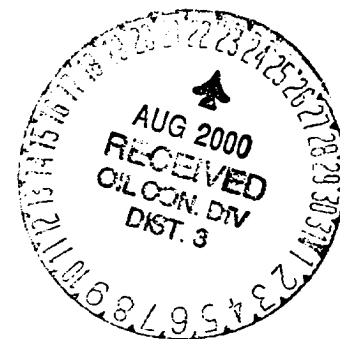


dugan production corp.

August 22, 2000



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

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

Re: Proposed Surface Commingling & Off-lease Measurement  
Dugan Production Corp.'s Big Field No. 1 (API No. 30-045-22763)  
Dugan Production Corp.'s Big Field No. 5 (API No. 30-045-30182)  
Units P & I, Section 10, T-30N, R-14W  
Federal Lease NM-10561  
Basin Dakota & Harper Hill Fruitland Sand-Pictured Cliffs Gas Pools  
San Juan County, NM

Dear Ms. Wrotenbery and Mr. Otteni,

We are writing to request your administrative approvals to surface commingle natural gas produced from the captioned wells which will allow us to convert the existing natural gas sales meter for the Big Field No. 1 (El Paso's meter no. 93115) to a central delivery sales meter (CDP) for the Big Field No. 1 and No. 5 wells. In addition, we are requesting your approvals for the off-lease measurement of natural gas produced from both wells which is necessary since the existing sales meter for the Big Field No. 1 is located on El Paso's pipeline approximately 1500' south of the well. The Big Field No. 1 sales meter was installed at this location on 6-20-80 by El Paso and Dugan Production inadvertently did not secure approvals for the off-lease measurement which resulted from El Paso's meter actually being located in Section 15 (NE/4 NE/4) and on Federal Lease No. 28820 (which was also held by Dugan Production Corp. prior to 3/99).

Attachment No. 1 was reproduced from the Youngs Lake USGS Quadrangle Topography map and presents the proposed Big Field CDP along with the subject leases and wells. Dugan's Federal Lease No. NM-10561 covers all of Section No. 10 and is the only lease comprising the south half spacing unit for the Big Field No. 1 and also the SE/4 spacing unit for the Big Field No. 5. Federal Lease NM-28820 is also presented and comprises the NE/4 and the E/2 of the NW/4 of Section No. 15. As previously detailed, the Big Field No. 1 sales meter is located on this lease, however lease no. NM-28820 is not included in the spacing units of either well.

The pipeline right-of-way for the line between the Big Field No. 1 and the sales meter in the NE/4 NE/4 of Section 15 was initially obtained by Northwest Pipeline (ROW No. NM33902) and was transferred to Dugan Production on 2-12-80. The BLM approved this assignment, along with an amendment which relocated the sales meter to the NENE of Section 15, on 3-21-80.

Attachment No. 2 presents information for each of the wells proposed for this CDP and Attachment No. 3 presents C-102's for each well which also includes the dedicated spacing units. Dugan Production Corp. is the operator of both wells and holds 100% of the working interest. The royalty and overriding royalty interest is common for both wells and Attachment No. 4 presents ownership information.

The Big Field No. 1 was completed in the Basin Dakota gas pool on 5-10-79 and has produced 85.6 mmcf of gas plus 1785 bbl condensate as of 7-1-00. The well is currently averaging 7 mcf plus 0.1 bbl condensate per day and the production history is presented on Attachment No. 5. This well has produced fairly marginal rates since completion and is difficult to keep producing with the small volumes of liquids which tend to accumulate and log the well off. El Paso's gathering system averages  $\pm 275$  psi with pressures periodically approaching 400 psi. We plan to install a compressor for the commingled gas stream from the No. 1 and 5 wells, which hopefully will allow a plunger to be installed in the Big Field No. 1 which should allow the well to be produced more efficiently and at higher gas rates.

The Big Field No. 5 was spudded on 7-10-00 and has been perforated and fracture stimulated in the Harper Hill Fruitland Sand-Pictured Cliffs gas pool. We are currently installing rod pump equipment and based upon swab testing following the stimulation we anticipate production to initially average between 100 and 200 mcf/d with 300 to 400 bwpd. We do not anticipate that the Big Field No. 5 will have sufficient wellhead pressure (perfs 1663'-1799') to produce into El Paso's pipeline which averages 275 to 400 psi and thus wellhead compression will be necessary for the Big Field No. 5 to produce.

