# THE SCIENTIFIC INQUIRY INTO HYDRAULIC FRACTURING

IN THE NORTHERN TERRITORY



### Big River Station – Hearing Transcript

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8 March 2017

Knotts Crossing Restaurant, Katherine

Speaker: Daniel Tapp

Daniel Tapp:

My name is Daniel Tapp, I was born in Katherine and I've been in the cattle industry all my life. I'm a pastoralist been living on my property on the Roper River for 20 years. I've lived in NT all my life. We rely on good clean air, pasture, food and water to make a living and sell our produce. Along with my wife and two daughters, I'm very concerned about the unconventional shale gas mining in NT in Australia. The inquiry needs to cover all aspects of unconventional gas fracking above ground and below. I would like to thank the government for implementing a hydraulic fracturing moratorium however, not all shale gas activities in the Northern Territory have ceased. Station owners and farmers, traditional owners are still battling to protect land from gas companies wanting to clear seismic testing lines, test wells et cetera. The panel should include but not be limited to environmental impact such as biodiversity, reduction, air, water pollution, methane and other gas emissions. Human, animal health impacts, transport issues and impact on revenue generated by existing sustainable industries such as horticulture, agriculture and tourism.

The panel should also investigate and implement protection measures for land owners allowing land owners the right to refuse gas companies or industry representatives access to their land and the right to say no. In saying that contamination, environmental and financial issues do not stop at the boundary fence. What happens hundreds of miles away can have disastrous results for all. Therefore, with these issues involved, there's no guarantee, I would like to see a total ban on unconventional gas fracking in the Northern Territory in Australia. We need to include a revue of internationally sourced literature to examine global experiences by a short term, long term impacts associated with aspects of on shore gas industry. Not just the act of fracking the shale, eg. pipelines, emissions, etc.

The panel should also include community representatives, medical practitioners, lawyers, pastoralist TO's, economists. Most of this activity will be happening on pastoral land and traditional owner's land. To provide a balanced inquiry on social and health impacts of fracking, the rights of landholders to prohibit fracking on their land, true cost of fracking and its boom by cycle compared to an existing sustainable industries agriculture, tourism, et cetera. Improving the panel to make these alterations is vital to ensuring a genuine inquiry into the shale gas fracking industry and its

### HYDRAULIC FRACTURING

IN THE NORTHERN TERRITORY



impacts on the Northern Territory. The beef pastoral industry is worth nearly a billion dollars a year and has proved to be a sustainable industry for both jobs and the environment. This is would be greatly affected if the gas industry industrialises or contaminates the environment and water. Even the industrialisation of the landscape alone would have serious effects on other industries. These are issues I see arising from full blown gas industry above ground.

The Frogtech report done by 50 different institutes worldwide for the CLP government said that to extract the 200 trillion square feet of gas in the NT, it would take approximately 65,000 gas wells. This name I could never pronounce and it's a bit of a tongue twister, Dr. Elgraffea is an expert ... Sorry, the name's on the tip of my tongue. What's your expertise? Systems, rock mechanics engineer, Elgraffea says they work on 6 to 8% well failure rate while in production. This would mean that there would be around 4,000 failing wells leaking gas in the NT while in production. Not including above ground risks. What will stop well failure happening in years to come when the gas companies have abandoned them and they begin to fail due to age and natural earth movement? Eg. earthquakes, natural seismic activities with trillions and trillions of tonnes of pressure. Well integrity will never stand the test of time.

I have had a geologist here in the past on my property from the Dept of Mines and Energies. When I asked him about fracking in this area, he told me not to worry because they would not be coming here because it is too dangerous because of the fault lines in the area. A couple of weeks later, I went to a fracking meeting in Katherine and we are in one of the hotspots to frack. I've included a map of my property and show the fault lines, his name was Tim Munson, senior geologist, 2014. It is said by some when gas wells are plugged after their use by date or from failing or are out of an economical gas supply, this is when gas pressure builds up and the chemicals and gas will find their way out of natural fault lines, cracks, fracks and aquifers because there is no other way out. The pressure has to go somewhere.

