

well
file

OIL CONSERVATION COMMISSION
Aztec DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE OCTOBER 27, 1975

RE: Proposed MC _____
Proposed DHC ✓ _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

attn: Carl Elvrog

Gentlemen:

I have examined the application dated October 8, 1975
for the Amoco Prod. Co. Sicavilla Cont. 146 #11 K-4-25-5
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

approve

Yours very truly,

Al Hendrick



Amoco Production Company

Security Life Building
Denver, Colorado 80202

October 8, 1975

Joe D. Ramey, Secretary-Director (3)
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501



Dear Mr. Ramey:

File: VDP-395-986.511

Downhole Commingle Gas from Gonzales
Mesaverde and Basin Dakota in Jicarilla
Contract 146 No. 11, Rio Arriba County,
New Mexico

We respectively request approval to downhole commingle gas production from the Gonzales Mesaverde and the Basin Dakota formations in Amoco's Jicarilla Contract 146 No. 11, K-4-25N-5W. (1820' FWL and 1510' FSL of Section 4). The commingling of condensate in this well was administratively approved by NMOCC Order CTB-253 on May 17, 1974 and has been done since November 5, 1974.

There is precedent for downhole commingling of gas from the Mesaverde and Basin Dakota. Austral Oil Company, Incorporated, by NMOCC Order No. R-5075, dated August 12, 1975, received such permission for the Blanco Mesaverde and Basin Dakota commingling in its Bunny Well No. 1, P-10-27N-9W. Our reasons for requesting downhole commingling in Jicarilla Contract 146 No. 11 are practically identical with theirs, i.e., downhole mechanical problems which would be costly to repair and present a risk of formation damage, and the fact that the Mesaverde is an edge location stratigraphically and with respect to the boundary of the Gonzales field.

By NMOCC Administrative Order MC-2041 dated July 11, 1973, Amoco was given permission to dually complete its Jicarilla Contract 146 Well No. 11 in the Gonzales Mesaverde and the Basin Dakota, provided annual packer leakage tests were taken to prove segregation of production. A. R. Kendrick's letter of August 8, 1975 to our Farmington Area directed that Amoco take immediate action to correct communication between the Mesaverde and Dakota in our No. 11 well that was indicated from the

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latest packer leakage test report. To correct the packer leak, we will be forced to pull the tubing and repair the packer, an expensive procedure approximating \$3,500. To pull the tubing we also would have to kill the well, risking permanent damage to the already weak formations and reduced gas recovery from the damaged formations. If commingling were approved, we only would have to open a sleeve set above the packer, a procedure involving no risk of formation damage and costing but \$300.

The attached map shows the outline of the Gonzales Mesaverde Field and the location of all Gonzales Mesaverde wells presently completed in the area. The map also shows all Basin Dakota wells in the immediate area of Jicarilla Contract 146 No. 11. All the Basin Dakota wells in the area are operated by Amoco with the exception of the Marathon wells in Section 33, T26N-R5W. There are only electric logs available over the Gonzales Mesaverde zone on our offsets to Jicarilla Contract 146 No. 11. Attached are copies of the logs covering the Mesaverde zone in the offset wells. The Gonzales Mesaverde wells are completed in the Point Lookout (lower Mesaverde). None are completed in the Cliffhouse (upper Mesaverde). This zone was found to be wet through early development testing.

The Gonzales Mesaverde is not prorated and the Basin Dakota side of the Jicarilla Contract 146 No. 11 is marginal. There consequently are no restrictions on the production from the two zones. Jicarilla Contract 146 No. 11 is 100% Amoco leasehold interest, with both zones having common royalty interest owners.

In support of this commingling request, we enclose a wellbore diagram of Jicarilla Contract 146 No. 11, a plot of shut-in wellhead pressure vs. cumulative production for the Mesaverde and for the Dakota in this well since its completion, a chronological listing of the orders extending the boundary of the Gonzales Mesaverde pool, and a recap of production and pressures measured in Jicarilla Contract 146 No. 11 over the past several years.

Shut-in wellhead pressure is essentially the same for the Mesaverde and for the Dakota in Well No. 11. As such, underground waste should not be caused by the granting of the proposed commingling.

Based on the production performance of the Gonzales Mesaverde averaged over the entire year of 1974 in Well No. 11 and the production performance of the Basin Dakota in this same well for the same period of time, we recommend allocation of the commingled production be:

Gonzales Mesaverde 66% gas: 40% liquids
Basin Dakota 34% gas: 60% liquids

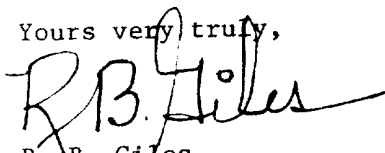
Production during May, 1975 likewise supports this allocation.

