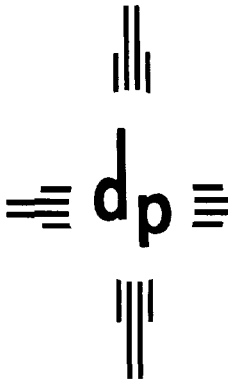


AMEND PC N/R



dugan production corp.

DEC 22 1999

December 20, 1999

Ms. Lori Wrotenbery, Director  
New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, NM 87505

Mr. Lee Otteni, Manager  
Bureau of Land Management, FFO  
1235 La Plata Highway  
Farmington, NM 87401

Re: Application to Amend the System Equipment & Allocation Procedure  
Dugan Production Corp.'s  
Davis Federal Gas Gathering System & CDP  
Federal Lease SF 078937 & Com Agreements SW-64 & SW-65  
San Juan County, New Mexico

Dear Ms. Wrotenbery and Mr. Otteni,

We are writing to advise you of the existence of a drip trap on the Davis Federal Gas Gathering System and to request your approval of our proposed drip allocation procedure which was not included in our initial application. The NMOCD (on 10-3-97 with Second Amended Commingling Order PC-936) and BLM (on 12-11-97) have approved this gathering system and CDP from Dugan's 7-28-97 application. The subject drip trap is located on the gas line from the Platero Navajo wells No. 1 & 2, approximately 800' south of the Platero Navajo No. 1 (ref. Attachment No. 1). This drip trap was installed by El Paso prior to Dugan Production taking over the operation of this line under a lease agreement with El Paso.

Dugan Production has operated this gas gathering system since January 1998 and to date have recovered very little fluid (water or drip) from this drip trap. In fact, we were unaware that the drip trap existed until our field people were recently attempting to clear fluid from the line and recovered water plus a very small amount of drip. The drip trap is an integral part of the pipeline and any fluids that might accumulate are removed by blowing the fluid to a 100 bbl blow down tank which was also installed by El Paso prior to Dugan acquiring the operatorship. All fluid recovered in the blow down tank will be transported by truck with the water being properly disposed of and the drip sold and allocated to the wells producing through the drip trap using the procedure presented on Attachment No. 2. Currently only the Platero Navajo No. 1 & 2 produce through this drip trap. Both wells are completed in the Basin Dakota gas pool and based upon the gas analysis for each well (ref. Attachments No. 3 & 4), we anticipate very little, if any, drip to ever be recovered in the drip trap.

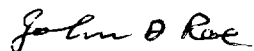
The fill and drain valves on the drip blow down tank will be locked and sealed in the closed position and a seal log maintained.

The allocation procedures for gas production and BTU's presented on Attachment No. 2 are unchanged from the allocation procedures initially presented as Attachment No. 9 and approved by both the NMOCD and BLM. Thus Attachment No. 2 restates the currently approved gas production and BTU allocation procedures plus presents the proposed allocation procedure for drip should saleable volumes of drip ever be recovered from the drip trap.

The wells and gathering system are unchanged from our initial application. Dugan Production operates all three wells producing into the system (the Davis Federal No. 1 plus the Platero Navajo wells No. 1 & 2), and all interest owners (working, royalty and overriding royalty) will receive a copy of this letter (Attachment No. 5).

In summary, we are requesting your existing approvals for the operation of our Davis Federal Gas Gathering System and CDP be amended to include an existing pipeline drip and proposed drip allocation procedure. This drip has been in the pipeline since Dugan Production acquired this gathering system from El Paso Field Services and to date very little fluid has been recovered, however should we ever recover saleable volumes of drip from the drip trap, it will be necessary to allocate the drip to the wells producing through the drip trap, and the current proposed drip allocation procedure will facilitate proper allocation. Should you have questions or need additional information, please let me know.

