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IN THE UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY
Civ. No. 04-3749 (JAP)
(Consolidated Cases)
Hon. Joel A. Pisano
----------x
IN RE ROYAL DUTCH/SHELL TRANSPORT SECURITIES LITIGATION
----------x

January 11, 2007

10:02 a.m.

Videotaped deposition of SHEILA M. GRAHAM, taken by the Lead Plaintiff and the Class, at the offices of LeBoeuf, Lamb, Greene & MacRae LLP, 1 Minster Court, London, England, before Gail F. Schorr, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York.

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A P P E A R A N C E S:

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14
BY: AIMEE D. LATIMER, ESQ.
15
16 ALSO PRESENT:
17 CHRISTINE MARTINEZ, Legal Assistant
Bernstein Liebhard & Lifshitz, LLP
18
PHILLIP HILL, Video Operator
19 Action Legal Video, Inc.
20
21
22
23
24
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2 THE VIDEO OPERATOR: This is
3 the beginning of tape 1, volume 1. This
4 is the video operator speaking,
5 Mr. Phillip Hill of Merrill Corp. London.
6 Today is January 11, 2007, and the time
7 is 10:02 a.m. London time. We are at the
8 offices of LeBoeuf, Lamb, Greene & MacRae
9 in London to take the video deposition of
10 Sheila Graham. This is in re Royal
11 Dutch/Shell Transport Securities
12 Litigation. This is being heard in the
13 United States District Court, District of
14 New Jersey, case number Civ. 04-3749
15 (JAP).
16 Will counsels present please
17 introduce themselves for the record.
18 MR. MILLKEY: Mark Millkey,
19 Bernstein Liebhard & Lifshitz, for lead
20 plaintiff, Peter M. Wood and the class.
21 MS. ABATE: Amy Abate of
22 Bernstein Liebhard & Lifshitz, on
23 behalf of Peter M. Wood and the class.
24 MS. MARSHALL: Caroline
25 Marshall, Bernstein Liebhard &
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Lifshitz, on behalf of lead plaintiff, Peter M. Wood and the class.

MR. GOLDSCHMID: Charlie Goldschmid, Debevoise & Plimpton, on behalf of the defendant Royal Dutch Petroleum and Shell Transport & Trading Company.

MR. WEED: Earl Weed, in-house Shell.

MR. SMITH: Colby Smith, Debevoise & Plimpton LLP, on behalf of the corporate defendants Royal Dutch Petroleum and Shell Transport & Trading, and for the witness.

MR. CORSON: Nicholas Corson, Hogan & Hartson, on behalf of KPMG Accountants NV.

MS. LATIMER: Aimee Latimer, Mayer Brown Rowe & Maw, on behalf of defendant Sir Philip Watts.

MR. FOUKAS: Savvas Foukas, Hughes Hubbard & Reed, on behalf of PricewaterhouseCoopers LLP.

MR. SENNETT: Nancy Sennett of Foley & Lardner LLP, on behalf of the defendant Judith Boynton.

THE VIDEO OPERATOR: Will the court reporter, Gail Schorr of Merrill Corp. New York, please swear in the witness.

S H E I L A M. G R A H A M, residing at 521 North Deeside Road, Aberdeen, Scotland, having been first duly sworn by the Notary Public (Gail F. Schorr), was examined and testified as follows:

MR. MILLKEY: Before we begin, I'd just like to note for the record that this voluntary deposition is being conducted in London, the

United Kingdom, upon consent of all parties, pursuant to Federal Rule of Civil Procedure 29. Pursuant to that agreement, the deposition shall be conducted in accordance with the Federal Rules of Civil Procedure and all applicable rules and orders of the United States District Court for the

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District of New Jersey.

EXAMINATION BY MR. MILLKEY:

Q. Good morning.

A. Good morning.

Q. I know you've had your deposition taken at least once by the SEC. Have you had any other depositions?

A. No.

Q. The groundrules today will be the same as the groundrules during the deposition with the SEC. I will ask you questions that I hope will be clear. If you don't understand them, please ask me to rephrase them and I'm happy to do that. Answer in words for the benefit of the court reporter, and we should both try not to talk over each other.

If you need a break at any time let me know and I will certainly try to accommodate you.

Today when I refer to Shell I'm going to be using that term in its broadest possible sense to refer to

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Royal Dutch, Shell Transport and the operating companies and service companies in which they hold an interest.

Could you just please state your name and address.

A. Sheila Graham, 521 North

Deeside Road, Aberdeen, Scotland.
Q. Can you please describe your educational background beginning with university?
A. I have a Bachelor's degree in electrical engineering from Edinburgh University, and I joined Shell straight from university.
Q. What year did you graduate?
A. 1989.
Q. Do you hold any professional licenses?
A. No.
Q. Do you belong to any professional organizations?
A. No.
Q. Are you currently employed?

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A. By Shell.
Q. What is your position?
A. I'm the commercial manager for North Sea.
Q. Where are you located?
A. In Aberdeen.
Q. What do you do as commercial manager for the North Sea?
A. I manage Shell's contracts and their commercial operations for their offshore installations in the North Sea.
Q. In that position do you have any responsibility for the reporting of reserves?
A. No.
Q. If you could briefly go over your employment history beginning in 1989 after you graduated.
A. I joined Shell in 1990 and I initially worked as what's called a well site petroleum engineer offshore. I then moved from offshore into the offices and worked as a petrophysicist.

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Q. Where was that?
A. In Gronigen, which is in the north of Holland.
Q. And were both of those positions at the same place?
A. Yes.
Q. And how long -- how long were you in that position?
A. It would have been four years, so till roughly the end of 1993.
Q. What does a petrophysicist do?
A. It interprets wire line logs. When you drill wells you take wire line logs and you can interpret to tell them the amount of hydrocarbons which are in a reservoir.
Q. Had you had any training for that position?
A. Yes.
Q. What was your training?
A. I initially had a three month training period, residential period, training period in The Hague,
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and then subsequent to that probably every year I had two or three weeks of training as well as on-the-job training.
Q. Did you change positions at the end of 1993?
A. Yes. I moved to The Hague.
Q. What was your position then?
A. I worked as a consultant petrophysicist working for Shell operating units that were without petrophysicist -- petrophysical employees.
Q. And so you consulted with various operating units?

A. Yes.
Q. And what operating units did you consult with?
A. Shell Gabon, Shell China, Shell the Philippines, and Shell Viet Nam.
Q. In your work with any of those operating units, did you have any responsibility with respect to the

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calculation or reporting of proved reserves?
A. No.
Q. How long were you in that position?
A. I moved to Australia in 19 -- the beginning of 1998.
Q. Where were you located in Australia?
A. Initially I was located in Melbourne and then I moved to Perth.
Q. What was your initial position there when you began?
A. My initial position was as a petrophysicist.
Q. How long were you a petrophysicist in Australia?
A. About a year and a half.
Q. During that year and a half did you have any responsibility for the calculation or reporting of proved reserves?
A. No.
Q. So roughly at some point in

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1999 your job changed?
A. Yes.
Q. When in 1999?
A. I don't remember exactly when, but it was probably about midyear of 1999.

Q. And what was your position at that time?
A. I moved into planning and economics role with also responsibility for ARPR reporting.
Q. How long did you hold those roles?
A. The planning and economics roles I held until I went on maternity leave in 2000 -- the end of 2001, the beginning of 2002. The reserves reporting role I held until mid-2001.
Q. After you left those positions, after your maternity leave, did you join Shell in the position you have now or was there something in between?
A. I joined gas and power. So

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it's a different position.
Q. Just so I get the full range of your employment history, what were you doing at that time?
A. I was working in LNG, liquefied natural gas trading.
Q. When you became -- is it fair to say you are an economist and a reserves coordinator for --
A. Yes.
Q. What's the name of the operating unit you were working for in Australia?
A. Shell Development Australia.
Q. I may refer to them today as SDA. When you took on those new roles, was that roughly at the same time you moved to Perth?
A. About three or four months after I moved to Perth.
Q. So economist and reserves coordinator, is that two jobs or one?
A. It's two jobs.

25 Q. What were your
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1 SHEILA M. GRAHAM
2 responsibilities as an economist?
3 A. My responsibilities were to
4 basically undertake the economic
5 analysis of the projects that Shell
6 were undertaking to see their
7 feasibility, commercial feasibility.
8 Q. Had you had any training to
9 undertake those responsibilities?
10 A. No.
11 Q. Were you in effect learning
12 on the job?
13 A. Yes.
14 Q. Were you the only economist
15 that worked for SDA?
16 A. No, there were probably
17 about five economists.
18 Q. I take it you had different
19 responsibilities from the others?
20 A. Yes.
21 Q. What were your
22 responsibilities in particular?
23 A. Initially my
24 responsibilities were for the Gorgon,
25 greater Gorgon area, and later on my
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1 SHEILA M. GRAHAM
2 responsibilities moved to Northwest
3 Shelf.
4 Q. When your responsibilities
5 moved to the Northwest Shelf, were you
6 also responsible for Gorgon or only the
7 Northwest Shelf?
8 A. No, only the Northwest
9 Shelf.
10 Q. And when did that change
11 occur?
12 A. I can't remember.
13 Q. What were your
14 responsibilities as reserves coordinator
15 for SDA?

A. The responsibilities as reserves coordinator was to compile the ARPR on an annual basis.
Q. Had you had any training for that role?
A. No.
Q. So again you were learning on the job?
A. Yes.
Q. Were you the only reserves

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coordinator employed by SDA at that time?
A. Yes.
Q. Do you know whether reserves coordinators at Shell are typically economists as well?
A. Typically they are petroleum engineers.
Q. Were your positions as economist and reserves coordinator related, would you say?
A. No.
Q. Do you know who preceded you as reserves coordinator at SDA?
A. Helge Hammer.
Q. Do you know how long he held that position?
A. No.
Q. Do you know what Mr. Hammer did after he left the position of reserves coordinator?
A. He moved in to become a reservoir engineer in Woodside.
Q. What is Woodside?

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A. Woodside is a listed oil and gas company in Australia.
Q. So he was still located in Australia after he left that --
A. Yes.

Q. -- the position of reserves coordinator?
MR. SMITH: Let him finish his questions before you answer.
THE WITNESS: Sorry.
Q. Do you know physically where he was located in Australia after he left that position, after he left Shell?
A. He didn't leave Shell. He was a Shell secondee into Woodside.
Q. Do you know where he was located in Australia when he was with Woodside?
A. In Perth.
Q. Were you physically located in the same building?
A. No, in different -- in separate buildings.

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Q. When you became the reserves coordinator was there any transition period in which you worked with Mr. Hammer?
A. Not really. I went over the electronic files of the worksheets, and that's all that we did as a handover.
Q. Do you know who preceded Mr. Hammer as reserves coordinator for SDA?
A. I believe it was Leigh Yaxley.
Q. Did you report to different people in your role as economist and reserves coordinator?
A. Yes.
Q. Who did you report to in your role as an economist?
A. Wim Maarse was my immediate line manager.
Q. What was his name again?
A. Wim Maarse.
Q. Maarse. What was his title?

A. It would have been planning manager.

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Q. Who was your -- who did you report to as reserves coordinator?

A. Initially Robert Blaauw, and then Jeroen Regtien.

Q. Did Mr. Regtien replace Mr. Blaauw -- did Mr. Blaauw change jobs?

A. No, Jeroen came in between myself and Robert Blaauw as an interim manager.

Q. Do you know when Mr. Regtien, when you began to report to Mr. Regtien?

A. No.

Q. What was Mr. Regtien's title, if you recall?

A. I don't recall.

Q. Do you recall Mr. Blaauw's title?

A. No.

Q. Did anyone report to you?

A. No.

MR. SMITH: I'm sorry, just so we're clear, in both positions or just the reserve coordinator position

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for that question?

Q. In both positions?

A. In neither.

Q. When you arrived, do you know approximately how many employees Shell Development Australia had?

A. No.

Q. Who was the head of SDA in 1999?

A. A. Parsley, Alan Parsley.

Q. Parsley. Now, did SDA have any technical personnel when you began in 1999?

MR. SMITH: Objection to form.
Q. For example -- well, did SDA do any technical work as far as you're aware, or did it rely on other entities for technical work?
MR. SMITH: Objection to form.
A. I don't understand the question. Are you asking when I started with SDA or when I started as

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reserves coordinator?
Q. When you started as reserves coordinator.
A. When I started as reserves coordinator there were no technical staff in SDA.
Q. Had there previously been technical staff?
A. Yes.
Q. I take it there had been some sort of organizational change within S -- well, strike that.
Do you know why there was no longer any technical staff at SDA when you began as reserves coordinator?
A. When the office moved from Melbourne to Perth it was due to an alliance with Woodside, and the technical staff, the local technical staff became Woodside employees and the international technical staff became Shell secondees into Woodside.
Q. Do you know if at or about that time there had been a reduction in

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SDA's funding for exploration?
A. No, I don't know.
Q. You're familiar with the term the center as used in Shell?

A. Yes.
Q. What is the center?
A. The center is considered the -- either The Hague or London, depending in which part of the company you're working in, and it's the governance part of Shell.
Q. In your role as an economist at SDA, did you have occasion to work with, on a regular basis with anyone from the center?
A. Yes, Rob Jager.
Q. What was Mr. Jager's title, if you recall?
A. He was the regional business advisor.
Q. Was there anyone else you worked with on a regular basis as economist?
A. From the center?

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Q. From the center, right.
A. There was the equivalent of Rob Jager in gas and power.
Q. Do you recall that person's name?
A. Paul den Reijer.
Q. Now, in your role as coordinator, reserves coordinator, was there anyone you worked with on a regular basis from the center?
A. Not on a regular basis, but from time to time I would call Remco Aalbers.
Q. What was Mr. Aalbers' position at Shell at that time?
A. I don't recall the actual name of his title, but he was a reserves coordinator of some description.
Q. Was he the reserves coordinator for the group?

A. Yes.
Q. Earlier you mentioned something called the ARPR. What is
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that?
A. The annual review of petroleum resources.
Q. And what is that?
A. That's Shell's annual submission of the status of its reserves.
Q. Why did Shell conduct the ARPR, if you know?
A. I don't know.
Q. Did you under -- did the ARPR process culminate in an external reporting of reserves, if you know?
MR. SMITH: Objection to form.
A. Are you asking was I involved in external reporting?
Q. I'm asking if Shell reported proved reserves numbers externally?
A. Yes, they did.
Q. Was that one of the reasons the ARPR was conducted?
A. At the time I was involved in it it -- my involvement was purely a
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submission to the center of Australia's position. What the center did with that I wasn't involved with.
Q. In 1999 did you have an understanding of the term proved reserves?
A. Yes.
Q. What was your understanding?
A. Reserves that are in place or could be produced with reasonable certainty.
Q. What was the basis for your

understanding of that term?
A. In the Shell guidelines, it indicated that in a technical basis it was reserves that had an 85 percent chance of being there, and overlain on that was both economic and commercial rationale.
Q. So there was a technical requirement and a commercial requirement?
A. And an economic requirement.
Q. What was the difference

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between the economic requirement and the commercial requirement?
A. The economic requirement only took into account if the field was -- would be economic, and assumed that the gas or the oil had a market. So an assumption was made on the market and then the fields have to be profitable.
The commercial requirement was that there was a market for the oil or for the gas.
Q. You referred to guidelines. What were those?
A. The Shell published annual guidelines on -- on how to complete the ARPR submission.
Q. Are you familiar with SEC Rule 4-10? Have you ever heard of that rule?
A. No.
Q. Are you aware of any rule issued by the US Securities and Exchange Commission relating to proved reserves?

