R4W  
 Rio Arriba County, New Mexico  
 Dual Completion (Gallup-Dakota)

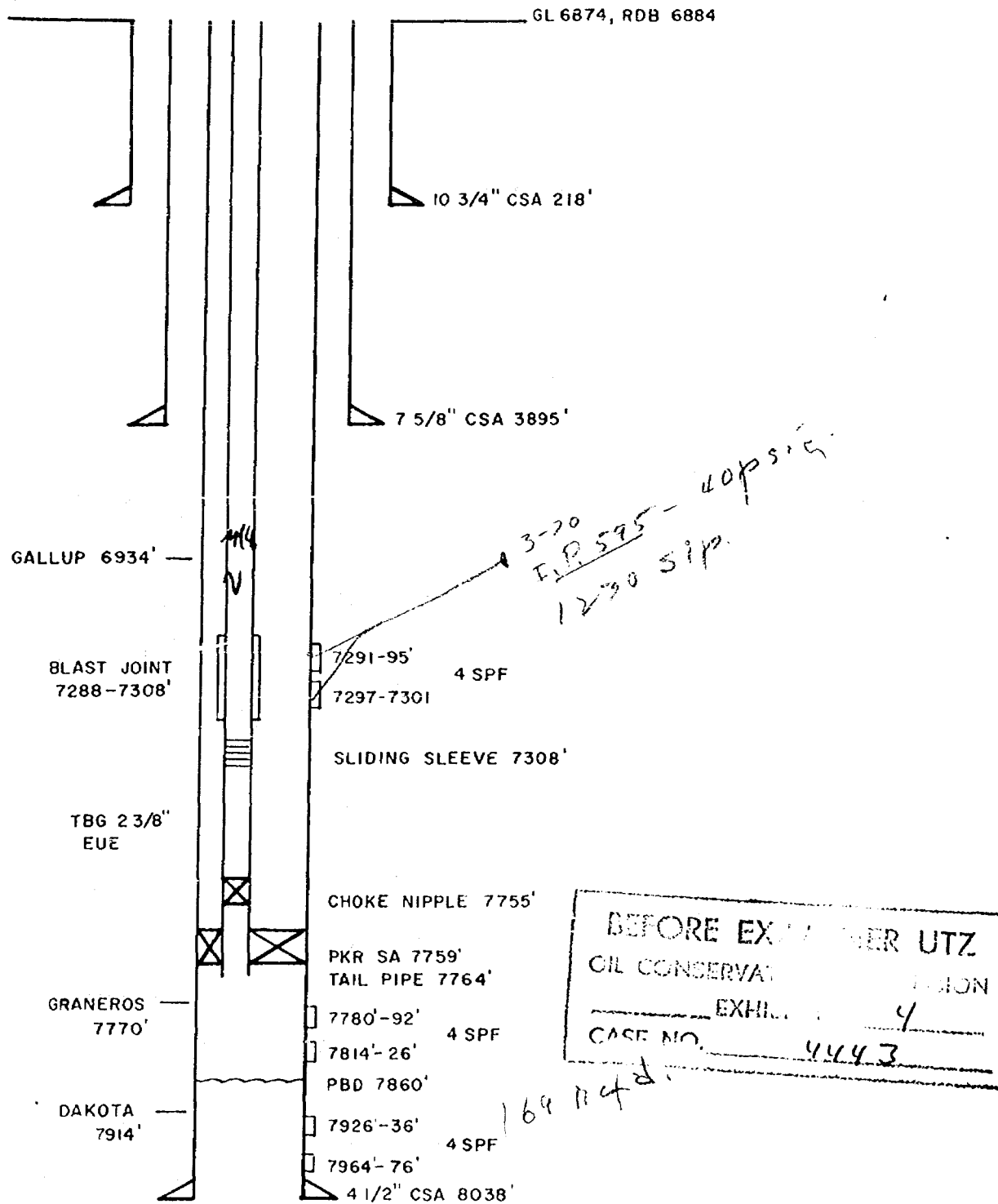
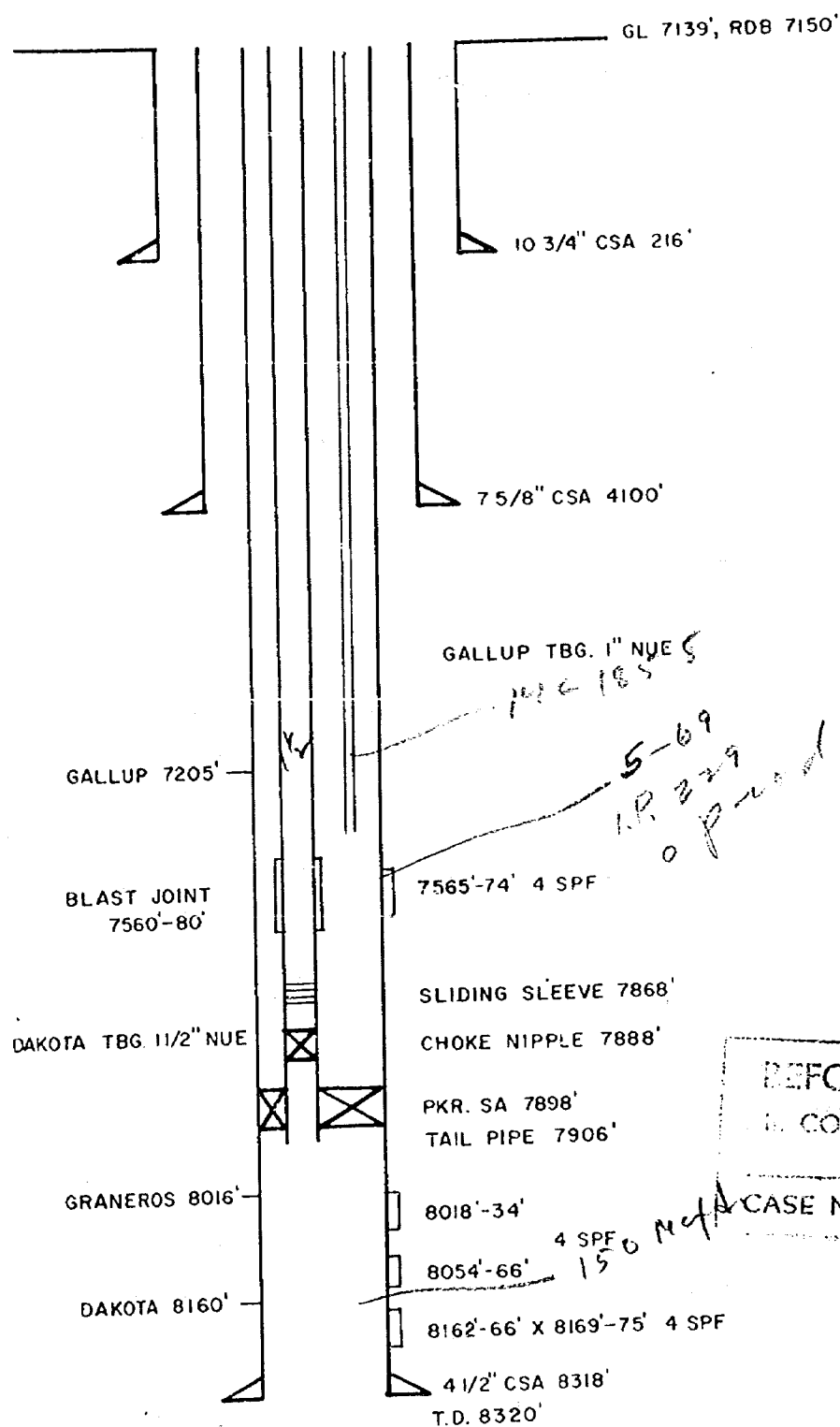


