



Cave Creek Station – Hearing Transcript

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7 March 2017

Tennant Creek Training Centre, Tennant Creek

Speaker: Rohan Sullivan

Rohan Sullivan: My name's Rohan Sullivan, I'm from Mataranka at Cave Creek station.

Hon. Justice

Rachel Pepper: Thank you, alright.

What would you like to tell the panel today?

Rohan Sullivan: I've got a written statement which I was intending to read out, it might be a bit dry and long, but-

Hon. Justice

Rachel Pepper: That's okay, thank you.

Rohan Sullivan: We'll see how we go.

I overheard in the last session about the earthquake here in Tennant Creek, I remember seeing a section of the gas pipeline at the Katherine show in about '87 or '88 when that earthquake happened. It had actually concertinaed the pipe, the wall of the pipe was actually concertinaed like that, so obviously, a fair bit of stress there, too. Anyway, just to fill in a gap there hopefully.

Okay, I'll start here. I'd like to rate my experience over the past two or three years as a pastoralist leasee here in Northern Territory, it has actually been impacted by patrol in exploration activities. I empathise the word "actually" because many, if not most, of the loud voices in the hydraulic fracturing debate have not had any shale gas exploration activity on their properties. Our pastoral lease, Burton Creek is near Larrimah, approximately 180 kilometres south of Katherine. The property was purchased in 2002, and is jointly owned by myself and my wife, and our neighbours to the south. The property is 76,300 hectares and is run in two halves with the stock world operating the southern half, and ourselves the northern half. My comments mainly relate to the northern half.

We were not affected directly by any exploration activity until 2013, prior to that the main focus of activity had been further south east, around Daly



Waters. Any of you I may have formed about the impacts of exploration activities was only from second or third hand information. This mainly revolved around interference with day to day station activities such as mustering, watering cattle, damage to infrastructures such as roads and fences, spread of weeds along new seismic lines or roads, and the potential for fires. On the other hand, it seemed there may have been opportunities to provide services or carry out work for their exploration companies.

Exploration company, Pangaea, was granted exploration permits over the Sturt Plateau district, including Burton Creek, in January 2013, and started making contact with property owners to formalise access arrangements for an exploration program. Resistance developed fairly quickly as individual pastoralists objected to the lack of input into the proposed access arrangements, and a perception of being rushed. Landholders also wanted the opportunity to be involved in carrying out some of the preparatory work, rather than bringing in interstate contractors. Initially, it was not clear who we were actually supposed to be dealing with, there was a seismic contractor, and the initial contact with landholders was made by contracted staff who did not have any authority to negotiate different arrangements. Some of their local group had been through the experience of the Alice to Darwin rail construction and did not want a repeat of the divide and rule tactics and lack of communication or accountability.

And I might say that I'm part of a group of producers there on the Sturt Plateau, who all own similar size properties, and have been there probably for the last 25 to 30 years, it's only a recently developed region of the Northern Territory, so a lot of us have a similar stage of development. These problems were only resolved when the pastoralists as a group, nominated a spokesman to negotiate directly with the company to address the issues of concern. Ultimately, an agreement was reached with Pangaea, legal advice was provided by a lawyer of the groups' choice but paid for by Pangaea. The agreement reached between Pangaea and the group has formed basis for a strong, functional working relationship with new written agreements required for each year's activities. The extent of the exploration activity has reduced over the three-year period, from initially over 20 properties down to approximately 9 now. This will probably reduce further if the program resumes.

My assessment of the relationship now is that the majority of pastoralists in the district are either neutral or supportive of the exploration program. Some people hold the view that the potential value of the resource is such that the development of an oil or gas field will ultimately go ahead, should the exploration programme prove successful. However, there are people in the group that still have concerns, particularly about potential impacts on water. In general, our group sees the activities associated with the exploration and potential development as a means of fast tracking public infrastructure development in the district, and generating economic activity in the region. Pastoralists do not have rights over minerals or petroleum, but do see potential benefits from the building of infrastructure including access roads and water supplies on properties which can revert to the pastoral lease on completion of the exploration or development program. This may



help to compensate for the inevitable disruption to normal pastoral activities.

