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*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

W. THOMAS KELLAHIN*

June 25, 2001

Mr. Michael E. Stogner, Hearing Examiner Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

Re: NMOCD Case No. 12651

HAND DELIVERED

Application of Burlington Resources Oil & Gas Inc. for Fruitland Coal-Gas Pilot Project and unorthodox well locations, San Juan and Rio Arriba, New Mexico

Dear Mr. Stogner:

cc:

On behalf of Burlington Resources Oil & Gas Inc., please find enclosed a proposed order for entry in the referenced case heard on May 17, 2001.

I have also enclosed a wordperfect 5.1 diskette which contains a copy of the draft order.

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Burlington Resources Oil & Gas Inc. Attn: Alan Alexander

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE	NO.	12651
Order	No.	

APPLICATION OF BURLINGTON RESOURCES
OIL & GAS COMPANY FOR UNORTHODOX WELL
LOCATIONS AND AN EXCEPTION FROM RULE 4
OF THE SPECIAL RULES AND REGULATIONS
FOR THE BASIN FRUITLAND COAL GAS POOL,
RIO ARRIBA AND SAN JUAN COUNTIES, NEW MEXICO

BURLINGTON RESOURCES OIL & GAS COMPANY'S PROPOSED ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 17, 2001 at Santa Fe, New Mexico, before Examiner Michael E. Stogner

NOW, on this __day of June, 2001, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

- (2) Burlington Resources Oil & Gas Company ("Burlington") has applied to the Division for approval of a Pilot Project including unorthodox well locations and an exception from Rule 4 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool ("the Pool") for purposes of establishing a pilot infill drilling program to determine proper well density for coal-gas wells, Rio Arriba and San Juan Counties, New Mexico. Applicant seeks approval for a pilot program including an exception from the Special Rule and Regulations for the Basin-Fruitland Coal Gas Pool and authorization to drill wells at unorthodox and/or off pattern locations.
- (3) The Bureau of Land Management, BP Amoco, Williams Producing and Cross Timbers appeared in support of granting this application and no interested person has appeared in opposition to approval of this application.
- (4) Burlington proposes to drill and operate the following test wells at unorthodox ("off pattern") locations as part of its study of the appropriate well density for the Basin Fruitland Coal Gas Pool:

San Juan 28-6 Unit Well No. 418S 1065 feet from the north line and 1830 feet from the west line Unit C, "infill" well, W/2 Section 28, T28N, R6W

Turner Federal Well No. 210S
665 feet from the north line and 980 feet from the west line
Unit D, "infill" well, N/2 Section 13, T30N, R10W

San Juan 28-5 Unit Well No. 201S
1980 feet from the north line and 2630 feet from the west line
Unit F, "infill well" N/2 Section 15, T28N, R5W

Davis Well 505S
2420 feet from the south line and 660 feet from the east line
Unit I, E/2 of Irregular Section 12, T31N, R12W

In addition, Burlington will drill the following test well at a standard location as follows:

Huerfano Unit Well No. 258S
1190 feet from the north line and 840 feet from the east line
Unit A, E/2 Section 36, T27N, R10W

(5) The Basin Fruitland Coal Gas Pool Rules provide, in part, that:

Rule 4: 320 acre spacing units with a provision for an exception from Rule 4 to allow the drilling of a second well on a standard 320-acre unit after notice and hearing.

Rule 7: wells in the pool "shall be located in the NE/4 or SW/4 of a single governmental section and shall be located not closer than 660 feet to any outer boundary of a proration unit nor closer than 10 feet to any interior quarter or quarter-quarter line or subdivision inner boundary."

- (6) On July 16, 1991, the Division entered Order R-8768-A which found that:
 - "(9) The results of the reservoir simulation study generally establish that one well in the subject pool can effectively drain and develop 320 acres."
 - "(10) The results of the study further indicate however that there may be certain areas within the basin where reservoir parameters such as porosity, permeability, coal thickness, pressure, gas content, sorption isotherm and initial gas/water saturation may exist in certain combinations such that infill drilling may be required to increase gas recovery."
- (7) Burlington presented land evidence which demonstrated that:
- (a) since the original spacing order was established in 1988 and amended in 1991, production from the Pool has matured considerably;
- (b) beginning in 1999, the Aztec District Office of the Division (Aztec-OCD) formed the Fruitland Coal Gas Committee ("FCGC") composed of representatives of the Bureau of Land Management ("BLM"), Burlington and other operators to discuss well density for the Pool;
- (c) by April, 2001, FCGC had met some ten times and agreed it was timely for Burlington to proceed with its proposed pilot project;

