

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF STANOLIND OIL AND GAS COMPANY)
FOR MODIFICATION OF THE RULES AND)
REGULATIONS OF THE COMMISSION WITH)
RESPECT TO THE PERIODS PRESCRIBED)
FOR WAITING ON CEMENT IN CONNECTION)
WITH THE CEMENTING OF CASING.)

Case No. _____

PETITION

Comes now Stanolind Oil and Gas Company, and states:

That it is engaged in the production of oil in Lea County and other areas in the State of New Mexico, and in the drilling of wells for such production. It has come to the attention of this Petitioner, both from actual field experience and from laboratory tests, that the times now prescribed by the Regulations of this Commission for waiting on cement, required in connection with the cementing of casing, are excessive, and should be reduced to approximately the following periods:

	<u>Under Pressure Hours</u>	<u>Drilling Plug Hours</u>
Surface Pipe	16	24
Intermediate	24	30
Oil String	24	30

It is the opinion of this Petitioner that the periods specified in the foregoing table are ample and that they should be adopted by the Commission, and that if adopted, the new periods will not result in any injury to the wells or to the strata penetrated, and will result in more expeditious drilling, thereby saving a large amount of wasted time in connection with the drilling of wells. Petitioner is ready and willing to present evidence, supporting the above specified periods of waiting time at a hearing ordered by the Commission.

Case 11

SUMMARY OF WAITING ON CEMENT EXPERIMENTS
HOBBS AREA, NEW MEXICO

There follows a brief summary of the waiting on cement time experiments which have been performed to date in the Hobbs Area. All elapsed times mentioned below refer to the time when the first cement was mixed.

The first test was made on the Rowan Drilling Company's Elliott B-15, Well No. 2 located in Section 15, T-22-S, R-37-E, Penrose-Skelly Area, Lea County, New Mexico. When the well had reached the total depth of 1165 feet, 9 5/8 inch casing was run to bottom and cemented with 650 sacks of Incor high early strength cement on December 19, 1945. 34 minutes were required to mix the cement and the plug was pumped to a depth of 1148 feet 55 minutes after the first cement was mixed. The final pump pressure was 400 pounds per square inch. A few minutes after the plug reached bottom maximum pressure on the casing at the surface was 25 pounds per square inch. No pressure buildup was obtained on the well. No pressure leaks were observed at the surface and no plausible explanation for failure to obtain the pressure buildup has been made. The test was witnessed briefly by Messrs. Stahl and Schorster of the USGS. The plug was drilled 48 hours after cement was first mixed under verbal approval of Mr. Frost of the USGS.

The next waiting on cement test was conducted on the Anderson-Prichard No. 1 Parcell in the Drinkard Field. On January 15, 1945, 3003 feet of 9 5/8 inch casing was run in this well and cemented with 1150 sacks of bulk common cement. The total depth of the well at this time was 3007 feet. Mixing of cement was completed in 35 minutes and the plug reached bottom at an elapsed time of 1 hour and 5 minutes. The final pressure to pump the plug was 550 psi. In 1 hour and 30 minutes after first mixing of cement pressure had decreased to 240 psi and further decreased to zero pressure in 4 hours. No leaks were observed in any of the surface connections. Casinghead connections were removed after an elapsed time of 10 hours and no pressure was observed on the casing at this time, although fluid was standing at the surface. Drill pipe was run and the plug and 23 feet of cement above the float collar was drilled approximately 17 1/2 hours after commencing operations. Pump pressure of 700 psi and 18,000 pounds weight on the bit were used in drilling this 23 feet of cement in 27 minutes. A core barrel was run and cement was cored for a total 11 feet, approximately 20 hours after first cement was mixed. Core recovery amounted to only 2 feet of cement; however, the core recovered had desirable qualities. These cement cores were inspected by Mr. Frank Stahl of the USGS and Mr. L. F. Foster of Anderson-Prichard. There was no question that the cement had reached its final set. The field office had advanced the theory that failure to obtain the pressure buildup was due to not bumping the plug on bottom, thereby allowing fluid within the casing to expand and force the plug downward in the pipe rather than produce a pressure buildup.

