

# dugan production corp.

*Applicant for VC  
approval*

December 10, 1984

**RECEIVED**  
DEC 12 1984  
OIL CON. DIV.  
DIST. 3

Richard L. Stamets, Director  
New Mexico Oil Conservation Division  
P O Box 2088  
Santa Fe, NM 87501

RE: Request for Administrative Approval of Surface Commingling  
Dugan Production Corp.'s Ballymaloe #1 and Ballymaloe #2 Wells  
Undesignated Chacra and Lybrook Gallup Fields  
Units M & K of Section 25, T-23-N, R-7-W, NMPM  
Sandoval County, New Mexico  
Federal Lease No. NM 28747

Gentlemen:

We respectfully request administrative approval for surface commingling of gas production from the Chacra formation in the Ballymaloe #1 and from the Gallup formation in the Ballymaloe #2. Both wells are operated by Dugan Production Corp.

The Ballymaloe #1 was completed December 5, 1981, with perforations in the Chacra, 2474-2492'. The well tested a rate of 102 Mcf/day on our initial back pressure test. A copy of the C-122 is attached for your reference.

The 160 acre production unit for the Ballymaloe #1 is the SW/4 of Sec. 25. At the time the well was completed, the gas was not dedicated, but a contract was later obtained with Northwest Pipeline Co. and first delivery was made on September 6, 1983, into El Paso Natural Gas Company's system under the San Juan Basin Exchange agreement between NWPL and EPNG.

The pipeline pressure in El Paso's system is running 160-180 psi and since the well was connected, it has only produced a marginal volume of gas. In nine months of production, (210 days on line), the well has averaged 17.2 Mcf/day. The actual production history for the Ballymaloe #1 is presented on Table No. 1.

The Ballymaloe #2 was spudded March 1, 1984 and completed March 26, 1984, with perforations 5175-5461' (36 holes) and 5522-5706' (33 holes) for a total of 69 holes throughout a 531' gross interval. This Lybrook Gallup pool completion swab tested a rate of 160 BOPD, 80 Mcf/day and 208 BLW during the initial potential test and since completion, the Ballymaloe #2 has been shut in pending efforts to obtain a pipeline connection for gas sales. As is typical to the Gallup in this area, we anticipate that production will average approximately 10 BOPD with a GOR of 2500 under continuous operations. The well is equipped with a pumping unit and a three phase separator.

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The 40 acre production unit for this well is the NE/4 SW/4 of Sec. 25. The gas is dedicated to NWPL as is the gas from the Ballymaloe #1 and following eight and one half months of extensive negotiations with NWPL, we have been unable to secure a pipeline connection for gas sales, as this well falls below the minimum criteria utilized by NWPL for making a wellhead connection. NWPL has indicated that they would accept deliveries of gas from the Ballymaloe #2 at their existing meter run for the Ballymaloe #1, provided Dugan Production would deliver the gas to that point. This is the basis for our requesting permission for the surface commingling of production from the Ballymaloe #1 and #2 wells.

In order to produce both wells, Dugan Production Corp. plans to install a 1½-2" steel pipeline from the Ballymaloe #2 to the existing flow line upstream of the meter run for the Ballymaloe #1. We also plan to install a Barton dry flow meter upstream of the EPNG meter to continuously monitor flow from one well and use the subtraction method to determine production from the second well.

Both wells are located on a common Federal lease, and were drilled and are operated by Dugan Production Corp. under a farmout agreement with Southern Union Exploration Co.

Referring to the attached production map, it can be seen that the subject area is in a region that is not well-developed. Excluding Sec. 26, where a Gallup and a Chacra well exist (also operated by Dugan Production), the nearest Gallup production is 1 mile north of the Ballymaloe #2 and the nearest Chacra well is 2½ miles south of the Ballymaloe #1.

Presently, the gas from the Ballymaloe #1 qualifies for Section 102 pricing and the gas from the Ballymaloe #2 qualifies for Section 103. However, we expect that to change January 1, 1985.

Please accept as evidence of the compatibility of the separate streams from the subject wells, the fact that Dugan Production operates the Kinsale #1 and the Kinsale #2, located in Sec. 26 to the west, under similar circumstances to those described above. (NMOCD Commingling Order PC-652)

It is our belief that the value of the commingled streams will be equal to the value of the individual streams. However, without authorization to surface commingle, the Ballymaloe #2 will remain shut in or the gas associated with the production of oil will be vented. This will result in a loss of revenues to Dugan Production and a loss of the associated gas produced from the Ballymaloe #2.

