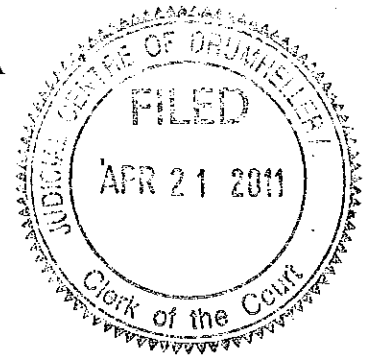


IN THE COURT OF QUEEN'S BENCH OF ALBERTA
CENTRAL
JUDICIAL DISTRICT OF DRUMHELLER/THANNA



BETWEEN:

JESSICA ERNST

Plaintiff

and

**ENCANA CORPORATION,
ENERGY RESOURCES CONSERVATION BOARD and
HER MAJESTY THE QUEEN IN RIGHT OF ALBERTA**

Defendants

AMENDED STATEMENT OF CLAIM

Amended on: April 21, 2011

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NOTICE TO DEFENDANT(S)

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STATEMENT OF FACTS RELIED ON:

I. Summary of Claim

1. In or around 2001, EnCana began a risky and experimental drilling program for shallow coalbed methane ("CBM") at dozens of wells in the area around Rosebud, Alberta. As part of the extraction process, and without the knowledge of local residents, EnCana negligently injected chemical fracturing fluids at high pressure into coal seams located at shallow depths below ground and near the underground freshwater drinking supplies of rural Albertans. In at least one instance, EnCana negligently injected chemical fracturing fluids directly into the aquifer that local residents depend upon for access to safe, clean drinking water.
2. This negligent CBM drilling released a large amount of methane and other contaminants into underground freshwater supplies, and specifically into Jessica Ernst's water well. As

a result, Ms. Ernst's water is now so contaminated with methane and other chemicals that it can be lit on fire.

3. In the course of drilling for CBM, EnCana broke several laws, regulations and requirements that were intended to protect drinking water supplies, and were to be administered and enforced by the Government of Alberta, through both Alberta Environment and the Alberta Energy and Utilities Board (now the Alberta Energy Resources Conservation Board).
4. The Alberta Government, through Alberta Environment, is responsible for protecting the environment and for regulating the management and protection of water. Alberta Environment has repeatedly assured rural Albertans that its regulations protect underground freshwater supplies for their benefit.
5. The Alberta Energy and Utilities Board (now the Alberta Energy Resources Conservation Board, henceforth the "EUB") is responsible for regulating all aspects of the oil and gas industry. The EUB has repeatedly reassured rural Albertans that it is regulating CBM drilling in a manner that protects underground freshwater supplies, including by establishing various legal requirements that are directed at protecting the drinking water supplies of rural Albertans.
6. Despite knowledge that EnCana had breached Alberta Environment and EUB legal requirements when drilling for CBM near Rosebud, and despite numerous reports of suspected water contamination in the Rosebud area, Alberta Environment and the EUB failed to follow the investigation and enforcement processes that they had established and publicized. Instead, Alberta Environment and the EUB responded to the Plaintiff's legitimate complaints and concerns in a hostile and confrontational manner that was characterized by bad faith. When Alberta Environment did finally conduct an investigation, it was completed negligently and in bad faith.
7. Further, the EUB prevented Ms. Ernst from raising legitimate concerns regarding industry related-contamination at the very time that the regulator was most needed. This

silencing of Ms. Ernst appeared to be an attempt to threaten, intimidate and punish her for comments and criticism that she had made about the EUB both publicly and privately. These actions taken by the EUB infringed on Ms. Ernst's right to free speech as guaranteed by the Canadian Charter of Rights and Freedoms.

8. In the case of Ms. Ernst and her neighbours, the EUB and Alberta Environment have consistently failed to enforce regulations specifically designed to protect the safety of groundwater. Their failure to act, despite frequent promises to protect the public, has in fact served as a governmental cover-up of environmental contamination caused by the oil and gas industry.

II. *The Parties*

A. The Plaintiff

i. Jessica Ernst

9. The Plaintiff Jessica Ernst resides near Rosebud, Alberta, and is the fee simple owner of, and resides on, the land legally described as Plan 9813427, Block 2 located in SE 13-27-22-W4M in Horseshoe Canyon in Wheatland County ("the Ernst Property"), which she purchased in 1998.
10. Ms. Ernst holds a Masters Degree in Science from the Pathology Department of the University of Guelph's Veterinary College. She currently provides environmental consultation services to the oil and gas industry, and has twenty-five years of work experience in the oil and gas industry in the western Canadian provinces and territories.

B. The Defendants

i. EnCana Corporation

11. The Defendant EnCana Corporation ("EnCana"), headquartered in Calgary, Alberta, is a North American oil and gas company formed in 2002 through the merger of PanCanadian Energy Corporation and the Alberta Energy Company Ltd. EnCana is incorporated

pursuant to the *Canada Business Corporations Act* and operates under corporate number 4340442.

12. The Defendant EnCana Corporation continues several corporations through various amalgamations made pursuant to the *Canada Business Corporations Act*. The amalgamating corporations include (but are not limited to): EnCana Corporation (No. 4211375); 6110703 Canada Inc. (No. 6110703); EnCana Corporation (No. 4132432); 3398234 Canada Ltd. (No. 3398234); Alberta Energy Company Ltd. (No. 4132424); EnCana Midstream Ltd. (No. 3090256); EnCana Corporation (No. 3987752, formerly named PanCanadian Energy Corporation); Alberta Energy Company Ltd. (No. 4132408); EnCana Pipelines Ltd. (No. 4132416); PanCanadian Petroleum Ltd. (No. 3451771); PanCanadian Energy Corporation (No. 3952177); PanCanadian Petroleum Ltd. (No. 3269019); PanCanadian NGLs Ltd. (No. 3339114); 3340112 Canada Ltd. (No. 3340112); PanCanadian Energy Corporation (No. 3914569); 3921778 Canada Inc. (No. 3921778); and 3929132 Canada Inc. (No. 3929132).
13. Under s. 186 of the *Canada Business Corporations Act*, EnCana, as the amalgamated corporation, continues to be liable for the obligations of each of the amalgamating corporations. Any existing cause of action claim or liability against any of the amalgamating corporations continues against EnCana Corporation.
14. For the purposes of this Statement of Claim, EnCana and all of its amalgamating corporations will be referred to as “EnCana”, or “EnCana Corporation”.
15. On or around September 24, 2008, EnCana caused to be created a corporation called Cenovus Energy Inc. (“Cenovus”, formerly 7050372 Canada Inc.), pursuant to the *Canadian Business Corporations Act*. On or around November 20, 2009, Cenovus Energy Inc. and EnCana completed a business arrangement in which EnCana transferred certain oil-related business and assets formerly owned and/or operated by EnCana to Cenovus. The Plaintiffs assert that EnCana continues as a legal entity and that liability for the damages caused by EnCana’s coalbed methane activities is unaffected by the transfer of assets to Cenovus.

ii. Energy Resources Conservation Board

16. The Defendant Energy Resources Conservation Board (“ERCB”) was created on January 1, 2008 as a result of the realignment of the Alberta Energy and Utilities Board (“EUB”) into two separate regulatory bodies – the ERCB, which regulates the oil and gas industry, and the Alberta Utilities Commission (“AUC”), which regulates utilities.
17. According to the *Alberta Utilities Commission Act*, S.A. 2007, c. A-37.2 and regulations under that Act, any existing cause of action, civil action, claim or liability brought against the EUB may be continued against the ERCB so long as it relates to a matter under the jurisdiction of the ERCB.
18. The stated legislative purpose of the ERCB is, among other things, to “control pollution and ensure environment conservation in the exploration for, processing, development and transportation of energy resources and energy”. For the purposes of the legislation, “energy resources” include coalbed methane.
19. At all material times, the EUB was a corporation created by the *Alberta Energy and Utilities Board Act*, R.S.A. 2000, c. A-17. The EUB had several distinct functions, some quasi-judicial, some regulatory and some related to the investigation and enforcement of EUB legal requirements, including laws, regulations, orders and directions.

iii. Her Majesty the Queen in right of Alberta

20. The Defendant Her Majesty the Queen in right of Alberta (hereinafter the “Provincial Crown”) is responsible in law for the tortious actions and omissions of the officers and agents of the Government of Alberta pursuant to the *Proceedings Against the Crown Act*, R.S.A. 2000, c. P-25.
21. Alberta Environment is the provincial ministry, established under the *Government Organization Act*, R.S.A. 2000, c. G-10, responsible for overseeing the environmental protection of Alberta’s land, water and air. Hereinafter, “Alberta Environment” will refer

to the officers and agents of the Provincial Crown that constitute the ministry of Alberta Environment.

III. Summary of Facts

A. Coalbed Methane Extraction

22. Coalbed methane (“CBM”) is methane that is found in coal deposits and that is attached, or “adsorbed”, to the coal due to weak electromagnetic forces.
23. In coal formations that have low permeability, oil and gas companies must complete two steps to release the CBM from the coal. First, the coal itself must be hydraulically fractured, a process that is accomplished by drilling into the coal bed and injecting large quantities of fracturing fluids into the coal seam at a rate and pressure strong enough to enlarge existing fractures in the coal and rock, and to create new fractures. These fracturing fluids can and often do contain hazardous and toxic chemicals.
24. Second, in order to free the methane from the coal, the pressure in the coalbed must be reduced. If the coalbed is water-bearing, oil and gas companies will depressurize the coalbed by pumping out or otherwise removing or diverting water from the coalbed. During this process, a substantial amount of water is removed or diverted from the coalbed.
25. Once the pressure in the coalbed is sufficiently low, the methane desorbs from the coal and travels freely through the coalbed fracture network, through the fractures created by the hydraulic fracturing, and into the production wellbore, where it is collected. Once production has started, a CBM well can continue to produce methane for approximately 20 to 40 years.
26. However, once released from the coal, not all of the methane will necessarily be captured. The fractures created during the fracturing process can connect to other

fractures or can extend beyond the coalbed, and into bodies of groundwater, thus creating pathways for the methane to enter aquifers and other drinking water sources.

27. Government and industry acknowledge that the coal formations in the Rosebud area have naturally low permeability, and are therefore considered to be “tight” formations. Methane in these tight formations generally will not migrate unless the coal formations are subject to hydraulic fracturing operations.

B. Regulatory and Legislative Framework Administered and Enforced by the Alberta Energy & Utilities Board

28. Exploring and drilling for CBM in Alberta is subject to various legislative and regulatory provisions that are enacted, administered and enforced by, among other bodies, the EUB and Alberta Environment. This regulatory matrix imposes various requirements on CBM well operators.

29. The EUB is exclusively tasked with licensing and regulating the locating, spacing, drilling, equipping, constructing, completing, reworking, testing, operating, maintenance, repair, suspension and abandonment of wells and facilities for the production of oil and gas in Alberta. In particular, the EUB is exclusively tasked with enforcing significant legislative and regulatory provisions that are directed towards protecting both usable groundwater and those who depend upon that groundwater. These legislative and regulatory provisions are contained in, among other sources, the *Oil and Gas Conservation Act*, RSA 2000, and related regulations, guidelines, orders and directions.

i. The Oil and Gas Conservation Act and related regulatory requirements

30. According to section 4(f) of the *Oil and Gas Conservation Act*, the purposes of the *Act* include to “control pollution above, at or below the surface in the drilling of wells and in operations for the production of oil and gas and in other operations over which the Board has jurisdiction.”

31. Section 10(2) of the *Oil and Gas Conservation Act* empowers the EUB to make regulations governing the oil and gas industry in Alberta. The legal requirements imposed by the EUB include those contained in regulations, guidelines, informational letters, orders and directives issued by the EUB. Under section 7 of the *Oil and Gas Conservation Act*, the EUB (and its successor, the ERCB) is empowered to “make any just and reasonable orders and directions the Board considers necessary to effect the purposes of this Act and that are not otherwise specifically authorized by this Act.”
32. Further, the EUB has broad powers to investigate and enforce its regulations under sections 94 to 110 of the *Oil and Gas Conservation Act*. These powers include the power to compensate those harmed by EUB orders under section 99.
33. The EUB did, in fact, make or issue regulations, orders, directions and other requirements governing the oil and gas industry that were specifically aimed at protecting the quality and quantity of groundwater supply from interference or contamination due to oil and gas development. These requirements are contained in, among other sources, the *Oil and Gas Conservation Regulations*, Alta. Reg. 151/1971, *Guide 65: Resources Applications for Conventional Oil and Gas Reservoirs* (2003), *Guide G-8: Surface Casing Depth – Minimum Requirements* (1997), *Guide 56: Energy Development Applications and Schedules* (2003) and *Informational Letter IL 91-11: Coalbed Methane Regulation* (1991).
34. Since 2006, owing specifically to concerns about CBM development, the EUB has, at various times, issued a number of orders and directions aimed at assessing, mitigating and managing the risks associated with CBM development. For example:
 - (a) *Directive 027* notes that there “is not always a complete understanding of fracture propagation at shallow depths” and therefore CBM well operators “must not conduct fracturing operations at depths less than 200 metres unless they have fully assessed all potential impacts to ensure the protection of water wells and shallow aquifers”.

- (b) Directive 035 makes baseline water well testing “mandatory for companies wanting to drill a new well or complete or recomplete wells for the purpose of producing coalbed methane (CBM) above the base of groundwater protection”. The ‘base of groundwater protection’ is a specified level above which ground water is deemed usable without treatment and is thus entitled to protection under Alberta Environment and EUB regulations and directives.
- (c) Directive 044 outlines actions that CBM well operators must take if any well completed above the ‘base of groundwater protection’ produces more than 5 cubic meters of water per calendar month. In particular, Directive 044 notes that “wells that are on production [i.e. producing gas] should not be shut in [i.e. closed off] except as needed to obtain the required information unless so directed by the EUB, as shut-in may increase the risk of crossflow in the wellbore”.

35. The directives in the preceding paragraph were promulgated after the occurrence of many of the events affecting the Plaintiff as set out herein, but are material to the legal standard of care the Plaintiff asserts was breached by one or more of the defendants.

C. Regulatory and Legislative Framework Administered and Enforced by Alberta Environment

36. Alberta Environment administers and enforces significant legislative and regulatory provisions that are intended to protect both the quality and the quantity of groundwater supply in areas in which there are oil and gas operations, for the benefit of household users of that groundwater. These legislative and regulatory provisions are contained in, among other sources, the *Water Act*, R.S.A. 2000, c. W-3, the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12 and associated regulations and guidelines.

i. The Water Act and related regulatory requirements

37. Under section 169(2) of the *Water Act*, the Minister of Environment is empowered to make regulations relating to any matters “necessary for the purposes of this Act”. Specifically, the Minister may make regulations “prohibiting drilling through water, oil,

gas, coal or any other mineral unless adequate measures are taken to confine the water, oil, gas or other mineral to its original stratum” as well as regulations “governing property in and rights with respect to diversion and use of water in Alberta.” Similarly, under section 14(1), the Minister is empowered to establish water guidelines.