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A. I don't recall exact details, but I believe in the Shell reporting guidelines there was a list

of SEC wording and then there was an explanation as to how to adhere to these guidelines.

Q. Now, in the Shell guidelines, was there a difference between proved developed reserves and proved undeveloped reserves?

A. Yes.

Q. What did you understand -- in 1999 what did you understand the difference to be?

A. Proved developed reserves are those that could be sold with the existing infrastructure, whereas undeveloped would require capital expenditure in order to produce them.

Q. Now, did the Shell guidelines in 1999 have different requirements for the booking of proved undeveloped oil reserves and proved undeveloped gas reserves?

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A. I don't believe so. I believe that they both had to have reasonable certainty of a market.

Q. Were there any other written sources that you consulted when you were undertaking your work as part of the ARPR process?

A. No.

Q. When was the first time you read the Shell guidelines?

A. Probably autumn of 1999.

Q. Did Shell provide you with any training in the guidelines?

A. No.

MR. MILLKEY: Can you mark that as number 1.

(Graham Exhibit 1 for identification, Bates stamped RJW 00121875 through RJW 00121906.)

Q. Ms. Graham, we're going to

be showing you certain documents today. This is the first one. It's Graham Exhibit number 1. It's a rather large document, and I'm going to ask you

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questions about particular passages in it. At this time spend as much time as you would like looking at it but all I'm asking, would like you to do right now is just to see if you can identify the document and then I'll direct your attention to particular pages.

Graham Exhibit number 1 has the title "Petroleum Resource Volume Guidelines 1999." Ms. Graham, so you know, the document has numbers at the bottom which have been added for purposes of the litigation and I may refer to those today as Bates numbers. The Bates numbers on this document are RJW 00121875 through RJW 00121906.

Do you recognize this document?

A. Yes.

Q. And what is it?

A. It is the guidelines sent out from the center for ARPR submissions.

Q. Was this the document you

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used in conducting your ARPR work in the latter part of 1999?

A. Yes.

MR. SMITH: Objection to form.

Q. I'd just like to direct your attention to, it's Page 5 of the guidelines, the Bates range number is 121884.

A. Sorry, can you repeat that again.

Q. If you're looking at the page numbers at the top it's Page 5. Do you see the chart about a quarter of the way down the page?
A. Yes.
Q. It has the title "Cumulative production." Can you just describe for me what this chart represents?
A. The table?
Q. The table at the top, right.
A. Yes. It represents the different classes of reserves.
Q. Now, the various classes

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that are listed here, are they listed on a continuum with developed reserves at one end of the spectrum and discovered initial in place on the other end of the spectrum, is that an accurate statement or not?
A. They reflect the maturity of a project ranging from initial discovery to production.
Q. Now, within the third box down on the chart which says discovered scope for recovery there are three items listed there. The first item is commercial scope for recovery by proved techniques. The second is commercial scope for recovery by unproved techniques. And the third is noncommercial scope for recovery. Do those three items reflect different levels of maturity?
MR. SMITH: Objection to form.
A. No. I can't remember what commercial scope for recovery by

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unproved techniques represents. Commercial scope for recovery by proved

techniques and noncommercial scope for recovery, the only difference between these two is one is economic and the other is not.

Q. Noncommercial being noneconomic?

A. Yes.

Q. In that sense is it less mature than the first category, or is that an inaccurate statement?

MR. SMITH: Objection to form; asked and answered.

A. It depends on your definition of mature, so I don't understand what you mean by mature.

Q. Okay, that's fine. That's fine. This is a document we may be consulting from time to time today, but that's enough for right now.

Does the ARPR process start at a particular time of the year at Shell?

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A. The actual submission has a particular date in January, and it is up to the individual coordinator when they would wish to start preparing their work for that submission.

Q. When did you start your work for the submission -- when in 1999 did you start your work for the January 2000 submission?

A. When I took over from Helge Hammer I started -- I started then reading up on the guidelines and looking for basic data.

Q. If you could just describe for me in general the work you undertook in 1999 as part of the ARPR process just so I get a general understanding of the process.

A. I would collate the

technical data that was required, so the actual reserves numbers. They would be collated from SDA's operators of the fields who would be Woodside and WAPET. And once I had collected the

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data I would apply an economic and commercial overlay and then prepare the submission.

Q. Did the ARPR process culminate in your suggestion -- your submission of particular proved reserve numbers, or recommendations?

A. The ARPR submission was a spreadsheet, an Excel spreadsheet that would have all the reserves numbers in it.

Q. When you say all the reserves numbers, did you have separate numbers for separate fields?

A. No. They would have been rolled up into one submission for proved reserves or one submission for exploration.

Q. For how many fields were you doing this ARPR work?

A. All the fields in the SDA portfolio.

Q. And approximately how many fields would that be?

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A. I have no idea.

Q. To whom -- when you made the ultimate ARPR submission, to whom did you make that submission?

A. To Remco Aalbers.

Q. Do you know whether the ARPR numbers that you submitted to Mr. Aalbers were the same numbers that were later incorporated in Shell's reporting to the SEC?

A. No.
MR. SMITH: Objection to form.
Q. You don't know?
A. I don't know.
Q. I take it you did the actual calculation of the proved reserve numbers for the ARPR submission?
A. The calculation of the numbers for the ARPR submission came from the operators of the fields. So the technical numbers came from Woodside and from WAPET.
Q. So you did no technical work

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with the numbers themselves?
A. No.
MR. SMITH: Objection to form.
Q. Were you the individual with the final say over the numbers that were reported as part of the ARPR submission, or were there others who had to give their approval?
MR. SMITH: Within SDA?
Q. Within SDA.
A. The ARPR submission had to be signed off by senior management and Robert Blaauw had -- was the signatory.
Q. In your experience, did Mr. Blaauw change the numbers that were submitted in January of 2000 or did he just sign off, if you know?
A. Robert signed.
Q. Okay. Now you mentioned that the technical work was done by WAPET and Woodside; is that correct? What is WAPET?
A. WAPET was a company set up

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to manage the Gorgon field and the

exploration acreage surrounding that.
Q. Do you know if any Shell entities within the United States ever did any technical work for Shell Development Australia?
A. No.
Q. Have you ever heard of Shell Deepwater Services?
A. I've heard of Shell Deepwater Services, yes.
Q. Do you know whether Shell Deepwater Services ever rendered any technical assistance to SDA?
A. I don't know.
Q. Have you ever heard of an organization within Shell called SEPTAR?
A. I believe so.
Q. Do you know whether SEPTAR ever rendered any technical assistance to Shell Development Australia?
A. I don't know.
Q. You look like you might have

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hesitated for a moment. Was there a reason?
MR. SMITH: Objection to form.
Q. I mean have you ever heard that SEPTAR rendered services to SDA?
A. No. I don't actually know what SEPTAR is, so that's why I couldn't answer the question.
Q. All right. Okay. So I just want to be sure I'm clear on one point. When you submitted AR -- when you make your ARPR submission, there were no separate numbers listed for the particular fields in SDA, there were only sum -- sum totals --
MR. SMITH: Objection to form.

Q. -- for approval?
A. Are you asking me if the ARPR submission is rolled up?
Q. Is it only rolled up or does it break down the proved reserve numbers by field within SDA?

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A. It's only --
MR. SMITH: Objection to form.
A. It's only rolled up.
MR. SMITH: May I make a comment?
MR. MILLKEY: Pardon me?
MR. SMITH: May I make a comment?
MR. MILLKEY: Yes.
MR. SMITH: I think you two are using the word field in a different way. It would just be nice if the record were clear about that.
Q. How are you using the word field?
A. I'm using the word field as an individual accumulation of hydrocarbons.
Q. Well, for example, we'll take Gorgon as an example, in the ARPR submission that was made in or about January of 2000, were there distinct proved reserve numbers listed for the

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Gorgon field, or for Gorgon?
A. No.
Q. What is Gorgon?
A. Gorgon is a gas field.
Q. Is it a single field or more than one field?
A. As far as I know it's one field.
Q. Have you heard of a field

called Spar?
A. Yes.
Q. But that's separate and apart from Gorgon?
A. Yes.
Q. Do you know how, approximately how large Gorgon was in terms of natural gas that it had?
MR. SMITH: Objection to form.
A. At the time I would have known, but now I don't.
Q. Was Gorgon considered to be a large field?
A. Yes, within the SDA

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portfolio it was a large field.
Q. Are you aware of any other fields in the group portfolio that were larger than Gorgon?
A. At the time I was only aware of Gorgon in comparison with other fields within Australia.
Q. Was Gorgon the largest field in SDA's portfolio?
A. It was the largest field, single field. However, the grouping of the Northwest Shelf fields was larger.
Q. Where was Gorgon located?
A. Northwest offshore Australia.
Q. That's in the Indian Ocean?
A. I presume so.
Q. Okay.
A. Geography not being my...
Q. Did Shell have an interest in Gorgon in 1999?
A. Yes.
Q. Can you describe the interest it had?

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A. In terms of equity percentages.
Q. Well did Shell have any partners or co-venturers in Gorgon?
A. I believe there were four partners in the Gorgon field.
Q. Who were the partners?
A. Shell, Chevron, Texaco and I believe the fourth one would have been Exxon Mobil.
Q. Do you know the breakdown of interests among the partners?
A. Not now.
Q. Do you know whether Shell had the largest interest?
A. I can't remember.
Q. Who was the operator of Gorgon?
A. WAPET was the operator of Gorgon and that moved to Chevron.
Q. When you say that moved to Chevron, what do you mean?
A. The company WAPET was dissolved and Chevron took over the

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operatorship of greater Gordon.
Q. Do you know had WAPET been a subsidiary of Chevron?
A. I don't believe so. I believe it was a separate company set up by the owners in the Gorgon field.
Q. Do you know if there was any allocation of work responsibilities among the partners?
MR. SMITH: Objection to form.
Q. In Gorgon?
MR. SMITH: Objection to form.
A. I don't fully understand the question. Are you talking about time frame or --

Q. In 1999. What was Shell's responsibility as a partner with respect to Gorgon? Was it purely financial?
A. It was purely -- it was purely as an equity owner. The actual day-to-day running of Gorgon was

0045

undertaken by WAPET.
Q. Did you do any work with respect to Gorgon as part of the ARPR process that began in late 1999?
A. I received the technical data from WAPET. There had to be -- there was a difference in how WAPET reported their probabilistic distributions. So there had to be -- these had to be altered to fit the Shell guidelines. And then there was discussions with the asset managers as to the economics and to the commerciality.
Q. Who did you have those discussions with?
A. With -- in WAPET or within Shell?
Q. Well let's start with WAPET.
A. In WAPET my counterpart in WAPET was somebody called Erik van der Steen.
Q. And what do you recall about your conversations with Mr. van der

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Steen?
A. They were purely technical so that I could gain an understanding of the actual technical reserves.
Q. And who did you have conversations with within SDA?
A. For the economic part of it, I was actually undertaking the economic

analysis, so that was with my line manager and with Mark Chittleborough.
Q. And again, by your line manager you're referring to?
A. Wim Maarse.
Q. And who is Mr. Chittleborough?
A. He was the asset manager within SDA for Gorgon.
Q. What do you recall about your conversations with Mr. Chittleborough?
MR. SMITH: In 1999?
MR. MILLKEY: In 1999.
A. It was concerning the maturity of the gas market for Gorgon

0047

and how commercial discussions were proceeding with potential buyers in the Far East.
Q. What specifically do you recall about those conversations?
A. Specifically it was the maturity of a gas market.
Q. Did you have some concerns about the maturity of the gas market for Gorgon at that time?
MR. SMITH: Objection to form.
A. In what -- in what respect do you mean concerns?
Q. Did you understand -- I think you testified earlier that economic maturity was a requirement for the booking of proved reserves?
A. Yes.
Q. Let me ask this. Do you know whether there were any signed contracts in place for the sale of Gorgon gas at that time in 1999?
A. There were no signed

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contracts in place.
Q. Do you know whether there ever had been signed contracts in place for the sale of Gorgon gas?
A. I believe there had been signed letters of intent in place previously.
Q. Did you ever see any signed letters of intent?
A. No, I didn't.
Q. Who did you understand the signed letters of intent were with?
A. It was with Far East buyers. Which country I can't remember, but it wasn't Japan.
Q. What's the basis for your understanding that there had been a signed letter of intent?
A. Whenever I talked with anybody in the asset these letters were mentioned and the fact that the Asian crisis had meant that the letters of intent never became commercialized.
Q. But you had never seen any

letters; is that correct?
A. That's correct.
Q. When you refer to the Asian crisis, what are you talking about?
A. The Asian crisis is when a lot of the economies in -- in the Far East basically started to falter, to fail and the demand for gas dropped dramatically.
Q. Do you recall when the crisis began?
A. Not exact dates, but -- not exact dates, no.
Q. Do you recall approximately what year?
A. Probably '96, '97, '98. Not

sure.
(Graham Exhibit 2 for identification, Bates stamped V 00100166 and AU 000166.)
MR. MILLKEY: Graham Exhibit number 2 is a one-page document. It has a couple of Bates numbers. One of them is V 00100166. The other is AU

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000166. The document appears to be an email from Mr. Jager to Ms. Graham with ccs to Robert Blaauw and to Mr. Jager himself.
Q. Ms. Graham, do you recall this email?
A. Yes.
Q. Mr. Jager refers to a change you were suggesting in respect to Gorgon reserves from proven to SFR uncommercial. Is that a suggestion that you in fact had made?
A. No. I don't believe that I would have suggested a move from proven to SFR uncommercial. I would have suggested a move from proven to SFR commercial.
Q. Do you recall why you made that suggestion?
A. The move or the difference between commercial or uncommercial?
Q. Pardon me. I'm not sure I understand your question.
MR. SMITH: Swear him in.