Bond money, bond money for rehabilitation. No matter how much bond money you have to fix these problems, the question is how do they fix a depleted or a contaminated aquifer? This in my opinion is impossible. Who will be responsible for compensation for livestock produce, injury, damage, contamination or death by gas industry or associates? Who will be responsible for compensation for injury or death to persons on my property, Eg. visitor or employee of mine or visitor or employee of the gas industry, or any mining industry that might come onto my land without my consent or knowledge? Who will be responsible for compensation or damages to my property by way of contamination of land, environment, or water or destruction of infrastructure, fire or explosion? Who will be responsible for compensation or damages to neighbouring property that comes from my property to neighbour's property by the gas industry? Contamination and danger issues do not stop at the boundary fence.

### HYDRAULIC FRACTURING

IN THE NORTHERN TERRITORY



Who will be responsible for compensation of consumers eating or using contaminated products when they are contaminated by the gas industry and I can't sell my produce? Who will be responsible for compensation of land values when I can't sell my land because land and water contamination or water depletion and the industrialisation of land with hundreds of gas well and associated infrastructure and transport? Who will be responsible for compensation of further development on my property if I can't build in where I want to because infrastructure belonging to the gas industry is in the way of my development? Who will be responsible for testing soil, water and food contamination caused by gas industry and how often will these tests happen? Do they report to me? Who will be responsible for compensation if the company goes bankrupt or ceases to exist? Who will do the rehabilitation work or compensate me for my losses? Who will be responsible for baseline studies on water, air and soil contamination?

Who will be responsible for compensation when I can't conduct standard management practices because of the gas industry being present? Who is to be responsible for weed control, erosion control, stock escaping from gates being left open or grass fires started by the industry? Who is responsible for a risk management plan and who is responsible to take action on that plan? Who is responsible for my property insurance as I have been informed by my insurance company that they will not insure me against unconventional gas mining activities, infrastructure failing or contamination issues? How do I know who these people are coming onto my property without consent? I don't want these people on my property, that's why I live here. I don't want the risks of other people in dangerous infrastructure around me or my family. I want and need wide open spaces, fresh air and clean water and environment to survive. I have approached my insurance company and they have said to me that they will not insure against the above mentioned or anything else to do with unconventional gas mining.

A leading environmental insurance specialist, Sydney based Anthony Saunders said, "The risk of contamination activities by gas companies couldn't be insured." Envirosure, this is the name of the company, was the only insurance broker to confirm the lack of insurance covering the sector which includes the farmers, explorers and the indigenous land owners. He said one international insurance broker had made available and insurance policy for gas exploration but the fine print excludes the financial cost to rectify the effects of gradual contamination to the land or aquifer. If the trigger in the policy is any accident, the deliberate process of injecting a cocktail of chemicals to extract the gas negates that cover. Logically if the process of contamination is deliberate, there's no cover in an event of pollution. The gas companies are 100% responsible for that and because of that there is no insurer that will cover an event that has the likelihood of certainty. If there is no cover, then why are they licensed to carry out this process? No insurance company wants to be responsible for a future claim that is likely, he said.

Bearing in mind that this is not like car insurance where you can just go and buy a new one. This is our water, environment and lives that are on the line here. A report from the Australian Institute just recently stated that, "The

### HYDRAULIC FRACTURING

IN THE NORTHERN TERRITORY



methane gas emissions are 170 times higher than the gas industry claims. The gas industry as been allowed to hoodwink and bully communities and government into the big lie that gas is a clean form of energy. Not to mention the hundreds of secret recipes being using and most have not been tested." Doctor Elgraffea says that they expect a 6 to 8% well failure rate while in operation alone. In 20 years, 60% will fail and in time all will fail. How can the industry guarantee when fracturing the rock that the fracture will not go further than the desired length and stay localised?