All fluid production (water and condensate) will be separated from the gas, and will be stored, sold or disposed of at each well site. Only natural gas will be surface commingled. Each well will be equipped with continuous recording conventional gas metering equipment, such as a dry flow meter, and the volumes recorded at each well will be used to determine allocation factors for allocating the volumes recorded at the CDP sales meter to the individual wells. Each allocation meter will be installed and maintained by DPC and the charts from each meter will be integrated monthly by a commercial chart service. The proposed allocation procedures are presented on Attachment No. 6.

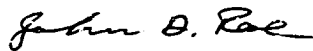
Gas production from both wells is believed to be compatible and mixing should not create any operational problems. Attachment No. 7 presents copies of representative gas analyses from both pools to be commingled.

We are sending copies of this application to all interest owners. DPC is the only working interest owner and all royalty is Federal. Attachment No. 8 presents a copy of the letter sent to the three overriding royalty interest owners.

In summary, we are proposing to convert the existing gas sales meter for Dugan's Big Field No. 1 to a central delivery sales meter for two wells, Dugan's Big Field No. 1 and No. 5. This will require the surface commingling of natural production from both wells. In addition, we are requesting approvals from off-lease measurement of natural gas for both wells which is necessary since the existing sales meter for the Big Field No. 1 well is located on El Paso's pipeline approximately 1500' south of the well on an adjacent Federal lease. The proposed surface commingling will allow us to install a compressor at the No. 1 well which will be shared by both wells, and will hopefully provide an increase in production for the No. 1 well and will allow the No. 5 well to produce into the pipeline which otherwise will likely not be possible without compression.

