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NEW MEXICO OIL CONSERVATION DIVISION

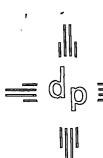
- Engineering Bureau -1220 South St. Francis Drive, Santa Fe, NM 87505



91

ADMINISTRATIVE APPLICATION CHECKLIST THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE **Application Acronyms:** [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication] [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement] [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion] [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase] [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response] [1] TYPE OF APPLICATION - Check Those Which Apply for [A] Location - Spacing Unit - Simultaneous Dedication ☐ NSL ☐ NSP ☐ SD Check One Only for [B] or [C] Commingling - Storage - Measurement [B] ☐ DHC ☐ CTB ☐ PLC ☐ PC OLS X OLM [C]Injection - Disposal - Pressure Increase - Enhanced Oil Recovery □ WFX □ PMX □ SWD □ IPI □ EOR □ PPR [D]Other: Specify [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or \Box Does Not Apply [A] Working, Royalty or Overriding Royalty Interest Owners [B] Offset Operators, Leaseholders or Surface Owner [C]Application is One Which Requires Published Legal Notice [D]Notification and/or Concurrent Approval by BLM or SLO U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office [X] For all of the above, Proof of Notification or Publication is Attached, and/or, [E] +- copies of lefter providing notice are with in Application as Attachinant No. 8. Copies [F] Waivers are Attached certified return receipts will be much to NMOED upon received SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE [3] OF APPLICATION INDICATED ABOVE. CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division. Note: Statement must be completed by an individual with managerial and/or supervisory capacity. Engineering Manager John D. Roe Print or Type Name dugan@cptnet.com

e-mail Address



dugan production corp.

September 6, 2001

Ms. Lori Wrotenbery New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87505 Mr. Steve Henke Bureau of Land Management-FFO 1235 La Plata Highway Farmington, NM 87401

Re: Proposed surface commingling & off-lease measurement
Nine wells operated by Dugan Production Corp.
Dugan Production's Proposed Big Band Gas Gathering System
San Juan County, New Mexico

Dear Ms. Wrotenbery and Mr. Henke:

We are writing to request your approvals for the surface commingling and off-lease measurement of natural gas produced from nine wells (seven existing plus two proposed locations) operated by Dugan Production Corp. and completed in the Bisti Chacra and/or Basin Fruitland Coal pools. These nine wells are located upon six federal leases (NM-8902, NM-57445, NM-90471, NM-90472, NM-93253 & NM-94067) and will be connected to a new gas gathering system currently being installed by Dugan Production Corp. This new gathering system will be known as the Big Band Gas Gathering System and will deliver natural gas to a central delivery sales meter (CDP) operated and maintained by PNM on their main line in the NENE of Section 27, T-22N, R-8W. Only natural gas will be surface commingled. All liquids will be separated, stored and disposed of at each individual well. We do not anticipate any liquid hydrocarbon production. All leasehold interest is federal and is held 100% by Dugan Production.

Attachment No. 1 was reproduced from portions of the Fire Rockwell and Lybrook NW USGS Quadrangle topography maps and presents Dugan's proposed Big Band Gas Gathering System along with the nine wells proposed to initially be connected to the system. In addition, Dugan Production's leasehold interest in this area is also presented. This gathering system will consist of approximately 26,700' of buried 2" to 8", 160# working pressure, new polyethylene pipe. We will pressure test all lines to approximately 120 psi and anticipate maintaining a system gathering pressure of ±30 psi. We will be dehydrating the gas to approximately 7 pounds of water per million cubic feet and using a 3-stage compressor located at the CDP to deliver gas into PNM's pipeline which is currently averaging 350 to 550 psi. Each well will be equipped with continuous recording allocation meters (Barton dryflow or similar) which will be maintained by Dugan Production in accordance with state and federal regulations (currently Onshore Order No. 5).

The monthly charts from each allocation meter will be integrated by a commercial integration company and the volumes recorded will be used to determine factors for allocating sales volumes, BTU's and revenues from the CDP sales meter to each well.

Attachment No. 2 presents well and lease information for each of the nine wells to be connected to the gathering system.

Attachment No. 3 presents the C-102's for each of the wells along with the dedicated spacing units and associated leases. Attachment No. 4 presents the ownership for each of the nine wells and Attachment No. 5 presents the proposed allocation procedures.

The nine wells to be connected to this gathering system are completed in the Bisti Chacra or the Basin Fruitland Coal pools and the natural gas is believed to be mutually compatible. Since all wells have been shut in much of the time since completion and none have produced other than during completion or short term production testing subsequent to completion, we have very little information about the productivity of each well. Based upon testing to date and our experience with other similar completions in the general area along with the Rusty Chacra gas pool, approximately four miles to the east, it is our belief that these nine wells will not be large volume producers. The nearest established Chacra production is from Dugan Production's Dome Rusty 20-22-7 No. 1 located approximately four miles to the east (P-20-22N-7W). The production history for this well is presented in Attachment No. 6 and during the past 19 years, a total of ±33 million cubic feet of gas have been produced with initial production averaging approximately 35 mcfd. The nearest established production from the Fruitland Coal is from Dugan Production's Sapp No. 90 (B-29-24N-8W) approximately 12 miles to the north. The production history for this well is also presented in Attachment No. 6. A total of 133.4 million cubic feet of gas have been produced from this well during the past seven years with initial production averaging approximately 300 mcfd but declining fairly rapidly to ±30 mcfd.

Gas analysis from these two wells are presented in Attachment No. 7 and are believed to be representative of the production from Bisti Chacra and Basin Fruitland Coal in the nine wells to be connected to the Big Band Gathering System.

As previously stated, Dugan Production is the operator and holds 100% of the working interest in all nine wells. Since the spacing units for each of the nine wells encompasses only federal leases, all royalty interest is held by the U.S. government. Dugan Production does have a state lease in Section 36, T-22N, R-8W, however this lease is not included in the spacing units of any of the nine wells to be connected to our gathering system. We are sending notice of our application to all overriding royalty interest owners and Attachment No. 8 is a coy of our letter to them. All interest owner notification was sent by certified return-receipt mail and upon receiving the return receipts, we will provide copies to the NMOCD as evidence of interest owner notification.

