

**STANDING COMMITTEE ON  
ENVIRONMENT AND PUBLIC AFFAIRS**

**INQUIRY INTO THE IMPLICATIONS FOR WESTERN AUSTRALIA OF  
HYDRAULIC FRACTURING FOR UNCONVENTIONAL GAS**

**TRANSCRIPT OF EVIDENCE  
TAKEN AT PERTH  
MONDAY, 17 FEBRUARY 2014**

**SESSION THREE**

**Members**

**Hon Simon O'Brien (Chairman)  
Hon Stephen Dawson (Deputy Chairman)  
Hon Brian Ellis  
Hon Paul Brown  
Hon Samantha Rowe**

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**Hearing commenced at 1.37 pm****Mr STEVEN GILMAN****Private citizen, sworn and examined:**

**The CHAIRMAN:** Mr Gilman, on behalf of the committee I would like to welcome you to this hearing.

[Witness took the oath.]

**The CHAIRMAN:** Can you please state your full name and the capacity in which you are appearing before the committee?

**Mr Gilman:** My name is Steven Kent Gilman, and I am appearing before this committee as a private citizen.

**The CHAIRMAN:** You will have signed a document entitled “Information for Witnesses”. Have you read and understood the document?

**Mr Gilman:** Yes, I have read and understood that.

**The CHAIRMAN:** These proceedings are being recorded by Hansard and a transcript of your evidence will be provided to you. To assist the committee and Hansard, if you do quote from any document during the course of the hearing, if you could please identify that document with its full title for the record. Your transcript will become a matter for the public record, and if for some reason you want to make a confidential statement during today’s proceedings you should request that the evidence be taken in closed session. If the committee grants your request, any public and media in attendance will be excluded from hearing. Please note that until such time as the transcript of your public evidence is finalised, it should not be made public. I advise you that the publication or disclosure of the uncorrected transcript of evidence may constitute a contempt of Parliament and may mean that the material published or disclosed is not subject to parliamentary privilege. If you need any further advice about any of that, of course you can contact our committee legal officer.

Mr Gilman, firstly, the committee would just like to thank you for providing your submission back in September 2013 regarding the terms of reference and generally on the inquiry into the implications for Western Australia of hydraulic fracturing for unconventional gas. We understand that you have some background in this area; I am just wondering if you could introduce yourself and your background a little more?

[1.40 pm]

**Mr Gilman:** I live, and have lived before, in the central west and the coastal area between Geraldton and Perth, and I am most interested in this topic, and I have some residential credentials. I grew up on farms in the wheatbelt in Western Australia and, like a lot of people of my vintage on farms, I gravitated into the mining industry. After I left school, I went to the School of Mines in Kalgoorlie and studied metallurgy. I have worked in the mining industry in Western Australia, and in Africa and the United States, for production companies over the years. In the last 14 years, I have worked in a private consulting company that services the mining industry worldwide.

In terms of the debate that is obvious in the public arena about unconventional gas and hydraulic fracturing, it seems to me to be incomplete, because it is quite polarised. Quite a bit of that is uninformed. In my view, we need to get a bit more balance in the debate. Obviously—to me, anyway—a lot of good can come from a substantial affordable gas supply that is in close proximity to Perth and the south west. On the other hand, there are some experiences, as have been reported by people, particularly farmers, around the world, that mean that we need to make sure that we do this in a proper way.

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My motivation to get involved with this really started from observing activity in the town in which I live, where there is quite a bit of public debate in our local newsletters and people are putting up signs in the street. As somebody who has been in the production industry for nearly 30 years, it is pretty obvious that the debate is pretty one sided and not well informed, and people really are not given the opportunity to understand what it is all about. So in the end I responded to some of this—in a way that I normally would not—and I wrote to the local newspaper, and then about six months later I saw an advert in the same local paper from our local member, Shane Love, inviting people in the community, if they were interested in this issue, to either write to the member or to this committee, so that is what I did.

**The CHAIRMAN:** Thanks very much for that introduction. You have stated that where you live a lot of debate has been going on. I think you mentioned that signs are going up and there are billboards and all sorts of things. I live in Perth, and I have not seen much of that in my neighbourhood; in fact I have not seen any at all. Just how big an issue is this where you come from and how widespread is the debate?

