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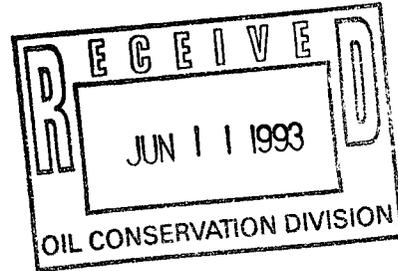
SANTA FE, NEW MEXICO 87501

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June 11, 1993

William J. LeMay
Director
New Mexico Oil Conservation Division
State Land Office Building
Santa Fe, N.M. 87501



HAND DELIVERED

Re: Application of Pronghorn SWD System
for Salt Water Disposal, Lea County
New Mexico Case No. 10,693

Dear Mr. LeMay:

I enclose the Applicant's Proposed Order and Brief in Support of Proposed Order in connection with the above case.

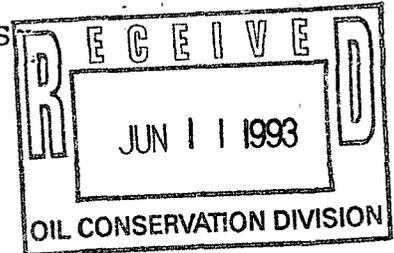
Sincerely,

A handwritten signature in cursive script that reads "Karen Aubrey".

Karen Aubrey

ka/hg
enclosures
xc: Larry Scott
Michael Wallace

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS
OIL CONSERVATION DIVISION



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

CASE NO. 10693

ORDER NO. _____

APPLICATION OF PRONGHORN SWD SYSTEM
FOR SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO,

PROPOSED ORDER SUBMITTED BY
PRONGHORN SWD SYSTEM

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 6 and 7, 1993, at Santa Fe, New Mexico, before Examiner Michael Stogner.

NOW, on this ___ day of _____, 1993, 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) The applicant, Pronghorn SWD System, seeks authority to recomplete the Brooks Federal 7' No. 6 Well, located in Unit N, Section 7, Township 20S, Range 33E, Lea County, New Mexico as a salt water disposal well and to dispose of produced salt water in the perforated interval from 3220 to 5050 feet in the Capitan Reef formation.

(3) The applicant proposes to inject up to 10,000 barrels of water per day into the proposed disposal well. The source of the injected fluid is primarily Delaware formation water produced in conjunction with oil and gas operations.

(4) The applicant presented the testimony of Larry Scott, who was qualified as an expert in petroleum engineering, and the testimony of Michael Wallace, who was qualified as an expert in hydrology.

(5) The New Mexico Oil Conservation Division (hereafter "NMOCD") entered its appearance through its attorney Robert Stovall, in association with Susan Kery, attorney for the New Mexico State Engineer's office.

(6) The NMOCD presented the testimony of David Catanach, a Division Examiner, and Tom Morrison, Head of Hydrology for the New Mexico State Engineer's Office.

(7) The New Mexico State Engineer's Office (hereinafter "SEO") did not enter an appearance in this case, and is not a party.

(8) Michael Wallace (hereinafter "Wallace") testified that he created a computer model of the proposed injection in order to predict whether or not the proposed injection would have an effect on fresh water sources within the Capitan Reef.

(9) Wallace identified two areas of fresh water in the Reef: the Pecos River, and an area to the southeast of the proposed injection well (hereinafter "the Southeast area").

(10) Fresh water is defined as "all underground waters in the State of New Mexico containing 10,000 milligrams/liter or less of dissolved solids are hereby designated by the State Engineer pursuant to Section 70-2-12-B.(15) NMSA, 1078; except that this designation shall not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination."

(11) In creating his model, Wallace made the following major assumptions:

(a) It is assumed that the Capitan, within the model domain, does not dip to the east but rather lays flat. It is also assumed that the Capitan has a constant vertical thickness of 1,000 feet and a constant width of 10.25 miles.

(b) It is assumed that the Capitan is surrounded by impermeable boundaries both above and below and to the north and the south.

(c) It is assumed that the Pecos River fully penetrates the Capitan at the west end of the model. It is also assumed that the Pecos is "fresh" having a TDS concentration of 0.0 ppm.

(d) It is assumed that a constant pressure boundary delimits the eastern end of the model.