- (d) for each of its pilot project wells, Burlington demonstrated that they had sent notice to all appropriate parties being affected and that none of the parties had objected to the project, the well locations, or the increase in well density.
- (8) Burlington presented geologic and petroleum engineering evidence which demonstrated that:
 - (a) the Pool can be subdivided into an over-pressured area ("Fairway") and an under-pressured area ("UPE");
 - (b) the cumulative production from the Pool has served to highlight the sharp contrast in producing characteristics from coals located within the Fairway and those in the UPE;
 - (c) Burlington believes wells in the Fairway appear to be draining 320-acres under existing well density of one well per GPU while wells in the UPE appear not to be adequately developed on that density.
 - (d) most of the reservoir engineering and simulation data evaluated in the original pool rule cases was based upon wells in the Cedar Hills portion of the Fairway;
 - (e) currently available data in the UPE is not adequate from which to determine if conventional calculations of original gas in place are correct and therefore more wells need to be drilled in the UPE or whether those reserves are substantially overestimated and current density is adequate.
 - (f) approval of the pilot wells will afford an opportunity to gather the additional data and to further calibrate reservoir simulation models.
 - (g) the purpose of the project will be to drill, complete and produce for a period of 180 days certain wells in a manner similar to surrounding coal-gas wells in order to adequately determined potential production difference between the different coal seams encountered in the pilot wells.
 - (h) the stratigraphic complexity and grouping relationships observed in each pilot area will dictate the number of layers that are tested and ultimately modeled separately for coal quality, isotherm development,

Case 12651
Order No. R
-Page 5

current levels of depletion, gas content and productive potential.

- (i) there is a need for layered pressure which cannot be obtained from existing wellbores.
- (j) Burlington proposes that the pilot project would consists of five different areas in the UPE of the Pool with each area to have one new pilot well;
- (k) four of the five pilot wells will be "off-pattern" in that they will be located either in the NW/4 or the SE/4 of the section.
- (l) in each instance, the off-pattern location was justified as being reasonable for purposes of gathering data for purposes of further calibrating its reservoir simulation of these five areas:
- (m) reservoir simulation is necessary in order to satisfy Findings (6) and (7) of Order R-8768-A;

(9) The Division FINDS that:

- (a) in order to determine proper well density in the underpressured area of the Basin Fruitland Coal-Gas Pool, there is a need to obtain additional data;
- (b) it should approve Burlington's plan to initiate a pilot program for the drilling of additional Basin-Fruitland Coal Gas Pool wells to provide data for reservoir engineering and geologic studies for the purposes of determining the proper well density;
- (c) it should approve the initial pilot project wells as second wells on a GPU and four are to be located at unorthodox gas well locations ("off pattern locations") so that the pilot wells are in portions of the reservoir which will provide the necessary well density data;
- (d) copies of this application have been sent to all appropriate parties as required by the Division notice rules (Rule 1207) and Rule 4 of the Basin-Fruitland Coal Gas Pool Rules;

Case 12651
Order No. R
-Page 6-

- (e) no parties objected.
- (f) approval of this application is in the best interests of conservation, the prevention of waste and the protection of correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) As an exception to the "SPECIAL RULES AND REGULATIONS FOR THE BASIN FRUITLAND COAL-GAS POOL" the applicant, Burlington Resources Oil & Gas Company is hereby authorized to conduct a pilot infill drilling program within San Juan and Rio Arriba Counties, New Mexico and to drill and operate the following test wells at unorthodox ("off pattern") locations as part of its study of the appropriate well density for the Basin Fruitland Coal Gas Pool:

San Juan 28-6 Unit Well No. 418S 1065 feet from the north line and 1830 feet from the west line Unit C, "infill" well, W/2 Section 28, T28N, R6W

Turner Federal Well No. 210S
665 feet from the north line and 980 feet from the west line
Unit D, "infill" well, N/2 Section 13, T30N, R10W

San Juan 28-5 Unit Well No. 201S 1980 feet from the north line and 2630 feet from the west line Unit F, N/2 Section 15, T28N, R5W

Davis Well 505S 2420 feet from the south line and 660 feet from the east line Unit I, E/2 of Irregular Section 12, T31N, R12W

In addition, Burlington is authorized to drill the following test well at a standard location as follows:

Huerfano Unit Well No. 258S 1190 feet from the north line and 840 feet from the east line Unit A, E/2 Section 36, T27N, R10W

Case 12651
Order No. R
-Page 7-

- (2) Burlington is authorized to produce each of the pilot wells for 180 days of production. Thereafter the wells shall be shut-in pending further order by the Division.
- (3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

LORI WROTENBERY, DIRECTOR