The Real Cost of Fracking: How America's Shale Gas Boom Is Threatening Our Families, Pets, and Food

Michelle Bamberger, Robert Oswald
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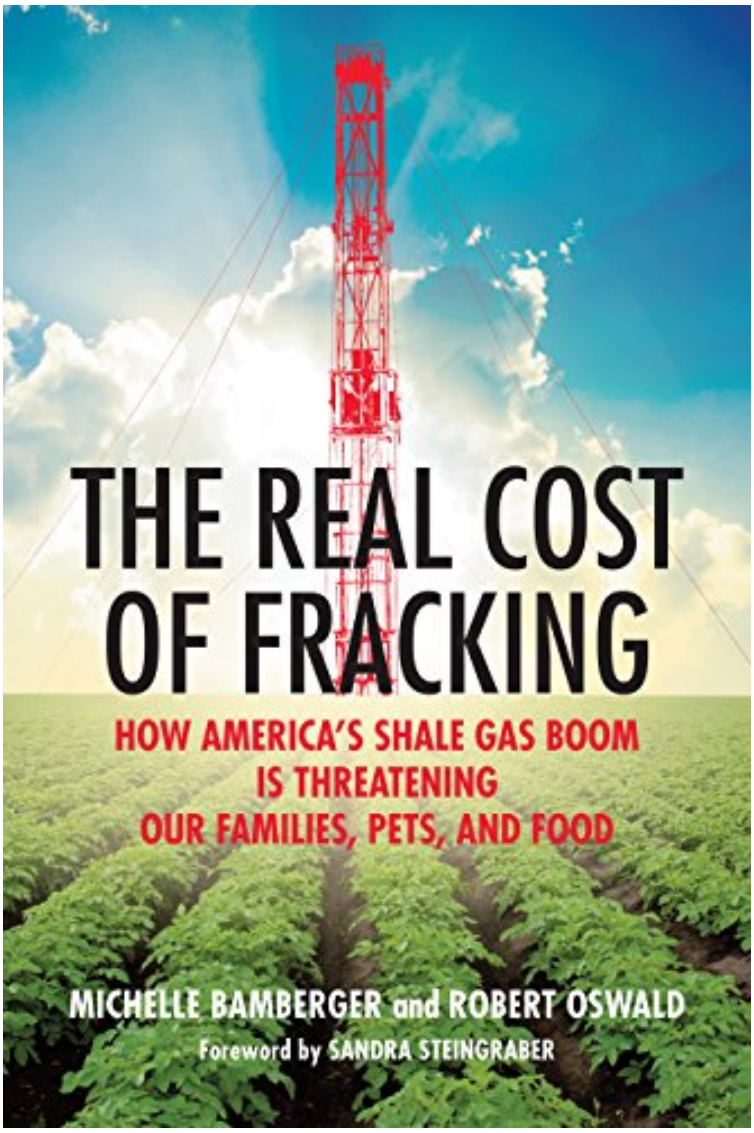

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Michelle Bamberger, Robert Oswald : The Real Cost of Fracking: How America's Shale Gas Boom Is Threatening Our Families, Pets, and Food before purchasing it in order to gage whether or not it would be worth my time, and all praised The Real Cost of Fracking: How America's Shale Gas Boom Is Threatening Our Families, Pets, and Food:

0 of 0 people found the following review helpful. Five StarsBy Faster PastorEye-opening expose of the truth, from one

who already suffers from an environmentally acquired illness.19 of 19 people found the following review helpful. Think fracking doesn't affect you? Think again ...By Peggy TibbettsIn 2012, veterinarian Michelle Bamberger and Cornell University professor of molecular medicine Robert Oswald published their study, ldquo;Impacts of Gas Drilling on Human and Animal Health.rdquo; Their report documented cases studies with animal owners in Colorado, Louisiana, New York, Ohio, Pennsylvania, and Texas. In 24 cases they found evidence of animals affected by drilling and fracking operations. However their report received little media attention. So they wrote a book.In ldquo;The Real Cost of Fracking: How America's Shale Gas Boom Is Threatening Our Families, Pets, and Food,rdquo; Bamberger and Oswald tell the stories of those people whose lives and the lives of the animals they loved and cared for were changed forever by drilling and fracking. They even go so far as to mask the identities of people who signed non-disclosure agreements, and who are in some cases speaking out for the first time.The people in these stories are farmers. They raise livestock and pets, and/or grow ldquo;organicrdquo; fruits and vegetables that end up on dinner tables across the country. But how safe is food that has been grown and raised in an environment that contains toxic chemicals? In some cases the crops and cattle were contaminated directly from spills of drilling fluids and wastewater, and they went to market anyway.Bamberger also pays a visit to a tiny community without water after a company fracked in the aquifer underneath the town and blew up all the wells, then walked away from the mess. It is inconceivable that she is describing a town in the United States. Further evidence that fracking is transforming rural America into the Third World.This book speaks to people who live in the gas patch. Where I live in Silt, Colorado, we are surrounded by more than 10,500 oil and gas wells. My own experience and the experiences of my family, friends and neighbors echo these stories. Yet no matter how much Irsquo;ve learned about this issue, no matter how much I think I know there is always something new to learn. I came away from this book with a better understanding of the cumulative effects from exposure to drilling and fracking chemicals in water and air, not only on humans but also animals and plants. How insidiously, over months, then years, the air and water become contaminated and people and animals become sickened.Moreover ldquo;The Real Cost of Frackingrdquo; has something for everyone ndash; believers and non-believers alike. Readers who want to stick to the facts about drilling and fracking will find ldquo;A Primer on Gas Drilling.rdquo; Spoiler alert -- you cannot reach the end of this book and believe fracking is safe. Unless you think itrsquo;s all lies. But Bambergerrsquo;s and Oswaldrsquo;s research is well-documented and included.With fracking happening in 32 states, plus the proliferation of interstate pipelines, silica sand mines (for fracking), bomb trains and earthquakes, and with natural gas exports on the horizon, the impacts of oil and gas development are coming to a neighborhood near you. I advise you to read ldquo;The Real Cost of Frackingrdquo; as soon as