In summary, Dugan Production Corp. is installing a new gas gathering system which will gather produced natural gas from nine wells (seven existing plus two proposed) and deliver the gas to a CDP sales meter belonging to PNM. Dugan Production is the operator of all nine wells and will operate the newly installed Big Band Gas Gathering System. This will allow these nine wells, all located on

federal leases, and in an area that has no other options for a pipeline connection, to begin producing. All nine wells are considered to be fairly low volume producers (probably less than 100 mcfd per well) however, hopefully will have long producing lives and will develop significant gas reserves. A gathering system compressor will be installed which will allow all wells to benefit from the operation of one compressor and will eliminate the need for individual well head compressors (which may not be economically feasible for some wells). A central compressor as opposed to individual well head compressors will provide an overall more efficient operation, reducing the volumes of compressor fuel needed, plus will reduce compressor noise and exhaust emissions. All gas volumes, BTU's and revenues will be allocated from the CDP to the individual wells using allocation factors determined from gas volumes recorded by allocation meters located at each well and BTU's determined for each well. This should help to insure that the proposed surface commingling and off-lease measurement will not diminish the production value of any one well.

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

Sincerely,

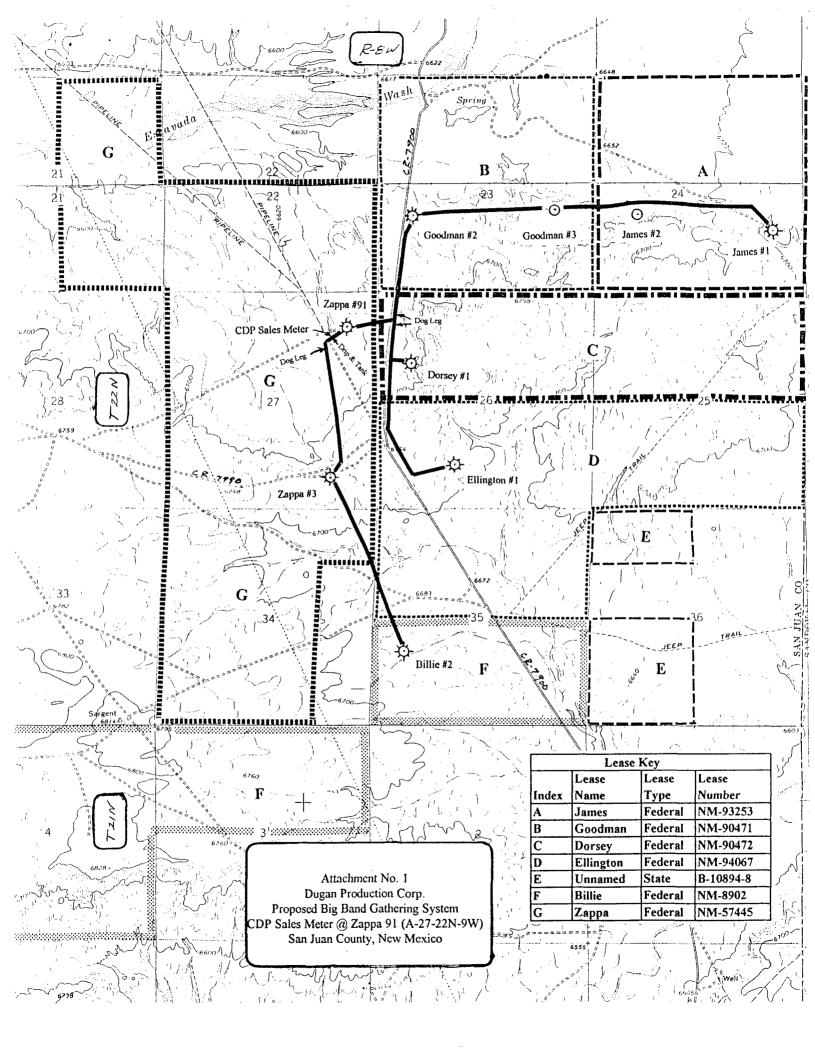
John D. Rose

John D. Roe

Engineering Manager

JDR/tmf

xc: NMOCD-Aztec



ATTACHMENT NO. 2 DUGAN PRODUCTION CORP. PROPOSED BIG BAND GATHERING SYSTEM AND CDP SAN JUAN COUNTY, NEW MEXICO

	API Number	Well Location	Well Locati	ation			Completion	Curren	Current Prod.	Θ	Spacing
Well Name	30-045-	UL-Sec-Twn-Rng	Lease No.	Lse.Type	CA Number	Pool	Date	MCFD BC/D	BC/D	BW/D	Unit
WELLS TO BE ADDED TO SYSTEM	SYSTEM										
Billie No. 2	23386	L-35-22N-8W	NM-8902	Federal	N/A	Bisti Chacra	1/31/81	117	0	1	SW/4-160A
Dorsey No. 1	29909	E-26-22N-8W	NM-90472	Federal	N/A	Bisti Chacra Ext.	12/1/99	100	0	1	NW/4-160A
Ellington No. 1	29907	W8-N22-92-N	NM-94067	Federal	N/A	Bisti Chacra Ext.	10/6/99	179	0	0	SW/4-160A
Goodman No. 2	29191	L-23-22N-8W	NM-90471	Federal	N/A	Bisti Chacra Ext.	1/4/95	184	0	0	SW/4-160A
Goodman No. 3 (2)	pending	1-23-22N-8W	NM-90471	Federal	N/A	Bisti Chacra Ext.	Location	100	0	0	SE/4-160A
James No. 1	29910	I-24-22N-8W	NM-93253	Federal	N/A	Bisti Chacra Ext.	12/31/99	100	0	0	SE/4-160A
James No. 2 (2)	pending	L-24-22N-8W	NM-93253	Federal	N/A	Bisti Chacra Ext.	Location	100	0	0	SW/4-160A
Zappa No. 3 (3)	29908	P-27-22N-8W	NM-57445	Federal	N/A	Bisti Chacra & Basin FR Coal	12/2/99	09	0	12	SE/4 & S/2
Zappa No. 91 (4)	29997	A-27-22N-8W	NM-57445	Federal	N/A	Basin Fruitland Coal	2/2/01	30	0	30	N/2-320A

dotes:

N/A - Not applicable or not needed.

