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Hydraulic Fracturing Taskforce
Darwin, NT 0801, Australia
Email: fracking.inquiry@nt.gov.au

Dear Sir/Madam

Re Hydraulic Fracturing Inquiry Community Updates #9 to #12

Background

Imperial Oil & Gas Pty Ltd (“Imperial”) has been operating in the McArthur Basin since the issue of our Exploration Permit Applications (“EPA’s”) in 2010. Currently Imperial has been issued two Exploration Permits (“EP’s”), had one EPA placed into a 5 year moratorium and is currently in the final negotiation period with Traditional Owners for 3 additional EP’s.

Over the period 2010 to 2017, Imperial has arranged 22 on-country meetings with Traditional Owners in addition to many on-country meetings as Imperial has undertaken exploration programs over its granted EP’s. Further, commencing in 2014 Imperial initiated discussions with American Energy Partners (“AEP”), a Company consisting of one of the worlds most experienced shale exploration and production teams. By late 2015 AEP had completed negotiations and agreements to commence the development of shale resources, within Imperial’s and a second company’s tenements, particularly focused on the McArthur and Glyde sub basins. AEP brought to the Northern Territory and the McArthur Basin (its first shale development program outside the USA), its highly qualified shale development, exploration, drilling and production team. Sadly, in 2016 the founder of AEP was tragically killed in a car accident and due to uncertainties in the Northern Territory in 2016 and within the foundation of AEP following the founder’s death, the AEP team disbanded over 2016. A number of these internationally acclaimed experts remain available to continue with Imperial’s project.

During the period, 2010 through to 2016, prior to the shale fracking moratorium in the NT, Imperial had invested significant financial resources into the development and progress of the granted EP’s and EPA’s. This includes the development of an understanding of the geological complexities of the McArthur sub basin, along with on-country meeting with the Traditional Owners, completed drilling programs, surface exploration, re-interpretation of seismic, core re-examination and other research and desktop studies.

On 3 December 2016, the Northern Territory Government announced an independent Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory (“Inquiry”). The Inquiry is investigating the environmental, social and economic risks and impacts of hydraulic fracturing (commonly known as fracking) of onshore unconventional gas reservoirs and associated activities in the Northern Territory.

As discussed below, Imperial is seeking clarification on the direction that the Hydraulic Fracturing Taskforce (“Taskforce”) is taking as the Inquiry appears to be diverging from its original intent.

Comments made by the Fracking Inquiry

I wish to refer specifically to The Community Updates, #9 through to #12 issued by the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory.

Update #9

“The economic assessment will include the potential beneficial impacts on the Northern Territory economy, under the following three scenarios:

- ***...Scenario 3, which involves the development of unconventional shale gas reserves in the Beetaloo sub-basin only.***

The economic assessment will also look at the economic risks associated with the three scenarios, describing the actual and possible adverse impacts on and risks to the Northern Territory economy under the regulatory regime.”

Update #10

“The successful tenderer must identify the people and groups of people that are likely to be impacted by the development of unconventional gas resources in and around the Beetaloo Sub-basin, and make an assessment of the potential impacts and recommend strategies that could be applied to either mitigate negative social impacts or maximise social benefits”, Justice Pepper said.”

Update #11

“...ACIL Allen must consider the following scenarios in making the assessment:

- ***...Scenario 3, which involves the development of unconventional shale gas reservoirs in the Beetaloo sub-basin only.”***

Update #12

“...Justice Pepper said the social impact assessment to be undertaken by Coffey will be multifaceted and will enable the Inquiry Panel to address the full terms of reference for the Inquiry, which includes a requirement to assess the risks and benefits of the unconventional shale gas industry on social and cultural conditions in the Northern Territory...”

