

IN THE MATTER OF AN ARBITRATION UNDER CHAPTER ELEVEN OF THE
NORTH AMERICAN FREE TRADE AGREEMENT AND THE ICSID
CONVENTION

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In the Matter of Arbitration :

Between: :

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MOBIL INVESTMENTS CANADA, INC., :

: ICSID Case No.

 Claimant, : ARB/15/6

:

 and :

:

GOVERNMENT OF CANADA, :

:

 Respondent. :

:

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HEARING ON JURISDICTION, MERITS AND QUANTUM

Tuesday, July 25, 2017

The World Bank
1818 H Street, N.W.
Conference Room 4-800
Washington, D.C.

The hearing in the above-entitled matter
came on at 9:30 a.m. before:

PROF. CHRISTOPHER GREENWOOD, Q.C., President

DR. GAVAN GRIFFITH, Co-Arbitrator

MR. J. WILLIAM ROWLEY, Q.C., Co-Arbitrator

ALSO PRESENT:

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Secretary to the Tribunal

MR. ALEX KAPLAN
Legal Counsel

Court Reporter:

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1 PROCEEDINGS

2 PRESIDENT GREENWOOD: Right, ladies and
3 gentlemen. Apologies for the late start.

4 I think we will break for lunch at the time
5 we originally suggested depending on how the
6 cross-examination is going, but we will run an extra
7 15 minutes this afternoon.

8 Right. So, Mr. Phelan, I think it's you,
9 next.

10 PAUL PHELAN, CLAIMANT'S WITNESS, CALLED

11 MR. NICHOLS: With the permission of the
12 Tribunal, may we place on Mr. Phelan's table his
13 Witness Statements and the Rejoinder Report of
14 Richard Walck?

15 PRESIDENT GREENWOOD: Yes, I think there's no
16 problem about that. Please do.

17 Mr. Phelan, good morning.

18 Would you please make the Declaration on the
19 laminated sheet in front of you.

20 THE WITNESS: I solemnly declare upon my
21 honor and conscience that I shall speak the truth,
22 the whole truth, and nothing but the truth.

1 PRESIDENT GREENWOOD: Thank you very much.

2 Mr. O'Gorman, which of your team is going to
3 engage in the very brief direct examination?

4 MR. O'GORMAN: Mr. President, thank you. My
5 colleague, Denton Nichols, will examine Mr. Phelan.

6 PRESIDENT GREENWOOD: Thank you.

7 Mr. Nichols.

8 MR. NICHOLS: May I also add that we intend
9 to pose to Mr. Phelan certain questions regarding
10 Richard Walck's Rejoinder Report as permitted in P.O.
11 8?

12 PRESIDENT GREENWOOD: Yes.

13 MR. NICHOLS: Thank you.

14 DIRECT EXAMINATION

15 BY MR. NICHOLS:

16 Q. Good morning.

17 A. Good morning.

18 Q. Can you please introduce yourself and what
19 your relationship is to the Hibernia and Terra Nova
20 Projects.

21 A. Okay. My name is Paul Phelan.

22 Since 1990, other than my current position as

1 Manager of Internal Audit with Syncrude in Fort
2 McMurray, Alberta, and my time in Sarnia, Ontario, as
3 the Imperial Controller between 2004 and 2006, most
4 of my career has been on the East Coast, first of
5 all, with Hibernia Management Development Company
6 Limited, where I moved up from the first position of
7 Budget Reporting up through to Finance Manager.

8 And then, in 2007, I moved back to St. John's
9 after Sarnia, and at that time I was the Operations
10 Accounting Manager responsible for eastern Canada
11 operations for ExxonMobil Canada, which included
12 Hibernia, Terra Nova, Hebron, and Sable.

13 Q. Did you submit written Witness Statements in
14 the last proceeding between Mobil and Canada?

15 A. I did. I submitted five Witness Statements
16 for Mobil I.

17 Q. Did you also testify at the hearings in the
18 last proceeding?

19 A. I did.

20 Q. You submitted two Witness Statements in this
21 proceeding; isn't that correct?

22 A. That is correct.

1 Q. You have your First Witness Statement of
2 March 7, 2016, that was submitted in this proceeding
3 and marked CW-1?

4 A. I have it in front of me.

5 Q. Do you reaffirm the contents of that Witness
6 Statement?

7 A. I do.

8 Q. Do you have any corrections to make to that
9 Witness Statement?

10 A. No.

11 Any corrections I would have noted in Witness
12 Statement No. 2.

13 Q. Do you have your Second Witness Statement of
14 September 22nd, 2016, marked CW-9?

15 A. I do.

16 Q. Do you reaffirm the contents of that Witness
17 Statement?

18 A. I do.

19 And I have one correction and a couple of
20 updates I would like to convey to the Tribunal and to
21 Canada.

22 Q. Let's start with the corrections, sir.

1 Can you please point us to where you wish to
2 make a correction?

3 A. Okay. If you go to Paragraph 81.

4 In Paragraph 81, I talk to the historical
5 trends of the R&D and E&T expenditures; and, upon
6 review of this particular paragraph, I realized that
7 the sentence that says "during the pendency of a
8 Canadian court challenge against the Guidelines
9 between 2004 and 2008, there were no accounting
10 systems in place to track expenditures." I should
11 have said "prior to 2004, there were no accounting
12 systems in place to track expenditures."

13 Prior to 2004, Hibernia spent approximately
14 [REDACTED] on R&D, but we were not tracking what is
15 now the Board's definition of R&D and E&T, so the
16 [REDACTED] was primarily R&D SR&ED-eligible.

17 Terra Nova was the same process. My
18 counterparts at Terra Nova with Suncor also did not
19 have any accounting systems prior to 2004, and so
20 again, I just want to correct this particular
21 paragraph to highlight that beyond 2004 we did track
22 costs to meet the R&D Guidelines.

1 Q. You mentioned a moment ago that you had a
2 couple of updates as well to this Witness Statement.

3 A. Okay. The two updates I would like to talk to
4 is Paragraph 13 in my Second Witness Statement. And
5 what I would like to convey to the Tribunal is that I
6 will be receiving an update from our Treasurer's
7 department relative to the CDOR rates, and for
8 purposes of this Tribunal, provide hopefully later
9 this week an update to June 30th, 2017, of the
10 interest calculations.

11 The second Update that I would like to talk
12 to would be referring to Paragraphs 18, 19, and 20
13 where I talk about the Province's treatment of
14 incremental Research and Development.

15 In Paragraph 18, I had indicated in my Second
16 Witness Statement that the Province had not yet
17 delivered results of any of its royalty audits in the
18 years in which Incremental Expenditures had been
19 filed.

20 What I would like to indicate is in
21 December 2016, ExxonMobil Canada received for the
22 Hibernia Project for the Year 2010 its Notice of

1 Preliminary Redetermination, so that was an
2 indication of what would be allowed and disallowed
3 relative to royalties.

4 The Second Report that we received was in
5 April 2017 this year, and that again, was received by
6 Suncor and ExxonMobil Canada relative to Terra Nova,
7 and that was the 2010 Notice of Reassessment from the
8 Province in Newfoundland and Labrador.

9 Q. Mr. Phelan, I just want to make sure I heard
10 you correctly with respect to the Notice of
11 Preliminary Redetermination at Hibernia. I believe I
12 heard you say 2010 was the year.

13 A. Oh, I'm sorry--yes.

14 Sorry, 2009, I'm sorry. There's a seven-year
15 lag relative to receiving Audit Reports, and so the
16 Report we received was for 2009. We will not receive
17 the 2010 Report until December 2017 this year, if
18 normal practice holds.

19 Q. And just for clarity of the record, when you
20 refer to the 2010 Terra Nova Notice of Reassessment,
21 was that the correct year?

22 A. Yes. It is the 2010 was received in April of

1 2017.

2 PRESIDENT GREENWOOD: Sorry, can I just
3 clarify something.

4 And, in each case, it's a preliminary
5 determination; is that right?

6 THE WITNESS: It is. The Notice of
7 Preliminary Redetermination for Hibernia is just
8 that. Typically, we get a first look at what the
9 audit results are, and then the owners collectively
10 will take a position on whether we agree or disagree
11 with the Province. And that would hold true as well
12 with Terra Nova.

13 PRESIDENT GREENWOOD: Right. Because you
14 used the expression "reassessment for Terra Nova."
15 Is that the same thing as a preliminary
16 determination?

17 THE WITNESS: It is similar.

18 PRESIDENT GREENWOOD: Thank you.

19 BY MR. NICHOLS:

20 Q. Mr. Phelan, let's take each of these one at a
21 time. The 2009 Hibernia Notice of Preliminary
22 Redeterminations. What did that show?

1

A.

[REDACTED]

2

[REDACTED]

3

[REDACTED]

4

[REDACTED]

5

[REDACTED]

6

[REDACTED]

7

[REDACTED]

8

[REDACTED]

9

[REDACTED]

10

[REDACTED]

11

[REDACTED]

12

Q. And with respect to the 2010 Terra Nova Notice

13

of Reassessment, what did that Notice of Reassessment

14

show?

15

A.

[REDACTED]

16

[REDACTED]

17

[REDACTED]

18

[REDACTED]

19

[REDACTED]

20

[REDACTED]

21

[REDACTED]

22

[REDACTED]

1

[REDACTED]

2

[REDACTED]

3

[REDACTED]

4

Q. Mr. Phelan, as a result of the 2010 Terra Nova

5

royalty audit and the 2009 Hibernia Notice of

6

Reassessment, has your view changed on whether

7

Mobil's compensation should be reduced in respect of

8

royalty deductions for incremental R&D and E&T?

9

A. No.

10

And the reason being is that we have at this

11

point in time submitted [REDACTED]

12

[REDACTED]

13

[REDACTED]

14

[REDACTED]

15

[REDACTED]

16

It is also early in the process, so we

17

received a 2009 and a 2010 Report. There are still

18

many open periods and quite a bit of Incremental

19

Expenditures yet to be assessed.

20

Number 2, is those matters are still open;

21

so, technically, there is zero royalty audits

22

finalized for the period in question with Incremental

1 Expenditures.

2 As I mentioned earlier, we do find that the
3 Province in Newfoundland and Labrador do dispute
4 charges--sorry, costs relative to eligibility. We
5 have been dealing with the Province on Newfoundland
6 and Labrador on Hibernia since 1990, and when the
7 Royalty Agreement first came into play.

8 So, based on past history and the information
9 we have, there is no indication that we would do
10 anything different relative to the royalties.

11 The second comment I would like to make is,
12 relative to royalties, the Royalty Agreement is an
13 agreement which we've honored. Under NAFTA I or
14 Mobil I, when we did receive the Award in April 2016,
15 we immediately processed the applicable credits to
16 the Provincial Government in the tune of
17 [REDACTED], which was the refund against the Mobil
18 I receipt that we received in April of 2016. That is
19 consistent, or at least as our interpretation, of
20 being consistent with those agreements, which would
21 require that if we receive a credit against any
22 eligible cost, we are to file those credits back at

1 the time that we receive cash.

2 The other point I would like to make is, in
3 that process we also filed or returned [REDACTED]
4 back to the Federal Government of Canada, associated
5 with the Net Profits Interest, which is a
6 royalty-like agreement that was also executed at the
7 same time as the Hibernia Royalty Agreement. That is
8 an agreement between the Hibernia Proponents and the
9 Federal Government of Canada.

10 And again, as I had indicated in Mobil I,
11 there would be no windfall, that when monies would be
12 received, we would return the appropriate deductions
13 whether it happens to be on the provincial royalties
14 for Hibernia and Terra Nova or the Government of
15 Canada Net Profits Interest of 10 percent, and so
16 that position remains the same.

17 One final comment I would make is, in July of
18 2016, my successor, Rocky Kalischuk, who is currently
19 the Operations Accounting Manager, has informed me
20 that there was a letter from the Government of Canada
21 relative to its audit findings for the Year 2013.
22 That letter was signed by Sam Miller from the

1 Government of Canada with Natural Resources Canada.
2 They send in auditors periodically to each of the
3 Hibernia owners. For the Year 2013, there's
4 approximately [REDACTED] worth of Incremental
5 Expenditures that the Government of Canada have
6 disallowed.

7 The reason I highlight that is that, if you
8 look at the Net Profits Interest and the Incidental
9 Net Profits Interest Agreement and then also look at
10 the Hibernia Royalty Agreement, both of these
11 agreements were crafted and executed back in 1990.
12 The definitions applicable to eligible costs are
13 identical--I shouldn't say "identical." They are
14 similar in both Net Profits Interest as well as the
15 Hibernia Royalty Agreement.

16 And so, it's for that latter reason that my
17 position would not change in terms of the amount of
18 uncertainty that still remains relative to royalty
19 deductions.

20 Q. Mr. Phelan, do you have any other Updates or
21 corrections that you wish to make at this time to
22 your Second Witness Statement?

1 A. No, no further Updates.

2 Q. All right. Mr. Phelan, let's turn now to
3 Mr. Walck's Rejoinder Report, do you have that in
4 front of you, sir? It should be dated December 16th,
5 2016, and marked RE-2.

6 A. I do.

7 Q. Have you read Mr. Walck's Rejoinder Report?

8 A. I have read his Report.

9 Q. Right.

10 I would like to ask you about certain points
11 raised in that Report, sir.

12 Let's turn to Paragraph 30.

13 A. Okay. This is in the Section C, "alternative
14 ways to calculate Mobil's damages"?

15 Q. Yes, sir.

16 And we will drill down a bit more into these
17 paragraphs, but what do you understand Mr. Walck to
18 be conveying in this section of his Report?

19 A. Mr. Walck is indicating that Mobil should have
20 looked at alternate methods for valuation during
21 Mobil I. So, within the paragraphs that follow, he
22 articulates a couple of examples of different

1 valuation methods that he's indicated Mobil did not
2 follow.

3 Q. Okay. Let's take a look individually at each
4 of those.

5 A. Okay. If you look at Paragraph 33, he
6 indicates that a potential valuation methodology
7 would be when ownership interests change. Under
8 Mobil I, we indicated to the Tribunal that there was
9 a change in ownership for ExxonMobil associated with
10 Terra Nova where our working interest moved from
11 22 percent to 19 percent effective December 1st,
12 2010. That is the Terra Nova redetermination. [REDACTED]

13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]

1 [REDACTED]
2 In essence, the Terra Nova redetermination
3 was at a point in time based on the reservoir. It
4 was not a valuation of determining the full life of
5 field cost. [REDACTED]

6 [REDACTED]
7 [REDACTED]
8 [REDACTED] So, in essence, it is not your Valuation
9 Model that you would use in trying to determine the
10 impact of Research and Development Guidelines on a
11 particular asset.

12 Q. Just for clarity, Mr. Phelan, in that Terra
13 Nova redetermination, were any interests purchased or
14 sold?

15 A. No. There was no interests purchased or sold
16 between parties.

17 Q. Now, let's turn to Paragraph 34.

18 What do you understand Mr. Walck to be saying
19 in this section of his Report?

20 A. So, Mr. Walck had in an earlier paragraph
21 talked about using transactional data. And, first of
22 all, I would say that there is no transactional data

1 that exists, looking at Hibernia or Terra Nova
2 relative to the asset valuation associated with the
3 R&D Guidelines.

4 But, in this paragraph, he talks about
5 ExxonMobil's 10-K filings and a particular footnote
6 that talks about the valuation of assets, and he also
7 talks about the impairment of assets.

8 Relative to the valuation of assets, I'm not
9 aware of any valuation of assets that
10 Hibernia--sorry, that ExxonMobil has conducted for
11 Hibernia or Terra Nova that would take into account
12 the impact of the Research and Development
13 Guidelines.

14 Relative to the impairment tests, both
15 Hibernia and Terra Nova are profitable assets.
16 Typically, you would look at an impairment test
17 associated with an asset when you're near the end of
18 field life or, as pointed out in Walck's quote, when
19 there is a triggering event. So, if we see a
20 significant drop in price, that indicates the
21 profitability going forward would be such that you
22 would have questioned the value of the asset on the

1 books.

2 Again, I would state for the Tribunal there
3 has been no impairment tests conducted of either
4 Hibernia or Terra Nova by ExxonMobil.

5 And furthermore, I would add that in terms of
6 any asset valuation that one would conduct relative
7 to Hibernia or Terra Nova for the R&D Guidelines, one
8 would have to actually deal with the same variables
9 that were contained within the damages model, and
10 those variables are the same--have the same
11 uncertainties that were associated with the Mobil I
12 hearing.

13 Q. Let's turn to another section of Mr. Walck's
14 Report.

15 Before we do, though, sir, what is your
16 overall view of what Mr. Walck is conveying in this
17 section of the Report describing other potential
18 methods to value the impact that the R&D Guidelines
19 had on Hibernia and Terra Nova assets?

20 A. Well, Mr. Walck has indicated in his Report
21 that he's looking for some additional supporting data
22 relative to a valuation method. What I can tell you

1 again is that any time I've conducted any
2 forward-looking cash-flow projections and
3 particularly under the R&D Guidelines, you actually
4 have to look at the assumptions, life of field. We
5 would be dealing with the same factors as the Stats
6 Canada factor which, it's my recollection that we
7 started in the damages under Mobil I with a .4 Stats
8 Canada factor. The current number is over .7. And,
9 in essence, the 2013 data shows that it's .9. So,
10 there's been over an 80 percent increase in the Stats
11 Canada factor since Mobil I.

12 You are dealing with oil prices, which I
13 understand that the previous Tribunal had heard
14 lengthy expert opinion in terms of what data is out
15 there.

16 As well, production volumes, which again
17 since Mobil I, production volumes for both Hibernia
18 and Terra Nova have increased, and then we're dealing
19 with the uncertainty in terms of or the debate
20 relative to R&D Ordinary versus Incremental
21 Expenditures.

22 So, in summary, any valuation methodology

1 that we would do relative to R&D would use the same
2 uncertain variables that came into play the first
3 time around.

4 Q. I would like to draw your attention,
5 Mr. Phelan, to Paragraph 26 of Mr. Walck's Report,
6 which appears earlier than the section we were just
7 discussing.

8 What do you understand Mr. Walck to be saying
9 in this section of his Report?

10 A. So, Mr. Walck is, again, challenging that the
11 Claimant has indicated that no such fund exists; and,
12 again, based on my understanding--well, first and
13 foremost, we never had to pay into a fund. It's my
14 understanding that the Board themselves, in a
15 March 2010 document, actually indicated they did not
16 want to administer a fund. They would find that the
17 Board administering the fund would be an exhaustive
18 process and something that they did not want to
19 administer at any point going forward.

20 From a Mobil perspective, the other comment
21 that I would make about a fund is that Mobil does not
22 control the expenditures for Hibernia or Terra Nova.

1 Hibernia has an Operator which is Hibernia Management
2 Development Company Limited. We have a working
3 interest of 33.125 percent. For Terra Nova, Suncor
4 is the Operator, and Mobil has a 19 percent. In
5 essence, for Mobil to pay into a fund, it would put
6 us at a position of disadvantage:

7 Number 1, it would, first of all, have to be
8 a call by the Board, and those calls are typically on
9 the Operator, which would be a joint decision amongst
10 all of the owners before there would be a decision to
11 pay to a fund. But, if Mobil were to pay directly
12 into a fund, it would be a situation where then we
13 paid that amount of money, whatever that amount is,
14 and we would still be contributing to the joint
15 account because, again, we are a minority in each of
16 those two assets, and you have to have--under the
17 joint-account administration, you have to have [REDACTED]
18 [REDACTED] in order to pass a vote. So,
19 in other words, Mobil does not control whether or not
20 we would pay into a fund.

21 Q. One more point on this, sir. Do you know
22 whether the Board has set up an R&D fund pursuant to

1 the Guidelines?

2 A. I'm not aware of any fund that has been set up
3 by the Board.

4 Q. Mr. Walck appears to make an equivalency
5 between the Board and the Letters of Credit. Do you
6 have a view on that, sir?

7 A. Well, yes, I do.

8 So, relative to Letters of Credit, that was
9 not the preference of any of the owners of either
10 Hibernia or Terra Nova. Back in 2009, I assisted
11 Andrew Ringvee, who was coordinating the Work Plan
12 for Hibernia at the time and dealing with the joint
13 industry, as well as with the Board; and, at the
14 time, the owners of Hibernia and Terra Nova had
15 actually requested the Board to consider
16 financial--the strength of financial statements of
17 the owner company, such as ExxonMobil and Suncor and
18 Chevron, as the first option.

19 Failing that, we indicated that similar to
20 the financial reporting requirements that are
21 currently in place, where a Promissory Note is held
22 from HMDC, we indicated that we would like to see the

1 Operator issue a Promissory Note.

2 Our third option as we went through the
3 various options, happened to be a financial
4 instrument, Letter of Credit being one of those, but
5 that was not our preferred option.

6 So, first of all, relative to Letters of
7 Credit--I just wanted to indicate that it was not the
8 owner's preference to have Letters of Credit as our
9 basis.

10 Q. I would like to direct your attention,
11 Mr. Phelan, to Page 6 of Mr. Walck's Report under the
12 heading "Mobil's 'Self-Judging' Standard."

13 What do you understand Mr. Walck to be saying
14 in this section of his Report?

15 A. Mr. Walck has actually made a number of
16 comments within. First of all, he talks to the fact
17 that the Respondents are the individuals making the
18 Decision on what the expenditures will be and what
19 are deemed to be incremental, and I would disagree
20 with that position. If you look again, my previous
21 comment is the joint account is administered by the
22 Operators, that being HMDC for Hibernia and Suncor

1 for Terra Nova. Those Operators submit annual
2 budgets to the respective owners, and that budget is
3 voted on each year. Prior to the Guidelines coming
4 into play, R&D was not a line item that Hibernia had
5 nor was it a topic of discussion at the Terra Nova
6 Management Committee. When the Guidelines became law
7 relative to the--our Canada court appeal being
8 denied, each of the owners would ask each of the
9 Operators to pull together their respective budgets
10 to look at what obligations needed to be met.

11 As the Chief Financial Officer of HMDC, it
12 was my responsibility to ensure that HMDC as Operator
13 was fulfilling its obligation. The Board at the time
14 had indicated that we had a very significant
15 shortfall, and so the owners requested HMDC to look
16 at opportunities to basically remedy the Shortfall
17 and get it to a point that, by 2015, the end of the
18 OA for 2015, we would have actually no shortfall
19 left. That was a demand that the Board had made upon
20 HMDC relative to being in a significant position of
21 shortfall.

22 So, a summary of this is first and foremost,

1 it's the Operators who have to make the expenditures.
2 They put forward the programs. The programs were
3 budgeted. And the risk of any overspending, as Walck
4 has said in one of his paragraphs, does not exist
5 because, in essence, each of the owners have a check
6 process relative to the approval of budgets to make
7 sure that the Operators are not spending more than
8 they should be. That's my first point.

9 The second point is, through the next series
10 of paragraphs, Mr. Walck indicates that it's
11 ExxonMobil making decisions about changing from
12 Incremental to Ordinary. And I would like to draw
13 your attention Paragraph 19; and, in Paragraph 19,
14 Mr. Walck has noted one of the items I testified in
15 Mobil I.

16 At the time, I testified that specifically we
17 wouldn't expect any owner to endorse a [REDACTED]
18 expenditure to save 40 million when there is a degree
19 of uncertainty associated with this. A wise investor
20 would not put [REDACTED] down without knowing that
21 you're going to recoup your [REDACTED].

22 So, the particular iceberg study at the time

1 we filed was, in fact, an incremental expenditure,
2 and I stand by it being an incremental expenditure.

3 Subsequently, as we were preparing for the
4 next phase of the arbitration, I was--sorry.

5 I became aware of the fact that the Hibernia
6 Southern Extension Project, which is a separate
7 sanctioned Project operating from the Hibernia
8 platform, had actually been denied by the Province of
9 Newfoundland and Labrador on its proposed legacy
10 project. Under the Hibernia Southern Extension
11 Agreement, we are required to meet the R&D
12 Guidelines. That was a stipulation that the Hibernia
13 owners or the Hibernia Southern Extension owners,
14 including the Province of Newfoundland and Labrador,
15 had to comply with. As part of that, there was a
16 [REDACTED] legacy project that the Province of
17 Newfoundland and Labrador wanted the Hibernia
18 Southern Extension owners to progress with.

19 When the first proposal was turned down, the
20 management of Hibernia looked at other opportunities
21 or I should say the management of HSE looked at other
22 opportunities. Part of that was the iceberg study.

1 So, in essence, our new legacy project that was
2 submitted to the Province of Newfoundland and
3 Labrador and was approved by the Province of
4 Newfoundland and Labrador for the Hibernia Southern
5 Extension was, in essence, associated with the
6 iceberg study. The result of that is, when I filed
7 my Update for Mobil I, we removed from the
8 Incremental Expenditures those expenditures that were
9 now HSE-specific expenditures.

10 So, again, I'd emphasize the reason for the
11 change is we are taking a conservative approach and
12 an accurate approach to make sure that when we submit
13 numbers, they reflect what is to be claimed.

14 Q. Mr. Phelan, just on a point that I heard you
15 say earlier, I think I heard you say earlier that
16 Respondents are the individuals who are making the
17 decision on what to do with expenditures. Is that
18 what you meant, the Respondents are the individuals?

19 A. Sorry?

20 Q. I believe I heard you say earlier--

21 A. Right.

22 Q. --that the Respondents are the individuals,

1 did you, in fact, mean the Claimants?

2 A. Oh, I'm sorry, Claimants. Yes, thank you.


3 I have to get used to legalese that
4 Respondent is on my left and Claimant is on my right.
5 Sorry about that.

6 Q. No problem, sir.

7 I believe Mr. Walck's report highlights the
8 fact that Mobil withdrew a claim in this proceeding
9 with respect to two expenditures. Do you have a view
10 on that, sir?

11 A. Yes, I do.

12 It was my responsibility for this Mobil II
13 damages claim to actually collect from my colleagues
14 the information associated with what expenditures
15 would be incremental, versus what would not be
16 claimed.

17 In terms of the migratory bird behavior
18 study, that is an incremental expenditure, and
19 Mr. Durdle will attest to that. However, as he's
20 conveyed to me--and in the interest of being
21 conservative in our claim--

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And so, on that basis, Mr. Durdle has advised me that we would move it from "incremental" to "not claimed."

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In terms of the other studies which are the interaction systems optimization, as well as the reservoir souring study, Mr. Sampath has informed me that, again, we have taken a conservative approach. We did file it as incremental cost, and we would see it as incremental cost, but in conversations that Mr. Sampath has had with the Suncor representative, Suncor have indicated that the possibility exists that certain parts of the study would have actually been conducted out west in Alberta.

So, again, in both of those cases, it's our position that we have taken a conservative approach and moved from incremental to not claimed.

Q. I would like to take you to Paragraph 53 of Mr. Walck's report, on Page 15--it's under the heading here "Treatment on Claimant's Royalty Savings."

1 A. Yes. I have it in front of me.

2 Q. What do you understand Mr. Walck to be saying
3 at Paragraphs 53 and following?

4 A. So, Mr. Walck has proposed that, in terms of
5 the Claimant's treatment of royalty savings, that we
6 have missed on our calculation. What he has simply
7 said is that if the Tribunal award damages and
8 interest, there is, with the royalty deductions, the
9 possibility that ExxonMobil would actually be
10 receiving the benefit, in terms of the interest
11 benefit, on those royalty savings from the time that
12 we deducted the cost to the time that--which is
13 present.

14 My position on this remains the same. As
15 I've stated before about royalty deductions, there is
16 an uncertainty about royalty deductions. So, at this
17 point in time, Walck's assumption is that we would
18 receive a hundred percent of our royalty deductions;
19 and, in doing so, therefore, capitalize on the
20 interest savings for the period from our deduction to
21 present time.

22 Taking that position would actually put the

1 Claimant in a position of potentially being under
2 compensated. And I say that in the sense that, until
3 we get more facts on the [REDACTED] of
4 Incremental Expenditures from the Province in
5 Newfoundland as well as the Federal Government of
6 Canada on Net Profits Interest, we run the risk that,
7 if this Tribunal were to deduct the royalty
8 deductions from our claim, and then the Province and
9 the Federal Government deducted the same royalty
10 amounts, we would, in fact, be under compensated.

11 Also within the Royalty Agreements, there is
12 a penalty relative to interest, where it's [REDACTED]
13 [REDACTED] on Hibernia, and [REDACTED] on
14 Terra Nova. And so, in essence, the loss of royalty
15 deductions would just compound the under compensation
16 by ExxonMobil.

17 Q. Mr. Phelan, I just have one more topic. Can
18 we please turn to Paragraph 65 of Mr. Walck's report.

19 What do you understand Mr. Walck to be saying
20 with respect to Paragraph 65 in the table that
21 appears there?

22 A. So, in Paragraph 65, Mr. Walck is talking to

1 Table 8, where he's indicating that if one were to
2 look at Terra Nova's "ordinary course" spending, that
3 the "ordinary course" spending at this point in time
4 is well in excess of the Stats Canada factor.

5 If you look at Paragraph 66, Mr. Walck then
6 goes on to indicate, in the third line, that Terra
7 Nova's "ordinary course" spending is expected to
8 fully satisfy its past and future spending
9 obligations, with no ongoing damage from the
10 implementation of the Guidelines.

11 I disagree with that statement in
12 Paragraph 66, and I also would like to just highlight
13 what I would calculate relative to Table 8.

14 So, if you look at what Walck has in the
15 second-to-last line in Table 8, he's indicated there
16 is \$43 million worth of "ordinary" spending for Terra
17 Nova. And that was taken off of my statement. And I
18 don't deny that that's--that line-item balances.

19 For purposes of the Tribunal, there's two
20 components that are noted in the table above, in
21 Table 7. Line B is the Contractor spend, which is
22 [REDACTED], and that's, again, for the period 2012 to

1 2015. And then it's the "less not claimed," which is
2 the ordinary, the [REDACTED]. So, in essence, that's
3 where Walck has added those two to get the [REDACTED]
4 that he has noted down below.

5 I don't take an exception to that simple math
6 that is there. However, what it doesn't take into
7 account is a number of key factors:

8 First of all, in my annex that I have
9 relative to the submission from Terra Nova,
10 [REDACTED] of that approximately--or approximately
11 [REDACTED] of the ordinary spend was attributable to
12 the environmental effects monitoring retroactive
13 adjustment for the period 2004 to 2011 that Terra
14 Nova's Operator had submitted to the Board. So, in
15 other words, there is approximately [REDACTED] that
16 is not applicable to the current period.

17 Because, again, what Walck is doing here is a
18 calculation of ordinary spend against the Stats
19 Canada factor for the current period.

20 So, have you to take, first of all,
21 approximately [REDACTED] out of the [REDACTED].

22 The second component is, approximately

1 [REDACTED] of that [REDACTED] is not spend through
2 the joint account; it is spend by Contractors. The
3 Contractor spend has been higher than anticipated.
4 However, in the most recent report from Terra Nova,
5 Contractor spend in 2016 was significantly lower, in
6 terms of an annual number.

7 Also, it is still a question-mark going
8 forward because Terra Nova has no control over
9 Contractor spend. They do not reimburse Contractors
10 for such spend. It's each individual Contractor to
11 make their own determination as to how much they
12 would spend on Research and Development in the
13 Province of Newfoundland and Labrador. So,
14 therefore, there is approximately 20 percent of
15 Walck's number that's questionable.

16 But the key point in this calculation is that
17 approximately [REDACTED] of the [REDACTED] --or, more
18 particularly, [REDACTED] of the [REDACTED] that went
19 through the joint account-- [REDACTED] for the period
20 is associated with the H2S ordinary spend, which was
21 a Project that, in 2012, was submitted by the Terra
22 Nova Operator; and, while initially at a factor of

1 [REDACTED] in the initial proposal, was actually
2 reduced subsequently.

3 What I'm pointing out is that is a one-off
4 event and has a limited life. The Board, in their
5 approval of that Project, indicated that it would go
6 for a certain period of time, and that they would
7 want to see an annual review each year.

8 I can also tell you that, in 2016, for the
9 Terra Nova Project, approximately [REDACTED] was
10 spent on H2S for Terra Nova. So, the spend for H2S
11 is not increased and, in fact, will likely come to an
12 end over the next couple of years.

13 The point I am making with those numbers is
14 that, when you take off the H2S, and you take off the
15 approximately [REDACTED] for the environmental
16 effects monitoring, and then there is the question of
17 the Contractor spend, the actual ordinary spend going
18 forward will be significantly less than the Stats
19 Canada factor, and I would argue that it would be
20 less than [REDACTED], as opposed to the [REDACTED]
21 that Walck has proposed.

22 So, in summary, the amount of ordinary spend

1 for Terra Nova is not certain going forward, and so
2 one should not assume that all future damages are
3 erased by ordinary spend. That would be an incorrect
4 assumption.

5 MR. NICHOLS: At this point, Mobil passes the
6 Witness to Canada.

7 PRESIDENT GREENWOOD: Thank you very much.

8 Canada, do you wish to take a break before
9 you cross-examine? You're entitled to, on a request,
10 under the rules.

11 MR. DOUGLAS: Yes, maybe a quick short
12 break--but just a couple points, first,
13 Mr. President, if I may.

14 Claimant, in direct, has testified for what
15 Canada believes to a number of documents that were
16 requested under Procedural Order Number 4 of May 8,
17 2016, and we haven't received. And this is
18 predominantly in relation to the royalties and NPI.
19 I don't think we need to discuss too much right now,
20 but we just want to reserve that concern and look
21 into it a bit further because we did request
22 documents relating to NPI offsets and royalty offsets

1 for expenditures at issue in this arbitration, and
2 none were produced, as far as my understanding, so we
3 just want to take that under advisement.

4 And the second thing I just wanted to raise
5 was that was a direct examination of approximately 41
6 minutes. And I was happy to let Mr. Phelan, you
7 know, speak to Mr. Walck's report, but it was rather
8 long. And, from our view, it doesn't necessarily
9 reflect the conversation during the procedural
10 discussion we had with you of a couple of weeks ago.

11 And I think it would be our preference, at
12 least for Mr. Noseworthy, if the direct were kept to
13 a little bit more of a limited basis.

14 That would just be Canada's position on that
15 matter.

16 MR. O'GORMAN: Mr. President--

17 PRESIDENT GREENWOOD: Go ahead, Mr. O'Gorman.

18 MR. O'GORMAN: If I may respond,
19 Mr. President.

20 As I recall from the oral discussion during
21 Procedural Order Number 8 hearing, you indicated that
22 an hour would be a little too long, but we had up to

1 that amount of time. And that's what we tried to
2 stick to, of course. And these questions were
3 strictly responsive to what Mr. Walck said in his
4 Report, which was entirely the purpose of the direct
5 examination, as you have allowed.

6 And so, while we note that Canada was not
7 particularly pleased with what they heard from
8 Mr. Phelan, it's clear that he was entitled, under
9 your Procedural Order, to do that.

10 We will, of course, not take inordinate time
11 with Mr. Noseworthy. But again, we feel as though he
12 should be entitled to respond to the Report of
13 Mr. O'Keefe as the Tribunal found in Procedural Order
14 Number 8.

15 PRESIDENT GREENWOOD: Yes, thank you.

16 I don't think Canada was taking exception to
17 what Mr. Phelan said. Instead, I think Canada was
18 taking exception to the length of time you had taken
19 over getting him to say it.

20 I'm assuming that in the case of
21 Mr. Noseworthy the direct examination will not need
22 to be anything like as long because there is not an

1 expert report to which he is responding.

2 MR. O'GORMAN: No, there is
3 not--Mr. President, there is not, but there is a fact
4 Expert Report that was submitted at the end of the
5 proceedings which does raise a number of fact issues
6 which, in fairness, Mr. Noseworthy should be allowed
7 to address.

8 PRESIDENT GREENWOOD: A fact witness
9 statement?

10 MR. O'GORMAN: Yes, yes.

11 PRESIDENT GREENWOOD: Yes. Of course, he'll
12 be allowed to respond to that, but I'm assuming it
13 will not need to take as long as the direct
14 examination of Mr. Phelan has taken.

15 MR. O'GORMAN: We will do our very best, sir.

16 PRESIDENT GREENWOOD: You're getting a clear
17 steer from the Chair of how long it will take, on or
18 about not as the case will be.

19 We will take a 10-minute break.

20 I was just thinking, do you want to have a
21 coffee break now or--I think two-and-a-half hours of
22 witness examination without a break is probably too

1 much. Let's take ten minutes now to give you a
2 chance to collect your thoughts, and we will take a
3 coffee break at a later stage.

4 Mr. Phelan, if I could just remind you not to
5 speak to anybody during the course of the break.

6 THE WITNESS: I understand.

7 PRESIDENT GREENWOOD: Thank you.

8 (Brief recess.)