- Since all wells proposed for this gathering system have been shut in since completion, the production data reflects either the initial potential test or results from short term production testing subsequent to the initial completion testing. Rates for undrilled wells represent estimated intitial potential.
- . APD submitted 8/8/01.
- Zappa No. 3 was completed in the Bisti Chacra 12/2/99 with a SE/4-160A spacing unit. The Basin Fruitland Coal was perforated and fracture stimulated on 1/29/01 in conjunction with the Chacra frac job. The well is currently being production tested with the Bisti Chacra and Basin Fruitland Coal being downhole commingled and 80% Fruitland Coal. We are pumping 125-140 BWPD and gas proudction has increased from nothing to ±3 mcfd and appears to be exhibiting performance Order NSL-4418. Commingled gas production is allocated 50% each to the Chacra and Fruitland Coal. Commingled water production is allocated 20% Chacra (DHC-2673). The Fruitland Coal spacing unit comprises the S/2-320A and the unorthodox SE/4 Fruitland Coal completion is authorized by Administrative typical to dewatering Fruitland Coal. We anticipate 30 to 60 mcfd plus 6 to 12 BWPD as dewatering progresses.
 - Rod pump artificial lift equipment was installed 2/22/01 and a rate of 5 mcfd plus 30 BWPD was tested on 6/11/01. Based upon testing to date, the performance appears to be typical for dewatering Fruitland Coal. We anticipate ±30 mcfd as dewatering progresses. 4

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WELL LOCATION AND ACREAGE DEDICATION PLAT

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Signature / Kurt Fagrelius Printed Name Geologist Title <u>August 8, 2001</u> Date "SURVEYOR CERTIFICATION 5313.00 I hereby cartify 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 connect to the best of my belief. Date of Survey: JULY 15, 2001 Dugan Prod. 90272 Signature and Seal of Professional Surveyor SON C. EDWARDS EN MEXIC 1030 REGISTERED ASSESSIONAL 5229 13 Centificate Number

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WELL LOCATION AND ACREAGE DEDICATION DI AT

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UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West	line	County
I	24	22N	8W	1	1475	South	878	East		San Juan
			11 Bott	om Hol	e Location l	If Different Fro	om Surface			
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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District I. PO 80x 1980, Hoods, NM 88241-1980

District II PO Drawer DD. Antesia, NM 88211-0719

District III 1000 Rio Erazos Rd. Aztec, NM 87410

Oistrict IV PO Box 2088, Santa Fe. NM 87504-2088 State Of New Mexico Energy Minerals & Natural Resources Departm.

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088 Ravised February 21, 1994
Instructions on back
Submit to Appropriate District Office
Appropriate District Office
Appropriate Lease - 4 Cooles
Fee Lease - 3 Cooles
No. 3
Porton Amended Report

PO Eox 2088.	Santa Fe	. NM 87504	1-2088							
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				f			August	8, 200	<u> </u>	

"SURVEYOR CERTIFICATION 32 I hereby centify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my sucervision, and that the same is thue and connect to the best of my belief. 5347 Dugan Prod. Date of Survey: JUNE 29, 2001 Signature and Seal of Professional Surveyor 1000' SP CH MEXICO EN MEXICO REGISTERS AND ESSIONAL Same You 1885 5243.70 Certificate Number 15259

District 1 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

PO Box 2088, Santa Fc, NM 87504-2088

API Number

30 045 29908

⁴ Property Code

013361

OGRID No.

District IV

State of New Mexico
Energy, Minerals & Natural Resources Department

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

No.3 Form C-102

Pg 8. f 10 Revised February 21, 1994

Instructions on back

³ Poul Name

Bisti Chacra Ext.

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☐ AMENDED REPORT

Well Number

· Élevation

WELL LOCATION AND ACREAGE DEDICATION PLAT

⁵ Property Name

Operator Name

1 Pool Code

96166

Zappa

006515	_	Du	ıgan Prod	duction C	orporation				673	8'
					10 Surfac	e Location				
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Fo	et from the	East/West line	County
Р	27	22N	8W	Р	790	South	11	90	East	San Juan
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UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Fee	t from the	East/West line	County
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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

30 045 29908

⁴ Property Code

OGRID No.

013361

API Number

State of New Mexico Energy, Minerals & Natural Resources Department

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

Harmont No.3 Form C-102 P9 90 10 Revised February 21, 1994

³ Pool Name

Basin Fruitland Coal

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■ AMENDED REPORT

4 Well Number

Élevation

3

67381

WELL LOCATION AND ACREAGE DEDICATION PLAT

⁵ Property Name

Operator Name

² Pool Code

71629

Zappa

006515		ים`	ugan Prod	duction Co	orporation			673	3 '
					10 Surface	Location			
UL ar lat so.	Section	Tawaship	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
Р	27	22N	8W		790	South	1190	East	San Juan
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District I PO Box 1980, Hobbs, NM 88241-1980 District II PO Drawer DD, Artesia, NM 88211-0719 District III 1000 Rio Bruzos Rd., Aztec, NM 87410