(e) It is assumed that the Capitan is homogeneous and isotropic, that it has a constant hydraulic conductivity of 5 ft per day and a constant porosity of 0.18. A constant longitudinal dispersivity of 100 meters is also assumed, along with a constant transverse dispersivity of 10 meters. The coefficient of molecular

diffusion is assumed to be $5 * 10^{-10}/m^2/sec.$

(f) It is assumed that an initial distribution of brine exists in the model domain, patterned after the TDS contour map contained in Applicant's Exhibit 8, titled "Ground-Water Quality of the Capitan Reef". Because the model is 2-dimensional-areal, the brine concentrations assigned are constant through the model thickness, and only vary with horizontal location. No additional sources of brine throughout time are present in the model, except at the proposed injection position.

(g) A constant source at the injection point is assumed, with an injection rate of 12,500 bbls. per day of brine with a TDS concentration of 250,000 ppm, for a period of 50 years. The screened zone of the well is assumed to fully penetrate the Capitan.

(12) The assumptions made by Wallace are conservative assumptions.

(13) The assumptions made by Wallace are reasonable assumptions.

(14) The NMOCD does not challenge Wallace's assumptions.

(15) No scientific evidence contradicting Applicant's evidence was presented.

(16) The NMOCD does not question the validity of Applicant's model.

(17) The model created by Wallace shows that the plume of injected brine will not reach or have an impact upon either the Pecos River or the fresh water areas southeast of the proposed injection well (hereinafter "the Southeast area") within 1000 years at the proposed injection rate.

(18) Tom Morrison (hereinafer "Morrison") testified that the State Engineer's Office was "unable to render an opinion which quantifies the impacts due to the brine injection". TR. 244.

(19) Morrison testified that the State Engineer's office was "requested by the OCD to point out problems with the [Wallace] report". TR. 293.

(20) The SEO did not run applicant's model, even though it was provided with the software, input data, and offers of assistance.

(21) There is no practical hydrological connection between the proposed injection zone and any zone of fresh water.

(22) The San Andres formation is hydrologically connected to the Capitan Reef.

(23) Injection of brine into the San Andres formation has been ongoing for many years, at numerous sites which are located closer to the Southeast area than is the proposed injection site.

(24) The NMOCD and SEO were unable to quantify the degradation, if any, of the Reef from injection of brine into the San Andres formation.

(25) The Capitan formation is deeper than the Ogallala formation which contains fresh water.

(26) The most environmentally sound method of disposing of oil field wastes such as brine is injection into a safe disposal zone. TR. 218.

(27) The standards for approving or rejecting an application for disposal of salt water are contained in NMOCD Rule 701.

(28) Applicant's evidence meets the standards contained in NMOCD Rule 701.

(29) N.M.S.A. §70-2-12(B)(15)(1992 Cum. Supp.) requires that the NMOCD regulate produced water in a manner that affords reasonable protection against contamination of fresh water supplies designated by the State Engineer.

(30) The proposed injection affords reasonable protection against contamination of fresh water supplies designated by the State Engineer.

(31) The NMOCD presented no testimony or other evidence to show that the plume of injected brine would reach either the area of the Pecos River the Southeast area, or any other area of fresh water.

(32) The injection should be accomplished through 4 1/2 inch plastic coated tubing installed in a packer set at approximately 3170 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leaking in the casing, tubing, or packer.

(33) That the well should be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 1610 psi.

(34) That the Director of the Division should be authorized to administratively approve an increase in injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the injection interval.

(35) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the

installation of disposal equipment so that the same may be inspected.

(36) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(37) That approval of the subject application will prevent the drilling of unnecessary wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pronghorn SWD System is hereby authorized to utilize its Brooks Federal '7' Well No. 6, located 660 Feet from the South Line and 1926 Feet from the West Line, Section 7, Township 20S, Range 33 East, NNPM, Lea County, New Mexico, to dispose of produced salt water into the Capitan Reef formation, injection to be accomplished through 4 1/2 inch tubing installed in a packer set at approximately 3170 feet, with injection into the perforated interval from 3220 to 5050 feet.

PROVIDED, HOWEVER, that the tubing shall be plastic-coated; that the casing-tubing annulus shall be filled with an inert fluid, and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing or packer.

(2) That the injection well or system shall be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 1620 pounds psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the injection interval.

(4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or of the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall conduct disposal operations and submit monthly reports in accordance with Rules 702, 703, 704, 705, 706, 708, and 1120 of the Division's Rules and Regulations.

