LISTRICT I

BITRICT II

r O Box 1980, Hobbs, NM 88241 1980

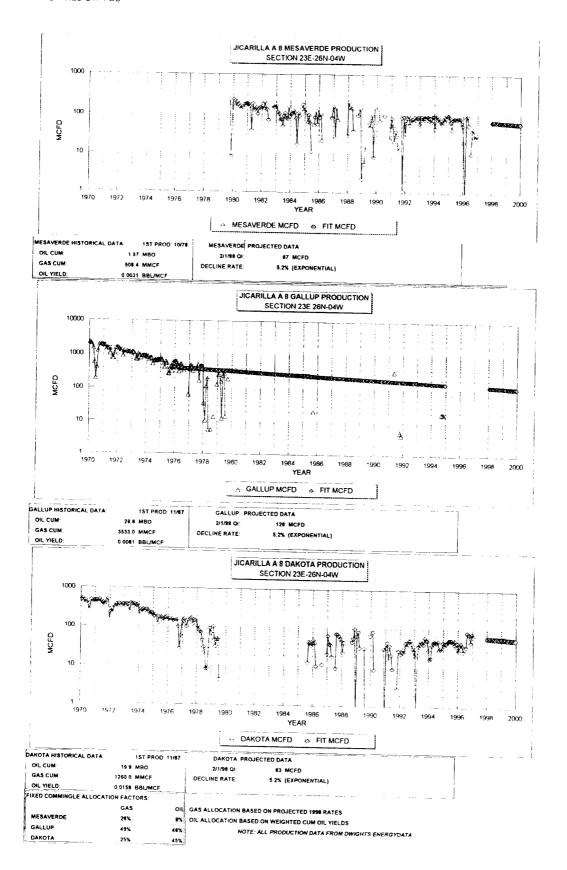
811 SouthI First St. Artesia NM 88210 2835

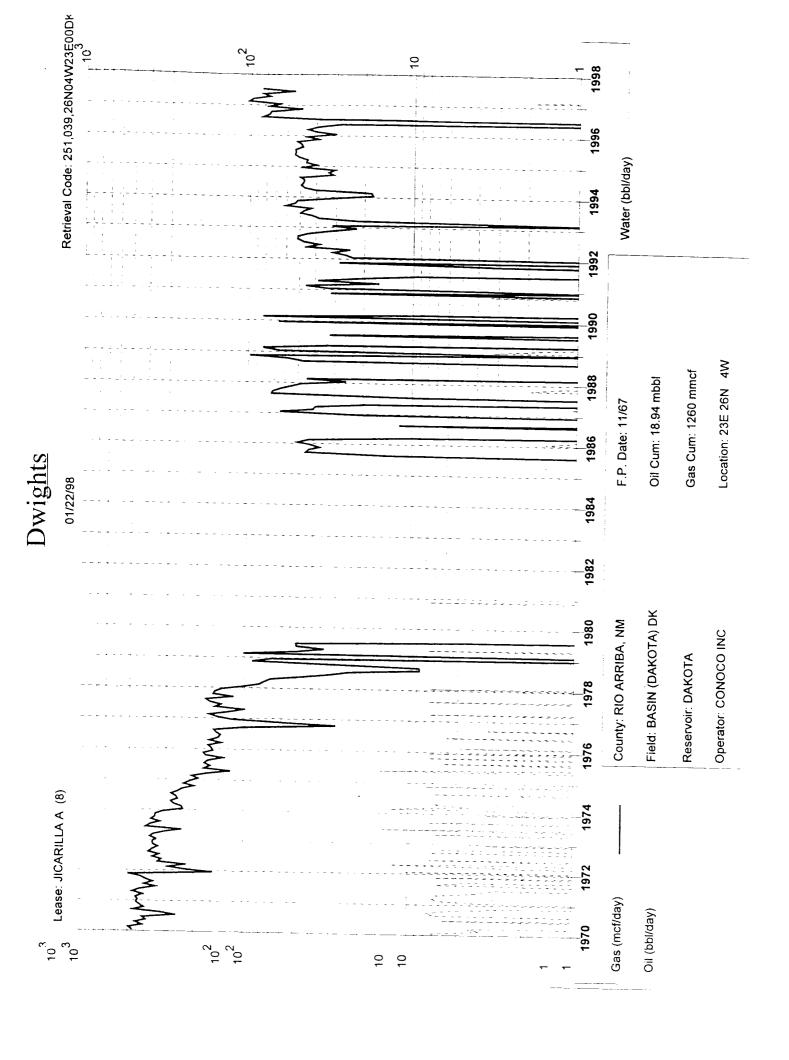
State of New Mexico Energy, Minerals and Natural Rasources Department

