

Summary:

I offer an example from Colorado of the terrible impact of BLM's current bonding structure for oil/gas operators on public minerals. My county is home to 100s of 'zombie' oil wells on federal mineral/federal surface that are significantly past their economically useful life. The McCallum field in Jackson County was originally developed starting in the 1920s, seriously fragmenting and destroying high priority habitat for Greater Sage Grouse. The old vertical shallow oil wells are now owned by one operator (K P Kauffman). The 89 wells the remain in some level of operation are not generating nearly enough revenue to cover the costs of even the most basic safety and maintenance work. Current financial assurances rules incentivize operators like this to keep these zombie wells in limbo, delaying the expenditures for plugging and reclamation, often until bankruptcy puts the burden on tax payers. Meanwhile, these wells can continue to leak methane into the atmosphere with a global warming potential 84 times that of CO₂ over 20 years. We encourage you to direct the BLM to modify the financial incentives and triggers in their rules to require plugging and remediation of these low and non-producing wells. Without these reforms, K.P. Kauffman and others like them will continue to hold these wells hostage in false 'production' status, preventing BLM from achieving habitat restoration and managing the public lands they occupy for other values while the wells continue for the indefinite future to impact our environment and public health.

Introduction:

My name is Barbara Vasquez. After earning a Ph.D. in biochemistry, I pursued two distinct careers, basic biomedical research at the National Institutes of Health for 7 years followed by a transition to research and development leading to senior management positions in the semiconductor industry for 23 years in 4 different countries. As I approached retirement in 2005, I looked for a new home with more 4-footed than two-footed residents and discovered Jackson County, Colorado in the north central region of the state.

Jackson County is a rural county that is approximately 65% public lands, covers approximately 1600 square miles and is home to a population of less than 1400 people. At less than 1 person/sq mile, it beats the threshold for being designated a 'frontier' county 6-fold. The central part of the basin is a sagebrush sea at an elevation of 8000 feet with the USFWS Arapaho National Wildlife Refuge in the center. The basin is ringed by mountains which include several wilderness areas and is immediately adjacent to Rocky Mountain National Park. These mountains form the headwaters of the North Platte River and the county is known as "North Park".

The incredible landscapes, the diverse plant and animal life and large swaths of public lands in both the basin and surrounding mountains are what drew me to make this my new and final home. Viewing wildlife every time I drive in North Park brings me amazing joy! I frequently see raptors like bald and golden eagles, many species of hawks and the occasional osprey as well as members of our large populations of wildlife including bear, moose, deer, pronghorn and elk. These as well as the keystone species in the

sagebrush sea, the Greater Sage Grouse, are a common visitor to my property. Recently, a growing pack of endangered wolves established themselves here. The opportunities to hike and backpack on public lands up and down this basin and in the mountains surrounding it are treasured experiences.

When I retired, I vowed to retire TO a new line of work rather than FROM my previous line of work. That intention has been realized. I have served as the environmental representative to the North Platte Basin Roundtable since 2006 and served on the BLM Resource Advisory Council for NW CO from 2011-2017. I am currently serving as Vice Chair of the new Greater Rocky Mountain Advisory Committee for the USFS which covers the entire states of Colorado and Wyoming.

Next month I will end a 4-year term serving on the CO Transportation Commission where my primary focus was decarbonization of transportation to reduce impacts on climate change. And in March I was appointed to a 3-year term on CO Water Conservation Board which is struggling with the longstanding drought in the state leading to reduced flow in our streams and rivers, impacts to agriculture, forest health and wildlife habitat as well as the Colorado River Crisis.

I have worked as a citizen scientist on oil/gas issues since 2006 and in the past 6 years that work has been amplified through my membership in Western Colorado Alliance's oil and gas campaign team and as Chair of the oil/gas campaign team for Western Organization of Resource Councils. It is that work that brings me before you today.

