1975 CarswellNS 226, 19 N.S.R. (2d) 344

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Nova Scotia Supreme Court, Trial Division

Henry v. Irving Oil Co.

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Henry and Henry v. Irving Oil Co. Ltd.

MacIntosh, J.

Judgment: February 17, 1975

Counsel: *Robert Murrant* and *James K. Allen*, for the plaintiffs.
William R. Ryan and *David R. Chipman, Q.C.*, for the defendant.

Subject: Environmental

Related Abridgment Classifications
For all relevant Canadian Abridgment Classifications refer to highest level of case via History.
Environmental law

II Liability for environmental harm
II.3 Strict liability (Rylands v. Fletcher)
II.3.c Fuel

Headnote
Environmental Law --- Common law actions — Strict liability (Rylands v. Fletcher) — Fuel

***MacIntosh, J.*:**

1 The plaintiffs' claim for damages is based on the allegation that the well on their residential property has been contaminated and its water rendered unfit for human consumption due to the presence of gasoline, hydrocarbon or other noxious substance which escaped from oil storage tanks on the defendant's property.

2 The properties of the parties to this action are located on the south side of Route 207, Upper Lawrencetown, Nova Scotia.

3 The service station property of the defendant is situate at a higher level than the plaintiffs' residence.

4 The properties are approximately 200 feet apart.

5 G. Belliveau has been a well driller since 1970. He drilled the wells for the subdivision in which the plaintiffs' property is located. The first well drilled on this property was to a depth of 58 feet and was contaminated. This was due to a break in the casing which allowed in surface water. This break was repaired and the well deepened to 158 feet.

6 This witness testified the well should be drilled to a depth of 200 feet to miss the contamination.

7 He had received complaints from other dwellers in the area of the mineral content of the water and its bad odor.

8 The plaintiffs, Gerald M. Henry and his wife, moved into their home in May of 1973. The home is heated by an oil-fired hot water heating system.

9 The well is located five or six feet from the house foundation.

10 Gerald Henry testified that the well was drilled before they moved into their new home.

11 The water had a bad taste and a gassy smell. They complained to the party who sold them the property and were told to let the water run. This did not clear the water of its bad taste and odor. They installed a water softener at a cost of $364.00 but this did not help the problem.

12 In his opinion, the quality of the water had not changed since they first moved into the property.

13 He pointed out that there are no buildings on the opposite side of the road in this locality. It is a wooded area. Halfway between the properties of the parties is the residence of one B. Conrad.

14 Other than the defendant's, the nearest service station is at Cole Harbour, six or seven miles distant.

15 The oil tank for his furnace is located approximately 25 feet from the water system. There are no other sources of oil in the house area. He maintained there were no leaks from this oil tank.

16 Prior to buying the house the plaintiffs discussed the water problem with one of the carpenters. This would be sometime in April 1973.

17 On page 4 of the female plaintiff's discovery testimony we find the following:

> Q. Prior to your testing the tap back in April '73, had you any indication or had anyone mentioned to you the fact that there was an odor coming from the water?
>
> A. No, we mentioned it to them and they said it was just unsettled water or that the painters had put something in the sink and that's all they said.
>
> Q. Okay, who is 'they'?
>
> A. Oh well, first it was just a carpenter named Del Findlay, and then we brought it up to the contractor, Maroun, and he said the same thing. Just told us after we moved in just to let it run for a few days and that it should settle by then.
>
> Q. Was the carpenter there the first time you tested the water?
>
> A. Well, yes he was. When we turned it on we could smell.. you know.. you could really smell it. Especially the hot water and he just said it was.. you know.. new well.

18 Mrs. Henry confirms her husband's testimony as to the bad quality of water when they first took over this property. However, she disagrees with him in that she believes the water has improved in quality and that the smell has lessened. However, she would not drink the water in its present condition. She stated the water tastes oily and smells like gasoline. In her opinion the drilling of the second well provided no relief.

19 Dr. Chang L. Lin described himself as a groundwater geologist.

20 On September 27 and October 21, 1973, he visited the home of the plaintiffs. He described the water as having a strong offensive smell. It was a gasoline-like smell.

21 Dr. Lin tested the water on both these occasions. On the first occasion the oil content was .005 ppm (parts per million). As he felt the oil contamination was so slight, as indicated by the test, as opposed to the smell of the water, he returned and took another water sample from the plaintiffs' well. This sample tested at .5 ppm. which did not meet the Canadian Drinking Water Standards suggested by the Federal Department of Health and Welfare.