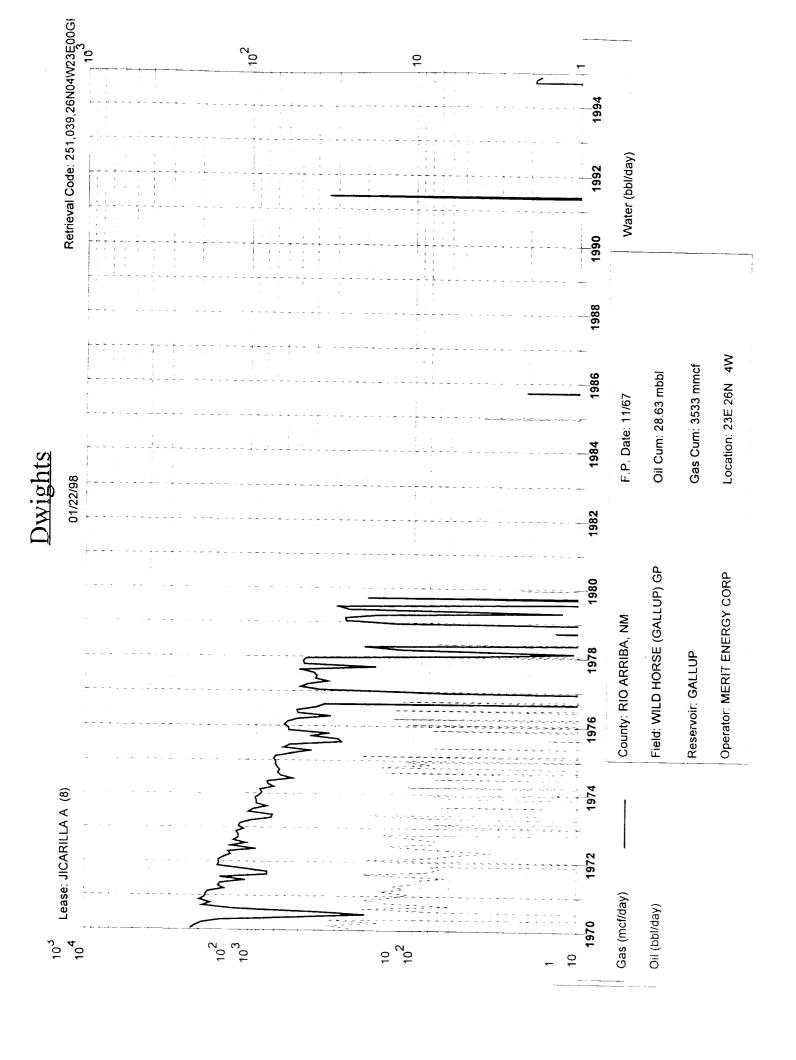
Form C-107-A New 3-12-96

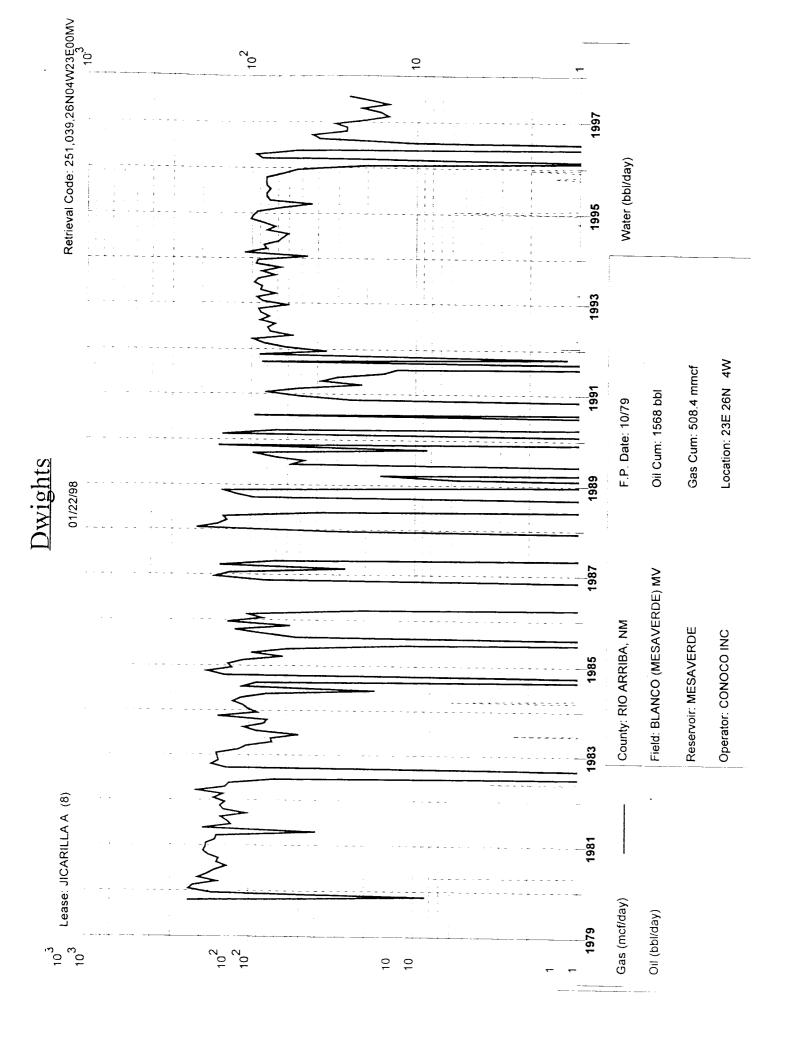
OIL CONSERVATION DIVISION

811 SouthI First St. Artesia NM 88210 2835	ÀIT CONSI	O40 S. Pacheco New Mexico 87505-6429:	APPROVAL BOOK
DISTRICT III 1000 Rio Brazos Rd Aztec, NM 87410 1693	- APPROVAL PROCES		
	APPLICATION FOR	DOWNHOLE COMMING	NG EXISTING WELLBOR
Conoco Inc.	William Ga	BOWNHOLE COMMINGLI	NG YES N
Operator		10 Desta Dr. Ste 100W, Mic	lland Ty 70705
Jicarilla A	1AY - 1 1933 19 _{#8}		
005070		Section 23, T-26-N, R-4	-W, E Rio Arriba
OGRID NO 005073 Property	Code - 18018 API NO	30-039-20029 s	County pacing Unit Lease Types: (check 1 or more)
The following to		50-039-20029 Fede	ral . State (and/or) Fee
support of downhole comminging:	Upper Zone	intermediate Zone	
1 Pool Name and		Zone	Lower Zone
Pool Code	Blanco Mesaverde 71599	Wildhorse Gallup	Davis Dat
2. TOP and Bottom of	71399	87360	Basin Dakota 71599
Fay Section (Perforations)	5621-5807'		
3 Type of production (Oil or Gas)		7214-7240'	7700-7872'
	Gas		
4 Method of Production {Flowing or Artificial Lilt}		Gas	Gas
5 Bottomhole Pressure	Flowing	Flowing	
Oil Zones - Artificial Life	a (Current)	a.	Flowing
Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current	590 psia	324 psia	a.
All Gas Zones: Measured Current Estimated Or Measured Original	b(Original)	524 psia	806 psia
	1368	1	b.
6. Oil Gravity (°API) or Gas BT Content		2135	2645
7 Producing or Shut-In?	1306	1413	
7 Froutening or Shut-In?	Producing		1267
Production Marginal? (yes or no)		Producing	Producing
• If Shut-In give data	Yes	Yes	Yes
Note For name as	Rates	Date	Date
estimates and supporting data		Rates	Rates
If Producing, date and oil/gas/ water rates of recent test	Date Est 2/98	Date Est 2/98	
(within 60 days)	Rates 67 MCFD, 0 BWPD, .2 BOPD	Rates 128 MCFD, .2 BWPD,	Est 2/98 Rates 63 MCFD, .25 BWPD,
Fixed Percentage Allocation		1 BOPD	1 BOPD
Formula -% or each zone	Gas	oil Gas	Oil
