

Entered June 14, 1977
JDR

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. 5923
Order No. R-5457

APPLICATION OF EL PASO NATURAL
GAS COMPANY FOR UNDERGROUND GAS
STORAGE, SAN JUAN COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 11, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 14th day of June, 1977, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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, proposes the establishment of an underground gas storage project in San Juan County, New Mexico, and La Plata County, Colorado, to be known as the Barker Dome Gas Storage Project.

(3) That the applicant has conducted geological and engineering studies to confirm the existence and areal extent of a geological structure underlying all or portions of Sections 1, 2, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, and 24, Township 32 North, Range 13 1/2 West, NMPM, and Sections 13, 23, and 24, Township 32 North, Range 14 West, NMPM, La Plata County, Colorado, and all or portions of Sections 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 27, 28, 29, 30, and 32, Township 32 North, Range 14 West, NMPM, San Juan County, New Mexico, and to determine the suitability of said structure for the underground storage of natural gas.

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(4) That gas storage within said structure would be in the Dakota formation immediately beneath the Graneros Shale and down to the shales overlying the Morrison formation.

(5) That the aforesaid vertical interval from the base of the Graneros Shale down to the top of the shales overlying the Morrison formation beneath the following described lands:

SAN JUAN COUNTY, NEW MEXICO
TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM
Partial Sections 9, 10, and 11: All
Sections 14 through 16: All
Section 17: E/2
Sections 20 through 22: All
Section 23: NW/4
Section 27: NW/4
Section 28: N/2
Section 29: All

is a gas reservoir in New Mexico, having been designated by the Commission as the Barker Dome-Dakota Gas Pool by Commission Order No. R-13, dated March 15, 1950.

(6) That said Barker Dome-Dakota Gas Pool is essentially depleted of native natural gas.

(7) That the applicant, El Paso Natural Gas Company, has acquired the rights to the remaining gas in said Barker Dome-Dakota Gas Pool, and to the use of the above-described structure underlying the lands described in Finding No. (3) above for gas storage purposes.

(8) That the applicant proposes to re-enter all existing wells penetrating the proposed gas storage project and to plug or re-plug the same in order to ensure that there will be no leakage of gas from its proposed gas storage project.

(9) That the applicant proposes to drill and complete some 30 injection/withdrawal wells in the proposed gas storage project, of which 27 would be located in the State of New Mexico and three would be located in the State of Colorado.

(10) That the applicant also proposes to drill and complete some nine observation wells on the outer flanks of the gas storage structure to permit the detection of any migration away from the project of gas placed in storage, five of which would be located in the State of New Mexico and four of which would be located in the State of Colorado.

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(11) That the location of the injection/withdrawal wells and the observation wells to be drilled in New Mexico is proposed as follows:

WELL NO.	LOCATION	SECTION
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Injection/Withdrawal Wells

WI 01	2525' from North line, 1689' from East line	21
WI 02	1608' from South line, 1630' from East line	21
WI 03	2184' from South line, 670' from East line	21
WI 04	824' from North line, 843' from East line	21
WI 05	1103' from North line, 1965' from East line	21
WI 06	880' from North line, 1555' from West line	21
WI 07	102' from North line, 1594' from East line	21
WI 08	877' from South line, 602' from West line	15
WI 09	2144' from North line, 894' from West line	15
WI 10	2137' from North line, 714' from East line	16
WI 11	670' from North line, 689' from West line	22
WI 12	2004' from North line, 747' from West line	22
WI 13	2485' from North line, 1994' from West line	21
WI 14	440' from South line, 2448' from West line	16
WI 15	68' from South line, 2273' from West line	15
WI 16	1571' from South line, 1540' from East line	15
WI 17	619' from North line, 938' from West line	15
WI 18	1001' from North line, 812' from East line	15
WI 19	610' from South line, 2113' from West line	10
WI 21	2268' from North line, 75' from West line	21
WI 22	656' from South line, 2192' from West line	21
WI 23	1700' from South line, 817' from East line	16
WI 24	2015' from North line, 2459' from East line	15
WI 25	892' from North line, 2228' from West line	15
WI 26	646' from South line, 1269' from West line	10
WI 27	989' from North line, 1491' from East line	10
WI 28	601' from South line, 133' from West line	11

Observation Wells

"O" 31	889' from North line, 1771' from East line	29
"O" 33	389' from North line, 715' from West line	27
"O" 34	960' from South line, 323' from East line	29
"O" 35	976' from South line, 1490' from West line	17
"O" 39	1353' from North line, 829' from West line	23

all in Township 32 North, Range 14 West, NMPM, San Juan County, New Mexico.

(12) That the applicant proposes to drill and complete the aforesaid injection/withdrawal wells as follows:

- (A) Set 9 5/8-inch surface casing approximately 40 feet into the Mancos Shale and circulate cement to the surface;
- (B) Drill approximately 125 feet into the Dakota Sand with air or gas;
- (C) Set 7-inch casing into the top of the Dakota Sand and cement to approximately 400 feet above the casing shoe;
- (D) Land 2 3/8-inch tubing 10 to 15 feet off the bottom of the hole.