**Mr Gilman:** It is highly visible. Two weeks ago on Thursday, I took the opportunity to take in a short movie that was put on by an action group from Geraldton called Frack Free Geraldton. They had advertised locally for people to look at this film called *Fractured Country*, which is about the coal seam gas experience in the eastern states. It is narrated by Jack Thompson, a famous Australian actor. That is just one example of the type of thing the public is exposed to in the area. There are interested people who have got the network and the backing and who have put the case against this activity and against developing unconventional gas in our area. That is in keeping with the material that is published in the local newspaper and with the signage and the popular debate that is taking place in the area. In my view, that is very much focused on the negative. In fact, quite a bit of the material that is published is not relevant to what has been proposed, and some of the detail that is used to support the views is factually incorrect by my own calculations.

That is one side of it. The other side for me is that having made my one response to the local newspaper and having got a fair bit of feedback from that in the next edition —

**The CHAIRMAN:** What sort of feedback was that?

**Mr Gilman:** Very negative. I am a terrible person, apparently. People are saying things like this will be an industrial wasteland; it will wreck our water; I do not have any feeling for the environment; and what sort of world do I want to leave for my grandkids. That is completely over the top as far as I am concerned.

**Hon PAUL BROWN:** Was that from individuals or from a known group?

**Mr Gilman:** It was individuals in the response in the newspaper—probably from a known group, but I have not taken the time to find out which group is involved with that. But I have also had people who I know who have approached me and said, “Thank goodness somebody has actually tried to moderate this whole debate so that it is not just one-sided and it is not just Armageddon. Thanks very much for speaking up.”

**The CHAIRMAN:** The committee in its inquiry has tried to juggle those extremes as well. We have received numerous submissions about the matters that we are inquiring into. We have received points of view that say that fracking is all positive for Western Australia and there are no problems; whereas on the other side—these ideas are perhaps a bit more extreme—they are saying this will be end of civilisation on the planet as we know it. Of course what we, as an impartial committee, are trying to work out is where the objective truth lies. From what you have told us, you are a kindred spirit, so again I thank you for your submission and for coming in to see us.

One of the reasons the committee thought it might be useful to get your perspective in person is that you have a background in the mining industry and now you are resident in an area where, as you know, your local community has told you that fracking will be occurring in the vicinity and it is

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going to cause all sorts of potential problems, and obviously you are concerned about the wellbeing of your community, where you live, one would think. We just wanted to get your perspective on it as someone who has a stake by virtue of being a resident—presumably you have family with you—but also someone who knows about mining and engineering.

[1.50 pm]

**Hon STEPHEN DAWSON:** Mr Gilman, you have expressed some frustration that the debate, at least where you are, is fairly one sided. To your knowledge has any government agency or proponent—a gas or petroleum company—actively engaged with the community? Have they run counter sessions or information sessions?

**Mr Gilman:** Nothing is as visible as the anti-side. I seem to recollect that there have been suggestions published in the newsletter that people can get information from the Department of Mines and Petroleum website about fracking, but it is about that level.

**Hon STEPHEN DAWSON:** So there is no real engagement?

**Mr Gilman:** Not really.

**Hon STEPHEN DAWSON:** Do you think it would be helpful where you live if agencies or companies were a bit more involved and public about telling the other side of the story?

**Mr Gilman:** I believe so. In a vacuum of information people imagine things, and if their imaginations are also bolstered by one point of view, that is probably what they will finish up thinking. There has been gas production in the area not too far away, to my knowledge, in the last 30 years. I was the resident manager at the mine in Eneabba when the Woodada field was developed. That gas was teed into the Parmelia pipeline and the condensate from that gas field came to Eneabba and we used it as a substitute for diesel fuel in the mineral sands dryer. Those facilities are still there. I flew a Cessna over there a couple of weeks ago and you can still see the area there. I am not sure whether that means there is potential for redevelopment using these new techniques or what the story is, but what is consistent about this is that the community does not know, because no-one is saying.

**Hon BRIAN ELLIS:** I will just follow up on something from your submission, with you being an ex-farm boy, as you say—same as me actually. I was interested whether you could expand on the comment in your submission about the importance of the gas industry to the economy over the farming industry. You make the comment, “There should be ample ability for losses to farmland to compensate for the fruits of the gas production”. You think this form of gas production is going to be very important to the state’s economy. Can you expand on that?

