Alice Springs – Central Australian Frack-Free Alliance (CAFFA)

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Alice Springs Convention Centre, Alice Springs

Speakers: Marley Banks, Jessie Hancock

Hon. Justice Rachel Pepper: We have our next presenters here, I believe.

Marley Banks: Hello.

Hon. Justice Rachel Pepper: If you could please state your name, both of you, and who you're appearing on behalf of if you're appearing on behalf of an organisation. Thank you.

Marley Banks: Can I ask the second, it was the name, sorry, I just didn't hear the second-

Hon. Justice Rachel Pepper: The name and if you're appearing on behalf of an organisation, if you could please state that organisation. Thank you.

Marley Banks: Hello, Marley Banks. I'm here on behalf of Central Australian Frack Free Alliance.

Jessie Hancock: Hi, my name's Jessie Hancock, also here on behalf of Central Australian Frack Free Alliance. Just note that they have about 450 members based in and around Alice Springs currently.

Hon. Justice Rachel Pepper: Thank you. When you're ready.

Marley Banks: Hello, and welcome back to Alice Springs. Thanks for the opportunity to address you again. CAFFA, we met at the initial hearings here in town, and we are a community group of roughly 450 members, and we've got serious concerns over the impacts of the unconventional shale gas industry here in the Northern Territory. Since presenting to the inquiry in Alice Springs in March, CAFFA has continued to engage the local community and reach out to communities across central Australia. Based on deep engagement of and conversations with the community, CAFFA's position remains strong. CAFFA is advocating for a total ban on fracking in the Northern Territory.

An overview, in reading over the interim report CAFFA observed that there was not much attention paid to the Amadeus Basin. We know there's a

considerable pressure to frack for more gas, given the approval of the NGP Jemena project, which they are publicly stating that it's expected to run at capacity, and that Central Petroleum has been a target customer, and they're local here. As such, this presentation aims to focus somewhat on the Amadeus Basin, so CAFFA urges the inquiry to pursue an in-depth scientific analysis of the Amadeus Basin, and is also mindful of the need for greater study of surrounding basins such as the Arthur Creek formation, and the Pedrika Basin. They're all outlined on the map in the report.

In this presentation we'll first cover over social impacts, highlighting gaps and areas of concern in the interim report, and the presentation will then touch on some environmental concerns in regards to fracking in the Amadeus Basin. On social impact, there's global evidence of people turning against coal, oil and gas. Around the world we're seeing massive opposition to these legacy industries. We can look across to the Keystone XL pipeline in the United States, and we see the project, my apologies, is in limbo despite the Trump administration's mass support. To quote, "A final Nebraskan public service commission hearing on the Keystone last week showcased the depth of opposition to the pipeline in the state, while a local farmer has attracted attention for installing American-made solar panels on his land to protest the project." This is a symbolic as well as a disruption, it's a symbolic gesture by the farmer to put up these solar panels in line of the pipeline, but it's also staggering and slowing down the process of that pipeline. Now we're seeing that it's in limbo.

When we're considering the social licence to operate, I draw the panel's attention to a very clear statement from the executive summary on the report. "Overwhelmingly the message received from the people who attended these meetings was that fracking was not safe, was not trusted, and was not wanted in the Northern Territory." I'm sure you're hearing that loud and clear across your engagement in the communities. As an incorporated body, we are in communication, that is CAFFA, with groups across Australia and the world. These connections are maintained with the interests of sharing information and experience relating to fracking and the many risks that it poses.

We're going to draw to a diagram, it's through these connections we've been drawn to the attention of this slide. It shows quite a revealing image that shows the Bakken oil fields, which is in North Dakota, Minneapolis and Chicago. We can see that Chicago has a population of 7.2 million people, and we see that in the bottom right hand side of the screen. The Bakken oil fields are in fact lit up by shale gas flares. The North Dakota population is 758,000 people, so it's a real indication that the invasive methods that we see in unconventional shale gas have huge impacts on our landscape.

That has clear indication that the density really does light up the night skies. There's a reason globally why people are turning against this despite the rhetoric from mining companies, only being a hole in the ground. We can see clearly that it is very invasive and it does industrialise our landscape on a mass scale. We can have a look now at an alternative image, which is in a

Tibetan plateau in eastern China. These are four million solar panels that silently soak up the sun as part of the Longyangxia, I believe it's pronounced, dam solar park. It's the largest solar farm in the world, and it spreads over 16.09 square kilometres in the high desert landscape. This solar farm can power over 140,000 typical homes.

