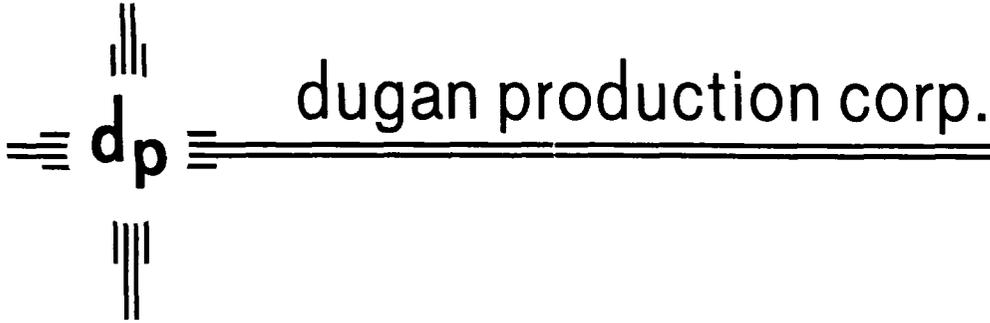


CTB 7/28/97
455



July 3, 1997

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

Mr. Ray Powell, Commissioner
New Mexico State Land Office
P.O. Box 1148
Santa Fe, NM 87504-1148

Mr. Lee Otteni, District Manager
Bureau of Land Management
1235 LaPlata Hwy.
Farmington, NM 87401

Re: *Proposed Natural Gas Surface Commingling
Dugan's Kenny No. 1 (State Lease LG-3925)
Unit B, Section 36, T23N, R7W
Plus Surface Commingling & Off-Lease Measurement
Dugan's Little Sis No. 1 (Federal Lease NM-89021)
Unit K, Section 31, T23N, R6W
Sandoval County, New Mexico*

LYBROOK GALLUP
40 107/2000

Gentlemen:

Dugan Production Corp. (DPC) requests your administrative approval to surface commingle natural gas production from the captioned wells and to deliver the commingled gas stream to a central delivery sales meter located on the Kenny No. 1 lease (State lease LG-3925) which will also require off-lease measurement and sale of natural gas for Dugan's recently completed Little Sis No. 1. Both wells are completed in the Lybrook Gallup oil pool and are operated by DPC. DPC holds all working interest in both wells and there is no overriding royalty. Only natural gas will be commingled and sold at the CDP. All liquid hydrocarbons will be separated, stored and sold at each well.

This proposal will entail converting the existing gas sales meter for Dugan's Kenny No. 1 well (located on El Paso Field Services' Lateral 2C-161 approximately 1685' FNL & 180' FWL of Section 36, T23N, R7W) to a central delivery meter and installing standard Barton dry flow meters and meter runs at each well for allocation purposes. Attachment No. 1 was reproduced from the Lybrook topo map and presents the proposed gas lines, lease boundaries and well locations. Attachment No. 2 is a schematic diagram of all facilities.

The Kenny No. 1 was completed in the Lybrook Gallup oil pool on 10/13/86 with an initial potential of 80 BOPD + 96 MCFD and has produced a total of 8,466 BO plus 171,461 MCF as of 4/1/97. During the first 3 months of 1997, production averaged 36 BO plus 1199 MCF of gas per month and Attachment No. 3 is a copy of the past production. The 40 acre spacing unit consists of the NW/4 NE/4 of Section 36, T23N, R7W.

The Little Sis No. 1 was completed in the Lybrook Gallup oil pool on 5/20/97 with an initial potential of 30 BOPD + 438 MCFD. To date, production has been limited to testing following completion, however, we anticipate production volumes to be similar to the Kenny No. 1. The 40 acre spacing unit consists of the NE/4 SW/4 Section 31, T23N, R6W.

Since both wells are completed in the same interval, the produced gasses should be compatible and similar in composition. Attachment No. 4 is a copy of the most recent gas analysis from the Kenny No. 1 and is believed to be representative of both gas streams.

