2016 Louisiana High School Mock Trial

Competition Case Problem

Charlie Winters

V.

The State of Louisiana Department of Transportation

A Civil Case

By Olivia Sage and Adam Nettles

of the University of Louisiana-Monroe Mock Trial Team

under the direction of

Bob Noel

43RD JUDICIAL DISTRICT COURT FOR THE PARISH OF NORTH SABINE

NO. CKII-1453 **DIVISION "L"**

CHARLIE WINTERS

VERSUS

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PRE-TRIAL STATEMENT

On this the 2nd day of October 2015, the above-captioned matter came before the undersigned Judge for pretrial conference. The parties, appearing through their counsel, indicated their agreement to, and approval of, the terms of this Order, and requested that it be made the Order of this Court. The terms of this Order, accordingly shall not be altered, except upon a showing of good cause.

I. STATEMENT OF THE CASE

On August 17th of 2012 Charlie Winters's teenage daughter Karissa and a few friends were driving in the town of Powhatan, Louisiana. As Karissa was preparing to merge, the car's tire hit a deep pot hole that the Department of Transportation had claimed to have had filled two days previously in an invoice. This incident resulted in the popping of Karissa's tire causing her car to swerve into the car next to her. In the end, the accident claimed the lives of all six (6) people involved. Unfortunately earthquakes occurred after the incident resulting in no accurate determination as to whether a pothole was opened before or after the accident.

Charlie Winters timely filed suit against the Department of Transportation for the wrongful death of Karissa.

II. WITNESSES

The Plaintiff will call the following witnesses:

(1) Charlie Winters

(2) Eli Hughes

(3) Jean Michaels

The Defendants will call the following witnesses:

(1) Frances Sommers

(2) Taylor Morrison

(3) Campbell Jones

III. EXHIBITS

1) Seismic Chart for August 17th
2) Richter Scale
3) Louisiana Department of Transportation Invoice
4) Picture of pothole before it was filled
5) Picture of Karissa's car after the accident
6) Diagram of Fracking
7) Diagram of the Accident according to the Plaintiff's Case
8) Graph of Earthquakes/tremors before the introduction of Fracking
9) Graph of Earthquakes/tremors after the introduction of Fracking

Objections may be made to an exhibit's admissibility using only the Mock Trial Rules of Evidence found in the Handbook published with this problem. Student-Attorneys will be judged on their ability to make relevant objections and to argue their position. Student-Attorneys will also be judged on their ability to articulate a response to the objection. ***However, all exhibits will be admitted into evidence following argument.***

IV. STIPULATIONS

The parties have entered into the following stipulations, which shall not be contradicted or challenged:

(1) The automobile accident of August 17th, 2012 was the proximate cause of the death of all six individuals.

(2) Karissa Winters was a minor child at the time of the accident.

(3) All Exhibits listed are authentic and accurate in all respects.

(4) The signature witnesses on all witness statements/affidavits and other documents are authentic.

(5) Exhibits 4 and 5 are true and accurate reflections of the items they purport to depict.

(6) Exhibit 7 fairly and accurately reflects the scene, view, or geography they purport to depict.

(7) At all material times relative thereto, the Louisiana Department of Transportation and Development was in control of, and responsible for, the maintenance of Maginot Line road.

V. LAW AND JURY CHARGES

Statutes and case law applicable to this case are binding only if they are from the jurisdiction of North Sabine Parish or from the North Sabine Parish Statutes. The only statutes, law and jury charges applicable to this case are set forth below.

In addition, all trials are governed by the National High School Mock Trial Rules of Evidence, as well as Rules of Competition provided in the Handbook.

a. Statutory Law

NSPS 2:2315 Liability for Acts Causing Damages

A. Every act whatever of man that causes damage to another obliges him by whose fault it happened to repair it.

B. Damages may include loss of consortium, service, and society, and shall be recoverable by the same respective categories of persons who would have had a cause of action for wrongful death of an injured person.

NSPS 2:2318 Liability acts of others and things in custody

We are responsible, not only for the damage occasioned by our own act, but for that which is caused by the act of persons for whom we are answerable, or of the things which we have in our custody.

NSPS 2:2500 Comparative Fault

A. In any action for damages where a person suffers injury, death, or loss, the degree or percentage of fault of all persons causing or contributing to the injury, death, or loss shall be determined, regardless of whether the person is a party to the action or a nonparty. If a person suffers injury, death, or loss as the result partly of his own negligence and partly as a result of the fault of another person or persons, the amount of damages recoverable shall be reduced in proportion to the degree or percentage of negligence attributable to the person suffering the injury, death, or loss.

b. Jury Charges

1. Burden of Proof

The fact that a plaintiff claims to have been injured or has brought a law suit does not prove liability on the part of defendants or entitle plaintiff to recovery. The mere fact that an accident has occurred does not mean that defendants are presumed liable or negligent. Each plaintiff in this action must prove each element of his or her case by a preponderance of the evidence. This means that the plaintiff must convince you that, when the evidence is taken as a whole, the facts sought to be proved are more probable than not. If any plaintiff fails to prove or establish any essential element of his or her case by a preponderance of the evidence, then you must find that he or she has failed to prove his or her case sufficiently to recover. The fact that a plaintiff has been injured or brought a law suit does not necessarily entitle plaintiff to recovery.

2. Liability/duty-risk analysis

The standard of conduct required of persons in Louisiana in their relationships with one another is the basis for liability as set forth in NSPS 2:2315 which provides, in pertinent part, that "[e]very act whatever of man that causes damage to another obliges him by whose fault it happened to repair it." a person is also responsible for the damages he occasions not merely by his act, but by his negligence, his imprudence, or his want of skill.

To determine liability in negligence cases under NSPS 2:2315, our courts have adopted a duty-risk analysis.

To prove negligence, a plaintiff must prove five separate elements:

1. The defendant had a duty to conform his or her conduct to a specific standard of care (the duty element);
2. The defendant failed to conform his or her conduct to the appropriate standard (the breach of duty element);
3. The defendant's substandard conduct was a cause-in-fact of the plaintiff's injuries (the cause-in fact element);
4. The defendant's substandard conduct was a legal cause of the plaintiff's injuries (the scope of liability or scope of protection element); and,
5. Actual damages (the damages element).