We've included this image not to go into great detail about the scientific capacity of solar, but to demonstrate the strong reasons that people across the globe are turning away from this exploitative use of natural resources such as gas and turning to renewable options. Socially, people are motivated on this issue not by economics, but rather from concern for the natural environment, and what affects this looming industry will have on the landscape that we rely. It must be understood that we find ourselves in a unique period of anthropogenic climate change, and individuals are now steering themselves towards alternative energy options above legacy industries despite industry or government pressures.

This is just an example, and it shows that even if government does choose to progress this industry, Territorians are not prepared to accept the outcome of fracking. We acknowledge that the inquiries identify that there is a diversity of communities across the Northern Territory, and that the social impact study has been outsourced to [inaudible 01:04:33] company. We note that social impact studies without adequate consultation cannot acceptably produce fair representation on behalf of communities to accurately reflect the social fabrication of the Northern Territory as a whole. All communities regardless of size or demographic across the territory deserve the right to be given the opportunity to participate equally. This would require the panel visiting every community ensuring appropriate consultation with consideration to time, access and culture.

Whilst we are non-indigenous people, we can speak on behalf of numerous Aboriginals, we cannot, I apologise. We cannot speak on behalf of numerous Aboriginal communities across Northern Territory. It's necessary to attempt to understand the systems of law and culture that underpin connection to the land. A quote is, "It was their belief that by caring for country and not over-exploiting the available resources, the land would in turn sustain them. The person takes care of the country and the country takes care of the person." Noted within the interim report, Aboriginal people make up most of the resident population of the areas that are highlighted for this industry. As a community, Aboriginal people must be able to maintain their cultural traditions relating to that land so that it can carry on for generations.

We can look towards other values of indigenous cultures across the world. There's a seventh generation principle taught by the Native Americans which says that in every decision, be it personal, governmental or corporate, we must consider how it will affect our descendants seven generations into the future. This was first recorded anywhere between 1140 to 1500 AD. It's the great law of the Iroquois Confederacy, and interestingly it helped influence and form the American constitution. Teddy Roosevelt was highly

impressed by their system of law. In fact didn't take the English principles, but was guided by these teachings.

The seventh generation principle today is generally referred to in regards to decisions made about energy, water, natural resources and ensuring those decisions are sustainable for seven generations into the future. We can draw from this value system an insight into indigenous cultural values that the land is sacred, and usually given by a creator or supreme being, directly contradicting the world view that the land or the resources should be available for development and extraction for the benefit of humans. As we've started to witness climate change taking place, the world view is shifting towards an understanding of the importance of preserving the natural environment and setting limits so not to over-exploit our available natural resources.

In the Paris Accord, it's noted that acknowledging climate change actually is a broader statement to include indigenous people but also the rights of all humans. We note that there's a gap in the report, that it does not clearly recognise the rights to all Territorians as affected groups of people. Those living in remote communities as well as those in larger towns and cities. We have an ask in recognising Australia's commitment to the United Nations' framework convention on climate change Paris Agreement. It's crucial that we acknowledge basic human rights surrounding the threats that shale gas imposes on indigenous and non-indigenous people of the Northern Territory. The report must expand to give fair representation to all. This bit I might need you to help me with. We ask the panel to recommend a way that the government can attain a social licence from all Territorians. This could look like a region by region citizen jury prior to fracking commences in an affected area, or it could look like a Territory-wide option where everyone has a say that could come in the form of a referendum on the issue.

A second ask on the social aspects is what guarantee can the panel give that the [inaudible 01:08:44] company will adequately consult with all communities in the Northern Territory?

Jessie Hancock: Now I'd like to focus a little more on the environmental concerns of hydraulic fracturing, and particularly try and focus on the Amadeus Basin as it's not mentioned overly in the report. I'll just start by talking a little bit about re-injection, and acknowledging that it is said that re-injection is very closely linked to increased seismicity in the ground. A quote from a submission to the inquiry that Santos also stated, "Given the low population density and lack of infrastructure in the area of its operations in the Amadeus Basin, the induction of seismic events is not considered a plausible risk to well integrity."

I seek some clarification on this statement, as it's linking population density to risk on well integrity. If we can get some clarity on that, that would be great. The report goes on to mention re-injection a few times, noting the Amadeus Basin as the only potential site for re-injection in the Territory.

That's on page 31, where it says, "There are no known potential sites for re-injection of flow back water into conventional hydrocarbon formations in the Northern Territory outside the Amadeus Basin."

