

Aug. 27.

Receipt
mailed to (encl. is 4 pgs)
all parties who
attend on
appearance of the
May 16 to the
On Aug 3, 1962

4-2-70

2561

Production, Transcript,
all Exhibits, Etc.

NO. 24-62

DOCKET: REGULAR HEARING - WEDNESDAY - AUGUST 15, 1962

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE
BUILDING, SANTA FE, NEW MEXICO

- ALLOWABLE:**
- (1) Consideration of the oil allowable for September, 1962.
 - (2) Consideration of the allowable production of gas for September, 1962, from ten prorated pools in Lea and Eddy Counties, New Mexico, also consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for September, 1962.

CASE 2504:

(REHEARING)

Application of Consolidated Oil & Gas, Inc. for an amendment of Order No. R-1670-C, changing the allocation formula for the Basin-Dakota Gas Pool, San Juan, Rio Arriba and Sandoval Counties, New Mexico.

NOTICE

CASE 2504 has been continued by the Commission to the September 13, 1962 regular hearing, at 9 o'clock a.m., Morgan Hall, State Land Office Building, Santa Fe, New Mexico. All parties who entered a formal appearance have been notified of the continuation by certified mail.

CASE 2561:

(Continued)

In the matter of the hearing called on the motion of the Oil Conservation Commission to consider revising Rule 111, Deviation Tests and Whipstocking. The Commission will consider the report and recommended rule of the Industry Committee appointed by the Commission after the May, 1962 hearing. The proposed rule, as stated in the Committee Report, reads in its entirety as follows:

Rule 111. Deviation Tests and Directional Drilling

(a) Any well which is drilled or deepened with Rotary Tools shall be tested at reasonably frequent intervals not to exceed 500 feet or at the next subsequent bit change to determine the deviation from the vertical. A sworn notarized tabulation of all tests run shall be filed with Form C-105, Well Record. When such deviation averages more than five degrees in any 500 foot interval, the Commission may ^{require} ~~request~~ that a directional survey be run to establish the location of the producing interval(s).

Rule 111. Deviation Tests and Directional Drilling (Cont.)

The Commission, at the request of an offset operator, may require any operator to make a directional survey of any well. Said directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a \$5,000 indemnity bond posted with and approved by the Commission. The requesting party may designate the well survey company, and said survey shall be witnessed by the Commission.

(b) No well shall be intentionally deviated in a predetermined direction without special permission from the Commission. Permission to deviate toward the vertical to straighten an excessively deviated well bore as defined in (a) above; or to sidetrack junk in the hole in an indeterminate direction or toward the vertical; or to drill a relief well to control a blow-out shall be obtained from the appropriate District Office of the Commission on Commission Form C-102 with copies of said Form C-102 being furnished to all offset operators. Permission to deviate a well in any other manner or for any other reason will be granted only after notice and hearing. Upon completion of any well that was deviated in a predetermined direction, except toward the vertical, a directional survey of the entire well bore must be run and filed with the Commission. In addition, all directional surveys run on any well that was intentionally deviated in any manner for any reason must be filed by the operator with the Commission upon completion of the well. Prior to the assignment of an allowable, operator shall submit a sworn notarized statement to the effect that all directional surveys run on the well have been filed.

intentionally deviated

CASE 2618:

Application of El Paso Natural Gas Company for a revision of Rule 314. Applicant, in the above-styled cause, seeks the revision of Rule 314 pertaining to the gathering, transporting and sale of drip to provide for the redefinition of drip also to include condensate; to further regulate the transportation of drip, as redefined; and to require the reporting of such transportation on Forms C-110-A and C-110-B.

CASE 2503:

Application of the Oil Conservation Commission, on its own motion, to consider the establishment of minimum gas allowables in the Blanco-Mesaverde, Aztec-Pictured Cliffs, Ballard-Pictured Cliffs, Fulcher Kutz-Pictured Cliffs, South Blanco-Pictured Cliffs, and West Kutz-Pictured Cliffs Gas Pools, San Juan, Rio Arriba and Sandoval Counties, New Mexico.

Docket No. 24-62

CASE 2619:

Southeastern New Mexico nomenclature case calling for an order creating new pools and extending certain existing pools in Lea and Roosevelt Counties, New Mexico.

- (a) Create a new oil pool for Montoya production, designated as the North Justis-Montoya Pool, and described as:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM

Section 1: NW/4

- (b) Create a new oil pool for Waddell production, designated as the North Justis-Waddell Pool, and described as:

TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM

Section 35: SE/4

- (c) Extend the Allison-Pennsylvanian Pool to include:

TOWNSHIP 8 SOUTH, RANGE 36 EAST, NMPM

Section 25: NW/4

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM

Section 4: NW/4

Section 8: SW/4

- (d) Extend the Blinebry Pool to include:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM

Section 5: N/2

- (e) Extend the South Crossroads-Devonian Pool to include:

TOWNSHIP 10 SOUTH, RANGE 36 EAST, NMPM

Section 15: W/2

- (f) Extend the Hobbs Pool to include:

TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM

Section 22: N/2 NW/4

- (g) Extend the Justis-Blinebry Pool to include:

TOWNSHIP 26 SOUTH, RANGE 37 EAST, NMPM

Section 1: NE/4

- (h) Extend the North Justis-Blinebry Pool to include:

TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM
Section 35: SW/4

- (i) Extend the North Justis-Ellenburger Pool to include:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 2: SE/4

- (j) Extend the North Justis-Fusselman Pool to include:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 2: SE/4

- (k) Extend the North Justis Tubb-Drinkard Pool to include:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 2: SE/4

- (l) Extend the Lea-Pennsylvanian Gas Pool to include:

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM
Section 11: E/2
Section 12: All

- (m) Extend the South Lane-Pennsylvanian Pool to include:

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM
Section 35: NW/4

- (n) Extend the Medicine Rock-Devonian Pool to include:

TOWNSHIP 15 SOUTH, RANGE 38 EAST, NMPM
Section 23: NW/4

- (o) Extend the Saunders Permo-Pennsylvanian Pool to include:

TOWNSHIP 14 SOUTH, RANGE 33 EAST, NMPM
Section 21: SW/4

- (p) Extend the East Saunders Permo-Pennsylvanian Pool to include:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
Section 17: NW/4

-5-

Docket No. 24-62

(q) Extend the Sawyer-San Andres Gas Pool to include:

TOWNSHIP 10 SOUTH, RANGE 38 EAST, NMPM
Section 5: NE/4

(r) Extend the East Weir-Blinebry Pool to include:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 12: NW/4

iqg/

RULE 314: GATHERING, TRANSPORTING, AND SALE OF DRIP OR CONDENSATE
(As proposed by El Paso Natural Gas Company)

- (a) For the purpose of this Rule, condensate is defined as any liquid hydrocarbon which is produced at the wellhead incidental to the production of gas well gas and separated from the gas by conventional separation methods; drip includes condensate, as defined above, or any liquid hydrocarbon incidentally accumulating in a gas gathering or transportation system, or any mixture of such hydrocarbons.
- (b) The waste of drip is hereby prohibited when it is economically feasible to salvage same.
- (c) Transportation and sale of drip is hereby authorized provided the provisions of this Rule are complied with and Commission Form C-110 has been completed and filed in compliance with the provisions of Statewide Rule 1109.
- (d) Every person transporting drip within the State of New Mexico shall file Commission Form C-112 in compliance with the provisions of Statewide Rule 1111.
- (e) The owner during transportation and all persons transporting drip by truck or other vehicle shall make report of such transportation on Commission Form C-110-A. When the owner is also the transporter, the owner shall complete Sections I and II of the Form, furnish one copy to the driver of the vehicle and, when the trip has been completed, file one completed copy with the Commission. When the owner is not the transporter, the owner shall complete Section I of Form C-110-A and deliver the Form to the transporter, who shall complete Section II of Form C-110-A and furnish the driver of the vehicle with one copy and, when the trip has been completed, file one completed copy with the Commission. The driver of the vehicle shall complete Section III of Form C-110-A. The person driving or operating a vehicle transporting drip shall have in his possession a copy of Form C-110-A signed by the owner and transporter, or an authorized agent, in the appropriate Section thereof, showing the name and address of the owner, the source and destination of the drip, the name and address of the owner of the vehicle, type of vehicle, license number of vehicle, name and address of driver of vehicle, quantity of drip transported, and date and time and places loaded.

(Over)

If the owner of said drip is not the producer thereof, each and every operator of such truck or other vehicle shall have in his possession, in addition to the above requirements, a completed copy of Commission Form C-110-B, signed and certified by the producer and the purchaser of said drip, or their agents, in the appropriate Section thereof, showing the name and address of the producer, the name and address of the purchaser, the source of the drip and the expiration date of the authority of the purchaser to transport drip from the producer's system or other facility. Commission Form C-110-B shall be prepared in sufficient number by the purchaser. One copy shall be retained by the producer, one copy by the purchaser, one copy shall be filed by the purchaser with the Commission, and one copy shall be given to each vehicle driver having need thereof.

- (f) Every gas transporter in the State of New Mexico shall, on or before the first day of November of each year, file with the Commission maps of its entire gas gathering and transportation systems within the State of New Mexico, locating and identifying thereon each drip trap and/or tank in said systems, said maps to be accompanied by a report, on a form prescribed by the Commission, showing the disposition being made of the drip from each of such facilities.

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
DRIP TRANSPORTATION REPORT

FORM C-110-A
(As proposed by
El Paso Natural
Gas Company)
TICKET NO. _____

PRODUCER'S IDENTIFICATION NO. _____
(To Be Inserted by Owner of Drip)

SECTION I

1. NAME OF OWNER OF DRIP _____

a. PRODUCED BY OWNER ☐ PURCHASED FROM PRODUCER ☐
(Check one. If b. is checked, attach copy of Form 110-B showing transfer of title)

2. ADDRESS OF OWNER _____

3. SOURCE OF DRIP _____

4. DESTINATION _____

(Name of Person and Physical Place to Which Delivery Authorized)

I hereby certify that on this _____ day of _____ 19____, I have authorized the below-named transporter to gather and transport to the above destination the quantity of drip specified below and that I have authority to sell the same.

SECTION II

Signature of Owner or Agent

1. NAME AND ADDRESS OF OWNER OF VEHICLE _____

2. TYPE OF VEHICLE _____

3. LICENSE NO. OF VEHICLE _____

4. NAME OF OWNERS AGENT ORDERING TRIP _____

5. DATE ORDERED _____

6. FACILITIES TO BE SERVICED _____

The undersigned accepts drip for delivery in accordance with the above directions.

SECTION III

Signature of Transporter or Agent

1. NAME AND ADDRESS OF DRIVER _____

Source	Gauge (Top)	Gauge (Bottom)	Barrels	Date and Hour
	Ft. _____ In. _____	Ft. _____ In. _____		
	Ft. _____ In. _____	Ft. _____ In. _____		
	Ft. _____ In. _____	Ft. _____ In. _____		
	Ft. _____ In. _____	Ft. _____ In. _____		
	Ft. _____ In. _____	Ft. _____ In. _____		

Total _____

I hereby certify that drip transported by me was obtained by me from the source described in Section I and loaded as described in Section III.

Signature of Driver

FORM C-110-B

NEW MEXICO OIL CONSERVATION COMMISSION

(As proposed by
El Paso Natural
Gas Company)

SANTA FE, NEW MEXICO

DRIP SALE AND PURCHASE REPORT

I

NAME OF PRODUCER _____

ADDRESS OF PRODUCER _____

SOURCE OF DRIP _____

EXPIRATION DATE OF THIS AUTHORIZATION _____

I certify that I have transferred title to the drip from the above source or sources to the below-named purchaser and he is hereby authorized to obtain drip from such source or sources until the expiration of this authorization.

Producer

II

NAME OF PURCHASER _____

ADDRESS OF PURCHASER _____

I certify that I am the purchaser and owner of the drip from the source or sources indicated above and am authorized to remove the same until the expiration date set out in Section I above.

Purchaser

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

File 2561
Case

June 21, 1932

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Mr. B. L. Francis
Assistant Division Manager
Tenneco Inc.
P. O. Box 1109
Midland, Texas

Dear Sir:

Complying with your request by telegram of this date, the Commission is hereby appointing Tenneco Inc as a member of the Industry Committee which has been appointed to make a study of deviation tests and whiptocking.

The next meeting of the Committee will be held at 9 a.m. at the Mobil Building, Legal Library, Midland, Texas on June 27, 1932.

Please notify this office as to the name and address of the Tenneco representative, sending a copy of your letter to Mr. C. J. Bessupre, Secy Mobil Oil Company, P. O. Box 2404, Hobbs, New Mexico.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/lr

cc: Mr. B. M. Anderson
Mr. W. E. Bingham
Mr. J. E. Newhirk
Mr. Daniel S. Nutter
Mr. C. J. Bessupre

Mr. J. E. Willingham
Mr. M. B. Wilson
Mr. Clark E. Storn
Mr. Joe D. Roney

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

June 4, 1962

Mr. C. J. Beauprey
Socony Mobil Oil Company
P. O. Box 2406
Hobbs, New Mexico

Dear Mr. Beauprey:

I am enclosing copies of letters which I have received from Humble Oil & Refining Company, Amerasia Petroleum Corporation, Shell Oil Company, Great Western Drilling Company and Carper Drilling Company. These letters indicate the willingness of each of these companies to serve on the committee of which you have been named chairman, and they designate the representatives who will serve on the committee.

As soon as I hear from Sinclair Oil & Gas Company, I will forward the information to you.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Enclosures

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CIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 23, 1962

**Secony Mobil Oil Company
P. O. Box 2406
Hobbs, New Mexico**

Attention: Mr. C. J. Beauprey

Gentlemen:

I am enclosing a copy of a letter designating an Industry Committee to make a study of the problems of deviation tests and whipstocking, in connection with Case No. 2561.