**Mr Gilman:** We are all familiar with the huge amount of gas available at the North West Shelf. Some of us are less familiar with the fact that there is only one pipe that comes to the south west from up there and it is full. Although we have a huge amount of gas in WA, it is not easily or affordably available for potential users in the south west, in particular for the electricity generating industry. Gas is a very convenient source of fuel for generating electricity and, indeed, WA has quite a bit of gas-fired power generation. Long story short, if you want to go away from coal-fired reliance, or base load, then a combination of renewables and gas is recognised worldwide as one of the most likely affordable ways of doing it. To me, if it is a given that CO<sub>2</sub> is an issue for the world, then if we want to keep being able to use electricity in WA, having more gas available where all the people are using the power certainly makes sense. Gas that is cheap or affordable is also an ingredient that is generating a lot of industrial activity, say, in the United States, where this technology of gas fracturing is much more advanced. Our company has colleagues in Houston and they are surrounded by this. The industrial development that has occurred because of abundant affordable gas, quite apart from its use in power generation, is enormous. So much so, for example, that the US is now exporting precursor plastics to China on the basis of its abundance of affordable natural gas. The area around Perth and the south west has lots of people and we already have a

number of well-developed industrial areas, but the price of gas that is available here and the amount of gas that is available in this area are both unfavourable for further development. In my view, if abundant affordable gas was available for this region close to Perth, it would have an enormous beneficial impact on the lives of most people living in Perth. With domestic gas, what we pay in Perth is more or less equivalent to the same cost of heating power buying diesel at the pump. It is shocking that we have so much gas in Western Australia, but we have really expensive energy in Perth. To me it is logical, if you can have the gas source close to Perth, it should be more available and more affordable. That can only be a big fillip for industry.

**Hon BRIAN ELLIS:** Just on another point you made in your submission: you spoke of gas separators. I am not sure what a gas separator is, but we did hear about a gas leak this morning from a closed-off well, and I do not know whether that is what you are talking about and that it might be a direct regulation requirement that the gas developer is responsible for installing these gas separators. Can you explain to me what a gas separator is?

[2.00 pm]

**Mr Gilman:** Particularly in the US, but also obviously in many other places, for a hundred years or more, people who have drilled domestic water wells through the ground where there is gas—there are lots of places where there is plenty of gas—the water can come up with methane gas in the water. When the water gets to the surface, the gas separates from the water and collects. If you do not do something about that, you can actually cause an explosion—if you had an electric motor driving your water pump that was up in the top of the well for example—or you could see the water coming out of your tap, over the sink and the gas coming out of it. Maybe some members of the committee have seen footage of people lighting up the gas coming out of the thing. Whether that particular vision comes from water that has been affected by something that has leaked out of the fracking gas production or it is just some other kind of gas production—or not even a gas production at all but just a water well that has gone into something where there is plenty of gas—to me is not the point. If you have gas in your water, there is equipment that has been available from retail outlets for at least 100 years that you can just go and install to let the gas separate from the water, deal with the gas safely and then you have water that does not have any gas in it. That is completely disconnected from the advance of shale gas fracturing technology which has only been relatively recent. If you had the circumstances where somebody's domestic water supply suddenly had gas in it because of activities of a nearby gas developer, it might well be that the gas developer would find that as a reasonable collateral expense for their activity to provide the necessary separators so that that person's water is not impacted. Really, that is what I was getting at.

**Hon PAUL BROWN:** In relation to some of the rhetoric that has been in your area, through the Jurien–Dongara area, which is an area both Hon Brian Ellis and I look after, there has been a lot of history about moving away from a coal-based energy sector into a gas energy sector to provide the CO<sub>2</sub> benefits. Through this discussion, we are now being told that gas is dirty and we should be moving into PV, wind and tidal energy as base load. Do you have any comment you would like to make on that?

**Mr Gilman:** Yes. I really like the wind-generator farm that we have just east of Jurien Bay. There is another one at Walkaway near Geraldton. I think that is a good idea long term. It is not particularly cheap but it makes sense in a place that is really windy to have wind generators, but they are not base load because the wind does not always blow. It seems to me—not just me, but other things that I have read—that coupling things like wind generation to standby gas generation solves the problem of “the wind does not always blow” or, in the case of solar, “the sun does not always shine”. Unlike a coal-fired power station, which cannot be switched on and off very readily, a gas-fired power station can be. It seems to me that this is a very good solution for moving away from just coal-based base load that in future more of these couplets of renewables and reliable gas

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supplement is actually the logical and probably the most affordable technology that is currently available; so I am all for it.