EXHIBIT NO. 4



PAN AMERICAN PETROLEUM CORPORATION  
 JICARILLA APACHE 102 WELL NO. 12  
 SEC. 9, T 26 N - R 4 W  
 Rio Arriba County, New Mexico  
 Dual Completion (Gallup-Dakota)



BEFORE	ER UTZ
CONSL	SECTION
CASE NO.	5
	4443

EXHIBIT NO. 5

PRODUCTION DATA

JICARILLA APACHE 102 LEASE GALLUP-DAKOTA DUAL COMPLETIONS

Well	Gallup			Dakota - Latest Deliverability Test				Year of Test	Remarks
	Latest Shut In Pressure	Latest Test Or Production Rate	Flow Pressure	Present Status	Pc-PSIA	Rate MCFD	Flow Pressure, PSIA		
No. 7	1356 ✓ (4-14-70)	183 MCFD on 3/4" ch. 183 MCFD CAOF	4 psig	SI	799 ✓	130 (Aug. 1970)	501	1970	Pressures from April, 1970 Packer Leakage Test
No. 9	895 (6-24-70)	93 MCFD on line	440 psia	Producing to the line	812 ✓	198	431	1970	Potential Test Gallup completed 7-1-68. Flow 533 MCFD on 3/4" ch. AOF 615 MCFD. TPF 34 psig. S/P 1,304 psig.
No. 11	1230 (3-25-70)	595 MCFD on 3/4" ch.	40 psig	SI	945 ✓	218 (Aug. 1970)	592	1970	Pressures from March, 1970 Packer Leakage Test
No. 12	1293 (5-30-69)	229 MCFD on 3/4" ch. 259 MCFD CAOF	8 psig	SI	940 ✓	136	518	1970	