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MR. MILLKEY: I'd like a clarification.
A. I didn't know whether you're asking me whether I'm challenging the fact that I wouldn't have suggested SFR uncommercial or if you're asking me why I would have suggested moving it at all

from proved to something else.
Q. Why were you suggesting moving it from proved to something else?
A. Because there's a dual -- in my mind there was a dual check for proven reserves. One was economic and Gorgon was definitely economic. And the second one was the timing of the ability to get the gas to market. And in my view the gas could not be got to market in the next four or five years. It was probably in the next 10 years. And therefore, in my view, it should be moved from proven to scope for recovery commercial.
Q. Now, Mr. Jager says

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regarding your suggestion that it at least seemed logical to him. At this point in time was Mr. Jager receptive to your suggestion?
MR. SMITH: Objection to form.
A. I can't remember the details, but from this email it appears that's the case.
Q. He refers to a conversation you had had I guess the week before. Do you recall that conversation?
A. No, I don't.
Q. He says "I am keen to check with the relevant bodies here what the possible fallout from such a change could/would be (before it happens)." Did you have an understanding of what he meant by the relevant bodies?
A. I never questioned Rob as to what he meant by relevant bodies, but my assumption would have been that he would be checking with Remco Aalbers.
Q. Did you have an

0053
SHEILA M. GRAHAM
understanding, or how did you understand his reference to possible fallout?
A. Again, I never questioned him exactly what he meant. My understanding of that would have been the impact if reserves was on SDA's scorecard.
Q. What is a scorecard?
A. The scorecard is the way in which the center judges SDA's performance.
Q. Were proved reserve goals ever included within scorecards?
MR. SMITH: Objection to form; lack of foundation. Do you mean for SDA?
MR. MILLKEY: For SDA.
A. For SDA, initially when I was in SDA it wasn't, and at some time during my tenure it was. But I can't remember the exact years that reserves were on the scorecard.
Q. I just want to make sure I
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understand how scorecards work. Was there a point during the year when scorecard goals were written up for later evaluation, is that the way it worked?
A. The scorecard was on an annual basis and there would be 10 or 15 items on the scorecard, each worth about five or 10 percent. So reserves would have been worth 5 percent of the scorecard. And there were targets, and there was meeting targets, below target or above target, and based on that you would get a percentage of the 5 percent, and the roll-up of all the

items on the scorecard would be the performance of SDA, the corporate performance of SDA over the year.

Q. Were there any consequences for failing to meet your scorecard goals, for SDA?

A. What do you mean by consequences? I mean there was --

Q. Were there --

0055

A. There was the psychological consequence of managers.

Q. Was there either -- was there a funding consequence for SDA?

MR. SMITH: Objection to form.

A. By --

Q. If SDA failed to meet its scorecard goals, could that impact the funding that SDA would receive from Shell, for example?

A. No.

MR. SMITH: Objection to the form.

Q. Were there consequences for bonuses or compensation of individuals who worked within SDA?

A. Yes. Your bonus was made up of a combination of factors, your individual performance being the one that was the most important, but your individual performance was multiplied by a weighting factor and that weighting factor came from the

0056

scorecard.

Q. Do you recall when proved reserves were on SDA's scorecard for the first time?

A. No, I don't.

Q. Do you know whether proved

reserves were on the scorecard that was in effect for SDA in 1999?
A. No, I don't.
Q. Mr. Jager asked for information on the size, both total and relative, of this change and I guess he's referring to your suggestion that we discussed before. Do you recall if -- do you recall whether you responded to that request?
A. I can't remember. I -- I presume I would have.
Q. Do you recall the size of the proved reserve booking that SDA had for Gorgon as of 1999?
A. Not the absolute number, but relative I believe it was about 50 percent.

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Q. Of SDA's portfolio you mean?
A. Of SDA's proved reserves.
Q. Did you take any steps to find out about what Mr. Jager refers to as the possible fallout, or was that something that he did?
A. I didn't do any steps.
Q. Now, you said he was the regional business advisor. What do you understand the role of a regional business advisor to be? What does that person do?
A. He facilitates the conversation between the operating unit and the center. So he would come from The Hague and be the face of the center to the operating unit, but conversely, in any meetings in the center he would be the face of SDA.
Q. So he's kind of a liaison?
A. Yes.
Q. Who's stationed in The Hague?

25 A. Yes.
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1 SHEILA M. GRAHAM
2 Q. Do you recall at this
3 juncture whether Mr. Blaauw expressed
4 any opinion on the suggested change
5 from proved to unproved?
6 A. I don't recall.
7 MR. SMITH: If you're done
8 with this, we've been going about an
9 hour and 15, should we take a break?
10 MR. MILLKEY: That's fine.
11 THE VIDEO OPERATOR: Going
12 off the record, the time is 11:12.
13 (A recess was taken.)
14 THE VIDEO OPERATOR: Going
15 back on the record, the time is 11:33.
16 Q. Turning back to Graham
17 Exhibit number 2, we talked about the
18 text of this where Mr. Jager refers to
19 your suggestion to change Gorgon, the
20 categorization of Gorgon from proved --
21 proven to SFR uncommercial and you
22 suggested that you would not have
23 suggested that change, you would have
24 suggested SFR commercial. Can you just
25 explain why and what the difference is
0059
1 SHEILA M. GRAHAM
2 between SFR commercial and
3 uncommercial?
4 MR. SMITH: Objection to
5 form; asked and answered.
6 A. The Shell -- the Shell
7 guidelines commercial, SFR commercial
8 is the project screens economically,
9 and it is -- it is just nonmature in a
10 technical sense. Whereas scope for
11 recovery uncommercial it is nonmature
12 in a technical sense but also it
13 doesn't screen economically.
14 Q. Okay. Also in this email we
15 discussed the term relevant bodies. Do

you know whether the EP ExCom might -- was one of the relevant bodies to which Mr. Jager was referring?
MR. SMITH: Objection to form; asked and answered.
A. I never questioned Rob on what he meant by relevant bodies.
Q. Do you know whether a movement from a proven categorization to an unproven categorization would

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SHEILA M. GRAHAM

require the approval of the EP ExCom?
A. I don't know.
(Graham Exhibit 3 for identification, Bates stamped PER 00072308 through PER 00072310.)
Q. Ms. Graham, if you could just let me know after you've had a chance to review that.
MR. MILLKEY: Graham Exhibit number 3 appears to be a fax cover sheet with an attachment. The Bates range is PER 00072308 through PER 00072310. The fax cover sheet is dated May 8th, from Mark Chittleborough to Paul Oen, that's O-e-n, Neil Theobald and Alan Dunlop. The attachment appears to be a two-page letter dated August 21st, 1998, on the letterhead of an entity called Kogas.
Q. Ms. Graham, I realize your name does not appear anywhere on this document, but I'm wondering if you've ever seen it before.
A. No.

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Q. You had mentioned earlier the possibility that there was a signed letter of intent. Do you know whether that letter of intent, if in fact there was one, was with Kogas?

A. I don't know.

(Graham Exhibit 4 for identification, Bates stamped PER 00012719 through 12720.)

MR. MILLKEY: Graham Exhibit number 4 is an email string. The Bates range is PER 00012719 through 12720. The earliest email in the string appears to be from Ms. Graham to Mr. Aalbers with a cc to Jeroen Hoonhorst dated December 23rd, 1999?

Q. Ms. Graham, do you recall this email string?

A. Yes.

Q. Who is Mr. Hoonhorst?

A. I don't know.

Q. In that first email in the string you write in the second paragraph, "I've been looking back at

our data and am unable to find when Gorgon was booked as reserves (my data goes back to '95) and the rational," "rationale for the booking. Is that information available in any central archive?"

You say your data went back to 1995. Did the data you have show that Gorgon was booked as proved as early as 1995?

A. I can't remember. I know it was booked as proved the year before, but I can't remember previously.

Q. And by the year before you mean 1998, January 1st, 1998, or --

A. It was booked on 1/1/99, so 1/1/98 I don't know about.

Q. Why were you looking for information about the original booking of Gorgon?

A. Because I was new in the position and I was trying to understand

the history for all the fields that I was looking after.

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SHEILA M. GRAHAM

Q. Your email also says you were looking for information about the rationale for the booking. Was that for the reason you just gave?

A. The reason I was new in the job?

Q. Yes.

A. Yes.

Q. Now, on the first page of the exhibit there's an email on the bottom of the page from Mr. Aalbers to you thanking you for the draft submissions. Is he referring to the draft submission of the ARPR?

A. Yes.

Q. Do you recall whether in the draft submission you suggested recategorizing Gorgon from proved to an unproved category?

MR. SMITH: Objection to form.

A. No, because the draft submissions that I submitted were not submissions for -- for Australia where

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Gorgon would fit in the submission for Australia. They were submissions for Cambodia, Mauritania and PNG and these are separate submissions.

Q. So you had not yet made a submission for SDA, is that -- I'm sorry, for Gorgon?

A. No.

Q. At the top of the page, the first page, 12719, there's an email from Mr. Aalbers to you with a cc to Bea Jespers dated January 5th, 2000. Who is Ms. Jespers?

A. She was a secretary.
Q. In the second paragraph of Mr. Aalbers' email he says, "As to your question on Gorgon, we indeed do not have that data easily available. When was Gorgon discovered? I had a look and it's not in my list (1986 through 1998). Maybe you could check with Helge Hammer." Was Mr. Hammer the reserves coordinator at the time that Gorgon was first booked as proved?

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A. I never managed to find that out.
Q. Did you take Mr. Aalbers' suggestion and contact Mr. Hammer about Gorgon?
A. I didn't because Helge was actually on leave in Norway for two months over that period.
Q. Did you ever speak with Mr. Hammer about Gorgon after this time?
A. No.

(Graham Exhibit 5 for identification, Bates stamped PER 00012729 through 12736.)

MR. MILLKEY: Graham Exhibit number 5 is an email with an attachment from Remco Aalbers to Ms. Graham, with a cc to Bea Jespers. The subject line is "Reserves report SDA." The Bates range is PER 00012729 through 12736.

Q. Ms. Graham, do you recall receiving this email?
A. Yes.
Q. The first line of the email

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to you says, "Proved reserves - externally reported - were first booked in 1997 (for 1.1.98) - see attached files from Helge." Was this the first

time you learned when proved reserves were first booked for Gorgon?
A. This was Remco telling me that this was when he believed that they were booked. However, this isn't the ARPR submission.
Q. What do you recall this is?
A. These are Helge's work books which feed -- these are his personal work books which feed into the ARPR submission.
Q. Right.
A. So basically you take the roll-up from these data sheets and put it into the ARPR submission. So when I mentioned before the break that the ARPR submission is a roll-up, this is consistent with that. These are the worksheets that would feed into the ARPR submission. It's the background

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information.
Q. Is there a place on these worksheets that indicates when Gorgon was first booked as proved?
MR. SMITH: Objection to form. I'd just note for the record that I guess a couple of pages of this are quite difficult to read.
MR. MILLKEY: That is correct.
A. The first set is easy to read and you can see that Gorgon is booked as there is 9.83 as proved reserves for Gorgon under undeveloped reserves.
Q. Which page are you on?
A. Page 1.
Q. That's the first page of the -- so that's 12731; is that correct?
A. Yes.
Q. And where exactly are you

looking?
A. The table that says dry gas nonassociated.

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Q. Right.
A. There's two fields in there, Bonga and Gorgon.
Q. Right.
A. Under the Gorgon line under undeveloped reserves it says proved 9.83. So from that you can tell that as of 1/1/98 Helge was holding Gorgon as proved undeveloped reserves. To be able to tell when it was booked you need to find the 1997 one and compare it against it. And I think this is the 1997 one, but it's pretty difficult to read.
MR. SMITH: Just for the record, you said "this," maybe you could just mention the Bates number.
A. Sorry, PER 00012735.
Q. As best you can tell from the pages you've just mentioned or the page you just mentioned, was Gorgon booked as of January 1, 1997?
A. It would appear -- it would look as if it's saying zero improved

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and there's a number in expectation.
Q. Okay. Acknowledging that this is very difficult to read.
Now, turning back to 12731, just above the 9.83 number I think you mentioned there's a P. That stands for proved or proven?
A. Yes.
Q. The E stands for expectation; is that correct?
THE REPORTER: I'm sorry.
Q. Next to that there's an H.

MR. SMITH: You need an audible response.
A. Yes. Sorry.
Q. And next to the E there's an H. What does that stand for?
A. High.
Q. High. And what does that mean?
A. There is a 15 percent chance that there are reserves of that magnitude in place.
Q. When you submitted an ARPR

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the following year. Well, let's see. As of January 1, would have been 2000? Let's see, hold on.
MR. SMITH: '99.
A. '99.
Q. '99. Would you have included worksheets -- worksheets like this with your submission?
A. Most likely. I would have definitely -- I had a spreadsheet identical to this which I would have developed, and most likely I would have sent this as backup information with the ARPR submission.
Q. In the email on the first page of this exhibit it refers to Bea Jespers being back in the office and Mr. Aalbers says he would ask her to see if she can find the old field reserves files. Do you recall receiving any additional information about the initial booking from Ms. Jespers or Mr. Aalbers?
A. No.

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(Graham Exhibit 6 for identification, Bates stamped GC 00008108 through 8131.)

MR. MILLKEY: Graham Exhibit number 6 has the title "Annual review of petroleum resources as at 1.1.1998 for Shell Development Australia." The Bates range is GC 00008108 through 8131.

Q. Ms. Graham, have you ever seen this document before?

A. The front cover I have and I presume I probably have seen the bits at the back before.

Q. What is this document?

A. The front cover is Helge's note for management in SDA as to the -- it's a summary of the ARPR. And then the back is a mixture of the ARPR submission and Helge's working notes.

Q. Do you know whether -- now, when you say the working notes, are those the same notes that we just looked at as Exhibit 5?

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A. Yes.

Q. Can you tell whether those notes were submitted as part of Mr. Hammer's ARPR submission?

A. They wouldn't be because the ARPR submission is an automatic document. So there's no way they could have been submitted at the same time. They might have been submitted an hour later, but they couldn't have been submitted at the same time.

Q. On the first page of the Exhibit 6 the last full paragraph on the page says, "A technical revision of the Gorgon field (by RTS/SDA) has resulted in an increase of the gas reserves" -- I'm sorry, "an increase of" yes, "of the gas reserves of 2.39 tcf. Based on new PVT analysis, a higher condensate gas ratio has been

estimated, resulting in condensate reserves increasing by 103 million bbl." What is RTS? Do you know what RTS refers to?

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A. Rijswijk, research and technical services, so the research center in Rijswijk.

Q. And when it says, refers to 2.39 tcf, what does tcf mean?

A. Trillion cubic feet.

Q. And PVT analysis, what does PVT refer to?

A. Pressure volume temperature.

Q. Now, that paragraph refers to a technical revision of the Gorgon field. What do you understand the term technical revision to mean?

MR. SMITH: Objection to form.

A. I never -- I never talked to Helge about this note. My interpretation is a technical revision is a technical review.

Q. Is what?

A. A technical review.

Q. What does that mean?

A. Technical experts within SDA and Rijswijk would visit the operator

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and undertake to examine the technical data.

Q. Do you know whether the Gorgon reserves when they were first booked were booked as a revision?

A. I don't know.

MR. SMITH: Objection to form and lack of foundation.