**Hon PAUL BROWN:** As the current renewable part of the power supply is quite expensive on a per-unit basis, I imagine that your comments about the dollars per megajoule or kilojoule that gas provides would actually allow that to be offset, so you get a very good marriage between the two industries.

**Mr Gilman:** You can get a marriage between the two industries that is favourable for the available technology, but I think my comment about the cost per gigajoule was to do with intensity of use of water. In some places renewable is from corn and sugarcane farming, which is irrigated, and the amount of water that you use for that is a lot more per generated unit of electricity than the amount of water that gets used to develop gas through unconventional rock fracturing. That was the reference there, I think.

**Hon PAUL BROWN:** Sorry, that was my mistake.

**Hon SAMANTHA ROWE:** Do you see any risks to the environment or public health due to hydraulic fracturing in Western Australia?

**Mr Gilman:** I do not think any oil and gas production is without risk. Obviously risk to public health is as much about “Where is it?” as much as “What is it?” I cannot imagine anybody in the state regulatory environment that we have here allowing gas production, whether it be conventional or unconventional, through, say, the Jurien Bay domestic water supply area. But that is a pretty small area; you do not have to go there. The question is whether gas production, or fracking in particular, is going to impact on the town water supply for Jurien Bay; it does not have to at all because it does not have to be anywhere near it. Even if you stretch the bow a very long way and say that some of the fracturing fluid chemicals could get into deep aquifers, or indeed some shallow aquifers where you might be doing this fracturing activity, the chances of it getting into the local water supply are non-existent because it is not just connected. If it is properly regulated—by “regulated” I do not mean you are not allowed to do it, but maybe you are not allowed to do it here or there—that minimises the risk to public health. Furthermore, if things are properly regulated, the risk of any well having problems can be mitigated. Most of the well-publicised data in the US—which has the most experience in this—talks about more than half of the issues which might be 43 well-publicised issues out of 20 000 wells. It was reported in one learned document that I followed that just over 22 of the 43 were complaints that the well casing had leaked and something had gotten into the local water supply. In none of those cases was it conclusively proven that it was caused by that well. It is a very small number—not to be sneezed at because you do not want any, but a very small number—but if properly regulated and wells are constructed properly and the industry is properly supervised, the chances of something untoward happening to public health, to me, are very, very minor compared to many, many other activities that we are all accustomed to that go on all day long every day. In perspective I think it is an extremely small risk to public health if it is regulated properly.

[2.10 pm]

**Hon STEPHEN DAWSON:** Going back to your submission where you talk about the impact of hydraulic fracturing in current and future land uses—I am not trying to put words in your mouth—I think you seemed to be suggesting that, I guess, where there might be gas, if it is farmland, the gas production or extraction should take priority over farmland, I think you said, because it is a small part of the land that is being disturbed for fracking. Is that what you are saying in your submission?

**Mr Gilman:** More or less. I think, to put it right, what I am saying is that people are rightly concerned about disturbing the surface environment and you certainly do not want to deliberately go and do something that wrecks it so that it is no good for the future. Some people could argue that we have already done that with a lot of marginal farmland area in Western Australia. I am not

saying that because that might be the case, you ought go and wreck some more, but the area we are talking about for developing the unconventional gas is very, very small compared to the area that has already been disturbed for many other human activities, including building roads and putting houses on them and what have you, and golf courses that actually do put chemicals into the groundwater. The relative benefit to the Western Australian economy of the disturbed area is much greater because of the intensity of value that can come from the area disturbed than would be broad acre or grazier farming. I am not saying that the farmers do not have a point about people coming into their property but it does not have to be a fight.

**Hon STEPHEN DAWSON:** I am not sure whether you saw an article in *The Geraldton Guardian* last week, on 14 February, which showed a fruitgrower who had a big, I guess, kind of crater on his property and I think he has been fighting with a gas exploration company for a number of years. He is quoted in the paper as estimating that he has lost up to \$50 000 each year as a result of the 9 000 square kilometres taken up by this old well. Can you see that farmers who farm the land may well feel aggrieved by the fact that they are missing out on farmland? In your submission you mention also that there should be enough money flowing out from gas royalties or whatever to compensate these farmers. This farmer has been fighting for years to try to get compensation. How do we fix that? How do we ensure that people who feel aggrieved do not miss out and it is not a case of David versus Goliath battles?