PO Box 2088, Santa Fe, NM 87504-2088

API Number

District IV

State of New Mexico
Energy, Minerals & Natural Resources Department

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ Pool Code

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

Form C-102 Revised February 21, 1994

Instructions on back

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AMENDED REPORT

AHarhmant No. 3

2 Pool Name

Basin Fruitland Coal

30_0)45 2	9997		71629		Bas	<u>sin Fruitla</u>	nd_Coal	
4 Property	Code				⁵ Prope	rty Name			* Well Number
0133	361		Zappa						91
OGRID	No.				•	tor Name			* Élevation
0065	515	<u> </u>	Dugan f	Production	on Corporati				6648'
					10 Surfac	e Location			• •
UL or lot no.	Section	Townsh	ip Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
Α	27	22N	ws .	Α	790	North	790	East	San Juan
			11 Bot	tom Ho	le Location	If Different Fr	om Surface	•	
UL or lot no.	Section	Townshi	p Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
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ATTACHMENT NO. 4 - PAGE 1 OF 7 Interest Ownership Summary Wells to be added to Dugan Production Corp.'s Proposed Big Band Gas Gathering System

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David T. Sorenson				0.437500						
Matthew N. Sorenson				1.104166						
Unknown Interest										2.000
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ATTACHMENT 4-PAGE 2 OF 7

Dugan Production Corp. Billie No. 2

Bisti Chacra Pool

Well Location: NWSW 35, T-22N, R-8W

Spacing Unit: SW/4 (160.0A) San Juan County, New Mexico

INTEREST OWNER	INTEREST%		
	<u>Gross</u>	Net	
Working Interest			
Dugan Production Corp.	100.000000	81.250000	
P. O. Box 420			
Farmington, NM 87499-0420			
Royalty			
USA - Bureau of Land Management	-0-	12.500000	
1235 La Plata Hwy.	Ū	12.50000	
Farmington, NM 87401			
Overriding Royalty Interest	_		
G. J. Fellis & Irene R. Fellis	-0-	3.125000	
P. O. Box 10541			
Albuquerque, NM 87184-0541			
Billie Robinson	-0-	3.125000	
P. O. Box 1281	Ū	3.123000	
Santa Fe, NM 87501-1281			
,			
		-	
TOTAL WELL	100.000000	100.000000	

ATTACHMENT 4-PAGE 3 OF 7

Dugan Production Corp. Dorsey No. 4

Bisti Chacra Pool

Well Location: SWNW 26, T-22N, R-8W

Spacing Unit: NW/4 (160.0A)
San Juan County, New Mexico

INTEREST OWNER	INTEREST%	
	Gross	Net
Working Interest		
Dugan Production Corp.	100.000000	87.500000
P. O. Box 420	-	
Farmington, NM 87499-0420		
Royalty USA - Bureau of Land Management 1235 La Plata Highway Farmington, NM 87401	-0-	12.500000
TOTAL WELL	100.000000	100.000000

ATTACHMENT 4-PAGE 4 OF 7

Dugan Production Corp. Ellington No. 1

Bisti Chacra Pool

Well Location: SESW 26-T-22N, R-8W Spacing Unit: SW/4 160.0A San Juan County, New Mexico

INTEREST OWNER	INTEREST%	
	Gross	<u>Net</u>
Working Interest		
Dugan Production Corp.	100.000000	80.000000
P. O. Box 420		
Farmington, NM 87499-0420		
Royalty		
USA-Bureau of Land Management	-0-	12.500000
1235 La Plata Highway		
Farmington, NM 87401		
Overriding Royalty Interest		
Christine V. Grimm	-0-	1.104167
P. O. Box 1453		
Roswell, NM 88202-1453		
F. Andrew Grooms	-0-	3.750000
P. O. Box 2328		
Roswell, NM 88202-2328		
Kellie M. Kross	-0-	1.104167
P. O. Box 1453		
Roswell, NM 88202-1453		
David T. Sorenson	- 0-	0.437500
P. O. Box 1453		
Roswell, NM 88202-1453		
Matthew N. Sorenson	-0-	1.104166
P. O. Box 1453		
Roswell, NM 88202-1453		
TOTAL WELL	100.000000	100,000000
		

ATTACHMENT 4-PAGE 5 OF 7 Dugan Production Corp.

100.000000

100.000000

Well Name Goodman No. 2 Goodman No. 3	Pool Bisti Chacra Bisti Chacra	Location NWSW 23, T-22N, R-8 NESE 23, T-22N, R-8	
INTEREST OWNER		INTER Gross	REST % Net
Working Interest			
Dugan Production Cor	D.	100,000000	87.500000
P. O. Box 420	r -		
Farmington, NM 8749	99-0420		
Royalty USA - Bureau of Land 1235 La Plata Hwy. Farmington, NM 8740	Management	-0-	12.500000

TOTAL WELL

ATTACHMENT 4-PAGE 6 OF 7 Dugan Production Corp.

Well Name James No. 1 James No. 2	Pool Bisti Chacra Bisti Chacra	Location NESE 24, T-22N, R NWSW 24, T-22N,	
INTEREST OWNER		INTEREST Gross	<u>Net</u>
Working Interest Dugan Production Corp P. O. Box 420 Farmington, NM 87499		100.000000	87.500000
Royalty USA - Bureau of Land 1235 La Plata Hwy. Farmington, NM 8740	J	-0-	12.500000
TOTAL WELL		100.000000	100.000000

ATTACHMENT 4 - PAGE 7 OF 7 Dugan Production Corp.

Well Name	Pool	Location	Spacing Unit
Zappa No. 3	Basin Fruitland Coal	SESE 27, T-22N, R-8W	S/2-320A
66 77	Bisti Chacra	٠٠ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	SE/4-160A
Zappa No. 91	Basin Fruitland Coal	NENE 27, T-22N, R-8W	N/2-320A

INTEREST OWNER	INTEREST Gross Net	
Working Interest Dugan Production Corp. P. O. Box 420 Farmington, NM 87499-0420	100.000000	80.500000
Royalty Interest USA - Bureau of Land Management 1235 La Plata Highway Farmington, NM 87401	-0-	12.500000
Overriding Royalty Charles Breck Adams & Susan J. Adams 979 Windflower Way San Diego, CA 92106	-0-	1.000000
Dugan Production Corp. P. O. Box 420 Farmington, NM 87499-0420	-0-	4.000000
Unknown	-0-	2.000000
TOTAL	100.000000	100.000000

