

HOUSE OF COMMONS
ORAL EVIDENCE
TAKEN BEFORE THE
ENVIRONMENTAL AUDIT COMMITTEE

PROTECTING THE ARCTIC

TUESDAY 3 JULY 2012

PROFESSOR RICHARD STEINER

Evidence heard in Public

Questions 387 - 403

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Oral Evidence

Taken before the Environmental Audit Committee

on Tuesday 3 July 2012

Members present:

Joan Walley (Chair)
Peter Aldous
Martin Caton
Zac Goldsmith
Mark Lazarowicz
Caroline Lucas
Paul Uppal
Dr Alan Whitehead
Simon Wright

Examination of Witness

*Witness: Professor Richard Steiner, Consultant, Oasis Earth, gave evidence.
This evidence was provided via video link.*

Q387 Chair: We are so grateful to you that you have found the time to give evidence. I think it is breakfast time there; it is evening here. We have a vote in the House of Commons at 7.30pm. We are going to have to keep our deliberations just to the next 35 minutes or so if that is okay. I understand in the first instance that you wish to make a short introductory presentation to us. If I could just introduce our Environmental Audit Select Committee, there are six of us around the table, and we will come to you in turn, if that is okay.

Professor Steiner: Absolutely, that is wonderful. I appreciate it.

It is not much of a presentation. It is just that I really appreciate the opportunity to appear before the Committee and I applaud the Committee and the House of Commons for convening this very important Committee. It comes at a very auspicious time.

Let me recount a few things going on here right now. We have just measured atmospheric CO₂ concentrations over the Arctic at 400 parts per million. That was announced two weeks ago. By reference, we think we need to be at 350 parts per million. That is the highest concentration ever measured in human history on planet Earth that we know. June sea ice over the Arctic Ocean basin was lower than ever in the month. It was the least extent in the basin.

Shell is heading north with its two drilling rigs as we speak to drill in the Chukchi and the Beaufort Sea off the Alaska coast. On the other hand, BP has foregone its Liberty project about seven miles offshore of the Beaufort Sea coast in Alaska. They were ready to do the project before Deepwater Horizon. After Deepwater Horizon, they learned the lessons very painfully and they took a hard look at the Liberty project, which was in the US OCS in the Arctic Ocean. They just announced a week ago that they are going to terminate the project as designed, because to do it safely and with great integrity it would be too expensive to do the extended reach drilling as they had planned to do. I applaud BP for making that decision.

Last year, we had another contact issue here. We had something like 400 ships transiting the Bering Strait between the Bering Sea and the Arctic Ocean. There is more to come this year. Of course, we had the Russian explorers planting a flag on the North Pole

seabed a couple of years ago, which opened up all this issue of territorial claims. Plus, finally, there seems to be a military build up within Russia and even Norway that is a little bit of a concern. All these issues fit together the fabric that means your Committee hearings are utterly important in providing some reasonable policy in the Arctic. I have several specific recommendations to the Committee that we can go through as we have our discussion today.

With that, again, thank you and I applaud the House for convening this Committee. I would be delighted to entertain discussion and questions.

Q388 Chair: You have given us a lot of food for thought there, and I only hope that our Committee will live up to your expectations. I think we just wanted to ask some detailed questions to begin with. In your evidence you have given us a lot of articles that you have written, for which we are very grateful, but you advocate a moratorium on drilling. How feasible do you think a moratorium could actually be, given that drilling has already started? Playing devil's advocate, if you like, how feasible is it, how realistic is it, for you to have that policy and to push it forward?

Professor Steiner: Obviously, they have been drilling off the Alaska Arctic coast offshore. Most of the production, or much of the production from the Prudhoe Bay Field has been near shore, but offshore in the Arctic Ocean, so the concept of a complete blanket umbrella moratorium on Arctic drilling is unfeasible, as you suggest. I agree with that. I have endorsed Greenpeace's recent proposal for a High Arctic sanctuary, which they have done for the international waters, the international seabed, and the High Arctic that is not within sovereign EEZs or any of the eight Arctic coastal states. I signed their Arctic Scroll, and completely endorse that.