38. The Minister did, in fact, establish regulations, guidelines and other requirements aimed specifically at protecting groundwater quantity and quality. These regulations and guidelines include *Water (Ministerial) Regulation*, Alta. Reg. 205/1998, *Alberta Environment Guidelines for Groundwater Diversion: For Coalbed Methane/Natural Gas in Coal Development* (2004) and *Groundwater Evaluation Guideline (Information Required when Submitting an Application under the Water Act)* (2003).
39. The Minister of Environment is given broad powers to inspect and investigate alleged breaches of the *Water Act* as well as broad powers to enforce that *Act* under sections 118 to 152.

ii. *The Environmental Protection and Enhancement Act and related regulatory requirements*

40. According to section 2 of the *Environmental Protection and Enhancement Act*:

The purpose of this Act is to support and promote the protection, enhancement and wise use of the environment while recognizing the following:

- (a) the protection of the environment is essential to the integrity of ecosystems and human health and to the well-being of society;
- (b) the need for Alberta's economic growth and prosperity in an environmentally responsible manner and the need to integrate environmental protection and economic decisions in the earliest stages of planning;
- ...
- (d) the importance of preventing and mitigating the environmental impact of development and of government policies, programs and decisions;
- ...
- (i) the responsibility of polluters to pay for the costs of their actions.

41. The *Environmental Protection and Enhancement Act* contains a number of provisions aimed specifically at protecting groundwater. Further, the *Environmental Protection and Enhancement Act* grants the Minister broad enforcement powers under sections 194 to

239 of the Act. These powers include the power to investigate, inspect, issue enforcement orders, and prosecute persons who breach the Act.

D. EnCana's Drilling Activities Contaminated the Plaintiff's Well Water

42. Prior to the arrival of CBM development in the Rosebud area, Ms. Ernst's water well (the "Ernst Water Well" or the "Ernst Well") produced large quantities of very clear, high quality water.

43. As detailed below, in or around 2001, EnCana began drilling wells for the extraction of CBM from the Horseshoe Canyon geological formation located underneath Wheatland County. EnCana's CBM activities in the Rosebud area caused the Ernst Water Well to become contaminated with dangerously high concentrations of methane and with other hazardous substances not normally found in groundwater. EnCana's CBM activities included perforating and fracturing various water bearing coal seams at shallow depths, and, in one case, perforating and fracturing directly into water bearing coal seams that act as an aquifer for the wells of various homes in the Rosebud area, including the Ernst Water Well. Many of these CBM activities breached various laws, regulations, guidelines, orders, directions or other requirements administered and enforced by either the EUB or Alberta Environment.

44. As detailed below, various tests confirmed that, after EnCana's CBM activities, methane concentrations in Ms. Ernst's well water are considerably above levels that are scientifically recognized to be hazardous. Because of the high concentrations of methane in Ms. Ernst's water supply, methane was leaving her water and entering the air of her home in concentrations that created a serious risk of explosion. This contamination has made Ms. Ernst's well water and the Ernst Water Well unusable.

45. Several of Ms. Ernst's neighbours reported similar problems with their water wells corresponding in time to the beginning of intensified CBM drilling in the Rosebud area. These reported problems ranged from wells going 'dry', to the presence of contaminants in well water including various petroleum pollutants and large quantities of methane.

Isotopic fingerprinting tests commissioned by Alberta Environment confirmed that the ethane, butane and propane signatures from several local water wells matched the signatures from nearby EnCana energy wells, suggesting contamination caused by oil and gas industry activity.

i. No historical records of methane or other gases in the Plaintiff's well water

46. In Alberta, many water wells for residential households draw water from aquifers contained in coalbeds. Ms. Ernst, along with others in the Rosebud region, draws her water from the aquifers contained in the coal seams known as the Carbon Thompson Coals and the Weaver Coals, both of which are part of the Horseshoe Canyon geological formation located underneath Wheatland County, near the hamlet of Rosebud. The aquifer or aquifers from which the Ernst Water Well draws water will for convenience hereafter be referred to as the "Rosebud Aquifer". The Rosebud Aquifer provides water for many wells in the Rosebud area.

47. Alberta Environment requires all water well drillers to submit a "Water Well Drilling Report" ("Drilling Report") to Alberta Environment within 60 days after drilling a water well. These Drilling Reports state whether gas is present in the well. Further, if gas is encountered when drilling a water well, regulations require the driller to notify the owner of the well. If gas is encountered in a quantity that would prevent the safe drilling or operation of the water well, the driller must also notify the Ministry of Environment and take remedial steps to ensure that the gas is immediately sealed off.

48. The existence of significant quantities of naturally occurring methane gas in water wells is very rare in the Rosebud area. Of all Drilling Reports regarding over 2,300 water wells located in the 50 km² surrounding Ms. Ernst's residence completed prior to the arrival of CBM operations in or around 2001, only 4 noted the presence of a gas that could possibly be methane in the water.

49. There are no historical records or indications that the Ernst Well contained notable quantities of gas of any sort prior to 2005. Particulars include the following:

- (a) In May 1986, the Ernst Water Well was drilled for the previous owner, Mr. Lorne Feckley, and tested. The Drilling Report for the Ernst Water Well states that gas was not present in the well;
- (b) In September 1987, a water well was drilled on behalf of Wheatland County on the same quarter of land that contains the Ernst Well. The Drilling Report for the Wheatland County well states that gas was not present in the well;
- (c) The Ernst Water Well was tested in May 1995, approximately 3 years before Ms. Ernst bought the Property. The well report notes that the well water was clear. No mention is made of any problems with gas;
- (d) When Ms. Ernst purchased the Property in 1998, the previous owner, Lorne Feckley, did not mention the presence of methane or any other gas in the water from the Ernst Well. Mr. Feckley specifically drew attention to the high quality of the water as a selling feature of the property; and
- (e) In June 2003, the Ernst Well was tested by EnCana prior to the drilling of an EnCana gas well on an adjacent property. The report states that the water was clear. No mention is made of any problems with gas.

ii. Ernst well water quality radically worsened in 2005/2006

50. In or around 2005 Ms. Ernst began to notice for the first time that her water quality had significantly changed. Various indications that a serious change in water quality had occurred included:
- (a) small coal particles began to appear in household water that had formerly been very clear. The coal particles would regularly clog filters in faucets and household appliances;
 - (b) bathing in the water caused rashes as well as skin and eye irritations;
 - (c) the faucets in Ms. Ernst's house, notably the bathtub faucet, began to whistle and blow some type of gas which Ms. Ernst assumed at the time was air. The whistling was so loud that Ms. Ernst resorted to propping the bathtub spout open to stop the noise;

- (d) water in the toilet would fizz, sending tiny droplets of water several inches above the surface of the water;
- (e) the water became cloudy, would bubble and froth when poured and gave off a thick white vapour;
- (f) Ms. Ernst experienced eye irritations from merely being in the house;
- (g) Ms. Ernst could no longer produce suds with soap and shampoo;
- (h) Ms. Ernst's sinks and toilets took on a constant and unnatural shine; and
- (i) Ms. Ernst's dogs refused to drink the water.

51. In August 2005, Ms. Ernst contacted EnCana to report the above problems with her well water. EnCana failed to address Ms. Ernst's concerns at that time.

52. By the autumn of 2005, Ms. Ernst had become aware that her water was seriously contaminated with a flammable substance. Based on her own research and conversations with others who had had similar problems, Ms. Ernst conducted a few simple experiments. Indications of apparent contamination include the following:

- (a) tap water resting in a bowl or cup would catch fire if an open flame was brought close to the water; and
- (b) if water was placed in a plastic pop bottle and capped for a minute or less, the gas coming off the water would explode in a flame a foot high if a lit match or lighter was placed near the mouth of the bottle.

iii. Tests revealed that the Plaintiff's well water had become contaminated with a high concentration of methane

53. Methane can be present in two phases in water: as dissolved methane, or as bubbles of free methane gas.

54. Significant quantities of methane can exist in a dissolved state in water. Methane is not visible in its dissolved state. The degree of solubility of methane in water depends on

various factors including temperature and pressure. Much more methane can exist in a dissolved state at higher pressures than at standard atmospheric pressure. At standard atmospheric pressure, the maximum solubility of methane in water ranges from approximately 23 mg/L at a temperature of 9°C to approximately 33 mg/L at a temperature of 25°C. Owing to higher pressures found underground, dissolved methane concentrations of 127 mg/L have been reported in aquifers at depths of 213 metres near oil and gas facilities in the United States.

55. Methane can also exist in water as bubbles of gaseous methane. Any methane in water above the maximum solubility concentrations (as determined by pressure and temperature) will necessarily be gaseous methane.

56. Various laboratory tests conducted by Alberta Environment and others indicate very high levels of dissolved methane in Ms. Ernst's well water. These levels are at or near the maximum concentration chemically possible for methane in water at standard atmospheric pressure, and these levels pose a risk of explosion if methane leaving the water accumulates in a confined space. Particulars of these tests include:
 - (a) Ms. Ernst received the results a water analysis from an independent lab in December 2005. The result showed methane concentrations of 29.4 mg/L dissolved in her water. The tests also indicated that sulfide-reducing bacteria that consume methane were present;

 - (b) In March 2006, Alberta Environment sampled and tested the water from Ms. Ernst's taps. These tests were completed negligently as the sampler failed to insert a preservative in the sampling container prior to taking the sample, and allowed a delay before replacing the cap on the sample bottle. Although these errors in sampling likely allowed significant quantities of methane to escape from the sample water, tests still showed dissolved methane concentrations ranging from 11.2 mg/L to 14.2 mg/L;

 - (c) Independent samples taken at the same date, time and location as the Alberta Environment tests showed dissolved methane concentrations ranging from 21.7 mg/L to 36.5 mg/L. The lab report states: "[a]ll samples for methane content

contained a gas bubble. This is probably due to the high methane content". The gaseous methane in these gas bubbles is not included in the above concentrations; and

- (d) Alberta Environment tests conducted in June 2007 showed dissolved methane concentrations of 24.3 mg/L.

All of the above tests are for dissolved methane only; they did not measure the amount of additional gaseous methane in Ms. Ernst's water.

57. Accurate sampling of dissolved methane is difficult; if pressure and temperature are not maintained, or if the sample is exposed to air, methane can leave solution and would not be measured in the dissolved methane concentration. In all cases, sampling errors would result in detected methane levels that are lower than actual methane levels.

58. The appearance of Ms. Ernst's water indicates that gaseous methane was and is present in her water. Throughout the relevant time period, water from Ms. Ernst's taps was consistently fizzy, frothy, and cloudy-white in appearance – all of which indicates either the presence of gaseous methane, or of methane that was previously dissolved in the water that is rapidly leaving solution and becoming gaseous methane.

iv. High methane concentrations in well water are hazardous

59. Methane in water is hazardous primarily because of the potential for methane gas to leave the water and enter the air at concentrations sufficient to pose an explosion risk. Methane is a colourless, odourless and highly flammable gas that will ignite explosively at atmospheric concentrations ranging between 5% and 15%. At atmospheric concentrations below 5% (known as the Lower Explosive Limit), there is not enough methane to ignite. At atmospheric levels higher than 15% (known as the Upper Explosive Limit), the methane will have altered the composition of air enough so that there is not a sufficient concentration of oxygen in the air to ignite. The risk of explosion revives when methane dissipates and concentrations return to below 15%. Because methane is lighter than air, it rises and often accumulates at higher concentrations in areas

such as ceilings in rooms. The atmospheric concentration of methane at different points in a room can vary widely and a considerable margin of safety should be maintained.

60. Because of the tendency of methane gas to accumulate, the Alberta Government has stated that an atmospheric “gas concentration of 10 per cent or more of the Lower Explosive Limit is considered to be a safety hazard” (i.e. 10% of 5%, or 0.5%).
61. Dissolved methane will leave water at a rate and quantity determined by temperature, pressure, the concentration of methane in solution, and the concentration of methane in the atmosphere above the water. When ground water at 23°C contains greater than 1.1 mg/L of methane, it is theoretically possible for an explosion hazard to exist in poorly ventilated air spaces such as shower stalls, rooms or water tanks. Scientific literature generally holds that a concentration greater than 10 mg/L of dissolved methane in water is hazardous and should be addressed to prevent the accumulation of methane in concentrations sufficient to pose a risk of explosion.
62. Despite potential sampling errors that would produce test results that showed lower than actual concentrations of methane, tests on Ms. Ernst’s water consistently indicate dissolved methane concentrations of above 20 mg/L and as high as 36.5 mg/L – between two times and three and a half times the concentration generally considered hazardous.
63. In Ms. Ernst’s case, much of the methane in her water appears as gaseous methane. This is partly due to the effect of pressure changes on the solubility of methane. Since water at the intake valve of her well is located deep underground where water pressure is greater, the dissolved methane concentration in her well water is much higher than measured at her taps. As the water travels through Ms. Ernst’s water system and eventually out of her taps, the water pressure decreases, causing methane to leave solution as a gas. This gaseous methane appears as bubbles in her water. Gaseous methane rises and leaves the water at the first available opportunity. Water containing gaseous methane can rapidly release enough methane into the air to pose a risk of explosion.

64. After learning of the risk posed by methane in her water, Ms. Ernst obtained and installed a portable methane detector. The methane detector was triggered by methane levels in excess of 10% of the Lower Explosive Limit of 5% (indicating the existence of a safety hazard) twice in late 2005 and early 2006, despite the fact that Ms. Ernst left her windows partially open to help prevent the accumulation of methane in her house.
65. On both occasions when the methane detector was triggered because of unsafe concentrations of methane, the methane detector was located approximately one metre off the ground and could not have adequately read the atmospheric concentration of methane in all parts of Ms. Ernst's house. Given that methane rises and accumulates at greater concentrations in areas such as ceilings, a reading of 10% of the Lower Explosive Limit at a height of one metre likely indicates a higher concentration of methane at other heights in the house, suggesting a significant risk of explosion.
66. The safety hazard posed by methane in Ms. Ernst's home is real. In May of 2006, methane escaping from a private water well near Spirit River, Alberta, accumulated in the shed that housed the well and ignited explosively, seriously injuring the well owner and two well technicians. The methane contamination of the water well was allegedly caused by oil and gas industry activities.
67. As a result of this safety hazard, Ms. Ernst disconnected the Ernst Well from her house's water supply system in March 2006 and now relies on water that is brought in from elsewhere.

v. EnCana's CBM activities caused contamination of the Plaintiff's well water

68. Between the years 2001 and 2006, EnCana engaged in a risky and experimental shallow CBM drilling program at dozens of gas wells in the vicinity of the Ernst property. At these gas wells, EnCana fractured and perforated formations at shallow depths near or directly into aquifers on which local residents depended for access to clean, safe drinking water. EnCana's shallowest perforations and fractures were at the same depth underground as the depth of local private water wells, including the Ernst Well.