9 PRESIDENT GREENWOOD: Yes, Mr. Douglas.

10 MR. DOUGLAS: Thank you very much,
11 Mr. President.

12 CROSS-EXAMINATION

13 BY MR. DOUGLAS:

14 Q. Hi, Mr. Phelan.

15 A. Hello.

16 Q. It's nice to see you again.

17 A. Likewise.

18 Q. As I said to my colleague, Mark, we really
19 have to stop meeting this way.

20 A. I agree with that statement.

21 Q. And as you testified this morning, you
22 testified as a fact witness in the Mobil and Murphy

1 Arbitration?

2 A. That is correct.

3 Q. And you filed five Witness Statements in that
4 arbitration?

5 A. That is correct.

6 Q. And three of those Witness Statements were
7 before the Decision on Liability?

8 A. That is also correct.

9 Q. And the last two were after the Decision on
10 Liability?

11 A. Yes.

12 Q. And you testified twice in those proceedings.

13 A. At least twice.

14 Q. And once before the Decision on Liability?

15 A. Yes.

16 Q. And that was in about October 2010?

17 A. Was it October 2010?

18 Q. Around there?

19 A. Okay.

20 Q. Once after the Decision on Liability?

21 A. It was at the Damages, yes.

22 Q. And that was about in April 2013?

1 A. That's correct.

2 Q. Okay. And you joined Hibernia Management and
3 Development Company in 1990?

4 A. In December 1990.

5 Q. Okay. And that company is known as HMDC?

6 A. That's the abbreviation that's used. Hibernia
7 Management and Development Company Limited.

8 Q. And HMDC is the Operator of the Hibernia
9 Project?

10 A. It is.

11 Q. All right. And you worked for HMDC from 1990
12 to 2002?

13 A. I was an HMDC employee up to the end of 2002.
14 I continued the work as a secondee to HMDC after
15 January 1st, 2003.

16 For the Tribunal's purpose, January 1st,
17 2003, I was hired as an ExxonMobil Canada employee.

18 Q. So, you became an employee of ExxonMobil
19 Canada in early 2003.

20 A. January 1st, 2003.

21 Q. And then were seconded back to HMDC?

22 A. Yes.

1 So, there is a Management Services Agreement
2 that's in place between ExxonMobil Canada and HMDC,
3 and that would include the provision of accounting
4 and controller services.

5 Q. Okay. And is that part of the--and I think
6 you mentioned this in your Witness Statement--the
7 2002 Resolution that was passed among the owners of
8 the Hibernia Project?

9 A. You're referring to the 2002 Resolution that
10 at the time we put in place the Management Services
11 Agreement and that HMDC would align to the controls
12 as well as procedures, operating procedures, of
13 ExxonMobil.

14 Q. So, at the time, HMDC adopted the policies,
15 procedures systems and business controls of
16 ExxonMobil?

17 A. We--I think the better word is aligned
18 to--HMDC has its own procedures, it's its own
19 independent company, but we certainly took all of the
20 ExxonMobil procedures, the controls, catalogs,
21 operating procedures, and implemented an HMDC set.

22 Q. And HMDC agreed to rely solely on ExxonMobil

1 for the nomination of management personnel?

2 A. That was part of the Management Resolution
3 that you referred to in 2002, yes.

4 Q. And HMDC, as you mentioned, was authorized to
5 enter into Service Agreements with EMC and its
6 affiliates?

7 A. The Hibernia owners voted, Majority to have
8 HMDC enter into the Service Agreements that you
9 mentioned.

10 Q. Okay. And, in 2007, you became EMC's
11 Operations Support Manager in Eastern Canada?

12 A. So, in 2007, I returned from Sarnia, Ontario,
13 where I was the site controller back to Eastern
14 Canada, back to St. John's, went into the position of
15 ExxonMobil Canada Operations Accounting Manager
16 overseeing, not just Hibernia, but also the other
17 assets that ExxonMobil had a working interest in.

18 Q. And you became HMDC's Chief Financial Officer
19 at that time in 2007, too; is that right?

20 A. That's correct.

21 Q. And you stayed as HMDC's CFO until 2015?

22 A. Yes.

1 In August 31st, 2015, I moved to Fort
2 McMurray. I was seconded to Syncrude Canada Limited;
3 and, at that time, Rocky Kalischuk took over that
4 particular role.

5 Q. And now you're based in Northern Alberta?

6 A. Yes, I am.

7 Q. I'm also from Calgary.

8 And since that date, you no longer have day-to-day
9 responsibilities at Hibernia?

10 A. That is correct.

11 Q. Have you ever worked for Suncor, the Operator
12 of Terra Nova Project?

13 A. I worked with Suncor. I have not worked for
14 Suncor.

15 Q. Okay. You mentioned that HMDC manages
16 Hibernia on behalf of the interest owners?

17 A. HMDC is the Operator of the Hibernia platform,
18 the operations. All of the Operations Authorizations
19 is direct with HMDC.

20 Q. And one of its roles is to prepare an annual
21 budget for the approval by the owners?

22 A. Yes.

1 So, HMDC is a separate entity. It submits
2 under the Joint Operating Agreement, it's actually
3 called the "Hibernia Field Operating Agreement."
4 There is an annual requirement in September of each
5 year to submit a budget to the owners. And by
6 December of each year, that budget is approved by the
7 Majority of the owners.

8 Q. So, for example, a budget for 2015 would be
9 submitted to the owners in September 2014?

10 A. That's--that would be the typical timing that
11 you would see with the budget submission to the
12 Hibernia owners.

13 Q. And then for approval by the owners in
14 December 2014?

15 A. Yes.

16 So, the Operating Agreements has a specific
17 clause that, by September 15th of each year
18 preceding, there would be a submission of a budget;
19 and, by December 15th of each year, the owners would
20 actually approve that budget or any adjustments that
21 they proposed to such a budget.

22 Q. And the budgets are usually a couple of pages

1 long?

2 A. The budgets can vary from year to year.

3 Typically, I sat as the advisor to the
4 Hibernia Executive Committee for a number of years
5 starting back in 1995-96 timeframe up until 2004 when
6 I went to Sarnia.

7 And so, typically, the budget is submitted.
8 The owners will request additional detail, and so you
9 could have a couple of pages in terms of what would
10 be the mail ballot, and in other instances we've
11 actually had similar to a bound document that is here
12 on my table that would have quite a few details.

13 So, it varies, depending on the requests of
14 the owners.

15 Q. Okay. And the budget would include things
16 like operational costs?

17 A. It's a budget, it's specifically written
18 within the Agreements that it would require your
19 operating expense budget for the upcoming year, as
20 well as your CAPEX expenditure budget for the
21 upcoming year.

22 There are some other conditions within the

1 Operating Agreement. The only other one that I'm a
2 specifically aware of is there is a contributions and
3 advertising budget, which typically has been less
4 than [REDACTED] a year. That
5 would be part of the formal approval process.

6 Q. And would the budget include R&D costs?

7 A. The budget doesn't have a specific line
8 item--I should rephrase.

9 Up until, I believe it's 2010, when we
10 developed a Work Plan, there was no line item within
11 the budget that was approved by the owners.

12 What would typically happen is if there was
13 an R&D Project prior to the Guidelines, that R&D
14 Project would be for the Project. So, if it's over
15 [REDACTED] it typically would be a separate mail
16 ballot out to the owners before any expenditure can
17 occur within the joint account.

18 After 2010, there is a budget line item for
19 the Hibernia submission; and, in Mobil I, we showed
20 examples specifically of that particular budget line
21 item.

22 Q. So, there is a line item for R&D costs in the

1 budget now?

2 A. There is now a line item for budget for R&D
3 costs, yes.

4 Q. Is there a list of individual R&D expenditures
5 included as part of that budget?

6 A. There actually is a fulsome list that is
7 available to the owners. Again, each of the owners
8 will look at various Updates. I can tell you that,
9 in the period 2010 through to 2014, there was an
10 extensive list that was provided to respective owners
11 because, as I had mentioned earlier, Andrew Ringvee
12 was the R&D Coordinator. He put together a Work Plan
13 specifically outlining a number of the significant
14 Projects.

15 As we would go through any of the budgets, if
16 there were new items being added, if there were new
17 Projects, those would be added accordingly.

18 Q. Okay. And were any non-Work Plan-based
19 expenditures, were those listed in future years under
20 the budget?

21 A. Well, what would happen is if there was
22 something that was over the materiality that was

1 significant, typically, we would see a mail ballot
2 going out specifically.

3 And, again, in Mobil I, I believe we gave a
4 couple of examples. The Manuels River I believe was
5 a significant outlay that required a separate request
6 to the owners that had not been in the budget when it
7 was submitted in September and approved in December
8 of the previous year.

9 Q. What would be, in your view, significant or an
10 expenditure that is significant enough to be listed
11 in the budget in the year?

12 A. Well, per the Operating Agreement, anything in
13 excess of [REDACTED] will require a separate mail
14 ballot, if it has not already been contained within
15 the budget.

16 Having said that, relative to R&D
17 expenditures, if we are into a situation where there
18 is a substitution and, as with any R&D expenditures,
19 we have a situation where there has to be longer term
20 commitments made.

21 So, in some cases we've seen, for example,
22 with CARD, the contribution at Hibernia and Terra

1 Nova made the CARD. Both of those went before the
2 Management Committee. In both instances, they were a
3 multi-year program. So, when the program was
4 endorsed, it was for a multi-year program. So, those
5 particular line items didn't have to go back to the
6 Management Committee for subsequent approval. They
7 were part of the Work Plan endorsed.

8 Q. Does the R&D Coordinator monitor how much R&D
9 will be conducted in a given year?

10 A. Hibernia and Terra Nova have individuals that
11 do monitor the R&D. Obviously, the Boards' R&D
12 Guidelines put an additional obligation on each of
13 the Operators.

14 And so, in the case of Hibernia, the R&D
15 Coordinator, which was initially Andrew Ringvee, then
16 changed to Bill Swett, Andre Cerquiera and most
17 recently Sampath and now Kamran Gul, those
18 individuals have the R&D budget, they report to the
19 HMDC President in terms of the various expenditures.
20 And if there are any changes in that program, they
21 would actually engage the HMDC President accordingly.

22 With Suncor, they had an individual as well

1 that would basically coordinate, particularly when
2 they were in a shortfall situation. When they got to
3 get the approval on the H2S, I understand talking to
4 my counterpart Pat Gregory, who was the Operations
5 Accounting--still is the Operations Accounting
6 Manager for Suncor--obviously, their emphasis on R&D
7 dropped once the H2S was approved.

8 So, to answer your question, yes, there is an
9 R&D Coordinator managing the budget.

10 Q. And Mr. Phelan, I appreciate the fulsome
11 responses, but there are a fair few questions and if
12 they are all as fulsome as that one, we will be here
13 for quite some time. So, in fairness, I want you to
14 be able to answer the question as best as you're
15 able, but the question was more of a straightforward
16 one.

17 The R&D Coordinator decides what individual
18 R&D expenditures will fall within the proposed
19 budgeted amount?

20 A. Could you repeat the question?

21 Q. Sure.

22 Is it the R&D Coordinator that decides what

1 individual R&D expenditures will fall within the
2 proposed budgeted amount in a given year?

3 A. Well, the decision in the case of HMDC and at
4 Terra Nova would be senior management. The R&D
5 Coordinator has the responsibility to submit the Work
6 Plan or the Updates to the Work Plan in the case of
7 HMDC.

8 Q. Okay.

9 A. The same applies in terms of Suncor. They
10 have that individual I mentioned, Michelle Squires,
11 in the position she's putting forward a proposal.
12 I'm not aware of what her specific authority is, but
13 relative to any Work Plan for Suncor for Terra Nova.
14 That, again, is going up to the more senior ranks.

15 Q. Okay. And you mentioned Andrew Ringvee. Is
16 he an ExxonMobil employee?

17 A. I believe he's an Imperial employee, but in
18 essence--

19 Q. Was he--

20 (Overlapping speakers.)

21 A. Sorry, David.

22 The question was: Is Andrew Ringvee an

1 ExxonMobil employee? Maybe the best way I can
2 categorize it is I don't know his official employer,
3 but he was on the East Coast as an ExxonMobil Canada
4 secondee, seconded into HMDC.

5 Q. Okay. And you mentioned Bill Swett?

6 A. Bill Swett was, he's since retired. He was an
7 Imperial Oil employee, seconded into HMDC.

8 Q. Okay. Now, both Hibernia and Terra Nova are
9 in the Production Phases of their Projects; is that
10 right?

11 A. That's correct.

12 Q. And you testified in the Mobil and Murphy
13 Arbitration that, during the Production Phase of the
14 Projects there is little need for R&D in the ordinary
15 course?

16 A. I indicated in my statement that there was
17 little need, less need is probably the better
18 explanation.

19 What I was also elaborating on is that,
20 typically in that construction mode, you have more
21 requirements for design and engineering and,
22 therefore, more opportunities for R&D.

1 Q. Okay. And because there is less need, this
2 poses a challenge when complying with the Guidelines?

3 A. I believe that's clear, relative to looking at
4 the charts for both Hibernia and Terra Nova when you
5 see the uptick in 2010 as a result of the R&D
6 Guidelines.

7 Q. Because the Guidelines require more spending
8 or at levels that are much greater than R&D spending
9 in the ordinary course?

10 A. Yes, because we are bound by the conditions of
11 the Operations Authorization, the Operators were
12 required to spend more.

13 Q. Okay. Could you have a look at Canada's
14 Counter-Memorial. I think it's Paragraph 74. It
15 should be there, I think, in one of the coiled--just
16 let me know if you're having difficulties finding it,
17 and I can come and help. It's probably the bigger
18 one.

19 A. You say "Counter-Memorial"?

20 Q. Counter-Memorial, yeah.

21 A. Counter-Memorial, smaller print.

22 Okay. I have it.

1 Q. You see the tables--and this is under the row
2 that says they're actual figures. These figures
3 purport to show the Claimant's actual "ordinary
4 course" R&D spending levels.

5 A. So, I've seen both of these tables, and the
6 items that you have highlighted would be prior to our
7 filing, yes.

8 Q. And these figures reflect the Claimant's
9 share, not the overall Terra Nova or Hibernia
10 figures; is that right?

11 PRESIDENT GREENWOOD: Mr. Douglas, I'm sorry
12 to interrupt you, could you just give me the page.
13 It took me longer than I'd expected to find my copy
14 of the Counter-Memorial.

15 MR. DOUGLAS: It's Pages 30 and 31.

16 PRESIDENT GREENWOOD: Thank you.

17 Sorry to interrupt you, Mr. Phelan.

18 BY MR. DOUGLAS:

19 Q. I think I had asked that these figures reflect
20 the Claimant's share not the overall Terra Nova or
21 Hibernia figures; is that correct?

22 A. I'm just checking.

1 I believe that to be the case, but I'm
2 checking back to my annex as well.

3 So, you're asking me is this the Claimant's
4 portion for Terra Nova and the Claimant's portion for
5 Hibernia?

6 Q. Yes, the title of the table is "Claimant's
7 'Ordinary Course' Spending at Hibernia."

8 A. So, I have seen these numbers before.

9 Q. Okay. So, these reflect the Claimant's
10 portion, not the overall Hibernia and Terra Nova
11 portion; is that correct?

12 A. That would be correct.

13 Q. And if you wanted to get the Project level of
14 "ordinary course" spending, the figures would be
15 greater?

16 A. They would be significantly more simply
17 because you would take the working interest portion,
18 plus you would have to also take into account any of
19 the other variables that are at play when you're
20 reconciling on the Hibernia and Terra Nova side.
21 What I'm referring to is if there is any ordinary
22 owner spend within the numbers.

1 Q. And you see there at the row, let's look at
2 Terra Nova, maybe, first, and you see the row titled
3 "Actual Figures up to the Claimant's March 2015
4 Memorial Filing"?

5 A. Yes.

6 Q. And if you look at the numbers from left to
7 right, they show an increasing trend in "ordinary
8 course" spending by the Claimant?

9 A. They do.

10 Q. And the same thing if you look at the actual
11 figures in the Hibernia table from left to right,
12 they show an increasing trend in "ordinary course"
13 spending by the Claimant; is that right?

14 A. They do.

15 Q. Do you think the 2004-2008 figures are
16 accurate in both of these tables?

17 A. Which figures are you asking whether they're
18 accurate?

19 Q. The [REDACTED] at Terra Nova and the
20 [REDACTED] at Hibernia.

21 A. If they are coming from my statement where I
22 have indicated "ordinary course," then I can

1 reconcile to those numbers.

2 Q. Okay. So, you agree, then, that there has
3 been an increase in "ordinary course" spending by the
4 Claimant at both Projects?

5 A. The facts show that the "ordinary course"
6 spending has increased for Terra Nova as a result of
7 a number of key factors.

8 Similarly, on Hibernia's side, we see an
9 uptick between 2004 and 2008 and then less of an
10 uptick between the period 2009 and 2011 to 2012-2015.
11 But, in fact, looking at those comparative, the
12 numbers themselves show an increase.

13 Q. Okay. Maybe if we could turn to, and you were
14 taken to it on direct, so I just have a couple
15 questions. It's Paragraph 81 of your Second Witness
16 Statement. It should also be there on your desk, or
17 we can pull it up on the screen for you.

18 Now, I think you had made a correction to
19 this, and I just wanted to understand it.

20 Am I correct that the sentence that reads:
21 "During the pendency of a court challenge against the
22 Guidelines prior to 2004-2008, there were no

1 accounting systems in place to track expenditures
2 that might qualify as credit under the Guidelines."

3 Is that right?

4 A. That's right.

5 The correction that I made was prior to 2004.
6 The accounting systems that were in place focused on
7 the Research and Development that was associated with
8 SR&ED, so we received those numbers from 1990 through
9 to 2004. When the Guidelines came into play, we were
10 trying to determine what was eligible under the
11 Guidelines.

12 And so, if you go back to your previous
13 chart--sorry.

14 Q. No, we can go back, absolutely.

15 A. Okay.

16 Q. It's also in the materials in front of you.

17 You can keep both at hand. That's fine.

18 Go ahead.

19 A. So, if you go back to the previous chart, you
20 look at the comparative, the first line versus the
21 second line for both Terra Nova and Hibernia.

22 What we did not know in 2009 was the effect

1 of the R&D Guidelines, and more specifically the
2 Board's latitude relative to definitions.

3 So, when we pulled together a series of
4 assumptions for Rosen's Report in 2009, those
5 assumptions were based on historic data. More
6 specifically, the R&D, we used the SR&ED example and
7 the SR&ED history as the basis for the R&D. We did
8 not have a lot of contractor data, nor were we
9 collecting. So, back to the other paragraph, nor
10 were we collecting contractor data prior to the
11 Guidelines being put into place. So, in essence, the
12 amount of knowledge that we had in terms of the
13 latitude of the Board, in terms of their definition
14 or their liberal definition of the R&D--and I say
15 that in the context of being other than just
16 SR&ED-eligible under the Tax Act.

17 Also, the Education and Training that would
18 be applicable, so when we came up with assumptions
19 for July 2009 for Education and Training, we had the
20 work-term students at Hibernia and Terra Nova as the
21 basis. We had very little that--else that we would
22 add to it. Environmental effects monitoring, for

1 example, if you go to the 2012-2015 Terra Nova, the
2 8.2 million--

3 Q. Mr. Phelan, I was just asking you to confirm
4 your correction.

5 A. Sorry.

6 Q. No, that's okay. Again, I want to give you
7 the chance to explain.

8 A. Okay.

9 Q. But are we just supposed to replace the word
10 "between" with "prior to"? Was that your testimony?

11 A. Sorry, the--prior to 2004, there were no
12 accounting systems in place.

13 Q. It's just curious--

14 PRESIDENT GREENWOOD: Sorry, can I--I thought
15 I had this right when you made the correction in
16 direct examination, but I'm not now sure I have.

17 THE WITNESS: Sure.

18 PRESIDENT GREENWOOD: The Court challenge was
19 2004 and 2008.

20 THE WITNESS: That's correct.

21 PRESIDENT GREENWOOD: But you corrected your
22 sentence, and what I had written down was that it

1 should now read: "Prior to 2004, there were no
2 accounting systems in place."

3 THE WITNESS: To collect the same R&D and E&T
4 expenditures.

5 PRESIDENT GREENWOOD: So--

6 THE WITNESS: That's correct.

7 PRESIDENT GREENWOOD: So, in fact, the
8 reference to the Canadian court challenge is expunged
9 completely, because that covers a different period.

10 THE WITNESS: Right.

11 So, to be very clear--and thank you for the
12 question--in 2009, we went back to reconcile 2004
13 through 2008. We went out to our Contractors and
14 asked if they had any R&D.

15 So, what I was pointing is, we didn't have
16 any accounting systems that would readily collect
17 Contractor and Owner data. But once the Court
18 challenge, the appeal was lost, or denied, we then
19 went forward to collect all of the information to
20 report to the Board, as was required.

21 BY MR. DOUGLAS:

22 Q. I'm very sorry, because I'm still just trying

1 to get my mind around this.

2 It's my understanding--at least here in this
3 paragraph, you are responding to these tables, or the
4 tables that were just on the screen at Paragraph 74;
5 is that right? And Canada's argument that there is a
6 trend of increase--which you have now agreed that
7 there is an increase.

8 So, do you no longer take issue with that
9 there's an increasing trend in "ordinary course"
10 spending by the Claimants at both Projects?

11 A. Well, I think you have to look at the words
12 that are there: Increase as the Projects age. My
13 position stays the same there.

14 What you're looking at is defined process:
15 Hibernia will be producing past 2040. So, as the
16 Project ages, we'd anticipate that our ordinary R&D
17 expenditures would decrease.

18 Q. Have the Projects--were they aging between
19 2004 and 2015?

20 A. The Projects were aging between 2004 and 2015.
21 But what you have in the numbers that are on the
22 previous page indicate that we became more

1 knowledgeable of Contractor spend, for example. So,
2 we went out--and if you look at Terra Nova's annex,
3 for example, there are amounts of \$50 being submitted
4 by Contractors for R&D eligibility. So, the
5 granularity that the two Operators have gone through
6 was something that was not there prior to.

7 So, what I'm pointing out is my statement
8 remains the same. As the Projects age, I would not
9 expect to see our R&D and E&T increase.

10 PRESIDENT GREENWOOD: Mr. Douglas, sorry to
11 distract you.

12 MR. DOUGLAS: That's okay.

13 PRESIDENT GREENWOOD: Let's try and be clear
14 that I've got this right:

15 What you're saying in the correction to your
16 Paragraph 81 of your Second Statement is that, prior
17 to 2004--in other words, before the Guidelines came
18 in--there were no accounting systems in place to
19 track expenditures that might qualify for credit
20 under the Guidelines. Well, that's obvious.

21 THE WITNESS: That's correct, yes.

22 PRESIDENT GREENWOOD: But what was the

1 position between 2004 and 2008, when you knew the
2 Guidelines were there, but they were being challenged
3 in court?

4 THE WITNESS: The position between the period
5 of time, as the CFO, was to actually look at what
6 there may be, in terms of risk or exposure for
7 the--for HMDC. And I'm speaking to HMDC.

8 Amongst the Owners, we--it was uncertain as
9 to how the court action would come out. So, to be
10 prepared for what we believed was the Board's future
11 action, if the courts were not in our favor, we
12 started to collect information in that period.

13 PRESIDENT GREENWOOD: Right--so you did have
14 accounting systems in place, or were putting them in
15 place between 2004 and 2008?

16 THE WITNESS: Yes.

17 PRESIDENT GREENWOOD: Thank you.

18 BY MR. DOUGLAS:

19 Q. That sort of, I guess, begs the question of
20 the next part, where you state that there were likely
21 a large amount of expenditures during this period at
22 the Operator, Contractor and Owner levels that would

1 have qualified for Guidelines credit, but
2 unfortunately were not captured and reported to the
3 Board.

4 So, is the testimony that there were systems
5 in place but there was nonetheless uncaptured and
6 unreported R&D that would have been eligible under
7 the Guidelines that wasn't reported?

8 A. So, the change that I made in the correction
9 was that, prior to 2004, the next sentence, "Thus,
10 there were likely a large amount of expenditures
11 during this historical period"--prior to 2004 is the
12 reference there, with the correction.

13 And, specifically, prior to 2004 we were not
14 reaching out to Contractors and saying could you
15 please advise the Operators of any R&D or
16 E&T-eligible costs. As a matter of fact, we had no
17 knowledge of what Contractors were spending on R&D
18 even, let alone E&T.

19 Q. So, your testimony isn't that there were
20 uncaptured and unreported R&D in the 2004-2008
21 period?

22 A. Sorry? Could you repeat that?

1 Q. Your testimony is not that there was
2 uncaptured and unreported R&D in the 2004 and 2008
3 period?

4 A. No. My testimony is that we don't know what
5 other costs would have been out there. So, if you
6 looked at the statement, there were likely a large
7 amount of expenditures.

8 So, if I can simplify, try to simplify this,
9 we indicated in our Reporting to the Board on the
10 normal process, [REDACTED] for Hibernia and
11 [REDACTED] for Terra Nova, but that didn't include
12 Contractor spend, owner spend, E&T. Some of the E&T
13 that has been accepted by the Board include such
14 things as contributions to Manuels River. I'm aware
15 that prior to 2004, HMDC did make contributions to
16 similar agencies. We did not account for that on any
17 R&D prior to 2004.

18 So, my statement there is there were likely
19 large amount of expenditures that didn't even get
20 captured, but we didn't pursue that with the
21 Contractors because the Board instructed us that they
22 were not going to go back to do any historical

1 assessment.

2 Q. Again, between the 2004 and 2008 period, were
3 there any uncaptured and unreported R&D to the Board?

4 A. Between 2004 and 2008, there is a possibility
5 that there were some costs that were not captured.
6 We went out to the Contractors and asked if they
7 could pull some information, for example. They
8 submitted what they that had available, and we
9 submitted that.

10 PRESIDENT GREENWOOD: Mr. Douglas, I think we
11 probably got as much as we're going to get out of
12 that, if we could move on.

13 MR. DOUGLAS: Yes, absolutely.

14 Sorry, I've lost my place because we jumped
15 around. Give me a moment, please.

16 (Pause.)

17 PRESIDENT GREENWOOD: Mr. Douglas, I was
18 planning to taking a coffee break at half past 11:00.
19 If you would like to take it now, and then we will
20 move on--

21 MR. DOUGLAS: I'm absolutely fine. I was
22 going to come to in a little bit later, so I'm just

1 trying to find my place.

2 But would you like to take it now?

3 PRESIDENT GREENWOOD: I'm enjoying myself so
4 much I'm happy to stay.

5 MR. DOUGLAS: That's absolutely fine. Why
6 don't we take it now.

7 PRESIDENT GREENWOOD: We will take a coffee
8 break.

9 Mr. Phelan, I'm terribly sorry, but you
10 remain in purdah. I'm sure somebody will go and get
11 you a cup of coffee, if you so wish.

12 THE WITNESS: Thank you very much. I'm fine
13 with the water. Thank you.

14 PRESIDENT GREENWOOD: Okay. We will have 15
15 minutes and come back just after half past 11:00.

16 (Brief recess.)

17 PRESIDENT GREENWOOD: Right. Ladies and
18 gentlemen. Thank you.

19 Mr. Douglas, we are ready to continue.

20 MR. DOUGLAS: Wonderful, thank you, Mr.
21 President.

22 Oh, yes, Canada would just like to introduce

1 one more member who has been able to join us,
2 Ms. Julie Boisvert, from Global Affairs Canada, has
3 just arrived. She is down there somewhere.

4 PRESIDENT GREENWOOD: She is very welcome.
5 Thank you.

6 MR. DOUGLAS: Thank you very much.

7 And welcome, Julie.

8 BY MR. DOUGLAS:

9 Q. Mr. Phelan, between 2004 and 2011, the
10 Guidelines required Terra Nova to spend about
11 52 million on R&D?

12 A. Could you just point me to the--

13 Q. Absolutely.

14 If you look at your Fourth Witness Statement,
15 and the First from the Murphy Arbitration, it's
16 Respondent's Exhibit 69, I think it's Tab 7 of
17 your--in the binder there, Mr. Phelan.

18 A. Oh, in the binder?

19 Q. Mm-hmm.

20 And I believe it's at Table 3(a). It's going to
21 be a table at the back there, and it's Page 4.

22 MR. DOUGLAS: And, Members of the Tribunal,

1 we're going to be looking at some schedules and
2 stuff, if there's ever something that you're having
3 difficulty finding, please just don't hesitate to
4 interrupt and we can wait.

5 THE WITNESS: I have Table 3(a) in front of
6 me.

7 BY MR. DOUGLAS:

8 Q. Mm-hmm.

9 And do you see there is a spending requirement
10 there on Page--I don't think that's the right page.

11 Do you see at the top, is this on the screen
12 what you see in front of you?

13 A. Actually, what's on the screen is spending
14 requirement. That's not--

15 Q. No, it's not, right, but do you have it in
16 front of you there?

17 A. So, the spending requirement Table 3(a),
18 Summary of Terra Nova R&D Shortfall, the total
19 requirement between 2004 and 2011 was 64,034,784.
20 The net requirement for that period because of a
21 Development Phase Credit is 52,806,517.

22 Q. Okay. So, \$52.8 million?

1 A. Yes.

2 But just to your point, the requirement was
3 64 million for that period.

4 Q. Fair enough.

5 And Mobil was awarded approximately 1 million for
6 its "incremental" spending at Terra Nova between 2004
7 and 2011?

8 A. So, you're currently looking at the shortfall
9 page.

10 Q. There was nothing on that page. That was for
11 the last question, which was about the requirement.
12 I'm asking you a new question now, which is about the
13 amount of "incremental" spending that Mobil was
14 awarded at Terra Nova between 2004 and 2011?

15 A. So, just for the Tribunal's purpose, we had
16 filed approximately 1,037,000 of Incremental
17 Expenditures, which is on Annex A spreadsheet
18 demonstrating Claimants' damages in Mobil I.

19 Q. So, you were awarded 1 million in
20 "incremental" spending for the 2004-2011 period at
21 Terra Nova; is that correct?

22 A. Approximately.

1 Q. In the expenditure obligation at Terra Nova
2 between 2012 and 2015, I believe you said in your
3 direct was about \$29 million?

4 A. Again, if I can refer to my Witness Statements
5 on those.

6 Q. Maybe it's easiest to look at Mr. Walck's
7 Expert Report, which should be on the table in front
8 of you. It's his Rejoinder Report at Paragraph 58.
9 It's going to be one of the coiled. It's not going
10 to be in your binder.

11 A. Mr. Walck's Rejoinder?

12 Q. That's correct.

13 A. Okay.

14 Q. We looked at this or at least you were taken
15 to this in direct this morning.

16 A. Okay.

17 Which table?

18 Q. It's at Paragraph 58.

19 A. Okay. I have Paragraph 58 in front.

20 Q. And so--

21 A. So, your question was the total obligation for
22 the period 2012 through 2015 was 29,163,000?

1 Q. That's correct.

2 A. The answer is yes.

3 Q. Okay. Sorry for all the flipping around, I
4 thought you might have known those numbers. If you
5 could turn to your second witness in this
6 arbitration.

7 A. Okay. What paragraph or page would you like
8 me to look at?

9 Q. I'm looking at your "Annex A Revised."

10 A. Okay. I have that in front of me.

11 Q. Okay, of course. We are pulling it up for you
12 right now.

13 And if you look at Lines B and E, these are
14 expenditures under the Guidelines?

15 A. Sorry, Lines...

16 Q. B as in Bob and E as in elephant.

17 A. Okay. Those are expenditures, yes.

18 Q. Under the Guidelines?

19 A. They're expend--sorry, they're expenditures
20 that were deemed eligible. The first line here is
21 expenditures as approved by the Board. And then in
22 my calculations, similar to Mobil I, I have taken off

1 the Contractor spend, as well as the amounts not
2 claimed, as well as some other line items.

3 Q. Okay. So, Line B is Contractor spend, which
4 is "ordinary course" spending?

5 A. It has been classified as "ordinary course"
6 spending.

7 Q. And Line E is also "ordinary course" spending
8 under the Guidelines?

9 A. I would be careful to call it "ordinary
10 course" spending because we have, as I mentioned
11 earlier, in terms of being conservative, there are
12 some Incremental Expenditures that we have not
13 claimed, so that's--the title there is not claimed.

14 Q. Well, if it's not incremental for the purposes
15 of this arbitration, it would fall in the "ordinary
16 course" camp?

17 A. It is not Incremental Expenditures.

18 Q. Okay. And if we look at the Lines B and E and
19 look across to Terra Nova, the figures there are
20 about [REDACTED] and [REDACTED] ?

21 A. That's correct.

22 Q. And that would equal about [REDACTED] in

1 "ordinary course" spending?

2 A. That is [REDACTED] for the period 2012 to 2015.

3 Q. And, as you mentioned, these were amounts used
4 to meet the Terra Nova obligation between 2012 and
5 2015 and are not claimed as damages?

6 A. These were amounts to meet what was a
7 shortfall going into 2012, as well as the current
8 period expenditures.

9 Q. And the [REDACTED] amount is sufficient to
10 meet the 29 million obligation between 2012 and 2015?

11 A. Well, if we were isolating just the specific
12 period, that would be a correct statement, but what
13 we are doing as an operator--so, in terms of Terra
14 Nova, Suncor had to look at life-of-field
15 obligations. Going into 2012, we had, I believe it's
16 close to 9 million in shortfall.

17 Q. Mr. Phelan, I do want to give you a chance to
18 explain. I think it's just important to answer the
19 question. If there is anything on redirect, I would
20 just please ask that perhaps those questions could be
21 put to you if you want to be given a chance to
22 provide further context.

1 A. Sure.

2 Q. I'm just asking whether the [REDACTED] amount
3 is sufficient to meet the \$29 million obligation.

4 A. So, the perspective of the Operator was to
5 spend [REDACTED] against its obligation requirements
6 in its entirety. That is not just exclusive to the
7 2012-2015 period. It covers all of the OAs past and
8 future.

9 Q. But it is just a matter of math, isn't it, the
10 [REDACTED] amount is sufficient to meet a
11 \$29 million obligation; would you agree with that?

12 A. If the \$29 million obligation were the only
13 obligation that Terra Nova faced during that period,
14 then that would be a correct statement. That's
15 simple math.

16 Q. So, if we look at what Terra Nova's total
17 obligation under the Guidelines from 2004 to 2015,
18 you mentioned before and confirmed before the
19 obligation in 2004 to 2011 was \$52.8 million?

20 A. That's correct.

21 Q. And the obligation in 2012 to 2015 was
22 29 million; is that correct?

1 A. Those are the previous statements, yes.

2 Q. Okay. So, it's about \$81 million; is that
3 correct?

4 A. 81 million, not including the Development
5 Phase Credit.

6 Q. I believe the 52.8 does include the
7 Development Phase Credit.

8 A. It takes it off.

9 Q. Takes it off.

10 A. So, actually, if you wanted the full
11 obligation for the period because the Board's
12 Development Phase Credit per the formula was to be
13 taken over life of field.

14 Q. Okay. So, we have an obligation of about
15 \$90 million between 2004 and 2015?

16 A. That's correct.

17 Q. If we just look at the amount of expenditures
18 that were needed to meet that obligation, the
19 Claimant only needed to undertake [REDACTED] of
20 incremental R&D to meet that requirement?

21 A. Sorry, we're confusing Claimant and Operator.
22 The numbers that are in front of me right now deal

1 with the Operator. You just asked a question about
2 the Claimant's environment.

3 Q. I understand that the obligation is to the
4 Project as a whole, but you confirmed before that
5 Claimant spent 1 million in incremental R&D for the
6 2004 to 2011 period; correct?

7 A. Sorry, that was the calculations on the Mobil
8 I Case, yes, approximately.

9 Q. And there is sufficient expenditures in the
10 2012-2015 period to meet the obligation in that
11 period; correct?

12 A. So, again, if we're talking about the
13 Operator--

14 Q. Yes.

15 A. --as a whole, when you combine the total
16 obligations that the Operator has through the period,
17 and you look at the one-off that we have with H2S,
18 which was significant.

19 To answer your question, the obligations in
20 its entirety for the Operator during the period, when
21 you take off the Contractor spend, the Owner spend
22 and the other numbers, you do get to a point where it

1 is a surplus as at December 31st, 2015.

2 Q. I understand that. I think I'm just trying to
3 look at it from an obligation standpoint. So, if the
4 obligation over 2004 to 2015 period was \$90 million,
5 which you confirmed?

6 A. Correct.

7 Q. I'm just trying to understand that, in that
8 period there was 1 million of "incremental" spending
9 undertaken by the Claimant towards that obligation?

10 A. In the 2004 and 2011 period.

11 Q. Mm-hmm?

12 A. That's correct.

13 Q. And there was sufficient "ordinary course"
14 spending to meet the obligation in the 2012 to 2015
15 period?

16 A. Well, our claim was focused on Incremental
17 Expenditures.

18 Q. I know, but I'm focused on requirement.

19 A. Right.

20 Q. So, you can confirm that there was sufficient
21 "ordinary course" spending to meet the requirement in
22 2012 to 2015?

1 A. So, in 2012 to 2015, if you ring-fence and you
2 cut off the opening and the closing so that you're
3 not taking into account prior obligations that are
4 still alive under the current OA, and if at the end
5 of 2015 you say the current OA has no requirements
6 then, under that formula, you're taking the math
7 which is your expenditure obligation less the
8 ordinary spend, which is, as I mentioned earlier, is
9 composed of many one-offs, but the calculation,
10 Mr. Douglas, is yes.