If allocation formula is been t	926 %	49 **	45 % Gas
If allocation formula is based up submit attachments with suppo Are all working, overriding, and If not, have all working, overrid	on something other than currently data and/or explaining me	ent or past production, or is had	Sed up a
			ctions or other required data.
riave an offset operators been g	iven written notice of the property	notified by certified mail?	X Yes No
Will cross-flow occur? X Yes	No If yes, are fluids com	osed downnole commingling?	Yes X No X Yes No
flowed production be recovered.	and will the allocation formula	osed downhole commingling? npatible, will the formations not a be reliable. X Yes No	be damaged, will any cross-
meadord lights from all C	Ommingled zongs assured	- Indiah	(in No. allach explanation)
if this area	ecreased by commingling?	Yes X No	s No
if this well is on, or communitize United States Bureau of Land M NMOCD Reference Cases for Ru	d with, state or federal lands, anagement has been notified.	either the Commissioner of Pu	attach explanation)
-1100 Cases 101 KU	le 303(D) Exceptions:	ODDES	162 MO
ATTACHMENTS * C-102 for a - 1	,	ORDER NO(S)DH	C-1095, R-5857
* Production curve for ex-	d be commingled showing its s ach zone for at least one year	spacing unit and acreage dedicated the splan duction rates and support in the splan duction rates and splan duction rates are duction rates and splan duction rates and splan duction rates are duction rates and duction rates are duction rates and duction rates are duction rates and duction rates are ductio	ation
• Notification line	on method or formula	duction rates and supporting da	lation.)
NOtification 11 . a	riser operators.		•••
udditional stateme	king, overriding and royalty ints, data, or documents requir	red to support common interest	cases.
			··
eby certify that the information at	pove is true and complete to t	he best of my knowledge and h	elief
ATURE TUY		TIE Popular	0 -