Your company has been designated as chairman and it will be the duty of the chairman to inform the members of the time and place of the first meeting. In this connection, I would like to advise that the meeting rooms of any of our district offices as well as our conference room here in Santa Fe will be made available at any time.

Very truly yours,

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

ALP:ir

cc: Mr. Daniel S. Nutter - Santa Fe, New Mexico
Mr. Joe Ramey - Hobbs, New Mexico

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 23, 1962

Shell Oil Company
P. O. Box 1589
Midland, Texas

Attention: Mr. Ed Nestor

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Mutter and Mr. Ramey of the Commission staff will work with the committee.

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

Please advise the Commission as to whether your company will serve on the committee, and the name of the person whom you will designate to represent you.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

cc: Mr. Daniel S. Futter, Santa Fe, New Mexico
Mr. Joe D. Ramey, Hobbs, New Mexico

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CIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 23, 1962

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Amerada Petroleum Corporation
P. O. Box 2040
Tulsa 2, Oklahoma

Attention: Mr. Bob Christie

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Nutter and Mr. Ramey of the Commission staff will work with the committee.

C. L. CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2

Please advise the Commission as to whether your company will serve on the committee, and the name of the person whom you will designate to represent you.

Very truly yours,

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

ALP:lr

**cc: Mr. Daniel S. Hutter - Santa Fe, New Mexico
Mr. Joe D. Runey - Hobbs, New Mexico**

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U.S. CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 23, 1962

**Sinclair Oil & Gas Company
P. O. Box 1470
Midland, Texas**

Attention: Mr. Foley Wright

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

**Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company**

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Mutter and Mr. Ramey of the Commission staff will work with the committee.

C. L. CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

Please advise the Commission as to whether your company will serve on the committee, and the name of the person whom you will designate to represent you.

Very truly yours,

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

ALP:lr

cc:

Mr. Daniel S. Muttter - Santa Fe, New Mexico
Mr. Joe D. Ramsey - Hobbs, New Mexico

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U.S. CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

May 23, 1962

Humble Oil & Refining Company
Box 1600
Midland, Texas

Attention: Mr. Henry Meadows

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Nutter and Mr. Ramey of the Commission staff will work with the committee.

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U. S. CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

-2-

Please advise the Commission as to whether your company will serve on the committee, and the name of the person whom you will designate to represent you.

Very truly yours,

A. L. PORTER, JR.
Secretary-Director

ALP/lr

cc: Mr. Daniel S. Witter - Santa Fe, New Mexico
Mr. Joe B. Ramsey - Hobbs, New Mexico

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 23, 1962

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**Socony Mobil Oil Company
P. O. Box 2406
Albuquerque, New Mexico**

Attention: Mr. C. J. Beauprey

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

**Caryer Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company**

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Mutter and Mr. Ramsey of the Commission staff will work with the committee.

U.S. CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

**Please advise the Commission as to whether your company
will serve on the committee, and the name of the person
whom you will designate to represent you.**

Very truly yours,

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

ALP/ir

**cc: Mr. Daniel J. Muttar - Santa Fe, New Mexico
Mr. Joe D. Ramey - Hobbs, New Mexico**

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OIL CONSERVATION COMMISSION
P. O. BOX 671
SANTA FE, NEW MEXICO

May 23, 1962

**Carper Drilling Company
200 Carper Building
Artesia, New Mexico**

Attention: Mr. Marshall Rowley

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

**Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company**

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Mutter and Mr. Ramey of the Commission staff will work with the committee.

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CIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

Please advise the Commission as to whether your company will serve on the committee, and the name of the person whom you will designate to represent you.

Very truly yours,

A. L. POSTER, JR.
Secretary-Director

ALP:ir

cc: Mr. Daniel S. Mutter, - Santa Fe, New Mexico
Mr. Joe D. Ramsey - Hobbs, New Mexico

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OIL CONSERVATION COMMISSION

P. O. BOX 671

SANTA FE, NEW MEXICO

May 23, 1962

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**Great Western Drilling Company
Box 1459
Midland, Texas**

Attention: Mr. Merrill Wilson

Gentlemen:

On May 16, 1962, at the conclusion of testimony in Case 2561, having to do with deviation tests and whipstocking, a motion was made to continue the case to August 15, 1962 and in the meantime to appoint an industry committee to make further study of the matter. The motion was granted and the following companies are hereby designated to serve on the committee:

**Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Socony-Mobil Oil Company (Chairman)
Great Western Drilling Company
Shell Oil Company**

It will be the duty of the committee to make a thorough study of the problem and to be prepared to present its findings and recommendations at the hearing on August 15, 1962.

Mr. Nutter and Mr. Ramsey of the Commission staff will work with the committee.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

Please advise the Commission as to whether your company will serve on the committee, and the name of the person whom you will designate to represent you.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

cc: Mr. Daniel S. Witter, Santa Fe, New Mexico
Mr. Joe D. Raney, Hobbs, New Mexico

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CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

1220
R-4-00

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

LA113 DC196

D MDA130 LONG PD=FAX MIDLAND TEX 21 158P CST=

A L PORTER JR, NEW MEXICO OIL CONSERVATION COMM=

PO BOX 871 SANTA FE NMEX=

REFERENCE IS MADE TO THE INDUSTRY COMMITTEE APPOINTED BY THE COMMISSION TO STUDY THE PROPOSED CLARIFICATION AND REVISION OF RULE 111. TEXACO WAS UNABLE TO HAVE PERSONAL REPRESENTATION AT THE MAY 15TH STATE-WIDE HEARING HOWEVER WE CONCURRED BY LETTER WITH THE PROPOSED CHANGES RECOMMENDED BY THE COMMISSION. DURING 1961 TEXACO DRILLED 64 WELLS IN THE STATE OF NEW MEXICO AND AT THE PRESENT TIME WE ARE CONTINUING AN ACTIVE DRILLING PROGRAM IN THE STATE. TEXACO IS THEREFORE VITALLY INTERESTED IN THE FORMULATION OF RULES AND REGULATIONS GOVERNING THE DRILLING AND PRODUCTION OF OIL WELLS IN THE STATE OF NEW MEXICO. TEXACO RESPECTFULLY REQUESTS THAT IT BE APPOINTED AS A MEMBER OF THE ABOVE MENTIONED COMMITTEE IN ORDER THAT WE MAY PARTICIPATE IN THE REMAINING WORK SESSIONS=

B L FRANCIS ASSISTANT DIVISION MANAGER=

=111 15TH 1961 64 ...

1962 JUN 21 PM 1 38

000 30140 1111



MAIL SERVICE 000

SINCLAIR OIL & GAS COMPANY

P.O. BOX 1470 12

MIDLAND, TEXAS

MUTUAL 3-2761

1962 JUN 5 AM 7 12

R. L. ELSTON
VICE PRES. & DIVISION MANAGER

June 4, 1962

State of New Mexico
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Gentlemen:

By letter dated May 23, 1962, you advised that Sinclair Oil & Gas Company had been designated to serve on an industry committee to make a further study of the matters of deviation tests and whip-stacking.

We are pleased to serve on this committee and designate Mr. R. M. Anderson as our representative. Mr. Anderson's address is Post Office Box 1470, Midland, Texas.

Yours very truly,


R. L. Elston

RLE:REP:esa

HUMBLE OIL & REFINING COMPANY

MIDLAND, TEXAS

MIDLAND AREA

PRODUCTION DEPARTMENT

R. R. McCARTY
MANAGER
H. L. HENSLEY
J. M. SHEPHERD
OPERATIONS SUPERINTENDENTS
H. E. MEADOWS
ENGINEERING COORDINATOR

June 1, 1962

OFFICE BOX 1600
JUN 12 25

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

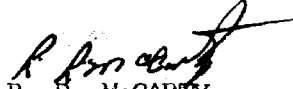
Attention: Mr. A. L. Porter, Jr., Secretary-Director

Dear Sir:

In reply to your letter of May 23, 1962, requesting that Humble be represented on an Industry Committee to study and make recommendations for rules relating to deviation tests and whipstocking, we wish to advise that Humble will serve on this committee and that Mr. J. E. Willingham, Box 1600, Midland, Texas, will be Humble's representative. Notice of committee meetings should be directed to Mr. Willingham.

Yours very truly,

HUMBLE OIL & REFINING COMPANY


R. R. McCARTY

JWG/rs

cc: Mr. Daniel S. Nutter, Santa Fe, N. M.
Mr. Joe D. Ramey, Hobbs, N. M.
Mr. J. E. Willingham, Midland



SHELL OIL COMPANY

PETROLEUM BUILDING

P. O. BOX 1509

MIDLAND, TEXAS

MAIN OFFICE OCC

1962 JUN 2 AM 8:36

May 31, 1962

Mr. A. L. Porter, Jr.
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

We refer to your letter of May 23, announcing the formation of an industry committee to study the problem of deviation tests and whipstocking.

Shell Oil Company will be pleased to serve on this committee, with Mr. W. E. Bingman designated as our representative. Please have any information directed to Mr. Bingman through Shell Oil Company, Box 1509, Midland, Texas.

Yours very truly,

E. W. Nestor
E. W. Nestor

EWN:RJ

MAIN OFFICE

1962 JUN 1 AM 8:15



R. C. TUCKER, PRES.

May 30, 1962

PHONE MU 2-5241
ADDRESS REPLY TO:
BOX 1659
MIDLAND, TEXAS

Mr. A. L. Porter, Jr., Secretary-Director
Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

We have received your letter of May 23, 1962, designating Great Western Drilling Company as a member of an industry committee to study the matter of rules concerning deviation tests and whipstocking in New Mexico.

Great Western gladly accepts this assignment and the writer will serve on the committee. If you will, please advise me as to the date or dates and place that the committee will meet.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

M. B. Wilson
Vice President - Production

MBW:ect



AMERADA PETROLEUM CORPORATION

P. O. BOX 2040

TULSA 2, OKLA.

PRODUCTION DEPARTMENT
JAMES E. LOW
GENERAL SUPERINTENDENT

May 29, 1962

MAIN OFFICE OCC

1962 JUN 2 AM 8:37

State of New Mexico
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

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

Gentlemen:

This is to advise that Amerada Petroleum Corporation will be glad to serve on the industrial committee to make a further study of deviation tests and whipstocking (Case 2561) and to present recommendations to the Commission at the hearing to be held on August 15, 1962.

Amerada's representative on this committee will be
Mr. J. E. Newkirk, P. O. Box 312, Midland, Texas.

Very truly yours,



BWW:mk

c.c. - Mr. J. E. Newkirk
Mr. R. S. Christie
Mr. H. A. Nedom

CARPER

DRILLING COMPANY INC.

O I L P R O D U C T I O N A N D D R I L L I N G

STANLEY CARPER, PRESIDENT
MARSHALL ROWLEY, EXEC. VICE PRES. & TREAS.
GLENN A. CASKEY, SECRETARY

ARTESIA, NEW MEXICO
CARPER BUILDING
SHERWOOD 6-2783

May 25, 1962

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter
Secretary-Director

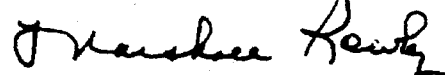
Gentlemen:

We are pleased to have been selected as one of the
companies to make a further study of Case 2561.

We hereby designate Mr. Clark E. Storm, Production
Superintendent, as the person to represent us on the Industry Committee.

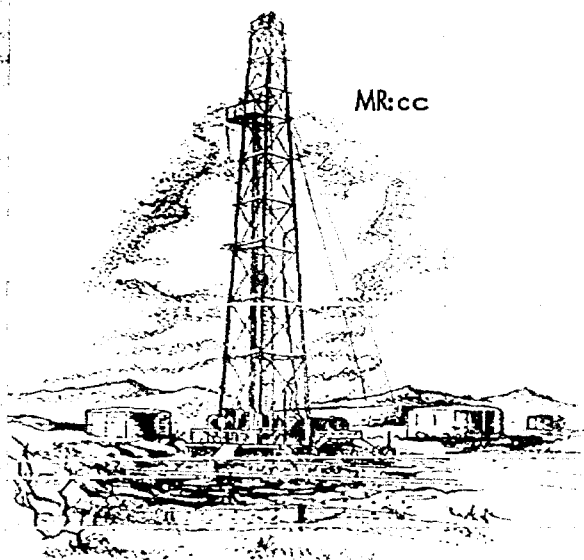
Yours very truly,

CARPER DRILLING COMPANY, INC.



Marshall Rowley

MR:cc



PAN AMERICAN PETROLEUM CORPORATION

MAIN OFFICE 0301 AND GAS BUILDING P. O. BOX 1410

FORT WORTH 1, TEXAS

KENNETH J. BARR
DIVISION ENGINEER

1962 MAY 14 AM 8:27

May 11, 1962

Case 2561

File: GHF-211-986.510.1

Subject: Amendment of Statewide Rule 111
Case 2561

Mr. A. L. Porter, Jr.
Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

Reference is to Case 2561 on the regular hearing docket for May 16, 1962, which is on the application of the Commission to amend Statewide Rule 111. This is to advise that Pan American Petroleum Corporation concurs in the Commission's proposed amendment of Statewide Rule 111.

Yours very truly,

Kenneth J. Barr

*Docket
Mailed
8-3/62
[Signature]*

STATEMENT OF TEXACO INC. FOR CASE 2561

Texaco Inc. supports the proposed revision of Rule 111 as presented by the Commission appointed Industry Committee. We believe the proposed rule is equitable for all operators and will promote rather than hinder additional drilling within the State of New Mexico.

8/7/62
JER/kg

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, President

SYMBOLS

DL = Day Letter

NL = Night Letter

1500 (4-00)

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

LA171 SSJ269

L RWA103 PD=ROSWELL NMEX 14 315P MST=

1962 AUG 14 PM 4:44

OIL CONSERVATION COMMISSION=

STATE OF NMEX PO BOX 871 SANTA FE NMEX=

ATTN MR A L PORTER JR

9 REFERENCE CASE NO 2561 SCHEDULED FOR HEARING
ON AUGUST 15 1962, GULF OIL CORPORATION CONCURS WITH
THE PROPOSED REVISION OF RULE 111=

GULF OIL CORP W A SHELLSHEAR.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

TEXACO
INC.

