

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

**APPLICATION OF RILEY PERMIAN
OPERATING COMPANY LLC,
FOR A SALT WATER DISPOSAL WELL,
IN EDDY COUNTY, NEW MEXICO.**

CASE NO. 24279

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CLOSING ARGUMENT

For its closing argument, Riley Permian Operating Company, LLC (“Riley”), by and through its undersigned counsel, states:

Introduction.

The central issue between the parties is whether the Cisco formation will confine the injected produced water proposed to be injected by Riley. The dispute centers on whether produced water injected into the Cisco will migrate to the 3rd Bone Spring interval of the Bone Spring formation. Riley presented evidence that there is an impermeable shale barrier between the top of the Cisco formation and the Wolfcamp formation, which is non-productive in the area. The Wolfcamp is approximately 400 to 500 feet thick. There is no known oil and gas production in the Cisco and Wolfcamp formations in the area of the disposal zone.

Pertinent Riley Witness Testimony.

Reed Davis—seismicity expert.

Mr. Davis testified that the Cisco formation is well suited for injection because it is bounded by an upper and lower confining barrier layers which will prevent migration of injected

fluids. The Cisco formation is overlain by about 67 feet of low porosity carbonate rocks within the lower Wolfcamp formation which will prevent upward migration of injection fluid. The lower confining zone, composed of low porosity of about 24 feet will prevent migration of injected fluids into the Strawn formation.

Mr. Davis, relying on public available data from governmental agencies concluded that:

- The potential for injection induced seismicity is expected to be minimal assuming that injection pressure is maintained below formation parting pressure;
- His conclusion is based on numerous confining layers above and below the injection zone—which are present in this case; and,
- Significant vertical distance between the injection zone and Precambrian basement rock in which the nearest fault has been identified—which is according to geophysical logs from nearby wells is at least 6,795 feet of vertical separation.

Tom Tomastik--geologist:

Mr. Tomastik's testimony concerned Riley's investigation to:

- determine whether there were any existing or potential connections between the injection interval and the deepest underground source of drinking water and the wellbore design will isolate any fresh water sources;
- containment through multiple confining zones in the shale layer above the Cisco and the Wolfcamp formations;
- there is no known faulting that will cause communication of injected water and other producing formations.

Matador and Permian (both “Matador”) testimony.

Matador’s testimony relied on “concerns” and potential fracturing. Yet, their witnesses testified that a commercial salt water disposal into the Cisco has not fractured the Cisco to cause migration into the 3rd Bone Spring interval. Despite Matador’s concerns, Matador did not show:

- “provable causation” that there was a correlation between a commercial Cisco SWD and Matador’s Red Eagle 131 Bone Spring well;
- made no water analysis to show migration from the Cisco SWD well to its Red Eagle 131 Bone Spring well.

Matador drew an analogy to the Dagger Draw field, which had been in production for 30 to 40 years. That analogy could not quantify whether there had been induced faulting. Industry speculation about hydraulic fracturing or earthquakes from reinjection of produced water but failed to quantify or prove that earthquakes or slippage had occurred. Interestingly, Matador’s witness had not studied the Dagger Draw and did not know the history of the Dagger Draw, or the injection process. Testimony regarding the Dagger Draw was more speculation than fact—an erroneous analogy.

Matador’s reliance on structure mapping also does not prove that induced seismicity will occur. Matador’s witnesses did not have a notion of timing for a fracture failure, if it ever would occur. They essentially knew nothing about the commercial Cisco SWD well in the area. Speculation that an increase in the water cut in its Eagle 31 Bone Spring well proved nothing.

One of their witnesses, Mr. Parker, could not say whether any SWD wells should be allowed in this area of the applications. He preferred to let the OCD or Mr. Goetz decide whether

SWDs should be allowed. His term of “prone to failure” means it could and/or is likely slip and create an earthquake—NO PROOF OF THAT EITHER OTHER THAN CONJECTURE!

VF Petroleum Testimony.

VF Petroleum did not have any wells within the one-half mile circle nor in the two-mile circle of the maps in C-108. Its only well was a Morrow formation well outside of the two-mile circle that was drilled in 1977 and was producing about 12 MCF per day. VF Petroleum’s witness testified that there had been shows of oil in the Cisco, and perhaps, VF Petroleum might sometime recomplete in the Cisco, however, there were no plans for a recompletion.

This testimony was simply irrelevant and had no real bearing on the case. It should be discounted completely.

Conclusion.

- The fact that a commercial Cisco well has operated in the area for a considerable amount of time without seismic incident is conclusive evidence that Matador’s “concerns” and potential seismic events are speculative.
- The bottom and top confining layers of the Cisco will confine injected produced water in both proposed wells.
- There is no known production of oil and gas within the disposal zone in the Cisco and Wolfcamp formations.
- Approval of the applications will be in the best interest of conservation of oil and gas reserves, will prevent waste and protect correlative rights.

Respectfully submitted,

PADILLA LAW FIRM, P.A.
/s/ Ernest L. Padilla
Ernest L. Padilla
Post Office Box 2523
Santa Fe, New Mexico 87504
(505) 988-7577
padillalawnm@outlook.com

CERTIFICATE OF SERVICE

I hereby certify that on this 21st day of August, 2024, I served a copy of the foregoing pleading to the following counsel of record via Electronic Mail to:

Michael H. Feldewert	mfeldewert@hollandhart.com
Adam G. Rankin	agrarkin@hollandhart.com
Paula M. Vance	pmvance@hollandhart.com
Nathan R. Jurgensen	nrjurgensen@hollandhart.com
Dana S. Hardy	dhardy@hinklelawfirm.com
Jaclyn McLean	jmclean@hinklelawfirm.com

/s/ Ernest L. Padilla
Ernest L. Padilla