# BUSE 4332 Midterm

# March 7, 2014

# Jacob Wall

## Question 1

There are a few areas to address first. TRRC Rule 37 requires that wells not be drilled nearer than 467 feet to any property line as well as no wells can be drilled nearer than 1,200 feet apart [[1](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&ti=16&ch=3&rl=37)]. This immediately impacts Sponge Bob and his desire to be as close to Ole McDonalds' land as possible. Sponge Bob will need to work with the owner of the mineral rights at the adjacent property to obtain permission. He can receive this information by contacting the County Clerk's office.

Assuming Sponge Bob abides by TRRC Rule 37 and properly obtains the mineral rights he can drill. Although it’s plausible he will collect oil that once was under the adjacent property, where he does not have mineral rights. This does not matter since he is protected under the rule of capture.

Sponge Bob will need to obtain the right to build on Ole McDonalds' property to build the oil storage tank. It would be under the best judgment to wait to build the oil storage tanks on the off chance he finds himself holding the cards of a dry hole.

Sponge Bob mentioned interest in flaring the natural gas, which the way planned, would be illegal. Under TRRC Rule 32 Texas only allows flaring up to 45 days at a time with a maximum of 180 days [[2](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=32)].

Ole McDonald will likely complain about unreasonable use under the “accommodation doctrine” and the light that is produced by flaring. The TRRC outlines that the well operator will need to “accommodate an existing surface use when reasonable alternatives are available [[3](http://www.rrc.state.tx.us/about/faqs/SurfaceOwnerInfo.pdf)].”

Sponge Bob, if he wants to build on Ole McDonalds’ land would need the surface owners approval to move forward. However, if he chose to build everything, including the storage tanks, on the property of which he has the mineral rights he is entitled to do that under the fair use doctrine.

## Question 2

Sponge Bob will need to gain approval from the TRRC to inject the salt water in an injection well on the McDonald farm. The requirements to be approved are as follows [[4](http://www.rrc.state.tx.us/about/faqs/saltwaterwells.php)]:

* Whether an operator is eligible for a permit (has no past due franchise taxes, has the required financial assurance, and has no outstanding compliance problems applicable to the proposed injection or disposal operation.)
* Whether all affected parties have been properly notified. For non-commercial wells, the surface owner and nearby oil and gas well operators are required by Commission rules to be notified. For commercial wells, adjacent surface owners also must be notified under Commission rules.
* If a protest is filed, the RRC notifies the operator that the application cannot be approved administratively, and the operator is advised of their right to a hearing on the application.
* That the proposed injection well is properly completed to protect groundwater with required surface casing to the base of usable quality water as determined by RRC’s Groundwater Advisory Unit with long string casing and cement to ensure that the injected fluid is confined to the proposed injection or disposal interval.
* That there are no improperly completed, improperly plugged or unplugged and abandoned oil and gas wells of public record within ¼ mile of the proposed injection well. (This is known as the area of review, and may be expanded up to ½ mile or more in some circumstances.)

Sponge Bob would need to find a proper way in order to dispose or store the salt water. He would be unable to dump the water into a stream. If Sponge Bob has fears that he loses the ownership of the natural gas once re-injected he does not have to worry. In Texas oil and gas becomes personal property once recovered. Even if you re-inject it and “lose” it, the oil and gas is yours.

In the event Sponge Bob needs to obtain a load he can use the oil storage as collateral. The bank would file a Uniform Commercial Code financial statement to protect them in the event Sponge Bob defaulted [[5](http://www.statutes.legis.state.tx.us/Docs/BC/htm/BC.9.htm)].

## Question 3

Seismic exploration utilizes shock or sound waves created on the surface that go through the ground. The waves will “reflect” at different times and angles, due to different formations or rocks, and thus allow you to view what’s under the ground. Sponge Bob should absolutely spend the money to shoot seismic images. Seismic data will allow Sponge Bob to locate the best place to put his well potentially saving him a considerable amount of money wasted drilling dry holes. The success rate for 3D seismic data has approached 90%. The downside is that the process will delay Sponge Bob by a few months due to the permitting process [[6](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=5&rl=203)]. Sponge Bob will need to gain permission from the surface owner in order to shoot seismic. Explosives are a rudimentary way to obtain seismic data these days. Sponge Bob would be best to use a vibro-truck to shoot the seismic since it is more environmentally friendly, and required in many populated areas but that’s not applicable in this case, and is something that would be appreciated by the residents (and livestock) near the area of which he will be shooting seismic data.

If the frac job works, Sponge Bob under the rule of capture, retains ownership of the oil and natural gas his well “sucks up” regardless of where it came from. This is assuming that he is abiding by all applicable laws, such that the well hole does not extend to the other individuals property. Sponge Bob can use a compressor to push the natural gas into a pipeline. Sponge Bobs right was upheld in the case United Carbon Company et al. v. Campbellsville Gas Company [[7](http://www.facstaff.bucknell.edu/kinnaman/Hammonds%20v.htm)]. The compressor will help increase the output and is well worth the money.