Climate change is impacting Colorado at disproportionately high rates relative to other areas of the country. I have already suffered direct harm as a result of climate change, having been forcibly evacuated from my home twice by wildfire. In 2016, the Beaver Creek fire came within 100yards of my home, saved only by the amazing work of wildland firefighters. In 2018 I was forced out again, and only allowed to return 10 days later. These types of events are occurring with increasing frequency in Colorado and across the West. In addition to being traumatic in and of themselves, the proximity to and increasing regularity of wildfire causes me to be concerned about my health through such exposures. I am also concerned about the impacts of oil and gas development on air quality. The pollutants emitted into the air by oil/gas development know no boundaries, impacting public health for many miles downwind and exacerbating climate change globally.

Background:

We are very appreciative that the federal government has appropriated funds to plug orphaned wells on public, tribal and fee lands overlying federal minerals through the BLM, and on state and private minerals through state oil/gas commission programs. This one-time expenditure will accelerate the closure of 'orphaned' oil and gas wells: wells that are beyond their useful lives and have no discernable responsible party to do the well plugging and site remediation. However, getting a well officially into the category of 'orphaned' can be a decades-long process. Meanwhile there are many more wells on public lands that are years beyond their economically useful life, either

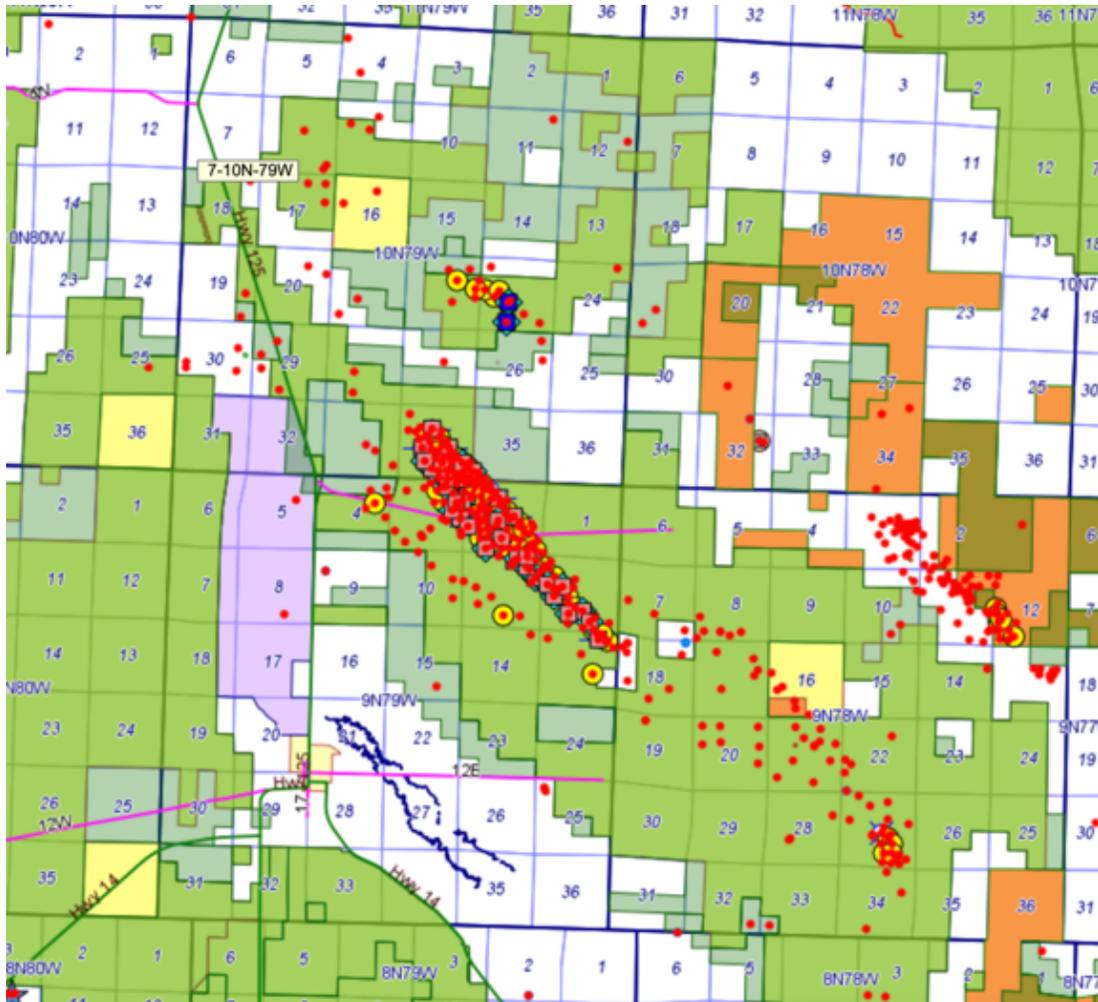
producing no oil or not enough oil to fund the most basic safety and maintenance work. These wells are left to leak methane and other hydrocarbons into the air and ground water until properly plugged and reclaimed, meanwhile rendering the public lands they occupy useless for other purposes such as grazing, recreation and wildlife habitat. Present financial assurance rules incentivize operators to keep these zombie wells in limbo, either shut-in or technically held in production by miniscule volumes and delay as long as possible the plugging and reclamation long overdue on these wells. And we have seen financially weak operators in Colorado delay even until bankruptcy, when end-of-life requirements are passed on to the citizens.

