

dugan production corp.

August 1, 1997

Mr. Bill LeMay, Director
New Mexico Oil Conservation Div.
2040 South Pacheco
Santa Fe, NM 87505

Mr. Duane Spencer, Fluid Minerals Mgr.
Bureau of Land Management
1235 La Plata Highway
Farmington, NM 87401

Re: Proposed surface commingling
Dugan Production Corp.'s
Five of Diamonds CPD
Five of Diamonds wells No. 2S & 90
API No.'s 30-045-24557 & 30-045-29425
Choke Cherry Fruitland Sand & Basin Fruitland Coal Pools
Unit L, Section 10, T-30-N, R-13-W
San Juan County, NM

RECEIVED
AUG - 4 1997

OIL CON. DIV.
DIST. 3

Dear Mr. LeMay and Mr. Spencer:

We are writing to request your administrative approvals to surface commingle natural gas production from the captioned 2 wells operated by Dugan Production Corp. (DPC). Both wells are located on Federal Lease No. NM-030555A which comprises the west half of Section 10 and all of the spacing units for both wells. Dugan Production holds 100% of the working interest in both wells and all other interest in both wells is common.

Attachments No. 1 and 2 are copies of NMOCD forms C-102 and presents the spacing units for each well. Attachment No. 3 presents a sketch of the proposed facilities. We propose to connect our recently completed Five of Diamonds No. 90 for gas sales using the meter for our Five of Diamonds No. 2S. El Paso Field Services will not set a separate meter for the No. 90 well, but is willing to convert the Five of Diamonds No. 2S meter to a CPD sales meter for the Five of Diamonds No. 2S and No. 90. The meter currently in use for the Five of Diamonds No. 2S has served as a central delivery meter for the Five of Diamonds No. 2 and No. 2S (NMOCD approval dated 7-23-85 - Ref. Attachment No. 4), however the No. 2 well is currently disconnected from the pipeline and we plan to plug and abandon this well.

The Five of Diamonds No. 90 was completed in the Basin Fruitland Coal pool on 1-15-97 and testing to date indicates that the well will not flow continuously and that production will likely be marginal. We installed rod pump equipment on 7-16-97 and plan to production test the Fruitland Coal.

Production is currently averaging \pm 40 BWPD plus just enough gas to provide fuel for the 7hp pumping unit engine (approximately 2 MCFD). We anticipate gas production will improve (which is typical to the Fruitland Coal) and propose to connect the Five of Diamonds No. 90 gas to the gas sales line from the Five of Diamonds No. 2S which will require approximately 50' of line to be installed and will require regulatory approval for the resulting surface commingling. The Fruitland Coal has not been developed in this area to date. Within Section 10 and the 8 adjacent sections, the only other coal completion was in Texakoma Oil & Gas Corp.'s Foothills No. 1, located approximately 1-1/2 miles to the Southeast (A-14-30N-13W) and this well has only produced 1,970 MCF since 8/85.

The Five of Diamonds No. 2S is also a marginal well, completed in the Choke Cherry Fruitland Sand Pool on 9-17-82. As of 7-1-97, a total of 19,702 MCF have been produced and production during 6-97 averaged 9.5 MCFD. Since 1-92, the well has produced very little. The production history for the Five of Diamonds No. 2S is presented on Attachment No. 5 and it can be seen that this well has not been a large producer even in its early days.

We propose to allocate production and revenues from the CPD sales meter to the Five of Diamonds No. 2S and No. 90 based upon fixed allocation factors to be determined annually by testing each zone. The No. 2S currently qualifies for alternative measurement methods and we anticipate the No. 90 will too. We do plan to continue using the existing gas sales meter at the CPD.

Neither well produces liquid hydrocarbons and the No. 2S produces very little water. The only other equipment currently requiring lease fuel is a 32hp, single stage compressor currently on the No. 2S which uses 8.1 MCFD and will be split between the wells using allocation factors determined from well production. Should it ever be necessary to vent gas from the gathering system or should a loss occur, the volumes will be estimated using appropriate procedures for the circumstances involved and will be allocated to each well affected based upon production volumes.

Our proposed allocation procedures are summarized on Attachment No. 6.

