



Alice Springs - Arid Lands Environment Centre

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Alice Springs Convention Centre

Speaker: Jimmy Cocking and Alex Read

Hon. Justice Pepper: When you're ready, gentlemen, can you please state your names and who you're appearing on behalf of. Thank you.

Jimmy Cocking: Thank you, Madam Chair. Jimmy Cocking, Arid Lands Environment Centre.

Alex Read: Alex Read, Arid Lands Environment Centre.

Hon. Justice Pepper: Thank you, yes. When you're ready.

Jimmy Cocking: Great. Thank you, Madam Chair and panel for affording us another opportunity to present on behalf of the Arid Lands Environment Centre. Just for the record as well, ALEC is Central Australia's own environmental organisation. Our vision is healthy futures for arid lands and people. We research, advocate, and support community engagement on environmental issues; and have been a leading voice for the protection of nature and ecologically sustainable development in the arid lands.

Firstly, I want to acknowledge that we present today on Arrrente country and pay respects to the Arrrente people, their Elders, and Traditional Owners and Custodians past, present, and future.

ALEC's been involved in this issue since 2011 and welcomes the progress that has been made both in government circles and in the wider community, and understanding the risks associated with this industry. We commend the panel on the huge body of research and work that has resulted in the draft final report and the thoroughness, integrity, and independence that has underpinned the panel's recommendations.

While this inquiry is specifically looking at the Northern Territory, the nature of knowledge and experience makes this inquiry relevant on a global level. Contributing to the ever-evolving pool of human knowledge and understanding about the risks of the shale gas fracking industry. We find ourselves in a challenging situation in that in the interest of reducing carbon, and supporting the global efforts to mitigate climate change, we need to ultimately ban shale gas fracking. In line with the precautionary principle and acknowledging that there is no acceptable risk when it comes to groundwater supplies in remote Australia, we need to ban fracking.

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



The whole concept of acceptable risk is subjective and is ultimately placed best and dependent on the local community and the people being subjected to the risk. The impacts of fracking are irreversible and as the old adage that comes from the US gas fields, "Once you frack you can't go back." ALEC disagrees with the conclusions of the report that we can adequately mitigate the risk. ALEC's position is unchanged and the moratorium should remain in place because it poses an unacceptable risk to our land, water, and air.

There is no level of acceptable risk to water, and no acceptable level of contribution to climate when the science is firm on its conclusion that the vast majority of fossil fuel reserves must stay in the ground. ALEC's position on maintaining the moratorium is supported by most Territorians and particularly here in Alice Spring where almost two-thirds of Alice Spring's residents are reported being opposed to shale gas fracking in palms. Also in line with community sentiment, local governments have also expressed concerns about potential impacts on groundwater reserves. Amelioration of risk can only occur if the regulator has the information available to assess the risk prior to permitting an activity. This is the major deficit in the report.

The amelioration of risk can only occur at the exploration phase. Fracking is part of the exploration phase. If it is only assessed at the production phase then the underground damage has already been done. This is relevant to Traditional Owners, Native Title Holders, Pastoralist, and Territorians reliant on groundwater. How can anyone accept the risk and engage in negotiations on an even playing field when the information is not available or considered until the production phase. It's too bad if you've signed on at the expiration phase with a Native Title Act and Freehold Title State that you agreed to exploration and it's binding and therefore you've agreed to the production phase. The report sets a new standard and provides strong guidance for the environmental policymakers and regulators currently undergoing the most substantial environmental regulatory reform since self-government started 40 years ago.

ALEC supports the regulation of petroleum activities per the NT government's proposed regulatory reforms as opposed to establishing a specific regulatory body. The strategic regional environmental and baseline assessment process, described as world leading, however, it is not compelled to be done prior to exploration when the initial fracking process is being conducted and we feel that the entire document can be compromised by that fact.

Social licence is earned and not paid for though it does come at a cost. The shale gas fracking industry may never get social licence to operate in the Northern Territory and that will make this issue a political one for many years. The only chance that the industry has is to accept the communities desire to have faith in a regulatory system. The current system is inadequate. We all know that. The implementation of the inquiries recommendations will go some way to ameliorating community concerns. However, the door is open without making adequate precautions and that means getting the regulatory framework and mechanisms in place to reduce

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



the risk at exploration phase and ensuring that that risk is not born by the community or the government in the medium to long-term. This industry will never get a green light by the community.

Exploration in mining is different than shale gas exploration. Therefore, exploration for shale gas should be treated differently. We urge the panel to reinforce the fact that risk is unacceptable until these measures are implemented and applicable to the exploration phase and not apply only at the production phase. From here Alex is going to go into much more detail about the issues highlighted.

Alex Read:

The work of the panel today is commendable and you have identified the full multitude of risks and threats posed by this onshore gas industry. We fully support regulatory reforms including merits review and increased judicial review as well as reversing the burden of proof in contamination. However, we fundamentally disagree on three points.

First is with the notion of an acceptable risk. The reasoning behind what is acceptable has not been made clear. Secondly, the panel has failed in considering the concept of prevention, instead focusing only on mitigation. Finally, the report fails to support the premise of the ultimate conclusion by suggesting regulatory reform does not have to occur prior to exploration activities.

Your recommendation that risks can be adequately mitigated is based on the belief that regulatory reform is going to be implemented prior to the start of production. But there are a host of risks identified in the report that are very much present at the exploration stage. It is not clear how the panel has decided that a risk is acceptable. What is meant by risk reduced to an acceptable level? I understand the risk matrix and the process of determining low, medium or high but translating this into acceptable has not been made clear. It would be valuable if in the final report it is made clear how medium risk or low-risk becomes acceptable. A conclusion of acceptable risk is ultimate a political position.

The report is one of the most comprehensive out of all literature on the debate of fracking. It will go some way to substantiating global discussions and national discussions but it is not the same as providing for a social licence to operate. The report fails to acknowledge the scale and strength of community opposition. It is important to remind mindful of the ongoing existence of community opposition that will not be exhausted by the findings in this report. They are lead to environmental values of stewardship that are not consistent with the development of an industry that exacerbates climate change and risks integrity of water resources. Simply put, we never see pro-fracking rallies in the NT or Australia.