ATTACHMENT No. 5

Proposed Allocation Procedures Dugan Production Corp.'s

Proposed Big Band Gas Gathering System CDP Gas Sales Meter: NENE 27-22N-8W (New PNM Meter) San Juan County, New Mexico

Base Data:

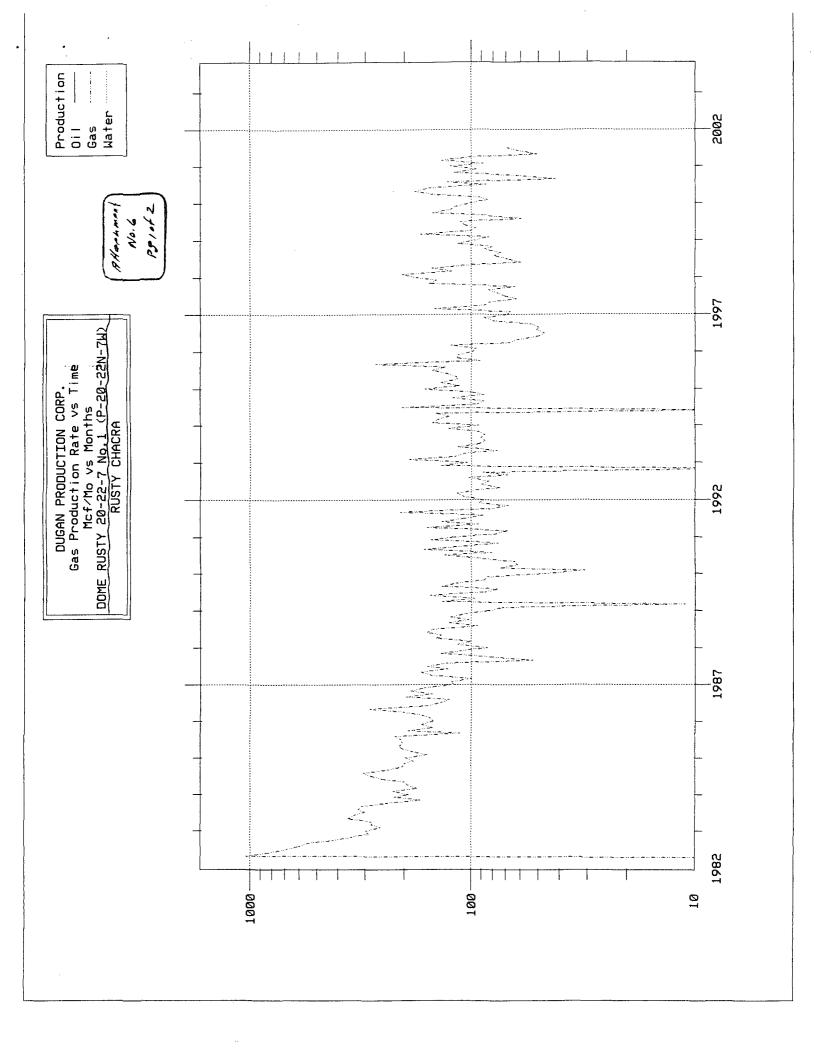
W = Gas Volume (MCF) from allocation meters at individual wells during allocation period.

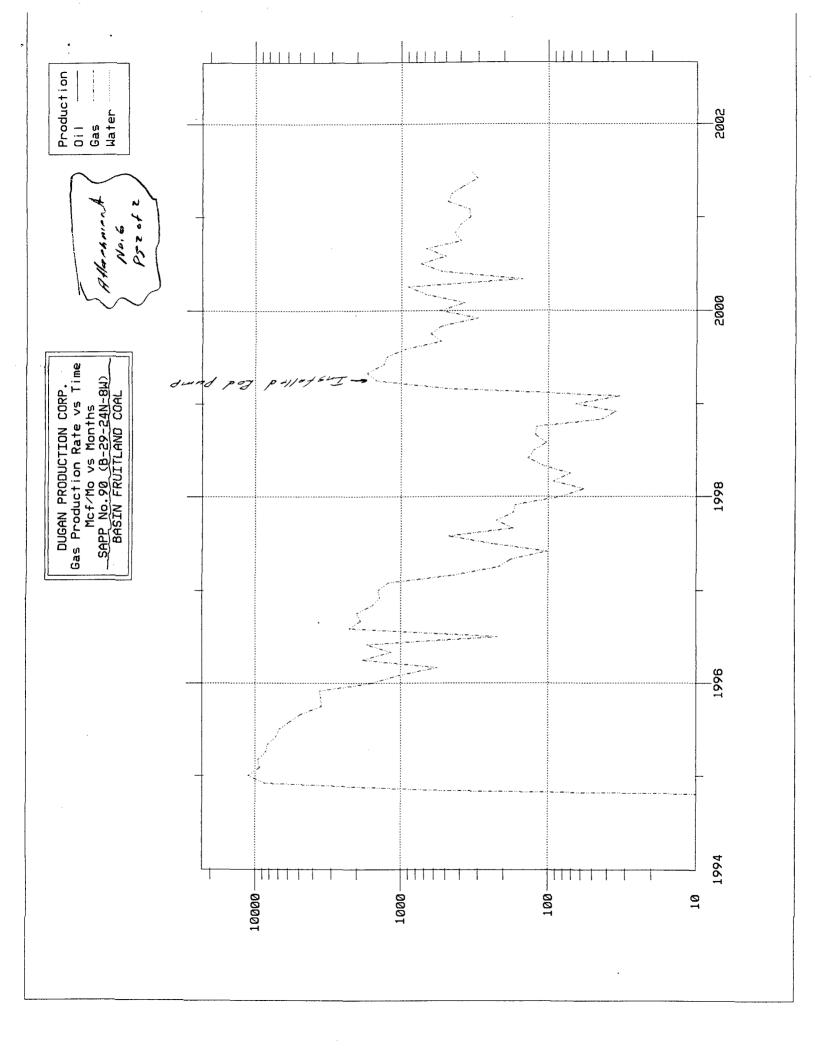
X = Gas Volume (MCF) from CDP Sales Meter during allocation period.

