

CASE 2059: Application of HUMBLE for
an oil-oil dual completion of its
State "M" Well No. 24 in Unit O.

Case No.

2059

Application, Transcript,
Small Exhibits, Etc!

State of New Mexico
Oil Conservation Commission



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY DIRECTOR

August 29, 1960

Re: Case No. 2059
Order No. R-1759
Applicant:

Humble Oil & Refining Co.

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

**A. L. PORTER, Jr.,
Secretary-Director**

Carbon copy of order also sent to:

Hobbs OCC X
Artesia OCC
Aztec OCC

Other _____

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2059
Order No. R-1739

APPLICATION OF HUNBLE OIL &
REFINING COMPANY FOR AN OIL-OIL
DUAL COMPLETION IN THE LANGLEY-
MATTIX POOL AND THE DRINKARD
POOL, LEA COUNTY, NEW MEXICO,
UTILIZING PARALLEL STRINGS OF
SMALL DIAMETER CASING.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 24, 1960, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 30th day of August, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant is the owner and operator of the State "M" Well No. 24, located in Unit O, Section 19, Township 22 South, Range 37 East, NEPM, Lea County, New Mexico.

(3) That the applicant proposes to dually complete the above-described State "M" Well No. 24 in such a manner as to permit the production of oil from the Langley-Mattix Pool and the production of oil from the Drinkard Pool through 2-7/8 inch casing and 4-1/2 inch casing, respectively, using 2-inch tubing within the string of 4-1/2 inch casing.

(4) That the applicant proposes that said two strings of casing be cemented in a common well-bore with cement circulated from total depth to approximately 2800 feet.

CASE No. 2059
Order No. R-1759

(5) That centralizers should be used at least in the interval between the bottom of the 2-7/8 inch casing at approximately 3000 feet and the top of the cement at 2000 feet.

(6) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(7) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

That the applicant, Muehle Oil & Refining Company, be and the same is hereby authorized to drill and complete its State "H" Well No. 24, located in Unit C, Section 19, Township 22 South, Range 17 East, NMM, Lea County, New Mexico, in such a manner as to permit the production of oil from the Langile-Mattix Pool and the production of oil from the Drinkard Pool through 2-7/8 inch casing and 4-1/2 inch casing, respectively, using 1-inch tubing within the string of 4-1/2 inch casing.

PROVIDED HOWEVER, That said two strings of casing shall be cemented in a common well-bore with cement circulated from total depth to approximately 2000 feet.

PROVIDED FURTHER, That centralizers shall be used at least in the interval between the bottom of the 2-7/8 inch casing at approximately 3000 feet and the top of the cement at 2000 feet.

PROVIDED FURTHER, That the applicant shall complete, operate, and produce the well in accordance with the applicable provisions of Section V, Rule 112-A.

PROVIDED FURTHER, That the applicant shall take communication tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Drinkard Pool.

IT IS FURTHER ORDERED:

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or the protection of correlative rights; upon the failure of the applicant to comply with any requirement of this order, the Commission may terminate the authority herein granted and require the applicant or its successors and assigns to limit its activities to regular single-zone production in the interest of conservation.

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CASE No. 2059
Order No. R-1759

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John H. Burroughs
JOHN BURROUGHS, Chairman

W. H. Mays
W. H. MAYS, Secretary

A. L. Porter, Jr.
A. L. PORTER, JR., Member & Secretary

ccx/

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO


Date 8/24

CASE 2059

Hearing Date 9am 8/24
JEN@SF

My recommendations for an order in the above numbered cases are as follows:

Approve deal as requested
by Humble. Use order
entered for Humbleco Steel M20
as guide, changing only
the depth of cementing as
suggested at hearing.