Communities are declaring themselves gas field free and this movement will only grow. Many Territorians believe that this industry is inherently incompatible with the realities of life in the NT and it is good to see this has been acknowledged in the work of the panel through the acknowledgment of the importance of no-go zones. So, there is an understanding, at a certain



level, that no amount of mitigation will make the industry safe and accepted.

I would just like to make a point about this comparison between environmental and community groups and the concerns raised by gas companies. It suggests that there is often an equal interest on both sides, that the ideological interests of community and environmental groups is equal to what the financial interests could be gained from gas companies. A comprehensive study into this issue in the US has documented incidents of compromised conclusions because of concealed links with industry. Pro-fracking scholarship is often industry led and lacking in scientific rigour. Research institutes in partnership with industry have been producing studies of questionable validity because of ties to industry; conclusions similar to what we have been suggested by the industry in Australia. Such as a report from 2011 in New York, which concluded the report demonstrates without ambiguity that state regulation coupled with improvements in industry practises results in a low-risk environmental event. This is published by a pro-industry shale gas organisation that claimed it was peer-reviewed but this claim was subsequently withdrawn.

What I am suggesting here is that companies are able to exploit their supposed authority from technical expertise to patronise community concerns as being unscientific. They have superior resources both financial and political to control how information is perceived. This has led to deliberate brainwashing. What do concerned citizens community groups have to gain by being opposed to the industry? Pressure and criticism levelled at environmental groups is not warranted considering companies are escaping unscathed while making allegations against extreme leftists and eco-terrorists. Claims that fracking does not pose an acceptable risk should be carefully scrutinised if they have industry funding. Financial conflicts of interests are more likely to arrive at certain conclusions.

I would now like to move on to the chapter on climate and emissions. This chapter is highly complex and highly detailed and I recognise that it was very difficult for the panel to arrive at the figures that they have been made. The case has been clearly made to you, substantiated by the most up to date science, that the vast majority fossil fuels must stay in the ground. Reject the justification for gas as a cleaner fuel as the immediacy of the issues leaves us no time for a transition fossil fuel. Evidence also given to the inquiry also undermines the argument that emissions savings are made from gas if fugitive emissions are factored into this.

Each resource that is uncovered is undermining our ability to transition away from fossil fuels. The time is now to leave resources in the ground to solidify this transition that is already well underway. The chapter says there is little control over the downstream emissions, which is simply neglecting the possibility of the do-nothing scenario while a do-nothing scenario was considered in the economic assessment.

An increase of emissions of 5% in Australia is considered low to moderate but the consequence is recognised as low. This decision is inconsistent with



what we know. How is an increase in global emissions of low consequence when we know that the rate of warming is leading to catastrophic consequences? It is not clear how the figure of .1% of global emissions was decided as the environmental objective. It seems like an arbitrary decision in the report and this hasn't been referenced to any policy objectives or any political or public interest input. A 5% increase in Australian emissions effectively creates the need for a 10% reduction in other areas if we are to meet our obligations international law. At what point do we start saying no to the exploitation of fossil fuel reserves?

The report has said there is a global increase of 10 megatons a year from methane but new research published using data from NASA has identified a fatal shortfall in this calculation; to show that fossil fuel production contributes an additional 17 megatons of methane a year. Fossil fuels could contribute within the range of 12 to 19 megatons of this increase. This means that the report has drastically underestimated the contribution of fossil fuel methane emissions to ambient methane concentrations. Now, this has implications for the .2% contribution of warming that is understood to be contributed from this industry and it also undermines the assumption of 1.5% global warming as being incorrect. So, I suggest these numbers need to be revised acknowledging this study.

It shows that methane emissions are thus rising sharply. Biogenic sources are harder to mitigate and quantify especially because a majority share is an enteric fermentation and rise from developing countries. According to the principle of common by differentiated responsibilities under international law, Australia should take it upon itself to have a greater responsibility to reduce methane emissions even if it is not the largest player in the methane emissions globally.

Further research is required to understand the interaction of field-based research and site-specific measurements. It is good to see that this has been acknowledged in the final report but the question is how confident can we be in these levels that have been concluded by the panel if there is still such a big range of uncertainty because of the bottom down or top approaches to methane emissions.

Baseline monitoring of methane in the soil and atmosphere needs to be undertaken before any production occurs. Production of gas occurs at the exploration stage so those baseline studies must be conducted prior to the lifting of any moratorium. For this reason, we oppose recommendation 9.3; it must be before exploration. It should also be extended beyond a year in order to gain an accurate understanding of seasonal fluxes in methane including wildfires, which vary a lot in the NT.

The best practise code must be developed prior to the approval of any exploration activities. This is absolutely vital as any flaring or venting occurring through appraisal or production testing will compromise the integrity of any ambient air concentrations thus compromising the ability to gain an accurate baseline concentration. If exploration activity commences without baseline assessments through the SREBA then ambient



concentrations are compromised. This section could do with a recommendation of a climate change policy that includes an emissions reduction target otherwise there is simply no benchmark from which to assess compliance of minimum standards.

If the comparison is going to be made with fugitive to global carbon then the emissions from total use, including combustion, should be factored into Australia's emissions responsibilities. Ultimately we are urging the panel to make this clear and report that all recommendations must be implemented in full otherwise there will be no guarantee on the ability to mitigate risk to an acceptable level. Each recommendation is a necessary condition of adequate mitigation. It is vital that companies cannot keep exploring under the current system, which does not have community confidence.

I would like to briefly touch on the discussion of health and social issues. The draft final report notes that much of the evidence concerning health risks is incomplete or mixed. However new research published in January of this year has shown a strong correlation between increased hospitalizations for circulatory and respiratory conditions for air pollution while it has not demonstrated a causal connection with fracking. The increase is directly correlated with increase in CSG operations in Queensland.