Gas volumes resulting from CDP sales will be allocated to each well based upon a ratio established by comparing the individual well's volume (from the allocation meter) to the total of all allocation meter volumes. Gas revenues from the CDP sales meter will be allocated to the individual wells based upon a ratio established by comparing the BTUs from each well (obtained by multiplying the individual well allocation meter volume by that well's gas heating value) to the total BTUs similarly computed for all wells producing into the system.

Each well is equipped with a heated separator which will require a lease fuel of 1.4 MCFD and 3.8 MCFD, respectively, for the Kenny No. 1 and Little Sis No. 1. All fuel used by the separator and any other well site equipment that may be installed will be accounted for separately by well. We currently do not plan to install any equipment on the gas gathering system which would require fuel, however, should we ever do so, the fuel use will be allocated to each well based upon the ratio of production from each well compared to the total production of all wells benefiting from the equipment.

The gas system integrity will be tested prior to initiating operation of the CDP and will be periodically monitored using Dugan Production's gas detector. Any gas lost from the system will be estimated using standard industry accepted procedure and will be allocated to each well based upon production volumes from each well affected by the loss.

In summary, Dugan Production requests approval to surface commingle gas produced from our Kenny No. 1 (located on a state lease) with gas from our Little Sis No. 1 (located on a federal lease) and deliver the commingled gas stream to a CDP sales meter (currently the Kenny No. 1 sales meter) located on our Kenny lease. This will provide on-lease measurement for our Kenny No. 1 but will require off-lease measurement and sale for our Little Sis No. 1. Both wells produce from a common pool and are anticipated to produce similar volumes of gas. The

proposed CDP will eliminate installing duplicate gas lines to El Paso's gas line and will help to improve operating economics from 2 marginally economic wells. In addition, should it become desirable to install central compression, each well will benefit from operation of a single compressor as opposed to multiple well compressors which will result in improved individual well operating economics and a corresponding increase in the ultimate recovery of oil and gas resources. All liquid production will be separated, stored and sold at each wellsite.

Should you need additional information or have questions, please feel free to call me or Barbara Williams at the letterhead address.

Sincerely,

A handwritten signature in cursive script that reads "John D. Roe".

John D. Roe
Manager of Engineering

JDR/cg

attachs.

Attachment No. 1
Dugan Production Corp.
Proposed CDP Gas Sales
Kenny #1 + Little Sis #1
Approx CDP meter loc:
180'FWLY 1675'FWL,
Section 36, T-23N, R-7W

