

ENCANA SHALLOW GAS INFILL DEVELOPMENT PROJECT
AND EUB APPLICATION NO. 1435831

JOINT REVIEW PANEL HEARING CONDUCTED PURSUANT TO:
SECTION 4.5 OF THE *"AGREEMENT TO ESTABLISH A PANEL
FOR THE ENCANA SHALLOW GAS INFILL DEVELOPMENT PROJECT"*
AND THE EUB'S *RULES OF PRACTICE*

PROCEEDINGS AT HEARING

OCTOBER 22, 2008

VOLUME 13

PAGES 2866 TO 3119

Held at:
Energy Resources Conservation Board
Govier Hall, 640-5th Avenue S.W.
Calgary, Alberta

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1 MR. LAMBRECHT: Just one administrative
2 matter, sir. Thank you for the accommodation of
3 Colonel Bruce which we had advised our friends of and
4 the Panel counsel some weeks ago. We do appreciate
5 that.

6 And with respect to the exhibits that we
7 referenced yesterday morning, those have been given
8 exhibit numbers 003036 to 003046 inclusive.

9 THE CHAIRMAN: Correct, Mr. Lambrecht.
10 Thank you for confirming that.

11 MR. LAMBRECHT: Thank you.

12 THE CHAIRMAN: All right. Ms. Klimek,
13 please continue your cross-examination.

14 A. COL LAMARRE: Sir, I'm sorry to interrupt.
15 But based on yesterday, if you'll bear with me, based
16 on yesterday there were some clarifications and
17 undertakings that we had to provide. And I'm not
18 quite sure when we have to actually provide those
19 things. Is it now, before we start the cross-exam, or
20 at a later time?

21 THE CHAIRMAN: Colonel Lamarre, do you have
22 the results of those undertakings available?

23 A. COL LAMARRE: Sir, I do.

24 THE CHAIRMAN: Then I would suggest we do
25 that right now.

1 MS. KLIMEK: Mr. Chair, before we go into
2 that, I have two small administrative matters on our
3 undertaking and I wonder if I could put them on the
4 record before we start theirs so we're not breaking it
5 up.

6 THE CHAIRMAN: Sure, that would be fine.

7 **RESPONSES TO UNDERTAKINGS BY THE COALITION:**

8 MS. KLIMEK: Sorry, Colonel Lamarre, but.
9 When our panel -- when the Coalition's panel
10 was up, they were asked to produce the field op, or
11 the study of the Express Pipeline. We now have a hard
12 copy. And I just wanted to put that in. And it has
13 already been given a number and it's 006-044. So I
14 just wanted to make that clear.

15 **EXHIBIT 006-044: Field Observations of the**
16 **Recovery of Native Rangeland Plant**
17 **Communities on Express Pipeline - July 2008**
18 **(Not yet officially submitted)**

19 And we were given one other undertaking and this
20 was when Mr. Denstedt was examining the Coalition
21 panel. And this is when I'm going to ask for some
22 help from Canada. And it was to provide the Federal
23 vegetation survey guidelines, a copy of those.

24 Ms. Bradley referred to them. And I was -- when I
25 talked to Environment Canada, they said the author of

1 that was here. And I was wondering if we could ask
2 them if they could provide a copy of that for us.

3 THE CHAIRMAN: Mr. Ingstrup, can you respond
4 to that, please.

5 A. MR. INGSTRUP: I can. We do have -- it is a
6 draft document at this time, but we do have a copy
7 that we could provide on the understanding that it is
8 a draft.

9 MS. KLIMEK: Yes, I think that was clear
10 on the record that it was draft. So if we could get
11 that and then that would fulfill that undertaking. So
12 those are my administrative matters.

13 THE CHAIRMAN: Thank you, Ms. Klimek. When
14 we get that document, we'll add it as an exhibit as
15 well, then.

16 Colonel Lamarre, then, could you continue
17 with your undertakings, please.

18 **RESPONSES TO UNDERTAKINGS BY GOVERNMENT OF CANADA PANEL:**

19 A. COL LAMARRE: Thank you, sir. The first
20 thing I want to refer to is clarification to 32 well
21 per program -- sorry, 32 well program. The question,
22 the reference here is Exhibit 006018 and the appendix
23 is Alpha 0182057.

24 And as you see we now have the map up on the
25 screen that Colonel Bruce used yesterday to refer to

1 that. He had been asked about the 32 well per section
2 and he explained that there was a pilot project
3 located down in the area that is being demonstrated by
4 the mouse right now. In fact, the document refers to
5 32 oil wells in the Oil Access Area and Military
6 Training Area, parts of the training area. And right
7 now, as you can see, we've got the same circling that
8 is going on as to where that application was. So it
9 was not the pilot project down in the south, but 32
10 oil wells located up in the northwest corner of the
11 Base.

12 Sir, the second clarification that I have has
13 to do in response to a question about activities in
14 the NWA post-2004. And it was erroneously stated that
15 there had been none. But, in reality, in 2006 EnCana
16 installed 10 SCADA, which stands for Supervisory
17 Control and Data Acquisition. Again, that's
18 Supervisory Control and Data Acquisition units, each
19 comprising a computer data box and pole with solar
20 panel at existing gas metering stations. And that's
21 within the National Wildlife Area. Okay. And to do
22 that, EnCana went through the AFD process and they
23 were granted the permit to go in and install these
24 things.

25 The third clarification I think is important

1 here is in response to a question that you had,
2 Ms. Klimek, as to how it is the process by which DND
3 gets environmental information for granting of
4 licences. And there was the question about the EO
5 coming in 30 days after the fact.

6 We discussed this last night, and I think
7 it's important for the Panel to understand what the
8 process is and to clarify for everybody here. And to
9 do this, I'll turn it over to Ms. Guenther who is
10 going to explain it, okay?

11 A. MS. GUENTHER: Good morning. Thank you
12 Panel for the opportunity to clarify my answer from
13 yesterday as it pertains to the requirement for
14 environmental work at the time of application.

15 THE CHAIRMAN: Ms. Guenther, please, more
16 slowly.

17 A. Industry applies to the Base with Routine and
18 Non-Routine Applications. All the applications have
19 had environmental work completed. However,
20 Non-Routine, Non-Routine Applications also provide
21 what I had called an environmental waiver material,
22 which is a shortened version of the environmental
23 overview. The waiver will include why the location is
24 non-routine and the mitigation for why it was left
25 where sited.

1 This process was implemented to allow for
2 routine applications to move through the system at a
3 faster pace while the non-routine require closer
4 scrutiny and usually fieldchecks.

5 All applications receive desktop and GIS
6 reviews for environmental concerns. Thirty days after
7 approval is given for locations, the entire
8 environmental overview is provided for the Base's
9 records and audit.

10 THE CHAIRMAN: Thank you. That concludes
11 the response, Colonel Lamarre?

12 A. COL LAMARRE: Unfortunately, sir, I'm not
13 not done yet. We also have some undertakings that we
14 need to address right now.

15 One of the undertakings that we were, were
16 asked to take on, or offered to take on, refers to
17 reference 80182035. And in there it refers to a
18 document that was severed. It was as a result of an
19 Access to Information request and the document had
20 been severed and it was dealing with deeper rights in
21 the NWA.

22 Ms. Klimek had asked, "Do we know, was that
23 EnCana, by any chance, who was in that discussion when
24 paragraph 12 was around and wanting deeper mineral
25 rights?" So specifically the question was, "Who was

1 it that had been severed out of there?"

2 That paragraph relates to a discussion
3 between Alberta Energy, Industry, and the Base. And,
4 really, as this was a severed document through ATI, I
5 cannot confirm at this point if it was SIRC or EnCana
6 who was at the meeting, or anybody else, for that
7 matter.

8 The purpose of that meeting was to discuss
9 the possibility of a company doing a re-entry on a
10 well and drilling to a deeper gas zone.

11 The Base in that case deferred their decision
12 on this matter pending the outcome of a comprehensive
13 study and environmental assessment.

14 It leads to the next undertaking. And this
15 particular undertaking had to do, and, again, in the
16 same area:

17 "Do you know what they're referring
18 to when they say 'the posting of
19 the bottom part of the shallow gas
20 zone'? And, specifically, is that
21 with the shallow gas zone, does
22 that include what is part of this
23 application, or is it something
24 different than what's here and it's
25 left, I guess to be exploited."

1 So going to the same reference, this comes down
2 to, EnCana was looking at purchasing, we believe, some
3 deeper gas mineral rights that they did not own at the
4 time. To answer the specific questions, do you know
5 what they were referring to when they say "the posting
6 of the shallow gas zone"? Our answer is "not
7 precisely", but we believe it to be the Second White
8 Specks. And I had to get some expert advice on this.
9 Specifically about the levels of gas pockets,
10 including the Milk River, the Medicine Hat, and
11 finally the Second White Specks, the third lowest
12 down.

13 Now, as far as to whether or not it's
14 something else that they want to leave exploited, I
15 don't believe that DND or the Government of Canada are
16 the ones that can answer the question. It actually
17 probably has to go back to EnCana who would have the
18 expertise and would be able to to state whether or not
19 they were targeting that specific spot.

20 That's the second undertaking that we had,
21 sir.

22 And there's a third and final one which deals
23 with item 006-018. And that's at appendix Alpha
24 0182010. And this was a document that had been
25 written by Mr. Brent Smith, who is sitting behind me,

1 and the specific questions had to do, when they
2 referred to various species at risk, more specific, so
3 I'll turn to him now to answer that.

4 Mr. Smith.

5 A. MR. SMITH: So to answer the
6 question, in support of the environmental overview,
7 there's two types of observations databases searched,
8 that is the Alberta Natural Heritage Information
9 Centre, so before they went on the ground, they
10 actually did a database search of what was known to
11 exist in the area. Those observations included Dwarf
12 Woolly-Head, common dodder, prickly milkvetch, smooth
13 bolsduvalia, flowering quillwort and Long-billed
14 Curlew.

15 In support of the environmental overview,
16 direct observations were also carried out and the
17 following species were also observed. Louisiana broom
18 rape, silver leaf psoralea, low milk vetch,
19 narrow-leaf Goosefoot, Nevada Blue Grass, nodding
20 umbrella plant, Burrowing Owl nests, and a
21 Sharp-Tailed Grouse lek.

22 A. COL LAMARRE: Sir, that's it. Thank you
23 very much.

24 THE CHAIRMAN: Thank you, Colonel Lamarre.
25 Ms. Klimek, you can now begin.

1 DEPARTMENT OF NATIONAL DEFENCE, ENVIRONMENT CANADA, AND
2 NATURAL RESOURCES CANADA WITNESSES (ON FORMER
3 OATH/AFFIRMATION):

4 Dr. Jennifer Rowland, DND (former oath)

5 Col Chuck Lamarre, DND (former oath)

6 LCol Malcolm Bruce, DND (former oath)

7 Mr. Mike Norton, EC (former affirmation)

8 Mr. Dave Instrup, EC (former oath)

9 Dr. Dave Duncan, EC (former oath)

10 Ms. Jessica Coulson, NRCan (former affirmation)

11 Mr. Andy Didiuk, EC (former oath)

12 Mr. Paul Gregoire, EC (former affirmation)

13 Ms. Brenda Dale, EC (former affirmation)

14 Dr. Darcy Henderson, EC (former oath)

15 Mr. Olaf Jensen, EC (former affirmation)

16 Mr. Brent Smith, DND (former oath)

17 Ms. Delaney Boyd, DND (former affirmation)

18 Ms. Karen Guenther, DND (former affirmation)

19 Dr. Tony Hamblin, NRCan (former affirmation)

20 Dr. Fons Schellekens, NRCan (former affirmation)

21 Dr. Miroslav Nastev, NRCan (former oath)

22 Dr. Rod Smith, NRCan (former affirmation)

23 Dr. Stephen Wolfe, NRCan (former affirmation)

24 Mr. Wes Richmond, DND (former oath)

25

1 **CROSS-EXAMINATION BY MS. KLIMEK (CONTINUED):**

2 MS. KLIMEK: Good morning, Mr. Chairman,
3 Panel members. Good morning, Panel.

4 Q. What I wanted to do today is carry on with some of the
5 Access to Information. And the one I'm going to be
6 referring to, for starters, is A0182057. And if we
7 could go there, there's a 11-page document a few
8 pages in. That's the one. Now, this -- and I'll
9 start with you, Colonel Lamarre, and then you can
10 tell me who this should be referred to.

11 Now, as I understand this document, it is
12 looking at -- it's a follow-up to the one we were
13 talking about yesterday. And it's looking at the
14 Koomati shallow infill program. Is that correct?

15 A. COL LAMARRE: It appears to be.

16 Q. And I see it was signed by Mr. Smith and -- is...

17 A. Yes, it was.

18 Q. So we should probably direct our questions to him;
19 would that be fair?

20 A. Yes, that would be.

21 Q. Okay. Now, Mr. Smith, this -- it says at the top "the
22 audit of" and I presume that is EnCana Koomati
23 minimal disturbance shallow infill program; is that
24 correct?

25 A. MR. SMITH: Yes, Ma'am.

1 Q. And this was to look at -- was this a follow-up to
2 this document we discussed yesterday?

3 A. Yes, Ma'am.

4 Q. Now, this was to deal -- I take it, it was a minimal
5 disturbance program that was used to install those
6 wells?

7 A. Yes, Ma'am.

8 Q. And I just -- before this program was drilled, EnCana
9 would have had a program and it would have had access
10 roads delineated and their program would have been
11 submitted to the Base; is that correct?

12 A. It is my understanding that nothing was provided to
13 the Base in terms of access or other infrastructure
14 other than the actual physical well locations.

15 Q. Okay, so in that process, at that time, the Base
16 wasn't requiring them to set out how they were going
17 to get to these wells or -- is that a fair statement?

18 A. From what I understand, yes.

19 Q. Okay, so -- now, I'm looking at the aim of this, and
20 these are your words, Mr. Smith, so I'll ask you a
21 few questions about it. Under Paragraph 1:

22 "The goal of minimal disturbance
23 development is to avoid disturbing
24 native Prairie by employing
25 techniques and equipment that

1 result in the least possible
2 disturbance. Little information is
3 known about the effectiveness of
4 these actions."

5 So at the time this was wrote -- written in 2006,
6 you would agree with me there wasn't much known about
7 the effectiveness of these techniques?

8 A. From the Base perspective, no.

9 Q. Okay. And was the aim of this to find out what the
10 results of this was from the Base -- for the Base to
11 find that out?

12 A. The goal was to treat -- to develop an understanding
13 for myself and for the Base in terms of understanding
14 what the overall effects of minimal disturbance
15 shallow gas development were.

16 Q. Okay. Now, as I understood it that -- then the Base
17 went out and actually physically looked at 33 of the
18 wells; is that correct?

19 A. Yes.

20 Q. Now, if we can turn to Paragraph 4. Now, what -- do
21 you know when this -- these wells were drilled, what
22 time of the year?

23 A. My understanding was they were drilled both winter and
24 partially in the spring period.

25 Q. Okay. Now, what was found here in Paragraph 4 -- did

1 you go out and look at these yourself?

2 A. With other staff support, yes.

3 Q. Okay. Now, at Paragraph 4, and this is of -- analysis
4 of vehicle rutting revealed significant trends. Now,
5 all sites exhibited some degree of rutting damage.

6 Would that be all 33?

7 A. Yes, Ma'am.

8 Q. And then it goes on a bit:

9 "Pictures indicate that rutting is
10 not contained within a particular
11 area of the lease. Vehicle tracks
12 are evidenced within 50 metres of
13 the lease in every direction and
14 show no pattern, resulting in heavy
15 compaction at many of the sites."

16 Now, that was your observation on the actual well
17 sites that you went out to see?

18 A. That is correct, yes.

19 Q. Now, if we go down a little bit, and it says:

20 "Extreme cases of rutting were
21 observed up to 65 centimetres..."

22 Is that the depth of the ruts?

23 A. Yes.

24 Q.

25 "... indicating that development

1 was occurring during wet and
2 unfrozen ground conditions,
3 contrary to what was dictated in
4 AEUB IL202201."

5 So was that on -- do you know how many sites you
6 saw that on, or was it all of them?

7 A. That particular case was an extreme example. I think
8 there's data later on to show the overall trends. In
9 some cases, there was minimal rutting. In other
10 cases, there was extreme examples like this. But I
11 couldn't -- unless I referred to the actual --

12 Q. Okay.

13 A. -- information, I couldn't tell you offhand.

14 Q. Okay. Now, had this AEU IBL 200201, what was --
15 that's an information letter. Is that with respect
16 to minimal disturbance?

17 A. Yes, it is.

18 Q. Okay, so that's the EUB's guidelines for minimal
19 disturbance?

20 A. Yes, it is.

21 Q. Okay. Now, going on to Paragraph 5. And at the
22 beginning it says:

23 "Only 1 of 33 wells were accessed
24 using a single access trail. And
25 the maximum number of trails found

1 on a single site..."

2 And then there's the legal:

3 "... was nine."

4 So am I understanding correctly that, of the 33
5 wells you looked at, only one had a single access and
6 the rest had multiple access?

7 A. That is correct, yes.

8 Q. Now, further down it says:

9 "The requirement for making lease
10 boundaries and access trails is
11 also a requirement..."

12 I presume of -- is that EnCana's:

13 "... EnCana's Environmental
14 Protection Plan to ensure that
15 trespass does not occur."

16 So I take it EnCana had an environmental plan for
17 these wells?

18 A. COL LAMARRE: I'm sorry to interrupt at
19 this point, but I think we need to -- and this comes
20 back, again, to the **Access to Information and Privacy**
21 **Act**, and I don't know propose that I have the deepest
22 knowledge of these things, so whenever there is a
23 request for information that comes in an Access to
24 Information request, it goes in through the national
25 level to our headquarters there and then it filters

1 down to all the experts to do it and then the
2 information itself that is provided is reviewed and as
3 necessary it is severed. So specifically in our case
4 matters that tend to address National Defence,
5 national security. But also within the guidelines of
6 Access to Information, specifically companies and
7 industry might also have information kept out of
8 there.

9 So I guess I'm looking for guidance, sir, as
10 to how we answer the kinds of questions --

11 Q. I will --

12 A. -- where the document's already severed?

13 Q. I will rephrase my question so you don't have to
14 address that. How about that? I'll make it easier
15 for you. The Koomati area, who has wells in that
16 area?

17 A. MR. SMITH: My understanding is, is that
18 it's EnCana.

19 Q. Okay. That's all I need. So I will rephrase my
20 question, then, to you, Mr. Smith. The company that
21 was -- you're referring to in this document did have
22 an Environmental Protection Plan that did cover the
23 drilling of these wells?

24 A. That is my understanding, yes.

25 Q. And in that plan, they had certain requirements to

1 ensure that trespass didn't occur off of their lease
2 sites; is that correct?

3 A. Yes.

4 Q. Okay. And part of that was to -- forget that
5 question.

6 Now, after -- now, I'm going to the next
7 page. And there's a recommendation there. And
8 that's number 11. Or there's one above it:

9 "It is recommended that studies be
10 carried out to assess the
11 ecological impacts of high
12 intensity infill drilling."

13 Is that the study -- is one -- let me start out.
14 That's your recommendation out of that, right,
15 Mr. Smith?

16 A. Yes.

17 Q. And is that the study we were talking about yesterday,
18 did it grow out of that recommendation or would that
19 fulfill it, that's going to be done in 2009?

20 A. There are currently studies underway looking at high
21 intensity infill drilling, yes. They will not be
22 completed at least for a couple more years.

23 Q. Okay. And then your next recommendation is that:

24 "The *Species At Risk Act*, RSO, and
25 EUB Guidelines be strictly enforced

1 at CFB Suffield."

2 That is also one of your recommendations?

3 A. Yes.

4 Q. Now, I guess out of this my, question to the panel, or
5 DND, is: Once you saw these problems, was anything
6 done or how did you deal with them with the
7 operators? Were any sanctions levied or how were
8 they dealt with?

9 A. COL LAMARRE: We'll just take a moment for
10 that one, please.

11 In response to that, no specific actions were
12 taken, though there were discussions that were
13 undertaken with the company, with EnCana, and it is
14 really at that time that there was a greater
15 realization that the oversight had to be there, but no
16 specific actions were taken.

17 Q. Maybe help me out a little bit here. When you see
18 this level of, I would say, breach of one of its --
19 only 1 out of 33 wells, and you're seeing rutting and
20 you're seeing other issues, is there a reason why the
21 Base has not taken any sanctions against this? Do
22 they feel that there is -- it's better to work with
23 industry than to penalize them? I'm trying to
24 understand the rationale and why -- it seems to me,
25 like, from a layman's, that something further should

1 have been done other than discussions, but can you
2 explain why?

3 A. MR. RICHMOND: Wes Richmond. This is
4 probably a question that currently Bruce might be
5 better able to answer when he gets back.

6 But for a bit of clarification, we were
7 involved in, in some discussions with, with EnCana at
8 that time about our relations and we were putting into
9 place Range Standing Orders which covered the
10 environmental protocols for oil and gas activities.
11 And we were in discussions with, with the company at
12 that time, and through SIRC, for improving the
13 conditions that we were finding in, in these various
14 audits. So there were actions being taken. We did
15 not and probably do not have any, any means for
16 enforcement because those are areas that we were into
17 discussions on and never quite finished, never got to
18 the point of actually coming up with an enforcement
19 mechanism.

20 The Base Commander does have authority to
21 limit access and that would probably be the only
22 avenue at this time.

23 Q. You sort of anticipated where I was going,
24 Mr. Richmond, because my next question is: What
25 tools did you have at hand that you could enforce?

1 And you said at this time you didn't. Have those
2 developed since then, that there are some enforcement
3 mechanisms when you see these types of things
4 happening?

5 A. No, we have not progressed to the point where we've
6 now got any mechanisms to deal with these things.
7 We're still at the same point we were at that time.

8 A. COL LAMARRE: Can I add a bit to this also.
9 In 2005, an ultimate dispute resolution process was
10 ordered by then Commander of Land Force Western Area
11 who was Major General Grant, retired now. And at that
12 time, I'm not sure what exact circumstances, who
13 contacted him first, but General Grant ordered the
14 Base Commander to go through a process of ADR,
15 Alternate Dispute Resolution, with a number of
16 individuals, which included Alberta Energy, SEAC,
17 SIRC, EnCana, and Harvest Energy as well. And I
18 believe, although I can't confirm right now, the ERCB
19 might have been involved.

20 Specific issues that were going to be
21 addressed with them were things such as the well
22 density, RSOs in the approval process for development,
23 so the AFD.

24 ADR, of course, is non-binding, but -- and
25 not all participants stayed until the end. So when

1 this process wrapped up in 2006, by then some folks
2 had already pulled out, including EnCana and Harvest
3 Energy and Alberta Environment.

4 But the things that did come up, for example,
5 is a clearer AFD, Application for Development. And
6 the RSOs, which were being discussed at the time, had
7 now been published and are now entered as part of the
8 evidence that we have here.

9 So in your question, Ms. Klimek, you were
10 asking, is there sort of what process do you have to
11 address transgressions? Not only do we have the face
12 to face and the coordination that occurs between
13 various elements of the Base, and also the Base
14 Commander, with his counterparts within EnCana, if you
15 will, but also at times, other measures have been put
16 in place to ensure that the channels of communication
17 were kept open.

18 Again, DND is very conscious that we need to
19 enable all potential users, but it has to be within
20 the laws. And one of the first approaches that we
21 have at all times is to enter into discussions and
22 continue that way.

23 Q. I would like to follow up a bit on that, Colonel
24 Lamarre. Did you say it was Alberta Energy was part
25 of this, or was it Alberta Environment?

1 A. COL LAMARRE: It was Alberta Energy.

2 Q. Okay. And when you say that parties pulled out -- and
3 you said EnCana and Harvest pulled out?

4 A. That's correct. We're getting into a level of detail
5 that, if necessary, I'll have to turn to members of
6 the Base itself to answer that. Are you in a position
7 to do so? I'm sorry, could you rephrase the question
8 again?

9 Q. Well I'm just -- maybe I'll lead up a little bit. So
10 the two parties you said pulled out were EnCana and
11 Harvest Energy; is that correct?

12 A. MR. RICHMOND: Harvest had, had quit
13 attending the meetings earlier on. They were a party
14 to the process in the beginning and they were happy
15 to, to let EnCana speak on behalf of industry. But
16 EnCana had pulled out later on in the summer of 2006,
17 I believe it was.

18 Q. And did they give a reason why they pulled out of that
19 process?

20 A. There were a number of issues that they were having
21 difficulty reconciling with us. And those were
22 setbacks for species at risk and wetlands. And the 16
23 disturbance per section issue and -- sorry, Base
24 Commander authority was the third.

25 Q. I'm sorry, I didn't hear that last one.

1 A. Base Commander authority.

2 Q. So as I understand it the process, then, continued
3 without it to develop the RSOs and the application
4 process?

5 A. The application process was the first item that was
6 actually dealt with by the -- through the ADR process
7 and we came to an understanding and developed a format
8 for that. And the rest of it was, was discussed by
9 ourselves with the, with the EUB. And we carried on a
10 little bit with ADR discussions even though EnCana had
11 pulled out. And then, after a time, those broke down
12 as well because there was no, no sense progressing any
13 further.

14 However, we did carry on with our Range
15 Standing Order or oil and gas protocol, if you will,
16 and carried on developing that. And that's since been
17 tabled, as you heard earlier.

18 Q. So you said the ERCB, then, pulled out after some
19 point?

20 A. That was -- no, it was basically mutually agreed upon
21 by ourselves and the ERCB. I can't recall what the
22 gentleman's title was. He was responsible for, for
23 the ADR process.

24 MR. MOUSSEAU: Maybe I can help with this.

25 I do have some knowledge about it. I think what --

1 the ERCB's involvement was sort of two fold. First of
2 all, they provided the mediator, or the person in
3 charge, who is Bill Remmer, a former employee of the
4 ERCB. The ERCB was also there in an information
5 capacity to provide information with respect to its
6 rules and requirements. So I hope I've captured that
7 appropriately.

8 MS. KLIMEK: Okay.

9 Q. Now, I guess we have a new player that we haven't
10 heard about until now, is Alberta Energy. And, first
11 of all, what was their role in that and did they stay
12 to the end?

13 A. MR. RICHMOND: They were basically providing
14 oversight over the sale of the resource and providing
15 any legal background they could on that aspect of it
16 as the rights obviously were sold through them. And
17 they were involved, but towards the latter stages of
18 the process, had very little input into it, so they
19 were not necessarily involved in all the final
20 meetings.

21 Q. Now was SEAC there for the whole process?

22 A. Yes, they were.

23 Q. Okay. So I just want to go back to this enforcement
24 mechanism because I may have lost it or didn't quite
25 understand it. As a result of the ADR, or where we

1 are now, is there a mechanism for enforcement other
2 than this communication and trying to work things
3 out?

4 A. COL LAMARRE: I'll take that one. There is
5 a mechanism for enforcement. And we referred to it in
6 our opening statements. The Base Commander has the
7 final authority for access to the Base. And if people
8 are in contravention to what's going on on the Base,
9 he can actually ask them to desist and to leave. But
10 very much, as this has been progressing, the intent
11 has been to work co-operatively with the users of the
12 Base, including industry, including those who come and
13 graze, and including folks who are doing research.
14 And I don't believe -- we would have to confirm with
15 Colonel Bruce when he comes back -- I don't believe
16 that at any time that they actually said to anybody
17 "cease and desist and leave the Base."

18 Q. Now, this is along the same line, but if we could turn
19 to A0182035. And if we could go -- there's a
20 document that is of four pages. And if we could
21 go -- this, I take it, is a summary of discussions
22 within a meeting on the Base; is that correct?

23 A. I just need one second to quickly scan through the
24 document. I can confirm that the meeting did take
25 place. And in accordance with the first paragraph,

1 really was meant to brief up, I believe, any Base
2 Commander.

3 Q. Okay. Now, I would like to turn to Paragraph 4F which
4 is on page 2. And it says here:

5 "The Base needs protocols and
6 processes for the ONG industry,
7 including penalties for
8 non-compliance. And G3 confirmed a
9 draft is in process and this will
10 be shared with severed name to
11 assist in joint development of the
12 RSOs chapter."

13 So I take it back in 2005 this was recognized as
14 a shortcoming in dealing with oil and gas?

15 A. MR. RICHMOND: That's correct.

16 Q. Now, the protocols and processes, is that what came
17 out of the ADR and the RSOs?

18 A. No. Those processes didn't quite develop to that
19 point when ADR had ceased.

20 Q. Okay. So the protocols and processes that are
21 referred to here, have they been done?

22 MR. LAMBRECHT: Mr. Chairman, if I just
23 might, since we're dealing with a document that has
24 been subjected to Access to Information, what I wanted
25 to do is to articulate our understanding of how these

1 materials may be treated here.

2 Our understanding, as counsel, is that
3 Section 8 of the **Privacy Act** provides an exemption to
4 ATIP exemptions for information provided to the
5 Attorney General for the purposes of legal
6 proceedings.

7 We feel that this panel falls within, and its
8 proceedings, falls within the phrase "legal
9 proceedings". And so the sum of that is that we do
10 not feel that the personal information which was
11 exempted in the Access to Information process is
12 sheltered from disclosure here.

13 I hope that's helpful and clear.

14 Basically, if a person -- any person may make
15 an Access to Information request. It is processed.
16 And exemptions for various personal information,
17 including the identity of third parties, is removed
18 and then the documents are produced. And so that's a
19 sort of a paper exercise.

20 When it comes to legal proceedings, our
21 understanding is that that information may be
22 produced. We do not expect that there may be other
23 types of exemptions that might be applicable here such
24 as national security.

25 So I just wanted to make that clear before we

1 proceed too much further. And I don't -- that's our
2 view, as counsel. I'm not sure how the witnesses wish
3 to deal with it, but that's in their hands.

4 THE CHAIRMAN: Thank you, Mr. Lambrecht. I think
5 that's also consistent with the statement Colonel
6 Lamarre made a few minutes ago as well on this matter.

7 Ms. Klimek, are you okay with that explanation
8 and will you direct your questions accordingly?

9 MS. KLIMEK: Well, I just want to make
10 sure -- I'm not sure I understand what Mr. Lambrecht
11 -- and it's me, probably not him. It's his position
12 that it is okay to...

13 MR. LAMBRECHT: Yes. In other words, if my
14 friend were to ask the panel to undertake to provide
15 to the Attorney General the information which is
16 removed so that the AG could provide it to the panel,
17 we would do that. I think it's shorter if she simply
18 proceeds on the basis that we are not going to object
19 if questions are asked respecting the blanked-out
20 information.

21 MS. KLIMEK: I'm certainly fine -- I certainly
22 am fine with that. And I'm still not sure that I need
23 to get into much of the blanked-out information, but
24 that is useful.

25 Q. And Colonel Lamarre, I guess what I want to know out

1 of this document where it was acknowledged back in
2 2005 that the Base needs protocols and processes,
3 including penalties, what has happened since then to
4 develop those protocols and processes, as well as the
5 penalties, to deal with these situations on the Base?

6 A. COL LAMARRE: I'll start off, first of all,
7 with really two responses, two parts to the response.

8 The first one has to do with the mechanisms
9 that were being developed. During the presentation by
10 the Base Commander, you saw the process by which
11 applications to do work within CFB Suffield are
12 addressed. And there's a very clear process by which
13 the steps and the stations need to be met so that
14 applications can be approved.

15 Secondly, to make sure that there was greater
16 oversight, the Base Commander established the RSS
17 section, of which we have members right here. So,
18 again, we were going from a shop of one individual
19 going up to a shop of approximately 22 individuals.
20 The oversight was being instituted by the Base
21 Commander as well.

22 The third aspect is to do -- is with, for
23 example, governs documents such as the Range Standing
24 Orders, specifically Chapter 7, which addresses oil
25 and gas. Chapter 7, which addresses oil and gas.

1 So all of those things provide guidelines as
2 to how. And it's not only for oil and gas when they
3 talk about the Application for Development, it applies
4 to all participants, all individuals who would like to
5 come on the Base and do some projects, whether they be
6 construction or research.

7 But when you get to the RSOs, specifically,
8 then you get into oil and gas directions.

9 As far as the enforcement mechanisms, I don't
10 have the expertise to speak about that at this point,
11 other than to revert to the question I already have,
12 or I already answered as to the powers of the Base
13 Commander and what he can do.

14 What is clear to me, however, is that there
15 has been increased awareness on the part of Base
16 Commanders starting -- certainly including the one
17 that is currently in the position, but the two
18 previous ones as well, Lieutenant Colonel Drew,
19 D-R-E-W, Drew, and Lieutenant Colonel Steed. And
20 these gentlemen, through the observations of the
21 increase in gas activity, undertook to have more
22 communication and undertook also to put in place
23 control mechanisms, of which RSOs are just one
24 example.