It is noted the need for more comprehensive studies to determine= the cause of relationships here. It demonstrates that health research around fracking is still in its infancy but suggests current controls and emissions standards are not adequate to protect people from risks of exposure to air pollutants. We do not need to permit exploration here to solidify our understanding of the links between fracking and human health. We do not need to take further risk to confirm what we understand. It also pointed out that distance isn't the largest factor in showing a relationship between emissions and health impacts. One of the most important points to take from this research is that health impacts are still largely undocumented and there's still a higher degree of uncertainty about the connection between world PAN emissions and health implications. It is an evolving area of knowledge so that this point is not possible to know it definitively. Human health risk assessments must be prepared prior to exploration.

Social impact assessment. Just quoting, the attitudes and opinions of the public towards fracking should go towards determining if there is a social licence, if not how to gain one. The assumption inherent in this is that the industry deserves one. The question was never posed if they had one how it should be taken away or broken. The biggest issue with this assessment from our perspective is that the assessment risk that was ... The issue was this, is that it identified community concern as a risk that was to be managed. Community concern is not a risk to be managed. Community concern is a legitimate reaction to perceptions of harm. The community is not to be managed.

The assessment did not consider the social ramifications of a polluted resource or a family killed in a collision involving fracking operations. It read like a blueprint for how to gain a social licence. It was the impression of a



fate accomplished by not getting an assessment of public opinion. We are already seeing resistance by gas companies to regulatory reform as I've heard in the last few days in the presentations. A social licence to operate does not exist at the moment and it is unlikely to be gained while companies continue to evade reform at the exploration stage.

In this next section, I want to draw out the issues of ambiguity regarding production and exploration that has become a core issue of recent presentations. Simply put, exploration is fracking. Appraisal production testing, venting and flaring all suggest gas is produced during the exploration phase. It is good to see that the panel has accepted that there is little public confidence in the current regulatory system and that in its current form it is inadequate to regulate this industry.

This acknowledgment needs to be explicitly connected to exploration activities. It is not clear why the report would allow for exploration to continue under the current regime prior to implementing reforms at the production phase. The implication of this logically is that there will be unmitigated risks during exploration. The key point here is that the implication of the recommendations is that risks can only be adequately mitigated if all recommendations are implemented in full but once exploration has been completed the ability for new information such as baseline studies, to determine production applications, is almost non-existent.

Recommendation 14.16 to repeal the schedule and include active regulating seismic surveys drilling again must be made before production. Seismic work is mainly exploration and those surveys can occur largely unregulated. The recommendation regarding fit and proper person test must be applied to exploration. There is a risk from companies who do not demonstrate due diligence at the exploration stage as you have heard in the video from Lucy Creek. Due diligence must be conducted at the exploration stage.

Is it important to make an assessment upfront whether than later on down the track? The key request today then is that you make an explicit recommendation that all recommendations are implemented in full prior to exploration approvals. Without making this explicit there is room to pick and choose recommendations, which will compromise the work of the inquiry in suggesting risks can be adequately mitigated to an acceptable level. If one fails, they all fall. Each is a necessary condition.

A recommendation to explicitly ignore a reform process are already underway as it ties in with most of the regulatory suggestions. This needs to create a direct link for policy implementations. Recommendations need to address how no-go zones are going to be established over areas with pre-existing and active exploration permits. Otherwise, this recommendation is meaningless. The SREBA must be completed prior to exploration because it informs the identification of high conservation areas. We must know these high conservation areas before exploration activities begin.



Some of these recommendations are putting the government in difficult policy in the legal situation. This is because of inconsistently in the explicit recommendations and the practical applications those. For example, recommendation 14.31 notes the need for separation between promotion and regulation. Allowing exploration to occur prior to regulatory reform means that that petroleum responsibilities remain with the current regulator.

Regulatory reform is striving for a significant culture shift in the NT including rehabilitation in closure of wells. We strongly suggest a recommendation to introduce chain of responsibility legitimation in the NT to adequately capture the responsibilities of decommissioned and abandoned wells. The NT is host to an immeasurable number of legacy mines. There needs to significant policy shift to prevent operators from escaping the legal requirements of rehabilitation. An ideal model is the change of responsibility legislation in Queensland.

We do not support recommendation 14.26, a tiered approach to enforcement depending on the history of each proponent. Every company should be held to identical standards through the lifetime of the project. This will ensure that any changes with intention, or not, are captured and remedied. A tiered approach could lead to perceptions of a problematic relationship between companies and regulators namely a conflict of interest and favouritism. It also places greater importance on the financial interests of the operator when the priority is outcomes and risk-based. By reducing monitoring you are not reducing the likelihood of risk just the likelihood of discovering any incident. It simply ensures a consistent level of oversight and transparency of all companies that are subject to the same regulations.

Another recommendation that is opposed in a similar vein is 8.15 in minimising impact of landscape amenity to as low as reasonably practical. Again leaving such valid judgments to the discretion of operators is problematic. Such standards need to be informed by those that stand to be directly affected. Companies should not be left to define what is practicable as it would be designed primarily on a cost basis.

Turn to the issues of public participation in consultation recommendations in the current form undermine meaning engagement in the decision-making process. If baseline health environment or cultural studies are taken prior to production than many Title Holders will not have access to information that is critical to establishing free prior informed consent. Without having access to this information at this stage of consultation on, an EMP will fundamentally weaken this assessment process. It will be vulnerable to current problems that that plague the regulatory framework.

This concern also goes towards 11.8, suggestion cultural assessment should occur prior to production. This cannot lead to meaningful engagement and decision making because a right of veto has been forfeited once exploration has commenced. Such an assessment will not be able to inform any decision about utilising the resource.



We firmly support adopting option one for regulatory reform. We understand this to be the most effective and practical arrangement to regulate this industry. Option two is problematic for several reasons including adequate financing of this independent body, perception of a special interest for this industry, and favouritism. Renders have regulated more vulnerable to collusion by industry through developing a close relationship? It would also be an inefficient use of resources if we had to move away from the current regulatory reform that is already underway.