**Mr Gilman:** I have been resident manager of a mining operation in the midwest on two occasions, and this was a pretty large area of disturbance and right in the middle of a farming district. Between the mining community and the farming community, we managed to get on fine and work with one another in all sorts of things, in all sorts of ways. For example, we would ask the farmers, if they were interested, to come and have a look at the land rehabilitation and give us their ideas about how they thought we were going and what they thought we might want to do. Because it is more open, there is a way of solving these issues. My experience is that that is done collaboratively and cooperatively if you have a sensible conversation with one another and are open about it. In the US our mine was on a pine plantation and when the mining was finished, the pine trees were grown again and everyone was happy. It was cooperative and collaborative. Where you run into trouble—I have seen farmers and explorationists get into strife with within another, never mind gas fracking as well—is when people are not respecting the rights of one another, and that goes both ways. What can legislators do about that? I think we have a pretty good regulatory regime in Western Australia anyway for allowing reasonable access for developing our mineral and petroleum wealth, and I think farmers get a pretty good go at having access to what they need to be able to look after their interests. In the end, you will never satisfy everyone. I think if you can prove on a case-by-case basis that someone has been unfairly dealt with by one party or another, there are ways of handling that in the courts.

**The CHAIRMAN:** Have you ever been an employee of the Department of Mines and Petroleum?

**Mr Gilman:** No.

**The CHAIRMAN:** But you have had dealings with that department or its predecessors, have you not?

**Mr Gilman:** Yes.

**The CHAIRMAN:** What sort of dealings have you had with them?

**Mr Gilman:** As a resident manager and a registered mine manager I have been subjected to visits—inspections by officers of that department or its predecessors. I have been the subject of work orders to take care of certain deficiencies that they found.

**The CHAIRMAN:** What sort of deficiencies were they, just generally?

**Mr Gilman:** The general idea of the mines inspector was that he would come around and see if he could spot anything that might be a safety hazard or something like that. He might write an

instruction for you to fix a handrail that was inadequate or to resolve some poor practice. The mines inspectors have the weight of law behind them, so as a registered mine manager you are required to comply with their instructions or else.

**The CHAIRMAN:** My understanding is that the Department of Mines and Petroleum has been accused by some—we have received submissions to this effect—that it has been captured by industry. Does that sound a likely thing?

**Mr Gilman:** Well, in my experience—I have to say that I have not had any experience of this in the last few years—over the previous times that is not likely; that certainly was not my experience. In fact, the officers in the mines department I ever had to deal with were very, very independent and sometimes I wondered whether they were not being a bit overzealous in their regulatory duties. I never, ever found it to be the other way. If I was a non-mining industry person, I would feel very comfortable that the Department of Mines and Petroleum in Western Australia has officers who do their jobs diligently and are not influenced unduly by the people they regulate.

[2.20 pm]

**Hon BRIAN ELLIS:** I would like to ask a question around the re-use of the return water and I am wondering if you can explain your statement that says that in WA's midwest it seems unlikely that many prospective fracking well locations would allow feasible re-use of the return water. Can you explain why you believe that?

**Mr Gilman:** One of the complaints about hydraulic fracturing is that it uses a lot of water per well, per development. Once the well has been developed, the first thing that comes out of the well is the water that was put down for fracturing in the first place, so you need to do something with that water. If it could affordably be transported to the next place you want to do that, then that would be a sensible thing to do with it. If it is too far away, or you are not ready for it, then that becomes less feasible. My understanding of how close you might want to put these wells in this very deep fracturing environment that we are looking at—it is not like coal seam gas where you have something every couple of hundred metres—is that these things are going to be miles apart. The feasibility of re-using those fracturing fluids seems much less likely in that geography.

**The CHAIRMAN:** Mr Gilman, it has been a very interesting discussion. Thank you very much, again, for your submission, but also for coming down to talk with us. It is good to get all sorts of perspectives from our community. We thank you for yours. Unless there is anything else you want to say, we will draw it to a close at that point.

**Mr Gilman:** No.

**The CHAIRMAN:** Thanks once again.

**Hearing concluded at 2.21 pm**

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