3. ***Legal Duty***

A legal duty is the obligation to conform one's conduct to the standard of conduct of a reasonable person under like circumstances. Whether or not a legal duty is owed by one party to another depends on the facts and circumstances of the case and the relationship of the parties.

To determine whether defendant's conduct was below the standard applicable to his/her activities, you should consider the requirement that a defendant exercise that degree of care which we might reasonably expect from an ordinarily prudent person under the same or similar circumstances. This care will vary according to the circumstances. The standard is not that of an extraordinarily cautious individual or the exceptionally skillful one, but that of a person of ordinary prudence.

The ordinarily prudent person will avoid creating an unreasonable risk of harm. In determining whether the defendant breached this standard, and created an unreasonable risk of harm, you may weigh the likelihood that someone might have been injured and the seriousness of that injury against the importance of society of what the defendant is doing and the advisability of the way in which he/she was doing it, under the circumstances.

In summary, to find the defendant's conduct sub-standard, you must find that as an ordinarily prudent person under all the circumstances surrounding his/her conduct, the defendant should have reasonably foreseen that as a result of his/her conduct, some such injury as the plaintiff suffered would occur, and you must find also that he/she failed to exercise reasonable care to avoid the injury. You may find it helpful to phrase your inquiry this way: "how would an ordinarily prudent person have acted or what precautions would he/she have taken if faced with similar conditions or circumstances?"

4. Scope of Duty

Rules of conduct are designed to protect persons under certain circumstances against certain risks. Policy considerations determine the reach of the rule, and there must be an ease of association between the rule or conduct, the risk of an injury, and the loss complained of. In determining whether the interest of the party seeking recovery of damages is one falling within the protection of the rule of law whose violation gave rise to the damages, you should consider the particular case in terms of the moral, social, and economic values involved together with a view towards the ideal of justice.

5. General Duty of Care—Motorists

Our law requires a motorist generally to keep his vehicle under proper control and at a proper speed, and to maintain a proper lookout for hazards, which by the use of ordinary care and observation one should be able to see.

Persons have a duty to see what should be seen and are bound to observe their course of travel, see if pathways are clear, and are deemed to have seen obstacles in their pathway which a reasonably prudent person exercising ordinary care under all the circumstances would have seen.

6. Separate Intervening Acts

A defendant can only be held liable for those damages caused by his/her fault. Therefore, plaintiffs must bear the burden of proving that the injuries upon which they base their claim result from the acts for which the defendant is responsible, and not from separate, distinct, and intervening acts with regard to which the defendant had neither connection nor responsibility.

If you find that plaintiff and defendant and/or others were at fault in causing plaintiff's injuries herein you should divide responsibility for fault according to the following comparative fault instruction.

43RD JUDICIAL DISTRICT COURT FOR THE PARISH OF NORTH SABINE

NO. CKII-1453 **DIVISION "L"**

CHARLIE WINTERS

VERSUS

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PETITION FOR DAMAGES

NOW INTO COURT COMES plaintiff, Charlie Winters, a major domiciliary of the Parish of North Sabine, states as follows:

Introduction

1. This is a wrongful death suit brought on by plaintiff Charlie Winters, individually, and on behalf of the minor child, Karissa Winters against the Louisiana Department of Public Transportation for the wrongful death of Karissa Winters in a car accident on a bad road.

Parties

2. Plaintiff, Karissa Winters was a minor (under 18) on August 17, 2012.

3. Charlie Winters is the parent of Karissa Winters.

4. The Louisiana Department of Public Transportation made defendant herein.

Jurisdiction and Venue

5. This court has jurisdiction because this action is brought under the Louisiana Civil Code.

6. This court has personal jurisdiction over the defendant because the defendant is a tributary of the Louisiana state government and is therefore subject and held under the law.

7. The venue is proper because the Defendant is subject to Louisiana law and the incident took place within the jurisdiction of the state of Louisiana, Parish of North Sabine.

Factual Background

8. On August 17th of 2012 Karissa Winters drove to school in a personally owned vehicle.

9. On August 17th of 2012 Karissa Winters was driving the car home and swerved into traffic.

10. Six (6) people including Karissa Winters died as a result of this accident.

Count 1: Wrongful death

11. Plaintiff repeats and re-alleges points 1-10

12. On and before August 17th of 2012, the Louisiana Department of Transportation had a duty to the Winters family and to the citizens of the city to ensure the safety of the roads, particularly Maginot Line Road where the accident took place. This included filling all potholes and keeping the road drivable and safe for all vehicles.

13. Duty: The Defendant had a duty to protect and fix the roads

14. Breach of Duty: The danger to the roads went unfixed and posed a threat

15. Causation: This threat, the pothole, caused the accident and death of Karissa Winters

Prayer for Relief

THEREFORE the Plaintiff demands judgment against the defendant in an amount greater than the jurisdictional amount.

Respectfully submitted:

/s/Attorney_____
Attorney of Record

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ANSWER

1. The allegations in paragraph 1 do not appear to be true to the defense. The defense denies the allegations brought on by the Winters family.

Parties

2. Defense denies having knowledge sufficient to form a belief concerning the details of paragraph 2.
3. Defense denies having knowledge sufficient to form a belief concerning the details of paragraph 3.
4. Defense admits to the allegations of paragraph 4.

Jurisdiction and Venue

5. Defendant admits to the allegations of paragraph 5.
6. Defendant admits to being subject to Louisiana law and denies all other allegations of paragraph 6.
7. Defendant admits to being subject to Louisiana law and denies all other allegations of Paragraph 7.

Factual background

8. Defense denies having knowledge sufficient to form a belief concerning the details of paragraph 8.
9. Defense denies having knowledge sufficient to form a belief concerning the details of paragraph 9.
10. Defense denies having knowledge sufficient to form a belief concerning the details of paragraph 10.

Answer to Count 1 of the Complaint

11. Defense repeats and re-alleges their response to 1-10.
12. The defense admits to the allegations of paragraph 12.
13. The defense admits to the allegations of paragraph 13.
14. The defense denies the allegations of paragraph 14.
15. The defense denies the allegations of paragraph 15.
16. Defendants request trial by jury on all issues.

WHEREFORE, Defendant, the Louisiana Department of Transportation and Development, prays that this answer be deemed good and sufficient, and after all legal delays and due proceedings had, that there be judgment herein in favor of the defendant dismissing Plaintiff's claims.