14.32 is most important, the reforms must be implemented prior to production or risks present at exploration are not capable of being mitigated. If the panel does not recommend granting of all reforms, prior to exploration, licences the premise of the conclusion falls away. Unless they are all implemented in full the report will remain in the logically and legally untenable position.

Jimmy Cocking:

Thank you Alex. And also thank you to the panel for the opportunity to present again today. We thank you, Madam Chair for the way you've led this inquiry and extend our thanks to the panel for the exceptional process of consultation engagement on this very important issue. Despite that, there have been some clear failings of consultants through the process ... And I've also just had a phone call before I arrived here that there is some concern around the engagement with the indigenous communities where people are relying too heavily on anthropologist and not necessarily talking directly to the Traditional Owners and asking them.

We also have some concerns about the recent exposure of what appears to either have been a grave mistake or potential cover up of a well fire or other normally that does not demonstrate the transparency we would expect an industry seeking to build community trust. We've also heard that there was an alleged hallway collusion of industry and media figures immediately post this revelation in Darwin.

We urge you to consider what we've presented today and we wish you all the best in the final days of this important inquiry. ALEC supports a ban on fracking but at the very least we ask that a moratorium on fracking be maintained until all of the recommendations are implemented and the recommendations cover exploration and not just the production phase. We did take some umbrage and we were a little bit concerned about what we saw as being an inappropriate, and possibly unethical, adaptations of Rachel Carson's Silent Spring in both the introduction and conclusion of the report.

We think it is appropriate then to end our presentation with two much more appropriate quotes from Rachel Carson. "Underlying all of these problems of introducing contamination into our world is the question of moral responsibility. The threat is infinitely greater to the generations unborn, to those that have no voice in the decisions of today, and that factor line makes our responsibility a heavy one."

Alex Read:

And I will leave you on this final note to also quote Carson since you invited poetic discourse and humanity into this discussion. "If having enjoyed much

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



we have at last asserted our right to know, and if knowing we have concluded that we're being asked to take senseless and frightening risks, then we should no longer accept the counsel of those who tell us that we must fill our world with poisonous chemicals. We should look about and see what other cause is open to us."

Hon. Justice Pepper: Thank you gentlemen. A couple of matters, certainly in relation to social licence to operate. Coffey was never asked to ascertain whether or not there was or wasn't a social licence they were asked to build a framework. The assumption underlying that of course is that there is no social licence to operate. Otherwise, why would you build the framework? You wouldn't need to. But we will take on board the commentary, from you and many other people, that we haven't identified clearly enough the community opposition. That is something that we will attend to.

I think you've also highlighted, as have done I might add a number of other presenters, that we obviously haven't perhaps articulated clearly enough the timing of some of these recommendations in terms of whether or not they're before exploration or after exploration. A number of the recommendations, for example, that you went through just recently in relation to chapter 14, Regulatory Reform, indeed many of those are indeed supposed to come into effect before exploration not after exploration. But obviously the fact that you are ... and you and number of people have felt the need to submit on that indicates to us that it's not clear enough in the report and again we will go back and attend to that because we absolutely agree with you.

For example, reform of the regulator in relation to making sure that you split off promotion from environmental compliance that must be done now. That's a very firm view of the panel but if that's not clear then we need to make that clear.

We agree with the chain of responsibility legislation. Again you are not the first person to raise that, and in fact, we are going to do some investigation of that. I realise that Queensland has got that legislation in place. So we will be looking into that.

I just want to explore with you, I think this is the question, and again maybe it's a question of clarification in the report but option two was designed to be much stronger and more independent model for regulatory reform than option one and I think the recommendation was, do option one first and then contemplate moving over towards option two. The idea of a separate one-stop shop, effectively independent regulator that sits outside of government that is staffed by experts and not politicians is what is behind option two. The idea would be that that regulator then advises the Minister ... ultimately it's the Minister of the Environment that nevertheless would sign off on any decision. And I think it's appropriate in a Westminster system, if you don't like those decisions you vote that person out. But that was the intent behind option two. So having perhaps explained that a little bit better does your position to option two still ... and you don't need to answer this now ... still remain?

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



Jimmy Cocking: You can answer this better than I can but I'll start off. One of the main concerns we have with it is that we are in a state of flux at the moment in the regulatory reform in the territory. We've got some of the most robust attempt to improve the environmental regulatory system on a whole for significant ... You know, I'm an optimist. So there is some reform in that process going on.

Hon. Justice Pepper: Yeah, in the EMP.

Jimmy Cocking: Where they are looking at the Water Act and Waste Management Pollution Control Act and they are actually introducing potentially an Environment Protection Act that will include mining and run through partial land clearing, and a whole range of impacts. We think that if we actually separate this one out of that and give it a separate legislation we end up in a similar situation where the Environment Protection Act does not apply to petroleum activities. I think that that's an issue that we have at the moment where the Water Act and Waste Management Pollution Control Act is both mining and petroleum activities are exempted from both of those acts-

Hon. Justice Pepper: Indeed. Indeed. That's a problem.

Jimmy Cocking: So if we ended up having the Environment Protection Act saying this doesn't apply because we've got the Onshore Shale Gas Act that has a separate body, and all that sort of thing, I think that it will not necessarily be as robust and integrated as we hope for a better environmental regulatory process that would ultimately include national level involvement as well, which we understand is heading towards being federal Labour Party policy as well around national environmental regulation as well. So there is a lot of reform happening in this space and I think that we want to see this be included as opposed to excluded because it has been excluded from the Water Act and Waste Management Pollution Control Act. But you can add on to that.

Hon. Justice Pepper: If it was included would that change your view? If you ended up having two levels of, sort of, protection in the sense of you have an Environmental Act that applies but you nevertheless have this independent body ... One-stop shop body separate as I said from government ... It would sit outside of government that would then advise behind the science, or whatever that may be, to the relevant Minister? Again, I can't see how that doesn't do anything other than strengthen the existing position. So, you're not relying on basically what departmental officials are telling you, you are relying on what hopefully separate scientists and engineers are telling you; independent scientists and engineers.