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El Paso markets the gas and liquids from the No. 11 well. In our opinion, the commercial value of the commingled production will not be less than the sum of the values of the individual streams. The proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

All offset operators and the U.S. Geological Survey, since Tribal lands are involved, are being notified of this commingling request by certified mailing of a copy of this letter application. We ask that each party waive objection to this commingling request by signing in the space provided below, sending one signed copy to you, one to me, and retaining the third copy for their own files.

Yours very truly,



R. B. Giles

RBG:do

cc: A. R. Kendrick, Supervisor
District No. 3
New Mexico Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico 87410

I have no objection to Amoco's plans to downhole commingle gas production from the Gonzales Mesaverde formation and from the Basin Dakota formation in Jicarilla Contract 146 No. 11 Well, K-4-25N-5W.

MARATHON OIL COMPANY

By: _____

Date: _____

CONTINENTAL OIL COMPANY

By: _____

Date: _____

UNITED STATES GEOLOGICAL SURVEY

By: _____

Date: _____

VERIFICATION AND AFFIDAVIT

STATE OF COLORADO)
 : ss
COUNTY OF DENVER)

R. B. Giles, of lawful age, being first duly sworn on his oath, deposes and says:

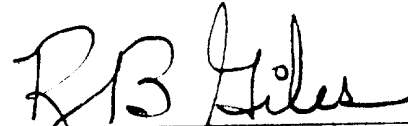
That he is employed in an engineering capacity by Amoco Production Company in its Denver, Colorado, office; that Amoco's application for approval to downhole commingle gas production from the Gonzales Mesaverde and from the Basin Dakota in its Jicarilla Contract 146 No. 11 well, K-4-25N-5W, in Rio Arriba County, New Mexico, was prepared under his direction and supervision; that the matters and things therein set forth are true and correct to the best of his knowledge and belief; and that a copy thereof was sent by certified mail from Applicant's Denver, Colorado, office on October 8, 1975 to the following parties, at the addresses shown herein, to wit:

P. T. McGrath (2)
U. S. Geological Survey
P. O. Box 965
Farmington, New Mexico 88240

Marathon Oil Company
P. O. Box 120
Casper, Wyoming 82601


Continental Oil Company
P. O. Box 460
Hobbs, New Mexico 88240

and to the best of his information, knowledge and belief, the parties above named are the only parties to whom notice of such application is required to be given in accordance with New Mexico Oil Conservation Commission rules.



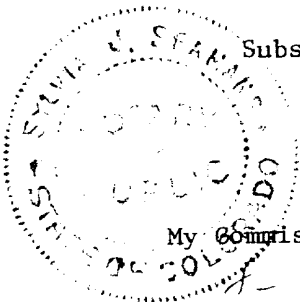
R. B. Giles

Subscribed and sworn to before me this 8th day of October, 1975.



Notary Public

My Commission expires:

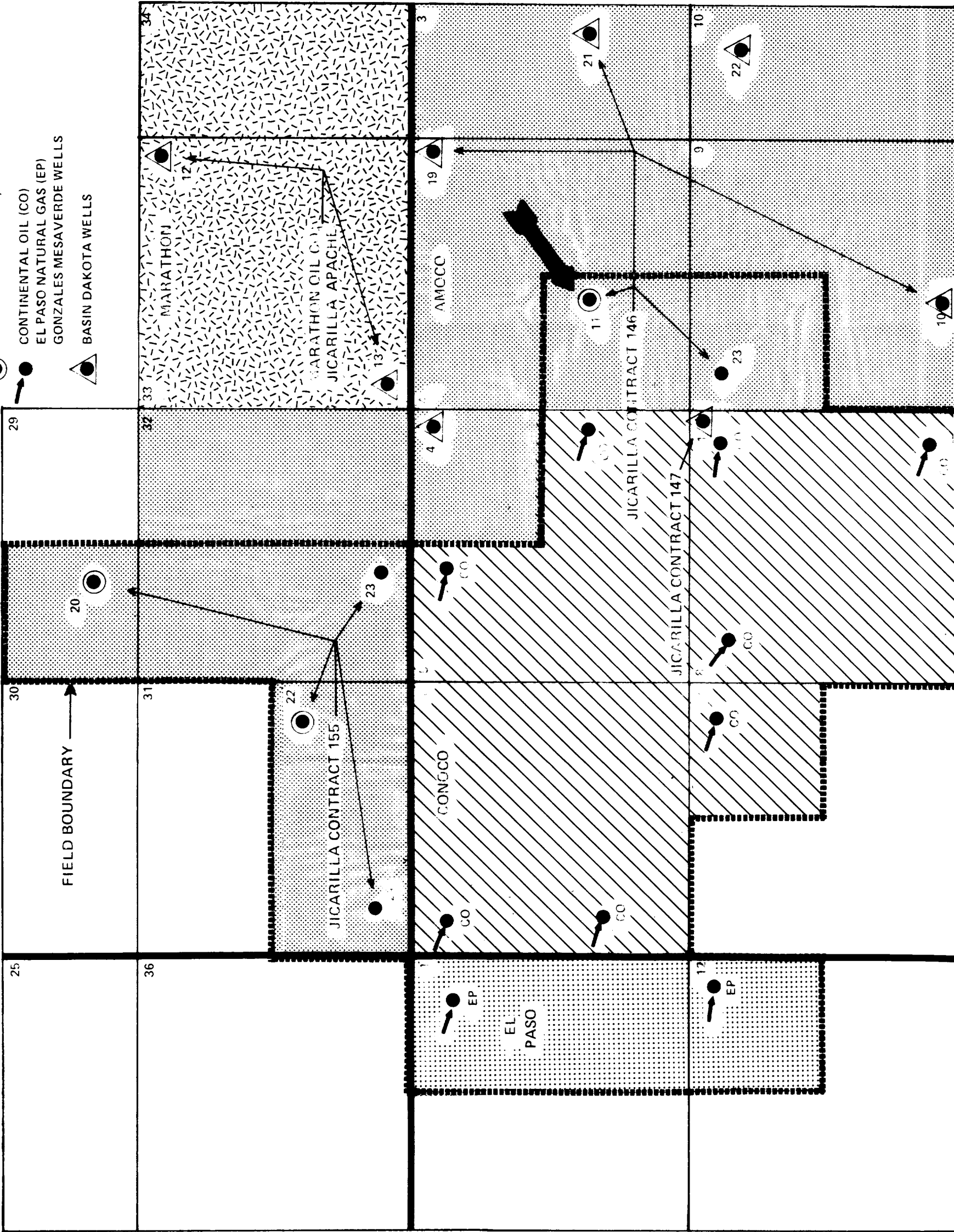


GONZALES MESAVERDE

- AMOCO GON. MV
- AMOCO DUAL GON MV, BASIN DAK.
- CONTINENTAL OIL (CO)
- EL PASO NATURAL GAS (EP)
- GONZALES MESAVERDE WELLS
- ▲ BASIN DAKOTA WELLS

R6W

R5W



T 26 N

T 25 N

**COMMINGLING OF GAS DOWNHOLE
JICARILLA CONTRACT 146 NO. 11**

WELLBORE DIAGRAM:

***Original Completion 6-30-61:**

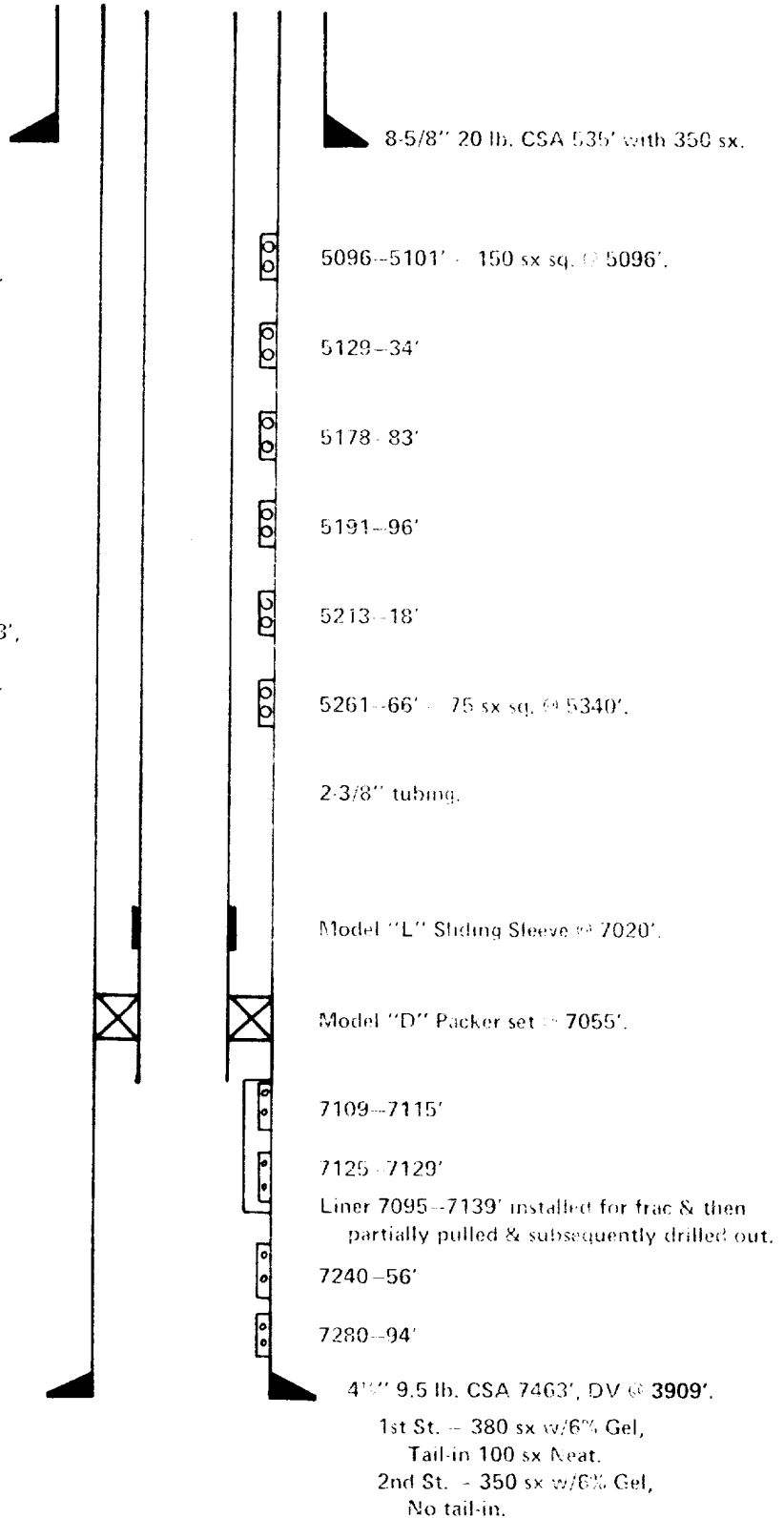
Perf with 6 SPF 7109-7115' &
7125-7129'. SWHYF with 33,600
gal. 1% CaCl₂ water & 5 lb. J- 98/
1000 gal. & 30,000 lb. sn. 1725
psi SIP.