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

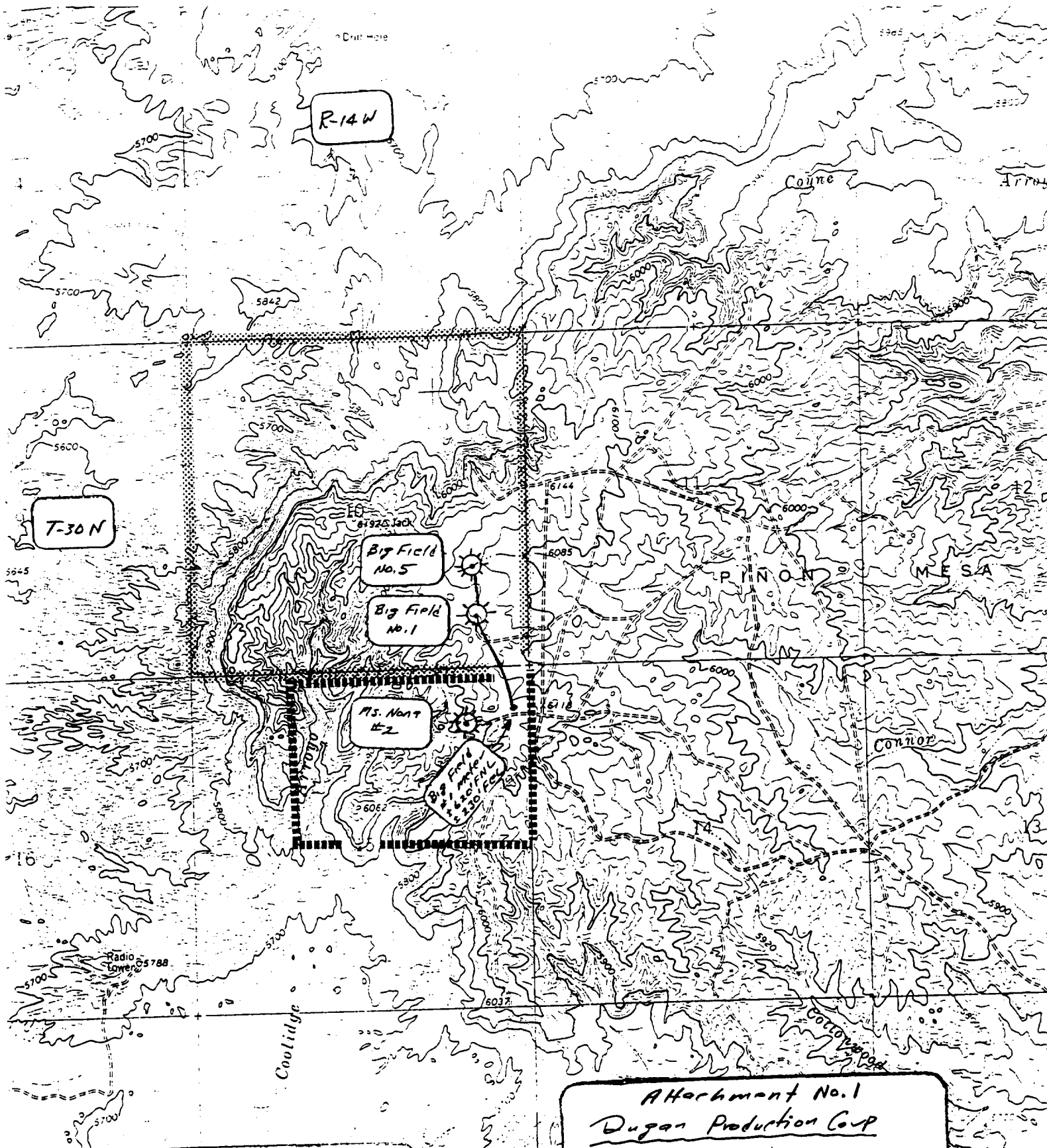
Sincerely,



John D. Roe  
Engineering Manager

JDR/tmf

cc: NMOCD- Aztec  
ORRI owners



### Legend

- part of Dugan's Federal Lse # NM-10561
- Fed. Lse # NM-28820 - Richardson operating Co. (Held by Dugan prior to 1/59)

Map from Youngs Lake Topo

### Attachment No. 1 Dugan Production Corp

#### Proposed Big Field CDP

- El Paso Motor #93115 - A-15-30N-14W
- Dugan Big Field #1 - P-10-30N-14W
- Dugan Big Field #5 - I-10-30N-14W

**ATTACHMENT NO. 2  
DUGAN PRODUCTION CORP.  
PROPOSED BIG FIELD CDP (A-15-30N-14W)  
SAN JUAN COUNTY, NEW MEXICO**

Well Name	API Number	Well Location			CA Number	Pool	Completion Date	Current Prod.		Spacing Unit
		Unit	Sec-Twn-Rng	Lease No.				MCFD	BWPD	
WELLS PROPOSED FOR CDP										
Big Field #1	30-045-22763	P	10-30N-14W	NM-10561	N/A	Basin Dakota	5/10/79	7.02 (2)	0.1 (2)	S/2-320A
Big Field #5	30-045-30182	I	10-30N-14W	NM-10561	N/A	Harper Hill FR Sand PC	Note (1)	Note (3)	Note (3)	SE/4-160A

**Notes:**

N/A - Not needed

Note (1) - Not completed - well spudded 7-10-2000.

Note (2) - Average during first six months 2000. Cumulative production 7-1-2000 = 85,560 mcf + 1785 bbl condensate + 18,614 bbl water

Note (3) - Well is shut in waiting on pumping unit installation. Well was foam frac'd 7-26-00 and downhole rod pump equipment installed

8-4-00. Based upon testing to date, we anticipate production to be 100 to 200 mcf/d plus 300-400 bwpd.

c:\johnroes\bigfield\att2

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION LAT

Attachment  
No. 3  
Pg 1 of 2

Form C-102  
Supersedes C-128  
Effective 1-1-65

API # 30-045-22763 All distances must be from the outer boundaries of the Section.

Operator <b>Dugan Production Corporation</b>			Lease <b>Big Field</b>		Well No. <b>1</b>
Unit Letter <b>P</b>	Section <b>10</b>	Township <b>30 North</b>	Range <b>14 West</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>790</b> feet from the <b>South</b> line and <b>790</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6143</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin</b>		Dedicated Acreage: <b>320</b> Acres

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?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

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 Commission.

SEC. 10	
Dugan Production Corp. - 100%	
NM-10561	

CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Thomas A. Dugan*

Name

Thomas A. Dugan

Position

Petroleum Engineer

Company

Dugan Production Corp.