25 Q. So I take from your answer then, Colonel Lamarre, that

1 when you talk about protocol and processes, and I
2 just want to be perfectly clear on this, is there any
3 protocol or process for penalties for non-compliance?
4 Has that been developed?

5 A. I am told that we are just simply not there yet. It
6 is an evolutionary process. And we are working with,
7 for example, the RSOs, but the actual compliance
8 things and the penalties, we're not fully developed.
9 It was the intent that the actual ADR would address
10 some of these issues, but since EnCana pulled out
11 early, we did not achieve a final document, if you
12 will, or a final set of protocols for this.

13 Q. Now, I'm going to move on to another area and I would
14 like to turn to Document A-0182001. And I would like
15 to go to a document called a "Minute Sheet". And
16 this is just an observation that I've made in this
17 document. We're going to come back to the actual
18 substance of this. But I see that this Minute Sheet
19 was signed by you, Mr. Richmond; is that correct?

20 A. MR. RICHMOND: Yes, that's correct.

21 Q. Now, in Paragraph 2, you're referring -- I want to
22 know what you're referring to here. And it's the
23 sentence that starts:

24 "Finally, once the well is in
25 service there will be ongoing

1 requirements to visit the site to
2 carry out servicing. As leaks in
3 these lines are not uncommon, they
4 are driven over regularly for
5 detection. If a leak is found,
6 excavation and repair are needed."

7 Now, what type of lines were you referring to in
8 that document?

9 A. This would be a shallow gas tie-in from a well to a
10 main.

11 Q. And when you say "leaks are not uncommon", what were
12 you referring to? Are you referring to pipelines or
13 these shallow tie-in lines generally in that
14 statement?

15 A. Yes.

16 Q. And when you say "they're not uncommon", were you
17 seeing a lot of them on -- leaks on the Base, or what
18 were you referring to there?

19 A. I should probably qualify that. They do occur because
20 there is an extensive network of that type of pipeline
21 out there, so they, they do happen regularly. I
22 wouldn't want to suggest that they happen frequently
23 on one line. But there is a program that I understand
24 that EnCana and other gas companies do employ where
25 they drive the lines with some sort of a detection

1 device sniffing for leaks, and then, when they find
2 them, they shut the line and repair it.

3 Q. Now, when you say they drive it with a sniffing
4 device, what kind of vehicle is used to do that and
5 are there -- let's start with that.

6 A. I'm really not qualified to answer that.

7 Q. Okay.

8 A. But I believe it's a very small vehicle.

9 Q. Okay. And when those -- if a leak is found, then is
10 that something that has to be dealt with immediately,
11 do you know?

12 A. I'm not really qualified to deal with that, but I
13 would think it would be fairly, fairly soon.

14 Q. Okay. And what happens, then? Is the area excavated,
15 then, to expose the leak and it's fixed; is that
16 correct?

17 A. That's my understanding.

18 Q. Now, would the operator need a permit to go in and do
19 that excavation and to fix the repair or is that
20 covered in your -- some general right to be out
21 there?

22 A. That would depend on which area of the Base it
23 occurred in. Only, only the NWA requires permits.

24 Q. Okay, so if we had a leak in the NWA, and they needed
25 to get out there to excavate it, would they have to

1 apply for a permit to go out and do that?

2 A. MS. BOYD: Yes. If anyone wants to do
3 any sort of, especially excavation, in the National
4 Wildlife Area, a permit is needed. Now, in this
5 initial case where we are dealing with a period where
6 we're developing routine access permits for industry
7 so they can conduct routine maintenance on their
8 wells, we would hope that eventually coverage of such
9 things as emergency repairs will be part of that
10 permit.

11 A recent permit that we have issued to
12 industry does include a condition that indicates that
13 access for emergency purposes is allowed. So at this
14 point industry is, in this case, EnCana, for their
15 routine access, is covered for those types of repairs.

16 However, prior to that permit being in place,
17 it was done on a case-by-case basis by calling the
18 Base and informing us of the situation so that we were
19 aware of it and could conduct monitoring. In this
20 case we would still be notified but we have covered it
21 through the permit.

22 Q. So I guess my question out of that is, if you have one
23 of these repairs, and it's occurring during one of
24 our sensitive periods for wildlife or some other SARA
25 species, does the Base take any steps to ensure that

1 those species will not be disturbed during a repair
2 or governed, how do you protect when they can go out
3 there and do it any time?

4 A. In this particular case, and we're talking about well
5 repairs, there -- we, we first need to -- we would
6 discuss with the operator and ensure that we
7 understood what the nature of the emergency was. If
8 it is truly a case of human health being endangered,
9 in that sense we really can't put any sort of
10 blockages on the ability to go in and make the repair.
11 Even if there was a species at risk, it is my
12 understanding that human health would likely override
13 that; however, I can't necessarily speak directly to
14 the legality of that.

15 However, if it is the case that it can --
16 there could be a delay while we assess the site, to
17 ensure that there was no species at risk or other
18 environmental issues, and then put in sufficient
19 mitigation measures, we would, in fact, do that. So
20 human health I believe is the main criteria on by
21 which we would determine the speed with which they
22 would access.

23 Q. Well, I have a follow-up question because I heard you
24 say earlier that they would notify you when they had
25 -- part of their blanket approval was to be able to

1 go out and effect repairs. So I'm having trouble
2 putting those two side by side, that we would look at
3 SARA, we would go out and do an assessment, but
4 meanwhile they have authority to go out and do what
5 repairs they need to do as needed. How do you sit
6 those two side by side in the NWA?

7 A. Part of the condition of the permit is that they do
8 have to notify the Base. And as a result of that
9 notification, there would be consultation and
10 discussion about the way forward. The permit is
11 simply in place so that the legality of their access
12 is covered.

13 A. COL LAMARRE: Mr. Chairman, we also have
14 Mr. Ingstrup from Environment Canada who can add to
15 that in terms of *Species At Risk Act*.

16 THE CHAIRMAN: Please do.

17 A. MR. INGSTRUP: Thank you. I just wanted to
18 point out that the *Species At Risk Act* permits are
19 issued by Environment Canada. So our expectation,
20 when there is a situation where one of the
21 prohibitions with respect to SARA, in this case, the
22 prohibitions on individual, disturbance of individuals
23 or their residences, our expectation is that we're
24 contacted. And normally that occurs from the Base.
25 They will contact us. And then we would, we would

1 consider an application for a permit in that case.

2 So I just wanted to make it clear that that's
3 the process for issuing a *Species At Risk Act* permit.
4 I think the discussions up until now have been namely
5 around permissions under the **Canada Permits Act**.

6 A. MS. BOYD: I'll just add, sorry, one
7 additional point; is that it's our understanding that
8 in cases where there might be environmental concerns
9 associated with the need for excavation when a repair
10 is required is that industry could shut in a line,
11 meaning essentially turn, turn it off so that it is no
12 longer flowing, until such time that any sort of
13 assessments can be conducted and done in an
14 appropriate and environmentally-sensitive manner.
15 That's our understanding and certainly industry
16 representatives could confirm that.

17 Q. So I just want to be really clear on this; that is the
18 Base -- would they be relying on EnCana to do those
19 necessary surveys during those periods of time if
20 they wanted to go out and do a repair, or would --
21 are you relying on them or are you going to go out
22 and do your own surveys to see if there's any species
23 at risk or if it's a bad time of the year for
24 migratory birds or whatever?

25 A. MS. GUENTHER: I'm just going to clarify

1 what happens throughout the rest of the Base. We have
2 had instances where pipeline replacements are required
3 due to leaks. And industry does apply to us more on a
4 notification of intent basis. They are providing
5 environmental work at the appropriate times, so if it
6 is even happening in the winter, we -- if it's in the
7 Manoeuvre Training Area, they will go and do their
8 ground searches looking for Burrowing Owls. But,
9 again, it is -- it comes down to a safety thing, too,
10 in that, as long as those species at risk, their
11 habitats aren't being destroyed, and the environmental
12 work has been completed, we are usually giving consent
13 for those repairs to occur as it is a live training
14 area and we don't want soldiers or any other personnel
15 injured out there.

16 Q. What might be useful for us, if we could get a sample
17 copy of one of the permits that you've given that
18 allow -- that govern these activities, how you can go
19 in, and what's covered under routine, and all of
20 those things. Do you follow what I'm asking for?

21 A. COL LAMARRE: Yes, I do.

22 Q. Good, because I'm not sure I did. Okay. I think
23 we'll leave that for now.

24 A. Can we have just one second to discuss because there's
25 much documentation involved in this. We want to make

1 sure we're clear on that.

2 THE CHAIRMAN: Certainly.

3 A. Sir, on this particular case, there are a number of
4 documents that are related. And, again, it varies on
5 where the application is for, whether it's in the Main
6 Training Area, or if it's within the National Wildlife
7 Area. There are applications that come in first of
8 all, then after that, there are approval letters. And
9 if it's within the NWA, then it gets also into the
10 permits to enter the NWA. So we're going to need to
11 have a clarification of what specifically Ms. Klimek
12 would like to have and then after that address it that
13 way. And it's not to be obstructionist in any way;
14 it's just that there are many documents.

15 THE CHAIRMAN: I presume, Ms. Klimek, it has
16 to do with the NWA?

17 MS. KLIMEK: That's what I was going to
18 clarify.

19 Q. What we're interested in -- and maybe if I can under
20 -- I'll say what I understand from what your evidence
21 is because if I've misunderstood it then maybe we're
22 not getting to where we need to be.

23 A. I know.

24 Q. I understood that when you give these permits, there's
25 some overriding that, where there is repairs or

1 things need to be done, they're allowed to go in
2 under the permit with certain conditions. And that's
3 what we're trying to understand. And this is within
4 the NWA. We understand things are different outside.

5 So if you could give us a sample of what one
6 of those permits looks like, I think it would be
7 helpful to the Panel and to us to see, when a permit
8 is issued, what is EnCana going to be allowed to do
9 and the conditions around it. And if you can pick
10 one that is sort of representative of what you've
11 done. I don't think we need to see them all or
12 anything. Does that help?

13 A. I believe it does. But before I close this one off.

14 A. MS. BOYD: I'll just add one more point
15 of clarification. We can in fact provide a copy of,
16 of a permit. And by "a" permit, excuse me, at this
17 point it truly is "the" permit because, at this point,
18 the only activities that are, in fact, permitted are
19 excavations for emergency purposes. And "emergency"
20 being where there are issues of human safety, health
21 and safety. Permits are still pending. We're still
22 in the development stage of permits for what might be
23 considered more routine; access for excavations that
24 might be upon the discretion of the Proponent that are
25 not emergency related. And the reason why there is

1 this separation at this time is because, within the
2 National Wildlife Area, there is a requirement under
3 the *Canadian Environmental Assessment Act*, section 48
4 of the inclusion list, that when you are within a
5 National Wildlife Area, any form of ground disturbance
6 or vegetation disturbance requires an Environmental
7 Assessment.

8 We have made, I suppose, an exception to that
9 for emergency purposes again when human life, human
10 health and safety are an issue, for the purposes of
11 this permit, but additional excavations, whether it be
12 for pipeline repairs or any other type of development
13 are, technically speaking, right now not authorized
14 until an Environmental Assessment is completed and a
15 permit is issued.

16 A. COL LAMARRE: But, meanwhile, as well,
17 we'll make sure that we get an example of the permit
18 as you requested.

19 Q. Okay, thank you.

20 Now, if we could turn to Document A-0182005,
21 and if we could go in a page that -- there's a
22 document entitled "Loss of Use". It's the next one I
23 think. No, you've got it right there. Thank you.

24 Now, this refers -- I'm just trying to
25 understand what this "Loss of Use" document refers

1 to. Does anyone know what this was done for?

2 A. I'm sorry, we're just refreshing our memories by
3 reading the document as we go.

4 Mr. Chairman, I apologize for the time. It's
5 just we had to get ourselves back up to speed. This
6 was signed off by the last Base Commander, Lieutenant
7 Colonel Drew. And I just need to read into it. So if
8 I could ask Ms. Klimek to ask me the question again.
9 I apologize for that.

10 Q. Well, I'm just trying to get some context around this
11 document and what it -- how it came about, what it
12 relates to. And just to give you a heads-up where
13 I'm going with this. What is of interest to me, out
14 of this whole document, is the discussion about the
15 use of water. But I'm just trying to understand the
16 context of this document.

17 THE CHAIRMAN: Ms. Klimek, maybe I could ask
18 you the relevance of it. It does relate to the MTA,
19 not the NWA if I recall, so --

20 MS. KLIMEK: Well --

21 THE CHAIRMAN: -- perhaps you could clarify
22 exactly what you're trying to get at here.

23 MS. KLIMEK: Well, I want to go into some
24 questions around the use -- there's some comments in
25 here about use of water and industry's use of water

1 and what it's doing to the water table and what needs
2 to be done. And it's -- my position is that it was
3 recognized in the MTA that there are some issues.
4 We've heard evidence from Dr. Nastev. And I would
5 like to tie in what is the Base doing about these
6 issues before they go into the -- before -- insofar as
7 understanding what's going to happen to the NWA or
8 have they got a process to deal with water issues?
9 And that's what I'm going to be focusing on.

10 Okay. And it's also the impact, because the
11 water, we understand, is coming from this area. So
12 what it's going to do out there if they use this water
13 in there. So that's -- and that's the only questions
14 I'm going to ask around this document.

15 THE CHAIRMAN: Thank you.

16 A. COL LAMARRE: Mr. Chairman, for the context
17 of that specific letter, the way I interpret it was a
18 request from industry to specifically be looking for
19 their 2005 plan and the response by the Base Commander
20 saying that he had concerns about a number of issues
21 which he outlined there. And I know I was following
22 the specification by Ms. Klimek that water extraction
23 is a subparagraph. I'm going to turn over to
24 Mr. Richmond here to specifically address that one.

25 MS. KLIMEK: Okay. That's useful.

1 Q. Now, Mr. Richmond, at page 2 of this, there's a
2 comment that there are 20 Base -- this is under
3 "water extraction." If we go down, there are 20 Base
4 sanction water extraction, water points that have
5 been prepared with an access road and been fenced off
6 to prevent military incursion. Then it goes on to
7 say:

8 "These have not been regulated or
9 monitored to date due to lack of
10 staff and funding."

11 Now, just to tie it in, on the next page under
12 "Water Table Impacts":

13 "To date, the Base has not
14 monitored or measured the impact of
15 oil and gas industry's water
16 extraction practices. As the
17 industry uses very large quantities
18 of water for its drilling
19 activities, this activity needs to
20 be measured to prevent excessive
21 drawdown of the water table."

22 Now, my question to you is: Since this has been
23 written, has the Base taken any steps to regulate or
24 monitor the amount of water being used for drilling?

25 A. MR. RICHMOND: If I can just have a moment

1 to confer with one of my colleagues?

2 THE CHAIRMAN: Yes.

3 A. Mr. Chairman, there's a few initiatives that have been
4 instituted since then. We had actually started a
5 monitoring program, but we did not have the resources
6 to actually fulfill the requirements of it. We're
7 getting up to speed now with that, that sort of
8 requirement. And we had conducted a study through
9 LandWise Incorporated, or LandWise Inc., in 2008 to
10 look at the groundwater deficit, if there were any,
11 and the effects of water drawdown in these areas.

12 MS. KLIMEK:

13 Q. Now, we also understand that some of water for the NWA
14 drilling will come from dugouts in the MTA; is that
15 your understanding as well?

16 A. I'm not sure if that's correct. I was under the
17 impression it was wells.

18 Q. Okay.

19 A. MS. GUENTHER: From my interpretation, it's
20 going to be three wells and the river.

21 Q. And where are those wells located, do you know? And,
22 more importantly, are they close or near any
23 wetlands, do you know?

24 A. MR. RICHMOND: I believe one of those
25 locations is Big Bob, which is associated with a

1 wetland, which has been talked about in previous
2 testimony. The other ones I'm not sure of. We would
3 have to review those.

4 Q. Is the Base requiring operators to meter or measure
5 the amount of water they're taking out of these wells
6 and is that reported?

7 A. Water extraction from wells is actually regulated by
8 Alberta Environment. And my understanding is that
9 they are required to have meters on those wells. And
10 the only check that Alberta Environment puts on them
11 is to perhaps ask for the amounts of water that may
12 have been extracted from them on occasion.

13 Q. Does the Base get any of that information from Alberta
14 Environment?

15 A. MS. GUENTHER: We currently have the
16 Temporary Diversion Licences that Alberta Environment
17 issued to the Proponent. Our field crews have gone
18 out and checked those water wells to ensure that the
19 meters are set at the right amount that is supposed to
20 be withdrawn.

21 I believe in one circumstance it was set at a
22 higher rate. We notified the company, and they fixed
23 it, and we then further verified that the right
24 amounts are now being withdrawn.

25 Q. Is the Base doing any aquifer testing related to those

1 wells?

2 A. MR. RICHMOND: Other than the report that I
3 referred to earlier, there's no other analysis going
4 on.

5 Q. Okay. Now, I want to understand a little bit about
6 drilling wastes. And we know -- am I correct that
7 land spraying while drilling is not allowed in the
8 NWA; is that correct?

9 A. Yes, that's correct.

10 Q. Now, will -- is it allowed -- and this is relating to
11 the wastes from the NWA. Will that be allowed to be
12 land sprayed on the MTA?

13 A. My understanding is that all the drilling wastes will
14 be placed into sumps off the NWA probably in the MTA
15 or EPG, Experimental Proving Ground.

16 Q. So there won't be any land spraying of that, then; is
17 that your understanding?

18 A. That's my understanding.

19 Q. Okay. Now, you'll be relieved to know I'm drawing to
20 the end on this, but I have a few other questions.
21 And I would like to go to 0182039. 0182039. And I
22 would like to go to page 6 of 7. And, again, this is
23 related to enforcement. And I'm trying to understand
24 how the Base can deal with issues like this. And I'm
25 looking at the Sand Verbena, which we understand is a

1 SARA-listed species. And I understand in this area
2 there was some problems with the disturbance with the
3 Sand Verbena; is that correct?

4 A. Yes, that's correct.

5 Q. And is there some -- I see here that due -- what this
6 says here is:

7 "Environment Canada's enforcement
8 branch visited the Koomati site
9 again and indicated to the Base and
10 [whoever] that there will be no
11 charges associated with the
12 disturbance of this plant due to
13 lack of clear evidence."

14 And I guess in situations where you see
15 disturbances like this and you don't have clear
16 evidence, is there anything else available to the Base
17 on being able to deal with those problems or -- how
18 are they going to deal with them? And maybe that can
19 also go to Environment Canada. We have a species at
20 risk that's been disturbed. We can't prove it. So
21 what do we do now?

22 A. MS. BOYD: From the Base perspective, in
23 cases such as this, we would modify the activities
24 that might be allowed in that area, so there might be
25 times when access would not be allowed depending on

1 the species that we were dealing with. We might
2 change, in this case, for instance, when road
3 maintenance might occur or when industry was allowed
4 to access to minimize future possibility of
5 disturbance to the species.

6 Environment Canada may also have additional
7 comments from their perspective on this particular
8 incident.

9 A. MR. INGSTRUP: Thanks. In this particular
10 case, it was an example where Environment Canada, we
11 were notified of an issue, and when that occurs, we
12 essentially deploy our enforcement officers to the
13 site. And that's what happened in this case. And an
14 investigation was, was started. And, as you can see
15 in these notes, it's my understanding that there was
16 -- no charges were laid by our enforcement people at
17 that time.

18 I would agree with what DND has said here.
19 In these cases, when we are unable to lay charges, we
20 certainly want to encourage compliance with the Act
21 through some sort of compliance promotion program.
22 Normally, in these investigations, we will talk with
23 all, all the parties and, and make sure that everyone
24 is aware of what, what the issue was and the details
25 around it. And we would also encourage certainly

1 avoidance of any sort of these activities that, if
2 they happen to disturb species at risk, we certainly
3 encourage people to avoid it in the future.

4 Q. Now, I would like to now turn to 0182150. And I don't
5 know who best to address these questions to, but the
6 purpose of my questions here is to understand the
7 process that the Base goes through when there's a
8 problem. It's not necessarily that this problem is
9 the NWA, but to understand the process, and that's my
10 purposes.

11 Now, we did ask EnCana some questions about
12 this, and this was the well that was in the Nishimoto
13 flat -- or wetland, I understand. So who would be
14 best to ask some questions about the process that was
15 undertaken to deal with this, because I think it's an
16 example of how things work when there's a problem.

17 A. COL LAMARRE: As you can tell, Members of
18 the Panel, there are many people involved in answering
19 these questions because of the segregations of
20 responsibilities. So in this case, would it be
21 possible to have your specific question and I'll just
22 direct it from there?

23 Q. Sure, that would be fine, Colonel. Now, I understand
24 that -- let's back up a bit. What is the expectation
25 of the Base with respect to wetlands and wells?

1 A. DR. ROWLAND: The expectation on the Base
2 is that activity is not permitted within 100 metres of
3 any type of wetland.

4 Q. Okay. And were -- this wetland, was it identified on
5 maps, Base maps, do you know?

6 A. MR. RICHMOND: Yes, it's marked on Base
7 maps.

8 Q. Okay. Now, I take it through your discussions with
9 the industry, they're made aware that it's the Base's
10 expectations that they will not be drilled in
11 wetlands or within 100 metres?

12 A. Yes, these expectations were made known to industry.

13 Q. Now, this well I understand was drilled in October,
14 2004. Is that correct? If we look at the top of
15 this, a well was drilled in October.

16 A. Yes, according to the memo, yes.

17 Q. And... Now, how did the -- was the Base advised by
18 the operator that it was put in a wetland or did they
19 find that out themselves through inspections?

20 A. MR. SMITH: We had a database of proposed
21 wells. Brent Smith. We had a database of proposed
22 wells and plot them into our Geographic Information
23 System, or GIS, and at that time discovered that the
24 well was in a wetland.

25 Q. So what did the Base, what steps did it have or go

1 through with respect to dealing with that once they
2 found it out?

3 A. COL LAMARRE: Mr. Chairman, on this
4 specific question, we're dealing back to a bit of
5 history here dating back to 2004. The right
6 individual to answer these questions might be Mr. Fern
7 Martins, who used to be the G3 on the Base, and is now
8 part of the Base as a civilian, but I think it would
9 probably be worthwhile to have him sworn in to answer
10 this historical background.

11 MS. KLIMEK: That would be fine.

12 THE CHAIRMAN: We can do that, or it can be
13 an undertaking. Would you prefer --

14 MS. KLIMEK: Well, I have a series of
15 questions, so it might be more efficient to have him
16 sworn in because his answer may beget another
17 question.

18 THE CHAIRMAN: Mr. Denstedt?

19 MR. DENSTEDT: I sat there silent; I thought
20 I should say something.

21 I don't know if Mr. Martins' resume is on the
22 record. It probably should go on the record as well.

23 MR. MOUSSEAU: I think it was actually on
24 the record when I was reviewing the CVs, so.

25 THE CHAIRMAN: Okay. It sounds -- I guess

1 we have confirmation that it is on the record.

2 Then Mr. Martins, could you come forward?

3 You will need to sit somewhere up here. And I think
4 there are enough seats available. It will require
5 somebody to move, but. And we will swear you in under
6 oath, Mr. Martins.

7 **GOVERNMENT WITNESS SWORN:**

8 **MR. MARTINS (SWORN)**

9 THE CHAIRMAN: I believe we are ready to
10 proceed, Ms. Klimek. Now, perhaps you could identify
11 your questions once again for Mr. Martins.

12 MS. KLIMEK: Yes.

13 Q. Welcome to the panel, Mr. Martins. I'm sure this is
14 what you were waiting for.

15 Now, Mr. Martins, I understand you were
16 involved with dealing with the well that was placed
17 in the, is it the Nishimoto wetland?

18 A. MR. MARTINS: Yes, that's correct.

19 Q. Now, once it was determined that the well was in the
20 wetland, what steps did the Base undertake to deal
21 with that problem?

22 A. I'll first preface that the situation transcended
23 several Base Commanders. It started in the tenure of
24 Colonel Steed. He was the Base Commander. When the
25 Base became aware of this well within the wetland,

1 possible wetland at the time, we first went and did a
2 site visit to the site with the Base Commander and a
3 couple of the other Base staff to ascertain its exact
4 location. We came to the conclusion that it was in a
5 wetland. We then proceeded to have discussions with
6 industry, with EnCana, to take a look at this
7 situation.

8 Sorry, I'm going to have to back up. We
9 first started discussions with SIRC, who was
10 representing industry on this matter. The discussions
11 went around the venue that it would be detrimental
12 from industry's perspective to remove that well, and
13 we took the perspective that removing it once rather
14 than continuing to revisit the site, et cetera, and
15 refrac'g and doing all kinds of site visits over a
16 period of time, would be inconsistent with the DND
17 policy associated with wetlands.

18 A number of discussions occurred back and
19 forth and some letters back and forth. And in
20 between, Base Commanders did change. And it resulted
21 in a final letter issued by a second Base Commander,
22 Colonel Drew, who indicated that the well had to be
23 removed by a certain date, at which point EnCana
24 complied with that direction and the well was
25 withdrawn.

1 Q. Now, I note in this document, it talks about:

2 "... three formal written
3 directives to be removed over the
4 past 11 months."

5 Now, what is a formal written directive?

6 A. What we are referring to are Base Commander letters.

7 Q. Okay. And I take it those weren't complied with
8 originally because you had to keep sending them out;
9 is that a fair statement?

10 A. They were not complied with and resulted in further
11 discussions and industry's desire to engage us to seek
12 a resolution on the matter.

13 Q. Now, when you said earlier that EnCana's position was
14 it was detrimental to the industry, what does that
15 mean? Can you shed some light on that?

16 A. I'll try to explain the way I understand it and EnCana
17 should really speak for themselves on this side of it.

18 Q. Okay.

19 A. The way it was conveyed to us is that EnCana had
20 invested money, put this well in with the intent of
21 developing it and producing it, so there was monetary
22 investment in this well as well as the expectation
23 that they would be able to extract the natural gas.
24 So that, that is my understanding of what the
25 detrimental impact was to EnCana.

1 Q. Now was SEAC involved in any of the discussions around
2 this problem?

3 A. Yes.

4 Q. And what was their involvement in the -- and what did
5 they do to deal with this?

6 A. The Base, first of all, verbally discussed the issue
7 with SEAC. I'll preface that there was no application
8 that was submitted to SEAC for this well. But we
9 verbally discussed this situation with SEAC. As a
10 result of one of the to'ing and fro'ing between the
11 Base and industry, we scheduled a site visit as part
12 of one of the annual tours, or recis (phonetic), went
13 to the site and at the site SEAC did look at the site
14 and discussed it with the on-site team, both from
15 SIRC, EnCana, and the Base about that site and clearly
16 defined and said that it was a wetland and that it
17 should never have been put there in the first place.

18 SEAC, on a number of occasions, had stated to
19 the Base that we should not be permitting development
20 in wetlands or in the close proximity of wetlands over
21 the course of years.

22 Q. Now, did the Base have to take any steps to, other
23 than -- what I'm trying to understand is why did it
24 finally get removed and why did it take 11 months and
25 did you have to take any steps to get it removed?

1 Like, did you have to threaten any process or
2 prosecutions or anything like that around it?

3 A. There were no threats of prosecution, to my knowledge.
4 I would have to review notes on that situation and
5 take a look exactly what all transcended. By my
6 recollection, there was, as I mentioned before, some
7 to'ing and fro'ing discussions, letters back and
8 forth, but the final crux was a final letter issued by
9 the Base Commander. And I would have to review the
10 content of that letter, but basically it indicated
11 that you had -- they had to remove that well by a
12 specific period of time or, if I remember correctly,
13 or access was going to be denied. But I would have to
14 review that document to be 100 percent sure on the
15 exact content of that letter.

16 Q. Could you confirm that for us? Just look and see what
17 the "or else" was?

18 A. I will do so.

19 THE CHAIRMAN: This will be an undertaking
20 that you will respond to, then, at some later point
21 here in the proceedings.

22 A. COL LAMARRE: Yes, sir.

23 THE CHAIRMAN: Okay.

24 MS. KLIMEK:

25 Q. Now, has that site been successfully restored to a

1 wetland? Do we...

2 A. MR. SMITH: Brent Smith. No one's had a
3 chance to go back and check it from the Base staff.

4 Q. When was it finally removed? Do we know?

5 A. MR. MARTINS: It was removed prior to the
6 deadline set by the Base Commander.

7 MS. KLIMEK: I think this might be a good
8 time to break because we're going into a new topic, if
9 that's okay with the Panel?

10 THE CHAIRMAN: Just let me verify one
11 administrative matter. Do we have coffee out in the
12 lounge at the back because that will be very
13 important, I think, for the participants here. Okay,
14 then let's take a break. And 15 minutes. And we'll
15 resume at that point.

16 (MORNING BREAK)

17 (PROCEEDINGS ADJOURNED AT 10:07 A.M.)

18 (PROCEEDINGS RECONVENED AT 10:24 A.M.)

19 THE CHAIRMAN: I believe we're ready to
20 reconvene again. Again, Ladies and Gentlemen.

21 Mr. Denstedt, you had a comment you wished to
22 make?

23 **COMMENTS BY MR. DENSTEDT:**

24 MR. DENSTEDT: Yes, sir, just briefly. I
25 think my friends are well aware of the protocol at

1 hearings when it comes to cross-examination. And I
2 wanted to get on the record my concern about the risk
3 of what is commonly called "sweetheart
4 cross-examination"; where parties who are not adverse
5 in interest, who are not directly adverse in interest,
6 cross-examine one another on the Proponent's evidence
7 in an attempt to buttress up their own evidence. It's
8 inappropriate, to start with. And second of all, as
9 Mr. Martins pointed out, that EnCana wasn't here to
10 defend themselves.

11 And one of the primary purposes of
12 administrative law, and the law in general, is that a
13 party has a right to know the case and respond to the
14 case against them. And the cross-examination in some
15 of these matters is unfair to EnCana, quite frankly,
16 and it will require us to put up a rebuttal panel and
17 probably go another few days, but that's okay. The
18 process is designed to, to accommodate that.

19 But I think in the Government of Canada's
20 case, my friend should be given some latitude because
21 they are the Government of Canada and they are
22 providing expert advice, but her questions should be
23 restricted to those areas and not attempts to buttress
24 her own evidence.

25 That's all, sir.

1 THE CHAIRMAN: Thank you, Mr. Denstedt. I
2 think the point is made. And Ms. Klimek, I assume you
3 will take that into consideration.

4 **REPLY COMMENTS BY MS. KLIMEK:**

5 MS. KLIMEK: Well, I would like to respond
6 to that, sir. We did put these questions to EnCana,
7 they did answer them, and I think it's fair to find
8 out what was heard on the other side. And this is not
9 sweetheart cross-examination. This is the regulator
10 of this and I think the public is entitled to know
11 what has gone on vis-a-vis the regulator and EnCana.

12 So I do say I am of the view it is valid
13 cross-examination. And we did put these, these
14 questions that I put to Mr. Martins about EnCana, why
15 they did what they did, I put to EnCana in their
16 examination. So I don't think it's unfair. And
17 EnCana doesn't have rebuttal. So I just want to put
18 that on the record. This is not a -- I don't think
19 Canada is adverse in interest to anybody. They're
20 here to provide information. And if they choose not
21 to put forward information that we think is relative
22 -- relevant, I think we're entitled to get that out
23 through questioning, because we had no control over
24 what evidence they were going to put in on how they're
25 managing that Base, so that's why we're

1 cross-examining on these things.

2 THE CHAIRMAN: Thank you, Ms. Klimek.

3 Please continue with your cross-examination.

4 MS. KLIMEK:

5 Q. Now, just back to the well in the Nishimoto wetland,
6 I'm guessing, and from the timeline, it was drilled
7 in 2004 and it took 11 months to get it out, but it
8 was removed sometime in 2005 or early 2006. And I
9 guess my question to the Base is: Why has nobody
10 gone out and looked at the status of that wetland to
11 see how it's restored? It looks like it's at least
12 two to two and-a-half years old since it's been
13 removed.

14 A. MS. GUENTHER: We have been out to the site
15 within the last two years at least, but within the
16 last year we haven't had crews out to ensure the
17 status of it; that it's recovering at the rate that we
18 want, but within from 2006 to 2007 I'm sure we have
19 been out at least once.

20 A. MS. BOYD: I can add to that as well.
21 Just the comment that, in terms of the reminder about
22 the standup of the range sustainability section, and
23 just the sense that there are 2690 square kilometres
24 of area that a small number of sustainability
25 professionals are required to, to look at and monitor,

1 so, unfortunately, it does take us some time to get
2 through all of the issues, this being one of many, and
3 not just related to oil and gas, of course.

4 Q. When EnCana decided and did remove the well, was there
5 a restoration plan developed or any guidelines
6 developed with respect to restoring that wetland
7 given to the Base?

8 A. MR. RICHMOND: I think the process that was
9 being applied in that case was one of natural recovery
10 and with follow-up checks.