Staff Engineer

DOCKET: EXAMINER HEARING AUGUST 24, 1960

Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe

The following cases will be heard before Daniel S. Nutter, Examiner, or Oliver E. Payne, Attorney, as alternate Examiner:

CASE 2053:

Application of Continental Oil Company for a triple completion utilizing three strings of casing. Applicant, in the above-styled cause, seeks an order authorizing it to triple complete its Jicarilla 22-22 Well No. 1, located in the NW/4 SE/4 of Section 22, Township 25 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the Gallup formation, the production of oil from the Greenhorn formation and the production of oil from the Dakota formation through parallel strings of 4½-inch, 2 7/8-inch, and 4½-inch casing respectively, cemented in a common well bore. Applicant proposes to install tubing to the Gallup and Dakota formations.

CASE 2054:

Application of Continental Oil Company for a triple completion utilizing three strings of casing. Applicant, in the above-styled cause, seeks an order authorizing it to triple complete its Jicarilla 28-27 Well No. 3, located in the NW/4 SE/4 of Section 27, Township 25 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the Gallup formation, the production of oil from the Greenhorn formation and the production of oil from the Dakota formation through parallel strings of 4½-inch, 2 7/8-inch, and 4½-inch casing respectively, cemented in a common well bore. Applicant proposes to install tubing to the Gallup and Dakota formations.

CASE 2055:

Application of Aztec Oil & Gas Company for a gas-gas dual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Hanks Well No. 12-D, located in Unit H, Section 7, Township 27 North, Range 9 West, San Juan County, New Mexico, in such a manner as to permit the production of gas from the Fulcher Kutz-Pictured Cliffs Pool and the production of gas from the Dakota Producing Interval through parallel strings of 2 7/8-inch and 4½-inch casing cemented in a common well bore. Applicant proposes to install 2 3/8-inch tubing to produce the Dakota gas.

CASE 2056: Application of Gulf Oil Corporation for permission to commingle the production from all wells on several leases in Townships 21 and 22 South, Range 36 East, Lea County, New Mexico, and for approval of two automatic custody transfer facilities to handle said commingled production from the Arrowhead Pool, Eumont Pool, Eunice-Monument Pool, South Eunice Pool and Jalmat Pool, all in Lea County, New Mexico.

CASE 2057: Application of Kay Kimbell for an order force-pooling all interests in a 320-acre standard gas unit in the Dakota Producing Interval. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Dakota Producing Interval in a 320-acre standard gas unit consisting of the W/2 of Section 22, Township 29 North, Range 11 West, San Juan County, New Mexico.

CASE 2058: Application of Anderson-Prichard Oil Corporation for a triple completion and for a 181-acre non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of its Western-Federal Well No. 1, located 330 feet from the North and West lines of Section 5, Township 23 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Blinebry Pool, the production of gas from the Tubb Gas Pool and the production of oil from the Drinkard Pool through parallel strings of 2 3/8-inch tubing, 2 1/16-inch tubing, and 2 3/8-inch tubing respectively. Applicant, further seeks the establishment of a 181-acre non-standard gas proration unit in the Tubb Gas Pool consisting of Lots 1, 2, 3, and 4 of said Section 5, to be dedicated to the said Western-Federal Well No. 1.

CASE 2059: Application of Humble Oil & Refining Company for an oil-oil dual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State "M" Well No. 24, located in Unit O, Section 19, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Langlie-Mattix Pool and the production of oil from an undesignated Drinkard Pool through parallel strings of 2 7/8-inch and 4 1/2-inch casing cemented in a common well bore.

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Docket No. 24-60

CASE 2060:

Application of Drilling and Exploration Company, Inc., for approval of a unit agreement. Applicant, in the above-styled cause seeks approval of its Mescalero Unit Agreement, which unit is to embrace approximately 4829 acres of Federal and State land in Townships 18 and 19 South, Ranges 33 and 34 East, Lea County, New Mexico.

CASE 2061:

Application of Ralph Lowe for approval of a unit agreement. Applicant, in the above-styled cause, seeks approval of its Northeast Maljamar Unit Agreement, which unit is to embrace approximately 800 acres in Townships 16 and 17 South, Range 33 East, Lea County, New Mexico.