Respectfully Submitted,

/s/ Defendant attorneys

STATE OF LOUISIANA

PARISH OF NORTH SABINE

AFFIDAVIT OF CHARLIE WINTERS

Charlie Winters, duly sworn, under oath, and based upon personal knowledge, attests as follows:

1. I am 48 years old and a registered nurse. I work at the local hospital in town, St. Joseph and the Archangels Hospital, in the ER. I've lived in Powhatan, Louisiana my entire life and was raising Karissa here as a single parent up until the incident.
2. As an ER nurse I spend my days seeing people in dire situations and I can say from experience that a good many people who come in to the hospital's ER unit do so because of traffic accidents.
3. As a resident of Powhatan, I know that the state of the roads is not up to par; however, I am not an expert. I expected the Department of Transportation to be in charge of keeping us safe. Looks like I was wrong.
4. On August 16th I was driving my daughter Karissa to school when I swerved to avoid a pothole. This was Maginot Line road and it went straight from our house to her high school. This is a common occurrence here as our roads and infrastructure date back to the 1930s, and recently there have been earthquakes hitting our little town. These earthquakes have done quite a number on our roads. I, of course, warned my daughter about avoiding the potholes and to remain calm during earthquakes.
5. On August 17th I was working in the ER. Around 4:45 in the afternoon, when Karissa would just be getting off from school and heading home, I got a call from the police

saying my daughter had been in an accident. It was like all of my worst nightmares rolled into one. I couldn't breathe, I couldn't think.

6. Karissa's tire had popped when she had hit a pothole, that same pothole from the day before, as she swerved to avoid hitting a car merging into traffic. She lost control of the vehicle, and ended up hitting the car that she tried to avoid. Her two friends in the car and the family of four that she hit, all died along with her. She died at the scene with two others and the rest died on their way and in the ER of the hospital.
7. The reason that I am filing this suit is because I later found out that the Department of Safety had listed all potholes on that road as being filled two days before the incident, saying that they had been taken care of. Clearly it wasn't taken care of, as my daughter lost her life.
8. The grave lack of concern for the lives and people of Powhatan is appalling and now I will never get to see my daughter graduate high school, or start a family on her own, because of the negligence of the Louisiana Department of Transportation.

STATE OF LOUISIANA

PARISH OF NORTH SABINE

AFFIDAVIT OF ELI HUGHES

Eli Hughes, duly sworn, under oath, and based upon personal knowledge, attests as follows:

1. I am currently employed as a chemical engineer with a major tobacco corporation. I was called into today's case because of my expertise with chemical engineering as it is related to the earth and fracking.
2. I graduated from Powhatan University with a degree in chemical engineering, and later did an internship for an environmental agency working in earthquake areas and areas of high risk as a data inputter. I never actually did any field work for the organization. After that I got a new job and have spent the last 15 years working for a tobacco corporation in their department on environmental studies.
3. I was brought on to this case to study whether or not there was an earthquake that took place between August 16th of 2012 and August 18th of 2012, whether or not that earthquake would have been enough to open or reopen a pothole, and if an earthquake happened, the likelihood of the earthquake being caused by fracking.
4. Fracking is the process of drilling down into the earth before a high-pressure water mixture is directed at the rock to release the gas inside. Fracking does little to disturb the natural sediments below and while it could cause minor disturbances to the rock structure below the ground it wouldn't be enough to be able to fracture a road.

5. Using my experience as an engineer and relying on a seismology sheet from the time period leading up to the accident, I was able to determine that while there were indeed small tremors felt throughout the day, none were enough to cause the large pothole that was identified to me as the probable cause of the accident.
6. A major 7.5 earthquake took place 3 hours after the incident and before the wreckage had been cleaned up resulting in the police being unable to actually identify the pothole that caused the incident or being able to decide if a pothole had even been opened at the time.
7. However, judging from the evidence and my own expert opinion, it is clear that the pothole that caused the incident had to have been previously there and was not caused by an earthquake.
8. In fact, I would say that the pothole that was there had to have been there for several days, perhaps even weeks judging by its size and the wear and tear to the sides.

STATE OF LOUISIANA

PARISH OF NORTH SABINE

AFFIDAVIT OF JEAN MICHAELS

Jean Michaels, duly sworn, under oath, and based upon personal knowledge, attests as follows:

1. I am a former traffic engineer and former employee of the Louisiana department of Transportation.
2. I graduated from the University of Louisiana at Powhatan with a degree in traffic engineering and was grandfathered into my post at the Department of Transportation. I was head of traffic engineering for 11 years before I was unceremoniously let go for undisclosed reasons.
3. I now serve as a manager at a local tire dealership and a volunteer first responder for the city of Powhatan.
4. I was actually a first responder to the scene on August 17th. I took pictures of the wreck to highlight the dangers of pothole and shoddy work. I was sure to leave my card and information with Charlie Winters at the hospital after the accident.
5. As a traffic engineer I was able to do a reconstruction of what happened at the accident.
6. It is clear from what I gathered that at 4:25 Karissa Winters was driving when she swerved to avoid hitting another car merging onto the busy road she was on. She just so happened to swerve into a pothole that popped her tire, sending her back into the opposing lane, causing a large wreck.

7. The pothole, after I did some digging into the open records of the Department of Transportation, should have been and was marked as being filled and fixed two days before, on the 15th.
8. A pothole does not reopen two days after it is filled and fixed.
9. From my years of experience it is clear that the pothole was not filled and that in an effort to cut corners the Department of Transportation marked it as filled when it was not.
10. This money saving measure resulted in the deaths of six people.
11. When I was working for the Department, they had begun trying to save money, due to the shrinking budget. They would do it by filling the potholes with rocks and not patching them up fully. It is clear they have gotten to the point where they are not patching them at all.