(13) That the applicant proposes to drill and complete the aforesaid observation wells as follows:

- (A) Set 7-inch surface casing approximately 40 feet into the Mancos shale and circulate cement to the surface;
- (B) Drill approximately 125 feet into the Dakota sand;
- (C) Set 4 1/2-inch casing at total depth and cement to approximately 400 feet above the casing shoe;
- (D) Perforate the casing opposite the Dakota Sand.

(14) That the above casing and cementing programs are adequate and should afford ample protection against loss of gas while being injected, withdrawn, or held in storage, and will provide good and sufficient protection against contamination of ground waters.

(15) That the proposed El Paso Natural Gas Company Barker Dome Gas Storage Project is in the interest of conservation, will not cause waste, and will not impair correlative rights, and should be approved, provided

- (A) That the area described in Finding No. (5) above as well as the following described buffer zone

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TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM

Partial Section 7: E/2
Partial Section 8: All
Section 17: W/2
Section 18: E/2
Section 19: E/2
Section 23: NE/4 and S/2
Section 28: S/2
Section 30: N/2 and E/2 SE/4
Section 32: N/2 N/2

should be designated as the New Mexico portion of the gas storage Project Area;

- (B) That the Commission's rules and regulations governing well locations, acreage dedication, and the production of natural gas from gas reservoirs should not be applicable to the project;
- (C) That an administrative procedure for approval of amended locations for injection/withdrawal wells and observation wells or for the drilling of additional wells should be established;
- (D) That the applicant should file injection/withdrawal reports monthly with the Commission.

IT IS THEREFORE ORDERED:

(1) That the applicant herein, El Paso Natural Gas Company, is hereby authorized to establish its Barker Dome Gas Storage Project by the injection into and withdrawal from the Dakota Sand of natural gas in the following described area in San Juan County, New Mexico:

TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM

Partial Section 7: E/2
Partial Sections 8 thru 11: All
Sections 14 thru 17: All
Section 18: E/2
Section 19: E/2
Sections 20 thru 23: All
Section 27: NW/4
Sections 28 and 29: All
Section 30: N/2 and E/2 SE/4
Section 32: N/2 N/2

(2) That said area shall be known as the New Mexico Portion of the El Paso Natural Gas Company Barker Dome Gas Storage Project Area.

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(3) That the applicant is hereby authorized to drill, complete, and operate the following described wells as injection/withdrawal wells:

WELL NO.	LOCATION	SECTION
WI 01	2525' from North line, 1689' from East line	21
WI 02	1608' from South line, 1630' from East line	21
WI 03	2184' from South line, 670' from East line	21
WI 04	824' from North line, 843' from East line	21
WI 05	1103' from North line, 1965' from East line	21
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WI 27	989' from North line, 1491' from East line	10
WI 28	601' from South line, 133' from West line	11

all in Township 32 North, Range 14 West, NMPM, San Juan County, New Mexico.

(4) That the applicant is hereby authorized to drill, complete and operate the following described wells as observation wells:

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WELL NO.	LOCATION	SECTION
"O" 31	889' from North line, 1771' from East line	29
"O" 33	389' from North line, 715' from West line	27
"O" 34	960' from South line, 323' from East line	29
"O" 35	976' from South line, 1490' from West line	17
"O" 39	1353' from North line, 829' from West line	23

all in Township 32 North, Range 14 West, NMPM, San Juan County, New Mexico.

(5) That should topographic or geologic conditions render any well location described in Orders Nos. (3) and (4) above less advisable than an alternative location, or if any additional injection/withdrawal well or observation well is deemed necessary, the applicant shall notify the Secretary-Director of the Commission of such fact by letter, and shall by copies thereof also notify the Aztec District Office of the Commission and the Durango, Colorado, Office of the United States Geological Survey.

(6) That the Rules and Regulations of the Commission pertaining to gas well locations, acreage dedication, and normal gas production practices shall not apply to the subject gas storage project so long as waste does not result from such inapplication.

(7) That the applicant shall file a monthly report covering operations of the subject gas storage project, said report to be on a form prescribed by the Commission and filed in duplicate by the 20th day of each month and detailing the operations of the project during the preceding month. One copy of the report shall be filed with the Santa Fe office of the Commission and one copy with the Aztec office.

(8) That the applicant shall notify the Commission immediately of any evidence of leakage of gas from the gas storage project, or of any evidence of contamination of ground waters as the result of operations in the gas storage project.

(9) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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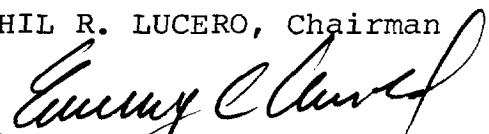
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DONE at Santa Fe, New Mexico, on the day and year
hereinabove designated.

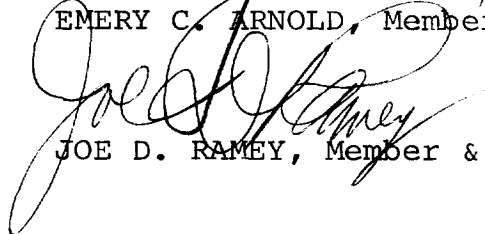
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



PHIL R. LUCERO, Chairman



EMERY C. ARNOLD, Member



JOE D. RAMEY, Member & Secretary

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