11 Q. So, between 2012 to 2015, there is sufficient
12 "ordinary course" spending to meet the obligation in
13 that period?

14 A. Because of the H2S, yes.

15 Q. Okay. So, between 2004 to 2015, there was
16 [REDACTED] of incremental R&D needed to meet the
17 obligation in that period?

18 A. In the case of Hibernia for incremental--

19 Q. Just terra Nova.

20 A. I'm sorry, Terra Nova. I'm sorry, I meant to
21 say Terra Nova.

22 We filed [REDACTED].

1 Q. [REDACTED]?

2 A. Well, the exact number was on the chart that
3 you had up earlier.

4 PRESIDENT GREENWOOD: Mr. Douglas, if I could
5 just interrupt you for a moment.

6 MR. DOUGLAS: Yes.

7 PRESIDENT GREENWOOD: Please make sure you
8 check the Transcript because at one point that [REDACTED]
9 [REDACTED] came up as 51 million, and I want to make
10 sure these figures are accurate. You need to go
11 through the Transcript tonight with a tooth comb,
12 please.

13 MR. DOUGLAS: Yes, I didn't mean to conflate
14 the [REDACTED] or 51 million.

15 PRESIDENT GREENWOOD: I think it was just a
16 slip somewhere, but I want to make sure that it's
17 right. This is difficult enough to follow in the
18 best of times.

19 MR. DOUGLAS: Yes, I'm sure. Thank you.

20 PRESIDENT GREENWOOD: Mr. Phelan, I think
21 your answers to the questions so far, you have
22 qualified a number of points that have been made. I

1 think we have taken that qualification on board about
2 the period for which the expenditure relates.

3 There's no need to repeat it any further.

4 THE WITNESS: Okay. I appreciate that, thank
5 you.

6 BY MR. DOUGLAS:

7 Q. Mr. Phelan, the Hibernia Project has a field
8 called the Hibernia Southern Extension.

9 A. There was a--yes.

10 Hibernia Southern Extension is a Project that
11 was a separate sanction.

12 Q. It's also known as HSE?

13 A. HSE is the abbreviation.

14 Q. Does that include the BNA Reservoir?

15 A. So, Hibernia has a complex reservoir. BNA is
16 both Hibernia as well as HSE. Within the HSE world,
17 we have a--we call it Unit BNA. HSE unit, Hibernia
18 Southern Extension unit. I just need to clarify
19 that.

20 Q. And as you mentioned, HSE is a complicated
21 reservoir.

22 A. It is a complicated reservoir. Well, multiple

1 layers, but the Unit BNA is a component of it.

2 Q. As they say, it's highly faulted.

3 A. Most of the reservoir beneath the Hibernia
4 platform, but particularly the BNA is highly faulted,
5 yes.

6 Q. And R&D spending in the ordinary course at HSE
7 can be used to meet Hibernia's obligations as a whole
8 under the Guidelines?

9 MR. DOUGLAS: Sorry, David.

10 BY MR. DOUGLAS:

11 Q. And R&D spending in the ordinary course at HSE
12 can be used to meet Hibernia's obligations as a whole
13 under the Guidelines?

14 A. I would be careful with that calculation.
15 What you're referring to is that the Board does an
16 annual reconciliation. They combine Hibernia as well
17 as HSE and AA Block. Amongst the Owners there is a
18 different working interest with HSE, Province of
19 Newfoundland and Labrador with this Crown Corporation
20 and Nalcor have a working interest. So, amongst the
21 Owners we actually reconcile HSE separate from
22 Hibernia, so there are different expenditures and

1 different obligations for HSE than there are for
2 Hibernia.

3 Q. Could you open your Second Witness Statement
4 in this arbitration to Annex A, please.

5 A. I have Annex A in front of me.

6 Q. You see Line F, I believe, which says "HSE
7 specific expenditures" and in brackets "Hibernia
8 only"?

9 A. Yes.

10 Q. These are figures for HSE expenditures?

11 A. Yes.

12 This reconciliation as a whole is
13 expenditures, not obligations.

14 Q. And from 2012 to 2015 there is about
15 [REDACTED]?

16 A. There is [REDACTED].

17 Q. Dollars of "ordinary course" R&D at HSE?

18 A. There is HSE-specific expenditures of
19 [REDACTED].

20 Q. And these are not claimed as damages in this
21 arbitration?

22 A. We were not permitted, in order to sanction

1 the HSE Project, the Board and Province put in a
2 condition that we had to accept the--the Hibernia
3 Owners had to accept the R&D Guidelines as is when
4 the Project was sanctioned.

5 Q. So, these are taken out of your damages
6 calculations?

7 A. These amounts are taken out of the expenditure
8 calculations, not the obligations.

9 Q. Okay.

10 A. Two different calculations as Mobil I.

11 Q. If you could maybe keep your finger on Annex A
12 here, and if we could turn to Annex I. And I will
13 request the Tribunal's indulgence here for a moment.

14 PRESIDENT GREENWOOD: The picture on the
15 screen is no help whatsoever.

16 (Laughter.)

17 MR. DOUGLAS: Let's see if we can blow it up.

18 PRESIDENT GREENWOOD: It's not helpful, I've
19 forgotten to bring my reading glasses. I've only got
20 my distance glasses.

21 MR. DOUGLAS: We'll help you through it.

22 BY MR. DOUGLAS:

1 Q. This is a summary of R&D undertaken at
2 Hibernia in 2015?

3 A. Annex I?

4 Q. Yes.

5 A. Yes, Annex I is the 2015 calculations.

6 Q. And under Column F, this is a list of
7 HSE-specific expenditures undertaken in 2015?

8 A. That is correct.

9 Q. And if you go down to the bottom, it totals
10 about [REDACTED]?

11 A. It does.

12 Q. And the two expenditures listed there for the
13 same Project and it's called the "[REDACTED]
14 [REDACTED]"?

15 A. Yes.

16 Q. And these amounts were used to meet Hibernia's
17 obligations under the Guidelines in 2015?

18 A. They're to meet the HSE obligations.

19 Q. But HSE doesn't have obligations independent
20 of the Hibernia Project, does it?

21 A. HSE actually has an approved amendment to the
22 Development Plan, and the HSE Owners have to meet

1 their own obligations separate from Hibernia Owners.

2 Q. So, when the Board issues its annual
3 obligation, that's for the Hibernia Project as a
4 whole that includes HSE?

5 A. The Board deal with HMDC as the Operator of
6 the platform, and all of the costs are collected, all
7 of the expenditures are collected, and we submit that
8 in a single report to the Board.

9 The Board, as I pointed out in one of my
10 Witness Statements, the Board consolidated Hibernia
11 and HSE. However, amongst the Owners--and this is
12 particularly pertinent for Mobil--there is a
13 different working interest, and so, therefore, we do
14 separate amongst the Owners the obligations for
15 Hibernia versus the obligations for HSE.

16 Q. Okay. Let's turn back to Annex A for me, if
17 you could, and let's look at the Year 2015 in
18 particular.

19 Now, correct me if I have this wrong, but
20 Mobil doesn't claim damages for the Contractor R&D,
21 which is Line B; is that correct?

22 A. Well, sorry, the answer is we do not see

1 Contractor expenditures as incremental, so we've
2 taken a conservative approach. We do not file it,
3 no.

4 Q. Thank you. So, Mobil does not claim damages--

5 PRESIDENT GREENWOOD: Mr. Douglas, forgive me
6 for interrupting. Mr. Phelan, I'm worried that we're
7 making rather slow progress, if you could please try
8 to be more concise in your answers, the answer to
9 that question was clearly no. I think we can take it
10 as that.

11 THE WITNESS: Thank you.

12 BY MR. DOUGLAS:

13 Q. Nor does it claim damages for the Owner spend
14 with is Line C?

15 A. No.

16 Q. And nor not-claimed amounts which is Line E?

17 A. No.

18 Q. And then, of course, as we've just stated, not
19 the HSE expenditures, which is Line F?

20 A. That's correct.

21 Q. And we can see there the [REDACTED]
22 figure. That would be the [REDACTED] we just looked at?

1 A. That's correct.

2 Q. Okay. If we added up these numbers, and I do
3 apologize, I think there is a calculator on your
4 table, and I don't mean for us to use it, but by my
5 math, if we added these numbers up, we get to about
6 [REDACTED]?

7 A. Sorry, in terms of adding up the Contractor--

8 Q. Contractor Owner, not claimed, and
9 HSE-specific expenditures in the Year 2015.

10 A. Is approximately [REDACTED].

11 Q. [REDACTED]?

12 A. Approximately [REDACTED].

13 If you calculated it, if you have taken these
14 four numbers--

15 Q. I know, I'm a lawyer so, I'm not sure I would
16 trust mine, but I have done it a couple of times.

17 And the total required spending under the
18 Guidelines at Hibernia in 2015 was 14.6 million?

19 We can look at that, if you want.

20 A. So, the total--

21 Q. Do you want the total?

22 A. It's Board-required?

1 Q. Mm-hmm.

2 A. I think that's in Walck's Report as well.

3 Q. Yes, it is.

4 Did you want to take a look?

5 A. No.

6 If it is the number that was in Walck's
7 Report for the obligation--

8 PRESIDENT GREENWOOD: So, you said

9 [REDACTED].

10 MR. DOUGLAS: Yes.

11 PRESIDENT GREENWOOD: 14.6, not 24.6.

12 MR. DOUGLAS: Sorry, I guess I'm tired. My
13 apologies.

14 PRESIDENT GREENWOOD: No, I'm just trying to
15 make sure that these numbers, the record is as
16 accurate as we can make it.

17 BY MR. DOUGLAS:

18 Q. So, we have [REDACTED] of non-claimed
19 spending in 2015, and then obligation of 14.6 million
20 in 2015, and that's at Walck's Rejoinder Report at
21 Paragraph 57. It's in his table there at Table 1, if
22 you would like to confirm, that's fine.

1 A. Which table?

2 ARBITRATOR ROWLEY: We don't have to have all
3 these things confirmed if they're on the documents.
4 You can just ask him to accept it.

5 MR. DOUGLAS: Okay.

6 THE WITNESS: Could you just refer me to--

7 BY MR. DOUGLAS:

8 Q. Paragraph 57.

9 A. 57. Hibernia expenditure obligation?

10 Q. That's correct.

11 In 2015?

12 A. Yes.

13 Q. If you add up the 5.8 million and 8.7 million,
14 you get to about 14.6.

15 A. That's correct.

16 Q. Okay. So, if we divide the [REDACTED]
17 spending by the 14.6 million requirement, we get
18 about [REDACTED]?

19 A. If the obligation that you're comparing to the
20 expenditure was the same, I would say, no. But what
21 I'm referring to is HSE doesn't have the same
22 obligation, so the obligation as noted in Walck's

1 Report is a combined Hibernia and HSE, so you would
2 have to take HSE separate and compare Hibernia to
3 Hibernia.

4 Q. But you do take out the HSE expenditures in
5 2015 from the calculation of damages?

6 A. Well, maybe I should clarify. What I'm
7 pointing out is if we're going to mix obligations to
8 expenditures, we have to be very specific. In Mobil
9 I, obligations was a calculation we did as part (a)
10 in the shortfall or surplus amount. Incremental
11 Expenditures start with the actual expenditures
12 approved by the Board, and then we remove the
13 appropriate.

14 So, if you're asking me the calculation to
15 remove HSE expenditures from the overall Hibernia
16 obligation, that's one answer. However, if I'm going
17 to only compare the Hibernia expenditures against the
18 Hibernia obligation, that's a different number.

19 Q. How much oil did HSE produce in 2015?

20 A. I think in one of my tables I've indicated the
21 percentage, actually Annex B. And so, if we're
22 looking at HSE Block for 2015 was [REDACTED].

1 Q. So, we have a [REDACTED]
2 expenditure used to meet oil production that totals
3 [REDACTED] of what was produced from Hibernia in that
4 year; is that correct?

5 A. That's correct.

6 And [REDACTED] is a separate Project that is
7 identified specifically with HSE. Oftentimes with
8 Projects, you will see those types of expenditure,
9 but the key point here is the Board's calculation of
10 obligations is based on Hibernia AA Block and HSE,
11 and all I'm pointing out is you would actually have
12 to take the overall obligation and remove
13 [REDACTED] of that to get the Hibernia obligation,
14 but you do not deduct HSE expenditures from what's
15 left for Hibernia only, so you will get a different
16 number.

17 Q. And you can use that additional amount to meet
18 the obligations at the Hibernia Project?

19 A. If you get acceptance from the HSE Owners to
20 do so--in other words, the Board consolidate the two,
21 but in terms of looking at what the Claimant's
22 responsibility is or obligation, there's two separate

1 obligations on the books.

2 Q. And that was done for the [REDACTED]

3 A. The [REDACTED] is part of HSE, and so it
4 would--if you take [REDACTED] multiply it by the total
5 Hibernia production, I believe you get a number
6 that's less than a couple of million for obligation
7 for HSE. So, in essence, HSE is in surplus.

8 Q. But that expenditure [REDACTED] was used to meet
9 the obligations as a whole.

10 A. The Board consolidates.

11 Q. But do the other Owners agree that that
12 Project--

13 A. No, actually, each of the Owners have their
14 own accounting, so they account for Hibernia separate
15 from HSE, as does Mobil.

16 Q. I just meant for the--

17 (Overlapping speakers.)

18 Q. Just to repeat the question, I was just
19 wondering whether the [REDACTED] was used to meet the
20 Hibernia Project as a whole its obligations?

21 A. From the Board's perspective, they have taken
22 the overall Hibernia total obligations, and they've

1 used the Mazeflo to report back.

2 PRESIDENT GREENWOOD: Can I just be clear
3 about this because I think we're getting a bit bogged
4 down.

5 What I take from your evidence,
6 Mr. Phelan--and correct me if I'm wrong about
7 this--is that, because of the different ownership in
8 the accounts of the various companies, HSE
9 expenditure and revenue would have been accounted
10 separately from Hibernia?

11 THE WITNESS: That's correct.

12 PRESIDENT GREENWOOD: Yes. But, in terms of
13 satisfying the Guidelines requirements for the Board,
14 money spent on R&D connected with HSE could be used
15 to discharge the obligation for Hibernia as a whole?

16 THE WITNESS: The Board does permit that.

17 PRESIDENT GREENWOOD: So, the answer to my
18 question is yes?

19 THE WITNESS: Yes.

20 PRESIDENT GREENWOOD: Right. I think that's
21 the essence of the point we've been looking at for
22 the last quarter of an hour or so. Thank you.

1 MR. DOUGLAS: And I just have one final
2 question on this.

3 BY MR. DOUGLAS:

4 Q. If you could just clarify what Mobil's share
5 of HSE is for me.

6 A. It's approximately 27 percent.

7 Q. Okay. Thank you.

8 Does ExxonMobil ever buy or sell working
9 interests in an oilfield?

10 A. I believe the answer to that is yes.

11 Q. And other oil companies do the same?

12 A. Yes.

13 Q. Okay. Would the value of the working
14 interests be affected by the amount of oil the field
15 is expected to produce?

16 A. Yes.

17 Q. And would you expect the value would fluctuate
18 if there is more or less recoverable oil?

19 A. Yes.

20 Q. And would the value of that working interest
21 also be affected by the price of oil?

22 A. Yes.

1 Q. And if the field is somewhere overseas in a
2 country where currency fluctuates relative to the
3 U.S. dollar, the value of that working interest might
4 also be affected by the Exchange Rate; correct?

5 A. Yes, it would.

6 Q. So, it's fair to say that companies like
7 ExxonMobil use oil production, oil prices and
8 exchange rates to put a value on their working
9 interests; correct?

10 A. That's correct.

11 Q. And in their assessments they will also
12 account for political risk?

13 A. That's one of the sensitivities.

14 Q. And regulatory uncertainty?

15 A. That is a sensitivity.

16 Q. And they will apply a Discount Rate to account
17 for those uncertainties?

18 A. That is correct.

19 Q. And the figure that comes out at the end would
20 reflect an assessment of the value of the interest?

21 A. That would be correct.

22 Q. And oil companies typically have to make these

1 projections to justify their initial investment,
2 don't they?

3 A. They do upon initial investment, yes.

4 Q. And when changes in ownership occur after the
5 initial investment, those projections can again be
6 used in determining transaction values; is that
7 right?

8 A. Sorry, just ask the question once more.

9 Q. Yes.

10 When changes in ownership occur after the
11 initial investment, those projections can again be
12 used in determining transaction values?

13 A. They could be used, yes.

14 Q. And if a new cost has been added that is
15 expected to continue for the remaining life of the
16 Project, all other things being equal, the
17 transaction value would drop; is that right?

18 A. Depending on what that cost is, yes.

19 Q. And that decrease in the transaction value
20 would reflect the best estimate as to the Present
21 Value of the impact of that new cost?

22 A. That's correct.

1 Q. Does ExxonMobil undertake Research and
2 Development at its other Projects worldwide?

3 A. It does.

4 Q. Does ExxonMobil undertake Research and
5 Development during the Production Phases at its
6 Projects worldwide?

7 A. It does.

8 Q. And Mobil submitted a Request for Arbitration
9 in the Mobil and Murphy Case on November 1st, 2007?

10 A. That's correct.

11 Q. And in its Request for Arbitration, Mobil
12 sought damages from Canada caused by the Guidelines
13 over the lives of the Hibernia and Terra Nova
14 Projects?

15 A. That's correct.

16 Q. And Mr. Rosen filed his First Expert Report on
17 July 30th, 2009?

18 A. It was in July 2009, yes.

19 Q. And the approach he adopted to quantify
20 damages contained essentially two fundamental
21 elements. The first was the total amount of spending
22 required by the Guidelines over the life of the

1 fields?

2 A. That's correct.

3 Q. And the second was the level of spending the
4 Projects would undertake in the ordinary course of
5 business?

6 A. Based on our assumptions, yes.

7 Q. And generally speaking, for the lives of the
8 Projects, Mr. Rosen took the total required spending
9 less the "ordinary course" spending to get the
10 Claimant's damages?

11 A. To look at the life of field, yes.

12 Q. And Mr. Rosen did not model the damages case
13 as one for lost future profits?

14 A. Pardon?

15 Q. Mr. Rosen did not model the damages case as
16 one for lost future profits?

17 A. No. It was an expenditure profile over the
18 life of field.

19 Q. So, he quantified a lump sum that the Claimant
20 could draw on to make future payments under the
21 Guidelines?

22 A. It was, yeah--yes, it was a lump sum, Present

1 Value.

2 Q. And Mr. Rosen filed a second Damages Report in
3 support of his approach on April 8th, 2010?

4 A. Yes, he did.

5 Q. And then a Third Expert Report on damages on
6 August 6th, 2010?

7 A. I believe that to be the date.

8 Q. And all of these were before the Merits
9 Hearing in October of 2010.

10 A. They were.

11 Q. So, Mobil had three opportunities to set out
12 its damages case in whatever fashion it believed
13 would provide the Tribunal with reasonable certainty
14 regarding its future damages?

15 A. We sought external experts to validate the
16 numbers that Rosen put into his assumptions.

17 Q. And there were uncertainties inherent in the
18 model used by Mr. Rosen in his three expert reports;
19 is that right?

20 A. I think the uncertainty is they are the same
21 as the Guidelines uncertainties.

22 Q. Did you investigate any ways to reduce that

1 uncertainty?

2 A. In Mobil I, there was plenty of opportunity by
3 both sides to try to come to some degree of
4 acceptance of the other Party's numbers, so attempts
5 were made to come to a number.

6 Q. But just for the part of ExxonMobil, was there
7 an investigation in ways to reduce that uncertainty?

8 A. There was no precedent in terms of R&D
9 Guidelines and understanding what some of the
10 variables and factors were, such as Stats Canada,
11 which was new for us. The whole issue of Research
12 and Development and the definition was new to us.
13 Incremental versus ordinary was new to us. So, there
14 was nothing that we could benchmark against.

15 Q. Did you investigate other ways to the approach
16 of the calculation of damages?

17 A. We actually believe that the way we presented
18 it was in line with the R&D Guidelines formula.

19 ARBITRATOR ROWLEY: I don't think that's an
20 answer to the question.

21 THE WITNESS: I'm sorry. Okay.

22 Could you please repeat the question?

1 BY MR. DOUGLAS:

2 Q. I was just wondering whether you investigated
3 any other ways to approach the calculation of
4 damages?

5 A. We had different scenarios, but ultimately
6 what we issued was the damaged model that was in
7 Mobil I.

8 Q. If you wouldn't mind turning to Paragraph 89
9 of your Second Witness Statement, please.

10 A. I have that in front of me.

11 Q. Here, you're responding to Mr. Walck who
12 suggests in his First Expert Report in this
13 arbitration that a valuation-based damages model
14 could have been used?

15 A. That is correct.

16 Q. And you agree this could have been possible?

17 A. Any Valuation Model that we put forward would
18 have actually been right back to the same factors
19 that are in the Guidelines.

20 What I'm getting at is, if you look at life
21 of field cash-flow projections, the only variable
22 that changes would be the R&D formula.

1 Q. So, again, you agree that it could have been
2 possible.

3 A. If we had provided that type of model, it
4 would have come to the same conclusion that Rosen's
5 model shows.

6 PRESIDENT GREENWOOD: Mr. Phelan, please
7 answer the questions put to you and not the question
8 you would have liked to have been asked.

9 THE WITNESS: Right. I understand that.

10 PRESIDENT GREENWOOD: The question that was
11 put to you is: Would it have been possible to use
12 another model, not what other model, a better one
13 than the one that you actually used.

14 THE WITNESS: Thank you.

15 Yes, it would have been possible.

16 BY MR. DOUGLAS:

17 Q. But likely would not have provided more
18 certainty, in your view?

19 A. That's correct.

20 Q. Did you do or consider doing any investigation
21 of how Mobil's transactional people would assess the
22 impact of the Guidelines on the potential value of

1 Mobil's Hibernia investment?

2 A. No, we did not.

3 Q. Did you do or consider doing an investigation
4 of how Mobil's transactional people would assess the
5 impact of the Guidelines on the potential value of
6 Mobil's Terra Nova investment?

7 A. No, we did not.

8 Q. You mentioned earlier that you did investigate
9 other scenarios, but you decided not to put those
10 other scenarios forward?

11 A. We conducted sensitivity analyses around the
12 numbers. For example, with the Stats Canada factor
13 we had in our model as high as .6 versus what was
14 actually submitted, so maybe I should indicate we did
15 sensitivity analysis around our number and felt that
16 we went in with a conservative approach in the case
17 of Mobil I.

18 Q. My question was that you didn't put those on
19 the record in the Mobil and Murphy Arbitration?

20 A. No, we did not.

21 Q. And the ownership percentages in Terra Nova
22 changed during the Mobil and Murphy Arbitration?

1 A. Yes.

2 Q. Do you know if at all the impact of the
3 Guidelines affected the value at which those
4 ownership changes were made?

5 A. The Guidelines did not impact the ownership
6 changes at all. It was on a reservoir basis, not on
7 a cost basis.

8 Q. Give me just one moment.

9 A. Sure.

10 (Pause.)

11 Q. Apologies.

12 A. Take your time.

13 Q. There are several approaches to meeting the
14 spending requirements under the Guidelines; is that
15 right?

16 A. Yes.

17 Q. For example, the requirements can be met by
18 spending on R&D that is necessary for the Hibernia
19 and Terra Nova Projects?

20 A. That's always the preferred option.

21 Q. And typically spending that is necessary for
22 the Projects is done through the Projects' joint

1 account?

2 A. That is correct.

3 Q. And the cost of the expenditure is shared by
4 the individual Owners in proportion to their interest
5 in the Project?

6 A. That is correct.

7 Q. For example, Mobil has a 33.125 percent
8 interest in the Hibernia Project; is that right?

9 A. That is correct.

10 Q. And Mobil can meet its share of the
11 obligations under the Guidelines with its own
12 "ordinary course" spending?

13 A. Yes.

14 Q. But, in that context, it pays for the
15 expenditures on its own?

16 A. That's correct.

17 Q. Without the other Owners?

18 A. That is correct.

19 Q. And the Claimant did make such expenditures
20 between 2012 and 2015?

21 A. I believe year--or total to date about
22 [REDACTED] of ExxonMobil owner-specific expenditures.

1 Q. And it doesn't claim those expenditures as
2 damages in this arbitration?

3 A. No, we do not.

4 Q. And the Claimant didn't need to get
5 pre-approval from the Board for these R&D
6 expenditures?

7 A. The requirement for pre-approval was no. What
8 we typically--just for clarity--we typically submit
9 the cost to see if the Board are going to consider it
10 as eligible.

11 Q. But it's not required under the Guidelines for
12 Owner spend?

13 A. I don't believe it's required for Owner spend.

14 Q. And the downside to making expenditures at the
15 Owner level under the Guidelines is that you can't
16 use it to offset your royalty payments to the
17 Province?

18 A. That is true.

19 Q. At Hibernia, the offsets would total
20 30 percent of the expenditure?

21 A. At Hibernia, it's 30 percent plus 10 percent
22 Net Profits Interest.

1 Q. And at Terra Nova, it's 42.5 percent of the
2 expenditure? You can offset your royalty payments;
3 is that right?

4 A. That is correct.

5 Q. And then, as you've mentioned, another
6 downside, you won't be able to use the expenditure to
7 offset your Net Profit Interest payment if it's done
8 at the Owner spend level; is that right?

9 A. Well, I wouldn't see it as a downside.
10 ExxonMobil, if they're investing in R&D solely for
11 their own purpose, were not looking at the whole
12 issue of royalties.

13 Q. I just meant that--

14 A. Sorry.

15 Q. An Owner spend isn't eligible under the Net
16 Profit Interest.

17 A. An Owner spend is not eligible, you're
18 correct.

19 Q. But an expenditure through the joint account
20 is.

21 A. An expenditure through the joint account may
22 be eligible, depending on the determination--

1 Q. Okay.

2 A. --by the Province or the Feds.

3 Q. And the offset to NPI is about 10 percent of
4 the expenditure?

5 A. That is correct.

6 Q. Okay. So, let's take a hypothetical
7 \$1 million R&D expenditure. Now, you've mentioned
8 the Claimant could engage this expenditure itself and
9 spend down 1 million of its obligations under the
10 Guidelines; is that right?

11 A. That--if they want to keep the proprietary
12 rights, yes.

13 Q. And alternatively, if payment for these
14 expenditures is made through the joint account, the
15 \$1 million expense is distributed between the Owners?

16 A. That's correct. We would pick up
17 33.125 percent in the case of Hibernia.

18 Q. So, in this particular example, an expenditure
19 that would cost Mobil one million dollars cost it
20 \$330,000 through the joint account, approximately?

21 A. That's correct, if there was a project like
22 that.

1 Q. Okay. And assuming Mobil can use the expense
2 to offset its royalty payments, that could be another
3 30 percent write-off at Hibernia?

4 A. Well, again, if we get all of the Owners in
5 agreement that it goes to the joint account, then all
6 of the Owners share in the royalty deduction.

7 Q. And that would be about 30 percent.

8 A. And that's 30 percent, plus your Net Profits
9 Interest for Hibernia.

10 Q. So, of Mobil's \$330,000 share of the 1 million
11 expenditure, that would be a \$99,000 deduction?

12 A. Approximately.

13 Q. Okay. And assuming Mobil can use the expense
14 to offset its NPI payments, that would be a
15 10 percent write-off?

16 A. That's correct.

17 Q. It would be a \$33,000 reduction?

18 A. Approximately.

19 Q. And assuming the expense is eligible under the
20 SR&ED Tax Credit Program, that would be a 27.75
21 percent tax write-off?

22 A. After 2013, if it's SR&ED-eligible, yes.

1 Q. And that would be roughly a \$92,000 deduction?

2 A. I believe that's approximately correct.

3 Q. You're very good at math on your feet. It
4 took me awhile.

5 If we added these up, the \$99,000 deduction, the
6 \$33,000 deduction, and the 92,000 for SR&ED, that
7 would total about \$224,000?

8 A. I believe that to be correct.

9 Q. And if you subtracted those deductions from
10 Mobil's share of the \$1 million expenditure, you get
11 \$106,000?

12 A. I believe so.

13 Q. So, an expenditure that might cost Mobil 1
14 million to engage on its own could cost \$106,000
15 through the Hibernia joint account?

16 A. If it was something that ExxonMobil put
17 through the joint account with the agreement of all
18 of the Owners, and something all the Owners support,
19 then yes, the calculation is correct.

20 Q. To meet its obligations under the Guidelines,
21 Mobil can move R&D into the Province from other
22 locations?

1 A. Typically, we don't look at taking any
2 ExxonMobil-specific R&D to move into the Province.

3 Q. If you wouldn't mind turning--

4 PRESIDENT GREENWOOD: Mr. Phelan, again,
5 that's not the question you were asked. You were
6 asked whether you could do it, not whether Mobil did
7 do it. Please try to focus your answers on the
8 questions put to you.

9 THE WITNESS: Yes. It could be done.

10 BY MR. DOUGLAS:

11 Q. Could you turn to Tab 1 for me of your binder
12 there, please. This is your First Witness Statement
13 in the Mobil and Murphy Arbitration. It's
14 respondent's Exhibit 248. And if you could turn to
15 Paragraph 29(c), please.

16 And you state here that one possibility, in
17 terms of meeting the obligations, is to move
18 expenditures from the Upstream Research Company in
19 Houston into the Province?

20 A. That is one of the options that is in this
21 Statement.

22 Q. Okay. Has, in fact, Mobil moved Research and

1 Development from URC into the Province to meet the
2 obligations under the Guidelines?

3 A. I'm not aware of any specific ExxonMobil URC
4 Projects.

5 Q. Perhaps if we could turn to Tab 8 of your
6 binder, then, which is your Fifth Witness Statement
7 in the Mobil and Murphy Arbitration. And it's
8 Respondent's Exhibit 70; and if we look at
9 Paragraph 4, please.

10 You testified here that Mobil has worked hard
11 to find ways to comply with the Guidelines; is that
12 correct?

13 A. It was the Operator's--the Projects as well as
14 their individual Owners, yes.

15 Q. And you mentioned you had explored
16 project-level R&D joint industry initiatives, and
17 diverting existing R&D work from individuals Owners'
18 research centers?

19 A. Andrew Ringvee had discussions with all of the
20 Owners when we were developing the Work Plan to see
21 if there was any possibility.

22 Q. The last sentence here says: "As it turns

1 out, we have relied on a combination of all three
2 approaches in our efforts to spend down our
3 Guidelines obligations."?

4 A. That is correct.

5 Q. So have you, in fact, then, under this
6 testimony, moved R&D expenditures from URC into the
7 Province?

8 A. Again, I'm not aware of specific Projects that
9 ExxonMobil have that they moved into the Province.

10 When you go back to my Witness Statement and
11 look at it, Andrew Ringvee was pulling together a
12 Work Plan. He brought in a joint-industry task force
13 to look at all opportunities that included all of the
14 Owners, and so this comment here is factual. We
15 looked at all three approaches in that joint
16 industry.

17 But I'm not the best one to know specifically
18 if we have URC Projects specifically being brought
19 into the joint account.

20 As a matter of fact, I doubt we brought URC
21 value-added ExxonMobil Projects into the joint
22 account.

1 Q. But you do state here that "We have relied on
2 a combination of all three." Would you stand by that
3 testimony?

4 A. Our Work Plan reflects all three. That was in
5 2010. That's Andrew Ringvee's Work Plan.

6 Q. And, under the Guidelines, an option is
7 created to deposit money into a fund that would be
8 managed by the Board in conjunction with the
9 Operator?

10 A. That is correct.

11 Q. And we can call this the Board's fund?

12 A. That's fair.

13 Q. And that's found in Section 4.2 of the
14 Guidelines?

15 A. I believe that to be correct.

16 Q. And you raised the fund as an option in your
17 First Witness Statement in the Mobil and Murphy
18 Arbitration?

19 A. It was one of many options that was at hand in
20 our conversations with the Board and the other
21 Owners.

22 Q. Why don't we--sorry, since we were just there,

1 why don't we take a look at it again. It was Tab 1,
2 and it was Subparagraph (d).

3 MR. DOUGLAS: Apologies, I should have asked
4 everyone to put their finger there.

5 THE WITNESS: Sorry, which--

6 BY MR. DOUGLAS:

7 Q. It's respondent's Exhibit 248, Tab 1,
8 Paragraph 29(d).

9 And you state there: "The Hibernia Owners
10 determined that there is insufficient opportunity to
11 undertake value-added and cost-effective R&D in the
12 Province, a final option would be to simply deposit
13 unspent expenditure commitments into a fund as
14 contemplated by the Guidelines."

15 A. That's correct--if you look at exhausting A,
16 B, and C, first.

17 Q. So, rather than having spending shortfalls
18 placed into the Board's fund, Mobil proposed filing
19 Letters of Credit to the Board?

20 A. Actually, the Owners suggested--again, each
21 Operator had a responsibility.

22 Q. And Mobil would have been part of that

1 Decision.

2 A. We agreed with our partners.

3 Q. Okay. So, it was a proposal that came from
4 the Operators.

5 A. It was a proposal from the Operators.

6 Q. So that future spending could be used to meet
7 past shortfalls.

8 A. That is one of the options, yes.

9 Q. Okay. And the Letter of Credit will be drawn
10 down by the Board if spending requirements aren't met
11 within a specified timeframe?

12 A. I'm sorry, Adam, could you repeat that
13 question?

14 Q. Oh, yes--just the Letter of Credit will be
15 drawn down by the Board if spending requirements
16 aren't met within a specified timeframe?

17 A. That's correct. Under the OA, the Board can
18 call, and I believe they give 90-day notice.

19 Q. Mobil incurs a cost to file these Letters of
20 Credit?

21 A. We do.

22 Q. And claims those costs as damages in this

1 arbitration?

2 A. We have.

3 Q. And that totals--what--[REDACTED]?

4 A. I agree.

5 Q. And these costs, would they have been incurred
6 if the Board's fund were used?

7 A. They would not have been incurred if the
8 Board's fund was used because we would have paid to
9 the fund.

10 Q. Okay. In the Mobil and Murphy Arbitration,
11 Mobil claimed as damages the entire amount of the
12 Shortfall as of April 2012 at Hibernia?

13 A. That's correct.

14 Q. And December 2011 at Terra Nova?

15 A. That is correct.

16 Q. And Canada argued in the Murphy and Mobil
17 Arbitration that Mobil would meet these Shortfall
18 spending requirements with future "ordinary course"
19 spending? Do you remember that?

20 A. Sorry, could you repeat.

21 Q. Well, we argued in the Mobil and Murphy
22 Arbitration that those shortfall amounts would be met

1 with future "ordinary course" spending?

2 A. I'm sorry, Canada argued--

3 Q. Yes, yes--you're right. Yes. Is that
4 correct?

5 A. Yes, Canada argued.

6 Q. I will just restate the question: It was
7 Canada's argument that--

8 A. I'm sorry--yes.

9 Q. --those spending Shortfalls would be met with
10 future "ordinary course" spending?

11 A. Yes.

12 Q. And, thus, Mobil shouldn't be entitled to the
13 full amount as damages.

14 A. That was Canada's position.

15 Q. You testified that Mobil is responsible for
16 managing its own portion of the Shortfall?

17 A. Each Owner has to submit--if it's a Letter of
18 Credit, each Owner has--and that was agreed amongst
19 all Hibernia and Terra Nova Owners. So, we have an
20 obligation to issue a Letter of Credit for our
21 portion.

22 Q. And Mobil puts its, as you mentioned, own

1 Letter of Credit in place which it manages itself?

2 A. That's correct. HMDC does not have the
3 authority to enter into Letters of Credit without
4 Owner approval.

5 Q. Okay. And going forward, Mobil is not
6 required to use future annual expenditures to pay off
7 past Shortfalls; is that right?

8 A. I'm sorry?

9 Q. Mobil can let the Letter of Credit be drawn
10 down, if that was its choice?

11 A. If that's the choice of all of the Owners.

12 Q. So, Mobil does not have the choice to have its
13 own Letter of Credit drawn down by the Board?

14 A. If the Board were to draw down Mobil's Letter
15 of Credit, it would put us in a position of
16 disadvantage because, as I mentioned earlier today,
17 we still have the joint-account expenditures.

18 So, the Board call the Operator, and so all
19 of the Owners would have to agree to allow the
20 Letters of Credit to be drawn down. Otherwise, there
21 is a disproportionate share of future joint-account
22 costs.

1 Q. Why don't we turn to--sorry again for flipping
2 back again, but it's back to Tab 8, which is your
3 Fifth Witness Statement in the Mobil and Murphy
4 Arbitration, which is Respondent Exhibit 70, and at
5 Paragraph 40, please.

6 You testify here that it may make more sense
7 for Mobil to simply allow the Board to draw down on
8 your Letter of Credit; is that right?

9 A. I made--in my statement here is it makes
10 more--it made more sense for the Project Owners to
11 consider. Amongst all of the Owners, we had
12 conversation as to whether it would be easier for
13 Hibernia to just allow the Letters of Credit be
14 drawn.

15 Q. Well, if we look at the last paragraph,
16 Paragraph 39, the last sentence reads: "As such
17 going forward, Claimants are not required to use
18 future annual expenditures to pay off past
19 shortfalls."