22 He testified that in his opinion the water contamination was present before occupation of the plaintiffs' house.

23 The water could be treated by a water softener. The problem, chemically, is a high content of iron and manganese. This is due to the well's location in an old swamp.

24 Regardless of oil, the water would not be drinkable without treatment of the iron and manganese.

25 He also testified the tests indicate a probability of salt water intrusion. The plaintiffs' land is only a few feet above and 300 feet from the sea.

26 He stated that even if all the petroleum hydrocarbons were removed he would not drink this water.

27 He indicated he would not drill a new well in the same area.

28 He described the geology of the area as underlaid with a quartzite formation not far below the surface. The rock formation is fractural and the underground water flow similar to an underground river.

29 He also stated that the source of the gasoline in the well had to be from a fairly substantial volume.

30 Dr. G. D. Lutwick is an analytical chemist in charge of the Analytical Chemistry Section of the Nova Scotia Research Foundation. On December 6, 1974, he analysed water samples for the plaintiffs. His brief report states the following:

1. Odour suggests gasoline

2. The hydrocarbons found in the water correspond to hydrocarbons found in gasoline

3. The absence of high molecular weight hydrocarbons rule out the presence of an oil.

31 On direct examination this witness testified in the following manner:

Q. I see, now as a result of your analysis of this particular gas, what did you find?

A. I found hydrocarbons corresponding to the hydrocarbons that you find in gasoline.

Q. I see, now what is there that would lead you to believe in terms of chemistry that these hydrocarbons correspond to gasoline?

A. First you have the odor...this suggests gasoline. Secondly, you have the composition of the gas with regard to boiling point distribution and the boiling point distribution of that sample corresponded to the boiling point distribution of gasoline, with regard to the constituency it contains.

Q. So you did a test in this respect I gather? For boiling point?

A. Ah.. essentially.

Q. Yes, now you mentioned odor, what sort of test did you do for that?

A. Smelled it.

Q. I see..

A. And compared it to gasoline odor.. from gasoline.

Q. I see, and what would you say of smelling a substance as being a scientific test?

A. Ah.. it is very good in a lot of cases.

Q. Now..

A. That gives you something to start with. It is a starting point. It will indicate what the compound is or composition.

Q. Doctor, what is the distinction.. in chemical terms.. between gasoline and other forms of hydrocarbons such as lubricating oil, for example?

A. It is a matter of the composition with regard to the boiling point or the boiling fraction.. they fractionate the hydrocarbon. They take the raw petroleum and they fractionate it. In other words, they convert it into fractions which have different boiling ranges and gasoline contains the lower.. well, you have methane and ethane and ethylene, which usually do not occur in gasoline.. and then you come into the gasoline range which runs from about C-3.. this refers to length of the carbon chain.. from a C-3 to about C-10, C-12.

Q. I see..

A. In this area. You get into oils, you are running up into higher chain length hydrocarbons. Greases are higher yet and so are waxes.

Q. I see, in Exhibit 3, could you tell the Court, please, what that is?

A. It is a statement of the conclusions reached from the analysis of Mr. and Mrs. Henry's water.

Q. I see, and what conclusions did you reach in that document.

A. That there was gasoline present in their water.

32 Again, on cross-examination, Dr. Lutwick testified:

Q. No, my point is that it is in that range as you say?

A. Right.

Q. Right.

A. 80.1.

Q. Now, Dr. Lutwick, based on your test, are you in a position to say to this Court that there is conclusively gasoline in that water sample? And that it is gasoline and nothing but gasoline? Are you in a position to say that there are petroleum hydrocarbons which are similar to gasoline?

A. I'll say this.. that to my best knowledge there is gasoline in that water.

Q. Gasoline as opposed to any other petroleum hydrocarbons?

A. Right.

Q. How many parts per million, Doctor?

A. I didn't do a quantitative analysis.

Q. Did you do a chemical breakdown of the water?

A. Chemical breakdown of the water.. no.. I did a chemical breakdown of the hydrocarbon constituents in the water.

Q. Doctor, do you remember having a telephone conversation with me, the latter part of last week?

A. Yes.

Q. And do you remember at that time I asked you the question: Could you conclusively say if there was gasoline and nothing but gasoline?

A. Yes.

Q. And at that time, isn't it right that you told me you weren't in a position to say there was gasoline and nothing but gasoline?

A. I wasn't in a position to say that, and I'm still not in a position.. but as far as these tests are concerned, because of the.. I'd say that runs about 95% sure that it is gasoline.