69. In particular, between 2001 and April 1, 2006, EnCana perforated and fractured coal seams and other formations located less than 200 metres underground at over 60 wells within an approximately 6 mile radius of the Ernst Property, without taking necessary precautions to protect in-use aquifers or water wells. The ERCB has acknowledged that there “is not always a complete understanding of fracture propagation at shallow depths”. Since May 2006, the ERCB prohibits fracturing operations at depths less than 200 metres unless CBM operators have first “fully assessed all potential impacts to ensure protection of water wells and shallow aquifers”.
70. During the same period, EnCana perforated and fractured coal seams and other formations located above the Base of Groundwater Protection at over 190 wells within an approximately 6 mile radius of the Ernst Property (hereinafter referred to as the “EnCana Wells”) without taking necessary precautions to protect in-use aquifers or water wells. Water above the Base of Groundwater Protection is fresh water that is usable without treatment and is protected by Alberta Environment and ERCB regulations.
71. Of the aforementioned EnCana Wells, EnCana Wells with legal descriptions 02/02-33-026-22W4M; 02/16-34-026-22W4M; 103/06-02-027-22W4M; 00/08-02-027-22W4M; 02/08-02-027-22W4M; 102/14-02-027-22W4M; 100/16-02-027-22W4M; 102/10-03-027-22W4M; 02/06-04-27-22W4M; 00/01-07-27-22W4M; 00/15-09-27-22W4M; 102/04-11-027-22W4M; 100/07-11-027-22W4M; 100/06-12-027-22W4M; 102/08-12-027-22W4M; 100/03-14-027-22W4M; 00/05-14-027-22W4M; 00/06-24-27-22W4M; 03/01-25-027-22W4M; 100/05-25-027-22W4M; 00/07-25-027-22W4M; 100/10-25-027-22W4M; 100/16-28-027-22W4M; and 100/13-31-027-22W4M are of particular concern.
72. EnCana’s activities at the aforementioned 190 EnCana Wells included construction, drilling, perforating, repeated hydraulic fracturing, ongoing operation, servicing, reclamation and remediation activities (“EnCana Activities”).
73. The EnCana Activities at the EnCana Wells, and in particular EnCana’s repeated hydraulic fracturing, caused:

- (a) large numbers of pre-existing fractures within the underground coal formations and surrounding formations to be greatly expanded in width and length;
 - (b) large numbers of new fractures of various widths and lengths to be created within the underground coal formations and surrounding underground formations; and
 - (c) new connections to be created in the underground coal formations and surrounding formations between large numbers of pre-existing fractures that had been expanded by EnCana Activities, large numbers of pre-existing formations which had not been changed by EnCana Activities, and fractures newly created by EnCana Activities, thereby creating far-reaching new networks of underground fractures extending for considerable distances.
74. The expansion of pre-existing underground fractures, and the creation of large numbers of new underground fractures, and the joining-up of these and other underground fractures into new and far-reaching networks extending for considerable distances, had the effect of creating large numbers of new, extended and lengthy underground pathways for dissolved and gaseous methane and ethane to travel long distances underground, and had the further effect of freeing up large amounts of previously fixed and immobile dissolved and gaseous methane and ethane in the underground formations, which then did in fact travel long distances through the new networks and pathways created by EnCana Activities.
75. There are proven incidents of methane migrating through fracture networks for more than 6 miles underground. For example, in 2001, methane gas travelled underground for 7 miles from the Yaggy Gas Storage facility to the town of Hutchinson, Kansas where leaking gas caused several fires and explosions.
76. The expansion of pre-existing underground fractures, and the creation of large numbers of new underground fractures, and the joining-up of these and other underground fractures into new and far-reaching networks extending for considerable distances, so as to free up large amounts of dissolved and gaseous methane and ethane which would then

travel underground through these networks and pathways, was a specific intention and goal of EnCana's CBM Activities.

77. It was the specific intention and goal of EnCana to make the new networks and pathways extended and lengthy, so that they would in their totality extend for large distances underground, so as to maximize the amount of dissolved and gaseous methane and ethane that would be freed up and would travel through the networks and pathways of fractures.
78. The networks of fractures created by EnCana's Activities included chains of fractures extending both horizontally and vertically, so that dissolved and gaseous methane and ethane could and did flow vertically as well as horizontally through fracture networks.
79. EnCana had little control over the direction and limits of the fracture networks and pathways it was creating underground with its high-pressure injection of hydraulic fluids, and little knowledge of where and how far the fracture networks and pathways it was creating would extend.
80. The fracture networks and pathways created by EnCana's hydraulic fracturing became connected to additional pathways for dissolved and gaseous methane and ethane travel that were part of the EnCana Wells themselves or of other wells, including:
- (a) fissures in the wellbores of the EnCana Wells due to inadequate or faulty cementing of the wellbores;
 - (b) fissures in the wellbores of abandoned conventional gas wells located within an approximate 6 mile radius of the Ernst Well, due to inadequate or faulty cementing of the wellbores; and
 - (c) the annuli (the space between the well casing and the wellbore) of both EnCana Wells and abandoned conventional wells.
81. These parts of the wells, once connected to the fracture networks, created additional pathways in which dissolved and gaseous methane and ethane could and did travel, and

in particular pathways in which dissolved and gaseous methane and ethane could travel significant distances vertically to reach fracture pathways at higher underground levels.

82. The Rosebud Aquifer itself became connected to and further extended the fracture pathways created by EnCana's Activities.
83. The hydraulic fracturing and well construction by EnCana at its various individual EnCana Wells in the area surrounding the Ernst Property had a cumulative effect by creating networks and pathways that linked with each other, thus further expanding and multiplying the distance and varieties of ways in which dissolved and gaseous methane and ethane could travel underground.
84. The networks and pathways created by the EnCana Activities extended into the subsurface of the Ernst Property, where no such pathways had previously existed, and those pathways extended to and flowed into the Ernst Well.
85. During and after EnCana's creation of these new pathways, the various hydraulic fracturing substances injected underground under high pressure by EnCana, and the dissolved and gaseous methane and ethane freed up by the hydraulic fracturing, traveled onto and into the Ernst Property beneath the surface, without the permission of Ms. Ernst, and contrary to her wishes.

vi. EnCana perforated directly into the Rosebud Aquifer

86. In addition to creating extensive underground networks and pathways in which methane and ethane could and did travel, EnCana directly targeted the formation that makes up the Rosebud Aquifer at a minimum of two CBM wells. In 2001, EnCana perforated the wellbore of well 02/06-04-27-22-W4M ("Well 06-04") at depths starting at 100.5 meters below ground in preparation for hydraulic fracturing. In 2004, EnCana perforated the wellbore of well 00/05-14-027-22W4M ("Well 05-14") and hydraulically fractured coal seams starting at a depth of 121.5 meters below ground. Three of these fractures were at depths that correspond to the depth of local water wells. In both cases, EnCana knew or

should have known that it was perforating into and fracturing in-use aquifers that provided potable water to Ms. Ernst and her neighbours.

87. EnCana Activities at Well 06-04 and Well 05-14 had the further effect of freeing up large amounts of previously fixed and immobile dissolved and gaseous methane and ethane within the Rosebud Aquifer. This methane and ethane migrated from the Rosebud Aquifer to the Ernst Well through the mechanism described above.
88. The perforating and fracturing of the coal seams that make up the Rosebud Aquifer at Well 05-14 and Well 06-04 breached various legislative and regulatory measures designed specifically to protect groundwater. These breaches include:
 - (a) failing to protect usable groundwater during the drilling of energy wells;
 - (b) diverting water without a permit; and
 - (c) failing to complete and submit a “Preliminary Groundwater Assessment” prior to targeting coal seams containing water.
89. Many of these breaches of legislative and regulatory measures were egregious — for example, not only did EnCana fail to take preventative steps to protect the integrity of the aquifer by encasing the wellbore of Well 05-14 and Well 06-04 in cement or otherwise isolating the aquifer from the energy well as required by EUB *Guide 056*, it also intentionally targeted, perforated and fractured directly into this aquifer, thereby both contaminating and depleting the aquifer.
90. As a result of the perforation and fracturing of the Rosebud Aquifer by Well 05-14, Well 06-04 and possibly other wells EnCana pumped, diverted or otherwise caused large quantities of water to be removed from the Rosebud Aquifer. The loss of water from the aquifer reduced the hydrostatic pressure in the aquifer, which in turn, caused the release of substantial quantities of methane from the aquifer coal seams into the Ernst Water Well. The loss of water from the aquifers also opened new pathways for the migration of methane into the Ernst Well.

91. Due to the large quantity of water inflow into the wellbore of Well 05-14, EnCana was forced to shut down production at Well 05-14 at least two times between March 4, 2004, and June 9, 2004. EnCana then tried to stop water from entering the wellbore by attempting to apply a “cement squeeze” into problematic fractures. EnCana ultimately attempted to close off the well completely by way of a “cement plug” on October 10, 2004, after which EnCana abandoned the well.
92. Due to similar problems at Well 06-04, EnCana completely closed off and abandoned Well 06-04 on October 8, 2004.
93. Completely closing off and sealing Well 06-04 and Well 05-14 increased the likelihood of methane and ethane migration by preventing the methane and ethane from exiting underground formations via the gas wells as originally intended. Instead, the released ethane and methane remained underground, and travelled via other pathways, including by migrating through the Rosebud Aquifer into the Ernst Water Well.

vii. EnCana used hazardous chemicals in its CBM activities

94. CBM development requires the use of various hazardous chemicals during construction, drilling, fracturing, production, remediation and reclamation operations. In particular, hydraulic fracturing involves forcing fluid (often composed of toxic chemicals) under high pressure into the coal seam. The specific content of the hydraulic fracturing fluid is a secret closely guarded by companies drilling for unconventional gas, and varies widely depending on site-specific factors. Fracture fluids can take the form of gels, foams, liquids and gases, the content of which ranges from pure nitrogen gas to a mixture of various toxic substances including diesel fuel. In other CBM operations in North America, EnCana has used benzene, naphthalene, methyl tert-butyl ether, toluene and xylene, among other chemicals, in its fracture fluids. While companies engaged in hydraulic fracturing attempt to recover these fracture fluids after they have been pumped underground, studies have shown that a large amount of fracture fluid (sometimes more than 50%) remains underground.

95. In the Rosebud region, EnCana documents indicate that many of the EnCana Wells were fractured using water, sand and some sort of fracture fluid. EnCana documents indicate that fracture fluids used at the EnCana Wells included “foam” and “50-50% oil cuts” which may have contained hazardous chemicals. While EnCana has refused to disclose the chemical content of the fracture fluids used in fracturing operations in the Rosebud area, EnCana has publically admitted to using the same fracture methods in Alberta as have been used in the United States where chemical fracturing is common. Despite obvious risks posed to groundwater, the EUB did not prohibit the use of toxic fracturing chemicals above the base of groundwater protection until May 2006.
96. EnCana also applied a number of chemical “treatments” to EnCana Well 05-14 in an attempt to repair and remediate poorly producing coal seams. These “treatments” involved pumping various chemicals into targeted coal seams, including the Rosebud Aquifer.

viii. The Plaintiff’s well water contains chemicals that indicate oil and gas industry contamination

97. Tests conducted by Alberta Environment indicate that Ms. Ernst’s water is contaminated with at least three chemical compounds that are not normally found in groundwater, and whose presence is often indicative of oil and gas industry contamination. In particular, the tests found:
- (a) 0.21 mg/L of F-2 petroleum hydrocarbons (“F-2 Hydrocarbons”). F-2 Hydrocarbons are higher-order hydrocarbons that are primary components of various fuels including gasoline, kerosene, diesel fuel and jet fuel. F-2 Hydrocarbons are considered toxic to some degree to human and environmental health;
 - (b) 2.0 µg/L of 2-Propanol 2-Methyl. 2-Propanol 2-Methyl is a product of degrading methyl *tert*-butyl (MTBE), and may indicate MTBE contamination. Both 2-Propanol 2-Methyl and MTBE are hazardous; and
 - (c) 3.6 µg/L of Bis (2-ethylhexyl) phthalate (BEHP). BEHP can cause cancer as well as damage to the liver after prolonged exposure.

All of the above chemicals are commonly used in CBM construction, drilling, fracturing, production, remediation and reclamation operations.

98. Various metals found in Ms. Ernst's well water greatly increased after CBM drilling commenced in the Rosebud area. Total chromium levels increased from <0.0008 mg/L (below the detection limit) in June 2003 to 0.036 mg/L in March 2006, an increase of over 45 times the 2003 levels. Barium levels increased by 2.2 times from 0.086 mg/L in June 2003 to a peak of 0.190 mg/L in November 2005. Both chromium and barium are listed by EnCana as components found in drilling waste, and may be indicative of oil and gas industry contamination. Chromium can irritate eyes and skin, and hexavalent chromium, a form of chromium associated with industrial activity and CBM drilling and hydraulic fracturing, is known to cause cancer. Water testing at an Alberta Environment monitoring water well located approximately 1 km to the east of the Ernst Water Well disclosed groundwater that was contaminated with hexavalent chromium.
99. Ms. Ernst's water may be contaminated with other hazardous substances. Due to technical limitations in water testing, water can only be comprehensively tested if the potential chemical contaminants are identified beforehand. EnCana has refused to provide a complete list of chemicals used in its CBM operations, making it very difficult to properly and comprehensively test for possible contaminants.
100. As a result of EnCana's CBM activities, in particular at the above EnCana Wells, EnCana has contaminated the aquifers with various noxious and hazardous substances, and thus has destroyed the groundwater drinking supplies of local residents, including Ms. Ernst's.

ix. EnCana's conduct was reprehensible, malicious and highhanded

101. EnCana's behaviour toward the Rosebud community in general and to Ms. Ernst in particular was highly reprehensible, malicious and highhanded.
102. As described above, EnCana undertook inherently dangerous activities without regard to the potential consequences of these activities on local communities and individuals,

including the real risk that aquifers that provide homes with drinking water would become contaminated with methane, various petroleum products and other potentially dangerous CBM-industry chemicals. These inherently dangerous activities include deliberately:

- (a) fracturing directly into a freshwater aquifer;
- (b) fracturing at shallow depths underground; and
- (c) injecting toxic chemicals into or near groundwater supplies.

103. EnCana undertook these dangerous and risky activities without informing those who would likely be affected, without conducting a risk assessment, without conducting adequate baseline testing of the water supplies to make it easier in the future to determine if specific wells had been impacted by CBM activities, and without an operational protocol outlining how EnCana would respond to potential problems, including water contamination, if and when such problems occurred.