Q. Have you ever heard that the Gorgon booking was reported as a revision to the SEC in 1998?

MR. SMITH: Objection to form and lack of foundation.
A. I've never heard.
Q. When you are submitting the ARPR, can you characterize a book reserve -- a proved reserve booking as a revision?
MR. SMITH: Objection to form.
A. I can't remember. In the main spreadsheet you account for the total proved reserves, and there is a part of the spreadsheet where you

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indicate if there's any changes to -- from the previous year and then you indicate what these changes were due to.
Q. If SDA were characterizing reserves as proved for the first time in its ARPR submission, would it be unusual to characterize that initial booking as a revision?
MR. SMITH: Objection to form.
A. I don't -- I don't know. I don't have enough experience.
MR. MILLKEY: Why don't we go off the record for a moment. He needs to change the tape.
THE VIDEO OPERATOR: This marks the end of tape number 1, volume 1 of the video deposition of Sheila Graham. Going off the record, the time is 12:06.
(A recess was taken.)
THE VIDEO OPERATOR: Back on the record. Here marks the beginning

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of tape number 2, volume 1 in the video deposition of Sheila Graham. The time

is 12:13.
(Graham Exhibit 7 for identification, Bates stamped PER 00012745 through 12747.)
Q. Ms. Graham, we're marking a document to be Graham Exhibit 7, if you could just spend a moment looking at it.
MR. MILLKEY: Graham Exhibit number 7 is an email string. The Bates range is PER 00012745 through 12747. The earliest email in the string is from Mr. Jager to Ms. Graham dated December 24th, 1999, and I believe that email we discussed in connection with an earlier exhibit. Just above that on the second page of the exhibit there's an email from Ms. Graham dated January 7th, 2000 to Mr. Jager with ccs to Mr. Blaauw and Mr. Aalbers.
Q. In the second paragraph -- well, first of all, Ms. Graham, do you

recall this email string?
A. Yes.
Q. The second paragraph of your January 7th 3:04 a.m. email states, "I've tried to find out when Gorgon was initially booked as reserves or moved from SFR, but our detailed records only go back to 1995 where it was registered as reserves." What does the term -- what does the phrase registered as reserves mean?
A. In the work books, the electronic work books that I would have -- that I found there was a number inserted against Gorgon for reserves.
Q. As what type of reserves?
A. I don't recall, but it would -- could have been scope for recovery or expectation.

Q. Now, in Exhibit 5 which we discussed a few moments ago, Mr. Aalbers told you that reserves were first booked in 1997 for 1/1/98. That email was also dated January 7th. I

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take it at some point that same day you received Mr. Aalbers' email. Let me just say that again.

In Exhibit 7 you're still saying you don't know when it was first booked. I take it after this email in Exhibit 7 you learned from Mr. Aalbers that it was booked as of January 1st, 1998; is that correct?

MR. SMITH: Objection to form. That's not what Mr. Aalbers' email says.

A. Mr. Aalbers' email is talking about proved reserves whereas I was interested in the complete chain of events, when was it first booked to scope for recovery, when would it move from scope for recovery to expectation reserves and when would it finally be booked as proved reserves.

Q. So when you say "I tried to find out" -- when you say in Exhibit 7, "I've tried to find out when Gorgon was initially booked as reserves" you were

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not talking about proved reserves --

A. No.

Q. -- is that correct?

In the next paragraph, in Exhibit 7 you say "Gorgon was certified by external reserves certifiers NSAI in December -- in December '98. What is NSAI?

A. I can't remember what it stands for exactly. It's the name of

the reserves certification company.
Q. Do you know where that company was located?
A. I don't.
Q. In the next paragraph you write, "Based on the above, and also the comment in the reserves guidelines not to change categories without considerable justification, SDA's recommendation is to leave Gorgon in reserves." By reserves, are you referring to proved reserves there?
A. No, I'm referring to both proved and expectation.

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Q. Was it your recommendation -- was it SDA's recommendation at this time that the Gorgon reserves which had previously been booked as proved remain booked as proved?
A. It was my recommendation.
Q. Now you say at the beginning of that paragraph "Based on the above." What specifically were you referring to?
A. I don't know.
Q. Do you recall whether you relied on the NSAI certification as a basis for recommending that the Gorgon proved reserves remain proved.
A. No, definitely not. The recommendation is a technical, it doesn't address the -- the commerciality.
MR. SMITH: I'm sorry, in your answer you said recommendation. Did you mean the certification from NSAI?
THE WITNESS: Yes.

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SHEILA M. GRAHAM

MR. SMITH: I just wanted to

be clear.
Q. How did you come to this recommendation?
A. The recommendation to keep it in proved reserves --
Q. Yes.
A. -- and then to address the issue -- what was the timing it said? In October. This was based on discussions with the asset manager, Mark Chittleborough, where -- and also my own experience as the economist for Gorgon on the status of discussions with Northwest Shelf's partners and the setting up of ALNG.
Q. The setting up of what, I'm sorry?
A. Australian LNG.
Q. Describe for me, please, your conversations with Mr. Chittleborough on this subject?
A. It -- it was concerning the probability of signed agreements being

0082

in place to either separately develop Gorgon as a stand-alone development with marketing to the Far East, or to -- to go into a partnership with the Northwest Shelf and then build five -- two more trains on the Northwest Shelf which would be co-owned by the Gorgon owners and the Northwest Shelf owners and it was the maturity of these discussions that we would be discussing.
Q. If you could explain to me further, how did the possibility of a partnership with the Northwest Shelf make a difference with respect to the commerciality of Gorgon?
A. Because then you would have a -- you would know with absolute

certainty that the Gorgon field would be -- that the gas from the Gorgon field would be used as backfill into the existing trains and trains 5 and 6. So you would have a signed agreement that that gas would be used.

0083

SHEILA M. GRAHAM

Q. What does backfill mean?

A. Backfill means that when the gas that's allocated for the existing trains from the Northwest Shelf runs out, Gorgon would then be used to -- to run the trains.

Q. Was there a contract in existence for the sale of the gas from the Northwest Shelf?

A. Yes.

Q. At this time, January 2000, was there a partnership between Gorgon and the Northwest Shelf?

A. There were discussions ongoing as to set up a partnership.

Q. Was that partnership ever entered?

A. I believe not.

Q. Now, you described the partnership as one possibility I believe. Was there still a possibility that Gorgon would be developed as a stand-alone project?

A. Yes, that was being worked

0084

SHEILA M. GRAHAM

up separately the possibility that Gorgon would separately go out and find its own buyers for its gas and build Gorgon as a green field development as opposed to a brown field development with Northwest Shelf.

Q. What's the difference between -- strike that.

What does green field mean?

A. Green field means on a brand new site with no existing structure.
Q. Had anything happened between December of 1999 and this email -- strike that.
Had a letter of intent with respect to the Gorgon project been signed either in December of -- in December of 1999?
A. Either or --
Q. Let me strike that, I'm sorry.
Was a letter of intent with respect to the Gorgon project signed in December of 1999?

0085

A. No.
Q. Was a letter of intent with respect to the Gorgon project signed in January of 2000?
A. No.
Q. With respect to the possibility that Gorgon would develop as a stand-alone project, did you in January of 2000 believe there was sufficient commerciality to justify the continued booking of Gorgon as proved?
A. Yes. I believed that there was sufficient value in cooperation between the Northwest Shelf and Gorgon that a deal would be reached during that year.
Q. I guess my question though is with respect to Gorgon as a stand-alone project.
A. I don't understand the significance of a stand-alone project.
Q. I understood you to say that there were two possibilities.
A. Yes.

0086

Q. Gorgon would be developed as a stand-alone project or there would be a partnership with the Northwest Shelf?
A. Yes.
Q. Was your recommendation that the Gorgon reserves remain booked as proved based only on the possibility of the partnership with the Northwest Shelf?
A. No, it was a combination of both. There was -- I felt there was a higher chance that the partnership would succeed than the green field, but we were still all working very hard on the green field as well.
Q. Setting aside the possibility of the partnership, did you believe there was sufficient commerciality in Gorgon as a stand-alone project to maintain it on the books as proved?
MR. SMITH: Objection to form.
A. I can't answer that question

0087

because I -- it was never considered in that fact because I was examining the totality of the deals that were available to me in deciding whether proved -- whether to keep it as proved or not.
Q. Now, in December of 1999 you had suggested changing the classification of Gorgon from proved to, what was it, commercial unproved; is that right?
A. SFR commercial.
Q. SFR commercial. Is the possibility of this deal with the Northwest Shelf the sole basis for your change of recommendation in January of 2000?
MR. SMITH: Objection to

form.
A. It -- my -- my recommendation to keep it as reserves and -- and review the situation during the forthcoming year was based on the totality of evidence that was available to me.

0088

SHEILA M. GRAHAM

Q. Am I correct -- strike that.
Other than the possibility of the Northwest Shelf deal, were there other possibilities that arose in either December 1999 or January 2000 for the sale of Gorgon gas?
MR. SMITH: Objection to form. That's been asked and answered.
A. I can't remember the specific details. I know we were working on a variety of options.
Q. But you don't recall a specific opportunity for the sale of Gorgon gas during that time period?
MR. SMITH: Objection to form.
A. I know we were working on specific deals. I just can't remember the country. I know it wasn't Japan, but I know that we were working on two specific countries, but I can't remember which countries they were, in the Far East.
Q. Turning back to the text of

0089

SHEILA M. GRAHAM

Exhibit 7, you refer to the comment in the reserves guidelines not to change categories without considerable justification. Was that comment in the guidelines one of the reasons you were recommending that the Gorgon proved reserves remain as proved?
A. Yes.

Q. I'd ask you to take a look again at Exhibit 1 which we've marked earlier, and in particular, if you could turn to Page 9, that's 9 at the top of the page, the Bates number is RJW 000121888.
A. Sorry, I've got the wrong exhibit out. My apologies.
Q. That's okay, take your time.
A. Sorry, if you could repeat that.
Q. If you could turn to Page 9 of the guidelines there's a heading "Cumulative production" at the very top of the page. If you look about halfway down the page there's a sentence

0090

beginning "To minimize fluctuations over time." Do you see that?
A. Yes.
Q. If you could just read that paragraph and then tell me if this is the language in the guidelines to which you were referring?
MR. SMITH: And if you need to review other parts of the document to answer that question, please do so.
Q. Take your time. Whatever you need to review is fine.
A. Okay, now, sorry, the question was again.
Q. Is that the language that you were referring to in the paragraph we just discussed from Exhibit 7?
A. Yes.
Q. Could you also read the following paragraph beginning "Existing volumes." At this time in January of 2000, did you consider Gorgon commercially mature?
A. I felt that it had the

0091

SHEILA M. GRAHAM

ability to be commercially mature within the next few quarters.

Q. But in January of 2000 it was not commercially mature?

MR. SMITH: Objection to form.

A. I felt it would be more commercially mature in the next -- in the coming quarters.

Q. Now, just looking to the paragraph in Exhibit 1 beginning "Existing volumes," I'll just read it. "Existing volumes classified as reserves but which are no longer commercially mature, may be retained as reserves only in cases when there is an overriding strategic interest, or where a current small operating loss is expected to be reversed in the short term. In both cases support from shareholders must be obtained," and that last sentence is underscored.

At any time during this time period, December of 1999 to January of

SHEILA M. GRAHAM

2000, did anyone suggest to you that there was an overriding strategic interest in keeping the Gorgon proved reserves booked as proved?

A. No.

Q. In the last sentence of that paragraph where it says "In both cases support from shareholders must be obtained" what do you understand the term shareholders to mean?

A. Rob Jager.

Q. The business advisor?

A. The business advisor that was -- they were always called the shareholders when we had discussions with them.

Q. Do you know whether the SEC rule governing the reporting of proved reserves includes an exception from its requirements, its proved reserve requirements for companies that wished to minimize fluctuations in their proved reserve bookings?

MR. SMITH: Objection to form.

I just want to note for the record that the portion of this document you're reading from talks about reserves, not proved reserves. There is a section of this document that talks about proved reserves, it's not this one.

Q. Ms. Graham, in Exhibit 7 you refer to the comment in the reserve guidelines not to change categories without considerable justification. Is there another portion of the guidelines to which you were referring by that comment?

A. I haven't had time here to read all of these guidelines to see if -- if there is anywhere else. To minimize the fluctuations over time seems applicable, but I can't remember if that's the exact paragraph I would have been meaning without reading the rest of the document.

Q. Again referring to Exhibit 7 where you refer to SDA's recommendation

is to leave Gorgon in reserves, was that your decision?

A. Yes.

Q. In reaching that decision did you consult with anyone else?

A. No.

Q. If you could just turn to

the first page of paragraph -- of Exhibit 7. There's an email from Mr. Aalbers to you dated January 7th at 8:31 a.m. In the second paragraph he refers to a telecom of this morning. Do you recall having -- do you know whether you were a participant in that telecom?

A. Well the reading of it indicates that I was involved in the telecom with Remco. I wasn't in the discussions with Rob Jager and Roelof Platenkamp.

Q. Do you remember that particular teleconference?

A. No.

Q. Have you ever had any

conversations with Mr. Platenkamp about proved reserves at Gorgon?

A. No.

Q. Do you know who Mr. Platenkamp was at the time?

A. Yes, he was the planning head of the central planning group.

Q. Now, in the next paragraph there's a reference to 20 percent increases versus volumes. Can you explain what that means?

A. That the technical work has indicated that there's 20 percent more volume in the fields than previously thought.

Q. At this juncture was there any discussion about booking that 20 percent increase as proved?

A. Yes. There was a discussion about whether to increase the proved reserves in line with the new technical recommendations or to keep them con- -- the same as the previous year's ARPR.

Q. Who do you recall

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SHEILA M. GRAHAM
participating in those conversations?
A. I don't recall specifically. I know there was a discussion with Remco. And I'm not sure if anybody else was involved.
Q. Did you have a view at that time about whether the 20 percent increase should be booked as proved or not?
A. I think I felt that we should keep everything the same as the previous year's. So not de-book anything and not add anything. Because I felt that the next six months were going to be decisive for Gorgon and I didn't want to look stupid by either de-booking or adding volumes and that all subsequently changed the next six months.
Q. Do you recall whether Mr. Aalbers expressed a view about whether the 20 percent increase should be booked as proved?
A. I believe he -- he concurred
0097
SHEILA M. GRAHAM
and agreed that we should keep the booking as per the previous year.
Q. Did his view on that question change at any time prior to the submission of the ARPR for 1999?
A. Before the submission?
Q. Right.
A. No.
Q. Again in paragraph 7 -- I'm sorry, Exhibit 7, about halfway down the page where the paragraph beginning "As indicated." Do you see that?
A. Yes.
Q. It reads, "As indicated proved gas reserves in Australia have

been an item of discussion with our external auditors for the last two years with reference to the Asian crisis. It would be difficult to defend a further increase in proved gas reserves which have no signed market." Do you know who Mr. Aalbers was referring to when he wrote "External auditors"?

0098

SHEILA M. GRAHAM

A. No.

Q. In the course of your work as reserves coordinator for SDA, did you ever have occasion to work with PricewaterhouseCoopers?