possible.2 of 2 people found the following review helpful. Fracking: Do the costs outweigh the benefits? You decide!!By STEPHEN PLETKOXXXXX(1) "Water dispensers and water buffalos have displaced our water sources"(2) "All my puppies were born dead"(3) "I have no calves this year"(4) "My vet can't figure out what's happening to my animals"(5) "We had to leave our home to escape the bad air"(6) "We all have headaches, nosebleeds, and rashes"(7) "We are not living; we are merely existing"The above common complaints of people living in fracking (the extraction of natural gas by hydraulic fracturing) areas are found in this revealing book by Michelle Bamberger and Robert Oswald. Bamberger is a veterinarian author and Oswald is a professor of molecular medicine at Cornell University.In the beginning chapters of this book we sit across the kitchen table from REAL people who have been seriously affected by fracking, families with children (including babies) and with pets--dogs, cats, horses, goats, pigs, chickens, and a donkey.The middle chapters encompasses farmers and food-producing animals (largely beef cattle).In the last chapters, the authors analyse the issues surrounding unconventional gas drilling (which fracking is) and delve into environmental justice.By giving a voice to people at ground zero of the fracking debate, the authors show us the consequences of fracking and issue an urgent warning to all of us: fracking poses a serious threat to--(1) The air we breathe(2) The water we drink(3) The food we eatThis book superbly illustrates society's modern dilemma:We require energy to live with our many modern conveniences, but to what degree of environmental degradation, health risks, and food supply threats do we want to accept to obtain that energy?Finally, for those who want to know the technical details behind fracking, there is an informative appendix entitled "A Primer on Gas Drilling."In conclusion, it all comes down to this with respect to fracking:Do the costs outweigh the benefits? Do we welcome oil and gas companies when they come to our neighbourhood with open arms, or do we tell them to "FRACK OFF?"(First published 2014; foreword; introduction; 9 chapters; epilogue; main narrative 180 pages; appendix; acknowledgements; notes; index)XXXXX

A pharmacologist and a veterinarian pull back the curtain on the human and animal health effects of hydraulic fracturing, or ldquo;frackingrdquo; nbsp;Across the country, frackingmdash;the extraction of natural gas by hydraulic fracturingmdash;is being touted as the nationrsquo;s answer to energy independence and a fix for a flagging economy. Drilling companies assure us that the process is safe, politicians push through drilling legislation without a serious public-health debate, and those who speak out are marginalized, their silence purchased by gas companies and their warnings about the dangers of fracking stifled. nbsp; The Real Cost of Fracking pulls back the curtain on how this toxic process endangers the environment and harms people, pets, and livestock. Michelle Bamberger, a veterinarian,

and Robert Oswald, a pharmacologist, combine their expertise to show how contamination at drilling sites translates into ill health and heartbreak for families and their animals. By giving voice to the people at ground zero of the fracking debate, the authors vividly illustrate the consequences of fracking and issue an urgent warning to all of us: fracking poses a dire threat to the air we breathe, the water we drink, and even our food supply. nbsp; Bamberger and Oswald reveal the harrowing experiences of small farmers who have lost their animals, their livelihoods, and their peace of mind, and of rural families whose property values have plummeted as their towns have been invaded by drillers. At the same time, these stories give us hope, as people band together to help one another and courageously fight to reclaim their communities. nbsp; The debate over fracking speaks to a core dilemma of contemporary life: we require energy to live with modern conveniences, but what degree of environmental degradation, health risks, and threats to our food supply are we willing to accept to obtain that energy? As these stories demonstrate, the stakes couldnrsquo;t be higher, and this is an issue that none of us can afford to ignore.From the Hardcover edition.

