



To: Citizens of District 1, Sandoval County
Fm: Dr. J.F. Holden-Rhodes, Commissioner, District 1
Sub: Protection and Preservation of Ground Water in Sandoval
County
29Nov17

Citizens of Sandoval County, District 1,

Purpose: The purpose of this paper is to address the issue of the protection and preservation of Ground Water in Sandoval County.

There is, at present, a proposed Ordinance dealing with the governance of potential Oil&Gas [O&G] operations in Sandoval County, awaiting a vote by the Sandoval County Commission.

Unfortunately—by deliberate design on the part of certain parties—emphasis has been placed on O&G, vice the real issue: the protection and preservation of Ground Water in Sandoval County.

This paper will address:

- 1.Charts dealing with the geological and hydrological make-up of Sandoval County;
- 2.Events to date that reflect upon the ongoing failure to address the protection and preservation of Ground Water in Sandoval County; and, efforts to “force feed” an O&G Ordinance of very questionable value on to the Citizens of Sandoval County, and,
- 3.Make recommendations with which to protect Sandoval County Ground Water....



Situation and Terrain

As a very young Lieutenant of Marines, my first active duty was spent at The Basic School, Marine Corps Schools, Quantico, Virginia. At TBS it was drilled into our heads that when contemplating a Strategy and supporting Tactics, there were two key elements to always consider: Situation and Terrain.

Today, those two elements are critical to understanding the issues germane to the protection and preservation of Ground Water in Sandoval County:

Situation: New Mexico is high desert country. Ground water has been, is, and will be a precious commodity. Period.

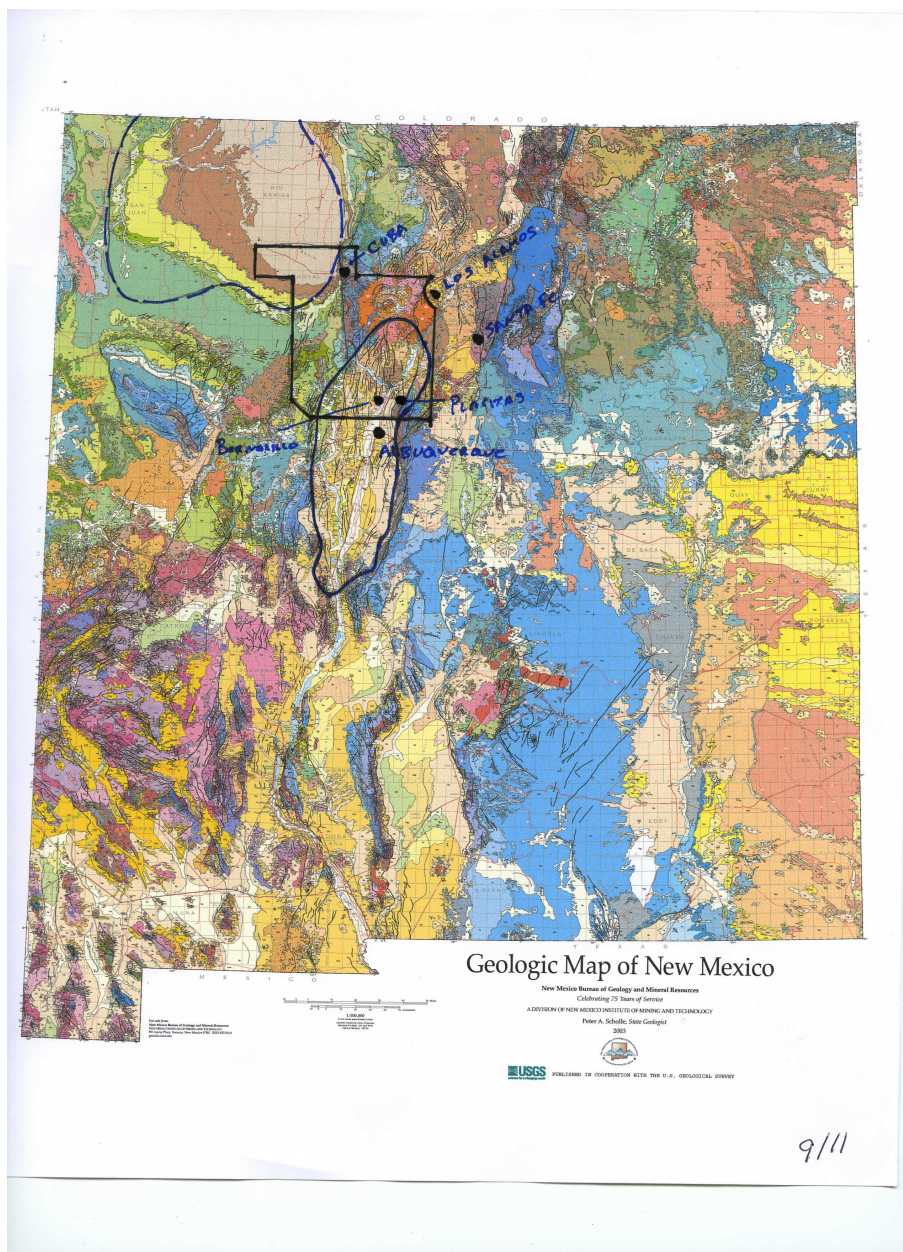
Terrain: The subterranean structure of New Mexico [please see Chart 1 below] can and does support oil and gas operations in the southeast corner of the state; and, in the northwest corner of the state. In northwest Sandoval County there are presently 526 wells [a mixture of operational and non-operational].