A. Not in relation to my role as reserves coordinator.

Q. In what role did you work with them?

A. I was part of the team involved with the reverse takeover of Woodside.

Q. In connection with your responsibilities as reserves coordinator for SDA, did you ever have occasion to work with personnel from KPMG?

A. No.

Q. In that same paragraph Mr. Aalbers refers to a signed market. Do you have an understanding of what he intended by that? Or how did you understand that?

A. I never questioned him about

0099

SHEILA M. GRAHAM

that. A signed market would be a signed contract.

Q. Mr. Aalbers wrote, "It would be difficult to defend a further increase in proved gas reserves which have no signed market." Did you agree

with that statement?
A. I can't remember.
Q. But again, you weren't in favor of increasing the proved reserve booking; is that correct?
MR. SMITH: Objection to form; asked and answered.
MR. MILLKEY: Strike that.
You want to take lunch?
MR. SMITH: That would be great, yes. Thank you.
THE VIDEO OPERATOR: Going off the record, the time is 12:51.
(Lunch recess: 12:51 p.m.)

0100

SHEILA M. GRAHAM
A F T E R N O O N S E S S I O N
1:47 p.m.
THE VIDEO OPERATOR: Back on the record, the time is 13:47.
S H E I L A M. G R A H A M, resumed, having been previously duly sworn, was examined and testified further as follows:
CONTINUED EXAMINATION
BY MR. MILLKEY:
Q. Good afternoon.
(Graham Exhibit 8 for identification, Bates stamped GC 00008167 through 8169.)
MR. MILLKEY: Graham Exhibit 8 is entitled "1.1.2000 Shell Development Australia: Review of petroleum resources." The Bates numbers are GC 00008167 through 8169.
Q. Ms. Graham, do you recognize this document?
A. Yes.
Q. Did you draft this document?

25 A. Yes.
0101
1 SHEILA M. GRAHAM
2 Q. And what is it?
3 A. It's my memorandum to manage
4 -- SDA management on our summary of the
5 1/1/2000 ARPR.
6 Q. Was this document part of
7 the ARPR submission?
8 A. No.
9 Q. To whom was this document
10 sent?
11 A. I don't remember who it was
12 sent to. It was intended for -- well,
13 Robert Blaauw was my immediate line
14 manager.
15 Q. Do you know if it was sent
16 to anyone at the center?
17 A. I don't know. I can't
18 remember.
19 Q. If you could look at the
20 paragraph about halfway down the first
21 page discussing Gorgon, in that
22 paragraph it says, "Proved 'technical'
23 reserves have increased accordingly,
24 but due to the lack of a gas market for
25 Gorgon, the proved reserves having been
0102
1 SHEILA M. GRAHAM
2 kept at their 1.1.99 level. This has
3 been agreed prior to the submission
4 with both Remco Aalbers and Robert
5 Jager." And in the previous sentence
6 you had discussed the fact that
7 expectation reserves had increased by
8 23 mrd sm3. What does mrd sm3 mean?
9 A. Milliard standard cubic
10 meters.
11 Q. And you mentioned the
12 agreement with Mr. Aalbers. Had there
13 been any discussions with Mr. Aalbers
14 prior to this date about the
15 possibility of de-booking the Gorgon

proved reserves?
A. This -- this note would have been drafted towards the end of January, and so the -- the discussions that we covered this morning would have taken place prior to this note being drafted.
Q. So maybe you did answer this question earlier today, I just don't recall. Did you specifically discuss

0103

the possibility of de-booking the proved reserves with Mr. Aalbers?
A. I can't -- can't recall.
Q. Did you discuss that subject with him at some other point?
A. Definitely during the course of 2000 it was discussed with Remco.
Q. Now, in the quoted text which we read you say "But due to the lack of gas" -- "the lack of a gas market for Gorgon the proved reserves have been kept at their 1.1.99 level." So it was specifically because of the lack of a gas market that you did not recommend booking the additional 23 percent, or 23 mrd sm3 as proved?
A. Yes. In conjunction with the -- the discussion this morning, that I didn't want to appear stupid by increasing the reserves and then over the course of the next couple of quarters the commercialization of Gorgon did not succeed and I would then subsequently de-book the whole amount

0104

in next year's submission.
Q. Now, this morning you talked about using Gorgon gas as backfill for the Northwest Shelf. I take it that would have occurred at some point in

the future when the Northwest Shelf gas had been dissipated; is that correct?
A. I said that there was a discussion about trains 5 and 6.
Q. Right.
A. Which would be combined Northwest Shelf and Gorgon and then the existing trains 1 to 4 would be backfilled with Gorgon gas. So two distinct opportunities.
Q. At what point in the future was the Gorgon gas projected to be necessary for those projects?
A. The backfill for trains 1 to 4 was around 2015-ish, and for trains 5 and 6 I can't remember the specific date.
Q. Would it have been before that 2015?

0105

A. It would be before 2015.
Q. Would it be before 2010, do you know?
A. I can't remember.
Q. Do you know in January of 2000 whether there was a development plan in place for Gorgon?
A. By a development plan do you mean -- what exactly did you mean?
Q. A plan for the development and production of gas at Gorgon?
A. Yes. More than one development plan.
Q. How many development plans were in place?
A. At least three that I was aware of.
Q. Can you just describe briefly what those three plans were?
A. One was a pipeline to the existing Burrup Peninsula where Northwest Shelf is and the other two

were regarding development of Gorgon. One was for a green field on Thevenard

0106

Island and the other one was for a combined -- a combined domestic gas or methanol usage from -- using the gas for production of methanol -- well, methanex.

Q. Now Gorgon was in the Indian Ocean or at least out in a body of water that may have been in the Indian Ocean. Do you know the depth it was at?

A. I don't.

Q. Did Gorgon require a subsea gathering system to collect the gas?

A. I don't remember the specific technical details.

Q. Do you know if the infrastructure that was necessary for the collection of gas at Gorgon was in place in January of 2000?

A. No, there was no infrastructure in place.

Q. Is the lack of that infrastructure a relevant consideration in determining whether the Gorgon

0107

reserves could be booked as proved?

A. No. It's just instrumental in deciding whether they're developed or undeveloped.

Q. Do you know whether a gas processing facility was in place at that time?

A. The processing facility for trains 1 to 3 on the Northwest Shelf was in place, but nothing else was in place at that time.

Q. Was there a plan for the construction of a gas processing

facility on Barrow Island?
A. Yes, I believe there may have been. At what stage I'm not sure.
Q. Do you know if it was intended that that facility would be used for the gas produced from Gorgon?
A. As far as I'm aware, the plans for Barrow Island and for Thevenard Island were for Gorgon gas.
Q. Do you know whether Shell and its joint venture partners had to

0108

secure certain permissions from the Commonwealth of Australia before they could construct the infrastructure necessary for collecting gas from Gorgon?
MR. SMITH: Objection to form.
A. At the time I wasn't aware. Sub- -- I am aware now.
Q. What is your current awareness?
A. That environmental approval is required from the government.
Q. Environmental approval for what in particular?
A. For constructing on -- on Barrow Island.
Q. Is Barrow Island a nature preserve in Australia?
A. It's --
MR. SMITH: Objection to form and lack of foundation.
Q. Do you know whether Barrow Island has a nature preserve on it?

0109

A. Barrow Island is both -- has both existing oil infrastructure on it and is also an environmental conservation area.

Q. Now, I believe you testified that you were unaware at the time that environmental permissions were necessary for construction of a gas processing facility on Barrow Island; is that correct?
A. I testified that I wasn't aware at the time I was in Australia.
Q. Right.
A. I became aware of it in the last year whilst it's been in the media.
Q. Would the need for a certain -- for certain environmental permissions be a relevant factor in determining whether the Gorgon reserves could be booked as proved?
MR. SMITH: Objection to form. It's a hypothetical question.
A. I wasn't aware at the time

0110

that environmental issues would be considered for booking reserves.
Q. Had you been made aware at the time would that have been a factor you would have considered in determining whether the Gorgon reserves could be booked as proved?
MR. SMITH: Objection to form and lack of foundation.
A. As I wasn't aware of it, I didn't consider it at the time.
Q. Why don't we take a look at Exhibit 1 again. I'll just direct your attention to Page 13, which is also numbered RJW 00121892. Do you have the page?
A. Yes.
Q. This section appears in a larger heading beginning on the previous page called "Resource volume classification for external reporting,"

and again on Page 13, the second paragraph, in the margin there's what I guess can be described as a heading

0111

that says "Proved undeveloped reserves." The second sentence reads, "Reasonable certainty is met by using the P85 value or low side estimate of undeveloped reserves and taking into account undefined fluid contacts, untested recovery mechanisms, license periods, government restrictions, and market limitations as discussed above."

Does the need to get environmental permissions from the Commonwealth of Australia, or the state of Western Australia, fall into the category of government restriction?

MR. SMITH: Objection to form and lack of foundation.

A. I never -- I never considered it because as we discussed this morning, there was numerous options available for Gorgon and the major one, but only one of them, was the direct route straight to the brown field development which went nowhere near Thevenard Island and Barrow

0112

Island, and therefore, these -- this restriction would not apply to the existing brown field site.

Q. Do you know whether independent of the environmental permissions we've been discussing additional permissions were needed from the Commonwealth of Australia to put in the infrastructure necessary for recovering gas at Gorgon?

MR. SMITH: At this time?

Q. At this time.

A. As far as I know, there were no requirements.
Q. Let me just ask you one more question on this subject. Independent of Gorgon, but just to the best of your understanding of the guidelines, does the need for an environmental permission fall into the category of government restriction in the paragraph we just read from Exhibit 1?
A. Are you asking my opinion now as I'm sitting here?

0113

SHEILA M. GRAHAM

Q. Well, we'll start with that, yes.
A. My opinion would be that a permit would fall under governmental restrictions.
Q. Did you have a different opinion in January of 2000?
A. I had no opinion in January 2000 because I hadn't considered it.
(Graham Exhibit 9 for identification, Bates stamped V 00100190 through V 00100193 and AU 000192 through 195.)
MR. MILLKEY: Graham Exhibit 9 is a series of emails. The Bates range is V 00100190 through V 00100193. There's a second Bates range, AU 000192 through 195.
Q. Ms. Graham, do you recall seeing this correspondence before?
A. Yes.
Q. If you could turn your attention to Page V 00100191, which has a small number 2 at the bottom, there's

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SHEILA M. GRAHAM

an email from Mr. Aalbers to you with a number of ccs dated February 1st, 2000. The first paragraph reads, "Following

the ExCom on Monday (31/1) I would like urgently," and the word urgently is in all caps, "to find out if SDA know what the other Gorgon partners and WAPET (Chevron?) are going to do for proved reserve booking 1.1.2000." Do you recall hearing -- well, following the ExCom, does that refer to a meeting of the EP ExCom, if you know?

MR. SMITH: Objection to form.

Q. Do you know what was intended by ExCom on Monday, 31/1?

MR. SMITH: Objection to form and lack of foundation.

A. I know that ExCom means the executive committee. I am -- I have no idea what they were meeting about at that time.

Q. So you never heard any reports of that meeting?

0115

SHEILA M. GRAHAM

A. Other than these emails.

Q. And further in the email it says "ExCom seemed concern that the group is more conservative" it says "that competition." I think it probably means than competition. Did you take any steps to find out what Shell's partners in Gorgon were doing in terms of booking proved reserves?

A. Yes, I was -- I didn't have contact at the correct level in our partner organization so I asked Mark Chittleborough if he could find that out for me.

Q. And what was he able to -- was he able to find out anything?

A. Yes, I believe the email at the back of this, so AU 000194, the bottom of that email refers to Texaco's response to Mark's questions.

Q. And the response was?
A. And Texaco do not carry it as proved reserves.
Q. Did you ever find out if
0116
SHEILA M. GRAHAM
Shell's other partners carried Gorgon as proved reserves at that time?
A. I believe that prior to this I had already found out that Chevron were not carrying it, and I can't remember about Exxon Mobil.
Q. Did the fact that at least some of Shell's partners were not carrying the Gorgon reserves as proved affect your opinion about whether Shell should carry those reserves as proved?
A. I felt that this was additional information that by -- for next year's ARPR would be taken in conjunction with the developments on securing a market.
Q. Would this additional information weigh one way or the other in terms of future bookings by Shell?
A. It would weigh in the favor of de-booking.
Q. Did anyone ever tell you why ExCom was taking an interest in this subject?
0117
SHEILA M. GRAHAM
MR. SMITH: You mean other than in this -- what's reflected in this email chain?
Q. Other than what's reflected in this email. Well let me put it another way.
What was your understanding, if any, of ExCom's interest in this subject?
A. My understanding was that the additional 20 percent that we

booked as expectation but didn't book as proved, they were wondering if our partners had booked the additional 20 percent as proved.

Q. Do you know what a reserves replacement ratio is?

A. Yes.

Q. What is a reserve replacement ratio?

A. It is the -- as your reserves are decreasing due to production, it's the amount by which your -- your incremental reserves are

0118

replacing production.

Q. Did you have any understanding at that time about what the group's reserves replacement ratios were?

A. It wasn't as high as it would -- we would have liked it to have been.

Q. Do you know whether the reserve replacement ratio for gas, the group RRR for gas was more than 50 percent?

A. I can't remember.

MR. SMITH: As of the beginning of 2000?

MR. MILLKEY: Yes, as of the beginning of 2000.

A. I can't remember.

Q. Had you heard that ExCom was interested in booking that additional 20 percent in an effort to raise the group's RRR?

A. No. I had only heard that they were concerned that we were

0119

perhaps more conservative than our partners.

(Graham Exhibit 10 for identification, Bates stamped PER 00020076 through 20079.)

MR. MILLKEY: Graham Exhibit 10 is a document Bates stamped PER 00020076 through 20079.

Q. I guess this is a memorandum and not an email with an attachment. It's from Jeroen Regtien, dated March 17th, 2000, to Wim Maarse with a cc to Ms. Graham. The subject is "ASR reserves contribution final," and it attaches the appraisal of 1999 strategy review. Do you recognize this document?

MR. SMITH: Objection to form.

MR. MILLKEY: What did I -- did I mischaracterize it?

MR. SMITH: You just misstated the title. I think it's SSA appraisal of 1999 and strategy review,

0120

not of strategy review.

Q. Have you seen this document before?

A. Yes.

Q. What is an ASR?

A. Annual strategy strategic, one or the other, review strategy.

Q. And what is an annual -- what is the ASR? What occurs during the ASR?

A. Once a year senior advisors from The Hague would come out to an operating unit and we would do an appraisal of the previous year and then there would be a look forward to the coming year.