11 Q. Is -- just to follow up, is the Base doing that
12 monitoring or is EnCana required to monitor and
13 report back on how that natural recovery is, whether
14 it's been effective or not?

15 A. COL LAMARRE: To the best of our knowledge
16 on this one, we do have requirement for ourselves to
17 go out and do inspections. But as was mentioned
18 earlier on, we have a limit to the number of folks who
19 can. And as far as EnCana's requirement to go and do
20 follow-up inspections, we don't know the answer to
21 that one.

22 Q. Okay, now --

23 A. MR. MARTINS: Sorry, if I may.

24 Q. Sorry.

25 A. There is an expectation that industry would comply

1 with the access agreements and they would still be
2 monitoring any abandoned well, et cetera. So with
3 this well, as far as the Base is concerned, it is
4 classified as an abandoned well. And that
5 restoration, when EnCana is satisfied that the
6 parameters are close to being ready to turn that back,
7 we would expect that they would be one of those sites
8 that would be reviewed, submitted for a -- what's the
9 actual term, a Reclamation Certificate.

10 Q. Thank you. Now, in 2008 have there been any
11 infractions by EnCana in the NWA where they did not
12 have any required permits to do activities within the
13 NWA?

14 A. MS. BOYD: Could I just clarify; are you
15 asking about simply the year within the calendar year
16 of 2008 or up to and including 2008?

17 Q. Well, I was going to break them out by years starting
18 at 2006 to 2008, so if you have -- what we're trying
19 to understand, have there been any cases where EnCana
20 has done work in the NWA where they didn't have their
21 required permits or approvals from the Base? Let's
22 go from 2006 to 2008.

23 A. From the Base's perspective, yes, there have been
24 incidents where we interpret it as activities
25 occurring in the NWA that did not have a permit.

1 Q. And what type of activities were those?

2 A. We have provided details of these incidents in our
3 supplemental submission. I'm not sure if you're
4 wishing me to reiterate those here for the record.

5 Q. Just for ease of reference, do you have an easy
6 reference to where those are?

7 A. Yes, we'll just find that. One moment, please. I
8 believe it is in Exhibit 003-019 within their, the
9 DND, supplemental submission, page 22.

10 Q. Okay. We'll take a minute to look at those and come
11 back if we have any follow-up questions.

12 Now, I'm going to ask a few questions now,
13 and I really -- the purpose of these questions are
14 not to understand what went on there but to
15 understand the process. And as I understand it,
16 there was some applications for developments in March
17 2006 by EnCana for wells. Is that -- to drill some
18 additional wells. Is that correct?

19 A. MS. GUENTHER: Can you clarify if that's
20 within the NWA or the other areas of the Base?

21 Q. Just I'll come back to that because I want to get a
22 bit of clarification to assist you. So we'll come
23 back to that.

24 What I'm going to do now is leave you guys
25 alone for a while, so you can sit back, and talk to

1 this end of the table. There's a smile at that end.

2 Now, the surveys that were done by the CWS
3 prior to this, the wetlands, and other surveys, would
4 you characterize them as a detailed or reconnaissance
5 type survey?

6 A. MR. NORTON: Ms. Klimek, could I just
7 clarify, are you referring to the 1994, 1995
8 biophysical survey as it's usually referred to?

9 Q. Yes.

10 A. Ms. Dale will answer that.

11 A. MS. DALE: Good morning, Panel. My name
12 is Brenda Dale. I was involved in the 1994/1995
13 biophysical inventory. Those surveys were undertaken
14 prior to us formalizing anything about the National
15 Wildlife Area in order to understand the distribution
16 of various biota in relation to soil types,
17 topography, and in some cases, to implements such as
18 fire and grazing. There were, I think of the two
19 things she offered, reconnaissance would be more
20 appropriate classification than anything detailed.

21 Q. Okay. Now, with the wetland survey, can you confirm
22 what type of survey was done with wetlands? Like
23 what --

24 A. MR. DIDIUK: Andrew Didiuk, Canadian
25 Wildlife Service, Saskatoon. Please consider my

1 voice. I seem to be getting a bit under the weather,
2 but I think I can still function.

3 The wetland classification conducted in 1994
4 and 1995 was fairly rigorous using high resolution
5 imagery and site visits to all wetland basins that
6 were detected on this imagery. A fairly detailed
7 wetland classification was developed and including
8 evaluations of some water chemistry parameters. And
9 these wetlands were also visited subsequently for
10 amphibian assessments.

11 Q. Did that survey catch your temporary or seasonal
12 wetlands?

13 A. In part.

14 Q. And you would agree that those wetlands, the temporary
15 and seasonal ones, are important for many of the SARA
16 species, such as the toads, and some of those?

17 A. That is correct.

18 Q. Now, I'm going to -- I'm jumping around a bit here
19 because I just want to zero in on a few points. And
20 this goes to -- is it Dr. Nastev?

21 A. DR. NASTEV: Yes.

22 Q. If we could get a microphone back to you. And it
23 might be useful to pull up your slide that showed the
24 amounts of water that were coming out of the
25 aquifers. It's on page 24. It's 003031. That was

1 like seeing your presentation flash before your eyes,
2 wasn't it?

3 I understand we don't have it on the
4 overhead, but you have it in front of you, I
5 understand, Dr. Nastev, right? Am I saying your name
6 right?

7 A. DR. NASTEVA: "Nastev".

8 Q. Nastev. Sorry. Now --

9 MR. LAMBRECHT: I'm sorry to interrupt my
10 friend's flow of questioning. I'm not sure why it is
11 that the full electronic copy of the NRCan
12 presentation that was presented on the overhead during
13 the opening is not available now, but I understand
14 that the CD that I'm holding does contain that, and if
15 it would assist, I would be happy to provide it so
16 that reference could be made to this document.

17 MS. KLIMEK: I don't --

18 THE CHAIRMAN: I appreciate we seem to --

19 I'm not sure why it's not available. But, Ms. Klimek
20 do we actually need it on the screen?

21 MS. KLIMEK: No.

22 THE CHAIRMAN: I think, I think you can
23 direct -- what we want is the question to the panel, I
24 think, rather than sort of seeing it on the screen.

25 MS. KLIMEK: Yes. That's what I was going

1 to say. I don't think it's necessary to have it put
2 forward.

3 Q. Now, I just want to understand this chart a little
4 bit, Dr. Nastev. What I understand from your
5 evidence, and I want to clarify this before I ask you
6 the question, is the upper sand and gravel and the
7 lower sand and gravel brick, those were the aquifers
8 that EnCana is drawing the water from?

9 A. DR. NASTEV: Yes, you're right.

10 Q. And this -- when you're looking at this chart, is this
11 per -- that's metres per day that is being drawn out
12 when I look at the 4142, for example?

13 A. Well, okay, more difficulty this one. The column in
14 the middle is the estimated aquifer in metres per day.
15 The column on the right-hand side is what is
16 allocated. This does not mean that it is what is
17 extracted from the aquifer.

18 Q. So that has been -- and do you know who that's been
19 allocated to, or is that just the total allocation
20 from that aquifer that has been allowed?

21 A. Well, this table comes from the EnCana EIS study. It
22 is Table 2.6.

23 Q. Okay.

24 A. And it is valid for all Cypress County. I believe
25 that these numbers are actually taken from another

1 study.

2 Q. Okay. So my question is, out of this, if that
3 allocation is taken out -- I mean, first of all, if
4 the water is not there, can you remove -- you can't
5 remove more than what's there; is that correct?

6 A. Well, in answer to this question, there is two types
7 of groundwater extraction or pumping; one is low-water
8 pumping when the aquifer is able to sustain the
9 extraction rate. And the other one can be called
10 "groundwater mining"; when the aquifer is not able to
11 sustain the extraction rate. In that case the water
12 levels decrease gradually and the discharge to surface
13 waterbodies, wetlands, rivers, decreases gradually as
14 well.

15 Q. Okay. So then my question, then, is: If that
16 allocation is actually taken out, what effect is that
17 going to have on wetlands or springs?

18 A. Well, this table represents the regional image of the
19 groundwater of the region. For each particular
20 extraction and for each wetland, a local study has to
21 be done to see where from the water comes to the
22 wetland. Maybe it's not connected with the aquifer at
23 all, so groundwater pumping from the aquifer cannot
24 affect the wetland. It, it might be that it is
25 connected. In that case, the water level of the

1 wetlands will start to decrease, the wetlands will
2 start to shrink, and finally it will dry out.

3 Q. Okay. Now, I guess this goes to the regulators and
4 maybe the Base. What -- when you see these numbers,
5 what steps are being taken to look at that issue on
6 -- will this water drawdown affect wetlands and what
7 will that effect be? Is anybody looking at that in
8 the area to determine what's going to happen to the
9 wetlands on the Base and, secondly, to the NWA?

10 A. MR. SMITH: Can you repeat the question,
11 please?

12 Q. We heard from Dr. Nastev that you would have to look
13 at individual wetlands to see if they're connected
14 with those aquifers. Is that correct? Did I
15 understand that correctly?

16 A. DR. NASTEVE: Yes. But may I finish my
17 answer?

18 Q. I'm sorry.

19 A. Add to my answer before this one?

20 Q. Sure.

21 A. Okay. This table represents the regional groundwater
22 image. In the LandWise 2008 report, there is a water
23 budget done particularly for the CFB Suffield.
24 However, however in this additional water budget,
25 again, no water is pumped from the aquifer, from the

1 aquifers, then it is -- that is the estimated
2 groundwater flow.

3 Q. So -- now, as I understand it, did the LandWise look
4 at those regional or, or specific wetlands? Did they
5 go that far, do you know?

6 A. Well, I should have to, to check in the report. I
7 think they did the analysis of about 18 lands,
8 wetlands. Quite a comprehensive study. It is quite a
9 comprehensive study done for the DND.

10 Q. And we have that on the record, I take it, right?

11 A. Yes.

12 Q. Okay. Now, I guess we'll come back. I just want to
13 review the LandWise before we go on with the next
14 questions. But I -- the question I have is: If we
15 determine that there are effects to the wetlands from
16 the water extraction, who is able to regulate the use
17 of that water? Is that the Base? Is it -- who has
18 control over that from a regulatory framework?

19 A. MR. RICHMOND: That's entirely in the
20 hands of Alberta Environment who issue the permits.

21 Q. Now, I'm going to turn to soils now for a bit and who
22 will be best? I'll ask my question and then you can
23 decide.

24 And in looking at the Middle Sand Hills, you
25 would agree that those are extreme ly sensitive soils

1 and some of them are on steeper slopes; is that a
2 fair assessment?

3 A. DR. WOLFE: It's a fair assessment.

4 Q. You need to say your name.

5 A. Stephen -- Stephen Wolfe. It's a -- can you just
6 repeat the question again?

7 Q. Is that -- those are Extreme sensitive on steep, on
8 steep slopes, some of those soils?

9 A. It's fair to say that those slopes are sensitive to
10 erosion.

11 Q. Now, is there any -- as I understand it, there is some
12 technology, and I -- that you can do a slope analysis
13 at a fine scale from the desktop. And what I'm
14 referring to is LIDAR. Do you understand -- would
15 you agree?

16 A. LIDAR could be used as a mapping anything.

17 Q. And do you -- is that being used at all in this area,
18 do you know? To determine what slopes at the desktop
19 level, like at the PDAs, at all?

20 A. MR. SMITH: Brent Smith. My
21 understanding is "no".

22 Q. Do you think that might be something that might be
23 useful at that first screening to use that for the
24 placement of wells if they should allow to go ahead
25 to at least delineate those before they're being

1 placed?

2 A. MR. SMITH: Yes.

3 Q. Now, I'm now going to spend a little bit of time on
4 the SARA species. And I want -- that would go to
5 you, Mr. Ingstrup, is that a good starting point?

6 A. MR. INGSTRUP: Correct.

7 Q. Now, I understand the purpose of SARA is first to
8 identify your species at risk. That's one of the
9 things it's to do. Right?

10 A. To assess and list the species, yes, that's correct.

11 Q. Right. And it's to protect them, but it's also to
12 enhance their recovery; is that correct?

13 A. Yes.

14 Q. So it's not to maintain the status quo. It's to
15 improve things for them?

16 A. To maintain and recover species at risk.

17 Q. Yes. And CWS is charged with implementing that
18 program or Act?

19 A. Sorry. As I said in my Opening Statement, I think
20 under the *Species At Risk Act*, there's three competent
21 departments that are responsible for implementing the
22 *Species At Risk Act*; that being Environment Canada,
23 Fisheries and Oceans Canada, and the Parks Canada
24 Agency.

25 And I can explain if you wish in a little

1 more detail how those roles are separated out under
2 the *Species At Risk Act*, but there are three
3 departments that are responsible for implementing
4 SARA.

5 Q. Okay. Maybe it would be useful to see the different
6 roles if you could elaborate on that.

7 THE CHAIRMAN: Mr. Ingstrup, maybe it would
8 be helpful if you would indicate which one applied in
9 the case of the NWA, or whether all three do.

10 A. MR. INGSTRUP: Yes, I can do that.
11 Maybe I'll start with when, when Environment Canada --
12 is responsible, the responsible department for
13 terrestrial species. The Department of Fisheries and
14 Oceans is responsible when we're dealing with an
15 aquatic species at risk. And Parks Canada Agency in
16 this case it wouldn't apply in the National Wildlife
17 Area. They are solely responsible for dealing with
18 issues when they occur in a national park.

19 In the case of a National Wildlife Area, I
20 think the 15 species that we showed you the other day
21 are entirely terrestrial, there's no aquatic species,
22 therefore certainly involves our department in terms
23 of this particular Project.

24 Q. Okay. Thank you. That's helpful. Now -- for once a
25 species has been listed, and I'm just setting the

1 framework for where we're going, one of the things is
2 to identify the critical habitat for that species; is
3 that correct?

4 A. Yes. One, one requirement for an extirpated,
5 endangered, or threatened species is to develop a
6 recovery strategy for that species. And the Act
7 specifies that as part of developing that recovery
8 strategy, there's a, there's a requirement to
9 identify -- there's a requirement to identify the
10 species' critical habitat to the extent possible and
11 that's based upon the best available information
12 including the information --

13 THE CHAIRMAN: Could you slow down, please.

14 A. MR. INGSTRUP: I'm sorry. Provided by
15 COSEWIC and examples of activities that are likely to
16 result in its destruction.

17 And in the case that our department is unable
18 to do that, we're required to put in the recovery
19 strategy, a schedule of studies, to identify that
20 critical habitat. And, and when the available
21 information is inadequate. So that's, that's
22 specified right in the *Species At Risk Act*. And
23 that's under Section 41.

24 Q. Okay. Now, what I'm going to do now is by way of
25 example use one of the SARA species. And I don't

1 intend to go through all of them, so once I get -- so
2 I'm starting down this road, rest assured I'm not
3 going to go through all of them.

4 And I want to start out with the Sprague's
5 Pipit. Now, it's a species at risk found in the NWA.
6 Is that correct?

7 A. That's correct.

8 Q. Now, has -- a recovery plan, I understand, has been
9 done for that species?

10 A. That's correct. And it's been posted on the *Species*
11 *At Risk Act* public registry.

12 Q. Now, when you're doing the recovery plan, who are the
13 scientists that were involved in putting together
14 that recovery plan?

15 A. One minute. Just for clarification, are you looking
16 for specific people that are participating on -- in
17 the development of that strategy? Is that what you're
18 looking for?

19 Q. Well, that -- if you can, offhand, who the lead ones
20 were.

21 A. Yeah, I can't offer you -- we don't have that
22 information offhand in terms of all the people that
23 were on the recovery team that participated. And, but
24 the Chair for that recovery team, I can confirm that
25 that was an Environment Canada employee Dr. Stephen

1 Davis. He is located in our Regina office.

2 Q. But I take it you get some of the experts on that
3 species to develop the recovery plan; is that a fair
4 statement?

5 A. One minute. Sorry, I got a bit distracted. Can you
6 repeat that question?

7 Q. Well, when you're doing a recovery plan, is it fair to
8 say that you go out and try to get the experts in
9 that species to develop it?

10 A. That's correct. Generally, our approach, when we are
11 faced with having to produce a recovery strategy, is
12 to formulate a team of experts, if you will. It's
13 important to note that a recovery team is -- I mean,
14 certainly that's the way we implement recovery
15 strategy writing. The concept of a recovery team is
16 not specifically mentioned in the *Species At Risk Act*,
17 but it is certainly a common way that we have in terms
18 of preparation of a strategy.

19 When we're faced with the species, I won't
20 use any particular one, but when we're faced with
21 having to form a recovery strategy, we certainly look
22 to, if we're leading, if Environment Canada is leading
23 on a strategy, we try and find someone that's an
24 expert, that's knowledgeable in the species, that has
25 some sort of credibility, if you will, in terms of

1 developing a recovery strategy. And we look to other
2 government departments.

3 Certainly we look to Provincial government
4 departments in formulating that team. And we will
5 involve expertise from universities and other, you
6 know, any other areas where people may be able to
7 offer some expertise.

8 Q. Okay. And your lead here you said was Dr. or
9 Mr. Davis?

10 A. It's Dr. Stephen Davis, yes. D-a-v-i-s.

11 Q. Okay. And is it Dr. Dale, was she on that team as
12 well?

13 A. Yes, I was just going to mention that, actually.
14 Brenda Dale, who is with us here today, is a member of
15 the Sprague's Pipit recovery team.

16 Q. And that's because she's done a lot of work in that
17 area; is that correct?

18 A. Yes, Brenda is very knowledgeable as I think we all
19 know in terms of the grassland birds and particularly
20 in the Suffield Block.

21 Q. Okay. Now, when you were looking at a recovery plan
22 for the Sprague's Pipit, do you -- was the Suffield
23 Block treated as one entity? I'm trying to
24 understand, does it -- do you do one with -- do you
25 do one nationally but would there be a specific plan

1 for the Suffield Block in that?

2 A. MR. INGSTRUP: Just a little bit of
3 clarification. Are we speaking with respect to
4 Sprague's Pipit?

5 Q. Yes, I'm using that as an example of how this process
6 works.

7 A. Because it does vary. I would just add that, you
8 know, depending upon the range of the species, you
9 know, it will dictate a different approach.

10 But in the Sprague's Pipit recovery strategy,
11 I'll just comment that certainly Suffield is, we've
12 determined, one of the most important areas for this
13 particular species.

14 Beyond that, I would like Brenda Dale to
15 comment in terms of sort of how that recovery strategy
16 developed.

17 Q. Okay. If we could. Is it Dr. Dale or Ms. Dale?

18 A. MS. DALE: It's Ms. Dale.

19 Q. Ms. Dale, okay. So could you tell us a little bit
20 about how that recovery plan evolves and what -- an
21 overview of that?

22 A. I guess I would require a little clarification. Are
23 you speaking about the critical habitat portion? Or
24 the entire plan? Or how we -- can -- it could take a
25 while if you want the whole --

1 Q. Okay, maybe we'll work -- I'll ask you some specific
2 questions. And I guess to back up a little bit to
3 the recovery team, is industry involved in that, and
4 when we're looking at something like Suffield, would
5 the industry there be involved in the recovery plan?

6 A. In terms of the team, there were representatives from
7 the provinces, and those were individuals who all have
8 experience with the species from each of the three
9 Prairie provinces.

10 There were representatives of the Department
11 of National Defence because their lands have high
12 concentrations of Sprague's Pipit.

13 There were -- there are representatives from
14 the cattle industry because range management is very
15 important for this species.

16 There was -- there were no members from the
17 oil and gas industry.

18 A. MR. INGSTRUP: Could I just add to that in
19 terms of recovery strategies, it is specified in the
20 Act that they should be prepared in consultation with
21 essentially any landowners or parties that would be
22 directly impacted by that strategy.

23 Often, I mean, we don't -- just due to
24 logistics, certainly we can't involve, especially for
25 some of these wide-ranging species, all parties within

1 the range of that species. What we do to try and meet
2 our requirements under the Act is we, we post these
3 strategies when they are completed by some experts in
4 the field for consultation period and with the
5 expectation that parties that would be impacted would
6 review that and provide us some comments on it before
7 it's finalized.

8 Q. I guess my question, then, in response to that: Did
9 you receive any feedback from oil and gas on the
10 recovery plan and, in particular, EnCana?

11 A. DR. DUNCAN: The -- as was mentioned, the
12 recovery strategy for the Sprague's Pipit posted for
13 public consultation on the register, that required a
14 60-day comment period, and it's been finalized now.
15 And is now being finalized.

16 THE CHAIRMAN: Would you give your name,
17 please.

18 A. DR. DUNCAN: What we traditionally do when
19 we post a recovery strategy is we are required to
20 consult with people who are directly affected by that.
21 So we make a judgment on a particular recovery
22 strategy as to whether people are directly affected.
23 Typically, if we don't identify any critical habitat
24 in a recovery strategy, we found there's very little
25 interest by landowners, by industry in a recovery

1 strategy, generically speaking.

2 What we have done is typically send all of
3 our recovery strategies, before we even post them on
4 the SARA public registry, to a list of environmental
5 groups, industry, industry in terms of CAAP, would get
6 a copy of these in case they want to comment even
7 before we send them up to our Minister to get posted
8 for a 60-day comment period.

9 I can't guarantee off the top of my head,
10 excuse me, off the top of my head that the Sprague's
11 Pipit was sent to all those organizations, but that's
12 typically the way we proceeded with all our recovery
13 strategies.

14 Q. Does anyone know if you got any feedback from EnCana
15 on the Sprague's Pipit recovery plan?

16 A. I'm quite sure we did not. I would make the point of
17 clarification that that recovery strategy did not have
18 any critical habitat identified within it.

19 Q. Okay, and that's where -- in the recovery plan -- and
20 I do apologize, I have looked at it, but I don't have
21 a recent memory -- is there any comments on there
22 about what types of activity is compatible? For
23 example, does it make any recommendations about
24 industrial activity in the area?

25 A. MS. DALE: Brenda Dale. I would have to

1 check all of the specifics, but my general
2 recollection would be that it would make reference to
3 grazing as being, when properly managed, as being a
4 very beneficial practice for this species. And I do
5 believe it goes through a series of of activities that
6 I believe either require further research to determine
7 their exact magnitude of their impact on the species.

8 Q. Okay. And we can look at the plan and see what it
9 says about oil and gas, so I won't go there.

10 Now, I might talk a little bit about critical
11 habitat. And I see from your presentation that the
12 NWA -- I think it was the one that had a lot of red
13 on it. It's at page 8. Now, that is the preliminary
14 assessment for the Sprague's Pipit; is that correct?

15 A. That is correct.

16 Q. Now, does -- do you have any -- received any
17 information on when that will be finalized?

18 A. MR. INGSTRUP: Just a bit of context. In
19 order to finalize this critical habitat designation,
20 we do have quite a significant consultation
21 requirement for it. We expect to be finalizing the
22 critical habitat designation for the five species that
23 we've talked about on the National Wildlife Area where
24 we preliminarily identified it to date or assessed it
25 to date. We expect in 6 to 24 months to have that

1 finalized. And that's subject to all the necessary
2 consultations going through and some unforeseen
3 circumstance not, not arising during that.

4 Q. Has a consultation started on that?

5 A. DR. DUNCAN: We've started our
6 consultations for the three plant species, the Sand
7 Verbena, the Tiny Cryptanthe, and the Slender
8 Mouse-Ear Cress. We have not yet started
9 consultations to any extent on the Sprague's Pipit or
10 the Kangaroo Rat critical habitat.

11 Q. So just so I'm clear, is the purpose of -- once you
12 get the consultation then, you go back and look at
13 the preliminary critical habitat and then a final
14 determination will be made on it. Am I understanding
15 the process?

16 A. Yeah, typically, we've already engaged the experts in
17 the species, so we're going out and consulting on the
18 recovery strategy or the critical habitat, if you
19 will, in however form, be it a recovery strategy where
20 it's going to be identified, or an amendment to a
21 recovery strategy where it will be identified, or in a
22 subsequent action plan.

23 Q. Okay. Now, if development goes ahead before the
24 critical habitat is determined, does that change any
25 decisions on critical habitat, what it is or how it's

1 to be determined or --

2 A. That's an interesting point you raise. Yes, when we
3 go and finally identify critical habitat for a given
4 species; things like roads, well sites are not part of
5 the critical habitat. Obviously most of our species
6 are not dependent upon or living on the roads or the
7 well sites. And so we would say here is the critical
8 habitat for this species within these geographic
9 bounds and it would consist of a certain habitat type
10 and it typically would not be the roads and the wells
11 within that geographic boundary.

12 Q. So just so I'm clear, then, if this development were
13 allowed to go ahead, then you would have to go back
14 and revisit what would be critical habitat in the
15 NWA?

16 A. MR. INGSTRUP: Just one point. In your
17 question to me, it implied that you were assuming that
18 critical habitat, that critical habitat or the
19 preliminarily assessed critical habitat at this point
20 would be destroyed.

21 Q. Well, my question -- I'm not -- I don't think I'm
22 making any assumptions, and forgive me if I am, but
23 what I'm trying to understand that, if this was
24 approved would you then have to go back and
25 re-evaluate what you have preliminarily determined to

1 be critical habitat?

2 A. If the Project was approved and, and during this time,
3 before it's been actually identified as critical
4 habitat, and if critical habitat was destroyed or,
5 pardon me, the preliminarily assessed critical habitat
6 that you see on this map, if it was destroyed as a
7 result of the Project going forward, then certainly we
8 would have to, you know, factor that into our final
9 decision in terms of what critical habitat is actually
10 mapped.

11 I mean, certainly if habitat or preliminarily
12 assessed critical habitat, if it's destroyed, it won't
13 be suitable to identify that formally as critical
14 habitat in the future.

15 Q. And that would be for the other species, the plant
16 species we've talked about as well?

17 A. That's correct.

18 Q. Now, I'm going to talk a little bit about snakes and
19 amphibians and reptiles. And that would be you,
20 Mr. Didiuk, right? Am I saying your name right?

21 A. MR. DIDIUK: Yes.

22 Q. Now, I don't -- we heard evidence, and this is some
23 evidence that came forward during the EnCana panel,
24 that in some areas they will be asking for wells to
25 be placed in the wetland buffer. And, in fact, the

1 two PDAs have two within that. What effect -- or let
2 me -- some of the great species at risk such as the
3 Great Plains toads, would you agree, will be using
4 that area or could be using that area?

5 A. Depending on the type of wetland type, correct.

6 Q. And how does, or does it, relaxation of buffers, does
7 that pose any obstacles or any concerns with respect
8 to recovery of those species?

9 A. If a well development and associated structures occur
10 within a wetland buffer that are beyond the wetland
11 basin, but perhaps near the wetland where newly
12 transformed Great Plains toads or adults may be
13 located for overwintering purposes, then there could
14 be perhaps some mortality occurring.

15 Q. Okay. And of course is it fair to say with SARA that
16 any unnatural mortality is a concern? Any SARA
17 species?

18 A. That would be correct. And in view of -- this would
19 be a concern for special concern species when
20 considering development and working with stakeholders
21 under the venue of a managing plan.

22 Q. Okay. Now, I'm going to now turn to snakes. And I
23 think, if I've heard this right, that the snake
24 populations are on the decline. Is that a fair
25 statement, the ones that are in the NWA?

1 A. Based on a variety of types of information, that would
2 be my judgment.

3 Q. Now, I just want to go back to the basis of the NWA.
4 And what -- is one of the reasons for declaring an
5 area a National Wildlife Area is to assist in, I
6 guess, preventing species from becoming SARA listed
7 or to help those that are SARA listed to recover? Is
8 that a general aim of the NWA?

9 A. MR. INGSTRUP: That's certainly one of the
10 main purposes, yes.

11 Q. Because, I mean, it would seem to me, we should have
12 concerns about species before they become listed. We
13 don't just start and get worried about them when they
14 are listed. Is that fair?

15 A. I would agree with that.

16 Q. Now, are any of the mitigations with respect to snake
17 mortality, what's your assessment, Mr. Didiuk about
18 their efficacy? Are they working?

19 A. MR. DIDIUK: In my judgment, some of these
20 proposed mitigation measures that have been put
21 forward by EnCana are -- will not be particularly
22 effective. Intent is one thing, but meaningful and
23 effectiveness is another consideration. And based on
24 a variety of aspects of both snake behavior and human
25 behavior, some of these -- these mitigative measures I

1 have -- I would judge would not be particularly
2 effective.

3 Q. Could you elaborate a bit on that? Like which ones
4 and why?

5 A. EnCana in its EIS and various places in the EIS and in
6 the EPP list, about up to, approximately 10 mitigative
7 measures, but they can essentially grouped into four
8 main categories. Speed limits, education programs,
9 entry points for traffic, and attempts to use
10 primarily east/west roads. I could address each of
11 these, but perhaps I could -- perhaps speak to speed
12 limits as an example, if that would work.

13 Q. Sure: Sure. That would be fine.

14 A. I think a few days ago Mr. Collister, I think in
15 cross-examination, I believe it was by Mr. Ross,
16 responded regarding speed limits and how effective
17 they might be. And, essentially, I would have to
18 check the transcripts, but he stated lower is better.
19 And I would have to agree. Lower speed limits for a
20 variety of reasons would be preferred on the NWA.

21 But the effectiveness of speed limits to
22 reduce or avoid killing of snakes really depends on
23 the ability of drivers to detect these snakes and to
24 act accordingly to avoid striking these snakes. And
25 this in turn has been determined by the vehicular --

1 THE CHAIRMAN: Mr. Didiuk, please slow down.

2 A. Oh, I'm sorry.

3 THE CHAIRMAN: You're going too fast.

4 A. And this is determined by the behavior of the snakes,
5 the visibility of the snakes, the capability of
6 vehicles and drivers, and attitude of drivers. And
7 the latter, attitude of drivers, is probably best left
8 to when discussing education programs.

9 Mr. Collister also responded to Mr. Ross's
10 question about; has there been any empirical studies
11 dealing with the effectiveness of speed limits to
12 avoid mortality of snakes. I believe he indicated
13 there has been some information from CWS, perhaps, but
14 no studies. This is not really correct. There is a
15 variety of information in the literature. And, in
16 fact, the Canadian Wildlife Service, Service in 2000,
17 did conduct a fairly detailed study of trying to
18 define characteristics of traffic and responses
19 of drive -- characterizing encounters with snakes.

20 And I can just pull out perhaps a few
21 statistics in that respect to show the difficulty of
22 using speed limits as a mitigating factor.

23 I think we had a contractor driving up just
24 over -- 10,000 kilometre over a 36-day period, day
25 after day, dividing observations from morning,

1 afternoon, and evening, characterizing the type of
2 traffic, the speed of traffic, the type of vehicle
3 encountering the snakes and how they -- in terms of
4 detection distances and a variety of measurements like
5 that.

6 We conducted these surveys. And there was an
7 average of 44 kilometres per hour. We did conduct
8 some travel at little bit higher speeds just to look
9 at the stopping conditions. We can look at a few of
10 the statistics. This is combined for all species
11 combined. We encountered 68 snakes. The average
12 distance, the detection for these snakes, was a little
13 over 12 metres at approximately a 45 kilometre per
14 hour truck rate of travel.

15 The distance safely -- and I have to
16 emphasize "safely" -- to stop the vehicle while at the
17 same time hopefully try not to strike a snake was
18 36 metres. In other words, you know, in almost all
19 cases, in order to safely stop in the time you
20 detected a snake, you were well past the snake.

21 So this indicates the difficulty of detecting
22 snakes and effectively trying to avoid them. And I
23 can look at a few comments of the contractor just to
24 show that, even though this is a person who is
25 motivated to find snakes and see snakes, it's

1 difficult to see them. And that -- comments like "saw
2 snake adjacent to truck as passed."

3 THE CHAIRMAN: Mr. Didiuk, you are going a
4 little fast, so please slow down.

5 A. Okay, I'll try. My apologies again.

6 THE CHAIRMAN: Since I have interrupted, I
7 don't believe this study is an exhibit. I wonder if
8 you could confirm that. I wonder if it should be put
9 on the record since you are quoting from it.

10 A. I see. This study has been referenced within another
11 document in the Environment Canada's submission which
12 was provided to EnCana. As far as actual document, I
13 do not, I do not know if EnCana has accessed that, but
14 it can be provided. As an undertaking?

15 MR. DENSTEDT: Mr. Chairman, if we could
16 have a reference of what the name of the author is or
17 something, that would be marginally helpful.

18 THE CHAIRMAN: Indeed, that would be helpful
19 for us to understand what you're reading from, please.

20 A. MR. DIDIUK: One moment. Mr. Chairman,
21 the document referenced is titled: "Didiuk 2001, An
22 Initial Assessment on Mortality of Snakes on Roads at
23 CFB Suffield National Wildlife Area, Unpublished, CWS
24 Presentation to CFB Suffield, February 19th, 2001."
25 In support of this document are some selected digital

1 data files providing specifics regarding the type of
2 observations I've been alluding to, ah, describing.

