# Quiz 4

1. You own the mineral rights and ‘shoot’ seismic. The resultant images indicate there is very little chance of finding oil or gas on the lands. With the data parties are no longer interested in leasing. Can a mineral owner sue you for ‘condemning’ the value of their property for oil and gas leasing purposes?

No, as the mineral owner you voluntarily offered the seismic data.

1. You own the mineral rights and shoot seismic. Do you have a duty to share the data from the shot with the surface owner or other mineral owners?

You do not have the duty to share the data with the surface or other mineral owners. It is entirely up to you whether or not you would want to show the data to them.

1. For what legal reason don’t you generally see much seismic data in investor presentations made by public exploration companies to investors?

Seismic data is normally kept internal as it heavily addresses the profitability, or lack thereof, in the physical area of your leases. If one area is known to have positive looking seismic data it could adversely affect the cost of leasing area around the land or the renewal cost of the current lease.

1. According to the case Briscoe v. Peters what were the three major ways to dispose of ‘produced water’ produced in conjunction with crude oil production?

The three major ways to dispose were

1. Run the brime into Little river
2. Run the brime into the South Canadian river
3. Impound it in pits or tanks upon their respective leases
4. What is the modern, environmentally acceptable way to dispose of produced water today?

Produced water, for the most part, is disposed of through injection wells. This is used to either dispose of the water or can help “move” the oil towards the wellbore.

1. What is the major environmental problem with produced water?

Produced water has even more dissolved solids than seawater, 34,500 vs 50,000 PPM roughly, and is not fit for human consumption. Produced water is also highly corrosive and damaging to the watertable. Produced water is about 95-98% of all of the contents that are extracted from the well and spills are not uncommon.

1. The Green Revolution has been aided by legislation that requires additional use of ethanol in motor fuel. One of the key drivers of the agricultural revolution is the ability of farmers to ‘fix’ nitrogen in the soil. To do this they incorporate ammonium nitrate in many of their fertilizers. What is the main feedstock chemical to make ammonium nitrate?

Ammonium nitrate is synthesized for the most part these days using anhydrous ammonia gas and concentrated nitric acid.

1. What environmental or safety issues present themselves when handling or producing ammonium nitrate?

Ammonium nitrate has a plethora of safety, handling, and storage risks as outlined by the MSDS sheet. When handling or producing ammonium nitrate you must be sure that there isn’t any substantial heat or any ignition source which could cause combustion. You must also store ammonium nitrate in a sealed container as it has a critical relative humidity of 59.4%. At this point it could coagulate into a solid or could absorb enough moisture to liquefy and then seep into the watershed.

1. In the Briscoe v. Peters case the landowner’s house and water well was 20 feet higher than the evaporation pit in which the produced water was stored. The land sloped from the house to the river below the evaporation pit. What environmental significance might this have for the landowner’s groundwater?

In court they explained that one well was already producing salt water. They made the assumption that, since one is already producing, that others could potentially produce salt water tainting the ability to receive human-safe water. They ruled this as a nuisance.

1. What state produces the most ‘produced water”?

Texas, where everything is bigger! In 2007 Texas produced 35% of the total volume of produced water in the United States.