However, I think this concept, the paradigm with which we are looking at the Arctic, needs reflection and a broader longer-term view. The notion of the Arctic coastal states, the eight Arctic coastal states, as the sole policy body governing the Arctic, I think is a bit outdated. We need Governments such as the UK, China, Japan, Germany, Korea, several other non-Arctic nations with interests in the Arctic to be at the table as well. I would propose that the UN convene a true Arctic Council composed of the existing eight Arctic Council members, the eight coastal states, plus the other non-Arctic nations, including the UK, China, Japan and those nations with interests in the Arctic. The Arctic is simply too critical and important to be left to the rather parochial political whims of the Arctic coastal states at present.

So a moratorium on drilling per se within the sovereign EEZ of these eight Arctic coastal states right now, is unfeasible, I believe. However, it does not mean that certain areas within the EEZ of these Arctic coastal states would not be contributed by—the US could designate certain areas within an Arctic EEZ to an Arctic marine sanctuary. So could Russia.

Q389 Chair: It is interesting that you said that you are looking at some kind of long-term solution in the Arctic. Given what you said about the United Nations, what is the "route back" from where we are now, to where we need to be in time to get the different paradigm that you referred to? What would that road map actually look like and who would be taking the lead? Who are the stakeholders who would really need to get on board for that?

Professor Steiner: That is a political question, which I am not particularly skilled to answer, but I think a global consensus is building right now around protecting the Arctic, not necessarily identical to the Antarctic, because there are no sovereign states in the Antarctic. The Arctic has such global importance for reasons of climate mitigation. The sea ice is really important to global climate, plus biodiversity conservation. If we lose the sea ice ecosystem in the Arctic Ocean, which all of our models predict that we will, at least in the summer time—

the sea ice system is utterly important—we are going to lose a lot of the biodiversity that is critical for the planet and a lot of people care about.

I would say, on the NGO community and Governments without a parochial economic interest in the Arctic, that there is a lot of interest from Governments, NGOs and even some industries in providing protection, long-term protection in the Arctic. It is something I think the UK Government could and has provided leadership in.

Q390 Chair: I have two very quick questions for you, if I may. The first one is that the effect on the ecosystem in the Arctic is often given as a reason for, again, further oil exploration. Are there, in your view, any mitigating measures that could be taken to make that drilling okay and acceptable?

Professor Steiner: There are things that can be done to minimise the risk to as low as possible. There is no question about that. Currently, industry hasn't taken all steps necessary, because that last 10% or 20% of risk, getting that out of the equation of drilling, is the most expensive.

There are two principal things that could help in answering your question there. One is an adequate financial liability protocol Arctic-wide, which currently does not exist. We have the Tanker IMO Oil Spill Liability Protocol, the CLC, the IOPC Fund, the Supplementary Fund, but even those are very limited in what they cover—not necessarily their financial limitation limits, but what they cover and what they do not. Then you have the Bunkers Convention, the limitation of liability for maritime claims, but we have no international convention regarding liability for offshore drilling. That is something I think the UK Government, in its representation on the International Maritime Organisation, could be very helpful in. However, the UK Government along with the US Government opposed the recent proposal—I think it was in April—by Indonesia to have the IMO mandate expand beyond shipping to include offshore oil and gas drilling, which I think is something we need to reflect on.

There are a number of other aspects on this, but you asked me to be brief, so I will be.

Chair: My colleague Zac Goldsmith wishes to come in on one of the points made there.

Q391 Zac Goldsmith: Thank you for your evidence. I just wanted to dwell for a few more seconds on this point of liability. I think in your work for Greenpeace on the Oil Spill Prevention and Contingency Plan, you recommended an unlimited liability mechanism. Is that correct?

Professor Steiner: That is correct.

Q392 Zac Goldsmith: What would have been the impact had there been the unlimited liability requirement on BP? What would have been the impact on them financially?

Professor Steiner: Fortunately, BP stepped up to the plate, did the right thing and excused themselves from the limitations of liability in US law. They did the right thing, because they had the deep pockets and they knew that it would be politically imprudent—to put it mildly—for them to hide under the \$75 million US liability limit for offshore drilling rigs in the US. The US, Russia, all of the coastal Arctic nations have a dysfunctional liability regime at present.

In addition, under the international regime, most of the Arctic coastal states are members of the IOPC Funds and so on. BP excused itself from that limited liability in US law, which was the right thing to do. Other companies, such as Exxon, Shell—I have asked

Shell if they would forgo the liability limit currently in US law. They have not answered. Effectively, they would but we do not know that.