From there the report is somewhat ambiguous into the actual recommendation on re-injection. Page 54 stating that, "Preliminary assessment is that the practice of injecting waste water into aquifers should not occur." Then on page 57, stating that, "Until further information is obtained to determine whether or not the risks associated with this practice can be managed to acceptable levels, the practice of disposal of waste waters by re-injection of untreated waste waters into aquifers should generally not be permitted." The term generally is a bit open there, and given the Amadeus Basin is highlighted by the companies as a potential site for re-injection, I would seek further clarity on a strong position on this. Particularly in relation to the Amadeus Basin.

Given [inaudible 01:10:49] would be around, the report needs to be more clear and firm in its recommendation that this practice should not occur, even in areas such as the Amadeus Basin, where there are conventional hydrocarbon formations and already a push from companies to use this area as a re-injection site.

I'll move on to water supply now. As has already been stated by numerous people, the Amadeus Basin only has episodic recharge based on large rainfall events. These rainfall events are quite rare and unpredictable. There is no substantial analysis in the interim report of potential ground water for use outside of the Alice Springs water that's currently covered by a water allocation plan. I certainly found it difficult to find detailed analysis of water supply available in the Amadeus Basin that is outside of the Mereenie aquifer Alice Springs currently draws water from. It is clear that any alternate aquifers in the basin are certainly not as large as the Mereenie aquifer where Alice Springs draws its water from.

Having spoken with a hydrologist who worked specifically on the Amadeus Basin, I can provide his name and research at a later date. Due to the short turn around between the interim report and this I didn't have time to get it on record. It was acknowledged that there is, and has been for many years, a great need for baseline studies in the basin in its entirety. The Amadeus Basin that is, before any judgement for the capacity of fracking in relation to water supply.

To put the water use in perspective, Alice Springs has used 250,000 mega-liters of water since 1964, which is approximately 4700 mega-liters per year. Conservative estimates in the interim report state that a development containing up to 12000 wells over a 25 year period could require an average of 5000 mega-liters per year. This is in relation to the Beetaloo sub-basin. That's stating that if such a development were to occur in the Amadeus Basin, it's equivalent to having enough water to support a second settlement the size of Alice Springs. Given the concern taken amongst Alice Springs residents to conserve water, because we're told that water is scarce,

I would suggest that there is not an unending source of ground water in the Amadeus Basin that is yet to be discovered, and somehow seems to be what these companies might be relying upon.

On biodiversity and conservation, CAFFA notes the panel is considering making a recommendation that onshore shale gas development should be excluded from all conservation reserves and sites of conservation significance. I commend the panel for that. In his book, Biodiversity and Conservation, Jeffries notes the following, and I'll quote, "Effective use of protected areas now recognises the importance of ecological processes and change. Reserves should not be set up which are too small, fragmented or isolated, so that their ecology is not sustainable. Reserves must account for evolutionary processes and genetic variety." There is a risk with the current recommendation that it could result in numerous small reserves or sites of cultural significance. While conservation reserves and sites of significance should be excluded from gas development, baseline studies are needed to ensure these are large areas that take all biodiversity into account.

An example of this might be the water in Palm Valley, Finke Gorge or Boggy Hole, all of which could be affected by gas mining anywhere in the Amadeus Basin, even hundreds of kilometres south, but would not be protected if it is simply a reserve around those specific sites. I would say this goes for any significant tourist site in NT as well, which has come up earlier today. I ask that there be a comprehensive analysis into the Amadeus Basin water supply and aquifers prior even to case by case analysis of each potential fracking site.

I want to talk a little bit about wells, not only does fracking expose the Amadeus Basin aquifer to waste as a product of the fracking, that's the chemicals of concern, but there are potential other chemical contaminants likely to be in the ground. This is of particular concern given the panel's trust in modern wells. The panel's preliminary review was that technology is improving, and certainly agree with that, but any testing of wells we know has to happen over tens if not hundreds of years to be entirely sure on that. A precautionary principle would say wait hundreds of years to test those wells before opening up the Territory to that kind of risk.

What proof is there that the outlined improvements will last that test of time? This is of particular importance in areas like the Amadeus Basin, where that area's open to all sorts of other chemicals. In 2016 the government pushed to have a nuclear waste dump just south of Alice Springs, which is on the basin. There was significant community opposition to that, and more recently a proposal for a salt mine that would double as a waste burial facility near the community of Titjikala, which sits on the eastern edge of the Amadeus Basin. I include this just to note that there are other chemicals in the ground and things going on. Pressures from the government, state government and national government that use this as a bit of a burial site.

I'm going to ask here that the companies that currently have mining operations in the Territory do release for the public and this inquiry well site inspection records, and that's from every company that's operating in the territory. We know they keep records of well site inspection, and it would be good to be able to access them. I might just hand over to Marley to talk about alternative power options.