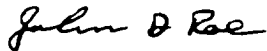
Attachment No. 7 presents a copy of a representative gas analysis from the No. 2S Fruitland Sand completion and although we do not currently have a gas sample from the No. 90 Fruitland Coal, we anticipate the composition and quality to be very similar and compatible with the gas from the No. 2S. There should be no affect upon the value of either gas stream resulting from commingling, particularly since we will allocate revenues from the CPD using individual well BTU's. In addition, since both wells are considered to be marginal, the sharing of a central compressor will help both wells to benefit from compression, and the shared costs of operating a compressor will reduce each wells operating costs and corresponding economic limits. Hopefully this will result in an increase of the ultimate gas recoveries in both wells.

We have provided a certified copy of the application to all interest owners and Attachment No. 8 presents that fact.

In summary, Dugan Production proposes to surface commingle natural gas production from 2 wells operated by DPC. Both wells are on the same Federal lease and only one lease is involved which results in all interest being common. The No. 2S has been producing since 1985 and is a marginal well. The No. 90 was recently completed, however testing indicates it will also be marginal. Our proposed surface commingling can be done very simply and will allow both wells to share a central compressor which should provide an increase in the ultimate recoveries from each well.

Should you need additional information or have questions, please let me know.

Sincerely,



John D. Roe
Engineering Manager

JDR/tmf

cc: Jerry W. Massengale
Hoover H. & Betty R. Wright
Frank Chavez, NMOCD-Aztec

Attachments

Form C-102
Revised February 21, 1992
Instructions on Back
Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

Attachment
NO. 1
Pg 1 of 1

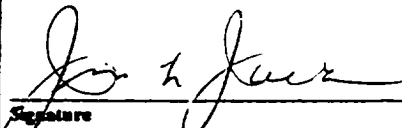

* API Number 30 045 24557		* Pool Code	* Pool Name Choke Cherry Fruitland Sand	No. 1 Pg 1 of 1
* Property Code 003683	* Property Name Five of Diamonds		* Well Number 2S	
* OGRID No. 006515	* Operator Name Dugan Production Corp.		* Elevation 5720' GL	

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	10	30N	13W		1840	South	790	West	San Juan

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16			17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <div style="text-align: right; margin-right: 20px;">  _____ Signature Jim L. Jacobs _____ Printed Name Vice-President _____ Title 12/12/94 _____ Date </div>
	Sec. 10		
790' —  1840'	Dugan Prod. NM-030555-A		18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. <div style="text-align: right; margin-right: 20px;"> 8/12/80 _____ Date of Survey Signature and Seal of Professional Surveyor: Original surveyed & signed by Edgar L. Risenhoover, LS 5979 _____ Certificate Number </div>

Market I
FD Box 1988, Hobbs, NM 88241-1988
Market II
FD Drawer DD, Artesia, NM 88211-0719
Market III
1000 Rio Pecos Rd., Aztec, NM 87410
Market IV
FD Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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BLP

96 OCT 22 AM 10:53

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* APT Number 30 045		* Pool Code 71629	* Pool Name Basin Fruitland Coal
* Property Code 003683	* Property Name Five of Diamonds		* Well Number 90
* OGRID No. 006515	* Operator Name Dugan Production Corporation		* Elevation 5718' Estimated

Attachment
NO. 2
pg 1 of 1

10 Surface Location

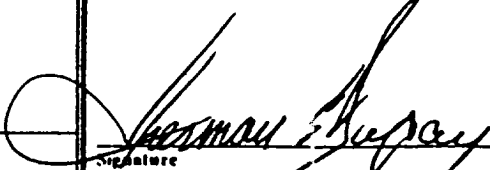

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	10	30N	13W		1740	South	1230	West	San Juan

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

* Dedicated Acres	* Joint or Infill	* Consolidation Code	* Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<div>6</div> <div>Dugan Prod. NM 03555-A 03055517</div> <div>1230'</div> <div>1740'</div>	<div>17 OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</div> <div></div> <div>Signature</div> <div>Sherman E. Dugan</div> <div>Printed Name</div> <div>Vice-President</div> <div>Title</div> <div>10-17-96</div> <div>Date</div>			
	<div>18 SURVEYOR CERTIFICATION</div> <div>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</div> <div>October 10, 1996</div> <div>Date of Survey</div> <div>Signature and Seal of Registered Surveyor:</div> <div></div> <div>Edgar L. Risenhoover</div> <div>Certificate No. 5979</div>			