Dugan Prod.
Kenny #1
B-36-23N-7W
State Lease
26-3925

Proposed
CDP Sales
Meter - Existing
Kenny #1
Sales Meter

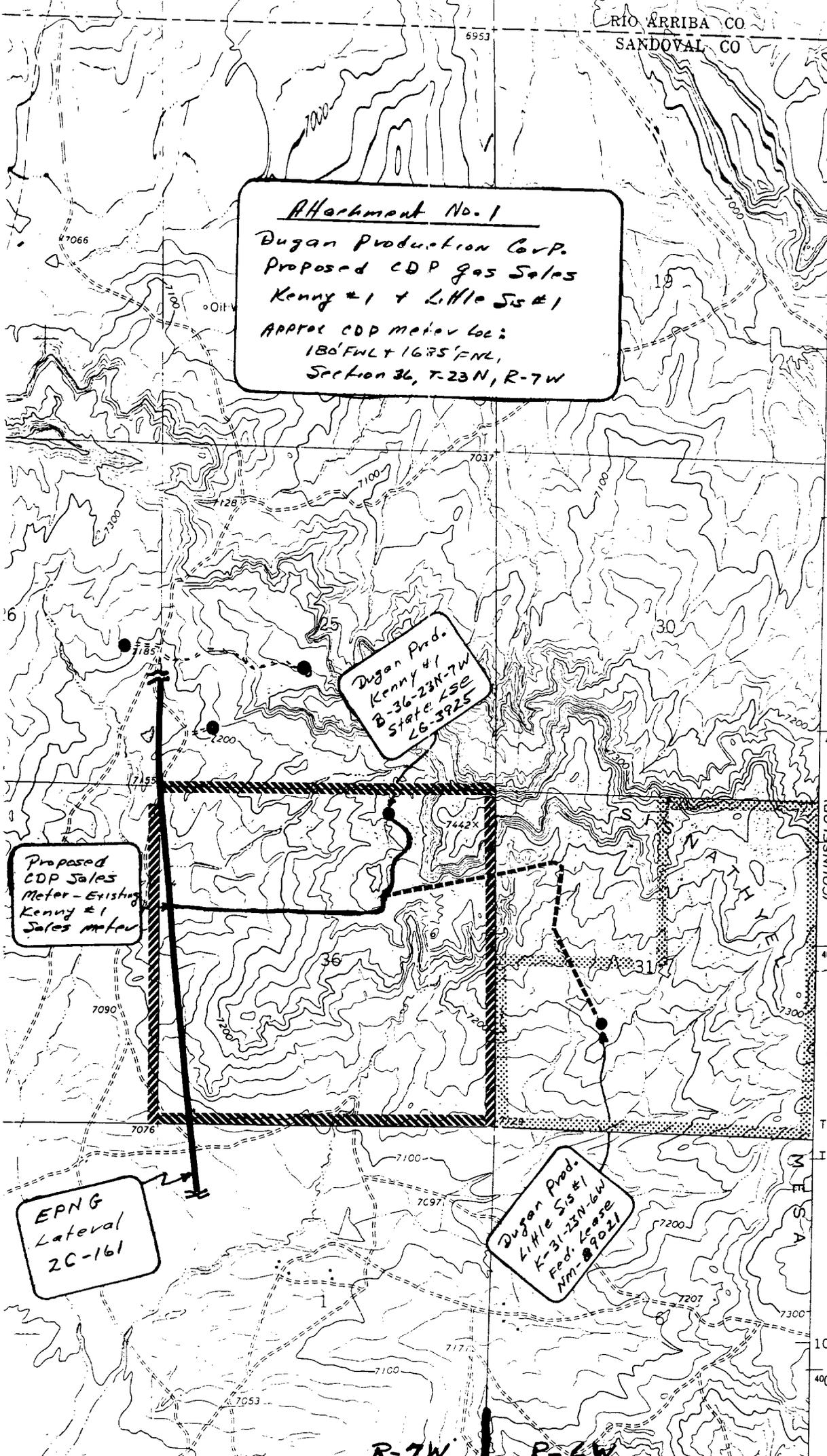
EPNG
Lateral
2C-161

Dugan Prod.
Little Sis #1
K-31-23N-6W
Fed. Lease
Nm. 89021

(COUNSELOR)
4556 III NW

T 23 N
T 22 N

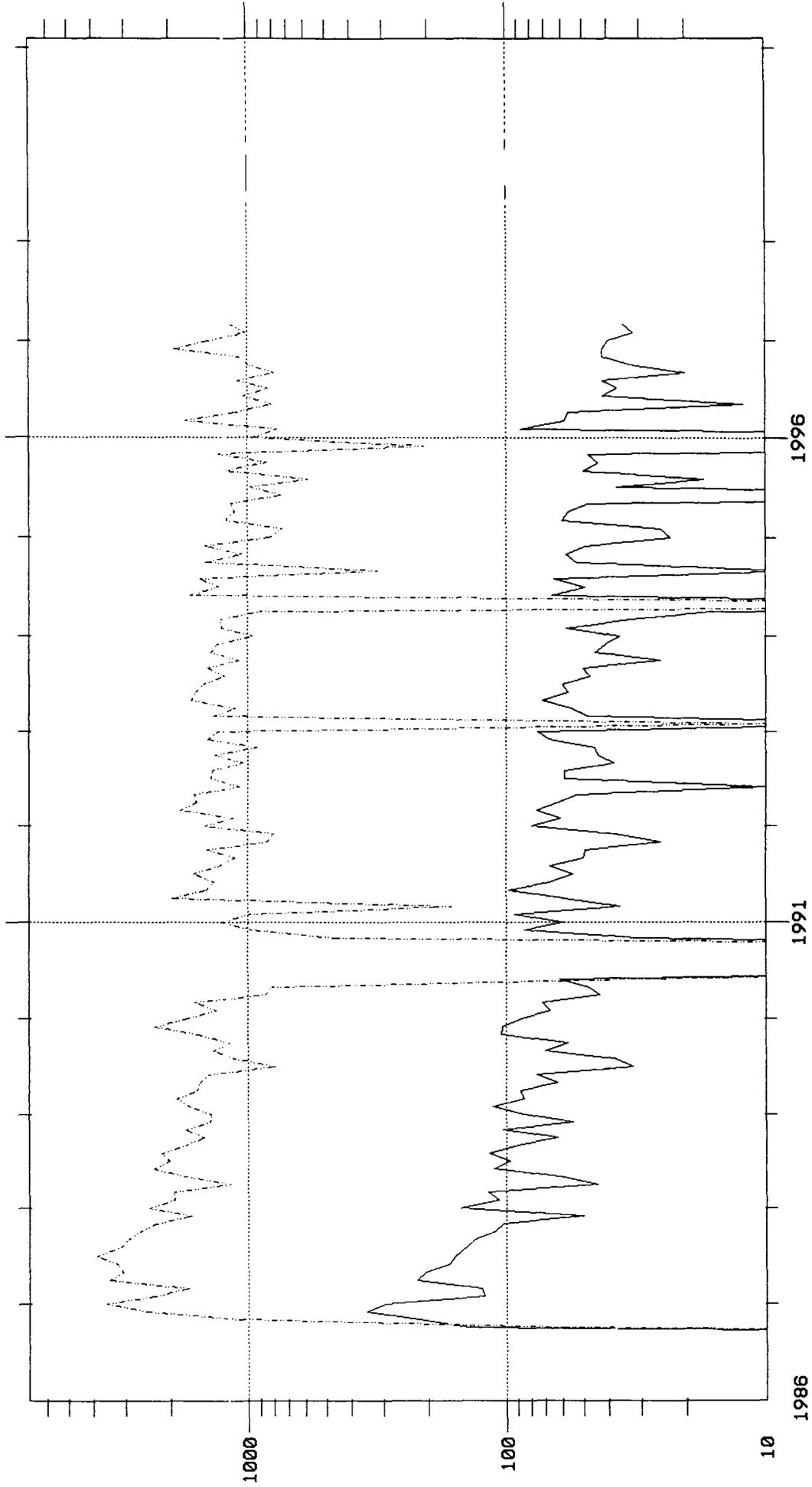
R-7W R-6W



Attachment No. 3

LYBROOK GALLUP
Production Rate vs Time
BBl/Mo or Mcf/Mo vs Months
Kenny No.1 (B-36-23N-7W)
Dugan Production Corp.

Production
Oil
Gas
Water



Reported Oil Production = 8466 Bbls
Reported Gas Production = 171461 Mcf

CO.CD 23 EL PASO NATURAL GAS
CUSTOMER ACCOUNTING SERVICES DEPARTMENT
VOLUME CALCULATION DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978