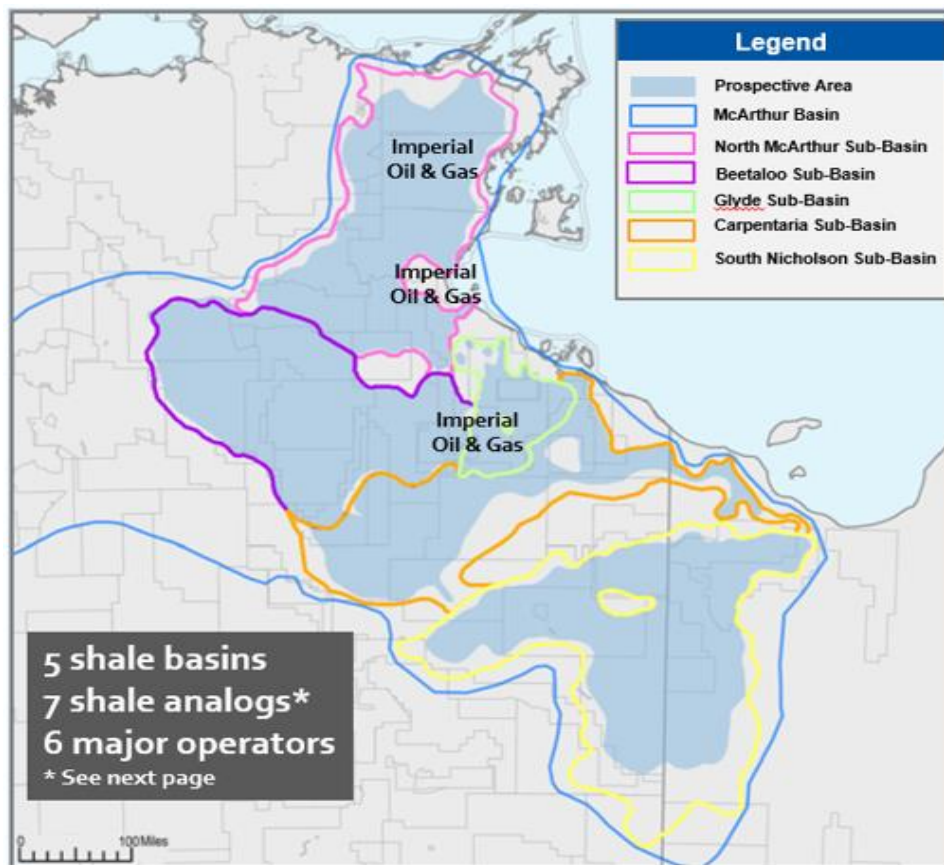
“Second, Coffey will identify the people or groups of people that are most likely to be impacted by potential development of onshore unconventional shale gas resources in and around the Beetaloo Sub-basin, and make an assessment of the potential impacts and recommend strategies that could be applied to either mitigate negative social impacts or maximise social benefit.”

The direction of the Inquiry

It is clear from the comments highlighted above in Community Notes #9 to #12 that the Taskforce has decided to separate the Beetaloo sub-basin from other shale basins in the Northern Territory which have the potential to be equally, or of superior, petroleum potential.

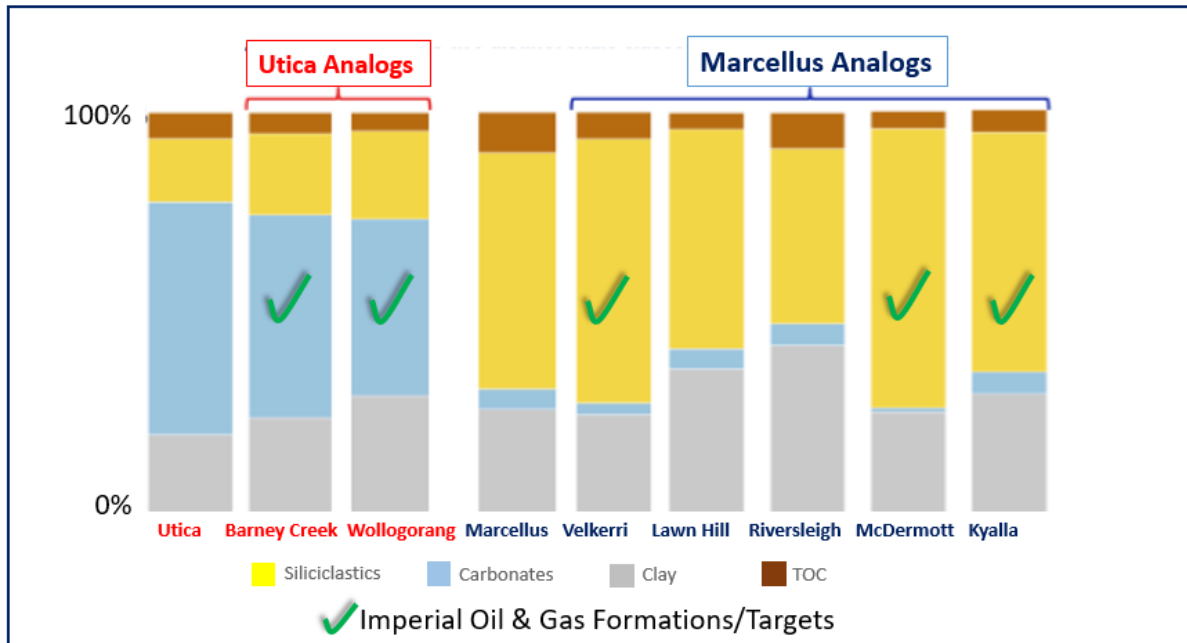
To have the Taskforce make decisions of this nature would seem to be contrary to the specific designed purpose of the Inquiry as outlined by the Northern Territory Government and as set out above.

To assist in clarification of the issues addressed by this letter, for convenient reference the following map demonstrates the position of each of the sub basins within the Greater McArthur Basin...