Marley Banks: Having listed a few environmental concerns relating to fracking occurring in the Amadeus Basin, it's also worth noting the great potential that exists in an alternative means of energy in this region. The panel has noted from the interim report that there is significant concern regarding Australia's ability to meet goals set out in the Paris Accord. While we have no disagreement in the panel's findings that gas extraction may result in less emissions than coal, quoted as less than half way, the question is why is this the major comparison that we can make? If we have a look, we have a world map of direct normal irradiation, which is different to direct horizontal irradiation. Actually you can see that Australia's the continent that has the greatest direct normal irradiation. If we then go to have a look at the Northern Territory, you can see that even more specifically, central Australia and the Amadeus Basin actually falls completely within the highest concentration of direct normal irradiation in the world.

You'll see that the research shows that the greenhouse gas emissions from PV to be 4% of that emitted by coal. Have I lost a bit from here? I think I might have. Noted in the report, it says that gas is 50% lower than coal in its life cycle. We can have a look at this diagram which we've included, which takes into account if we're taking coal at 50%, gas as 50% of coal, we're looking at 500 grams of CO2 equivalent to the kilowatt hour. If we have a look at the life cycle stages of photovoltaic at the top it's 40 grams, which is 8% of the emissions of gas. Which is pretty staggering and inspiring considering our direct normal irradiation availability and untapped resource.

We have an ask with this information that comparing to unconventional and conventional gas sources, the report needs to be expanded to include life cycle stages of renewables as the NT's highest potential of direct normal irradiation to be captured in the form of solar, PV.

Jessie Hancock: To clarify, and lots of people raised this with you yesterday, I understand it's a relevant comparison to have greenhouse gas emissions between coal and gas, but just adding a further layer to that would seem logical given the information is there on this stuff. It is a real alternative option specifically for the Territory and central Australia.

That ends the large chunk of our presentation. Thank you for the opportunity to present to you. We're very happy with the process of the inquiry so far. We'll just end with a question to the panel as to how this process, the process of the inquiry, will ensure that the Amadeus Basin is a no go zone for shale gas fracking.

Hon. Justice Rachel Pepper: We have noted that submission, thank you. I just have a couple of remarks, appendix 10 sets out the scope of services for the social assessment modelling. At page 152, if you have a look at 3.7 C and D, there specifically we've asked [inaudible 01:20:02] to basically look at the measures that the industry and government can take to enable the industry, should the government lift the moratorium to obtain a social license to operate, and how it may do so. So we have asked [inaudible 01:20:16] to effectively come up with some suggestions in that respect.

Indeed in relation to consultations, and one of the difficulties, and I've spoken about this publicly before, with getting anyone to do a Territory-wide social impact modelling as we just simply don't have the data of what this industry may look like. Again, should the government lift the moratorium at a territory-wide level we do have some data, it's not much but we have some from the Beetaloo, which is why we have asked [inaudible 01:20:47] to concentrate only on the Beetaloo. Then the framework from the Beetaloo can be adapted elsewhere in the territory once that data becomes available, and if the moratorium is lifted. That's with they're concentrating on the Beetaloo, that's what they've been asked to do, and that's what's made explicit at appendix 10 in relation to the scope of services. Any? Yes, Professor Hart.

Prof. Barry Hart: Thank you for your submission focusing on the Amadeus Basin. Couple of points I would make. On page 35, you've probably seen there that we note that while there are prospective unconventional gas explorations and development potential, it's considered unlikely and mostly that'll be conventional ways there. That's the first point. The second one is, as has been pointed out by the chair, we focused on Beetalooo because that's where the greatest potential at the moment is. It's being explored, and we have reasonable, not entirely, but reasonable information. We can make some statements there, but our terms of reference as you probably know is that we should be looking at all of the NT. Amadeus Basin is part of NT, so your comments that you made about the need for baseline studies, water, terrestrial, aquatic, biodiversity, all of those sorts of things. They will be the types of recommendations if the government does lift the moratorium would have to be done. I think you can rest assured that your comments are taken into consideration, and they'll be part of an overall assessment.

Jessie Hancock: Sure, and I take that into account for this panel. I guess what's clear from the interim report is that Territorians have a strong distrust of fracking and mining companies. In some sense regardless of the regulation that's there or the government putting the brakes on until it exists, if the Beetaloo sub-basin is being successfully fracked and companies are getting a lot of gas out, companies that have permits on the Amadeus Basin are unlikely to not try and compete with that, that's the nature of the industry so far in the Territory, and the concern there.

