BTEX and Dangerous Chemicals

The repeated statement that BTEX is not used for fracking in NZ is plainly false. TRC's risk assessment report (Appendix I) includes two fracking products (Wax-chek 5222 and Halliburton WAC-12L) containing Ethyl benzene and Xylene. The 67 products in the appendix include numerous other hazardous chemicals. A US risk assessment describes three of them – glutaraldehyde, 2,2-dibromo-3-nitrilopropionamide (DBNPA) and ethylene glycol monobutyl ether (2-BE) – as 'dangerous at concentrations near or below their chemical detection limits' (www.gasdrillingtechnotes.org). Glutaraldehyde is a potent respiratory toxin and mutagen active at minute concentrations of parts-per-billion (ppb). DBNPA is a respiratory and skin toxin, lethal to rainbow trout at 40-50 ppb and to oysters at concentrations well below the limit of detection. 2-BE, easily absorbed through the skin, is toxic to red blood cells and is an endocrine disruptor at extremely low levels, affecting the ovaries and adrenal glands. These chemicals are widely used in drilling, not only fracking. Now to help STOS cleanup their Kapuni sites, our councils allow them to spread tonnes of contaminated soil onto so-called 'landfarms' where cows will graze and supposedly 'bioremediate' the soil. Mind you, TRC did analyse soil samples at the Brown Road landfarm for chloride, conductivity, hydrocarbons, sodium and total soluble salts. But what about 2-BE and numerous other toxic chemicals used in drilling? It is utterly irresponsible to risk contaminating our food/milk producing land and drinking water supply by allowing discharge of waste products from the oil and gas industry into or near them.

In response to http://www.stuff.co.nz/taranaki-daily-news/news/7728858/Council-rejects-water-worry Letter published on TDN on 4 Oct 2012.

Eight Good Reasons for Farmers to Lock the Gate

There are at least eight good reasons for farmers to "Lock the Gate" - deny access to oil/gas/fracking companies. If you open your gate:

1. You may be subjected to unacceptable noise, light and traffic from vehicle movements, heavy machinery and burning flares 24/7.

2. Your soil and water may become contaminated and permanently damaged by toxic chemicals.

3. The health of your family and livestock may be at risk.

4. Your groundwater supply may be adversely affected.

5. Your property value may fall and farm insurance become insecure.

6. You may lose control of your day-to-day property management.

7. Your community and social wellbeing may change forever.

8. You may regret not to have supported the transition to renewable energy.

Are these risks worth taking? Once you've decided to deny access, seek legal advice. If you are worried about legal costs, note that the Crown Minerals Act 1991 lays out the rights of landowners and occupiers re access to land for petroleum prospecting, exploration and mining. Article 73 states clearly that the costs on each party and the arbitrator in relation to the hearing shall be borne by the person seeking access. Don't hesitate - lock the gate now! http://www.legislation.co.nz

Emailed to TDN editor on 3 Sept 2012. Published on 8 Sept 2012.

Re Coal Seam Gas Lies

Solid Energy's Dr Pearce wants us to believe that re-injecting "the dirtied water back into the coalseam" just 400 metres deep means no disposal issues at the surface. He conveniently avoided telling us that the Huntly well was fracked. When will the oil/gas industry stop lying to us? Didn't PEPANZ tell us that they only frack in wells deep underground, thousands of metres below our aquifers, and 98% of the fracking fluid is water? These claims were quickly discredited when Taranaki Regional Council's risk assessment report listed several gas wells less than 1,600 metres deep, one was <300 metres away from our aquifer, and many of the wells were fracked with diesel (not water). And just a few days ago, David Robinson himself acknowledged the danger, *"Coal seam gas is extracted using a pressure change within the structure created by extracting water from within the coal seam. Water management is a challenge for this industry. By comparison, conventional and tight gas resources are typically found at significantly greater depths."* Naturally when water is extracted from coal seams, pressures within the seams change, creating pathways that could set gas free into unexpected areas. As I write, the Condamine River in Queensland is bubbling profusely while a methane gauge on the surface beeps! Guess what, nearby is Origin's coal seam gas project site.

In response to http://www.stuff.co.nz/taranaki-daily-news/news/7027071/Solid-rebuts-coalseam-gas-fears Emailed to editor on 1 June 2012. Published on 25 June. See also http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10809950

Re Show Us Your Fracking Facts

Another key point is waste disposal in the oil/gas industry, with or without fracking. Currently, landfarming whereby drilling mud is spread on farmland and returned to cow grazing pastures, is a common practice in Taranaki. Do NZ farmers want the world to know that their milk and cheese might have come from cows that have grazed on drilling wastes? What will consumers think then? How will that affect NZ's export earning?