Q393 Zac Goldsmith: Presumably then, any company wanting to drill in the Arctic would have to demonstrate they have the means to cover the worst-case scenario as a condition of being able to drill. You are nodding, so no need to answer. If that is the case, do you think that is the next best thing we can hope for other than a straightforward moratorium covering the whole area? Is that the second goal?

Professor Steiner: I think that is exactly right. I think it is a patchwork. There are areas such as the High Arctic, which should be a sanctuary. There are areas over the continental shelves of the eight Arctic nations where the nations, I think, could contribute by conducting marine spatial planning and agree that these areas should not be subject to oil and gas drilling. If we are going to do it, then we darn well have to do it as safely and reliably as possible. Having sufficient liability on the line, we have found that companies know how to do this job right and will do the job right.

Secondly, though, there is another aspect to this: the notion of industry self-policing. I know a lot of people belittle this, but there is a really good example of that in the United States. In the nuclear power industry after Three Mile Island, in 1979, I think it was, the nuclear industry in the United States set up this thing called the Institute for Nuclear Power Operations, or INPO. It is a strictly industry-run nuclear power company, non-profit organisation, 400 employees, \$100 million a year budget. The board of directors is comprised of the CEOs of each nuclear power company in the United States. They have not supplanted federal oversight and federal regulatory inspection of the plants, but they have complemented it such that subsequent to Three Mile Island we have not had a serious problem. They did shut down a plant. But it shows that industry, when it is adequately motivated, can self-police and raise the standards of all the operators.

I believe the BP Deepwater Horizon Commission in the United States recommended something similar to INPO for offshore drilling within US waters. I would recommend to the Committee here that we look at an Arctic petroleum offshore institute where any petroleum company operating in the Arctic would participate in this industry self-policing institute. They know how to drill these wells correctly and if they have inspectors from each industry looking at them, I think we will have a much better chance. So we need better Government oversight, better industrial oversight, better financial liability on the line. With that mixture, I think we can reduce the risk, but not to zero.

Q394 Caroline Lucas: You have talked about adopting a risk standard that would be based on as low a risk as possible rather than the more usual “as low as reasonably practical”, and you have made the point that cost should not be an object in that. Could you just say a bit more about how practical that is in the sense of how much extra as a percentage of total cost is it likely to be if companies are required to go to as low as possible? Is that, in effect, another way of achieving a moratorium, or is it likely still to be perfectly financially viable for companies to do everything that has been required of them if they were to go to that standard?

Professor Steiner: I am going to say the latter. They can reduce risk as low as possible. You are right that the extra 10% or 20% of risk—that is, residual risk in a system—is more expensive, more costly, more difficult to dial out, but it can be done. A great example again is the nuclear power industry in the United States and elsewhere, where the risk of even a small probability—these are called low probability-high consequence events, where the risk is so great. In the Arctic Ocean, the risk of a catastrophic well blowout is enormous. We know what the environmental consequences would be. We know it would probably be permanent

damage in several of the ecosystems. You could not clean it up. You could not respond to it. You cannot restore the damage. We know the risk is so great that every potential risk reduction measure and mitigation measure needs to be put in the system. It would not preclude development; it would preclude some of the smaller companies going out there.

Look at BP. Again, I applaud BP, which I have so often said. I applaud BP for their decision last week to back out of the Liberty project as designed, because they took another hard look at it and said, "To do it safely, we would have to put so much money into it, it would be twice the cost that we were anticipating, so we are not going to do it as previously designed. It is a 100 million barrel field. It is not worth it".

Another example of that is Exxon in the Gulf of Mexico. They were drilling a very deep well. It is called the Blackbeard field. This is about five years ago. They looked at the engineering of it and said, "No, this is too risky. We are not going to do it; not worth it." They got out.

There are instances where industry itself realises the risks are too great for the potential rewards. That is the kind of calculus we need, we need them to be making these prudent decisions. No, it does not preclude development.

Q395 Caroline Lucas: Is there any advice you have in terms of ways of reaching a point where there is enough pressure on them to come to that conclusion from time to time, because we have had a whole series of representatives from the oil companies assuring us that the bit that they are doing is perfectly adequate and we do not need anything further? Would your best hope for that be precisely the UN-type forum where other voices could be heard that would not have the direct financial interests that some of the Arctic states have? Is there anything that the UK Government, for example, could do to help pursue that agenda?