3 THE CHAIRMAN: Thank you.

4 Mr. Denstedt?

5 MR. DENSTEDT: Mr. Chairman, I'm advised by
6 EnCana that we don't have that document. Mr. Didiuk
7 and the Government of Canada filed evidence some six
8 months ago. I'm shocked, quite frankly, that we're
9 hearing about this for the first time here in
10 Mr. Didiuk's oral testimony. Shocked. I expect an
11 explanation.

12 A. MR. NORTON: Mr. Chairman, we can
13 certainly file the document in question as an exhibit.

14 THE CHAIRMAN: The concern, of course, is
15 that this is new evidence and that Mr. Didiuk or,
16 sorry, that Mr. Denstedt and EnCana have not received
17 this before now.

18 MR. LAMBRECHT: Mr. Chairman, if I might, my
19 understanding of the evidence is that this particular
20 study was footnoted in some of the materials that were
21 filed by Environment Canada, so I think if that is
22 correct, then it would be incorrect to submit this is
23 the first time EnCana had an opportunity to examine
24 this material. Certainly the information request
25 process, and within the Panel process, is quite

1 exhaustive, so I think I just wanted to make an
2 observation with respect to my friend's comments that
3 my understanding of the evidence was that there was
4 reference to this study in some of the materials
5 already on record.

6 THE CHAIRMAN: Thank you, Mr. Lambrecht.

7 Well, it does not seem that the evidence has been made
8 available to EnCana. There may have been a footnote,
9 but I'm not sure that the study has -- it sounds like
10 the study has not been made available to them.

11 So at this stage, Mr. Denstedt, have you
12 further comment here?

13 MR. DENSTEDT: Sir, we'll -- we have to
14 manage it as best we can, right. The process here is
15 to gather information. Again, my concern is about
16 fairness, but if we can get the document as soon as
17 possible, we'll try and deal with it in rebuttal.

18 THE CHAIRMAN: Thank you, Mr. Denstedt. I
19 would ask that this document be filed as evidence and
20 given a number. So can you undertake to file that
21 document, Mr. Didiuk?

22 A. MR. DIDIUK: Yes, Mr. Chairman, I can.
23 However, at this point I would like to, perhaps, if I
24 can, at your -- with your permission, get a little bit
25 of clarification about what the accessibility of this

1 information, in my view, might have been to EnCana.

2 THE CHAIRMAN: Well, Mr. Didiuk, I have no
3 idea. I have no idea, I'm afraid.

4 A. Oh. Okay.

5 THE CHAIRMAN: What I'm asking for is that
6 the document be filed as an exhibit.

7 A. MR. DIDIUK: We will do so.

8 MR. DENSTEDT: So for clarification, again,
9 we asked for all the references from the Government of
10 Canada and we received a list of more than 200
11 references and Didiuk 2001 is not among them.

12 THE CHAIRMAN: Thank you. So as I
13 understand it, this document will be filed as
14 evidence.

15 MS. KLIMEK:

16 Q. Now, back to where we were, if I can remember, and
17 I'll let Mr. Lambrecht and Mr. Denstedt sort out who
18 knew what where when because that isn't -- I guess
19 that's between them. But you were going through what
20 you found about.

21 MR. DENSTEDT: Okay, I apologize, my
22 patience is wearing thin. It's inappropriate for my
23 friend to cross-examination -- cross-examine on a
24 document we have not seen and cannot follow along
25 with. It's just inappropriate.

1 THE CHAIRMAN: What I suggest is the
2 document be filed immediately and perhaps --

3 MS. KLIMEK: We'll come back to it.

4 THE CHAIRMAN: -- come back to this.

5 Do you have the document there, Mr. Didiuk?

6 A. MR. DIDIUK: I have it in digital form.

7 THE CHAIRMAN: Well, we'll have to make it
8 available to, to members here, and this will not be
9 able to occur until the lunch break, I guess. But as
10 soon as we take a break at lunch, then perhaps you can
11 make it available to the Secretariat. And that will
12 be made available, then, to everybody else then.

13 So Ms. Klimek, could you proceed on another
14 matter, please?

15 MS. KLIMEK: Yeah, I'll move ahead on
16 that.

17 Q. Now, this might go back to you, Mr. Ingstrup. I think
18 we were talking about the Sprague's Pipit recovery
19 plan. And I think back -- I just want to go to the
20 slide. Which ones of these have recovery plans?

21 A. MR. INGSTRUP: The Tiny Cryptanthe and the
22 Sprague's Pipit. The Burrowing Owl has a draft plan
23 that's been posted on the Registry but has not yet
24 been finalized.

25 Q. Okay. Now on those, were industry involved in the

1 creation of the recovery plan, do you know, the Tiny
2 Cryptanthe?

3 A. I would like Darcy Henderson to comment on that.

4 Q. Okay.

5 A. He is the Chair of the Recovery Team.

6 A. DR. HENDERSON: I'm Darcy Henderson,
7 H-E-N-D-E-R-S-O-N, one of the easier ones.

8 For the recovery strategy for Tiny
9 Cryptanthe, it was officially released in 2006, sorry.
10 When you refer to 'industry", I assume you're
11 referring to the oil and gas industry. To my
12 knowledge, they were not specifically consulted.
13 There was also no critical habitat identified in that
14 recovery strategy. But as far as other industrial
15 representatives, there was a member of the Canadian
16 Cattlemen's Association who is part of the recovery
17 team who is involved in the review and preparation of
18 that document.

19 Q. And for the plant species, has critical habitat been
20 defined for those? and you may have told me, but
21 I've got overload.

22 A. Darcy Henderson again. Critical habitat has not been
23 officially identified for any of these plant species
24 at risk that I'm responsible for.

25 Q. And is there any timetable to be doing it for these

1 rare plants?

2 A. DR. DUNCAN: As we've stated already, the
3 recovery strategy for the Tiny Cryptanthe has been
4 finalized, so what we're looking at is an amendment to
5 the recovery strategy for Tiny Cryptanthe. Speaking
6 to schedule, I'll go to the recovery strategies for
7 the Slender Mouse-Ear Cress and the Small-flowered
8 Sand Verbena. In fact, unfortunately we have missed
9 our deadline. There are requisite deadlines for
10 producing recovery strategies under the *Species At*
11 *Risk Act* and we, in fact, have passed those deadlines
12 primarily due to the requirement for consultation,
13 which is somewhat out of our control.

14 So we have started but not yet completed our
15 consultation on the recovery strategies for the Sand
16 Verbena and the Mouse-eared Cress. We have also
17 started but not completed the consultations on the
18 addendum or amendment for the Tiny Cryptanthe. I
19 would anticipate we should be finished in the next
20 three to six months, but again it's somewhat difficult
21 sometimes to anticipate when we can complete our
22 consultations and we want to make sure we do an
23 adequate job of that.

24 We have started particularly on these three
25 plants. We've had two sessions and meetings with

1 EnCana and other oil and gas industry folks for the
2 three plants that we're talking about. We have also,
3 of course, co-operatively developed those documents
4 with the Provincial governments and the Prairie Plant
5 Recover Team. One of our outstanding consultation
6 requirements is with the Siksika First Nation who
7 expressed an interest on Suffield. We have commenced
8 discussions with the Siksika First Nation but, again,
9 have not concluded those consultation efforts.

10 So it's a bit hard to predict, but I would
11 certainly hope in the next six months we would be in a
12 position to finalize the critical habitat with the two
13 recovery strategies and the amendment for the three
14 plant species.

15 Q. And, again, with respect to those, if this Project is
16 approved, will there have to be revisiting of that
17 process to determine whether there's some effect on
18 what could be potentially critical habitat?

19 A. If there is a lot of change in land use between today
20 and six months from now, we may have to revisit to see
21 if those areas still meet our requirement. I would
22 anticipate they likely would. We don't anticipate
23 anyone going in and cultivating extensive areas within
24 the National Wildlife Area. However, there could be
25 some additional change in land use that might happen

1 in the next six months that may make us revisit what
2 we were going to identify as critical habitat.

3 A. MR. INGSTRUP: Could I just add to that? We
4 have preliminarily assessed this habitat in the case
5 of Tiny Cryptanthe and endangered species. We put
6 this forward. And we would have a real concern if,
7 what we've shown to you through this, this forum, if
8 that preliminarily assessed critical habitat happens
9 to be destroyed because it's, in our opinion, at this
10 point in time, that, that habitat is critical to the
11 survival or the recovery of that particular species.
12 So we would really have a concern about that if that
13 situation unfolded.

14 Q. Now, I would like to talk a little bit about the
15 Kangaroo Rat and who is best to -- is that to you,
16 Mr. Ingstrup, too?

17 A. You can start with me.

18 Q. Okay. Now, what status or where is it at with respect
19 to in the process for recovery plans and critical
20 habitat?

21 A. DR. DUNCAN: For the endangered Kangaroo
22 Rat, we don't have a lot of expertise within the
23 Canadian Wildlife Service, so what we have done is
24 issued a contract to a consultant who has given us a
25 first draft of a national recovery strategy for the

1 Kangaroo Rat. We provided some comments back to that
2 contractor. And I'm just awaiting the finalization
3 from the contractor's point of view on that. And then
4 we'll proceed to share that with various government
5 agencies and go about consulting on that document.

6 Q. Okay. And is industry involved in the recovery team
7 for that species, the Kangaroo Rat?

8 A. The Kangaroo Rat is found in both Alberta and
9 Saskatchewan. There is no national recovery team for
10 that species. There is, however, an Alberta
11 Provincial Recovery Team for that species. And I'm
12 not sure who all sits on that Provincial Recovery
13 Team. That's led by the Province of Alberta.

14 Q. Now, I would just like someone's views on this one
15 because I think we heard that, for some of these
16 species, industrial development will be a benefit.
17 How do you reach -- if that's the case, how do you
18 factor that in? Is that the case and how do you
19 factor that in to a recovery plan, or is it factored
20 in?

21 A. Is this question in relation to Kangaroo Rats
22 specifically now?

23 Q. Well, that's -- we'll start with that one, yes.

24 A. I would like to refer to Olaf Jensen.

25 A. MR. JENSEN: Olaf Jensen, J-E-N-S-E-N.

1 With respect to Ord's Kangaroo Rat, and I believe your
2 question, perhaps you could clarify it, is around
3 possible beneficial habitat created by industrial
4 disturbance?

5 Q. Yes.

6 A. Yeah, there's been some discussion over the past few
7 days with respect to how especially creation of sandy
8 habitats along roads and trails may indeed create
9 habitat that is beneficial for Kangaroo Rats. It's an
10 interesting question.

11 Kangaroo Rats, for a bit of background, are
12 found across the continental U.S.A. and in Canada.
13 Ord's Kangaroo Rat is found just in Saskatchewan and
14 in Alberta. It depends entirely on, on open sandy
15 habitats for, for its life cycle in that it needs,
16 seems to need to have open sand.

17 Part of the work that Environment Canada did
18 with respect to Ord's Kangaroo Rat was to undertake a
19 preliminary assessment of critical habitat, which --
20 and, sorry, this is a long way to answer your
21 question, but it will get to the point here -- was to
22 look at preliminary critical habitat. And we
23 contracted some experts at the University of Calgary
24 to look at this issue. They undertook a modelling
25 approach using a very large amount of data, which is

1 unusual in some respects, in that K Rats, Kangaroo
2 Rats, pardon me, especially at CFB Suffield National
3 Wildlife Area, have been monitored extensively over
4 the past few years.

5 So they ran a model taking into account all
6 the data they had available on where Kangaroo Rats
7 occur and -- sorry -- and in what habitat associations
8 they occur. So they had data on a location for a
9 Kangaroo Rat and what the vegetative or surface
10 characteristics of that location were like.

11 They created a model. And you might have
12 noticed, the model contained in Environment Canada's
13 submissions, and also in our presentation. We could
14 reference that map if that's useful. So the map on
15 your screen now shows a preliminary map of critical
16 habitat for Ord's Kangaroo Rat. And you'll notice,
17 especially along the western edge of the National
18 Wildlife Area, there's a line of red indicating
19 preliminary assessed critical habitat for this
20 species -- pardon me, eliminating preliminary assessed
21 critical habitat for this species.

22 Now, those -- that's an anthropogenic
23 feature. It's a man-made feature. That's a road.
24 This, sorry, this is getting to the point of whether
25 or not industrial or human activities can create

1 critical habitat.

2 Because the model was primarily looking at
3 the association of where Kangaroo Rats occur and what
4 the characteristics of the vegetation and soil were
5 like, the model itself generated an output of
6 preliminary assessed critical habitat that did include
7 roads and trails to some degree.

8 Now, further, further work that is ongoing at
9 this point which will refine this model over time
10 suggests that those habitats might indeed be a sink
11 for the species. So while they contain open sand and
12 thinly vegetated sandy soils, which are attractive to
13 K Rats, Kangaroo Rats may move away from habitat where
14 they produce more young that can occupy the habitat.
15 Those young Kangaroo Rats will occur along the roads.
16 But over time, because of characteristics related to
17 the soil and the quality of food found along those
18 roads and trails, those Kangaroo Rats will not survive
19 over time.

20 One important point to remember here with
21 Kangaroo Rats is their populations cycle tremendously,
22 over the course of a year. So in extreme winters,
23 they'll -- as much as 90 percent of the population
24 will be lost just from winter mortality.

25 So they're heavily dependent, in my view, on

1 habitats that are of high enough quality to sustain
2 the population both through the summer and make them
3 healthy enough that they can again survive through the
4 winter.

5 So one final point on this issue, and I think
6 I've partly answered the question as to -- so, on
7 first glance, yes, man-made activities can create
8 habitats that are attractive to Kangaroo Rats.
9 Whether or not this will form critical habitat in that
10 it's habitat that will become useful to the survival
11 or recovery of the species is unknown but unlikely at
12 this time.

13 Kangaroo Rats, as I mentioned, occur across
14 the continental U.S. and Canada. In the southern, in
15 the United States where they -- where Kangaroo Rats
16 and their con specific, though not Ord's Kangaroo Rat
17 but relate related species occur, they occur in large
18 numbers.

19 Now, from a genetics point of view, species
20 that occur at the northern end of their range, like
21 Ord's Kangaroo Rat in Canada, are very sensitive to
22 these oscillations or fluctuations in population. And
23 it's an important concern for conservation that we
24 look at the value of habitat preserving these
25 populations over the long time, long term.

1 So part of the work that Environment Canada
2 did, which is in our submission, is undertake a
3 systemic review of all the literature. The
4 literature, pardon me. The literature did show that,
5 in the southern U.S., that roads and trails could be
6 beneficial habitat for Kangaroo Rats. In these areas,
7 however, roads and trails are -- or Kangaroo Rats are
8 not subject to the same large fluctuations
9 interannually in population; that is, they're not
10 losing 90 percent of their population every winter.
11 So when we return to the northern end of the range,
12 you've got populations that are attracted to roads and
13 trails because of the habitat itself, but they're not
14 likely to survive over the winter.

15 So that's a very long answer to your
16 question. I hope it answers -- I hope it has answered
17 your question.

18 Q. Thank you very much. That was helpful. Now, I have
19 just a few more questions on SARA, so I think I'll
20 wrap them up before lunch. Is -- maybe you can give
21 us some indication. There are some
22 Provincially-listed species that are not SARA listed.
23 And we also have sensitive species travel -- from
24 Alberta or listed in Alberta travelling through the
25 area. What level of coordination is there between

1 Alberta and Canada looking at these other species and
2 what has your experience been with that? Because we
3 don't have Alberta Environment here to talk about
4 that.

5 A. DR. DUNCAN: Dave Duncan again. I can
6 speak sort of from a higher level, if you will.
7 Generically, there's quite good cooperation between
8 the Provincial and Federal governments. I personally
9 have been invited to sit on the Province of Alberta's
10 Endangered Species Conservation Committee to help
11 foster the federal/provincial relationship.

12 So I try to attend those meetings as best I
13 can. So I'm aware from the Federal perspective of
14 what the Province is doing in terms of its listing
15 process and what species it's concerned with and use
16 that as one of the conduits to try to get their
17 concerns on Federal lands, places like the Suffield
18 National Wildlife Area, but I can't, I can't speak to
19 individual species, specifics like that.

20 A. MR. INGSTRUP: And I just add to that, we do
21 communicate with the Province of Alberta in this case
22 fairly regularly in terms of co-ordinating species at
23 risk programming in the Province. We're in the
24 process of actually finalizing a, a bilateral
25 agreement that would help both Alberta government and

1 the Government of Canada, in this case, the three
2 competent departments, in basically assisting and
3 improving the coordination between all the different
4 jurisdictions, both Federal and Provincial, and
5 involved in the species at risk recovery planning, so
6 we've got that ongoing as well.

7 Q. I guess this might go over to you, Colonel Lamarre.
8 With Alberta species, and you've got the SARA and CWS
9 taking care of the Provincially-listed ones, but has
10 there been any coordination with Alberta and the Base
11 on what happens or how you deal with their species
12 that are listed that come on to your Base?

13 A. COL LAMARRE: I'm going to turn to my
14 scientists on that as well.

15 A. MS. BOYD: When the Base is considering
16 land use impacts, we do of course take into
17 consideration SARA species, but also the
18 Provincially-listed species, as well as sensitive
19 species such as those that are listed on the General
20 Status of Species in Alberta Listings.

21 In terms of coordination, the Base does
22 participate in several recovery teams, certainly at
23 the Federal level, but also more specifically at the
24 Provincial level for the Ord's Kangaroo Rat. So
25 before it was listed on SARA, it was already an

1 endangered species in the Province. And we sat on
2 that recovery team for some -- for several years. And
3 also the Base is one of the co-chairs of that recovery
4 team.

5 We also now sit on the Tiny Cryptanthe team
6 for the Province, the recovery team, as well as for
7 Sand Verbena. So both the Federal and the Provincial
8 teams for those, those particular species. So there
9 is a good deal of coordination that is going on and we
10 are concerned about those species listed Provincially
11 as well.

12 Q. Okay, thank you. Now, I think these might go to you,
13 Mr. Ingstrup, and I want to talk a little bit about
14 permitting under SARA, because we've heard from the
15 Proponent that if they encounter a species at risk,
16 their response would be to go to SARA and get a
17 permit. And I would like to explore that concept a
18 little bit on, first of all, are -- have there been
19 many applications to SARA for permits? And what are
20 the -- let's back up a little bit. What is the
21 purpose of the permit? Is it to allow you to go
22 ahead in contravention of the Act or, or -- not
23 contravention because I guess you get a permit -- but
24 what is the purpose of the permitting under SARA?

25 A. MR. INGSTRUP: Basically, to use the wording

1 in Section 73 of the *Species At Risk Act*, and this is
2 the section that, that outlines the whole permitting
3 issue. And it says that the competent Minister, and
4 in this case, with respect to terrestrial species,
5 that would be the Minister of Environment, may enter
6 into an agreement with a person or issue a permit --
7 I'm sorry. May enter into an agreement with a person,
8 or issue a permit to a person, authorizing the person
9 to engage -- and this gets to your question -- in an
10 activity affecting a listed wildlife species, any part
11 of its critical habitat, or the residence of its
12 individuals. So that's essentially what a permit
13 would be for.

14 With regard to your question in terms of how
15 many permits have been issued on the National Wildlife
16 Area, I can confirm that to date we've issued 8
17 permits on the National Wildlife Area. All the
18 permits were for scientific research activities only.
19 And that included -- it involved species like SARA
20 plants, that we've talked about, Burrowing Owl,
21 Kangaroo Rat and the Gold-Edged Gem.

22 So we haven't issued a lot of permits and we
23 generally don't. We take them pretty seriously when
24 anyone proposes to basically, you know, apply to
25 contravene essentially the prohibitions that do exist

1 under SARA.

2 Q. Now when you said these were scientific, so I take it
3 none of them are oil and gas, or for purposes of oil
4 and gas development then? None of the 8 permits?

5 A. That's correct.

6 Q. Now, when you're looking at this, and I'm just trying
7 to get a sense of looking ahead because the evidence
8 we heard from EnCana was, if during their drilling
9 they came across one, or if the PDA showed there may
10 be a species, that they would apply for a permit.
11 Would -- has the department structured any types of
12 applications of what type of information you would
13 need to assess whether or not a permit would be
14 given?

15 A. We have. We have a permit application form that is
16 available and we would have no problem making that
17 available to the Panel. And it, it basically goes
18 into the detailed questions that we ask initially to
19 any Applicants for permits.

20 Q. Now, when you were looking, or if you're looking at a
21 permit, would, would your application consider a
22 cumulative impact assessment of that species and
23 what's happening regionally in granting that permit,
24 or would it be just specific to that one area?

25 A. I think this is the best time to really outline that

1 the *Species At Risk Act* is fairly specific in terms of
2 specifying conditions and pre-conditions for which we
3 can issue an issue a permit under. And, if you'd
4 like, I can go into these --

5 Q. Yes, that would be really helpful.

6 A. -- because I think it's quite helpful. Basically what
7 we have to look at is, is firstly whether the activity
8 is scientific research relating to the conservation of
9 the species. And is it being conducted by a qualified
10 person? That's, that's one condition. Secondly, the
11 activity, does it benefit the species or is it
12 required to enhance its chance of survival in the
13 wild? Or thirdly, is affecting the species incidental
14 to the carrying out of the activity?

15 So these are the -- basically, the agreement
16 or the permit may be entered into or issued only if,
17 if the competent Minister, again, in this case for
18 terrestrial species, it's the Minister of Environment,
19 if he is of the opinion that these three conditions
20 have been met.

21 Further to that, there's another test and
22 what we call in SARA, these are pre-conditions to
23 issuing a permit. And what this specifies, and this
24 is, again, in Section 73 of the *Species At Risk Act*.
25 Basically it, it indicates that an agreement or a

1 permit can only be issued if the competent Minister is
2 of the opinion that, firstly, all reasonable
3 alternatives to the activity that would reduce the
4 impact on the species have been considered and the
5 best solution has been adopted; secondly, all feasible
6 measures will be taken to minimize the impact of the
7 activity on the species or its critical habitat or the
8 residences of its individuals; and thirdly, that the
9 activity will not jeopardize the survival or recovery
10 of the species.

11 So basically the -- what I've outlined then
12 is three conditions and pre-conditions that we would
13 follow before, you know, and satisfy before issuing a
14 permit.

15 Q. That's very helpful. I would like to go back to your
16 first three because I want to clarify those; that you
17 said scientific benefit for the species and the third
18 one is the one I'm, I'm not sure I'm clear on. It's
19 incidental to the carrying on of the activity?

20 A. That's correct.

21 Q. Could you explain what you're looking at there?

22 A. DR. DUNCAN: When I -- excuse me, Dave
23 Duncan again. When it comes to incidental, one should
24 not read into that "accidental". It's -- we need to
25 reassure ourselves that all those three pre-conditions

1 are met. So before we would ever issue a permit, we
2 need to assure ourselves that the jeopardy -- that
3 there's no jeopardy to the survival and recovery of
4 the species. To do that, we obviously need
5 substantial information to make that judgment upon.
6 So we have in the past received some questions or
7 queries from industry in general saying, "Can I get a
8 permit in case I accidentally cause some harm?" And
9 the answer is "no".

10 Incidental is different. That's where
11 someone has gone out, done the appropriate surveys so
12 that we can make the judgment on whether that activity
13 might jeopardize the survival or recovery of the
14 species. And we can also ask, have you mitigated or
15 have you tried to avoid these impacts? Is this the
16 best route? Before we would even consider issuing a
17 permit?

18 So the incidental is when you're not meaning
19 to do that, you're doing another activity, incidental
20 to conducting that activity, you're going to have this
21 harm, and we have to ask, Well, can't you avoid that?
22 Can't you mitigate that?

23 And so we're very cautious whenever we look
24 at that. But it's not meant to be a broad-ranging,
25 wide-open door.

1 A. MR. INGSTRUP: I would just like to add to
2 that. I'm not aware, at least in our region and
3 that's the Prairie and the northern regions of Canada,
4 that we've issued any incidental type permits under
5 that, on that part of the Act.

6 But there are examples nation-wide where we
7 have issued incidental type permits and I thought I'd
8 just give you an example and perhaps this may help
9 answer your question.

10 We did in 2007 issue a permit in Ontario. It
11 was essentially for a routine bridge inspection and
12 maintenance program during the critical season for the
13 Peregrine Falcon nesting. And so that permit was
14 issued. But it was also under the condition that
15 included the development of a Peregrine management
16 plan for that particular project. So those are sort
17 of the type of conditions that were put on an
18 incidental type permit.

19 Another example was in 2006, again in
20 Ontario, and in this case it was -- involved a rather
21 interesting issue where there was a digging of grave
22 sites and the maintenance of graves at a First Nation
23 cemetery for rare plants. And again, when we issued
24 that type of permit, as Dave said, we take it very
25 seriously. And in that case, mitigation involved

1 replacing the sod back to the gravesite, so it was
2 removed and set back to where it was initially.

3 So those are two examples that hopefully will
4 help clarify that.

5 Q. Now, just a couple more questions. In this situation
6 for the drilling of wells, it would be under that
7 incidental taking that a permit would be granted or
8 applied for; is that correct?

9 A. Not necessarily.

10 Q. Okay, what other -- and maybe I should clarify. What
11 we heard from EnCana is that they were drilling or
12 they were out there and they found a species at risk,
13 they would go apply for a permit to allow them to
14 continue their activity, is what I understood them to
15 say. Would that be -- in those situations, would
16 that be under the incidental taking?

17 A. MR. INGSTRUP: With respect to an
18 activity, if it doesn't meet the condition that it's
19 scientific research, then that doesn't apply. If the
20 activity, in this case putting in a well site, doesn't
21 benefit the species or, or enhances its chance of
22 survival in the wild, that wouldn't apply. So that
23 would leave us with the only other alternative then
24 would be to issue a permit under the scenario that
25 it's affecting the species or that its affecting the

1 species is incidental to the carrying out of that
2 activity.

3 Q. Okay. Now, if we hear -- one of the things we hear
4 here is that we want to -- there will be situations
5 where we may have to go into setbacks because, I
6 guess for environmental or other reasons, such as
7 it's the best place to get the gas, do you think a
8 permit would be appropriate in those situations or is
9 that pre-judging it?

10 A. I'll let Paul Gregoire actually answer this. And just
11 by way of introductions, Paul is the person who
12 actually, when an application is made, reviews the
13 applications for SARA permits in, in the region for
14 Environment Canada.

15 A. MR. GREGOIRE: Members of the Panel, my name
16 is Paul Gregoire. In response to your question, yes,
17 if -- should an activity encroach upon setbacks, the
18 purpose of the setbacks is, is to protect the species
19 and provide some certainty for industry, so in the
20 event that the setbacks are encroached upon them yes,
21 it warrants further consideration to determine
22 whether, indeed, a permit would be required.

23 Q. Okay. Now, under the Act, what types of sanctions are
24 available to the regulators if the Act is breached
25 and harm comes to a species or its habitat without a

1 permit. What is your range of enforcement?

2 A. MR. INGSTRUP: The first response, when that
3 issue happens, and it does from time to time, and I
4 think we covered this a bit earlier, my first recourse
5 is to notify our Enforcement Branch within Environment
6 Canada. And they have wildlife officers that would
7 respond in that case and consider whether an
8 investigation is required or not and follow through
9 with that. So that's, that's basically our, our --
10 our first line of action, if you will, when we're put
11 in that sort of situation.

12 Q. And then following investigation, is there -- do you
13 have a certain range of penalties you can impose or
14 does it go to complete -- you know, what is the range
15 of options available to you?

16 A. DR. DUNCAN: We don't have anyone from our
17 enforcement branch here, but I have a bit of
18 knowledge.

19 Q. Okay.

20 A. I'm informed that this Act is -- was purposely made to
21 be very creative, so it does have substantial
22 alternative measures that could be applied when
23 offences occur. Having said that, there are offences
24 and penalties in Section 97 of the Act that talk about
25 the fines and that kind of thing that I could read out

1 if you felt it was required.

2 Q. No, I think that's helpful, but there is -- I know
3 under some of the Provincial stuff, there's something
4 sort of a full prosecution that you can levy certain
5 sanctions on people. Is that the same under this
6 Act?

7 A. Yes, that's my understanding.

8 MS. KLIMEK: Okay. I think that sort of
9 comes to the end of this part. I might have a few
10 tail ends upon reflecting over lunch, but just so the
11 Panel knows, we're getting close to the end. I think
12 another hour would probably finalize our
13 cross-examination.

14 THE CHAIRMAN: Thank you, Ms. Klimek. Then
15 we will break for lunch and reconvene at 1 o'clock
16 again. Thank you.

17 (NOON RECESS)

18 (PROCEEDINGS ADJOURNED AT 12:05 P.M.)

19 (PROCEEDINGS RECONVENED AT 1:00 P.M.)

20 THE CHAIRMAN: Ladies and Gentlemen. I
21 would like to reconvene our proceedings once again.
22 Mr. Lambrecht, you have a comment.

23 MR. LAMBRECHT: Yes, sir. Colonel Lamarre
24 has been able to prepare answers to some of the
25 undertakings over the lunch hour and would like to

1 speak to those if that's acceptable to my friend and
2 to the Panel.

3 With respect to the question of the Didiuk
4 study, my colleague, Mr. Drummond, has had to return
5 to the hotel in order to be able to have access to
6 printing capacity and I expect him to return directly
7 and I'll, I'll speak with him when he returns and
8 we'll assess how best to tender that --

9 THE CHAIRMAN: Okay.

10 MR. LAMBRECHT: -- so that it arrives here in
11 a timely fashion for all concerned.

12 THE CHAIRMAN: Okay. Thank you,
13 Mr. Lambrecht. I'll turn to Colonel Lamarre to speak
14 to the undertakings.

15 **UNDERTAKINGS SPOKEN TO BY THE GOVERNMENT OF CANADA:**

16 A. COL LAMARRE: Thank you, Mr. Chairman.
17 It's only one right now we would like to address. And
18 it's in response to Ms. Klimek's request for an
19 example of a permit for the National Wildlife Area.
20 And I have some copies here of an example that we
21 could perhaps provide to the Proponent and to the
22 other participants.

23 THE CHAIRMAN: We will give that an exhibit
24 number and I believe it would be 003-047.

25 **EXHIBIT 003-047: Example of Permit for**

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**Routine Operations in the Suffield National
Wildlife Area**

A. COL LAMARRE: And, sir, once the copies are distributed, I will call upon Ms. Delaney Boyd to discuss the specific permits. She is the one that is responsible for permitting within the NWA.

THE CHAIRMAN: Okay.

MS. KLIMEK: Just for reference, what was the exhibit number on this one again?

THE CHAIRMAN: Yes. The number I assigned was 003-047.

Ms. Delaney, I think everybody has the document, so I'll turn to you, please.

A. MS. DELANEY: Excellent, thank you. I would just like to discuss this document very briefly to provide you some context so that you -- so that everyone is aware of what they are, in fact, looking at. I will apologize in advance for the somewhat poor legibility, especially of the actual permit document itself. Unfortunately, the PDF, after being copied many times, may have some legibility issues and we can certainly rectify that if anyone is having difficulties with it.

In terms of context, the letter on the front, you will note, is from the Proponent. And this is the

1 Proponent's response, after having signed this
2 National Wildlife Area permit, acknowledging and
3 accepting the permit and its conditions.

4 However, I will draw your attention to
5 Paragraph 1 of the cover letter indicating that this,
6 this permit was in fact accepted and agreed to without
7 prejudice to the Proponent's right to seek a
8 declaration of its rights in the NWA. And,
9 essentially, EnCana is not agreeing or contesting
10 whether or not they even need a permit for operation
11 in the NWA with respect to maintenance of its -- their
12 existing infrastructure.

13 So we just wanted to have that there; that,
14 although they have accepted the permit, there are
15 still some outstanding legal matters with this permit.

16 Nevertheless, what this permit covers is
17 outlined in Paragraph 9 of the conditions of the
18 permit. And, specifically, just to summarize what,
19 what it includes are activities that tend to include
20 light vehicles. There is no exact definition of that.
21 But just to give you some context, these are the less
22 intrusive activities by DND's estimation. For
23 instance, a pickup truck driving into a wellhead and
24 doing some measurements or looking at the wellhead.
25 That would be a type of activity that's covered.

1 What is not included in this permit, and
2 which is also outlined in Paragraph 2 of the cover
3 letter, are issues of pipeline repairs, swabbing,
4 re-fracturing, water extraction, and reclamation.
5 These are issues that required additional discussion
6 and further development of permit conditions, and that
7 is ongoing as, as we speak, so.

8 And, however, with respect to the pipeline
9 repair matter that was brought up in earlier
10 cross-examination, in the permit, Paragraph 9H, so on
11 the back page, at the very top, it does indicate that
12 infrastructure repairs requiring ground disturbance
13 must be authorized by the permitter, being DND, in
14 writing on a case-by-case basis.

