



CONTINENTAL OIL COMPANY

LEGAL DEPARTMENT

DENVER 2, COLORADO

A. T. SMITH
GENERAL ATTORNEY
C. R. HAMPTON
F. E. RADLOFF
W. M. GRIFFITH
G. H. MAYBERRY
R. A. HOLLERN
ATTORNEYS

April 11, 1961

Oil & Gas Conservation Commission
State Land Building
Santa Fe, New Mexico

Re: Case No. 2242

Dear Sir:

Reference is made to the subject case wherein the Oil Conservation Commission on its own motion is considering amending Rule 112 to provide, among other things, for administrative approval for multiple slim-hole completions. Continental Oil Company would favor such an amendment, and would like to respectfully suggest to the commission that slim-hole completions be defined to include a maximum of four and one-half inch casing.

Very truly yours,

William M. Griffith

by

cc: John Tynan
Ralph Vertrees
M. A. MacLennan

N O T E G R A M

August 30, 1960

In re: Terminology for Tubingless Completions

TO: Mr. O. P. Nicola, Jr.

FROM: Mr. Harold S. Kelly

In answer to your August 22, 1960 notegram, Humble Oil and Refining Company have been the foremost users and developers of the "tubingless" type completions. In view of the fact that Humble had first applied the term "tubingless" to these type of completions and the fact that the other operators and manufacturers have established this term through common usage, it is recommended that the term "single tubingless" completion be applied to all completion operations where one string of tubing is cemented in or is run as the oil string in lieu of 4-1/2" or larger casing. If two or more tubing strings are run and/or cemented in lieu of casing, this type of completion should be referred to as a "dual, triple, or quadruple tubingless" completion. The term "multiple tubingless" completion could be used when a broad reference is made to the dual, triple and quadruple tubingless completions.

To our knowledge, there is not an established terminology to describe those "tubingless" completions, having the inner "macaroni" strings except for those "single and multiple tubingless" completions having "hollow" sucker rods. However, in view of the fact that these inner strings could be 1-1/2", 2-1/16" or 2-3/8" O.D. tubing strings, we would be opposed to the use of "macaroni" in the wording describing these type completions. After considering the following terms; inner producing string, inner tube, inner flow tube, concentric string, and several others; we feel that the term "single tubingless" completion with an "inner flow string" would aptly describe flowing tubingless completions with an inner flow string. When the tubingless well is artificially lifted the term "with inner artificial lift string" could replace the phrase "inner flow string."

From the practical point of view, the important thing is for the Commission to accept and establish that terminology that has been and will be established through common usage by the industry. They should not establish rigid terminology at this time unless they are quite sure that the other companies will accept and establish this terminology through common usage. Phillips personnel will accept and help to establish any terminology that is based on common usage or is reasonable and represents the consensus of industry's opinion.

RSB:ab

MAIN OFFICE CCC

1960 AUG 25 PM 1:10



Mobil Oil Company

A Division of Socony Mobil Oil Company, Inc.

P. O. BOX 2406, HOBBS, NEW MEXICO

*File
Cool 2242*

August 19, 1960

Mr. Dan Nutter
P. O. Box 871
Santa Fe, New Mexico

Dear Dan:

The attached table of completion nomenclature was made up by Wayne Gamble and myself and is our personal suggestion. This is in response to the plea for help in Nancy's last letter.

We have seen and experienced some of this naming trouble ourselves. However, we really appreciate the difficulties after making up the table. There are some shortcomings to the table but it gives a fairly good word picture. We hope that it will be of some assistance to you.

Yours very truly,

J. C. Gordon, Jr.

J. C. Gordon, Jr.
Sr. Production Engineer

nrh

HUMBLE OIL & REFINING COMPANY

HUMBLE DIVISION

HOUSTON 1, TEXAS

September 9, 1960

PRODUCTION DEPARTMENT

L. H. BYRD
OPERATIONS MANAGER

Mr. Dan Nutter
Oil Conservation Commission
107 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Dear Dan:

In line with our recent telephone conversation and in response to the request in the New Mexico Statehouse Reporting Service dated August 12, 1960, attached are some suggestions concerning nomenclature for the various types of multiple completions.

As you know, any method of nomenclature used is strictly arbitrary; however, it is felt that the attached suggestions would serve the purpose. I would like to suggest again that, regardless of the nomenclature used, permanent well numbers be assigned the individual completions when the producing strings are cemented in the well bore. It is also felt that the Commission would do itself and the Industry a service by permitting, as soon as possible, administrative approval of multiple completions after the precedent has been established in a given pool.

We hope that this will be of use to you, and if we can cooperate in any other matter, please advise.