North McArthur sub-basin	<ul style="list-style-type: none"> ✓ Prospective development targets include Velkerri, Kyalla, Wollgorang, McDermott and Barney Creek shales. ✓ Operator- Imperial O&G (major % of sub-basin)
Beetaloo sub-basin	<ul style="list-style-type: none"> ✓ Primary organic rich unconventional targets include Velkerri, Barney Creek and Kyalla shales. ✓ Operator- Imperial O&G
Glyde sub-basin	<ul style="list-style-type: none"> ✓ Primary organic rich unconventional targets include the Wollgorang, McDermott and Barney Creek shales. ✓ Operator- Imperial O&G
Carpentaria sub-basin	<ul style="list-style-type: none"> ✓ Primary organic rich unconventional targets include the Wollgorang, McDermott and Barney Creek shales.
South Nicholson sub-basin	<ul style="list-style-type: none"> ✓ The Lawn Hill and Riversleigh shales identified as significant development horizons

...and for a simple clarification of the shale types within the Greater McArthur Basin, the following mineralogical analysis reveals two distinct shale classics, clearly identified by US shale analogs. This simple graph signifies the importance of taking a much broader view on the potential of the shale bearing sub basins within the Greater McArthur Basin. The most productive gas wells drilled in the USA have been in the 'Utica' type shales (high carbonate structures). Further, horizontal wells in the Utica formation in the USA are being drilled with up to 5 km horizontals. If this can be duplicated in the Northern Territory this significantly reduces surface disturbance.



Source: AEP

The Imperial Board of Directors, after spending millions of dollars in progressing the development of petroleum tenements in the Northern Territory is seeking clarification on the following:

- On what expertise and data has the Taskforce relied to suggest that the Beetaloo sub-basin has greater petroleum potential than other shale basins/sub basins in the Northern Territory?
- As I am sure the Taskforce is aware the major target within any shale basin, if present, is the depositional basin centre that has been remote from ocean/river-borne sediment input. The Beetaloo sub-basin is characterised by the latter. In terms of potential hydrocarbon resources, the McArthur Basin Trough (comprising the McArthur and Glyde sub basins) is among the most important and extensive targets in the Northern Territory. On geological factors alone, could you please inform the public on what basis has the Taskforce placed the superiority of the Beetaloo sub basin over other Northern Territory shale basins, especially the McArthur Basin Trough?
- Extensive work by one of the USA's most experienced shale teams demonstrated the superior petroleum producing characteristics of the Barney Creek, with further studies to be carried out into the petroleum capacities of the newly discovered Wologorang and McDermott Shales, also now considered major targets throughout the McArthur and Glyde sub basins. On what basis were these shale formations and geological settings compared to other shales such as the Velkerri and Kyalla shales in the Beetaloo sub basin?
- Please provide comment on what influences the commercial operators in the Beetaloo sub-basin have placed on the Taskforce to separate the Beetaloo sub basin from all other shale basins in the Northern Territory? This is important for several reasons:

- It would appear that the Taskforce has made a geological and commercial decision on the economic viability of the Beetaloo sub basin. As noted above, we find this disturbing considering the millions of dollars that have been spent on researching the McArthur Basin Trough, being the depositional centre (or basin) of the entire Greater McArthur Basin.
- It is difficult to comprehend how the Taskforce, with relatively limited experience in shale resource evaluation has promoted the Beetaloo sub basin ahead of other equally prospective regions; and
- The Northern Territory Government, through the Taskforce appears to have committed, or is committing substantial financial resources to an economic assessment of just one region (the Beetaloo sub basin) upon which to characterise the potential beneficial impacts on the entire Northern Territory economy and associated groups of people involved. Clearly this study will identify the potential impacts, and recommend strategies, but will regionalise matters that may mitigate negative social impacts or maximise social benefits of such people only within Beetaloo sub basin which will not apply to others. Further these studies provide a very significant financial benefit to petroleum operators in the Beetaloo sub basin, while ensuring operators in all other shale basins will be required to undertake such studies, if required, by utilising their own resources.
- The above allocation of resources clearly appears to prematurely prioritise the Beetaloo sub-basin as the desired development region at the expense of equally prospective adjacent regions. In summary, this program now seems very inequitable, due to:
 - The premature selection of the Beetaloo sub basin as the most prospective shale basin in the Northern Territory. On what basis has the Taskforce made such a prioritisation?
 - Will the Taskforce arrange the allocation of funds to other shale basin and or sub-basin operators to undertake the social and economic impact studies required in those regions (other than the Beetaloo sub basin) whose petroleum potential is continuing to be demonstrated?

It seems unusual that the Taskforce has taken an apparently commercial role, by 'choosing a winner', namely the Beetaloo sub basin, as opposed to undertaking what was purported to be an independent inquiry.

To re-iterate, we strongly believe, along with the world renown experts we have worked with from AEP, studies of other shale basins in the Northern Territory have equal or greater prospectivity than the Beetaloo sub basin. Premature focus on just one region (the Beetaloo sub basin) may ultimately slow development, production and petroleum revenues from those basins that become proven as hosting substantially greater commercially viable petroleum resources and potentially deprive other groups of people significant benefits which it appears the Taskforce is indicating that they should potentially forgo.

I look forward to your clarification of these points noted above.

Yours sincerely

Bruce McLeod
Chairman

Imperial Oil & Gas