PETROLEUM PRODUCTS



17

DOMESTIC PRODUCING DEPARTMENT
MIDLAND DIVISION

P. O. BOX 510
MIDLAND, TEXAS

B. L. FRANCIS, ASSISTANT DIVISION MANAGER

August 7, 1962

CASE 2561

PROPOSED REVISION OF RULE 111

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

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

Gentlemen:

Texaco Inc. is appreciative of the Commission's action in honoring our request that we be appointed to the Industry Committee to consider revising Rule 111. The Commission is to be congratulated in your method of selecting industry committees to study and present recommendations for revision of certain regulations of the New Mexico Oil Conservation Commission. By permitting various members of the industry an opportunity to express their opinions and recommendations in an informal manner, we believe that a rule or policy can be made that will be equitable for all concerned parties.

Texaco Inc. believes that the proposed rule that has been presented by the Industry Committee is equitable for all operators in the State of New Mexico. The proposed rule adds clarity to the intention of the previous rule and will encourage additional drilling in the State of New Mexico.

Attached is a statement that we wish to be entered in Case No. 2561.

Yours very truly,

B. L. Francis
B. L. Francis

JER/kg
Attach.

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECT

P. O. BOX 871
SANTA FE

August 28, 1962

Mr. C. J. Beaupre
Socony Mobil Oil Company
P. O. Box 2406
Hobbs, New Mexico

Re: Case No. 2561

Order No. R-2308

Applicant:

OIL CONSERVATION COMMISSION

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC x

OTHER _____

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

BEFORE THE
OIL CONSERVATION COMMISSION
High School Auditorium
1300 East Scharbauer
Hobbs, New Mexico

May 16, 1962

REGULAR HEARING

IN THE MATTER OF:

In the matter of the hearing called on the
motion of the Oil Conservation Commission
to consider revising Rule 111, Deviation
Tests and Whipstocking.

CASE NO.
2561

BEFORE: Edwin L. Mechem, Governor
E. S. "Johnny" Walker, Land Commissioner
A. L. "Pete" Porter, Secretary-Director of Commission

TRANSCRIPT OF HEARING

MR. PORTER: Case No. 2561.

MR. MORRIS: In the matter of the hearing called on the
motion of the Oil Conservation Commission to consider revising
Rule 111, Deviation Tests and Whipstocking.

I want to call Mr. Nutter.

MR. PORTER: Let the record show that Mr. Nutter had
been previously sworn today. Do we have other appearances?

DANIEL S. NUTTER,

called as a witness, having been previously duly sworn on oath,



was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Nutter, --

MR. PORTER: We have other appearances.

MR. BRATTON: Howard Bratton on behalf of Humble Oil & Refining Company. I think we will have one witness.

MR. ANDERSON: R. M. Anderson of Sinclair Oil & Gas Company. We will have a statement to make.

MR. KASTLER: Bill Kastler with Gulf will have a statement to make at the conclusion of the testimony.

MR. PORTER: Mr. Christie.

MR. CHRISTIE: Clarence Christie. I would like to make a statement at the end of the case.

MR. PORTER: Mr. Morris, you may proceed with the witness.

Q (by Mr. Morris) State your name and position.

A Dan Nutter, chief engineer for the New Mexico Oil Conservation Commission.

Q Mr. Nutter, are you familiar with Commission Rule 111 as presently constituted?

A Yes, sir, I am.

Q And have you been the Examiner in several hearings which have involved Rule 111 and its construction and application to various situations?

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A Yes, sir.

Q From your experience in these hearings and in other Commission matters involving this Rule 111, do you feel there is a need for its clarification and revision?

A Yes, sir, I stated I was familiar with it. I'm not sure of what it says in its entirety, however.

Q Mr. Nutter, in preparation for this case, have you prepared a complete revision of Rule 111?

A Yes, sir, I have.

Q I would ask you at this time to please read the entire rules as you have proposed it.

A Yes, sir, Rule 111 as it is presently constituted is divided into two paragraphs, Paragraph (a) and Paragraph (b), and has reference to the drilling of a well and controlling the drilling of it to keep the well within five degrees of the vertical in any 500 foot interval if the well deviates more than five degrees average in a 500-foot interval, a directional survey is required before any oil or gas can be sold from the well. A directional survey is required to establish that the bottom of the hole is on the lease before any oil or gas can be sold from the well.

Paragraph (b) has reference to intentional directional drilling. We have written Paragraph (a) in much the same manner that it is written at the present time; however, we have included a couple of new items in the rule.

Our proposal is that it would read as follows:



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"(a) Any well which is drilled or deepened with rotary tools shall be tested at reasonably frequent intervals to determine the deviation from the vertical and a tabulation thereof filed with Form C-105, Well Record. When such deviation averages more than five degrees in any 500-foot interval, no oil or gas shall be sold until it has been established that the bottom of the hole is on the proration unit assigned to the well by means of a deviational and directional survey. In lieu of said survey, the operator may, with specific approval of the Commission, establish the location of the bottom of the hole by filing a notarized tabulation of all deviation tests, assuming the deviation from the vertical and the drift to be in a constant and continuous direction to the nearest boundary of the proration unit."

Q Before you go into Paragraph (b), let's discuss some of the things in Paragraph (a) for just a moment. At the beginning of Paragraph (a) your proposed rule reads that the well is to be tested at reasonably frequent intervals?

A Yes, sir.

Q Now, why have you used that particular wording, "reasonably frequent"?

A The present rule simply requires that tests be taken to determine the deviation from the vertical. It just stands to reason that these tests ought to be taken at reasonably frequent intervals.

Q Did you use that particular wording rather than a re-



quirement of footage, a footage requirement, because it might not correspond to actual drilling practices?

A Yes, sir, deviation tests are usually taken at the time the drillstem is pulled in order to change the bit, and if you try to specify that the deviation tests would be taken at certain hundred-foot intervals, it would of necessity require changing the bit for running a test at that time, whether you were ready to change the bit or not. This would be impractical; also, impractical to require the deviation tests be made every time the bit is changed because this may represent just a few feet from the last test or it may represent a large amount, depending on the drilling record of the bit, so we tried to make it sound reasonable and say reasonably frequent intervals.

Q Are you familiar with the practice in the industry as to what might be considered reasonably frequent intervals?

A I imagine there is a variation of opinion as to what reasonably frequent intervals should be on the intervals within a 500-foot interval to know what that drift is in the 500 feet; it's pretty much a matter of touch and go.

Q In other words, the requirement that you are taking these tests to know whether you are deviating more than five degrees in a 500-foot interval, of course, would have a bearing on what would be reasonably frequent?

A Yes, sir, I think the operators' experience in a given area would dictate to a large extent how often the tests should

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be taken. Some wells, in certain areas, will take off a sharper angle than wells in other areas.

Q Mr. Nutter, in the next line of your proposed rule there is the requirement that a tabulation of these tests be filed with the Form C-105, which is the Commission's form for the well record?

A Yes, sir.

Q Is it your feeling that the tests taken should be reported to the Commission?

A Yes, sir, there is no use taking the tests if you don't do something with them.

Q Further down in the next sentence, you have used the term, "proration unit", with respect to the requirement of the rule that "no oil or gas shall be sold until it has been established that the bottom of the hole is on the proration unit, " whereas the previous rule, as now written, the word "lease" is used. Could you explain why you made that change?

A Yes, sir, the word "lease" is a rather general term. It may include a large amount of acreage and has no application whatsoever unless it would happen to be a 40-acre lease. In the case of the 40-acre oil well, we substituted the term "proration unit" because the producing interval of the bottom of that hole should be on the proration unit, not specifically on the lease. You haven't proven any proration unit to be productive until you have completed a producing well on that proration unit. So we felt that the term "proration unit" was more applicable and pro-

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bably used than "lease" in this sense.

Q Now, your proposed rule down to this point through the sentence containing the word "proration unit" requires that the deviational and directional survey be taken and filed to show the bottom of the hole is on the proration unit. If the five degree variation or deviation has been expected in a 500-foot interval, now, your last sentence in Paragraph (a) employs an alternative to that requirement under certain circumstances. Now, in that last sentence, that is completely new in the proposed rule, is that correct?

A Yes, sir, I believe that the three changes we have made in Paragraph (a) up to this point are all relatively insignificant. The fourth line in the paragraph, as you say, is new and reads as follows: --referring back to the well that has a deviation of more than five degrees from the vertical in a 500-foot interval, no oil or gas could be sold until it was established that the bottom of the hole was on the proration unit. You have to make this establishment by means of the deviational and directional survey, so we added this sentence: "In lieu of said survey, the operator could assume all of the drift to be in a single constant direction towards the nearest proration unit boundary, and if the bottom of that hole or the producing interval is shown to be on the proration unit." By making those two basic assumptions of the conditions, then no survey would be necessary, then the cost of the survey would be eliminated. You are making the two words,

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"assuming" and "establishing" that the bottom of the hole is on the proration unit.

Q So a deviation test, to try to put this whole paragraph together, is required on every well?

A Yes, sir.

Q Then, if you have a five-degree deviation in a 500-foot interval, you have to go further and take a directional survey unless you exercise this option, so to speak, and can show just using the deviational tests alone, and applying the deviation towards the nearest boundary of the proration unit, the bottom of the hole is still on the unit?

A Yes, sir.

Q And in this event, the directional survey would not be necessary?

A That is correct.

Q Do you have anything further to add before we take up Paragraph (b)?

A No, I think not.

Q Would you read Paragraph (b) please?

A Paragraph (b) really doesn't, the way we have it proposed, it doesn't change from the present Paragraph (b) at all, I don't think. Like I said before, I am not sure what Paragraph (b) really says. This paragraph has been subject to several interpretations over the years, and I think -- well, the rule that I have proposed here for (b) is the interpretation that I have of the



present Paragraph (b), but I tried to make it a little clearer so we would know what it says. My proposal is as follows:

"No well shall be whipstocked and directionally drilled without special permission from the Commission. Permission to whipstock to straighten a crooked hole, to sidetrack junk in the hole, or to control a blow-out may be obtained from the appropriate District Office of the Commission on Commission Form C-102, with copies of said Form C-102 being furnished all offset operators. Permission to whipstock for any other reason will be granted only after notice and hearing. Upon completion of any whipstocked well and prior to producing any oil or gas therefrom, a deviational and directional survey shall be conducted and a report thereof filed with the Commission."

Q Mr. Nutter, in view of recent developments we all read about in the morning paper, and it appears the last few days, what is happening over in the East Texas field, do you feel the requirements of the Commission with respect to requiring notice and hearing for whipstocking in all cases other than just three that you have enumerated here, that is straighten a crooked hole, to sidetrack junk in the hole, or to control a blow-out, do you feel that the requirement to have a hearing is unreasonable?

A No, sir, I do not.

Q Absolutely necessary to exercise a clearly high degree of control over the use of whipstocking in order to be completely sure that the operators are producing from their own proration

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units?

A Yes, sir.

Q Do you have anything further you would like to add in respect to Paragraph (b)?

A Yes, sir, in the first sentence where it says that "no well shall be whipstocked and directionally drilled," I would change that slightly and say, "whipstocked and/or directionally drilled" to cover the instance where you may be directionally drilling without the use of the whipstock. I would like to further explain that the notification of the offset operators by the form C-102, in the instance where you are trying to straighten a crooked hole, to sidetrack junk in the hole, or to control a blow-out does not imply there would be any waiting, before the Commission would approve the form C-102. It is merely to put the operator on record as having notified the offset operators of his intent to set a whipstock and directionally drill. The offset operators have been notified that the well must be directionally surveyed later on, at which time the offset operators, having been notified, could come in and see the directional survey and find out just where the bottom of the hole was. That portion of the rule is different than anything that is contained in Paragraph (b) at the present time, but I don't think it is unreasonable to send a C-102 to your operators when you're whipstocking. It's not a real common practice anyway.

Q Do you have anything further?

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A No, sir.

MR. MORRIS: That, then, concludes the direct examination.

MR. PORTER: Anyone have a question of Mr. Nutter?
Mr. Kendrick.

CROSS EXAMINATION

BY MR. KENDRICK:

Q Mr. Nutter, this term "proration unit" is misused, I believe, in this case. I would prefer to have the thing called a "drill track", a "spacing unit" or a "drilling unit" or some term other than "proration unit", because proration unit would imply that the well is a prorated well.

Do you agree?

A Well, it appears that the unit, the prorated, if it is a proration unit, some substitutions could be made there.

MR. PORTER: Mr. Jameson.

CROSS EXAMINATION

BY MR. JAMESON:

Q Mr. Nutter, can you make a reasonable definition of the crooked hole? Is it possible to make it?

A I think that the Commission's definition of what must have a survey made on it being the well that is off more than five degrees average in a 500-foot interval, would be a crooked hole. I think the connotation there is if a well is within five degrees in all the 500-foot intervals, it is a straight head.

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Q In that event, a hearing would have to be held if they wanted to directionally drill after drilling the original hole less than five degrees?

A A hearing would have to be held when?

Q Assuming an operator came in and asked to set a whipstock on a well which had been drilled in total depth and the deviation in any 500-foot interval did not average five degrees at the time, it would be necessary for this operator to apply for a hearing before the Commission, is that correct?

A Well, if it's going to whipstock and keep within five degrees --

Q No, sir, supposing an operator has drilled a standard location, his well is undeviated beyond five degrees and actually he wants to set the whipstock in that well. In that event, it would be necessary for him to have to?

A Yes, we would want to set a stage. He got a dry hole notice, he wants to get a producer.

Q Yes, sir?

A Yes, sir, he would have to have a hearing.

MR. PORTER: Anyone else have a question?

(No response.)

MR. PORTER: The witness may be excused.

(Witness excused.)

Mr. Bratton, call your witness.

MR. BRATTON: If the Commission please, before we question



Mr. Willingham, I have a statement to make. I would like to advise the Commission the purpose of putting on this witness.