20 So, it seems to be a reference to Mobil and
21 Murphy; is that right?

22 A. Well, in Paragraph 39, that's a reference to

1 Mobil and Murphy.

2 Q. And then you mentioned that it is not
3 necessarily the case that Mobil will take that
4 approach with regard to our current or future
5 shortfalls; is that correct?

6 A. I think--if you're referring to the word "us"
7 and implying that it's the Claimants only, that's
8 your conclusion.

9 Q. Well, reading, then, into the next paragraph,
10 "where it made more sense for us to simply allow the
11 Board to draw down on our Letters of Credit."

12 A. Okay.

13 Q. It's referring to the Claimants using existing
14 spending to meet other past obligations or existing
15 obligations.

16 A. I will take back my statement. I understand,
17 Adam.

18 We were responding to--this whole section
19 talks about the Claimant's shortfall, so I will take
20 it back and indicate that it's the Claimant.

21 Q. Okay. So, you're testifying here that it may
22 make more sense for Mobil to simply allow the Board

1 to draw down on its Letter of Credit; is that right?

2 A. That's correct.

3 Q. Rather than devote time--management, time and
4 effort to devising new R&D opportunities for the
5 Project; is that right?

6 A. That's correct.

7 I just wanted to caution again, we can't do
8 that on our own, the Board looked to the full
9 ownership.

10 ARBITRATOR ROWLEY: Forgive me. I thought
11 you could do it on your own. It's just
12 disadvantageous to do so.

13 THE WITNESS: I'm sorry, you're correct. I
14 mean, we could do it if the Board were to make a
15 call. It would--it has never occurred that the Board
16 has made a call on a single Owner of--actually, the
17 Board hasn't made a call on any Letters of Credit
18 that I'm aware of, so it's not typical of the Board
19 to go to individual owners making calls, so I might
20 have confused the Tribunal. I apologize.

21 PRESIDENT GREENWOOD: I'm sorry, I didn't
22 think that was Mr. Rowley's question.

1 THE WITNESS: I'm sorry.

2 PRESIDENT GREENWOOD: It wasn't whether the
3 Board had done this. The question is whether Mobil
4 could have just decided to let the Letter of Credit
5 be called upon at some stage in the future.

6 THE WITNESS: Okay.

7 PRESIDENT GREENWOOD: I hope that's properly
8 paraphrasing--

9 THE WITNESS: I'm sorry. So, the answer is
10 yes, Mobil could let it expire.

11 PRESIDENT GREENWOOD: Thank you.

12 BY MR. DOUGLAS:

13 Q. So, is it your position that Mobil cannot opt
14 out of HMDC expenditures even if it's something that
15 they don't have an interest in doing?

16 A. We'd have to get an agreement from all of the
17 Owners as per the Field Operating Agreement.

18 Q. If you turn to Tab 5 for me, please, in your
19 binder. This is Respondent's Exhibit 284, and it's
20 the hearing Transcript from the merits in
21 October 2010; is that correct?

22 A. That's correct.

1 Q. If you could turn, if you could, I think there
2 are some page numbers at the bottom. It would be
3 Page--let's start at 78.

4 Are you there?

5 A. Yes, I am.

6 Q. And actually apologies. If you flip just to
7 one page on 77, you can see this is the redirect
8 examination of Mr. Rivkin of you; is that correct,
9 Mr. Phelan?

10 A. Yes.

11 Q. And down on Page 391, I believe he's asking
12 you questions about the work plans; is that correct?

13 A. Yes. And if you're referring to "do you know
14 today how the money will be spent"?

15 Q. Yes, that is correct.

16 And you state here that, on Line 8, that
17 "we've also had to go to the Hibernia Owners and seek
18 their approval that we could proceed with the various
19 projects." Is that correct?

20 A. As HMDC, yes.

21 Q. And then the Hibernia Owners have given us
22 approval on first phase of these projects?

1 A. Yes. I was referring to the Work Plan.

2 Q. Mm-hmm. And you state: "So, we may find as
3 we go forward that some of the Hibernia owners may,
4 in actual fact, elect to opt out because they may
5 feel that it's not something that's of interest to
6 those specific owners."

7 A. That is correct.

8 Q. So, individual owners can opt out of
9 expenditures that are not of interest to them?

10 A. No. The process--they can opt out, but they
11 can't opt out of the joint account.

12 What would happen in this specific
13 circumstance is the Project would have to be funded
14 outside the joint account.

15 So, as I mentioned earlier, you'd have to
16 have a separate agreement or an amendment to the
17 existing joint-account agreement.

18 Q. Why don't you turn to Tab 9 for me, please.

19 MR. DOUGLAS: I wonder whether we might take
20 a lunch break at some point.

21 PRESIDENT GREENWOOD: Well, I would like to
22 take a snapshot of where we stand at the moment. How

1 much longer is this cross-examination going to take?

2 MR. DOUGLAS: I don't think a significant
3 amount of time, but it could be another 20 minutes or
4 so, if not more. It depends on the answers, I guess.

5 PRESIDENT GREENWOOD: Well, if it's of the
6 order of about 20 minutes, then even allowing a bit
7 of extra time if it takes longer, we could run
8 through and finish it by lunchtime, which I would
9 prefer to do.

10 MR. DOUGLAS: I'm happy to proceed.

11 BY MR. DOUGLAS:

12 Q. So, at Tab 9, which is Respondent's
13 Exhibit 290.

14 A. Okay. I have it in front of me.

15 Q. Yes. We will pull it up.

16 If we could go to, I think it's Page 234. And
17 it's the Transcript page there, so it's sheet 60, I
18 believe.

19 And this is a transcript of your testimony
20 from the damages hearing of the Murphy and Mobil
21 Arbitration?

22 A. It is. Sorry, it is.

1 Q. And my friend, Mr. Gallus, counsel for Canada,
2 was asking you some questions about the Letters of
3 Credit.

4 A. I believe it is Mr. Gallus.

5 I'm being asked.

6 Q. And again, at Line 10 of Page 34, states that
7 ExxonMobil, you're still assessing all of the
8 different avenues; is that correct?

9 A. Yes, that's the context of that particular
10 statement.

11 Q. And what you mean by that is it may be better
12 for Mobil to just focus on the current period and
13 look at current expenditures being applied to the
14 current obligation because we don't get into the
15 exhaustive effort relative to the assessment of
16 Incremental Expenditures for future claims; is that
17 correct?

18 A. That is my statement.

19 Q. And what you mean by that is ExxonMobil might
20 focus on obligations in the current year and let the
21 Board draw down on its Letters of Credit; is that
22 right?

1 A. What I mean by that is that ExxonMobil may,
2 working with the other Hibernia owners, just elect to
3 basically focus on the period at hand.

4 Q. Rather than come up with new "incremental"
5 spending?

6 A. That's correct.

7 Q. And I think, again down at Lines 12 to 15, you
8 state: "From an ExxonMobil perspective, it may be
9 cleaner and less of an administrative burden to just
10 focus on current year's expenditures and obligations
11 going forward." Is that correct?

12 A. Sorry, I'm just trying to jump--Page--

13 Q. Page--yes, Page 235.

14 A. 235?

15 Q. Lines 12 to 15.

16 A. Right. I was--yes. So, from the ExxonMobil
17 perspective, it may be cleaner and less an
18 administrative burden.

19 Q. And again, in this context here, and people
20 can read if they like, but at Paragraph 237, you
21 state: "We have to evaluate what's best for
22 ExxonMobil." Am I correct?

1 A. In light of the NAFTA claim, yes.

2 Q. Okay. But Mobil doesn't want to use the fund
3 or allow the Board to draw on its letter of credit;
4 is that right?

5 A. Our preference is not to see the Letter of
6 Credit or the fund used.

7 Q. Because it wouldn't bring any value.

8 A. Because, again, it's not a wise investment
9 decision to just relinquish cash. So, if we are able
10 to find opportunities value-added to the Projects,
11 and that is always our better option. If I released
12 the funds prematurely and then I find a value-added
13 projects, now I've doubled my cost.

14 Q. If you flip back just to Page 230, if you
15 could, it's at Line 19. Mr. Gallus asks you, about
16 the funds and writing a check to the Board isn't good
17 business practice. Do you stand by your view that
18 that's not a fair--that is a fair statement?

19 A. I stand by that view.

20 Q. And, under the Guidelines, Mobil has actively
21 looked for opportunities to undertake work that will
22 bring it benefit.

1 A. Each of the Operators have actively. Mobil
2 has contributed to that pursuit.

3 Q. Which is why you testified in the Mobil and
4 Murphy Arbitration, and we looked at this back at
5 your First Witness Statement, where if there was no
6 value-added R&D opportunities, Mobil will simply put
7 money into the Board's fund.

8 A. If you've exhausted all other avenues, the
9 answer is yes.

10 Q. And obviously no money has been put into a
11 Board's fund; is that correct?

12 A. We have not been requested--the Owners have
13 not been requested--when I say "Owners," Operators
14 have not been requested to put any monies in any
15 funds.

16 ARBITRATOR ROWLEY: And again, it's not
17 responsive to the question.

18 THE WITNESS: I'm sorry.

19 Could you repeat the question?

20 BY MR. DOUGLAS:

21 Q. No money has been put into the Board's fund;
22 is that correct?

1 A. No money has been put into any fund.

2 Q. So, value-added Research and Development has
3 been engaged; is that right?

4 A. It's been value-added in that we have met our
5 obligation as a group of Owners.

6 PRESIDENT GREENWOOD: I'm sorry, Mr. Phelan.

7 THE WITNESS: Sorry.

8 PRESIDENT GREENWOOD: That again is not an
9 answer to the question.

10 THE WITNESS: I'm sorry.

11 PRESIDENT GREENWOOD: The question you were
12 asked was, so value-added Research and Development
13 has been engaged; is that right?

14 Remembering it's been value-added in that we
15 have--I just rolled your answer into the question
16 because that's way it's come up on the transcript.
17 The question was: So, value-added Research and
18 Development has been engaged; is that right?

19 THE WITNESS: I can't say that it's been
20 value-added. There has been some value-added which
21 had been specific to the Project, but I can't say
22 that some of our other spend such as Manuels River

1 would necessarily be considered value-added for
2 Mobil.

3 BY MR. DOUGLAS:

4 Q. Okay. Mobil recognizes offsets to royalty
5 payments on a monthly basis?

6 A. We do.

7 Q. And uses all of its spending under the
8 Guidelines to offset its royalty payments.

9 A. We deduct a hundred percent, consistent with
10 all of the other Owners.

11 Q. If you could turn to--and I think you have it
12 Canada's Rejoinder at Paragraph 287. We can pull it
13 up on the screen for the benefit the Tribunal, if
14 they like.

15 Mine just broke.

16 A. This one?

17 There it is, thank you.

18 I have 287 in front of me.

19 Q. Okay. Feel free to take a moment just to read
20 it.

21 Mr. Phelan, can you confirm whether the amount
22 of savings Mobil enjoys on its royalty payments as a

1 result of its spending under the Guidelines is equal
2 to the amount of royalties it pays on its incidental
3 revenue?

4 A. Sorry, could you repeat that question once
5 more, please.

6 Q. Yes. You testified in directed today about
7 this savings on one date which happens on a monthly
8 basis, and the payment on royalties as incidental
9 revenue on an award at a later date.

10 A. Right.

11 Q. I'm just asking you whether those two figures
12 are identical.

13 A. Which two figures are identical?

14 Q. The savings that you take.

15 A. Okay. So, the 30 percent deduction. So, if I
16 have a million dollars, I deducted \$300,000 from my
17 royalties payable, so that is at the date that I
18 deduct it, yes.

19 Q. Mm-hmm.

20 A. And your question is...

21 Q. When it is paid, when royalties are paid on
22 incidental revenue--

1 A. Yes.

2 Q. --such as the Mobil and Murphy Arbitration
3 Award--

4 A. Right.

5 Q. --is that amount equal to--

6 A. Yes.

7 Q. --the amount that was saved.

8 (Overlapping speakers.)

9 A. I'm sorry. Now I understand.

10 Q. I was just wondering whether the amount paid
11 as incidental revenue on the Award is the same as the
12 amount that was saved.

13 A. Thank you for a clarification. I understand
14 the question.

15 Q. Okay.

16 A. It's yes, the amount is the same. We have
17 deducted exactly the same amount.

18 Q. Okay. That's great. Thank you.

19 Now, on its savings, Mobil would prefer to
20 have its cash earn a return rather than letting it
21 sit idle; is that correct?

22 A. Yes.

1 Q. And Mobil doesn't look for a return that it
2 could get on a simple bank account or Treasury issue;
3 is that right?

4 A. I don't want to speculate on specifics of
5 Treasury, but, I mean, there is a policy for
6 achieving benefits, yes.

7 Q. So, if it takes a savings like it does under
8 the royalties, it will look for higher returns.

9 A. That's typical.

10 Q. Okay. What would be a good return for Mobil?

11 A. I'm having a struggle with indicating what
12 would be a good return for Mobil. I mean, obviously
13 we're doing better than bank rates.

14 Q. But, in your view, what would be a good return
15 for Mobil?

16 A. I don't--I haven't seen the latest numbers
17 that ExxonMobil have, but, you know, we basically
18 have--I guess what you're asking is internal Cost of
19 Capital.

20 Q. Which would be...

21 A. I don't have that figure.

22 Q. What was the last one that you saw?

1 A. Let me just say that--because I'm being
2 careful of obviously the proprietary information of
3 our Internal Rate of Return.

4 Q. Well, we can go into a confidential session
5 if...sorry?

6 I think I have been told we are already in a
7 confidential session so...

8 PRESIDENT GREENWOOD: Yes. I don't think
9 that this is going to disrupt Mobil's
10 confidentiality--

11 THE WITNESS: No, I respect that.

12 Can I just indicate greater than [REDACTED] ?

13 BY MR. DOUGLAS:

14 Q. So, you do have a sense, then.

15 A. Well, no, you asked me the last time I looked,
16 and I just responded.

17 Q. But greater than [REDACTED] is not a number.

18 A. So, what I'm going from is a capital project
19 within Hibernia where we had an Internal Rate of
20 Return.

21 Q. Mm-hmm.

22 A. And I believe that number at the time was

1 approximately [REDACTED] at that time. And,
2 again, I'm dating myself.

3 Q. Okay. Thank you.

4 Has the Province ever denied any Incremental
5 Expenditures as eligible under the royalty regimes?

6 A. I talked to that this morning. We've only got
7 two reports, and they did not deny in either case.

8 Q. Could you turn to Paragraph 89 of your First
9 Witness Statement in this arbitration.

10 And, here, you're discussing the Net Profit
11 Interest?

12 A. That is correct.

13 Q. And what is the Net Profit Interest?

14 A. Net Profits Interest is an agreement between
15 the Hibernia owners and the Federal Government of
16 Canada relative to a financing arrangement--if I
17 could simplify the logic, it's a financing
18 arrangement that the Federal Government had
19 participated in the initial financing arrangements
20 with Hibernia. So, this was a return to the Federal
21 Government such that at a specific date into the
22 future, the Federal Government of Canada would

1 receive 10 percent of revenue less expenses.

2 Q. Okay. And you testify here that Mobil used
3 its R&D under the Guidelines to make deductions to
4 its Federal NPI obligations, is that correct?

5 A. Yes. We had to comply, and the Operators
6 filed the information to the Owners, and the Owners
7 had to comply to our agreement.

8 Q. How much money was Mobil able to offset on its
9 NPI payments as a result of the "incremental"
10 spending at issue in the Mobil--in this arbitration?

11 A. In this arbitration or in Mobil I?

12 Q. In this arbitration.

13 A. That amount of incremental expenditures that
14 we filed for Hibernia is the amount that would have
15 been deducted for Net Profits Interests purpose.

16 Q. So, a hundred percent of the "incremental"
17 spending was submitted--

18 A. I'm sorry, I thought you wanted the exact
19 numbers.

20 Yes, A hundred percent of the amounts that we
21 had for Incremental Expenditures we deducted for Net
22 Profits Interest.

1 Q. And you are able to take 10 percent of that
2 amount as an offset to your NPI payments.

3 A. Yes.

4 Q. Are the audit periods for that time done?

5 A. The only audit period that I'm aware of was
6 the July 2016 letter from Sam Miller for the period
7 2013, for the year-ended 2013.

8 Q. Do you know how long the audits last for NPI?

9 A. In terms of the audit period itself?

10 Q. Yeah, how long the audits take to complete.

11 A. Well, in talking to my successor, the Federal
12 Government had actually come in the previous year to
13 look at 2013 costs, and then it was in July of 2016,
14 so sometime in 2015 they commenced the audit of 2013.
15 But they come in for a period of a couple of weeks.
16 They sent, I think the last time, one auditor that
17 came in. There may have been a second one. I think
18 the lady's name was Hussein.

19 Q. And just to clarify, were expenditures--some
20 expenditures were rejected in the 2013 audit; is that
21 right?

22 A. Yes. It was approximately [REDACTED] of the

1 incremental expenditures for 2013 that was rejected
2 or disallowed by the Federal Government.

3 Q. And the rest was accepted.

4 A. That's correct.

5 MR. DOUGLAS: Okay. I have no further
6 questions, Dr. Greenwood.

7 PRESIDENT GREENWOOD: Thank you very much,
8 Mr. Douglas.

9 Mr. Nichols, do you have a redirect?

10 MR. O'GORMAN: Mr. President, if we could
11 meet over lunch and discuss whether there will be any
12 redirect, that would be helpful to us.

13 PRESIDENT GREENWOOD: All right. It has the
14 disadvantage that Mr. Phelan will have to have lunch
15 on his own, but I dare say, as a Mobil employee, he
16 will bear that with equanimity.

17 Mr. Phelan, you are also sequestered, I'm
18 afraid.

19 We will meet back at ten minutes to 2:00.
20 Thank you.

21 (Whereupon, at 12:25 p.m., the Hearing was
22 adjourned until 1:50 p.m., the same day.)

1 AFTERNOON SESSION

2 PRESIDENT GREENWOOD: Well, welcome back,
3 ladies and gentlemen.

4 I understand there is no redirect of
5 Mr. Phelan.

6 MR. O'GORMAN: That's correct, Mr. President.

7 PRESIDENT GREENWOOD: Thank you.

8 Could I just ask whether either of my
9 colleagues have any questions they wish to put to
10 him?

11 ARBITRATOR GRIFFITH: No, but I wish him well
12 in his next career beyond being a witness for the
13 next ten years.

14 THE WITNESS: Thank you very much.

15 PRESIDENT GREENWOOD: Mr. Phelan, thank you
16 very much. You are discharged. You can stand down.
17 I gather you didn't get any lunch. So, I hope you
18 can now go off and have some.

19 THE WITNESS: I'm good. Thank you very much.

20 (Witness steps down.)

21 PRESIDENT GREENWOOD: Before we call the next
22 witness, there is a matter of administration I want

1 to raise with you.

2 Now, this is the kind of comment that people
3 always tend to read things into. You should read
4 nothing into this other than what I'm about to say to
5 you.

6 The Tribunal had taken the view that there
7 are some substantial questions in relation to both
8 the temporal argument and the res judicata, Canada's
9 res judicata argument.

10 Now, we are going to have to take a view
11 about those before the case can go any further.

12 If we find in Canada's favor on either of
13 those points, that is the end of the proceedings and
14 will be dealt with in an Award. If, on the other
15 hand, we find in Mobil's favor on both of those
16 points, we still think it would be procedurally
17 sensible if we dealt with those two matters in what
18 would then be a decision.

19 So, what we are proposing to do is, after the
20 Hearing, we are going to confer and then draft our
21 views about the two points I've just listed,
22 Articles 1116 and 1117 and the res judicata argument.

1 Now, for that reason, the way we propose to
2 proceed is as follows: We suggest that the closing
3 submissions should be confined to those issues and
4 not go into the details of damages. If we find in
5 Mobil's favor on these two issues, we will then
6 invite Post-Hearing Briefs about the damages
7 questions, and we would in those circumstances very
8 likely have a number of questions we would want to
9 put to the Parties.

10 But we would like Friday's closing
11 submissions to be confined, please, to res judicata,
12 1116(2), 1117(2), and any related matters of that
13 kind that you wish to raise and not looking at the
14 questions of quantum.

15 Now, we've set aside two hours and 45 minutes
16 for each party on Friday. We would very strongly
17 encourage you to, in your preparation, to ensure that
18 you leave at least an hour of your allocation for
19 taking questions from the Tribunal. You will have
20 seen from Monday's hearing that we tend to ask quite
21 a lot of questions about these points.

22 The other suggestion that we would make--and

1 it's only a suggestion--is that if it is possible to
2 get through the witnesses by lunchtime on Thursday,
3 even if we have a slightly later lunch, we think that
4 would be in the Parties' interests because it will
5 give you time to prepare more thoroughly for Friday's
6 closing submissions.

7 We've decided over our lunch break that I
8 would raise these matters with you now so that you
9 have the opportunity to make your preparations
10 accordingly.

11 Like I say, please do not read into this
12 anything of any significance for the outcome of the
13 case. The Tribunal has not made up its mind on
14 either of the two issues that I've outlined, but
15 there is no question that we will have to take a view
16 on at least one of those before we look at whether
17 the case proceeds any further; and, if so, on what
18 basis.

19 Does anybody have any questions you'd like
20 to--

21 Sorry, there is one other thing.

22 The Tribunal Secretary will send you by

1 electronic communication the text of the Max Planck
2 Encyclopedia article on res judicata that I was
3 referring to.

4 Does anybody have any questions or any points
5 you would like to raise about what I'm suggesting?

6 Claimants?

7 MR. O'GORMAN: We understand the direction,
8 Mr. President.

9 PRESIDENT GREENWOOD: Thank you.

10 Respondent?

11 MR. LUZ: We are in the Tribunal's hands.

12 PRESIDENT GREENWOOD: Right. Thank you.

13 I hope that this will enable sensible
14 procedural economy for all concerned.

15 Right. Now, our next witness is
16 Mr. Noseworthy; is that right?

17 Yes, so let us invite him in, and we will
18 move on.

19 RYAN NOSEWORTHY, CLAIMANT'S WITNESS, CALLED

20 MR. NICHOLS: Mr. Chairman, I see that Canada
21 has placed its Cross-Examination Bundle, what I
22 believe to be its Cross-Examination Bundle on the

1 table before Mr. Noseworthy.

2 May I also place before him his Witness
3 Statements submitted in this proceeding and the
4 Witness Statement by Mr. Jeff O'Keefe submitted on
5 behalf of Canada?

6 PRESIDENT GREENWOOD: Yes, of course. Please
7 do so.

8 Mr. Noseworthy, make yourself comfortable.
9 Pour yourself a glass of water. If this morning is
10 anything to go by, you will need it. Now, on the
11 table in front of you on the laminated sheet is the
12 Witness Declaration, if you would kindly make that
13 Declaration.

14 THE WITNESS: I solemnly declare upon my
15 honor and conscience that I shall speak the truth,
16 the whole truth, and nothing but the truth.

17 PRESIDENT GREENWOOD: Thank you very much.

18 Could I just, to avoid what happened this
19 morning, ask you and the counsel who are questioning
20 you to be particularly careful not to speak at the
21 same time. Sitting behind you is our Court Reporter,
22 Mr. Kasdan, and he has to be able to get an accurate

1 transcript of what's being said.

2 Very good. Mr. Nichols, you are going to do
3 the direct examination, I take it?

4 MR. NICHOLS: Yes, I will.

5 PRESIDENT GREENWOOD: Thank you. Please, go
6 ahead.

7 MR. NICHOLS: Thank you, Mr. President.

8 DIRECT EXAMINATION

9 BY MR. NICHOLS:

10 Q. Good afternoon, could you please introduce
11 yourself and your relationship to the Hibernia
12 Project?

13 A. My name is Ryan Noseworthy. I have been
14 employed by ExxonMobil for approximately 12 years.
15 Of those 12 years, I was seconded to Hibernia
16 Management Development Company for approximately six
17 years. For three years, I was a Hibernia Reservoir
18 Engineer with HMDC, and then subsequently for another
19 three years I, was the Hibernia Reservoir Supervisor
20 for HMDC.

21 Q. And just for the sake of the record, are you
22 the same Ryan Noseworthy who submitted a Witness

1 Statement in the prior proceeding between Mobil and
2 Canada?

3 A. I am.

4 Q. Did you testify also at the damages hearing in
5 the last proceeding?

6 A. I did.

7 Q. You have submitted two Witness Statements in
8 this proceeding; isn't that correct?

9 A. That is correct.

10 Q. Do you have your First Witness Statement of
11 February 26, 2016 that was submitted in this
12 proceeding marked CW-5?

13 A. I do.

14 Q. Do you reaffirm the contents of that
15 statement?

16 A. I do.

17 Q. Do you have any corrections to make to that
18 statement?

19 A. No, I do not.

20 Q. Do you have your Second Witness Statement
21 submitted in this proceeding of September 20th, 2016,
22 marked CW-11?

1 A. I do.

2 Q. Do you reaffirm the contents of that
3 statement?

4 A. Yes, I do.

5 Q. Do you have any corrections to make to that
6 statement?

7 A. No, I do not.

8 Q. I would like to ask you just a few brief
9 questions about Mr. O'Keefe's statement, which I
10 believe you also have in front of you. Is that
11 correct, sir?

12 A. Yes, I do.

13 Q. Okay. And when I say, Mr. O'Keefe, for the
14 sake of the record, I'm referring to Mr. Jeff
15 O'Keefe, who has submitted a Witness Statement that I
16 believe is marked RW-1.

17 Before I get into that statement, do you
18 professionally know and interact with Mr. Jeff
19 O'Keefe?

20 A. During my time as Hibernia Reservoir
21 Supervisor, I interacted with Mr. O'Keefe and his
22 team quite frequently on resource-management matters

1 for Hibernia.

2 Q. Okay. I would like to draw your attention to
3 Paragraph 3 of Jeff O'Keefe's Witness Statement. It
4 starts on Page 1, and then there's a quotation at the
5 top of Page 2.

6 Can you please tell us what this quotation at
7 the top of Page 2 is?

8 A. That is a condition of our original 1986
9 Development Plan for Hibernia which required, as is
10 written there, undertake studies concurrent with
11 initial development drilling to establish the
12 feasibility of a miscible flood for the Hibernia
13 Reservoir.

14 Q. What is your understanding of what that
15 condition requires?

16 A. That condition required us to study the
17 potential for a miscible flood for Hibernia. A
18 miscible flood is essentially a process in which you
19 inject gas into the reservoir with the intent to
20 enhance recovery from the reservoir in doing so, so
21 that's really what that condition was after.

22 Q. What do you understand by the use of the term

1 "study" as used in this condition?

2 A. A study is typically an expenditure where we
3 would get an engineer or researcher--one or several,
4 in fact--to conduct some analysis, whether it be a
5 simulation-type analysis or actual just technical
6 analysis. And they would, as part of that, work an
7 effort to evaluate the potential for some type of
8 fieldwork and whether or not they felt that that
9 would be successful. And, typically, the end result
10 for that would be a report.

11 Q. I'm going to switch gears.

12 With respect to the WAG Pilot, what activities
13 and costs are entailed with that pilot?

14 A. The WAG Pilot that we were contemplating for
15 Hibernia involved a lot of in-field implementation
16 work and substantial amount of investment whereby we
17 would need to replace and install new components for
18 the well, such as the Christmas tree, which is
19 essentially the top of the well that contains the
20 pressures of the well in the different zones of the
21 reservoir, as well as the tubing hangar and the
22 tubing which had millions and millions of dollars of

1 expenditure requirements to be able to implement that
2 type of pilot.

3 Q. What do you understand Mr. O'Keefe to be
4 saying about this Condition 1 in his Witness
5 Statement?

6 A. My interpretation of Mr. O'Keefe's statement
7 is that he's--seems to imply that the condition of
8 the 86 Development Plan, the studies that were
9 required to evaluate miscible flood were the same as
10 implementing a WAG Pilot in the field, and I don't
11 agree with that because a WAG Pilot, as I mentioned,
12 would involve a lot of expenditures associated with
13 in-field implementation, whereas a study is typically
14 something that engineers would produce and generate a
15 report, which is much more lower cost because you
16 typically in a study just have the costs associated
17 with the engineer's time.

18 ARBITRATOR ROWLEY: You're speaking quite
19 quickly, and it's hard for the Reporter, if you
20 continue that speed throughout.

21 THE WITNESS: Okay.

22 PRESIDENT GREENWOOD: I was about to say the

1 same. Also, please bear in mind that the terms
2 you're talking about may be second nature to you and
3 the people that you work with all day, but they're
4 not second nature to those of us on the Tribunal, and
5 I think the other people in the room.

6 THE WITNESS: I understand.

7 BY MR. NICHOLS:

8 Q. So, perhaps we can clarify just a couple of
9 those terms.

10 Miscible flood, it appears here in
11 Condition 1; correct?

12 A. That is correct.

13 Q. What does miscible flood mean in a lay sense?

14 A. A miscible flood is essentially injecting gas
15 in a reservoir with the intent to release the oil
16 from the pores of the reservoir to allow it to be
17 produced. You can do that by injecting many
18 different types of gases, you can use natural gas
19 that's produced from a reservoir, you can use carbon
20 dioxide type gas or nitrogen gas, for example, so
21 that's really what miscible flood entails.

22 Q. Another term that appears in Mr. O'Keefe's

1 statement and I believe also overlaps with yours is
2 enhanced oil recovery. Can you also please explain
3 that term for us.

4 A. Enhanced oil recovery is a broad term that we
5 use to describe methods in which we are attempting to
6 increase recovery from the reservoir. Some forms of
7 enhanced oil recovery would be such as gas injection.
8 We also have thermal injection such as steam. We
9 also have chemical injection, which is injecting
10 polymers or things of that nature to try to improve
11 recovery. So, when you hear enhanced oil recovery,
12 it's a very broad industry terminology for trying to
13 improve recovery from the reservoir on top of our
14 ordinary recovery techniques.

15 Q. Finally, Water-Alternating-Gas. Can you also
16 please give us another succinct definition of what
17 that is?

18 A. Water-Alternating-Gas is pretty much exactly
19 how it sounds. It's essentially alternating
20 injecting water and gas into a reservoir to improve
21 recovery from reservoir.

22 Q. So, between these three terms--miscible flood,

1 enhanced oil recovery, and Water-Alternating-Gas--do
2 you know whether there is a relationship among these
3 terms?

4 A. Enhanced oil recovery, as I mentioned, is a
5 very broad term for attempting to increase recovery,
6 WAG would be a form of that, and miscible flood as
7 well would be a form of enhanced oil recovery.

8 Q. Mr. Noseworthy, does Condition 1 require of
9 the Hibernia Project to conduct a WAG Pilot?

10 A. No, it does not.

11 Q. Let's turn to Paragraph 5 of Mr. Jeff
12 O'Keefe's Statement. What do you understand
13 Mr. O'Keefe to be saying in that particular passage?

14 A. Mr. O'Keefe is referencing Section 65 of the
15 Drilling and Production Regulations, which requires
16 that the Operator maximize his recovery
17 from--Section 65 of the regulations requires that an
18 operator ensure maximum recovery from a pool or zone
19 is achieved in accordance with Good Oilfield
20 Practices, also that wells are located and operated
21 to provide for maximum recovery from a pool, and if
22 there is reason to believe that in-fill drilling or

1 implementation of enhanced recovery scheme might
2 result in increased recovery from a pool or field,
3 studies on these methods are carried out and
4 submitted to the Board.

5 Q. Okay. I believe you just read for us
6 Section 65.

7 A. Yes.

8 Q. Perhaps you could help us understand exactly
9 what Subsection A requires.

10 A. Subsection A requires that we do everything we
11 can to maximize--

12 PRESIDENT GREENWOOD: I'm so sorry,
13 Mr. Noseworthy, you're still speaking rather fast.

14 THE WITNESS: Yes.

15 PRESIDENT GREENWOOD: If you could slow down.
16 I know it's actually quite difficult to do in a
17 courtroom environment, but please try and bear in
18 mind that somebody is having to transcribe everything
19 you say.

20 THE WITNESS: Thank you.

21 Section 65(a) requires that the Operators
22 maximize recovery from a pool or zone and in

1 accordance with Good Oilfield Practices, and the
2 methods in which we would typical do that at Hibernia
3 is our "ordinary course" business of drilling
4 additional wells in new areas of the reservoir. We
5 would also conduct work on our existing wells to
6 attempt to improve the performance and rates from
7 those existing wells.

8 And we would also look to optimize the well
9 rates and basically mix of those different wells so
10 that we could have the best recovery and rates in the
11 fields.

12 So, that's really how we typically would go
13 to achieve that requirement.

14 BY MR. NICHOLS:

15 Q. Mr. Noseworthy, does Subsection A of
16 Section 65 require the Hibernia Operator to perform
17 the WAG Pilot?

18 A. No, it does not.

19 Q. Could you please explain for us what
20 Subsection B provides?

21 A. Section B requires that--

22 PRESIDENT GREENWOOD: Sorry, before you do

1 that, could you just clarify for me why do you think
2 that 65(a) does not require a WAG Pilot?

3 THE WITNESS: The WAG Pilot, as I mentioned
4 is really implementing the WAG Pilot in the field.
5 It's very possible that you could hurt recovery in a
6 field such as Hibernia from implementing a WAG Pilot.
7 Really the key thing to realize is that Hibernia is a
8 slot constrained facility, and what a slot is
9 essentially the number of holes that we have to drill
10 wells from in the facility. Because we are
11 slot-constrained, to implement something such as a
12 WAG Pilot, means we are using those slots for that
13 instead of using those slots to drill new wells which
14 are a hundred percent oil. Whereas in WAG, what
15 you're trying to do is improve the recovery or oil
16 rates from the wells marginally over time.

17 So, I think it's really important to realize
18 that it's a real balance to be able to look at what
19 is the best way to get maximum recovery from a field,
20 given we have a limited amount of slots. As well, we
21 have a limited amount of gas in the Hibernia Field.

22 And, as I mentioned, WAG actually requires

1 the gas resource to be able to do the WAG process.
2 And because gas is actually pretty scarce in
3 Hibernia, and we use it in ordinary course for our
4 gas-flood region, you have a competing priority there
5 between the wells that are in your gas slot and the
6 wells that you would consider for a WAG.

7 So, that's why I feel that, to just say that
8 Section A would require a WAG Pilot implementation, I
9 don't feel that way.

10 And another thing I would draw to your
11 attention is that the WAG Pilot has never been done
12 anywhere else in the Offshore Area in Newfoundland,
13 and they're subject so the same regulations, and
14 those fields are actually closer to the end-of-field
15 life than Hibernia.

16 PRESIDENT GREENWOOD: That's very helpful.
17 Thank you, Mr. Noseworthy.

18 Mr. Nichols, sorry to have interrupted you.
19 Please continue.

20 MR. NICHOLS: Thank you for that question.

21 BY MR. NICHOLS:

22 Q. We will just continue to Subsection B.

1 A. Okay.

2 Q. Can you please explain to us what that
3 requires?

4 A. So, Section B basically speaks to the fact
5 that wells need to be located in a position that will
6 maximize recovery from a reservoir. If you don't put
7 your wells in the right locations in the reservoir,
8 you could lead to what we call unswept oil, so
9 attic--so oil that's above your producing well or oil
10 below your injection well we call cellar oil, and
11 that's essentially oil that you're not going to
12 recover, so wells do really need to be located in the
13 optimal location to maximize recovery.

14 Q. Do you know whether the WAG Pilot was
15 performed for the purpose of satisfying Section
16 65(b)?

17 A. It was not because the WAG Pilot actually does
18 not move wells, so the wells are already located
19 where they are.

20 Q. All right. Let's turn, finally, to Subsection
21 (c). Could you please explain to us what that
22 particular provision requires?

1 A. Subsection (c) speaks to if there's a reason
2 to believe that in-field drilling or implementation
3 of an enhanced recovery scheme might result in
4 increased recovery from a pool or field that study is
5 to be carried out and submitted to the Board. And we
6 have been meeting that condition through the life of
7 the Hibernia Field. In fact, in 2008, as we prepared
8 for the 2010 Development Plan submission, we
9 conducted a study at a research lab in Houston to
10 evaluate the potential for a double displacement in
11 the reservoir with the intent to evaluate the
12 potential for enhanced recovery as required in
13 Section 65(c).

14 Q. Was the--I will start again.

15 Do you know whether the purpose of performing
16 the WAG Pilot was to satisfy Subsection (c) of
17 Section 65?

18 A. No. It was not. The WAG Pilot really came as
19 a result of us needing to spend down our significant
20 shortfall of our earning expenditures at Hibernia in
21 2010.

22 Q. What do you understand Mr. Jeff O'Keefe to be

1 saying in his statement about Section 65 and the WAG
2 Pilot?

3 A. My interpretation of Mr. O'Keefe's comments in
4 his statement is that Section 65 essentially requires
5 the implementation of the WAG Pilot. And, as I
6 mentioned, I don't feel that's the case because other
7 fields haven't done it in the Offshore Area. As
8 well, Hibernia was not conducting WAG Pilots prior to
9 the R&D Guidelines in 2010.