Q. Did you participate in the ASR that occurred in 2000?

A. Yes.

Q. Who from The Hague attended the ASR?
A. I can't remember everybody. There would have been Paul den Reijer and Rob Jager, but their line managers

0121

would also have been there.
Q. Was the ASR a one-day meeting?
A. No, it was usually a week's.
Q. A week. What do you recall occurring during the ASR?
A. In respect of the reserves?
Q. Gorgon, particularly Gorgon and reserves at Gorgon.
A. I don't remember the specifics of the meetings. I know that in -- because I was the economist for Gorgon I sat in the asset discussions on Gorgon. So they would be discussing the plans, the development plans for Gorgon for the next year. And for the reserves part, I don't remember the discussions.
Q. The attachment to this memorandum, did you draft any of it?
A. I drafted it in conjunction with Jeroen.
Q. Turn to the next to last page of the exhibit, 20078, the fourth

0122

paragraph down. At the end of the paragraph it says "The situation will be reviewed against next year following the planned asset alignment with Woodside and possible advances of ALNG with marketing of Gorgon gas." Can you tell me what is meant by planned asset alignment with Woodside?
A. I can't remember what it was, what that was all about. I think

this was pre the takeover.
Q. At some point was there a decision to freeze Gorgon's proved reserves bookings?
A. No.
MR. SMITH: Objection to form.
A. No.
Q. No. On the page before, which is 20077, did you prepare the diagram at the top of the page?
A. I believe Jeroen prepared it and then we had discussions as to how we could simplify it because it was too

0123

busy.
Q. It still is.
A. It was worse.
MR. SMITH: Objection to form.
Q. In the upper right in that diagram there's a rectangle that says "Reserves replacement ratio" and then the numbers 22, 134 and 580. What do those numbers mean?
A. No idea.
Q. Were you at this juncture having any conversations with Mr. Regtien about the upcoming ARPR?
A. I believe at this --
Q. With regard -- with respect to Gorgon?
A. I believe it was around about this time that Jeroen moved into -- into SDA, and I was -- he then became my line manager for ARPR reporting. And so I would have discussed with him what had previously happened and proposals for moving

0124

forward for what would happen at the

end of 2000.
Q. Do you recall what you and he discussed for proposals for the coming ARPR?
A. We were discussing that if the market didn't improve then it was our recommendation that Gorgon would be de-booked at the end of this year.
Q. At any time during your tenure as reserves coordinator at SDA, did the market improve for Gorgon gas?
A. No.
(Graham Exhibit 11 for identification, Bates stamped PER 00020190 through 20192.)
MR. MILLKEY: Graham Exhibit number 11 is Bates range PER 00020190 through 20192. It appears to be an email from Mr. Regtien sent on September 4th, 2000, to Ms. Graham and others, with a cc to Anton Barendregt and others. The subject is "Final agenda reserves audit 9-13 October"

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SHEILA M. GRAHAM
with an attachment entitled "Agenda SDA reserves audit 9-13 October 2000."
Q. Do you recognize this document?
A. Yes.
Q. What is it?
A. It is basically the agenda for Anton Barendregt's audit of the ARPR.
Q. How often did such audits occur, if you know?
A. I believe they were once every four years.
Q. This was a regularly scheduled audit as opposed to a special audit?
A. It was a regularly -- it was -- yes.

Q. Who was Mr. Barendregt?
A. Mr. Barendregt was the external auditor, reserves auditor.
Q. Do you know who he was employed by?
A. He was employed -- you mean

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previous to his becoming an auditor, or --
Q. Do you know if he had a current employer as of this time?
A. No, I didn't know.
Q. Had you ever met Mr. Barendregt before this time?
A. Yes.
Q. In what context did you meet him?
A. I worked in the same team as him when I worked in The Hague.
Q. When was that?
A. 1994 to about 1997.
Q. What was the team?
A. The team was Shell's corporate petroleum engineering division.
Q. Did you work directly with Mr. Barendregt as part of that team?
A. He was the -- he was a reservoir engineer in that team. I was a petrophysicist, but we never actually worked on the same projects together.

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Q. Did SDA take any steps to prepare itself for the reserves audit conducted by Mr. Barendregt?
A. Yes, ensuring that all the correct documentation was available, ensuring that the correct people were available, and also to the extent of ensuring that the timing was such that the correct people would be available.

Q. And by correct people who do you mean?
A. The reserves coordinator in -- in Woodside and the asset managers of the relevant assets.
Q. Do you know if Mr. Aalbers participated in the reserves audit?
A. No, he didn't.
Q. Turning to the agenda itself, which begins on 20191, there's a list of what appear to be presentations that were to be made as part of the audit. I see you're listed with Mr. Chittleborough and Mr. Regtien on -- as giving presentations on

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October the 11th. Did you in fact give a presentation?
A. I can't remember, but if it's listed here that I was going to then I would have.
Q. And it says "Chevron methodology." Do you know what that refers to?
A. Yes, it's basically the mathematics that I undertook in converting P 10 data to P 15 data.
Q. I also see a little higher up on that same page it refers to a planned visit by Harry Roels? Is that how you pronounce his name? Do you know who he is?
A. He was senior in Shell, and he was a member of the CMD. I'm not sure if he was at that particular point in time on the CMD or not.
Q. Do you know whether he in fact visited SDA?
A. No.
Q. Do you know whether he

0129

participated in the reserves audit?
A. No, he didn't.
Q. Do you have any recollection of specific meetings you attended during the audit?
A. No, I don't.
Q. Did you have any conversations with Mr. Barendregt about the possibility of de-booking reserves, proved reserves at Gorgon?
A. Yes.
Q. What do you recall about those discussions?
A. I recall that we were -- we presented the, basically the current commercial opportunities that were available for Gorgon, the lack of a signed contract in the next short -- in the short term, as well as the technical basis for the figure -- the reserves figures for Gorgon.
Q. Now when you say the technical basis for the figure, are you suggesting that there was a technical

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basis for de-booking Gorgon?
A. No. I'm -- I'm saying that we would have discussed -- we discussed the complete overview of Gorgon, so what the technical reserves actually were, and then whether the reserves, the technical reserves would -- should be booked as proved or should be de-booked to scope for recovery.
Q. Did you express an opinion to Mr. Barendregt about whether the Gorgon approved reserves should be de-booked?
MR. SMITH: Objection to the form; asked and answered.
THE WITNESS: Pardon, I didn't -- sorry, I didn't hear you.

MR. SMITH: You can go ahead and answer the question.
A. I can't remember the exact conversations with Anton. However, I'm pretty sure that I would have expressed a preference.
Q. Do you recall what Mr.

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Barendregt's response was? Did he have a response?
A. I believe that Anton didn't give us a direct response at the time. However, there was a written -- a written writeup of his views of the audit.
Q. Did you have an expectation of what Mr. Barendregt's conclusion would be with respect to the Gorgon reserves?
MR. SMITH: Objection to form. Before she talked to him or after she talked to him?
MR. MILLKEY: Before she talked to him.
Q. Did you have -- did you have an expectation about the outcome of the audit with respect to the Gorgon proved reserves?
A. Before I talked to Anton I assumed that he would concur with SDA's recommendation with de-booking.
Q. Do you have a recollection

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of what Mr. Barendregt's conclusion was in his report?
A. He recommended continuing with Gorgon as proved undeveloped reserves.
Q. Do you recall what the basis of -- the reason for that recommendation was?

A. Yes. The difference in opinion between us was on timing, that in Anton's view the fact that Gorgon would be developed in a later time frame and would not impact on its ability to be booked as proved developed reserves. There was no disagreement about it being economic, it was just a disagreement about timing.

Q. Was it his view -- did he express the view to you that as long as the gas could be marketed at some point in the future that was sufficient to justify booking?

A. Yes.

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(Graham Exhibit 12 for identification, Bates stamped PER 00170686 through 70696.)

MR. MILLKEY: Graham Exhibit 12 is a note dated December 5th, 2000 from Anton Barendregt to Lorin Brass and Alan Parsley with a number of copies. The title is "SEC proved reserves audit, Shell Development Australia, 9 through 13 October 2000." The Bates range is PER 00170686 through 70696.

Q. Have you seen this document before?

A. Yes.

Q. And what is it?

A. It's the closeout audit report.

Q. In the paragraph maybe two-thirds of the way down the page it starts "The audit commended the high quality." A little further down it says "Maintaining the preliminarily booked volume of Gorgon gas reserves

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(first done at 1.1.1999) was supported on the ground that a gas market was highly likely to be established in due course and that it must be considered likely that an extension of the current five year retention lease will be granted in 2002." He seems to indicate that the Gorgon reserves were first booked as of 1/1/1999. Do you believe that to be a mistake?

MR. SMITH: Objection to form and lack of foundation.

A. I believe it was booked earlier.

Q. On the following page at point 3 about halfway down the first paragraph it begins "An important challenge." Do you see that?

A. No, sorry.

Q. Oh, it's point 3, about halfway down the paragraph, "An important challenge."

A. Oh, yes, yes.

Q. "An important challenge is

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finding a buyer in a market that is fully supplied until 2005 and in which there is still significant competition thereafter. In the long term, however, there can be little doubt that a market will be found for this gas in the East or South Asian rim. Hence, the group reserves reporting guidelines do in principle allow this gas to be reported as reserves."

I guess this is really more a question for Mr. Barendregt than for you, but apparently Mr. Barendregt was contemplating that, at a minimum, it would be four years before there would be a buyer for the gas since he said

the market was fully booked until 2005.
In the next paragraph there's a reference to a retention lease. Were you aware of that lease at any point?
A. Yes.
Q. And he notes that there was no formal right to an extension of the
0136
SHEILA M. GRAHAM
lease which was to expire in 2002. Was the lack of a formal right to an extension a factor you considered in determining whether the proved reserves should continue to be booked in the previous ARPR that we discussed earlier today?
MR. SMITH: Objection to form and lack of foundation.
Q. Were you -- were you aware of the lack of a formal right to an extension of the lease during the previous ARPR?
A. Yes.
Q. Was that -- did you consider that to be a relevant factor in your thinking?
A. It was relevant, but with reasonable certainty we knew that the government would renew the license.
MR. MILLKEY: He needs to change the tape, so why don't we go off the record.
THE VIDEO OPERATOR: This
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SHEILA M. GRAHAM
marks the end of tape number 2, volume 1 in the video deposition of Sheila Graham. Going off the record, the time is 14:51.
(A recess was taken.)
THE VIDEO OPERATOR: Back on the record. Here marks the beginning

of tape 3, volume 1 in the deposition of Sheila Graham. The time is 15:09.

(Graham Exhibit 13 for identification, Bates stamped PER 00020246 through 20248.)

Q. Have you had an opportunity to look at Graham Exhibit 13?

A. Yes.

MR. MILLKEY: Graham Exhibit 13 is an email string, Bates range PER 00020246 through 20248.

Q. Do you recognize this email string?

A. Yes.

Q. The earliest email in this string appears to be from Remco Aalbers dated September 16th, 2000, to you and

Wim Maarse with ccs to Mr. Jager, Mr. McKay, and Mr. Branson. And he says, "Wim, Sheila, I picked up the following comments on Gorgon reserves versus SFR in your BP'00 dollar indications." Do you know what BP'00 refers to?

A. 2000 business plan.

Q. Below that he quotes what I take to be a section from the BP -- the 2000 business plan. That block quotation at the bottom of the page, do you know who wrote that?

A. Wim sent it and I think I wrote it. It's not actually part of the BP'00. The Hague would send us questions on points they wished clarified on the BP 2000, on the business plan, and this is our answer to their question.

Q. The first line of the quotation, the question, it says "Q SFR maturation zero?" And then the first sentence says "We are acutely aware of our reserves replacement and SFR

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maturation KPIs." What does KPI stand for?
A. Key performance indicators.
Q. Why did you write that -- well, does the we refer to SDA?
A. Yes.
Q. Why did you write that SDA was acutely aware of reserves replacement and SFR maturation KPIs?
A. I was being sarcastic in my response back to them.
Q. Why were you being sarcastic?
A. Because to mature scope for recovery to reserves for oil discoveries, you need money, and for gas you need a market, and in the capital allocation we got no money to develop the oil reserves, therefore, it was impossible to move from scope for recovery to reserves. And for gas there was no gas market so we couldn't move that either, and yet we were being asked why we weren't moving our scope
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for recovery to reserves. It was blindingly obvious why.
Q. In the quotation, in that block quotation there's the abbreviation CA. What does that stand for?
A. Capital allocation.
Q. Did you have any understanding why Mr. Aalbers wrote that "this is a very important and sensitive point from both a principle point as well as in light of the group's proved reserves" -- "RRR target"?
A. Principle point, I don't know what he was meaning. The RRR

target was that we would not be contributing anything towards the RRR target.
Q. Do you know if there was a specific target, like a target number or a target percentage?
A. I don't know.
Q. Mr. Aalbers goes on to say "The discussion should be with both Rob

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and myself, not with Anton Barendregt." Do you know why Mr. Aalbers didn't want you to have the conversation with Mr. Barendregt?
MR. SMITH: Objection to form and lack of foundation.
A. No, I don't.
Q. On the previous page, which is the first page of the exhibit, towards the bottom of the page there's an email from Mr. Regtien to you in which he says "My view is that we come to our own understanding first within the current guidelines," and then he suggests checking with Mr. Barendregt. Did you have any conversations with Mr. Regtien about whether Mr. Barendregt should be consulted?
A. Yes.
Q. As part of this conversation. And what do you recall about that conversation?
A. We decided to ignore Remco and we would just discuss with Anton.

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Q. And he goes on to say "My proposal to treat the Gorgon reserves is based on the following," and he lists four bulleted points." And then he says "I therefore recommend and am prepared to defend downgrading Gorgon

from the proved undeveloped reserves category to SFR (commercial/proved techniques)." Was it Mr. Regtien's opinion at this juncture that the Gorgon proved reserves should be de-booked as proved?

A. Yes.

Q. At this time did you share that opinion with him?

A. Yes.

Q. The next sentence says, "I realize that this may carry some sensitivity in SIEP, but it was extensively discussed at the ASR and SDA was actioned to develop a plan" and I think it should say "to downgrade Gorgon reserves, it says "the downgrade Gorgon reserves." What is SIEP?

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A. Shell International Exploration and Production, the center.

Q. When it says "SDA was actioned to develop a plan" what does that mean, actioned? Did someone direct them to do that?

A. I don't remember being actioned to develop a plan. I remember the discussions centered around if the -- if there were no commercial developments then -- then the discussions would have to be made to de-book Gorgon.

Q. At the top of the first page of the exhibit there's an email to Mr. Regtien from Mr. Blaauw dated September 19th of 2000. Do you know whether Mr. Blaauw at this time advocated de-booking the Gorgon reserves as proved?