We certainly concur with Mr. Nutter that the present rule needed revisions and ~~that~~ the proposed provision is a step in the right direction. We do believe that there are very serious implications involved and feel that the matter should be carefully and fully explored to see if additional consideration should be given to the amendment of the rule, to what amendment should be made to it, and for that purpose, we would suggest that an industry committee of operators, contractors, survey companies, and that the chairman be a member of the Commission staff, should give the matter consideration and report back to this Commission, at the hearing, within the very near future, two months or so, at the convenience of the Commission.

Our reasons for making that request will be detailed by our witness.

J. E. WILLINGHAM,

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BRATTON:

Q Would you state your name, occupation, and location?

A My name is J. E. Willingham. I am a production engineer for Humble Oil & Refining Company in Midland, Texas.

Q Have you previously testified before this Commission as

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an expert witness?

A Yes.

Q Will you state Humble's reasons, Mr. Willingham, for making the requests which I have outlined?

A In my opening testimony, I want to reiterate what Mr. Bratton said. Humble is in favor of a statewide rule on deviation which would result in a well drilling that is fair and equitable to all concerned, and we concur with the Commission. This present rule does mean provision and also some of the proposals that have been proposed in the revision, we heartily concur with because we feel they will benefit the operator in making -- particularly where the operator pursues the deviation from the vertical and the drift to be in a constant and continuous direction to the nearest boundary of the proration unit. I think that is an advantage for the operator and in some cases eliminates the need for directional survey, but in general, we believe that the bottom of the hole should fall below the surface location.

However, there have been many new techniques in tools that have become available to the industry, and we feel it would be very desirable to also have rules that allowed you to have a surface location in one place and a target for your bottom hole. The target should be in another whereby you can take the advantage of high bit waste through drilling beds. We feel this would reduce costs to the contractors and in turn, reduce cost to the operators. We know that in the past the New Mexico Commission

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has always been very sympathetic with the problem of the operators, and I want to point out some parts of this rule which we feel need very careful consideration, and certainly we believe when a hole is deliberately deviated, it should require deviation control that is available both to the Commission and to the industry.

I want to emphasize before I go into these details that we feel that very careful consideration should be given to this because you can have regulations on deviations to the point where you can harm the economics of well drilling to the point where they wouldn't want to drill the well.

Some suggested changes that we have is, first, that the requirements for the tabulation and submission of deviation measurements as a routine policy should be deleted. The reason for this, there would be a very great volume of paper work which would add to the cost of the well.

Number two, in the portion of the rule revision proposed, it says "bottom of the hole." We feel this should be changed to "producing interval" because in a deep well with a shallow pay and this particular bottom hole might be one place and your producing interval another.

Also, in the portion in which Mr. Nutter has brought out thoroughly, but we wanted in particular to bring up some ways that you can whipstock or ways and things you can do in lieu of whipstocking, there are many ways to deviate a well and these are commonly used in the field. For one, you can plug two eyes of a

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bit and leave the other open, orient your drill pipe with a fill driver stake on the ground the way you want to go, lower your drill pipe or bit down to the shale section, and start pumping until you work out a hole in the shale section and start drilling; and if you deviate another way, you can use small collars in a reamer immediately above the bit which will deviate a well very rapidly.

Another way you can do it, you can take your crown block and move it off center, start your hole an an angle, keep a conductor pipe in the hole, pack your hole and take off at an angle.

Another way you can do it, if you want a sharp angle, move your rotary off center, drill a shanked hole, cement down, pack your hole, and you are deviated.

You can also use a cement plug and a slope, run light weights at that slope, cut a new hole and start a new hole in your well without setting a whipstock.

You can also use the area for making dips. In other words, if you know you are in a certain portion of the field and the field is dipped in a certain direction, you, with knowledge of deviation techniques, hole size and collar size, can deliberately deviate your well without using any bottom hole tool whatsoever.

The last method I want to show you, you can use a stabilizer in small collars and by the use of gravity deviate your well.

Another portion of the rule that we want to mention that leaves a problem, although different operators interpret



this in different ways, the requirement for averages of more than five degrees in any 500-foot interval, the average to one operator is one thing and to another, it is another thing. For example, if you had an eight or twelve-degree hole, it is conceivable you could go back in an area of the hole within this 500-foot section that is one or two degrees sloped and run one or two deviations in an area and get it below five degrees. Understand, Humble does not do this, but it could be done.

In closing, I want to re-emphasize and call on the Commission to use the attitude they have always used toward the oil industry in recognizing our problems and realizing if we do not come up with a rule that corresponds with the requirements of the Commission, which I know that you need for controlled deviations, but also the operational requirements of the industry to provide the most economical drilling methods we can use.

If we don't provide these and every time you raise the cost of a well to a certain extent, curtail your drilling, and it is in particular requested that we form a committee with the Commission as the chairman, someone from the Commission as the chairman, to look at the problem in detail and see if we can come up with some rules that would perhaps set the pattern for New Mexico and also the United States, because there are no rules in the United States right now that adequately answer the problem of deviation control.

That is all I have, Mr. Porter.

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Q (by Mr. Bratton) Mr. Willingham, are you a self-confessed expert on controlled deviational drilling?

A Let's say I have considerable knowledge of this.

MR. BRATTON: I believe that is all we have at this time, Mr. Porter.

MR. PORTER: Anyone have a question?

MR. MORRIS: Yes, sir.

CROSS EXAMINATION

BY MR. MORRIS:

Q Mr. Willingham, would these rules, that a committee such as you have proposed might come up with, would these rules prescribe among other things exactly the way you would compute averages if we were going to eventually adopt something like Mr. Nutter has proposed here? That was one of the problems.

A I would say they would come up with suggestions of how it could be done, that however is minor compared to some of the other problems.

Q Do you feel that it is being too restrictive to require the deviational tests be run continually as the well is drilled?

A No, sir, in fact I think if the Commission didn't even have this as a requirement you would still see it done for operational reasons because a drilling contractor on a footage rate or company, say, drilling with a company rig, they want to know how their hole is deviating, for operational reasons.

Q Mr. Willingham, you are aware of Mr. Nutter's last

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minute change in his proposed rule where he interjected the word "and/or" into Paragraph (b) which would require that no well shall be whipstocked and/or directionally drilled without special permission from the Commission?

A Yes, sir, I am aware of that; however, I am sure you are aware of this, that an operator that plugs two eyes of a bit and goes down and washes a hole in the soft formation may not consider that directional drilling. It's up to his interpretation what is directional drilling.

Q Well, that may be true, Mr. Willingham, but if a given operator has a mind to directionally drill, either intentionally or by one of the more conventional routes or by some unconventional routes such as many of those you outlined to us today, there is no rule that the Commission can pass that is going to keep him from doing that?

A That is certainly true.

Q Do you feel that after a committee study you might be able to come up with some rule which could be enforced to the extent of preventing this type of practice?

A Well, in direct answer to your question, it is very difficult, I am sure, to regulate integrity, and I don't know that a new rule would control that situation. However, I do think the new rule would be of help to the industry as providing us with good practices and still provide you with the information that you need and which we support.

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Q In essence, then, you are asking the Commission, rather than to adopt the rule at the present time, to go into a full-scale investigation of whipstocking and directional drilling practices and come up with something more extensive than what has been proposed here today?

A Yes, sir.

MR. MORRIS: Thank you.

MR. PORTER: Anyone else have a question? Mr. Nutter, do you have any questions?

MR. NUTTER: No, I believe not.

MR. PORTER: Witness may be excused.

(Witness excused.)

MR. BRATTON: If it please the Chairman, at this point Humble would renew its motion that the Commission retain the case on its docket possibly for three months and appoint an industry committee chairman and a member of the Commission staff to report back and make recommendations to the Commission at the August hearing.

MR. PORTER: You have heard testimony in this case by Mr. Nutter and Mr. Willingham. You also heard Mr. Bratton's motion for continuing the case until August and appointing a committee to come up with recommendations.

Does anybody care to comment on that, on Mr. Bratton's motion?

MR. ANDERSON: R. M. Anderson of Sinclair Oil & Gas



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Company. I was unaware of Humble's recommendations prior to the hearing today, but in preparation for this case Sinclair took everything they thought pertinent into consideration. One of the things is the timeliness of this case. I think now it is a good time to act on the matter. I feel that many of Mr. Willingham's objections or possibilities for deviation do not have too much pertinence in the case unless they are coupled with some knowledge of the direction of the deviations, and we have found it extremely difficult when we were aware of deviations, extremely difficult to know what direction it was in. In spite of the rules about the bit will dig in and move up-structure, we have seen the contrary applied numerous times. I feel that the recommendations as made by Mr. Nutter are sufficient and satisfactory and necessary. I believe that they would result in the workable rule that would not be overly burdened with detail and with the necessity of going to a lot of extra work in order to accomplish and satisfy the rule, so Sinclair likes this rule as proposed by Mr. Nutter and we find no way that we can improve upon it. We feel, due to the time limits of it, we feel it is timely right now and we would like to see the Commission adopt it in the very near future. For that reason, we object to a six-month or longer delay and the industry committee and we don't feel they can accomplish much more than what we heard today from Mr. Nutter.

Thank you.

MR. PORTER: Anyone else care to express themselves?



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MR. SHELDON: My name is Vilas P. Sheldon, Independent of Artesia. I am quite in accord, I think, with Mr. Nutter's provision in the rule. I definitely think the rule does need revising, but since the question came up here twenty minutes ago what constituted a perfect hole, I see we are going to dig ourselves into another hole not knowingly. I wonder if the Commission would be willing to add the fourth provision in allowing the operator to deviate the hole without the Commission hearing. The fourth provision to be added to the straighten a crooked hole, to sidetrack junk in the hole, or to control a blow-out, sets forth and reads as follows: or to deliberately drill a straight hole. It didn't seem to me that an operator is indebted to dig a straight hole. I am thinking especially of a hole going to some deliberate depth, maybe 8,000, maybe 10,000 in a field where they habitually deviate at 5,000 or 6,000 or 3,000 foot. If an operator has intended to set a whipstock at that point, he would be deliberately drilling a straight hole.

MR. PORTER: Anyone else have any statements to make?

MR. GORDON: Joe Gordon, Socony Mobil, we support the proposal by Mr. Nutter.

MR. PORTER: Mr. Christie.

MR. CHRISTIE: After hearing the Humble proposal, we would like to see this thing continued, because we feel it is not complete the way it is now. As for example, the precise of the unit depth we are drilling to now, if we can get over more than



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five degrees -- as a matter of fact, if you drill on a 640-acre tract, 2310 feet from the line, that would be a gas unit. Of course, you could get off five, ten degrees and still be on your own tract, and it might be something like that should be considered. In other words, at a greater angle of deviation, so I think the rule needs more study and we are in favor of the motion made by Humble.

MR. PORTER: Mr. Kastler.

MR. KASTLER: Gulf feels that the present rule is somewhat inadequate. To that extent, we concur with the Commission bringing this on but you might say also, no objection in support of Humble's suggestion for giving this matter such further consideration as might be deemed necessary, other than that if the rule changes, is to be accepted without further delay, I would like to suggest instead of whipstocking and/or directionally drilling, wherein the word "whipstocking" be changed to "intentionally deviated." We also question the necessity of filing a form C-102 for straightening a crooked hole or sidetracking junk where the deviated hole is five degrees or less in a 500-foot interval. In other words, if you straighten out a very minor crook in the hole, then it should be possible to do so without filing the form C-102.

Thank you.

MR. PORTER: Anyone else?

MR. MORRIS: I have a statement, if the Commission please.



Mr. Nutter's proposed rule was intended primarily to clarify the existing Rule 111 under which we have operated for quite some time. If a further study of the entire problem is necessary, as Humble has proposed, then it would seem to me that such a further study could be undertaken, but that the proposed rule of Mr. Nutter could be adopted immediately to clarify the present rule with badly needs clarification.

That is all I have.

MR. PORTER: Anyone else care to make a statement?

The Commission will grant the motion by Mr. Bratton for a continuance until August.

We will appoint an industry committee, and Mr. Bratton, personally I think it probably advisable to appoint only the producers or operators. Of course, the committee can avail itself of its services or drilling contractors or deviation test people who think they might be able to give good advice on it, and also one other point, we will rule on this later as to the chairman of the committee. But the case will be continued until August and we will appoint the committee.

* * * *

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss.

I, JAMES MALONEY, NOTARY PUBLIC in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of proceedings 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.

James Maloney
NOTARY PUBLIC

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BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 15, 1962

IN THE MATTER OF: (Continued)

Case 2561

The hearing called on the motion of the motion of the Oil Conservation Commission to consider revising Rule 111, Deviation Tests and Whipstocking. The Commission will consider the report and recommended rule of the Industry Committee appointed by the Commission after the May, 1962 hearing. The proposed rule, as stated in the Committee Report, reads in its entirety as follows:

Rule 111. Deviation Tests and Directional Drilling

(a) Any well which is drilled or deepened with Rotary Tools shall be tested at reasonably frequent intervals not to exceed 500 feet or at the next subsequent bit change to determine the deviation from the vertical. A sworn notarized tabulation of all tests run shall be filed with Form C-105, Well Record. When such deviation averages more than five degrees in any 500 foot interval, the Commission may request that a directional survey be run to establish the location of the producing interval (s).

The Commission, at the request of an offset operator, may require any operator to make a directional survey of any well. Said directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a \$5,000

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indemnity bond posted with and approved by the Commission. The requesting party may designate the well survey company, and said survey shall be witnessed by the Commission.