Alex Read: I think a separate body could be more vulnerable to intrusions into ... conflict of interest because they wouldn't have the full capacity of the department behind them to make sure that all those relationships stay a safe working distance from industry representatives. I don't see the justification for why one particular industry should have a regulator for their own-

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



Hon. Justice Pepper: I absolutely do accept that. I guess we are confined by, as you know, our terms of reference. We can only look at onshore shale. Yes, as a matter of logic, you would hope that would then include many different types of extractive activities absolutely but we can only make recommendations in respect to what we've been given, what the terms of reference ...

I guess what the panel had in mind is entities like the Alberta Energy Regulator, the BC Oil and Gas Commission, which that's what option two was directed towards. They seem to operate very effectively with low levels of environmental incidents and quite efficient and with few complaints. And of course, they would operate on a full fee recovery basis as well. So, industry in effect pays money to the government and then the government funds a separate body.

Jimmy Cocking: I'm able to take on [crosstalk 00:32:40] and just look a bit more deeply into those options, in particular, the BC and Alberta models. I think ultimately we want to make sure we've got a robust regulatory system in place-

Hon. Justice Pepper: Indeed.

Jimmy Cocking: ... and that we don't have outliers. At the moment we've got pastoralist have got their own pastoral land board run by ex-pastoralist, we've got the mining agencies that have got people from industry in there and then we've got the EPA which doesn't have a Territorian on the board. So, there's a lack of ownership of issues that if something goes wrong well people can just go back to where they live and not have to deal with the consequences, either socially or politically, and I think this just reinforces our point about we need to maintain that moratorium to be able to get these structures in place.

This isn't going to be ready next week and I know that there'll be people knocking on the door and people in this room that would want us to ... the moratorium to just get rid of, as soon as you lay down your final report and chief minister to walk out and say, "Yep. We're lifting moratorium. We're implementing the recommendations and we're going to allow it to happen in the Beetaloo," and not have the regulatory framework in place. This is why it reinforces our point about for there to be an extended period of time for this moratorium to get these structures in place and to make sure that they're functioning before we have all those teething problems of a potential [crosstalk 00:34:08]-

Hon. Justice Pepper: I understand that. I understand the position that you've put but you've heard what I've had to say about our ability to recommend that the moratorium stays or goes. Again, option two was designed, but obviously not clearly enough, with the view to allowing people to have that one body to go to if they have a complaint. If they feel that there isn't compliance, if they need information, if they want to get some education, whatever that may be. That was designed to avoid, in fact, the bifurcation of various agencies, which with great respect, has what has probably occurred in Queensland where you've got various bodies that are responsible for various bits and pieces of this industry. One of the complaints that we heard when we went to Queensland was, "We just don't know where to go, or if

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



we got to one agency they tell us one bit of information and that's then contradicted by another agency." So again, perhaps not clearly articulated, but the intent people option two is to allow people one place to go and that's an independent body, that's outside of politics, that is responsible for those functions.

Jimmy Cocking: Happy to look deeper into it and I will also-

Hon. Justice Pepper: I would certainly appreciate your views on that because it was a bit surprising that you said, "No, we don't want option two," and option two, as I said, is designed to more independent, more robust, a stronger form of regulation, or reform of the regulator I should say, than option one.

Jimmy Cocking: I suppose that sort of possibly doing the governments job for them in thinking more about costs and resources and how those things would happen-

Hon. Justice Pepper: Option one now. Absolutely option one now, and then look at moving towards option two in the future for the very reasons that you have just identified.

Jimmy Cocking: I suppose we're coming from a, "we're wanting to ban fracking position." So rather than waste money setting up a regulatory body to manage something that we don't want to see happen, we'd rather just see a stronger, across the board, environmental regulatory system.

Hon. Justice Pepper: I appreciate that and that is an understandable position to take. The obvious point is that if there's a ban on fracking we don't need to talk about option one or option two for that matter.

Just one last thing, I may have misheard you, in relation to the confusion about the two figures one of which listed a well deformation and one of which didn't by Origin. I don't know whether you two gentleman have had a chance to look at the live feed that's on our website. Well, I suppose not so much live now and see that sequence of events. See what happened, listen to Dr. Close's explanation, listen to the inquiry's explanation of the chronology ... Have you had a chance to look at that?

Jimmy Cocking: No. We actually happened to have it on at the time when all of that happened and it was a big surprise to us and also seeing an explanation ... I don't know how to best to... It was an explanation from Dr. Close about why it happened. From my perspective as a person who lives, and calls this place home, and has a reasonable understanding of all of science, it seems strange that there are those two figures that exist. And looking at the time frame of when that happened it seems as though ... well just looking out ... I'm giving you an explanation in terms of what we've seen and why I made those comments if that's [crosstalk]

Hon. Justice Pepper: I think you used the word, cover-up; potential cover-up.

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



Jimmy Cocking: I said potential because I think that that's what we saw in the media. I said it's either a mistake or ... I could say, an airbrushed touch up. Either way, there's a yellow section on one document that was submitted in April from my understanding ... Oh no. You got the old blue one in April and then you got the yellow one in May. I'm just looking at the chronology from what I saw. What at least in Alice Spring News ... They must've just reported off of what they saw.

Hon. Justice Pepper: Have you actually looked at the ... So you watched it live? You..

Jimmy Cocking: We saw the explanation.

Hon. Justice Pepper: ... saw the explanation from both the panel and Dr. Close?

Jimmy Cocking: What did we see? We saw the panel, didn't we? Or did we just see David Close? I can't...

I think we saw David Close. There was a period in between where we missed where we saw your...

Hon. Justice Pepper: The chronology that the panel went through ... It's important that I share this with you, made it perfectly clear that the second diagram that had the additional markings on it was given to the inquiry on the 25th of May 2017, before the interim report was published and before the draft final report was published and well before Naomi Hogan made her submission in Darwin, well before. So it's for that reason that the inquiry has categorically rejected any suggestion whatsoever of a coverup, potential or otherwise by Origin. That document has been in the public domain for all to see including Lock the Gate since the 25th of May 2017 and I can't overemphasise that enough.