Y = BTU's from CDP Sales Meter during allocation period.

Allocation Period is typically a calendar month and will be the same for all wells.

- Individual Well Gas 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 specification 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/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. <u>Allocated Individual Well BTU's</u>=((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 On shore Order No. 5).







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

ANALYSIS NO. CUST, NO.

DU210043 23000 - 10630

> A Haramont No.7

> > PS 10FZ

WELL/LEASE INFORMATION

CUSTOMER NAME

WELL NAME **COUNTY/ STATE**

LOCATION FIELD FORMATION

CUST.STN.NO.

DUGAN PRODUCTION CORP. DOME RUSTY 20-22-7 #1 SANDOVAL NM

P20-22N-07W

RUSTY CHACRA 202A252607

SOURCE

PRESSURE SAMPLE TEMP

WELL FLOWING

DATE SAMPLED SAMPLED BY

FOREMAN/ENGR.

N/A

40 PSIG DEG.F

3/27/01 J. DAVIS TOM BLAIR

REMARKS

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR *
NITROGEN	0.933	0.0000	0.00	0.0090
CO2	0.108	0.0000	0.00	0.0016
METHANE	89.307	0.0000	904.05	0.4947
ETHANE	5.922	1.5841	105.04	0.0615
PROPANE	2.335	0.6435	58.89	0.0356
I-BUTANE	0.387	0.1266	12.61	0.0078
N-BUTANE	0.481	0.1517	15.73	0.0097
I-PENTANE	0.162	0.0593	6.50	0.0040
N-PENTANE	0.100	0.0362	4.02	0.0025
HEXANE PLUS	0.265	0.1156	13.62	0.0085
TOTAL	100.000	2.7170	1,120.46	0.6349

^{*@} 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

COMPRESSIBLITY FACTOR 1.0027 (1/Z)BTU/CU.FT (DRY) CORRECTED FOR (1/Z) 1,123.6 BTU/CU FT (WET) CORRECTED FOR (1/Z) 1,104.1 **REAL SPECIFIC GRAVITY** 0.6367

ANALYSIS RUN AT 14,730 PSIA & 60 DEGREES F

DRY BTU @ 14.650	1,117.5	CYLINDER#	1/012
DRY BTU @ 14.696	1,121.0	CYLINDER PRESSURE	K013 48 PSIG
DRY BTU @ 14.730	1,123.6	DATE RUN	4/5/01
DRY BTU @ 15.025	1,146.1	ANALYSIS RUN BY	DAWN BLASSINGAME

^{₩@} 14,730 PSIA & 60 DEG. F.



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

ANALYSIS NO.

CUST. NO.

DUG00047 23000-10055

WELL/LEASE INFORMATION

NM

CUSTOMER NAME DUGAN PRODUCTION CORP.

WELL NAME

LOCATION

SAPP 90

COUNTY/ STATE

SAN JUAN

29-24N-08W

FIELD

FORMATION CUST.STN.NO. FRUITLAND COAL

202E-4314

SOURCE

PRESSURE

SAMPLE TEMP

WELL FLOWING DATE SAMPLED

SAMPLED BY

FOREMAN/ENGR.

METER RUN 45 PSIG DEG.F

7/24/00 J. DAVIS TOM BLAIR

REMARKS

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR *
NITROGEN	1.588	0.0000	0.00	0.0154
CO2	0.550	0.0000	0.00	0.0084
METHANE	92.453	0.0000	935.90	0.5121
ETHANE	3.340	0.8934	59.24	0.0347
PROPANE	1,023	0.2819	25.80	0.0156
I-BUTANE	0.296	0.0968	9.65	0.0059
N-BUTANE	0.282	0.0889	9.22	0.0057
I-PENTANE	0.132	0.0483	5,29	0.0033
N-PENTANE	0.077	0.0279	3.09	0.0019
HEXANE PLUS	0.259	0.1130	13.32	0.0083
TOTAL	100.000	1.5503	1,061.51	0.6112

^{* @} 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

^{** @} 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR	(1/Z)	1.0024
BTU/CU.FT (DRY) CORRECTED FOR	(1/Z)	1,064.2
BTU/CU.FT (WET) CORRECTED FOR	• /	1,045.7
REAL SPECÎFIÇ ĞRAVITY	. ,	0.6129

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

DRY BTU @ 14.650 DRY BTU @ 14.696	1,058.4 1,061.8	CYLINDER#	K098	2010
DRY BTU @ 14.730 DRY BTU @ 15.025	1,064.2 1,085.5	CYLINDER PRESSURE DATE RUN ANALYSIS RUN BY	30 7/31/00 DAWN	



dugan production corp.



Alfrehment No.8 Pg 1 of 3

To:

Overriding Royalty Interest Owners (Address list on Attachment No. 1)

Application to connect nine wells

Dugan Production Corp.'s

Proposed Big Band Gathering System San Juan County, New Mexico

Dear Overriding Royalty Interest Owner:

Dugan Production Corp. has submitted an application to connect nine wells (seven existing and two to be drilled) to our Big Band Gas Gathering system which is currently being constructed. Our application requests approvals from the Bureau of Land Management (BLM) and the New Mexico Oil Conservation Division (NMOCD) to surface commingle gas produced from each well and to deliver the gas in Dugan's Big Band Gas Gathering System to a central delivery sales meter (CDP) located on PNM's pipeline in the NENE of Section 27, T-22N, R-8W of San Juan County. Each well will be equipped with a standard, continuous recording gas meter which will be used to allocate gas sales volumes, BTU's and revenues from the CDP sales meter to each individual well. This should insure that the value of production from each well will be preserved for all interest owners.

As an interest owner in one or more of these wells, you are entitled to receive notice of our application and should you desire to review the application, we will be happy to provide you with a copy. The wells in which you have an interest are presented on Attachment No. 1 and Attachment No. 2 presents basic well and lease information for each of the nine wells.