Sincerely,



LHB:mn
Attachment

PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA

PRODUCTION DEPARTMENT

L. E. FITZJARRALD
VICE PRESIDENT

September 1, 1960

EARL GRIFFIN
MANAGER
JACK TARNER
TECHNICAL ADVISER TO VICE PRES.
H. S. KELLY
CHIEF ENGINEER

Mr. Dan Nutter
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Dear Dan:

I read in one of Nancy Royal's recent reports that you were seeking advice concerning terminology for tubingless completions where several strings of tubing are cemented, as casing, in a single drilling hole.

I took this matter up with Mr. H. S. Kelly, our chief engineer. Mr. Kelly and his staff are concerned with equipment used in oil and gas production, and therefore could be of some assistance. For whatever help it may be to you, I am pleased to attach herewith a copy of Mr. Kelly's reply to my inquiry.

I also might say I have been fascinated by the equation you and Morris developed to represent the depth bracket allowable.

Sincerely yours,

O. P. Nicola, Jr.
O. P. Nicola, Jr.

OPN:hd
Attach.

NOMENCLATURE TABLE OF TYPE COMPLETIONS

<u>No. of Formations Completed</u>	<u>No. of Casing Strings</u>	<u>No. of Tubing Strings</u>	<u>Nomenclature</u>	
1	1	None	Single	2-7/8" tubingless completion
1	1	1	Single	4-1/2" standard completion
2	1	1	Dual	7" standard completion
2	1	2	Dual	7" standard completion
2	2	None	Dual	2-7/8" tubingless - 2-7/8" tubingless completion
2	2	1	Dual	2-7/8" tubingless - 4-1/2" standard completion
2	2	2	Dual	2-7/8" standard - 2-7/8" standard completion
3	1	2	Triple	8-5/8" standard completion
3	1	3	Triple	8-5/8" standard completion
3	2	1	Triple	2-7/8" tubingless-dual 4-1/2" standard completion
3	2	2	Triple	2-7/8" standard-dual 4-1/2" standard completion
3	2	3	Triple	2-7/8" standard-dual 4-1/2" standard completion
3	3	None	Triple	2-7/8" tubingless-2-7/8" tubingless-2-7/8" tubingless completion
3	3	1	Triple	2-7/8" tubingless-2-7/8" tubingless-2-7/8" standard completion
3	3	2	Triple	2-7/8" tubingless-2-7/8" standard-2-7/8" standard completion
3	3	3	Triple	2-7/8" standard-2-7/8" standard-2-7/8" standard completion

- NOTES: 1) First word denotes number of formations completed - single, dual, triple.
- 2) Second "position" is size of casing string or strings and has entry for casing string.
- 3) Third "position" indicates if casing is tubingless or standard; i.e., casing with tubing.
- 4) Sizes shown in table are for illustration only.

J. C. Gordon, Jr.
H. W. Gamble
8-19-60

SUGGESTIONS ON TERMINOLOGY FOR MULTIPLE COMPLETIONS

STATE OF NEW MEXICO

MULTIPLE TUBINGLESS COMPLETION - could denote wells with more than one string of 2-7/8-inch OD casing cemented in the same bore hole. This terminology has become commonplace in the Industry even though a concentric string of small tubing may be used in a small casing string in some cases for artificial lift purposes.

Each casing string in a multiple tubingless completion serves as an independent well; abandonments or workovers in one producing outlet can be conducted without disturbing equipment or production in adjacent completions. Therefore, permanent identification of each completion in a multiple tubingless completion is feasible. A numerical suffix to the well number could be used; for example, a dual tubingless completion could be designated "John Doe 1-1 and 1-2" and a quadruple tubingless completion "John Doe 1-1, 1-2, 1-3, 1-4". This system of designating the producing outlets in a multiple tubingless completion would identify the well as a tubingless completion and would also avoid the problems that might be presented by employing nomenclature which would imply the relative level of producing intervals, such as "U" for upper, "I" for intermediate, and "L" for lower. With a suffix assigned permanently to each producing outlet, no change in nomenclature would be necessary in the event that a workover in one producing interval in a multiple tubingless completion resulted in a change in the productive interval level with respect to other producing intervals in adjacent strings.

COMBINATION TUBINGLESS COMPLETION - could denote wells made by cementing side by side one or more strings of 2-7/8-inch OD casing and a larger string such as 4-1/2-inch OD casing. This type completion could also utilize the numerical suffix system of designating each 2-7/8-inch OD string, and a Roman numeral or alphabetical suffix could be used to identify the larger casing string.

CONVENTIONAL MULTIPLE COMPLETIONS - could be used to denote multiple completions obtained by installing one or more strings of tubing inside a string of casing with packers employed to isolate reservoirs. Existing regulations and labeling of conventional multiple completions appear to be entirely satisfactory. Therefore, obtaining a dual completion by installing a small packer and tubing string inside 2-7/8-inch OD casing in either a single or multiple tubingless completion could be handled by existing regulations.