(b) No well shall be intentionally deviated in a predetermined direction without special permission from the Commission. Permission to deviate toward the vertical to straighten an excessively deviated well bore as defined in (a) above; or to sidetrack junk in the hole in an indeterminate direction or toward the vertical; or to drill a relief well to control a blow-out shall be obtained from the appropriate District Office of the Commission on Commission Form C-102 with copies of said Form C-102 being furnished to all offset operators. Permission to deviate a well in any other manner or for any other reason will be granted only after notice and hearing. Upon completion of any well that was deviated in a predetermined direction, except toward the vertical, a directional survey of the entire well bore must be run and filed with the Commission. In addition, all directional surveys run on any well that was intentionally deviated in any manner for any reason must be filed by the operator with the Commission upon completion of the well. Prior to the assignment of an allowable, operator shall submit a sworn notarized statement to the effect that all directional surveys run on the well have been filed.

BEFORE: Honorable Edwin L. Mechem
Mr. A. L. "Pete" Porter
Mr. E. S. "Johnny" Walker

TRANSCRIPT OF HEARING

MR. PORTER: We will take up next Case 2561.

MR. PAYNE: Case 2561, in the matter of the hearing



called on the motion of the Oil Conservation Commission to consider the revision of Rule 111.

Mr. Commissioner, the Commission has one witness, Mr. C. J. Beaupre.

MR. PORTER: Mr. Beaupre, will you come forward and be sworn, please?

(Witness sworn.)

MR. PORTER: Take the stand, please.

C. J. BEAUPRE

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. PAYNE:

Q Will the witness please state his name and his position?

A My name is C. J. Beaupre, Petroleum Engineer with Mobil Oil Company.

Q Mr. Beaupre, have you ever testified before the Commission before?

A No, I have not.

Q Will you give them a brief resume of your background and professional experience?

A I have had eight years drilling well completion and workover experience in Louisiana, Gulf, West Texas and eastern

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New Mexico. I'm a registered professional engineer in the State of New Mexico Certificate 3652.

MR. PAYNE: I'll ask the Commission if the witness's qualifications are accepted.

MR. PORTER: Yes, they are.

Q (By Mr. Payne) Did you serve as Chairman on a Committee to consider revision of Rule 111?

A Yes.

Q What basic changes did you and the Committee propose, and what is the purpose for these particular changes?

A The basic changes are in that the operator must file the surveys and the old rule had just implied it. Also, the old rule stated that if the deviation exceeded five degrees in any 500 feet, that the Commission would require a survey, or survey must be furnished to the Committee, this is a deviation and directional survey.

The old rule, the well must be bottomed on the lease, and in the new rule it must determine that it is in a producing interval, and it's meant that it be in the producing interval on the proration unit.

A new paragraph has been added to Section A, in that the offset operator may require a survey. In Part B the emergency clause has been clarified, and also that the deviation toward the

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vertical is clarified. Every other intentionally deviated hole shall be only after notice and hearing.

Now, I have some background, and I would like to read the minutes of the meeting.

Q All right.

A First I would like to read off the members who were on the Committee. There's myself, C. J. Beaupre with Mobil Oil Company; Clark E. Storm with Carper Drilling Company; J. E. Newkirk with Amerada Petroleum Company; R. M. Anderson with Sinclair Oil & Gas; J. E. Willingham with Humble Oil & Refining Company; Merrill Wilson with Great Western Drilling Company; W. E. Bingman with Shell Oil Company, and J. E. Robinson with Texaco, Inc.

Other participants were Johnny Hampton, W. R. Harrison, J. G. Yope, E. G. Hays, A. E. Snyder, A. J. Troop, J. B. Peddy and George R. Hoy.

The Commission participants were Daniel S. Nutter, Joe D. Ramey and J. W. Runyan.

Governor Mechem, Mr. Walker and Secretary-Director Porter, the following is a resume of the meetings of the Deviation Tests and Directional Drilling Committee which was formed by you, the Commission, for the specific reason of studying and recommending a clarification and revision of Commission Rule 111. The Commission designation is Case 2561. The following is the recommended

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revision to Rule 111 and has the unanimous support of all committee members. The recommended rule reads as follows:

Rule 111. Deviation Tests and Directional Drilling

(a) Any well which is drilled or deepened with Rotary Tools shall be tested at reasonably frequent intervals not to exceed 500 feet or at the next subsequent bit change to determine the deviation from the vertical. A sworn notarized tabulation of all tests run shall be filed with Form C-105, Well Record. When such divation averages more than five degrees in any 500 foot interval, the Commission may require that a directional survey be run to establish the location of the producing interval(s).

The Commission, at the request of an offset operator, may require any operator to make a directional survey of any well. Said directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a \$5,000 indemnity bond posted with and approved by the Commission. The requesting party may designate the well survey company, and said survey shall be witnessed by the Commission.

(b) No well shall be intentionally deviated -- this is part (b), No well shall be intentionally deviated in a pre-

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determined direction without special permission from the Commission. Permission to deviate toward the vertical to straighten an excessively deviated well bore as defined in (a) above; or to sidetrack junk in the hole in an indeterminate direction or toward the vertical; or to drill a relief well to control a blow-out shall be obtained from the appropriate District Office of the Commission on Commission Form C-102 with copies of said Form C-102 being furnished to all offset operators. Permission to deviate a well in any other manner or for any other reason will be granted only after notice and hearing. Upon completion of any well that was deviated in a predetermined direction, except toward the vertical, a directional survey of the entire well bore must be run and filed with the Commission. In addition, all directional surveys run on any well that was intentionally deviated in any manner for any reason must be filed by the operator with the Commission upon completion of the well. Prior to the assignment of an allowable, operator shall submit a sworn notarized statement to the effect that all directional surveys run on the intentionally deviated well have been filed.

The above recommendation is not a rigid, detailed, complicated rule, but does represent a reasonable yet complete rule which the



prudent operator will have no difficulty in following. Also, the proposed rule may save both the Commission and the operator considerable money in the future and it is hoped that this rule will encourage rather than discourage continued drilling.

The following will present the findings of the committee and present the analysis of the important items which were discussed that pertain to hole deviation and directional drilling. The fine details of the meeting will not be listed for the simple reason that it would be too time consuming and will not add to the clarity of the findings; the meetings to date required 24½ hours or approximately 251 man hours in the conference room and an indeterminate amount of time outside of the conference room. The first meeting was held in Hobbs, New Mexico, on May 18, 1962. The minutes of the Commission called hearing to amend Rule 111 (Case 2561) were read to the committee. The present Rule 111 was also read. Mr. Daniel S. Nutter stated the need for clarification of the rule and briefly described several of the hearings involved. Two proposed revisions were presented at this time; one by Mr. Nutter and Mr. Morris of the NMOCC, and one by Mr. E. G. Hays of Humble Oil & Refining Company. Most of the discussion that took place evolved around the following topics:

1. The bottom hole location with respect to surface location.
2. The 5° in any 500 ft. present yardstick.

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3. Whether or not to include cable tools in the hole deviation rules.

4. The method of handling of controlled directional drilling administratively or by notice and hearing.

The discussion that took place ended with no acceptable conclusions. The discussion and other data were to be continued at the next meeting. Also, it was agreed that a well deviational and directional survey expert would be present at the next meeting and that cable tool drilling companies would be contacted with regard to hole deviation and survey practices.

The second meeting was held in Midland, Texas on June 22, 1962. Prior to this, the members of the committee were furnished with copies of the hole deviation and directional drilling rules from 12 of the states in the United States which have rules pertaining to hole deviation. A copy of such is enclosed along with a tabulation of the various points covered in these rules. Surveying experts were consulted and information obtained from them indicated that cable tool drilled holes could be drilled as crooked as rotary drilled holes. Continued discussion pertaining to cable tool drilling resulted in the following conclusions:

1. That since the depth of cable tool drilling is limited, it is possible but improbable that cable tool rigs would "bottom the hole" off the proration unit.

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2. That when deviation changes rapidly in a cable tool hole, the tools no longer work freely in the hole.
3. That generally cable tool drilling usually drifts down dip rather than up dip; rotary drilled holes usually drift up dip.

Several deviational and directional surveys were presented at this meeting. Most of these surveys showed that in Eastern New Mexico low deviational holes usually, but not always, tend to spiral while high deviational holes (over 4 or 5°) nearly always trend toward one direction. At this time three proposed rule amendments were presented by Texaco, Sinclair, and Mobil. Considerable discussion evolved around such items as bottom hole location with respect to surface location. In other words, should an operator who drills a well one foot from the proration unit boundary have the same allowable as an operator who bottoms his hole under the 330 ft. from lease line location. It appeared to be difficult to formulate a rule which would seemingly be a contradiction to Rule 104. Mr. D. S. Nutter stated that, in the past, as long as a random drilled well is bottomed within the proration unit boundaries the well would receive a full allowable.

The third meeting was held in Midland, Texas, on July 2, 1962. At this meeting the following was agreed upon concerning deviation tests:

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1. That a practical minimum hole deviation be adopted; this is to be 5° for any 500 foot interval.
2. The Commission may require a directional survey if the deviation stated in "1" is exceeded.
3. Deviation tests should be taken at reasonably frequent intervals at least every 500 feet or the next subsequent bit change and these tests be filed with Form C-105 and made a part thereof.
4. That the first paragraph of Rule 111 (a) pertain to rotary tools.
5. That the Commission may require a directional and deviational survey of any well at the request of the offset operator; the cost and other expenses (including loss of production, pulling unit costs, etc.) of this survey would be borne by the requesting company, since it was agreed that the operator may either refuse or be unable to pay for the survey. It was not intended that these surveys be limited to rotary tools.

Since it was agreed by most of the committee members that rotary drilled wells with deviations less than 3° tend to spiral, it was proposed that the Commission use only the cumulative of drifts in excess of 3° deviation in determining whether or not a survey is necessary as in "2" above.



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Q Let me interrupt you at this point, Mr. Beaupre.

Did the rule mean to imply that this is all the Commission can use in determining whether a survey is necessary?

A No, sir, it is not.

Q Thank you.

A A motion was made and seconded to adopt Part (a) of the proposed Rule 111 by Mr. Clark E. Storm and Mr. R. M. Anderson, respectively. The proposed rule vote was unanimously accepted by all committee members present. Paragraph (b) of Rule 111 pertaining to intentional directional drilling appeared to be less controversial than paragraph (a). The committee members agreed on the following:

1. That the rule must contain a suitable emergency clause, one which would permit the operator to take action immediately in the event of emergency.
2. That other than for those reasons stated in the emergency clause, all planned directional drilling should require a hearing.
3. That a deviational and directional survey of the entire well bore, sworn and notarized, of any intentional directionally drilled holes (except those deviating toward the vertical) should be required by and filed with the Commission.



4. That all surveys run in an intentionally deviated hole, be filed with the Commission.

Considerable discussion evolved around whether the operator or the survey company would file the deviational and directional surveys. Mr. Joe D. Ramey of the Commission stated that the Commission does not have any jurisdiction over the survey company, while it does have jurisdiction over the operator. A motion was made by Mr. E. G. Hays to require that the directional survey companies file the required directional surveys. Mr. Clark E. Storm seconded this motion. This motion was defeated. A motion was made and seconded that the committee accept Rule 111 part (b) similar to the way it appears above by Mr. R. M. Anderson and Mr. J. E. Robinson, respectively. The meeting was then adjourned. Therefore, it was decided by vote that the operator file the surveys.

The last meeting of the committee was held at Santa Fe, New Mexico on July 19, 1962. This meeting was arranged so as to familiarize the commission members with the work of the committee and to determine if the Four Corners or other areas presented deviation problems different from those of Eastern New Mexico. Mr. J. M. Durette (Commission Legal Staff) suggested that the proposed "Rule 111 a" (second paragraph) contain a \$5,000 bond requirement. After a discussion, a motion was made and seconded

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by Mr. J. E. Willingham and Messrs. R. M. Anderson and J. E. Robinson, Jr., respectively, that the wording of the second paragraph of the proposed rule be reworded to include the posting of a bond by the party requesting a survey. The committee voted to accept this addition.

A motion to adopt the proposed Rule 111 as it appears in this letter was made and seconded by Mr. J. E. Willingham and Mr. W. E. Bingman, respectively. The vote by the committee to adopt the proposed rule to be presented to the August commission hearing was unanimously accepted.

It is sincerely hoped that the Commission will accept the proposed revision of Rule 111. The committee believes that it will be accepted by all operators and that it will not place any additional burdens on any operator or the Commission.

Q Mr. Beaupre, if you had a dual completion, one completion being in the proration unit and the other completion being in a different proration unit due to deviational drilling, under your rule, what's going to be dedicated to each well?

A It would depend on the producing interval in the proration unit that the producing interval is in.

Q That's the criterion under your rule?

A Right.

Q Mr. Beaupre, did you prepare Exhibit A?

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A Yes, sir.

Q Do you have anything further you would like to state to the Commission relative to this exhibit?

A No, sir, not at this particular time.

MR. PAYNE: We move for the admission of Exhibit A in Case 2561.

(Whereupon, Exhibit A was offered into evidence.)

MR. PORTER: Without objection, the exhibit will be admitted.

(Whereupon Exhibit A was admitted into evidence.)

MR. PORTER: Does anyone have a question of Mr. Beaupre concerning the committee report or his testimony? His exhibit? Mr. Beaupre, you may be excused.

(Witness excused.)

MR. PORTER: Does anyone have any further testimony to offer in the case? Does anyone have a statement to make?

MR. HENSLEY: Mr. Commissioners, My name is Harold Hensley, Jr., associated with the law firm of Hervey, Dow & Hinkle in Roswell, New Mexico, and appearing on and in behalf of Humble Oil & Refining Company and tender the following statement for the record. The Humble Oil & Refining Company recommends and supports the proposed change to Rule 111, Deviation Test and Directional Drilling as read. Thank you.

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MR. PORTER: Mr. Gordon.

MR. GORDON: Joe Gordon with Socony-Mobil. Socony-Mobil recommends that the Commission adopt the revised Rule 111 as proposed by the Commission.

MR. PORTER: Mr. Eaton.

MR. EATON: George W. Eaton, Jr. for Pan American Petroleum Corporation. Pan American believes the proposed revision to Rule 111 is a definite improvement, and, therefore, recommends and supports the adoption of the revised rule.

MR. PORTER: Mr. Anderson.