STATE OF LOUISIANA

PARISH OF NORTH SABINE

AFFIDAVIT OF FRANCIS SOMMERS

Francis Sommers duly sworn, under oath, and based upon personal knowledge, attests as follows:

1. I'm the current director of the Department of Transportation for the city of Powhatan, Louisiana. I have been in this position for the last 7 years, and beforehand I was working as the manager for the local DMV.
2. I received my degree in management from Powhatan University, where I also served as president of our local "Keep Louisiana Litter Free" group.
3. As director of the Department of Transportation It is my job to oversee the activities of our traffic engineers and making sure that our roads are taken care of.
4. Recently, since the addition of oil drilling operations using fracking, which is run by a major tobacco corporation in the state, Powhatan has been experiencing earthquakes.
5. I would like to clarify that earthquakes are supposed to be very rare in the state of Louisiana due to our soil type and lack of bedrock. However, since the introduction of fracking to our town, we have started having earthquakes and tremors almost every day. Our roads are not meant for earthquakes. These heavy tremors and major earthquakes are destroying our fragile infrastructure.
6. On August 15th, one of my crews filled a large pothole on a major road. On August 17h through August 18th a series of tremors struck the area. It is my understanding

that these earthquakes reopened the potholes. This was followed up with a major earthquake on the 17th that basically destroyed the road.

7. These earthquakes, a direct result of the environmental travesty being caused by the fracking, are ruining our roads before we can fix them.
8. Although we are tremendously horrified and saddened by the accident on August 17th there is nothing that could have been done.
9. Road crews cannot work during earthquake tremors and to my knowledge we had previously filled the hole.

STATE OF LOUISIANA

PARISH OF NORTH SABINE

AFFIDAVIT OF TAYLOR MORRISON

Taylor Morrison, duly sworn, under oath, and based upon personal knowledge, attests as follows:

1. I work for an environmental think tank and have a degree in environmental engineering.
2. I received this degree from the University of New York 10 years ago. Since then I have worked at several environmental agencies, working to stop the destruction of our environment. The last being the Committee to Repel Environmental Destruction, also Common CRUD.
3. Exposing the destruction brought by industry has been a mission for me. Yes, I have even been arrested for protesting at nuclear power plants and coal mines in West Virginia. I think the charge was trespassing and inciting a riot.
4. I have been working in Powhatan for the last two years monitoring the rise in earthquakes since the introduction of fracking to the community. This job requires me to monitor the seismic activity in the town and also go out to visit sites affected by the earthquakes.
5. There is a clear correlation between the fracking and the earthquakes.
6. I provided two charts showing a before and after for earthquakes and minor tremors when it comes to the introduction of Fracking to Powhatan.
7. The area where the accident occurred on August 17th was about 3 miles from a major fracking drilling site meaning that it is in prime area to be continuously hit by tremors

and heavy activity. Frankly I am surprised that any of the road was even left by the time August 17th rolled around. Daily earthquakes in an area that has probably never ever experienced a movement before the introduction of the drilling should have theoretically destroyed most major pieces of infrastructure.

8. It is important to note that earthquakes the size of those being reported here and even small tremors can damage a fragile road quickly. One good sized tremor can open a pothole.
9. The day of August 17th there were several tremors leading up to the major earthquake that happened three hours after the accident. Also as you can see from the picture of the pothole the ground underneath was hollow. This hollow ground is a common trend for earthquake damage as earthquakes tend to cause ground diaspora, leaving a hollow shell in their wake.
10. Fracking is, in my expert opinion, the main cause of what happened August 17th. Fracking disturbs the sediment and rock table below the ground, causing seismic shifts that can result in major earthquakes or tremors.
11. Any one of these tremors could reopen a closed pothole, especially if the pothole was only filled and not covered.
12. I know this because of my years of working to monitor and control earthquakes and the damage caused by fracking. If fracking isn't stopped the whole town of Powhatan could sink into the fragile ground and cease to exist. So not only is this ecological hazard causing earthquakes that result in the deaths of innocent townsfolk it is literally posing as a death sentence to the entire town.

STATE OF LOUISIANA

PARISH OF NORTH SABINE

AFFIDAVIT OF CAMPBELL JONES

Campbell Jones duly sworn, under oath, and based upon personal knowledge, attests as follows:

1. I'm currently employed with the Department of Transportation as a group manager to ensure the upkeep of the roads.

2. I didn't go to college, instead I started as a road worker, fixing roads and patching potholes until I was able to work my way up to my current position. This took me about 8 years, and I've been working in this position for 2 years.

3. I know the department has been having some issues when it comes to cost. All of the earthquakes have been causing major road damage and frankly at times we don't have the budget to fix everything.

4. We've been forced to cut corners, fill things as best as we can, repair the major things, all while waiting for more money.

5. Unfortunately the Governor has decided we won't be getting more money.

6. With the way things are, I'm not sure if Powhatan can withstand any more damage.

7. On August 15th myself and a team went out to repair a major pothole on the road to the high school, Maginot Line road. I had to take a call so I left the team to fill it while I handled some personal business concerning my sick child.