Colorado Example:

I'd like to share an example from Colorado. The first wells were drilled in McCallum Field in NE Jackson County in the 1920's. These legacy wells are shallow, vertical oil wells with significant water co-production. Currently all the remaining 89 wells -- whether producing or shut-in or temporarily abandoned -- in this field on federal surface/federal minerals are owned by one operator, K.P. Kauffman.

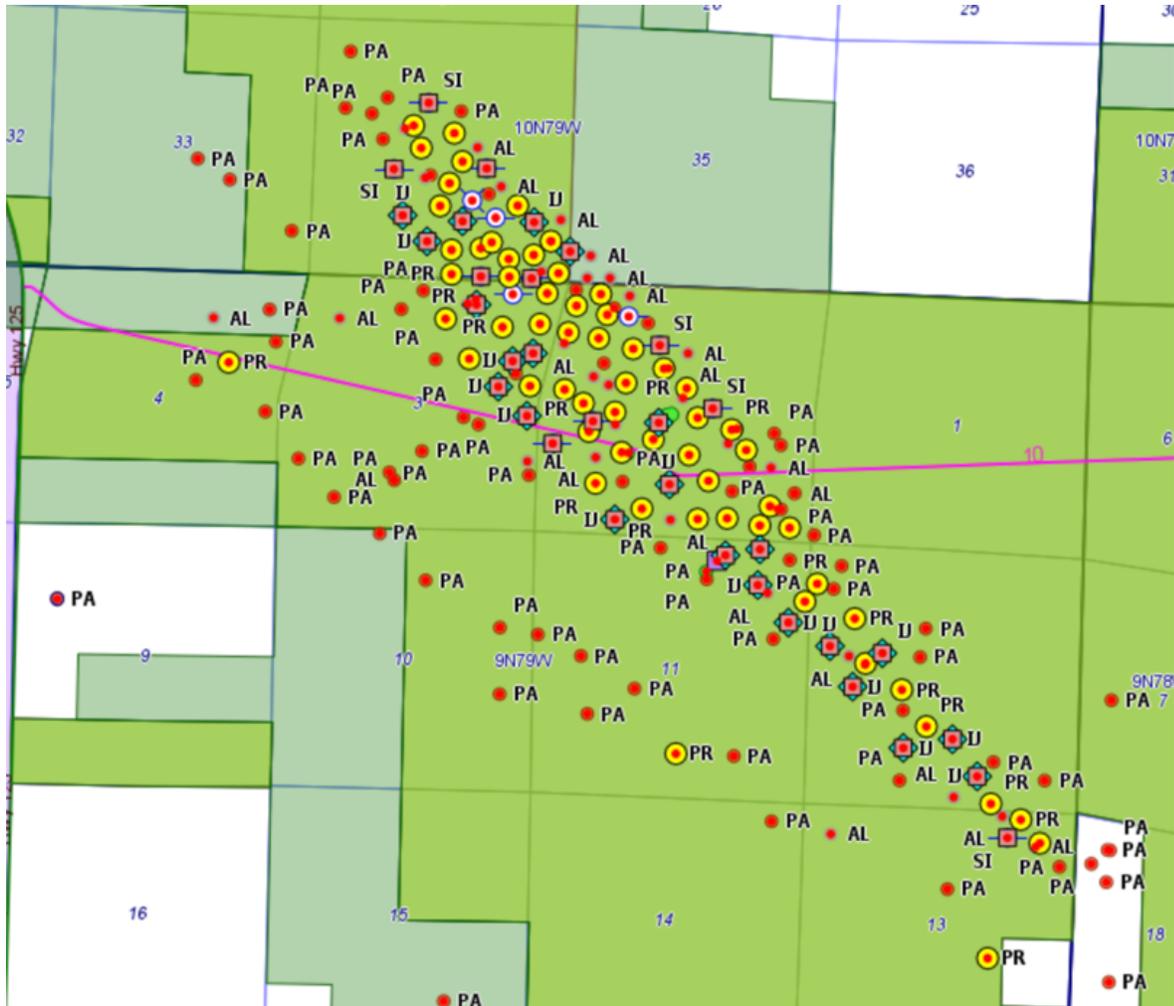
This map from our Colorado Oil & Gas Conservation Commission (COGCC) data mapping tool shows the producing wells (red dots in a yellow circle) in the field. BLM surface is green.

