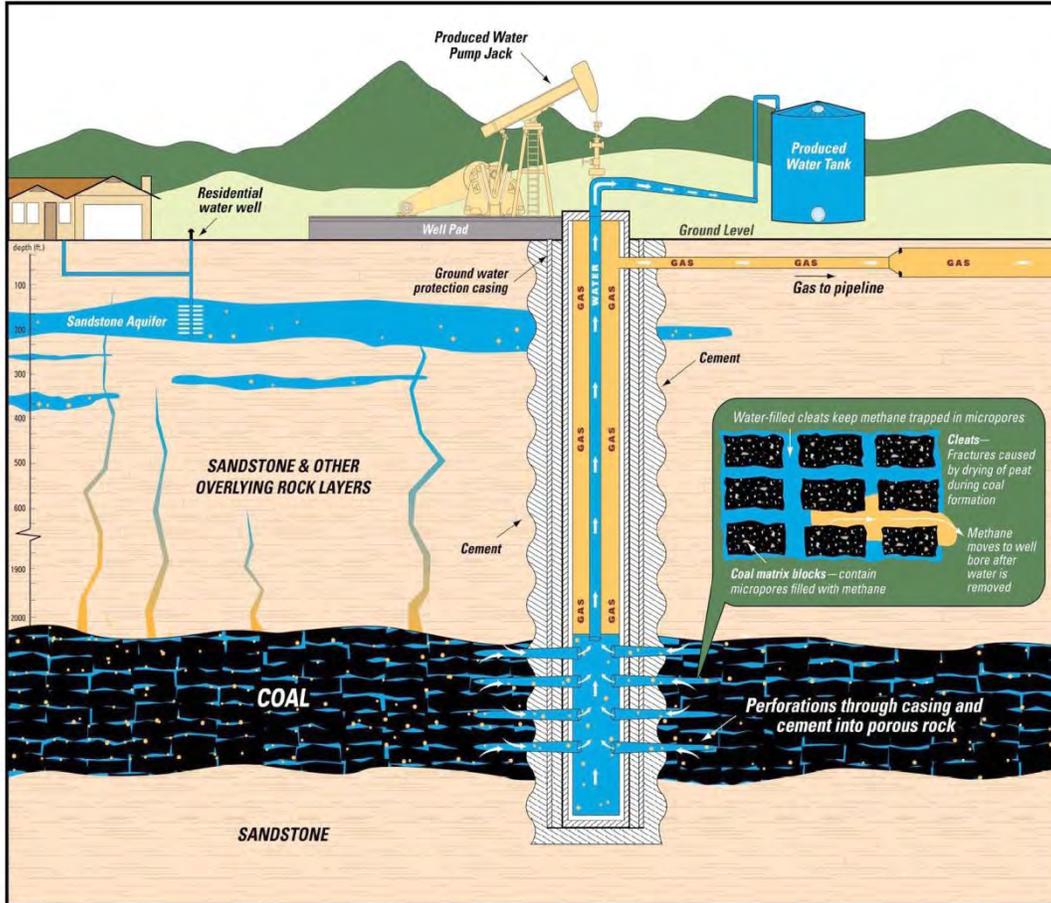


COALBED METHANE. WHAT IS IT?

Coalbed Methane (CBM) is a type of shallow natural gas that sits atop coal seams. Natural gas is used for domestic appliances, industry, power generation, and heating.



To extract CBM, “shallow gas” wells are drilled as deep as 4000 feet.

The methane doesn’t necessarily just rise to the surface, however...

To extract CBM, the water sitting atop the methane must be pumped out, the rocks holding the methane be splintered open, and the methane gas must be extracted, stored, and shipped.

In addition to the natural gas, water, called “produced water,” also emerges from the well. Produced water can be re-injected, held in water tanks for shipment elsewhere, evaporated through the use of sprayers, placed in holding ponds, or released on the surface.

Image source: Ecos Consulting

If CBM is found near your home, on your land, or in a place you care about, consider that these and other impacts often accompany natural gas extraction:

- 1. Construction of new roads, buildings, pipelines, lights, noise, and significant truck traffic.**
- 2. Pollution.** Wells, compressor stations, and settling ponds are not perfectly closed systems and can release pollutants into the surrounding environment. Sources of chemicals include those used in drilling muds as propellants as well as methane itself. Alarming evidence of toxic seepage is raising concern about methane migration and the impact of methane and other chemicals on air, water, soil, and human health.
- 3. Changes to aquifers and drinking water.**
 - a. Estimates vary widely, but between 5000 and several million gallons of water are required to inject into a single well to fracture the rocks and begin natural gas extraction.
 - b. This re-arrangement of water has resulted in an array of problems in different locations: **depleted aquifers**, abundance of saline “**produced water**” on the surface causing flooding and plant death, and chemically **contaminated water** both above and below the surface.