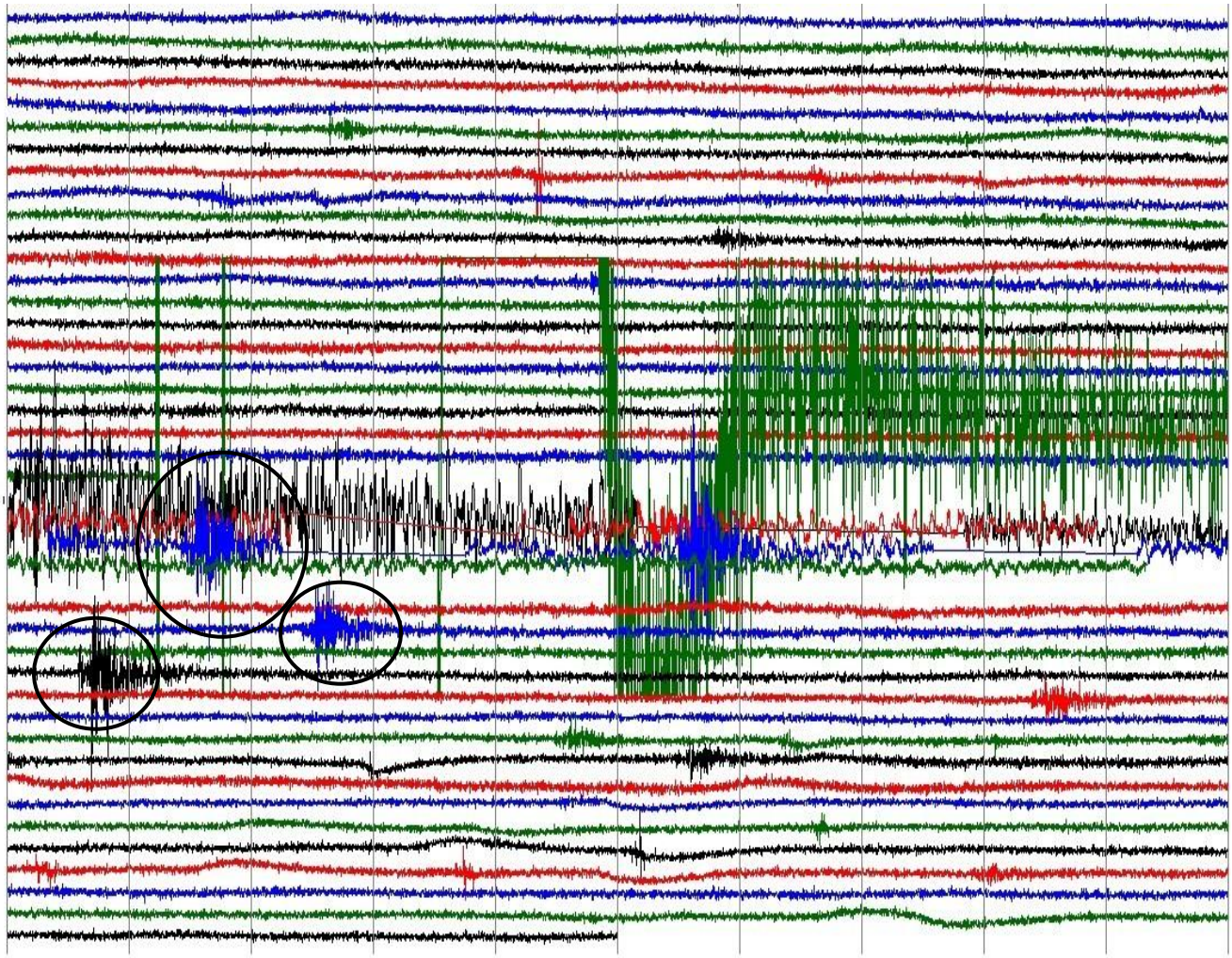
8. When I returned the team assured me that the hole had been filled, we were in a rush, so I marked it as being filled, trusting my team.

9. It is general protocol to take a before and after photo of each pothole. I am in charge of taking the photos. I took a before photo, but due to the rush, I was unable to go and take an after photo.

10. That day and night there were several small earthquakes, and I know how quickly, from experience, that can damage a road.

11. I have no doubt that we are doing the best we can and that the hole had been filled on August 15th. I trust my team to follow orders.

Exhibit 1



This seismograph chart details the day of August 17th of 2012. As seen there were several small tremors, each one is circled. These small tremors all took place before the incident and each ranked between a 2.0 and a 4.4.

The large mass is the 7.5 earthquake that struck the town later that day.