ldquo;In this cool, disarming and persuasive indictment of frackingrsquo;s widespread negative consequences, the authors provide an important addition to an ongoing debate.rdquo;mdash;Kirkus s, starred reviewldquo;This pragmatic, cautionary analysis is recommended for general readers.rdquo;mdash;Library Journalldquo;Bamberger and Oswaldrsquo;s message is clear: The canaries of the gas patch are wheezing and keeling over. We are being warned.rdquo;mdash;Slateldquo;Here, woven among the courageous words of human witnesses, is the unimpeachable story of science carried out in extreme and intimidating circumstances. It is the sound of silence breaking.rdquo; mdash;Sandra Steingraber, from the Forewordldquo;A must-read primer on frackingmdash;the compelling interviews and informative narrative tell the heartbreaking story of how peoplersquo;s lives are destroyed by fracking. If you care about the food you eat or animal welfare issuesmdash;read this book!rdquo; mdash;Wenonah Hauter,nbsp;Director of Food Water Watch,nbsp;author ofnbsp;Foodopoly: The Battle Over the Future of Food and Farming in Americaldquo;Sometimes, just when we think we know enough about a very important subject, a book comes along that shows usmdash;in urgent, even chilling, termsmdash;how much more we need to understand.nbsp;The Real Cost of Fracking is such a book. It cracks open the reality of fracking and seats us across the kitchen table from real people who have been poisonedmdash;and who, despite being American citizens and taxpayers, canrsquo;t do a thing about it. The farmers, retirees and children we meet in these pages are canaries in the fracking minemdash;and they are in serious danger.rdquo; mdash;Barbara Gottlieb, Director for Environment Health, Physicians for Social Responsibilityldquo;The Real Cost of Fracking adroitly documents the maladies that fracking inflicts on its neighbors and their animals, and Bamberger and Oswald convincingly connect these illnesses with current science and statistical studies. The authors provide a reasoned and impassioned call for government to stop toxic trespass by the fracking industry. The people will demand it after reading Real Cost.rdquo; mdash;Weston Wilson, environmental engineer and EPA whistle-blowerldquo;Finally, here is the narrative that relays the tragic toll of the shale-gas boom in America; how ordinary people, who lovingly care for children and animals, gardens and farms, find themselves imprisoned by the toxicity of the fracked landscapes they once called home. Our hearts break for the ruin they shoulder while we applaud Bamberger and Oswald for drawing back the veil on the injustice being wrought.rdquo; mdash;Amy Seidl, author of Finding Higher Ground: Adaptation in the Age of WarmingFrom the Hardcover edition.About the AuthorMichelle Bamberger is a veterinarian and the author of two books on first aid for cats and dogs. Robert Oswald is a professor of molecular medicine at Cornell University and the recipient of Fulbright and Guggenheim fellowships. They serve on the advisory board of Physicians, Scientists, and Engineers for Healthy Energy. Bamberger and Oswald live in Ithaca, New York.From the Hardcover edition.Excerpt. copy; Reprinted by permission. All rights reserved.From the IntroductionIn the summer of 2009, we were awakened. Articles began to appear in our local papers on the subject of fracking, the common name for the entire process of unconventional gas extraction (horizontal drilling with high-volume hydraulic fracturing) whereby millions of gallons of water, sand, and chemicals are pushed deep into the earth under high pressure to release small pockets of gas held tightly in the rock (see ldquo;A Primer on