

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

ILLEGIBLE

December 7, 1965

C
O
P
Y
Monsanto Company
Hydrocarbons Division
101 North Marienfeld
Midland, Texas 79704

Attention: Mr. A. W. Wood

Administrative Order PIC-24

Gentlemen:

Reference is made to your application dated October 21, 1965, wherein you request authority to commingle the gas production from the Morrow and Strawn zones in your Dagger Draw Well No. 1 located in Section 6, Township 20 South, Range 25 East, Eddy County, New Mexico. The Morrow zone has 640 acre spacing, and the Strawn zone has 320 acre spacing; therefore, exception to Rule 309-A pertaining to commingling between the leases with diversified ownership also applies in this request. It is our understanding that the gas production from each pool will pass through a heater and a high pressure oil-gas separator, after which it will be metered prior to being commingled in a dehydrator; that the Morrow liquids will be passed through a low pressure separator and stored separately from the Strawn liquids which will be subject to one stage separation only.

Pursuant to the authority granted me under the provisions of Rule 303 (b) and 309-B of the Commission Rules and Regulations, you are hereby authorized to commingle the gas production from the aforesaid pools and ownership areas in the above-described manner. Provided, however, that the installation shall be installed and operated in accordance with the Commission's commingling manual.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP:DSN:sg

cc: Oil Conservation Commission (with enclosure) - Artesia
Oil & Gas Engineering Committee - Hobbs

Monsanto

C O M P A N Y

HYDROCARBONS DIVISION

101 North Marienfeld
Midland, Texas 79704
(915) MUtual 3-3306

October 21, 1965

New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Attention Mr. D. S. Nutter

Gentlemen:

We are applying for administrative approval to commingle the gas production from the Morrow and Strawn zones in Monsanto's Dagger Draw Well #1 located in Section 6, T-20S, R-25E, Eddy County, New Mexico. The Morrow zone has 640 acre spacing, and the Strawn zone has 320 acre spacing; therefore, Rule 309-B (Exception to Rule 309-A) pertaining to commingling between leases with diversified ownership applies to this request. Exception to Rule 303 governing commingling between pools or zones also applies to this request.

The information requested in rules 303 and 309-B for administrative approval to commingle production is submitted as follows:

1. A plat is enclosed showing the location of the Dagger Draw #1 and the spacing of the Morrow and Strawn zones from which the well is producing. This is the only well on the lease.
2. Volume and gravity data of each gas to be commingled. (See Multi-Point Back Pressure Test for Gas Wells - Form C-122.)

	<u>Morrow</u>	<u>Strawn</u>
Gravity of separator gas	.6556	.671
Gas-liquid hydrocarbon ratio	195 MCF/bbl	0
Absolute potential	3900 MCFPD	1950 MCFPD

3. Value of the Gas - The gas is contracted to Natural Gas Pipeline Company of America at 16¢/MCF, subject to adjustment for heating values below 1000 BTU/cf. The heating values of the Morrow and Strawn gas are 1111 BTU/cf and 1141 BTU/cf respectively; therefore, the value of the commingled gas would also be 16¢/MCF.

October 21, 1965

4. Schematic Diagram of the Proposed Production Equipment Installation - The gas from each zone will be produced into individual heaters and high pressure oil-gas separators. The gas from each high pressure separator will be measured by orifice meters and then commingled before entering the glycol dehydrator. The commingled gas goes from the dehydrator into the gathering line. The small amount of gas from the low pressure separator will be used for heater fuel, or vented. This gas will not be at high enough pressure to go into the gathering line.

Liquid hydrocarbon production from the Morrow and Strawn zones will not be commingled in order to comply with rules 303 and 309-A. We do not expect enough liquid from the Strawn gas to justify a low pressure separator for this zone.

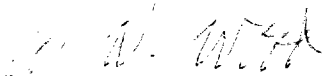
5. Permission to commingle gas from the Morrow and Strawn zones in the Dagger Draw Well #1 has been requested from the Regional Supervisor of the United States Geological Survey (copy of letter attached).
6. A list of working interest, royalty, and overriding royalty owners is enclosed. These parties and Natural Gas Pipeline Company of America (purchaser of the gas) have been advised of our request to commingle the Morrow and Strawn gas of the Dagger Draw #1 by copy of this letter.

Commingling of gas from the Morrow and Strawn zones in our Dagger Draw #1 is being requested so that only one dehydrator and gathering line will be required for gas sales. We will have to run approximately 3400' of gathering line from our Dagger Draw #1 to Section 12, T-20S, R-24E, to connect into the pipeline of Natural Gas Pipeline Company of America.