Exhibit 2

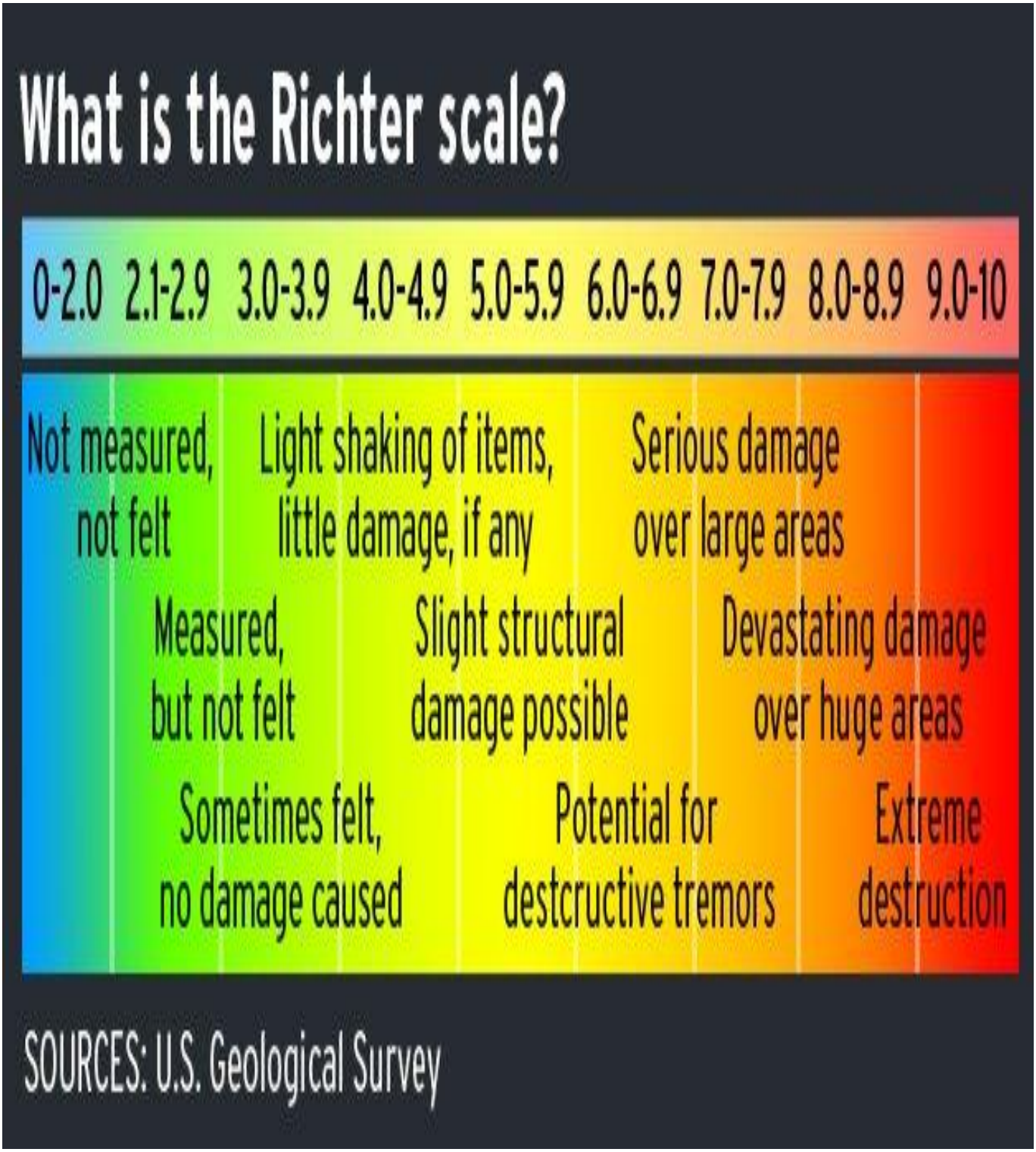

What is the Richter scale?
0-2.0 2.1-2.9 3.0-3.9 4.0-4.9 5.0-5.9 6.0-6.9 7.0-7.9 8.0-8.9 9.0-10
Not measured, not felt
Measured, but not felt
Sometimes felt, no damage caused
Light shaking of items, little damage, if any
Slight structural damage possible
Potential for destcructive tremors
Serious damage over large areas
Devastating damage over huge areas
Extreme destruction
SOURCES: U.S. Geological Survey

Exhibit 3

INVOICE

Louisiana Department of Transportation
Powhatan, Louisiana

Bill To:

Department of Transportation
Baton Rouge, Louisiana

Invoice#

Invoice Date

Due Date

Item Description	Qty	Rate	Amount
Pot Hole Repair -Maginot Line Rd pothole repair -debris removal -filled pothole -covered pothole	1	300	300
Tree limb removal	1	100	100
Pot Hole Repair -Serendipity Blvd -filled pothole	1	250	250
Pot Hole Repair -Lennon Prkway -Filled -Covered	1	300	300
Traffic light repair Oakley Crcle	1	150	150
		Sub Total	**1100**
		Sales Tax (10%)	**110**
		TOTAL	**$1210**

Notes

It was great doing business with you.

Exhibit 4

Exhibit 5

Exhibit 6

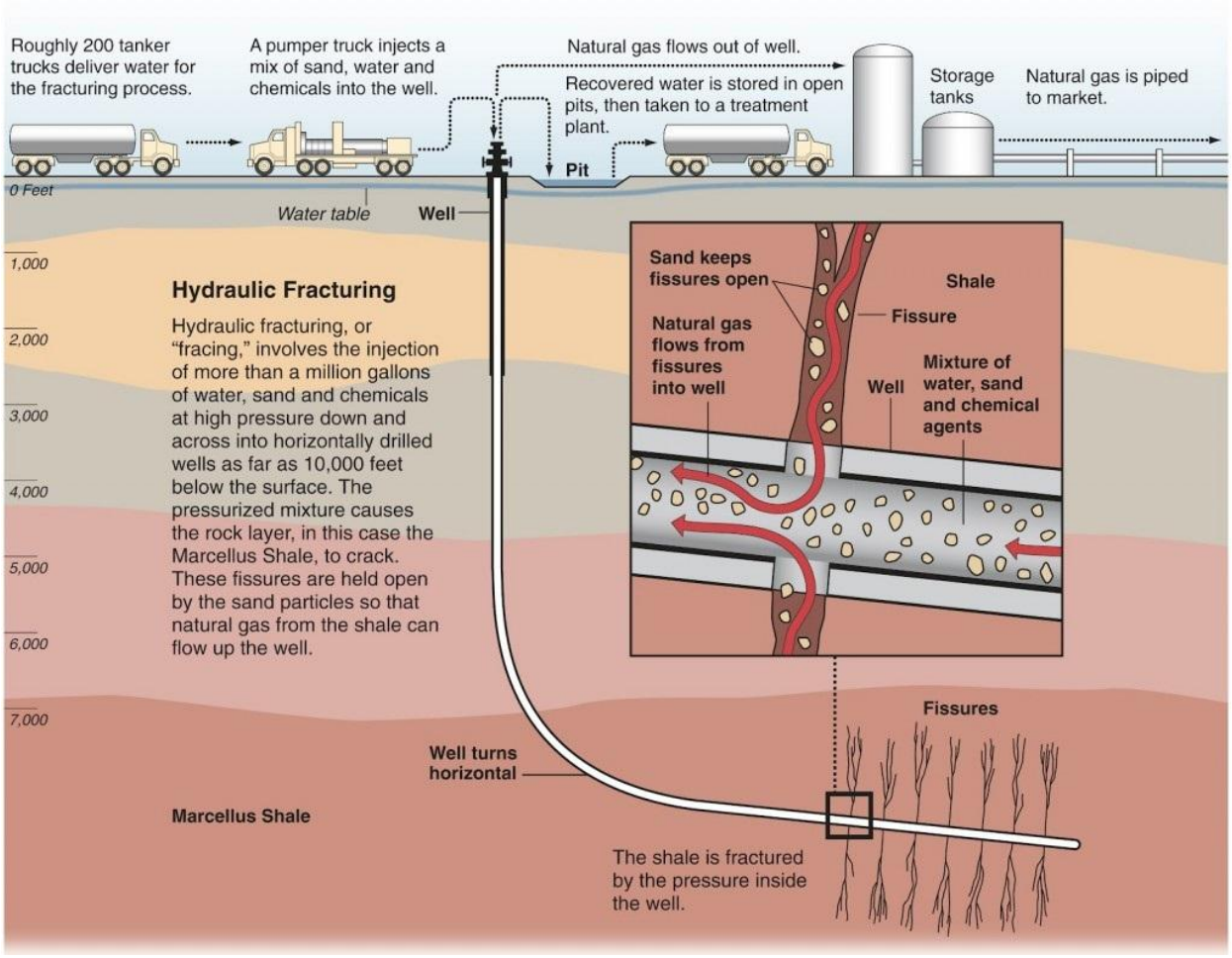

Roughly 200 tanker trucks deliver water for the fracturing process.
A pumper truck injects a mix of sand, water and chemicals into the well.
Natural gas flows out of well.
Recovered water is stored in open pits, then taken to a treatment plant.
Storage tanks
Natural gas is piped to market.
Pit
0 Feet
Water table
Well
1,000
2,000
3,000
4,000
5,000
6,000
7,000
Hydraulic Fracturing
Hydraulic fracturing, or "fracing," involves the injection of more than a million gallons of water, sand and chemicals at high pressure down and across into horizontally drilled wells as far as 10,000 feet below the surface. The pressurized mixture causes the rock layer, in this case the Marcellus Shale, to crack. These fissures are held open by the sand particles so that natural gas from the shale can flow up the well.
Sand keeps fissures open
Shale
Fissure
Natural gas flows from fissures into well
Well
Mixture of water, sand and chemical agents
Fissures
Well turns horizontal
Marcellus Shale
The shale is fractured by the pressure inside the well.