OR PRINT NAME Kay Maddox		LL Regulatory Agent	DATE HOLL 14, 1998
······································		TELEPHONE NO. (915	(1)
		1910	686-5798









MELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102 Supersedes C-128 Effective 1-1-55

All distances must be from the outer boundaries of the Section Operator Lease Well No. Supron Energy Corporation JICARILLA "A" 8 Unit Letter Section Township Range County E 23 26 North 4 West Rio Arriba Actual Footage Location of Well: feet from the NORTH line and WEST feet from the Ground Level Elev. Producing Formation Dakota, Basin Dakota, Blanco Mv. 320 W/2 Dakota & Mv 6863.0 Mesaverde & Gallup & Wild Horse Gallup 160 NW/4 Gallupicres 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling.etc? XX Yes No If answer is "yes," type of consolidation _ Communitization If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)_ No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commis-CERTIFICATION I hereby certify that the information con-8851-Rudy D. Motto Position Area Superintendent Company SUPRON ENERGY CORPORATION Jicarilla Apache Contract #105 March 22, 1979 LENGINEED supervision, and the place some Date Surveyed 11 May 1967 Registered Professional Engine Certificate No.

660

.90

1320 1650

2310

2000

1500

1000

Conoco, Inc. 10 Desta Dr STE 100W Midland, TX 79705

RE: Jicarilla A #8 Downhole Commingle Application C-107A Section 23, T-26-N, R-4-W, E

Notification of Offset Operators:

Chateau Oil & Gas 2515 McKinney Ave STE 840 Dallas, TX 75201

Burlington Resources PO Box 4289 Farmington, NM 87499

State of New Mexico ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT Santa Fe, New Mexico 87505



OIL CONSERVATION DIVISION



ADMINISTRATIVE ORDER DHC-1095

Merit Energy Company 12222 Merit Drive, Suite 1500 Dallas, Texas 75251

Attention: Terry D. Gottberg

Authorization to downhole commingle Basin Dakota Pool and Blanco Mesaverde Pool production.