15 So we have placed that in there to cover off
16 the notion that ground disturbance in the NWA
17 requires, normally speaking, an Environmental
18 Assessment under CEA.

19 Now, in cases where -- and that's basically
20 the caveat that would have us looking at the
21 situations individually and requires them to notify us
22 so that we can decide on what the best way forward is.

23 Paragraph 19 on that back page indicates
24 that, if there is a requirement to conduct activities
25 necessary to mitigate immediate threats to human life

1 or the environment, that the permitholder may proceed.

2 However, we have indicated earlier in the
3 conditions of the permit, I believe it's -- I'll just
4 turn over here -- Paragraph 5, that reporting is
5 required. They must notify us. And that's what keeps
6 us engaged and involved in the process so that we may
7 decide what the best way forward is and if any
8 additional measures, mitigation, or follow-up is
9 required.

10 So I hope that provides enough context. And
11 certainly if you have any questions, I would be happy
12 to answer them.

13 MS. KLIMEK: Thank you. I don't think we
14 have any questions arising out of that. But thank
15 you. That's helpful.

16 **CROSS-EXAMINATION BY MS. KLIMEK (CONTINUED):**

17 Good afternoon, Panel. I just have a few
18 follow-ups from this morning and then I'm going to
19 have probably about an hour left just so you know
20 where I'm going.

21 I also have a few questions -- I understand
22 Colonel Bruce will be back on Friday. I have maybe 10
23 or 15 minutes left for him. If that's okay, I'll just
24 leave them over?

25 THE CHAIRMAN: Yes, that would be -- I think

1 we agreed that if there were some questions, that they
2 would be saved for him on Friday.

3 MS. KLIMEK: Okay.

4 Q. Now, Mr. Gregoire, I wanted to go back to an answer
5 that we were discussing earlier and I want to put it
6 in the context of this well, and this is the SARA
7 permit with respect to breach of setbacks.

8 Now, as I understand it, the process, if this
9 is approved, is PDAs will be done. And within that,
10 there may be some indication through the PDA process
11 that some of the structure may encroach on setbacks.
12 Is that your understanding as well?

13 A. MR. GREGOIRE: If the SARA permitting
14 process is a separate process, so it requires that we
15 have the locations of the individuals, the residences,
16 or critical habitat, that's part of the permit
17 application form, that's a requirement. And we need
18 details of the activities, the very explicit locations
19 of the activities. So irrespective of any PDA
20 process, this is a separate requirement for the permit
21 application.

22 Q. Okay. And what I meant was it might be through the
23 PDA they determine that, so then they would apply to
24 SARA for that --

25 A. They would -- yes, they would have to apply separately

1 with that information.

2 Q. Okay. Now, I guess my question, and, and I'm just
3 trying to understand this from the policy or the
4 intent of SARA, the purpose of this I guess permit is
5 to allow activities which would encroach on SARA
6 species to go ahead?

7 A. That's the incidental activity, yes.

8 Q. And I'm trying to get an understanding of, when you're
9 looking at, say, one well or when you have a full
10 development, how would SARA look at whether or not
11 that encroachment would meet the needs of SARA?
12 Like, what -- and maybe I'm not phrasing it well, but
13 how would you look at it in the overall scheme of
14 things when you have one well come in and, say, we're
15 going to encroach here, and then another one; is
16 there some way of tying that all together so you're
17 looking at the recovery of a species as a whole or do
18 you look at it case by case?

19 A. So there is a, I guess, some logical points that you
20 are bringing up. Sometimes it depends. I guess it
21 would be hard to anticipate whether sometimes you're
22 going to get one well at a time or receive discrete
23 blocks. Obviously, in this situation, we have
24 advanced notice that there may be a large number of
25 wells that may require SARA permits. In that

1 instance, it would be useful to require -- to receive
2 some discrete blocks. If it's one-by-one, it's -- it
3 would still have to meet the requirements under the
4 prohibitions. In other words, they've looked at all
5 the alternatives, they've taken all measures to
6 minimize effects, and it shall not interfere with the
7 survival or recovery of the species. Those criteria
8 have to be met, whether it's a one-by-one well be
9 considered. And then we would have some, I guess,
10 some corporate knowledge after you've reviewed a
11 number of the projects.

12 Q. Okay.

13 A. MR. INGSTRUP: I would just like to add.
14 There is another section in SARA that I think applies
15 here. And that's section 79. And it deals with
16 project reviews. When there's situations that would
17 be impacting or could be impacting upon a species at
18 risk. And what, what's required under 79(1) is that
19 any person who is required under another Act of
20 Parliament to ensure that an assessment of
21 environmental effects of a project is conducted must,
22 without delay, notify the competent minister or
23 ministers in writing of the Project.

24 And it further goes on to say that the person
25 must identify the adverse effects of the Project on

1 the listed wildlife species and its critical habitat.
2 And if the Project is carried out, it must ensure that
3 measures are taken to avoid or lessen those effects
4 and to monitor them. And the measures must be taken
5 in a way that is consistent with any applicable
6 recovery strategy or action plan.

7 So I thought it's important to mention that
8 because that's another requirement that is, is from
9 SARA for anyone who is actually undertaking an
10 Environmental Assessment, for example.

11 Q. Mr. Ingstrup, for that section, it's -- if -- what
12 we've heard here is there isn't going to be no
13 adverse impact on SARA species . So does SARA review
14 that and look at it and judge that or -- and is -- I
15 guess that's one question. Secondly, is the EA
16 that's done here meeting the requirement under that
17 Act or is that something separate? So those are two
18 questions I have out of what you've said.

19 A. I apologize. Can you repeat that first question
20 again?

21 Q. I'll have to think about it. How about the first one?
22 Does the EA here that we've been looking at through
23 this process meet that requirement of that section or
24 is it something different that's going to need to be
25 done to meet that section?

1 A. I think it's our position that we haven't had enough
2 information through this Environmental Assessment to
3 really assess all the appropriate impacts on all the
4 listed species that are known to occur on the National
5 Wildlife Area, so it's -- it would be very difficult
6 for Environment Canada to, to basically say that, you
7 know, that all the appropriate measures have been
8 taken to avoid or lessen all these effects and the
9 appropriate measures have been taken to monitor them.

10 But we maintain that we just don't have all
11 the information that we need should we be in a
12 situation where we would have to issue a Species at
13 Risk permit.

14 Q. I think you answered my first question with that one
15 so I don't need to have to try and remember that.

16 A. Okay.

17 Q. So I guess back to you, Mr. Gregoire. If you -- and I
18 -- and this might be more philosophical, but I'm
19 trying to understand if you allow setbacks into the
20 SARA species and you do it in a project this large,
21 and there's many of them, are you still able to -- is
22 there concerns about the recovery of the species in
23 light of all those encroachments or is that dealt
24 with in the permitting?

25 A. MR. GREGOIRE: That would be dealt with

1 within the permitting review. Just to remind you,
2 that within the review -- the review for a SARA permit
3 is quite rigorous and there is a regional scientific
4 review consultation with species experts that would
5 advise us in that regard.

6 Q. How long would it take to do a review? Do you have
7 any sense or is there -- very dependent on what
8 you're looking at?

9 A. Currently, SARA permits are taking around 60 to
10 90 days for completion.

11 Q. Now, I'm going to go back to where we looked -- I
12 think it was one document that -- and I'm sorry,
13 Delaney, I forgot your last name.

14 A. MS. BOYD: Boyd.

15 Q. Boyd. Oh, I'm sorry, Ms. Boyd. That you were talking
16 about. And that was referring you to the 2000 -- we
17 asked you about what infractions were in 2007 and
18 2008. And when we looked at the document there were
19 none listed. Does that mean that -- it seemed to
20 stop at 2006. Is that, that there were none in 2007
21 and 2008 or the reporting went up to 2006?

22 A. The items that we reported in the supplemental
23 submission that I referred to earlier are the major
24 documented infractions that we had within the NWA by
25 the Proponent. Now, that's not to say that there

1 hasn't been, I guess, smaller infractions on the scale
2 of things such as we had seen an image, in one of the
3 presentations, which showed an access route that had
4 been taken and some rutting had been created. Well,
5 technically speaking, that is an infraction in that
6 there was ground disturbance that was not supposed to
7 be there.

8 Those -- that level of disturbance and that
9 level of infraction is not something we currently have
10 the capacity to monitor and document for. However, it
11 is apparent, through that one example, that it does
12 occur, as has been documented through the track record
13 that we presented for the remainder of the Base as
14 well, that there are potential incidents that occur on
15 a regular basis of, of that size.

16 Q. Well, what's your delineation between the minor and
17 what gets reported? Like, what qualifies as a major?

18 A. Sorry, reported to whom?

19 Q. Well, you said you listed the major ones and you have
20 no way of tracking these minor ones. I'm trying to
21 understand what's major and what's minor.

22 A. Sorry, I'll clarify. It's not necessarily that there
23 is a clear delineation between major and minor; it's
24 just simply that we haven't had the capacity to
25 necessarily detect any further incidents than the ones

1 that we've presented here.

2 Q. Now, the next -- just hold for a second. Now, I'm
3 going to turn to the NWA management plan. And who
4 would I be best to send these questions to?

5 A. COL LAMARRE: It would be Ms. Boyd again.

6 Q. Okay. Now, I think we have -- there is a management
7 strategy that's been done to date, is that correct,
8 for the NWA?

9 A. MS. BOYD: That is correct. It is in
10 draft form.

11 Q. And my reading of it is, and I don't think you need to
12 put it up, but it -- the strategy provides that:

13 "All existing and potential
14 activities within the NWA shall be
15 secondary to the conservation of
16 wildlife and its habitat except..."

17 And then it goes on to list a number of military
18 purposes. Am I correct in characterizing that?

19 A. Just one moment, please. That's correct.

20 Q. Now, when I look at the constraints map that was part
21 of Exhibit 31, 003-31, and I believe there was a
22 constraints map at number -- page 13. We're seeing
23 our life flash before us. Okay. Now, as I
24 understood this constraint map, when you put in all
25 of these that are listed there, what is red falls

1 within some form of constraint or another; is that
2 correct?

3 A. MR. JENSEN: Olaf Jensen responding again.
4 Sorry, could you repeat the question?

5 Q. Well, when I look at this map, and if I'm reading it
6 right, what is in red falls within at least one of
7 those constraints; is that correct?

8 A. Yeah, and this is a useful opportunity just to explain
9 a bit about the background for the creation of this
10 map, if I may.

11 THE CHAIRMAN: Mr. Jensen, please speak
12 slowly when you respond.

13 A. Yes, thank you, sir.

14 EnCana, of course, proposed as one of their
15 mitigations the construction of a constraints map.
16 The tool that they put together was, was quite good.
17 And as Environment Canada has mentioned in its
18 submission, we're supportive of the process or the
19 idea of constraints mapping.

20 Our concern at the outset was that the
21 constraints mapping process was not as inclusive or
22 systemic as it could be and neglected to include some
23 important, important species, important factors. So
24 as part of our, our submission, we undertook to revise
25 the constraints map to take into account some of these

1 species and constraints that were left out.

2 Some of the ones here, topographic
3 constraints, were included by EnCana in their
4 submission, but some species at risk were notably
5 absent. Sprague's Pipit was missing. And certainly
6 we wanted to address the issue of critical habitat.

7 The product you're looking at right now on
8 the screen is not intended to be a final, a final
9 product by Environment Canada; it's meant to
10 demonstrate what a constraints map might look like if
11 one were to follow the, the process outlined by EnCana
12 but using a more systemic and inclusive process that
13 includes all the, all the species at risk at CFB
14 Suffield National Wildlife Area.

15 So in advance of discussing this map in
16 particular, I would just like to remind everybody that
17 this is a conceptual map. It's, it's, it's probably
18 fairly, in terms of the total area, constrained in the
19 National Wildlife Area, which I'd have to, subject to
20 check, I believe was somewhere close to 90 percent of
21 the National Wildlife Area. It's -- that portion is
22 accurate, but it's not meant to be a final product.

23 MS. KLIMEK:

24 Q. Okay, so I guess my question, tying that map together
25 with the purpose of the NWA, if a development goes

1 ahead, such as proposed here, would that development
2 be secondary to the conservation of wildlife and its
3 habitat? I would like someone's comments on that
4 looking at something like this.

5 A. MS. BOYD: According to the strategy
6 that we've laid out at DND, any activities that
7 potentially interfere with the conservation of
8 wildlife would be activities that we would not want to
9 have occurring in the National Wildlife Area. So it
10 does come down to the determination of whether or not
11 they interfere with the conservation of wildlife.

12 So in that sense, they would be secondary to
13 the conservation of wildlife if they did in fact
14 interfere with the conservation of wildlife.

15 Q. Okay. Now I'm going to turn to the management plan.
16 Do we have any idea or when that would be completed,
17 the management plan, for the NWA?

18 A. At this point there actually isn't an intention to
19 produce what would be, what would be called a
20 management plan, per se, for the National Wildlife
21 Area. And the reason why is because we have a
22 strategy that is designed to provide guidance for
23 determining what activities should and shouldn't occur
24 in the National Wildlife Area. And then the Base
25 itself has a set of systems and processes already in

1 place and also evolving, as we have discussed before,
2 with the Suffield Sustainability Management Plan, that
3 are in place and evolving so that we can implement and
4 make decisions about land use on the Base, including
5 the National Wildlife Area.

6 And when it comes to doing something within
7 the National Wildlife Area, we would use the strategy
8 to help guide us in our application of those other
9 processes, such as the Base Environmental Management
10 Strategy, Range Standing Orders, the Range and
11 Training Area Management System, and the Suffield
12 Sustainability Management Process.

13 Q. Now, as I -- so the processes and all those things
14 that you've listed here, what we've been discussing
15 yesterday and today, am I correct that that's what
16 you're referring to?

17 A. Yes. Those processes, processes and programs that I
18 just listed off.

19 Q. Now, the development of many management plans has a
20 public consultation component. Now, when you're
21 using something like these processes, and your
22 internal structures, is there a process for the
23 public to provide feedback to you on how those
24 processes, ah, well, on those processes?

25 A. MR. RICHMOND: Wes Richmond. The Department

1 of National Defence on every Base with a training area
2 has had a number of different processes in place for
3 many, many years to govern how, how Bases are managed,
4 range and training areas in particular in this case.
5 And we, we had -- have been managing the Base for
6 decades now under these types of protocols and they've
7 been, they've been expanded and evolved over the years
8 to, to include far more, far greater concern for
9 environmental ecosystems and the protection and
10 sustainability of those systems.

11 So we've, we've been evolving things like
12 Range Standing Orders, Range and Training Area
13 Management System, Environmental Management System on
14 the Base, all these things that Delaney had mentioned.

15 And with the coming into place of the
16 National Wildlife Area, we developed the strategy,
17 although it's been taken -- it's taken some years to
18 get this thing completed, and it is at the point where
19 it's ready for signature by the Minister. Under the
20 guidance of the strategy, our Range and Training area
21 Management System, and RSOs, and all these things have
22 evolved to include all the management requirements for
23 a, for a National Wildlife Area.

24 Now, these types of activities normally are
25 not subject to input from outside agencies, NGOs and

1 the like. Although, certainly in the case of the
2 National Wildlife Area, we've had ongoing discussions
3 since the very earliest of times with Environment
4 Canada. And so it was our view that the way we had
5 established these processes, that they were
6 sufficient, and are sufficient, to deal with the
7 management of the National Wildlife Area.

8 Q. Now, in that, and again, I'm comparing this to some
9 other management plans, and maybe it doesn't apply
10 here, but some of them deal with zoning and certain
11 things and certain areas. Is that done through this
12 process for this area, or is it necessary, or --

13 A. COL LAMARRE: I'm sorry, just so I'm clear,
14 you're talking about zoning?

15 Q. In the sense that some areas are used for this type of
16 thing and others for this where you delineate what
17 can happen in specific areas of the National Wildlife
18 Area.

19 A. We might be seeking some clarification on that a bit.
20 When we're talking about zoning in the National
21 Wildlife Area, the only zoning that is really
22 occurring, per se, right now is to where the cattle is
23 grazing to the southern portion. Is that what you're
24 referring to?

25 Q. Yeah?

1 A. That type of zoning?

2 Q. What type of activities are in the protected areas.

3 A. Okay.

4 A. MS. BOYD: Thank you. Sorry for the
5 delay. With respect to your question of zoning, I
6 will reiterate that there's not necessarily specific
7 zones set out in the National Wildlife Area that
8 indicate where certain activities may or may not
9 occur, other than the example that was provided of
10 there are particular pasture areas for grazing; as
11 well as these other documents and processes that we
12 mentioned, such as the Range Standing Orders, do lay
13 out specific restrictions on types of activities that
14 might occur at certain times. For example, low-level
15 flying over the river area or the riverbank zone may
16 only occur during certain periods to minimize
17 disturbance to wildlife, as one example. So those
18 types of restrictions, and if you want to call that
19 "zoning", do occur.

20 However, otherwise, the strategy outlines for
21 the NWA a system of management that allows it to be
22 essentially effects-based. We have set out a series
23 of guiding principles that delineates what we would
24 like or not like to see on the ground in the NWA in
25 terms of effects on the ground. It does not -- it is

1 not prescriptive in that sense as to what may cause
2 the activity or what may not cause the activity or
3 where it may be; it is simply statements of principle
4 that we want to minimize or maximize certain things.

5 Q. Are those statements of principles in your submission
6 that are before this Panel?

7 A. Those are the principles that are laid out in the
8 Draft Management Strategy that is listed as a exhibit.

9 Q. Oh, okay. I just want to be clear that that -- those
10 are the ones you're referring to there?

11 A. That's correct.

12 Q. Okay. Now, I've got one last area of discussion. I'm
13 turning to reclamation now. And I -- do -- does the
14 Base know how many abandoned wells there are in the
15 NWA that have not been reclaimed?

16 A. MS. GUENTHER: Off the top of my head I
17 don't have that number. I can get it and provide it
18 at a later time.

19 Q. Could you please. Now, in one of the documents in the
20 access --

21 A. Sorry, we might have it. If you can just give us a
22 minute.

23 Q. Sure. Okay, sorry.

24 A. MR. JENSEN: Olaf Jensen responding. In
25 the Government of Canada submission, on page 305, we

1 outlined some aspects of oil and gas development in
2 the National Wildlife Area. The data is taken from
3 well publicly available records from a data supplier
4 called IHS. And right now our records or the IHS
5 records indicate 40 abandoned wells in the CFB
6 Suffield National Wildlife Area. The status is
7 generally unknown. And, according to those records,
8 29 are owned by, by EnCana.

9 Q. Thank you. Now, in one of the documents that is in
10 Exhibit 006-18 and it's A0182005, and if we go down
11 to just right there about abandoned wells. And
12 there's a statement in that:

13 It is clear there's no legislative
14 or financial incentive to have
15 these sites cleaned up, reclaimed,
16 and returned to CFB Suffield."

17 Has that changed at all since this memo was
18 written, from the Base's perspective?

19 A. MR. RICHMOND: No, it has not.

20 Q. Now, I'm going to turn to the scientists at this end
21 with a few questions about reclamation. I think this
22 might go to you, Mr. Henderson -- or Dr. Henderson.
23 And I would like to ask you a few questions about
24 Crested Wheatgrass. I understand you've been working
25 on that?

1 A. DR. HENDERSON: Yes, it was the subject of my
2 Ph.D. research and I've done some subsequent work on
3 it.

4 Q. And do you have -- and if you have this answered then
5 we don't have to do an undertaking to Parks Canada.
6 But if you do -- well, if you don't, we'll ask them.
7 Have they been doing work with Crested Wheatgrass as
8 well in the -- the Parks Canada folks?

9 A. Do you specifically mean Grasslands National Park?

10 Q. Yes.

11 A. There has been quite a bit of research done at
12 Grasslands National Park led largely by Dr. Scott
13 Wilson from the University of Regina. He's had
14 several graduate students complete theses working in
15 several fields at Grasslands National Park. They've
16 looked at a variety of different aspects of the
17 ecology and management of Crested Wheatgrass. I could
18 go through an entire list of it if you would like.

19 Q. Well, I have a few questions on that. I take it
20 you're familiar with that research, then?

21 A. Yes.

22 Q. And I guess the question we have is what obstacles or
23 challenges are they meeting and how is the
24 reclamation of that progressing and where do you see
25 the current state of that from both your experience

1 and what you know there?

2 MR. LAMBRECHT: What I would ask my friend is
3 just to somehow relate what is going on in the
4 National Park to this Project before this Panel.

5 MS. KLIMEK: Okay. I'll roll that --

6 THE CHAIRMAN: I think that's a reasonable
7 request, Ms. Klimek.

8 MS. KLIMEK:

9 Q. That was my next question was how would that apply to
10 the Suffield area and the Crested Wheatgrass problem.
11 So maybe that helps you answer that question where we
12 want to take it to, what are they finding out there,
13 and how would that be applied here?

14 A. The research at Grasslands National Park that's been
15 undertaken, not only by Dr. Wilson but also the Chief
16 Park Warden, Mr. Adrian Sturch (phonetic) has focused
17 largely on large old fields of Crested Wheatgrass that
18 would have been seeded by ranchers or farmers prior to
19 the creation of the National Park, but Dr. Sturch, or
20 Mr. Sturch has also specifically looked at roadside
21 edges and Crested Wheatgrass invasion and control from
22 those edges.

23 The entire body of research has looked really
24 at control mechanisms; how to restore native Prairie
25 in places where Crested Wheatgrass has been seeded or

1 has invaded over time. And what most of that research
2 indicates is that it's extremely difficult. It's
3 extremely time consuming. I would agree with some
4 comments that Dr. Walker had made in his testimony a
5 couple of weeks ago that tillage and herbicide are
6 really the only two options for eradicating that
7 species but that it then creates additional challenges
8 to try and revegetate that land once the Crested
9 Wheatgrass is gone.

10 The information is applicable because Crested
11 Wheatgrass invades by seed. It's a bunch grass so it
12 doesn't spread below ground through roots. It
13 requires dispersal of seed for invasion to occur.

14 Much of the evidence that's been generated by
15 Dr. Scott Wilson and his students is that they can't
16 eradicate the seed from the soil seedbank. They ran
17 one experiment for I believe at least nine years and
18 they still had Crested Wheatgrass appearing from the
19 soil seedbank. And this was after nine years of
20 repeated herbicide application. It was successful in
21 reducing Crested Wheatgrass cover and increasing the
22 cover of native species, but it indicated that the
23 process for restoration to a native grassland is a
24 very long one. It requires a huge commitment and a
25 lot of inputs that can be quite expensive.

1 But in Grasslands National Park where the
2 mandate is to maintain or restore ecological
3 integrity, the Park is committed to pursuing the
4 control and eradication of Crested Wheatgrass. It's
5 one of their major management undertakings. And
6 Mr. Sturch who is now Chief Park Warden has actually
7 begun to apply that research and beginning to control
8 Crested Wheatgrass on a large scale covering entire
9 quarter sections of land.

10 We've also begun some experiments to try and
11 control the seed production prior to the application
12 of herbicides, using cattle. And that's involved some
13 collaborators from the University of Saskatchewan and
14 myself as well. That -- I think that covers how some
15 of that research might be applicable to the National
16 Wildlife Area here.

17 Q. Now, you made a comment about some of it was invasion
18 over time is part of the problem. Did I hear that
19 right?

20 A. Correct.

21 Q. And if we could maybe turn to slide 26 from the Base's
22 submission, those two pictures. And maybe
23 Dr. Henderson or maybe you, Dr. Rowland, can explain
24 is -- are these pertaining -- is this topo? What do
25 we see there? Maybe Dr. Rowland, that was yours.

1 A. DR. ROWLAND: Okay. I'll start off. The
2 top image that you can see here is just a -- I don't
3 know if they're roads or access trails. These are
4 access trails. And you can see just the non-native
5 species just spreading out from there. It's sort of
6 accented on the top left of the side. It's a close-up
7 of what a pipeline would look like.

8 Q. And Dr. Henderson, is that -- can you explain what you
9 mean by "invasion of species"? Maybe you can -- and
10 these are your own words. What are we worried about
11 and what's happening here on the ground, I guess, is
12 what I'm trying to get at.

13 A. DR. HENDERSON: Certainly. When we speak of
14 invasive species, we are typically speaking of species
15 that are not native to North America and that persist
16 in the long term, over time, and increase through
17 natural dispersal or enhanced dispersal through human
18 hand use activities, and, ultimately, displace native
19 species or have some other negative impact on
20 ecosystem function or structure, all of which are
21 components of biodiversity.

22 So, in effect, invasive species are a concern
23 because they affect the compositional, structural
24 and/or functional aspects of natural ecosystems or
25 native ecosystems.

1 Not all invasive species spread at the same
2 rate. Some species have spread quite rapidly
3 throughout North America. Other species take time.
4 And for the people who do research on invasive
5 species, they're familiar with this population growth
6 curve where there's a lag phase early on in population
7 expansion. So you may not notice the invasion
8 happening when it's at an early stage. Often you
9 don't notice the invasion until it's passed some
10 threshold beyond which it's almost impossible to
11 control.

12 What we have an example of, in this
13 photograph, is something I would describe as being in
14 a lag phase moving towards an exponential phase of
15 invasion. It's perhaps best described by the research
16 by Richard Mack and Moody (phonetic), a paper in 1988,
17 about multiple naisin polsi (phonetic). Sorry for
18 that long term, complex term, terminology there.

19 But what you see in this photograph are a lot
20 of dark green spots. What those are are small little
21 patches of Crested Wheatgrass that have become
22 established. It only takes one seed to produce a new
23 plant, but often you see invasion spreading from these
24 little foccis (phonetic). There could be thousands of
25 them. And at a very early stage, if you were to

1 sample any of that native grassland out there, there's
2 the possibility you may not detect Crested Wheatgrass.
3 It may not show up in the samples that you've
4 gathered. That might be an indication that you're not
5 sampling enough. There's an insufficient sample size
6 to detect it. This is the same problem I run into
7 working with rare species is trying to detect the rare
8 species that are out on the landscape.

9 So at some point down the road you will begin
10 to detect the species more frequently, or if you go
11 closer to the source, as you can see along this linear
12 feature, you're more likely to encounter the species
13 the closer you get to that source population.

14 So there's sort of a diffuse pattern of
15 invasion that spreads out from the source and that
16 will increase over time in the absence of any other
17 factors that might slow down or control that invasion.

18 In the Suffield National Wildlife Area,
19 probably what's most similar to Grasslands National
20 Park is that there are large areas that are ungrazed,
21 or there are areas that receive very light grazing.
22 This allows Crested Wheatgrass to produce a lot of
23 seed and for that seed to disperse across the
24 landscape.

25 On a lot of the ranches I've worked on where

1 you have more intensive livestock grazing or a longer
2 grazing season where animals are able to eat the
3 Crested Wheatgrass earlier in the year, you don't see
4 a lot of evidence of invasion. Sometimes people have
5 fields that are 40 or 50 years old and you can still
6 see the edge of that field, no invasion has occurred,
7 and that's the direct result of the management they've
8 been applying on that site.

9 Q. Dr. Henderson, through your research, have you seen
10 any evidence where native Prairie is encroaching into
11 the Crested Wheatgrass and pushing it out?

12 A. Yes, I have. I have seen instances of that.
13 Normally, in the boreal forest, and in the aspen
14 parkland, in the fescue Prairie, I've actually seen
15 rough fescue invade Crested Wheatgrass pastures in the
16 fescue Prairie zone. These ecoregions are different
17 from the ecoregion we're dealing with here.

18 In the boreal forest and fescue prairies,
19 we've got different soils, relatively more organic
20 matter, different species of vegetation that happen to
21 be more competitive than Crested Wheatgrass in the
22 long term.

23 In the mixed grass Prairie region where the
24 climate is slightly dryer, you have a different mix of
25 species. Crested Wheatgrass has proven to be an

1 extremely persistent and also invasive species. So
2 there are, there are cases where natives have
3 encroached into Crested Wheatgrass fields for sure.

4 Also I'll add, some of the older plantings of
5 Crested Wheatgrass where native Prairie would have
6 been broken simply to seed the Crested Wheatgrass,
7 involved a very short period of disturbance, and a lot
8 of native species were present in the soil seedbank,
9 or were not even killed or destroyed by the
10 cultivation event. This has allowed some native
11 species to persist with Crested Wheat, but it's a
12 small subset of all the native species you would
13 expect to see in a native Prairie.

14 Some of the ones that are excluded in
15 particular, through my own research, are a lot of the
16 annual species, as well as some of the native grasses,
17 particularly what we would call cool season or C3
18 native grasses. But a few that do quite well in
19 association with Crested Wheatgrass would be Blue
20 Gramma, Sandberg's Blue Grass, and sedges.

21 Q. No, this might be one question that's best left until
22 Colonel Bruce gets back but maybe it isn't. When
23 you're -- as I understand it, the Base Commander is
24 going to sign off on the reclamation certificates.
25 Is that the plan?

1 A. MR. RICHMOND: Yes, that's the plan.

2 Q. And have there been any protocols or criteria
3 established for the reclamation on -- in the NWA?
4 Has that been established yet?

5 A. No, we've been working towards something, though.

6 Q. Okay, and is there a time when you anticipate those
7 will be finished?

8 A. Not at this point in time. I'm -- we had some
9 discussions back -- a number of meetings in 2005, but
10 we haven't had any since and we've been talking about
11 getting back that initiative again and just hoping to
12 rationalize something over the next year. Now, the
13 Base Commander had mentioned discussions that he had
14 had with the Alberta Environment Deputy Minister and
15 the director of the ERCB about getting meetings in the
16 January time frame to further this initiative.

17 Q. Okay. Now, my one last question on reclamation is and
18 -- maybe you've answered this and I -- you know, I
19 might have forgotten so forgive me if I have asked
20 it. On the produced water for drilling, where is it
21 going, do you know?

22 A. MS. GUENTHER: Can you clarify where you're
23 getting this produced water?

24 Q. This is during the drilling process, as I understand
25 it, if there's any -- first of all, do you know if

1 there is any and where it's going to be disposed of?

2 A. MR. RICHMOND: Perhaps I could ask for
3 clarification. Are you talking about drilling fluids
4 or produced water? Those are two separate things, as
5 we understand them.

6 Q. We understand it's water that comes up through the
7 wellbore?

8 A. Is that as part of the drilling process?

9 Q. That's okay. We're obviously as confused as you are
10 about it so we'll let that one go. If I could have
11 just, just a few minutes to talk to my clients, I
12 think we're done.

13 THE CHAIRMAN: Okay. Just take a few
14 minutes and...

15 A. MR. RICHMOND: Could I just add one more
16 part, Mr. Chair, on that last question on reclamation?

17 MS. KLIMEK:

18 Q. Are you going to educate me on drilling?

19 A. No, no, this is back to an earlier question on the, on
20 the reclamation.

21 Q. Yes.

22 A. Just so that I don't leave you with the impression
23 that there's -- we're not working to any kind of a
24 standard. There hasn't been many reclamations as
25 everybody realizes, but we do have provisions within

1 our, within our Range Standing Orders. That's what I
2 was telling you earlier about how these Range Standing
3 Orders have evolved to include the requirements for
4 different types of operations that are occurring at
5 the Base and within the NWA. There are provisions
6 within the RSOs for reclamation and, prior to that, we
7 had always been working towards applying the Alberta
8 Environment Reclamation Standards which were referred
9 to in the, in the MOAs initially and certainly with
10 our Environment, Alberta Environment member on the
11 SEAC, we were working to those types of provisions.
12 So it wasn't an area that was left open and there
13 certainly were provisions to cover it.

14 THE CHAIRMAN: Thank you.

15 MS. KLIMEK:

16 Q. Mr. Richmond, when you're looking at using the Alberta
17 standards of reclamation, is that standard back to a
18 restoration to its natural state or would it be
19 something less than that, those standards?

20 A. I'm probably not qualified to answer that because
21 it's -- that's an area that's been open for discussion
22 here over the last three weeks and we're not really
23 sure what that final standard really should be. And,
24 and since we hadn't completed the process of defining
25 a set of standards and protocols to cover it, it's an

1 area we hadn't really gotten to yet.

2 Q. So -- I'm sorry.

3 A. COL LAMARRE: But, sorry, maybe we could
4 turn this to Dr. Henderson as well who can add to
5 this.

6 Q. Okay.

7 A. DR. HENDERSON: Yes, the current standards in
8 Alberta, it's a 1995 update to Well Site Reclamation
9 Criteria. They also have a draft 2001 Pipeline
10 Reclamation Criteria. The criteria in there leaves
11 open a lot of flexibility because it requires a
12 definition of, of what's an acceptable end land use to
13 the landowner. And although there is criteria in
14 there about minimum cover of vegetation, minimum cover
15 of litter, some soil characteristics, some of that can
16 be sort of set aside or forgiven depending on what the
17 end land use objective is for that particular
18 landowner.