CONTACTS:
EL PASO FIELD SERVICES
(713) 510-2931
EL PASO MAINLINE
(915) 496-2595

DATE 1/08/97

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE
26730

DUGAN PRODUCTION CORPORATION
P O BOX 420
FARMINGTON, NM 87499-C420

Attachment No. 4

METER NUMBER 95989 - KENNY #1
OPERATOR 1862 - DUGAN PRODUCTION CORP

ANALYSIS DATE 12/18/96 TYPE CODE 2 - ACTUAL
SAMPLE DATE 12/09/96 H2S GRAINS 0
EFFECTIVE DATE 1/01/97 LOCATION F - FARM BECK
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.15	.000
H2S	.00	.000
N2	1.41	.000
METHANE	82.98	.000
ETHANE	7.48	2.001
PROPANE	4.21	1.160
ISO-BUTANE	.61	.200
NORM-BUTANE	1.49	.470
ISO-PENTANE	.45	.165
NORM-PENTANE	.48	.174
HEXANE PLUS	<u>.74</u>	<u>.323</u>
	100.00	4.493

SPECIFIC GRAVITY .707
MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1224
RATIO OF SPECIFIC HEATS .000
NO TEST SECURED FOR H2S CONTENT

CTB-455



COMMERCIAL RESOURCES
(505)-827-5724

SURFACE RESOURCES
(505)-827-5793

MINERAL RESOURCES
(505)-827-5744

ROYALTY
(505)-827-5772

State of New Mexico
Commissioner of Public Lands

Ray Powell, M.S., D.V.M.
310 Old Santa Fe Trail, P. O. Box 1148
Santa Fe, New Mexico 87504-1148
Phone (505)-827-5760, Fax (505)-827-5766

PUBLIC AFFAIRS
(505)-827-5765

ADMINISTRATIVE MGMT.
(505)-827-5700

LEGAL
(505)-827-5715

PLANNING
(505)-827-5732

July 16, 1997

Dugan Production Corporation
P. O. Box 420
Farmington, New Mexico 87499-0420

Attn: Mr. John D. Roe

Re: Surface Commingling Application
Lybrook Gallup Oil Pool
Kenny Well No. 1, Unit Letter B
Section 36-23N-07W, Lease LG-3925
Sandoval County, New Mexico

Dear Mr. Roe:

We have received your letter of July 3, 1997, wherein you requested our approval for surface commingling of production from the above well.

We understand that the gas production from the Little Sis Well No. 1 (NE/4SW/4, Section 31-23N-06W) will be commingled with gas produced from the Kenny Well No. 1 at the CDP sales meter located in the SW/4NW/4 of Section 36-23N-07W, Lease No. LG-3925. It is our understanding that this will provide on-lease measurement for the Kenny Well No. 1 and will require off-lease measurement and sale for the Little Sis Well No. 1. Both of these wells produce from a common pool and produce similar volumes of gas.

Since it appears that there will be no loss of revenue to the State of New Mexico's beneficiaries as a result of your proposed operation, your request is hereby approved. Our approval is given with the understanding that the Commissioner of Public Lands reserves the right to amend or withdraw his approval, should this operation prove to be unprofitable to the state at any time in the future. Also, our approval is subject to like approval by the New Mexico Oil Conservation Division.

Please contact Ms. Debbie Padilla of our Right-of-Way Section for a right-of-way easement through the NE/4 of Section 36-23N-07W. Ms. Padilla's telephone number is 827-5729. Our approval is subject to you obtaining the required right-of-way easement.

Dugan Production Corporation
July 16, 1997
Page 2

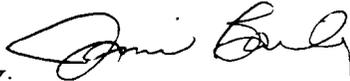
Please submit a copy of the New Mexico Oil Conservation Division's approval.

Your \$30.00 filing fee has been received.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS



BY:
JAMI BAILEY, Director
Oil, Gas and Minerals Division
(505) 827-5744

RP/JB/cpm

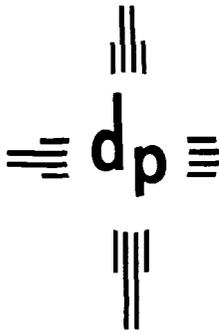
Enclosure

cc: Reader File

OCD--Mr. David Catanach, Mr. Ben Stone

BLM

Debbie Padilla



dugan production corp.