Online response to http://www.gisborneherald.co.nz/opinion/column/?id=27894 on 29 May 2012.

Re Social Licence

'Social licence' comes with social conscience and responsibilities. To continue pushing for fossil fuels extraction is socially irresponsible. The American Association for the Advancement of Science puts it clearly, "Delaying action to address climate change will increase the environmental and societal consequences as well as the costs. The longer we wait to tackle climate change, the harder and more expensive the task will be. ... We need an aggressive ... effort to transform the existing and future energy systems of the world away from technologies that emit greenhouse gases ... The time is now. We must rise to the challenge. We owe this to future generations." And this is what the UK Secretary of State for the Dept for Environment, Food and Rural Affairs says, "The shift to a green economy represents one of the biggest business opportunities in decades. Already, the global low-carbon market is worth more than £3 trillion, and is set to reach £4tn by 2015 as more economies invest in low-carbon technologies. In the UK, a sector still in

relative infancy is worth over £116bn and employs almost a million people. I want to see that base grow." We in New Zealand must move forward too!

Sent online comment on 20 May 2012 in response to:
http://www.gisborneherald.co.nz/opinion/column/?id=27771 Published on print version on 22 May.

Re Fossil fuel use and global warming

Gareth Hughes, the Green Party and indeed every one of us, have good reasons to be serious about fossil fuel use and climate change. The American Associaton for the Advancement of Science puts it clearly, "Delaying action to address climate change will increase the environmental and societal consequences as well as the costs. The longer we wait to tackle climate change, the harder and more expensive the task will be. History provides many examples of society confronting grave threats by mobilizing knowledge and promoting innovation. We need an aggressive research, development and deployment effort to transform the existing and future energy systems of the world away from technologies that emit greenhouse gases. Developing clean energy technologies will provide economic opportunities and ensure future energy supplies. The growing torrent of information presents a clear message: we are already experiencing global climate change. It is time to muster the political will for concerted action. Stronger leadership at all levels is needed. The time is now. We must rise to the challenge. We owe this to future generations."
http://www.aaas.org/news/releases/2007/0218am_statement.shtml

Online comment on 18 May 2012 in response to comment by Rigpig to http://www.stuff.co.nz/taranaki-daily-news/news/6943622/Greens-put-heat-on-TRC-over-fracking

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Re Groundwater contamination

Evidence of fracking operations contaminating groundwater in NZ is difficult to find, NOT because there haven't been contamination, but because there has not been adequate monitoring. Remember TRC did not even require resource consents for fracking until August last year? Compliance monitoring reports so far had therefore not a mention of fracking or indeed any groundwater testing for fracking chemicals (38 of 46 listed fracking products contain hazardous chemicals, many with trade secret ingredients). Such reports, however, have revealed plenty of breaches of consent conditions and incidents such as diesel spills, discharge of contaminants on land exceeding consent limits and at Kapuni, contamination from blow-down pits rendering shallow groundwater unfit for drinking, stock use or irrigation. Without local, direct evidence, one must look overseas where there have been thorough examination into fracking. The Truth of Fracking in Scientific American (Oct 2011) explains it well: "If fracking is defined as a single fracture of deep shale, that action might be benign. When multiple "fracks" are done in multiple, adjacent wells, however, the risk for contaminating drinking water may rise. If fracking is defined as the entire industrial operation, including drilling and the storage of wastewater, contamination has already been found." The Dept of Labour's current HSE review highlights the serious shortcomings in NZ's regulatory regime on its onshore petroleum operations. This gives no confidence whatsoever that our fracking operations would be safer than elsewhere. See
http://www.dol.govt.nz/consultation/petroleum-regulations/petroleum-regs-discussion.pdf

Online comment on18 May 2012 in response to comment by Rigpig to http://www.stuff.co.nz/taranaki-daily-news/news/6943622/Greens-put-heat-on-TRC-over-fracking

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Re Tag Oil Sidewinder Expansion