Sincerely,

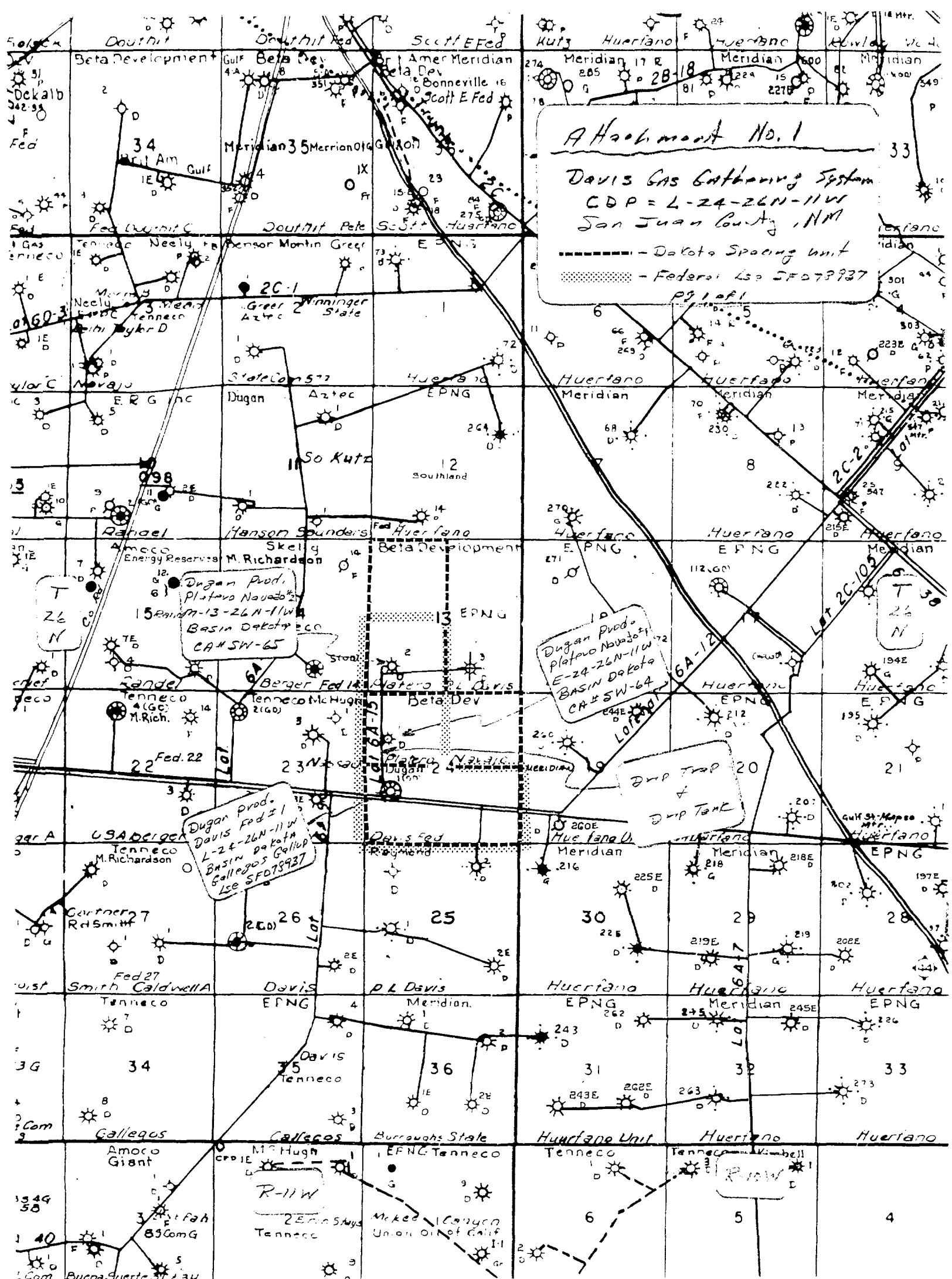


John D. Roe  
Engineering Manager

JDR/tmf

cc: NMOCD - Aztec  
All interest owners

attachments



Attachment No.1  
Commingling Order PC-936, 3<sup>rd</sup> Amendment  
Allocation Procedures  
Dugan Production Corporation  
NW/4 SW/4 and S/2 of Section 24, Township-26 North, Range 11 West,  
San Juan County, New Mexico

Base Data for Gas Production & BTU Allocations:

W=Volume (MCF) from Well Allocation Meter

X=Volume (MCF) from CDP Sales Meter

Y=BTU's from CDP Sales Meter

1. Allocated 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 Onshore Order No.5.

3. Allocated Individual Well Drip Volumes. This allocation procedure only applies to liquids that may condense from the gas stream and accumulate in the system drip traps. All crude oil, condensate and water production will continue to be separated, stored and sold

at each individual well. All drip volumes recovered from system drip traps will be allocated to the individual wells producing gas through the drip trap from which the drip was recovered using factors determined by dividing the individual well's theoretical liquids by the total theoretical liquids from all wells producing into the system from which the drip was recovered. The theoretical liquids will be calculated by multiplying the individual well's produced gas volumes by the individual well's gas stream liquids content (GPM) of isobutane and heavier. This allocation is to be made during the month that liquids are removed and will be based upon the most recent annual gas volumes produced from the wells involved and an average GPM for each well during the same period. Since drip accumulation typically occurs slowly over extended periods of time and is dependent upon numerous factors, many of which are not controllable, and considering that there is no practical way to know for sure exactly when the drip volumes accumulated, the use of annual gas production rather than specific months of production will simplify this calculation and should improve the accuracy of this factor.

Base Data for Drip & Drip Revenue Allocations:

S = Volume of drip (bbl) removed from system drip blow down tank.

U = GPM (gallons per MCF) of isobutane and heavier from a current individual well gas analysis.