Gas sales will be allocated to each zone according to the Allocation Formula in your Manual for the Installation and Operation of Commingling Facilities.

Approval for commingling the gas from the Morrow and Strawn zones in our Dagger Draw Well #1 will be greatly appreciated.

Yours very truly,



A. W. WOOD
District Production
Superintendent

AWW:PDH:1p
Encl.

DAGGER DRAW - Section 6

WORKING INTEREST OWNERS

Cities Service Oil Company
Bartlesville, Oklahoma

Tom L. Ingram
1000 South Kentucky
Roswell, New Mexico

Eugene E. Nearburg
Box 19598
Dallas, Texas

Frank W. Podpechan
1200 Wilco Building
Midland, Texas

Merl C. Kelce
c/o Frank W. Podpechan
1200 Wilco Bldg.
Midland, Texas

Monsanto Company

ROYALTY OWNERS

The Superior Oil Company
Box 1521
Houston, Texas

Yates Brothers
309 Carper Bldg.
Artesia, New Mexico

S. P. Johnson, Jr.
P. O. Box 1713
Roswell, New Mexico

U. S. Department of Interior
Geological Survey
P. O. Drawer 1875
Roswell, New Mexico

OVERRIDING ROYALTY OWNERS

Edgar A. G. Bright
316 Audubon Street
New Orleans, Louisiana

Jo Anna Wilis Light
1409 W. Orchard Lane
Carlsbad, New Mexico

Robert L. Monaghan
Box 3275
Midland, Texas

Socony Mobil Oil Company
P. O. Box 633
Midland, Texas

Bonnie M. Morrison
3 Park Road
Roswell, New Mexico

John B. Carter, Jr.
2426 Bank of the Southwest Bldg.
Houston, Texas

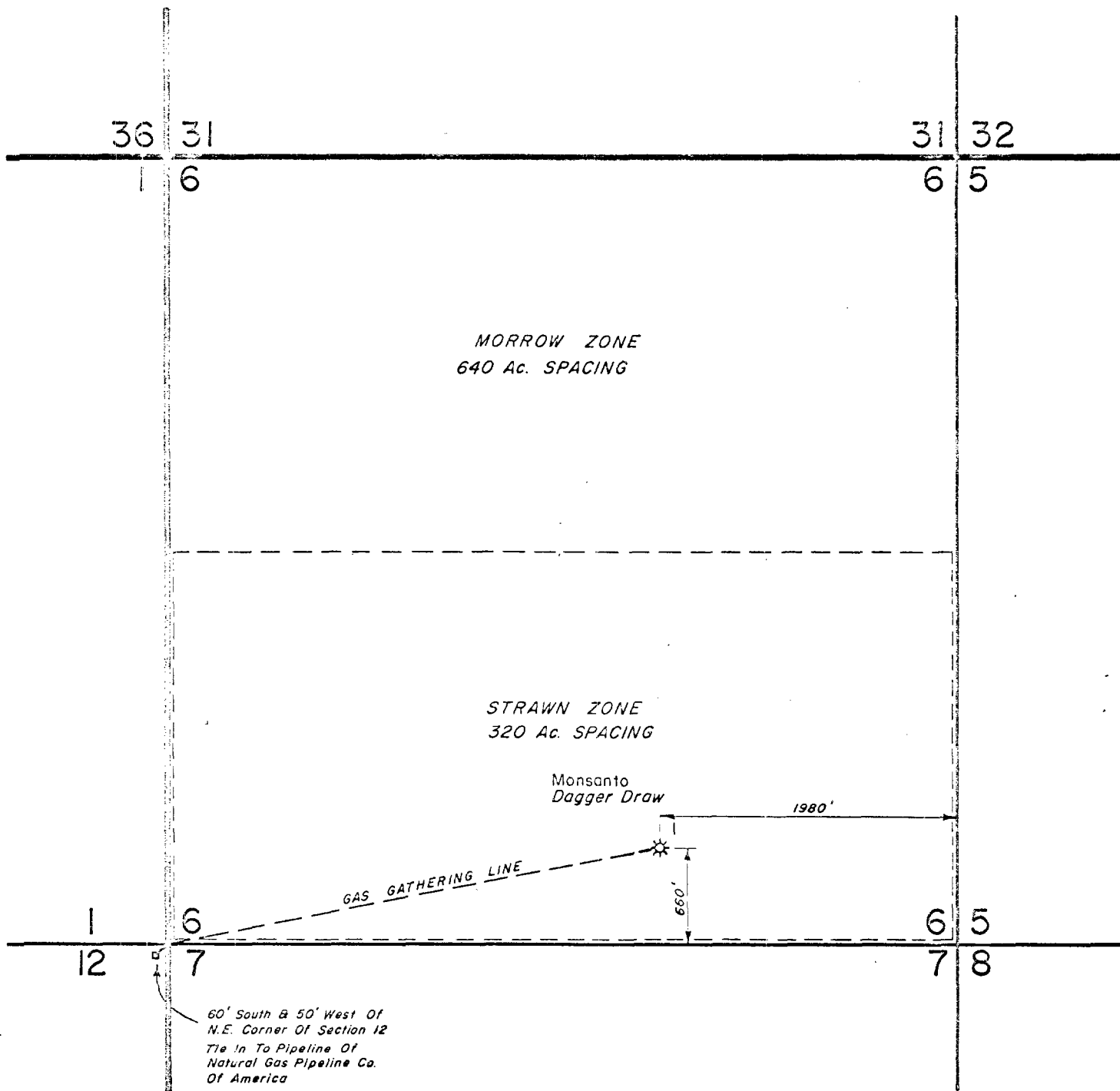
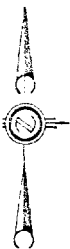
SPACING PATTERNS
MORROW & STRAWN ZONES

