

dugan production corp.

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JUL 18 1984

July 12, 1984

OIL CONSERVATION DIVISION

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

RE: Proposed Revision of Allocation Factors
Jerome P. McHugh's Mother Lode #1
Gavilan Mancos-Dakota Fields
Unit H, Sec. 3, T-24N, R-2W, NMPM
Rio Arriba County, New Mexico

RECEIVED
JUL 13 1984
OIL CON. DIV.
DIST. 3

Dear Mr. Chavez:

Case 8310

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-7365 dated October 4, 1983, the Mancos formation receives 79% of the oil and 91% of the gas, while the Dakota formation is allocated 21% of the oil and 9% of the gas. It is proposed that the oil allocation factor be revised to reflect 97% of the commingled stream being allocated to the Mancos and 3% of the commingled oil stream allocated to the Dakota. The gas allocation factors should not be changed.

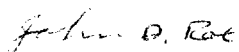
The proposed revised allocation factors are necessitated by the fact that production has improved since the initial testing, at which time a combined potential of 78 BOPD with an average GOR of 4615 was indicated (63 BOPD with a GOR of 5190 from the Mancos perforations 6765-7070' and 15 BOPD with a GOR of 2200 from Dakota perforations 7861-8108'). 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 317 BOPD during December 1983 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.

With respect to gas production, gas sales were commenced 3-22-84 and since that time the commingled stream GOR has averaged 469 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 2 months has averaged 437 SCF/STB from the Mancos and 1872 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 Mother Lode #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 82 BOPD and actually averaged 39 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 5.8 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 78 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

MAN = 63 BOPD (G.)
DAK = 15 - 63
788 32.8.

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DAK = 15 - 63
788 32.8.

C-115 H.S. Submitted										Revised, C-115									
oil production - bbl					MCF - GAS production					bbl - oil production, C-115					MCF - GAS production				
month	DAKOTA	MANCOS	TOTAL		DAKOTA	MANCOS	TOTAL	days on		DAKOTA	MANCOS	TOTAL	DAKOTA	MANCOS	TOTAL				
11/83	1138 ⁵⁰	4284	5422					21	63	132	5290	NC							
12/83	2064 ¹	7761	9825					31	61	189	9630	"							
1/84	572 ¹⁸	2151	2723					31	59	183	2540	"							
2/84	512 ¹⁸	1928	2440					29	57	165	2275	"							
3/84	573 ¹⁸	2154	2727					31-011 5-015	57	177	2550	"							
4/84	514 ¹⁷	1933	2447		105 245	1064 ¹⁸ 924	1169	30	55	165	2282	"	NC	NC	NC				
5/84	2553 ⁸²	9606	12159		511 1191	5171 ¹⁸ 4491	5682	31	53	164	11,995	"	NC	NC	NC				
7 mo total	7926 ³⁹	29817	37743					200	58	1175	36568	11							
7 of total	21%	78%								3%	97%								
① gas Allocation factors used initially were incorrect - C-115 Reports will be amended to reflect correct factors.																			

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. 7966
Order No. R-7365

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 September 28, 1983, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 4th day of October, 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 Mother Lode Well No. 1, located 1730 feet from the North line and 860 feet from the East line of Section 3, Township 24 North, Range 2 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Basin Dakota and Undesignated Gallup production within the wellbore of the above-described well.

(4) That from the Basin-Dakota zone, the subject well is capable of low marginal production only.

(5) That from the Undesignated Gallup zone, the subject well is 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.

(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, 79 percent of the commingled oil production and 91 percent of the commingled gas production should be allocated to the Undesignated Gallup zone, and 21 percent of the commingled oil production and 9 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 Basin-Dakota and Undesignated Gallup production within the wellbore of the Mother Lode Well No. 1, located 1730 feet from the North line and 860 feet from the East line of Section 3, Township 24 North, Range 2 West, NMPM, Rio Arriba County, New Mexico.

(2) That 79 percent of the commingled oil production and 91 percent of the commingled gas production shall be allocated to the Undesignated Gallup zone and 21 percent of the commingled oil production and 9 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.

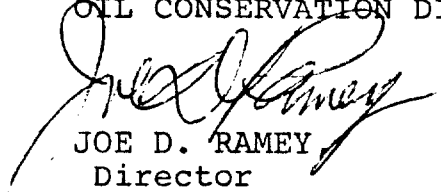
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Case No. 7966

Order No. R-7365

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



JOE D. RAMEY
Director

S E A L