Exhibit 7

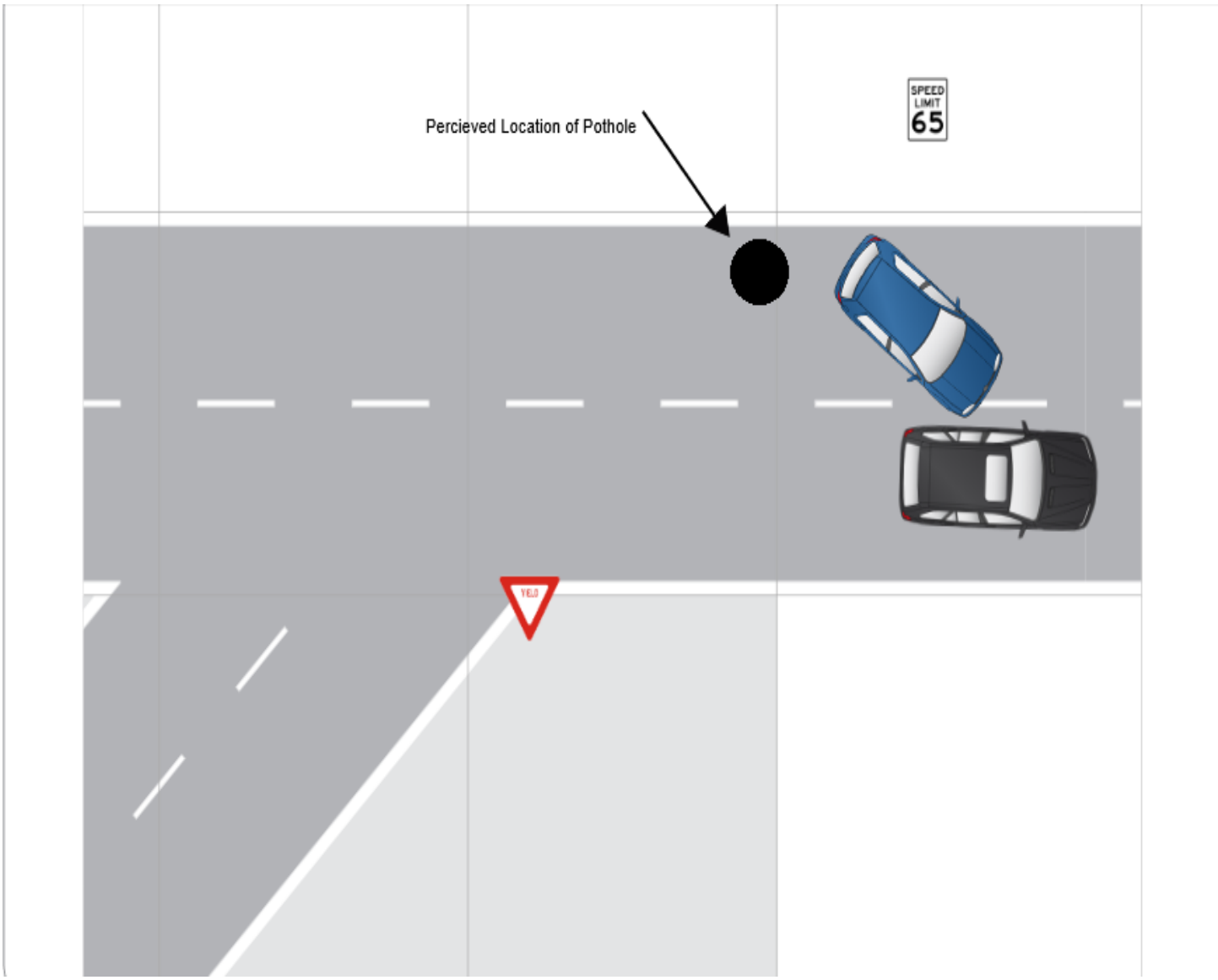

Percieved Location of Pothole
SPEED LIMIT 65
YIELD

Exhibit 8

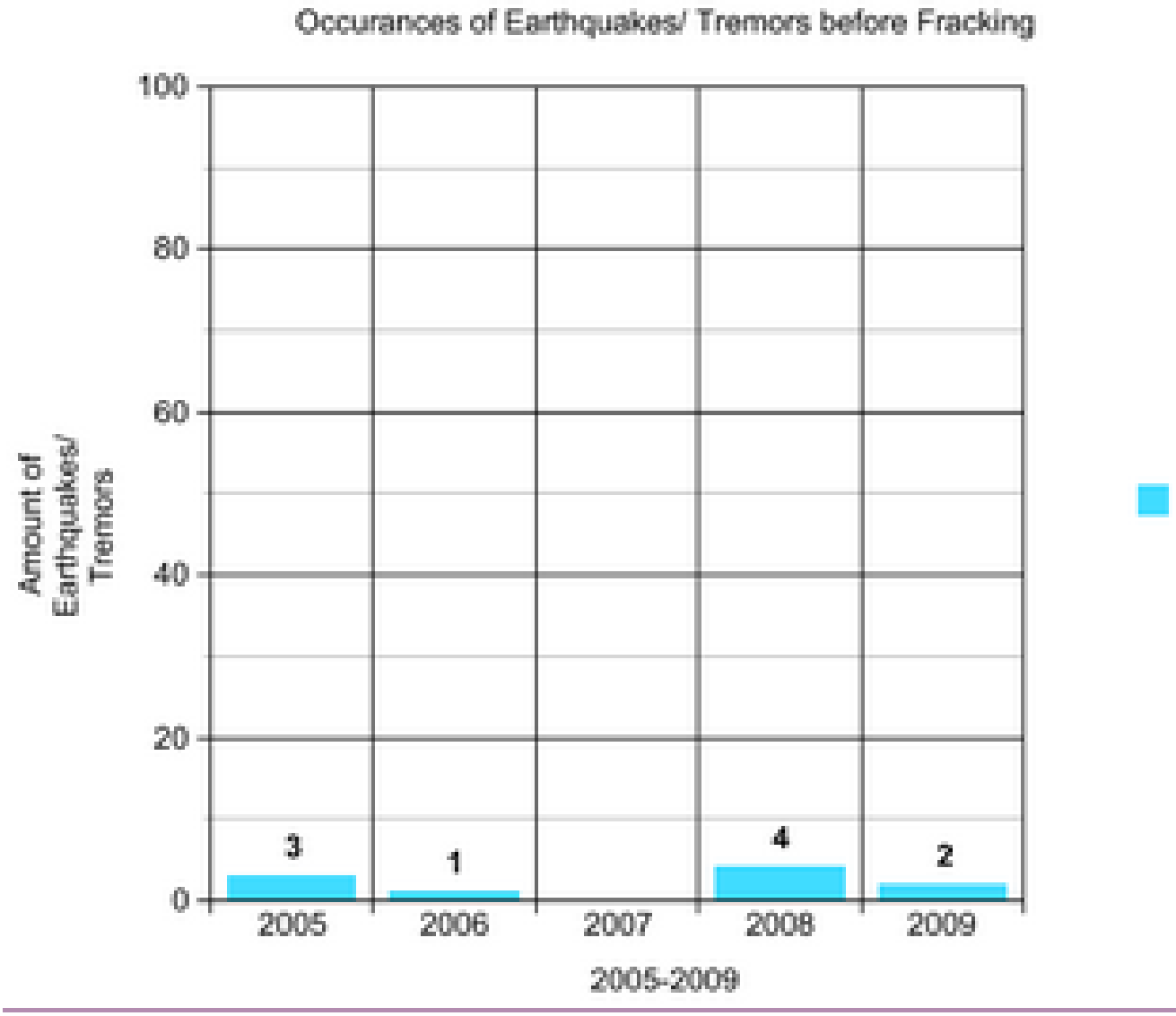
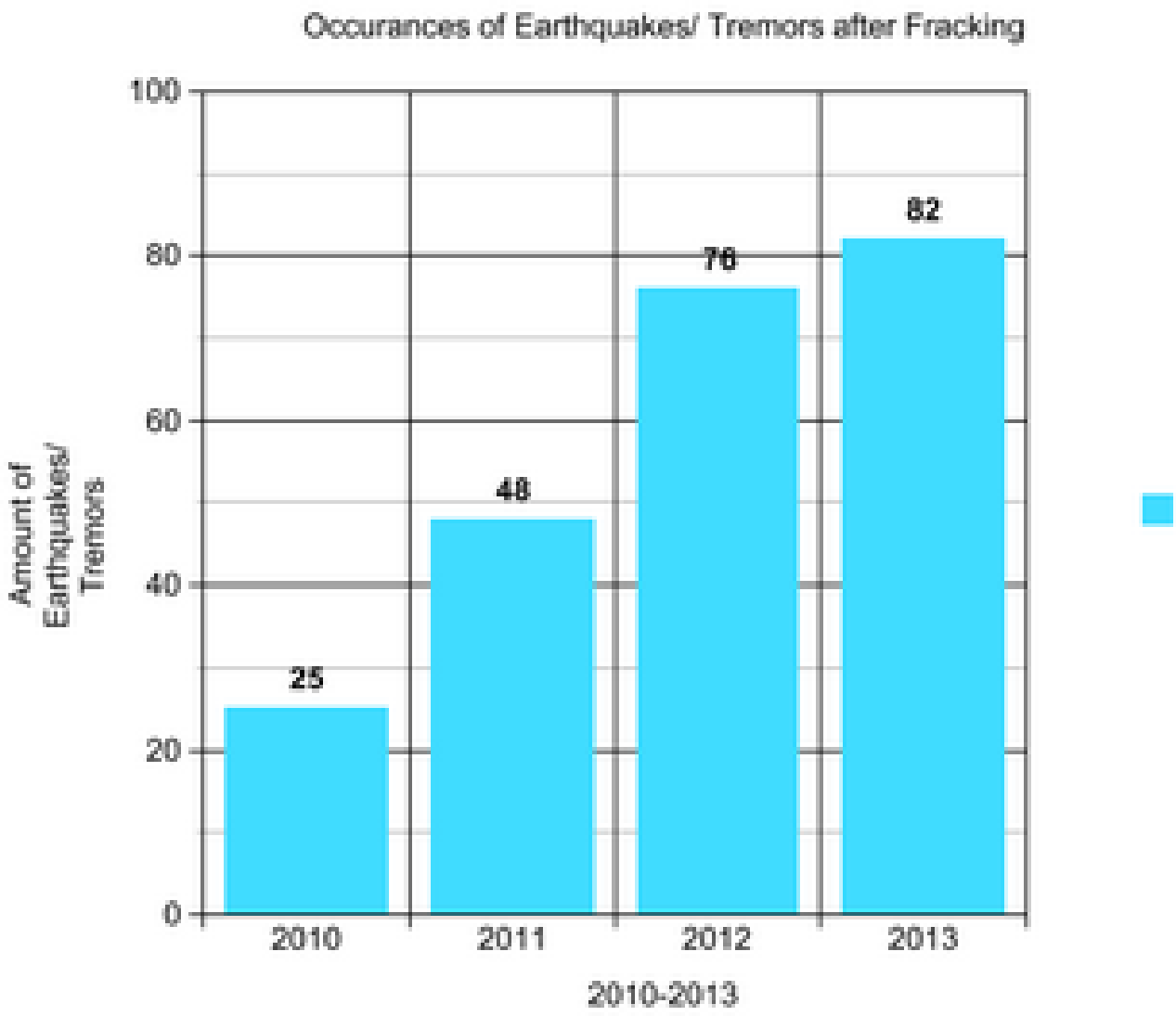

Occurances of Earthquakes/ Tremors before Fracking
Amount of Earthquakes/ Tremors
100
80
60
40
20
0
3
1
4
2
2005
2006
2007
2008
2009
2005-2009

Exhibit 9


Occurances of Earthquakes/ Tremors after Fracking
Amount of Earthquakes/ Tremors
100
80
60
40
20
0
25
48
76
82
2010
2011
2012
2013
2010-2013