10 Q. Is that to say, sir, you disagree?

11 A. Yes, I disagree.

12 Q. Let's take a look at Paragraph 7 of that same
13 Witness Statement. I will give you a moment to turn
14 to it.

15 A. Yes.

16 Q. What is Mr. O'Keefe or what do you understand
17 Mr. O'Keefe to be saying in this particular
18 paragraph?

19 A. In this paragraph, Mr. O'Keefe is describing
20 the fact that Section 86 of the same regulations
21 require that we submit Annual Production Reports to
22 the Board annually, so we do it every year, and that

1 we've relied on the WAG Pilot to fulfill our
2 obligation to explore ways to maximum recovery from
3 Hibernia.

4 However, I think it's important to realize
5 that Annual Production Reports are something that we
6 have submitted every single year since the field
7 started up in 1997, and it was only since the R&D
8 Guidelines were or since the WAG Pilot was approved
9 under the R&D Guidelines in 2010 that we included
10 commentary on the WAG Pilot.

11 The other thing that's important to realize
12 is that when you read Section 86 of--which describes
13 the requirements of an Annual Production Report, it
14 essentially outlines that you need to give an update
15 on each well that you have ongoing in expenditures or
16 activities. So, when I was responsible for the
17 Hibernia team, we really gave an Update on every well
18 in the field as part of the Annual Production Report.

19 Q. I'm going to back up just one moment to
20 Condition 1.

21 When is the first time that you learned of the
22 opinions expressed in this statement by Mr. Jeff

1 O'Keefe with respect to Condition 1?

2 A. When I read this statement.

3 Q. Okay. Same question for Section 65. When is
4 the first time that you learned that Mr. Jeff O'Keefe
5 held the view that Section 65 might require an EOR
6 Pilot or the WAG Pilot?

7 A. When I read his statement.

8 Q. Same question, sir, or new question for the
9 Annual Production Reports. When is the first time
10 that you learned of the view expressed in this
11 Witness Statement by Mr. Jeff O'Keefe with respect to
12 the Annual Production Reports?

13 A. It was when I read his statement.

14 Q. I would like to turn now to Paragraph 19 of
15 that statement.

16 A. Okay.

17 Q. What do you understand Mr. O'Keefe to be
18 expressing in this paragraph?

19 A. Mr. O'Keefe implies that the WAG Pilot is
20 required as part of abandonment of wells in the
21 field. I don't really feel that way because when I
22 was the Hibernia Reservoir Supervisor, we had

1 actually received approval from Mr. O'Keefe and his
2 team to abandon many wells from the field without
3 implementing a WAG Pilot.

4 Q. Can you estimate for us about how many wells
5 Hibernia has abandoned in the past?

6 A. I would estimate that we've abandoned about a
7 couple of dozen, up to about 24 wells in the field,
8 and we've never implemented WAG.

9 ARBITRATOR GRIFFITH: How many wells are
10 there in the field?

11 THE WITNESS: As I mentioned, there are 64
12 well slots. Of those, we do have a combination of
13 producers and injectors, both gas and water. So,
14 really, 23--yeah, 23 wells is what we've actually
15 abandoned without doing WAG, and we probably only
16 have about 23 or 24 producers, so we've almost
17 abandoned every well, almost every well that is an
18 equivalent number of every well that exists in the
19 field in the ordinary course of business.

20 ARBITRATOR GRIFFITH: I'm asking you a
21 question: Do you use gas that's generated from the
22 field for injection or do you have to bring it on to

1 the offshore rig?

2 THE WITNESS: We actually use gas that's
3 produced from the producing wells. The producing
4 wells produce a combination of oil, gas and water,
5 and the gas that comes from those wells is what we
6 use to inject back into the reservoir.

7 ARBITRATOR GRIFFITH: Do you separate out the
8 water?

9 THE WITNESS: We do. We have separation
10 facilities that essentially take care of separating
11 out the oil, gas and water. And the water goes
12 overboard to produce water, and the gas we mainly
13 inject back into the reservoir, but some of it is
14 used for fuel for the equipment and flair.

15 ARBITRATOR GRIFFITH: Mr. Nichols, apologies
16 for interrupting.

17 MR. NICHOLS: Not at all. Thank you,
18 Dr. Griffith.

19 BY MR. NICHOLS:

20 Q. Do you know on what basis the CNLOPB approved
21 or would approve abandonment of a well?

22 A. The agreed criteria that we had aligned with

1 the Board on abandoning wells was 95 percent water
2 cut or less, than 1,000 barrels a day--the agreed
3 criteria between us and the Board for abandoning
4 wells was 95 percent water cut, and essentially what
5 that means is if you have a well producing a hundred
6 barrels a day, 95 of them would be water, and five of
7 them would be oil. So, we agreed that anything that
8 had 95 percent water cut or higher or less than 1,000
9 barrels a day of oil rate was significant--had
10 enough, I guess, maturity to be abandoned.

11 Q. Do you know at present time what level of
12 water cut is the [REDACTED]?

13 A. It is currently at--I believe it's around
14 [REDACTED] water cut right now.

15 Q. And you mentioned a moment ago that,
16 normally--if I understood you correctly, and correct
17 me if I haven't--that normally Hibernia would drill a
18 new well elsewhere at the end of a well's useful
19 life? Did I understand correctly?

20 A. That is correct. Normally, when a well gets
21 to that criteria that I mentioned, which the Board
22 were aligned with, we would essentially get the Board

1 alignment and approval to move that well to a much
2 better location in the reservoir with the goal of
3 maximizing recovery from the field.

4 Q. And what is the typical level of water cut on
5 a new well in the Hibernia Field?

6 A. Typically, when we move a well in the field,
7 we have a well that's produced all oil, so there is
8 no water at all when we move our wells in the
9 reservoir.

10 Q. Who at the Board is responsible for approving
11 well-abandonment decisions?

12 A. It's responsibility under Jeff O'Keefe's team,
13 so Mr. O'Keefe and his team would be responsible for
14 those approvals.

15 Q. Have you ever had interactions with
16 Mr. O'Keefe or his team with respect to
17 well-abandonment decisions?

18 A. Yes. I had many interactions with Mr. O'Keefe
19 and his team on well-abandonment decisions.

20 Specifically, we would talk about whether or not a
21 well--if, you know, he was comfortable enough that a
22 well was ready to be abandoned based on the criteria

1 we had agreed, and so we would typically have those
2 discussions. And once everyone was comfortable, we
3 would follow up with ACW, which is our formal
4 application to alter the condition of a well.

5 Q. On those occasions, do you remember whether
6 Mr. O'Keefe or any member of his team indicated to
7 you that abandonment might be dependent on a WAG
8 Pilot or similar pilot?

9 A. Mr. O'Keefe never mentioned that we needed to
10 implement a WAG Pilot as part of those well
11 abandonments.

12 Q. When did you first learn that Mr. Jeff O'Keefe
13 or anyone at the Board might consider there to be a
14 relationship between the WAG Pilot and abandonment
15 decisions at Hibernia?

16 A. When I read Mr. O'Keefe's statement.

17 PRESIDENT GREENWOOD: Just for completeness,
18 Mr. Noseworthy, the question counsel asked you a
19 moment ago was do you remember whether Mr. O'Keefe or
20 any member of his team indicated to you that
21 abandonment might be dependent on a WAG Pilot or
22 similar pilot, and you replied that Mr. O'Keefe never

1 mentioned that. What about other members of his
2 team?

3 THE WITNESS: No, nobody, Mr. O'Keefe or his
4 team, ever mentioned a requirement for a WAG Pilot.

5 PRESIDENT GREENWOOD: Thank you.

6 MR. NICHOLS: Thank you for that
7 clarification.

8 BY MR. NICHOLS:

9 Q. Last paragraph--I say "last paragraph."
10 Paragraph 14.

11 It appears there are two figures--well,
12 multiple figures, but there's two figures in this
13 paragraph I wish to ask you about, Mr. Noseworthy.
14 The first one is the one that appears in the first
15 sentence regarding [REDACTED] barrels of oil.

16 Can you please--do you know where that figure
17 came from?

18 A. That figure is an estimate developed by my
19 team at HMDC through our engineering and simulation
20 work to evaluate what we felt the potential recovery
21 could be from a fault block in Hibernia such as the
22 CC1 Fault Block from implementing the WAG Pilot.

1 It's important to realize that that number is
2 essentially an estimate from a simulation model.
3 Simulation models are proven over time to not always,
4 in fact very rarely to be too accurate, and
5 also--sorry, it's success-based, so it assumes that
6 the WAG mechanism actually works in the reservoir.

7 Q. Absent the R&D Guidelines, would Hibernia have
8 relied on the simulation study to decide whether to
9 implement WAG Pilot in the field?

10 A. Sorry, can you repeat your question?

11 Q. Sorry, I may rephrase it.--

12 You explained a moment ago, as I understand, that
13 the [REDACTED] barrels of oil came from a simulation.

14 A. Yes, that is correct.

15 Q. Would that simulation have justified to the
16 Operator to proceed with the WAG Pilot in the
17 ordinary course of business, absent the R&D
18 Guidelines?

19 A. Absent the Guidelines, typically what we would
20 do is we would look at what we feel we could get for
21 recovery from a specific fault block with our
22 ordinary techniques such as drilling wells or moving

1 wells and optimizing locations of those wells, as
2 I've mentioned before. For the [REDACTED],
3 given we had the R&D approval from the Board, we
4 didn't look at trying to improve recovery from the
5 [REDACTED] in our ordinary methods, so we essentially
6 just took the wells where they were and ran a
7 simulation model as if WAG would work from a recovery
8 standpoint and see what those numbers would be.

9 A portion of the barrels that are actually
10 quoted in that number of [REDACTED] barrels, we
11 actually could have achieved by just conducting our
12 ordinary methods of moving the wells into a better
13 location, as well as doing more work on the wells to
14 improve their performance.

15 Q. The second figure I want to ask you about in
16 this paragraph is the one that appears in the last
17 sentence, [REDACTED] barrels of oil. Do you
18 know where that figure came from, sir?

19 A. My understanding is that number was
20 essentially using industry-accepted kind of estimates
21 for what the potential for enhanced oil recovery
22 could be. So, in industry, we typically expect we

1 can get [REDACTED], approximately, additional
2 recovery from implementing a process such as WAG, and
3 so we basically took the entire oil-in-place numbers
4 for Hibernia and multiplied it by [REDACTED],
5 and those are the numbers that you're looking at for
6 [REDACTED] barrels.

7 Q. Was there a simulation performed with respect
8 to the Hibernia Field--I will start again.

9 Was this figure derived from a simulation
10 performed by HMDC or any other company?

11 A. When the R&D pre-qualification document was
12 prepared in 2010, those numbers of [REDACTED]
13 barrels were not generated from a simulation model.

14 Q. Why did HMDC--or do you know why HMDC came up
15 with this figure?

16 A. The numbers of [REDACTED] barrels were
17 really a statement that we wanted to include in the
18 pre-qualification document we submitted to the Board
19 in October of 2010. In fact, if you look back in our
20 original submission to the Board in March 2010, we
21 actually quoted [REDACTED] barrels, and we said "un-
22 risked." What un-risked alludes to is that fact that

1 we haven't discounted the numbers at all for the fact
2 that it's very uncertain and unknown whether or not
3 WAG would even be successful.

4 But because we wanted to get the WAG Pilot
5 pre-qualified under the R&D Guidelines, we added
6 statements in our documents that, while possible, I
7 feel it very unlikely to be achieved over the course
8 of the field.

9 Q. One moment.

10 MR. NICHOLS: Mobil passes the Witness to
11 Canada.

12 PRESIDENT GREENWOOD: Thank you very much.

13 Who is going to conduct the cross-examination
14 for Canada?

15 MS. SQUIRES: I am, and hopefully it goes
16 better than my ability to work the microphone.

17 PRESIDENT GREENWOOD: I'm so sorry, do please
18 introduce yourself to the Tribunal.

19 MS. SQUIRES: Absolutely. My name is Heather
20 Squires.

21 PRESIDENT GREENWOOD: Ms. Squires, thank you
22 very much.

1 Ms. Squires, your witness.

2 MS. SQUIRES: Thank you very much.

3 CROSS-EXAMINATION

4 BY MS. SQUIRES:

5 Q. Good afternoon, Mr. Noseworthy.

6 As I just mentioned, my name is Heather Squires
7 and I am counsel for the Government of Canada in this
8 arbitration. I'm going to ask you a few questions
9 about the Witness Statements that you filed here.

10 PRESIDENT GREENWOOD: Ms. Squires, could I
11 ask you to hold for a minute because there is a
12 disruption while these folders are passed around.

13 Mr. Noseworthy, this goes with the turf:
14 There is always this kind of song-and-dance routine.

15 THE WITNESS: Okay.

16 (Pause.)

17 PRESIDENT GREENWOOD: Ms. Squires, please
18 continue.

19 MS. SQUIRES: Thank you very much.

20 BY MS. SQUIRES:

21 Q. As I mentioned, Mr. Noseworthy, I'm going to
22 take some time to ask you some questions about your

1 Witness statement. If you don't understand a
2 question, please take the time to ask me to reframe
3 it. It's very important that we understand each
4 other.

5 Also it's important that you answer my
6 questions. So, in that regard if the answer is a yes
7 or no, please provide that. Perhaps I will caveat
8 this a little bit as well, I believe, someone can
9 correct me if I'm wrong, this is the only time during
10 the arbitration that we have one Newfoundlander
11 speaking to another, and speaking slow for a
12 Newfoundlander is not an easy task, so I would ask
13 that Mr. Noseworthy and I, we will try and keep that
14 in mind, and speak quite slowly today.

15 I will do my best, Mr. Noseworthy, to allow to
16 you provide context, should you wish to do that, but
17 please answer yes or no, if that's--the question begs
18 for that kind of answer.

19 I will also refer to the binder there in front
20 of you. It's by tab numbers to help you find it, so
21 at various points I will refer you to the different
22 tabs in that binder.

1 I'd also note that, because of the volume of
2 the documents and the amount of page numbers in some
3 of them, we've just included an excerpt. If you wish
4 to look at the full document, we do have a copy.

5 PRESIDENT GREENWOOD: Ms. Squire, I'm
6 terribly sorry, you are going rather fast. I can
7 follow instructions like that, but once you get into
8 the details of an oilfield, you are going to have to
9 slow down quite a bit if Mr. Kasdan is going to be
10 able to get a transcript, and if there is any chance
11 of our being able to understand you. I realize it's
12 difficult, but there we are.

13 MS. SQUIRES: I guarantee you I will slow
14 down as well when I get into some reservoir
15 engineering.

16 ARBITRATOR GRIFFITH: Just pretend you're a
17 Norwegian rather than a Newfoundlander.

18 MS. SQUIRES: Sounds good.

19 BY MS. SQUIRES:

20 Q. Now, Mr. Noseworthy, you provided two Witness
21 Statements in this arbitration; correct?

22 A. That is correct.

1 Q. And you provided one in the first Mobil and
2 Murphy Arbitration?

3 A. Yes, that is correct.

4 Q. And that testimony in that statement relates
5 to the same content as what you provide today, the
6 WAG study or the WAG Pilot?

7 A. The WAG Pilot is included in the first as
8 well.

9 Q. And do you have a degree in mechanical
10 engineering from MUN?

11 A. That's correct.

12 Q. And you began your career at ExxonMobil
13 following the completion of that degree in July of
14 2005?

15 A. Yes, that is correct.

16 Q. And immediately after you were hired by
17 ExxonMobil, you were seconded to HMDC?

18 A. That is correct.

19 Q. And you were there until 2008 when you left
20 Exxon--when you left HMDC for ExxonMobil Canada's
21 planning team; is that right?

22 A. That is correct.

1 Q. And, in that position, you were involved in
2 reporting production costs and financial metrics for
3 projects in Eastern Canada?

4 A. That is correct.

5 Q. And did that position entail any R&D Decisions
6 related to the Hibernia Project?

7 A. The Planning lead role that I was responsible
8 for at ExxonMobil Canada was essentially developing
9 budget data, essentially, for the Eastern Canada
10 assets.

11 Q. So, not R&D decisions particularly?

12 A. If there was R&D expenditures expected in the
13 periods, then we would want to include those so that
14 we had the funds available, but it wasn't just R&D.
15 It was everything to do with expenditures in that
16 Eastern Canada assets.

17 Q. Now, you mention in your Witness Statement
18 that you are responsible for leading R&D activities
19 for the Hebron Project from December 2009 to 2011.
20 This is unrelated to Hibernia; correct?

21 A. The time I spent at Hebron I was responsible
22 for Research and Development for the Hebron Project.

1 So, while I was not working for HMDC, I was aware of
2 different activities that Hibernia was conducting for
3 research because we did have a lot of meetings
4 jointly across the different projects for JIPs and
5 things of that nature.

6 Q. But for expenditures specific to only the
7 Hibernia Project, not related to JIPs, you wouldn't
8 be involved in those in your capacity at Hebron?

9 A. That is correct.

10 Q. And following your time at Hebron, you are
11 again seconded back to HMDC; correct?

12 A. That is correct, in December 2011.

13 Q. And in that role you were involved in R&D
14 decisions?

15 A. My time as the reservoir supervisor at
16 Hibernia, I became responsible for executing certain
17 R&D Projects for Hibernia.

18 Q. And you held that position until you moved to
19 Houston in February of 2015; correct?

20 A. That is correct.

21 Q. And, in that position, you are also not
22 working specifically on Hibernia; correct?

1 A. In my current position in the Exxon Mobil
2 Corporation, I'm essentially--it's a role similar to
3 what I did originally in East Canada, which was
4 essentially preparing budgets. But right now, I'm
5 doing the budgets for the entire corporation
6 globally.

7 Q. So, in that position, you're not involved in
8 decisions, say, on the WAG Pilot?

9 A. I would not be involved in decisions for
10 Hibernia.

11 Q. Okay. So, if I follow the timelines, then,
12 your direct experience at HMDC pertaining to the WAG
13 Pilot would have been in the times that you worked
14 there between July 2005 and March 2008, and again
15 from December 2011 to February 2015? Sound about
16 right?

17 A. That's correct.

18 Q. Now, you rely on the Hibernia Work Plan that
19 was developed in 2010 in your Witness Statement to
20 explain why the R&D activity was undertaken, but you
21 were not working at HMDC at the time this document
22 was created; correct?

1 A. While I was not at HMDC in 2010 when the R&D
2 Work Plan was developed, I did an exhaustive and
3 extensive handover with Mr. Jamie Long, who was in my
4 position during that period of time.

5 As well, Mr. Long was promoted to be the
6 Hibernia President during my time as Reservoir
7 Supervisor, so he and I had a lot of good dialogue
8 and discussions so I got to know the context and
9 history of the WAG Pilot very well.

10 Q. But my question, though--so, you weren't there
11 at that time?

12 A. I was not there--

13 (Overlapping speakers.)

14 Q. That comes from discussions after you started
15 working there?

16 A. Correct.

17 Q. And that would be the same as well for the
18 pre-approval application submitted to the Board in
19 October 2010 and in March of 2010, is that right?

20 A. That's correct.

21 Q. And you were also not at HMDC, then, when
22 decisions were made to proceed with the WAG Pilot in

1 early 2017?

2 A. I was not working at Hibernia at that time.

3 Q. Now, I want to turn to Page 4 of your First
4 Witness Statement in this arbitration. I believe
5 it's there, one of those red--ones with the red
6 cover.

7 A. Okay.

8 Q. It's not in your binder--sorry, Mr.
9 Noseworthy, it's one of the ones there with the red
10 cover.

11 A. Okay.

12 And this is all Mr. O'Keefe?

13 Yep. Okay.

14 And you're looking for the First--

15 Q. Well, we're going to turn to Page 4 of your
16 First Witness Statement.

17 A. Okay.

18 Q. Specifically, Paragraph 15.

19 A. This is the CW-5; correct?

20 Q. I don't actually have the number in front of
21 me. Yeah, it is.

22 A. Paragraph 15?

1 Q. Paragraph 15.

2 A. Okay.

3 Q. You note there that EMC, so ExxonMobil Canada,
4 and HMDC's approach to R&D spending prior to the
5 Guidelines was driven by one overriding condition.

6 Do you see where I am there?

7 A. I do.

8 Q. And that consideration was: "Does the
9 possibility of increasing our production and revenues
10 outweigh the cost and the risk of the R&D." And you
11 describe that as a very simple economic calculation,
12 and I want to explore that a little bit further.

13 The four factors you consider--you indicate
14 there that are considered are the possibility of
15 increased production, possibility of increased
16 revenue. And that becomes weighed against the costs
17 of the R&D activity and the risks associated with the
18 activity; correct?

19 A. That's correct.

20 Q. And ExxonMobil was more likely to undertake an
21 R&D activity in the ordinary course if there was a
22 high probability it would result in a net gain; is

1 that accurate?

2 A. That is accurate.

3 Q. And as costs decrease, HMDC or ExxonMobil
4 Canada would be more likely to undertake an R&D
5 activity? Is that a fair statement?

6 A. I'm sorry, could you repeat the question?

7 Q. If we use those four factors, if the costs of
8 the R&D activity were to decrease, you would be more
9 likely to carry out that activity?

10 A. It depends, because you can't look at one of
11 those four factors in isolation. You really need to
12 think about all four of them combined. A key one is
13 whether or not you think a given technology will be
14 successful or not, and then have you to think about
15 the costs of implementing that technology. And
16 that's really the weight of the decision, I guess,
17 that you would normally take.

18 Q. Would you agree with me, then--and I'm just
19 talking about prior to the Guidelines right now--that
20 ExxonMobil and HMDC were not engaged in an R&D
21 activity if it did not provide value to ExxonMobil or
22 HMDC?

1 A. Prior to the Guidelines, if we were going to
2 conduct research, we would have believed that it was
3 potentially going to lead to a net benefit.

4 Q. You would look for that net benefit.

5 A. That is correct.

6 Q. And would that net benefit be measured in
7 terms of increased production, increased revenues?
8 Do you recall how that would have been measured?

9 A. So, normal research would look at the
10 potential to increase production from a well, because
11 obviously that would lead to increased revenues. But
12 it could also be research that looks at the potential
13 to reduce costs our over--in our day-to-day operating
14 cost environment. So, it would be essentially
15 looking for any gain, I guess, you could potentially
16 get from doing the research.

17 Q. Now, you also noted this approach in your
18 testimony in the last Mobil and Murphy Arbitration.
19 Do you recall that?

20 A. That is correct, yes.

21 Q. And I noted--and I believe you actually noted
22 this in your Witness Statements, as well--that your

1 testimony in that arbitration is repeated verbatim in
2 your First Witness Statement in this arbitration.

3 They're the same; correct?

4 A. Can you show me?

5 Q. Yeah. Paragraphs--if you look at your First
6 Witness Statement in this arbitration that you have
7 there, Paragraphs 15 to 17 on this topic, they're
8 identical to your First Witness Statement--your
9 Witness Statement in the Mobil and Murphy Arbitration
10 at Paragraphs 6 to 8. You can find that Witness
11 Statement at Tab 1 of your binder, Exhibit R-147.

12 A. I'm not certain if they're exact, but they're
13 definitely similar.

14 Q. Now, in both of those statements, then, you
15 noted that after the Guidelines HMDC and ExxonMobil
16 Canada were no longer looking at net gains or rates
17 of return, but you did still want to create some
18 value where you could; is that accurate?

19 A. Our intent, once the Guidelines were to be
20 followed, was to really look for any potential, even
21 if it was a very small chance we could generate some
22 net value, because it really was viewed as dollars we

1 had to spend anyway.

2 Q. So, when you say you looked for some value
3 there, you're still referring to that quantifiable
4 rate of return, or lower cost, or that sort of thing?

5 A. Correct.

6 Q. Now, I believe in the first Mobil and Murphy
7 Arbitration you said that, after the Guidelines, the
8 value you were looking for, what was said in the
9 hallways at ExxonMobil, was [REDACTED]. So, would
10 that [REDACTED], then, be--we can assume, then,
11 that's a [REDACTED] cost savings, or [REDACTED]
12 increase in net revenues, or [REDACTED] increase in
13 production?

14 A. The context for that was really [REDACTED] of
15 what we would normally expect for a Research Program
16 was really what I was trying to allude to there is.
17 If normally we would need, just for argument's sake,
18 a hundred dollars to make a research project viable,
19 we were okay if we only got--potentially getting [REDACTED].
20 Essentially, our hurdles were much different.

21 Q. Okay. Let's turn now to talk about the Gas
22 Utilization Study, or the WAG Pilot for a bit. And

1 this is a multi-year R&D project funded by HMDC;
2 correct?

3 A. That is correct.

4 Q. And the study itself--Canada has referred to
5 this as a Gas Utilization Study. I understand the
6 Claimant likes to call it the WAG study. For
7 purposes of today, I think we can use those
8 interchangeably. So, if I say "Gas Utilization
9 Study," I'm intending to refer to the--

10 ARBITRATOR ROWLEY: Slower.

11 BY MS. SQUIRES:

12 Q. If I say "Gas Utilization Study," I'm
13 intending to refer to the R&D activity at issue here,
14 not some other form of Gas Utilization Study in
15 general?

16 A. You're referring to the WAG Pilot?

17 Q. Exactly.

18 I want to haul up exhibit C-162, which is at Tab 2
19 of your binder. And this is the Hibernia R&D Work
20 Plan that was developed in 2010 to meet the Board's
21 Guideline requirements; correct?

22 A. Correct.

1 Q. And I want to turn to page--I'm going to ask
2 you to turn to the page number that ends in 3046.
3 There's Bates numbers on the bottom right-hand
4 corner. About halfway through the document, I think.

5 A. Okay.

6 Q. And it indicates here that--around the middle
7 of the page--that there's four phases: A study
8 period, detailed engineerings and approvals, project
9 execution, and then a WAG Pilot Field Test?

10 A. I see that.

11 Q. And, according to this document, the majority
12 of the costs of the R&D activity come from the WAG
13 Project work well, the facilities cost, and the pilot
14 field test itself; correct?

15 A. That is correct.

16 Q. And the remainder of the money being spent
17 goes to Memorial University for studies and for lab
18 set-up; is that right?

19 A. I'm sorry, what are you referring to in the
20 document here?

21 Q. I'm trying to figure out the breakdown of the
22 costs.

1 PRESIDENT GREENWOOD: Ms. Squires, I'm sorry,
2 you'll have to go more slowly.

3 BY MS. SQUIRES:

4 Q. So, if we look at the R&D Project's scoping
5 cost estimate--

6 A. Okay.

7 Q. --it lists off the WAG Project well work and
8 facilities cost, the WAG Pilot Field Test, but it
9 also lists off studies there, in the top, in the
10 first row?

11 A. Correct.

12 Q. Those studies are the studies that were done
13 at Memorial University; is that correct?

14 A. Umm--just hold on.

15 This is the March 2010 R&D Work Plan. At
16 that point in time, we had not yet contemplated
17 including Memorial University in the Gas Utilization,
18 or WAG Pilot Project.

19 Q. Studies, then, for the WAG Project and the
20 Pilot, studies conducted were done--ExxonMobil paid
21 for those to be done at Memorial University; is that
22 right?

1 A. The study and detailed engineering outlined
2 here in Section K of this document refers to the fact
3 that we had engineers under HMDC that we need to do
4 engineering associated with the WAG Pilot.

5 As I mentioned, Memorial University was
6 brought in between March 2010 and October 2010 as
7 part of enhancing our application to qualify under
8 the Research and Development Guidelines.

9 Q. Okay. In this arbitration, it's being
10 reported that [REDACTED] has been spent by HMDC on
11 the WAG study and WAG Pilots between--WAG Pilot,
12 sorry, between 2012 and 2015. Does that sound about
13 right to you?

14 A. I'm not really familiar with the exact numbers
15 of the expenditures for the WAG Pilot.

16 Q. I can take you to the submissions on that, if
17 you like.

18 A. If it's helpful. I'm not really the best
19 one--I'd probably rely on Mr. Phelan to really speak
20 to the numbers associated with our expenditures.

21 Q. I can confirm that is the number put forward
22 by Mr. Phelan.

1 A. Okay.

2 PRESIDENT GREENWOOD: Ms. Squires, I don't
3 think there's any point in pressing a Witness about
4 something that he's said is outside his area of
5 expertise.

6 MS. SQUIRES: Just give me one second,
7 Mr. Noseworthy.

8 THE WITNESS: Okay.

9 (Pause.)

10 BY MS. SQUIRES:

11 Q. All right. Mr. Noseworthy. I understand the
12 numbers are not within your realm of expertise, and
13 that's actually something that Mr. Phelan testified
14 to at length this morning.

15 I'm wondering, though, if you could confirm
16 something in his Witness Statement for me that
17 relates more to the technical aspects.

18 A. Okay.

19 Q. And if it's out of your realm of knowledge,
20 absolutely feel free to answer that way. I won't ask
21 you to continue.

22 Can you turn to his Second Witness Statement,

1 at Paragraph 93. And I believe you have been
2 provided a copy of that. I think that is one of the
3 ones with the red cover there, with the coil.

4 A. These are the same.

5 Q. We're going to turn to Paragraph 93.

6 A. Okay.

7 Q. So, right here, Mr. Phelan is talking about
8 the actual expenditures, the money that was put
9 towards the WAG Pilot. And he notes there that money
10 was spent on three separate things: The laboratory
11 at MUN, HMDC's Project management costs, and on the
12 procurement of equipment for HMDC to carry out the
13 WAG Pilot.

14 Do you see that?

15 A. I do.

16 Q. Now, in the first Mobil and Murphy
17 Arbitration, you testified at length on the
18 duplication between work at the MUN lab and work that
19 was done at URC. Do you recall that?

20 A. I do.

21 Q. And I was just seeking some clarification,
22 then, on duplication of spending.

1 And would you agree with me that while the MUN
2 lab was possibly a duplicate, that HMDC's Project
3 management costs and the procurement of equipment for
4 the pilot, that wasn't done twice?

5 A. I'm sorry, I don't really understand the
6 question.

7 Q. I'm trying--I'm asking whether or not you
8 procured the equipment for the WAG Pilot in
9 duplicate. It was a concern for the Mobil and Murphy
10 Tribunal that this--ExxonMobil was doing things in
11 duplicate. So, I think it would be helpful for me to
12 understand, going forward, exactly what was spent in
13 duplicate post those dates, and one of those things
14 is money on the pilot itself.

15 So, was the equipment to run the pilot, that
16 was only procured by HMDC on one occasion; correct?

17 A. The--yeah. The equipment required for the WAG
18 Pilot was something that we had to design and procure
19 manufacturers specifically for the WAG Pilot and had
20 some significant expenditures for that, but it was a
21 set of equipment for the WAG Pilot. We didn't
22 duplicate the--you know, the cost of that. It was

1 something we had to do specifically for the WAG
2 Pilot.

3 Q. And now, I'm going to go back to some basics
4 perhaps on enhanced oil recovery for the benefit
5 maybe of everybody in the room.

6 PRESIDENT GREENWOOD: Sorry, Ms. Squires.
7 Can I just follow up on that previous question before
8 we go any further?

9 MS. SQUIRES: Absolutely.

10 PRESIDENT GREENWOOD: I just want to be quite
11 clear about this. The only element of cost that was
12 duplicated was the work being done by MUN; is that
13 right?

14 THE WITNESS: The testimony I gave at
15 the--Mobil I was associated with the fact that we had
16 our own laboratory at ExxonMobil that we duplicated
17 at Memorial University. The expenditures related to
18 studying and implementing the WAG Pilot at Hibernia,
19 we didn't duplicate those anywhere, but I don't want
20 to seem to imply that we wouldn't have--you know, we
21 would have done it absence the Guidelines.

22 PRESIDENT GREENWOOD: That's a different

1 question altogether.

2 THE WITNESS: Okay.

3 PRESIDENT GREENWOOD: And the two issues that
4 are in play in this case are, first of all, were you
5 duplicating costs; and, secondly, irrespective of
6 whether the costs were duplicated, was this
7 expenditure that would have been incurred without the
8 Guidelines?

9 THE WITNESS: Okay. Yeah.

10 PRESIDENT GREENWOOD: We're only interested
11 at the moment in the first of those two questions.

12 THE WITNESS: Okay.

13 PRESIDENT GREENWOOD: And, as I understand
14 you, you are saying that the only path of costs that
15 were duplicated were the costs incurred for the work
16 done by MUN.

17 THE WITNESS: Yeah. So, the duplicate-costs
18 components would be the actual construction of the
19 laboratory at Memorial itself as well as the research
20 costs at Memorial itself because we could normally do
21 all the research that Memorial has done--

22 PRESIDENT GREENWOOD: Right.

1 THE WITNESS: --ourselves. So, really, to
2 anything to do with Memorial, whether it's
3 laboratory, you know, infrastructure costs or study
4 or a--that was all duplicative, essentially.

5 PRESIDENT GREENWOOD: Okay. Thank you very
6 much for me.

7 Forgive me for interjecting with questions
8 like this, but you will understand that we have not
9 had the benefit, if you'd used that word, of having
10 been steeped in this for several years.

11 THE WITNESS: I understand.

12 PRESIDENT GREENWOOD: You can continue,
13 Ms. Squires, please.

14 MS. SQUIRES: Thank you.

15 BY MS. SQUIRES:

16 Q. Now, enhanced oil recovery is often referred
17 to as a supplemental means of increasing production;
18 is that accurate?

19 A. We typically use the words "tertiary
20 recovery."

21 Q. And on that, then, primary recovery would be
22 recovery based on the natural physical makeup of a

1 well; correct?

2 A. Primary recovery is essentially drilling an
3 oil producer and whatever you can get back from that
4 producer is primary recovery.

5 Q. And then secondary recovery, as far as
6 Hibernia goes, would be injecting water in some wells
7 and then in other wells you would use gas for
8 secondary recovery; is that right?

9 A. That is correct.

10 Q. And there are different ways of carrying out
11 enhanced oil recovery, WAG being one of those.

12 A. Yes. As I mentioned, enhanced oil recovery
13 has many different forms, and WAG is one of those.

14 Q. And so, we just discussed that at Hibernia for
15 secondary recovery, Hibernia is using gas in some
16 wells and water in other wells, but WAG, on the other
17 hand, would use both of those injection fluids;
18 correct? Gas and then water alternating one behind
19 the other with the goal of enhancing recovery.

20 A. That is correct.

21 Q. Good, I'm glad I got that right.

22 A. That's right.

1 Q. Now, you note in your Witness Statement that,
2 to your knowledge, there is only one other offshore
3 project in the world in which ExxonMobil operates
4 where WAG has been implemented.

5 A. That is correct. In Malaysia.

6 Q. But it is employed in other large offshore
7 fields that are not Exxon projects; correct?

8 A. My understanding is there are other Operators
9 that have looked to implement WAG; but, as I
10 mentioned, for ExxonMobil, for which my knowledge is
11 obviously much better, we've only done it in
12 Malaysia, where we were contractually required to do
13 so.

14 Q. My question was, aside from ExxonMobil, there
15 are other Operators who are engaging in WAG
16 worldwide.

17 A. I believe there are some, but I don't believe
18 it's very many.

19 Q. Now, the geology and the reservoir
20 characteristics at the Hibernia Field are quite
21 complex; is that right?

22 A. That is true.

1 Q. And it's fair to say that they're different
2 than anywhere else in the world?

3 A. When you look at enhanced oil recovery, it's
4 very field-specific because you're relying on the
5 physics and mechanics of the reservoir itself, and so
6 it is challenging to necessarily take one and apply
7 to another.

8 Q. So, if you were going to look, then, at
9 enhanced oil recovery techniques for the Hibernia
10 Field, you would have to do studies specific to that
11 field.

12 A. Yes.

13 For example, you'd have to take what we call
14 "core," which is essentially when we cut a piece of
15 the reservoir out of a well we drill and you want to
16 do your lab analysis on that specific core so that
17 you can get representative data for that specific
18 field.

19 Q. Let's turn to Tab 18 of your binder.

20 MS. SQUIRES: And this is Exhibit R-256 for
21 the record.

22 BY MS. SQUIRES:

1 Q. And this is the ACW Addendum for the WAG Pilot
2 that HMDC submitted to the Board.

3 And ACW, I believe you told us earlier, stands
4 for the "Approval" to alter the "Condition" of a
5 "Well"; correct?

6 A. That is correct.

7 Q. And so, this is what HMDC submits to the Board
8 when it wants to change what's currently going on in
9 a well.

10 A. An ACW is required when you're going to change
11 the physical state of a well. So, if you're going to
12 essentially replace components of the well or drill a
13 different well from that same well slot, things of
14 that nature, you have to submit this document.

15 Q. So then, this document then was needed to
16 convert the well in the [REDACTED] for the pilot into
17 the pilot.

18 A. My understanding from talking to my--the
19 person who took my role, Mr. Matt McQueen, is that
20 this was a request from the Board in preparation for
21 them seeking approval to implement the [REDACTED] WAG Pilot.

22 Normally, when we do an ACW document for well

1 abandonment, it's a very short section that
2 essentially focuses on the criteria I described
3 earlier, which is the fact that the well is producing
4 at a substantially high-water cut, and hence we feel
5 it's ready to be moved and put in a position that
6 could generate more oil, whereas this document is a
7 lot more exhaustive.