CASE 2040:

(Continued)

Application of Neville G. Penrose, Inc., for an order authorizing the dual completion of its Grizzel Well No. 1, located in Unit G, Section 5, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Tubb Gas Pool and the production of oil from the Drinkard Pool through the casing-tubing annulus and 2 3/8-inch tubing respectively.

ig/

PRODUCTION DEPARTMENT
WESTERN AREA

R. R. McCARTY
MANAGER
J. S. BOLDRICK
OPERATIONS SUPERINTENDENT
H. L. HENSLEY
OPERATIONS SUPERINTENDENT
H. E. MEADOWS
ENGINEERING COORDINATOR
A. J. BEDFORD
ADMINISTRATIVE COORDINATOR

HUMBLE OIL & REFINING COMPANY

HUMBLE DIVISION

P. O. BOX 1600

1910 AUG MIDLAND, TEXAS

August 2, 1960

6-1

New Mexico Proration

New Mexico Oil Conservation
Commission
Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

With reference to the attached application for dual completion for Humble's New Mexico State M-24, it is proposed that this well will be a dual completion utilizing 2-7/8-inch casing in the Langlie-Mattix Pool and 4-1/2-inch casing in an undesignated Drinkard Pool. Exception will therefore be required to Statewide Rule 107 (e)(1) and Rule 107 (e)(4). It is requested that this matter be set for the August 24 examiner hearing.

Very truly yours,

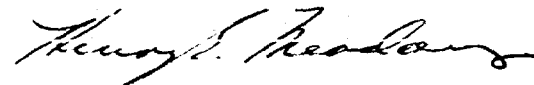
HUMBLE OIL & REFINING COMPANY

WSD/jn

Attachment

cc: Hervey, Dow & Hinkle
Roswell, New Mexico

R. R. McCARTY



Henry E. Meadows

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

| | | | |
|---|----------------------|--------------------------------------|-----------------------|
| Field Name Langlie Mattix & Undesignated Drinkard | | County Lea | Date 8-1-60 |
| Operator Humble Oil & Refining Co. | | Lease New Mexico State "M" | Well No. 24 |
| Location of Well 0 | Section 19 | Township 22-S | Range 37-E |

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES ☒ NO ☐

2. If answer is yes, identify one such instance: Order No. **R-1622**; Operator, Lease, and Well No.:
Humble's New Mexico State "M" No. 20.

| 3. The following facts are submitted: | ** Upper Zone | ** Lower Zone |
|--|------------------|--|
| a. Name of reservoir | Queen | <input checked="" type="checkbox"/> Lower Clearfork |
| b. Top and Bottom of Pay Section (Perforations) | 3600-3700 | 6400-6500 |
| c. Type of production (Oil or Gas) | Oil | Oil |
| d. Method of Production (Flowing or Artificial Lift) | Flow | Pump |

4. The following are attached. (Please mark YES or NO)

no a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

no c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application. *

no d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Skelly Oil Co., Box 993, Midland

Continental Oil Co., Box 431, Midland

Amerada Petroleum, Box 312, Midland

Gulf Oil Corp., Box 1150, Midland

Ohio Oil Co., Box 552, Midland, Texas

*To be filed when the well is completed.

**Estimated - an amended report will be filed later.

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES ☒ NO ☐ . If answer is yes, give date of such notification **8-1-60**

CERTIFICATE: I, the undersigned, state that I am the **Engineering Coordinator** of the **Humble Oil & Refining Co.** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Henry P. Bower
Signature

* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

ECONOMIC ANALYSIS

2-7/8-INCH O. D. CASING COMPLETIONS¹

NEW MEXICO

HUMBLE OIL & REFINING CO.