Another waiting on cement test was performed on Rowan Drilling Company's Elliott B-9, Well No. 3 in the Penrose -Skelly Area. On January 7, 1946, 8189 feet of 5 1/2 inch OD casing was set at a total depth in this well with 1450 sacks of cement, 750 sacks being common cement and 700 sacks being Incor high early strength cement. 41 minutes were required to mix the cement and the plug bumped the shoe in 1 hour and 3 minutes. Final pump pressure was 1900 psi. After placing pressure gages on the wellhead, pressure was bled from 1720 pounds per square inch to 850 psi. In an elapsed time of 4 hours from first mixing of cement, pressure had increased to 1400 psi. Pressure was bled down to 650 pounds per square inch and in a total elapsed time of 8 hours had achieved maximum pressure buildup to 1220 pounds per square inch. No further pressure buildup was noted after 8 hours. Applying the Farris method, the plug could have been drilled in a total elapsed time of 12 hours after mixing of first cement. The test was witnessed by Mr. Yarborough of the New Mexico Conservation Commission and Messrs. Stahl and Schorster of the USGS paid brief visits during the test.

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 BEFORE THE OIL CONSERVATION COMMISSION
 OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
 STANOLIND OIL AND GAS COMPANY FOR
 MODIFICATION OF THE RULES AND REGULATIONS
 OF THE COMMISSION WITH RESPECT TO
 THE PERIODS PRESCRIBED FOR WAITING
 ON CEMENT IN CONNECTION WITH THE
 CEMENTING OF CASING.

Case No. 90PETITION

Comes now Stanolind Oil and Gas Company, and states:

That it is engaged in the production of oil in Lea County and other areas in the State of New Mexico, and in the drilling of wells for such production. It has come to the attention of this Petitioner, both from actual field experience and from laboratory tests, that the times now prescribed by the Regulations of this Commission for waiting on cement, required in connection with the cementing of casing, are excessive, and should be reduced to approximately the following periods:

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Surface Pipe
 Intermediate
 Oil String

Under Pressure Hours

16
 24
 24

*U.S.G.S.*Drilling Plug Hours

(24) 24^v (36)
 (48) 30^v (48)
 (48) 30^v (48)

U.S.G.S.

It is the opinion of this Petitioner that the periods specified in the foregoing table are ample and that they should be adopted by the Commission, and that if adopted, the new periods will not result in any injury to the wells or to the strata penetrated, and will result in more expeditious drilling, thereby saving a large amount of wasted time in connection with the drilling of wells. Petitioner is ready and willing to present evidence, supporting the above specified periods of waiting time at a hearing ordered by the Commission.

WHEREFORE, Petitioner prays that a hearing be ordered on this Petition at as early date as is practicable, and this Petitioner and all other interested parties be permitted to present evidence on the matters involved at such hearing.

SETH AND MONTGOMERY

By J. O. Seth
 Attorneys for Petitioner

STATE OF NEW MEXICO)
) ss.
 COUNTY OF SANTA FE)

J. O. Seth, Being first duly sworn, deposes and says that he is one of the attorneys for the Petitioner in the foregoing Petition; that he has read said petition; knows the contents thereof, and the matters and things therein stated are true, as he is reliably informed and verily believes.

J. O. Seth

Subscribed and sworn to before me this ____ day of December, 1946.

Gray
 Finch
 Paris
 \$500

*order #52
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NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, as provided by law, hereby gives notice of the following hearings to be held at Santa Fe, New Mexico, at 10:00 A. M., January 10, 1947:

Case 90

In the matter of the application of Stanolind Oil and Gas Company for modification of the rules and regulations of the Commission with respect to the periods prescribed for waiting on cement in connection with the cementing of casing.

Case 91

In the matter of the application of Gulf Oil Corporation for the promulgation of an Order revising Rule 15, General Order No. 4 "Oil Tanks and Fire Walls".

Case 92

In the matter of the Application of Gulf Oil Corporation for the issuance of a Special Order permitting the production of more than one horizon or pool through a single well bore in the Hobbs Pool, Lea County, New Mexico.

Case 93

In the matter of the Application of Gulf Oil Corporation for the issuance of a Special Order permitting the production of more than one horizon or pool through a single well bore in the Paddock, Drinkard, Brunson, Jones and Blinbry Pools, Lea County, New Mexico.

Case 94

In the matter of the Application of Gulf Oil Corporation for the promulgation of a General Order permitting and controlling production from more than one horizon or pool through a single well bore.

Given under the seal of said Commission at Santa Fe, New Mexico on December 20, 1946.

OIL CONSERVATION COMMISSION



By: (Signed) R. R. SPURRIER, Secretary

SEAL