Now Ms. Hogan gave an explanation, which appeared to be along the lines of, well she only discovered this on Sunday. It's a matter for her but it has been in the public domain since the 25th of May 2017. So, there was no surprise. There was no cover-up. The inquiry wants to make its position perfectly clear in that respect. There has been a mistake, a wrong attribution, to that chain of events and the characterisation behind the motives ascribed to Origin. Now as I said, Lock the Gate have yet to apologise to Origin or indeed to this inquiry, and that's a matter that we view with some dismay.

Jimmy Cocking: Can I just ask a clarifying question just on that? So, it was a mistake that the one that doesn't have the yellow section on it, the anomaly or whatever it is, that was not on page 81 by mistake?

Hon. Justice Pepper: Page 81 of what?

Jimmy Cocking: Of the final report.

Hon. Justice Pepper: You have to be very clear as to which report that you're referring to.

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



Jimmy Cocking: Yeah, yeah. Sorry, sorry. In the final report where there is the picture of the graph...

Hon. Justice Pepper: Yes.

Jimmy Cocking: ... and there's just the blue ... ultimately the one that doesn't show...

Hon. Justice Pepper: Yes.

Jimmy Cocking: ... Is that a mistake or is that the ... that's what I don't understand. If they both exist and they're both a real graph why is the one without the yellow in the report? Is that because of commercial incompetence and not wanting to damage Origin's potential investment in there or is more about that it was just a mistake or?

Hon. Justice Pepper: It's a timing issue with respect to when it was provided to us when the interim report was published. At no point did anyone tell us, "Oh, no. Hang on a moment. There's a more updated, or up to date version, of that diagram." Origin didn't tell us, we didn't pick it up, Lock the Gate certainly didn't tell us. So, what happened is that diagram made its way from the interim report into the draft final report. It was also provided, I might add, for different purposes and that again, I'm not going to try to paraphrase Dr. Close's explanation of that, I will get it wrong, but it was provided for slightly different purposes. So, there is nothing nefarious. There was nothing nefarious in relation to its provision to the inquiry and in relation to the publication by the inquiry and there certainly wasn't a cover-up, and that must be made perfectly plain.

Jimmy Cocking: Thank you for clarifying and I expect then that picture will not necessarily be appearing in the final final report.

Hon. Justice Pepper: Which picture?

Jimmy Cocking: The graph.

Hon. Justice Pepper: Which one?

Jimmy Cocking: That's what I want to know. Is the one with the yellow anomaly going to the...

Hon. Justice Pepper: That's the beauty of having a draft final report and this process is that we'll go back and look again at about whether or not ... Basically, we will look again at which diagram is the most appropriate diagram given what it is trying illustrate. That's the point that's quite important here.

Jimmy Cocking: Would it be possible to use that graph in the fact that this conversation's had to demonstrate that you can have two bits of data that can mean different things to different people because I think that this demonstrates some of the risk and some of the uncertainty associated with the industry and dealing with issues so far below the earth where you've only got so ... You know, I haven't mentioned it today but ultimately each frack is a

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



controlled experiment. They don't know exactly what's going to happen and the one that's in the current draft report is a bankable document, is a bankable graph. Someone could look at that and say, "Yep, that's working." Whereas the one with the yellow one isn't bankable and somebody would say what's that-

Hon. Justice Pepper: Again, no, no. No, I am not sure that that is right and again I would absolutely... you've got to go back and listen to Dr. Close's explanation. You really do. I'm not going to sit now here in the absence of a transcript and try to remember it or paraphrase it because I don't want to get it wrong; in fairness to everybody including yourself.

Jimmy Cocking: Thank you.

Hon. Justice Pepper: But the explanation he gave certainly does not accord with what you've just said. Now that was very long.

Yes, Professor Hart who has been chomping at the bit.

Prof. Barry Hart: No, I haven't. No, I haven't. Just a comment on the quite reasonable point that you brought up about how to assess acceptable risk. It's in our terms of reference. We probably wouldn't have chosen that word but it's there. Yeah, it caused us some issues. No question at all about that. I think where we have been able to be reasonably quantitative about that is on what's acceptable for drinking water, human health, and aquatic ecosystems, and perhaps stock and domestic. And that is to use, in the case of human health, NHMRC, National Health and Medical Research Council, they have Australia drinking water standards ... criteria rather. And the same with ... There are what are called ANZECC guidelines for the ecosystems. So there is quantification there. I will say though that that doesn't cover all the potential chemicals. It covers a huge number but not necessarily all. So, you know, we've gone as far as we possibly could to quantify that but still accepting that there will be some subjectivity in various areas.

Jimmy Cocking: Thanks.

Hon. Justice Pepper: But we accept what you say in that respect.

Prof. Barry Hart: Yeah, I do. Right. Absolutely.

Hon. Justice Pepper: Absolutely we do accept what you say. Yes, Dr. Anderson.

Dr. Alan Anderson: Maybe just a quick follow up on that. I'm not sure if you've seen Table 4.4 of the draft report but it lists, in descriptive terms, what low, medium, and high impacts are for the various risk factors. And it's the low one is what we were considering as acceptable. So, if you perhaps go back to that and check out table 4.4 it's all described and as Professor Hart said it's mostly in a qualitative sort of sense of ... For example, low risk to land is impacts of limited significance to doing that sort of thing and through to high impact. So, you check that one out.

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



I've just got a question, Mr. Cocking. Your general conclusion, which you articulated at the start, that you feel that the environmental risks of fracking can never be mitigated to acceptable levels, and we've heard that view from a number of presenters, and I'm just wondering if you think that's been the experience at Mereenie? And are you aware of any unacceptable environmental impacts that's happened in the Mereenie fields?