Date

10-5-77

REGISTERED LAND SURVEYOR  
STATE OF NEW MEXICO  
I hereby certify that the well location shown on this plat was plotted from field notes of **Basin** surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.  
**ERNEST V. ECHOHAWK**

Date Surveyed

May 9, 1977

Registered Professional Engineer and/or Land Surveyor

*E.V. Echohawk*

Certificate No. 3602

E.V. Echohawk LS

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO 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

Attachment  
No. 3  
Page 2 of 2

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

1 API Number 30-045-30182		2 Pool Code 78160		3 Pool Name Harper Hill Fruitland Sand/PC	
4 Property Code 003591		5 Property Name Big Field			6 Well Number 5
7 OGRID No. 006515		8 Operator Name Dugan Production Corporation			9 Elevation 6128'

10 Surface Location

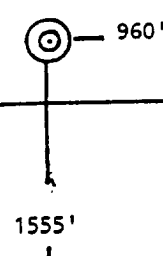
UL or lot no. I	Section 10	Township 30N	Range 14W	Lot Idn 1	Feet from the 1555	North/South line South	Feet from the 960	East/West line East	County San Juan
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11 Bottom Hole Location If Different From Surface

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

12 Dedicated Acres 160	13 Joint or Infill	14 Consolidation Code	15 Order No.
---------------------------	--------------------	-----------------------	--------------

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  Signature Sherman E. Dugan Printed Name Vice-President Title March 3, 2000 Date			
Section 10				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. February 8, 2000 Date of Survey Signature and Seal of Registered Surveyor Edgar L. Hoover Professional Surveyor No. 5979 Certificate Number			
NM-10561 DPC-100%							

ATTACHMENT NO. 4

Big Field No. 1

Basin Dakota

Well Location: SESE (Unit P) 10, T-30N, R-14W

Spacing Unit: S/2 Section 10, T-30N, R-14W (320A)

San Juan County, New Mexico

Big Field No. 5

Harper Hill Fruitland Sand PC

Well Location: NESE (Unit I) 10, T-30N, R-14W

Spacing Unit: SE/4 Section 10, T-30N, R-14W (160A)

San Juan County, New Mexico

INTEREST OWNER (both wells)

	<u>INTEREST%</u>	
	Net	Gross

Working Interest Owners

Dugan Production Corp.	82.5000	100.0000
------------------------	---------	----------

Royalty Interest Owners

USA - Bureau of Land Management 1235 La Plata Highway Farmington, NM 87401	12.5000	-0-
--	---------	-----

Overriding Royalty Interest Owners

Jennifer Jones Black 11714 Sharpview Houston, TX 77072	1.5000	-0-
--	--------	-----

Southern Sky Investment, Inc. P. O. Box 2167 Roswell, NM 88201-2167	1.0000	-0-
---	--------	-----

Virginia L. Vance, As Her Sole and Separate Property 26396 Rea Avenue Conifer, CO 80433-8537	2.5000	-0-
---	--------	-----