8 Q. Well, let's turn to Page 1 of that document,
9 the summary section, and I want to look at the
10 paragraph that starts with "In 2010," and going to
11 look towards the middle of the paragraph there. It
12 notes that: "However, given that EOR is an immature
13 technology in offshore Newfoundland and Labrador, the
14 WAG process will require field-scale investigations
15 to reduce risk for broader-field development."

16 Do you see where I am?

17 A. I do.

18 Q. And if I'm reading this correctly, then, HMDC
19 viewed the WAG Pilot as necessary to fully understand
20 the risks associated with carrying out EOR at the
21 Hibernia site; is that right?

22 A. The document is attempting to describe that

1 WAG is a very uncertain process, so you would never
2 want to implement that full field-wide and put the
3 investment that required for that, which is
4 substantial, without testing it first to see if it
5 would actually yield the results you're hoping for.
6 That's really, I think, the intent of that statement.

7 Q. So, would it be fair to say, then, that if
8 HMDC was to carry out EOR field-wide, the laboratory
9 studies would not give them enough certainty to make
10 that decision?

11 A. Essentially, if you think about the
12 significant investment that would be required to
13 implement the WAG-type technology throughout the
14 entirety of field, and the investment, just to give
15 you some context, would be things like new gas
16 compressors to handle all the additional gas
17 injection, all the different well changes that you
18 need to make to do WAG on a full-field basis. If
19 you're really going to commit yourself to that
20 significant level of expenditure, it would be
21 challenging to get that approved normally without
22 some confidence that it's going to work, and that's

1 really what this is alluding to.

2 PRESIDENT GREENWOOD: Mr. Noseworthy, you
3 refer to "risk" here. Can I just be clear: What
4 sort of risk are we talking about? Physical risks
5 that something might go wrong and you have a disaster
6 or are we talking about risks simply in the sense of
7 money wasted?

8 THE WITNESS: In reference to the WAG Pilot?

9 PRESIDENT GREENWOOD: Yes.

10 THE WITNESS: So, the risk I'm speaking to
11 for the WAG Pilot is a combination of actually a
12 little bit of safety operational risk associated with
13 the fact that the facilities themselves are much
14 higher pressure than the water injection scheme. But
15 mainly to do with the financial risk associated with
16 the fact that the WAG process doesn't work in every
17 field. In fact, in a lot of fields it may not work
18 at all, so you want to really, you know, "de-risk"
19 that, we call it, before you get into large
20 investments.

21 PRESIDENT GREENWOOD: That's very helpful.
22 Thank you.

1 THE WITNESS: You're welcome.

2 PRESIDENT GREENWOOD: Ms. Squires, please
3 continue.

4 BY MS. SQUIRES:

5 Q. On that point, then, to make accurate decision
6 that on that financial risk and, to some extent, some
7 safety risks and even perhaps environmental risks
8 associated with carrying out EOR or WAG at Hibernia,
9 the pilot would be necessary.

10 A. First, you have to ask yourself do you want to
11 consider doing enhanced oil recovery at all. I feel,
12 given where Hibernia is in its producing life, and it
13 has a significant number of wells left to drill in
14 the ordinary business, which is just moving wells and
15 getting more oil, that we would not consider
16 something like a WAG process at this point in time
17 because we have a lot of remaining opportunities that
18 will generate a lot of net revenue for the
19 shareholders of Hibernia.

20 Typically, when you think about doing
21 something like WAG or enhanced oil recovery, it's
22 much later in the field life when you have pretty

1 much exhausted all of your ordinary course techniques
2 to enhance recovery, and that's why I feel that the
3 WAG Pilot was a result of the R&D Guidelines.

4 For example, I also supported Terra Nova as
5 an ExxonMobil representative. Terra Nova is very
6 close to end-of-field life. It's only five or so
7 years away from a regulatory standpoint, maybe seven
8 if they get approval to go longer. They are the type
9 of field you want to look at doing some type of
10 enhanced oil recovery technique, but to my knowledge
11 they haven't done it.

12 Q. I appreciate your points on the timing, and I
13 think we will come back to that point on the timing
14 of the WAG Pilot a little later. But let's turn to
15 Tab 6 of your binder, and this is Exhibit R-249 The
16 Newfoundland Offshore Petroleum Drilling and
17 Production Regulations that Mr. Nichols took you
18 through in your direct examination.

19 Now, these regulations form part of the overall
20 regulatory scheme that applies to oil developments in
21 the Newfoundland area; is that right?

22 A. I assume so.

1 Q. Are you familiar with these regulations?

2 A. I am.

3 The sections applicable to resource
4 management.

5 Q. Let's turn to those sections then. Let's turn
6 to Page 31 of the document, and we're looking at that
7 Section 65.

8 A. Okay.

9 Q. Now, this section indicates, as you mentioned
10 earlier, that if there's reason to believe that
11 in-fill drilling or implementation of enhanced
12 recovery scheme might result in increased recovery
13 from a pool or field, studies on these methods are
14 carried out and submitted to the Board.

15 A. Correct.

16 Q. So, this section, then, requires HMDC as the
17 Operator to carry out studies on enhanced oil
18 recovery if there's reason to believe that there's a
19 possible increased recovery could come from that
20 process; correct?

21 A. It requires us to conduct studies but not
22 implementing in the fields such as a WAG Pilot.

1 Q. I understand that's your position, but you
2 agree with me, this is asking--if there's potential
3 for recovery, studies of some sort have to be
4 conducted.

5 A. Correct, as the study we conducted in 2008.
6 That was a displacement study.

7 Q. And you discuss in your Second Witness
8 Statement, and I'm quoting you, the notional figure
9 of [REDACTED] barrels of oil that was
10 presented to the Board in that 2010 application. And
11 you noted that this number represents the potential
12 to increase recovery. So, you would agree with me,
13 then, that based on that, there is reason to believe
14 that enhanced oil recovery might result in increased
15 recovery of oil at Hibernia.

16 A. As I mentioned earlier, the [REDACTED]
17 barrels that was included in our October 2010
18 Research and Development submission to the Board was
19 essentially just using industry-known kind of
20 potential increases you could get from an EOR-type
21 mechanism and multiplying it by our oil in place at
22 Hibernia. That's kind of how we came up with that

1 notional number as something that would theoretically
2 be possible.

3 Q. My question, though, is that you would agree
4 with me that that indicates that there is a
5 possibility or there may be increased production if
6 you carry out EOR. Those signs point to--yes.

7 A. No, because the only time we'll know whether
8 or not EOR will work on Hibernia is when we test in
9 the field.

10 Q. My question, though, is not with respect to
11 the certainty of whether or not EOR would work but
12 rather, in that document, it was flagged that [REDACTED]
13 [REDACTED] barrels are a possibility. And I
14 understand you've said that's unrisksed and there are
15 a lot of factors that go into that, but that is--you
16 have indicated that is a potential to increase
17 recovery in your Witness Statement. So, based on
18 that, in accordance with Section 65(c), studies
19 should be carried out.

20 A. I'm sorry, I don't quite understand the
21 question.

22 Q. I'll try and rephrase.

1 Section 65(c), we just read, requires that
2 studies on enhanced oil recovery be carried out by
3 the Operator if there is reason to believe that those
4 enhanced recovery schemes would lead to increased
5 production.

6 A. That's correct.

7 Q. And, based on the 2010 Work Plan of a
8 possibility of [REDACTED] barrels of oil,
9 would you agree with me that there is reason to
10 believe that an enhanced recovery scheme might result
11 in an increased production such that 65(c) would be
12 triggered?

13 A. The possibility of enhanced recovery improving
14 the recovery at Hibernia was something that we
15 actually--

16 Q. I apologize for cutting you off, Mr.
17 Noseworthy. I'm wondering if you could answer with a
18 yes or no to start and then perhaps give some
19 context?

20 A. Okay. Could you please ask the question
21 again?

22 Q. The [REDACTED] barrels of oil, is that

1 a--that's a potential recovery.

2 A. That number, as I said, I almost would call
3 like a back-of-the-envelope number where we took the
4 Hibernia oil in place and said if we got give [REDACTED]
5 [REDACTED] more, here is what it could be.

6 Q. So, it's a potential.

7 A. Possibly, if it's successful.

8 Q. And when you have a potential for increased
9 recovery, Section 65(c) requires you to do studies to
10 determine whether or not that potential could be
11 realized.

12 A. That is correct.

13 Q. So, then, Section 65(c) would be triggered.

14 A. Section 65(c), one way we actually have been
15 looking to explore that, as you said, is, when we do
16 our 2008 double displacement study, that was our
17 effort of actually evaluating or studying whether or
18 not some type of enhanced oil recovery could lead to
19 more recovery at Hibernia.

20 Q. So, is it your position, then, that Section
21 65(c) has been met by those studies in 2008?

22 A. It's my view that Section 65(c) requires that

1 we conduct studies to evaluate the potential for
2 improved recovery in the field. However, the reason
3 why I feel you can't necessarily say that 2008 study
4 alone would constitute satisfying that condition is
5 many variables of the field change over time.
6 Technologies change over time for enhanced oil
7 recovery.

8 So, I fully understand why the Board has
9 listed it as an ongoing condition because we want to
10 be continually looking at the potential for this type
11 of technology. But, as I mentioned, I feel it's, in
12 the ordinary course, something you would do much
13 later in the life of the field; and given Hibernia is
14 expected to produce out until past 2040, I don't feel
15 we would do it any time soon.

16 Q. All right. Let's turn to Tab 19 of your
17 binder, and this is Exhibit R-260.

18 PRESIDENT GREENWOOD: If I could just, while
19 you're finding that, since the original exhibit
20 numbers are in the Table of Contents behind the
21 cross-examination binders, I don't think it's
22 necessary to stipulate it for the record, just to

1 save time.

2 MS. SQUIRES: Okay.

3 PRESIDENT GREENWOOD: It's also slightly
4 confusing because it adds yet another number, and as
5 there are often more than two page numbers on each
6 page, it's difficult enough to follow as it is.

7 MS. SQUIRES: All right. We will stick with
8 the tab numbers, then.

9 BY MS. SQUIRES:

10 Q. So Tab 19. And this is an e-mail chain. The
11 subject refers to the [REDACTED] Block WAG injection pilot,
12 and it's from Matthew McQueen, who I believe you just
13 mentioned was your successor?

14 A. Eventually.

15 Q. Eventually.

16 A. There were a few people in between, but yes,
17 he's in the role I was in--

18 Q. Okay.

19 A. --from 2011 to 2015.

20 Q. And I see that Mr. Jeff O'Keefe is copied on
21 this e-mail.

22 A. Correct.

1 Q. And it's to Jonathan Manning, who works at the
2 Offshore Petroleum Board; correct?

3 A. Yes, he's the lead engineer that works for
4 Jeff O'Keefe.

5 Q. And this is dated November 20, 2016, you can
6 see there. And I want to turn towards the back of
7 the document. There's a series of questions, and I
8 want to look at Question 20.

9 Now, these are a series of questions that were
10 posed by the Board, and the red text there is
11 Mr. McQueen's responses to those questions.

12 And Question 20 says: "As per Section 65(c)
13 of the Newfoundland Offshore Petroleum Drilling and
14 Production Regulations, all enhanced-oil-recovery
15 studies in support of the pilot application have to
16 be submitted to the CNLOPB."

17 And, and the response is "Please see answer to
18 Question 1." And, if we go back to Question 1, it's
19 saying there that "HMDC is able to provide certain
20 studies," and it refers to those studies, and it
21 indicates that those studies were related to Phase I
22 of the Gas Utilization Study.

1 Now, those--Phase I of the Gas Utilization
2 Study, that would refer to studies done in the
3 context of the R&D Application, not ones that were
4 conducted in 2008; correct?

5 A. Correct. This refers to work that was done in
6 support of the Gas Utilization Study.

7 Q. So, and then in Question 20, when Mr. McQueen
8 responds, he doesn't say these studies were not done
9 pursuant to Section 65. He doesn't have an issue
10 with that; correct?

11 A. I'm sorry, I don't quite understand the
12 question.

13 Q. From this e-mail, Mr. McQueen is writing to
14 say that the Phase I studies of the Gas Utilization
15 Study have been provided to the Board as per Section
16 65(c). So, he is making a connection between those
17 two things; correct?

18 A. In my view, once we received the qualification
19 from the Board to execute the WAG Pilot given WAG is
20 enhanced oil recovery scheme, the studies and work
21 involved with that WAG Pilot per Section 65(c) you'd
22 have to submit to the Board, and in my mind, this is

1 what Mr. McQueen is doing, is essentially taking
2 components of the effort that was involves in the WAG
3 Pilot and providing them to the Board.

4 Q. Let's turn to Tab 7 of your binder.

5 And this is a presentation by the Board to the
6 Board executive on the WAG Pilot, dated December of
7 2016, so following that e-mail chain.

8 And let's turn to Slide 5. I don't believe
9 they're numbered, but it's the slide entitled "Staff
10 View," and it indicates there that "staff are
11 encouraged by HMDC's plans to execute the WAG Pilot
12 as it," and it goes on. In the third bullet point,
13 it says: "It's consistent with the responsibility of
14 an operator under Section 65(c) of the Drilling and
15 Production Regulations.

16 So, in the Board's view, Section 65, the pilot
17 falls within Section 65(c).

18 A. I disagree with that view because a WAG Pilot,
19 as I described earlier, is implementing a substantial
20 investment in the field whereas Section 65, I feel,
21 is describing the fact that if you feel enhanced oil
22 recovery can improve your performance for recovery in

1 the field you need to conduct studies.

2 Q. All right. Let's move on. I think I probably
3 have about five minutes of questions and then we
4 could do our afternoon coffee or tea break, if that's
5 fine with the Tribunal.

6 PRESIDENT GREENWOOD: Yes, that's absolutely
7 fine. Please continue.

8 BY MS. SQUIRES:

9 Q. Let's talk about the Benefits Plan. It's at
10 Tab--the Benefits and the Development Plan at Tab 8
11 of your binder, and this is what Mr. Nichols brought
12 to you earlier to discuss that Condition 1.

13 And you noted in your direct testimony--and
14 you agree--that the benefits--Condition 1 required
15 Hibernia or HMDC to look at the possibility of a
16 miscible flood. Is that a fair characterization of
17 what you said?

18 A. Could we perhaps bring it up?

19 Q. Absolutely.

20 Can you haul it up on the screen there, Chris?
21 It's on Page 50. We're looking at Condition 1(ii).

22 So, it's a condition of the approval of the

1 Hibernia Development Plan to undertake studies to
2 establish the feasibility of a miscible flood.

3 A. That's correct.

4 Q. And I believe you defined "miscible flood" as
5 injecting gas in a reservoir, so studies of how gas
6 would interact with oil in the reservoir.

7 A. That's correct.

8 Q. Okay. Let's stay on this document, but I want
9 turn to 101. It's not that far away from that, I'm
10 sure, because of the excerpt.

11 And on the left-hand side there, it provides a
12 definition of "miscible flood."

13 Can you see that?

14 A. Yes.

15 Q. It says: "A secondary or tertiary oil
16 recovery method where two or more injection fluids
17 are used, one behind the other, for example, gas and
18 water, to mix with oil and enhance flow
19 characteristics."

20 Do you see that?

21 A. I do.

22 Q. Now, earlier in your testimony I asked you

1 what the definition of a "WAG" was, and you indicated
2 to me that it was using two or more injection fluids,
3 oil or gas, to enhance flow characteristics. Do you
4 recall that?

5 A. No.

6 What WAG is is the process by which you
7 alternate water and natural gas injection into the
8 reservoir. Miscible flood could be a few different
9 types of gas injection.

10 It's important to realize that miscible flood
11 is a more broad term. For example, there are fields
12 which--

13 Q. I'm sorry, Mr. Noseworthy.

14 A. Yes.

15 Q. My question was, when we discussed what WAG
16 was earlier--

17 A. Uh-huh.

18 Q. --you agreed with me that it was using two
19 injection fluids, one after the other, to increase
20 recovery; is that right?

21 A. WAG is a process in which you alternate the
22 injection of water and gas with--in an attempt to

1 improve recovery.

2 MS. SQUIRES: And I understand--

3 PRESIDENT GREENWOOD: Ms. Squires, the
4 problem is when you first put the question, you asked
5 the Witness whether he had agreed that it was a
6 matter of alternating oil and gas, and what he had
7 said was water and gas. I just think there was a
8 slight slip in the way you put the question the first
9 time--

10 MS. SQUIRES: Okay. So I didn't--

11 PRESIDENT GREENWOOD: --that's causing the
12 confusion.

13 BY MS. SQUIRES:

14 Q. I did intend to say water and gas for WAG, so
15 that is the alternating water and gas to increase
16 recovery.

17 A. WAG is essentially injecting water and gas
18 produced from the reservoir, alternating that in an
19 attempt to improve recovery.

20 Miscible flood, you could actually use carbon
21 dioxide gas or nitrogen gas. It's essentially
22 injecting some type of gas in an attempt to improve

1 recovery is what "miscible flood" would allude to.

2 Q. Would you agree me, though, that the
3 definition of "miscible flood" here, as it's
4 contemplated in the Development Plan, is not simply
5 using one injection fluid. They are looking for
6 studies using two or more injection fluids.

7 A. It states here that "miscible flood" is two or
8 more injection fluids, and they give an example such
9 as gas and water.

10 And really, "miscible flood" is all about
11 trying to use gas to change the properties of the
12 reservoir to allow you to improve recovery.

13 Q. I understand that, but, as far as this
14 definition goes, you couldn't meet it using studies
15 on simply using one injection fluid. It's looking
16 for studies using two or more injection fluids.

17 A. That's what it states, yeah.

18 Q. Something like a WAG.

19 A. WAG would be an example of a miscible flood.

20 Q. And is it your position, as a well, then, that
21 this condition has been satisfied with those earlier
22 studies in 2008?

1 A. I'm sorry, can you repeat your question?

2 Q. Okay. You had mentioned that the drilling
3 regulations, that the studies that were done in 2008
4 were done in accordance with that regulation.

5 A. Okay.

6 Q. Do you have the same position here in terms of
7 saying that that condition--HMDC had met that
8 condition by 2008?

9 A. As I mentioned earlier, because enhanced oil
10 recovery is something that can change over time, the
11 properties and the characteristics of the reservoir
12 can change over time, and technologies for enhanced
13 oil recovery can change over time, it's really a
14 challenging condition to just, you know, do one study
15 and call it satisfied. It's something that over time
16 as you get more data in the field and new
17 technologies for enhanced oil recovery may come to
18 fruition, you're going to continue to evaluate it and
19 consider whether or not you can improve recovery.

20 Q. My question, though, Mr. Noseworthy is,
21 whether, as of 2008 you believed that condition had
22 been satisfied.

1 A. No, because, in the 2010 Development Plan
2 Amendment, the Board did not state that the condition
3 was satisfied, but they were encouraged by the fact
4 that we did the double displacement study.

5 MS. SQUIRES: I think this might be a good
6 time to take a break.

7 PRESIDENT GREENWOOD: Have you finished?

8 MS. SQUIRES: No, unfortunately not.

9 PRESIDENT GREENWOOD: You've got some time to
10 get, so that's fine. Then let's take a break. It's
11 now 20 past 3:00. We'll come back at 25 to 4:00.

12 Mr. Noseworthy, I have to remind you not to
13 talk to anyone during the coffee break.

14 THE WITNESS: I understand.

15 PRESIDENT GREENWOOD: Just think of it as a
16 few minutes of peace and quiet.

17 THE WITNESS: That would be nice.

18 (Laughter.)

19 (Brief recess.)

20 PRESIDENT GREENWOOD: Very good.

21 Ms. Squires, do continue.

22 Can you give me an idea of how much longer

1 you're likely to be?

2 MS. SQUIRES: My best guess is no longer than
3 45 minutes.

4 PRESIDENT GREENWOOD: Right. Thank you.
5 Because I would quite like, we have Mr. Sampath next,
6 and the question is whether we are going to be able
7 to finish him today or whether to run overnight.

8 MS. SQUIRES: Mr. Sampath gets to deal with
9 me again, and I don't anticipate being able to finish
10 him today even if we were to start.

11 PRESIDENT GREENWOOD: Right.

12 What view do the two Parties have about my
13 suggestion earlier, that we should try to finish the
14 witnesses by lunchtime on Thursday? Is that
15 unrealistic?

16 MR. DOUGLAS: We think it's still realistic.

17 PRESIDENT GREENWOOD: You think it's
18 realistic.

19 What about you, Mr. O'Gorman?

20 MR. O'GORMAN: Mr. President, we think that
21 is entirely reasonable, and we will work towards that
22 goal.

1 PRESIDENT GREENWOOD: Good. Thank you.

2 Now, if it is possible to finish Mr. Sampath
3 today, I think it's better that we do so, but it may
4 be just--I don't know what questions have you in mind
5 to ask. If you think you're nearly there, let me
6 know, and we will sit a bit later. I always feel
7 sorry for witnesses told to keep himself to himself
8 overnight. It's a bit hard, even in Washington.

9 MR. DOUGLAS: No, understood.

10 I think of the remaining witnesses,
11 Mr. Sampath would--is likely to be the most likely,
12 and I sincerely doubt that we will be able to finish
13 him today, unless we were to actually sit quite late.

14 PRESIDENT GREENWOOD: Would it make sense
15 to--I'm sorry, Mr. Noseworthy, we talk about you in
16 the third person. Would it make sense after we have
17 finished Mr. Noseworthy's evidence to call one of the
18 other witnesses? Would it make any difference if you
19 had Mr. Durdle or Mr. Dunphy, for example, before
20 Mr. Sampath?

21 MR. DOUGLAS: It is possible. We take that
22 under consideration because it does change the order,

1 and--

2 PRESIDENT GREENWOOD: Would you think about
3 that? I'm not going to put you under any pressure
4 about it?

5 MR. O'GORMAN: Mr. President, we were
6 anticipating that they would go tomorrow morning, so
7 they are not actually available this afternoon.

8 PRESIDENT GREENWOOD: I think the Procedural
9 Order said every witness should be available a half
10 day before they were due to be called.

11 MR. O'GORMAN: Yes, we understood that
12 Mr. Sampath was straddling both this afternoon and
13 tomorrow morning.

14 PRESIDENT GREENWOOD: My attempt to get
15 Mr. Sampath a chance to talk to people over dinner is
16 not going to succeed. He's just going to have to go
17 to dinner on his own.

18 All right. So, carry on, Ms. Squires, and we
19 will just make what progress we can.

20 MS. SQUIRES: All right.

21 BY MS. SQUIRES:

22 Q. Now, I want to turn to Tab 10 of your binder,

1 and this is that study we were talking about a little
2 while ago, that Double Displacement Process study at
3 Hibernia in February 2008; is that right?

4 A. That is correct.

5 Q. And Double Displacement Process is a form of
6 enhanced oil recovery?

7 A. That is correct.

8 Q. And if we turn to Page 4, it notes there at
9 the top that this report summarizes a Reservoir
10 Simulation Study conducted to assess the potential
11 for additional oil recovery by the DPP and [REDACTED]
12 [REDACTED] in the Hibernia Field.

13 Do you see that?

14 A. I do.

15 Q. So, in 2008, URC is studying EOR techniques
16 for Hibernia without the Guidelines being the driving
17 factor; is that right?

18 A. That is correct.

19 Q. And if we stay on Page 4 there in that same
20 document, in the second paragraph it notes that, in
21 2005, core scrape measurements of DDP performance
22 were conducted at the ExxonMobil URC on core material

1 from Hibernia well B 16-17.

2 Do you see that?

3 A. I do.

4 Q. So, URC was looking at EOR for Hibernia even
5 further back then in 2005?

6 A. The 2005 work is essentially conducting some
7 lab work for Double Displacement, correct.

8 Q. And again, that was before--that was not due
9 to the Guidelines?

10 A. Correct.

11 Q. And that 2005 Double Displacement Study was
12 relied on by HMDC in its kickoff meeting with
13 Memorial University in March of 2012 to set up the
14 EOR lab there; is that right?

15 A. Sorry, could you show me what you're referring
16 to?

17 Q. Absolutely.

18 If you turn to Tab 17 in your binder, and we're
19 going to look at the page in the bottom right-hand
20 corner, again there are a series of numbers. We're
21 looking at the page that ends in 5258.

22 Under "background" there, it's referring to

1 that Double Displacement Experiment that was
2 conducted in 2005, and this document, if you turn to
3 the cover page, is entitled "Gas Utilization Study
4 R&D Project, MUN EOR lab kickoff meeting."

5 So, the results of that 2005 study formed part
6 of the presentation to kick off the EOR lab at MUN?

7 A. The intent of the meeting with Memorial in
8 March of 2012 was to essentially discuss with them
9 how we would ensure that they are able to conduct the
10 types of experiments that our research lab in Houston
11 would normally conduct. One way to do that is to
12 actually get them to try to replicate or duplicate
13 some analysis that was previously done because, if
14 you're able to get the same or similar results, it
15 means that you're essentially conducting the same
16 analysis, so that's why we brought up some of the
17 prior work we have done in the Hibernia core and
18 wells to basically--as a way to kind of build their
19 capacity.

20 Q. So, this was done, then, to show the
21 individuals at MUN similar work that they would
22 themselves then have to be undertaking once the lab

1 got set up?

2 A. It was essentially us discussing with them
3 some prior work that we had done with the goal of
4 attempting to get them to see if they could re-create
5 it once the lab was actually built because it had to
6 be built first, but eventually, that would be the
7 intent.

8 Q. So, this 2008 study or the 2005 study that's
9 referred to here, at least in some way relates to
10 doing WAG studies?

11 A. The work in 2005 and 2008 was looking at
12 double displacement as a potential enhanced oil
13 recovery technique, and it was going to be leveraged
14 to help establish the capacity at the Memorial
15 University when they built their lab and started
16 conducting their own experiments.

17 Q. And the MUN lab study was doing studies
18 particular to the R&D WAG study and pilot; correct?

19 A. Once Memorial lab was constructed and
20 operational, the intent was we would get them to try
21 to recreate results associated with Hibernia.

22 Q. My question though is that the MUN lab studies

1 were pursuant to the R&D expenditure at issue in this
2 arbitration; correct?

3 A. The work that we were collaborating with
4 Memorial on were part of the Gas Utilization Scope.

5 Q. So, part of the expenditure?

6 A. Sorry?

7 Q. So, the money--the R&D, the WAG Pilot that the
8 Board pre-approved, or the WAG studies and the pilot
9 that the Board pre-approved, the work that MUN was
10 doing was part of that?

11 A. The work that we were conducting with Memorial
12 was encompassed within the study, the Gas Utilization
13 Study with the Board.

14 Q. And those studies from 2005 and 2008 relate,
15 then, in some way to what MUN was doing. They touch
16 on similar subject matter?

17 A. The work from 2005 and '08 had nothing to do
18 with the Gas Utilization Study. It was prior work
19 that we were going to leverage to build the capacity
20 of Memorial.

21 Q. So, you say it doesn't relate to the Gas
22 Utilization Study. Are you saying that it's--I'm

1 just trying to figure out why it was included here,
2 then, if it didn't relate to the Gas Utilization
3 Study, can you explain why it would have been
4 presented to the individuals at MUN?

5 A. I've mentioned I believe previously that all
6 of the work at Memorial was not required and
7 duplicative, and we only went down that path because
8 it was really important to get the pre-qualification
9 under the R&D Guidelines. So, really, everything we
10 did with Memorial we didn't need to do.

11 Q. Let's turn to Tab 18.

12 PRESIDENT GREENWOOD: Sorry, can I just
13 interrupt for a minute.

14 I don't think that's quite the question you
15 have just been asked. The question you were being
16 asked is whether the double displacement experiment
17 conducted in 2005, why that is in the papers about
18 Memorial University, if Memorial University was
19 working on the Gas Utilization Study?

20 THE WITNESS: So, the intent of describing
21 the results of the work we did in 2005 with Memorial,
22 is when we establish a new laboratory and we get the

1 researchers in there to start conducting laboratory
2 experiments, one way to validate that they've
3 actually built up the expertise that is required to
4 run those experiments is to calibrate the results
5 they are producing back to prior analysis that you
6 had confidence in.

7 So, because we had done the 2005 work in our
8 own laboratory and we were happy with those results,
9 we wanted to show Memorial that, really, we would use
10 that and leverage that as a way for them to see if
11 they could replicate the results.

12 PRESIDENT GREENWOOD: Thank you. I
13 understand now. Very helpful.

14 THE WITNESS: Okay.

15 BY MS. SQUIRES:

16 Q. All right. Let's turn back to Tab 18. We
17 were there a little while ago. And we're going to go
18 back to Page 1 again.

19 And it notes there in the second paragraph
20 that there was a 2008 maximum recovery workshop
21 related to EOR recovery at Hibernia.

22 Do you see that?

1 A. I do.

2 Q. And that workshop was put off by HMDC; is that
3 right?

4 A. That's correct.

5 Q. And that workshop in 2008 was not motivated by
6 the Guidelines?

7 A. That's correct.

8 Q. Now, I want to take a minute to turn to Tab 7
9 of your binder, and this, again, is that presentation
10 that was prepared by the Board for the Board
11 executive related to the pilot, and I want to turn to
12 the fourth slide, which is called "Where Could the
13 Pilot Lead?"

14 Now, there is a table there on the right-hand
15 side. The information in this table was data
16 provided to the Board by HMDC; is that right?

17 A. That is correct.

18 Q. And it lists off all the different blocks for
19 the Hibernia Project there in the second column?

20 A. That is correct.

21 Q. And they are ranked in the first column in
22 order of WAG suitability; correct?

1 A. They are ranked in order of what we call F&D,
2 Finding and Development Costs.

3 Q. They have a WAG ranking, I believe it says
4 there on the top of the table?

5 A. Correct.

6 Q. Now, down towards the bottom it notes that
7 there are 17 viable blocks. Those are the ones that
8 have been deemed, based on this data, suitable for
9 WAG or WAG candidates, perhaps?

10 A. Essentially, the way to think of this table is
11 it's characterizing the fault blocks in the reservoir
12 that would have a better potential for enhanced oil
13 recovery versus others.

14 Q. And those 17, then, that are identified and
15 highlighted there in green, those are the ones that
16 are identified as having more potential than the
17 other ones that are listed in the table?

18 A. That is correct.

19 Q. And there are seven that have been deemed
20 marginal, and those are because the expected
21 incremental recovery is less than 2 million barrels
22 of oil?

1 They are because the expected incremental
2 recovery of those blocks is less than 2 million
3 barrels of oil?

4 A. That was a notional cut-off that we just
5 assumed for the table, yes.

6 Q. So, the answer is yes?

7 A. Yes.

8 Q. And then there are five blocks that are deemed
9 not viable, and it notes that dollar figure you just
10 mentioned, the Find and Development Costs, of being
11 over \$25, so simply too expensive to do WAG; is that
12 right?

13 A. The F&D essentially is your cost over
14 potential recovery, so yeah, that's the metrics shown
15 there.

16 Q. So, out of the 29 blocks, then, that are
17 listed there, [REDACTED] are either viable for WAG or
18 possibly viable or marginal, marginally viable for
19 WAG, if we add up those numbers, [REDACTED].

20 A. If WAG is successful and actually works as a
21 recovery mechanism, then the ones at the top of this
22 table would be the most viable candidates.

1 Q. But my question just relates to, based on this
2 data, not in the end of whether or not EOR turns out
3 to be successful, but based on this data, HMDC has
4 identified [REDACTED] viable and [REDACTED] more that are
5 marginal, making [REDACTED] that are possible WAG candidates?

6 A. Can you repeat?

7 Q. I'm just doing the math, Mr. Noseworthy, on [REDACTED]
8 plus [REDACTED] [REDACTED] viable blocks for WAG plus [REDACTED] that
9 are marginal?

10 A. That's what the table states, yes.

11 Q. Now, in your Witness Statement, you note that
12 there's doubts that WAG would ever be implemented
13 field-wide at Hibernia, but this data seems to
14 suggest that, at least based on the studies done to
15 date without the pilot, [REDACTED] of the blocks are,
16 in fact, WAG candidates; is that correct?

17 A. I could probably give some context to the
18 table. Really what we were doing was just doing a
19 notional calculation of the block size and the
20 potential incremental recovery we might be able to
21 get from those blocks. And really in an idea of
22 trying to weight the blocks to identify the most

1 suitable pilot for the Gas Utilization Study.

2 Q. HMDC would stand by these numbers, though;
3 correct? They were provided to the Board?

4 A. That is correct.

5 Q. And they are based on some type of study or
6 sound evidence?

7 A. They are based on a calculation that we did to
8 essentially look at the oil in place for each of
9 these blocks, what we think the incremental recovery
10 could be in a success case scenario under WAG, based
11 on industry-type norms, and that was our way of
12 trying to prioritize the blocks versus each other.

13 Q. And HMDC, over the course of carrying out the
14 WAG studies, has refined these numbers; correct?

15 A. Over time, as the engineering team would
16 actually start conducting simulation work and more
17 in-depth analysis for each of different areas of the
18 field, the table would obviously get updated.

19 And the other thing to be aware of, if you
20 look at the table, under the cost component, we
21 actually have no idea what the field implementation
22 for WAG--full field implementation for WAG would be.

1 We notionally put in the [REDACTED]. You can see they
2 are all rounded numbers. The reality is the costs
3 are a key component in whether or not WAG would ever
4 make sense from a full-field standpoint.

5 Q. But surely these are based on some kind
6 of--they're not just pulled out of the air. They're
7 based on some kind of--I get they might be guesses,
8 but they're not just random numbers.

9 A. It's essentially looking at how much we
10 typically spend to retrofit or change out a lot of
11 the equipment or wells in ordinary course of
12 business, and that's what was put into the table.

13 Q. Now. So, you mentioned that this data, then,
14 that's in this table has been improved over the years
15 as simulations have occurred. And I want--if we look
16 at the column there that's entitled "EUR MB," that's
17 the amount of increased oil in millions of barrels
18 that's expected, based on the preliminary
19 simulations, that would be expected from those fault
20 blocks; is that correct?

21 A. Much of this table was not simulation based.
22 It was just using a notional recovery factor given

1 the kind of characteristics of the fault block from a
2 geometry standpoint. But really what we did was look
3 at the notional shape and size of the blocks and the
4 oil in place for those blocks, and if you assume a [REDACTED]
5 [REDACTED], that's kind of how we shaped the
6 recovery-factor estimates and came up with the
7 numbers there.

8 As we do simulation work on the blocks
9 individually such as the [REDACTED] obviously, we would
10 have better data.

11 Q. Right. So, but my question still remains,
12 though, this is that based on the data that HMDC has
13 to date, after having done some studies, right now
14 this is the best information you have and, in fact,
15 what you're presenting to the Board when giving them
16 information on the WAG Pilot.

17 A. This was our notional estimate of potential
18 incremental recovery from some type of enhanced oil
19 such as WAG, and, like I mentioned, some notional
20 costs for that to come up with a really--the goal of
21 the table when we built it was to prioritize and
22 better understand which blocks were probably better

1 candidates than others in the success case.

2 Q. And you mentioned, to confirm, this has been
3 refined since 2010; correct?

4 A. I would expect so. As additional work gets
5 done, they would consider revising the table.

6 Q. Okay. Now, if we--and there's a--I think
7 you've been given a calculator, feel free to use it
8 or feel free to assume that I'm in some way doing
9 math that's correct, but I have had someone to verify
10 that I have, if I was to add up the incremental
11 recovery for the [REDACTED] viable wells, it comes to [REDACTED]
12 [REDACTED] barrels of oil. Do you believe me on that?

13 A. Yeah. I mean, this table is consistent with
14 the [REDACTED] I mentioned early. It was a
15 notional [REDACTED] based on industry analogues
16 for enhanced oil recovery.

17 COURT REPORTER: Slow down.

18 THE WITNESS: Sorry, apologies.

19 The table is consistent with the [REDACTED]
20 [REDACTED] barrel number that we quoted earlier in
21 the R&D qualification document, which, as I
22 mentioned, was really just taking industry accepted

1 kind of norms for enhanced oil recovery, that is
2 successful in field. It's a [REDACTED]
3 incremental recovery. We basically just took those [REDACTED]
4 [REDACTED] and made some measuring kind of
5 judgments on--this block actually has a geometry that
6 would be more conducive to EOR than another, and came
7 up with these percents. So, I wouldn't want to leave
8 the impression that there is simulation work behind
9 these numbers. It's a notional estimate for these
10 fault blocks with the data we had at the time.

11 Q. So, this morning or earlier today, we focused
12 on the fact that the [REDACTED] barrels of oil
13 was something that was cited back years ago, in that
14 2010 plan, but those numbers are still what's being
15 relied on by HMDC today.

16 A. Those numbers, I expect, will stay fairly
17 consistent, given we have not yet received any actual
18 in-field data. So, we have no new data to really
19 change our opinions on these numbers until we get a
20 sense whether or not WAG is even something that's
21 viable in the field.

22 Q. So, you would need the pilot, then, to figure

1 out exactly what's going on for enhanced oil
2 recovery, the possibility of it.

3 A. To update the figures in this table,
4 typically, I would expect we would either need to run
5 simulation data to get a better type of analysis, you
6 know, an engineering analysis that we particularly
7 would do. And like you said, if we did something in
8 the field, well, that would be the best data you
9 could hope for.