Attachment No. 3

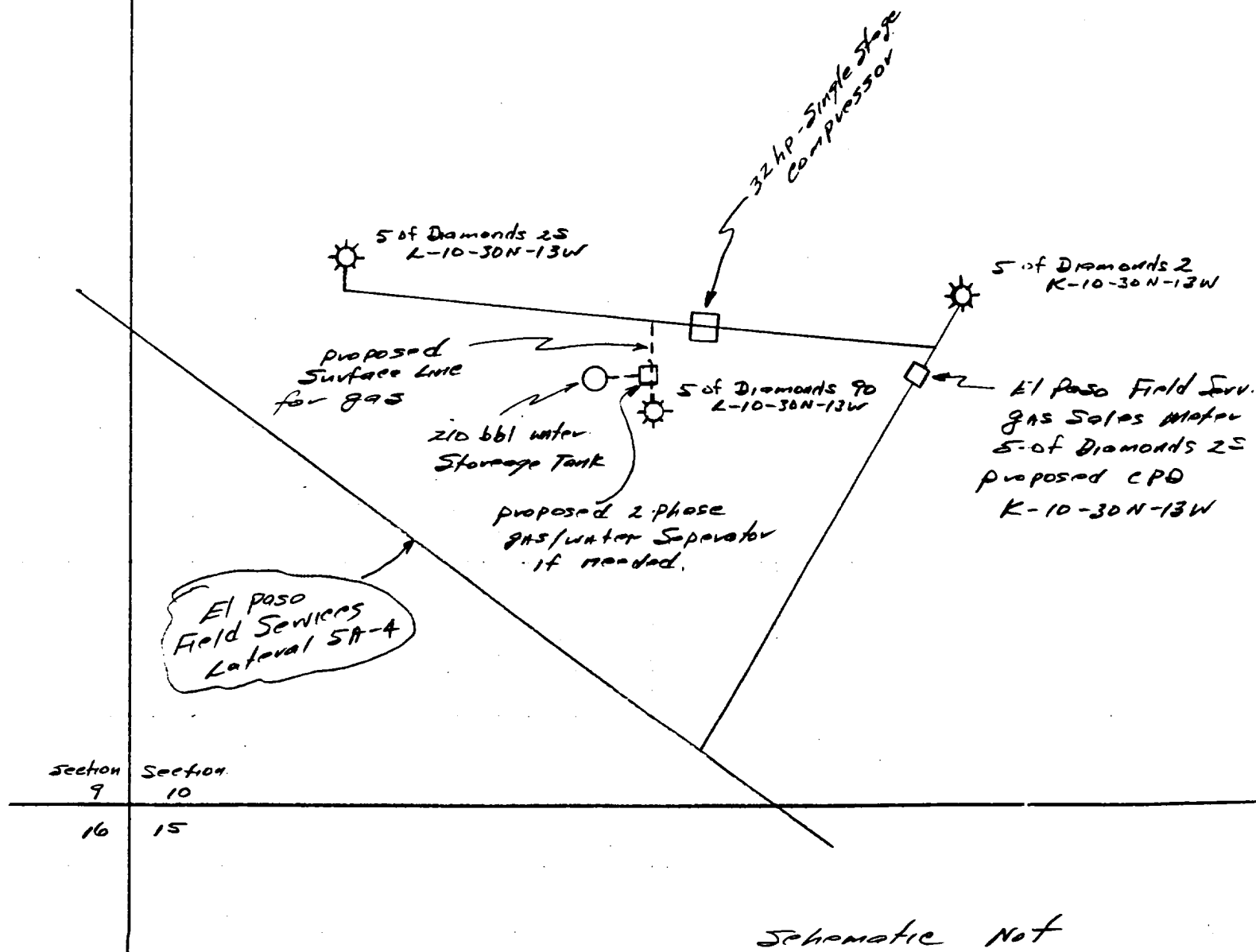
Facility Diagram
Proposed Surface Connection
Five of Diamonds No 25 & 16

Well Locations

Five of Diamonds No 23 - 1840' FSL + 790' FWL
" " " NO. 90 - 1740' FSL + 1230' FWL
" " " NO 2 - 1800' FSL + 1800' FWL

APPROX. Distances

5 of Diamonds 25 to 90 = $\pm 451'$
" " " 90 " 2 = $\pm 573'$





TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



1935 - 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

July 23, 1985

Attachment
No. 4
Pg 1 of 1

Dugan Production Corp.
P. O. Box 208
Farmington, New Mexico 87401

Re: Gas Commingling

Gentlemen:

Based upon your applications filed in this matter, authority is hereby granted for surface commingling of the production from the Five of Diamonds Well No. 2 in Unit K and Well No. 2S in Unit L of Section 10, Township 30 North, Range 13 West, Undesignated Fruitland Gas Pool, San Juan County, New Mexico.