A prime example of how fragile the environmental water is to be contaminated is a recent aquifer contamination in Katherine. This came from a little bit of fire flame on a small piece of land. How can this massive industrialisation of thousands of wells not contaminate our aquifer? It is quoted by the gas industry that chemical use is half of a percent of water use. Let's do the math on that. Water use on average is 20 million litres per frack well. Half of a percent of 20 million litres of water equals 100,000 litres of chemicals. For each well, there would be 100,000 litres of chemicals and 20 million litres of water. Fresh water that is now contaminated, not just the half a percent that is stated by the industry. A conservative estimate on NT would get 10,000 shale gas wells in the Beetaloo basin. This would mean one billion litres of pure chemicals added to the 200 billion litres of water. Now we have 200 billion litres of contaminated water that needs to be disposed of, or potentially leak into the aquifers.

If the industry is fully developed at 65,000 wells, that would mean a whopping 6.5 billion litres of chemicals alone. You'll just have to excuse me on my terms of this figure. It's in chemicals alone, a whopping 1,300 billion litres of water that is now contaminated. This is only for one frack per well per year. Most wells get fracked two or three times a year. This doesn't include BTEX a very toxic brew of chemicals that the government and industry say are banned. Let's be honest about this, these are natural occurring chemicals that come up from the well whether you like it or not. These figures are ridiculous when you think that we'll live in the driest continent in the world and most of our aquifers are already at capacity. Where will this fresh water come from? In a report for the CLP government last year tabled at the water forum meeting, it was said that the recharge rate for our aquifers in the NT was a very dismal 1%. We also have a very thirsty development at the North Program about to hit on already strained aquifers.

The main purpose of this development is the food bond for Asia in the north. How can these industries co-exist is beyond me when they are competing for the same scarce and most precious resource, water. Just on these over allocation issues with the aquifers, I didn't put this in here and it's not in my submission. These allocations of these aquifers were done on a 40-year average water flow. They should be done on a 100-year average. The 100-year average is almost half of the 40-year average. Basically, these aquifers are already over allocated. Many of these chemical additives have not been checked out for their health risks. Some of the chemicals used are arsenic, silica, barium, sodium, acid, radium 226, nickel, uranium and aluminium. Plus, the naturally occurring btex, the naturally occurring

### HYDRAULIC FRACTURING

IN THE NORTHERN TERRITORY



radioactive material that comes from under the ground drilling process whether you like it or not. These chemicals cause cancer, disrupt the endocrine system, effect brain, nervous system and immune system. The industry and government repeatedly tell the public that these chemicals are banned. Can they please stop lying to use about this? These chemicals are not banned; they are naturally occurring.

Many of the secret recipes are secret, why is this so? Is this misleading the public and the inquiry panel? I'm not convinced that these chemicals are found under the kitchen sink or in ice cream like the industry says it is. We need to make it clear that unconventional shale gas fracking has not been happening in the NT or in Australia for 40 years as APPEA and pro fracking persons continually refer to. It is only in its experimental stage. In fact, there are only a couple experimental and exploration wells Australia wide and are not in commercial use and is untried, untested, new technology. I would like to make that very clear to the public and the panel. For a sustainable future we need clean, green food and water, and need to move towards renewable energy. The 70 pastoralists that signed a letter to the public government and industry have agreed to lock our gates under the gas industry. We are not letting the industry or government hoodwink or bully us into destroying our own land and water. Our family homes are not for sale.

The 70 pastoralists covers a huge portion of the NT parcel leases including mining leases, some of the biggest parcel operations in the NT and Australia to the family owned stations and farms. In Queensland, I know this is coal seam gas but these are companies that are operating here and a lot of the infrastructure is above ground infrastructures and stuff of the same. In Queensland, Darling Down region food bale, there is now 4,700 hectares of what is described by government as a contamination zone. Gas rising through the ground and contaminated water from gas mining. Framers grazing, feed loaders are using untreated, contaminated water to water livestock and crops for human consumption. Also, feeding stock with grain, hay that has been irrigated by contaminated water. Also, grain, fruit, veggies for human consumption without testing for contamination, then selling these products to the open market to the likes of Coles and Woolworths.