May 23, 2023 Testimony by Dr. Barbara Vasquez to OMB
Re: BLM on-shore oil/gas bonding program reforms



Zooming in on the largest group of producing wells, you can see the large number of old wells that have been plugged and abandoned (PA) and locations that have been abandoned (AL).

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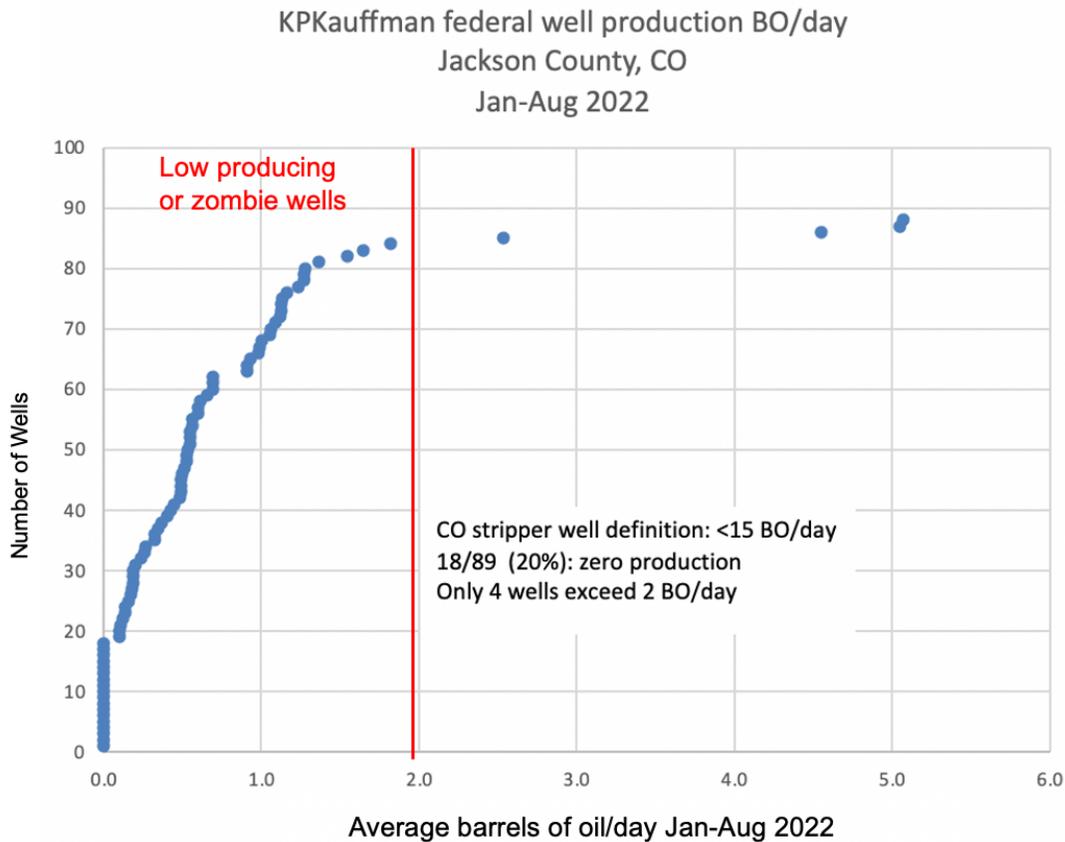
I have personally spent quite a bit of time in this field and can vouch for the fact that the removal of infrastructure and site remediation is woefully inadequate at many of these sites. Field work with Earth Works has produced forward looking infrared thermal imaging camera (FLIR) evidence of emissions and leaks of hydrocarbons during multiple site visits. Although the FLIR camera cannot determine species of hydrocarbons, a large fraction of emissions is likely methane.