Dear Mr. Gottberg:

Reference is made to your recent application for an exception to Rule 303-A of the Division Rules and Regulations to permit downhole commingling in the wellbore, the production of the above mentioned pools in the following described wells:

Well Name	Number	Unit Letter	Section
Jicarilla "A"	8	E	23
Jicarilla "A"	9	С	14
Jicarilla "A"	10E	G	23
Jicarilla "A"	13E	N	13
Jicarilla "A"	22Y	K	24
Jicarilla "B"	8A	D	25

All wells located in Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

It appearing that the subject wells qualify for approval for such exception pursuant to the provisions of Rule 303-C, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the two zones is hereby placed in abeyance.

In accordance with the provisions of Rule 303-C-4., total commingled oil production from the subject wells shall not exceed 30 barrels per day, and total water production shall not exceed 60 barrels per day.

Forestry and Resources Conservation Division |P.O. Box 1948 | 87504-1848 | 827-6430 |
Park and Recreation Division |P.O. Box 1147 | 87504-1147 |
827-7485

Office of the Secretary
827-5950
Administrative Services
827-5925
Energy Conservation & Management
827-5900
Milning and Minerals
827-5970
Oil Conservation
827-7121
214 950 1252 PAGE.202

Administrative Order DHC-1095 Merit Energy Company February 21, 1995 Page 2

The maximum amount of gas which may be produced daily from the wells shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

MARKET TOTAL CO

In accordance with the provisions of Rule 303-C, the supervisor of the Aztec District Office of the Oil Conservation Division shall determine the proper allocation of production from the subject wells following their completion.

FURTHER: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303-C-5, the commingling authority granted by the order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 21st day of February, 1995.

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION

WILLIAM J. LEMAY

Director

SEAL

WJL/BES

cc: Oil Conservation Division - Aztec

ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

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

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CASE NO. 6341 Order No. R-5857

APPLICATION OF SUPRON ENERGY CORPORATION FOR DUAL COMPLETIONS AND DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 8, 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 29th day of November, 1978, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Supron Energy Corporation, seeks the dual completion of its Jicarilla "A" Well No. 8 located in Unit E of Section 23; its Jicarilla "E" Well No. 7 located in Unit P of Section 15; and its Jicarilla "E" Well No. 8 located in Unit C of Section 15, all in Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Mesaverde formation through tubing and to produce commingled Gallup and Dakota production through a separate string of tubing with separation of the Mesaverde zone from the commingled zones by means of a packer.
- (3) That the mechanics of the proposed dual completions are feasible and in accord with good conservation practices.

action practices.

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- (4) That 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.
- (5) That the reservoir characteristics of the Gallup and Dakota formations in each of the subject wells are such that underground waste would not be caused by the proposed commingling provided that the wells are not shut in for an extended period.
- (6) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Division any time any of the subject wells is shut in for 7 consecutive days.
- (7) That in order to allocate the commingled production to each of the commingled zones in the subject wells, applicant should conduct tests during completion operations, and should consult with the supervisor of the Division's Aztec office to arrive at an allocation formula.
- (8) That approval of the subject application will prevent waste and protect correlative rights.
- (9) That Division Orders Nos. MC-1777, MC-1803, and MC-1802, which authorized the dual completion of the subject wells, should be superseded.

IT IS THEREFORE ORDERED:

(1) That the applicant, Supron Energy Corporation, is hereby authorized to dually complete its Jicarilla "A" Well No. 8 located in Unit E of Section 23; its Jicarilla "E" Well No. 7 located in Unit P of Section 15; and its Jicarilla "E" Well No. 8 located in Unit C of Section 15, all in Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to each produce gas from the Mesaverde formation through tubing and to produce commingled Gallup and Dakota production through a separate string of tubing with separation of the Mesaverde zone from the commingled zones to be achieved by means of a packer.

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said wells in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

-3-Case No. 6341 Order No. R-5857

4

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for the prorated gas wells in Northwest New Mexico.