Jimmy Cocking:

Well, I think I did with my first submission to this inquiry mention a report where a fellow from PetroFrontier was talking about the oil and gas industry at a presentation here at Charles Darwin University ... I can resend that ... It's not Alice News but it's just a little independent ... Not the Alice Spring News but a report on that where he in that meeting ... I don't think he was there for much longer ... but he reported that there'd been at least a large saltwater pollution event that happened at Mereenie at that time; like back in the 80s or something like that. Arguably it's what's happening out at Mereenie ... and such is the nature of information these days, and people creating memes and looking for those word's where they say we've been fracking at Mereenie for 40 years without any problems.

We can attest that the fracking that's happening out there, ultimately what's happening, that's not the fracking that we are describing here. It's not the horizontal shale gas fracking. It is conventional gas ... I call it hydraulic stimulation. It's ultimately putting water down, gas comes up. You've got a bubble of gas, push the water down, the gas comes up under pressure; simplistically explained whereas what we're talking about is high-pressure horizontality fracking into shale. So, I'd say that they're both quite different. ALEC itself is not opposed to conventional gas sources. We say it's a fossil fuel, but when we've got known reserves and we are already using them, we are not calling for them to be shut down.

Our concern is that the increased expenditure on exploration to develop new gas fields is going to increase our greenhouse gas emissions to beyond acceptable levels. And I say acceptable in terms of the politics of the day but we have a government in the Northern Territory at the moment that believes in climate change, is developing climate policy, has put a roadmap to renewables out there, and seems to be heading in and at least thinking about their potential international obligations but the challenge is, is that the projects like INPEX the gas emissions are considered to keep on rising without any thought of offsetting that.

So as far as Mereenie goes, we'd say its comparing apples and oranges to horizontality shale gas fracking and what's happening out at Mereenie. We contest that there has been reasonably good operation. From what I understand the people at Johannesburg, and families, get the money from the royalties of 1.5% or whatever the percentage is for the gas flowing through the pipeline and that's worked reasonably well. It's not always going to be like that and particularly with fracking in that it's a lot more higher risk because as we see up at Lucy Creek, you can have all of this interruption to your life, and having to turn up the meetings, and be promised all these royalties and have all this disruption and damage to land and then not have anything at the end of it. I think that's the concern that

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



people have about fracking and when it gets tied up with Mereenie ... We've been fracking for 40 years I react strongly to that particularly when I hear journalists repeat it because it's not true and I think that we just need to take that aside and say, "Yep. What's happening in Mereenie is conventional gas. What this report is looking at is the development of unconventional shale gas industry which is vastly different."

Hon. Justice Pepper: I must say it's a bit ... it's a curiosity which we've not been able to resolve but when we went to Mumbai to have a look at the frack and the drill there, and we issued a community update as we do for purposes of information and transparency, and we were criticised because we had gone to see this conventional drill and conventional frack. So, we went back to Santos and said what's the difference. They said, as far as they're concerned, their definition of unconventional is anything that requires hydraulic stimulation. So, they said we don't know why some people label what happens in South Australia or what happens in Mereenie conventional but it still involves hydraulic stimulation.

Jimmy Cocking: As opposed to fracturing.

Hon. Justice Pepper: Which is hydraulic stimulation. The difference is you go down in one and in the other, you go down and sideways. But they both involve hydraulic stimulation. Fracking is hydraulic stimulation.

Jimmy Cocking: The difference from what I understand with what happens out at Mereenie is they're using a mixture of [inaudible 00:52:36] water. It's not actually ... they don't put all the chemicals in it that they see in a horizontal frack, and the prop, and all those sorts of things just generally water from my understanding or salty water if that's correct. Any s-

Hon. Justice Pepper: I'm not sure that's right but we will check that out. But I'm not sure that's right based what we were told when we went to visit Mereenie. And that was one of specific reasons why we went to visit Mereenie was because we wanted to see what a mature gas field looked like after rehabilitation and certainly after the trees and the grasses and shrubs and stuff had come back. And also to see what a gas field that had been hydraulically stimulated, ie fracked, had looked like.

Dr. Alan Anderson: Your interpretation may well be true for the 70%. We understand that 30% of the wells in Mereenie have been hydraulically fracked; they're vertical. But that process is similar to a lateral, you go split open the rock or whatever it happens to be to access the gas. So, I think there are some-

Hon. Justice Pepper: We will integrate that further. We will interrogate that further without a doubt but it does remain a bit of a grey area. As I said, according to Santos at least, anything that involves hydraulic stimulation is fracking and is unconventional whether it's tight, whether its shale, whether it's CSG.

Jimmy Cocking: And that plays the narrative really well.

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



Hon. Justice Pepper: Look, I'm not sure that I would necessarily disagree with that either but there is sort of a grey area. I think Dr. Anderson had a question if I was right.

Dr. Alan Anderson: Just a follow up. I think Mr. Cocking was not disputing the term hydraulic stimulation but you were thinking that that wasn't meaning the actual fracturing of the rock, weren't you? You were thinking it was another process for getting the gas up, and I guess that's what we need to clarify whether it is actually fracturing of the source rock.

Jimmy Cocking: The way that I've described ... and I look forward to an invite from Mars inter Petroleum if you are listening, to go out and look at the field-

Hon. Justice Pepper: Who I'm sure is watching as we speak.

Jimmy Cocking: ... So yes, I would like to obviously go out and see this. But the way that I understand it, based on what I've read and understand talking to people is that, and the way that I separate the two at least in my mind is that hydraulic stimulation is the vertical, obviously hydraulic, using water and fluid to do that. Whereas hydraulic fracturing the way that I've described it, and the way I sort of see it here, is the horizontal. And I think that that's the way the general community understands fracking.

When they hear fracking they think of it is being that one. Whereas hydraulic stimulation is a way ... that's hydraulic stimulation as well ... but there's fracturing involved. The way that I have understood that and I look forward to meeting with Central Petroleum out at Palm Valley and the Mereenie to have a look at their operations there to understand the difference because there is one and I think that we do need to articulate that.