104. Despite the fact that CBM was a major concern for many local residents, throughout the relevant time period EnCana deliberately lied to community members about the nature and extent of CMB development in the Rosebud area. In particular:

- (a) In 2003 during Ms. Ernst's negotiations with EnCana regarding an access lease on her property, Ms. Ernst raised concerns about CBM drilling and potential impacts that CBM development might have on water. EnCana's representative told her not to worry because EnCana had no plans to drill CBM wells near Rosebud. In fact, EnCana had already begun an extensive CBM drilling program in the Rosebud area, beginning as early as 2001;
- (b) In 2004 EnCana conducted a series of public meetings in Rosebud in which EnCana representatives stated that CBM activity had not yet come to the Rosebud area, despite the fact that EnCana had already engaged in an extensive drilling program for shallow CBM at dozens of wells in the Rosebud Area. EnCana had also already fractured directly into the Rosebud Aquifer at two separate CBM

wells, and had begun investigating specific complaints regarding water wells that appeared to have been impacted by EnCana's CBM activities; and

- (c) EnCana representatives stated that EnCana's CBM fracturing activities, should they occur, would always take place below the impermeable layer that protects drinking water. In fact, EnCana hydraulically fractured above the base of groundwater protection at over 190 wells in close proximity to Rosebud. At over 60 of these wells, EnCana had hydraulically fractured at very shallow depths of less than 200 m underground.
105. EnCana's deceitful conduct prevented Ms. Ernst and others from taking steps to protect themselves from the harmful effects of EnCana's behaviour. In particular, EnCana's deceitful conduct made it difficult for Ms. Ernst to determine what was wrong with her water. It was only as a result of her extensive research that she was able to determine that her water was contaminated with methane and other hazardous substances, and that this contamination was likely linked to EnCana's CBM development. Before reaching these conclusions and while Ms. Ernst was conducting this research, she continued to drink and bathe in water containing unknown contaminants and continued to live in a house that, it is now known, contained potentially explosive levels of methane.
106. After Ms. Ernst first raised concerns about potential water contamination in her water well, EnCana refused to address Ms. Ernst's concerns or answer her questions; failed to investigate Ms. Ernst's water contamination problem; refused to disclose the chemicals used in fracturing, drilling and servicing operations (thereby preventing Ms. Ernst and the regulator from conducting proper water contamination tests); declared publically that EnCana was not obligated to cooperate with Alberta Environment water contamination investigations; and continued to deny that it fractured directly into the Rosebud Aquifer despite the existence of a hydrological consultant's report commissioned by EnCana that revealed that EnCana had, in fact, perforated and fractured the Rosebud Aquifer.
107. After becoming aware of possible contamination caused by its CBM activities, EnCana continued to drill shallow CBM wells in the area, thereby modifying underground conditions and making it difficult to complete an adequate investigation of water well

contamination, and increasing the likelihood of further contamination of the area's water supplies.

x. Subsurface trespass

108. EnCana, through its hydraulic fracturing and related activities at the EnCana Wells, has injected various contaminants into the rock and other natural substances making up the subsurface portion of Ms. Ernst's land and caused methane and other substances to travel into Ms. Ernst's subsurface lands. This contamination and degradation of her subsurface land seriously interferes with her rights of ownership as a property owner, including her right to preserve and protect and enjoy the natural and environmental quality of the surface and subsurface land she owns.

E. Alberta Energy & Utilities Board Failed to Properly Monitor and Regulate EnCana's Activities

109. As detailed below, throughout the relevant period, the Alberta Energy and Utilities Board failed to follow its own specific published investigation and enforcement process. This failure continued despite numerous complaints from residents regarding serious water contamination potentially caused by CBM development in the Rosebud area and despite the EUB's knowledge that EnCana had breached several laws, regulations, orders, directions and other requirements under the jurisdiction of the EUB that were specifically directed at the protection of groundwater quantity and quality. Further, the EUB seized on an offhand comment made by Ms. Ernst and used it as an excuse to prevent Ms. Ernst from meaningfully communicating with the EUB. Ms. Ernst was thereby prevented from raising legitimate concerns regarding industry-related water contamination with the very regulator that is mandated by the government to investigate and remediate such contamination and at the very time that the regulator was most needed.

i. The EUB's interaction with the Plaintiff

110. Throughout 2004 and 2005, Ms. Ernst was in frequent contact with EUB staff regarding several negative impacts caused by oil and gas activity in the Rosebud area. In particular Ms. Ernst raised concerns with both EnCana and the EUB regarding drastic increases in

noise caused by both gas compressors and traffic, and potential breaches of EUB Noise Control Guide 38.

111. During this time, Ms. Ernst gradually lost confidence in the EUB and its willingness to engage with the concerns of the public in good faith. Despite over a year of engagement with the EUB regarding industry-related noise, Ms. Ernst's legitimate concerns remained unaddressed. Based on her own experiences, and based on numerous stories she heard from her growing network of concerned citizens, Ms. Ernst became convinced that the regulator was uninterested in properly enforcing its own legal requirements and that the EUB would not respond in a reasonable manner to complaints made by her or others.
112. As a result of her frustrations, Ms. Ernst began to pursue alternate means of promoting industry accountability. These efforts included both organizing networks of other concerned citizens and speaking with the press, and were in addition to, and concurrent with, her continued attempts to engage directly and constructively with both EnCana and the EUB.
113. Ms. Ernst's organizational efforts focused public attention on the EUB's regulatory activities and served, in the words of an EUB lawyer, to "humiliate" the EUB. In particular, after receiving a draft directive from the EUB regarding potential increases to the allowable industry noise level limits, Ms. Ernst sent an email to an email list of concerned citizens on November 1, 2005, explaining the proposed increase and encouraging people to contact the EUB to register their concerns. As a result of Ms. Ernst's efforts, a lawyer from the EUB stated that "the board [was] getting slagged from all sides" by people upset by the proposed changes.
114. At the very end of Ms. Ernst's lengthy November 1st email, which was sent to a personal network of acquaintances (and specifically not to the EUB or any of its staff), Ms. Ernst made passing reference to a comment that a neighbour had made to her about the well known critic and opponent of the oil and gas industry, Wiebo Ludwig. She wrote, "[s]omeone said to me the other day: 'You know, I am beginning to think that the only way is the Wiebo Way.' " Ms. Ernst maintains and has always maintained that the phrase

'Wiebo Way' was a reference to Ludwig's attempts to reduce dependence on fossil fuels by using various alternative power sources on his property, and not a reference to Ludwig's acts of vandalism and sabotage.

115. The EUB somehow managed to obtain a copy of the November 1st email, and then took steps to sever all communication with Ms. Ernst, including by refusing to receive her written correspondence. The EUB immediately and deliberately misrepresented the reference to "Wiebo" as a threat of violence by Ms. Ernst, and, without providing any opportunity for response or clarification, advised her by way of a letter dated November 24, 2005, and signed by Jim Reid, the Manager of the Compliance and Operations Branch, that EUB staff were instructed to have no further contact with her.
116. In this letter, Mr. Reid grossly overreacted, and maliciously, recklessly or negligently wrote:

What I cannot and will not accept is your threat, veiled as something someone said to you, as a means to incite people to resort to the "Wiebo Way". Criminal threats will not be tolerated, and we are deciding on how best to work with the office of the Attorney General of Alberta and the RCMP to register our concern and to ensure the protection of the public including our staff. Until the safety and security issues have been satisfactorily addressed and resolved, I have instructed my staff to avoid any further contact with you. The EUB Field Surveillance Branch have [*sic*] been made aware of this situation as well.

Mr. Reid copied this letter to the RCMP Drumheller Detachment, the manager of the EUB Field Surveillance Branch and the manager of EUB security.

117. On December 6, 2005, Ms. Ernst wrote to Mr. Reid seeking clarification of his letter dated November 24, 2005. In this letter she asked:

First, are you alleging that by quoting what someone said to me in my email dated November 1, 2005, I have somehow made a criminal threat? Second, as a result of that allegation, are you now stating that the EUB "will avoid any further contact with" me regardless of the issue? Third, by what authority have you made this decision? And under whose instructions was this statement and decision made?

This letter was refused by the EUB and returned unopened to Ms. Ernst.

118. On December 14, 2005, Ms. Ernst wrote to Neil McCrank, the then-Chairman of the EUB, detailing the above concerns and requesting clarification regarding the communication ban. Mr. McCrank did not respond to this letter.
119. On January 11, 2006 Ms. Ernst wrote to Mr. McCrank and again asked for clarification.
120. On January 18, 2006, Mr. McCrank wrote to Ms. Ernst, but failed to provide any explanation regarding the communication ban and failed to address or clarify the alleged “safety and security issues”. Instead, Mr. McCrank referred Ms. Ernst to Richard McKee of the EUB’s legal branch, stating that Mr. McKee would “deal with [her] directly with regard to [her] concerns and [her] relationship with the EUB in general.” Mr. McKee, in turn, continued to ignore, deflect and dismiss Ms. Ernst’s request for an explanation regarding her exclusion from effective participation in the EUB process and her request for the reinstatement of her right to communicate with the regulator.
121. In 2005, Ms. Ernst had become aware that her water was seriously contaminated potentially due to oil and gas industry activity. She had also become aware of other instances of water contamination in the Rosebud area. Despite having lost faith in the regulator, and despite being severely limited as to whom she could communicate with at the EUB, Ms. Ernst tried to make these new concerns known to the EUB through faxes and emails sent in 2005 and 2006. In particular, Ms. Ernst repeatedly stated that her water contained elevated and dangerous levels of methane and possibly other contaminants, and that this contamination was likely caused by EnCana’s CBM activities in the Rosebud area. Given that Ms. Ernst had little faith in the regulator, and was now prevented from effectively communicating with the EUB, Ms Ernst continued to publically advocate for proper regulation.
122. Mr. McKee failed to respond to Ms. Ernst’s new concerns regarding water contamination, stating in an email written in or around early June 2006 that “until we come to an understanding of each others [sic] position and re-establish a level of mutual respect the various specific issues you desire to discuss will remain off the table”.

123. On June 8, 2006, Ms. Ernst finally succeeded in meeting with Mr. McKee in person to discuss Ms. Ernst's relationship with the EUB. In this meeting, Mr. McKee confirmed that Ms. Ernst had been prevented from communicating with the EUB, stating

late last fall, the Board took a decision to discontinue further discussion with [Ms. Ernst]. . . . I do not want at the end of this meeting to continue the current situation, which is essentially, that [Ms. Ernst's] voice is in the wilderness to some extent. . . . I want to make sure that the lines of communication can then open up.

124. During the course of this meeting, Mr. McKee made it clear that Ms. Ernst would not be able to communicate with the EUB regarding any regulatory concerns until two issues had first been resolved: first, the "security issues" supposedly raised by Ms. Ernst's reference to the "Wiebo Way"; and second the manner in which Ms. Ernst engaged with the EUB.

125. The Plaintiff asserts that the EUB was never seriously concerned about alleged "safety and security issues" allegedly arising from the November 1st email. In the June 8, 2006 meeting, Mr. McKee repeatedly stated that if he thought that Ms. Ernst advocated violence, he would not be meeting with her. He further stated that the supposed 'threat' is "almost lost in the particular meaning", and that the issue of safety could be dispensed with "in the wave of the hand." Rather, the Plaintiff asserts that the EUB was much more concerned about the public attention and debate caused by Ms. Ernst. In particular, the EUB was angry that Ms. Ernst was airing her grievances publically instead of privately with the Board, thereby embarrassing the EUB. As a result, the EUB seized on a long email that was not addressed to the EUB or intended for anyone connected to the EUB that contained an off-hand reference to Wiebo Ludwig, and deliberately misinterpreted the reference as a threat of violence. The EUB then used this concocted 'threat' as a reason to prohibit communications and other interactions with Ms. Ernst. The Plaintiff asserts that the communication ban was a means to punish her for past criticisms, to prevent her from making future criticism, to marginalize her concerns and to deny her access to the EUB regulatory processes, including its complaints mechanism. The Plaintiff further asserts that copying the November 24, 2005 letter from Mr. Reid to the RCMP and the EUB Security Division was an attempt to intimidate, threaten and punish Ms. Ernst for her public criticism of the EUB.

126. In the June 8, 2006 meeting, Mr. McKee made it clear that the EUB would only re-open communication with Ms. Ernst if she participated in the EUB process in the quiet and subdued manner that the EUB wanted. In other words, the EUB demanded that Ms. Ernst raise concerns regarding the regulatory process privately with the EUB, and not publically via internet groups or the media. Specifically, Mr. McKee stated:

But do you understand that the way that this will work is that those concerns, those things that you flag are brought back to the table with the people who are trying to put this together, in good faith, trying to do their jobs, and have that discussion there and not publically. 'Cause you humiliate people. What you are doing is, hey, I don't want to make it sound like people are a bunch of sensitive, you know, but at the end of the day, you are, you seem to be, attempting to humiliate the organization. And if that is your intention, good on you, but don't expect us to help you.

127. Despite confirmation that Ms. Ernst had never advocated violence, despite explanations that the phrase the "Wiebo way" referred to reducing dependence on fossil fuels through alternate power generation, and despite expressing her willingness to go before the EUB to confirm that she "would never and have never and could never . . . advocate violence at any level as a way to resolve things", Ms. Ernst continued to be prevented from communicating with the EUB and barred from meaningfully participating in its regulatory processes.

128. In an email dated October 11, 2006, Ms. Ernst wrote to Mr. McKee stating that she wanted her "banishment from the regulator lifted – in writing – so that [she could] file formal objection to the regulator about EnCana's cumulative adverse impacts that [would] likely further violate [her] legal right to quiet enjoyment of [her] home and property". Mr. McKee did not respond to this email.

129. It was not until January 19, 2007 that the EUB first responded (albeit in a cursory and evasive manner) to any of the substantive concerns that Ms. Ernst had raised in the previous 13 months. On March 20, 2007, 16 months after the original letter restricting communication with the EUB, Mr. McCrank stated in a letter that Ms. Ernst was free to deal with any EUB staff. The EUB has yet to address any of Ms. Ernst's substantive concerns.

130. Preventing Ms. Ernst from meaningfully communicating with the EUB for 16 months has had serious consequences. In particular, Ms. Ernst was prevented from raising concerns regarding industry-related water contamination with the very regulator that is mandated by the government to investigate and remediate such contamination and at the very time that the regulator was most needed. Her exclusion from the EUB's specific and publicized investigation and enforcement process effectively prevented Ms. Ernst from raising concerns with the EUB regarding its failure to enforce the laws, regulations, orders, directions and other requirements under its jurisdiction, including those aimed at protecting groundwater quantity and quality.

ii. The EUB made numerous public representations that created reasonable and legitimate expectations that the EUB would adequately regulate, investigate and enforce EUB requirements

131. In June 1999, the EUB established and published a specific investigation and enforcement process with the ostensible goal of securing compliance with the legal requirements set out in the laws, regulations, orders and directions under its jurisdiction. This process is set out in a document entitled *Informational Letter (IL) 99-4: EUB Enforcement Process, Generic Enforcement Ladder, and Field Surveillance Ladder* and was in force until January 1, 2006. The "Public Safety / Field Surveillance Branch" of the EUB was responsible for implementing the above process, and was responsible for conducting inspections and monitoring the activity of the oil and gas industry. In 2005, there were eight Field Centres located throughout Alberta.

132. Through various public documents, the EUB made numerous representations regarding what people adversely impacted by oil and gas activities could expect from the EUB's investigation and enforcement process. These representations include:

- (a) "Field staff respond to all complaints related to . . . oil and gas activities, with the goal of ensuring prompt, effective and lasting resolution to the problems identified";
- (b) "The EUB investigated all complaints received" regarding oil and gas industry activity in Alberta;

- (c) “When a non-compliance is identified, the EUB triggers a process that has an established policy for EUB enforcement actions”; and
- (d) “Companies that fail to meet requirements or follow EUB direction are subject to escalating enforcement actions, which always include deadlines to correct problems and may be reinforced by penalties”.