7-22-97

July 21, 1997

Mr. Ben Stone
New Mexico Oil Conservation Division
2040 South Pacheco St.
Santa Fe, New Mexico 87505

Mr. Pete Martinez
New Mexico State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

Re: Supplemental information
Dugan's 7-3-97 Letter Application
Proposed Natural Gas Surface Commingling
Dugan's Kenny No. 1 (State Lease LG-3925)
Unit B, Section 36, T23N, R7W
Plus Surface Commingling and Off-Lease Measurement
Dugan's Little Sis No. 1 (Federal Lease NM-89021)
Unit K, Section 31, T23N, R6W
Sandoval County, New Mexico

Dear Ben and Pete:

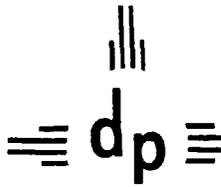
Attached for your file and information is a copy of our letter to the BLM setting out our proposed allocation procedures in a format requested by the BLM. I do not believe this alters the allocation procedures set out in our initial letter of 7-3-97.

Should you have any questions please let me know.

Sincerely,

John D. Roe

JDR/tmf



dugan production corp.

July 21, 1997

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

Hand Delivered

Re: Supplemental information
Dugan's 7-3-97 Letter Application
Proposed Natural Gas Surface Commingling
Dugan's Kenny No. 1 (State Lease LG-3925)
Unit B, Section 36, T23N, R7W
Plus Surface Commingling and Off-Lease Measurement
Dugan's Little Sis No. 1 (Federal Lease NM-89021)
Unit K, Section 31, T23N, R6W
Sandoval County, New Mexico

Dear Mr. Spencer:

I'm writing to clarify our proposed allocation procedures for the subject application. It is our proposal that the following formulas be used:

Base Data:

W=Volume (MCF) from Well Allocation Meter

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/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.

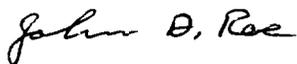
D = Allocated fuel from gathering system equipment, MCF. The total fuel required to operate gathering system equipment will be allocated to the individual wells benefiting from the equipment using allocation factors determined by $W / \text{Sum } W$ for the wells involved.

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 = $(W \times \text{Individual well BTU}) \times Y$. Individual well gas heating values to be determined in accordance with BLM's On Shore Order No. 5.
3. Allocated Individual Well Gas Revenues = $(\text{Allocated Individual well BTU's} / \text{Sum Allocated individual well BTU's}) \times Z$

I hope this supplemental information will provide the clarification necessary. Should you have any questions or need additional information, please let me know.

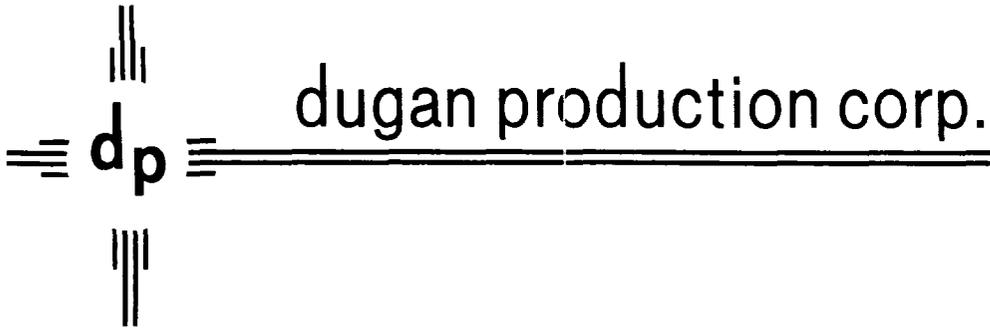
Sincerely,



John D. Roe

JDR/tmf

xc: Ben Stone, NMOCD-Santa Fe
Pete Martinez, NMSLO-Santa Fe



August 26, 1997

Mr. Ben Stone
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Mr. Pete Martinez
New Mexico State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

