Entered Johnary 23, 1967 Ce J.P.

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. 3527 Order No. R-3197

APPLICATION OF EL PASO NATURAL GAS COMPANY FOR AUTHORITY TO DRILL AND TO DIRECTIONALLY DRILL SEVERAL WELLS AT UNSPECIFIED UNORTHO-DOX LOCATIONS AND TO PRODUCE THEREFROM AND VENT NATURAL GAS IN CONJUNCTION WITH "PROJECT GASBUGGY," RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 15, 1967, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this <u>23rd</u> day of February, 1967, 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 the applicant, El Paso Natural Gas Company, seeks authority to drill several wells at unspecified unorthodox locations in the SW/4 of Section 36, Township 29 North, Range 4 West, NMPM, Choza Mesa-Pictured Cliffs Gas Pool, Rio Arriba County, New Mexico, for testing, instrumentation, and the detonation of a nuclear explosive to determine the feasibility of increasing the recovery of natural gas from low permeability reservoirs.

(3) That the aforesaid effort to determine the feasibility of increasing the recovery of natural gas from low permeability reservoirs by means of nuclear detonation is to be conducted by -2-CASE No. 3527 Order No. R-3197

the applicant in cooperation with the United States Atomic Energy Commission, the United States Bureau of Mines, and the Lawrence Radiation Laboratory of the University of California and is designated "Project Gasbuggy."

(4) That the applicant also seeks authority to produce and flare natural gas both before the detonation and afterward, as required, to establish producing characteristics of the formation at the test site and to otherwise properly evaluate the test.

(5) That the applicant further seeks the establishment of an administrative procedure for approval of the location of such wells as may be required at unorthodox locations and to directionally drill said wells as and when the applicant is able to determine the number of wells, the unorthodox locations, and the directional drilling that will be necessary to properly conduct "Project Gasbuggy."

(6) That the applicant proposes to drill a well or wells in the SW/4 of said Section 36 prior to any detonation of a nuclear explosive in order to conduct extensive coring and logging operations to determine the acceptability of the site for test purposes. The applicant also proposes to produce said wells and to flare said production in order to establish the exact producing characteristics of the formation.

(7) That the applicant proposes to drill an emplacement well within the SW/4 of said Section 36 at a site yet to be selected and for the detonation of a nuclear explosive therein in the Pictured Cliffs formation at a depth of approximately 4200 feet, if the aforementioned test wells establish that satisfactory conditions exist for the conduction of a nuclear explosion and test.

(8) That after the aforementioned detonation, the applicant proposes to drill a reentry well, and other wells as may be necessary, for the purpose of producing gas from and determining the extent of the fractured area and to produce and flare gas from the fractured area under the supervision of governmental authorities until such time as appropriate governmental agencies including the United States Public Health Service determine that said gas complies with all health and safety requirements.

(9) That in order to properly conduct and evaluate the aforesaid test to determine the feasibility of increasing the recovery of natural gas from low permeability reservoirs by means of nuclear detonations, it will be necessary for an as yet unspecified number -3-CASE No. 3527 Order No. R-3197

of wells to be drilled and to be drilled at unorthodox locations, to flare a minimal amount of gas before and after detonation, and possibly to directionally drill some of said wells.

(10) That the above-mentioned test is in the interest of conservation of the natural resources of New Mexico and should provide invaluable information toward determining the feasibility of increasing the recovery of natural gas from low permeability reservoirs by means of nuclear detonations; that the drilling of said wells at unorthodox locations, directional drilling of said wells, and the flaring of a minimal amount of gas are necessary parts of such study and will not violate correlative rights and may well result in the recovery of large amounts of gas that would otherwise be unrecoverable thereby preventing waste.

(11) That an administrative procedure should be established whereby the applicant can receive authorization to drill a well or wells in the SW/4 of said Section 36 at unorthodox locations and to directionally drill said wells if necessary when the applicant has determined the location or locations to be drilled and the necessity for and the manner of directionally drilling said wells.

IT IS THEREFORE ORDERED:

(1) That the applicant, El Paso Natural Gas Company, is hereby authorized to drill an unspecified number of wells in the SW/4 of Section 36, Township 29 North, Range 4 West, NMPM, Choza Mesa-Pictured Cliffs Gas Pool, Rio Arriba County, New Mexico, to drill said wells at unorthodox locations in said SW/4, and to directionally drill said wells if necessary;

<u>PROVIDED HOWEVER</u>, that the applicant shall apply to the Secretary-Director of the Commission for approval for each and every well to be drilled and shall apply to the Secretary-Director for approval for any directional drilling to be done and shall receive approval from the Secretary-Director for said wells to be drilled and for said directional drilling;

<u>PROVIDED FURTHER</u>, that should any of the aforementioned wells be directionally drilled, a directional survey shall be made of the well and a copy of the survey report filed with the Santa Fe Office of the Commission, Box 2088, Santa Fe, New Mexico.

(2) That Form C-105 shall be filed in accordance with Commission Rule 1105 and the operator shall indicate thereon true vertical depths in addition to measured depths. -4-CASE No. 3527 Order No. R-3197

(3) That the applicant is hereby authorized to produce and flare from wells drilled in the SW/4 of Section 36, Township 29 North, Range 4 West, NMPM, Choza Mesa-Pictured Cliffs Gas Pool, Rio Arriba County, New Mexico, in conjunction with "Project Gasbuggy" that amount of gas necessary to establish producing characteristics of the formations at the test site and to otherwise properly conduct and evaluate the test.

(4) 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 DAVID F. CARGO. Chai man S Ъ HAYS Memb GUYTON B aur / L. PORTER, Jr., Member & Secretary Α.

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