However, when one views a broad band extending from the East Mountain area—La Madera, Overlook, San Pedro Creek Estates— west to Placitas and then down to Bernalillo, Algodones, Santa Ana Pueblo, Sandia Pueblo and onward to Río Rancho, it is clear—even to the most benighted individual—that the sub-strata is decidedly different.

This band overrides the Albuquerque Basin. An aquifer that supports a third of the states population.



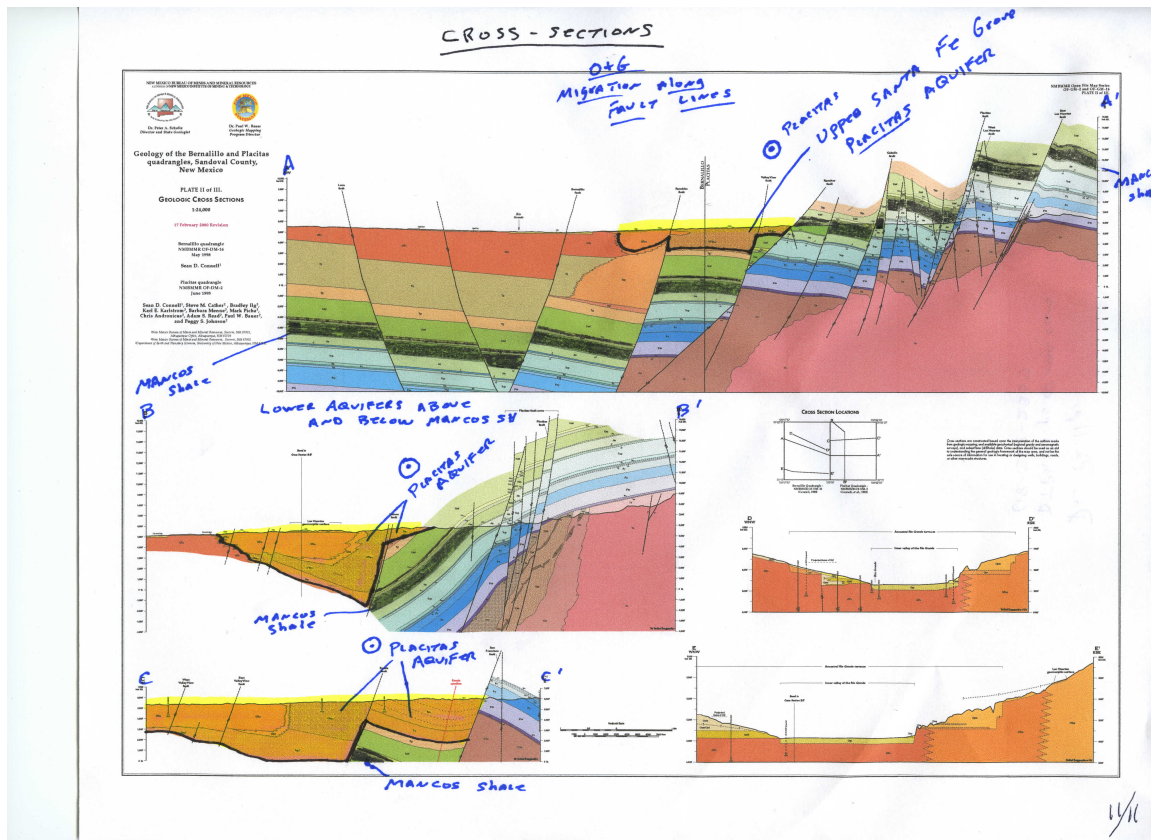
Chart 1



Going a step further, when one looks at a cross-section of that band, [please see Chart 2] one sees a subterranean setting that is totally different from the O&G production areas in the northwest and southeast corners of the state.



Chart 2



What is abundantly clear is that this area is heavily faulted and that the Mancos Shale—the locations of which O&G companies want to drill into—are in many cases actually in contact with the main drinking water aquifer[s].

Simply stated, the area in question—thanks to the complex nature of the faulting—will present a high degree of unpredictability of what may be encountered by oil and gas drilling.

Cutting to the chase it needs to be forcefully stated that any drilling in this area poses an extremely high risk for contamination of the drinking water aquifers.....