19 So some private landowners may not want
20 native Prairie returned to native Prairie. And under
21 those, using those reclamation criteria, it could all
22 be based on the landowner's desire and opinion as to
23 what would constitute effective reclamation.

24 Now, reclamation as a term in itself is
25 distinct from restoration. And this has been dealt

1 with in a number of papers in the literature trying to
2 make distinctions between restoration, rehabilitation,
3 remediation, reclamation.

4 Typically, restoration would be at the, the
5 higher end as far as a goal goes. There you're trying
6 to, in many respects, replicate the structure of that
7 ecosystem. So again, the composition, the structure,
8 the function to make it the way it was or make it the
9 way it was relative to some referenced community or
10 referenced ecosystem that you've selected.

11 Reclamation is a slightly lesser objective
12 where you're going for some sort of equivalent land
13 capability. Some examples of reclamation have been
14 taking an agricultural field and making it into a
15 recreational park so that there's still human land use
16 of that area, it's called reclamation, but it's not
17 necessarily the same land use and it doesn't
18 necessarily represent the same biodiversity or
19 ecosystem structure or function. And I think in
20 testimony from Dr. Walker, he's even pointed out that,
21 when it comes to reclamation, you may -- it may not be
22 desirable to return to the state you had before the
23 land was disturbed. And that points out some of the
24 flexibility that exist s under that term of
25 reclamation and how it can be applied using Alberta's

1 criteria.

2 A. MS. BOYD: I can add just one more point
3 to that, sorry, just to put it all in context again to
4 the National Wildlife Area Management Strategy with
5 respect to it being effects based. One of the points
6 in the strategy, for example, is that activities shall
7 not contribute to the net loss of native Prairie
8 including habitat degradation and fragmentation.

9 So as an example, that principle would be one
10 of the pieces of information we would have in mind
11 when developing reclamation standards for the National
12 Wildlife Area to help guide us to what level and to
13 what degree we would be restoring and/or re-claiming
14 any given areas of the National Wildlife Area.

15 Q. Now --

16 A. COL LAMARRE: I'm sorry, if I can also pile
17 onto this one. Again, it comes down to the RSOs that
18 are issued under the authority of the Base Commander.
19 And I refer to 00 -- sorry, 003A-031, which is annex
20 J, and that is the Chapter 7 of the RSOs. And there's
21 a Part 4, "General Environmental Rules", and it's on
22 page 7. That's okay. 003 alpha 031. And that is the
23 Annex J. And that's the draft RSO. A copy has since
24 been entered that is the -- more up to date than that.
25 But if you look to that page 7, I think you'll get the

1 idea. And it's -- stop right there.

2 Paragraph 30. It speaks a bit to what
3 Dr. Henderson was mentioning; that landowner has an
4 interest, and DND, as it approaches the management of
5 the NWA, also has an interest of going back to the
6 subparagraph "bravo" that is given there. Equivalent
7 native Prairie vegetation community, soils, and
8 productivity, capable of sustaining itself.

9 Q. Now, I have one last question and this is for you,
10 Ms. Dale. And I know we're jumping around a bit
11 here, but I forgot to ask this one. During the PDA
12 process, EnCana has advised that it's not going to be
13 -- that the Sprague's Pipits are not going to be one
14 of the species they're looking for or can -- and I
15 would like your comments on whether you think that's
16 appropriate or not.

17 A. MS. DALE: Sorry, you're asking whether
18 or not I feel not including Sprague's Pipit in the PDA
19 process is appropriate?

20 Q. Yes.

21 A. I have some concerns about that for several reasons.
22 The, the assumption that was, I believe, stated
23 several times was that because construction would
24 occur during the winter that, that it wasn't necessary
25 to be concerned about the locations of Sprague's

1 Pipits because they would not be present during the
2 winter.

3 But winter construction does not mitigate for
4 the fact that habitat will be lost. It does not
5 mitigate for the fact that trails will have to be
6 created in order to visit wells. And it does not
7 mitigate for indirect effects on habitat and on Pipit
8 behavior that may happen because of those trails and
9 other indirect effects, changes in habitat associated
10 with oil and -- with gas activities.

11 So I'm not sure that I feel that it is
12 appropriate to, to not consider areas that are
13 attractive to Pipits in, in their assessment.

14 MS. KLIMEK: Now, my only questions I have
15 left are to deal with Mr. Didiuk, but we don't have
16 that report, so I'm just -- I may not have any once I
17 look at it but I would like to reserve my right to
18 come back at that point, and other than that, and the
19 few questions I have for Colonel Bruce or Friday, we
20 are finished and I would like to thank this panel for
21 their patience and indulgence.

22 THE CHAIRMAN: Thank you, Ms. Klimek.
23 Perhaps it would be appropriate to pursue that
24 further, if you feel you need to, at the time that
25 Colonel Bruce is back with us on Friday. At least

1 that's an option in any case.

2 MS. KLIMEK: I would be fine with that.

3 THE CHAIRMAN: Okay. Thank you, Ms. Klimek,
4 for your questions.

5 MS. KLIMEK: Thank you.

6 THE CHAIRMAN: We'll now ask EnCana to begin
7 their cross-examination. Mr. Denstedt, please.

8 MR. DENSTEDT: Mr. Chairman, it might be
9 appropriate to take five minutes here while we
10 shuffle.

11 THE CHAIRMAN: Certainly.

12 **(SHORT BREAK)**

13 **(PROCEEDINGS ADJOURNED AT 2:05 P.M.)**

14 **(PROCEEDINGS RECONVENED AT 2:13 P.M.)**

15 THE CHAIRMAN: Mr. Denstedt, you're ready to
16 proceed, I believe. If so, it might be helpful just
17 to give us a sense again of timing, whether you've got
18 different sections that you wish to pursue and how you
19 might want to fit that in this afternoon as you
20 proceed.

21 MR. DENSTEDT: Absolutely, sir. You, you
22 read my mind, actually. I was going to suggest what
23 the format looks like.

24 What I would intend to do this afternoon, and
25 I think it will take the remainder of the afternoon,

1 is to run through what we heard in the opening
2 presentation and our comments on that, or questions
3 about that, and questions in relation to what we've
4 heard so far as a result of Ms. Klimek's
5 cross-examination. I think that will take us to about
6 4:30 or 5:00.

7 But then the way I've organized my
8 cross-examination is it fits together nicely to treat
9 that as a whole because I will walk through the
10 evidence in a fairly -- not a detailed manner, but a
11 manner that has some, some coherence to it. And I
12 would prefer to keep that together if possible but,
13 you know, I'm in your hands, I'm happy to stop if I,
14 if I have to.

15 THE CHAIRMAN: Well, that seems to be an
16 appropriate way to proceed, Mr. Denstedt. We might
17 then again, if convenient for, for you, in, in your
18 break to have a break in, in perhaps an hour or so if
19 that makes sense.

20 MR. DENSTEDT: Absolutely, sir.

21 THE CHAIRMAN: Okay. Please proceed then.

22 MR. DENSTEDT: You bet.

23 **CROSS-EXAMINATION BY MR. DENSTEDT:**

24 MR. DENSTEDT:

25 Q. So panel, welcome. And my friend Mr. Lambrecht

1 provided some context yesterday when the panel came
2 up, and it's only fair that I provide the same kind
3 of context for why I'm here, as he did for why you're
4 here. And he indicated that one of the roles you are
5 here to fulfill is to provide your views and your
6 information and that includes the critical analysis
7 and the critical thought that you've put into your
8 evidence.

9 And to put my role in context, I'm here to
10 test that analysis and test that thought. And I'm
11 going to be testing the bases and the assumptions of
12 the -- on which that critical thought or critical
13 analysis is based. So that's, that's one of the
14 roles, roles I'm here to fulfill.

15 One of my goals is to assist the Panel to
16 better understand the evidence you filed and
17 understand how reasonable or reliable it is and
18 whether those positions you're taking are reasonable
19 and reliable. So that's the context that I'm going
20 to be asking questions in.

21 And if you have your Opening Statement, I
22 think it's worthwhile to, to turn to that.

23 I have a few preliminary questions. I think
24 these are for you, Mr. Norton and Colonel Lamarre.
25 Just so we are all on the same page, I think this is

1 basic stuff.

2 But I would, I would take it you would agree
3 with me that opinions are based on fact and
4 expertise?

5 A. COL LAMARRE: Yes.

6 Q. And the corollary to that is that if the facts are
7 wrong, then the opinion may be wrong?

8 A. Yes.

9 Q. Thanks. If you could turn up page 7 of the opening
10 presentation. And, Colonel Lamarre, I'll direct
11 these questions to you and let you throw the ball to
12 whoever you want to throw the ball to. I have a
13 question about the bottom slide on that page, sir.
14 It's the management goals for the NWA. It's the
15 correct one on the screen. Do you see that?

16 A. I do.

17 Q. And I take it this slide with the Military Training
18 Support highlight, highlighted is to indicate that
19 that is the primary goal of the NWA. Is that fair?

20 A. That is the primary goal of CFB Suffield.

21 Q. And is it the primary goal of the NWA?

22 A. As part of CFB Suffield, yes.

23 Q. And Mr. Shaw and Mr. Lambrecht both asked questions of
24 the Proponent during their cross-examination in
25 respect of caissons. Is it DND's position that they

1 wish EnCana to install caissons in the NWA?

2 A. It is DND's position that whatever activity is taken
3 in the National Wildlife Area must be able to allow
4 for continued military training as required. So when
5 we're examining the various options for installment of
6 anything, and for any activity, if it were to impede
7 the ability of DND, to, for whatever reason, undertake
8 military training there, it would be -- it would not
9 be the preferred course of action for DND.

10 Q. So let me follow up on that, Colonel Lamarre. EnCana,
11 in its project description, has applied for wells to
12 be installed above ground. Is it DND's position at
13 this hearing that they do not want above-ground wells
14 in the NWA?

15 A. I'll need one second to confirm on that. Some of
16 these decisions or some of these discussions, I
17 believe, are taken or discussed within the staff only
18 and I need to clarify that.

19 Mr. Chairman, as you can appreciate, there
20 was a fair amount of discussion on this issue. But
21 I'm informed really that the decision is not made. It
22 needs to be something that would be examined, as this
23 Project, if it is approved or recommended -- or,
24 rather, recommended and approved and went forward.

25 If I can just go a bit more on that. There

1 are certain advantages to having caissons installed
2 because, naturally, it means that if you are going to
3 use it for large-scale manoeuvring, then you have
4 fewer obstacles that could prevent that large scale
5 manoeuvring. That said, right now there is no intent
6 to do large-scale manoeuvring. And as was discussed
7 during the presentation, the National Wildlife Area is
8 mostly used towards having a danger template when
9 we're doing live fire within the main training area.
10 And it's also used for overflight. And access into
11 and out-to for air corridors.

12 So from that point of view at this point, it
13 is one of the items that would be discussed, whether
14 it was caissons or above-ground wells, but no more
15 than that.

16 THE CHAIRMAN: Okay. Thank you, Colonel
17 Lamarre. Mr. Denstedt.

18 MR. DENSTEDT:

19 Q. So let me pursue that a little bit with you, Colonel
20 Lamarre, and if you need to pass this on to somebody
21 else or defer to Lieutenant Colonel Bruce, that's
22 okay, too. Did you ever make that known to EnCana
23 during the consultation process leading up to this
24 hearing?

25 A. I don't know.

1 Q. Would Lieutenant Colonel Bruce know that?

2 A. Oops, sorry, I see the microphone was still on there.
3 I apologize there for the consultation.

4 As you can appreciate, much of this
5 information has occurred -- correction. The
6 discussions started a long time ago when we had
7 different staff, potentially some were the same. The
8 bottom line is this; is two things; first of all, we
9 probably should ask Colonel Bruce when he comes on
10 Friday. But, secondly, also DND has always been in
11 the position that it reserves the right to decide
12 whether or not it would be above or below ground based
13 on military requirements.

14 THE CHAIRMAN: Okay. You may wish to
15 reserve that question then later, Mr. Denstedt.

16 MR. DENSTEDT: I may, but I have a few more
17 questions along that line that I think that Colonel
18 Lamarre's friends can help him with.

19 Q. So, so Colonel Lamarre, when the Project description
20 for this Project was produced in 2005, three years
21 ago, and DND led that process as the Responsible
22 Authority, no mention was made of caissons at that
23 time. Can some of your folks explain that?

24 A. Mr. Chairman, unfortunately we just don't have an
25 answer to that right now, so certainly we'll take this

1 on -- correction, we will examine this amongst
2 ourselves tonight, but also I believe this question
3 will have to be asked of Colonel Bruce on Friday.

4 Q. Fair, fair enough. No, I'll pursue that with, with
5 Colonel Bruce. If you could flip then to page 8 and
6 the top slide on that page. And I have a couple
7 questions in respect of the NWA management strategy
8 that, I think it was Ms. Boyd that was speaking with
9 my friend, Ms. Klimek, earlier about.

10 So Colonel Lamarre, these questions, should
11 they be directed to Ms. Boyd?

12 A. It would depend on the question specifically, so I
13 mean, all of us are available to answer them as they
14 come through. Perhaps you can go through the
15 questions and the individuals who have the best
16 knowledge will answer it.

17 Q. Okay, so just a basic question to start with, so
18 Colonel Lamarre, maybe you can answer this again.
19 Feel free to pass it on.

20 In the NWA management strategy, the draft
21 document that we have, is there integration with that
22 document between -- with the plan for the Base as a
23 whole?

24 A. The NWA draft strategy is certainly one of the key
25 documents that would be used in the Range Training

1 Area Management System. So it is one of the
2 considerations and the visions would be considered as
3 the Base goes forward and manages of course the
4 National Wildlife Area. It would also be one of the
5 documents that would be considered in Applications for
6 Development or any other activity that affects the
7 National Wildlife Area or it being looked at by the
8 Base.

9 Q. And in respect of the preparation of that strategy,
10 who did the Department of National Defence consult
11 with?

12 A. I'll take a second to consult. In the drafting of the
13 document, in, in addition to DND naturally,
14 Environment Canada's Canada Wildlife Services as well
15 as Department of Justice.

16 Q. So I gather -- well, I should ask the question. I
17 shouldn't gather anything. I should just ask. Did
18 you consult with EnCana?

19 A. No.

20 Q. And why was that, sir?

21 A. Mr. Chairman, I come late to this one right now. And
22 from the amount of knowledge we have around this table
23 on that specific, why was EnCana not consulted? I
24 think we're going to have to ask some other questions
25 from other people who may have been involved in the

1 past as this document was being put together. I see
2 no other way that I can provide clear indications to
3 you as to the decision as to why or why EnCana was not
4 -- or why not EnCana was being consulted or not.

5 THE CHAIRMAN: Is this something that could
6 be provided perhaps tomorrow or with the return of
7 Colonel Bruce?

8 A. Perhaps Colonel Bruce as well, but right now, as terms
9 of undertaking, I'm not even sure if we can provide a
10 document. It will have to be based partially on the
11 folks who were involved at the time. So my ability to
12 contact those individuals might be limited but what I
13 will undertake to do is to find out what was involved
14 in the original drafting and what processes and what
15 decisions were made in terms of consultation. Does
16 that seem reasonable to you, sir?

17 THE CHAIRMAN: Yes. I might ask one further
18 question. I know it's a bit out of turn here, but is
19 this document that is before the Minister in draft
20 form or is it final?

21 A. Sir, to the best of my knowledge, it's still in draft
22 form. We had it there to his office in preparation
23 for signature. The election is intervening in this.
24 And I do not know the status as of just prior to the
25 start of this Board.

1 THE CHAIRMAN: Thank you. Mr. Denstedt.

2 MR. DENSTEDT:

3 Q. So, Colonel Lamarre, who, who is the -- who has got
4 the pen on this draft strategy now because the draft
5 we have on the record is dated January of, or
6 February of '08? So clearly it's somebody with some
7 recent vintage.

8 A. Your specific question is who is responsible right now
9 for any additions to the draft?

10 Q. Who's got responsibility or the pen on putting that
11 draft into final form today? Because the draft we
12 have been provided is February '08 of this year. So
13 I'm just a little surprised there's not someone on
14 the panel that can speak to it.

15 A. Well, we would have had as a last view on this draft
16 more than likely legal opinion and so the last people
17 who would have provided this and made amendments
18 before it went up to the Minister's office could very
19 well have been one of our lawyers. Again, I'm not
20 sure about that. I can check and I will check.

21 But, secondly, once the draft goes up from
22 the Base Suffield, up the chain, if you will, it has a
23 number of stops along the way. First of all, because
24 Suffield is an Army Base, it will have gone up to the
25 Army staff. And then from the Army staff, in

1 consultation probably with Director of Infrastructure
2 and Environment, it would have gone for their review,
3 and from there eventually put forward all the way up
4 to the Minister's office. But there would have been
5 some other stops along the way, too.

6 And as you can appreciate, something that is
7 going to be signed off by the Minister of National
8 Defence will usually have a number of eyes and pens
9 upon it. So I anticipate that's it.

10 So the latest copy we have dated February '08
11 might not have actually been in the hands of anybody
12 on the Base for the better part of six to eight
13 months, depending on the staffing process.

14 So, again, I have to ask for the indulgence
15 of the Panel to go back and try to understand who had
16 the last thing, and specifically going back to the
17 question, the decision as to why or why not on
18 EnCana's consultation.

19 MR. DENSTEDT So, Mr. Chair --

20 THE CHAIRMAN: That would be helpful to get
21 an answer in response to Mr. Denstedt's question, yes.

22 MR. DENSTEDT:

23 Q. All right. And so, Colonel Lamarre, then, I have a
24 few questions for Ms. Boyd. Ms. Boyd, were you
25 involved in the drafting of that document?

1 A. MS. BOYD: Yes, I was.

2 Q. And did you speak to anybody in EnCana about the
3 potential impact on them?

4 A. Not that I recall. However, I will mention at this
5 point that the, the document as it has been crafted,
6 has been a representation of the vision and the
7 principles that we see as land managers as wanting to
8 follow for the National Wildlife Area. And as I
9 mentioned before, putting it in the context of an
10 effects-based strategy, what are the things we would
11 like to see or not see on the ground. It is not
12 prescriptive and it is not specific to the individual
13 land users or activities. For instance, at no time
14 does it say we do not want oil and gas activity in the
15 NWA. At no time does it say we do not want grazing,
16 or that we do. It does not use any of that type of
17 terminology or phrasing. It is designed to simply
18 express the types of effects we would or would not
19 want to see. And so I guess I would pose perhaps
20 rhetorically; what specifically in the strategy does
21 EnCana think that it is impacting upon them that they
22 would not want to follow?

23 Q. You might have asked them that before you sent it to
24 the Minister for signatures, Ms. Boyd. Wouldn't that
25 have been a good idea?

1 A. However, we do stand by our document, so. And believe
2 that it is reasonable.

3 Q. Well, you asked the rhetorical question. Now you've
4 stepped into it. So answer the question. Why wasn't
5 it sent to EnCana for further consultation?

6 A. I believe that that's --

7 THE CHAIRMAN: Sir, I think --

8 A. -- so --

9 THE CHAIRMAN: -- I think --

10 A. -- sure.

11 THE CHAIRMAN: -- I think, I think Colonel
12 Lamarre has --

13 A. COL LAMARRE: -- comes around to my --

14 THE CHAIRMAN: -- indicated that -- I think
15 you had indicated you were going to try to get that
16 answer, Colonel Lamarre.

17 A. That's correct, sir. And I'll, I'll do that and I'll
18 try to find that information in an expeditious manner.

19 MR. DENSTEDT:

20 Q. So, Colonel Lamarre, then let me ask you this
21 question: Do you think it's appropriate for, for
22 anyone who might be impacting another party's rights
23 to develop strategies that might impact their rights
24 without talking to them, just as a basic principle?

25 A. I believe -- and I think you're asking me for an

1 opinion here at this point -- I believe that we
2 certainly have to look at rights as they are expressed
3 in documents. But I believe we also have to respect
4 the law of the land. And in that respect, we need to
5 make sure that we take all steps necessary to respect
6 the law of the land.

7 Q. Thanks, Colonel Lamarre. And in respect of the
8 homework tonight on the undertaking on consultation,
9 in the opening presentation, Ms. Boyd did indicate
10 that she developed the NWA policy and is currently
11 responsible for the management of that policy. So
12 perhaps you could focus on her involvement and what
13 she did in respect of consultation with
14 potentially-affected landowners and, and
15 leaseholders, including the PFRA and EnCana, if that
16 would be the -- could be the, kind of the two things
17 to corral some of the work you might have to do
18 Colonel Lamarre. Is that okay?

19 A. I'll consider all potential aspects of it.

20 Q. So if we could move on to page 15 of the opening
21 presentation. And I'm not sure if this is
22 Ms. Rowland or whether this should go to Colonel
23 Bruce when he's back. I think he spoke to this,
24 but --

25 A. Yes. Mr. Chairman, Colonel Bruce spoke about this one

1 specifically and I think it would probably be
2 worthwhile for us to wait until he comes back. Very
3 much, he is the one who has the responsibility for
4 allowing and making all activities that are within the
5 carrying capacity that's outlined there, so he's
6 probably best to speak to that one.

7 THE CHAIRMAN: That might save us some time
8 as well, Mr. Denstedt.

9 MR. DENSTEDT:

10 Q. Okay. And we may be in for a long session, then. I
11 would have thought that in relation to carrying
12 capacity and those issues, it would have been the
13 technical experts that could speak to that, but
14 you're telling me that's Colonel Bruce?

15 A. I'm saying that Colonel Bruce is eminently qualified
16 to speak on the matter which he first presented. And
17 also I have to remind folks that, when he first made
18 his presentation, he very much said, as in the title,
19 that this is a conceptual model. But these are the
20 things that concern him as the Base Commander; is how
21 much can you have going on of all types of activities
22 on his Base.

23 So, Mr. Chairman, I think for us to get the
24 right answer, what his -- is in his mindset, we would
25 be better off to wait for him.

1 Q. I'm happy to wait. So I think, Dr. Rowland, we're
2 into your part of the presentation, but if I'm wrong,
3 I may have the wrong spot on the transcript, you'll
4 let me know I'm sure. Just a basic question, and it
5 struck, struck me to hear, but I want to ask you the
6 question. And it's on page 2201 of the transcript.
7 You indicated that, and I don't know if you need to
8 turn it up because it's a pretty short quote:

9 "The tolerance level for
10 disturbance within the National
11 Wildlife Area is understandably
12 lower because of the nature of the
13 protected area designation."

14 Now, I assume you meant there the Military's
15 tolerance for disturbance as opposed to the creatures'
16 tolerance for disturbance?

17 A. DR. ROWLAND: When I was talking about
18 tolerance level in regards to the slide, as well as
19 the Wildlife Area, it was the tolerance of any
20 activity that's going to occur within the National
21 Wildlife Area.

22 Q. But the question is, that I'm asking you, Dr. Rowland,
23 is, is whose tolerance? Is it the Military's
24 tolerance for disturbance or is it the animals'
25 tolerance for disturbance?

1 A. I'm sorry, I understand you now. The tolerance level
2 is in respect to the wildlife that's present.
3 However, because the wildlife can't speak for
4 themselves, the Defence, as the manager of this wildlife
5 area, determines that level of tolerance.

6 Q. I'm not sure that I understand that. I thought I had
7 a simple question, but I'll ask it again. And the
8 quote says:

9 "Tolerance level for disturbance
10 within the National Wildlife Area
11 is understandably lower because of
12 the nature of the protected area
13 designation."

14 Now, I assumed that, because the wildlife can't
15 read, they wouldn't know whether this was protected
16 area or not, and so that the tolerance level, in fact,
17 was the Military's tolerance level for disturbance.

18 A. The tolerance level is, yes, it's the level determined
19 by National Defence.

20 Q. Thanks. And if we look at page 19, over to the top
21 slide, do you have that slide in front of you?

22 Great. Now, Dr. Rowland, on the left-hand side of
23 this picture is, I take it, a D6/D8 battery at
24 8 wells per section. And on the right-hand side is,
25 after it was drilled to 16 wells per section. Am I

1 right there?

2 A. Yes, that is my understanding.

3 Q. And when was this picture taken?

4 A. The image on the right-hand side was taken in fall of
5 2001.

6 Q. And the image on the left-hand side?

7 A. The image on the left-hand side, the pre-infill, was
8 taken in -- yes, my notes say that the pre-infill was
9 taken in 1997.

10 Q. 1997. And can you point out on that left-hand side
11 where the 8 wells are?

12 A. I cannot, personally.

13 Q. And Dr. Rowland, is this -- are these -- is this
14 picture -- I believe I've seen this picture someplace
15 else. Is that in Mr. Smith's work, Brent Smith's
16 work?

17 A. Just verifying. It is in Mr. Smith's work. I'm just
18 questioning if it's actually in our submission as
19 well.

20 Q. It is, Dr. Rowland. And have you had a chance to read
21 EnCana's reply evidence and, in particular,
22 Appendix G?

23 A. I definitely read through all of the response
24 evidence.

25 Q. And, in particular, have you read Appendix G? And if

1 you haven't that's okay. There's lots of material on
2 the record.

3 MR. MOUSSEAU: Mr. Denstedt, do you have a
4 exhibit number? I think it's Exhibit 002-110.

5 MR. DENSTEDT: 110, that's correct, sorry.

6 A. DR. ROWLAND: Yes, I did read through
7 Appendix G.

8 MR. DENSTEDT:

9 Q. And I'll deal with the details of that with, with
10 Mr. Smith, but when you reviewed Appendix G, did you
11 have a discussion with Mr. Smith about this picture
12 and its -- in comparison to the picture on the
13 left-hand side of the page?

14 A. I'm sorry, are you asking with regards to the image in
15 our presentation if I discussed that slide in, in
16 response to Appendix G?

17 Q. That's correct. Now, you've put the slide up on
18 page 19 to demonstrate footprint. And on the
19 left-hand side of the page is a picture of drilling
20 at 8 wells per section. And there's a picture taken
21 in the fall of 2001 depicting 16 wells per section.
22 And in EnCana's reply evidence in Exhibit 110,
23 Appendix G they go through some of the concerns they
24 had about the use of that picture. And I just
25 wondered if you had any discussions with Mr. Smith

1 before you reproduced that picture again to
2 demonstrate footprint. And you may not have felt it
3 was necessary and that's okay, too.

4 A. I'm sorry, I don't remember specifically if I spoke
5 about this with Mr. Smith.

6 Q. That's fine. If you could -- if you have a copy of
7 the transcript, or if we can bring it up, on page
8 2203 you were talking about the Environmental Impact
9 Statement and the concern that the DND had for the
10 EIS. And, specifically, you quoted from the
11 guidelines there. And one of the items you quoted
12 was:

13 "Demonstrate the proposed actions
14 are examined in a careful and
15 precautionary manner in order to
16 ensure that they do not cause
17 serious or irreversible damage."

18 And you went on to talk about considering system
19 tolerance and resilience. And I wanted to just
20 explore that with you, your comment in the Opening
21 Statement.

22 I take it when you say "considering system
23 tolerance and resilience", and that's from the
24 Guidelines, you mean things like drought and fire and
25 those kinds of things?

1 A. COL LAMARRE: Mr. Chairman,
2 Mr. Denstedt is referring to a transcript. And we're
3 trying to match it up to the actual presentation that
4 we had there so we can read it because the transcript
5 is hard to bring up quickly. So perhaps we'll just
6 have your indulgence to get the transcript reference
7 again if we could so we can actually have a look at
8 that.

9 THE CHAIRMAN: I believe, Mr. Denstedt, you
10 had that reference, the transcript reference, please.

11 MR. DENSTEDT: It's page 2203 and it's line,
12 lines 14 and 15. That's page 2203. Is all that's
13 particularly required.

14 Q. I could put the question to you, Dr. Rowland, and
15 then, subject to check, you could go back and check
16 later. It might be easier to keep things moving, if
17 that's okay.

18 A. COL LAMARRE: We're just about there.

19 Q. Okay.

20 A. We're scrolled a page away. Perhaps we could just
21 continue on.

22 THE CHAIRMAN: If you're close, just take a
23 moment to re-read it.

24 A. DR. ROWLAND: I now have the transcript.
25 Unfortunately, I forget the question.

1 MR. DENSTEDT:

2 Q. That's okay. I remember it. The section, it's on
3 pages 2202 and 2203, and in your opening
4 presentation, you were talking about some of the
5 deficiencies that the Department of National Defence
6 found with EnCana's Environmental Impact Statement.
7 And you quoted from the Guidelines and went on to say
8 that, in order to determine whether this essential
9 requirement is fulfilled, we've got some concerns
10 essentially.

11 And I went back to the Guideline portion
12 which talked about considering system tolerance and
13 resilience. And my question for you is, when you
14 were considering those deficiencies, how did you
15 consider those words, "system tolerance and
16 resilience", and I asked, did it include things like
17 drought and fire? Is that what your interpretation
18 is?

19 A. No, that's not what I had in mind. What I was -- this
20 is in relation directly to the Guidelines provided by
21 the Panel. And you had requested they look at
22 considering system tolerances and resilience. And I
23 interpreted that to be within the ecosystem itself.
24 There are a number of stressors and pressures that are
25 put on this ecosystem on a daily basis, partly, as

1 Mr. Denstedt has said, as a result of climatic
2 variation, but also specifically looking at the
3 ecosystem and its individual components and its
4 tolerance levels. Different ecosystems -- or
5 different species or organisms can withstand
6 different, different tolerance levels as a result of
7 different stressors. And that's what I was looking
8 for.

9 Q. So in the Guidelines where the Guidelines state that
10 one of the Proponent's obligations is to demonstrate
11 that the proposed actions are examined in a careful
12 and precautionary manner, I'm paraphrasing here,
13 considering system tolerance and resilience, you
14 interpret that to mean individual components of the
15 system; is that what I take your answer to mean?

16 A. Partially. That's just more of the detail. The
17 National Wildlife Area is part of a larger ecosystem
18 and I believe that all scales were to be examined for
19 their, their tolerance levels.

20 Another way of, of looking at this is
21 creating indicators of sustainability and determining
22 exactly at what level the ecosystem is irreversibly
23 damaged or damaged to the point that it would be
24 considered by this Panel to be significant.

25 Q. So let's take these things one at a time. What do you

1 think "system tolerance" means?

2 A. "System tolerance" is, is a different terminology for
3 determining a threshold.

4 Q. And what do you think "system resilience" means?

5 A. My interpretation of "system resilience" is the
6 ability of that part of the ecosystem or an individual
7 species to come back or re-establish or return to some
8 new equilibrium based on those stressors.

9 Q. And I go back to my original question, then. Is a
10 demonstration of resilience the type of thing that
11 would have occurred after the 1930s when the great
12 vast stretches of the prairie were turned to dust and
13 they came back? Is that an indication of resilience?

14 A. Yes, I would consider that resilience.

15 Q. If you could move to page 21 of the opening
16 presentation. It's probably a good time to pull up,
17 actually, page 49 of the Government of Canada's
18 submissions. This picture appears in both spots, so
19 I think it's easier to see and answer the questions
20 in respect of the picture on page 49 of the GOC's
21 submissions.

22 UNIDENTIFIED SPEAKER: 003012.

23 THE CHAIRMAN: I believe it's page 49 if
24 you're looking for the page number, if you've got it.

25 MR. DENSTEDT:

1 Q. I just had a few questions about this picture. And
2 first of all, if you stroll up just far enough so we
3 can see the caption on the picture. And this says"?

4 "Photo demonstrates Crested
5 Wheatgrass invading and displacing
6 native Prairie at CFB Suffield NWA
7 above ground base view, below
8 aerial view."

9 Now, I gather, Dr. Rowland, you would agree with
10 me that these, these pictures are not in the NWA?

11 A. MR. SMITH: Brent Smith. I can speak to
12 that. The one inside above is within the NWA, to my
13 understanding. The one below may be. I do not have
14 an exact location of that. It was taken from a
15 helicopter and I wasn't able to obtain the physical
16 location.

17 Q. All right, but you would agree with me that that's not
18 in the NWA?

19 A. The bottom picture I can't confirm. It may or may
20 not. I don't know.

21 Q. And did you indicate to EnCana that that was a
22 pipeline right-of-way?

23 A. My understanding in looking at the photo is that it's
24 a pipeline right-of-way and access combined, yes.

25 Q. And could you undertake to check that, Mr. Smith,

1 because I'm advised by EnCana that that's in fact an
2 old county road allowance.

3 A. I can't -- I'm not able to confirm the exact location.
4 There's, there's no way of referencing this to a
5 specific location.

6 A. COL LAMARRE: Sorry to jump in here, sir.
7 Can I ask you, Brent, to expand a bit more on that?
8 Do you think you know when the picture was taken?

9 A. MR. SMITH: My understanding was that
10 this was taken -- I took the picture during a SEAC
11 reconnaissance. And I forget the year. 2004/2005.
12 As we were traversing the south end of the Base
13 looking north proceeding from the Base into the NWA.
14 So it's a photo of the south end of the Base either at
15 the edge or within the NWA, I cannot confirm for sure,
16 looking north, directly north, along a trail, as I
17 understood it.