10 Q. Let's turn to the--you mentioned earlier, the
11 timing of the WAG Pilot, so let's turn to discuss
12 that. And let's turn to Tab 1 of your binder, and
13 this is your Witness Statement from the Mobil and
14 Murphy Arbitration, and I want to look at
15 Paragraph 28.

16 And with respect to timing, you state there
17 that Hibernia might at some point have undertaken the
18 WAG Pilot itself, and you go on to note and I'm
19 quoting you: "My best guess is that we would have
20 started employing EOR techniques in around 2020,
21 although we may well have commissioned test pilots
22 earlier than that"--"earlier than this"--sorry.

1 Do you see that?

2 A. I do.

3 Q. So, in that arbitration with that testimony,
4 you were referring there to your best guess or
5 estimate of what HMDC would have done in the ordinary
6 course if they were to do EOR.

7 A. The context I am trying to give in this
8 statement, if you look at the following Paragraph 29
9 as well, is I was trying to envision what we--what I
10 felt we would have done in the ordinary course of
11 business; and, in the ordinary course of business, I
12 believe we would not have considered enhanced oil
13 recovery until--because enhanced oil recovery
14 requires gas resource--until we had a situation where
15 we had gas available to consider something like
16 enhanced oil recovery.

17 The simulation models that we had at the time
18 predicted that the 2020 period was when we might
19 start to see our "ordinary course" gas flood start to
20 perform in such a way that we may have an ability to
21 use some of the gas without significant or
22 detrimental impacts to our gas-flood performance.

1 Q. Okay. So, if I understand correctly, then,
2 you were testifying there that you would start
3 employing EOR techniques in around 2020, and you
4 mentioned that you would have commissioned--the test
5 pilots would have happened earlier than that. That's
6 your testimony there.

7 I'm just asking you to confirm what's in your
8 Witness Statement.

9 A. The comment I just made, really, it was my
10 attempt at describing my best guess at when we would
11 start considering EOR techniques. It's important to
12 not lose context of the next paragraph as well, which
13 better describes my views on when gas would be
14 available for EOR.

15 Q. Right. But I'm just asking you to confirm
16 what would happen at different time periods, and you
17 say you would have employed EOR techniques in around
18 2020, that you would have commissioned test pilot
19 pilots earlier than that. Do you stand by that?

20 ARBITRATOR ROWLEY: He doesn't say that. He
21 said he may well have. He doesn't say he would.

22 MS. SQUIRES: Right, so his best guess.

1 THE WITNESS: It was my best guess at when we
2 started considering EOR as the technique for the
3 field.

4 BY MS. SQUIRES:

5 Q. Your testimony says employing EOR in 2020.
6 So, I'm asking if you stand by that testimony that
7 you would have been--you would have employed EOR in
8 2020, and it says you would have commissioned test
9 pilots earlier than that, so you wouldn't have
10 started studying in 2020 based on that--

11 PRESIDENT GREENWOOD: I'm sorry, I've got to
12 pick you up on this. It's important not to put words
13 into the Witness's mouth. What he said in his
14 earlier statement is my best guess is we would have
15 started employing EOR techniques in around 2020,
16 although we may well have commissioned test pilots
17 earlier than this. I think it's important not to
18 interchange the "would" and the "may well have."

19 And the question, Mr. Noseworthy, is: Do you
20 stand by that now?

21 THE WITNESS: I stand by the comments in my
22 statement. As I mentioned, I just want to ensure you

1 look at the full context of the testimony I was
2 giving. In Paragraph 29, I described why I felt the
3 earliest we would ever consider EOR is in the 2020
4 period.

5 BY MS. SQUIRES:

6 Q. All right. Now, I want to--in this
7 arbitration, and you can turn to your Second Witness
8 Statement if you like, at Paragraph 6, you noted that
9 it would ordinarily not make sense to begin studying
10 EOR techniques like WAG until around 2020 at the
11 earliest, when the gas supply is more readily
12 available.

13 A. Correct.

14 Q. Now--and I apologize if I'm--I'm trying to
15 focus on the exact words in your testimony and I'm
16 trying to determine whether or not those two
17 statements are consistent because they're a little
18 bit different.

19 In the Mobil I Arbitration, you said, and I'm
20 going to quote exactly what you said: "My best guess
21 is that we would have started employing EOR
22 technologies in around 2020, although we may well

1 have commissioned test pilots earlier than this."

2 In this arbitration, you're saying that "it
3 would not make sense to begin even studying the EOR
4 technology until 2020." So, there is a bit of a
5 difference in the time period; is that right?

6 A. The intent of these statements was to give
7 context that gas resource at Hibernia is very finite,
8 and you only can use it for a gas flood or enhanced
9 oil recovery. And we had predicted at the time I was
10 there that our gas would need to be used for ordinary
11 course business and would really not be available for
12 anything like EOR at the earliest until the 2020
13 period. So, that was the intent of the testimony I
14 was giving, is to describe that competing priorities
15 of that gas and how I--you know, the predictions we
16 had at the time is it wouldn't be available until
17 2020 at the earliest.

18 ARBITRATOR ROWLEY: Could I just confirm my
19 understanding, but "ordinary course use of gas" or
20 "gas flood," that, I take it, is to get the oil out
21 of the ground.

22 THE WITNESS: That's exactly right, so that

1 is essentially producing--

2 ARBITRATOR ROWLEY: And that is a priority,
3 am I right?

4 THE WITNESS: Absolutely.

5 ARBITRATOR ROWLEY: And once you have
6 determined that you've got all the gas you can
7 ordinarily get out of the ground, at least oil, got
8 all the oil you can normally expect to get out of the
9 ground using your ordinary techniques, if you then
10 have gas left, you can say, "Now we can afford to use
11 this extra gas for enhanced techniques." Is that the
12 weight of what you're saying?

13 THE WITNESS: That is the weight of what I'm
14 describing.

15 ARBITRATOR ROWLEY: Thank you.

16 BY MS. SQUIRES:

17 Q. I want to talk about that trade-off, then,
18 between using gas for the WAG Pilot and using gas
19 elsewhere.

20 And let's turn to Tab 19 of your binder.
21 Again, it's that e-mail chain with Mr. McQueen. And
22 I want to look at Question 20 in particular--or 22,

1 sorry.

2 And here, HMDC is being asked to provide some
3 discussion on the production trade-off of taking
4 injection gas from the gas-flood blocks and utilizing
5 it in the WAG Pilot.

6 Would you characterize what they're being asked
7 there the same thing that we're about to discuss?
8 Are we on the same point there?

9 A. 22, correct?

10 Q. Yeah. So, we're talking about a production
11 trade-off of doing the WAG versus "normal" well, for
12 the lack of a better term.

13 A. Correct.

14 Q. And they're talking about the B 16-24 well.
15 Is that the--that's the pilot well?

16 A. That is the [REDACTED] producer, correct.

17 Q. And it notes there in the third line: "Thus
18 it is economically more competitive to use injection
19 gas for the WAG Pilot than to support the marginal
20 gas-flood producer."

21 So, based on Mr. McQueen's answer, it appears
22 that it would be more economic for HMDC to use

1 injection gas at this time for the pilot rather than
2 to divert that gas to another well.

3 A. I think it's important to remember the context
4 of these questions. Mr. McQueen is seeking approval
5 from the Board to implement the WAG Pilot. And so,
6 as he describes, given the current performance of the
7 well at the time, the wells at the time, he believed
8 that the WAG Pilot wouldn't detrimentally impact the
9 gas flood.

10 However, it's important to realize that, in
11 the ordinary course of business, if our gas-flood
12 wells are actually performing poorly, we could do
13 well work on them or actually side track them, as
14 they're planning to do this coming year, to make the
15 gas wells more competitive. So, you need to realize
16 that the competitiveness changes over time, and it's
17 your best guess and prediction at a given time. It's
18 not static, I guess is what I would say.

19 Q. Okay. But you're not saying that what
20 Mr. McQueen says there is not truthful.

21 A. No. That's right.

22 Q. Why don't we just briefly touch on the fact

1 that there has been some wells abandoned already at
2 the Hibernia site without the WAG Pilot having been
3 taken place.

4 Some of those blocks have been abandoned
5 because, for example, drilling hit tar in the well,
6 and that would be detrimental to the field as a
7 whole; correct?

8 A. The numbers I described earlier were well
9 abandonments that were not related to mechanical
10 issues or for other issues that were not related to
11 basically just trying to increase recovery.

12 Q. So, for the abandonment, then, and I believe
13 it's the [REDACTED] which was abandoned because of the
14 tar.

15 A. Mm-hmm.

16 Q. Even if the WAG Pilot data had been available
17 at that time, it would have been irrelevant for the
18 purposes of deciding abandonment; correct?

19 A. I'm sorry, I don't quite understand your
20 question.

21 Q. Well, once you hit tar, you abandon the well
22 regardless because it could impact the entire field;

1 correct?

2 A. The numbers I quoted earlier of well
3 abandonments we did in the Hibernia Field were solely
4 to change location of the wells to get additional
5 recovery.

6 Q. I want to clarify something you said there,
7 Mr. Noseworthy.

8 Are you saying that there were no wells
9 abandoned because of the tar issue?

10 A. There are absolutely were wells abandoned from
11 a mechanical standpoint as in the drilling team
12 didn't get to their objective for mechanical reasons,
13 basically failed in the drilling attempts. There
14 were also wells, as you described, that had tar, that
15 found tar which essentially is a type of oil that
16 will not produce, that had to be moved as well.

17 But the wells that I'm describing that we had
18 actually sought and received Board approval to
19 abandon are ones that met the criteria that we agreed
20 with the regulator which was 95 percent water cut.

21 Q. And were those--are those the wells in the [REDACTED]

22 [REDACTED]

1 A. So, the blocks that we abandoned were the [REDACTED]
2 [REDACTED] --you're testing my memory--they're are
3 a few blocks. There was definitely a lot of blocks
4 in which we had met the criteria we agreed with the
5 Board.

6 We also--it's important to realize that,
7 within a well, there are many different zones, and
8 not only do we get the Board approval to completely
9 abandon the well that met the abandonment criteria we
10 agreed, we also received a lot more approvals from
11 the regulator to abandon specific zones that had met
12 the 95 percent criteria and did not do WAG.

13 Q. Sorry, just give me one more second. I think
14 we have other questions.

15 (Pause.)

16 Q. All right. Just a few more questions for you,
17 Mr. Noseworthy. I think we're almost done, and I
18 appreciate you indulging me in these questions.

19 We discussed earlier that the WAG Pilot, there
20 is--this notional figure had been passed around of
21 [REDACTED] of incremental recovery. That's a
22 possibility for--for the WAG Pilot.

1 A. [REDACTED] barrels.

2 Q. [REDACTED] barrels, sorry.

3 A. That's correct.

4 Q. And that's the best-case scenario; correct?

5 A. That is assuming success and all of the
6 parameters that go into a simulation model.

7 Q. Now oil is currently at about USD 46 a barrel,
8 when I checked this morning? Does that sound right
9 to you?

10 A. Brent was at 50 when I checked earlier.

11 Q. Ah, so it's--are you willing to indulge me on
12 the 46?

13 A. Sure.

14 Q. All right. So, USD 46 a barrel given our poor
15 Exchange Rate, about CDN 57? Does that sound about
16 right to you?

17 A. That sounds about right.

18 Q. At that price, then, [REDACTED] barrels of oil
19 would lead to a Gross Profit of about CDN

20 [REDACTED]?

21 A. I assume the math is correct.

22 Q. Now, earlier we spoke about that table of data

1 that HMDC provided. It listed again a notional
2 figure of [REDACTED] to develop the [REDACTED] well. Do
3 you recall that?

4 A. That's correct.

5 Q. So, that would be a cost that would be
6 deducted from the gross revenue that would be
7 received from the pilot; correct?

8 A. The cost would be deducted from the revenue,
9 yes.

10 Q. Now, the most recent production data that we
11 have on the record relates to 2015, and I can
12 absolutely take you there, if you'd like to, or maybe
13 we can haul it up. It's tab 21, the binder, and I'm
14 going to turn to Page--1-6, sorry.

15 And, on that page there, the first sentence,
16 it notes that: "In 2015, oil production from the
17 Hibernia Field totaled 5.25"--and "mm" cubed is
18 million--

19 A. Meter cubed.

20 Q. Meter cubed of oil.

21 Now, to translate that into barrels of oil, it
22 would result in--so, about 33 million barrels of oil?

1 It's multiplied by--my understanding is that 1 cubic
2 meter is 6.29 barrels of oil?

3 A. That's correct.

4 Q. So, if we were to multiply that by that factor
5 it would lead to about 33 million barrels of oil?

6 A. Yes, that's correct.

7 Q. So, that was the production in 2015.

8 And then, if we turn to Page 3-47, which is just
9 two pages into that, it's the excerpt that we
10 provided, and we look at the operating cost and the
11 capital cost in 2015, and they total [REDACTED].
12 So, we're looking CAPEX and the OPEX for 2015, the
13 total being [REDACTED]. And if my math is
14 correct, then, per barrel of oil, the CAPEX and OPEX
15 was about [REDACTED] per barrel that year? I'm dividing
16 the [REDACTED] by the 33 million barrels of oil.

17 A. Correct.

18 Q. Okay. So, those costs then would also be
19 deducted from the gross revenue of the Pilot; is that
20 right?

21 A. I think you're attempting to give a notional
22 figure for, like, the operating costs of the field?

1 Q. Yeah. So, I could get that by doing that:
2 taking the total production for that year and
3 deducting off, or figuring out, then, the CAPEX and
4 the OPEX would give me a general CAPEX and OPEX per
5 barrel of oil for that year; is that right?

6 A. Using those 2015 numbers, that's correct.

7 Q. They're, unfortunately, the most recent ones
8 we have on the record, so we're using those.

9 Now, in the R&D Application for the GUS study
10 it was estimated, on the high end, that the GUS study
11 would cost about [REDACTED]. Does that sound
12 familiar to you? And I understand you're not
13 familiar with the numbers. I can refresh your memory
14 or help you understand that by taking you to the
15 document, if you like.

16 A. Did you say "GUS" study?

17 Q. The Gas Util--lingo for us, we call it the
18 "GUS." I'm leading you to our internal knowledge
19 here. The Gas Utilization Study, that cost, on the
20 high end, was about \$61 million estimated?

21 A. That seems correct, yeah.

22 Q. So, if we take that Gross Profit, then, and I

1 deduct the costs to develop the well, the OPEX and
2 CAPEX per barrel for [REDACTED] barrels of oil, the
3 costs to run the R&D activity, it leads to about
4 [REDACTED]. And, on that net, so to speak, HMDC
5 would pay about 30 percent in royalties to the
6 Province?

7 A. I would refer to Mr. Phelan, but that sounds
8 about right.

9 Q. I believe Mr. Phelan is nodding over there,
10 but he did confirm that in his testimony this
11 morning.

12 So, that would be about [REDACTED]. So, if
13 my math is correct, then, the WAG Pilot would be run
14 on the high-end potential of [REDACTED] barrels of
15 oil, and leave HMDC with a Net Profit of around
16 [REDACTED]?

17 A. All of those numbers assume the WAG Pilot
18 actually works. If WAG was such a proven technology,
19 I expect it would have already been introduced to the
20 Hibernia Field as well as other fields in the
21 Offshore Area.

22 Q. I'm sorry, your position now is that WAG would

1 have been done earlier?

2 A. My position is that the numbers that you
3 described, the [REDACTED] barrels of incremental
4 recovery for the [REDACTED] WAG Pilot are very uncertain,
5 and it's very possible that WAG does not create any
6 incremental oil production from Hibernia. That's
7 really the intent of conducting the pilot is to see
8 if it would actually work.

9 And, as I mentioned, if WAG mechanism was
10 such an attractive technology versus our
11 ordinary-course drilling wells and everything else, I
12 expect that other Operators, who were much closer to
13 end-of-field life, would have conducted it before we
14 did.

15 Q. You would agree with me, then, that at least
16 there is a possibility that, at the end of the day,
17 after carrying out the WAG Pilot, that HMDC will walk
18 away with a profit?

19 A. If the WAG Pilot is successful, we would have
20 to see what the results show us in terms of
21 incremental recovery, and then weigh that potential
22 benefit against the costs, as I mentioned.

1 Q. My question, Mr. Noseworthy, doesn't relate to
2 implementing EOR field-wide. I'm looking just at
3 profits that can be made off running the Pilot.

4 And you would agree with me that there is a
5 possibility that, if the Pilot goes well, or even is
6 marginally well and produces some oil, that
7 ExxonMobil or HMDC will make a profit off this R&D
8 activity?

9 A. If the WAG Pilot proves to be successful and
10 achieves incremental recovery, then its potential for
11 us to generate some value. But, as I mentioned, it's
12 important to realize that the trade-off is our
13 ordinary-course business, which also generates
14 significant value in the field.

15 And, in my view, as an ordinary-course
16 business, we would go after the undeveloped blocks in
17 the reservoir that have much more EOR potential than
18 the [REDACTED] quoted.

19 Q. The gas that's being used for the Pilot,
20 that's not lost in its entirety; correct? It's just
21 diverted for the time being and will become available
22 later on for use in other wells?

1 A. My understanding is a portion of that gas will
2 remain in the Fault Block in [REDACTED] but some of it will
3 come back through the recovery of the oil production;
4 so the gas will come back with that oil production.
5 But there will be some that will potentially stay in
6 the fault block.

7 And it's one of the concerns that Mr. O'Keefe
8 actually highlights in his documents.

9 Q. Let's turn to--I'm sorry, I'm missing the tab
10 number here. Let's turn back to Tab 7. And I want
11 to look at the slide entitled "Risks." And the third
12 bullet-point there--sorry, it's entitled "Risks."

13 The third bullet-point there notes that a
14 small amount of injection gas will be left in the [REDACTED]
15 [REDACTED] but this volume is minimal when compared to
16 the overall field gas resources.

17 So, what we're talking about is a little bit
18 of gas left in the WAG Pilot, but the majority of the
19 gas will return to the field to be used for those
20 other wells at a later point in time. So, we're just
21 deferring when you get back that oil, not removing
22 that oil from the production entirely.

1 ARBITRATOR ROWLEY: You're talking about gas.

2 MS. SQUIRES: Oil, sorry.

3 Q. Yes, but--so the gas that's left in the well,
4 that gas is then used to get oil out of other wells
5 later on; is that right?

6 A. I'm sorry, I'm not quite following.

7 Q. I will start again.

8 The gas that's used in the [REDACTED], some of that
9 gas will remain in the block at the end of the day?

10 A. Correct.

11 Q. Not all of it?

12 A. That's correct.

13 Q. That gas that will then be used after the
14 pilot is done to get recovery in what I would refer
15 to as "normal" functioning wells for Hibernia, not
16 Pilot wells?

17 A. The way to think of it is that, as we conduct
18 the WAG Pilot, the gas that we inject into the WAG
19 Pilot, some of that will come back up through the
20 producing well, and some of it will stay in the
21 block. And the gas that comes back up through the
22 producing well, as you describe, you can use for your

1 gas flood "ordinary course" wells.

2 Q. So, it's not that gas is being lost forever
3 and you would not be able to use it, it's just you're
4 not being able to use it at the present time?

5 A. As I described, some of the gas will remain in
6 the block, so that, technically, it is gone. But
7 some of the gas will also just produce back through
8 the producer and be usable for the gas flood.

9 Q. And that amount that stays in the well is
10 described in this document as "minimal".

11 A. That is correct.

12 Q. Those are all my questions for you,
13 Mr. Noseworthy. Thank you for your time.

14 ARBITRATOR ROWLEY: May I just--before you
15 leave, and there was one point that, just for the
16 Transcript, you asked the Witness to accept your
17 calculation of [REDACTED] times \$57 a barrel, and you
18 said that led to [REDACTED] gross profit.

19 And I think what you're talking about is
20 revenue, not profit. And you said that a couple of
21 times, so I'm just making that note.

22 Am I correct that that's what you meant?

1 MS. SQUIRES: That's correct. It would be
2 gross revenue.

3 ARBITRATOR ROWLEY: Thank you.

4 PRESIDENT GREENWOOD: Thank you very much,
5 Mr. Noseworthy. Just stay with where you are for a
6 moment, please.

7 Mr. Nichols, do you wish to re-examine?

8 MR. NICHOLS: Just very briefly.

9 PRESIDENT GREENWOOD: Please.

10 MR. NICHOLS: Thank you.

11 REDIRECT EXAMINATION

12 BY MR. NICHOLS:

13 Q. Mr. Noseworthy, I believe we were looking at a
14 document behind Tab 7, which has been marked by the
15 Respondent as R-259, and Ms. Squires was taking you
16 through several excerpts of this particular document.

17 Do you--let me phrase it this way:

18 Mr. Noseworthy, before you received Mr. Jeff
19 O'Keefe's Witness Statement in this proceeding, had
20 you seen this document before?

21 A. No, I did not.

22 Q. The views and statements contained in this

1 document, had you seen or heard any of those
2 expressed before by Mr. O'Keefe or anyone at the
3 Board before receiving Mr. O'Keefe's Witness
4 Statement?

5 A. No, I did not.

6 MR. NICHOLS: No more questions.

7 PRESIDENT GREENWOOD: Thank you very much.

8 Do either of my colleagues have any questions
9 for this Witness?

10 ARBITRATOR GRIFFITH: No.

11 ARBITRATOR ROWLEY: No.

12 PRESIDENT GREENWOOD: Mr. Noseworthy, thank
13 you very much. You may stand down.

14 THE WITNESS: Thank you.

15 (Witness steps down.)

16 PRESIDENT GREENWOOD: Shall we take a few
17 minutes break at this point--just five minutes while
18 you bring Mr. Sampath in and prepare whatever
19 documents are necessary to give him?

20 MR. DOUGLAS: Sounds great. Thank you.

21 PRESIDENT GREENWOOD: Mr. Douglas and
22 Ms. Squires, to make life easier, if you put the

1 Cross-Examination Bundles for Mr. Sampath on the
2 Tribunal Members' places, obviously, you don't give
3 them to counsel for Mobil until the cross-examination
4 begins, but we're not going to look at them, it will
5 just mean less carrying stuff around the room.

6 (Brief recess.)

7 PRESIDENT GREENWOOD: Perhaps you could
8 indicate, I imagine, Ms. Squires, it will be you.
9 Perhaps you would indicate to me a convenient point
10 at which to stop between, that is to say, half past
11 five and 6:00. And if you're about to move on to an
12 entirely different subject, that would be a good time
13 to change.

14 MS. SQUIRES: Absolutely.

15 KRISHNASWAMY SAMPATH, CLAIMANT'S WITNESS, CALLED

16 PRESIDENT GREENWOOD: Right. Mr. Sampath,
17 you have in front of you a Witness Declaration, if
18 you would be kind enough to read that to us to make
19 that Declaration for us.

20 THE WITNESS: Sure.

21 I solemnly declare upon my honor and
22 conscience that I shall speak the truth, the whole

1 truth, and nothing but the truth.

2 PRESIDENT GREENWOOD: Thank you very much.

3 Now, can I just, to help you and to help us,
4 first of all, please remember that sitting behind you
5 is a Court Reporter who has been busily transcribing
6 everything that has been said since half past 9:00
7 this morning and may be getting a little tired, so
8 please do not speak quickly. Try to use a measured,
9 deliberate tone of voice when you're answering
10 questions.

11 And the most important is don't speak at the
12 same time as counsel, so counsel don't speak at the
13 same time as the Witness.

14 Mr. Nichols, you're going to conduct the
15 direct examination, which will be brief, won't it?
16 That is if you can get your microphone to work.

17 MR. NICHOLS: It's working now.

18 Yes, I will endeavor to be as brief as
19 possible.

20 With the Tribunal's permission, may I bring
21 to the table the two Witness Statements?

22 PRESIDENT GREENWOOD: Yes, please.

1 DIRECT EXAMINATION

2 BY MR. NICHOLS:

3 Q. Good afternoon.

4 Can you please introduce yourself and your
5 relationship to the Terra Nova and Hibernia Projects?

6 A. My name is Krishnaswamy Sampath. From the end
7 of August in 2013--

8 COURT REPORTER: A little louder, please.

9 PRESIDENT GREENWOOD: I'm sorry, you're a
10 little soft spoken. If you move the microphone
11 closer to you.

12 THE WITNESS: Is that better?

13 PRESIDENT GREENWOOD: That's much better,
14 Mr. Sampath. Thank you.

15 THE WITNESS: I was the R&D Manager for
16 Hibernia Management and Development Corporation in
17 St. John's from end of August 2013 to the end of
18 January 2015.

19 BY MR. NICHOLS:

20 Q. Mr. Sampath, you submitted two Witness
21 Statements in this proceeding; is that correct?

22 A. Yes, that is correct.

1 Q. You have in front of you your First Witness
2 Statement of February 11, 2016, which has been marked
3 CW-3?

4 A. Yes.

5 Q. Do you reaffirm the contents of that Witness
6 Statement, sir?

7 A. Yes, I do.

8 Q. Do you have any corrections or updates to make
9 to this statement or to the attached résumé?

10 A. No.

11 Q. Mr. Sampath, do you have in front of you your
12 Second Witness Statement?

13 A. Yes.

14 Q. And that Second Witness Statement--first of
15 all, for the record, what was your answer to my last
16 question? Do you have in front of you your Second
17 Witness Statement in this proceeding?

18 A. Yes, I do.

19 Q. And it is dated September 21st, 2016 and
20 marked CW-10; isn't that correct?

21 A. That is correct.

22 Q. Do you reaffirm the contents of that

1 statement, sir?

2 A. Yes, I do.

3 Q. And do you have any corrections you wish to
4 make at this time or Updates to that statement?

5 A. No.

6 Q. Sir, are you familiar with an organization
7 called Research and Development Corporation?

8 A. Yes, I am.

9 Q. How are you familiar with that corporation or
10 that organization, sir?

11 A. I happened to work with some members of the
12 staff of the Research and Development Corporation
13 during my tenure in St. John's.

14 In addition, in 2015, I accompanied the
15 management team from RDC to Oslo, Norway, to give
16 some presentations to R&D vendors there to try to
17 encourage them to set up offices in St. John's to
18 help us to spend the money to meet our obligations.

19 In addition, RDC has a funding mechanism
20 through the Central Government, Federal Government,
21 and the Province. At that time, it was to the tune
22 of roughly \$35 million a year, and they were looking

1 for partners in industry because, if they had an
2 industrial participant in a project it made it easier
3 for them to convince their Board to fund the Project.

4 Q. Mr. Sampath, do you presently have any
5 relationship with RDC?

6 A. I had--recently, I was asked if I would be
7 willing to serve on the Board of RDC, and I agreed to
8 it. The last note that I got from them was that they
9 had completed the paperwork and sent it on, but I
10 also saw last week that RDC doesn't exist as an
11 entity anymore, and it's been taken over by an entity
12 called Innovate-NL, so I don't know what the status
13 of that is.

14 Q. How is RDC affiliated with the Province, sir?

15 A. RDC is a Crown agency set up in the Province.

16 Q. And that invitation you referred to a moment
17 ago, who sent you that invitation?

18 A. Glenn Janes, who was the CEO of RDC until
19 recently. He had back surgery and is currently a
20 senior advisor.

21 MR. NICHOLS: Mobil passes the Witness to
22 Canada.

1 PRESIDENT GREENWOOD: Thank you very much.

2 Ms. Squires, your witness.

3 MS. SQUIRES: Thank you.

4 CROSS-EXAMINATION

5 BY MS. SQUIRES:

6 Q. And good afternoon, Mr. Sampath.

7 A. Good afternoon.

8 Q. My colleague, Darian, is about to hand you a
9 binder with a series of documents in it. They're all
10 identified by a tab number. So, during the course of
11 my questioning, I might refer to certain tabs in that
12 binder for you to have a look.

13 Some of the documents, given they are quite
14 lengthy, we've just included an excerpt, but if you
15 would like to have the full document to look at, we
16 do have a separate copy, so you can just let me know
17 if that is the case.

18 A. Thank you.

19 Q. It's also important that for the purposes of
20 the Transcript that if my question is a yes-or-no
21 question that you answer in that way first, and then
22 I can give you the proper time to provide whatever

1 context you would like. But I would appreciate it if
2 you could answer yes or no to the question, if the
3 question begs that kind of response.

4 A. I understand.

5 Q. Mr. Sampath, the Guidelines prescribe a work
6 expenditure application form that HMDC submits to the
7 Board prior to undertaking an R&D activity; is that
8 correct?

9 A. Yes.

10 Q. Let's turn to Tab 8 of your binder that I just
11 mentioned, and Tab 8 is those famous Guidelines.

12 A. Right. I have it.

13 Q. I'm going to ask you to turn to the last page.

14 A. Yes.

15 Q. So, this is that R&D work expenditure
16 application form?

17 A. That is correct.

18 Q. Now, there's a place there towards the middle
19 for a description of the R&D activity.

20 Do you see that?

21 A. Yes.

22 Q. And additional information can be provided,

1 though, aside from the one sentence that is allowed
2 based on the space here; correct?

3 A. I'm sorry, could you repeat that?

4 Q. You don't have to fit all the information
5 you're providing into the Board on the form itself,
6 even though it says "Description of Activity" there.
7 You could attach a project proposal, for example.

8 A. That is correct.

9 Q. Now, if we--let's leave aside Education and
10 Training for a second, but for R&D Projects, the goal
11 of this application is to show that the proposed
12 activity meets the definition of R&D in the
13 Guidelines; correct?

14 A. Yes.

15 Q. And let's go to look at that definition, then,
16 in Section 3.3.

17 So, this is the definition; correct? Right
18 here.

19 A. Right.

20 Q. And it notes there that R&D may include three
21 different areas: R&D activity in the Province,
22 increased R&D capacity in the Province, and then

1 Education and Training activity or capacity in the
2 Province as discussed further below.

3 A. Yes.

4 Q. And then it goes on to provide a definition of
5 R&D that the Board looks for, and that's related to
6 the definition that's included in the Income Tax Act;
7 is that correct?

8 A. Yes.

9 Q. And it looks essentially for, if we look at A,
10 B, and C in the definition, basic research, applied
11 research, or Experimental Development.

12 Is that right?

13 A. Correct.

14 Q. So, generally speaking, then, if HMDC can show
15 that a proposed activity is an R&D activity in the
16 Province or building capacity in the Province and it
17 comes in the form of Basic Research, Applied
18 Research, or Experimental Development, it should be
19 pre-approved by the Board; is that right?

20 A. Would expect that, yes.

21 Q. Now, the form nor this definition requires
22 HMDC to show what benefit it itself would derive from

1 the R&D activity; correct?

2 A. Sorry, could you repeat that?

3 Q. The definition of R&D does not require that
4 HMDC explain in its application what benefit or value
5 HMDC or ExxonMobil would derive from the R&D
6 activity; correct?

7 A. Yes.

8 Q. Now, there are three expenditures that are
9 being claimed in this arbitration that relate solely
10 to the Terra Nova Project: The Sour Gas Laboratory
11 at MUN, the Ice Ocean Sentinel System, and the Young
12 Innovators Award.

13 Does that sound about right to you?

14 A. Yes.

15 Q. Now, Suncor is the operator of the Terra Nova
16 Project; correct?

17 A. Yes.

18 Q. And you have never been employed by Suncor; is
19 that correct?

20 A. Yes.

21 Q. But they do employ someone in a similar
22 position to your position at HMDC; is that right?

1 A. Yes.

2 Q. And--

3 A. Well, with one difference: My understanding
4 is that the individual acting as an R&D Coordinator
5 in Suncor also has operational responsibilities.
6 They work on the Projects as well, whereas in my role
7 as R&D Manager for HMDC, I was completely
8 disassociated from the operations of HMDC.

9 Q. Okay. In your capacity, then, as R&D
10 Coordinator at HMDC, you wouldn't have created any or
11 completed any of the R&D Application forms for the
12 Terra Nova Project; is that correct?

13 A. Yes, yes.

14 Q. And the sour gas expenditure, that was
15 approved by the Board in November 2012, I believe you
16 indicate in your Witness Statement.

17 Do you recall that?

18 A. Yes.

19 Q. And the statement of work that was done for
20 the work to be completed at Memorial University, that
21 was completed in June of 2013. I believe you also
22 indicate that in your Witness Statement?

1 A. Yes.

2 Q. So, both of these activities were carried out
3 prior to you moving to St. John's to work with HMDC
4 in August of 2013?

5 A. Yes.

6 Q. So, this expenditure, then, for which the
7 Claimant is seeking about \$600,000 was presented to
8 the Board and decided upon the Board with the funds
9 fully committed by Suncor prior to you arriving in
10 the Province?

11 A. Yes.

12 Q. All right. Now, Suncor had backed away from
13 making any new commitments to fund R&D activities
14 altogether by the time you arrived in September of
15 2013; is that right?

16 A. Not completely. I think they were willing to
17 consider new Projects on their merits, and they were
18 also willing to consider Projects if they had made a
19 commitment to fund these Projects earlier.

20 Q. So, if there was a prior commitment, they
21 would maintain that commitment?

22 A. Right.

1 Q. But they weren't looking to fund new R&D
2 activities?

3 A. The statement I heard from them was, unless
4 it's really, really fantastic Project.

5 Q. Okay. Fair enough.

6 Let's talk about the sour gas study for a few
7 minutes, this relates to an overall H2S souring
8 mitigation program that Suncor is currently
9 undertaking and it was originally valued at over
10 [REDACTED], and I understand from testimony this
11 morning that it's decreased in value since then, but
12 it's quite a substantial Project; correct?

13 A. Yes.

14 Q. And that expenditure came from a problem that
15 Terra Nova was facing with respect to sour gas
16 forming in its wells; is that right?

17 A. Yes.

18 Q. And it caused Terra Nova to shut down
19 production for some time; is that right?

20 A. Yeah.

21 Q. So, in response to that issue, Suncor
22 initiated a field pilot program to deal with that

1 sour gas problem; correct?

2 A. Yes.

3 Q. Now, the field oriented aspects or the--the
4 field program that was carried out by Terra Nova,
5 costs related to that are not being claimed in this
6 arbitration?

7 A. That's correct.

8 Q. Those would be considered "ordinary course"?

9 A. Yes.

10 Q. And--but the cost of setting up the laboratory
11 at MUN to study certain issues related to sour gas,
12 that is what's being claimed in this arbitration?

13 A. Yes.

14 Q. Okay. Now, in your First Witness Statement,
15 you noted that Suncor donated about \$2.9 million to
16 set up the MUN laboratory. Does that sound about
17 right?

18 A. Yeah.

19 Q. Okay. And now noted that Suncor made two
20 additional contributions to MUN, one about \$367,000
21 for one study and about \$417,000 for a second study?

22 A. Correct.

1 Q. And you opine that these constituted, in your
2 First Witness Statement, basic academic research not
3 specific or necessary for Terra Nova?

4 A. Yes.

5 Q. And, in your First Witness Statement, you
6 indicated that those expenses were incremental?

7 A. Sorry?

8 Q. In your First Witness Statement when speaking
9 of those expenditures, you characterized them as
10 incremental?

11 A. Yes.

12 Q. Now, in your Second Witness Statement you
13 indicated that a portion of those studies were, in
14 fact, done in the ordinary course; correct?

15 A. Yes.

16 Q. And that was following a discussion with
17 Michelle Squires, who I note is not related to me,
18 and an employee at Suncor?

19 A. Yes. She was the R&D Coordinator for Suncor
20 at that time.

21 Q. So, your conversations with Ms. Squires in
22 between your First and Second Witness Statement

1 corrected your original understanding of the
2 expenditure?

3 A. No. That is not correct. I still stand by my
4 original statement, but I prefer to defer to the
5 Operators' opinion in the interest of not being
6 aggressive in our claims but being conservative.

7 Q. So, Ms. Squires is the one who would have done
8 the R&D Application for the Board and would have
9 first-hand knowledge of this expenditure feels that
10 some of this is incremental--is "ordinary course,"
11 but you disagree with her?

12 A. Yes.

13 Q. Okay. I take that you disagree with her but
14 you have, in fact, provided some adjusted
15 calculations based on Ms. Squires' opinion; is that
16 right?

17 A. Yes.

18 Q. Okay. Let's have a look at that. We're going
19 to turn to Tab 12 of your binder.

20 A. Okay.

21 Q. So, this is the document where you provide
22 those adjusted calculations; is that right?

1 A. Yes.

2 Q. And you created this document for the purposes
3 of the arbitration?

4 A. Yes.

5 Q. And the document is entitled "an estimate of
6 'incremental' and 'ordinary course' expenditures";
7 correct?

8 A. Yes.

9 Q. And around halfway through the page there, it
10 notes that tasks three, four, and five are likely
11 ordinary course; correct?

12 A. Yes.

13 Q. And towards the bottom, it indicates that
14 there are certain assumptions that you have built
15 into this; is that right?

16 A. Yeah.

17 Q. Now, you don't provide any detail on what the
18 tasks one through five are in this document; correct?

19 A. No, but it is in the original proposal that
20 was submitted by Suncor to the Board.

21 Q. Now, you don't provide any further breakdown
22 to help understand why certain portions of an

1 expenditure would be considered ordinary course and
2 certain would be considered incremental, aside from
3 this?