Professor Steiner: Certainly, your ambassador to the United Nations could advance that concept of a UN-convened Arctic Council with both Arctic states and non-Arctic states working side by side on this global resource.

The other thing is the notion of local citizens around the Arctic basin. There are three or four million inhabitants. I started my career with the University of Alaska in the Arctic on the Chukchi Sea coast travelling to Eskimo villages. One of the things I was talking to them about was the risks of offshore oil drilling. These people deserve a legitimate, informed participatory role in these decisions, obviously. Just having observer status at the Arctic Council is not enough. What I have recommended is that each nation, each Arctic nation—and I would suggest this to the Committee here—establish an Arctic regional citizens' advisory council that has \$2 million, \$3 million, \$5 million a year from industry to convene each of the major stakeholder groups in a council that has a staff and has the funding to conduct their own research and their own oversight. We put two together after the Exxon Valdez disaster in Alaska. I tried to set them up prior to the disaster, which would have, I think, avoided the disaster altogether, but obviously I was unsuccessful.

I would also mention to you that the model for this I took from Sullom Voe, Scotland. I have worked over there several times and it is the Sullom Voe Oil Terminal Environmental Advisory Group. It is a quintessentially UK model that we took and adapted in the US, which now I think we need to adapt Arctic models from.

Q396 Paul Uppal: Briefly on that specific point, we have had numerous Q&A sessions specifically on indigenous populations, and whether they feel that that they get representation in terms of their own views. Can I paraphrase from what you are saying then? Do you think sometimes, although the Arctic Council is seen as a vehicle for them expressing their concerns and their views, that there can be a deficit or gap there in terms of that feedback actually getting through and following on? I just wanted to clarify that point again with you.

Professor Steiner: You are absolutely right. You said it better than I did, so thank you.

Q397 Caroline Lucas: I have one last question. The model that you are outlining sounds very attractive, the UN-type model where you have the Arctic states and the non-Arctic states, but what chances are there really of getting the Arctic states to agree to that, given that, even to achieve observer status, I think, you have to be able to agree that the Arctic states have sovereignty over the land in question? I just wonder in terms of the realpolitik of that how likely it is to be achieved.

Professor Steiner: Well, the Arctic states are not everything in the Arctic. Certainly, the UK and other Governments south of us have a stake in what happens in the Arctic, if for no other reason than for climate regulation and biodiversity conservation. This is why a UN-convened Arctic Council, I think, makes sense. It is the Arctic coastal states that have essentially, almost pre-emptively, formed the Arctic Council, which was a good idea, but it is not sufficient or adequate—

Chair: Okay, we do have a limited amount of time, so I need to move on now to my colleague Mark Lazarowicz, and we may come back to that point in a little while.

Q398 Mark Lazarowicz: Professor Steiner, good morning. You have been very critical of some of the oil companies' response plans, even though they have been signed off by the relevant national Governments. What do you think the Governments could do to improve those plans and make them more credible?

Professor Steiner: Certainly, Governments and industry traditionally understate risk and overstate their ability to respond to emergency situations, particularly oil spills. There has never been an effective response to a large offshore marine oil spill ever. On Shell, for instance, going into the Arctic, it has a very robust oil-spill response plan—there is no question about it—lots of ships, lots of trained personnel, lots of equipment, but the sad fact of the matter is that less than 10% will probably actually be collected in a significant spill. They know this. There certainly needs to be more research and development in ice condition oil spill response. It may be an impossibility in a large event.

One thing that can be done, the most important thing obviously, is preventing the oil from entering the environment in the first place. One thing that can be done is shortening the drilling season for exploratory rigs, which the US Government has done for the Chukchi Sea drilling season in order to be able to respond to a late season spill before the ice makes up and to sink a relief well to kill a loss of well control around the well before the ice prevents that possibility. There is a lot of R&D that can be done with spill technology in the Arctic. The US Government has just commissioned the National Research Council, which is just in the process of formulating a committee to look at Arctic oil spill response improvements, but I think there is a threshold there that is going to be very difficult to cross.