All wells to be added to the gathering system are located some distance from existing gas pipelines and do not qualify for individual well head pipeline connections. It is our belief that this proposed gathering system is the only option available to place these wells on production. A benefit to the operation of a gas gathering system is that a central compressor can be used for all wells which will eliminate the need for compressors at each well (which might not be economically feasible for some wells). The operation of a central compressor, as opposed to individual well head compressors, will be more efficient, will use less compressor fuel (which will increase the volumes available for sale), and will result in reduced exhaust and noise emissions.

Should you have any questions or desire to receive a copy of our application, please let me know. Should you have an objection to our application, you should contact the New Mexico Oil Conservation Division by mail at 1220 South St. Francis Drive, Santa Fe, NM 87505, or by phone at (505) 476-3440 within 20 days from the date of this letter. We would appreciate receiving a copy of any objection filed.

Sincerely,

Juliu O, Rive

John D. Roe

Engineering Manager

JDR/tmf

attachments

C:\TF\Johnroe\BigBand\ltrorriroyown.wpd

Interest Owners Address List

(a = Billie No. 2; b = Dorsey No. 1; c = Ellington No. 1; d = Goodman No. 2; e = Goodman No. 3; f = James No. 1; g = James No. 2; h = Zappa No. 3; i = Zappa No. #91)

Working Interest Owners

Dugan Production Corp. (a,b,c,d,e,f,g,h,i)

P. O. Box 420

Farmington, NM 87499-0420

Royalty Interest Owners

USA - Bureau of Land Management (a,b,c,d,e,f,g,h,i)

1235 LaPlata Hwy

Farmington, NM 87401

Overriding Royalty Interest Owners

Charles Breck Adams & Susan J. Adams (h,i)

979 Windflower Way

San Diego, CA 92106

Dugan Production Corp. (h,i)

P. O. Box 420

Farmington, NM 87499-0420

G. J. Fellis & Irene R. Fellis (a)

P. O. Box 10541

Albuquerque, NM 87184-0541

Christine V. Grimm (c)

P. O. Box 1453

Roswell, NM 88202-1453

F. Andrew Grooms (c)

P. O. Box 2328

Roswell, NM 88202-2328

Kellie M. Kross (c)

P. O. Box 1453

Roswell, NM 88202-1453

Billie Robinson (a)

P. O. Box 1281

Santa Fe, NM 87501-1281

David T. Sorenson (c)

P. O. Box 1453

Roswell, NM 88202-1453

Matthew N. Sorenson (c)

P. O. Box 1453

Roswell, NM 88202-1453

Affarhment No.8
P&Zof3

ATTACHMENT NO. 2 DUGAN PRODUCTION CORP. PROPOSED BIG BAND GATHERING SYSTEM AND CDP SAN JUAN COUNTY, NEW MEXICO

	Spacing	Unit		SW/4-160.A	NW/4-160A	SW/4-160A	SW/4-160A	SE/4-160A	SE/4-160A	SW/4-160A	SE/4 & S/2	N/2-320A
(Э	BW/D		1	1	0	0	0	0	0	12	30
	Current Prod.	MCFD BC/D		0	0	0	0	0	0	0	0	0
	Curre	MCFD		117	100	179	184	100	100	100	09	30
	Completion	Date		1/31/81	12/1/99	10/6/99	1/4/95	Location	12/31/99	Location	12/2/99	2/2/01
		Pool		Bisti Chacra	Bisti Chacra Ext.	Bisti Chacra Ext.	Bisti Chacra Ext.	Bisti Chacra Ext.	Bisti Chacra Ext.	Bisti Chacra Ext.	Bisti Chacra & Basin FR Coal	Basin Fruitland Coal
		CA Number		N/A	N/A	A/A	N/A	N/A	N/A	N/A	N/A	N/A
. 1	ation	Lse.Type		Federal	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Federal
	Well Location	Lease No.		NM-8902	NM-90472	NM-94067	NM-90471	NM-90471	NM-93253	NM-93253	NM-57445	NM-57445
	Well Location	UL-Sec-Twn-Rng		L-35-22N-8W	E-26-22N-8W	N-26-22N-8W	L-23-22N-8W	I-23-22N-8W	I-24-22N-8W	L-24-22N-8W	P-27-22N-8W	A-27-22N-8W
	API Number	30-045-	SYSTEM	23386	29909	29907	29191	pending	29910	pending	29908	29997
		a	DED TO					(2)		0	0	Ŧ
		Well Name	WELLS TO BE ADDED TO SYSTEM	Billie No. 2	Dorsey No. 1	Ellington No. 1	Goodman No. 2	Goodman No. 3	James No. 1	James No. 2	Zappa No. 3	Zappa No. 91

lotes:

N/A - Not applicable or not needed.

- Since all wells proposed for this gathering system have been shut in since completion, the production data reflects either the initial potential test or results from short term production testing subsequent to the initial completion testing. Rates for undrilled wells represent estimated intitial potential.
 - APD submitted 8/8/01.
- Zappa No. 3 was completed in the Bisti Chacra 12/2/99 with a SE/4-160A spacing unit. The Basin Fruitland Coal was perforated and fracture stimulated on 1/29/01 in conjunction with the Chacra frac job. The well is currently being production tested with the Bisti Chacra and Basin Fruitland Coal being downhole commingled and 80% Fruitland Coal. We are pumping 125-140 BWPD and gas proudction has increased from nothing to ±3 mcfd and appears to be exhibiting performance Order NSL-4418. Commingled gas production is allocated 50% each to the Chacra and Fruitland Coal. Commingled water production is allocated 20% Chacra (DHC-2673). The Fruitland Coal spacing unit comprises the S/2-320A and the unorthodox SE/4 Fruitland Coal completion is authorized by Administrative typical to dewatering Fruitland Coal. We anticipate 30 to 60 mcfd plus 6 to 12 BWPD as dewatering progresses.
 - Rod pump artificial lift equipment was installed 2/22/01 and a rate of 5 mcfd plus 30 BWPD was tested on 6/11/01. Based upon testing to date, the performance appears to be typical for dewatering Fruitland Coal. We anticipate ±30 mcfd as dewatering progresses. 4.