According to the Queensland government, Origin owned statistics say over 500 water bores are going to be drawn down or de-watered in the near future due to gas extraction in the [inaudible 00:20:59] and Chinchilla site. Mostly irrigation bores. In these same bores, they now have the problem of contamination zones and a contamination zone is an understatement. It is a danger zone. The farmers are not allowed to plough their paddocks, naked flames are prohibited and it's even dangerous to drive a vehicle through the site. This contamination, the QGC Water Treatment Plant pumps the waste water into the Condamine River above the weir where the town of Chinchilla gets their drinking water from. Origin Energy Treatment Plant pumps their waste water into Condamine River 10 kilometres downstream from the weir. This means that all the people, animals and environment on the Condamine River are all drinking contaminated water from the gas industry. The Condamine River is bubbling with methane gas.

### HYDRAULIC FRACTURING

#### IN THE NORTHERN TERRITORY



In these same areas, feed lot farmers are grazing their crops. Sorry, I've rewritten that. These peoples in these areas have been crying for help for decades and reporting these issues but have been ignored by government and industry repeated. Now the problem is irreversible and prime water and farmland aquifers have gone indefinitely. Reading between the lines, this tells me the industry and government has abandoned the people, animals, water and environment for the money that no one gets. I have friends living in this area, they can't even trap rain water off their roofs because it was contaminated from chemical soot from flares and waste water ponds within hundreds of metres away from their houses. They are losing their hair, bleeding from their eyes, ears and noses. It is in their houses, and it's obviously in the air and water. Unfortunately, these people can't leave because they can't sell their land. Banks won't lend them money on mortgage or on that land to purchase elsewhere. They are stuck in a gas field without the help and never gave consent to the industry.

No insurance, no life, just madness. I hope this don't happen here. What will we do, where will we go to live? Where do we get fresh air, clean water and food from? There's no planet B to go to. If this happens here it would be a crime against humanity in my opinion. Nothing less. The science and evidence is there and must be acted on. Prevention is better than cure.

Hon. Justice Rachel Pepper:

Thank you very much. I was reluctant to stop you Mr. Tapp because your presentation was so powerful. I do want, you've raised many important issues. Are you willing to make a copy of that paper? Are you willing to make that available?

Daniel Tapp: Yeah, I've made the submission.

Hon. Justice

Rachel Pepper: Wonderful.

Daniel Tapp: To them.

Hon. Justice

Rachel Pepper: You've already sent it in?

Daniel Tapp: Yep.

Hon. Justice

Rachel Pepper: Excellent, thank you very much, that's good.

Daniel Tapp: Got all the appropriate documentation with those reports, everything's all in

there.

Hon. Justice

Rachel Pepper: Wonderful. Model presenter, thank you.

Daniel Tapp: Yeah.

Hon. Justice

### HYDRAULIC FRACTURING

#### IN THE NORTHERN TERRITORY



Rachel Pepper: All right. Now I'm sure there's probably lots of questions from the panel.

Yes, Dr. Ritchie.

Dr. David Ritchie: Mr. Tapp, thank you for that submission. I'd just like to see if you can help

the committee with this thing. We've heard mixed submissions from your fellow pastoral industry reps that have come before us. The AA Co. are saying that they're very concerned about the possible effects of chemicals that would then degrade the clean image of their product. We've had some people from the Stuart Plateau saying they're using so many chemicals now, once you get north into the tick zone, you've got a lot of chemicals anyways, so it's not going to make much difference. Have you got a strong view on the potential economic disadvantage to your industry from the chemicals from

fracking?