- (2) That the applicant, during completion operations on the subject wells, shall conduct tests, and shall consult with the supervisor of the Division's Aztec office to determine a formula for allocation of production to each zone in each well.
- (3) That the operator of the subject wells shall immediately notify the Division's Aztec district office any time any such well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.
- (4) That Division Orders Nos. MC-1777, MC-1803, and MC-1802 are hereby superseded.
- (5) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OLL CONSERVATION BIVISION

JOE D. RAMEY,

Director

SEAL

dr/



Midland Division **Exploration Production**

February 20, 1996

Conoco Inc. 10 Desta Drive, Suite 100W Midland, TX 79705-4500 (915) 686-5400

Mr. Ernie Busch Aztec District Office 1000 Rio Brazos Rd. Aztec, New Mexico 87410

Re:

Jicarilla "A" No. 8 Downhole Commingling Allocation Formula Approval Unit E, Section 23, Township 26 North, Range 4 West, Rio Arriba County Downhole Commingling Authorized by Administrative Order DHC-1095

Dear Mr. Busch:

Conoco recently purchased the subject well from Merit Energy Company. Downhole commingling approval had already been secured by Merit through Order DHC-1095, but apparently Merit had not yet contacted your office to secure approval of an allocation formula for the commingled well. Therefore, Conoco as the current operator is submitting the following production history and proposed fixed allocation formula for your approval.

EXHIBIT A: Blanco Mesaverde production history plot

EXHIBIT B: Basin Dakota production history plot

EXHIBIT C: -- Production plots with projected exponential decline fit of data

-- Historical data for both zones (cums, current rates, decline rates)

- 1/1/96 producing rates

--- Proposed fixed allocation factors based on 1/1/96 rates

Since decline analysis of both producing zones indicates that both are producing at a stabilized 4.5% exponential decline, it is proposed that the following fixed percentage formula be established for proper allocation of production from this commingled well:

	<u>GAS</u>	<u>OIL</u>
Blanco Mesaverde	65 %	26 %
Basin Dakota	35 %	74 %

If you have any further questions or requirements for your consideration of this proposal, please contact me at (915) 686-6548.

