

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

CASE #207
ORDER #226

IN THE MATTER OF A HEARING CALLED
ON A MOTION OF THE COMMISSION TO
CONSIDER THE TEMPORARY SPACING
FOR THE DEVELOPMENT OF AN OIL
POOL DISCOVERED BY THE NORTHWEST
DRILLING COMPANY AND IN THEIR #1
BONNIE B WELL, LOCATED IN THE
SE SE OF SECTION 36, T. 164 N.,
R. 93 W., BURKE COUNTY, NORTH
DAKOTA, AND PRESCRIBE THE LIMITS
OF SAID POOL.

TEMPORARY ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to legal notice this cause came on for hearing at 9:30 a.m. on the 18th of March, 1958, at Bismarck, North Dakota, before the Industrial Commission of North Dakota, hereinafter referred to as the "Commission".

NOW, on this 27 day of March 1958, the Commission, a quorum being present, having considered the testimony adduced, 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 the geological and engineering evidence presented to the Commission bearing on the matter of well spacing is incomplete and not of a nature which would permit the Commission to determine a particular well spacing pattern which would assure the efficient development of this field.

(3) That certain special field rules are necessary to prevent waste and protect against the pollution of surface waters.

IT IS THEREFORE ORDERED:

(1) That the Field discovered by the Northwest Drilling Company in their Bonnie B #1 well, located in the SE SE of Section 36, Township 164 North, Range 93 West, Burke County, is hereby classified and defined as that common source of supply of crude oil and natural gas found in and under the following described tracts of land in Burke County, North Dakota, to wit:

Township 164 North, Range 93 West, 5th PM
All of sections 25 and 36.

Township 163 North, Range 93 West, 5th PM
All of section 1.

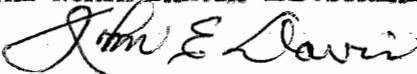
Township 163 North, Range 92 West, 5th PM
All of section 6.

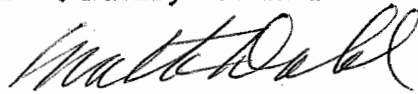
Township 164 North, Range 92 West, 5th PM
All of sections 30 and 31.

(2) That this order shall cover all of the Field, as discovered by the North-west Drilling Company's Bonnie B #1, located in the SE SE of Section 36, Township 164 North, Range 93 West, Divide County, North Dakota, and shall continue in force for a period not to exceed six (6) months from the date hereof.

DONE at Bismarck, North Dakota, this 27 day of March 1958.

THE NORTH DAKOTA INDUSTRIAL COMMISSION


John E. Davis, Governor


Math Dahl, Commissioner of Agriculture & Labor


Leslie R. Burgum, Attorney General



Chamely

NORTHWEST OIL DRILLING CO.

Chamely
Page 207
A North Dakota Corporation

Room 207 - American State Bank Bldg.
MINOT, NORTH DAKOTA

The North Dakota Industrial Commission,
Bismarck, North Dakota.

Re: Temporary spacing and special field rules
for Oil Pool discovered by the drilling of
Northwest Oil Drilling Co. Bonnie "B" No.1
SE SE Sec:36 - Twp.164N - Range 93 West.
Permit No. 1369.

Dear Sirs:

We wish to recommend for your consideration that the oil pool
discovered by the drilling and re-evaluating of the Bonnie "B"
No. 1 well, be given a temporary spacing unit of 80 acres with-
in the area as proposed on the accompanying plat.

Twp. 164 North - Range 93 West
Sec. 25: S $\frac{1}{2}$ S $\frac{1}{2}$ - Sec.36 (All)

Twp. 163 North - Range 93 West
Section 1

Twp. 164 North - Range 92 West
Sec: 30 - S $\frac{1}{2}$ S $\frac{1}{2}$ - Sec. 31 (all)

Twp. 163 North - Range 92 West
Section 6

All wells drilled in the proposed area to be located in the app-
roximate center of the South East and Northwest quarters of each
section or corresponding governmental lots. The temporary spac-
ing units to be rectangular in shape and consist of approximate
80 acres.

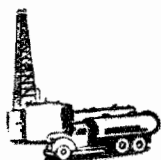
While the area proposed for this field is small we feel it will
be of adequate size to evaluate the possibilities of a pool around
the Bonnie "B" well. Further development will be necessary to
arrive at any definite conclusion for permanent spacing.