33 Wade Gates, called by the defendant, is a chemical technologist employed by the Nova Scotia Technical College since 1962. He tested the plaintiffs' water in October, 1973, and made the following observations:

Q. Okay, so from this analysis, Mr. Gates, we see that the iron is up, the manganese is over and above, the chloride is over and above, the zinc is over and above, the color and turbidity is over and above, is that not correct?

A. Yes.

Q. What does this suggest to you, based on your experience in dealing with water samples, and the breakdown of chemical analysis of water samples?

A. Well it would certainly give you black tea and be very difficult to.. I'd never drink it myself.

Q. Why is that?

A. Because that manganese in that high concentration would certainly be dangerous to health.

Q. Alright now, if you were to take the same chemical analysis and leaving aside the finding of less than 0.005 parts per million for the oil, what would be your opinion regarding the suitability or quality of this water?

A. Well, again, I certainly wouldn't drink it. That much manganese would certainly be dangerous to the health.

Q. What effect would the iron have on the water?

A. Iron would have the same effect as manganese only not as serious, but both iron and manganese is going to make even washing clothes.. it would be deposited on it.

Q. What effect would these chemicals have on a constituent.. have on the taste of the water?

A. It would certainly give it a bad taste and a metallic.. or if this iron and manganese is there, there is a sulphide.. it would give you a rotten egg type smell. In any event that high metal content would give a very bad smell.

He performed a further chemical analysis of this water in December, 1974. This test indicated that all chemical constituents were reduced from the previous test except for calcium and magnesium. He attributed this to heavy rains that could have a tendency to dilute these metals. The advent of a dry season would return these metals to a higher degree of concentration.

34 He felt that a charcoal filter would reduce the petroleum hydrocarbon in the water and an iron filtration device would lessen the chemical constituents.

35 On visiting two other houses in the area he found the water to have a very bad smell and taste.

36 Gas chromatographs prepared by this witness were, in my opinion, inconclusive as to the presence or absence of gasoline.

37 On cross-examination this witness was questioned about his reaction to the taste and smell of this water:

Q. And how would you describe the taste of it?

A. Oh.. it tasted very metallic and it tasted.. I think you could taste the phenol in it alright. It was a quite high taste.

Q. Had you tasted it on a previous occasion?

A. Yes.

Q. When was that?

A. That was when I took the sample with Dr. Lin in October '73, I think it was.

Q. Okay, what did it taste like then?

A. It tasted more strongly gaseous material at that time than it does now.

Q. Did it taste like gasoline?

A. Not necessarily, it tasted.. again I think it must have been high phenol in it, it tasted phenol-like but you could taste the metallic and high metals in it.. moreso.

Q. Back in October, it could have tasted like gasoline?

A. Well, I mean, a lot of things could taste like gasoline, a lot of these compounds.

Q. Could you smell it in October?

A. Yes.

Q. How did it smell?

A. Well, it smelled probably a little.. it smelled like there was material in it. But the Driger test didn't show any.

Q. It's not light material?

A. Yeah, like gaseous-type material.

Q. Did it smell like gasoline?

A. Well, again, gasoline is a hard thing to describe, in smelling there are so many other compounds that smell identical.

Q. To gasoline?

A. Yeah.

Q. On point of fact, you are saying you smelled this water on two occasions and on neither occasion did you get the feeling through your own sense of smell, or taste, of gasoline, commonly known.

A. Let's put it this way.. I got more of a feeling on the first occasion I tasted it than I did on the second.

Q. You did get a feeling of gasoline then?

A. Yeah, possibly it could have been gasoline-tasting at first.

Q. Let's go back to smell on the first one. What was the smell you got?

A. Well, again, the same as the taste.

Q. Like gasoline?

A. Yeah, on the first one I'd say yes.

38 In a discussion of the gas chromatogram prepared by this witness the following exchange was made in cross-examination:

Q. So you weren't looking for some of the constituents of gasoline?

A. I was looking for the whole sample.. the whole gasoline. Not just this.. single components.

Q. All of which put you in a position where you couldn't say they were definitely attributable to gasoline?

A. I would say, yes, they weren't attributable to gasoline.

Q. You'd say they were not now, were not attributable to gasoline?

A. Well, this one large peak there, I'd say that wasn't gasoline, and the other peaks that didn't show up that well on the sample, I'd say that there definitely wasn't much gasoline, if any, there.

Mr. Gates was of the opinion that there was no gasoline in the plaintiffs' water supply.

39 Bernard A. Conrad owns the property midway between that of the plaintiffs and the defendant. In prior years he had operated the service station of the defendant for various companies, including the defendant.