Very truly yours,

Jerry W. Hoover

Sr. Conservation Coordinator

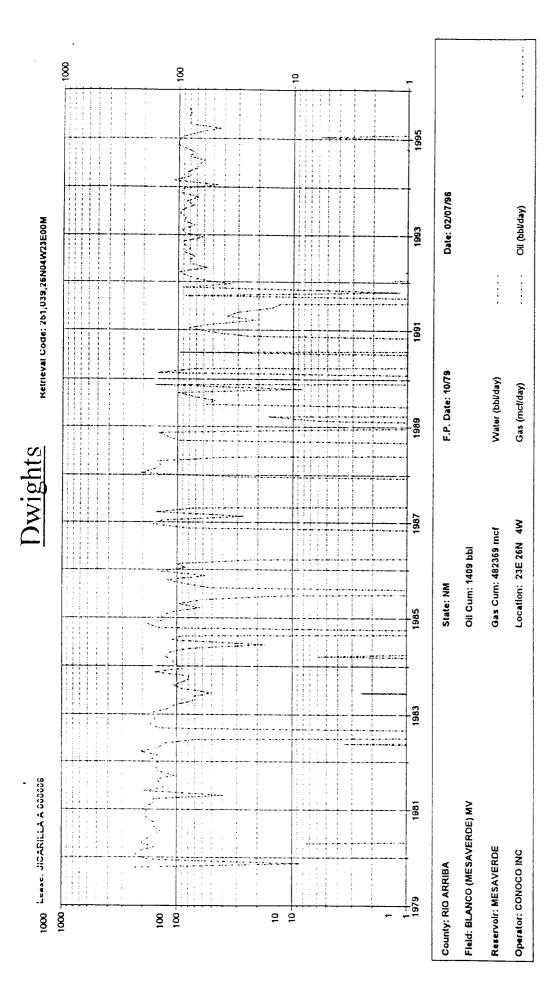
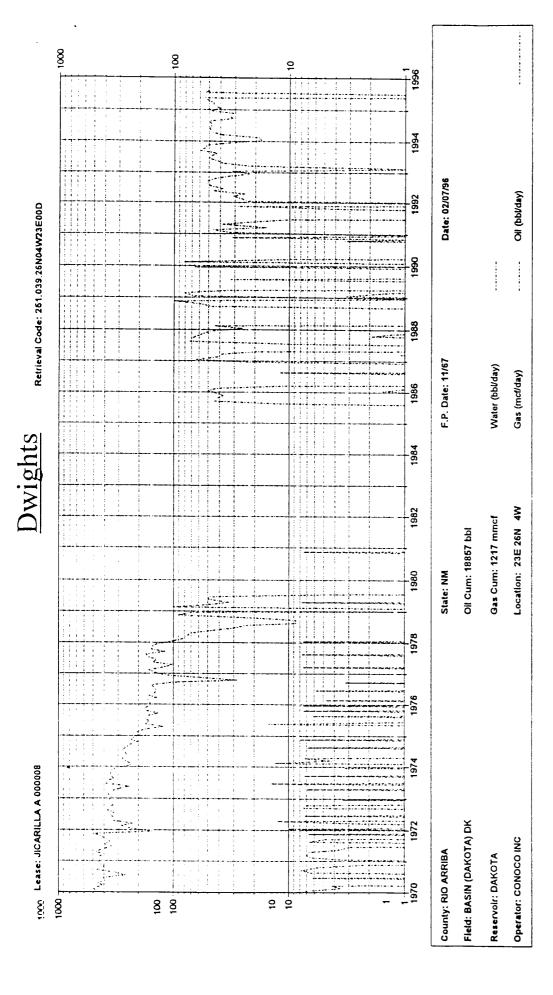
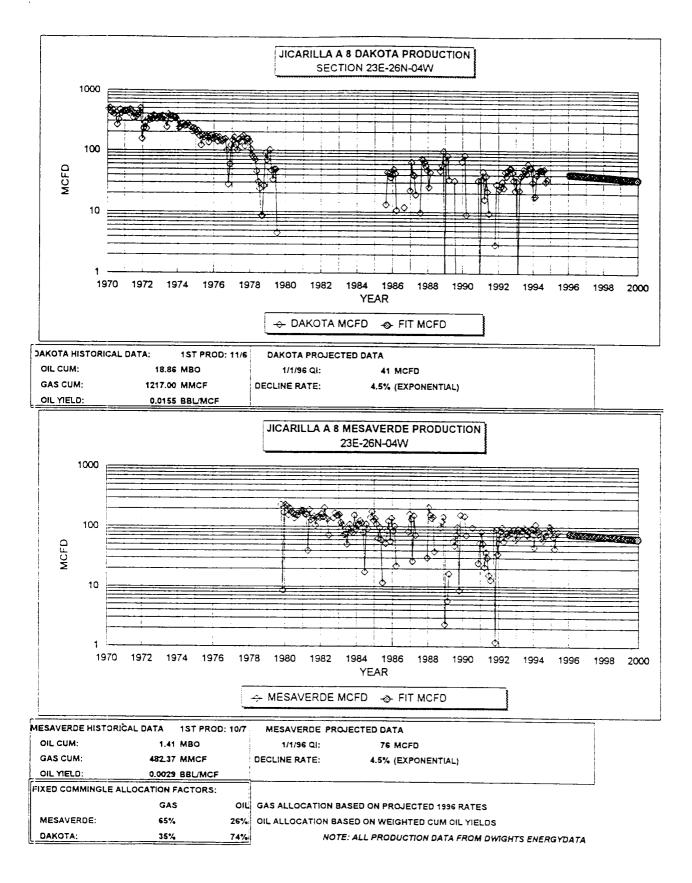