**TOTAL**

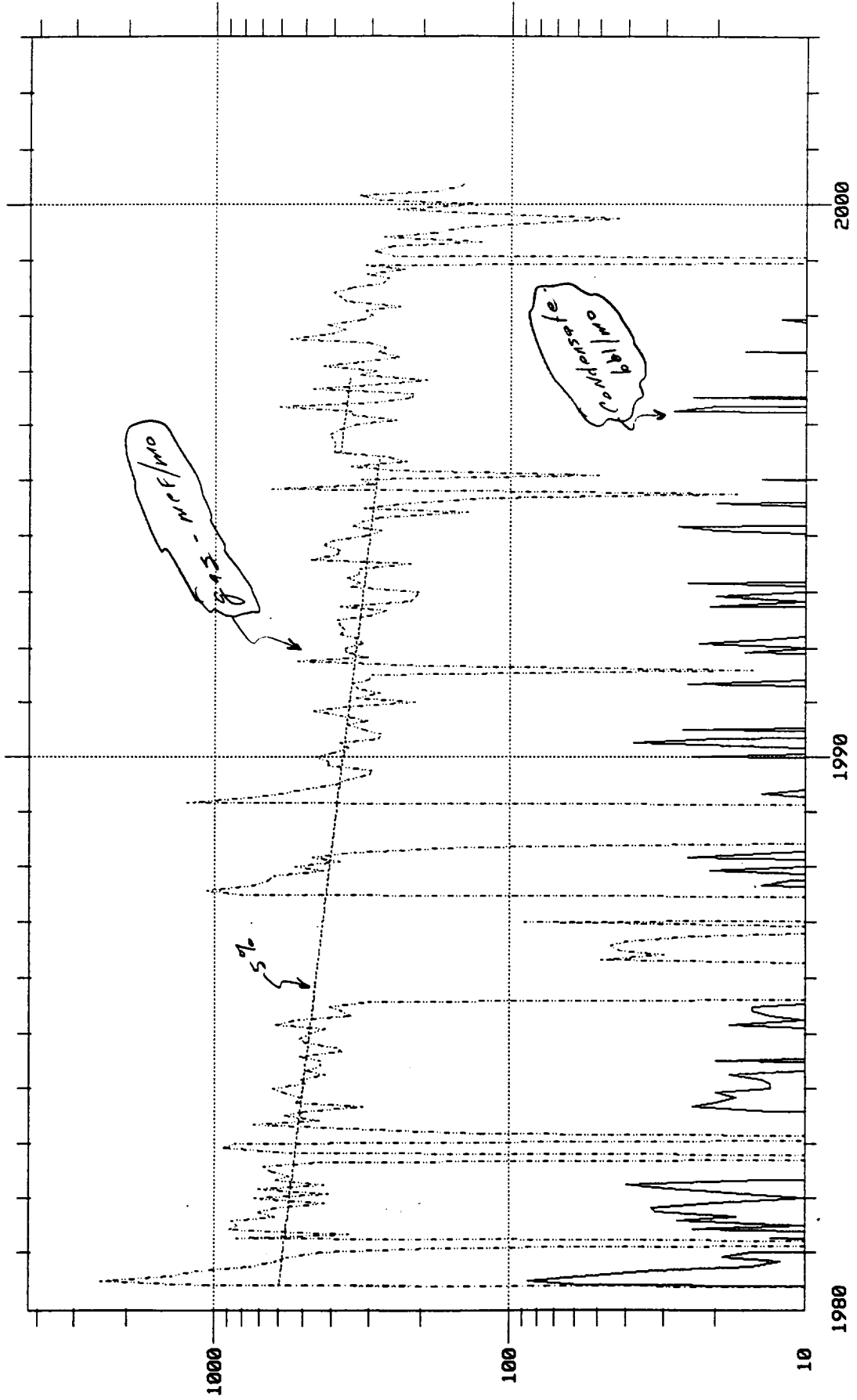
<u>100.0000</u>	<u>100.0000</u>
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Production  
Oil  
Gas  
Water

Attachment  
No. 5  
Pg 1 of 1

DUGAN PRODUCTION CORP.  
Production Rate vs Time  
BB1/Mo or Mcf/Mo vs Months  
BIG FIELD NO.1 (P-10-30N-14W)  
BASIN DAKOTA GAS POOL



**Attachment No. 6**  
**Proposed Allocation Procedures**  
**Dugan Production Corp.'s**  
**Big Field CDP**  
**NE NE 15, T-30N, R-14W**  
**San Juan County, New Mexico**

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

W=Volume (MCF) from Well Allocation Meter

X=Volume (MCF) from CDP Sales Meter

Y=BTU's from CDP Sales Meter

Z=Gas Revenue (\$) 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 = Fuel used on lease, 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 regulations (currently Onshore Order No. 5).

**3. Allocated Individual Well Gas Revenues = (Allocated Individual wells BTU's / Sum Allocated individual well BTU's) x Z**

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) 757-5953  
EL PASO MAINLINE  
(915) 496-2595