The Public Policy process dealing with the secondary issue of the life cycle of the proposed Oil&Gas Ordinance:

On 26Jun16, Sandoval County signed an agreement New Mexico Institute of Technology and Mining. The title of the document is:

Professional Services Agreement For On Demand Geological and Hydrological Services between Sandoval County and New Mexico Institute of Technology and Mining.

“WHEREAS, the COUNTY needs Geology and Mineral Resources Services regarding policy development....”, the document went on to list the key elements of the Scope of Work:

1. Provide geological information that contribute toward the development of public policy by the county;
2. Provide assistance to County in understanding and managing water resource issues, particularly focusing on water quantity and quality [my bold];
3. Review the geologic setting of proposed wells, producing wells, and transportation systems regarding oil and gas applications within the County.

On 17Jun17, the Director of Planning and Zoning, Sandoval County signed off on a document entitled:

Oil & Gas Resource Assessment of Sandoval County and Relationship of Potential Resources to Ground Water

In the Summary of this document it was noted that:



“Pertinent aspects of aquifers, including the distribution of aquifers prevalent in the county and depth to the base of the aquifer interval, will also be mapped in a reconnaissance manner. This in conjunction with projected depth to potentially productive oil and gas reservoirs, *will allow for assessment of the effect of oil and natural gas production on aquifers.* [my bold]

Also evaluated in this regard will be the effect of modern drilling and well completion techniques on oil and natural gas production and *potential effects of modern drilling and production technologies on aquifers.*” [my bold]

The Scope of Work noted that:

1. Pertinent aspects of aquifers, including the distribution of aquifers prevalent in the county and depth to the base of the aquifer interval, will also be mapped in a reconnaissance manner. This in conjunction with projected depth to potentially productive oil and gas reservoirs, will allow for assessment of the effect of oil and natural gas production on aquifers;
2. The final project report will include a thorough written report as well as maps and other figures that illustrate the variation in geologic **parameters relevant to oil and natural gas potential and to project-relevant aspects of aquifers.** [my bold].

In Delivery of work product it was noted that a “GIS project that has themes of data relevant to oil and gas resource assessment as a well as **project-relevant aquifer assessment.** [My bold]

Public Policy

“Public policy manifests the common sense and common conscience of the citizens as a whole that extends throughout the state and is applied to matters of public health, safety, and welfare. It is general, well-settled public



opinion relating to the duties of citizens to their fellow citizens. It imports something that fluctuates with the changing economic needs, social customs, and moral aspirations of the people. Public policy enters into, and influences, the enactment, execution, and interpretation of legislation. [My bold and underline] [I digress here and apologize for the foregoing definition of Public Policy. Try as a I might, the PhD in me creeps out from time to time and attempts to wax eloquent.]

Cutting to the chase:

In Public Policy, the common sense and common conscience of the citizen's are what the game is all about. If that is so, then to a highly vocal degree, the citizens of District 1 are opposed to the passage of the proposed O&G Ordinance. Clearly they understand that the central issue is the protection and preservation of ground water.

Reflecting on the almost total disdain expressed by "We, the People" towards the proposed ordinance, the question that must be answered is "...what public goals are being served by this proposed ordinance?"

Today

At the 16Nov17 Sandoval County Commission Meeting, discussion took place as to just what the NM Tech Study would involve.

P&Z Director Springfield stated that "The point of the study is to try to have New Mexico Tech review well log information and other types of information to give the county a better assessment of where the resources are in our county."

In a statement that brought the attendee's at the meeting to their feet, Chairman Chapman stated "It [the study] is not a report that is meant to be the basis for this ordinance." One has to wonder from whence came such statements.



How is it that the essence of the NM Tech Study—**Oil&Gas Resource Assessment of Sandoval County and the Relationship of Potential Resources to Ground Water**— suddenly disappeared.

A Motion to Table

Following those comments I made a Motion to table the proposed ordinance until such time as the NM Tech study was in hand and time to review it was completed. Commissioner Eichwald seconded the Motion. When put to a vote the Motion failed, 3-2.

It is beyond my ken—and obviously that of the Citizens of District 1— how anyone would even for a moment, consider foregoing the opportunity to receive and study the NM Tech Assessment, something for which the County is paying \$62, 009.97 .

Sandoval County Commission Meeting 14 Dec 17 & Recommendations

1.I will again make a Motion to table the proposed ordinance. I believe that it will receive a second. When put to a vote, I do not know the outcome;

2. In the interim, I am requesting that each and every District 1 Citizen contact— repeatedly— each of the other Commissioners and make their displeasure known and request a no vote on the proposed ordinance. [Please see telephone numbers below]

In closing ,I point out to each of you, once again:

“...it needs to be forcefully stated that any drilling in this area poses an extremely high risk for contamination of the drinking water aquifers.....

Semper Fidelis

H-R



District 2 Jay Block-252.6218

District 3 Chairman Don Chapman-414.6247

District 4 David Heil 252.6085

District 5 Ken Eichwald 252.7412