

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

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IN THE MATTER OF THE MOTION	:	ORDER
BY THE BOARD OF OIL, GAS AND	:	
MINING FOR AN ORDER REGARDING	:	DOCKET NO. 88-022
THE BOREN 2-11A2 AND 3-11A2	:	CAUSE NO. 139-59
WELLS OPERATED BY PENNZOIL	:	
COMPANY WHICH ARE LOCATED IN	:	
SECTION 11, TOWNSHIP 1 SOUTH,	:	
RANGE 2 WEST, DUCHESNE COUNTY,	:	
UTAH	:	

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This matter was heard before the Board of Oil, Gas and Mining at its regularly scheduled meeting at 10:00 a.m. on October 27, 1988, in the boardroom of the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Salt Lake City, Utah. The following Board members were present and participated in the hearing:

Gregory P. Williams, Chairman
James W. Carter
John M. Garr
Charles R. Henderson
Richard B. Larsen
E. Steele McIntyre

The Board of Oil, Gas and Mining was represented by Alan S. Bachman, Assistant Attorney General.

Members of the Division of Oil, Gas and Mining present and participating in the hearing included:

Dr. Dianne R. Nielson, Director
Ronald J. Firth, Associate Director, Oil and Gas
John R. Baza, Petroleum Engineer
Gilbert L. Hunt, Supervisor,
Environmental/Geological Section

The Division of Oil, Gas and Mining was represented by Barbara W. Roberts, Assistant Attorney General.

Mr. Robert G. Pruitt, Jr., Attorney, Pruitt, Gushee and Fletcher, appeared at the hearing on behalf of Pennzoil Exploration and Production Company (Pennzoil).

Mr. Ralph Williams, Supervising Petroleum Engineer, appeared at the hearing and presented testimony and introduced exhibits on behalf of Pennzoil.

The Notice of Hearing dated September 26, 1988, issued by the Board in this matter, required the respondent, Pennzoil, to file a written response by October 10, 1988. Robert G. Pruitt, Jr., Pennzoil's Attorney, filed the required response letter on October 10, 1988. The particular issues discussed in the response letter were 1) the reporting requirements and information submittals for the Boren 3-11A2 Well, 2) a review of the producing wells located in Section 11, Township 1 South, Range 2 West, U.S.M., 3) the questionable need for a hearing, and 4) a perceived communication problem between the parties.

A pre-hearing conference was held in the Division office on October 20, 1988, with the following in attendance:

Representing Pennzoil:

Robert G. Pruitt, Attorney
George San Filippo, Western Division Production Manager
Gary Kornegay, Geologist
Ralph Williams, Supervising Petroleum Engineer

Representing the Division:

Ronald J. Firth, Associate Director, Oil and Gas
John R. Baza, Petroleum Engineer
Barbara W. Roberts, Assistant Attorney General

The specific issues discussed at the conference were:

- 1) The submittal of the information obtained during the drilling of the Boren 3-11A2 Well which was required to be submitted to the Division as stipulated in the approval to drill the well.
- 2) The need for a board hearing to assure compliance with the Board's Order in Cause No. 139-42.
- 3) The plugging and abandonment procedures for the Boren 2-11A2 Well.

The Board having considered the testimony, exhibits and evidence presented and the statements made by the participants at the hearing, now makes and enters the following:

FINDINGS OF FACT

1. During May 1987, an unexpected natural gas blowout occurred at the Pennzoil Boren 2-11A2 Well located in the NE1/4 SW1/4, Section 11, Township 1 South, Range 2 West, U.S.M., Duchesne County, Utah. The well has produced a substantial volume of gas from an undetermined interval, however, the well is currently not producing. Pennzoil has been unable to determine the exact interval of the producing gas zone due to the mechanical condition of the well. At the time of the blowout, the Boren 2-11A2 was an oil well producing from the Lower Green River - Wasatch Formation.
2. Subsequent to the blowout occurring at the Boren 2-11A2 Well, Pennzoil proposed to drill the Boren 3-11A2 Well located in the SW1/4 SW1/4, Section 11, Township 1 South, Range 2 West, U.S.M., Duchesne County, Utah. On August 3, 1987, the Division issued its approval to drill the Boren 3-11A2 in accordance with Cause No. 139-42 and specified certain actions necessary in order to comply with the conditions of approval, namely:
 - a) If Pennzoil completes the Boren 3-11A2 Well as a well capable of producing from the Lower Green River - Wasatch Formation and desires to produce the well from that interval, it will be necessary for Pennzoil to petition the Board of Oil, Gas and Mining for an order to do so. This action is necessary to assure that only two (2) wells located within the drilling unit comprising all of Section 11 would be producing from the Lower Green River - Wasatch Formation and that only one (1) producing well would be located with a 160-acre quarter section.
 - b) Any information obtained during the drilling of the Boren 3-11A2 Well that will assist in determining the gas-producing interval in the Boren 2-11A2 Well should be promptly submitted to the Division.