Daniel Tapp: No, I haven't got an economical value on it. The food chain is developing

because of these chemical residues in beef, because of tick control or whatever contaminants are used. The world is leading more and more towards organic food. I don't know the levels of that but I know that I wouldn't want to be eating stuff with arsenic and traces of that sort of stuff in it, as compared to worm or this sort of stuff. Basically, I haven't got a cost

effect.

Dr. David Ritchie: Thanks, yeah.

Hon. Justice

Rachel Pepper: Yes, we have another question from the panel?

Hon. Justice

Rachel Pepper: Dr. Beck.

Dr. Vaughan Beck: You mentioned at the beginning that you're representing yourself but also a

number of other pastoralists. I'm just wondering can you give us some idea of the number of other pastoralists that you would be representing or if

you've provided details in your submission.

Daniel Tapp: They haven't supplied me any of this information.

Dr. Vaughan Beck: Right.

Daniel Tapp: There's a couple here that are on that list of the 70 pastoralists. I'm just

saying that I'm representing them, as in I've got that letter from those

pastoralists saying we oppose the fracking on our land.

Dr. Vaughan Beck: Yes.

Daniel Tapp: That's the part that I'm representing them on, not my personal views.

Dr. Vaughan Beck: Good, okay. Fine, thanks very much for that clarification.

Hon. Justice

Rachel Pepper: Anyone else? Sorry, yes. Dr. Jones.

2. Katherine - Big River Station, Daniel Tapp

### HYDRAULIC FRACTURING

#### IN THE NORTHERN TERRITORY



Dr. David Jones: You mentioned that the pastoral industry was worth about one billion

dollars a year. Is that across the entire territory or is that in the Barkly entire

region?

Daniel Tapp: I believe that's in the Northern Territory, all of the Northern Territory. Just

on that, it's just in the latest report I think from the Cattleman's Association there that in the last three to four years, it's grown from 300 million to

almost a billion. Just in the last two or three years.

Hon. Justice

Rachel Pepper: One of the things you mentioned in your presentation was obviously

significant concerns around land access. What if there were a right of veto? Would you still be against fracking if individual pastoralists could say, "No."

Daniel Tapp: I would like the right to say no, to veto. Like I said in the comment before, if

we water on the same aquifer and this single aquifer is strained now with its over allocation, is the aquifer that this Beetaloo sort of basin is going to water out of. Basically there as the crow flies, probably 300 kilometres from

me, but my water comes from there, out of that same aquifer.

Prof. Barry Hart: You've articulated a very comprehensive list of concerns and a number of

those have been, you have referred to other documents, so I appreciate that. Are there any other circumstances under which you would consider allowing fracking, perhaps not on your property but on the surrounding

areas? Can you foresee any circumstances at all or is it?

Daniel Tapp: I can't. I totally oppose it. It's this well integrity issue and the

industrialisation of our land. I just cannot see any, people talk about the economics of it. There's no economist on this panel, I agree with that in some sense. In the other way, I totally disagree with it because what value do we put on our environment? Whether it's \$10, or 100 billion dollars. It's got to be strictly, the decision has to be made strictly on the environmental

side of things, protecting our water.

Prof. Barry Hart: Thank you.

Daniel Tapp: There's no value on water.

Hon. Justice

Rachel Pepper: Yes.

Ms Jane Coram: Just a quick one, thank you for that Mr. Tapp. Following up on some of your

comments about the effects of the coal seam gas operations in Queensland on people's health and their drinking water supplies. Could I, in your

submission if you have any evidence of that, that would be very helpful for  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

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Daniel Tapp: Yep, I've submitted them.

Ms Jane Coram: Okay, thank you.

## HYDRAULIC FRACTURING

IN THE NORTHERN TERRITORY



Hon. Justice Rachel Pepper:

I think that's probably everything. We are running out of time. You have identified correctly, Mr. Tapp that there is no economist on this panel. The inquiry is aware of the need to get some economic modelling and as indicated in background and issues paper that is currently being commissioned by an independent economic expert. Thank you for drawing that to our attention. Thank you very much.