40 He testified the installation and removal of gas storage tanks on the service station property was done by the defendant company.

41 The water in his new well he described as "no good". Prior to this he had used the well on the defendant's service station property for 20 years.

42 The service station was closed in 1973 prior to the present lessee, Woodgate, taking over. The station was refurbished, according to Conrad, in April of 1973.

43 Irving Murphy is employed by the defendant company installing tanks and repairing pumps. In August, 1973, he installed new tanks at the service station to increase its storage capacity. There were no visible signs of any leakage from the tanks that were removed. He stated that leaks are usually picked up by the lessees from the pump totals.

44 Anthony Connolly is an audit supervisor for the Gas and Diesel Tax Department of the provincial government. His department checks the meter readings of the pumps against the reports filed by the oil companies. On October, 25, 1974, the department made an audit of this service station covering the period July 1, 1974 to October 25, 1974. The result of this audit indicated a surplus of 653 gallons of premium gasoline and a deficiency of 332 gallons of regular gasoline. Mr. Connolly stated it was quite common to have these deficiencies. It could be attributable to the gasoline being stored in the wrong tank, i.e., the premium gasoline put into the regular gasoline tank and vice versa. He also stated that shortages could be caused by leakages.

45 In May of 1973 the witness Woodgate, describing himself as lessee of the defendant service station, started its operation. He stated there is no drinking water at the service station. The water is used for purposes other than drinking.

46 He testified the old storage tanks were taken up and new ones installed in July 1973 on the orders of the defendant's superintendent of construction.

47 Woodgate was of the opinion that the shortage of regular gasoline determined by the government audit went into the customers' gasoline tanks. He believes the pumps are not accurate enough to record a loss of 300-plus gallons out of a total 58,000 gallons.

48 Philip Kempton is a real estate appraiser. He testified the water at the plaintiffs' home tasted and smelled like gasoline. He placed a value of $33,000.00 on the plaintiffs' home provided it had good water. He reduced the value 50% if without water.

49 Maroun Hage is the developer who built the plaintiffs' home and sold it to them in April of 1973. The house was sold before it was completed.

50 The plaintiffs complained to him about the water. A break in the well casing was discovered. This was repaired but the water remained undrinkable. According to Hage, it still had an oily taste. The plaintiffs complained again and in consequence of their complaints the second well-drilling operation started. The well-drilling company placed a lien against the plaintiffs' property for the cost of this drilling. Hage paid off the well-drilling company and took an assignment of the mechanic's lien. The plaintiffs were unaware of this lien against their property until this hearing.

51 Hage admitted to arguments with the plaintiffs concerning the water and other deficiencies of the home.

52 The defendant company admits the ownership of the service station as evidenced by Exhibit 7, a deed dated February 22, 1973, but denies it operates or occupies same.

53 Having observed the demeanor of the three expert witnesses, and having considered their testimony very carefully in the light of their respective academic backgrounds and experience, where their evidence is in conflict I prefer the testimony of Dr. Lin and Dr. Lutwick to that of Mr. Gates.

54 Based on the evidence presented I make the following findings of fact:

(1) The plaintiffs' water has such a high mineral content as to be undrinkable.

(2) The water contains gasoline.

(3) The source of this gasoline is the service station storage tanks owned and controlled by the defendant company.

55 Based on the wellknown principles of *Rylands v. Fletcher* (1868), L.R. 3 H.L. 330, I find the defendant company exercised such a degree of control over these premises, particularly with regard to the gasoline storage tanks, as to render itself liable to the plaintiffs for the damage they have suffered from the escape of the gasoline. Gasoline is certainly something "likely to cause mischief if it escapes".

56 In coming to this conclusion reference was made to the following cases: *Bennett v. Imperial Oil Limited* (1960), 46 M.P.R. 50; *City of Saint John v. Donald*, [1926] S.C.R. 371.

57 The plaintiffs claim as special damages the cost of purchasing and installing a water purifier in the sum of $319.70. As such an installation would be required regardless of the gasoline pollution I disallow this claim.

58 In determining general damages I am mindful of the fact that regardless of the gasoline the water was and is unfit for drinking or cooking.

59 To have allowed or to have built houses in an area such as this, where the water is such poor quality, is to my mind irresponsible. Municipal building permits should not be granted developers unless it has been determined there is an adequate supply of potable water.

60 The addition of the gasoline made worse an already bad situatin.

61 I award damages for the additional inconvenience it has caused the plaintiffs in the amount of $1,000.00.

62 The plaintiffs will have costs of this action to be taxed in one bill of costs.

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