FRACKING, short for hydraulic fracturing, is a process of forcefully injecting large quantities of water combined with fracking “fluids” (containing anything from sand to carcinogenic chemicals) into the earth to break apart the coal in which the gas is found. **Fracking** is in the news a lot right now because its use is being blamed for flammable tap water, unexplained illnesses, and fears about explosions resulting from gas wells. *If gas is found and developed around Healy, fracking will be used here (Final Best Interest Finding, 6-8).*

Healy Basin Gas Exploration License Area

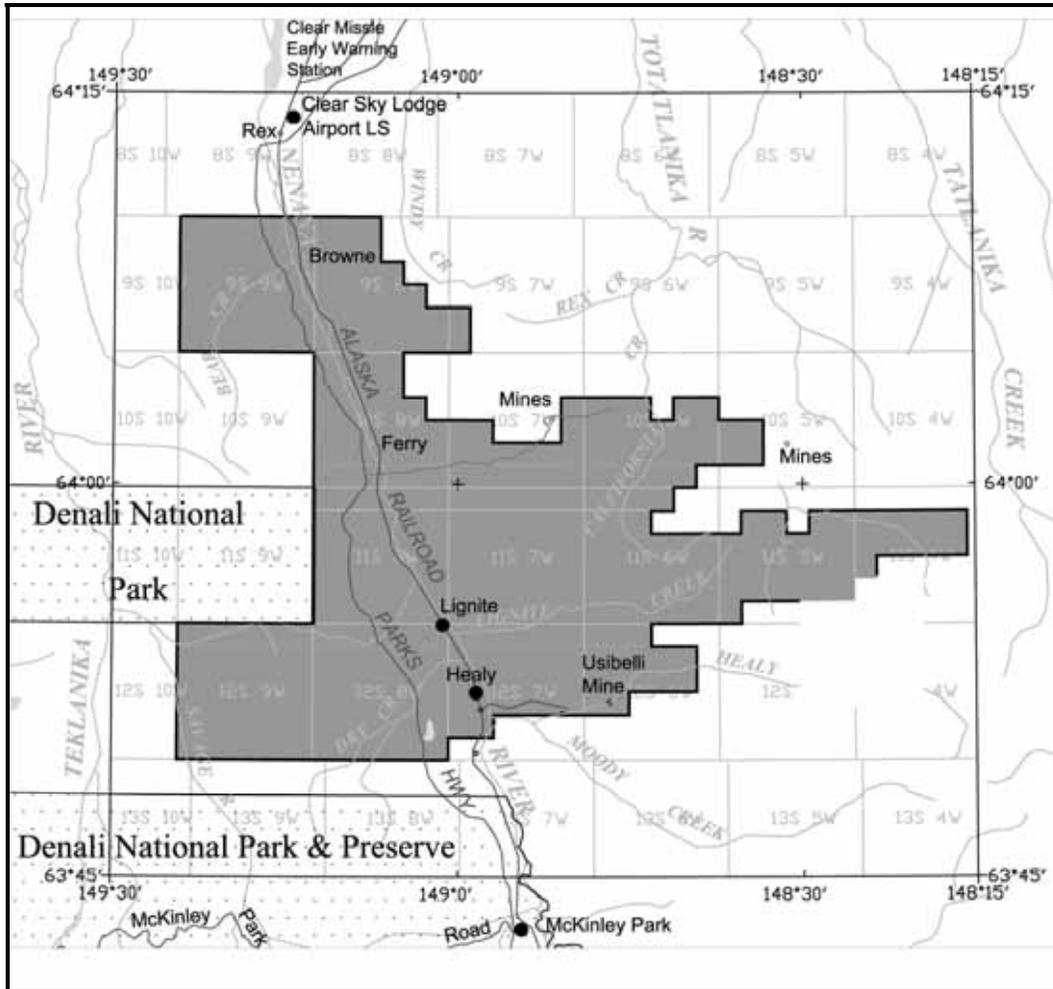
208,630 acres

All within zip code **99743**

Adjacent to Denali National Park and Preserve

Begins at mile 248 and extends north to mile 300 of the George Parks Hwy

Extends west to the Savage River & Bear Creek & as far as 30 miles east of the Parks Hwy



The area depicted in this map is open for gas exploration. Because subsurface rights trump private property owners' rights, "licensees of oil and gas interests have the right to enter upon the surface estate for the purposes of exploration and development." (AS 38.05.125). (Lands exempt include lands owned by the Alaska Railroad, the University of Alaska, and the Mental Health Trust Authority).



Denali Citizens Council

Serving to protect Denali National Park and environs

PO Box 78 Denali Park, Alaska 99755 907-683-3396

www.denalicitizens.org