(7) That 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 hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY,
Director

S E A L

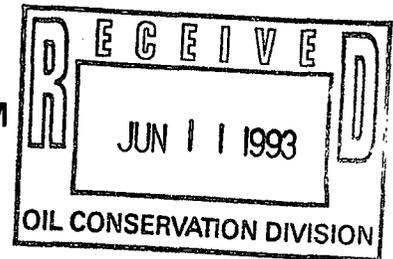
STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS
OIL CONSERVATION DIVISION

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

CASE NO. 10693
ORDER NO. _____

APPLICATION OF PRONGHORN SWD SYSTEM
FOR SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO,

BRIEF OF PRONGHORN SWD SYSTEM
IN SUPPORT OF PROPOSED ORDER



Applicant submits the following Brief on the legal issues involved in the presentation of its case, and in support of the Proposed Order submitted by it on June 11, 1993.

I. Burden of Proof

The applicant bears the burden of supporting its application by a preponderance of the evidence. Bender v. Clark, 744 F.2d 1424 (10th C. 1984); Matter of D'Angelo, 105 N.M. 391 (1986). In this case, the applicant presented scientific testimony by both its petroleum engineer, Larry Scott, and its expert hydrologist, Michael Wallace. No scientific evidence was presented by the other party, the New Mexico Oil Conservation Division.

The NMOCD attempted to counter the substantial, well-documented model presented by Mr. Wallace with the testimony of Tom Morrison, of the State Engineer's Office. However, Mr. Morrison, who refused to run the computer model provided to

fact that the NMOCD came to the hearing unprepared to dispute evidence that had been provided to it, and could only say, therefore, that the matter was uncertain, does not constitute evidence against the application.

Mr. Morrison best summarized the NMOCD's case when he said ". . . we are unable to render an opinion which quantifies the impacts due to the brine injection." TR. 244. The fact that the party opposing the application is unable to disprove the applicant's data does not mean that the applicant has failed to meet its burden of proof.

II. Standard of Proof

In its Prehearing Statement the NMOCD states:

In order to meet its responsibilities under the Oil and Gas Act and under Underground Injection Control regulations the Division must be certain that the proposed injection, and any other injection into the reef, will not adversely affect fresh water supplies, whether or not those supplies are being beneficially used at the present time.

Pre-hearing Statement of NMOCD, May 3, 1993, Page 2.

At the hearing, the NMOCD described the NMOCD's responsibility as:

. . . virtually absolute protection of the freshwater supplies that are contained within the Reef.

Transcript of Hearing, P. 10.

Both of these statements show that the NMOCD misunderstands its statutory duties under Federal and New Mexico law.

N.M.S.A. §70-2-12(B)(15) (1992 Cum. Supp.) requires that the NMOCD regulate disposition of produced waters in "a manner that will afford reasonable protection against contamination of fresh water supplies designated by the state engineer."

There is no mention in this statute of "certainty" or "virtually absolute protection". Only reasonable protection is required, and reasonable protection of fresh water is the standard set for the applicant by the Legislature.

Further, the definition of fresh water contained in SEO/OCD Exhibit C states;

". . . except that this designation shall not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination."

This definition is the exact opposite of the NMOCD's claim in its Prehearing Statement.

The Underground Injection Control regulations offered as an exhibit by the NMOCD at the hearing show that Federal law prohibits the movement of any contaminant into underground sources of drinking water. 40 C.F.R. §144.12. "Fresh water" and "drinking water" are not synonymous. TR.210.

NMOCD Exhibit 3 states that "...State regulations are correct in allowing injection below the base of the deepest existing underground source of drinking water." Neither the State Engineer nor the NMOCD presented any evidence of a zone of drinking water below the proposed injection zone.

Applicant cannot be held to a standard of protection of water that is higher than that set by law.

III. Due Process

On the Monday before the hearing, at 2:41 p.m., applicant was informed that the agency before which its application was to be heard was entering an appearance in its case. While Mr. Stovall's April 30, 1990 memorandum establishing the prehearing statement practice asks that a Prehearing statement be filed by 4:00 p.m.

on the Friday preceding the hearing, and while the NMOCD had asked for assistance from the State Engineer's office months before the hearing, Applicant was not notified in a timely fashion that an appearance would be entered. As Mr. Stovall stated in his 1990 memorandum: "By identifying the issues and evidence in advance, the examiners and the parties will be better prepared for the hearings." Apparently the NMOCD does not feel bound by its own practice in this regard.

At the hearing, the NMOCD was asked to state whether it supported or opposed the application. The NMOCD would only state that it "did not support" the application. While this statement might give an illusion of fairness or impartiality, the testimony at the hearing, both by the NMOCD Hearing Examiner David Catanach and State Engineer's Office Head of Hydrology Tom Morrison show that applicant's request was being opposed by the very agency charged, by law, with deciding the application.