It's also important to note that much of the North Platte Basin is high priority habitat for the Greater Sage Grouse. The presence of these economically spent wells, the roads constructed to access the sites fragment that destroy and fragment grouse habitat plus the dense network of powerlines which provide perches for raptors should be an important consideration when deciding on the BLM's priority for well plugging and surface remediation, as well as when considering further leasing and permitting.

All the wells marked SI (shut-in) or IJ (injection well) or PR (producing) are operated by KP Kauffman. K P Kauffman operates the wells in Jackson County as they do their wells in the Colorado Front Range. Their business plan has been to buy up portfolios of low producing wells to profit from the higher producers while delaying as long as possible

any expenditures for maintenance or end-of-life actions on the low producers or dry wells. Their track record of flagrant violations (including spills, failure to report operations and spills, failure to dispose properly of contaminated soil) in the Front Range led our Colorado Oil and Gas Commission (COGCC) to impose a Compliance Plan on KPK. Their failure for more than a year to comply with that plan resulted in COGCC issuing an order earlier this year to stop sales, giving the operator 6 months to return to full compliance and pay fines.

The type of portfolio KP Kauffman operates is exemplified by the Jackson County wells. The graph below shows the average daily production for 8 months in 2022 (from January to August -the last month reported on the COGCC database as of this report) for their wells. All 89 wells produced volumes significantly below the Colorado threshold (15 barrels of oil/day) to be categorized as a 'stripper well'. In Colorado, stripper wells are exempt from severance tax. Only 4 of the 89 wells exceeded 2 barrels of oil /day the threshold set by COGCC in the 2022 Financial Assurance rules to be considered 'low producers' or 'zombie wells'. Finally, 20% (18/89) of these wells produced no oil at all for KP Kauffman.



Conclusion:

We are pleased that the BLM has initiated this the long-overdue reform of current financial assurance rules for their on-shore oil and gas program. The new bonding structure should ensure timely and complete plugging of wells and remediation of sites, as required by law.

Zombie wells are at the end of their useful economic life, yet are allowed to continue burdening our health and environment. We encourage the BLM to finish rulemaking to increase bonding significantly, consistent with the current costs of plugging and abandoning wells and fully remediating sites. These increases in financial assurance are critical incentivize operators to plug all wells at the end of their useful life, including these low and non-producing wells and to fully remediate the sites. **The increases in bonding should apply not only to new permits to drill but should be phased in on existing leases and wells.** Without these reforms, K.P. Kauffman and others like them will continue to hold these wells hostage in false 'production' status, potentially leaking methane and other hydrocarbons with serious impacts for the indefinite future to the environment and public health.