EXHIBIT A





UNITED STATES SUBMIT IN DUPLICALE. Form approved. Budget Bureau No. 42-R355.5. DEPARTMENT OF THE INTERIOR 5. LEASE DESIGNATION AND SERIAL NO. GEOLOGICAL SURVEY Contract #105 6. IF INDIAN, ALCOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG* Jicarilla Apache 1a. TYPE OF WELL: WELL X Other UNIT AGREEMENT NAME b. TYPE OF COMPLETION: WELL X Other S. FARM OR LEASE NAME 2. NAME OF OPERATOR Jicarilla "A" Southern Union Production Company 8 P. O. Box 808, Farmington, New Mexico 87401 10. FIELD AND POOL Basin Dakota Undesignated Gallup 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 1450 ft. from the North line & \$85 ft. from the West line 11. Sec., T., B., W., OH BLOCK AND SURVEY OR AREA At top prod. interval reported below Same as above Sec. 23, T-26N, H-NW N.H.P.M. At total depth Same as above 14. PERMIT NO. DATE ISSUED 12. COUNTY OR 13. STATE -Rio Arriba New Mexico 15. DATE SPUDDED 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (OF. REB, RT, GR, ETC.) - 19. ELEV. CASINGHEAD 5/19/67 6/7/67 6/22/67 6873 ft. R.K.B. 6863 ft. 22. IF MULTIPLE COMPL., HOW MANY* 20. TOTAL DEPTH. MD & TVD 21. PLUG. BACK T.D., MD & TVD INTERVALS DRILLED BY ROTARY TOOLS CABLE TOOLS 3.34 7965 MD & TVD 7928 MD & TVD 0-7965 24. PRODUCING INTERVAL(S), OF THIS COMPLETION-TOP, BOTTOM, NAME (MD AND TVD) WAS DIRECTIONAL SURVEY MADE 7214-7240 ft. MD & TVD 7700-7872 ft. MD & TVD NO TYPE ELECTRIC AND OTHER LOGS RUN 27. WAS WELL CORED Induction-Electrical, Density, Gamma Ray Correlation, Cement Bond NO CASING RECORD (Report all strings set in well) CASING SIZE WEIGHT, LB./FT DEPTH SET (MD) HOLE SIZE CEMENTING RECORD AMOUNT PULLED 10-3/4" 32.75 15" 302 ft. 275 sacks 7-5/8" 26.40 3750 ft. 9-7/8" 350 cu. ft. 5-1/2" 15.50 & 17.0# 7965 ft. 6-3/4" 750 cu. ft. 29 LINER RECORD TUBING RECORD SIZE BOTTOM (MD) SCREEN (MD) SACKS CEMENT SIZE DEPTH SET (MD) PACKER SET (MD) 1-1/2" 7219 ft. Gallup 1-7/2" 7628 ft. KD. 7620 ft. 31. PERFORATION RECORD (Interval, size and number) ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. ? Undesignated Gallup: 2/ft. 7214-7240 DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL CSED 7214-7240 Acidized w/500 gal. 75 Mud Acid 2/ft. 7700-7724, 7816-7825, Dekota: Acidized w/2500 gal. 15% Acid. 7828-7832**,**7854-7872 7700-7872 Sand Frac. w/80,000# sand, Hole Size 0.48" 125,160 gal. 0.8% KCL water & PRODUCTION 2000# glass beads. PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump DATE FIRST PRODUCTION WELL STATUS (Producing or shuf-in) Shut-in 8/23/67 3/4H HOURS TESTED 84K PROD'N. FOR QIL-BBL. WATER-BEL. GAS-OIL RATIO TEST PERIOD 8/31/67 PRESS 3/1. H 131 Dakota 2783 1991 Gallup OIL GRAVITY-API (CORR.) 924 24-HOUR RATE Packer Dakota 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY Vented Kenneth E. Roddy 35. LIST OF ATTACHMENTS

Sept. 25, 1967 DATE

CONDITIONS OF APPROVAL FOR DOWNHOLE COMMINGLING

Operator	Conoco_Inc.	Well Name	Jicarilla A #8

- 1. The individual production zones will be tested every three years, or more often if production rates indicate a change to allocation factors, to verify that the allocation factors and methods remain proper.
- 2. Production from downhole commingled wells are to be reported with an alpha character, "C" (ie C1, C2, etc).
- 3. The following modifications to your downhole commingling program are to be made:

A copy of the well bore diagram will be submitted to BLM.