The production from said wells shall be allocated on the basis of periodic individual well tests through the sales meter.

Sincerely,

R. L. STAMETS
Director

RLS/fd

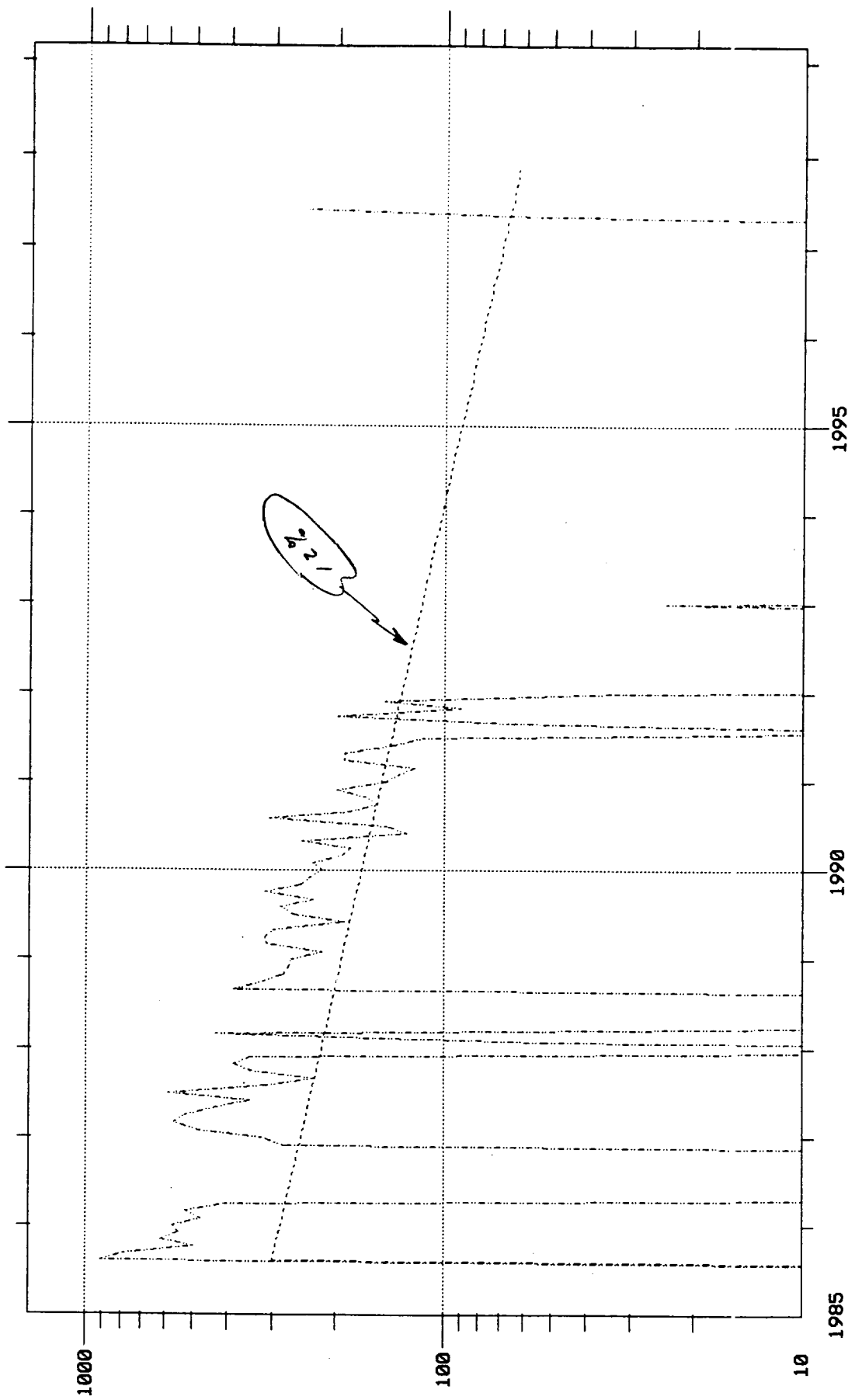
cc: Frank Chavez

Calculated
Oil
Gas
Water

CHOKO CHERRY FRUITLAND SAND
Gas Production Rate vs Time
Mcf/Mo vs Months
FIVE OF DIAMONDS:2S
L-10-24N-13W