18 Q. So, Mr. Smith, I'm going to ask specifically for an
19 undertaking for you to confirm whether this is in the
20 NWA or not.

21 A. I can try, but there -- I don't have any way of, of
22 confirming the exact ground location based on the
23 picture.

24 Q. Okay, so Mr. Smith, Mr. Heese will testify in rebuttal
25 that this is not in the NWA.

1 A. I'm prepared to accept that I'm wrong.

2 Q. Thanks. We should move on to page 24 of the opening
3 presentation.

4 A. COL LAMARRE: Excuse me, Mr. Chairman, I'm
5 interested in this, since we are trying to find things
6 at a ground-truth level. The same question is, is how
7 would Mr. Heese know, and if he does know, it would be
8 useful, would it not?

9 MR. DENSTEDT: I already said Mr. Heese will
10 testify to the location.

11 MR. LAMBRECHT: Well, perhaps my friend could
12 tell us where it is and then we can check to be sure.

13 MR. DENSTEDT: I'm happy to put Mr. Heese in
14 touch with Mr. Smith. My point, Mr. Chairman, is the
15 Government of Canada puts in their evidence a picture
16 of a county road allowance, purports that it's in the
17 NWA, tells us in response to an IR that it's a
18 pipeline right-of-way. It's in fact neither; it's a
19 county road allowance. And I think I have a right to
20 ask those questions. I'm happy to have Mr. Heese talk
21 to Mr. Smith and let them sort it out. I'm just,
22 just, just want the Panel to know that we have to be
23 cautious with what we're seeing, that's all.

24 So if Mr. Heese and Mr. Smith can get
25 together and sort it out, I'm happy with that.

1 THE CHAIRMAN: I think we would be happy,
2 too, to get the, get the straight answer on this,
3 Mr. Denstedt. Obviously there seems to be some
4 misunderstanding or -- of its location, and it would
5 be helpful if that could be clarified. Thank you.

6 MR. DENSTEDT: You bet.

7 Q. So if we turn to page 24 of the opening presentation,
8 and we'll look at the overall project timeline -- do
9 you have that in front of you, Dr. Rowland?

10 A. DR. ROWLAND: I do.

11 Q. And on page 2211 of the transcript, that's where
12 you're speaking to this point. And I don't think you
13 need to turn it up. The comment that you made was
14 that:

15 "Wildlife will receive little
16 downtime from the sensory and
17 physical disturbances of this
18 proposed Project."

19 And I just wanted to confirm that that statement
20 is made in the context of winter and dormant drilling
21 and in respect of one vehicle visit per month to the
22 well sites. That's still your position, is it?

23 A. That was -- that statement was made in reference to
24 the volume of activity that would be occurring within
25 the Wildlife Area and the number of vehicles that we

1 determine as a minimum would be accessing the Wildlife
2 Area at any given time throughout the year.

3 Q. When you say "we determined", you're referring to the
4 DND?

5 A. When I'm talking about "we", the Government of Canada
6 work together to, to help figure out exactly what
7 activities would be occurring when and what number of
8 vehicles would be included in each of these number of
9 activities.

10 A. MR. JENSEN: If I may, Mr. Denstedt, I can
11 assist with this for the Panel's reference.

12 THE CHAIRMAN: I'm sorry, we don't know
13 who's speaking here.

14 A. Pardon me. Sorry. It's Olaf Jensen speaking. And I
15 can assist with this to provide some clarity of -- to
16 where the information came from.

17 So what we had done together as a group, DND
18 and myself, with Environment Canada, was review the
19 material provided by EnCana including, of course,
20 their Environmental Impact Statement and information
21 provided in Supplementary Information Requests as well
22 as the material provided by EnCana in their Response
23 to Interveners' Requests.

24 So the material presented on the screen in
25 this gant chart reflects the activities that EnCana

1 has identified it's going to undertake in terms of the
2 sequence of events and how those events overlap in
3 time. This is meant to be done because EnCana has
4 identified that traffic volume will occur once per
5 well and in the wintertime. However, that does not
6 take into account the tremendous volume of activity
7 during the spring and summer months for the PDA work
8 as proposed.

9 So the gant chart here is reflecting only the
10 information provided by EnCana. Where there was
11 information missing, DND, Environment Canada, myself,
12 and Dr. Rowland, we made an effort to obtain that
13 information from our own records. And I'm referring
14 in those cases to activities that are specific to DND
15 such as UXO clearance, or activities that are not
16 EnCana's to undertake.

17 So this is meant to illustrate the number of
18 activities that overlap in time throughout the entire
19 project and activities co-occurring with the, with the
20 proposed Project.

21 MR. DENSTEDT:

22 Q. And Mr. Jensen, you're also a member of SEAC; is that
23 correct?

24 A. That's correct. I'm appointed by Environment Canada
25 to serve on the Suffield Environmental Advisory

1 Committee.

2 Q. And maybe I'll ask this when you come up as a member
3 of SEAC. I'm sure my friend will jump up if I try
4 and ask the question now.

5 In respect of the PDA process and the
6 surveys, how many man-days of work did you assume
7 there would be involved, Mr. Jensen?

8 A. If you'd give me a few moments, I would be happy to
9 pull out the material we used. As I said, the
10 information provided on this gant chart is what has
11 been provided by EnCana either in the information
12 requests or also as a part of this hearing.

13 I believe Mr. Collister and Mr. Kansas
14 provided a fair bit of this material during
15 cross-examination a week or so ago.

16 Q. And I assume, then, the -- this opening presentation
17 was updated in respect of that?

18 A. That's correct.

19 Q. Okay, so, so, Ms. Dale, I hope I didn't catch you by
20 surprise there, in respect of the 1994 and 1995 CWS
21 bird survey or surveys that were done, do you recall
22 how many man-days of effort that took?

23 A. MS. DALE: Brenda Dale. My recollection
24 would be that it took us about a little more than four
25 weeks in each of 1994 and 1995 to do the bird surveys.

1 I can't speak to the man-days involved in any of the
2 other components.

3 Q. Person-days, I suppose. Would it surprise you to know
4 that there were 3100 person-days spent doing those
5 surveys?

6 A. Are you referring only to the bird surveys or to --

7 Q. No, for all the surveys.

8 A. -- all the surveys?

9 Q. For all the surveys.

10 A. It would not surprise me.

11 Q. Thanks. And, Dr. Rowland, if you could perhaps pull
12 up -- again, I'm not sure if you need to because it's
13 a pretty simple question, and in order to keep things
14 moving, I don't think you need to pull it up. But on
15 page 2215, you talked about the Proponent's position
16 in respect of non-native species. And you indicated
17 in your opening presentation that research carried
18 out at Suffield has shown the contrary, meaning the
19 contrary to the Proponent's position that non-native
20 species are not spreading from access routes and
21 pipelines. And I just wanted to confirm with you
22 that that position would be based on Mister --
23 Dr. Henderson and Mr. Smith's work; is that correct?

24 A. DR. ROWLAND: Yes, I would agree, it's
25 based off Dr. Henderson as well as Mr. Smith, but

1 myself I did some research there as well.

2 As a follow-up to your last question, going
3 through our gant chart, based off of the PDAs, I have
4 approximately 480 man-days required to do the PDA
5 work.

6 Q. Thanks for that, Dr. Rowland. And on the same page,
7 on 2215, you were talking about fragmentation and you
8 say the Proponent did not assess fragmentation, but
9 you did indicate you've read the reply, and I think
10 you would agree with me that what EnCana did do was
11 that they, they looked at the potential for
12 fragmentation and they rejected that hypothesis. And
13 I take it you don't agree with that. I understand
14 that. But, but they looked at it and rejected that
15 hypothesis.

16 A. I agree that that's what's presented.

17 Q. So if we go to page 26 of the presentation, and the
18 bottom slide, if we could, and your comment here,
19 Dr. Rowland, is that:

20 "Clean vehicles entering the
21 Wildlife Area will not effectively
22 control the spread of this species
23 as demonstrated by this slide."

24 Now, I think you would agree with me that the
25 cartoon doesn't demonstrate anything?

1 A. The slide was just a means for demonstrating the
2 verbal sort of text that went along with it.

3 A. DR. HENDERSON: If I could add something.
4 Darcy Henderson here. In the Environmental Protection
5 Plan that EnCana has provided, they've indicated that
6 cleaning vehicles upon entry to the National Wildlife
7 Area might, might be one of the mitigations used.

8 Our argument here is that, once a vehicle is
9 cleaned at the gate, it's going to drive through
10 existing trails and access routes that have Crested
11 Wheatgrass on it, and they will transport that,
12 inevitably, on these new access trails to new wells;
13 that that -- that will inevitably happen.

14 Q. And so Dr. Henderson since you brought it up, the EPP
15 also provides for other mitigation methods in respect
16 of avoiding this issue; correct?

17 A. I would not agree that it was for avoidance of the
18 issue. That to avoid it would mean that the plants
19 would never establish. And the fact is plants may
20 establish as a result of this disturbance. So the EPP
21 outlines other things, such as weed control, actions
22 that may take place after the problem has already been
23 initiated.

24 Q. And one of those, one of the points raised in the EPP
25 is avoidance of those areas?

1 A. Because we do not have final well and trail locations,
2 I cannot say yes or no that they will be able to avoid
3 all existing access routes that have Crested
4 Wheatgrass upon them. So there's no way to say yes or
5 no to that, to that question. That's, that's a lack
6 of information that we have in order to actually
7 answer that question adequately.

8 Q. No, I think the question was: Does that exist in EPP?
9 And if you've read it, I assume you can confirm that,
10 yes or no. That's all I asked, sir.

11 A. I don't recall that specific thing, no.

12 Q. And are you aware of ASRD's information directive in
13 respect of protecting native Prairie from disturbed
14 sites? Have you read that?

15 A. Could you be specific as to which document that is,
16 please?

17 Q. I believe it's 2001-3, is my recollection, but, but
18 we'll check.

19 A. If you could provide me with a copy of the document,
20 that would be great.

21 Q. Sure, we'll get that for you after the break. But
22 you, you'd agree with me the ASRD has that
23 information directive on this topic; correct? It's
24 cited in your paper, Dr. Henderson; I'm sure that's
25 relatively easier to confirm.

1 A. You'll have to be more specific as to what topic
2 you're referring to.

3 Q. The topic of protecting the site from further
4 disturbance as a result of Crested Wheatgrass being
5 present on that location.

6 A. I'll reserve answering that question until I see and
7 read that document.

8 Q. Fair enough. We'll have lots of time with you
9 tomorrow, Dr. Henderson.

10 If you could turn to page two twenty -- 2221.

11 THE CHAIRMAN: I think it was 2221, if I
12 recall.

13 MR. DENSTEDT: Sorry, yeah. 2221.

14 Q. And this question is for you, Ms. Dale, again based on
15 the opening presentation. I think you're the right
16 person to answer this. It also is as a result of a
17 question that Ms. Klimek posed to you and that was in
18 respect of the CWS inventories that were done. And I
19 think I heard you indicate that those surveys were a
20 reconnaissance level surveys. Is that -- did I hear
21 you right?

22 A. MS. DALE: What I said was that the
23 purpose of the inventory was to determine the
24 distribution and relative abundance of, in my case,
25 bird species, relative to various soil types and, to

1 some degree, looking at the -- at their responses to
2 grazing and fire.

3 Q. And I think the word you used, though, with Ms. Klimek
4 was "reconnaissance".

5 A. I said that, of the two options she gave me, I thought
6 "reconnaissance" was the more appropriate.

7 Q. Okay. And on Environment Canada's website, these
8 surveys are described as the inventory is
9 extraordinary in its scope and comprehensiveness.
10 And it lists all the surveys that were done. Is that
11 still Environment Canada's view of those surveys?

12 A. I'm not sure that I'm the correct person to answer
13 that in totality, but as for the bird surveys, I don't
14 see those two conclusions as mutually exclusive.

15 Q. Mr. Norton, do you have anything to add to that?

16 A. MR. NORTON: I think clearly we would
17 stand behind that, that statement still. It was at
18 the time a ground-breaking, no pun intended, piece of,
19 piece of work. And I think that its value has
20 continued to be evident in the fact that we're still
21 using it as a fundamental information source for this
22 particular proceeding.

23 Q. So perhaps, Dr. Rowland, it's back to you and if you
24 could --

25 A. MR. DIDIUK: Excuse me. Andrew Didiuk. I

1 could perhaps add another comment regarding this
2 definition of comprehensiveness of these biophysical
3 surveys.

4 Perhaps the quotation that you're referring
5 to is not necessarily directed at each specific
6 biological group that was addressed. It is the fact
7 that it was comprehensive in terms of the number of
8 vertebrate groups and vegetation that were addressed
9 and linked to the surficial materials and soils that
10 was particularly driving the term "comprehensive".
11 The comprehensiveness of individual components varied
12 in their level of detail.

13 Q. So Mr. Didiuk, since you weighed in, the website goes
14 on to say:

15 "The study was a co-operative
16 effort involving species
17 specialists from the Canadian
18 Wildlife Service, Provincial Museum
19 of Alberta, Agriculture and
20 AgriFood Canada, graduate students,
21 contractors for other expertise,
22 including geomorphology and soils,
23 individuals from the Northern
24 Alberta Institute of Technology,
25 the Lethbridge Community College,

1 the University of Calgary, the
2 Western College of Veterinary
3 Medicine, the University of
4 Victoria, Prairie Farm
5 Rehabilitation Administration, and
6 Alberta Energy Company."

7 So I take it, Mr. Didiuk, that there were a
8 number of folks involved with significant experience
9 and expertise?

10 A. That is correct.

11 Q. So if we can go to page 2219. I think again,
12 Dr. Rowland, I think this is for you. And at the top
13 of the page, you talk about the persistence of
14 Crested Wheatgrass, for lack of a better word, and
15 that it's still being -- differences are still being
16 diseen (phonetic) on well sites in native Prairie.

17 And in preparation for the hearing, did, did
18 you conduct any due diligence in respect of what had
19 happened on the Base in the '70s and '80s since the
20 natural gas development was allowed?

21 A. DR. ROWLAND: I have completed some work on
22 the Base. However, it was not the intention of my
23 work for -- I did not complete the work for the
24 purpose of this Panel Review.

25 Q. Did you review the SEAC minutes as part of your

1 preparation for this proceeding?

2 A. There are a fair number of SEAC minutes. I can say
3 that I've reviewed some of them over the past five
4 years, but that's all I can tell you.

5 Q. Is it fair to say, Dr. Rowland, that Crested
6 Wheatgrass was used at CFB Suffield and in the NWA
7 with both SEAC's approval and the Base Commander's
8 approval?

9 A. MR. SMITH: Brent Smith. I can speak to
10 some of the uncertainty in going through some of the
11 Base records. And I believe it's an exhibit now that
12 we posted; a direction from SEAC to AEC EnCana in
13 1977 -- and I believe if it's not on the exhibit list,
14 it will be shortly -- indicating direction from SEAC
15 saying that non-native species will be used with
16 reclamation efforts within the Middle Sand Hills Zone
17 and River Bank Zone. That is my understanding.
18 Non-native species were not to be used.

19 Q. And, Mr. Smith, did you review any other SEAC minutes
20 from 1981 or 1982 or 1983?

21 A. I reviewed a number of them, yes.

22 Q. And then in respect of those minutes, those minutes
23 are clear that SEAC changed its mind and gave AEC the
24 right to -- not only the right; they asked them to --
25 specifically to use Crested Wheatgrass, including in

1 the Middle Sand Hills. Are you aware of that?

2 A. I'm aware of mixed messages, yes. And I think those
3 exhibits will speak to that. Originally, in '77, SEAC
4 advised that non-native species were not to be used
5 within the Middle, within the Middle Sand Hills and
6 other areas of the NWA, as it's known now.

7 There is a further letter that I believe is
8 also an exhibit, in 1982, stating the exact same
9 direction; that non-native species were not to be used
10 in reclamation efforts.

11 Q. And, Mr. Smith, will you undertake to file with the
12 Panel the minutes of, the SEAC minutes from 1981 and
13 1982?

14 A. Absolutely.

15 Q. And, Mr. Smith, could you turn up Exhibit 002-129. I
16 believe the document is found at Tab 14. It's the
17 Binder of Undertakings that was filed by EnCana.
18 It's the SEAC minutes from 1988 if that helps people
19 find things. Tab 14. And it's near the back of that
20 document. And it's in Appendix B, which is the SEAC
21 report on reclamation and abandonment.

22 It should be coming up quick there. B,
23 correct. Thank you. And 1, 2, 3, 4, fifth paragraph
24 down, end of that paragraph, it says in the SEAC
25 Minutes:

1 "It is noted that non-native
2 grasses were inadvertently seeded
3 on some leases and pipelines in
4 this area. There is no requirement
5 for Alberta Energy company to
6 remove these non-native species."

7 And that's in 1988. Did you review those Minutes
8 in preparing for this hearing?

9 A. MR. SMITH: My apologies. Brent Smith.
10 I believe that statement is actually made in the '86
11 Minutes as well, but I have not reviewed the '88
12 Minutes in preparation for the hearings, no.

13 Q. So Dr. Rowland, when you said in your Opening
14 Statement that EnCana had seeded Crested Wheatgrass
15 contrary to SEAC's direction, you were taking your
16 advice from Mr. Smith?

17 A. DR. ROWLAND: I was, but he also provided
18 me some of those documents which I believe were to be
19 entered on the Registry as well.

20 Q. And I've asked Mr. Smith to undertake to provide them
21 and I think he agreed. My question is: What did you
22 review yourself to make that statement that EnCana
23 had planted Crested Wheatgrass contrary to SEAC's
24 direction when the Minutes clearly indicate
25 otherwise?

1 A. I just put it before the Panel that there are a number
2 of SEAC minutes and, and I have read -- and another
3 one that you will see when it's provided, is it talks
4 about that the use of Crested Wheatgrass is not, is
5 not desired for use within, within the Base.

6 But it's true, when I put together the
7 Department of Defense presentation, it was a group
8 effort, and I absolutely conferred with Mr. Smith in
9 doing that.

10 Q. So if you turn to page 2227 of the transcript, I think
11 we should get to the bottom of this. And on there,
12 the direct quote from your Opening Statement,
13 Dr. Rowland, is:

14 "Further, in the 1970s and early
15 1980s non-native species appear to
16 have been used in reclamation
17 against the direction of SEAC."

18 And I put it to you, Dr. Rowland, that that's
19 simply not true. And if it is, please -- if it is, I
20 expect to see some evidence to support it.

21 A. COL LAMARRE: Mr. Chairman, please bear
22 with us. We are looking through many documents at
23 this time to try to make sure we have clarity on this
24 and our answer will just take a couple more minutes.

25 THE CHAIRMAN: Mr. Denstedt, I'm wondering

1 if we might be at a point, appropriate point, to have
2 a break and perhaps the Government of Canada Panel
3 might be able to be better able to respond to your
4 question given a 15-minute break.

5 MR. DENSTEDT: Absolutely, sir.

6 THE CHAIRMAN: Okay. We'll break and return
7 15 minutes. Thank you.

8 **(AFTERNOON BREAK)**

9 **(PROCEEDINGS ADJOURNED AT 3:23 P.M.)**

10 **(PROCEEDINGS RECONVENED AT 3:38 P.M.)**

11 THE CHAIRMAN: We are ready to resume,
12 Mr. Denstedt.

13 MR. DENSTEDT: Thanks, Mr. Chairman. I
14 believe Mr. Smith and Mr. Heese were able to get their
15 heads together on that picture so I don't know if
16 Mr. Smith wants to comment or not.

17 A. MR. SMITH: Panel Members, I can confirm
18 talking with my counterpart, Mr. Heese, that in fact
19 it is outside the NWA. It is a road allowance. There
20 is Crested Wheatgrass on it and from the observations
21 of the picture it is invading native Prairie. It is
22 inside the Base, yes.

23 THE CHAIRMAN: Okay. Thank you for that
24 clarification.

25 **CROSS-EXAMINATION BY MR. DENSTEDT (CONTINUED):**

1 MR. DENSTEDT:

2 Q. And, Mr. Smith, I'll have questions with you in
3 respect of whether it is in fact invading the native
4 Prairie or not. So we'll leave that for tomorrow.

5 Moving back to the opening presentation, if
6 you could turn up page 30, but the questions really
7 relate to the PDA process and page 2223, 2223 of the
8 transcript. And I don't know if you need to turn it
9 up again but I'll put the question to you,
10 Dr. Rowland.

11 At that page you talk about the problems that
12 may arise in respect of the PDA and you indicate
13 there, in respect of Burrowing Owls, that because
14 EnCana's not doing it as an NWA-wide survey a
15 Burrowing Owl nest located just outside a well site
16 may be missed. Do you see that or do you recall
17 saying that in the Opening Statement?

18 A. DR. ROWLAND: I do.

19 Q. And have you read Appendix E of the Exhibit 110 which
20 is the reply evidence? Other than today have you
21 read it?

22 A. I only need a moment to confer with what Appendix E
23 was and yes, I did. It is the PDA methodology.

24 Q. Right. And page E-5 Section E.2.5.1:

25 "Burrowing Owl area to be surveyed.

1 The entire NWA will be surveyed
2 over the course of the Project."

3 Is that a mistake in your opening presentation?

4 A. When I put the slide together I had gone through the
5 work that would be done for doing an individual site
6 and when they were doing a PDA site at specific
7 locations they had given specific species that they
8 were going to look for and the idea was that not all
9 species, when they do each individual site, would be
10 looked for, for all locations, both on the specific
11 locations they would be working as well as locations
12 outside of that.

13 Q. Okay. So Dr. Rowland, my friend's speech at the early
14 -- at the outset of this Panel being sat as a witness
15 said it's about critical analysis and critical
16 thought. It seems to me you've ignored the
17 Proponent's reply evidence in providing this
18 submission, Dr. Rowland.

19 A. When I put the presentation together, I put the slide
20 together, originally I created this cute little bird
21 that was fictitious with the idea being that all
22 species at risk were not going to be surveyed for.
23 There was concern raised by our team that using this
24 fictitious, fictitious bird was not sort of really
25 guiding the process. So it is true, at the last

1 minute I did change using this fictitious bird for the
2 Burrowing Owl, but the concern is still there that not
3 all species will be surveyed for at the appropriate
4 time and for all locations both within sort of the
5 lease site itself as well as outside of. So although
6 perhaps I did not use the best example, my concern is
7 still valid and it's still there.

8 Q. I'm sympathetic to your concern, Dr. Rowland, but what
9 I'm asking about is the accuracy of your evidence
10 which the Panel is being expected to rely on and as
11 my friend Colonel Lamarre agreed with me, an opinion
12 is only as good as the facts on which it is based and
13 clearly this is factually incorrect. You would agree
14 with me? Dr. Rowland, did Mr. Richmond and Ms. Boyd
15 help you in drafting this draft?

16 A. I will remind the Panel again that the Department of
17 National Defence presentation was a group effort. I
18 did have many people providing comments and direction
19 and also creating slides, so, yes, it was a group
20 effort.

21 If we're going to refer specifically to this
22 appendix as well as specifically to the Burrowing Owl
23 information, based on the information provided here it
24 doesn't tell you exactly what locations are going to
25 be surveyed for, for the Burrowing Owl. It does tell

1 you that the entire National Wildlife Area will be
2 surveyed over the course of the Project. It does not
3 tell you that it will be surveyed for when you do each
4 of these individual sites and therefore you will have
5 that information ahead of time.

6 Q. Thanks, Dr. Rowland. Your evidence at page 2223:

7 "The area within the well site as
8 well as the area within the
9 right-of-way will be surveyed for
10 some species at risk. Problems
11 arise, for example, if there is a
12 Burrowing Owl located just outside
13 the well site as it may not be
14 detected during the survey."

15 EnCana's reply evidence which was provided to you
16 three months ago says:

17 "The entire NWA will be surveyed
18 over the course of the Project."

19 The Panel can determine which is the accurate
20 statement.

21 Dr. Rowland, in respect of the very next
22 paragraph, you say:

23 "EnCana's PDA process will require
24 the entire project area to be
25 surveyed for rare plants and that

1 this work will be done on foot.
2 There is concern at the amount of
3 time that this activity will take
4 and if the survey is going to be
5 completed at optimal growing period
6 for each species given that areas
7 may not be accessible."

8 In fact, rare plants are surveyed on a well-site
9 and pipeline-site basis and as EnCana said in
10 Appendix E, page E-9:

11 "This is to avoid unnecessary
12 disturbance to the native Prairie."

13 So Dr. Rowland, did you in fact read Appendix E.

14 A. DR. HENDERSON: Dr. Henderson here. I read
15 Appendix E. I read protection on rare plant survey
16 methods. I have several concerns about it I would
17 like to address if possible.

18 Q. Well, we'll get to that, sir. I've asked a question
19 of Dr. Rowland who made a statement to this panel and
20 is asking them to rely on it and it's clearly,
21 clearly not in accordance with the evidence and it's
22 up to the Dr. Rowland who is being put forward by the
23 Government of Canada for her expert opinion to
24 justify that, sir. So Dr. Rowland, can you give me
25 an answer?

1 A. DR. ROWLAND: If I could have a few minutes
2 to pull these documents up but I did read Appendix E
3 and I do have some concerns with regards to surveying
4 for the rare plants. If we could be given a few
5 moments I could pull up the transcripts and perhaps
6 comment on what I said. But it's taking me a few
7 minutes to pull them up and I just don't have
8 sufficient time.

9 THE CHAIRMAN: We'll give you the time to
10 look at the transcript, Dr. Rowland.

11 A. DR. ROWLAND: Perhaps to save a little bit
12 of time, I have page 2223 now pulled up in regards to
13 my comment about the rare plant surveys. If we could
14 just have Mr. Denstedt repeat the question, please.

15 MR. DENSTEDT:

16 Q. All right. So we'll move on to the rare plants
17 questions at lines 20 through 22 where you talk about
18 EnCana's PDA process will require the entire project
19 area to be surveyed for rare plants and that this
20 work will be done on foot when in fact that's not
21 accurate.

22 A. I think what Mr. Denstedt is alluding to is the "on
23 foot". If he could perhaps clarify that.

24 Q. No, I'm alluding to the fact that you're taking the
25 position that EnCana's PDA process for rare plants

1 will require the entire area to be surveyed, which is
2 not true. In accordance with E-9, it is the well
3 sites, and I can read it to you if you want me to,
4 but I believe you've read it. Perhaps we can move on
5 to another topic and you can consider this overnight,
6 Dr. Rowland.

7 A. COL LAMARRE: Well, actually, Mr. Chairman,
8 before we quite abandon this quickly, there's quite a
9 bit of work to be done but we need a little bit of
10 clarification on a couple of things and we're also
11 seeking to, to find out specifics of the questions
12 such as the on-foot thing and the entire area.

13 THE CHAIRMAN: That would be fine to respond
14 to that tomorrow then.

15 MR. LAMBRECHT: Just by way of clarification,
16 is, is Mr. Denstedt putting that the entire NWA will
17 be surveyed over the course of the Project for owls
18 but not plants? Is that essentially it?

19 MR. DENSTEDT:

20 Q. The questions are pretty simple and it's based on
21 Appendix E. Appendix E of EnCana's evidence filed in
22 August said that for Burrowing Owls the entire NWA
23 will be surveyed. Dr. Rowland said no, the area
24 within the well site as well as the areas within the
25 right-of-way will be surveyed for Burrowing Owls and

1 she's worried about that.

2 My proposition was that that's wrong, that's
3 not in accordance with the evidence. That's a very
4 simple question. The same question applies to rare
5 plants. In Appendix E it states quite clearly that
6 the construction area and the pipeline -- and the
7 well site and the pipeline area will be surveyed for
8 rare plants to avoid disturbance. And Dr. Rowland
9 says, no, the entire project area will be surveyed.

10 Again, that's not in accordance with the
11 evidence. I just wanted confirmation that either:
12 (a) she didn't read Appendix E; (b) she read it and
13 didn't understand it; or this is just careless. I
14 don't think there's any other choices. So that can
15 be considered overnight, I suppose, and I'll move on.

16 If we could go to page 33 of the opening
17 presentation and who is responsible for this slide?
18 And it's the top picture.

19 A. What specifically are you asking?

20 Q. I'm asking who's responsible for putting this slide
21 together?

22 A. I can tell you that I physically inserted the four
23 pictures into the slide.

24 Q. Okay, and can you also tell the Panel where these
25 pictures were taken?

1 A. No, I cannot. I can tell you that these pictures came
2 from PFRA, just to demonstrate some of the impacts or
3 sort of effects that you would encounter with fencing
4 and cattle grazing.

5 Q. And I'm advised by EnCana that none of these well
6 sites are theirs. Do you agree with that or you
7 don't know?

8 A. As I said I don't know where those images are taken.
9 I don't know whose wells they are. They are merely to
10 demonstrate a point.

11 Q. Fair enough.

12 A. MR. BRISTOL: Bill Bristol, PFRA. I can
13 confirm that, that none of those photos have been
14 taken on the National Wildlife Area.

15 Q. Pardon. I didn't catch your name, sir?

16 A. Bill Bristol.

17 Q. So you can confirm that none of those are in the NWA?

18 A. Correct.

19 Q. Page 34 of the opening presentation -- and it's the --
20 that's the correct picture, thanks. Now, I take it
21 this pictogram is to depict what it would look like
22 with indirect habitat loss added into the buffers.
23 Is that correct, or as buffers?

24 A. MR. SMITH: Brent Smith. I can speak to
25 that. Yes.

1 Q. And can you clarify for me what buffer has been added
2 here?

3 A. Certainly. 150 metres.

4 Q. Great. And is it fair to say that those -- this
5 pictogram is based on a couple of assumptions and I
6 think we'd agree that the Government of Canada's view
7 and EnCana's view are not aligned here, but the two
8 assumptions are: (1) that there is habitat loss
9 based on on fragmentation; and it's based on some
10 other reports that the Government of Canada has
11 filed. Is that fair?

12 A. Yes.

13 Q. So, Dr. Rowland, let me come back to you in respect of
14 your opening remarks and we'll take you to page 2229
15 and perhaps you should turn that up before we start.

16 A. MR. JENSEN: Olaf Jensen speaking.
17 Mr. Denstedt, I, I assume you will also be talking
18 about this in some detail with Environment Canada's
19 submission as we also discussed in detail effective
20 habitat loss.

21 Q. Are you volunteering to be a witness, sir?

22 A. Well, certainly I -- of course, as being part of the
23 Government of Canada we, we have worked together with
24 respect to addressing issues and I should point out as
25 well that EnCana did supply a very valuable paper with

1 respect to indirect habitat loss through the Canadian
2 Association of Petroleum Producers or CAP, which was
3 Mr. Linnen's work which was discussed in
4 cross-examination a week or so ago and, and I'd be
5 happy to discuss that at some point.

6 Q. And I was just getting to that, Mr. Jensen, but let me
7 go back to Dr. Rowland's opening remarks on page 2229
8 and indeed you are speaking about Corey Linnen's work
9 at that page, I believe. Is that correct,
10 Dr. Rowland?

11 A. DR. ROWLAND: That is correct.

12 Q. And if someone prepared this part of the opening
13 presentation for you, I can ask that person the
14 questions if it's easier, Dr. Rowland.

15 A. I helped her.

16 Q. Is that you, Mr. Smith?

17 A. MR. SMITH: Yes, it is.

18 Q. All right. So this is -- again we'll talk about
19 Mr. Linnen's work and I believe both of his papers,
20 the 2006 paper and the 2008 paper are both on the
21 record. And the 2006 paper is at 003-040 and the
22 2008 paper is at 003-039. I'm not sure if we have to
23 turn them up, but we might. So if you have them
24 handy that might be useful.

25 And on page 2229, at the top of that page,

1 you talk about the conclusions of the current
2 literature from Petroleum Technology Alliance of
3 Canada and you state:

4 "Indirect habitat loss as a result
5 of minimal disturbance shallow gas
6 development may occur for some bird
7 species."

8 And you say, for the first words of the next
9 line, and I'll get to the second part:

10 "While not statistically
11 significant."

12 And I take it that means that there was no
13 statistical difference between the -- what Mr. Linnen
14 found in respect of shallow gas wells and what was
15 offsite.

16 A. That is my understanding, yes.

17 Q. Right. And the second part of that quote goes on to
18 say:

19 "The author of the two studies
20 within the Mixed-Grass Prairie
21 suggests the effects may be
22 biologically significant."

23 Now, Mr. Smith, I've read both those papers and I
24 can't find that anywhere in those two papers.

25 A. He doesn't say those exact words, but I would suggest

1 that his conclusions -- and I can refer to the
2 conclusions.