MR. ANDERSON: R. M. Anderson, Sinclair Oil & Gas Company. Sinclair participated in the industry committee study and we would like to concur with the committee recommendations.

MR. PAYNE: Mr. Commissioner, we have two statements that we received in the mail.

MR. PORTER: Would you indicate what they are, Mr. Payne?

MR. PAYNE: Gulf Oil Corporation and Texaco, Inc. both recommend the adoption of the rule proposed by the study committee.

MR. PORTER: At this time, before we take the case under advisement, I certainly want to thank the industry committee for the many hours they put in on this project, to which



they were assigned. I particularly want to thank Mr. Beaupre for serving as chairman and for presenting the recommendations of the committee here today. We think the committee has represented a good cross section of the industry. I didn't attend any of the committee meetings, but I was close enough to hear some of the rumbles, so I know there was some yielding here and there on occasion.

We certainly appreciate the work that has been done by this committee.

One other thing I would like to say is that I have been asked by various segments of the news media as to whether our docketing of this case was precipitated by some incident of slant hole drilling in another state, and it wasn't. Really, this case was scheduled to be heard early this year and we didn't find a convenient place to put it on the docket. It wasn't docketed until May, where we thought it would be a good case to put on the Hobbs docket, because it was something of industry-wide interest. It came on there in May, and at a suggestion, or upon motion of some of the interested parties, we did appoint the committee and brought it back on here this month.

I've been asked by the press as to whether we have had incidents of slant hole drilling. We didn't go out on the limb as some other states have and said no. That's something we

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don't know, but we did point out the factors which would make it less probable in New Mexico than it would in some of the places where it has occurred.

The Commission will take the case under advisement. We will take a short recess.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 24th day of August, 1962.

Ada Dearnley
Notary Public - Court Reporter

My commission expires:

June 19, 1963.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243 6631



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. 2561
Order No. R-2308

APPLICATION OF THE OIL CONSERVATION
COMMISSION, UPON ITS OWN MOTION, TO
CONSIDER REVISING COMMISSION RULE
111.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on May 16, 1962, at Hobbs, New Mexico, and on August 15, 1962, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission,"

NOW, on this 28th day of August, 1962, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That subsequent to the Hobbs hearing and the continuance of Case No. 2561 to August 15, 1962, the Commission appointed an Industry Committee to study Rule 111 of the Commission Rules and Regulations and to make a recommendation as to possible revision thereof at the August hearing.

(3) That the Committee's proposed revision of Rule 111, with certain minor modifications, should be adopted inasmuch as the proposed Rule, as modified, will require wells to be drilled in such a manner as to prevent injury to neighboring leases and properties and will be in the interest of more adequate protection of correlative rights and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That Rule 111 of the Commission Rules and Regulations be and the same is hereby amended to read in its entirety as follows:

RULE 111. DEVIATION TESTS AND DIRECTIONAL DRILLING

(a) Any well which is drilled or deepened with rotary tools shall be tested at reasonably frequent intervals to determine the deviation from the vertical. Such tests shall be made at least once each 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-194, Request for Allowable. When the deviation averages more than five degrees in any 500-foot interval, the Secretary-Director of the Commission may require that a directional survey be run to establish the location of the producing interval(s).

The Secretary-Director of the Commission, at the request of an offset operator, may require any operator to make a directional survey of any well. Said directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a \$5,000.00 indemnity bond posted with and approved by the Commission. The requesting party may designate the well survey company, and said survey shall be witnessed by the Commission.

(b) No well shall be intentionally deviated without special permission from the Commission. Permission to deviate toward the vertical to straighten a crooked hole, to deviate toward the vertical or in an indeterminate direction to sidetrack junk in the hole, or to drill a relief well to control a blow-out shall be obtained from the appropriate District Office of the Commission on Commission Form C-102 with copies of said Form C-102 being furnished to all offset operators. Permission to deviate a well in any other manner or for any other reason will be granted only after notice and hearing. Upon request from the Secretary-Director of the Commission, any well which was deviated in an indeterminate direction or toward the vertical shall be directionally surveyed. In addition, a directional survey of the entire well bore must be made on any well which was deviated in a predetermined direction, except toward the vertical. The District Office of the Commission shall be notified of the approximate time all directional surveys are to be conducted. All directional surveys run on any well which was intentionally deviated in any manner for any reason must be filed with the Commission upon completion of the well. The Commission will not assign an allowable to a well until the operator has submitted an affidavit that all such directional surveys have been filed.

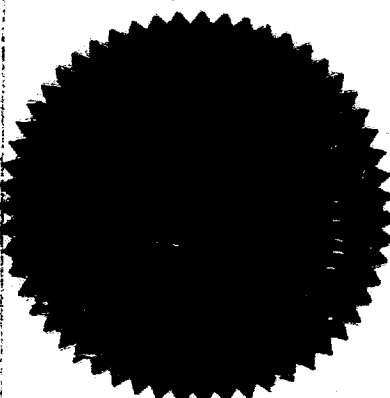
-3-

CASE No. 2561
Order No. R-2308

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



E. L. Hochen

EDWIN L. HOCHEN, Chairman

E. S. Walker

E. S. WALKER, Member

A. L. Porter, Jr.

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

esr/

NMOCC
Rule 111
Deviation tests and
Directional Drilling
Committee Report
Case 2561

Prepared by:
C. J. Beaupre

July 27, 1962

DEVIATIONAL TESTS AND DIRECTIONAL
DRILLING COMMITTEE

Members

C. J. Beaupre (Chairman)
Clark E. Storm
J. E. Newkirk
R. M. Anderson
J. E. Willingham
Merrill Wilson
W. E. Bingman
J. E. Robinson

Company

Mobil Oil Company
Carper Drilling Company
Amerada Petroleum Corporation
Sinclair Oil & Gas Company
Humble Oil & Refining Company
Great Western Drilling Company
Shell Oil Company
Texaco, Inc.

Participants

Johnny Hampton
W. R. Harrison
J. G. Yope
E. G. Hays
A. E. Snyder
A. J. Troop
J. B. Peddy
George R. Hoy

Great Western Drilling Company
Mobil Oil Company
Shell Oil Company
Humble Oil & Refining Company
Amerada Petroleum Corporation
Amerada Petroleum Corporation
Sperry-Sun Company
Great Western Drilling Company

Commission Participants

Daniel S. Nutter
Joe D. Ramey
J. W. Runyan



Mobil Oil Company

A Division of Socony Mobil Oil Company, Inc.

P. O. BOX 2406, HOBBS, NEW MEXICO

July 25, 1962

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

The following is a resume of the meetings of the Deviation Tests and Directional Drilling Committee which was formed by you, the Commission, for the specific reason of studying and recommending a clarification and revision of Commission Rule 111. The Commission designation is Case 2561. The following is the recommended revision to Rule 111 and has the unanimous support of all committee members. The recommended rule reads as follows:

Rule 111. Deviation Tests and Directional Drilling

(a) Any well which is drilled or deepened with Rotary Tools shall be tested at reasonably frequent intervals not to exceed 500 feet or at the next subsequent bit change to determine the deviation from the vertical. A sworn notarized tabulation of all tests run shall be filed with Form C-105, Well Record. When such deviation averages more than five degrees in any 500 foot interval, the Commission may request that a directional survey be run to establish the location of the producing interval(s).

The Commission, at the request of an offset operator, may require any operator to make a directional survey of any well. Said directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a \$5,000 bond indemnity posted with and approved by the Commission. The requesting party may designate the well survey company, and said survey shall be witnessed by the Commission.

(b) No well shall be intentionally deviated in a predetermined direction without special permission from the Commission. Permission to deviate toward the vertical to straighten an excessively deviated well bore as defined in (a) above; or to side-track junk in the hole in an indeterminate direction or toward the vertical; or to drill a relief well to control a blow-out shall be obtained from the appropriate District Office of the

Commission on Commission Form C-102 with copies of said Form C-102 being furnished to all offset operators. Permission to deviate a well in any other manner or for any other reason will be granted only after notice and hearing. Upon completion of any well that was deviated in a predetermined direction, except toward the vertical, a directional survey of the entire well bore must be run and filed with the Commission. In addition, all directional surveys run on any well that was intentionally deviated in any manner for any reason must be filed by the operator with the Commission upon completion of the well. Prior to the assignment of an allowable, operator shall submit a sworn notarized statement to the effect that all directional surveys run on the well have been filed.

The above recommendation is not a rigid, detailed, complicated rule, but does represent a reasonable yet complete rule which the prudent operator will have no difficulty in following. Also, the proposed rule may save both the Commission and the operator considerable money in the future and it is hoped that this rule will encourage rather than discourage continued drilling.

The following will present the findings of the committee and present the analysis of the important items which were discussed that pertain to hole deviation and directional drilling. The fine details of the meeting will not be listed for the simple reason that it would be too time consuming and will not add to the clarity of the findings; the meetings to date 7-19-62 required 24½ hours or approximately 251 man hours in the conference room and an indeterminate amount of time outside of the conference room. The first meeting was held in Hobbs, New Mexico, on May 18, 1962. The minutes of the Commission called hearing to amend Rule 111 (Case 2561) were read to the committee. The present Rule 111 was also read. Mr. D. S. Nutter stated the need for clarification of the rule and briefly described the hearings involved. Two proposed revisions were presented at this time; one by Mr. Nutter and Mr. Morris of the NMOCC, and one by Mr. E. G. Hays of Humble Oil & Refining Company. Most of the discussion that took place evolved around the following topics:

1. Bottom hole location with respect to surface location.
2. The 5° in any 500 ft. present yardstick.
3. Whether or not to include cable tools in the hole deviation rules.
4. The method of handling of controlled directional drilling - administratively or by notice and hearing.

The discussion that took place ended with no acceptable conclusions. The discussion and other data were to be continued at the next meeting. Also, it was agreed that a well deviational and directional survey expert would be present at the next meeting and that cable tool drilling companies would be contacted with regard to hole deviation and survey practices.

The second meeting was held in Midland, Texas on June 22, 1962. Prior to this, the members of the committee were furnished with copies of the hole deviation and directional drilling rules from 12 of the states in the United States which have rules pertaining to hole deviation. A copy of such is enclosed along with a tabulation of the various points covered in these rules. Surveying experts were consulted and information obtained from them indicated that cable tool drilled holes could be drilled as crooked as rotary drilled holes. Continued discussion pertaining to cable tool drilling resulted in the following conclusions:

1. That since the depth of cable tool drilling is limited, it is possible but improbable that cable tool rigs would "bottom the hole" off the proration unit.
2. That when deviation changes rapidly in a cable tool hole, the tools no longer work freely in the hole.
3. That generally cable tool drilling usually drifts down dip rather than up dip; rotary drilled holes usually drift up dip.

Several deviational and directional surveys were presented at this meeting. Most of these surveys showed that in Eastern New Mexico low deviational holes usually, but not always, tend to spiral while high deviational holes (over 4 or 5°) nearly always trend toward one direction. At this time three proposed rule amendments were presented by Texaco, Sinclair, and Mobil. Considerable discussion evolved around such items as bottom hole location with respect to surface location. In other words, should an operator who drills a well one foot from the proration unit boundary have the same allowable as an operator who bottoms his hole under the 330 ft. from lease line location. It appeared to be difficult to formulate a rule which would seemingly be a contradiction to Rule 104. Mr. D. S. Nutter stated that, in the past, as long as a random drilled well is bottomed within the proration unit boundaries the well would receive a full allowable.

The third meeting was held in Midland, Texas, on July 2, 1962. At this meeting the following was agreed upon concerning deviation tests:

1. That a practical minimum hole deviation be adopted; this is to be 5° for any 500 foot interval.
2. The Commission may require a directional survey if the deviation stated in "1" is exceeded.

3. Deviation tests should be taken at reasonably frequent intervals at least every 500 feet or the next subsequent bit change and these tests be filed with Form C-105 and made a part thereof.
4. That the first paragraph of Rule 111 (a) pertain to rotary tools.
5. That the Commission may require a directional and deviational survey of any well at the request of the offset operator; the cost and other expenses (including loss of production, pulling unit costs, etc.) of this survey would be borne by the requesting company, since it was agreed that the operator may either refuse or be unable to pay for the survey. It was not intended that these surveys be limited to rotary tools.

Since it was agreed by most of the committee members that rotary drilled wells with deviations less than 3° tend to spiral, it was proposed that the Commission use only the cumulative of drifts in excess of 3° deviation in determining whether or not a survey is necessary as in "2" above.

A motion was made and seconded to adopt Part (a) of the proposed Rule 111 by Mr. Clark E. Storm and Mr. R. M. Anderson, respectively. The proposed rule vote was unanimously accepted by all committee members present. Paragraph (b) of Rule 111 pertaining to intentional directional drilling appeared to be less controversial than paragraph (a). The committee members agreed on the following:

1. That the rule must contain a suitable emergency clause, one which would permit the operator to take action immediately in the event of emergency.
2. That other than for those reasons stated in the emergency clause, all planned directional drilling should require a hearing.
3. That a deviational and directional survey of the entire well bore, sworn and notarized, of any intentional directionally drilled holes (except those deviating toward the vertical) should be required by and filed with the Commission.
4. That all surveys run in an intentionally deviated hole, be filed with the Commission.

Considerable discussion evolved around whether the operator or the survey company would file the deviational and directional surveys. Mr. Joe D. Ramey of the Commission stated that the Commission does not have any jurisdiction over the survey company, while it does have jurisdiction over the operator. A motion was made by Mr. E. G. Hays to require that the directional survey companies file the required directional surveys. Mr. Clark E. Storm seconded this motion. This motion was defeated. A motion was made and seconded that the committee accept Rule 111 part (b) similar to the way it appears above by Mr. R. M. Anderson and Mr. J. E. Robinson, respectively. The meeting was then adjourned. Therefore, it was decided by vote that the operator file the surveys.