Gas Drillingrdquo; in the appendix). In our tight-knit community, people on both sides of the issue enthusiastically expressed their opinions. One article in particular caught our attention and led us to a website indicating that our small property in upstate New York was surrounded by neighbors who had already leased their lands to energy companies for gas drilling. We learned that our land could be drilled under and the gas extracted without our consent. That is, as long as a gas company owns leases on at least a certain percentage of the land (in New York, it is 60 percent) inside a certain amount of space (typically, one square mile), gas can be extracted from properties within that area even if the company does not have a lease on that land. Unleased land is taken by a process known as compulsory integration. We were concerned about what this meant for our water and airmdash;as yet untaintedmdash;but we also wondered if our farmersrsquo; markets, CSAs (community-supported agriculture groups), and Finger Lakes wineries could survive the massive industrialization we were beginning to see in Pennsylvania. Would faculty, staff, and studentsmdash;the mainstay of our economymdash;continue to be attracted to Cornell University and Ithaca College if the lakes and streams were polluted, the air fouled, and the land mottled by a matrix of shale gas wells? Would tourists continue to visit our picturesque parks, waterfalls, and gorges if thwarted by drilling traffic and diesel fumes? Because of our

interest in veterinary medicine, we became keenly aware of what was happening to companion animals and livestock in areas near existing industrial oil and gas operations. We heard stories we found hard to believe: healthy cattle dying within one hour after exposure to hydraulic fracturing fluid; cows failing to reproduce and herds with high rates of stillborn and stunted calves after exposure to drilling wastewater; dogs failing to reproduce after drinking contaminated well water; cats, dogs, and horses developing unexplained rashes and having difficulty breathing after living in intensively drilled areas. Our search for what really happened in each situation led us to document exposures and subsequent health problems by detailed case reportsmdash;just as would be done for a new diseasemdash;in both animals and their owners. We discovered that all too often, the humans in the household also experienced health problems associated with drilling operations and that sometimes the symptoms were the same ones their pets or farm animals had experienced. As we soon learned, the potential threat to our community is just a small part of a worldwide debate that has at its core the values and essence of modern life. That is, we require energy to live in the modern world, but what degree of risk and environmental degradation are acceptable to obtain that energy? Who should be asked to sacrifice, and who should profit? After untold hours of research, we learned more about the fossil fuel industry than we ever thought wersquo;d have a reason to know. Drilling originally exploited pockets of oil or gas and, in most cases, had a small impact on the communities surrounding the drilling sites, as confirmed by many of the people we interviewed. The changes in recent years, which involve extracting gas directly from shales rather than pockets of gas, have been made possible by two technologies: horizontal drilling and hydraulic fracturing. Shale layers are 50 to 200 feet thick, and in order to contact more of the shale, the drill bit must be turned to run horizontally. The technique of horizontal drilling was actually first applied to dentistry. In 1891, John Smalley Campbell (US Patent Number 459,152) described the idea that flexible shafts could be used to rotate drilling bits for dental applications, but he didnrsquo;t exclude the notion that his invention might someday be used for other purposes: ldquo;It is obvious that its use is not confined thereto, but that it may be applied to flexible drivingshafts