Production
Oil
Gas
Water

Phantom
No. 5
Pg 1 of 1



Reported Oil Production = 0 Bbls
Reported Gas Production = 19402 Mcf
Reported Water Production = 0 Bbls

**Attachment No. 6
Allocation Procedures
Dugan Production Corp.'s
Proposed Surface Commingling
Five of Diamonds No. 2S & No. 90
NE SW 10, T-30-N, R-13-W
San Juan County, New Mexico**

Base Data:

W=Volume (MCFD) from Annual Well Test

X=Volume (MCF) from CPD Sales Meter

Y=BTU's from CPD Sales Meter

Z=Gas Revenue (\$) from CPD Sales Meter

1. **Individual Well Production** = A+B+C+D+E

A = Allocated Sales Volume, MCF.

$$= (W / \text{SUM } W) \times X$$

B = On lease fuel usage, MCF. Determined from equipment specifications and operating conditions.

C = Purged and/or vented gas from well and/or lease equipment, MCF. Calculated using equipment specifications and pressures.

D = Allocated fuel from gathering system equipment, MCF. The total fuel required to operate gathering system equipment will be allocated to the individual wells benefiting from the equipment using allocation factors determined by $W / \text{Sum } W$ for the wells involved.

E = Allocated volume of gas lost and/or vented from the gathering system and/or gathering system equipment, MCF. The total volume will be determined using industry accepted procedures for the conditions existing at the time of the loss. All volumes corresponding to liquid condensation within the gathering system will also be determined. The total volume lost and/or vented will be allocated to the individual wells affected using factors determined by $W / \text{Sum } W$.

2. **Allocated Individual Well BTU's** = $(W \times \text{Individual well BTU}) / \text{Sum } (W \times \text{individual well BTU}) \times Y$.

Individual well gas heating values to be determined in accordance with BLM's On Shore Order No. 5.

3. **Allocated Individual Well Gas Revenues** = $(\text{Allocated Individual well BTU's} / \text{Sum Allocated individual well BTU's}) \times Z$

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267
CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 1/09/92

MAILEE
26730

DUGAN PRODUCTION CORPORATION
P. O. BOX 420
FARMINGTON, NEW MEXICO 87499

Attachment
No. 7
Pg 1 of 1

METER NUMBER 93267 - FIVE OF DIAMONDS #2S
OPERATOR 1862 - DUGAN PRODUCTION CORP

ANALYSIS DATE 99/99/99 TYPE CODE 2 - ACTUAL
SAMPLE DATE 12/05/91 H2S GRAINS 0
EFFECTIVE DATE 1/01/92 LOCATION F - FARMINGTON
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.18	.000
H2S	.00	.000
N2	.48	.000
METHANE	89.58	.000
ETHANE	5.42	1.450
PROPANE	2.59	.714
ISO-BUTANE	.44	.144
NORM-BUTANE	.69	.218
ISO-PENTANE	.22	.080
NORM-PENTANE	.16	.058
HEXANE PLUS	<u>.24</u>	<u>.105</u>
	100.00	2.769

SPECIFIC GRAVITY .641

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1136

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT

**Attachment No. 8
Interest Owner Notification
Surface Commingling-Dugan Production's
Five of Diamonds No. 2S and No. 90
Choke Cherry Fruitland Sand & Basin Fruitland Coal Pools**

Copies of Dugan Production's application to the NMOCD and BLM for the subject surface commingling were sent to all interest owners as follows:

<u>Interest Owner</u>	<u>WI</u>	<u>NI</u>
Dugan Production Corp.	100.00	82.50
U.S.A.-Federal c/o BLM	0	12.50
Jerry W. Massengale 9107 Arbor Park Drive Dallas, TX 75231	0	0.50
Hoover H. & Betty R. Wright Living Trust Dated 2-19-88 P. O. Box 2312 Santa Fe, NM 87504-2312	0	4.50
Total	<u>100.00</u>	<u>100.00</u>