## An Economic Analysis of HB 18-1289

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Under current Colorado law, any person or oil and gas interest can apply to the Colorado Oil and Gas Conservation Commission (COGCC) to extract a natural resource or mineral that this interest owns, even if it resides below a surface land owner's land. This process can currently be completed without the consent of the owner(s) of the given land. This bill will exempt local governments, defined as any entity that has the ability to levy taxes or assessments on a given population, from forced pooling, unless the given districts or governments give consent to do so in what is called voluntary pooling.

Pooling resources is currently one of the main rights issues in the oil and gas industry. All participating surface land owners, (willing or otherwise) are compensated at some rate for the use of their land. However, unwilling participants that do not want to participate in this market currently have no say over whether or not to contribute their land to an oil or gas company.

HB 18-1289 lets a district or local government that owns the land to approve or deny these companies from using the land that they own. This gives each community individually the right to choose what they may want after weighing the pros and cons of allowing drilling. However, private citizens are still not afforded this right of refusal to resource pooling. HB 18-1289 should have an amendment that allows all surface land owners in the state of Colorado to have mining of minerals under their property. Hb 18-1289 must also have an amendment that forces arbitration between an oil and gas interest and a surface land owner when no agreement can be reached; otherwise, either the surface owner or the oil and gas owners will have substantial control over the other's rights. This bill overall, with the listed amendments, is a good idea for the all land owners in the state of Colorado.

Standard drilling of minerals below a surface owner's land infringes on the property rights of the surface owner. Drilling takes up space on the surface for materials and machinery, and currently, companies are allowed to take surface land from its owners if needed to mine a resource. Drilling of these resources can also bring down property value without the surface owner's consent. This occurs from the loss of attractiveness of the property with the machinery placed on it, in addition to the risks of having an oil well on the property (BWAB).

After an oil or gas company determines what surface land they need to mine under, they will submit an application to the COGCC and a hearing is held. Land owners have the right to argue for fair compensation, take part in the well process and profit from the oil or gas found in a ratio of how much land they own in the whole project, or do nothing and receive a 1/8th share of the "owner's proportionate share of the production unit" as a non-consenting owner. This share is received by the surface land owner once the well begins to make a profit (Grey). This share of profits system intends to compensate surface land owners for the use of their land for the mining of oil and gas. This structure exists since all non-fracking drilling operations must take place on the surface land owner will be compensated for the use of their land, there is no current option to allow the owner to have any say in whether or not the minerals under the land are used by this company, since the company owns the rights in the first place.

The main concern with the mineral rights in a split estate is if this creates a market failure. While citizens and local governments are given compensation for drilling on their land,

there is no choice but to accept the payment, and often the landowners cannot do anything about it. In Erie, Colorado in 2012, the city worked out a deal with oil and gas interests that has more strict regulations than given by the COGCC (Aguillar, Daily Camera). However, under current Colorado law, these companies have no legal obligation to form these agreements. With HB 18-1289, local governments would have a right to accept or refuse all drilling on public lands.

However, this creates another market imperfection. In the current model, oil and gas rights owners have the rights to drill their materials without any say by the owners of the land above them, despite the effects they have on the surface. If surface land owners own the right to refuse this drilling, the companies who own the oil and gas below the surface are deprived of their rights to the materials they rightfully own. The second proposed amendment to HB 18-1289 would be to force arbitration between the two sides if an agreement cannot be reached between the two sides.

A common concern with drilling near any structure or population are externalities associated with the drilling. Oil and gas drilling can cause noise, reduce air quality, and cause waste (Tribal Energy). Oil and gas drilling also produced 27 billion gallons of wastewater in Colorado in 2015 (Ferrar). Large amounts of wastewater has been shown to be one of the leading causes of ground instability in the central United States, causing induced earthquakes that can disrupt any sort of land or mineral owner (USGS). The local government has a responsibility to protect its environment and people from any adverse externalities caused by drilling.

Other methods used by oil and gas companies on harder to reach oil and gas reserves do not require the land above the reserves; however, they still can have a negative externality on the land above them. Fracking is a process that allows access to oil and gas that are not easy or impossible to drill vertically. They require one to two miles of horizontal drilling underground to begin the process, rather than needing the surface land above the reserves. However, fracking provides several other negative externalities. Excess fluid used in the fracking process can increase the chance of earthquakes, and has done so in cases in Arkansas and Ohio (USGS). Additionally, the effects of these earthquakes can be felt up to ten miles from the drilling site (USGS).

While drilling may have negative externalities, it also can generate a significant amount of money for a given governmental body. According to numbers taken from the COGCC, the total compensation (voluntary, negotiated, and non-voluntary) for all state and federal lands in Colorado in 2014 was approximately \$475 million, and total for private and public rose over \$1.1 billion (Aguillar, Denver Post). This is a substantial amount of funding across the state, and this money can be used by different land owners for various functions if they choose over the negative costs of drilling.

According to HB 18-1289, only local government entities are including in protections against forced pooling. The violation of property rights, as well as all of the negative externalities caused by drilling affect private landowners in the state of Colorado. This market failure and negative externalities must be protected for all land owning citizens in the state.

Under current law, no local government has the ability to choose whether or not their community would benefit from drilling on these publicly own lands. With HB 18-1289, in its amended form, anyone who own lands are allowed to examine the benefits and risks and determine what they wish to do with it. This bill will fix this market failure, and allow public lands to be used as effectively as possible.

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