The Western Creek road runs west from Larrimah and services six to seven properties directly, as well as linking to other regional roads. This road was badly impacted by heavy truck traffic during the construction of the Alice to Darwin rail line and was not repaired afterwards. Local people have been putting up with substandard access for years, and lobbying the NT government to provide adequate maintenance and upgrading. However, this has been extremely slow and dependent on small allocations of funding which never seem to go very far.

When Pangaea indicated their intention to upgrade and seal the Western Creek road as part of their development program there was strong support. Work was due to commence in 2016. There was understandable anger when the NT labour party announced their intention to proceed with a moratorium on hydraulic fracturing, should they form government after the next election. The impact of this has now become apparent, with Pangaea suspending their 2016 program worth 100 million dollars, including commencement of the Western Creek road upgrade. It is likely that upgrade of communications infrastructure, i.e. mobile coverage would also become available as part of Pangaea's activities, currently Larrimah has no mobile coverage at all.

Water has always been a critical issue on the Sturt Plateau, there are no permanent streams and very few natural waterholes. Underground water is present but not easy to find, and there have been many unsuccessful bores drilled. Pastoralists are understandable protective of their underground water supplies and any activity which potentially threatens these is regarded with suspicion. However, during the course of the drilling program on the Sturt Plateau, most of the locals have become familiar with the techniques used to isolate the water-bearing strata from the drill hole to prevent leakage and contamination. Pangaea and the drilling contractors have been quite open in allowing local landholders to visit and tour drilled sites. The main concern is about the amounts of water potentially used for hydraulic fracturing, and the effect of this on stock water supplies. Pangaea has installed monitoring equipment in boreholes, however their water usage to date has been mainly for domestic purposes.

During the course of the seismic and drilling program, Pangaea identified and mapped a deeper aquifer which was previously only pooling know, water quality in this aquifer is reportedly lower than that needed for stock and domestic usage but suitable for use in hydraulic fracturing. It is now possible that no water will be required from the aquifers we draw our stock water from. In fact, there may be opportunities to source treated water for on property use. Pangaea also have had extensive light air coverage of the area done to assist with the design of the Western Creek road, an added benefit of this coverage is that Pangaea now can produce a map of ground elevation over extensive areas of the Sturt Plateau including Burton Creek. This will enable the most efficient placement of dams and excavated tanks to capture run off water for use in either their drilling and fracking



operations, or for pastoralists to use for development of dams for stock water.

Other issues: From my point of view, the main problems in having the exploration activity on my property are associated with planning. The placement of planned seismic lines can change depending on drilling results and vice versa. Having a major seismic programme means lots of new gateways need to be installed and fence lines, which is really just another job to do, even though we are compensated for the time and expense. At present our half of Burton Creek is in relatively undeveloped state and requires more fencing and water points. It would be far better from my point of view, for Pangaea to get in and conduct their exploration and development activities before we construct much more of our own infrastructure. Even with the best will in the world, there would be misunderstandings and communication problems, and rather than deal with the inevitable disruption and drama it would be far better to get it over and done with.

I can understand the concerns of people who have more highly developed properties. The more infrastructure on a property, the bigger the task of managing the impact of exploration activities, particularly seismic. To date, we have had over 100 kilometres of seismic lines, one exploration well, and three kilometres of gravel road put in on Burton Creek north. The only issue to arise was when Pangaea's contractors watered the Western Creek road to stop dust, and was stopped by the department of infrastructure because they didn't have a permit to work in the road corridor.

There was much made about the impact of multiple well pads and other gas infrastructure on pastoral land, my understanding is that horizontal drilling techniques now allow multiple holes to be drilled from one drill pad. These holes can radiate out in all directions from the vertical, for up to or exceeding 1.5 kilometres. So potentially, a 200 by 200 metre four-hectare drill pad could extract gas from under an area of eight square kilometres, which is 800 hectares. Extrapolated to the rest of Burton Creek north which is 360 square kilometres, the whole property could be developed for production with 45 wells covering an area of 180 hectares in total, or point half a percent of the property area.