***Restimulation 11-20-68:**

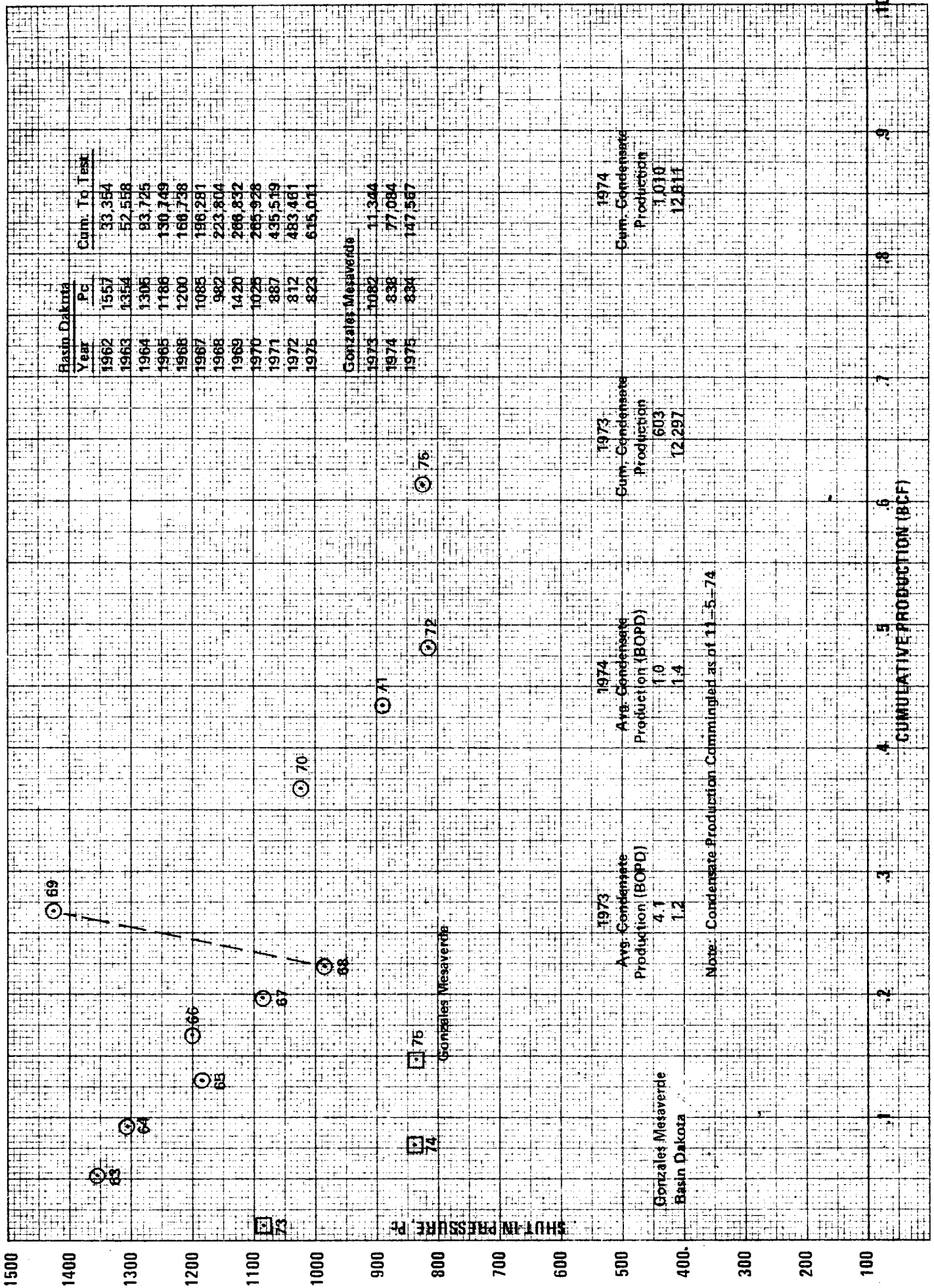
Perf with 2 SPF 7240-56', 7280-94'.
Set select liner 7095-7139' (over
perfs 7109-7129'). Frac with 36,630
gal. water & 25,000 lb. 20-40 sn &
2000 lb. 10-20 sn, sanded off.
CO to 7149' & attempted to pull
liner & left 38 1/2' in hole. Drilled
liner & CO to 7419'.

***Recompletion in Mesaverde 11-3-72:**

Sq. 75 sx cmt @ 5340'.
Sq. 150 sx cmt @ 5096'.
Perf 5096-5101', 5129-34', 5178-83',
5191-96', 5213-18', 5261-66' with
1 SPF SWHYF with 34,608 gal. water
with 0.8% KCl & 10 lb. Gel/1000 gal.
with 5000 lb. 20-40 sn, 25,000 lb.
10-20 sn, 8000 lb. 8-12 sn.



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GONZALES MESAVERDE POOL

Gonzales Mesaverde (Gas), Rio Arriba County, New Mexico

Discovery Date: November 4, 1971

Discovery Well: Continental Oil Company
AXI Apache "J" No. 18-A, Sec. 8-25N-5W

Average Producing Depth: Top 4607'

Creating Order: R-4311

Extending Boundaries Order: R-4690, R-4888, R-4963

R-4311 Finding (12): That there is a need for the creation of a new gas pool in Rio Arriba County, New Mexico, for the production of gas from the Mesaverde Formation, said pool to bear the designation of Gonzales Mesa-Mesaverde Pool.

Original Boundaries: T-25-N, R-5-W
Section 5: W/2
Section 6: All
Section 7: NE/4
Section 8: All