A. I can't remember.

Q. Do you remember if at any later time he formed an opinion one way or the other?

25 A. No.
0144
1 SHEILA M. GRAHAM
2 (Graham Exhibit 14 for
3 identification, Bates stamped PER
4 00020250 through 20251.)
5 MR. MILLKEY: Graham Exhibit
6 14 is numbered PER 00020250 through
7 20251. It's another email string. The
8 most recent email in the string is from
9 Remco Aalbers dated September 21st, 2000
10 to Ms. Graham, with ccs to Mr. Jager, Mr.
11 Regtien and Mr. Chittleborough. The
12 subject line is "Gorgon reserves versus
13 SFR."
14 Q. Ms. Graham, do you recall
15 receiving this email?
16 A. Yes.
17 Q. About five or six lines into
18 the email there's a sentence that
19 begins, "When Anton is down under." Do
20 you see that?
21 A. Sorry?
22 Q. It's about maybe six lines
23 down.
24 A. Yes.
25 Q. And Mr. Aalbers rights,
0145
1 SHEILA M. GRAHAM
2 "When Anton is down under in October,
3 SDA should justify why they had Gorgon
4 proved reserves on the book 1.1.2000
5 and that there is (still despite the
6 set-back from the Asian crisis) a
7 reasonable expectation of future market
8 to justify those volumes. Also they
9 need to support the fact that no add
10 volumes were booked - despite WAPET
11 reevaluation." Am I correct that when
12 he refers to Anton being down under in
13 October he's referring to the proved
14 reserves review we discussed a few
15 minutes ago?

MR. SMITH: Objection to form.

Q. Or the annual -- it wasn't annual. The audit that he conducted that we discussed earlier?

A. Yes.

Q. When you read the language that I just read, did you have any reaction to it?

A. Yes, I wasn't going to

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follow his recommendation, was not going to follow his recommendation.

Q. And why is that?

A. Because the reserves auditor -- the reserves auditor was an independent auditor and it shouldn't be dictated by the center what you can discuss with an independent auditor.

Q. The next sentence he wrote was "This is not the point to start discussing on de-booking to SFR." Did you have any reaction when you read that?

A. I didn't agree with that.

Q. Did you have a sense in reading this email that Mr. Aalbers was telling you what to do?

A. Yes.

Q. A little further down he writes, "Any discussion on this issue should be treated very carefully. It would have a very negative impact on the group's reserve replacement ratio." Did you ever have the suspicion that

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Mr. Aalbers was receiving pressure from someone else regarding the company's RRR?

MR. SMITH: Objection to form, lack of foundation.

A. I didn't know anything about why he wrote this email.
Q. Did you feel any resentment when you read this email?
MR. SMITH: Objection to form.
A. No, I didn't feel resentment. I just felt that Jeroen and I would proceed with the audit how we wanted to.
Q. Were you still the reserves coordinator when the January 1, 2001 ARPR was submitted for SDA?
A. No.
Q. Who was at that point?
A. Sarah Bell.
Q. Did you participate in any of the discussions leading up to that ARPR about whether the proved Gorgon

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reserves should be de-booked?
MR. SMITH: Sorry, can we just be clear here about the date you're asking about.
MR. MILLKEY: I'm talking about the following ARPR --
MR. SMITH: January 1, 2001 or January 1, 2002?
MR. MILLKEY: 2001.
MR. SMITH: So four months after Exhibit 14?
MR. MILLKEY: Right.
A. Okay. So yes, I was -- yes, I was the reserves auditor at that stage.
Q. Okay. Do you recall whether as of that ARPR -- strike that.
Do you recall whether in that ARPR there was a recommendation to de-book any Gorgon reserves?
A. No. Once we got Anton Barendregt's audit closeout report that

we've reviewed in this deposition, there was no further discussion.

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Q. Because?

A. Because it was felt that Anton was a technical, technical authority and that his views carried a lot of weight within SDA.

Q. Did your own personal view change as to whether the reserve should be de-booked?

A. No.

Q. So it was a matter of deferring to the independent auditor?

A. Yes.

(Graham Exhibit 15 for identification, Bates stamped PER 00020559 to 20560.)

MR. MILLKEY: Graham Exhibit 15 is an email string, it's a two-page document, PER 00020559 to 20560. The more recent email in the string is from Christiaan Stouthamer dated June 5th, 2001, to Ms. Graham and to Mr. Regtien. The subject says "Reserves in CA submission - urgent."

Q. Did I pronounce his name

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correctly, is it Stouthamer?

A. Yes.

Q. And who is he?

A. He replaced Wim Maarse.

Q. He says "More stuff from Mr. Yaxley" and the word Mr. is capitalized. Did you understand there to be any significance to that?

A. No, just a typo.

Q. Now I believe you testified earlier that Mr. Yaxley preceded Mr. Hammer as reserves coordinator for SDA; is that correct?

A. I think I testified that it was my belief that Leigh was before him.
Q. I'm sorry. What was Mr. Yaxley's position at this time?
A. He took over from Remco Aalbers I believe.
Q. So he was the group reserves coordinator?
A. Yes.
Q. I can't remember if I asked

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this before and if I did I apologize. Do you know whether Mr. Yaxley had any involvement in the initial booking of Gorgon?
MR. SMITH: Objection to form. Booking as what?
MR. MILLKEY: Pardon me?
MR. SMITH: Booking as what?
MR. MILLKEY: As proved, I'm sorry.
Q. The answer was -- I'm sorry.
A. I don't know. I believe that Leigh had something to do with the booking of Gorgon reserves, but I don't believe it was proved reserves.
Q. In Mr. Yaxley's email to Mr. Stouthamer on that same page he says he will address the resource volume reconciliation. Do you understand what that means? It's at the bottom of that first page.
A. Yes. The -- sum of all the reserves in the sheets, the sum of the expectation reserves in the sheets

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needs to match the ARPR expectation reserves submission.
Q. And the second bulleted point of Mr. Yaxley's email, which is

on the next page begins with the words "Another reason for misalignment." Do you see that?
A. Yes.
Q. "Another reason for misalignment might be that the reserves in the submission sheet are risked." Did you understand what he meant by that?
A. He being?
Q. Mr. Yaxley?
A. Mr. Yaxley didn't actually make that comment. To actually understand this email you actually have to see it in color because Leigh has actually inserted his comments at the back of Chris's initial response. So it's actually a very difficult email to interpret.
Q. I understand.

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A. So it's Chris Stouthamer's comment that another reason for misalignment might be that the reserves in the submission sheets are risked.
Q. Do you know whether at some point in that bulleted point Mr. Yaxley comments upon Mr. Stouthamer's words?
A. Yes. Chris is -- I'm sorry, Leigh -- I've forgotten his name -- Leigh Yaxley's comments are "If you're carrying a POS to FID of 54 percent for Gorgon then the project is commercially immature and you should not have the volumes on the books as proved undeveloped reserves."
Q. Now, where did that 54 percent number come from?
A. For the capital allocation project -- for the capital allocation process you choose one of your development scenarios to submit for

capital allocation. So, for example, Gorgon would have had three, would have been carrying three scenarios for

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Gorgon and the sum of these three scenarios would have added up to a hundred percent. One of these scenarios was the scenario that was submitted and the POS it had been carrying was 54 percent.

Q. POS is possibility of success?

A. That's right.

Q. Probability of success?

A. Yes.

Q. And then following the words that you just read there's bracketed italicized words that say "I suspect you may have heard this or similar remarks from my predecessor and the issue of Gorgon proved undeveloped reserves is something we will need to address during the next ARPR." When he refers to his predecessor is he referring to Mr. Aalbers?

A. Yes.

Q. What was your reaction when you read the language that you read and

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that I just read?

MR. SMITH: Objection to form.

Q. You can answer.

MR. SMITH: And lack of foundation.

A. Sorry, repeat, could you please repeat the question.

Q. Did you have any reaction to those words when you read them?

A. My reaction was that -- that Leigh can't have had a comprehensive

handover from Remco.
Q. Did you understand this to be inconsistent with the messages you had received from Mr. Aalbers about proved reserves at Gorgon?
A. Yes.
Q. Did you ever have an occasion to speak with Mr. Yaxley about this?
A. I don't remember.
Q. At some point did Shell make an effort to acquire an interest in

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Woodside?
A. Yes.
Q. Do you recall when that was?
A. Not the exact timing of it.
Q. Do you know whether the booking of Gorgon as proved had any bearing on that attempt by Shell?
A. No, no bearing.
Q. Did at some point Shell actually de-book the Gorgon reserves?
A. Yes.
Q. When did that occur?
A. The beginning of 2004.
Q. Was that part of the larger recategorization that Shell announced in January of 2004?
A. I'm not privy to the details.
Q. Did you have any reaction when you learned that Shell was de-booking the Gorgon reserves, proved reserves?
A. My reaction was that -- that somebody in the center must have

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eventually concurred with the ideas in SDA at the time.
Q. At any time in 2004 did you

become aware of public statements that representatives of Shell made about the Gorgon booking of proved reserves?
A. Yes.
Q. What do you recall?
A. I recall that it was indicated that it was Shell Australia decision only on reserves.
Q. Did you believe that to be an accurate statement?
MR. SMITH: Objection to form and lack of foundation.
A. I didn't know the time frame that they were referring to in the statement that they made.
Q. Do you recall who made the statement you're thinking of?
A. No.
Q. And you mentioned the time frame. Why was that relevant?
A. Because all I can remember

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from the reports is that the comment was that it was SDA management decision, but that could have been SDA management decision after I had left SDA.
Q. I'm probably being dense, but I don't -- could you explain that again. I don't fully understand what you mean.
MR. SMITH: Objection to form; asked and answered.
Q. I still don't -- I'm sorry, I just don't understand the timing point.
A. The timing point was that there could have been the -- the reports that I read could have been indicating that it was SDA's decisions in the time frame 2002 to 2004.
Q. I see.

A. And I obviously wasn't in SDA in 2002 to 2004.

MR. MILLKEY: Why don't we take a break.

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MR. SMITH: Sure.

THE VIDEO OPERATOR: Going off the record, the time is 15:47.

(A recess was taken.)

THE VIDEO OPERATOR: Going back on the record, the time is 15:53.

MR. MILLKEY: Ms. Graham, I have no further questions.

MR. SMITH: We don't have anything.

MR. MILLKEY: Thank you very much.

(Continued on following page.)

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THE WITNESS: Thank you.

THE VIDEO OPERATOR: Here marks the end of videotape number 3, volume 1 in the video deposition of Sheila Graham. Going off the record, the time is 15:54.

(Time noted: 3:54 p.m.)

_____

SHEILA M. GRAHAM

Subscribed and sworn to before me
this _____ day of _____, 2007.

_____
Notary Public

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STATE OF NEW YORK) Pg__of__Pgs
ss:
COUNTY OF NEW YORK)
I wish to make the following changes,
for the following reasons:
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C E R T I F I C A T E
STATE OF NEW YORK)
: ss.

COUNTY OF NEW YORK)

I, GAIL F. SCHORR, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York, do hereby certify:

That SHEILA M. GRAHAM, the witness whose deposition is hereinbefore set forth, was duly sworn by me and that such deposition is a true record of the testimony given by the witness.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this ____ day of _____, 2007.

_____

GAIL F. SCHORR, C.S.R., C.R.R.

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E X H I B I T S

DESCRIPTION	PAGE	LINE
(Graham Exhibit 1 for identification, Bates stamped RJW 00121875 through RJW 00121906.)	29	18
(Graham Exhibit 2 for identification, Bates stamped V 00100166 and AU 000166.)	49	19
(Graham Exhibit 3 for identification, Bates stamped PER 00072308 through PER 00072310.)	60	4
(Graham Exhibit 4 for identification, Bates stamped PER 00012719 through 12720.)	61	8
(Graham Exhibit 5 for	65	13

identification, Bates stamped PER 00012729 through 12736.)

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(Graham Exhibit 6 for identification, Bates stamped GC 00008108 through 8131.) 71 2

(Graham Exhibit 7 for identification, Bates stamped PER 00012745 through 12747.) 76 5

(Graham Exhibit 8 for identification, Bates stamped GC 00008167 through 8169.) 100 13

(Graham Exhibit 9 for identification, Bates stamped V 00100190 through V 00100193 and AU 000192 through 195.) 113 11

(Graham Exhibit 10 for identification, Bates stamped PER 00020076 through 20079.) 119 4

(Graham Exhibit 11 for identification, Bates stamped PER 00020190 through 20192.) 124 15

0165

(Graham Exhibit 12 for identification, Bates stamped PER 00170686 through 70696.) 133 2

(Graham Exhibit 13 for identification, Bates stamped PER 00020246 through 20248.) 137 11

(Graham Exhibit 14 for identification, Bates stamped PER 00020250 through 144 2

12	20251.)		
13	(Graham Exhibit 15 for	149	14
14	identification, Bates		
15	stamped PER 00020559 to		
16	20560.)		
17			
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1999

Petroleum Resource Volume Guidelines

PETROLEUM RESOURCE VOLUME GUIDELINES

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Petroleum Resource Volume Guidelines

Resource Classification and Value Realisation

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1. INTRODUCTION

Petroleum resources represent a significant part of the company's upstream assets and are the foundation of most of its current and future upstream activities. To aid in understanding, planning, and decision making about these petroleum resources, resource volumes are classified according to the maturity or status of its associated development project. The current status and changes in petroleum resources, and specifically the commercially recoverable portion (reserves), are a significant concern to management. The future of the company depends on our effectiveness in maturing resources to the point where maximum economic value is realised.

For the Shell Group as a whole, petroleum resources are reported annually to senior management and are essential information for the strategic planning process of the upstream sector. The current status and changes to the proved and proved developed reserves are also reported annually to the Securities and Exchange Commission (SEC).

Therefore the importance of these figures cannot be overemphasised. Reliability, uniformity, consistency, transparency and auditability are essential elements in the collation of petroleum resource reports by Operating Units (OUs) and New Venture Operations (NVOs). In 1998, the guidelines have been re-written, building on the foundation established by previous versions (References 1 to 5). These guidelines serve as a reference for OUs and NVOs and as the standard against which audits will be conducted.

The recommendations of the Hydrocarbon Resource Volume Value Creation Team have been incorporated in this update of the guidelines. The primary changes are increased attention to realise maximum value from volumes and the modification of the definition for proved developed reserves to be more consistent with industry practice. The value realisation theme is reflected in emphasising a) that reserves are project based and b) the importance of maturing resource volumes to developed reserves and hence sales. No major changes in the classification scheme are introduced.

This document contains only guidelines. The information on internal and external submission requirements and quantification methods that was contained in previous versions of this document will be included in other communications. Submission requirements will be communicated annually in a letter from EP Planning. Methods will be developed through the Hydrocarbon Resource Volume Common Interest Network (Reference 7).

The present, 1999 version contains a small number of corrections/modifications and clarifications compared to the 1998 edition, which are indicated by a line in the margin.

2. PETROLEUM RESOURCES

2.1 Definition

A petroleum resource is any accumulation of hydrocarbons that is known or anticipated to exist in a sub-surface rock formation, located in the company's current exploration and production acreage. If the petroleum resource extends beyond the company's licence area the resource volumes must be divided according to the granted licence boundaries, to take proper account of Group share.