R - 24 - E

R - 25 - E

T
19
S

T
20
S

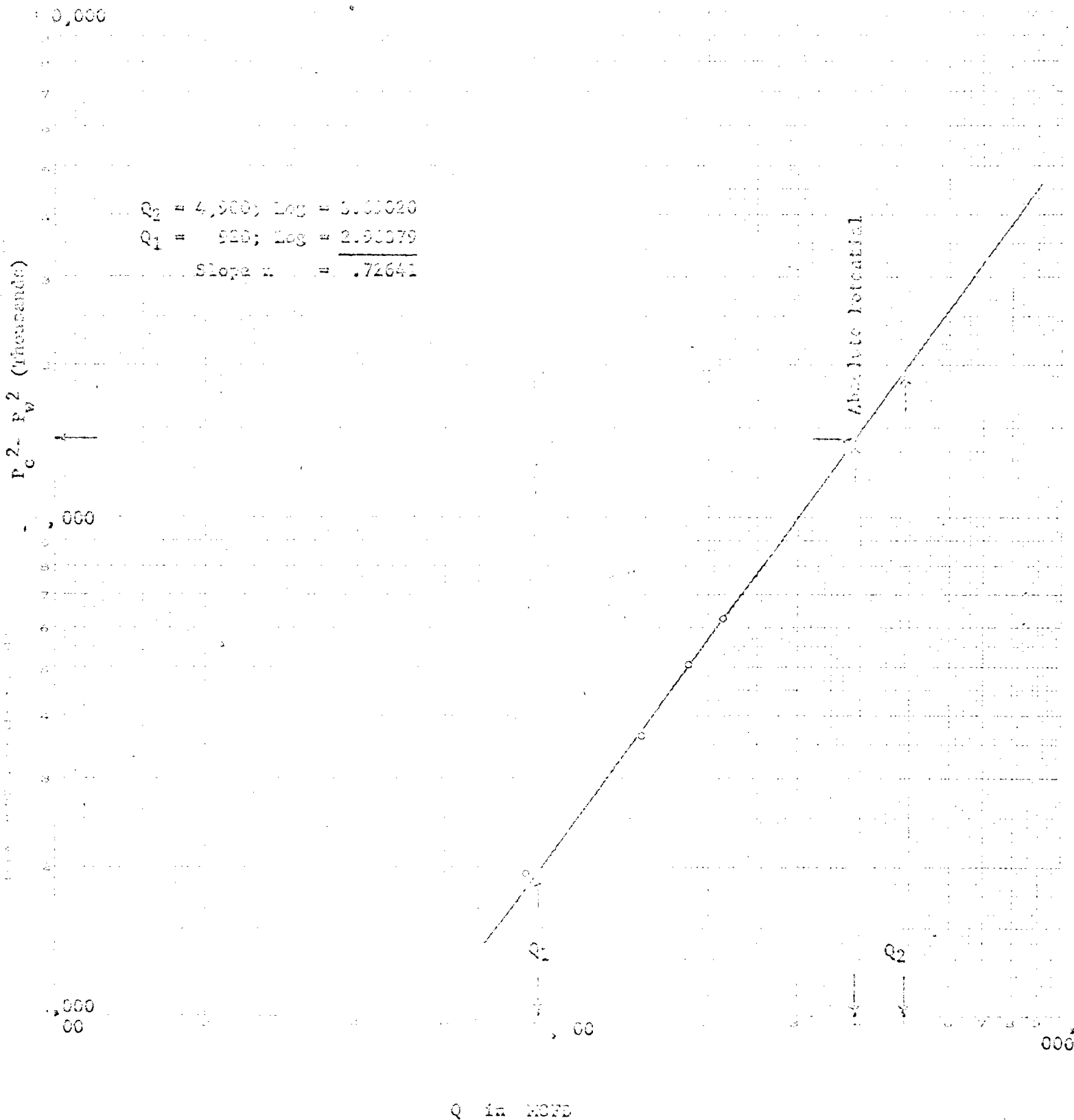


DAGGER DRAW AREA
Eddy County, New Mexico
SCALE: 1" = 1000'

COUNTY WISCONSIN: DAVENPORT
 STATE WISCONSIN: DAVENPORT
 LOCATION WISCONSIN: DAVENPORT
 COUNTY WISCONSIN: DAVENPORT
 DATE 8-7-54

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CORRECTED COPY



ILLEGIBLE

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Date of Completion: 3-25-64 Packer 2736 Reservoir Temp.

Tested Through	(Provis)	(CRSR)	(Meter)	Type Taps	Range

2000-0000

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool _____ Formation _____ County _____

Initial _____ Annual _____ Special _____ Date of Test _____

Company _____ Lease _____ Well No. _____

Unit _____ Sec. _____ Twp. _____ Rge. _____ Purchaser _____

Casing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____

Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____

Gas Pay: From _____ To _____ L _____ xG _____ -CL _____ Bar.Press. _____

Producing Thru: Casing _____ Tubing _____ Type Well _____

Date of Completion: _____ Packer _____ Single-Bradenhead-G. G. or G.O. Dual _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Packer) (Choke) (Meter) _____ Type Taps _____

No.	Flow Data				Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. $^{\circ}F.$	Press. psig	Temp. $^{\circ}F.$	Press. psig	
SI									
1.									
2.									
3.									
4.									
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_c	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.							
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c _____ $(1-e^{-S})$

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c _____ P_c^2 _____

No.	P_w P_t (psia)	P_c^2	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2 (1-e^{-S})$	P_w^2	$P_c^2 - P_w^2$	Cal. $\frac{P_w}{P_c}$	$\frac{P_w}{P_c}$
1.									
2.									
3.									
4.									
5.									

Absolute Potential: _____ MCFPD; n _____

COMPANY _____