At the NPDC hearings re Tag Oil's proposal to expand its drilling operations at the Sidewinder site, Tag Oil representative claimed that the company has impeccable track record here. Let's have a look at the July 2011 TRC monitoring report on Sidewinder. In the 10 months of operations from Sept 2010, there were two diesel spills, a cement spill and several breaches of consent conditions. Notably the tank for storing hazardous substances including diesel was only single skinned when it's supposed to be double-skinned. A water sample taken at the point where stormwater discharged to land near to Piakau Stream revealed levels of chloride and suspended solids above consent limits. There were issues about Halliburton's practices surrounding cleaning pipes and containment of discharged products. Consent 7596-1 was not complied with because TRC did not receive notification of flaring. No chemical analysis was undertaken on emissions from the flare to verify consent compliance re carbon monoxide, nitrogen dioxide and other contaminants. How impeccable does it get? Source: http://www.trc.govt.nz/assets/Publications/technical-reports/oil-and-gas-compliance-monitoring-reports/890325.pdf

Letter sent to TDN editor on 17 May 2012 in response to: http://www.stuff.co.nz/taranaki-daily-news/news/6928749/Drilling-plans-destroy-lifestyle-dream Published on 19 May 2012.

Re Consent given for fracking

The fracking frenzy is on! "More than six resource consents have been handed out in the past month … for deep well injection of fracking fluid" (TDN April 25). And since August 2011, TRC had already issued consents for the "discharge of contaminants associated with hydraulic fracturing into land" beneath the Mangahewa C and D, Onaero-1R and Turangi-B wellsites. Next will be consents, non-notified of course, for discharge of fracking associated contaminants onto land and into tributaries, and more consents for burning returned fracking fluid, some in close proximity to homes and schools. Obviously TRC and the oil/gas industry cannot wait for Parliamentary Commissioner for Environment's investigation into the safety of fracking, even with a report due by end of year. At all levels, our government is pushing ahead with unseemly haste in the 'dash for gas'! The current review of Crown Minerals Act is all about money and making life for the industry easier. Under the HSNO Act, companies are allowed to self-assess and import/manufacture fracking chemicals under the 'addictives, process chemicals and raw materials group standards'–a kind of blanket approval. The EPA has no control on use of hazardous substances in fracking, some are highly toxic even at low concentrations. Scientists have also explained that despite great depths where fracking and deepwell injection take place, chemicals can find their way up into aquifers through unknown natural fissures or abandoned gas wells. We simply can't risk further poisoning our water, soil and air, and disrupting our life-supporting climate.

Letter sent to TDN on 26 April 2012 in response to http://www.stuff.co.nz/taranaki-daily-news/news/6802689/Consent-given-for-fracking

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Re Fracking Inquiry and Moratorium

An immediate moratorium on fracking while the Parliamentary Commissioner for the Environment conducts her inquiry is crucial. There is too much secrecy and misinformation from the oil/gas industry and too little capacity for regional councils to properly assess, manage and monitor fracking activities across the country. Alarmingly, out of 46 "fracturing products" (used in fracking) included in Taranaki Regional Council's recent risk assessment report, more than 10 have undisclosed components, stated as 'trade

secrets' or proprietary. Of those 46 products, 38 are classified as Hazardous—flammable, corrosive, oxidizing, acutely toxic, carcinogenic, mutagenic and/or ecotoxic. Since August 2011 when TRC made consent applications for fracking mandatory, at least 6 non-notified consents for fracking and associated discharges have already been issued in Taranaki. Some of these consents hold for 15 years! Without a nation-wide fracking moratorium in place while the inquiry proceeds, there will be a big rush to get many more such consents through in the coming months, in Taranaki, the East Coast and elsewhere. This will result in large amounts of dangerous, and in some cases, undisclosed chemicals being released into our environment, threatening people's health and livelihoods.

Letter sent to NZ Herald on 30 March 2012 in response to
http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10795082

Re Fracking Inquiry and Moratorium

Apparently the Parliamentary Commissioner for the Environment's inquiry into fracking will give the oil/gas industry "a chance to put the facts on the table" and the industry has "nothing to hide", according to Mr. David Robinson. I ask why out of 46 "fracturing products" (used in fracking) included in TRC's recent risk assessment report, more than 10 have undisclosed components, stated as 'trade secrets' or proprietary? Without knowing what chemicals are involved, by putting the real "facts on the table", how can there be a comprehensive inquiry or "an open and honest dialogue"? Crucially, of those 46 products, 38 are classified as Hazardous—flammable, corrosive, oxidizing, acutely toxic, carcinogenic, mutagenic and/or ecotoxic. Since August 2011 when TRC made consent applications for fracking mandatory, at least 6 non-notified consents for fracking and associated discharges have already been issued. Some of these consents hold for 15 years! Without a Taranaki and nation-wide fracking moratorium in place while the inquiry proceeds, more such consents will be issued in the coming months. This will result in large amounts of dangerous, and in some cases, undisclosed chemicals being released into our environment, threatening people's health and livelihoods.