V = Most recent calendar year of gas production from the individual well - MCF. If a full 12 months is not available, an annual volume will be determined using an average production rate from the data available.

F = Allocated Individual Well Drip Volume, bbl

$$F = ((V \times U) / \text{Sum } (V \times U)) \times S$$

**Attachment No. 2**  
**(Attachment No. 9 in initial application)**  
**Allocation Procedures**  
**Dugan Production Corp.'s**  
**Davis Federal CDP**  
**NW SW 24, T-26N, R-11W**  
**San Juan County, New Mexico**

**Base Data for Gas Production & BTU Allocations:**

W=Volume (MCF) from Well Allocation Meter

X=Volume (MCF) from CDP Sales Meter

Y=BTU's from CDP Sales Meter

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

A = Allocated Sales Volume, MCF

= (W/SUM W) x 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 benefitting from the equipment using allocation factors determined by W / 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 / Sum W.

2. Allocated Individual Well BTU's = ((W x Individual well BTU) / Sum (W x individual well BTU)) x Y.

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

3. Allocated Individual Well Drip Volumes. This allocation procedure only applies to liquids that may condense from the gas stream and accumulate in the system drip traps. All crude oil, condensate and water production will continue to be separated, stored and sold

at each individual well. All drip volumes recovered from system drip traps will be allocated to the individual wells producing gas through the drip trap from which the drip was recovered using factors determined by dividing the individual well's theoretical liquids by the total theoretical liquids from all wells producing into the system from which the drip was recovered. The theoretical liquids will be calculated by multiplying the individual well's produced gas volumes by the individual well's gas stream liquids content (GPM) of isobutane and heavier. This allocation is to be made during the month that liquids are removed and will be based upon the most recent annual gas volumes produced from the wells involved and an average GPM for each well during the same period. Since drip accumulation typically occurs slowly over extended periods of time and is dependent upon numerous factors, many of which are not controllable, and considering that there is no practical way to know for sure exactly when the drip volumes accumulated, the use of annual gas production rather than specific months of production will simplify this calculation and should improve the accuracy of this factor.

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V = Most recent calendar year of gas production from the individual well - MCF.

If a full 12 months is not available, an annual volume will be determined using an average production rate from the data available.

F = Allocated Individual Well Drip Volume, bbl

$$F = ((V \times U) / \text{Sum } (V \times U)) \times S$$



2030 AFTON PLACE  
FARMINGTON, N.M. 87401  
(505) 325-6622

ANALYSIS NO. DUG90675  
CUST. NO. 23000- 11090

### WELL/LEASE INFORMATION

CUSTOMER NAME DUGAN PRODUCTION CORP.  
WELL NAME PLATERO NAVAJO 1  
COUNTY/STATE SAN JUAN NM  
LOCATION E24-26N-11W  
FIELD  
FORMATION BASIN DAKOTA  
CUST.STN.#O. 202A203850

SOURCE  
PRESSURE 34 PSIG  
SAMPLE TEMP N/A DEG.F  
WELL FLOWING Y  
DATE SAMPLED 9/1/99  
SAMPLED BY BILLIE WRIGHT  
FOREMAN/ENGR. TOM BLAIR

*Attachment*  
110.3  
Pg 1 of 1

REMARKS LEASE # SF-078937

### ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR *
NITROGEN	0.927	0.0000	0.00	0.0090
CO2	0.721	0.0000	0.00	0.0110
METHANE	71.756	0.0000	726.39	0.3975
ETHANE	13.244	3.5428	234.91	0.1375
PROPANE	7.480	2.0615	188.64	0.1139
I-BUTANE	1.139	0.3726	37.12	0.0229
N-BUTANE	2.100	0.6621	68.67	0.0421
I-PENTANE	0.679	0.2484	27.23	0.0169
N-PENTANE	0.572	0.2072	22.98	0.0142
HEXANE PLUS	1.382	0.6030	71.05	0.0445
TOTAL	100.000	7.6975	1,376.99	0.8094

$C_4^+ =$   
2.09 gal/mcf.

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\* @ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z) 1.0047  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z) 1,383.5  
BTU/CU.FT (WET) CORRECTED FOR (1/Z) 1,359.4  
REAL SPECIFIC GRAVITY 0.8133

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

DRY BTU @ 14.650 1,375.9  
DRY BTU @ 14.696 1,380.3  
DRY BTU @ 14.730 1,383.5  
DRY BTU @ 15.025 1,411.2

CYLINDER # A044  
CYLINDER PRESSURE 33 PSIG  
DATE RUN 9/3/99  
ANALYSIS RUN BY ANDREW ZEC





2030 AFTON PLACE  
FARMINGTON, N.M. 87401  
(505) 325-6622

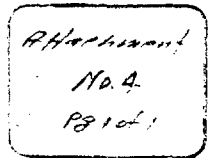
ANALYSIS NO. DUG90676  
CUST. NO. 23000- 11095

### WELL/LEASE INFORMATION

CUSTOMER NAME DUGAN PRODUCTION CORP.  
WELL NAME PLATERO NAVAJO 2  
COUNTY/STATE SAN JUAN NM  
LOCATION M13-26N-11W  
FIELD  
FORMATION BASIN DAKOTA  
CUST.STN.NO. 202A233253

SOURCE  
PRESSURE  
SAMPLE TEMP  
WELL FLOWING  
DATE SAMPLED  
SAMPLED BY  
FOREMAN/ENGR.