Mr. Catanach offered his opinion that this matter was better approached on an area wide basis. TR. 208-209. Mr. Morrison testified that the State Engineer was asked to "point out the problems with the [Wallace] report." TR. 293. Mr. Morrison did not say that his agency was asked to make a fair and impartial analysis of the applicant's data. It is clear from the transcript of the hearing that the NMOCD had secretly structured an opposition to applicant's case, and had concealed that fact from applicant even through the opening remarks in the case.

During the testimony, it was discovered that the State Engineer had withheld public documents from applicant. Applicant had requested all reports or studies in the possession of the State Engineer which concerned the subject matter of the application. The State Engineer had knowledge of such a study, relied on it in its

report and testimony, but did not reveal its contents to applicant until the morning of the hearing.

Finally, Applicant finds itself in the unenviable position of asking for adjudicatory relief from its opponent. The attorney representing the opponent regularly sits as an advisor to the Examiner. It is understood that this attorney also reviews the draft orders prepared by the Examiner and the final orders prepared by the Director. The Examiner who heard the case, the Examiner who testified, and the attorney opposing applicant's case are all employed by the Division Director, the person designated by the Legislature to decide the case. N.M.S.A. §70-2-13(1987 Repl. Pam.); NMOCD Rule 1213 (3-1-91). One can imagine several ways in which this matter could have been handled by the NMOCD so that applicant's rights to due process of law were not impaired, and so that the presumption of integrity, fairness and honesty in agency adjudications could have been preserved. Wing Pawn Shop v. Taxation and Revenue Dept., 111 N.M. 735 (1991). Unfortunately, the NMOCD has chosen to proceed in a fashion which disregards due process of law.

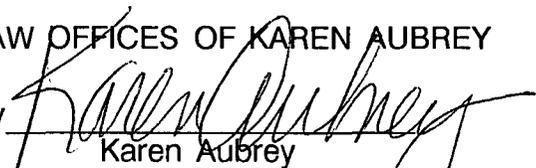
Applicant has the right to know which issues are to be adjudicated by the NMOCD. c.f. Wing Pawn Shop v. Taxation and Revenue Dept., *supra*. This hearing was not called as a rule-making proceeding for the establishment of disposal of produced brine into the Capitan Reef, but as an adjudicatory hearing for disposal by one applicant into one well. The distinction between adjudicatory and rule-making proceedings was recently discussed by the New Mexico Supreme Court in Uhden v. New Mexico Oil Conservation Comm'm., 112 N.M. 528 (1992). The NMOCD cannot turn an adjudicatory proceeding into a rule-making proceeding simply by announcing

at the beginning of the hearing that the case is "precedent-setting". TR.12. The rules and standards as they exist now are the ones that must govern this case, not the rules and standards which the NMOCD might like to adopt after a properly noticed rule making proceeding. To deny this application in favor of a determination on an "area-basis", TR. 203, as suggested by the NMOCD is to deny applicant its due process rights. The record shows that another application for disposal into the Reef was filed and denied, TR. 200, and that other inquiries have been made. If the Division wished to call a case for establishment of new rules and regulations, it possessed that power. N.M.S.A. §70-2-11. It has not done so, and having not done so, it must consider applicant's request under the Rules as they exist today.

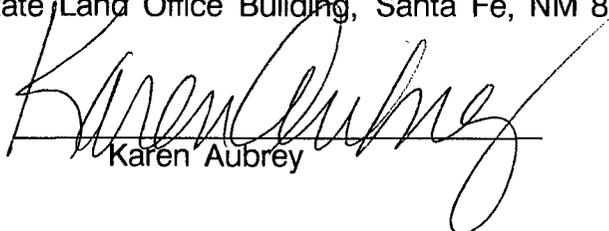
Only by granting the application can the NMOCD restore applicant's right to due process.

IV. Conclusion

The Application must be evaluated under the standards as set forth by the Legislature, not by any standard of certainty or absolute proof. Under the correct standard, applicant has shown by a preponderance of evidence that the application must be granted.

LAW OFFICES OF KAREN AUBREY
By 
Karen Aubrey
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I hereby certify that I hand delivered a copy of the foregoing Brief in Support of Proposed Order to opposing counsel of record, Robert Stovall, New Mexico Oil Conservation Division, State Land Office Building, Santa Fe, NM 87501 on June 11, 1993.


Karen Aubrey