Extended R-4690: T-25-N, R-5-W
Section 4: SW/4
Section 5: SE/4
Section 9: NW/4

T-26-N, R-5-W
Section 29: SW/4
Section 31: S/2
Section 32: W/2

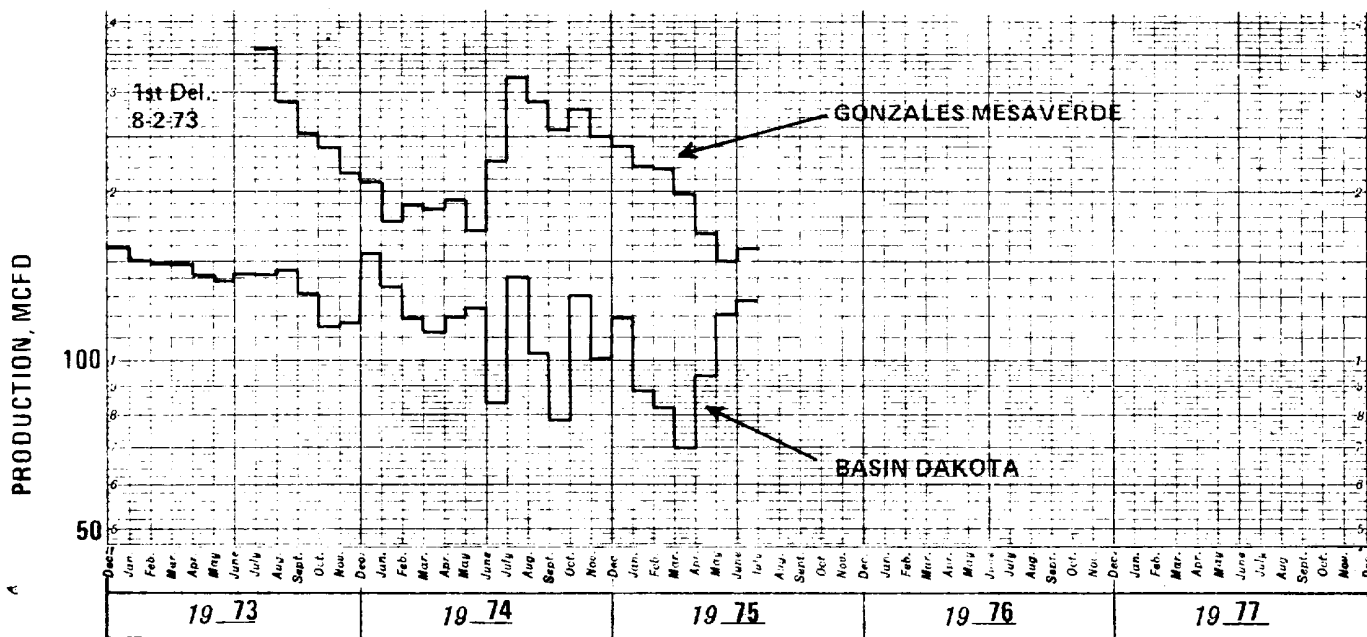
Extended R-4888: T-25-N, R-6-W
Section 1: NE/4

Extended R-4963: T-25-N, R-6-W
Section 1: SE/4
Section 12: NE/4

Summary:	<u>T-25-N, R-5-W</u>	<u>T-25-N, R-6-W</u>	<u>T-26-N, R-5-W</u>
	Section 4: SW/4	Section 1: E/2	Section 29: SW/4
	Section 5: SE/4	Section 12: NE/4	Section 31: S/2
	W/2		Section 32: W/2
	Section 6: All		
	Section 7: NE/4		
	Section 8: All		
	Section 9: NW/4		

PRODUCTION AND PRESSURES JICARILLA CONTRACT 146 NO. 11

	1973				1974				1975			
	BASIN DAK.		GON. MV		BASIN DAK.		GON. MV		BASIN DAK.		GON. MV	
	DAYS	MCFD	DAYS	MCFD	DAYS	MCFD	DAYS	MCFD	DAYS	MCFD	DAYS	MCFD
JAN.	32	159			32	154	32	207	32	118	29	240
FEB.	24	150			27	136	31	173	24	88	24	223
MAR.	32	149			32	119	31	189	32	83	32	219
APR.	32	148			24	112	24	186	32	69	32	196
MAY	32	143			32	120	32	190	32	94	32	169
JUNE	31	139			32	124	32	170	25	121	25	152
JULY	24	143			32	84	32	225	28	128	27	157
AUG.	32	142	24	373	32	140	26	307				
SEP.	32	144	26	286	32	102	32	285				
OCT.	29	131	27	251	24	79	24	254				
NOV.	32	116	32	238	28	130	30	278				
DEC.	25	118	24	213	32	100	32	248				



	YEAR	Q	TPF	CPF	P _c	P _w	P _d	Q
BASIN DAKOTA	1972	158	298	521	812	319	406	144
	1975	194	298	0	823	305	412	98
GONZALES MESAVERDE	1973	272	0	291	1082	319	806	135
	1974	320	0	321	838	324	419	291
	1975	156	0	323	834	326	417	142