February 1, 1960

| Field | County | Average Depth-Ft. | Number Completions | Reduction in Well Cost-% |
|-----------------------|--------|----------------------|-----------------------|-----------------------------|
| Langlie-Mattix | Lea | 3729 | 8 | 24 |
| Eumont | Lea | 3875 | 1 | 20 |
| West Henshaw-Grayburg | Eddy | 2975 | 2 | 22 |
| | Totals | 3605 | 11 | 23 |

Note 1: All wells completed are single zone completions.

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
App EXHIBIT NO. 2
CASE NO. 1905

BEFORE THE
OIL CONSERVATION COMMISSION
MABRY HALL
Santa Fe, New Mexico
August 24, 1960

IN THE MATTER OF:

Application of Humble Oil & Refining Company for an oil-oildual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State "M" Well No. 24, located in Unit O, Section 19, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Langlie-Mattix Pool and the production of oil from an undesignated Drinkard Pool through parallel strings of 2 7/8-inch and 4 1/2-inch casing cemented in a common well bore.) Case 2059

BEFORE:

Daniel Nutter

TRANSCRIPT OF HEARING

MR. NUTTER: We will call the next case, 2059.

MR. PAYNE: Application of Humble Oil & Refining Company for an Oil-oil dual completion utilizing two strings of casing.

MR. BRATTON: H. C. Bratton, of Humble Oil Company, we will have one witness and ask that he be sworn.

(Whereupon the witness is sworn.)

MR. BRATTON: If the Commission, please, I will explain briefly what we propose to do in this case. This is an application for an oil-oil dual completion in the Langlie-Mattix and Drinkard Pool utilizing parallel strings of small line or one diameter. It is identical to a request that we made to the

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Commission before. This well is 3/4 of a mile away from the previous well in which we made an identical application and presented extensive testimony in exhibits to the Commission and we will rather than burden the Commission with again going through that refer to that case and present the record and all of the exhibits in that case because its an identical situation. So rather than take up the Commission's time going through the same matter we will do this.

DIRECT EXAMINATION

By MR. BRATTON:

Q Would you state your name, occupation and where you are employed?

A My name is J. E. Willingham, Senior Petroleum Engineer, I work in Midland, Texas.

Q Have you previously testified before this commission and give testimony as an expert witness?

A Yes, sir.

Q You previously testified before. As a matter of fact, in connection with Slim Hole matters.

A Yes, sir.

Q Are you familiar with the area of the proposed well in question in the application?

A Yes, I am.

MR. BRATTON: Are the witnesses qualifications acceptable?

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MR. NUTTER: Yes, sir.

MR. BRATTON: Will you state briefly what Humble is asking in this case, Mr. Willingham?

A As compared to conventional dual which we know as casing string with small macaroni strings inside of it, this casing will set $4\frac{1}{2}$ and $2\frac{7}{8}$ in the same bore hole and must be described as a twin well in one bore hole.

Q What is the location of the proposed well and the formations Mr. Willingham?

A $2\frac{7}{8}$ will be set to the Queen and the $4\frac{1}{2}$ to the Drinkard.

Q Is it the Queen or the Langlie-Mattix.

A It's the Langlie-Mattix.

Q Is that the same thing?

A Yes.

Q Thank you. And the location of this well?

A It's 660 from the south line and 1980 from the east line of Section 19. It's T22 is R-37 E, Lea County, New Mexico.

Q And this is the Humble State "M" 24 Well?

A Yes, sir New Mexico State "M" 24.

Q Have you previously presented an identical application to this Commission in connection with Humble State "M" 20 Well?

A Yes, sir we have.

Q And what is the location of that Humble State "M" 20 Well?

A State "M" 20 is 1980 from the north line and from the west



line of Section 29, Township 22 West, Range 37 East, Lea County, New Mexico.

Q Was that application presented in case number 1905 and did the Commission enter an order number R1622 in that case?

A Yes.

Q Authorizing that completion?

A Yes, sir.

Q Have you completed the State "M" 20 Well in accordance with that order of the Commission?