3. The Boren 3-11A2 Well was spudded on September 12, 1987, drilled to a total depth of 14,600 feet, and was completed in the Lower Green River - Wasatch Formation from 13,274 feet to 13,854 feet on April 10, 1988. The appropriate testing, coring, and logging of the Upper Green River Formation was performed while drilling the interval from approximately 6,500 feet to 9,000 feet and a thorough analysis of the information obtained was completed by Pennzoil.
4. The analyses of the information obtained during the drilling of the Boren 3-11A2 indicates:
 - a) The Upper Green River interval above 6,990 feet in the well is gas prone, based on the mud log analysis,
 - b) The interval 6,528 feet - 7,135 feet, which was selectively cored, demonstrates porosity and fracture-induced permeability conducive to gas transmission through the reservoir rock,
 - c) Analysis of extrapolated pressure data indicates depletion has occurred in the interval of DST Nos. 3, 4, and 5 (6,653 feet - 7,135 feet), and
 - d) Fracture analysis indicates vertical, northwest/southeast-oriented fractures within the Upper Green River Formation.
5. General conclusions of Pennzoil after review of surrounding wells in the area indicates:
 - a) Based on structural interpretation, an area consisting of 21 sections demonstrates potential for producing gas from the Upper Green River Formation, and
 - b) Twelve wells have produced or have tested hydrocarbons from the Upper Green River Formation interval comparable to the possible gas-producing interval in the Boren 2-11A2.
6. Comparison by various gas analysis procedures of the gas recovered during drillstem testing operations, particularly DST No. 2 and DST No. 3, on the Boren 3-11A2 Well and the gas produced from the Boren 2-11A2 Well indicates similarities.

7. Based on the information obtained while drilling the Boren 3-11A2 and the subsequent analysis, it appears that gas produced from the Boren 2-11A2 was produced from an interval stratigraphically equivalent to the interval of 6,553 feet - 7,135 feet in the Boren 3-11A2.
8. No over-pressured zones or zones capable of producing gas at flow rates similar to that experienced in the Boren 2-11A2 gas blowout were evident in the Boren 3-11A2 or in the surrounding wells.
9. The Pennzoil Boren 2-11A2 Well has produced a significant amount of gas since the blowout occurred in May, 1987. The well is presently unable to produce gas, and Pennzoil is proposing to plug and abandon the well.
10. The modified plugging and abandonment program, which is agreeable to the Pennzoil representatives and the Division staff, is appropriate and adequate to safely plug the Boren 2-11A2 Well.

CONCLUSIONS OF LAW

1. Due and regular notice of the time, place, and purpose of the hearing was given to all interested parties as required by law and the rules of the Board.
2. The Board has jurisdiction over the matter covered by the Notice of hearing and of the parties interested therein, and jurisdiction to promulgate an order in the matter.
3. The Board Order in Cause No. 139-42 permitting (a) the drilling of additional wells on existing drilling units and (b) the simultaneous production of initial wells and additional wells will prevent waste of hydrocarbons, prevent the drilling of unnecessary wells, and protect correlative rights.
4. The Board is authorized to promulgate an order to protect human health, safety, and environmental quality and to encourage resource recovery and conservation.

The Board having considered the Findings of Fact and Conclusions of Law and the testimony, statements and exhibits received at the hearing and being fully advised in the premises, now makes and enters the following order:

ORDER

1. The Boren 3-11A2 Well, operated by Pennzoil, should be operated as a well producing from the Lower Green River - Wasatch Formation within the drilling unit comprising all of Section 11, Township 1 South, Range 2 West, U.S.M., Duchesne County, Utah.
2. The modified plugging and abandonment program submitted by Pennzoil for the Boren 2-11A2 Well is approved.

January 14, 1989

STATE OF UTAH
BOARD OF OIL, GAS AND MINING


Gregory P. Williams, Chairman