September 6, 2001

Ms. Lori Wrotenbery New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87505 Mr. Steve Henke Bureau of Land Management-FFO 1235 La Plata Highway Farmington, NM 87401

Re: Proposed surface commingling & off-lease measurement

Nine wells operated by Dugan Production Corp.

Dugan Production's Proposed Big Band Gas Gathering System

San Juan County, New Mexico

Dear Ms. Wrotenbery and Mr. Henke:

We are writing to request your approvals for the surface commingling and off-lease measurement of natural gas produced from nine wells (seven existing plus two proposed locations) operated by Dugan Production Corp. and completed in the Bisti Chacra and/or Basin Fruitland Coal pools. These nine wells are located upon six federal leases (NM-8902, NM-57445, NM-90471, NM-90472, NM-93253 & NM-94067) and will be connected to a new gas gathering system currently being installed by Dugan Production Corp. This new gathering system will be known as the Big Band Gas Gathering System and will deliver natural gas to a central delivery sales meter (CDP) operated and maintained by PNM on their main line in the NENE of Section 27, T-22N, R-8W. Only natural gas will be surface commingled. All liquids will be separated, stored and disposed of at each individual well. We do not anticipate any liquid hydrocarbon production. All leasehold interest is federal and is held 100% by Dugan Production.

Attachment No. 1 was reproduced from portions of the Fire Rockwell and Lybrook NW USGS Quadrangle topography maps and presents Dugan's proposed Big Band Gas Gathering System along with the nine wells proposed to initially be connected to the system. In addition, Dugan Production's leasehold interest in this area is also presented. This gathering system will consist of approximately 26,700' of buried 2" to 8", 160# working pressure, new polyethylene pipe. We will pressure test all lines to approximately 120 psi and anticipate maintaining a system gathering pressure of ±30 psi. We will be dehydrating the gas to approximately 7 pounds of water per million cubic feet and using a 3-stage compressor located at the CDP to deliver gas into PNM's pipeline which is currently averaging 350 to 550 psi. Each well will be equipped with continuous recording allocation meters (Barton dryflow or similar) which will be maintained by Dugan Production in accordance with state and federal regulations (currently Onshore Order No. 5).

The monthly charts from each allocation meter will be integrated by a commercial integration company and the volumes recorded will be used to determine factors for allocating sales volumes, BTU's and revenues from the CDP sales meter to each well.

Attachment No. 2 presents well and lease information for each of the nine wells to be connected to the gathering system.

Attachment No. 3 presents the C-102's for each of the wells along with the dedicated spacing units and associated leases. Attachment No. 4 presents the ownership for each of the nine wells and Attachment No. 5 presents the proposed allocation procedures.

The nine wells to be connected to this gathering system are completed in the Bisti Chacra or the Basin Fruitland Coal pools and the natural gas is believed to be mutually compatible. Since all wells have been shut in much of the time since completion and none have produced other than during completion or short term production testing subsequent to completiong, we have very little information about the productivity of each well. Based upon testing to date and our experience with other similar completions in the general area along with the Rusty Chacra gas pool, approximately four miles to the east, it is our belief that these nine wells will not be large volume producers. The nearest established Chacra production is from Dugan Production's Dome Rusty 20-22-7 No. 1 located approximately four miles to the east (P-20-22N-7W). The production history for this well is presented in Attachment No. 6 and during the past 19 years, a total of ±33 million cubic feet of gas have been produced with initial production averaging approximately 35 mcfd. The nearest established production from the Fruitland Coal is from Dugan Production's Sapp No. 90 (B-29-24N-8W) approximately 12 miles to the north. The production history for this well is also presented in Attachment No. 6. A total of 133.4 million cubic feet of gas have been produced from this well during the past seven years with initial production averaging approximately 300 mcfd but declining fairly rapidly to ±30 mcfd.

Gas analysis from these two wells are presented in Attachment No. 7 and are believed to be representative of the production from Bisti Chacra and Basin Fruitland Coal in the nine wells to be connected to the Big Band Gathering System.

As previously stated, Dugan Production is the operator and holds 100% of the working interest in all nine wells. Since the spacing units for each of the nine wells encompasses only federal leases, all royalty interest is held by the U.S. government. Dugan Production does have a state lease in Section 36, T-22N, R-8W, however this lease is not included in the spacing units of any of the nine wells to be connected to our gathering system. We are sending notice of our application to all overriding royalty interest owners and Attachment No. 8 is a coy of our letter to them. All interest owner notification was sent by certified return-receipt mail and upon receiving the return receipts, we will provide copies to the NMOCD as evidence of interest owner notification.

In summary, Dugan Production Corp. is installing a new gas gathering system which will gather produced natural gas from nine wells (seven existing plus two proposed) and deliver the gas to a CDP sales meter belonging to PNM. Dugan Production is the operator of all nine wells and will operate the newly installed Big Band Gas Gathering System. This will allow these nine wells, all located on

federal leases, and in an area that has no other options for a pipeline connection, to begin producing. All nine wells are considered to be fairly low volume producers (probably less than 100 mcfd per well) however, hopefully will have long producing lives and will develop significant gas reserves. A gathering system compressor will be installed which will allow all wells to benefit from the operation of one compressor and will eliminate the need for individual well head compressors (which may not be economically feasible for some wells). A central compressor as opposed to individual well head compressors will provide an overall more efficient operation reducing the volumes of compressor fuel needed, plus will reduce compressor noise and exhaust emissions. All gas volumes, BTU's and revenues will be allocated from the CDP to the individual wells using allocation factors determined from gas volumes recorded by allocation meters located at each well and BTU's determined for each well. This should help to insure that the proposed surface commingling and off-lease measurement will not diminish the production value of any one well. The operation of this gathering system is the only economically viable option available to place these nine wells on production

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

Sincerely,

John D. Roe Engineering Manager

JDR/tmf

xc: NMOCD-Aztec