A Yes, sir with the exception that we are still in the testing stage on the Drinkard. It hasn't been filed, we have completed it in accordance with the plan.

Q Have you experienced any difficulty in that well from an economical standpoint?

A No, sir there were no difficulties whatsoever.

Q You are perfectly satisfied with the operation and the functioning of your completion practices in accordance with the Commission order entered in that case.

A Yes, sir we are.

MR. BRATTON: Mr. Examiner, we would move the incorporation in this case of the testimony and exhibits presented in 1905 and the provision of order are R-1622.

MR. NUTTER: The record in case 1905 will be incorporated in the record of this case by reference.

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MR. BRATTON: Mr. Willingham, the situation presented here is identical with that presented in case 1905.

A That is correct.

Q Your testimony would be identical, and the exhibits offered if there were some offered would be identical if you were to re-introduce new exhibits?

A Yes, sir they would be the same.

Q You are asking for the same order that we entered in this case?

A Yes.

Q Just to immediately clarify the matter, would you run through generally the provisions of that order?

A It provided however that the said two strings of casing should be cemented in the common well bore and the cement circulated from the total depth of 2800 feet.

Q Well, would you just generally explain what was required?

A In this particular part we pointed out in our previous testimony we would cement through the 4½ and bring the cement up close to the 2 7/8 and then cement through the 2 7/8 and we do that because we have a better chance of getting a good cement job when the two total depths of casing are far apart and also that it stated that we have 2 7/8 casing set at 4000 feet. I think in this case it will be 3600 and the top of the cement would be 2800 feet.



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MR. NUTTER: You are expecting the top of the cement to be identical in this case with the previous.

A Yes, sir.

MR. NUTTER: 2800 feet?

A That is 1000 feet above the casing shoe.

MR. NUTTER: Where is the Queen formation expected to be perforated, Mr. Willingham?

A It was perforated in the previous well from 3622 to 3650. It will be approximately the same depth on this one.

MR. NUTTER: What is the uppermost perforation?

A 3622 to 3650.

MR. NUTTER: So the cement comes approximately 800 feet I guess above the Queen perforation.

A Yes, sir that is right.

MR. NUTTER: That would be centralized throughout?

A Throughout the pay and yes it will be centralized up to the cement. We customarily cement all of our wells, centralize all of our strings through the pays.

MR. BRATTON: Do you have anything else to add as to this particular completion with relation to the previous case and the exhibits and testimony which are incorporated now in this case?

A No, sir I believe they would be the same.

Q Mr. Willingham, with reference to the matter of the 4½ and 2 7/8 inch casing duals, has Humble completed a number of



these in this State of New Mexico?

A We have completed one in the State of New Mexico and a considerable number in West Texas.

Q And as a matter for the Commission, have you prepared a list of those completions?

A Yes, sir I have.

BY MR. BRATTON: That is identified as Exhibit No. 1 with reference to that list of completions.

MR. BRATTON: Mr. Willingham, would you care to express to the examiner your opinion as to the possibility of expanding the Commission's present order on Slim Hole dual completion?

A Yes, sir. The exhibits that I have submitted of course is parallel $4\frac{1}{2}$ and $2\frac{7}{8}$. We have also made many parallel $2\frac{7}{8}$ and we have made triple $2\frac{7}{8}$, not however in New Mexico. Our multiples have been highly successful and I expect and anticipate that it will be expanded rapidly in the future months and I feel that the having of the hearings for these multiples is going to become a burden on the Commission as well as on the operator, and I feel the statewide order would certainly be prudent from the standpoint of saving everyone time.

Q Do you think if the Commission were to call a statewide hearing the operators could come forth with considerable and additional testimony and suggestions for the Commission's consideration?

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A Yes, sir I feel they could.

MR. BRATTON: We have nothing further to offer, Mr. Examiner.

MR. NUTTER: Any questions of Mr. Willingham?

