dugan production corp.

RECEIVED
DEC 17 1984
OIL CONSERVATION DIVISION
SANTA FE

December 10, 1984

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.

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 well 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.

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,

Steve Folk

Steve Folk
Geologist

SF:JR:fp

Attachments

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

ENERGY AND MINERALS DEPARTMENT SANTA FE, NEW MEXICO ...

I So un Expt, I McHugh, I File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: Dec 12, 1981
Company: Dugan Production Corp	Connection		
Pool: Undesignated	Formation: Chacra		Unit
Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name: Ballymaloe
Csg. Size: 2 7/8	Wt.: 6.4#	d	Set At: 2856	Perforations: From 2474' To 2492'	Well No.: #1
Tbg. Size	Wt.	d	Set At	Perforations: From To	Unit: M Sec.: 29 Twp.: 23N Rge.: R7W
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: —	County: Sandoval
Producing Thru: csg.	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a	State: New Mexico
L	H	G_g: .62	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
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_m	Flow Temp. Factor F_t	Gravity Factor F_g	Super Compress. Factor, F_{pv}	Rate of Flow Q, Mcfd
1	5.4315		19	1.001	.9837	1.000	102
2.							
3.							
4.							
5.							

NO.	P_r	Temp. °R	T_r	Z
1				
2.				
3.				
4.				
5				

Gas Liquid Hydrocarbon Ratio ________ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons ________ Deg.
Specific Gravity Separator Gas ________ XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX ________
Critical Pressure ________ P.S.I.A. ________ P.S.I.A.
Critical Temperature ________ R ________ R

P_c 590 P_c^2 348100

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	361	19	361	347,739
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.001$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.001$

$$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 102$$

Absolute Open Flow 102 Mcfd @ 15.025 | Angle of Slope θ 40° | Slope, n .85

Remarks: Heavy mist of foam thru out test!