ADDRESS _____

AGENT and TITLE _____

WITNESSED _____

COMPANY _____

REMARKS

Monsanto

C O M P A N Y

HYDROCARBONS DIVISION

101 North Marienfeld
Midland, Texas 79704
(915) MUtual 3-3306

October 21, 1965

U. S. Department of Interior
Geological Survey
Drawer 1857
Roswell, New Mexico 88201

Attention Mr. John A. Anderson

Gentlemen:

In reference to my letter of October 12, 1965, application is being re-submitted for permission to commingle only the gas from the Morrow and Strawn zones in our Dagger Draw Well #1 located in Section 6, T-20S, R-25E, Eddy County, New Mexico.

A schematic of the proposed production equipment is enclosed. Gas from each zone will be produced into individual heaters and high pressure oil-gas separators. The gas from each high pressure separator will be measured by orifice meters and then commingled before entering the glycol dehydrator. The commingled gas will go from the dehydrator into the gathering line. Sales gas will be allocated to each zone according to the orifice meter readings at the high pressure separators.

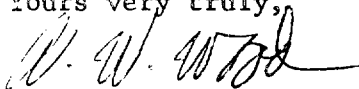
The small amount of gas from the low pressure separator will be used for heater fuel, or vented. This gas will not be at high enough pressure to go into the gathering line.

Liquid production from the Morrow and Strawn zones will not be commingled before marketing.

Commingling of gas from the Morrow and Strawn zones in our Dagger Draw #1 is being requested so that only one dehydrator and gathering line will be required for gas sales. We will have to run approximately 3400' of gathering line from our Dagger Draw #1 to Section 12, T-20S, R-24E, to connect into the pipeline of Natural Gas Company of America.

Your approval for commingling the gas from the Morrow and Strawn zones in our Dagger Draw #1 will be greatly appreciated.

Yours very truly,



A. W. WOOD

District Production
Superintendent

MONSANTO ^{#1}-Dagger Draw
Eddy County, New Mexico