Marley Banks: Plus I also see that if given the green light to go, that will encourage those companies which we know there's big prospective and actual licenses that

are all over this region, so if a gas industry does go ahead in the unconventional form, it's harder to undo those that have been legislated through governments. That's a risk.

Hon. Justice Rachel Pepper: As Professor Hart said, to the extent that we are enabled to make recommendations consistent with our terms of reference, if indeed there's just an absence of data there, those baseline studies haven't been done, then that is a recommendation that we'll make before the government can take any further step.

Marley Banks: Thank you.

Hon. Justice Rachel Pepper: Yes, Doctor Andersen.

Dr. Alan Andersen: Thanks, I have a couple of questions. First one to you, Ms Banks, and it's following up the issue of social licensing. You put forward the idea of maybe having regionally based citizen juries to assess, I presume what you meant assess for their region the social license for any potential development. I guess my question is, what if for a region the local communities, including local indigenous communities, supported the development of shale gas industry in their region? Would you be happy then to accept that, what would your view be?

Marley Banks: Well I guess we have to speak on behalf of the membership that we represent, which is Central Australian Frack Free Alliance, and my independent thoughts upon that would be different to what we're doing here today. Our body of membership is supportive of a ban across the board. What that would look like if it was broken down, whether it be a referendum which went to everybody versus the citizen jury in specific areas, I guess that would have to be something that would be considered at the time. On behalf of our membership, our membership supports this industry not going ahead.

Hon. Justice Rachel Pepper: That's a fair comment, you can only speak on behalf of your representative body, which is fair enough.

Dr. Alan Andersen: Yeah, thanks. Then my question for Mr Hancock, it's relating to water use. You talked about what's the figure for the Alice Springs population, uses about 4000 mega-liters a year for water. Do you have any idea of other water uses? The pastoral industry, for example? Do you have any figures for what the pastoral industry might be using in terms of water from that aquifer too?

Jessie Hancock: No, I don't have them on me. I'm sure I can endeavour to research and submit to the submission.

Hon. Justice

Rachel Pepper: That would be helpful, thank you. Doctor Jones?

Dr. David Jones: I noted down here a comment that I think you made, I'd just like a little bit of clarification. I noted that apparently, there is pressure for fracking to occur in the Amadeus Basin to feed the Jemena gas pipeline. What's the basis for that assertion, because it'd be interesting for us to hear that one?

Jessie Hancock: Certainly. That's evidence based on the fact that the pipeline, obviously construction has begun on it, and there was an article out in the Financial Review I think about two weeks ago stating that the pipeline is contracting other customers at this stage. It mentions Central Petroleum as one of those customers. We know that significant money will be spent building that pipeline, it's only natural that there will be pressure for companies to produce gas to go through that pipeline.

Dr. David Jones: When you say Central Petroleum, they've got larger conventional gas at the moment don't they? I know they've wound their gas production right back, but they could turn it back up again and send more gas up the pipeline.

Jessie Hancock: Yeah, and they could turn it up through unconventional shale gas if that's allowed and open, is the concern.

Marley Banks: I think when looking at the maps it clearly shows that areas that they have licenses on have deposits of shale. What's there to safeguard against them not pushing for unconventional once their conventional reserves run out or whatever it be?

Hon. Justice Rachel Pepper: Yes, Doctor Beck.

Dr. Vaughan Beck: Yes, I was just going to comment upon the night photograph showing Chicago and the Bakken oil fields. That was a very dramatic photograph. I'm just wondering if you could provide a reference where you got that photograph from, your detailed submission, and also just can you clarify was that a single shot during the night or was there time lapse involved in that, please?

Marley Banks: We can definitely provide that information, it's actually a NASA photograph and it's taken from space.

Dr. Vaughan Beck: Sure, that would be good if you could do that. Thank you.

Hon. Justice Rachel Pepper: Any further comments?

Prof. Barry Hart: One more.

Hon. Justice Rachel Pepper: All right, last one, Professor Hart.

Prof. Barry Hart: Just in terms of water use and the Amadeus Basin, it's very similar to what we believe will be the southern extent of Beetaloo. We've got information on the type of or the amount of recharge up in the more northern part, Mataranka and the lake, but we have no information down south. Very much lower rainfall, and you guys have even less rainfall. I think you pointed out that the water supply for Alice is actually ground water mining. That would be the same situation for any gas fracking operation, so it really puts it into a different context in terms of sustainability. I just wanted to point that out.

Jessie Hancock: Noted, yeah.

Hon. Justice Rachel Pepper: Again, thank you very much to CAFFA for taking the time to present again to the inquiry, we're very grateful for your efforts. Thank you.

Marley Banks: Thank you.