464  
465  
466

**BEFORE EXAMINER UTZ**  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 7  
CASE NO. 4443

# PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING  
DENVER, COLORADO 80202

2-4443

September 24, 1970

File: AMR-1665-986.511

Re: Application for Downhole Commingling  
Rio Arriba County, New Mexico

Mr. A. L. Porter, Jr. (3)  
Secretary-Director and Geologist  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. Porter:

We request, after due notice and hearing, an Order be entered permitting Pan American to downhole commingle gas and condensate produced from the Basin Dakota and BS Mesa Gallup pools in its Jicarilla Apache 102 Wells No. 7, 9, 11 and 12, said Order to provide for obtaining future approval, by administrative action rather than by hearing, of similar commingling in other wells on the Jicarilla Apache 102 lease, now producing from the two pools, if future performance should indicate commingling to be desirable.

Pan American is the Operator and sole working interest owner under Jicarilla Apache 102 lease, comprising all of Sections 3, 4, 9 and 10, T26N-R4W. Royalty ownership likewise is common under the four sections and for all horizons thereunder, being held by the Jicarilla Apache tribe. There are no overrides involved. The attached location plat shows the lease and the four wells proposed for commingling downhole. Details involving these wells are:

Well No. 9, located in Unit G Section 4, was dually completed July 15, 1968, under Order MC-1798 dated December 4, 1967, which authorized parallel string dual production. The well has 4-1/2" casing with 1-1/2" tubing for Dakota and 1" for Gallup production. The well is only a small Gallup producer, averaging 97 MCFD in August, 1970, and is intermitted to prevent logging off. Commingling with the Dakota, which averaged 211 MCFD in August, 1970, would be more efficient and prevent waste of Gallup hydrocarbons during intermittent venting.

Mr. A. L. Porter, Jr.  
September 24, 1970  
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Well No. 12, in Unit G Section 9, was dually completed May 23, 1969, using parallel strings of 1-1/2" for Dakota and 1" for Gallup as authorized by Order MC-1858 dated June 2, 1969. Although the initial 3 hour Gallup test potential was 396 MCFD, subsequent testing has shown that the well will not unload and produce continuously through either the 1" tubing or the casing annulus. The well has never produced Gallup gas to sales. The Dakota averaged 156 MCFD in August, 1970.

Well No. 7, in Unit G Section 3, and Well No. 11, in Unit C Section 10, each were completed as Gallup-Dakota duals April 21, 1970, and March 7, 1970, respectively. Completion consisted of 2-3/8" Dakota tubing and 4-1/2" Gallup annulus. This single tubing string type completion was used to reduce dual completion costs and hopefully solve the flow problems encountered in Wells No. 9 and No. 12 which used the 1" Gallup production tubing. Well No. 7 will not unload fluids or produce continuously from the Gallup. The initial Gallup test for Well No. 11 of 470 MCFD indicates the well could be produced; however, the installation of necessary production equipment for segregated Gallup production estimated at \$9,350 cannot be justified based on experience at Wells No. 9 and No. 12. Application for administrative approval of dual completion for Wells No. 7 and No. 11 was never made and the wells have never produced Gallup gas to sales. During August, 1970, Dakota production at Well No. 7 was 126 MCFD, and at Well No. 11 was 192 MCFD.

In light of the above mentioned difficulties in producing the Gallup, we propose commingling the Gallup and Dakota downhole and producing through the Dakota production string, 1-1/2" in Wells No. 9 and No. 12 and 2-3/8" in Wells No. 7 and No. 11. Allocation of production to these two marginal producing zones would be based on tests consisting of a stabilized Dakota rate before commingling and a stabilized combined Gallup-Dakota rate after commingling.

The proposed downhole commingling will result in additional gas recovery from the Gallup zone which could not otherwise be economically produced and will thus prevent waste and will not violate correlative rights. Reservoir and fluid characteristics of these two gas producing sandstone formations are similar. Bottom hole pressures are sufficiently equal so that no formation damage or underground waste should result from downhole commingling.

Mr. A. L. Porter, Jr.  
September 24, 1970  
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Considering the future, we respectfully ask that the Order entered as a result of the hearing on these four wells also include the provision that, after approval is obtained by administrative action, other Gallup-Dakota duals on this same lease may be authorized for downhole commingling when production from those wells declines to the level that commingling is desirable.