The last meeting of the committee was held at Santa Fe, New Mexico on July 19, 1962. This meeting was arranged so as to familiarize the commission members with the work of the committee and to determine if the Four Corners or other areas presented deviation problems different from those of Eastern New Mexico. Mr. J. M. Durette (Commission Legal Staff) suggested that the proposed "Rule 111 a" (second paragraph) contain a \$5,000 bond requirement. After a discussion, a motion was made and seconded by Mr. J. E. Willingham and Messrs. R. M. Anderson and J. E. Robinson, Jr., respectively, that the wording of the second paragraph of the proposed rule be reworded to include the posting of a bond by the party requesting a survey. The committee voted to accept this addition.

A motion to adopt the proposed Rule 111 as it appears in this letter was made and seconded by Mr. J. E. Willingham and Mr. W. E. Bingman, respectively. The vote by the committee to adopt the proposed rule to be presented to the August commission hearing was unanimously accepted.

It is sincerely hoped that the Commission will accept the proposed revision of Rule 111. The committee believes that it will be accepted by all operators and that it will not place any additional burdens on any operator or the Commission.

Yours very truly,

CJB/mc

Enclosures

C. J. Beaupre
Chairman, Deviational Tests &
Directional Drilling Committee

APPENDIX

Deviation Regulations

Illinois
Montana
Nebraska
North Dakota
Oklahoma
Colorado
Wyoming
Alabama
Arkansas
Florida
Louisiana
Mississippi

Survey of 12 states.

- DEVIATION REGULATIONS -

Illinois (RULES AND REGULATIONS OF THE DEPARTMENT
OF MINES AND MINERALS)

Rule II (G) -- Directional Drilling

"In controlled directional drilling when the intent is to direct the bottom of the well bore away from the vertical position, in addition to an application for a well permit the applicant shall furnish the Mining Board with the proposed direction of deviation and proposed horizontal distance between the bottom of the well bore and the surface location. If a permit is issued by the Mining Board, the permittee shall file with the Mining Board, within thirty (30) days after the completion of the well, a certified accurate and complete copy of the directional survey of said well. No person, company or organization shall direct, or assist in directing, any well bore away from the vertical position until the Mining Board has issued a permit for such directional drilling."

Montana (GENERAL RULES AND REGULATIONS OF THE OIL
AND GAS CONSERVATION COMMISSION)

Rule 213 -- Deviation

"Unless otherwise ordered by the Commission upon hearing, all wells shall be so drilled that the horizontal distance between the bottom of the hole and the location of the top of the hole shall be at all times at a practical minimum.

"Before beginning controlled directional drilling, other than whipstocking due to hole conditions, when the intent is to direct the bottom of the hole away from the vertical, notice of intention on Form No. 2 to do so shall be filed with the Commission and approval obtained. Such notice shall state clearly the depth, exact surface location of the well bore, proposed direction of deviation, and proposed horizontal distance between the bottom of the hole and the surface location. If approval is obtained, the owner shall file with the Commission, within thirty (30) days after the completion of the work, an accurate and complete copy of the survey made."

Nebraska (RULES AND REGULATIONS OF THE NEBRASKA OIL
AND GAS CONSERVATION COMMISSION)

Rule 314 -- Directional Drilling

"When the intent is to direct the bottom of the hole away from vertical, other than whipstocking necessitated by hole conditions, and the spacing pattern is not altered thereby, notice of intention to do so shall be filed with the Director and approval obtained before beginning controlled directional drilling operations. Such notice shall state clearly the depth, exact surface location of the well bore, proposed direction deviation and proposed horizontal distance between the proposed bottom of the hole and the surface location. If approval is obtained the owner shall file with the Commission, within thirty (30) days after the completion of the work, an accurate and complete copy of the directional survey made."

North Dakota (GENERAL RULES AND REGULATIONS OF
THE INDUSTRIAL COMMISSION)

Rule 111 -- Deviation Tests

"When any well is drilled or deepened, tests to determine the deviation from the vertical shall be taken. When the deviation from the vertical averages more than 4 degrees, the State Geologist may require that the hole be straightened. Directional surveys may be required by the Commission, whenever, in its judgment, the location of the bottom of the well is in doubt.

"A deviational and directional survey shall be made and filed with the State Geologist on any well utilizing a whipstock or any method of deviating the well bore in a pre-determined direction except to sidetrack junk in the hole, straighten a crooked hole or to control a blow-out. Special permits may be obtained to drill directionally in a pre-determined direction as provided above, only after a hearing before the Commission."

Oklahoma (GENERAL RULES AND REGULATIONS OF THE
CORPORATION COMMISSION OF OKLAHOMA)

Rule 210 -- Deviation from the Vertical

"Unless otherwise ordered by the Commission upon hearing,

all wells shall be drilled in a manner so that the horizontal distance between the bottom of the hole and the location at the top of the hole shall be at all times at a minimum, except as provided in Rule 209."

* * *

Rule 209 -- Controlled Directional Drilling

"(a) Controlled Directional Drilling shall mean intentional drilling of a well in a predetermined direction, so as to intentionally deviate said well from vertical; provided, however, the setting of a whipstock, or other tools, during the drilling operation, for the purpose of drilling by an obstruction in the hole or to deviate the hole toward a vertical direction shall not be construed to be Controlled Directional Drilling for the administration of these rules.

"(b) Any well may be controlled directionally drilled provided the operator desiring to carry on such controlled directional drilling, files with the Commission before, or not later than ten (10) days after such drilling operation has commenced, an application in triplicate to determine the allowable production factor for such well.

"(c) Such application shall contain the following:

1. The name of the operator;
2. The lease name, and well number;
3. The legal description, and the exact surface location of the well;
4. The depth at which whipstocks are set, or to be set;
5. The name and approximate depth of producing formation, or formations;
6. The proposed direction of deviation;
7. The estimated horizontal distance between surface location and bottom of hole;
8. Additional information deemed necessary in such application.

"(d) Accompanying each copy of such application, the applicant shall file a plat drawn to scale, showing the surface location of the well and the anticipated location of the bottom of the hole. A copy of such application and attached plat shall be

delivered, or mailed, to operators of offset leases at the time such application is filed with the Corporation Commission. The applicant, or his attorney, shall make affidavit that he has delivered, or mailed, copy of such application with attached plat.

"(e) The Corporation Commission, after notice and hearing, will enter an order setting forth the allowable production factor to be used in computing the allowable for such well that has been controlled directionally drilled.

"(f) Well survey shall be made of each well drilled under the provisions of this order, and shall furnish the Corporation Commission and offset operators, not later than thirty (30) days after the completion of said well, a certified, accurate and complete copy of such survey.

"(g) No allowable will be assigned any well drilled under the provisions of this order until the Corporation Commission has determined the production allowable factor for such well after notice and hearing.

"(h) Provided that this rule shall not apply where directional drilling has been authorized by special field rules."

Colorado (RULES AND REGULATIONS OF THE OIL AND GAS
CONSERVATION COMMISSION)

Rule 318 -- Directional Drilling

"Before beginning controlled directional drilling, other than whipstocking due to hole conditions, when the intent is to direct the bottom of the hole away from the vertical, notice of intention to do so shall be filed with the Director and approval obtained. Such notice shall state clearly the depth, exact surface location of the well bore, proposed direction of deviation, and proposed horizontal distance between the bottom of the hole and surface location. If approval is obtained, the owner shall file with the Commission, within thirty (30) days after the completion of the work, an accurate and complete copy of the survey made."

Wyoming (RULES AND REGULATIONS OF THE OIL
AND GAS CONSERVATION COMMISSION)

Rule 318 -- Directional Drilling

Same as Colorado, cited above.

Alabama

RULE B-16. DRILLING FLUID. At the time of drilling any well, the operator shall continuously maintain in the hole, from top to bottom, good drilling fluid of sufficient weight to control pressures which may be normally encountered, and shall test the blow-out preventer on said well at 24-hour intervals, or less.

RULE B-17. WELL HEAD FITTINGS. Christmas tree fittings or well head connections shall have a working pressure in keeping with the pressure expected to be encountered.

RULE B-18. DAYLIGHT HOURS. All drill stem tests shall be completed in the daylight hours before sunset. No well shall be brought into production except during daylight hours.

RULE B-19. CLEANING WELLS. All wells shall be cleaned into a point not less than one hundred (100) feet from the derrick floor and one hundred (100) feet from any fire hazard.

RULE B-20. BOILER OR LIGHT PLANT. No boiler or electric light generator shall be placed or remain nearer than one hundred (100) feet to any producing well or oil tank.

RULE B-21. RUBBISH OR DEBRIS. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least one hundred fifty (150) feet from the vicinity of wells, tanks and pump stations. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard or polluting streams and fresh water strata.

RULE B-22. TUBING. All flowing wells shall be produced through tubing not larger than 2½ inches in diameter and shall be equipped with a master valve.

RULE B-23. CHOKES. All flowing wells shall be equipped with adequate chokes, or beans, to properly control the flow thereof.

RULE B-24. SEPARATORS. All flowing oil wells must be produced through an approved oil and gas separator.

RULE B-25. USE OF EARTHEN RESERVOIRS. Oil shall not be stored or retained in earthen reservoirs or open receptacles.

RULE B-26. DEVIATION TESTS. All wells must be drilled with

due diligence to maintain a reasonably vertical well bore. The Board shall have the right to make or to require the operator to make a directional survey of the hole, at the request of an offset operator and at the expense of said offset operator prior to the completion of the well.

RULE B-27. NOTIFICATION OF FIRE, BREAKS, LEAKS OR BLOW-OUTS. All drillers, owners, operators and individuals having control of the operation of any oil and gas wells or pipe lines, or receiving tanks, storage tanks or receiving and storage receptacles into which crude oil is produced, received or stored, or through which oil is piped or transported, shall immediately notify the Board by letter giving full details concerning all fires which occur at oil or gas wells, or tanks or receptacles owned, operated or controlled by them or on their property, and all such persons shall immediately report all tanks or receptacles struck by lightning and any other fire which destroys oil or gas and shall immediately report any breaks or leaks in or from tanks or other receptacles and pipe lines from which oil or gas is escaping or has escaped. In all such reports of fire, breaks, leaks, or escapes, or other accidents of this nature, the location of the well, tanks, receptacle, or line break shall be given by county, section, township and range or other political subdivision, and property so that the exact location thereof can be readily located on the ground. Such report shall likewise specify what steps have been taken or are in progress to remedy the situation reported and shall detail the quantity estimated, if no accurate measurement can be obtained, in which case the report shall show that the same is an estimate) of oil or gas lost, destroyed, or permitted to escape. In case any tank or receptacle is permitted to run over, the escape thus occurring shall be reported as in the case of a leak. The report hereby required as to oil losses shall be necessary only in the case such oil loss exceeds twenty-five (25) barrels in the aggregate.

RULE B-28. DETERMINING AND NAMING COMMON SOURCES OF SUPPLY. Wells shall be classified as to the common sources of supply from which they produce and common sources of supply shall be determined and named by the Board, provided that in the event any person is dissatisfied with any such classification or determination, an application may be made to the Board for such classification or determination deemed proper and the Board will hear and determine the same. In naming the common sources of supply, reference shall be given to common usage and geographic names. Separate

distance of at least one hundred fifty (150) feet from the vicinity of wells, tanks and pump stations. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard or polluting streams and fresh water strata.

RULE B-23 TUBING

All wells shall be equipped with, and produced through, tubing of not more than two and a half (2½) inches in diameter. Bottom of tubing on flowing wells shall not be higher than top of producing sand. If tubing is perforated, the perforations shall not extend above the top of the sand. Tubing shall be free from obstructions, and have orange peel weld or bar on bottom.

RULE B-24 CHOKES

All wells shall be equipped with adequate chokes, or beans, to properly control the flow thereof.

RULE B-25 SEPARATORS

All flowing wells must be produced through an approved oil and gas separator.

RULE B-26 FIRE WALLS

(Amended 1-1-61)
All permanent oil tanks, or battery of tanks, must be surrounded by a dyke or fire wall with a capacity of one and one-half (1½) times that of the tanks or battery of tanks.

RULE B-27 SALT WATER

All wells producing two per cent (2%) or more salt water in the controlled fields must be reported monthly by their owner or operator to the Commission on "Well Status Report and Gas Oil Ratio."

RULE B-28 EMULSION, B. S. AND WASTE OIL

Wells producing oil shall be operated in such manner as will reduce as much as practicable the formation of emulsion and B. S. These substances and waste oil shall not be allowed to pollute streams or cause surface damage.

RULE B-29 CASING TESTS

The operator shall notify the Commission, before completing any well, that a test of each string of casing has been made in accordance with the provisions of the special rules governing the field or area in which the well was drilled.

RULE B-30 DEVIATION TESTS

The maximum point at which a well penetrates the producing formation shall not unreasonably vary from the vertical drawn from the center of hole at the surface. Deviations in excess of the following shall be deemed to be unreasonable: more than 3 degrees from the vertical drawn from the center of the hole at the surface.

The Commission shall have the right to make, or to require the operator to make a directional survey of the hole, at the request of an offset operator, prior to the completion of the well; and the Commission shall have the right to make or to require the operator to make a directional survey of the hole at any time, and at the expense of the operator, in order to ascertain that the well has not deviated beyond the boundaries of property on which the well is located.

RULE B-31 REPORT OF RESULT OF SHOOTING, PERFORATING OR TREATING OF WELL

A. All companies that perform any special function (usually referred to as service companies) during the drilling and completion operations of an oil or gas well for the operator, his agent or representative, be and shall be required to file (with the El Dorado office of the Arkansas Oil and Gas Commission) a legible and acceptable copy of all reports furnished to the operator of said well. All such reports shall be filed within 10 days after the work performed by the service company has been completed.

B. That all service company reports should commence to be filed on and after 15 February 1956 and continue to be filed unless a waiver in writing is specifically granted by the Arkansas Oil and Gas Commission.

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which shall be properly cemented at a sufficient depth adequately to protect the oil-bearing stratum. Cement shall be allowed to stand at least a total of 24 hours before drilling plug. Gas-producing wells shall be cased in a similar manner.