Letter in response to http://www.stuff.co.nz/taranaki-daily-news/news/6656108/Oil-gas-probe-raises-hopes sent by email to editor on 30 March 2012.

Re Groundwater test

I thank TRC for their response to my letter dated March 15. I must point out that my statements are based on official documents. Notably, TRC's technical report 317804 on Mangahewa-3 wellsite says, *"19 February 2007 – Drilling is nearly finished – logging is underway with fraccing to follow."* NZ Petroleum & Minerals website says, *"In late 2006 Todd began drilling the Mangahewa-3 appraisal well and carried out a fracturing operation in mid-2007."* Re Kapuni, *"The discharge of well fluids to blow-down pits had been occurring without any resource consents"* prior to 2006/07, according to TRC's technical report 854309. Three discharge consents for the blow-down pits were issued in 2006 and 2007. Applications of further consents were withdrawn, as *"the use of unlined earthen blow-down pits was not industry best practice. … a high risk of significant adverse environmental effects … STOS agreed to cease using all blow-down pits and has been investigating alternatives…"* Mr. Bedford says the company "*intends to remediate the groundwater as soon as practicable, even though the consents have several years left to run."* My questions are 1) Why hasn't remediation begun, bearing in mind that the groundwater was last tested in March 2008? 2) When will it be "practicable" to do so? 3) Can contaminated groundwater really be remediated? 4) Why are the consents valid till 2023 if STOS has ceased to use the blow-down pits?

Sources:

www.trc.govt.nz/assets/taranaki/publications/technical-reports/317804.pdf
www.nzpam.govt.nz/cms/news/2007/todd-makes-substantial-gas-discovery-at-mangahewa
www.trc.govt.nz/assets/Publications/technical-reports/oil-and-gas-compliance-monitoring-reports/854309.pdf

Sent to TDN editor on 15 March 2011. Published on 19 March.

Re Environmental Damage

You might not agree to boycott WOMAD, but please be mindful of the social and environmental havoc that companies like Shell, Todd Energy and the like have and are causing worldwide, including in our own backyard. Shell Todd has already poisoned the groundwater around four of its five Kapuni wellsites to the point that it's deemed unsafe for potable or stock use, two of which can't even be used for irrigation. From its McKee Production Station, Todd has permits to discharge stormwater to the Mangahewa Stream and Waitara River. During 2009-10, Todd had multiple breaches of consent conditions, including a reported hydrocarbon concentration seven folds of the maximum allowable level. Yet the council concluded: "Due to the significant dilution in the Waitara River these isolated cases are no cause for concern." Really? Todd's operation at Mangahewa-3 wellsite was also highly rated by council, despite no water samples collected for physicochemical analysis, no biomonitoring surveys of receiving waters undertaken and no ambient air quality analyses conducted. Notably Mangahewa-3 was fracked in 2007, although omitted from council's fracking risk assessment report. Just be aware!
Letter in response to http://www.stuff.co.nz/taranaki-daily-news/news/6547567/On-line-strike-at-festival-backers Published on March 15, with response from TRC:

Editor's note: We put points raised in this letter to the Taranaki Regional Council. It responded that Todd did not conduct a hydraulic fracture at Mangahewa-3. The equipment was "mobilised" but not used because the well flowed prolifically without the need for a hydraulic fracture treatment. Gary Bedford, the director of environment quality, said groundwater immediately beneath some of the blowdown pits within some Kapuni wellsites contains hydrocarbons. The sites are industrial sites and there is some distance between the pits and the site boundaries. The groundwater beneath them and in the vicinity is not taken for potable, stock use, or irrigation purposes. Biological and physicochemical monitoring of the Kapuni Stream shows no trace of any contamination from the groundwater in question. Consents held by STOS oblige the company to remediate the groundwater to potable groundwater standard within the term of the consents. The company has advised the council that it intends to remediate the groundwater as soon as practicable, even though the consents have several years left to run. Mr Bedford said the "multiple breaches" relate to stormwater discharges. Of 298 samples of stormwater discharging the Mangahewa stream and Waitara River, 294 were in compliance.