or cables of any other description.rdquo; Although the first recorded horizontal oil well was drilled in 1929 in Texas, it wasnrsquo;t until the early 1980s that the process was improved and applied with some success. Likewise, one of the first uses of hydraulic fracturing had nothing to do with extracting oil or gas. Instead, Thomas Leonard Watson used an early form of this process in 1908 to separate granite from bedrock in order to study granites. Hydraulic fracturingmdash;using low volumes of water, not the high volumes used todaymdash;was introduced in the 1940s and was originally used to stimulate the flow of gas, and subsequently oil, from vertical wells. In this way, the driller could extract oil or gas from relatively nonporous rock, such as shales, rather than simply from pockets of free oil or gas. By the 1990s, the technology for modern-day horizontal drilling was married to fracturing with very high volumes of chemically laced water (slickwater)mdash;thus the term horizontal drilling with high-volume hydraulic fracturingmdash;allowing operators to drill down and turn the bit horizontally within the layer of shale containing the fossil fuels, continuing the drilling for up to two miles. The entire length of the well could then be hydraulically fractured, producing far more oil or gas. The idea was that large regions of the country (shale plays) sit on rocks containing fossil fuels that could be extracted with this process. By dividing these shale plays into spacing units of perhaps one square mile, the entire region could be drilled and enormous quantities of oil or gas could be extracted. In 2008, Terry Engelder of Pennsylvania State University and Gary Lash of State University of New York at Fredonia calculated that the vast Marcellus and Utica Shales underlying parts of Ohio, West Virginia, Pennsylvania, New York, and Maryland contained almost 500 trillion cubic feet of gas. They proposed that this vast reservoir of gas could be the nationrsquo;s answer to energy independence, a flagging economy, high unemployment, and global warming. Along with other shale plays in Texas, Oklahoma, Colorado, Wyoming, Arkansas, North Dakota, and elsewhere in the United States, the nation would become the next Saudi Arabia of fossil fuels. Although we have little infrastructure to use methane as a fuel in transportation, and although multinational companies with no allegiance to our country are often the ones extracting our fossil fuels, the unconventional oil and gas revolution was also touted as a way of weaning ourselves off foreign oil. But the more we learned about unconventional fossil fuel extraction, the more we realized that the prospects may not be as rosy as have been projected by the oil and gas industry. The US Geologic Survey reduced the original estimates of gas in the Marcellus region from 500 to 84 trillion cubic feet. The lower estimate represents little more than three times the US yearly domestic gas use, with all of New York potentially contributing, at best, a six-month supply from the Marcellus Shale (not taking into account the plans for export of natural gas by multinational companies). At least for New York, this is likely to be an overestimate, since only wells drilled in counties near the Pennsylvania border are likely be profitable. Also, the output from shale gas wells has been found to decrease dramatically after the first year, suggesting that the production estimates may decrease further. Moreover, when the price of natural gas was low in late 2013, the industry and the US government were prompted to search for more ways of using the product and converting terminals previously used to import gas into export terminals to send the gas to foreign markets. Whether any of the claims associated with the current ldquo;oil and gas boomrdquo; will stand up to careful scrutiny is a matter of ongoing debate, but large-scale industrial drilling has definitely moved into more densely populated areas and has garnered a massive amount of attention.