Yours very truly,

*R B Giles*

Attachment

cc: Mr. E. C. Arnold (2)  
New Mexico Oil Conservation Commission  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

United States Geological Survey	United States Geological Survey
P. O. Box 965	Drawer 1857
Farmington, New Mexico 87401	Roswell, New Mexico 88201

STATE OF COLORADO )  
                              : SS  
COUNTY OF DENVER )

R. B. GILES being first duly sworn upon oath deposes and says that he is employed as an engineering supervisor by Pan American Petroleum Corporation, that the foregoing Application has been prepared under his supervision and direction, that he is familiar with the information contained in the Application and that the matters and the things therein set forth are true and correct to the best of his knowledge and belief.

*R B Giles*  
\_\_\_\_\_  
R. B. Giles

Subscribed and sworn to before me this 24th day of September, 1970.

*Kathleen L. Allison*  
\_\_\_\_\_  
Notary Public

My Commission expires July 24, 1974.

DRAFT

GMH/esr

November 3, 1970

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

*GMH*  
IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

*ASD*  
APPLICATION OF PAN AMERICAN PETROLEUM  
CORPORATION FOR DOWN-HOLE COMMINGLING,  
RIO ARriba COUNTY, NEW MEXICO.

*ASD*  
CASE No. 4443

Order No. R- R-4059  
*11-5-70*

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 28, 1970,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this \_\_\_\_\_ day of November, 1970, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Pan American Petroleum Corporation, is  
the owner and operator of the Jicarilla Apache 102 Lease comprising  
Sections 3, 4, 9, and 10, Township 26 North, Range 4 West, NMPM, Rio  
Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle production  
from the BS Mesa-Gallup and Basin-Dakota Gas Pools in the well-bores  
of four wells located on said lease as follows:

Jicarilla Apache Well No. 7 - Unit G - Section 3  
Jicarilla Apache Well No. 9 - Unit G - Section 4  
Jicarilla Apache Well No. 11 - Unit C - Section 10  
Jicarilla Apache Well No. 12 - Unit G - Section 9

(4) That the applicant further seeks a procedure whereby other wells on said Jicarilla Apache 102 Lease may be approved administratively for down-hole commingling.

(5) That the applicant proposes, as to each of said wells, to produce the commingled production through a single string of tubing set in ~~packers~~ just above the Dakota perforations.

(6) That each of the ~~subject wells~~ <sup>above described four wells</sup> is capable of producing only a very small amount of gas from either or both of the subject pools.

(7) That it is uneconomical to produce each of the ~~subject wells~~ <sup>above-described four wells</sup> as dual completions.

(8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling.

(9) That the proposed commingling may result in the recovery of additional gas from each of the subject pools as to each of said ~~four~~ wells, thereby preventing waste, and will not violate correlative rights.

(10) That production tests should be conducted prior to commingling, to determine the production from each zone in each well.

(11) That a procedure should be adopted whereby other wells on said Jicarilla Apache 102 Lease having the same characteristics as the above-described four wells may be approved administratively for down-hole commingling.

(12) That Administrative Orders Nos. MC-1798 and MC-1858 should be superseded.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to complete each of the following-described four wells located in Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico, in such a manner as to produce gas from the BS Mesa-Gallup and Basin-Dakota Gas Pools through a single string of tubing, commingling in the well-bore the production from each of said zones until further order of the Commission:

Jicarilla Apache Well No. 7 - Unit G - Section 3  
Jicarilla Apache Well No. 9 - Unit G - Section 4  
Jicarilla Apache Well No. 11 - Unit C - Section 10  
Jicarilla Apache Well No. 12 - Unit G - Section 9

(2) That the production of each zone in each of the above-described wells shall be established and future production allocated to the Gallup and Dakota zones in each of the subject wells in accordance with the following procedure:

1. Prior to commingling, the daily rate of flow from the Dakota formation shall be established <sup>by</sup> employing the last 24 hours of a seven-day flow period of said zone. (Test #1.)
2. Subsequent to commingling, the daily rate of flow from the commingled Dakota and Gallup zones shall be established by employing the final 24 hours of a seven-day flow test of the commingled zones. (Test #2.)
3. Determine the BS Mesa-Gallup allocation of production factor as follows:

$$(\text{Gallup}_f) = \frac{\text{Test \#2} - \text{Test \#1}}{\text{Test \#2}}$$

4. Determine the monthly allocation of production as follows:
  - a. BS Mesa-Gallup gas production =  
 $\text{Gallup}_f \times \text{commingled gas production}$
  - b. Basin-Dakota gas production =  
commingled gas production less calculated  
BS Mesa-Gallup gas production.