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Willingham, what are the communication tests on the State "M" 20?

A We as I stated before on the "M" 20 we had a good completion, on our 2 7/8 on the Queen and our 4½ in the Drinkard which was a marginal well and we came up and tested the Blinebry which was non-productive and we have gone back to accept the Drinkard as it was even though a poor producer and as a result we have not run the communication test as yet.

Q Do you anticipate doing that in the future?

A Yes, sir. Naturally when you refer and I point to the well on the multiple, you pressure up the string and when you shoot, if you did shoot into the other zone, why you would have an immediate consideration of communication, if I am making myself clear.

Q You do have a tubing string in the 4½-inch casing?

A Yes, sir.

Q You do propose the same thing in this well?

A Yes, sir.

MR. PAYNE: Thank you.

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CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Willingham, I was noting on exhibit number 7 in the previous case, 1905, and at that time you indicated that your 4½-inch pipe would be set at 7000 and your 2 7/8 inch pipe set at 4000 and on this exhibit we find that the 4½ was set at 6847 and the 2 7/8 at 3730, so evidently the structure ran a little higher than you anticipated.

A We found it slightly off, in fact this one we are saying is going to be 3800 instead of 4000.

Q Do you expect that it will be the same as the "M" 20?

A Yes, sir.

Q So the provision there in finding number 5, if we are going to use the identical copy, the provision in finding number 5 should read 2 7/8-inch casing at 3600 rather than 4000.

A Yes, that would be true.

Q So if the order provided further that centralizers should be used, the interval between the bottom of the 2 7/8-inch casing at 4000 feet and the top of the cement at 2800 feet should read 3800 and 2800.

A That is correct.

Q Mr. Willingham, your company has used this type of completion rather extensively, have they ever arrived at a concise, clear, brief term to call these cases, casing dual completions,

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what do you call them?

A What we call a Slim Hole-first of all when you talk about a Slim Hole, it means many things to many people. To my company a Slim Hole is a 6 1/4 inch or below and when we talk about this type of completion we would call it a parallel dual completion, parallel string dual completion, in other words.

Q Do you think that is distinct from the standard dual completion, that is parallel strings of tubing.

A I would say you would call that a dual completion with concentric strings of tubing or parallel-let me rephrase that. We would call that a dual completion with macaroni strings inside of the oil string, it's very difficult, it's hard to get nomenclature for these really.

Q I appreciate that. Thank you.

A I understand though that my company is in fact, Mr. Bird's specifically is sending you a letter with our recommendations and I have not conversed with him. I don't know what they decided yet.

MR. NUTTER: We can look forward for that nomenclature from Humble.

A Yes, sir I told him Friday.

MR. BRATTON: We would offer exhibit number 1.

MR. NUTTER: It will be admitted. Does anyone have anything further for case number 2059?



(No response)

We will take the case under advisement and call case 2050.

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ALBUQUERQUE, NEW MEXICO

PHONE CM 3-3691



I N D E X

| <u>WITNESSES</u> | <u>PAGE</u> |
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| J. E. WILLINGHAM | |
| Direct Examination by Mr. Bratton | 2 |
| Cross Examination by Mr. Payne | 8 |
| Cross Examination by Mr. Nutter | 9 |

E X H I B I T S

| <u>Number</u> | <u>Marked for Identification</u> | <u>Offered</u> | <u>Received</u> |
|---------------|--------------------------------------|----------------|-----------------|
| 1 | | 10 | |

DEARNLEY-MEIER REPORTING SERVICE, Inc.

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ALBUQUERQUE, NEW MEXICO



STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, Lewellyn Nelson, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 31st day of August, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Lewellyn D. Nelson
 NOTARY PUBLIC

My Commission Expires:

June 14, 1964

I do hereby certify that the foregoing is
 a true and correct record of the proceedings in
 the hearing of Case No. 2059
 held on 8/24 1960
[Signature] Examiner
 New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