Hon. Justice Pepper: Certainly, certainly. In South Australia when we were there it was just a vertical drill but it involved fracking and hydraulic stimulation, as I said that's what they say is unconventional gas, and certainly in South Australia at least, as I said, we need to clarify the position in relation to the chemicals, if any used at Mereenie, but they certainly used all the chemicals we have been discussing over the course of the past 13 odd months and in fact we were shown a mixture of the propane and the guar. It was actually made up for us just to show us how its done. We saw, what I think all of us in this room, would understand to be in a frack, of the frack that we're talking about. It was just straight down but not lateral but you know with many, if not all of the attendant risks that we have been discussing and looking at, and investigating over the past 13 odd months.

Jimmy Cocking: That's good. I suppose it's good for the panel to have gone out there and seen it and I think it's also... You know the fact that it went smoothly is a great thing. What we've seen here in the Territory already with our hydraulic factoring on horizontal slickwater fracking, to be more precise, up at Lucy Creek and those sort of examples. Talking to someone who was on the ground there that day when the shale wildfire happened, they went from being pro this industry to anti very quickly because those sort of instances stay with people for a long time. I think it's one of those things

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



that you never want one of those negative experiences to happen but the fact is that they do on the Territory exam ... and the Territory experience with horizontal slickwater fracturing currently has a 100% fail rate. And or and-

Hon. Justice Pepper: On Mudgee?

Jimmy Cocking: Well, it's debatable at the moment in terms of what we're talking about with that graph so we'll say 70%.

Hon. Justice Pepper: Well, again I would urge you to go and look and listen, at Dr. Close's explanation because I think once you listen to that there is a degree ... I'm not saying you have to accept what he says obviously, but he does seek to put that into context.

Jimmy Cocking: Thank you.

Hon. Justice Pepper: Yes, Dr. Smith.

Dr. Ross Smith: Extending we've already had that's quite lengthy but just one other comparison I wanted to ask you and the other unconventional gas industry in this industry that's been used in some areas for comparison by the inquiry is the CSG industry, which uses vertical wells. Do you regard that as fracking or did you regard that as something different? Because that obviously is a basic comparison we had in mind to some extent.

Jimmy Cocking: It's a different process. I suppose I haven't very much looked at it from a Territory perspective and here we have very much a largely shale but we've also got this proposal, a coal to gasification projected in the Pedirka basin. Now we're-

Hon. Justice Pepper: Let's happily not.

Jimmy Cocking: I suppose that's what comes from this report because given that in peoples minds fracking costs ... And in the number of times, you get people from New South Whales come here going, "Ah, no CSG." And it's like actually ... no shale gas. But there is a clear distinction from those two I suppose from our perspective. Everybody's going to be looking at the final report and it's focused on shale gas but there is also a proposed coal gasification project in Pedirka which is completely different to this, and a lot of different risks, and all those sorts of things but I suppose the question ... and this is total different but if, let's say option two came a long and there was a proc ... and would you expect ... and this is just a hypothetical ... would that coal to gasification project be assessed that proposed body or would that be something that would then be done under the other system?

Hon. Justice Pepper: Happily, that is well outside our terms of reference.

Dr. Ross Smith: But in a way your response is quite gratifying because I guess we've been trying to make that distinction between the coal seam gas industry and the shale gas industry despite obviously drawing some parallels where we could

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



but I was asking that question for clarification because it is both something that we've tried to differentiate, the two different industries, but also tried to draw some of those parallels. So, your response is in some way gratifying that that message has got across.

Jimmy Cocking: That's good and I think when you did the initial engagement with the community that came across very clearly. I think also just the similarities between the coal seam gas, coal gasification, shale gas is bringing up elements from the ground up to the surface. Whether its methane, whether it's radon gas, whether it's a range of different elements and compounds that have been sitting safely underground for a very long time. The risks are similar and the concerns around air quality and pollution are similar but different risk profiles.

Hon. Justice Pepper: Dr. Beck gets the last question.

Dr. Vaughan Beck: Again to observe that ... Thank you for the comments, observations, in respect to greenhouse gases. You've made a number of suggestions and we'll certainly consider the submission that you make. To note, in passing that in looking at the levels of greenhouse gas that are being projected to occur for shale operations in the Northern Territory we are considering these in isolation without considering it in the broader context of energy and climate change policies both national and global levels. So, that's a constraint, which we have to operate under the terms of reference of the inquiry.

Alex Read: Doesn't that limit, in some way, how you assess the risk?

Dr. Vaughan Beck: Pardon?

Alex Read: Doesn't that limit then how you can assess the risk?

Dr. Vaughan Beck: Well, there has to be some caveats on how we ... as you would've read we've assessed the risks on an absolute basis. All I'm saying is that assessing them in that context by the necessity of the constraints of the terms of reference we don't consider them in a broader context of policies that are being undertaken globally and nationally and initiatives that are being undertaken both by commercial entities and individuals as well, too, that are ameliorating the emissions.

Alex Read: But you said that if it's below .01% it's a low impact in comparison to global emissions. So, you are making that broader.

Dr. Vaughan Beck: Yes, I am but I'm saying the issue is we are making an assessment of the additive effects from a single shale gas operation, potential shale gas operation, in the Northern Territory without considering other policies that will be, or can be implemented by nationally and globally to reduce emissions and try to meet Paris targets and limit global temperature rise. It's just a constraint that we have to operate under.

THE SCIENTIFIC INQUIRY INTO
HYDRAULIC FRACTURING
IN THE NORTHERN TERRITORY



Hon. Justice Pepper: Look it does add to an air of, we said this before, artificiality in the exercise. Gentleman, we are terribly late. Mr. Cocking, Mr. Read, thank you very much for your presentation today, and thank you ... and that's the reason why we're late is because when we have good people coming before us we question them and we test, and we do want your feedback. You have consistently provided us with good quality submissions and very robust and rigorous engagement with the inquiry and we certainly appreciate that. I think the report is all the strong for it. So, thank you very much.

Jimmy Cocking: Thank you.

Alex Read: Thank you for your work.

Hon. Justice Pepper: That concludes today's public hearings. Thank you.