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Anderson	Anderson	

Table No. 1

Production History

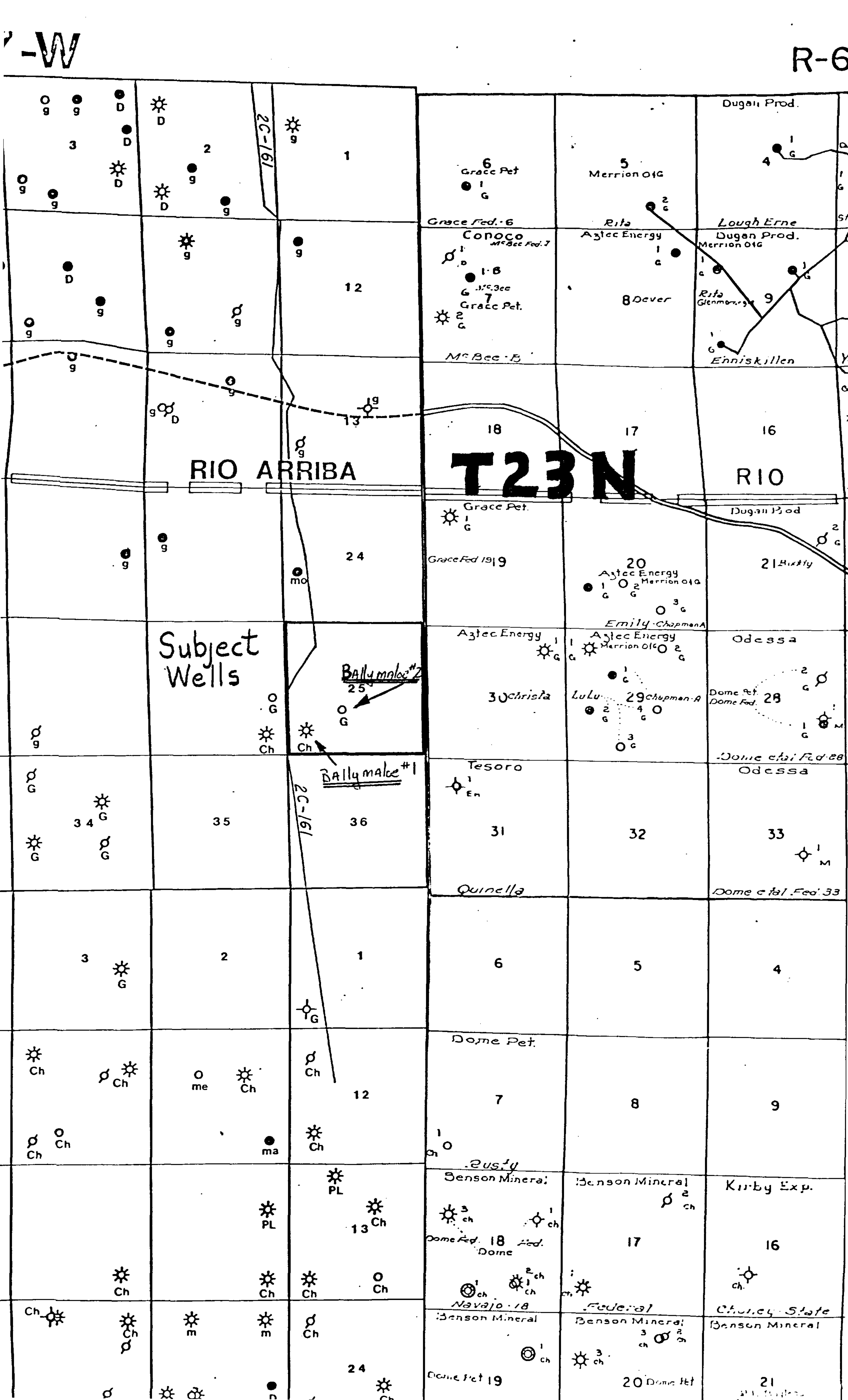
Ballymaloe #1 and Ballymaloe #2

Ballymaloe #1

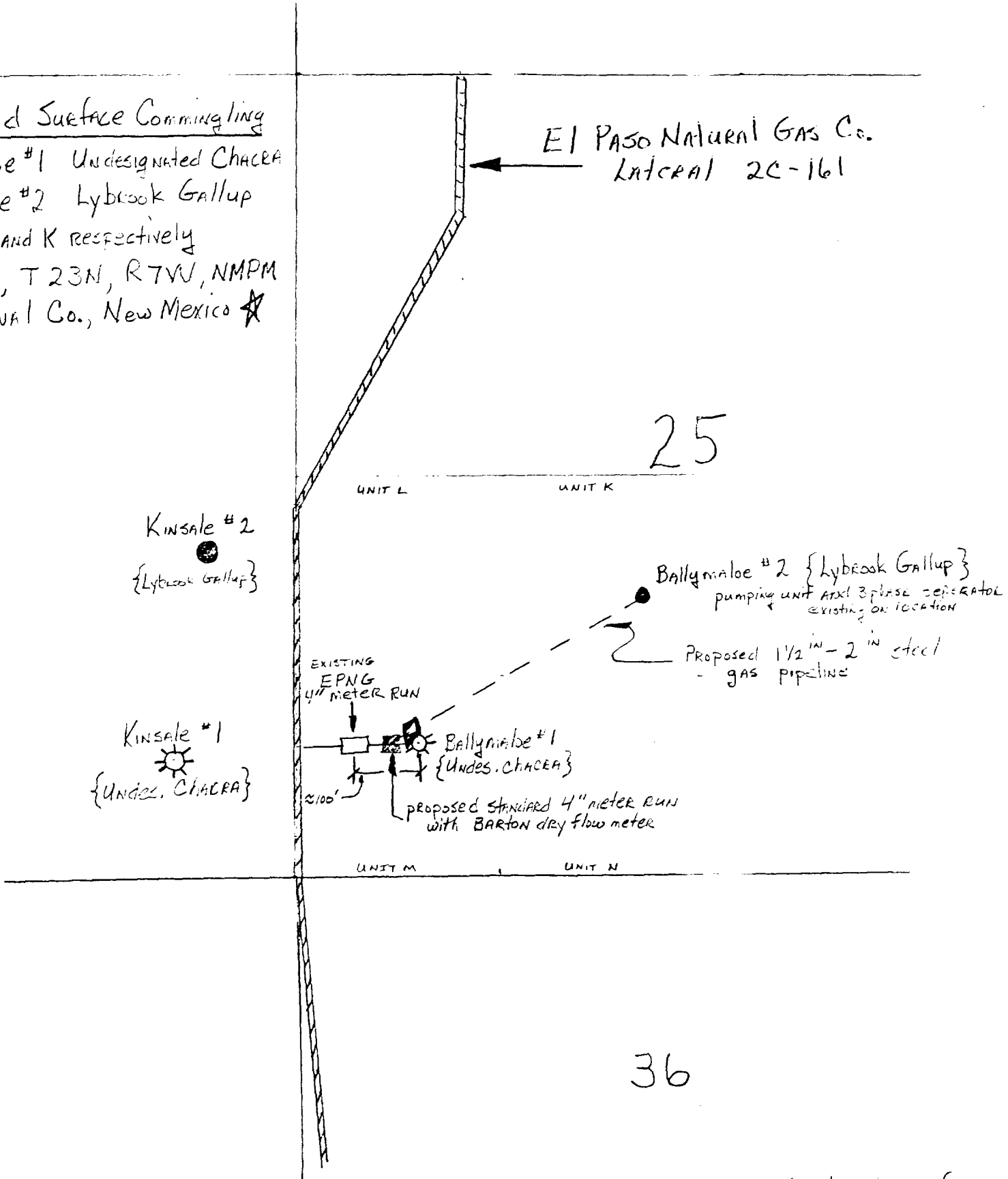
Month	Days On	Gas Produced	Average MCFD
9/83	20	191 Mcf	9.6
10/83	0	0	
11/83	0	0	
12/83	21	243	11.6
1/84	0	0	
2/84	0	0	
3/84	0	0	
4/84	7	3	0.4
5/84	9	196	21.8
6/84	30	623	20.8
7/84	31	634	20.5
8/84	31	525	16.9
9/84	30	556	18.5
10/84	31	644	20.8
Total	210	3,613	

Ballymaloe #2

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


-W
R-6
T23N
RIO ARRIBA
RIO
Subject Wells
Ballymaloe #2
Ballymaloe #1
2C-161
Dugan Prod.
Grace Pet
Merrion O&G
Grace Fed.-6
Rita
Lough Erne
Conoco
Aztec Energy
Dugan Prod.
Merrion O&G
Grace Pet.
Dever
Rita
McBee-B
Enniskillen
Grace Pet.
Dugan Prod
Grace Fed 19
Aztec Energy
Merrion O&G
Emily
Aztec Energy
Aztec Energy
Merrion O&G
Odessa
Christa
Lulu
Chapman-A
Dome Pet.
Dome Fed.
Tesoro
Odessa
Quinella
Dome et al Fed 33
Dome Pet.
Rusty
Benson Mineral
Benson Mineral
Kirby Exp.
Dome Fed.
Dome
Navajo-18
Federal
Benson Mineral
Benson Mineral
Benson Mineral
Dome Pet
Dome Pet

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



✱ Note: Drawing is to scale, but the location of meter runs are estimated