(3) That the Secretary-Director of the Commission may approve the down-hole commingling of BS Mesa-Gallup and Basin-Dakota gas production in other wells located <sup>comprising Wells 3, 4, 9, and 10 of the</sup> on the Jicarilla 102 Lease, provided such commingling is reasonably necessary to prevent waste and will not violate correlative rights.

(4) To obtain approval for down-hole commingling, the operator of the well shall submit the following in duplicate to the Secretary-Director of the Commission plus one copy to the appropriate District Office of the Commission:



- (a) Name and address of the operator.
- (b) Lease name, well number, well location.
- (c) Names of the pools the well is completed in and the Commission order number which authorized the dual completion.
- (d) A current (within 30 days) 24-hour productivity test on Commission Form C-116 showing the amount of oil, gas, and water produced from each zone.
- (e) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete résumé of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)
- (f) Estimated bottom-hole pressure for each artificially lifted zone. A current (within 30 days) measured bottom-hole pressure for each zone capable of flowing.
- (g) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.
- (h) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams.
- (i) A statement that all offset operators and, in the case of a well on Federal land, the United States Geological Survey, have been notified in writing of the proposed commingling.

(5) ~~The~~ The Secretary-Director of the Commission may approve the proposed down-hole commingling in the absence of a valid objection within 20 days after the receipt of the application if, in his opinion, there is no disqualifying disparity of bottom-hole pressures or other reservoir characteristics, waste will not result thereby, and correlative rights will not be violated. The 20-day waiting period may be dispensed with upon receipt of waivers of objection from all parties mentioned in ~~Section 2~~, paragraph (i).

(6) ~~Upon~~ Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling, and allocation of the commingled production from the well to each of the producing zones shall be in accordance with the allocation formula set forth in the order. ~~The production from the well shall be subject to the lower of the daily gas-oil ratio limitations applicable to the reservoirs. Wells shall be tested on a commingled basis annually, except that a well penalized for a high gas-oil ratio shall be tested semi-annually.~~

(7) ~~The~~ The Secretary-Director may rescind authority to commingle production in the well-bore and require both zones to be produced separately, if, in his opinion, waste or reservoir damage is resulting thereby, ~~or the efficiency of any secondary-recovery project is being impaired, or if any change of conditions renders the installation no longer eligible for down-hole commingling under the provisions of Section 1, paragraphs (a) through (h).~~

his opinion, there is no disqualifying pressures or other reservoir characteristics, waste will not result thereby, and correlative rights will not be violated. The 20-day waiting period may be dispensed with upon receipt of waivers of objection from all parties mentioned in Section 2, paragraph (i).

4. Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling, and allocation of the commingled production from the well to each of the producing zones shall be in accordance with the allocation formula set forth in the order. ~~The production from the well shall be subject to the lower of the daily gas-oil ratio limitations applicable to the reservoirs. Wells shall be tested on a commingled basis annually, except that a well penalized for a high gas-oil ratio shall be tested semi-annually.~~

5. The Secretary-Director may rescind authority to commingle production in the well-bore and require both zones to be produced separately, if, in his opinion, waste or reservoir damage is resulting thereby, ~~or the efficiency of any secondary recovery project is being impaired, or if any change of conditions renders the installation no longer eligible for down-hole commingling under the provisions of Section 1, paragraphs (a) through (h).~~

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

APPROPRIATE DISTRICT OFFICE OF THE COMMISSION:

- (a) Name and address of the operator.
- (b) Lease name, well number, well location.
- (c) Names of the pools the well is completed in and the Commission order number which authorized the dual completion.
- (d) A current (within 30 days) 24-hour productivity test on Commission Form C-116 showing the amount of oil, gas, and water produced from each zone.
- (e) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete résumé of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future

(8) That the operator shall file with the Santa Fe Office of the Commission semi-annually a report showing the monthly Gallup production, the ~~monthly~~ <sup>monthly</sup> Dakota production, and the ~~monthly~~ <sup>monthly</sup> commingled production for each well during the preceding six months. Said report to be filed as stated until further order of the Commission.

(9) That the provisions of Order No. R-333-F shall continue to apply to the subject wells.

(10) That Administrative Orders Nos. MC-1798 and MC-1858 are hereby superseded.

(11) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

*All the rest of an necessary  
since monthly production reports  
will be filed for each zone anyway.*

*He  
for all the production together  
Eg*

CASE 4444: Application of Tenneco  
Oil Company for an unorthodox oil  
well location, Lea County, N.M.