The above statements create the reasonable and legitimate expectation that public complaints or the identification of a “non-compliance” or “non-compliant event” would trigger a specific defined process of investigation and enforcement.

133. On January 1, 2006, the “Compliance Assurance Initiative”, as set out in *Directive 019: EUB Compliance Assurance – Enforcement* came into effect. *Directive 019* sets out a slightly modified EUB investigation and enforcement process and “provides the overall governance framework for enforcement to ensure compliance with all requirements”.
According to *Directive 019*:

The ultimate goal of EUB enforcement is to ensure compliance with the requirements that are written, monitored and enforced on behalf of Albertans, our stakeholders. Compliance ensures that resource activity within the province is conducted in a manner that protects public safety, minimizes environmental impact, preserves equity and ensures effective conservation of resources Enforcement of EUB requirements continues to be a cornerstone of our compliance strategy.

134. The “Compliance Assurance – Enforcement Initiative” was and is implemented through the “Public Safety / Field Surveillance Branch” of the EUB. This branch is responsible for, among other things:

inspecting oil and gas operations to ensure that licences are in compliance with all applicable standards, specifications and approval conditions taking appropriate enforcement action when noncompliance occurs and responding to and addressing public complaints related to energy development and environmental issues.

In 2006, there were nine Field Centres located throughout Alberta.

135. Through various public documents, the EUB made numerous representations regarding what individuals adversely impacted by oil and gas industry activity could expect from the EUB’s “Compliance Assurance – Enforcement Initiative”. These representations include:

- (a) “The EUB responds to emergencies and public complaints 24 hours a day to guarantee a consistent approach to enforcement of requirements”;
- (b) “Field staff respond to all complaints related to . . . oil and gas activities, with the goal of ensuring prompt, effective and lasting resolution to the problems identified”;
- (c) “The EUB continues to investigate all public complaints in Alberta to ensure that appropriate action is taken”;
- (d) “When the EUB identifies a non compliance event, it initiates EUB enforcement actions described in Directive 019: EUB Compliance Assurance – Enforcement”;
- (e) “Companies that fail to meet requirements or follow EUB direction are subject to escalating enforcement actions, which always include deadlines to correct problems and may be reinforced by penalties”; and
- (f) “Compliance is not negotiable for industry. The ERCB [formerly the EUB] has a history of taking decisive action when rules are not met. This commitment will not change.”

136. The above statements create the reasonable and legitimate expectation that a public complaint or the identification of a “non-compliance” or “non-compliant event” would trigger a specific defined process of investigation and enforcement.

iii. The EUB had knowledge of water contamination and of breaches of EUB requirements

137. Throughout the time in which Ms. Ernst was prevented from effectively communicating with the regulator, the EUB was aware that many residents from the Rosebud area, including Ms. Ernst, had serious concerns regarding groundwater contamination potentially caused by oil and gas industry activities. The EUB was also aware of evidence that suggested that EnCana had breached EUB legal requirements in their CBM activities near Rosebud. Particulars of this knowledge are detailed below.

138. In September 2004, Sean Kenny, a neighbour of Ms. Ernst, expressed concern to EnCana that EnCana’s activities might have caused sediment to enter the groundwater of both of

the water wells on his property. In late September 2004, EnCana hired consultants to study whether EnCana's activities had potentially impacted Mr. Kenny's well. Those consultants produced a report entitled "EnCana Corporation – Redland Area NE 10-027-22 W4M – Sean Kenny Site Investigation" (the "Sean Kenny Report") as a result of the investigation. The Sean Kenny Report was released to EnCana in January 2005. The Sean Kenny Report revealed that EnCana had perforated and fractured directly into the coal seams that comprise the Rosebud Aquifer in breach of several EUB requirements. The EUB became aware of the contents of the Kenny Report at some time prior to March 2006, and possibly as early as January 2005.

139. As a result of Ms. Ernst's conversations with the press, a newspaper article entitled "Tainted water lights fire under gas fears" was published on the front page of the *Edmonton Journal* on December 13, 2005. The article describes various problems with Ms. Ernst's water system including whistling faucets and tap water that was so contaminated with methane that it could be set on fire. A spokesperson for the EUB, Bob Curran, was contacted by the reporter and acknowledged that "it's possible for methane to migrate into a water well, but it's extremely rare." A shorter version of the article appeared in the *Calgary Herald* on page A3 on the same day.
140. On December 16, 2005, Jessica Ernst faxed a letter of objections and concerns to the EUB. In a section specifically regarding methane gas migration, Ms. Ernst stated that EnCana had breached EUB requirements when it drilled CBM wells near Rosebud; that EnCana's wells perforated into local aquifers; that her water had become contaminated and "now pours white, and fizzes horrifically. . . .[and] also stinks"; and that she believed that "adverse impacts to [her] water . . . might be related to coal bed methane or other drilling and fracturing activities." Ms Ernst went on to say:

I recently received from the EUB a letter dated November 24, 2005 stating: "***I have instructed my staff to avoid any further contact with you***". . . . I can only conclude that I am now faced with an incredibly serious danger that might have been caused by cumulative impacts from repeat and multiple perforating and shallow fracturing and I have no regulator. I might have had my health seriously impacted by toxic chemicals that might have contaminated aquifers during experimentation and lost circulation events and I have no regulator.

141. On February 28, 2006, Ms. Ernst held a press conference at the Alberta Legislature in which she voiced her concerns about her contaminated water and drew possible links between the contamination and CBM activities in Rosebud.
142. From March 7th to March 9th, 2006, Ms. Ernst gave several public presentations about her water contamination problems. In these presentations, Ms. Ernst stated that her water was seriously contaminated with methane and possibly other chemicals; that she believed that CBM activities had caused this contamination; and that the EUB and Alberta Environment were not enforcing relevant regulations. Ms. Ernst displayed a diagram from the Sean Kenny Report that showed that EnCana had fractured and perforated directly into the Rosebud Aquifer. Darin Barter, an EUB representative, attended most of these presentations as a member of the audience.
143. In May and June 2006, Ms. Ernst sent emails to Mr. McKee in which she stated that her water contained an elevated and dangerous level of methane and posed a safety risk to her and others. She further stated that this contamination was likely caused when EnCana perforated and fractured the Rosebud Aquifer.
144. During 2006, Ms. Ernst sent several emails to other staff members of the EUB. In these emails she wrote that continued CBM activity by EnCana was irreparably altering the underground conditions near her residence, making it difficult to gather the information needed to identify the root causes of the water contamination, and increasing the difficulty of remediating the problem.
145. Despite clear knowledge of potentially serious industry-related water contamination and knowledge of potential breaches of EUB regulations, orders, directions and other requirements, the EUB failed to respond in accordance with its specific published investigation and enforcement process. Instead, the EUB either completely ignored Ms. Ernst and her concerns, or directed her to the EUB's legal counsel, Mr. McKee, who in turn, refused to deal with her complaints.

146. Despite serious water contamination necessitating truck deliveries of safe water to households, and the EUB's responsibility to deal with groundwater contamination caused by CBM well operators that it had licensed, the EUB did not conduct any form of investigation into the causes of contamination in Ms. Ernst's or Rosebud's water.

F. Alberta Environment Failed to Properly Monitor and Regulate EnCana's Activities

147. As detailed below, throughout the relevant period, Alberta Environment failed to follow its own specific published investigation and enforcement process. This failure continued despite complaints from residents regarding serious water contamination potentially caused by CBM development in the Rosebud area and despite Alberta Environment's knowledge that EnCana had breached several legal requirements under the jurisdiction of Alberta Environment that were specifically directed at the protection of groundwater quantity and quality. When Alberta Environment finally did conduct investigations into the contamination of the Ernst Water Well and possible causes of that contamination, the investigations were seriously inadequate in scope, and carried out improperly, negligently, and in bad faith.

i. Alberta Environment made public representations that created reasonable and legitimate expectations that Alberta Environment would adequately regulate, investigate and enforce Alberta Environment requirements

148. According to Alberta Environment, "Alberta Environment is responsible for the protection of the environment and the protection and management of Alberta's renewable resources. . . . [W]e are accountable to the public and the regulated community. The department is also responsible for meeting the government's many commitments, including . . . community-level (and client) service."
149. Both the *Water Act* and the *Alberta Environmental Protection and Enhancement Act* include broad investigation, inspection and enforcement powers. In or before 2000, Alberta Environment established the "Compliance Assurance Program" to ensure compliance with these two *Acts*. In 2000, Alberta Environment published the "Compliance Assurance Principles", with the stated goal of "compliance with all Alberta

Environment legislation, as well as provincial and federal legislation which Alberta Environment staff are responsible for enforcing, in order to protect the environment and the public and to effectively protect and manage Alberta's natural resources".

150. Alberta Environment updated the "Compliance Assurance Program" in 2005. The stated purposes of the updated "Compliance Assurance Program" include to "provide clarity and certainty to all Albertans on compliance and performance expectations and how they will be achieved" and to "assure compliance with all regulatory requirements under the mandate of Alberta Environment".
151. The Regional Services Division of Alberta Environment is responsible for delivering the "Compliance Assurance Program" and adhering to the "Compliance Assurance Principles" at the operations level. This compliance branch includes a toll-free 1-800 telephone number to receive public complaints regarding potential issues involving "water well concerns". The compliance branch includes inspectors and investigators who are responsible for, among other things, investigating specific complaints made by the public. The procedures that are expected to be followed are outlined in the *Compliance Inspection and Monitoring Operational Guideline* and the *Compliance Inspection Operational Guideline*.
152. In the documents which outline the original 2001 "Compliance Assurance Principles" and the 2005 update of the "Compliance Assurance Program", Alberta Environment makes various representations regarding the sort of investigation and enforcement activities that complainants can expect from Alberta Environment once a complaint is identified. These statements include:
 - (a) Alberta Environment "will facilitate and encourage reporting of possible non-compliance";
 - (b) Alberta Environment "will ensure that each report of non-compliance is forwarded to the proper response group";
 - (c) Alberta Environment "will ensure that each report of non-compliance receives a timely and appropriate response";

- (d) Alberta Environment “will assess reports of non-compliance and investigate when there are reasonable grounds to believe that there is non-compliance”;
 - (e) Alberta Environment “investigations will be conducted, completed and documented in a thorough and timely manner that preserves the availability of all potential enforcement responses and ensures the investigation’s integrity”;
 - (f) In the course of investigations, “data supplied by regulated parties and by complainants as evidence will also be used in proving contraventions”;
 - (g) “If evidence of a contravention exists, the investigator will recommend to the Compliance Manager that enforcement action be taken”;
 - (h) “Decision-makers will consider the following relevant factors in choosing an enforcement response: (a) nature of the incident and seriousness of adverse or potential adverse effect on . . . i) public safety, ii) the environment or natural resources, iii) human health; or iv) property”;
 - (i) “Enforcement will be firm and fair”;
 - (j) “Enforcement responses will be based on a “polluter pays”/ “resource restitution” philosophy”; and
 - (k) “Follow-up to enforcement responses will be taken to bring the situation into compliance.”
153. The documents containing the “Compliance Assurance Principles” also make representations regarding what complainants can expect from Alberta Environment staff. Statements include:
- (a) “Staff will carry out their duties in a competent, safe and professional manner”;
and
 - (b) “Inspectors are expected to conduct themselves in an appropriate and professional manner. This includes being courteous, neutral and objective.”
154. These documents, and the general nature of the “Compliance Assurance Program”, create a legitimate and reasonable expectation on the part of household users of water that,

when a complaint is made, Alberta Environment staff will undertake proper inspections and investigations, that Alberta Environment staff will report contraventions of any act, regulation or requirement to the Compliance Manager and that the Compliance Manager will initiate and complete an effective enforcement response.

ii. Well water contamination was reported to Alberta Environment

155. Throughout 2005, a number of landowners in the Rosebud area made reports to Alberta Environment regarding suspected well water contamination and other problems with groundwater supply. Despite repeated requests for water well tests by these landowners, Alberta Environment initially refused to conduct tests to determine the nature, extent or cause of the alleged contamination.
156. In the autumn of 2005, Ms. Ernst telephoned Alberta Environment's emergency 1-800 number to report concerns about the impact of CBM drilling on well water in the Rosebud area. Around the same time, Ms. Ernst spoke to Nga de la Cruz, Alberta Environment's CBM expert, on the telephone to register her concerns about CBM development and its impact on groundwater. Alberta Environment failed to take any action regarding Ms. Ernst's concerns at this time.
157. Owing to Alberta Environment's lack of response to the complaints of several Rosebud area landowners, Ms. Ernst and other landowners began to speak publically about their concerns in late 2005 and early 2006, including by holding a press conference on February 28, 2006, to draw attention to water contamination possibly caused by CBM activities. After the press conference, various members of the Alberta Government, including the Premier of Alberta and the Minister of Environment, responded to the concerns of Ms. Ernst and her neighbours.
158. On February 28, 2006, the Honourable Ralph Klein, the then Premier of Alberta, committed to intervening on behalf of Ms. Ernst and others. He gave his personal guarantee that the concerns of Ms. Ernst and others would be addressed, stating "I am

willing to extend that to the fullest extent. Whatever is necessary to be done, will be done.”

159. On or around February 28, 2006, in a debate in the Legislative Assembly of Alberta, the then Alberta Environment Minister the Honourable Guy Boutilier stated:

Mr. Speaker, let me reiterate to the hon. member and to the families [specifically including Ms. Ernst] that are here today: it is a very serious issue. As Alberta Environment [sic] I will use every fibre of energy in my body to assist this family relative to safe drinking water now and into the future. . . . I can assure you that we are working with them and we will continue to work with them because this is a very important issue to this family and to many other families that have been impacted, be it by the natural flow or because of what is being asserted relative to what is taking place in the water supply. . . . I'm using my energy to get these people safe drinking water. We will do everything in our power to get them that, and then we can come to conclusive evidence in terms of: is it naturally flowing, or is it the result of drilling? I don't have that answer as of yet, but it's a very important question that we are committed to getting the answer to very quickly. . .

160. In March 2006, Environment Minister Boutilier and Deputy Minister of the Environment, C. Peter Watson, met with Ms. Ernst and others to discuss their water contamination concerns. During this meeting, the Minister promised an investigation into what was causing the contamination, and agreed to deliver safe water to Ms. Ernst's home.