Other infrastructure would include pipelines to connect the wells to a central point and a compression station. But even if this doubled the area, it would still only be one percent of the property, and cattle can still graze where pipelines are laid underground. If the property was to host a conventional oil or gas field, then the number of wells would be vastly increased. For example, the Kern river oil field in California has 8,000 wells in an area of 10,000 acres, there's no way that any other land use could co-exist with that. This may be an extreme example, but many of the images shown by anti fracking activists of closely developed gas or oil fields are actually conventional fields. Horizontal drilling and fracturing allows a much lower density of well pads, and the technology is developing continuously, so the footprint may be reduced even further.



From my point of view, if there is to be any sort of mining or petroleum activity on Burton Creek, I would prefer an unconventional oil or gas field over a conventional field or an open cut mine any day. Thank you.

Hon. Justice
Rachel Pepper:

Thank you, that was very useful. Would you be willing to make your written statement available to the task force?

Rohan Sullivan:

Yes, certainly, I've got an electronic copy.

Hon. Justice
Rachel Pepper:

Thank you, we need to send that through, someone from the task force can give you the website, or rather the email address to send that through. That's most useful, thank you.

I might open up your presentation to the panel, we are still madly writing.

Dr. David Jones:

With the information content, we are still trying to just capture-

Hon. Justice
Rachel Pepper:

[crosstalk 00:13:09] can you tell me; you've obviously had a bad experience as a result of the Alice to Darwin railway?

Rohan Sullivan:

Well, sorry [crosstalk 00:13:19]

Hon. Justice
Rachel Pepper:

yeah, just tell me a little bit about why that was so bad.

Rohan Sullivan:

Well I didn't, because the railway didn't go through my property, but some of the neighbours did and ah...

Hon. Justice
Rachel Pepper:

What went wrong?

Rohan Sullivan:

Well, in some ways it's a bit like an exploration programme in that the more developed your property was, the greater the impact, because you had a railway easement going through, which was 200 metres corridor going through. It could cut through the middle of paddocks, it could cut bores off from the rest of the paddock, if you had a fairly undeveloped property then it was quite good, because they'd do a bit of work for you and people got dams dug and that sort of thing, but I know there was at least two or three owners in that particular district that had quite a bad experience, and the frustrating thing was that they could go and try and get a problem sorted out and nobody would take responsibility for it. They'd go and see the contractor and they'd say "No, that's not my job go and see Adrail." Who was the head contractor, and of course they'd say "Go and talk to our liaison staff." And they would just get duck shoved around.

Hon. Justice
Rachel Pepper:

Were there- again, I appreciate that this is anecdotal on your part, but there were problems with the negotiation process?

Rohan Sullivan:

I couldn't really speak much about the negotiation process because I wasn't involved in it, but um...



Hon. Justice
Rachel Pepper: But that's a good point you raise about no one taking responsibility for when problems arise, and that's not, again, on any well site or drilling site you've got a number of different contractors who are going to be there, it's not just going to be one company, that's an important I think, point that you raise.

Rohan Sullivan: Yeah, well I think probably in our experience, that it got off to a bad start, because we weren't actually dealing with the company themselves the company had appointed a contractor to do the seismic, and I think the people we were talking to worked for them. Then there was going to be another contractor come from south western Queensland who was going to clear all the seismic lines and put in all the gates and all that sort of stuff. We just objected to it, because most of us have got a bit of machinery of our own, and we thought there should be some sort of opportunity for us to do some of the work.

Hon. Justice
Rachel Pepper: Absolutely. I understand what you're saying.

Rohan Sullivan: Now it's not quite as simple as that, because then you've got all the OH&S considerations and your machine might not be up to scratch, it's got to have so many flashing lights and fire extinguishers and all that sort of stuff. But that was the sort of attitude that we took, and I think the liaison staff were working very much on the Queensland model, which was basically go to the landholder and say "This is what's going to happen, we'll basically give you notice that we're going to do this program and this is how it'll work, and you just get out of the way, and we'll do our stuff and if we break anything we'll fix it up before we go, but just get out of the way." A few of us weren't happy with that sort of approach and we actually wanted- well ultimately to the company's credit they came around and actually met with us as a group, and we've actually developed quite a good relationship now with the company itself. To the company's credit all our main contractors now, apart from the drilling contractors, are locals.