Respectfully,

Dr. Barbara Vasquez

Western Colorado Alliance, Oil/Gas Campaign Team Member

Board Member at large, Western Colorado Alliance

Western Organization of Resource Councils, Lead for Oil/Gas Campaign Team

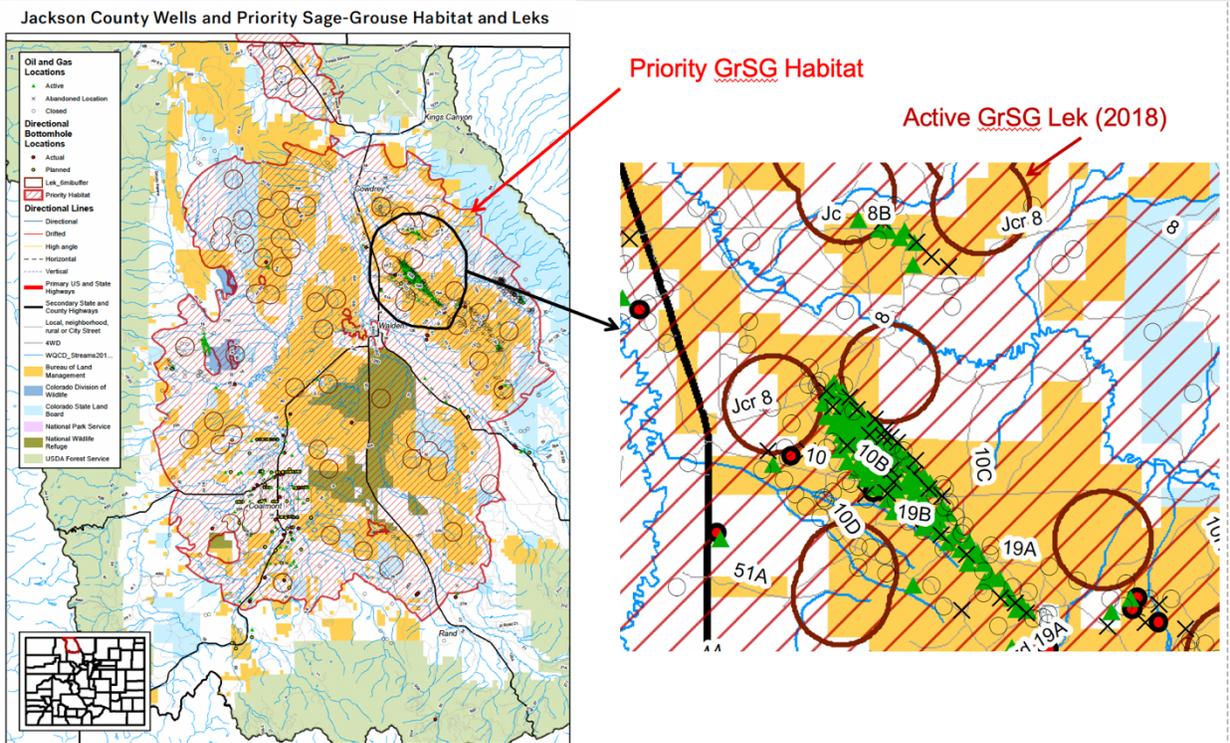
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APPENDIX A

Greater Sage Grouse (GrSG) Priority Habitat blankets the lower elevations of Jackson County, a high elevation (min 8000ft) basin surrounded by mountains which create the headwaters of the North Platte River. It is also called “North Park”, supporting large populations of wildlife (moose, elk, deer, pronghorn, bear, mountain lion, river otter, bald & golden eagles, etc) and a small human population (<1400 or <1 person/sq mile). It is >65% public lands including wilderness areas (Mount Zirkle, Rawah, Platte River, Never Summer), the Arapaho National Wildlife Refuge and it borders the Rocky Mountain National Park. The McCallum oil field to the NE of Walden hosts a high density of oil wells (active, inactive, plugged and abandoned) in this important habitat. The status of both the oil wells as well as the location of active Leks shown on the maps below are based on 2018 data. The GrSG subpopulation in North Park is topographically constrained, unable to move out of the basin due to the surrounding mountains. Due to this constraint, declines in census will not be mitigated by in-migration. Because of their lek fidelity, there is little evidence that capture elsewhere for release on new landscape can be effective. The only mitigation for declines in GrSG population is reclamation of local habitat.



APPENDIX B

The Greater Sage Grouse population in North Park is considered one of the most stable in the state of Colorado. The GrSG 3 year average high male lek counts from 1998-2022 is displayed in the graph below for North Park, all of Northwest Colorado (NWCO) and the total in the state. Data provided by Colorado Parks and Wildlife.

In North Park the count had declined from a high in 2017 (1127) to a max low (776) in 2021 by 30%. The historic high for North Park (1386) occurred in 2003. For all of NWCO, the historic high was in 2017 and the count had declined by 66% in 2021.