161. Despite Minister Boutilier's promise to deliver safe water to Ms. Ernst's home, Alberta Environment later told Ms. Ernst that she herself was responsible for finding and arranging for the installation of water storage tanks, and arranging for the delivery of safe water to her home. Despite repeated requests, Alberta Environment did not reimburse her for the water tanks for over a year, and did not reimburse her for the cost of safe water delivery for over two years.

iii. Alberta Environment conducted a negligent investigation

162. In March 2006, Alberta Environment began an investigation into the contamination of Rosebud area water wells. Alberta Environment conducted this investigation negligently and in bad faith. For example, Alberta Environment:

- (a) conducted the investigation in an *ad hoc*, arbitrary and scientifically irrational manner and without the benefit of a plan or protocol;

- (b) did not follow a sampling protocol when sampling water wells;
 - (c) used unsterilized equipment when taking the samples, possibly contaminating both the samples and the water wells being tested;
 - (d) committed sampling errors when collecting samples. Examples of these errors include failing to insert a preservative in the sampling container prior to taking the sample; allowing a delay before replacing the cap on water sample bottles; failing to purge the water well prior to taking water samples; and taking insufficient quantities of sample water;
 - (e) lost, destroyed or otherwise disposed of data collected by Alberta Environment investigators;
 - (f) submitted samples for analysis that were contaminated or otherwise unusable. According to the Alberta Research Council Report “[s]everal of the energy wells tested have questionable quality data”;
 - (g) failed to test water wells for various substances that could be indicative of industry contamination;
 - (h) failed to complete isotopic fingerprinting on various samples;
 - (i) failed to test or investigate specifically identified gas wells that potentially caused water contamination, in particular Well 05-14;
 - (j) failed to investigate numerous CBM wells in the vicinity of the Ernst Property where EnCana hydraulically fractured at shallow depths located in close proximity to the Rosebud Aquifer; and
 - (k) failed to conduct tests and collect data that were needed to complete an adequate and responsible investigation.
163. Throughout the material time, Ms. Ernst expressed concern to Alberta Environment regarding many of the above deficiencies in the Alberta Environment investigation.

164. Throughout the material time, Alberta Environment, and its lead investigator, Kevin Pilger, dealt with Ms. Ernst in a hostile, aggressive and confrontational manner. In particular:

- (a) Mr. Pilger concluded, before any investigation had begun, that the water wells he was responsible for investigating were not impacted by CBM development.
- (b) Mr. Pilger repeatedly accused complainants of being responsible for the contamination of their wells before conducting any investigations.
- (c) Mr. Pilger falsely and recklessly accused Ms. Ernst of going to elaborate efforts to fabricate and forge a hydrogeologist's report that indicated EnCana had fractured and perforated into the Rosebud Aquifer. Mr. Pilger used this baseless and defamatory accusation as a justification for not considering the information contained within this report.
- (d) Alberta Environment made no attempt to contact Ms. Ernst before Mr. Pilger went on her property to conduct tests on her well despite an Alberta Environment policy that requires investigators to make efforts to contact property owners before entering their property.
- (e) Alberta Environment stonewalled and otherwise blocked all of Ms. Ernst's attempts to gain access to relevant information regarding the contamination of her well and CBM development.
- (f) Alberta Environment gave inconsistent and often conflicting answers to Ms. Ernst's questions.
- (g) Alberta Environment made various representations and promises that it later reneged on or otherwise failed to keep.
- (h) Alberta Environment shared information collected as part of the investigation with EnCana, while refusing to release this information to Ms. Ernst, her neighbours or to the general public.

iv. Alberta Environment had knowledge of water contamination and breaches of Alberta Environment requirements

165. Results from early stages of the Alberta Environment investigation indicated that oil and gas industry activities had potentially contaminated Rosebud area groundwater. At or around the same time, Alberta Environment became aware that EnCana had breached the Water Act, and its associated regulations and other requirements. Further, Alberta Environment was aware that these breaches of the Water Act may have contributed to the contamination of Rosebud area groundwater. Examples of Alberta Environment's knowledge are detailed below.
166. Various tests conducted by Alberta Environment in 2006 revealed the presence of various chemical contaminants in the hamlet of Rosebud's waterworks system. All of the contaminants found in Rosebud water are also either directly used in CBM development or are the products of such CBM activities, or are compounds that can result from the chemical reaction of CBM contaminants with other compounds present in the Rosebud waterworks system.
167. Chemicals found in the Rosebud waterworks system that are commonly used in CBM development and may indicate oil and gas industry contamination include: petroleum distillates, bromodichloromethane, phenanthrene, toluene, methyl ethyl ketone, xylene, benzene, butylbenzyl phthalate, di-ethyl phthalate, di-n-butyl phthalate, bis(2-ethylhexyl) phthalate and benzothiazole. Many of these chemicals are toxic to human health. In particular, Alberta Environment tests indicate that levels of bromodichloromethane (a carcinogen) in the water works system breached the Guidelines for Canadian Drinking Water Quality several times between April and June 2006.
168. Methane, which is a product of the oil and gas industry, was also found in the Rosebud waterworks system. Tests on Rosebud water found dissolved methane in water concentrations of up to 4.78 mg/L in the Rosebud's two water wells. The isotopic signatures of the methane contained in the Rosebud waterworks system matched the

isotopic signature of methane from nearby EnCana gas wells, suggesting contamination from oil and gas industry activity.

169. Chemicals found in the Rosebud waterworks system that can be the result of chemical reactions between industry contaminants and disinfectants added to municipal water sources include various trihalomethanes – a group of carcinogenic chemicals. Trihalomethanes can be produced when chlorine disinfectant is added to water containing both organic compounds (such as methane) and bromine. Bromine is often used in CBM development (especially as a drilling fluid) and is not normally found in groundwater.
170. Alberta Environment tests on nearby private water wells located in the same aquifer as the Ernst Water Well revealed high concentrations of methane in well water. These same wells were also contaminated with over 50 other petroleum pollutants including pentane, propane, butane, pentene, octane, hexane, toluene, styrene, tetrachloroethylene and benzene. The isotopic signatures of ethane, propane and butane in these wells matches with the isotopic signatures of ethane, propane and butane from nearby EnCana gas wells, suggesting contamination from oil and gas industry activities.
171. Alberta Environment was aware of the results of the tests Alberta Environment conducted on the Ernst Water Well. Specifically, Alberta Environment was aware of high concentrations of methane, the presence of metals, and the presence of other chemicals in Ms. Ernst's well water.
172. As early as October 2004, Alberta Environment was aware that certain CBM well operators were diverting fresh water from underground aquifers without the required diversion permits from Alberta Environment.
173. In or around February 2005, Alberta Environment received a report from consultants hired by EnCana that indicated that EnCana had targeted, fractured and perforated the Rosebud Aquifer. This report also indicated that EnCana had diverted water without a permit or approval at Well 05-14 in contravention of the *Water Act* and associated regulations and guidelines.

v. Alberta Environment continued to make representations that created reasonable expectations that Alberta Environment would conduct an appropriate and effective investigation

174. Throughout the material time, Alberta Environment continued to make representations to Ms. Ernst regarding what complainants could expect from Alberta Environment. These representations are detailed below.
175. On or around April 24, 2006, Leslie Miller, a staff member at Alberta Environment, wrote to Ms. Ernst stating that “Alberta Environment is committed to responding to your concerns about the potential impacts of CBM activities on local aquifers.”
176. On June 20, 2006, Minister Boutilier wrote in a letter to Ms. Ernst that “[w]e have been working with you and several other landowners across the Province to determine the sources of methane or gas in private water wells, and to ensure all Albertans have access to safe, secure drinking water.” The letter goes on to say, in relation to a similar water contamination complaint, “I assure you, if we do find any contraventions under our strict guidelines, action will be taken.”
177. On March 8, 2007, the Deputy Minister of the Environment, C. Peter Watson, wrote to Ms. Ernst, “Alberta Environment is committed to working with landowners concerned about their water supply.”
178. Throughout the material time, Ms. Ernst and her neighbours continued to request that Alberta Environment conduct a responsible and comprehensive investigation of the water contamination cases in the Rosebud area. In particular, Ms. Ernst and her neighbours specifically requested that Alberta Environment sample, test and investigate CBM gas wells to determine if they had caused the contamination to groundwater supplies in the Rosebud area.
179. On April 19, 2007, Deputy Minister Watson wrote to Ms. Ernst to offer her and two of her neighbours “the comprehensive sampling you have requested.” Mr. Watson wrote that this sampling would ensure that Alberta Environment is “better able to respond to your concerns and any groundwater impacts in Rosebud and Redland.” Ms. Ernst and her

neighbours responded in a letter dated April 25, 2007, stating “[w]e are relieved and encouraged that AENV has finally, more than a year later, agreed to fulfill our many requests for comprehensive testing for our water contamination cases. We asked repeatedly for this from Mr. Kevin Pilger, Mr. Darren Bourget, Mr. Craig Knaus and Ms. Leslie Miller [employees at Alberta Environment].”

180. On April 17, 2008, the Minister of Environment the Honourable Rob Renner stated in the Legislative Assembly of Alberta in response to specific questions regarding water contamination in the Rosebud area, “Mr. Speaker, the issue of safe groundwater is a priority for Alberta Environment. . . . [W]e [the Government of Alberta] have the responsibility to ensure that the groundwater that Albertans access is safe.”

vi. Alberta Research Council Review of the Alberta Environment Investigation

181. In November 2007, almost two years after the original complaint, Alberta Environment contracted the Alberta Research Council to complete a “Scientific and Technical Review” of the information gathered regarding several well water complaints in the Rosebud area, including the complaint about the Ernst Water Well. However, Alberta Environment prevented an adequate and reasonable review from being undertaken by Alberta Research Council by restricting the scope of the review, specifically by instructing the Alberta Research Council to review “only information contained in the File (as received by Reviewer).” Relevant information that was not considered in the review includes available baseline data, available information on the most problematic CBM wells, outside consultants’ reports, isotopic fingerprinting data linking ethane in the contaminated water wells with oil and gas industry activity and data collected by Alberta Environment that was destroyed or otherwise disposed of by Alberta Environment, including data collected from the Ernst Well on March 3, 2006.
182. In a report summarizing the water well complaints in the Rosebud area entitled “An Independent Review of Coalbed Related Water Well Complaints Filed with Alberta Environment”, Alberta Research Council notes that there are problems with Alberta Environment’s investigation process, specifically commenting that Alberta Environment:

does not have a specific and documented response process, with required tasks and decision points to direct the investigative process or the involved parties. Data gathering and evaluation decisions are made somewhat subjectively based on the experience of staff. Specific responsibilities of [Alberta Environment] towards the companies and water well owners are not clearly delineated and appear to vary between complaints.

183. Despite missing key data, despite contaminated or otherwise compromised samples, and despite the existence of significant unanswered questions regarding possible causes of the contamination, the Alberta Research Council published a report entitled “Ernst Water Well Complaint Review” (the “Ernst Review”) that concluded that “energy development projects in the area most likely have not adversely affected Ms. Ernst’s private water supply.”
184. Alberta Environment relied upon the conclusions contained within the Ernst Review. Such reliance was negligent given that there were serious and legitimate concerns that the Ernst Review was inadequate and inaccurate. Specific concerns include the fact that the Review:
- (a) is based on an inadequate and negligently completed investigation, as detailed above;
 - (b) fails to include critical data that was available, or could have been available if appropriate samples were taken. For example, the Review did not consider data on the CBM well that fractured directly into the Rosebud Aquifer. The Ernst Review further notes “[s]everal of the energy wells tested have questionable quality data”;
 - (c) includes factually incorrect information;
 - (d) relies excessively on theoretical models, due to lack of data;
 - (e) fails to consider, account for or explain the presence of indicators of potential oil and gas industry contamination including metals, chemicals and other substances in groundwater; and
 - (f) makes conclusions that are not supportable on the available data.

185. The Alberta Research Council Ernst Review has been criticized by various sources, including experts in the field of hydrogeology and isotopic fingerprinting. Drs. Barbara Tilley and Karlis Muehlenbachs of the University of Alberta have stated that there are “basic and critical concerns regarding the validity of the study and the conclusions regarding the Rosebud area”, and that the conclusions of the Ernst Review are “premature”.
186. As detailed above, throughout the relevant period, Alberta Environment failed to enforce laws, regulations and guidelines that were specifically aimed at the protection of groundwater quantity and quality. Despite having clear evidence of a breach of the *Water Act* at Well 05-14, despite continued serious problems with water contamination, and despite significant unanswered questions regarding EnCana’s CBM activities and their impacts on local aquifers — in particular relating to breaches of the laws, regulations and guidelines administered and enforced by Alberta Environment — Alberta Environment closed the investigation into Ms. Ernst’s contaminated water on January 16, 2008, and stopped delivering water to her home in April 2008.

G. Representations Made by the Alberta Government and the EUB that Groundwater was Protected

187. In addition to both the EUB’s and Alberta Environment’s formal published investigation and enforcement process, and due to significant public concern about the potential impacts of CBM development on groundwater, various government ministries and the EUB published several documents which contained representations that created the reasonable and legitimate expectation that there was an adequate regulatory framework in place to protect groundwater (and those who depend on groundwater) from adverse impacts caused by CBM development.
188. In a document entitled “Water and Natural Gas in Coal” published in March 2004, Alberta Environment states that all CBM wells that produce non-saline water must receive authorization from Alberta Environment, and further that this authorization is dependent on receiving a technical report that shows that the proposed water diversion

“will not adversely affect the water supply of other users [and] will not cause adverse effects on any aquifer.”

189. On April 21, 2004, Alberta Environment staff gave a presentation entitled “Alberta Environment Guidelines for Groundwater Diversion for CBM/NCG Development” to a multi-stakeholder advisory group. This presentation, which can be found online, states that the *Water Act* and its accompanying regulations and guidelines are directed at the “protection of existing water users,” the “protection of the aquifer” and the “protection of adjacent aquifers.” The presentation also states that the objectives of the Guidelines for Groundwater Diversion include ensuring that there are “[n]o adverse effects on the water supply of nearby users [and] [n]o adverse effects on the aquifer due to diversion from the coal seam.”
190. In 2005, Alberta Agriculture published a document entitled “Coal Bed Methane (CBM) Wells & Water Well Protection” which assures landowners that “CBM and conventional gas wells must be properly cased and cemented to prevent migration of gas into any aquifer, mixing of water between different aquifers and groundwater contamination. CASING AND CEMENTING MUST PROTECT USEABLE GROUNDWATER RESOURCES” [emphasis in the original]. The document then goes on to explain how existing EUB regulations ensure proper casing and cementing.
191. On June 24, 2005, the EUB issued a press release that stated:
- Coalbed methane development is strictly regulated in Alberta, as is all natural gas development. Regulations are currently in place to address the production, use and disposal of non-saline and saline water as well as well spacing, noise and emissions. The EUB ensures that the discovery, development, and delivery of Alberta’s resources take place in a manner that is fair, responsible, and in the public interest.
192. In March 2006, the EUB published an article entitled “Busting the myths behind CBM” in the EUB’s monthly newsletter “Across the Board”. This article made numerous representations, including:
- (a) “In Alberta . . . the regulatory environment is arguably the most stringent in the world, and CBM development is strictly regulated”.