## Multiple Choice

1. On a volumetric basis, the largest amount of waste product generated by a crude oil or natural gas producing well is usually which of the following:

* 1. ~~Drilling mud from drilling activities~~
  2. Salt water from production and fracturing activities
  3. ~~Condensate from gathering lines and pipelines~~
  4. ~~Drilling and production pipe~~
  5. ~~None of the above~~

2. Under the ‘reasonable use doctrine’ a mineral owner or oil and gas lessee most likely could:

1. ~~Utilize whatever amount of surface area they desired to drill a well~~
2. ~~Drill a fresh water well and use that water for operations on the site~~
3. ~~Build a refinery on the site to refine oil trucked onto the site if the use was reasonable~~
4. Inject salt water produced off the lease premises in injection wells on the lease
5. ~~All of the above~~
6. ~~None of the above~~

3. The ‘reasonable use doctrine’ applies to:

1. ~~Interstate pipelines that transport natural gas to cities such as Chicago~~
2. ~~The local gasoline filling station seen on many street corners~~
3. ~~Crude oil refineries and their related operations~~
4. ~~Electrical distribution facilities and transformers at utility owned electrical generation facilities~~
5. ~~Offshore drilling platforms and related underwater pipelines~~
6. ~~All of the above~~
7. None of the above

4. Under the ‘reasonable use doctrine’ a mineral owner or oil and gas lessee:

1. ~~Is responsible for paying damages to the surface owner for the reasonable use of the surface~~
2. ~~Is responsible for paying damages to the surface owner only for operations off the leasehold premises~~
3. Is responsible for paying damages only for an unreasonable use of the surface at the well site.
4. ~~All of the above~~
5. ~~None of the above~~

5. In Texas the ‘accommodation doctrine’ supplements the ‘reasonable use doctrine’. What is required to invoke the accommodation doctrine:

1. ~~The presence of ‘sour gas’, that is hydrogen sulfide in the natural gas product~~
2. A pre-existing use of the surface, among other factors
3. ~~A state statute that encodes the accommodation doctrine, and the requirements~~
4. ~~A regulatory finding by the applicable state agency that the doctrine applies~~
5. ~~All of the above~~
6. None of the above

6. In Texas, you buy an interest in an oil and gas lease and want to drill an oil and gas well. The surface is owned by a third party unrelated to the mineral owner. Which of the following is true:

1. ~~The surface owner can keep you off the property until you settle prospective damages~~
2. ~~The surface owner is the dominant estate, and has the power to stop mineral development~~
3. The lease owner will many times agree to pay damages to the surface owner and will enter into a contract specifying surface activity the partied agree to even if it is not required by law
4. ~~All of the above~~
5. ~~None of the above~~

7. Higher commodity prices can make marginal properties that have environmental concerns economically viable for producers. In light of this fact, investing $1 on January 1, 2000, which of the following investment choices would have given you the largest return?

1. ~~Natural gas prices, as measured by the Henry Hub spot price~~
2. ~~Food prices, as measured by the FAO Food index~~
3. ~~The U.S. stock market, as measured by the S&P 500 Index~~
4. Crude oil, as measured by the West Texas Intermediate benchmark
5. ~~The U.S. stock market, as measured by the Russell 2000 Small Cap Index~~

8. In Texas, you buy the surface and mineral rights to a 40 acre tract of land. The tract of land is damaged by oil and gas activities. With regard to a damage claim, which of the following is true:

1. ~~Permanent damage will be measured by the cost of repair~~
2. ~~Punitive damages are never awarded for oil and gas environmental damages~~
3. Temporary damages are measured by the cost of repair
4. ~~None of the above~~

9. In Texas, you operate a crude oil well for Pony Oil Co. Inc. It produces 10 barrels per day of crude oil and 45 barrels per day of ‘produced water’. Which of the following is true:

1. ~~In general, most ‘produced water’ contains salts that can be dangerous to the environment~~
2. ~~In general, the ‘produced water’ is disposed of in specially permitted disposal injection wells~~
3. ~~In general, ‘produced water’ volumes increase over time as an oil well depletes~~
4. ~~In Texas, the surface owner owns the rights to the ground and surface waters~~
5. All of the above

10. In Texas, you are involved in a dispute with the surface owner regarding to the use of the surface on which you are drilling a well. No oil and gas lease provisions apply. The landowner claims you are using more surface than is reasonably necessary. Which of the following is true:

1. A well located in the City of Arlington (urban area near Dallas) may be considered a nuisance and an unreasonable use of the surface while the identical operation on a remote ranch in West Texas may not be considered an unreasonable use of the surface
2. ~~Texas Railroad Commission regulations define what drilling activities constitute a nuisance and what constitutes unreasonable use of the surface~~
3. ~~EPA regulations prohibit the use of an unreasonable amount of surface when drilling a well, and will hold a hearing on this issue on request~~
4. ~~All of the above~~
5. ~~None of the above~~