Look at the Gulf of Mexico. Billions of dollars went into that response. Maybe 2% or 3% of what came into the environment was actually collected. That is a pretty typical actual response. There was a lot that was dispersed and burned, but that was technically not mechanically collected. I think there are limitations to what we can achieve with Arctic oil spill response. We just have to be smarter about it, better about technology development, but also realise the limitations.

Q399 Mark Lazarowicz: On that point, we have had both Cairn and Shell before us quoting research that they said effectively proved that oil spill response techniques will work in the Arctic. Are we at the stage we can really say that, or is that some way off?

Professor Steiner: No, and I have a feeling, if they were to be completely candid, transparent and honest with you, they would admit that the realistic situation is that they

might collect 5% to 10% in a major spill—a well blow-out or a tanker spill or something like this—of what goes into the environment, sometimes much less than that.

With the Exxon Valdez, which was in relatively good conditions in southern Alaska, 60 degrees north latitude, \$2 billion was spent by Exxon in response over three years. They collected maybe 6% or 7% of what was spilled. There is still to this day, 23 years later, oil on the beach from the Exxon Valdez, it is still toxic. Most of the fish and wildlife populations injured have not fully recovered. We know these things have long-term consequences and the notion of the oil companies asserting that they have effective Arctic oil spill response, I think, does not pass the red face test to be honest with you.

Q400 Mark Lazarowicz: Can I ask you about the Governments' preparedness? Exxon Valdez, Deepwater Horizon, there were problems to put it mildly there, but you at least were nearer the possibility of Government intervention vessels and all the rest of it having a role to play. We are talking about the Arctic. Leaving aside the distance, the ice and the difficulty of getting support there, is there the kind of capacity even in the US Government, let alone the Governments with smaller naval and marine resources, such as presumably Denmark and Norway? Is that something that has at all developed yet?

Professor Steiner: No, and the question is a very good question because obviously the answer is no, even in the US and Canada. I think both would admit that we are woefully unprepared. I think the commandant of the US coastguard recently stated that we are just nowhere close to being able to respond to any significant oil pollution event in the Arctic off the United States' Alaskan shoreline. So we do need better international co-operation among the Arctic coastal states, the members of the Arctic Council and spill response, spill prevention and a legitimate national Arctic-wide regime.

I will mention here that the oil and gas standards put out by the Arctic Council, they were written and finalised in 2009 prior to the Deepwater Horizon. They are simply so general as to not be useful for anyone. I can guarantee you that Shell, or Cairn, or Exxon, or BP, or Conoco, or Chevron, no one has picked this document up. I have it right here. It is 98 pages or so. It did not address the seismic risk mitigation. It did not address liability standards. It did not address well containment and control, which are some of the biggest issues regarding the potential impact of offshore oil and gas.

We need better shipping standards in the Arctic, because any of the transport ships, the merchant ships, could have a bunker spill of one or two million gallons or more of heavy bunker fuel. The Bunkers Convention, which some of the Arctic coastal states are members of, but not all, is almost laughable and provides maybe \$20 million of coverage.

So, on the liability regime and prevention, we need better vessel traffic management, real-time vessel tracking and we need tugs to be able to respond to vessels in distress crossing the Arctic. I suggest that perhaps the UK Government could recommend that some of the Northwest Passage in the Northern Sea Route across Russia and across Canada be designated PSSA, Particular Sensitive Sea Areas, within the IMO designation, where it could grant additional focus on their protection.

Q401 Mark Lazarowicz: You mentioned the preparedness or otherwise of the US and Canada. Can you say anything about the preparedness of the other littoral states: Denmark/Greenland, Norway, Russia?

Professor Steiner: I would say Norway is up there, but I am not familiar with all their details. Certainly, Russia is ill-prepared and they know it. The fact of the matter is you can have all the equipment, all the contingency planning in the world, but if you have a major release—if it is one of the model worst case scenario releases that the US Government ran on the Chukchi Sea, with drilling at about 65,000 barrels, a loss of well control in one of the

exploratory well heads, and that coming down to maybe 30,000 barrels a day—there is no way physically or technologically possible to respond effectively to something like that. It's just beyond the scope of even entertaining, I think. We can do better, but I do not think we will ever go above 50%.

Chair: Professor Steiner, at 7.30 our time, the division bell is going to ring, so I am going to hand you over now to my colleague Dr Whitehead, but I do warn you that we will have to come to an abrupt end at 7.30.