- (b) “[F]resh water aquifers are specifically protected by EUB regulations.”
 - (c) “The EUB takes water production associated with the energy industry very seriously, and through a collaborative approach with Alberta Environment, ensures that Alberta’s water and agricultural lands are protected”.
 - (d) “Regulations are currently in place to address all issues associated with CBM development”.
193. In a document published in 2006 and entitled “Groundwater Protection and Coalbed Methane Development”, Alberta Environment states:
- Alberta Environment, the Energy and Utilities Board, Regional Health Authorities along with other government departments and agencies have legislation and policies to protect groundwater and human health. Coalbed methane companies must get Alberta Environment approval to de-water any coal bed zone if it is above the base of groundwater protection. *To receive approval, companies must demonstrate no impact to other water users. Coal bed methane wells must be constructed and operated to protect the aquifers, domestic water supplies and prevent mixing between groundwater zones of different water quality. . . . Alberta Environment protects all water that is above the base of groundwater protection (fresh water)* [Emphasis added].
194. In a document published online in or around April 2006 entitled “Water for Life – introduction to Coalbed Methane and Groundwater”, Alberta Environment states:
- Alberta Environment’s mandate is to ensure the water resources of the province and the environment are sustained for current and future generations. . . . EUB regulations protect the land, water resources and existing water users.
195. On or around July 21, 2006, the EUB made public presentations in which they described their commitment to protecting groundwater, stating that the EUB “[w]ill not approve an application unless confident that ground water will be protected” and that the EUB is committed to “firmly enforcing” EUB requirements.
196. On or before November 16, 2006, the EUB published a document entitled “EnerFAQs 10: Coalbed Methane” which states “[w]ell drilling and completion practices and requirements in all wells exist to ensure that nonsaline aquifers are protected”.
197. In 2007, Alberta Energy published a document entitled “Coalbed Methane Development”, which states that “[w]hen drilled, a CBM well could pass through several groundwater aquifers. Well casing is cemented in place to protect groundwater aquifers.”

198. In an article published in the Edmonton Journal on July 28, 2007, EUB spokesman Bob Curran stated, in relation to CBM industry activities, “[i]f you don’t meet the regulations, you don’t get your application approved, period.”
199. The above quotations are examples of statements made by the EUB, Alberta Environment and other Government of Alberta ministries that create the reasonable and legitimate expectation that Alberta Environment and the EUB would adequately regulate CBM development to protect the groundwater of landowners located near CBM activities.

IV. The Claims

A. EnCana

i. Negligence causing water contamination

200. EnCana owed a legal duty of care to the Plaintiff to avoid unreasonable conduct that could foreseeably cause harm to those located near its operations. EnCana, through its CBM activities, and in particular the negligent and wrongful perforation and fracturing at the above-described EnCana Wells, has deliberately, recklessly or negligently caused hydrocarbons (including methane) and fracturing fluid (including noxious and toxic substances), to enter into the Rosebud Aquifer, and thus into the Ernst Water Well, thereby contaminating Ms. Ernst’s groundwater supply and rendering her water and her well unusable.
201. EnCana, through its CBM activities and in particular through activities associated with Well 05-14 and Well 06-04, has deliberately, recklessly or negligently pumped out, diverted or otherwise caused to be removed substantial quantities of water from the Rosebud Aquifer. The dewatering of the aquifer reduced the hydrostatic pressure in the aquifer, thereby causing the desorption and release and movement of methane that had previously been adsorbed onto the coal of the aquifer into the aquifer and the Ernst Well, thus contributing to the contamination of her groundwater supply and to the rendering of

her water and her well unusable. The dewatering of the aquifer also created new pathways for the migration of methane into the Ernst Well.

202. EnCana negligently and wrongfully conducted oil and gas activities at various wells in the vicinity of the Ernst Property, including at the above described EnCana Wells. EnCana's negligent and wrongful activities include:

- (a) drilling through the Rosebud Aquifer without taking proper precautions to ensure the protection of in-use aquifers and water wells water;
- (b) perforating and fracturing the coal seams that make up the Rosebud Aquifer;
- (c) perforating and fracturing coal seams at shallow depths at numerous locations in the Rosebud area without taking necessary precautions to protect in-use aquifers and water wells in light of a poor understanding of fracture propagation and possible effects of these fractures on aquifers and water supply at such shallow depths;
- (d) commingling water and fluids from various production zones;
- (e) perforating and fracturing coal seams using toxic or otherwise harmful fracture fluids;
- (f) inadequate or faulty cementing of the wellbores of its CBM wells;
- (g) installing inadequate or faulty surface casing in its CBM wells;
- (h) drilling, perforating and fracturing above the base of groundwater protection level for the area.

a. EnCana breached laws and regulations

203. In the course of its CBM activities at the EnCana Wells, EnCana breached numerous legal and regulatory requirements contained in the *Oil and Gas Conservation Act*, the *Water Act*, and the *Environmental Protection and Enhancement Act* and related regulations. These breaches indicate a failure to meet the requisite common law standard of care. Examples of these breaches are detailed below.

Breach of the *Oil and Gas Conservation Act* and associated regulations, orders and directions

204. EnCana breached section 6.050 of the *Oil and Gas Conservation Regulations*, which requires the licensee of a well to “a) conduct operations, and b) maintain casing and control equipment, so that any oil, gas or water encountered shall be effectively controlled.” EnCana breached this section by losing control of water at Well 05-14, and by losing control of methane, ethane and other fluids at all of the EnCana Wells.
205. EnCana breached section 6.080 (2) of the *Oil and Gas Conservation Regulations* and section 7.9.9 of *Guide 56* "Energy Development Applications and Schedules" (“*Guide 56*”) by failing to “ensure that usable ground water is protected during drilling operations,” specifically by failing to meet “the requirements of *Guide G-8* so that usable aquifers (water containing less than 4000 milligrams per litre [mg/l] total dissolved solids) [are] covered by cementing surface casing, cementing the next casing string, or appropriate placement of open-hole abandonment plugs”. Instead of installing cementing surface casing or otherwise protecting the usable aquifer, EnCana directly perforated and fractured the coal seams that make up the Rosebud Aquifer, thereby contaminating the usable water contained within the aquifer.
206. EnCana breached section 7.10.7.2 of *Guide 56* by failing to submit the required “documentation showing the base of groundwater and a description of the method proposed to protect the groundwater”.
207. EnCana breached section 7.9.13 of *Guide 56* by failing to “assess each well site and access road and to develop plans to conserve, reclaim and mitigate the effects of its activities,” and further by failing to include in those plans “measures to contain any spills and prevent and control the following: soil and water contamination, soil erosion, siltation of any drainage courses or water bodies, and slope instability”.
208. EnCana breached section 7.10.11.3 of *Guide 56* by failing to “submit documentation outlining the steps that will be taken to ensure the protection of the environment and that all ERCB requirements are met”.

209. Under section 3.060 of the *Oil and Gas Conservation Regulations*, EnCana was prohibited from commingling gases from different production zones without first gaining the approval of the EUB. The application process for such approval is set out by section 4.4 of *Guide 65* and requires that the applicant submit a:

discussion of the reasons why you are requesting the commingling, including, as appropriate, . . . justification as to why commingling should be granted, including, where required,

- (i) why commingling will not contaminate any non-saline water interval, with supporting technical evaluation as appropriate;
- (ii) why commingling will not cause any issues in the water well(s), with supporting technical evaluation, including
 - a. the geological setting of the shallowest perforated zone and water-bearing zone(s),
 - b. the details of the fracture stimulation proposed or done, and
 - c. an evaluation of the potential of fracture propagation from the hydrocarbon zone into the water zone
- . . .
- (vii) why the commingling will not have any adverse impacts, with supporting technical evaluation.

EnCana breached section 3.060 of the *Oil and Gas Conservation Regulations* and section 4.4 of *Guide 65* by piercing, perforating and fracturing into various coal seams without ensuring that such seams were isolated from one another, and as a result commingled various production zones at a number of the EnCana Well sites, including Well 05-14, without first obtaining the approval of the EUB, and without considering potential adverse impacts on various aquifers.

210. EnCana breached *Informational Letter IL 91-11, "Coalbed Methane Regulation"* by failing "to address all environmental and social impacts, and to address objections of directly and adversely affected persons".

211. EnCana breached *Informational Letter IL 91-11* by failing to address "the impact that coal seam dewatering may have on area ground water aquifers . . . before large scale water withdrawals commence from any coal seam".

212. According to section 108(1) of the *Oil and Gas Conservation Act* "[e]very person who . . . contravenes or defaults in complying with any provision of this Act, the regulations, [or]

an order or direction of the Board made under this Act . . . is guilty of an offence".
Section 110(1) allows for accruing fines in the case of a continuing offense.

Breach of the *Water Act* and related regulatory requirements

213. EnCana breached section 36(1) of the *Water Act*, which states that “no person may commence or continue an activity except pursuant to an approval unless it is otherwise authorized under this Act.” EnCana commenced an “activity” without authorization or approval by puncturing, perforating, and dewatering the Rosebud Aquifer at Well 05-14 and Well 06-04. An “activity” is defined by section 1(1)(b) of the *Water Act* as:

- (a) placing, constructing, operating, maintaining, removing or disturbing works, maintaining, removing or disturbing ground, vegetation or other material, or carrying out any undertaking . . . in or on any land, water or water body, that
 - (A) alters, may alter or may become capable of altering the flow or level of water, whether temporarily or permanently, . . . by any means, including drainage,
 - (B) changes, may change or may become capable of changing the location of water or the direction of flow of water . . . by drainage or otherwise

“Activity” therefore includes puncturing, perforating and dewatering an aquifer.

214. According to section 142(1) of the *Water Act* a person who “commences or continues an activity except under an approval or otherwise authorized by this Act . . . is guilty of an offence”. Under section 143, breach of section 36(1) is considered a strict liability offence, punishable by a fine of up to \$500,000.

215. EnCana failed to apply for approval as required by section 36(1) prior to commencing or continuing an “activity”. Section 1.03 (b) of the *Groundwater Evaluation Guideline (Information Required when Submitting an Application under the Water Act)* (“Groundwater Evaluation Guideline”) requires that any application for approval of an “activity” include:

- (e) hydrogeological cross sections and/or maps showing the possible hydraulic relationships among the source aquifer, other aquifer units in which surrounding wells are completed and nearby surface water bodies. . . ;
- (f) geologic and hydrogeologic assessment and characterization of the aquifer including the areal extent and variability of the aquifer unit(s) and the hydraulic flow regime;
- (g) pumping test data sufficient to provide a reasonable quantitative assessment of the required volume, aquifer parameters and Q_{20} , and effect on neighbouring water supplies;

Further, section 2.08 requires an assessment of both short-term and long-term impacts that considers:

- (b) Any interference with other local groundwater and surface water users
...
- (n) Changes in water quality as a result of the diversion or drainage. . .

216. The Groundwater Evaluation Guideline includes a note on page 16 that states “[i]t is assumed, when a licensee or approval holder cannot prove beyond a reasonable doubt the water diversion or drainage caused [sic] an alleged unreasonable impact, the water diversion or drainage did cause the unreasonable impact”. The Plaintiff asserts that this sentence contains a typographical error and that the sentence was clearly intended to mean, and does mean, “it is assumed when a licensee or approval holder cannot prove beyond a reasonable doubt the water diversion or drainage [did not cause] an alleged unreasonable impact, the water diversion or drainage did cause the unreasonable impact.”

217. EnCana breached the *Alberta Environment Guidelines for Groundwater Diversion*, which requires that a “Preliminary Groundwater Assessment” be submitted “whenever technical data suggests that the target coal seam may contain and produce non-saline water.” EnCana failed to submit a “Preliminary Groundwater Assessment” despite specifically targeting a coal seam that is part of an aquifer that is widely known to contain, and which EnCana knew contained, usable non-saline water. In fact, this coal seam is the primary aquifer in the area near the Ernst property and the hamlet of Rosebud.

218. According to page 6 of the *Alberta Environment Guidelines for Groundwater Diversion* the “Preliminary Groundwater Assessment” that EnCana failed to submit should have included, among other information:

discussion on the relationship between the target coal zone, the Base of Groundwater Protection, and water wells in the area The depths, completion intervals and non-pumping water levels of area water wells relative to the depths of the proposed test holes, to the completion intervals of all exploratory wells, and the depth to the Base of Groundwater Protection The anticipated groundwater withdrawal rates, volumes, and groundwater quality from the coal zone and the potential for cross-flow between the target CBM/NGC zone and adjacent aquifer units. . . . The drilling method(s), fracturing method, fracturing fluid, chemicals, etc., that may be used, among other things, during the proposed investigation and well completion program.

219. EnCana is and has been in breach of section 49(1) of the *Water Act*, which states that “no person shall (a) commence or continue a diversion of water for any purpose. . . except pursuant to a licence unless it is otherwise authorized by this Act.” EnCana failed to apply for and obtain a license to divert water. The required application for a license is similar to that required for an approval of an “activity” as outlined above.
220. EnCana constructed Well 05-14 and Well 06-04 in a manner that resulted in multiple aquifer completions contrary to section 47(g) of *Water (Ministerial) Regulation*.

Breach of *The Environmental Protection and Enhancement Act* and associated regulatory requirements

221. EnCana is and has been in breach of section 109 of the *Environmental Protection and Enhancement Act*, which states that
- (1) No person shall knowingly release or permit the release into the environment of a substance in an amount, concentration or level or at a rate of release that causes or may cause a significant adverse effect.
 - (2) No person shall release or permit the release into the environment of a substance in an amount, concentration or level or at a rate of release that causes or may cause a significant adverse effect.
222. EnCana released or caused to be released methane and other chemicals and substances into the Rosebud Aquifer in quantities sufficient to make Ms. Ernst’s water unusable and unsafe. Release of methane from Ms. Ernst’s contaminated water into the air in her home posed a significant safety risk to Ms. Ernst and her property and has significantly impaired the use of her property, and therefore constitutes a significant adverse effect. According to section 227 and 228 of the *Environmental Protection and Enhancement Act*, contravention of section 109 is a strict liability offence punishable by a fine of up to \$1,000,000.
223. EnCana also breached section 110(1) of the *Environment Protection and Enhancement Act* by failing to report the above releases to the Minister of Environment as well as to “any other person who the person reporting knows or ought to know may be directly affected by the release”. According to sections 227 and 228 of the *Environmental Protection and Enhancement Act*, contravention of section 110(1) is a strict liability offence punishable by a fine of up to \$500,000.

224. In breaching the above regulations, and in its other conduct, EnCana failed to meet the requisite standard of care.

ii. Nuisance

225. EnCana has committed a nuisance by contaminating the Plaintiff's water supply, as detailed above, in a manner that has substantially and unreasonably interfered with the Plaintiff's use and enjoyment of her land.

iii. Strict Liability and the rule in Rylands v. Fletcher

226. EnCana has breached the rule in *Rylands v. Fletcher* by putting land under its control to an unnatural use; by bringing or releasing onto or into lands under its control fracturing fluids, methane and other fluids likely to do mischief if they escaped; and by allowing these substances to escape, thus causing damage to the Plaintiff's property, as detailed above.

iv. Trespass

227. The migration of methane and EnCana's fracturing and/or servicing fluids from the coal seam through the fractures deliberately caused by EnCana into Ms. Ernst's groundwater source and land amounts to a trespass on Ms. Ernst's land.