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Ballymaloe #1 and Ballymaloe #2  
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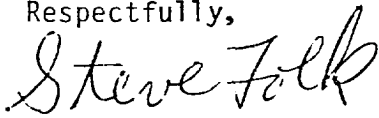
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In summary, Dugan Production Corp. wishes to surface commingle gas production from the Ballymaloe #1 and Ballymaloe #2. This will permit maximum recovery of gas and oil from the lease and will result in additional revenues being generated in this marginally productive area. It is our belief that correlative rights will not be violated.

By copy of this application we are also notifying the Bureau of Land Management and the appropriate district office of the NMOCD.

Feel free to contact me or John Roe at this office if you have any questions or require more information.

Respectfully,

A handwritten signature in cursive script that reads "Steve Folk".

Steve Folk  
Geologist

SF:JR:fp

Attachments

cc: BLM, Farmington  
NMOCD, Aztec  
Jerome P. McHugh

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date Dec 12, 1981	
Company Dugan Production Corp		Connection	
Pool Undesignated		Formation Chacra	
Completion Date	Total Depth	Plug back TD	Elevation
Csg. Size " 2 7/8	Wt. 6.4#	Set At 2856	Perforations From 2474' To 2492'
Reg. Size	Wt.	Let At	Perforations From To
Type Well - Single - Bordenhead - G.C. or G.O. Multiple Single		Packer Set At	County Sandoval
Producing thru CSG.	Shut-in Temp. °F	Mean Annual Temp. °F	State New Mexico
H	Cg .62	% CO <sub>2</sub>	% N <sub>2</sub>
		% H <sub>2</sub> S	Prover
			Meter Run
			Taps

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							578		7 days
1.	1/2" pos. choke						7	59'	3 hrs
2.									
3.									
4.									
5.									

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor FL	Gravity Factor F <sub>g</sub>	Super Compress. Factor, F <sub>sp</sub>	Rate of Flow Q, Mhd
1	5.4315		19	1.001	.9837	1.000	102
2.							
3.							
4.							
5.							

NO.	P	Temp. °R	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure P.S.I.A.	Critical Temperature °R
1									
2.									
3.									
4.									
5.									

NO.	P <sub>1</sub>	P <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>1</sub> <sup>2</sup> - h <sub>2</sub> <sup>2</sup>	(1) $\frac{P_2^2}{P_1^2 - P_2^2} = \frac{1.001}{1.001 - 1.001}$	(2) $\left[ \frac{P_2^2}{P_1^2 - P_2^2} \right]^n = \frac{1.001}{1.001 - 1.001}$
1	361	19	361	347.739			
2.							
3.							
4.							
5.							

Absolute Q <sub>gm</sub> Flow <u>102</u> Heavy mist of foam thru out test!	Mhd @ 15.025 Angle of Slope <u>40°</u> Slope, n <u>.85</u>
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Approved by Division	Conducted by Anderson	Calculated by Anderson	Checked by
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Table No. 1

Production History

Ballymaloe #1 and Ballymaloe #2

Ballymaloe #1

<u>Month</u>	<u>Days On</u>	<u>Gas Produced</u>	<u>Average MCFD</u>
9/83	20	191 Mcf	9.6
10/83	0	0	
11/83	0	0	
12/83	21	243	11.6
1/84	0	0	
2/84	0	0	
3/84	0	0	
4/84	7	3	0.4
5/84	9	196	21.8
6/84	30	623	20.8
7/84	31	634	20.5
8/84	31	525	16.9
9/84	30	556	18.5
10/84	<u>31</u>	<u>644</u>	20.8
Total	210	3,613	

Ballymaloe #2

<u>Month</u>	<u>Days On</u>	<u>Oil Produced</u>	<u>Gas Produced</u>
3/84	3	40 bbl.	20 Mcf
4/84-10/84	Shut in pending pipeline connection.		

and Surface Commingling  
 e #1 Undesignated Chacra  
 e #2 Lybrook Gallup  
 and K respectively  
 T 23N, R 7W, NMPM  
 Co., New Mexico ★

El Paso Natural Gas Co.  
 Lateral 2C-161

25

Kinsale #2  
 {Lybrook Gallup}

Kinsale #1  
 {Undes. Chacra}

Ballymaloe #2 {Lybrook Gallup}  
 pumping unit and 3 phase separator  
 existing on location

Proposed 1 1/2" - 2" steel  
 gas pipeline

EXISTING  
 EPNG  
 4" meter run

Ballymaloe #1  
 {Undes. Chacra}

proposed standard 4" meter run  
 with BARTON dry flow meter

UNIT M

UNIT N

36

★ Note: Drawing is to scale, but the location of  
 meter runs ARE estimated