Q402 Dr Whitehead: Good morning to you. You have, in fact, answered a number of the points I wanted to raise, which is fortunate, as we have only six minutes left. The Arctic littoral states have now agreed to resolve their outstanding territorial issues. Do you see that as perhaps a springboard for further treaty co-operation in the Arctic? How feasible do you really think, on the basis of where we are now with the Arctic Council, taking that into account, that some kind of treaty protecting the Arctic in the same way as has been arrived at in the Antarctic might be?

Professor Steiner: That, of course, is a huge question. I could deliberate on that for hours this afternoon and this evening.

Chair: We can always send for written evidence.

Professor Steiner: I think it is quite feasible that there will be an Arctic Treaty that protects the interests of the global community in the Arctic, but I think it is actually inevitable that some sort of a new governance structure for the Arctic will be agreed to just because the interests of the Arctic coastal states are going to remain economic, military and parochial. There is so much at stake in the Arctic that I do not think we can just sort of relinquish it to the control of the Arctic coastal states. I say that including the United States as one of the Arctic coastal states.

I think it is feasible. I think it is going to take some time, but I think, if it is couched in the correct way with the indigenous peoples behind it, the NGO community, maybe you do it piecemeal, the High Arctic sanctuary that Greenpeace has proposed—there are some High Arctic areas in the Canadian archipelago as well as the one in Greenland that I think possibly those Governments can contribute as being the final sanctuary of sea ice and polar bear habitat by mid-century. This is very serious stuff here. We are losing this ecosystem. We know we are going to be continually losing it, so we need to think long and hard about the future. I think it is feasible, and I think one of the leaders in that effort could be the UK Government.

Q403 Dr Whitehead: In the context of that sort of move, even of a regime of greater care for shipping transits across the North West-North East passage, do you think that it would be feasible to run the sort of levels of shipping that are projected to emerge over a period at all, or do you think perhaps a part of a treaty might need to be simply restricting shipping pretty much completely as far as those passages are concerned?

Professor Steiner: As an independent scientist I would prefer there to be no shipping in the Arctic. From my standpoint, there is an oil pollution risk, but also the sub-sea noise, much of the Arctic Ocean right now is seismic testing as well as shipping and that has a direct impact on acoustically sensitive organisms such as marine mammals.

I would prefer there to be none, but I think, again, back to the earlier question about prohibition on oil drilling, it is not really feasible. There is Arctic shipping. There will continue to be, I believe, but with tight safeguards and controls over areas to be avoided—if we can keep them 100 miles off coastline, it is a much safer situation, with icebreaker support, tracking them 24/7/365, all the time, but also having a rescue-tug capability to go out and haul them away from shorelines in high winds and things like that and better monitoring.

We cannot get the risk to zero with shipping, just like the oil and gas development, but we can dial down as much as we humanly can and that is, I think, what our goal should be.

If I could just reiterate very quickly, certainly, I would ask the Committee to recommend to endorse the notion of the High Arctic sanctuary—I fully support that—which prohibits oil and gas development and commercial fisheries and mineral exploration and so on; the notion of a UN-convened Arctic and non-Arctic states Arctic Council; the notion of an Arctic offshore petroleum institute, where the industry would come together and set standards and have an inspection regime, making it absolutely certain that any offshore oil and gas development in the Arctic Ocean is as safe as reasonably possible, because it is in everyone's interests to have that as safely as possible; then finally, the enhanced and more rational financial liability regime. It is a patchwork right now. Each coastal state has their own. There is the international regime. They do not meet and matriculate very well. That is a job for some very good attorneys to do that kind of thing, but the P&I clubs should be involved in that as well. I just wanted to reiterate those main points of recommendation, and I appreciate it.

Dr Whitehead: Thank you very much.

Chair: Okay, well, we are very grateful to you—

Caroline Lucas: Very grateful.

Chair: —all of us, for encapsulating your views like that and also for making yourself available. We hope to have the opportunity to be in touch at some later stage, but thank you very much indeed.

Professor Steiner: Again, I applaud the Committee and the House for convening it.

CLARIFYING NOTE FROM WITNESS:

While BP has recently announced that it has suspended its Liberty offshore drilling project off northern Alaska as currently designed, the witness does not know what BP's future plans may be for the lease.

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