3 Q. Yeah, let's do that, sir. Why don't we go to -- you
4 pick the paper and we'll go to it. I've got them
5 both here.

6 A. I forget the exact exhibit numbers but I'll refer to
7 page 20 of the 2008 study.

8 Q. Go ahead, sir. I'm there.

9 A. We found some indication that Chestnut-collared
10 Longspurs, Sprague's Pipits, Baird's Sparrows and
11 Savanna Sparrows may tend to avoid areas adjacent --
12 my apologies to minimal disturbance shallow gas
13 development.

14 Q. And that was the exact piece that I highlighted and
15 so, just so the Panel is clear, when Dr. Rowland said
16 that, that Mr. Linnen suggests that the effects may
17 be biologically significant, it's related to that
18 passage; is that correct?

19 A. As I understand it, yes.

20 Q. Okay, thank you.

21 A. MR. JENSEN: Mr. Jensen here again. If I
22 might, Mr. Denstedt is of course aware that
23 Environment Canada conducted a re-analysis of the data
24 in the 2006 Linnen paper. EnCana of course presented
25 a contrary view in their reply to Intervener

1 submissions, but when Environment Canada conducted the
2 re-analysis of the data in these papers, not only was
3 it implied to be biologically significant but the
4 results indicated that it was statistically
5 significant. So the effects of shallow gas infill
6 drilling in a similar area in Saskatchewan had a
7 significant effect on the frequency of occurrence and
8 abundance of grassland birds.

9 Q. And when the Government of Canada says in its Opening
10 Statement that Mr. Linnen suggested that the effects
11 might be biologically significant, you didn't mean
12 that they took Mr. Linnen's work, re-analyzed it,
13 came up with the answer they wanted, and then put
14 those words in Mr. Linnen's mouth. That's not what
15 you're suggesting, is it, Mr. Jensen?

16 A. Interesting argument. But, no, not at all. We, we
17 also discussed this work with Mr. Linnen and he
18 suggested this was a correct analysis. It was unclear
19 why Mr. Linnen pursued his particular form of
20 statistical analysis, but it was a valid way to
21 approach the data and yielded some interesting
22 conclusions.

23 Q. And we'll explore that tomorrow, Mr. Jensen, but you
24 would agree with me that Mr. Linnen's work in 2006,
25 he, he admitted in his work that the assumptions of

1 normality and homogeneous variances were tested by
2 examination of normal probability plots and relative
3 abundance data that did not meet the normality and
4 homogeneous. That's what he says. Those are his
5 words. You would agree with that, Mr. Jensen?

6 A. Yes, as to -- I would like to also make reference back
7 to EnCana's words that the waters might be getting
8 deep here and there is some interest also, contrary
9 statistical evidence, that I would be happy to
10 discuss. I would need to pull up the papers here and
11 discuss that in detail if that's of interest to the
12 Panel. Those are, those are Mr. Linnen's words, that
13 is correct, but there is some, also, further
14 information that is useful to explore.

15 Q. And I'll be coming back into that in detail tomorrow,
16 Mr. Jensen, so we can all bone up on it tonight.

17 So, Mr. Smith, I think this is for you again.
18 Where did you arrive at the 150-metre avoidance area?

19 A. MR. SMITH: As I understood it, he
20 assessed three distance factors, and I don't remember
21 the numbers offhand. I believe it was 50 metres,
22 100 metres and 150 metres. So the map here was a
23 conceptual demonstration of what indirect habitat loss
24 would occur at a distance of 150 metres.

25 Q. So this is still based on Mr. Linnen's work?

1 A. I think it's a representation of it, yes.

2 Q. And is that based on Environment Canada's re-analysis
3 of Mr. Linnen's work or is it Mr. Linnen's work?

4 A. It's simply conceptual, sir.

5 Q. Okay. That's helpful.

6 I think I have -- I think it's more of a
7 curiosity question than anything and it's on page 37
8 of the, of the opening presentation. Yes, that's the
9 picture.

10 And my curiosity was this, in respect of
11 Military training -- and this goes, I guess, to you,
12 Mr. Norton, how does Environment Canada ensure
13 endangered species are protected from military
14 training?

15 A. MR. NORTON: That's actually going to be
16 Mr. Ingstrup's territory.

17 Q. Great.

18 A. MR. INGSTRUP: And I'll, I'll give a
19 response and then I would certainly offer DND to, to
20 offer up some, some information as well. It's my
21 understanding that when species at risk are found in
22 the Military Training Area or in the National Wildlife
23 Area that they identify that and they avoid that area
24 for military training, so I think avoidance is a key
25 mitigating factor and that's acceptable to Environment

1 Canada.

2 Q. And, and how does that occur practically when
3 formation level training and battle group training is
4 going on, sir?

5 A. Well, given that I've never been in battle I would
6 really have to defer to the DND people.

7 Q. Sure how does that ensure -- or is that something for
8 Colonel Bruce?

9 A. COL LAMARRE: No, we have folks that can
10 answer those questions on how we address military
11 training and the impact on the Military environment.

12 Q. So the specific question is during formation level
13 training and battle group training, how do you ensure
14 that you don't have any impact on any endangered
15 species or encroach on any of their setbacks?

16 A. MS. BOYD: Thank you. I think just to
17 provide again some context for answering this
18 question, it's important to understand some of the
19 differences between what he's referring to as
20 formation level training -- I'll take it to mean
21 basically Military exercises within the Military
22 Training Area which might involve, for instance, tanks
23 and track vehicles such as what you see in this photo,
24 moving in various directions across the landscape and
25 there can be upwards of hundreds to thousands of

1 individuals and hundreds of vehicles out there moving
2 around in many different directions. That's a, a
3 basic premise.

4 Now, that type of activity on the landscape
5 has been evaluated through two major environmental
6 assessments on the Base in order to ascertain the type
7 of impact that it does have on the Base and on the
8 sustainability of the range and it was determined to,
9 to be, to be sustainable.

10 However, when it comes to individual species
11 at risk that might be out on the range, we certainly
12 don't know where they all are partly because animals
13 move and they vary from year to year but also because
14 it's such a large landscape it would be practically
15 impossible for us to be able to know exactly where
16 they all are and still be able to use the land.

17 The major difference is, is that the
18 transitory movement and somewhat erratic movement of
19 the Military vehicles out there has a tendency to not
20 be in the same place at the same time all of the time
21 and -- so we're dispersing our risk, first of all,
22 that's one of the things.

23 Secondly, avoidance, as was, was mentioned,
24 is still very much key in doing any of our
25 considerations for permanent infrastructure or even

1 semi-permanent infrastructure, such as if we were to
2 build a training village, a temporary training village
3 out on the range there would be species at risk
4 surveys done in advance of that as well as
5 environmental assessments, as necessary, to ensure
6 that those pieces of infrastructure are not being
7 placed where they could be harming species at risk or,
8 for instance, Wetlands so we maintain all of those
9 setbacks.

10 However, during training itself, we rely on
11 managing the risk of erratic movements and the
12 relatively low impact nature of Military training to
13 manage species at risk on the larger landscape.

14 Q. I guess I'm not sure I understand. So when these
15 thousands of troops are training, and I think you
16 said hundreds of tanks and vehicles, how do you make
17 sure you don't harass, destroy or harm an endangered
18 species? Tiny Cryptanthe can't get up and move,
19 right? Burrowing Owls are in their nests. How do
20 you make sure none of those species are harmed or
21 harassed?

22 A. COL LAMARRE: Mr. Chairman, we've got to,
23 of course, come back to the point that we don't do
24 large, battle-group-sized manoeuvres in the NWA. We
25 simply don't. It's only used as a template for live

1 fire as a safety template and we do overflights on it,
2 too, so I'm not really sure if that applies to species
3 at risk within the NWA at all.

4 Q. Well, Mr. Chairman, species at risk, I'm guessing,
5 can't tell whether they're in the NWA or the MTA and
6 it's a valid question to understand how we're
7 protecting this species everywhere. Isn't that
8 correct, Mr. Ingstrup? I'm sure the legislation is
9 to protect the species, not according to a line on a
10 map.

11 A. MR. INGSTRUP: Correct. The purpose of the
12 Act is to protect and recover species at risk.

13 Q. Okay. So I'll, I'll follow up tomorrow, Colonel
14 Lamarre. I may have some further questions for you.
15 Mr. Henderson, or Dr. Henderson, I'll come
16 back to this tomorrow but I'll, I'll give you the
17 reference that I couldn't find earlier. It's Alberta
18 Environment's Guidance dated September, 2003,
19 RNR/03-5. Pardon me. I may have some questions
20 tomorrow, but that's, that's the reference you're
21 looking for tonight.

22 THE CHAIRMAN: Could you repeat the last
23 one, the RNR?

24 MR. DENSTEDT: Yes, it's RNR/03-5 and it's,
25 "Problem Introduced Forages on Prairie and Parkland

1 Reclamation Sites" is the title.

2 Q. Mr. Norton, I think I'm moving on to you. Give me one
3 moment, please. Okay. So my, my first question is
4 -- I'll try and start with something general to get
5 the ball rolling. Environment Canada is the, is the
6 keeper of the *Canadian Environmental Assessment Act*.
7 You're responsible for that piece of legislation?

8 A. MR. NORTON: No, that's not correct. The
9 administrative responsibility for the Act is the
10 Canadian Environmental Assessment Agency, but we do
11 report to the same Minister.

12 Q. Okay. So it's two, two branches underneath the
13 Minister of the Environment?

14 A. That's correct.

15 Q. Okay. And am I correct in the understanding that the
16 test under the *Canadian Environmental Assessment Act*
17 is whether the Project, this Project in particular,
18 is likely to cause any significant adverse
19 environmental effects? Is that the test under CEAA?

20 A. Yes, noting that that test is applied after
21 consideration of any mitigation measures that are
22 considered appropriate. But, yes.

23 Q. You're reading my mind, Mr. Norton.

24 A. Sorry.

25 Q. No, that's good. It keeps things moving. Sorry, if

1 you could turn up page 4 of the Environment Canada
2 presentation, the bottom slide, please. Wrong way, I
3 think. That's it. Okay. And it's the top
4 right-hand box of the -- of this slide which says:

5 "There are no cumulative effects
6 since there are no residual
7 effects."

8 And is it Environment Canada's position that in
9 respect of this particular project, if there's no
10 effect from the Project, there's still a requirement
11 to consider the cumulative effects?

12 A. I'm sorry, Mr. Denstedt. I -- because the -- I think
13 the wording in your question is quite critical, I
14 would ask you to repeat it to get it right.

15 Q. I thought the exact same thing after I said it. And
16 let's focus on one specific area. Let's just pick
17 one and make the assumption that I'm correct. If,
18 for example, in groundwater it was determined that
19 the Project had no effect on groundwater, is it can
20 -- Environment Canada's position that nonetheless
21 EnCana would be required to go on and do a -- have to
22 do a cumulative effects assessment in respect of
23 groundwater? And, and I agree that you may not agree
24 with my, my assumption, but ...

25 A. No, that, that wouldn't be our position. As

1 Mr. Denstedt has already alluded to, of course, the,
2 the, the determination as to whether or not a
3 cumulative effects assessment in fact is required
4 first requires that there's agreement in terms of the
5 assessment of the level of effects at the project
6 scale. And if in fact that agreement is there and
7 that we were to concur that there were no effects at
8 the project scale then we would agree that a
9 cumulative effects assessment on that particular
10 factor would not be required.

11 Q. Thanks. If we could flip to page 7 of the Environment
12 Canada submission, and it's the -- my page 7 has
13 Ord's Kangaroo Rat on it. That's it. And
14 Mr. Jensen, you may have actually addressed this in
15 your comments to Ms. Klimek, but I'll be honest, I
16 was trying to do two things at once so I may have
17 missed part of it.

18 When I look at the map of this preliminarily,
19 preliminarily assessed critical habitat, it seems to
20 me that you've identified roads and road sides as
21 potential critical habitat for the Ord's Kangaroo
22 Rat; am I right?

23 A. MR. JENSEN: The short answer is correct.
24 I'm sure the Panel doesn't want to hear my lengthy
25 explanation again, so I'll leave it at that.

1 Q. Okay, and it's open to debate whether in fact those
2 are critical habitat or not. I think that was the
3 gist of your comment?

4 A. It, it's the subject of some debate, that's correct,
5 though the evidence leads one to believe that they,
6 they will not form part of critical habitat. Keep in
7 mind this is preliminarily assessed critical habitat.
8 It's output from a model and those -- the final
9 version of critical habitat is likely to change.

10 Q. So when I flip over to page 8 on your recommendation
11 that:

12 "No additional industrial activity
13 should be permitted at any time of
14 year in areas preliminarily
15 assessed as critical habitat."

16 Is it Environment Canada's position that there
17 should be no more traffic on those roads?

18 A. At, at this point one of the components of critical
19 habitat is the definition of what constitutes the
20 destruction of critical habitat. At this point,
21 Environment Canada has developed a map of what
22 constitutes preliminary assessed critical habitat but
23 the definitions as to the destruction of critical
24 habitat have not been finalized.

25 I'm not sure if that completely answers the

1 question, but there's no definitive answer as to what
2 would be restricted in those preliminary areas at this
3 point, would be my understanding.

4 Q. Okay. One, one final question on the -- if you can go
5 back to the picture of the Ord's Kangaroo Rat. We
6 don't have to -- I suspect we don't have to, but...
7 The, the map that is on this slide, when I compared
8 that to the map at, I believe it's at page 161 of the
9 Government of Canada's submissions, or maybe 160,
10 the, the two maps looked significantly different and
11 just more out of curiosity, what's the reason for
12 that?

13 A. Perhaps I can -- sorry, Mr. Jensen here again. I can
14 begin with that answer and then I'll defer to
15 Dr. Henderson and perhaps Dr. Duncan. The map
16 provided in Environment Canada's submission reflects
17 critical habitat identified at the quarter section
18 scale, that there is a debate in terms of how critical
19 habitat should be identified and this does not change
20 the fact that where restrictions on activities in
21 critical habitat will be identified will be different
22 than where they're identified on a map necessarily.
23 This is an unclear answer at this moment. I'll turn
24 it over to Dr. Henderson and Dr. Duncan perhaps to
25 answer it in more detail.

1 A. DR. HENDERSON: Sure. Mr. Denstedt, there
2 would also be a lack of correspondence between the map
3 you see in this presentation for plant species at
4 risk, preliminary critical habitat --

5 Q. I noticed that too.

6 A. -- and what was in the original Government of Canada
7 submission. And as Mr. Jensen has already pointed
8 out, we began with a model for how to identify
9 critical habitat that we're -- would -- going to use
10 the existing land survey system as a means to identify
11 the critical habitat in a way that would be
12 administratively simple. But following consultations
13 that we've had, including consultations with the PFRA,
14 with DND, with EnCana, members of CAP as well as
15 consultations internally with other biologists in
16 Environment Canada, we've taken a step away from that,
17 that concept or that idea in favour of other buffers
18 or other ways to delineate the boundaries of that
19 critical habitat.

20 So what you see in the map for the -- this is
21 on page 7 of the Government of Canada's presentation,
22 where there's preliminarily assessed critical habitat
23 for three plant species. I don't know if you want to
24 bring it up -- I'll try to talk slow, too. Yeah, just
25 right there. What this represents are locations of

1 plants surrounded by 300-metre buffers and in total,
2 for the National Wildlife Area, this covers
3 19.6 square kilometres or just slightly less than
4 5 percent of the NWA, possibly an insignificant area
5 of the NWA.

6 And that is different from what we had
7 originally proposed which was occurrences surrounded
8 by the existing quarter sections. So -- and that was
9 a slightly larger area actually by using quarter
10 sections. And we can go into the biological rationale
11 as to why we've changed that proposal, but as I, as I
12 stated, it's a result of the ongoing consultation
13 process and it reflects how we have modified things in
14 response to our consultations with, with those
15 stakeholders.

16 Q. And your ongoing consultation, in respect of EnCana at
17 least, is two meetings, one in May and one in June;
18 correct?

19 A. Correct. That's what's happened so far.

20 Q. So if you could turn the page over to page 8 of the
21 opening presentation and we'll deal with Sprague's
22 Pipit, and I could have easily have done this on
23 Ord's Kangaroo Rat but it was more obvious here.

24 Why, why does preliminarily assessed critical
25 habitat stop at the Double Wide Scrape at the edge of

1 the NWA? Doesn't -- does the Pipit not go across the
2 line?

3 A. MS. DALE: Brenda Dale. The reason is
4 that the critical habitat model was based on five
5 years of data and confirmed with a further two years
6 of data and that kind of information was not available
7 outside the National Wildlife Area to -- across the
8 Double Wide Scrape.

9 Q. So, so is it likely that Sprague's Pipit is smart
10 enough to stay in the NWA? He just goes back and
11 forth, doesn't he?

12 A. I, I have not spent a great deal of time in the MTA.
13 Part of the, part of the area that I have been in the
14 MTA I did not hear any Sprague's Pipits. Other places
15 I have heard them. That's about all I can tell you.
16 I've just been there a couple of times.

17 Q. Fair, fair enough, Ms. Dale.

18 A. MR. INGSTRUP: If I could answer that. I
19 would just add that there will be a requirement to
20 identify critical habitat eventually across the entire
21 range of the Sprague's Pipit, and other species as
22 well. And certainly the -- we're -- the way we're
23 going about that is where we do have information that
24 justifies identifying critical habitat, we will
25 identify incrementally across the range as

1 information, you know, is available to us. So that's
2 certainly, you know, an approach we've taken.

3 A. MR. DUNCAN: If I might -- Dave Duncan, if
4 I might just add a bit. We were really trying to
5 assist the Panel in its job and so we moved ahead for
6 identification of critical habitat for two of the
7 species of Kangaroo Rat and Sprague's Pipits,
8 specifically in the NWA. We also happen to have very,
9 very good data sets that didn't exist in other places.

10 As Mr. Ingstrup mentioned, we'll be moving on
11 with the Sprague's Pipit and we anticipate a year from
12 this December having a lot of other Sprague's Pipit
13 critical habitat identified in southern Saskatchewan
14 and likely other places in southern Alberta.

15 Q. And I think you would agree with me -- I think you may
16 have said "critical habitat" but this is
17 "preliminarily assessed critical habitat"; correct?

18 A. Yes, that's correct.

19 Q. All right. To what extent has the PFRA been consulted
20 in respect of the preliminarily assessed critical
21 habitat? In particular, I think page 13 brings it
22 into focus on the constraints mapping slide. To what
23 extent have they been consulted on the identification
24 of preliminarily assessed habitat?

25 A. Dave Duncan here. I'll, I'll take a shot at that. It

1 varies depending on the species. As I said, we're in
2 different stages of progressing in writing recovery
3 strategies for various species and different stages at
4 which we preliminarily assessed critical habitat. So
5 that the most progressed is the three-plant species
6 for which we've engaged EnCana with consultation and
7 for which we've also engaged PFRA. In fact, they sit
8 on the Prairie Plant Recovery Team, which has been a
9 mechanism we've used to cooperatively develop these
10 recovery strategies. As well, I presented to a number
11 of management staff at PFRA a couple of months ago to
12 consult further with them and in fact that, that
13 process has got one more step that we employ before
14 that's finished. We have not consulted with PFRA on
15 the Kangaroo Rat or the Sprague's Pipit to any degree.

16 A. MR. BRISTOL: If I could just add --

17 THE CHAIRMAN: Please identify yourself.

18 A. MR. BRISTOL: Sorry, Bill Bristol. Sorry.

19 If I could just add, PFRA has been a part of the
20 Sprague's Pipit recovery team for a number of years
21 and, as Dave said we have, we have been consulted, you
22 know, on the, on the what is potentially going to be
23 identified as critical habitat as well.

24 MR. DENSTEDT:

25 Q. And it's Dr. Duncan, sorry. Dr. Duncan, I think you

1 said earlier in response to a question by Ms. Klimek
2 that you are now in the process of consulting with
3 the Siksika. Did, did that arise as a result of
4 EnCana alerting you to their interest?

5 A. MR. DUNCAN: Yes, it did. At the very
6 first meeting we had with EnCana they said, oh, by the
7 way, you should be consulting with Siksika. Oh,
8 that's right, they had expressed an interest because
9 of this Panel. So we have now engaged -- started to
10 engage the Siksika First Nation, yeah.

11 Q. Okay. I think I will move on to -- most of my
12 questions for Environment Canada will be tomorrow, so
13 thanks for, for those initial thoughts. I would like
14 to move on to NRCan's portion of the opening
15 presentation. Is that you, Ms. Coulson?

16 A. MS. COULSON: Yes.

17 Q. And I think this will be reasonably light lifting for
18 you. The first question I have is on -- it looks
19 like slide -- page 24 of the presentation by NRCan.

20 A. Are you referring to slide 24?

21 Q. No, it's on page 24 of the presentation and it's the
22 -- I can't detect which slide it is. It's the top
23 slide on that page, though. "NRCan's View of
24 Groundwater Quantity Assessment (Cont)" is the page.
25 That looks like it right there actually. "NRCan's

1 Review of Groundwater Quantity Assessment (Cont)".
2 "Quantity". Sorry, "Quantity", sorry, not "Quality".
3 It has a funny ring to it. There we go, great.

4 The questions might be shorter than the time
5 it took to do that. At the bottom of that slide you
6 have an indication of EnCana's groundwater use at
7 130,000 cubic metres per year. Again, that, that's
8 not correct. That's the total water usage of EnCana,
9 are you aware of that?

10 A. I will refer to Dr. Nastev that presented this.

11 Q. Sure.

12 A. DR. NASTEV: No, sorry, this number is
13 correct.

14 Q. Okay. So where is the reference for that number as
15 the use of groundwater?

16 A. Page 226 of EnCana EIS report. I think it's written
17 on the, on the slide.

18 Q. Were you here for Mr. Fudge's testimony on October 8th
19 where he indicated that groundwater usage as opposed
20 to total water usage was 35,000 cubic metres per
21 year?

22 A. No, sir. I'm referring to -- sorry, can I get some
23 water? I'm referring to page 226 of EnCana EIS
24 report.

25 Q. Perhaps we'll bring that up.

1 A. I can read the -- I can read the quotation, if you
2 want.

3 Q. Right. And I understand what's at 226, but Mr. Fudge
4 corrected that on the record on October 8th in the
5 transcript. Were you aware of that? And, and I --
6 there's been a lot of, lot of information on the
7 transcripts.

8 A. I believe I read the comments from that.

9 Q. So it's October 8th, page 652, line 23, from the
10 transcript, where Mr. Fudge provided the information
11 that updated this to 35,000 cubic metres. I'm not
12 sure that it matters. You can consider it overnight
13 if you would like to, sir, if we're having a debate
14 of what was said.

15 A. Which page?

16 Q. It, it's page 652 of the transcript, line 23, but it's
17 -- also can be found just on page 226 of EIS when the
18 residual effects rating -- and it's the third
19 paragraph where it says, "EnCana" -- and if you can
20 if you could zoom in on that:

21 "EnCana is proposing that
22 approximately 35,125 cubic metres
23 per annum will be sourced from the
24 Dugway Well, Big Bob Well and other
25 dugouts."

1 And it goes on to say:

2 "... won't require any new
3 construction."

4 That's the reference to groundwater usage in the
5 EIS. 130,000 cubic metres is a -- is total water
6 usage.

7 A. Can you raise that? Can you go up? Stop. It is well
8 written here, 229, 187 --

9 THE CHAIRMAN: One second. Did you hear
10 that, Dr. Nastev?

11 A. Yes.

12 THE CHAIRMAN: I think, I think we're
13 getting a bit of an echo and it's difficult for the
14 Court reporter to hear. Please proceed.

15 A. DR. NASTEV: Mr. Chair, I used this number
16 which is in the middle under section, "Mitigation",
17 for my budget estimation. I would like if EnCana had
18 included budget estimation in their EIS study, but
19 this information was missing. So I made the budget
20 estimation based on this number which clearly stated
21 that it is groundwater.

22 MR. DENSTEDT:

23 Q. Right. And I understand that, sir. I mean, I'm just
24 pointing out that the, the number of where the
25 sources were was actually 35,000 and Mr. Fudge

1 confirmed that on October 8th, but you didn't update
2 your opening presentation and I'm just suggesting you
3 may not have been there that day. That's all.

4 A. My review was based on this report and on, on LandWise
5 2008 report.

6 Q. Okay, so -- and you didn't update your numbers based
7 on Mr. Fudge's testimony; correct?

8 A. Well, the PowerPoint presentation was prepared one
9 month ago.

10 Q. The entire presentation?

11 A. Most of my, my part.

12 Q. And if that number is incorrect, then your assessment
13 below will also have that error?

14 A. Well, I cannot agree entirely with this. What is
15 important to know, and what is not stated in the EIS
16 EnCana study, is that there is some other groundwater
17 use in the study area in the CFB Suffield. Actually,
18 the total water use amounts to some 450,000 cubic
19 metres per day -- sorry, per year.

20 So another estimation or budget estimation
21 have to be done then extracting the -- what was the
22 area EnCana report to see whether the groundwater on
23 the CFB Suffield is sustained or not sustained.

24 Q. So, Doctor, on your slide here you say, "The NWA
25 surface is 460 square kilometres" and you estimate an

1 annual recharge of 46,000 -- 460,000 cubic metres.

2 Is that fair?

3 A. Could you repeat the question, please?

4 Q. I'm just repeating what's on your document, sir, that
5 you estimated the recharge -- the groundwater
6 recharge based on the NWA surface of 460 square
7 kilometres; is that correct?

8 A. The groundwater recharge which is presented on this
9 slide is based on the estimated recharge rate which I
10 found in the EnCana's report which is varying from
11 zero to one millimetre, or two per square kilometre
12 per year. I said from zero because there are certain
13 years which no recharge occurs at all.

14 These numbers here, where I put just for, in
15 perspective in the, in the response for the EnCana
16 statement, that the, that it is small amount of
17 groundwater, not with the aim to make a precise budget
18 of the CFB Suffield.

19 Q. Okay. Well, Doctor, that wasn't my question. The
20 question was quite simple. On this slide it says you
21 estimated the annual recharge based on the NWA
22 surface of 460 square kilometres. Is that correct?

23 A. Yes, it is correct for the National Wildlife Area.

24 Q. Okay. So could we pull up Exhibit 002-015, page 2-17?
25 I have page 2-17. I think that was it.

1 Okay, Doctor, this is the map. Figure 2.3 is
2 the map of the groundwater flow and the indication is
3 that the groundwater is recharged from a much larger
4 area than the entire Base which was 2,690 square
5 kilometres and this map indicates that recharge to
6 the groundwater is over a significantly larger area
7 than that. And I'm wondering how you arrived at your
8 calculation using the NWA surface area as the
9 recharge area.

10 A. Mr. Chair, actually this map is not a correct map. It
11 includes measures in water wells which go in bedrock
12 in the buried valley and in the surficial sediments.
13 One cannot mix all these measures in one single map.
14 Actually, three piezometric and the water flow
15 direction map should -- should need it -- will be
16 needed. In answer to question, to the question, the
17 recharge rate that was presented on the previous slide
18 is the recharge that probably occurs, the average
19 recharge in the National Wildlife Area. I stated in
20 my presentation that for each groundwater well the
21 capturing area has to be delineated and the capturing
22 area represents the actual recharge rate for a given
23 well. So this map doesn't tell me anything about a
24 given well.

25 Q. Just a moment, Mr. Chairman.

1 If you could turn up the, the LandWise final
2 report which was filed as part of the DND
3 submissions, I believe it's 003A-032 -- 31, I think.
4 003A-031. Is that correct?

5 Page 26. Doctor, did you look at this map in
6 preparing your groundwater assessment?

7 A. Yes, sir.

8 Q. And is it still your view that the groundwater
9 recharge area is restricted to the surface area of
10 the NWA? Is that your evidence?

11 A. Mr. Chair, I never said that the recharge area was
12 restricted to the National Wildlife Area.

13 Concerning --

14 Q. Well, let's go -- before we go on let's go back to
15 your slide then so I understand exactly what your
16 evidence is because on your slide you indicate the
17 NWA surface at 460 square kilometres. In your simple
18 groundwater budget you estimate an annual estimated
19 recharge on that basis. So am I understanding that?
20 There's something different that I'm not aware of
21 here?

22 A. Mr. Chair, this slide is prepared to present you a
23 perspective on the numbers. Where we are with the
24 groundwater budget. The groundwater budget has not
25 been presented in the EnCana assessment studies. What

1 is -- say an example, maybe this is not a good
2 example. \$100 for, for me can be nothing, for you can
3 be a lot of money. EnCana uses the -- a small amount
4 of water, 430,000 cubic metres.

5 Just to give you idea -- to give you an idea
6 how much water it is, if we divided this by 365 days
7 per year, it amounts to 400 cubic metres per day.
8 EnCana plans to use this water only during the period
9 of six months. It means extraction rate is 800 cubic
10 metres per day. 800 cubic metres equals approximately
11 to this space where we are now, which is comparable to
12 a small municipal swimming pool. This is the amount
13 of water EnCana needs and these numbers are there only
14 to give you an idea where we are. I could well have
15 taken the area of the whole Military Base. In the
16 EnCana report assessment study we had that before.
17 Can we go to the page 226, please?

18 THE CHAIRMAN: It's page 226 of the EnCana
19 Environmental Impact Statement, I believe.

20 A. DR. NASTEV: Yes. (Indiscernible.)

21 THE CHAIRMAN: This is Volume 4 as well,
22 just to clarify.

23 A. DR. NASTEV: 226. This seems to be the
24 crucial page. Okay. You're there? Third paragraph
25 from below. Yeah. The effects of the proposed

1 Project groundwater withdrawals, so we still talk
2 about groundwater, can be compared to other typical
3 groundwater use in other areas of Cypress County if
4 the entire 35,125 cubic metres per year is removed
5 from EnCana's two wells in the LSA and is divided by
6 the area of LSA.

7 So in their report EnCana uses the area of
8 LSA. In my slide for comparison I use the area of
9 National Wildlife Area. So I don't see any problem.
10 I never said that the recharge, of course, only in the
11 National Wildlife Area.

12 Q. Okay, so I think, I think I understand, Doctor. You
13 simply took the example that EnCana used and you just
14 put that in your -- into your slide and used that as
15 an illustration. Is that fair?

16 A. The slide I prepared is there to compare the water
17 EnCana uses with the annual recharge rate with -- and
18 to, to not to prove but to indicate that the recharge
19 annual renewable rate in the aquifers might not be
20 sufficient to sustain the water use. And I will
21 repeat again, at the military Base the actual
22 groundwater use is 450,000 cubic metres per year which
23 is stated in the LandWise 2008 report but it's not
24 stated in the EnCana assessment study.

25 Q. So, Doctor, again, I'm just trying to find out a

1 pretty simple answer here, that's all, and it's --
2 and maybe I'm not making myself understood. It seems
3 to me, if I can understand what you've said, EnCana
4 used an example where they divided up the area of the
5 LSA into the water amount used and come up with a
6 rate. You simply took that example and used that in
7 your simple groundwater budget. Is that correct?

8 A. Yes.

9 MR. DENSTEDT: Thanks. Mr. Chairman, we're
10 at a pretty logical break for me in the
11 cross-examination. I, I could press on if you want me
12 to, though.

13 THE CHAIRMAN: This may be a good time to
14 stop, Mr. Denstedt, if this is a good break point for
15 you as well.

16 MR. DENSTEDT: Yes, thank you.

17 THE CHAIRMAN: In that case, let me indicate
18 our, our plans for tomorrow. We will reconvene at
19 8:30 and we will continue through until about 5:30.
20 We will have some dinner brought in for all of the
21 participants here, and ourselves of course, and we
22 will take a break of about 45 minutes, return and have
23 a SEAC Panel at that point.

24 So we, we may have to arbitrarily break the
25 discussion at 5:30 in order to hear from SEAC. We

1 understand that they may not be available later on in
2 the week.

3 So the plan then would be to have a session
4 beginning at about 5:00 -- or about, let's see, 6:15
5 -- if we break for 15 -- 45 minutes, about 6:15 and we
6 will continue through tomorrow evening with the SEAC
7 Panel and cross-examination. That's the plan for
8 tomorrow.

9 MR. DENSTEDT: Thank you, Mr. Chairman.

10 THE CHAIRMAN: So given that we'll have a
11 long evening tomorrow possibly, it's perhaps
12 appropriate to break at an earlier time this evening.
13 Thank you very much for your attendance and your
14 contribution to our proceedings today.

15 (PROCEEDINGS ADJOURNED AT 5:00 P.M.)

16 (PROCEEDINGS TO RECONVENE AT 8:30 A.M. ON WEDNESDAY,
17 OCTOBER 22, 2008)

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REPORTER'S CERTIFICATION

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2
3 I, Tambi Balchen, CRR, CSR No. 9166, Official
4 Realtime Reporter in the Provinces of British Columbia
5 and Alberta, Canada, do hereby certify:
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7 That the proceedings were taken down by me in
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13 IN WITNESS WHEREOF, I have hereunto subscribed my
14 name this 22nd day of October, 2008.
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