

# dugan production corp.

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OIL CONSERVATION DIVISION

*Case # 308*

Frank Chavez  
New Mexico Oil Conservation Division  
1000 Rio Brazos Rd.  
Aztec, NM 87410

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OIL CON. DIV.  
DIST. 3

RE: Proposed Revision of Allocation Factors  
Jerome P. McHugh's Janet #1  
Gavilan Mancos-Dakota Fields  
Unit A, Sec. 27, T-25N, R-2W, NMPM  
Rio Arriba County, New Mexico

Dear Mr. Chavez:

We are writing to request your approval of revised allocation factors to be utilized in splitting production between the Mancos and Dakota formations in the captioned well.

Currently, as provided by Order R-7258 dated April 8, 1983, the Mancos formation receives 63% of the oil and 82% of the gas, while the Dakota formation is allocated 37% of the oil and 18% of the gas. It is proposed that the oil allocation factor be revised to reflect 90% of the commingled stream being allocated to the Mancos and 10% of the commingled oil stream allocated to the Dakota. The gas allocation factors should not be changed.

The proposed revised allocation factors are necessitated by the fact that production has improved since the initial testing, at which time a combined potential of 116 BOPD with an average GOR of 2121 was indicated (73 BOPD with a GOR of 2753 from the Mancos perforations 6689-7000' and 43 BOPD with a GOR of 1047 from Dakota perforations 7740-7869'). The early testing indicated that the well would flow intermittently and appeared to be a mediocre well. Upon installing artificial lift equipment in November of 1983, the commingled production averaged 233 BOPD during November and has consistently produced at rates exceeding that indicated by the initial potential, which was utilized in determining our original allocation factors. It is our belief that the increase in productivity actually exhibited by the well is the result of natural fractures in the Mancos cleaning up with production. During the drilling of the Mancos, we did encounter lost circulation and it was necessary to include lost circulation material in our mud system in order to maintain circulation. It is believed that this is indicative of natural fracturing within the Mancos. The Dakota interval was drilled with no lost circulation and it is believed that the initial potential is indicative of the productive capacity of the Dakota formation.

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With respect to gas production, gas sales were commenced 6-24-83 and since that time the commingled stream GOR has averaged 791 SCF/STB, much less than anticipated from our initial testing. With the revised oil allocations and the reported gas production, the GOR during the past 7 months has averaged 622 SCF/STB from the Mancos and 1169 SCF/STB from the Dakota. These GOR's are in line with the GOR's indicated from testing and/or production in other wells in the field.

I have summarized the production submitted to date for the Janet #1 on the attached tabulation and have also indicated the numbers as revised, utilizing the proposed revised allocation factors. It is my belief that it is necessary to make these revisions in order to avoid misrepresenting the true productive capacity of the Dakota in this general area. As can be seen from the tabulation, based upon our current allocations, the Dakota is indicated to have averaged up to 86 BOPD and actually averaged 57 BOPD per producing day during the last 7 months of production on rod pump. These high rates of production from the Dakota are unrealistic, considering the initial testing and the reservoir parameters that are indicated from the open hole logs and sample analysis. As can be seen from the revised production schedule, the actual Dakota production during the last 7 months averaged 16 BOPD with the increase in productivity being from the Mancos interval. It has been our contention ever since the date of first production that the Dakota reservoir in this general area is of secondary interest and that the primary zone of interest is the Mancos and we believe that the revised allocation factors proposed herein more properly reflect this fact than do our original factors based upon an initial potential totaling 116 BOPD.

Should you have questions regarding this matter or need additional information, please feel free to contact me.

Sincerely,



John D. Roe  
Petroleum Engineer

fp  
cc: Jerome P. McHugh

Attachment

Income P. McHugh  
 Janet II

IP 4220  
 MAN - 73 51  
 DAK - 43 19

MC = unchanged.

Month	oil Production - bbl				MCF - GAS PRODUCTION			Days ON	661-well Production			MCF - GAS PRODUCTION		
	DAKOTA	MANCOS	TOTAL	DAKOTA	MANCOS	TOTAL	DAKOTA		MANCOS	TOTAL	DAKOTA	MANCOS	TOTAL	
11/83	1968 <sup>76</sup>	2978	3966	496	2262	2758	17	306 <sup>11</sup>	3660	4726	MC	MC	MC	
12/83	1967 <sup>63</sup>	3350	5317	743	2385	4128	31	539 <sup>114</sup>	4778	5317	MC	MC	MC	
1/84	1838 <sup>59</sup>	3128	4966	589	2683	3272	31	521 <sup>113</sup>	4445	5166	MC	MC	MC	
2/84	1598 <sup>17</sup>	2719	4317	408	1861	2269	29	391 <sup>113</sup>	3926	4317	MC	MC	MC	
3/84	1694 <sup>55</sup>	2884	4578	551	2512	3063	31	487 <sup>117</sup>	4091	4578	MC	MC	MC	
4/84	1083 <sup>15</sup>	1777	2860	377	1664	2041	30	456 <sup>117</sup>	2344	2800	MC	MC	MC	
5/84	1526 <sup>19</sup>	2598	4124	526	2395	3921	31	455 <sup>117</sup>	3669	4124	MC	MC	MC	
7 mo Total	11345 <sup>1</sup>	18954	30088	3690	16762	20452	195	3157 <sup>10</sup>	24983	30088	MC	MC	MC	
% of Total	37%	63%	100%	12%	55%	67%		10%	90%	100%				

Revised. C-115

C-115 AS Submitted

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 7839  
Order No. R-7258

APPLICATION OF JEROME P. McHUGH  
FOR DOWNHOLE COMMINGLING, RIO  
ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 30, 1983, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of April, 1983, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Jerome P. McHugh, is the owner and operator of the Janet Well No. 1, located 790 feet from the North line and 790 feet from the East line of Section 27, Township 25 North, Range 2 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant seeks authority to commingle Undesignated-Gallup and Basin-Dakota production within the wellbore of the above-described well.
- (4) That from the Undesignated-Gallup zone, the subject well is expected to be capable of low marginal production only.
- (5) That from the Basin-Dakota zone, the subject well is expected to be capable of low marginal production only.
- (6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

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Case No. 7839

Order No. R-7258

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 63 percent of the commingled oil production and 82 percent of the commingled gas production should be allocated to the Undesignated-Gallup zone, and 37 percent of the commingled oil production and 18 percent of the commingled gas production to the Basin-Dakota zone.

IT IS THEREFORE ORDERED:

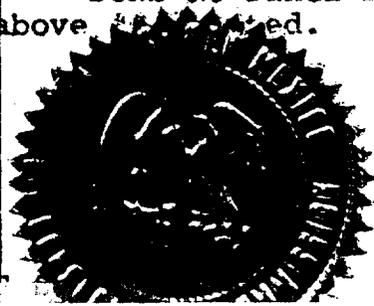
(1) That the applicant, Jerome P. McHugh, is hereby authorized to commingle Undesignated-Gallup and Basin-Dakota production within the wellbore of the Janet Well No. 1, located 790 feet from the North line and 790 feet from the East line of Section 27, Township 25 North, Range 2 West, NMPM, Rio Arriba County, New Mexico.

(2) That 63 percent of the commingled oil production and 82 percent of the commingled gas production shall be allocated to the Undesignated-Gallup zone and 37 percent of the commingled oil production and 18 percent of the commingled gas production shall be allocated to the Basin-Dakota zone.

(3) That the operator of the subject well shall immediately notify the Division's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove stated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Joe D. Ramey*  
JOE D. RAMEY  
Director