METER RUN  
31 PSIG  
DEG.F  
Y  
9/1/99  
BILLIE WRIGHT  
TOM BLAIR



REMARKS LEASE # SF-078937

### ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR *
NITROGEN	1.017	0.0000	0.00	0.0098
CO2	0.747	0.0000	0.00	0.0114
METHANE	71.679	0.0000	725.61	0.3970
ETHANE	12.962	3.4673	229.91	0.1346
PROPANE	7.759	2.1384	195.67	0.1181
I-BUTANE	1.165	0.3811	37.97	0.0234
N-BUTANE	2.176	0.6861	71.15	0.0437
I-PENTANE	0.667	0.2441	26.75	0.0166
N-PENTANE	0.577	0.2090	23.19	0.0144
HEXANE PLUS	1.251	0.5458	64.32	0.0403
TOTAL	100.000	7.6717	1,374.57	0.8092

$C_{4+} = 2.07 \text{ gal/mcf}$

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

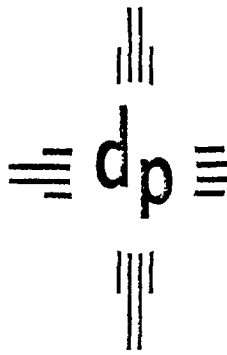
\*\* @ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z) 1.0046  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z) 1,380.9  
BTU/CU.FT (WET) CORRECTED FOR (1/Z) 1,356.9  
REAL SPECIFIC GRAVITY 0.8130

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

DRY BTU @ 14.650 1,373.4  
DRY BTU @ 14.696 1,377.7  
DRY BTU @ 14.730 1,380.9  
DRY BTU @ 15.025 1,408.5

CYLINDER # K084  
CYLINDER PRESSURE 30 PSIG  
DATE RUN 9/3/99  
ANALYSIS RUN BY ANDREW ZEC



# dugan production corp.

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Attachment  
No. 5  
Pg 1 of 2

December 20, 1999

To: Interest Owners (address list attached)  
Dugan Production Corp.'s  
Davis Federal No. 1 (L-24-26N-11W)  
Platero Navajo No. 1 (E-24-26N-11W)  
Platero Navajo No. 2 (M-13-26N-11W)  
San Juan County, New Mexico

Gentlemen:

Attached for your information, review and file is a copy of our application to the New Mexico Oil Conservation Division and the Bureau of Land Management to add a drip allocation procedure to the existing allocation procedures already approved for the subject three well gas gathering system.

The subject drip trap is currently in service and has been since Dugan Production initiated operation of this system in January 1998. There are no expenditures necessary and there should not be any significant changes in the system operation or revenues as a result of this proposal.

Should you have any questions, need additional information or have any concern as to our proposal, please let me know.

Sincerely,

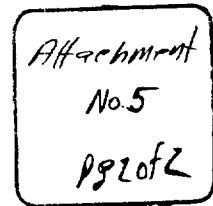
John D. Roe  
Engineering Manager

JDR/tmf

attachment

c:\tf\johnroe\dvsintow.wpd

**Interest Owners**  
**Davis Federal # 1 & Platero Navajo #1 & #2**



Energen Resources Corp.  
2198 Bloomfield Highway  
Farmington, NM 87401

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

Minerals Management Service - Federal  
c/o Bureau of Land Management  
1235 La Plata Highway  
Farmington, NM 87401

Charter Royalty Company  
P. O. Box 2865  
Midland, TX 79702-2865

Collins Partners, LTD  
5000 Burnet Road  
Austin, TX 78756

F. Farrell Davis  
P. O. Box 1811  
Midland, TX 79702-3061

Paul L. Davis, Jr.  
P. O. Box 1811  
Midland, TX 79702-1811

Lucy E. Lawson  
P. O. Box 3786  
Midland, TX 79702-3786

Louis Dreyfus Natural Gas Corp.  
P. O. Box 960116  
Oklahoma City, OK 73196-0116

Marathon Oil Company  
P. O. Box 3128  
Houston, TX 77253-3128

Wilson Oil Company LTD  
P. O. Box 1297  
Santa Fe, NM 87504-1297

Four Star Oil & Gas Company  
P. O. Box 46513  
Denver, CO 80201-6513