Rule B-14—Blow-Out Prevention

In drilling in areas where high pressures are likely to exist, all proper and necessary precautions shall be taken for keeping the well under control, including the use of blow-out preventers and high pressure fittings attached to properly anchored and cemented casing strings.

Rule B-15—Drilling Fluid

At the time of drilling any well, the operator shall continuously maintain in the hole, from top to bottom, good drilling fluid of sufficient weight to control pressures which may be encountered, and shall test the blow-out preventer on said well at 24-hour intervals or less.

Rule B-16—Well Head Fittings

Christmas tree fittings or well head connections shall have a working pressure or a test pressure in keeping with the expected depth of the well.

Rule B-17—Daylight Hours

All swabbing, bailing operations, or drill stem tests shall be completed in the daylight hours before sunset. No well shall be brought into production except during daylight hours.

Rule B-18—Cleaning Wells

All wells shall be cleaned into a pit not less than one hundred fifty (150) feet from the derrick floor and one hundred fifty (150) feet from any fire hazard.

Rule B-19—Boiler or Light Plant

No boiler or electric light generator shall be placed or remain nearer than one hundred (100) feet to any producing well or oil tank.

Rule B-20—Rubbish or Debris

Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least one hundred fifty (150) feet from the vicinity of wells, tanks and pump stations. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard or polluting streams and fresh water strata.

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Rule B-21—Tubing

All wells shall be equipped with and produced through tubing.

Rule B-22—Chokes

All wells shall be equipped with adequate chokes, or beans, to properly control the flow thereof.

Rule B-23—Separators

All flowing oil wells must be produced through an approved oil and gas separator.

Rule B-24—Fire Walls

All permanent oil tanks, or battery of tanks, must be surrounded by a dyke or fire wall with a capacity of one and one-half (1½) times that of the tanks, or battery of tanks.

Rule B-25—Emulsion, B.S., and Waste Oil

Wells producing oil shall be operated in such manner as will reduce as much as practicable the formation of emulsion and B.S. These substances and waste oil shall not be allowed to pollute streams or cause surface damage.

Rule B-26—Casing Tests

The operator shall test each string of casing, in accordance with the provisions of the rules governing the field or area in which the well was drilled, and report same on form to be supplied by the Board.

Rule B-27—Deviation Tests

All wells must be drilled with due diligence to maintain a reasonably vertical well bore. The Board shall have the right to make or to require the operator to make a directional survey of the hole, at the request of an off-set operator and at the expense of said off-set operator prior to the completion of the well; and the Board shall have the right to make or to require the operator to make a directional survey of the hole at any time, and at the expense of the operator, in order to ascertain that the well has not deviated beyond the boundaries of property on which well is located.

Rule B-28—Notification of Fire, Breaks, Leaks or Blow-Outs

All drillers, owners, operators and individuals having an interest in any oil and gas wells or pipe lines, or receiving tanks, storage tanks, or receiving and storage receptacles into which crude oil is produced, received or stored, or through which oil is piped or transported, shall immediately notify the Board by letter giving full details concerning all

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(STATEWIDE OPERATING RULES—Cont'd.)

SECTION XV.—PRODUCTION AND DISPOSAL OF SALT WATER:

When a well starts producing salt water, the operator or company shall report that condition to the Department. Permits must be secured before disposing of salt water underground.

SECTION XVI.—DEFICIENT WELLS:

In the event a well does not have the capacity to produce its total allowable, then it shall produce such amount of oil and gas less than its allowable that it is able to produce, and the deficiency of such well shall not be made up by the overproduction of any other well.

SECTION XVII.—MONTHLY REPORTS:

The producing, transporting, storing and/or refining of oil shall be reported in accordance with Order No. 25, or as it may be amended, or superseded. The length of time reports and other pertinent data, as defined by Section 16 of Act 157 of the Regular Legislative Session of 1940, shall be kept on file by operators and companies in their offices, and available for inspection by any Agent of the Department of Conservation, shall in no case be less than a period of three (3) years.

SECTION XVIII.—DIRECTIONAL DRILLING AND WELL SURVEYS:

No well shall be drilled in the State of Louisiana in which the well bore shall deviate laterally at any point a distance greater than that determined by a three (3) degree angle from a vertical line passing through the center of the surface location of the well bore; provided, however, that in the event the operator desires to whipstock or intentionally deflect said hole more than said three degrees from vertical, except to straighten the hole or to side-track junk in the hole or other mechanical difficulties, then and in that event, said operator shall first obtain a special permit from the District Manager to so deflect said hole and shall furnish the Department a copy of the survey of said hole when the drilling has been completed and before the casing has been set if an objection has been filed. Nothing in these rules shall be construed to permit the drilling of any well in such a manner that it crosses property lines. The Department shall have the right to make or to require the operator to make a directional survey of any hole, on its own initiative or at the request of an offset operator, and at the expense of said offset operator, prior to the completion of the well; and it shall have the authority to make or to require the operator to make a directional survey of any hole at any time, and at the expense of the offending party, i.e., if the operator contends his hole is in a certain condition and it is found so to be, then party requesting survey should pay. In cases of directional drilling, the Department shall assess appropriate allowable penalties to prevent undue drainage from the offset properties. All new wells that have surface locations 300 feet or less from any property or unit line and that reach a depth of 4,000 feet or more shall, beginning with the effective date of this order have directional surveys made to the total depth of the hole before setting final string of casing. Three certified copies of such directional surveys shall be filed with the District Manager by the well owner or by the service company which made the survey.

SECTION XIX.—ABANDONMENT AND CASING PULLING:

A. All wells which are to be abandoned shall be filled with a mud-fluid of sufficient weight to offset the hydrostatic pressure of any of the formations penetrated. Substantial cement plugs must be efficiently placed in sufficient number and at proper locations as to prevent the commingling of oil, gas, salt water and fresh water from one formation to another (mud is not permanently efficient for this purpose). Before the work of abandonment is begun, a permit must be secured and a detailed plan of abandonment must be submitted to the District Manager for approval or modification to meet the local and specific needs. Any drilling well which is to be temporarily abandoned and the rig moved away, shall be

mudded and cemented as it would for permanent abandonment, except a cement plug at the surface may be omitted.

B. The District Manager or his representative will inspect the work of abandonment as it progresses, check the location and quality of plugs, check the amount of casing pulled, check the demonstration of movement, if any, of oil, gas or water, and finally submit to his superiors a complete report on the work.

C. The plan of abandonment may be altered after the work has started, provided new or unforeseen conditions arise but only after approval by the District Manager.

D. For wells that have produced, the production formation shall, where practicable, be protected by cement plug extending from well below the bottom to well above the top of the reservoir and the cement shall be made to bond with the walls of the hole where possible.

E. All cement plugs shall be placed by the displacement method unless exception is granted by the Department.

F. The Commissioner or his Agent may require the posting of a reasonable bond with good and sufficient surety in order to secure the performance of the work of proper abandonment.

G. The District Manager shall be immediately notified by the vendor whenever change of title occurs as to lease, well or equipment appertaining thereto.

SECTION XX.—EXCEPTION AND HEARINGS:

If any operator can show to the Commissioner that the drilling and producing methods herein prescribed or the particular method by him prescribed for securing tests of wells, or any other part of this order, as applies to his well or wells, result in waste, or as to such operator are unreasonable, the Commissioner may enter such an order, as a special exception to the aforesaid rules and regulations, as will prevent such waste or eliminate such unreasonable restraint, as may result from the application of the aforesaid rules and regulations to the well or wells of such operators; provided, however, that before any operator shall be allowed the benefit of an order granting an exception as authorized by this Section, such operator must establish that such exception, if granted, will not result in waste in the field as a whole or give him an inequitable and unfair advantage over another operator or other operators in the field. No special exception will be granted except upon written application, fully stating the alleged facts, which shall be the subject of a hearing to be held not earlier than ten (10) days after filing of the application. Prior to the hearing upon such application, at least ten (10) days notice thereof shall be given by publication to all operators in the field. In addition to said notice by publication, adjacent operators where appropriate may be given at least ten (10) days notice of said hearing by personal service, or by Registered Mail.

SECTION XXI.—APPLICATION OF SPECIAL FIELD ORDERS:

This order shall be cumulative of, and in addition to, all special orders, rules and regulations affecting the drilling and production of oil and gas, as heretofore promulgated. In case of any conflict between this order and the special orders on specific fields, said special orders on specific fields shall govern.

SECTION XXII.—PENALTY FOR INFRACTIONS:

In accordance with the laws of the State of Louisiana, and especially Act 157 of the Legislature of 1940, any infraction of these rules and regulations may result in shutting in and sealing of any drilling or producing well or wells, tank storage or lease or leases, involved in the infraction, and prohibition of acceptance of oil or gas from such well or lease for purchasing or transporting by agency, or, in the alternative, as an additional penalty, be prosecuted under Section 17 of Act 157 of 1940.

SECTION XXIII.—EFFECTIVE DATE:

This order shall be effective from and after the 1st day of August, 1943.

string by two-tenths (.2) with the maximum test pressure required, unless otherwise ordered by the Board, not to exceed fifteen hundred (1500) pounds per square inch.

If at the end of thirty minutes the pressure gauge shows a drop of ten per cent (10%) of the test pressure or more, such corrective measures must be taken as will insure that the producing string of casing is so set and cemented that it will hold the pressure for thirty minutes without a drop of more than ten percent of the test pressure on the gauge.

The Board may, at its discretion, require that the operator give sufficient notice prior to conducting casing tests so that a Board representative may be present at such time as either the surface or producing casing is tested in any well.

RULE 13 Blowout Preventers

In drilling areas where high pressures are likely to exist and on all wildcat wells, all proper and necessary precautions shall be taken for keeping the well under control, including the use of blowout preventers and high pressure fittings attached to properly anchored and cemented casing strings.

RULE 14 Deviation of Hole and Directional Survey

(a) Each operator shall file on Form No. 3 a record of all deviation tests taken.

(b) No well shall cross drilling unit lines unless permit is obtained from the Board after notice and hearing.

(c) Intentional deviations of short distances necessary to straighten the hole, sidetrack, junk, or correct other mechanical difficulties may be accomplished without the issuance of a permit, but the operator shall immediately notify the Board by letter or telegram of the fact thereof.

(d) Except as set forth in paragraphs (d) and (e) hereof, no well may be directionally deviated from its normal course unless authorization so to do is first obtained from the Board after notice and hearing.

(e) In the event an operator in good faith commences and proceeds with the drilling of a straight well and thereafter, for reasons acceptable to the operator, desires to directionally deviate the well, he may do so at his own risk, first notifying the Board by letter or telegram of the fact thereof. On completion of such well as a producer, the operator must immediately apply for a permit from the Board on notice and hearing for approval of such intentional deviation. Pending such approval or disapproval, the Board may assign a temporary allowable only to such well.

(f) In cases of directionally deviated drilling the Board shall have the right to assess appropriate allowable penalties to prevent undue drainage from offset properties and to adjust possible inequities caused by the directional drilling.

(g) When a well is directionally deviated from its normal course for any reason, a complete angular deviation and directional survey of the finished hole shall be made at the expense of the operator and a certified copy of such survey shall be filed with the Board within 30 days.

(h) The Board shall have the right to make or to require any operator to make a directional survey of any hole at such operator's expense. The Board shall also have the right to require an operator to make a directional survey of any hole at the request of an offset operator, if, in the Board's opinion, such is necessary, but at the expense and risk of said offset operator unless it is found that such well is completed at a point outside the operator's drilling unit.

(i) All producible wells drilled from the effective date of this order which are located 300 ft. or less from any drilling unit line and that reach a depth of 4,000 feet or more shall have directional surveys made to the total depth of the hole before setting the final string of casing. A certified copy of such directional surveys shall be filed with the Board by the operator within 30 days.

RULE 15 Multiple and Dual Completions

No well shall be permitted to produce either oil or gas from different pools through the same string of casing and no well shall be completed with the casing open to one pool and the tubing open to another, unless a permit is obtained from the Board after notice and hearing.

RULE 16 Fire Hazards

(a) Anything that might constitute a fire hazard and which is used, or useful, in the operation of the well, tanks, separator or other equipment shall be removed to a distance of at least 100 feet from the well location, tanks and separators. All heaters, boilers and other fired vessels shall be located at least 100 feet from all vessels handling or storing crude oil.

(b) All open hole drill stem tests shall be completed in the daylight hours before sunset. No well shall be swabbed into production except during daylight hours, except in known low pressure areas.

(c) Oil shall not be stored in earthen reservoirs or in open pits.

SURVEY OF 12 STATES *

Natural Hole deviation

Percent

1.	Require no special rules. - - - - -	25
2.	Require practical minimum hole deviation (none stated) - -	33
3.	Require reported deviation tests - - - - -	17
4.	Require minimum reasonable deviation from vertical not to exceed 3° - - - - -	17
5.	May require straightening of hole if deviation exceeds 4° - - - - -	8
6.	Commission may require survey when bottom of hole location is in doubt - - - - -	8
7.	Require survey (if demanded by offset operator)	
	Paid for by offset operator - - - - -	33
	Paid for by operator - - - - -	17
	Paid for by offender - - - - -	17

Controlled Directional Drilling

1.	Requires application and approval - - - - -	50
2.	Require hearing - - - - -	25
3.	Require depth and exact surface location - - - - -	42
4.	Require direction of deviation and distance bottom hole - surface - - - - -	50
5.	Require directional survey upon completion - - - - -	66
6.	Require no special rules for deviating well due to hole conditions (other than notification in some states) - - - - -	58
7.	Commission will assess appropriate allowable penalties - -	25
8.	Proceed at own risk with hearing later - - - - -	8
9.	Require or state other details - - - - -	17
10.	No special rules - - - - -	8

* -- Illinois, Montana, Nebraska, North Dakota, Oklahoma, Colorado
Wyoming, Alabama, Arkansas, Florida, Louisiana, Mississippi