4 A. This page by itself needs to be combined with
5 the proposal to understand the basis of my
6 calculation of the incremental or routine expenses.

7 If you look at the proposal that was given to
8 the Board, tasks one through, I think even beyond
9 five, are outlined and the time for each of those
10 tasks is also outlined.

11 This, in fact, is perhaps a conservative
12 account because I have assumed equal costs for each
13 of the tasks, and some of the tasks like Task 1,
14 which if I remember correctly, is literacy research,
15 what would typically be done by interns or much
16 lower-paid individuals, whereas there is a
17 considerable amount of staff time whose hourly costs
18 are much higher.

19 Q. I think we have that R&D Application
20 that--where a tab link to a document here at Tab 11
21 of your binder, and I wonder if you could help me
22 find the information on the various tasks--

1 A. Certainly.

2 Q. --that are in that.

3 A. I believe there was another document that had
4 cost breakdown.

5 Q. I believe--

6 A. Excuse me, just one second.

7 I think this is a different Project under
8 Tab 11. It says "Subsurface Control of H2S and
9 Mitigation Techniques." The form here is NRB and SRB
10 interaction and system authorization.

11 Q. So, a different pre-approval would have been
12 submitted for that?

13 A. A different pre-approval, yes.

14 And it's a much larger amount as you can see.
15 The one in Tab 11 is only [REDACTED] if I remember
16 correctly.

17 Q. I think it says that amount expected--amount
18 expense [REDACTED]?

19 A. [REDACTED].

20 And if you look at this, the total is more
21 than [REDACTED]. If you look at "Time Writing" out and
22 other expenses, that itself is [REDACTED], equipment is

1 [REDACTED], so the total is over--and including indirect
2 costs, it's over [REDACTED], I believe. I think this is
3 a different Project. I'm fairly sure it's a
4 different Project.

5 Q. Okay. So, I believe the only R&D Work
6 Expenditure Application we have for the sour gas
7 study is the one that's in front of us, but we can
8 perhaps have another look. If you could give me one
9 second.

10 A. We have a copy with us back in our room.

11 Q. Okay. So, to confirm, then, Tab 11 of your
12 binder relates to the sour gas study, but a different
13 aspect than what--a different aspect of that study
14 than what your document at Tab 12 is speaking to.

15 A. Yes.

16 Q. Okay. So, we will do our best to look for the
17 other documents so you can help walk me through that
18 document later, and we'll have a look for that
19 tonight.

20 Let's move on now to another expenditure, and
21 I wanted to start by discussing the Subsea Sentry
22 System, which is quite the tongue twister, and you

1 discussed that at Paragraph 51 of your First Witness
2 Statement and Paragraph 70 of your Second Witness
3 Statement.

4 THE WITNESS: A question of clarification.
5 Am I speaking slowly enough?

6 COURT REPORTER: So far.

7 THE WITNESS: Thank you.

8 BY MS. SQUIRES:

9 Q. You are for me, but I'm also from
10 Newfoundland, so I don't think you can get too fast
11 for me.

12 A. I know.

13 PRESIDENT GREENWOOD: I'm sorry. Let me just
14 interrupt you for a minute.

15 David, it's the Subsea Sentry System.

16 BY MS. SQUIRES:

17 Q. Now this, the Subsea Sentry System expenditure
18 relates to a camera and laser system used to detect
19 leaks--

20 A. Did you say Paragraph 50?

21 Q. Paragraph 51 of your First Witness Statement
22 and Paragraph 70 of your Second Witness Statement.

1 A. Thank you.

2 Okay.

3 Q. This R&D activity relates to a camera and
4 laser system used to detect leaks underwater; is that
5 right?

6 A. Yes.

7 Q. And HMDC funded this for about [REDACTED] ?

8 A. Yes.

9 Q. And, in accordance with ExxonMobil's share of
10 33.125 percent, they would have paid about [REDACTED]
11 for this expenditure?

12 A. Yes.

13 Q. Now, the first two phases of the Subsea Sentry
14 System study were funded by ExxonMobil directly at
15 URC; correct?

16 A. Yes.

17 Q. And that was not as a result of the
18 Guidelines; correct?

19 A. No.

20 Q. So, ExxonMobil is not claiming compensation
21 for those earlier studies in this arbitration.

22 A. No.

1 Q. Now, the R&D activity that is at issue in this
2 arbitration relates to a third phase of the Project;
3 is that right?

4 A. Yes.

5 Q. And that is the development of a prototype.

6 A. Yes.

7 Q. And let's turn to Tab 13 of your binder. This
8 is the application that was submitted to the Board
9 for pre-approval of this expenditure.

10 A. Correct.

11 Q. And this one is signed--you have signed this
12 one yourself.

13 A. Yeah.

14 Q. And let's turn to Section 5 on Page 23.

15 A. Okay.

16 Q. It notes there that--and to quote what it
17 says: "ExxonMobil's Upstream Research Company (EM
18 URC) is in the process of developing a Subsea Sentry
19 System to facilitate subsea monitoring and
20 surveillance."

21 Do you see where I am there?

22 A. Yes.

1 Q. And it goes on to say that: "Ultimately, the
2 key goal is to develop a network of these systems
3 around key subsea assets for long-duration
4 surveillance."

5 So, based on this, then, ExxonMobil intends to
6 use the Subsea Sentry System when developed for
7 projects in its portfolio around the world?

8 A. If developed successfully, yes.

9 Q. So, when you say in your Witness Statement
10 that this, the Subsea Sentry System, is not
11 applicable to the Hibernia Project, there is a
12 possibility that it's applicable for ExxonMobil's
13 other assets? If successful.

14 A. If it's successful, yes.

15 Q. And you noted in your Second Witness Statement
16 at Paragraph 71 that the Subsea Sentry System was
17 intended to be used for deep-water assets.

18 A. Yes.

19 Q. So, no use for Hibernia given it's in
20 relatively shallow waters on the Grand Banks.

21 A. Yes.

22 Q. And if we turn to Page 9 at Tab 13, and look

1 at Section 2.6, it notes there that: "The SSSS"--so
2 that's the subsea system sentry system, I
3 assume--"will operate in a wide variety of subsea
4 environments and this may include shallow to very
5 deep-water."

6 So, based on this document, then, it appears
7 that the Subsea Sentry System does have applicability
8 in shallower water depth.

9 A. That would be correct, yes.

10 Q. So, the statement in your Witness Statement
11 about it being only applicable in deep-water is
12 actually not correct?

13 A. And the requirements for a shallow-water
14 system would be very different from what you need for
15 a deep-water system. A deep-water system needs to be
16 much more robust because the pressure is much higher.
17 But as for a shallow-water system, the needs are
18 not--the needs are very different for a shallow-water
19 system. They're much less tight. And if Hibernia
20 had needed a piece of apparatus like this for use in
21 the Hibernia Field, we would have just gone out and
22 contracted someone to build it for us.

1 Q. I guess my question relates to the fact that
2 the Subsea Sentry System, based on this document,
3 it's intended to work in both shallow and deep-water
4 environments.

5 A. Yes.

6 Q. Let's move on to the environmental genomics
7 expenditure, which is at Paragraphs 79 of your First
8 Witness Statement and Paragraph 98 of your Second
9 Witness Statement.

10 A. Okay.

11 Q. And this is a smaller expenditure. HMDC would
12 have paid about [REDACTED] towards the Centre; is that
13 what you indicate in your statement?

14 A. I don't know the [REDACTED] is HMDC's or a
15 total--HMDC, correct.

16 Q. I believe all the numbers are HMDC, the total
17 amount.

18 A. Yes, HMDC. It's gross.

19 Q. And Hibernia's--or ExxonMobil's share then
20 would have been 33.25 percent of that--.125, sorry.

21 A. Yes.

22 Q. Now, this expenditure involves setting up a

1 Centre for Environmental Genomics that uses DNA
2 methods to study environmental assessments; is that
3 right?

4 A. Yes.

5 Q. And let's turn to Tab 15 of your binder. This
6 is the presentation on Newfoundland and Labrador R&D,
7 and it refers to "Opportunities and Initial
8 Impressions."

9 And this is an ExxonMobil document; correct?

10 A. Yes.

11 Q. And if we turn to Page 2, the slide there is
12 discussing environmental technology research
13 opportunities, and it notes there at the top that
14 there are two initial areas of URC research with
15 significant potential for advancing research through
16 leveraging Newfoundland funds.

17 Do you see where I am there?

18 A. Yes.

19 Q. And one of those is the environmental
20 genomics--

21 A. Yes.

22 Q. --that we're talking about today.

1 And just a little further down, under "Business
2 Drivers," it notes there, it uses the word "we." Is
3 that URC? Who would the "we" be in that sentence?

4 A. It's URC.

5 Q. So, "URC is currently challenged in the pace
6 and scope of advancements of these technologies."

7 So, at the time of this presentation, then, URC had
8 been conducting some research on environmental
9 genomics, albeit at a pace--they were challenged in
10 the pace and scope of being able to advance that R&D.

11 A. If I can make a small explanation?

12 Q. Absolutely.

13 A. Many of these R&D Projects require multiple
14 phases. The first phase is defining the scope of the
15 Project and defining the objectives of the Project.

16 Phase II is a little more detailed. It's
17 mostly desktop-type operation, where you come up with
18 concepts on what you do next.

19 Phase III moves into building a prototype of
20 some kind or Phase III or Phase IV will go into
21 practically a commercial scale test or an
22 application. The costs go up astronomically as you

1 go from Phase I through Phases II, III and IV, which
2 is why in the previous one, Subsea Sentry System, URC
3 was able to fund Phases I and II because it was
4 relatively low dollars, but once it gets to something
5 like a \$1.8 million Project, normally those
6 things--maybe out of ten Projects on which you have
7 done Phases I and II, one or two will make the cut
8 because URC works under--with limited funding.

9 Q. And back on that point on the Subsea Sentry
10 System and moving Phase III to Newfoundland, a
11 benefit of doing that was ExxonMobil, instead of
12 paying a hundred percent of it at URC, would only pay
13 33 percent of it in Newfoundland?

14 A. I don't believe that was consideration at all.

15 Q. You would agree with me it would be cheaper to
16 do it Newfoundland given ExxonMobil is not bearing
17 the entire cost.

18 A. This is not an ExxonMobil Project. I want to
19 make that clear. It's an HMDC Project.

20 In February 2014, I went to URC soliciting
21 ideas for projects to be conducted in Newfoundland.
22 When I moved to Newfoundland in August of 2013, just

1 the shortfall from the previous OA Period was
2 [REDACTED], oil price was above a hundred dollars a
3 barrel, and the R&D factor had gone up. So, the
4 obligation that we had at that time when I went was
5 [REDACTED] for HMDC.

6 So, I was--in fact, maybe "desperate" is a
7 wrong word in this context, but it was almost at that
8 point because one of my goals was not to be
9 underspent by the next OA. So, I solicited ideas not
10 only from URC, but we held one-day seminars in
11 Newfoundland of one general and one specific to
12 safety and invited vendors from all over the
13 Province, and even from other Provinces, to come to
14 let them know how much funding was available and how
15 we would be able to fund the projects if they were
16 approved by the Board through the money that we had
17 to spend with our obligations.

18 Q. So, on that point, then, the environmental
19 genomics would have been a study that had been--or an
20 R&D activity that had commenced at URC, albeit at an
21 early phase, Phase I, so to speak, that was then
22 moved to Newfoundland to carry out further phases.

1 A. Yes.

2 Q. And that early phase work that was done at URC
3 was not done because of the Guidelines.

4 A. No.

5 Q. Now, the money that is being--is sought to be
6 recovered in this arbitration relates to setting up a
7 Centre for Environmental Genomics in Newfoundland?

8 A. Yes.

9 Q. And if we turn to Tab 14.

10 A. Yes.

11 Q. This is the pre-approval application for that
12 expenditure?

13 PRESIDENT GREENWOOD: Sorry. Before we get
14 to that, can I just ask one question, Mr. Sampath?

15 THE WITNESS: Sure.

16 PRESIDENT GREENWOOD: If it was an HMDC
17 Project and the first two phases of the work were
18 carried out at URC, would ExxonMobil have billed HMDC
19 for that, the costs incurred in those first two
20 phases?

21 THE WITNESS: No.

22 PRESIDENT GREENWOOD: Just to be a gratuitous

1 contribution?

2 THE WITNESS: It is. Actually, URC was more
3 interested in advancing the technology.

4 PRESIDENT GREENWOOD: Right. Thank you.

5 BY MS. SQUIRES:

6 Q. So, we're at Tab 14 there.

7 A. Yeah.

8 Q. And this is the pre-approval application for
9 that expenditure?

10 A. Yes.

11 Q. And again signed by you?

12 A. Yes.

13 Q. And if we turn to Page 1 there, Page 1 in the
14 attached abstract?

15 A. Yeah.

16 Q. It's actually Page 3 in the document, and we
17 look under "Problem and Value Statement," the third
18 line there, it notes that: "The establishment of the
19 Centre will perform a platform for upstream research
20 company to advance research on the use of
21 environmental genomics and environmental assessments.

22 So that--is that what you just referred to

1 about URC being interested in the results of this?

2 A. In advancing the technology, yes.

3 Q. And so, is it fair to say, then, it was a goal
4 of carrying out this expenditure to take those
5 URC-developed concepts and develop them into
6 deployment or commercial operation in Newfoundland?

7 A. I'm sorry, could you repeat that?

8 Q. Is it fair to say that one of the goals of
9 this expenditure was to take those concepts that were
10 being discussed at URC in a very early stage and then
11 put them into implementation or commercialize them in
12 Newfoundland through the Centre?

13 A. Yes.

14 In fact, the concepts were not just URC. It
15 was done in collaboration with Dalhousie University
16 in Canada, Newfoundland. The Professor from there is
17 actively involved in this project.

18 Q. And the results from studies that are
19 conducted at that Centre, they could be used to
20 benefit ExxonMobil's projects worldwide?

21 A. I don't know. I really cannot answer that
22 because--let me give you the explanation.

1 The Project really calls for setting up a
2 genomic Centre in Newfoundland and develop
3 methodologies and processes for using genomics to
4 characterize bio--marine life; essentially, that's
5 it, rather than the conventional way of doing it,
6 where you go in and take samples of marine life and
7 bring them back to the laboratory for testing. This
8 will let you take soil and water samples from the
9 habitat, and from using genomics, figure out the
10 marine life that exists or existed in that area. And
11 the whole idea is to perhaps develop a baseline
12 survey for any marine area you're going to so that
13 you can periodically monitor and assess the impact
14 on--oil and gas activity on the marine life.

15 So, one, the processes have not been
16 developed. Two, I don't know how specific they will
17 be to the areas that we are going to. Three, if we
18 use it, we will be paying the Centre pretty much the
19 commercial rate that they will be charging--I'm
20 sorry, ExxonMobil will be paying the commercial
21 center whatever they will be charging the other
22 customers.

1 So, when you say "will it be of value," I
2 hope so in some--in the future sometime, but it is no
3 more value than someone walking off the street and
4 contracting them to make a measurement.

5 Q. URC remains involved in this activity today;
6 is that right?

7 A. I don't know if they have any additional
8 research activity at URC, but we do have a
9 subject-matter expert from URC involved in the
10 Project.

11 Q. Let's discuss the nuclear magnetic resonance
12 expenditure.

13 PRESIDENT GREENWOOD: Sorry. Before we leave
14 the environmental genome, you said that URC was
15 interested in developing the technology.

16 THE WITNESS: Yes.

17 PRESIDENT GREENWOOD: Why?

18 THE WITNESS: One, it looked like a very
19 positive alternative way to get samples, and there
20 are issues with collecting marine samples. Many of
21 them don't make it. They're not alive when you bring
22 them up to the laboratory. The chance of them dying

1 because you're bringing them from varying depths,
2 pressure change, et cetera is a challenge; and it's
3 also much more expensive because you have to send
4 specialized boats or samplers to go and get it. This
5 can be done very simply using conventional oilfield
6 sampling techniques.

7 PRESIDENT GREENWOOD: Let me just ask you, if
8 I may, about URC just for a minute. I used to be a
9 university professor, though not in the sciences, and
10 I'm always aware there is a tension in research
11 between those who want to engage in research because
12 it looks interesting and those who propose to engage
13 in research because it produces a benefit of some
14 kind.

15 Now, was URC's focus ensuring benefits to
16 ExxonMobil or was it a group of scientists who just
17 thought this would be fun to do?

18 THE WITNESS: I think it's primarily to
19 benefit--provide benefits to the corporation.

20 PRESIDENT GREENWOOD: Right. Thanks very
21 much.

22 THE WITNESS: We do have a small fraction

1 of--if I may complete, we do have a fraction of the
2 budget devoted to fundamental science, to developing
3 concepts that can then be developed for application
4 for the business.

5 PRESIDENT GREENWOOD: Thank you very much.

6 BY MS. SQUIRES:

7 Q. So, the nuclear magnetic resonance expenditure
8 is at Paragraph 62 of your First Witness Statement
9 and Paragraph 80 of your Second.

10 A. Yes.

11 Q. You indicate in your Witness Statement that
12 it's a [REDACTED] expenditure. 33 percent of that
13 is what ExxonMobil would have funded?

14 A. Let me see how I can answer that question.

15 The HMDC funding, the [REDACTED], ma'am, for
16 the Project would have resulted in a bill to
17 ExxonMobil of 33.125 percent of that.

18 Q. Okay. So, about [REDACTED]?

19 A. Yeah.

20 Q. Okay. Now, this expenditure involves using
21 magnetic imaging to detect oil under ice.

22 Is that right?

1 A. Yes.

2 Q. So, it's dealing with oil spills?

3 A. That was the concept, yes.

4 Q. And URC had been studying nuclear magnetic
5 resonance since 2006?

6 Is that right?

7 A. Yes.

8 Q. And at the time that HMDC applied to have this
9 expenditure qualify as R&D under the Guidelines, URC
10 already held three patents on this technology.

11 A. Yes.

12 Q. And, as of the date of that application, URC
13 had already spent seven years and more than
14 [REDACTED] on the project.

15 A. Yes.

16 Q. So, this is an R&D activity that URC
17 themselves had been pursuing for years?

18 A. Yes.

19 Q. And that work started before Exxon began to
20 spend pursuant to the Guidelines; correct?

21 A. Before HMDC started spending money pursuant to
22 the Guidelines.

1 Q. HMDC.

2 Now, let's turn to Tab 17 of your binder.

3 And this is that pre-approval application that
4 you would have submitted for this expenditure;
5 correct?

6 A. Right.

7 Q. And we will turn to the first page--

8 A. For some reason, you have a copy without my
9 signature on it.

10 Q. Yeah, several of the ones that we have are
11 ones without your signature, but I note on the second
12 page there--

13 A. But I did sign it.

14 Q. --your signature does appear.

15 A. Yes.

16 Q. You'll take my word for it.

17 We're going to turn to Page 1 of the Project
18 abstract that you included there, and look at the
19 paragraph that starts--or it's entitled "Possible
20 Solutions."

21 A. Yeah.

22 Q. And it notes there: "Remote detection of oil

1 in and under ice has been an area of research for
2 several decades." So, that's referring to that URC
3 research; is that right?

4 A. Pardon me?

5 Q. Is that referring to that, the work that has
6 been done at URC?

7 A. No, not just URC, in the industry.

8 Q. So, this is something that the industry as a
9 whole is interested in?

10 A. Absolutely.

11 Q. Now, it goes on to mention, then, that
12 ExxonMobil is researching other oil spill response
13 technologies in parallel to the nuclear magnetic
14 resonance, and it's doing this as part of a JIP; is
15 that right?

16 A. Some of it and part of the JIP.

17 Q. And now, the Claimant, or ExxonMobil, in this
18 arbitration is not asking the Tribunal to award it
19 damages for monies spent in the seven years at URC;
20 is that right?

21 A. No.

22 Q. Nor is it asking to be compensated for money

1 that it spent as part of the JIP mentioned here or
2 other research that's done in the area; correct?

3 A. That's correct.

4 Q. So, money at URC and money that went towards
5 this JIP was not as a result of the Guidelines.

6 A. No.

7 Q. Now, ExxonMobil is seeking to be reimbursed,
8 then, in this arbitration for money it paid to a
9 contractor to research the potential of a
10 helicopter-based nuclear--

11 MR. O'GORMAN: The Claimant in this case is
12 Mobil Investments Canada, Inc., and if we can just be
13 clear on the terminology, I think that would be
14 helpful for all of us.

15 MS. SQUIRES: Sure.

16 BY MS. SQUIRES:

17 Q. So, what's being sought to be in this
18 arbitration, the money that's sought as damages,
19 relates to money paid to a contractor to research the
20 potential for a helicopter-based nuclear magnetic
21 resonance tool; is that right?

22 A. Yes.

1 Q. And stay on Page 1 here, and I want to look
2 under the background section. And it notes there
3 that the detection of oil in and under ice is a key
4 limitation to responding to an oil spill in the
5 Arctic.

6 Do you see that? Under "The Background,
7 Problem/Value Statement."

8 A. Yes.

9 Q. And it goes on to say that developing this
10 technology may prove important for future Arctic
11 drilling plans and/or production, and goes on to
12 indicate that such a technology has the potential to
13 improve--I believe it refers to response time and
14 safety-type concerns.

15 A. Yes.

16 Q. Is that right?

17 So, when you note in your Witness Statement that
18 this R&D activity would have no benefit to the
19 Hibernia Project because it's unusual for solid ice
20 to form in that area, that's not to say that this R&D
21 activity, if successful, wouldn't have application to
22 other areas of development for ExxonMobil; is that

1 correct?

2 A. Yes, that is correct.

3 Q. And--

4 A. But I would also add, if you look at Section D
5 of the same submission--

6 Q. Um-hmm.

7 A. --"Intellectual Property Considerations," the
8 Contractor or Contractors receiving the--the last
9 sentence, "Contractor or Contractors receiving the
10 License will be required to make the technology
11 available for unrestricted use worldwide."

12 In the area of environment and safety, the
13 stance is that it is a license-to-operate issue, and
14 it's not a competitive-advantage issue. And in case
15 of success, we would publish the results and make the
16 technology available to anybody in the industry.

17 Q. So, for R&D related to oil spills, then, there
18 is not concerns necessarily about keeping
19 Intellectual Property within the hands of ExxonMobil?

20 A. That is correct.

21 Q. And are there any other areas of R&D that
22 would follow the same--

1 A. I would say safety and environment.

2 Q. Safety and environment.

3 A. It would be exceptional for ExxonMobil to try
4 to look for distinguishing technology that they
5 wouldn't reveal to the industry because that would be
6 considered irresponsible.

7 Q. Now, let's turn to the Wave Impact Study, and
8 you discuss this at Paragraph 56 of your First
9 Witness Statement and 74 of your Second.

10 And I want--in the interest of time, for
11 every expenditure that I mention that we will go
12 through, I note in your Witness Statement you have
13 included a dollar value associated with that, but if
14 you could confirm that for all of those expenditures
15 that's what HMDC paid, not what ExxonMobil paid;
16 correct?

17 A. Would you repeat that?

18 Q. So, for example, if we look at the Wave Impact
19 Study--

20 A. Correct.

21 Q. --you've indicated that that's a [REDACTED]--that's
22 just over a [REDACTED] expenditure. That's the total

1 cost that HMDC as a whole paid for that expenditure?

2 A. Yes.

3 Q. And ExxonMobil paid 33.125 percent of that?

4 A. Yes.

5 Q. And that would be the same for all of the
6 expenditures in your Witness Statement: You've
7 provided a total amount that HMDC paid?

8 A. Yes.

9 May I add something?

10 Q. Absolutely.

11 A. According to the terms of the Joint Operating
12 Agreement, Statoil would have 5 percent interest in
13 HMDC, would have the same rights to the technology as
14 ExxonMobil who is a majority partner. I just wanted
15 to keep that in mind because the benefits are being
16 reaped by HMDC and its affiliates, and that's
17 regardless of the level of ownership in the Project.

18 Q. Now, in the Wave Impact Study, the intent of
19 that study was to determine the long-term effects
20 that wave loads have on offshore and near-shore
21 structures.

22 A. Yes.

1 Q. And this was a project that was proposed by
2 URC?

3 A. Yes.

4 Q. Now, you note in your Witness Statement that
5 this--

6 A. Can I make a clarification on that?

7 Q. Sure.

8 A. This was a project that was proposed by URC to
9 HMDC, and this document is something that was sent as
10 a proposal by HMDC to the CNLOPB.

11 Q. Okay. Thank you for that clarification.

12 You note in your Witness Statement that this R&D
13 activity could be of benefit to new construction
14 projects in the design phase?

15 A. Yes.

16 Q. And does ExxonMobil have projects in the
17 design phase in its worldwide portfolio?

18 A. Right now, I don't think so.

19 Q. Do you anticipate that they would have some in
20 the future?

21 A. I hope so. I still hold a lot of ExxonMobil
22 stock.

1 Q. Even though you are retired, you're still with
2 them?

3 A. Yes.

4 Q. Now, you noted in the R&D Application for
5 this--and I could take you there. It's at Tab 18 of
6 your binder.

7 A. Okay.

8 Q. --that ExxonMobil Projects will use this
9 technology to determine wave impact design loads; is
10 that right?

11 A. Yeah.

12 Q. And this is a potential cost savings for those
13 projects?

14 A. Could be.

15 Now, let me amplify on that a little bit.

16 Q. Sure.

17 A. These studies are done to improve our
18 scientific understanding. When you go to a specific
19 design of an offshore structure like a platform, most
20 regulatory requirements are that you perform
21 experiments that are very specific to the Project, to
22 the design that you have for the Project.

1 So, what this will do is perhaps train the
2 company that's doing the measurements on doing it
3 more efficiently and making sure that it's effective.
4 Other than that, this does not bring a direct value
5 to future projects.

6 Q. Okay. So, the R&D Application, though, it
7 does indicate that it allows a potential reduction in
8 costs. You would agree with that statement, though?

9 A. I don't know.

10 Q. Okay.

11 A. I have to clarify one thing: These proposals
12 came from the principal investigators, and I did not
13 go through the trouble of modifying or editing the
14 documents. As I said, I was [REDACTED] underspent;
15 and, as long as the Board was willing to accept it
16 and provide approval, I didn't bother to edit any of
17 the documents.

18 Researchers tend to be pretty optimistic, and
19 I'm glad they are. I used to be one. If you're not
20 an optimist, you shouldn't be in R&D.

21 (Laughter.)

22 A. And they tend to value what they're following

1 to a great extent.

2 And, actually, I'm more encouraged by it.
3 Whether it's true or not is immaterial to me. If
4 someone comes to me and says, "Well, I really think
5 this project has a 10 percent chance of success, but
6 I think you should fund it," I think my chance of
7 signing on that letter is pretty low.

8 Q. So you say you didn't go through this with a
9 fine-tooth comb to kind of fix those.

10 A. No.

11 Q. But that's not to say that this is completely
12 inaccurate?

13 A. No.

14 Q. Okay.

15 A. But, as I said, R&D folks have to be
16 optimistic.

17 Q. URC has performed work related to wave impact
18 as well; is that right?

19 A. URC--let me rephrase that, if I may, and you
20 can correct me.

21 Q. Sure.

22 A. URC has funded research on wave-impact

1 studies. I don't believe we have the equipment to
2 conduct the studies ourselves. We have used
3 companies in Norway in the past to make these kind of
4 measurements, and this was an effort to build a
5 capability and capacity in the Province in the true
6 spirit of what's in the Guidelines on what the
7 expenditures are for.

8 Q. So, this area of research, then, is something
9 that URC is interested in and has spent money on?

10 A. Yes.

11 Q. And ExxonMobil is not claiming that money in
12 this arbitration; correct?

13 A. No, no.

14 Q. Let's turn to the dynamic monitoring of
15 shallow-water wells.

16 A. Yes.

17 Q. That's at Paragraph 77 of your First Witness
18 Statement and 96 of your Second.

19 A. Okay.

20 Q. And this project involves taking realtime
21 measurements during drilling operations and by a
22 vessel in offshore in Newfoundland; right?

1 A. Yes.

2 Q. And it relates to addressing concerns over
3 wellhead fatigue?

4 A. Yes.

5 Q. Could you just briefly explain why wellhead
6 fatigue is a problem for the industry.

7 A. Because when the metal passes its fatigue
8 limits, it can break off, so there is a limit on how
9 long or how often you can operate the equipment; and
10 after that, you have to take it out for inspection to
11 make sure it's safe to continue using it. And the
12 calculations tend to be on the conservative side, for
13 obvious reasons, because of safety.

14 Q. So, the expenditure, then, looks to study when
15 that fatigue happens, and--

16 A. If you can get clearance to operate the
17 equipment for a longer period before you have to do
18 inspection, you're reducing the frequency of
19 inspections, and that can help in reducing costs.

20 Q. Okay. So, it could be a cost, a potential
21 cost savings?

22 A. Yes.

1 Q. Now, the modeling that's currently used to
2 predict the well-system fatigue--I believe it's
3 mentioned in your Witness Statement--does not always
4 represent what Operators find in real life?

5 A. Yes.

6 Q. And so, this study was then intended to bring
7 that modeling more in line with real-life situations?

8 A. Yes.

9 Q. And let's turn to Tab 21 of your binder. This
10 is the R&D Pre-Approval Application for the
11 expenditure. I know we got an unsigned version of
12 this one as well on both pages, but I trust--

13 A. I did sign it.

14 Q. And I want to look at Page 1 of the abstract
15 that was attached and specifically the background
16 section, and it lists off several bullet points there
17 that are objectives of the R&D expenditure.

18 A. Yes.

19 Q. And it says--the first one there says to--or
20 the third one, sorry: "To utilize interpretation of
21 the data to enhance current and future integrity of
22 drilling operations offshore Newfoundland and

1 Labrador."

2 Do you see where I am?

3 A. Yes.

4 Q. So, one of the objectives, then, was to
5 improve any drilling that might be happening in the
6 Newfoundland area?

7 A. In shallow-water areas of which Newfoundland
8 happens to be one.

9 Q. And if we turn to Page 3, under the "Benefit
10 of Proposed R&D Projects," it notes there, in the
11 last sentence under that heading, that: "Conclusions
12 from this study will ultimately help in improving the
13 integrity of future drilling operations offshore
14 Newfoundland and Labrador and beyond."

15 Do you see that?

16 A. Yes.

17 Q. So, there is potential here if the R&D is
18 successful to lead to a cost savings for when it
19 comes to drilling in Newfoundland and Labrador?

20 A. The cost savings will be available for
21 everybody. If you look at the "Intellectual Property
22 Consideration," the results will be published without

1 restriction, and the R&D deliverable learnings will
2 be made available for unrestricted worldwide use.

3 Q. So, everybody would get the cost savings, and
4 that would include ExxonMobil?

5 A. Yeah.

6 Q. Okay.

7 A. That could include ExxonMobil because, again,
8 savings are not guaranteed.

9 Q. Now, the R&D Application contemplates the
10 technology remaining on board the West Aquarius.
11 That's the drilling boat.

12 A. Yes.

13 Q. And the West Aquarius will do the drilling for
14 the Hibernia South Extension, the Ben Nevis Project,
15 and the Hebron Development; right?

16 A. Yes.

17 Q. And those are all ExxonMobil projects or
18 projects that ExxonMobil was involved in?

19 A. Projects that ExxonMobil is involved in, yes.

20 Q. Okay. And in deciding to do this R&D
21 activity, given that the West Aquarius was under
22 contract by HMDC at the time and will be operating in

1 Newfoundland for many years to come, HMDC decided to
2 leverage the funds it had to spend in Newfoundland to
3 develop that improved measurement system; is that
4 right?

5 A. Yes.

6 Q. Now, URC's interest in the wellhead-fatigue
7 study was--that was the main driver of this research;
8 is that correct?

9 I can rephrase that question. I might not
10 have gotten that very clearly.

11 URC's interest in the result of this R&D
12 activity was the main driver of why it was carried
13 out; is that right?

14 A. No. The main driver was the obligation that
15 we had to spend the money in the Province.

16 That was really the driving factor behind all
17 these projects.

18 Q. If we look at your First Witness Statement, in
19 Paragraph 77--or in 78, sorry--you note there in the
20 middle of the paragraph that the main driver for the
21 research was URC's interest in learning whether
22 existing predictive models for wellhead fatigue were

1 too conservative in shallow-water conditions.

2 Your testimony now is the Guidelines were the
3 main driver, but--

4 A. The main driver--again, this is a subset.
5 Each of the research projects has a different
6 sponsor. I haven't looked at the numbers that
7 closely. I would say roughly a third of the projects
8 came from URC. There are other projects that have
9 come from entities like, C-COR or CARD and other
10 Canadian research institutions, including the
11 University. So, that's the context of saying the
12 main driver of the research was the URC, not that we
13 spent the money because URC was interested in it. I
14 want to make that clear.

15 Again, as I repeated earlier--as I mentioned
16 earlier, I did go out to URC and solicited ideas from
17 them for funding because HMDC had this huge
18 obligation to spend money in the Province in a
19 relatively short period of time.

20 Q. Would it be fair to say, then, that URC
21 maintains an active interest in learning the results
22 of the R&D activity?

1 A. Yes.

2 Q. And now, URC planned and executed this type of
3 research in the past but in deeper-water depths?

4 A. Yes.

5 Q. And no money related to that research is being
6 sought in the arbitration?

7 A. No.

8 Q. And URC maintains an ongoing involvement in
9 this R&D activity?

10 A. I guess so.

11 Q. And let's turn to Page 2, there, at Tab 21 of
12 your binder, under "Intellectual Property
13 Consideration." It notes that the results of this
14 study may be useful to the ongoing DNV wellhead
15 fatigue JIP.

16 And who is DNV?

17 A. DNV is a company that does regulatory
18 standards.

19 Q. And the DNV wellhead fatigue JIP, ExxonMobil
20 is a part of that?

21 A. Yes.

22 Q. And JIP is another one of our lingoos, and

1 we've shortened to--

2 A. Joint Industry Projects.

3 Q. Okay. Now, no expenditures related to that
4 JIP are claimed in this arbitration?

5 A. No.

6 Q. And so, they were not carried out because of
7 the Guidelines; right?

8 A. No.

9 Q. And so, in that DNV wellhead fatigue JIP, most
10 of the other big players, so to speak, in the
11 industry are part of that JIP?

12 A. I'm really not familiar with that JIP.

13 Q. So, that JIP, would it be--would you
14 characterize that as something that ExxonMobil has
15 entered into in the ordinary course?

16 A. Yes.

17 Q. And the results of this R&D activity, then,
18 are useful to a JIP or research that's being done in
19 the ordinary course?

20 A. The key word is "maybe."

21 Q. Maybe, if successful?

22 A. Yes.

1 Q. They may be, okay.

2 A. If it is--and I don't know the details of the
3 JIP. I don't know how relevant the results of this
4 project will be to the JIP, to be honest.

5 Q. Maybe just--give me one second, Mr. Sampath.

6 (Discussion off the record.)

7 PRESIDENT GREENWOOD: Ms. Squires, I think
8 our Court Reporter has reached the end of his tether,
9 and it might, therefore, be an appropriate moment for
10 you to stop.

11 MS. SQUIRES: That's what we were just
12 discussing, and I would agree. Unfortunately for
13 you, Mr. Sampath, you have to be sequestered tonight,
14 but I do agree it's an appropriate time to stop.

15 PRESIDENT GREENWOOD: You are going to have
16 been sequestered tonight whatever happened.

17 Mr. Sampath, thank you very much.

18 You understand that you mustn't speak to
19 anyone from the Claimant's team about anything to do
20 with the case?

21 THE WITNESS: I understand.

22 PRESIDENT GREENWOOD: You shouldn't speak to

1 them at all.

2 THE WITNESS: I understand.

3 PRESIDENT GREENWOOD: Good. I hope you're
4 able to find something interesting to do in
5 Washington.

6 THE WITNESS: My wife is here with me, so...

7 PRESIDENT GREENWOOD: Well, in that case, you
8 won't be lonely, and I'm pleased to hear that.

9 Now, just taking stock, if we meet again at
10 9:30 tomorrow, I would like to try and make sure we
11 don't overrun on days we have witnesses because I
12 think everybody finds it much more tiring than legal
13 argument.

14 ARBITRATOR GRIFFITH: And I undertake to be
15 here on time.

16 (Laughter.)

17 PRESIDENT GREENWOOD: Good.

18 Are there any housekeeping matters before we
19 break for the day?

20 MR. O'GORMAN: Not from the Claimant's side,
21 Mr. President. Thank you.

22 MR. LUZ: None from the Respondent. Thank

1 you.

2 PRESIDENT GREENWOOD: Right.

3 Well, thank you all very much. We look
4 forward to seeing you tomorrow.

5 (Whereupon, at 5:35 p.m., the Hearing was
6 adjourned until 9:30 a.m. the following day.

CERTIFICATE OF REPORTER

I, David A. Kasdan, RDR-CRR, Court Reporter, do hereby certify that the foregoing proceedings were stenographically recorded by me and thereafter reduced to typewritten form by computer-assisted transcription under my direction and supervision; and that the foregoing transcript is a true and accurate record of the proceedings.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to this action in this proceeding, nor financially or otherwise interested in the outcome of this litigation.



DAVID A. KASDAN