WELL HISTORY:

The Bonnie "B" No.1 was drilled by the Northwest Oil Drilling Co.,
and Northern Pump Company on a joint venture.

This well was spudded on January 15, 1957, drilled to a total
depth of 6,393 feet. No cores taken, four drill stem tests were
taken in the Midale and Nesson sections with no significant shows
to warrant setting pipe. These tests gave similar results to tests
taken in other wells in the area which to that time had not been
considered worthy of running pipe.

After drilling the discovery Bunting well and other wells in the
Lignite area under different drilling conditions we felt the
Bonnie "B" had some of the same possibilities we found in the
discovery well and that it was feasible to go back in it and try
to complete it as a producing well.



NORTHWEST OIL DRILLING CO.

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MINOT, NORTH DAKOTA

WELL HISTORY CONTINUED:

Our partners Northern Pump Company were contacted regarding such a proposal and after considering it, declined to participate. They assigned all their interest in Sec. 36 - 164 - 93 to Northwest Oil Drilling Co.

Northwest Oil Drilling Co. moved their rig back on the Bonnie "B" in July 1957 drilled out the cement plugs, conditioned the hole and set 6,033 feet of 5 $\frac{1}{2}$ inch 15.5 lb. casing. Cemented casing with 200 sacks cement. The drilling rig was then moved off site and a work over rig moved on to complete the well.

The well was conditioned and perforated from 5928 to 5931 and from 5933 to 5939 with 4 shots per foot. Swabbing indicated inadequate cement bond with an apparent channel from above. Perforations were squeezed ~~and pressured up with 42 sacks cement~~ with 200 sacks cement with no pressure build up. After setting 24 hours the perforations were again squeezed and pressured up with 42 sacks cement. Formation was again perforated in the same interval with 8 shots per foot.

Formation was washed with 250 gallons mud acid and swabbed recovery approximately 50% oil and 50% water. It was then given a 2,000 gallon Petro Frac and swabbed further. This was followed with 6,000 gallon Petro Frac and 300 Gallon mud acid. Continued swabbing of approximately 50% oil and 50% water and from these results it indicated the oil was apparently coming from a upper zone. The zone from 5,900 to 5,906 and 5,910 to 5,914 was perforated with 4 shots per foot. This sections was washed with 250 gallons mud acid and swabbed. Better results were obtained from this interval and it appeared this was the zone production was coming from and the lower zone was apparently plugged off with mud and cement.

5,958 feet of 2 inch tubing was set. Rods, pump, treater and tank battery was installed. It has been on pump since in January 1958 producing from 3 to 10 barrels per day of oil and approximately the same of water. The well produces sufficient gas to operate pump motor, treater and burn a good flare.

GEOLOGICAL COMMENTS:

The productive interval of this well is confined to the lower Charles Section of the Madison Group, and in principal the Midale-Nesson interval.

The Midale Interval of porosity from 5900 thru 5928 is composed of three porosity zones for a total of 15 feet with an over all average of 12 to 20 percent. The two upper most zones show good hydrocarbon saturation while the lower connate water. Porosity is evident thru argillaceous granulated dolomitic limestone.



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GEOLOGICAL COMMENTS CONTINUED:

The Nesson interval 5,930 thru 5,980 shows good to fair porosity for the upper nine feet of oolitic and pelletoidal lime with micro-vug porosity and again showing good hydrocarbon saturation of the porosity. This porosity interval is underlain with a massive anhydrite mottled in part with dense brown lime.

The following log Surveys were taken and have been released to the industry:

Schlumberger - Latero Log, Gamma Ray
Micro-Laterolog
Wire Line - - Radioactivity Log

Accompanying this report is a plat of the proposed field showing lease owners as taken off a recent Petroleum Information Map.

Respectfully submitted,

NORTHWEST OIL DRILLING COMPANY,

By

A handwritten signature in cursive script, appearing to read 'Ivan Goheen', written over a horizontal line.

Ivan Goheen, Secretary.

PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA

March 14, 1958

In re: Hearing Before North Dakota State Industrial Commission,
March 18, 1958

North Dakota State Industrial Commission (2)
University Station
Grand Forks, North Dakota

Gentlemen:

We have reviewed the various cases docketed for hearing before the State Industrial Commission on March 18, 1958, at 9:30 a.m. in the State Capitol at Bismarck, North Dakota, and wish to make the following recommendations:

Case No. 203: On a motion of the Commission to consider the temporary spacing for the development of an oil pool discovered by the Anschutz Drilling Company in its #1 Einer Christianson well located in NE NW Section 7-158N-R81W, Renville County, North Dakota, prescribe the field limits, and such special field rules as may be necessary.

Recommendation: 80-acre spacing, the same as now in effect for the Wayne-Madison Pool located in Twp. 161 and 162N, Rge. 81 and 82W, Renville County. Proposed spaced area to cover Sections 5, 6, 7, 8, 17, 18, 19, 20, Twp. 158N, Rge. 81W; Sections 1, 2, 11, 12, 13, 14, 23, and 24, Twp. 158N, Rge. 82W; S/2, Sections 17 and 18, all of 19, 20, 29, 30, 31, and 32, Twp. 159N, Rge. 81W and S/2, Sections 13 and 14, all of Sections 23, 24, 25, 26, 35, and 36, Twp. 159N, Rge. 82W. Prescribed well location to be in the NE/4 and SW/4 of each 1/4 section with north-south drilling units.

Case No. 207: On a motion of the Commission to consider the temporary spacing for the development of an oil pool discovered by the Northwest Drilling Company in its #1 Bonnie B well located in SE SE Section 36-T164N-R93W, Burke County, North Dakota, prescribe the field limits, and such special field rules as may be necessary.

Recommendation: 80-acre spacing, the same as prescribed for the Lignite-Madison Pool in Twp. 162N, Rge. 91W, the Flaxton-Madison Pool in Twp. 163N, Rge. 91W, the Columbus-Madison Pool in Twp. 163N, Rge. 93W and the Rival-Madison Pool all located in Burke County, North Dakota. Prescribed well location to be in the NW/4 and SE/4 of each 1/4 section with north-south drilling units.

North Dakota State Industrial Commission

March 14, 1958

In re: Hearing Before North Dakota State Industrial Commission, March 18, 1958
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Phillips Petroleum Company has producing and non-producing properties in the Blue Buttes-Madison and Tioga-Madison Pools in McKenzie and Burke Counties respectively. We have no objection to redefining the limits of these fields as proposed in Cases Nos. 204 and 206 in order to include additional wells within these reservoirs.

Yours very truly,


L. E. Fitzjarrald

LEF:JRB:HD

LEGAL ADVERTISING

NOTICE OF PUBLICATION
N.D. INDUSTRIAL COMMISSION
BISMARCK, NORTH DAKOTA

The State of North Dakota by its Industrial Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder of the following public hearing to be held at 9:30 a.m. March 18, 1958 in the Hearing Room, State Capitol, in Bismarck, North Dakota.

STATE OF NORTH DAKOTA TO:

All named parties and persons having any right, title, interest or claim in the following cases and notice to the public. CASE NO. 202: On a motion of the Commission to consider the market demand for crude oil to be produced in the State of North Dakota during the month of March 1958. CASE NO. 206: On a motion of the Commission to redefine the limits of the Tloga-Madison pool in Burke County, North Dakota. CASE NO. 207: On a motion of the Commission to consider the temporary spacing for the development of an oil pool discovered by the Northwest Drilling Company in its #1 Bonnie B well located in SE SE Section 36-T164N-R93W, Burke County, North Dakota, prescribe the field limits, and such special field rules as may be necessary.

N.D. INDUSTRIAL COMMISSION

Sent to
Bismarck
Bismarck
John E. Davis, Governor

*Newburg
spacing case 207*

February 2, 1959

Mr. Ray Harrison
Cardinal Drilling Company
P. O. Box 446
Bismarck, North Dakota

Dear Sir:

This will confirm our telephone conversation of this afternoon, in which I advised you that we would not grant you a permit for the drilling of a well in the NE NE Section 1, T. 161 N, R. 80 W, Bottineau County.

The applied for location would be off-pattern for an extension of the Newburg field. Your proper location would be SE NE or NW NE.

Yours truly,

Clarence B. Folsom, Jr.
Chief Petroleum Engineer

CBF:bjm