Hon. Justice
Rachel Pepper: Okay.

Rohan Sullivan: So, their civil works as a local contractor, their liaison, their environmental people are locals, so there's a lot more local content in the program now than what there potentially would have been.

Hon. Justice
Rachel Pepper: Thank you. We'll work away from Doctor Ritchie up. Thank you.

Dr. David Ritchie: Mr. Sullivan, we've had some representations from other members of your industry, to the effect, that there are some concerns about the effect of an industry that uses a range of chemicals on the industry to continue to maintain its free range and chemical free status as a marketing edge. Do you feel that, that's a problem or do they dealt with that with Pangaea and that you're not concerned?

Rohan Sullivan: No, we haven't had that with Pangaea. I think the people that would have the most concern would be the people who have organic, certified organic.



- Dr. David Ritchie: Okay.
- Rohan Sullivan: I'm not sure of the rules around organic certification, but there's a very limited amount of chemicals of any sort that can be used on the property. So, that has the potential to impact on that property's certification. One, I guess you would like to think that the approach would be that the people could work out and negotiate how that might work, whether part of the property can be excised from that certification.
- Dr. David Ritchie: Does anybody on the Sturt plateau that you're aware of, using that kind of hook as a marketing thing...
- Rohan Sullivan: No.
- Dr. David Ritchie: No, okay.
- Rohan Sullivan: No, because we feed so much supplement which is basically fertiliser and salt and stuff, we use vaccines to stop botulism and other diseases. We use pour on drenches for tics and worms, and that sort of thing. Organic is not really an option for us.
- Dr. David Ritchie: Thank you.
- Hon. Justice
Rachel Pepper: Yes, I think, Doctor Jones, was it?
- Dr. David Jones: I was interested to hear that you said that Pangaea had found a deeper ground water resource which was presumably not suitable for stock or human potability but it was suitable for fracking, and one of the things that we'll be most looking at as part of this inquiry is the nature of the ground water in the region, and what the various types of water might be suitable for and particular how connected they might be, because it could well be, for example, that deeper saline water might be vertically connected to the potable water above it, so if you suck it out from below you actually can deplete what's above it. Those are the kinds of things that the causes and effects that we've got to look at fairly closely in terms of ah...
- Rohan Sullivan: Yeah, absolutely. The other thing about it is that I think there will be a lot more found out about deeper underground water as a result of companies doing exploration, because it wasn't known before and it's unlikely to ever happen if you're relying on government to do it, because government just hasn't got the resources to go on speculative drilling for water.
- Dr. David Jones: We were actually given a presentation by the water resources department who've got a brand new drilling rig as well, so maybe they've got a few more resources they can deploy so that...
- Rohan Sullivan: Yeah.
- Dr. David Jones: I guess that will be one of the things in our ultimate recommendations would be what kind of activity may need to precede any kind of...



Rohan Sullivan: But in my discussions with the company...

Hon. Justice

Rachel Pepper: I should just interrupt, that is if we get that far.

Dr. David Jones: If we get that far.

Hon. Justice

Rachel Pepper: Thank you.

Rohan Sullivan: My discussions with the company is sort have been around that they're going to try and avoid using the aquifer that we draw our stock water from. They've been looking at designs for dams or excavated tanks where you can capture ground water run-off, or potentially using one of those deeper aquifers for their water, rather than tapping into our stock water supplies which would give me a bit of comfort, I guess, because it's just the unknown of how much they're likely to take. Some of our bores only yield about half a litre a second, which isn't a lot of water.

Hon. Justice

Rachel Pepper: Any other questions?

Thank you very much for coming today, I am very keen to get hold of your statement, it contains a lot of very useful information, thank you for your assistance.