B. Alberta Energy & Utilities Board

i. Negligent administration of a regulatory regime

228. The Plaintiff alleges that the EUB committed the tort of negligence by not protecting, and by failing to take reasonable and adequate steps to protect, persons located near oil and gas activities from water contamination caused by the oil and gas industry.

229. The EUB owes a legal duty of care to the Plaintiff. This duty of care arises from the EUB's legislative framework, various representations made by the EUB, the EUB's direct communications and interactions with the Plaintiff, and the existence of a specific published EUB investigation and enforcement process as described above.

230. The Plaintiff alleges that the EUB was under a legal duty to:
- (a) take reasonable and adequate steps to protect individuals from the risks associated with the oil and gas industry, including by warning affected individuals when the EUB had reason to suspect that oil and gas activity had created a risk of water contamination or other adverse impacts to those located near oil and gas facilities and operations licensed by the EUB;
 - (b) exercise sufficient diligence in the natural gas well licensing process to ensure that oil and gas companies abide by EUB requirements intended to protect usable groundwater;
 - (c) adequately inspect and investigate all significant and credible allegations of contamination potentially caused by oil and gas industry activity;
 - (d) adequately inspect and investigate all significant and credible allegations of alleged breaches of legal requirements under the jurisdiction of the EUB, including the *Oil and Gas Conservation Act* and related regulations, orders and directions;
 - (e) adequately inspect and investigate all breaches of the *Oil and Gas Conservation Act* and related regulations, orders and directions when evidence of such a breach exists;
 - (f) use the enforcement powers available to the EUB to stop actions that are causing water contamination and to remediate water contamination and other harms caused by oil and gas industry activity that have already occurred; and
 - (g) conduct interactions with members of the public in good faith, particularly with those who have raised significant and credible concerns regarding alleged contamination caused by the oil and gas industry and alleged breaches of the *Oil and Gas Conservation Act* and related requirements.
231. The EUB breached the above duties by negligently granting licenses to EnCana to drill shallow CBM wells in the Rosebud area despite the existence of significant risks that drilling these CBM wells would contaminate local groundwater; by failing to conduct

adequate investigations once water contamination was credibly alleged; and by failing to use available enforcement mechanisms to ensure both compliance with requirements, and remediation of the damage caused by the breaches of EUB requirements.

232. Instead of following the EUB investigation and enforcement process outlined in IL 99-4 and Directive 019, as described above, all levels of the EUB responded to Ms. Ernst's serious concerns in a manner characterized by gross negligence, carelessness, recklessness and bad faith.

233. In particular, despite knowledge that serious water contamination with possible links to the oil and gas industry had occurred in multiple wells in Rosebud (including at Ms. Ernst's residence) and despite knowledge that EnCana had, in its CBM activities in the Rosebud area, breached numerous laws, regulations, orders, directions and other requirements under the jurisdiction of the EUB, the EUB took no steps to investigate the contamination or to enforce its regulations.

234. The EUB's negligent, careless and reckless failure to implement its own specific published licensing, investigation and enforcement process breached the requisite legal standard of care and resulted in the initial and continued contamination of Ms. Ernst's water supply.

ii. Breach of the Plaintiff's Charter Right to freedom of expression

235. The EUB infringed Ms. Ernst's right to freedom of expression contained in section 2(b) of the Canadian Charter of Rights and Freedoms by:

- (a) instructing staff to "avoid any further contact" with Ms. Ernst, thereby preventing Ms. Ernst from communicating with the government-mandated regulator of the oil and gas industry;
- (b) barring Ms. Ernst from participating in formal and public EUB processes, specifically by preventing her from lodging complaints regarding EnCana's breaches of laws and regulations within the jurisdiction of the EUB;

- (c) deliberately withholding publically available governmental services from Ms. Ernst in order to punish her for airing her grievances with the EUB openly and in public, and for encouraging other concerned citizens to engage with the EUB; and
- (d) deliberately withholding publically available governmental services from Ms. Ernst because of comments she made to a personal network of acquaintances.

236. The acts committed by the EUB that constitute a breach of Ms. Ernst's Charter right to freedom of expression prevented Ms. Ernst from effectively communicating with the regulator, in particular by removing her from the standard regulatory process. The acts that constitute this breach prevented the initiation of the regular and established investigation and enforcement process that, had it been followed, might have led to appropriate investigation and enforcement actions being taken. The failure to implement the EUB's investigation and enforcement process was an important cause of the continued contamination of Ms. Ernst's water supply.

237. Ms. Ernst repeatedly requested that the EUB properly enforce relevant standards, legislation and regulations. She was instead repeatedly and deliberately ignored, bullied, and deflected. The actions of the EUB show a willful disregard for Ms. Ernst's right to freedom of expression under section 2(b) the Canadian Charter of Rights and Freedoms. The EUB's activities warrant damages under section 24(1) of the Charter, compensatory damages and punitive damages.

C. The Provincial Crown as represented by Alberta Environment

i. Negligent administration of a regulatory regime

238. The Plaintiff alleges that Alberta Environment committed the tort of negligence by not protecting and by failing to take reasonable and adequate steps to protect household users of water from water contamination caused by the oil and gas industry.

239. Alberta Environment owed a duty of care to the Plaintiff. This duty of care arises from Alberta Environment's legislative framework, various representations made by Alberta Environment, Alberta Environment's direct communications and interactions with the

Plaintiff, and the existence of a specific published Alberta Environment investigation and enforcement process as described above.

240. The Plaintiff alleges that Alberta Environment was under a legal duty to:
- (a) take reasonable and adequate steps to protect users (including by warning them of risks) when regulators had reason to suspect contamination of drinking water sources;
 - (b) adequately inspect and investigate all significant and credible allegations of water contamination;
 - (c) adequately inspect and investigate all significant and credible alleged breaches of the *Water Act* and the *Environmental Protection and Enhancement Act* and related regulations and guidelines;
 - (d) adequately inspect and investigate all breaches of the *Water Act* and the *Environmental Protection and Enhancement Act* and related regulations and guidelines when credible evidence of such a breach existed;
 - (e) use the enforcement powers available to Alberta Environment to stop actions that were causing water contamination and to remediate water contamination; and
 - (f) conduct all inspections and investigations in good faith and in accordance with prevailing professional standards of scientific methodology and analysis.
241. In this case, instead of conducting themselves in accordance with the government mandated *Compliance Assurance Principles*, all levels of Alberta Environment responded to Ms. Ernst's complaints in a manner characterized by gross negligence, carelessness, recklessness and bad faith.
242. Despite having found toxic industry-related chemicals and substances in both the nearby hamlet's reservoir and other nearby water wells, despite the existence of a new and experimental shallow CBM drilling program in the Rosebud Area, and despite receiving frequent requests and complaints from Ms. Ernst, Alberta Environment concluded

without any information or investigation that there was not a problem with the Ernst Water Well, and refused to adequately test the Ernst Water Well for such substances.

243. When Alberta Environment did finally conduct investigations of the Ernst Water Well, they were unduly limited in scope, and were completed negligently, carelessly, recklessly and in bad faith. For example, Alberta Environment:

- (a) failed to inform Ms. Ernst or the public, or to take any reasonable steps to protect the public from water contamination, despite having acquired knowledge of the contamination of Rosebud's and Ms. Ernst's underground drinking water sources;
- (b) failed to investigate identified breaches of the *Water Act*, including EnCana's dewatering of the Rosebud Aquifer without approval or a permit, despite having specific evidence that such a breach had occurred;
- (c) failed to report specific breaches of the *Water Act* and the *Environmental Protection and Enhancement Act* and related regulations to the Compliance Manager despite evidence of such breaches and despite a policy of reporting all contraventions of any act, regulation or guideline to the Compliance Manager;
- (d) failed to recommend to the Compliance Manager that enforcement action be taken despite a policy of making such recommendations when evidence of a contravention of any act, regulation or guideline exists;
- (e) failed to investigate the impact of Well 05-14 on Ms. Ernst's water supply despite the fact that specific and reasonable concerns regarding that well had been identified by Ms. Ernst;
- (f) refused to perform adequate testing on suspected problematic hydrocarbon wells, despite repeated requests;
- (g) falsified, manipulated, ignored and withheld data;
- (h) misinformed the public as to the cause and severity of the contamination of Rosebud and Ms. Ernst's water supplies; and

- (i) failed to conduct testing for potential contamination by hydraulic fracturing fluids and other potential contaminants despite having found chemical contaminants in a water well near the Ernst Water Well.
244. The investigations that were undertaken failed to meet basic standards of scientific methodology and analysis. For example, Alberta Environment:
- (a) used unsterilized equipment;
 - (b) destroyed or otherwise disposed of data collected as a part of their investigation;
 - (c) failed to complete isotope fingerprinting;
 - (d) failed to utilize available baseline data; and
 - (e) took insufficient quantities of sample water.
245. Alberta Environment's negligent, careless and reckless implementation of its Compliance Assurance Program, and specifically the reckless, negligent and careless manner in which Alberta Environment carried out the investigation into Ms. Ernst's complaints, breached the requisite legal standard of care and resulted in the continued contamination of Ms. Ernst's water supply.
246. Alberta Environment's various acts and omissions as listed above were committed in bad faith.
247. In light of Alberta Environment's conduct as detailed above and other conduct, punitive damages against Alberta Environment are warranted.

V. Damages

248. The Plaintiff suffered damages as a result of Alberta Environment's negligence, as a result of the Alberta Energy and Utilities Board's negligence and breach of the Plaintiff's Charter rights, and as a result of EnCana's negligence, creation of a nuisance, breach of the rule in *Rylands v. Fletcher*, and trespass as described above.

i. General and aggravated damages

249. For greater clarity, general damages suffered by the Plaintiff include but are not limited to:

- (a) substantial reduction in the value of the Plaintiff's property due to the initial and continuing contamination of the property's water supply and the corresponding loss of use of the property's water well;
- (b) loss of use of the property and loss of amenity associated with the property including that caused by the initial and continuing contamination of the property's water supply;
- (c) environmental damage to property that the Plaintiff, owing to her strongly held environmental beliefs, particularly values for its natural environmental qualities; and
- (d) mental and emotional distress and worry caused by living in a house that is at risk of exploding, and caused by the knowledge that the Plaintiff, her family and her friends had, unbeknownst to them, consumed water containing unknown contaminants with unknown potential health effects.

ii. Special damages

250. For greater clarity, special damages include but are not limited to:

- (a) disbursements associated with securing replacement water sources;
- (b) disbursements associated with research and investigation into the Plaintiff's water contamination issues, including costs associated with travel, scientific testing, 'Access to Information' requests, and hydrogeologists' reports.

iii. Punitive and exemplary damages

251. The actions of the Alberta Energy and Utilities Board, Alberta Environment and EnCana, as detailed above, amount to high-handed, malicious and oppressive behaviour that justify punitive damages. These various actions have the effect of allowing and encouraging, and may be intended to allow and encourage, the imprudent and

irresponsible development of natural resources so as to produce enormous economic gain to EnCana and to the Alberta provincial government at the expense of the Plaintiff, the public and the natural environment. It is appropriate, just and necessary for the Court to assess large punitive damages to act as a deterrent to offset the large financial gains that these Defendants can derive from reckless and destructive resource development practices.

iv. Disgorgement of profits wrongfully obtained

252. In the alternative to the Plaintiff's claims for compensatory remedies from EnCana, the Plaintiff claims the restitutionary remedy of disgorgement based on the doctrine of 'waiver of tort'. As detailed above, EnCana's shallow and dangerous drilling of natural gas wells in the Rosebud area shows a cynical disregard for the environment and for the rights of the public and the Plaintiff. By negligently conducting CBM activities, including perforation and fracturing of coal seams at dangerously shallow depths at CBM wells located near the Plaintiff's home, EnCana gained access to natural gas that would have remained inaccessible but for its negligent conduct. The Plaintiff asserts that EnCana is liable to disgorge the profits gained through the sale of this wrongfully obtained natural gas.

VI. Remedy Sought

253. The Plaintiff Jessica Ernst claims from the Defendant EnCana Corporation:
- (a) general damages in the amount of \$500,000.00;
 - (b) special damages in the amount of \$100,000.00;
 - (c) aggravated damages in the amount of \$100,000.00;
 - (d) restitutionary damages in the amount of \$1,000,000.00;
 - (e) punitive and exemplary damages in the amount of \$10,000,000.00;
 - (f) prejudgment interest pursuant to the *Judgment Interest Act*, R.S.A. 2000, c. J-1 and amendments thereto;

- (g) postjudgment interest pursuant to the *Judgment Interest Act*, R.S.A. 2000, c. J-1 and amendments thereto;
- (h) costs; and
- (i) such further and other relief as seems just to this Honourable Court.

254. The Plaintiff Jessica Ernst claims from the Defendant Her Majesty the Queen in Right of Alberta (as represented by the Ministry of the Environment):

- (a) general damages in the amount of \$500,000.00;
- (b) special damages in the amount of \$100,000.00;
- (c) aggravated damages in the amount of \$100,000.00;
- (d) punitive and exemplary damages in the amount of \$10,000,000.00;
- (e) prejudgment interest pursuant to the *Judgment Interest Act*, R.S.A. 2000, c. J-1 and amendments thereto;
- (f) postjudgment interest pursuant to the *Judgment Interest Act*, R.S.A. 2000, c. J-1 and amendments thereto;
- (g) costs; and
- (h) such further and other relief as seems just to this Honourable Court.

255. The Plaintiff Jessica Ernst claims from the Defendant Energy Resources Conservation Board:

- (a) general damages in the amount of \$500,000.00;
- (b) special damages in the amount of \$100,000.00;
- (c) aggravated damages in the amount of \$100,000.00;
- (d) punitive and exemplary damages in the amount of \$10,000,000.00;
- (e) damages in the amount of \$50,000.00 under section 24(1) of the *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982* being Schedule B to the *Canada Act 1982(U.K.)*, 1982, c.11;

- (f) prejudgment interest pursuant to the *Judgment Interest Act*, R.S.A. 2000, c. J-1 and amendments thereto;
- (g) postjudgment interest pursuant to the *Judgment Interest Act*, R.S.A. 2000, c. J-1 and amendments thereto;
- (h) costs; and
- (i) such further and other relief as seems just to this Honourable Court.

256. The Plaintiff proposes that the trial of this action take place at the Court House in Drumheller, Alberta.

257. The Plaintiff's solicitors are of the opinion that this action will likely take more than 25 days to try.

NOTICE TO DEFENDANT(S)

You only have a short time to do something to defend yourself against this claim:

20 days if you are served in Alberta

1 month if you are served outside Alberta but in Canada

2 months if you are served outside Canada

You can respond by filing a statement of defence or a demand for notice in the office of the clerk of the Court of Queen's Bench at Drumheller, Alberta AND serving your statement of defence or a demand notice on the plaintiffs(s') address for service.

WARNING

If you do not file and serve a statement of defence or a demand for notice within your time period, you risk losing the lawsuit automatically. If you do not file, or do not serve, or are late in doing either of these things, a court may give a judgment to the plaintiff(s) against you.