Re: Supplemental information No. 2
Dugan's 7-3-97 Letter Application
Proposed Natural Gas Surface Commingling
Dugan's Kenny No. 1 (State Lease LG-3925)
Unit B, Section 36, T23N, R7W
Plus Surface Commingling and Off-Lease Measurement
Dugan's Little Sis No. 1 (Federal Lease NM-89021)
Unit K, Section 31, T23N, R6W
Sandoval County, New Mexico

Dear Ben and Pete:

Attached for your file and information is a copy of our letter to the BLM correcting an error in formula No. 2 of our 7-21-97 supplemental information letter. I do not believe this alters the allocation procedures set out in our initial letter of 7-3-97.

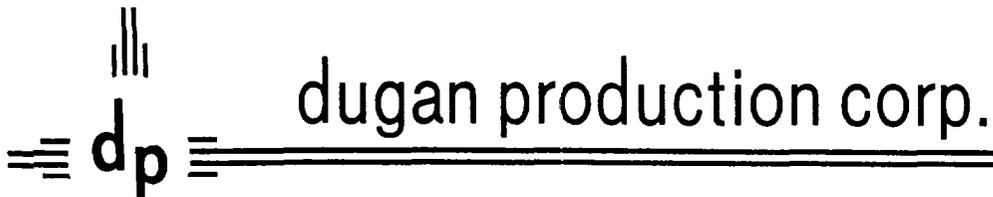
Should you have any questions, please let me know.

Sincerely,

John D. Roe
Engineering Manager

JDR/tmf

attachment



August 26, 1997

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

Hand Delivered

Re: Supplemental information No. 2
Dugan's 7-3-97 Letter Application
Proposed Natural Gas Surface Commingling
Dugan's Kenny No. 1 (State Lease LG-3925)
Unit B, Section 36, T23N, R7W
Plus Surface Commingling and Off-Lease Measurement
Dugan's Little Sis No. 1, (Federal Lease NM-89021)
Unit K, Section 31, T23N, R6W
Sandoval County, New Mexico

Dear Mr. Spencer:

I'm writing to correct our proposed allocation formula No. 2 set out in our supplemental letter dated 7-21-97. The correct formula should be:

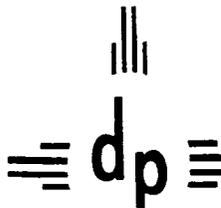
2. Allocated Individual BTU's = $((W \times \text{Individual well BTU}) / \text{Sum } (W \times \text{individual well BTU})) \times Y$.
Individual well gas heating values to be determined in accordance with BLM's On Shore Order No. 5.

I have attached a copy of our 7-21-97 letter which has been revised to reflect this change. Thank you for your help with this.

Sincerely,

John D. Roe
Engineering Manger

JDR/tmf



dugan production corp.



July 21, 1997 (corrected 8-25-97)

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

Hand Delivered

Re: Supplemental information
Dugan's 7-3-97 Letter Application
Proposed Natural Gas Surface Commingling
Dugan's Kenny No. 1 (State Lease LG-3925)
Unit B, Section 36, T23N, R7W
Plus Surface Commingling and Off-Lease Measurement
Dugan's Little Sis No. 1 (Federal Lease NM-89021)
Unit K, Section 31, T23N, R6W
Sandoval County, New Mexico

Dear Mr. Spencer:

I'm writing to clarify our proposed allocation procedures for the subject application. It is our proposal that the following formulas be used:

Base Data:

W=Volume (MCF) from Well Allocation Meter

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/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 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 = $(\text{Allocated Individual well BTU's} / \text{Sum Allocated individual well BTU's}) \times Z$

I hope this supplemental information will provide the clarification necessary. Should you have any questions or need additional information, please let me know.

Sincerely,



John D. Roe

JDR/tmf

xc: Ben Stone, NMOCD-Santa Fe
Pete Martinez, NMSLO-Santa Fe