DATE 12/04/98

CHROMATOGRAPHIC GAS ANALYSIS REPORT

Attachment  
No. 7  
pg 1 of 2

MAILEE  
26730

DUGAN PRODUCTION CORPORATION  
P O BOX 420  
FARMINGTON, NM 87499-0420

METER NUMBER 93115 - BIG FIELD #1 - *Bosin Dakota (P-10-30 N-14 W)*  
OPERATOR 1862 - DUGAN PRODUCTION CORP

ANALYSIS DATE 10/21/98  
SAMPLE DATE 10/20/98  
EFFECTIVE DATE 11/01/98  
EFFECTIVE FOR 6 MONTHS

TYPE CODE 2 - ACTUAL  
H2S GRAINS 0  
LOCATION F - FARM BECK

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.88	.000
H2S	.00	.000
N2	.54	.000
METHANE	83.72	.000
ETHANE	8.44	2.258
PROPANE	3.66	1.009
ISO-BUTANE	.56	.183
NORM-BUTANE	1.08	.341
ISO-PENTANE	.43	.157
NORM-PENTANE	.38	.138
HEXANE PLUS	<u>.31</u>	<u>.135</u>
	100.00	4.221

SPECIFIC GRAVITY .691  
MIXTURE HEATING VALUE  
(BTU @ 14.73 DRY) 1195  
RATIO OF SPECIFIC HEATS .000  
NO TEST SECURED FOR H2S CONTENT

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 11/13/89

MAILEE  
26730

DUGAN PRODUCTION CORPORATION  
P. O. BOX 208  
FARMINGTON, NEW MEXICO 87401

*Attachment*  
*No. 7*  
*pg 2 of 2*

METER NUMBER 90541 - COM 3 - Harper Hill Fruitland Sand - PC (J-2-29N-14W)  
OPERATOR 1862 - DUGAN PRODUCTION CORP

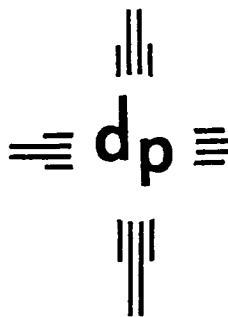
ANALYSIS DATE 0/00/00  
SAMPLE DATE 10/20/89  
EFFECTIVE DATE 11/01/89  
EFFECTIVE FOR 6 MONTHS

TYPE CODE 2 - ACTUAL  
H2S GRAINS 0  
LOCATION F - FARMINGTON

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.56	.000
H2S	.00	.000
N2	.37	.000
METHANE	95.82	.000
ETHANE	1.71	.457
PROPANE	.78	.215
ISO-BUTANE	.06	.020
NORM-BUTANE	.30	.095
ISO-PENTANE	.08	.029
NORM-PENTANE	.06	.022
HEXANE PLUS	<u>.26</u>	<u>.113</u>
	100.00	0.951

SPECIFIC GRAVITY .593  
MIXTURE HEATING VALUE  
(BTU @ 14.73 DRY) 1053  
RATIO OF SPECIFIC HEATS 1.302  
NO TEST SECURED FOR H2S CONTENT

*Since Dugan's  
Big Field No. 5 is  
currently being completed  
a representative gas  
sample has not been  
obtained, it is believed  
this gas sample will be  
representative of gas to be  
produced from the Big Field.*



dugan production corp.

Attachment  
No. 8  
Pg 1 of 1

August 22, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Jennifer Jones Black  
11714 Sharpview  
Houston, TX 77072

Southern Sky Investment, Inc.  
P. O. Box 2167  
Roswell, NM 88201-2167

Ms. Virginia L. Vance  
26396 Rea Avenue  
Conifer, CO 80433-8537

Re: Dugan Production Corp.'s  
Big Field No. 1 (P-10-29N-14W)  
Big Field No. 5 (I-10-29N-14W)

Dear Overriding Royalty Interest Owner,

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 surface commingle and off-lease measure natural gas produced from the captioned wells in which you have an overriding royalty interest ownership. The proposed surface commingling will allow us to place the recently completed Big Field No. 5 on production and will allow both wells to share the cost of operating a central compressor.

This proposal should not affect your interest in these wells and should allow your revenues to increase since both wells will share a central compressor which will hopefully increase production from the Big Field No. 1 and will allow the Big Field No. 5 to deliver gas into El Paso's pipeline which will likely not occur without the aid of a compressor.

Should you have any questions, need additional information or have any concern as to our proposal, please let me know. Should you have an objection, please let me know, or you can contact the New Mexico Oil Conservation Division directly at 2040 South Pacheco Street in Santa Fe, New Mexico 87505. Any objection should be filed within 20 days of receiving this letter, and we would appreciate receiving a copy of your objection.

Sincerely,

John D. Roe  
Engineering Manager

JDR/tmf