Resource volumes are reported as the quantities of sales product for crude oil, natural gas and natural gas liquids. The corresponding quantities of field recovery should be maintained by the OU (See Appendix 6). The reporting of petroleum resource volumes should further indicate the petroleum type, the reporting units and conditions, and the Group share.

Resource volumes are tied to the project that develops them and are generally reported by field. The term **reserves** is used for resource volumes associated with a project that is technically and commercially mature. Resource volumes that do not meet these criteria are called **scope for recovery** (SFR). **Proved reserves** are the portion of reserves that is reasonably certain to be produced. These distinctions will be discussed in Sections 3 and 4.

2.2 Group Share

Only the Group share of resource volumes is reported. The Group share is determined by agreements with the resource holders. Resource volumes can be distinguished according to three different types of agreement, which are discussed below.

Equity Equity resources are the Group share of resources in Concessions. Concession agreements lay down the general terms and conditions of operation. These agreements with governments define the applicable tax rules, the Group share of resources in Concessions and the duration of the production licence.

Entitlement Entitlement resources are the Group share of production in acreage governed by a Production Sharing Contract (PSC). The Group share of production is the Group interest in the sum of cost oil plus excess cost oil plus profit oil, in accordance with the PSC terms.

Innovative Production Contracts In recent years, a number of resource holding countries have introduced innovative production contracts in order to attract investment by foreign oil companies while preserving the principle of national resource ownership. These agreements typically provide for the contractor to recover costs and profits from hydrocarbon revenues while holding no title to, or entitlement to receive petroleum resources.

US Financial Accounting Standards Board (FASB) regulations have lagged behind these developments and provide little explicit guidance on reserves disclosure when the risks and rewards of ownership are carried without legal title to mineral rights.

However, volumes covered by such innovative contracts should be included in external reports in an informative way to be consistent with the spirit of the SEC regulations. The volumes from which economic benefit is derived should be reported if all three of the following conditions are met:

1. The OU participates in the production operations as either operator or in partnership with the operator, and so bears a share of the costs and risks of the production operations.
2. The OU derives future economic value that is directly related to the volume of hydrocarbons produced. For example, a fee expressed as a fixed or indexed amount per barrel of production would constitute a derivation of value from the produced hydrocarbons, but an operating fee that is largely independent of production would not. The actual source of revenues used to pay the OU is not crucial to this point. For example, if the remuneration is determined by a produced gas volume but paid from oil revenues, the economic value to the OU is in effect derived from the produced gas, and this volume should be reported.

3. The OU is exposed to the normal risks and rewards associated with ownership of mineral rights, including the downside and upside from changes in the value of future production volumes. These include the risk that costs may not be recovered, due to either uncertainty as to the presence or magnitude of hydrocarbon volumes or to movements in petroleum prices.

OUs and NVOs working under such contracts should complete the standard resource volume submission for the Group/Company interest in these volumes, noting the nature of the interest. Reported volumes should be in line with the reporting of traditional reserves with regard to royalties and should therefore reflect the volumes from which pre-tax cash flow is derived. As elsewhere, cash royalties are regarded as a production cost.

If an OU has interests in several licence areas subject to different contract types (e.g. reward generating and PSC), a separate submission must be made with respect to the interest in the reward generating contract area.

When an OU is participating in a venture which grants neither title to, nor an entitlement to receive petroleum, and which does not satisfy the three criteria above the OU should not report reserves or production volumes. For example this might occur if the recovery of costs is guaranteed against adverse price movements or a shortfall in recovered volumes

Licence or Contract Extensions

For internal reporting purposes, Group share of the expectation estimate of reserves and scope for recovery are recorded for the total producing life, i.e. including the period beyond the relinquishment date, but not covered by a right to extend or by a letter of assurance (see below). The currently existing licence terms or other anticipated terms should be assumed for this extrapolation. In addition to full life cycle volumes, resource volumes limited to the current licence only are recorded for total expectation reserves, developed expectation reserves and total commercial scope for recovery.

For external reporting, Group share of reserves (proved, proved developed) is limited to production within the existing licence or contract period. However, production beyond the licence or contract period can be included if there is a legal right to extend a production licence or PSC, or if the government has formally indicated that it will favour substantiated requests for extensions in the future (letter of assurance). Then volumes recoverable during the extension period are included in the Group share, assuming currently existing or other anticipated terms. Such considerations should be documented in the annual submission.

In some countries, the issue or duration of production licences for gas fields is effectively coupled to the conclusion of gas sales contracts. In other areas, a realistic target date for initiation must be set for projects that are not yet firmly planned so that the production forecast and other screening assumptions can be used to estimate the volume produced before licence or contract expiry.

Long Term Supply Agreements

FASB regulations (69 par. 13) require that quantities of oil or gas subject to purchase under long term supply, purchase or similar agreements should be reported separately, if the OU participates in the operation of the properties in which the oil or gas is located or otherwise serves as the "producer" of those reserves, as opposed, for example, to being an independent purchaser, broker, dealer, or importer.

The "supply" agreement should be a consequence of the OU acting as producer. This would not be the case if, for example, others had similar agreements but did not participate in the production operations.

These net quantities, as well as the net quantities received under the agreement during the year, should be included in the end year estimate of reserve volumes for external disclosure form.

Royalty

Royalty is a payment made to the host government for the production of mineral resources. It is usually calculated as a percentage of revenues (payable in cash) or production (payable in kind).

Where in practice royalty obligations are met in kind (i.e. by delivering oil instead of cash), the Group share of production and reserves should be reported excluding these volumes.

Where royalty is payable in cash or is in principle payable in kind but the government has formally elected to receive, or customarily receives, payment in cash, Group share of production and reserves should be reported without deduction of equivalent royalty volumes.

Fees in kind

Third Parties may in some cases pay Fees in Kind or Tariff in Kind (TIK) for the use of infrastructure (e.g. pipeline tariff, processing fee). Such volumes received by the company do not constitute a Group share in resources and should not be included in reported volumes. Condensate volumes recovered from a pipeline system related to transportation of Third Party gas volumes and sold by the company are equivalent to fees in kind received. All fees in kind received should be included as a purchased volume in the company accounts.

Where a company pays fees in kind (from its own fields/resources) to a Third Party, these do constitute a Group share in resources and should be included in the reported volumes. Annual volumes produced and used as fees in kind should be included in sales volumes, with associated revenues (at an agreed or fair market value) equivalent to booking of the incurred operating cost.

Open Acreage

Group share of volumes is non-existent in open acreage and acreage for possible acquisition or farm-in.

Under/Over Lift

Group share should also allow for any historic under or over lift by partners or government.

Committed Gas Reserves

Total volumes of expectation gas reserves within licence, which have been sold (committed) under long and short term contractual agreements. In countries with a mature/deregulated gas market all gas reserves, which have a near certainty of market take-up can be classified as 'committed'.

Committable Gas Reserves

Volumes of gas reserves, which have not been sold, but could be sold (committable) under contractual agreements. The sum of committed and committable gas reserves should equal expectation gas reserves within licence. Gas resource volumes, which are classified as scope for recovery due to lack market availability, should not be included.

Gas Re-injection

Gas volumes re-injected in a reservoir, for pressure maintenance, gas conservation, underground storage (incl. cushion gas), or other reasons, remain part of a company's resource base and should be accounted for as such. These gas volumes should be classified and reported as reserves or SFR, conform any other gas resource based on project assumptions for re-development (taking into account expected re-saturation losses).

Gas volumes re-injected in an Under Ground Storage (UGS) project on behalf of a Third Party (including any gas volumes previously sold by the company to this party) do not constitute a Group share in resources and should not be included in reported volumes.

Oil Sands

Reporting of petroleum volumes (heavy oil, bitumen, syncrude, gas etc) recovered from "oil sands" (tar sand, oil shales, coals etc.) as part of hydrocarbon resources (reserves or SFR) is principally governed by the method of recovery of such volumes. Volumes produced through wells, generally from thermal methods are reported as part of the hydrocarbon resource base. Volumes recovered though mining and subsequently recovered from the mined product are not part of the hydrocarbon resource base and should be reported separately (see also Appendix 3 C4).

3. RESOURCE VOLUME CLASSIFICATION FOR INTERNAL REPORTING

3.1 Classification Scheme

The internal classification scheme shown in Figure 1 is intended to provide a consistent link between a field's resource volumes and the EP business model, identifying separately those resources that are the focus of the various stages in the development life cycle.

Cumulative Production	
Reserves:	Developed Reserves
	Undeveloped Reserves
Discovered Scope for Recovery:	Commercial Scope for Recovery by Proved Techniques
	Commercial Scope for Recovery by Unproved Techniques
	Non-Commercial Scope for Recovery
Undiscovered Scope for Recovery	Undiscovered Commercial Scope for Recovery
Discovered Initial In Place	

Figure 1: Resource Categories for Internal Reporting

A summary of the definitions for these categories is provided in Appendix 1. The cascade model (Figure 2) illustrates the migration of volumes between resource categories during the development life cycle.

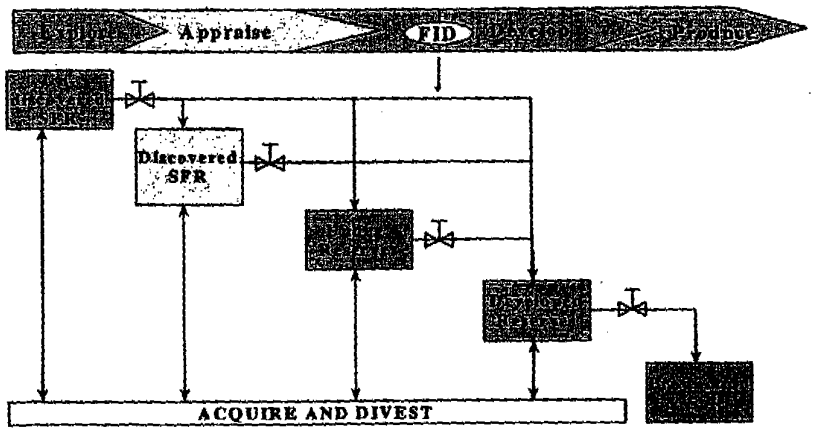


Figure 2: Cascade Model

A specific example of the migration of resource volumes between categories during a field's life cycle is shown in Appendix 2.

3.2 Value Realisation

The most important objective of resource volume management is the progression of the volumes to the point where maximum value is realised. The main purpose of the internal classification scheme tied to the development life cycle is to enable understanding of the potential value and the actions needed to mature volumes. In order to achieve business growth and reserves replacement objectives, it is essential that OUs and NVOs have efficient systems to move volumes through the value chain from scope for recovery to production and sales as shown in the cascade model.

OUs and NVOs internal reserve management systems should;

a) set targets and monitor actual performance in maturing volumes towards value realisation,

b) fully inventorise and have maturation plans for Scope for Recovery opportunities,

c) review ultimate recovery targets for existing fields and identify what activity - appraisal, study, new technology development, commercial agreement, etc. - is required to reach these targets,

d) and have Key Performance Indicators (KPI's) to measure performance (e.g. reserves replacement ratio, scope for recovery maturation ratio, time between discovery and first production).

3.3 Technical and Commercial Maturity

The classification scheme uses a project's technical and commercial maturity as the primary criteria to distinguish between reserves and scope for recovery (SFR). Resource volumes can be classified as reserves only if the associated project that will result in production of those volumes is considered to be technically and commercially mature. If it cannot, the resource volumes should be classified as SFR. SFR needs an activity (e.g. exploration appraisal, field trial, gas market development, etc) to achieve technical maturity and commercial viability. Secondary technical and commercial distinctions (between proved and unproved techniques SFR and between commercial and non-commercial SFR) further identify resource volumes at various stages in the life cycle.

Project Basis Technical and commercial maturity reflects the status of remaining uncertainties in the assessment of the optimal development project and its associated recovery. A project is any proposed or notional modification of the wells, the production facilities and/or the production policy, aimed at changing the company's sales product forecast. It can also be a modification of the company's share in a venture (purchase/ sales-in-place, unitisation, or new terms). The generic term 'project' is also used to describe a group of (sometimes alternative) projects, each with a certain chance of realisation, depending on the results of further data gathering. In that case, the project NPV is replaced by the Expected Monetary Value (or EMV, see Appendix 6).

Technically Mature For a project to be **technically mature**, information on the resource volume, including its level of uncertainty, is such that an optimal project can be defined with an auditable project development plan, based on a resource and development scenario description, with drilling/engineering cost estimates, a production forecast and economics. The plan may be notional or it may be an analogy of other projects based on similar resources. However, there should be a reasonable expectation that a firm development plan can be matured with time. Projects do not have to have a completed development plan.

Commercially Mature A **commercially mature** project is commercially viable over a sufficiently large portion of the range of possible scenarios that reflect the remaining resource uncertainties as well as the remaining commercial uncertainties, including market availability. The definition of what constitutes "a sufficiently large portion" may vary from case to case and could for example require the project NPV for the low reserves scenario to be positive for appropriate commercial criteria. It is also likely to include an assessment of the capital exposure in case of project failure due to adverse resource realisations. The selected range of scenarios should be documented and auditable.

Commercially Viable

A scenario is **commercially viable** if the NPV is expected to be positive under the applicable (or expected) terms and conditions for the acreage and for the current advised Group reference criteria for commerciality (Reference 9).

Economically Viable

A project is **economically viable** if the expected NPV under the applicable terms and conditions for the acreage exceeds the separately advised Group project screening criteria or if the project has already been approved by shareholders. Projects generally have to demonstrate economic viability in order to obtain investment approval. However, economic viability or formal project approval is not required for a project to be considered commercially mature. Reserves may be booked before project approval is sought.

3.4 Uncertainty Estimates

Uncertainty in resource volumes arises from using data and prediction techniques with varying degrees of uncertainty. The uncertainty in resource volume estimates can be assessed and represented using a variety of methods (see Reference 7). Probabilistic methods determine a range of estimates and the associated probability that they will occur. Scenario deterministic methods determine best estimates for specific cases such as a low side case or a base case.

The terms low, expectation or high estimates are used in this document to simplify the discussion and to define reported volumes where consistency is required. When using a probabilistic methodology, low, expectation and high estimates are defined as the P85, Mean and P15 values from the probability distribution function (see Appendix 7 for definitions). When using a scenario deterministic methodology, low, expectation and high estimates are the low side case, base case and high side cases, respectively.

Only the expectation estimate for each of the resource categories is required for Internal reporting. The low estimate is usually used to define externally reported proved reserves. It is up to the OU to decide whether there is a need to determine other estimates.

Uncertainty Reduction with Performance

The uncertainty range of ultimate recovery generally decreases as a field is developed and produced. However, the uncertainty range as a percentage of remaining reserves may not always decrease with time. **As a field matures, initial in place volumes and recovery should shift from a volumetric to a performance-based estimate, incorporating the additional production data to reduce the uncertainty range.** Once the reservoir performance has been established with reasonable certainty, a fairly small difference between low, expectation and high estimates would be expected. Definition of the low and high estimates may no longer be of value in mature fields with relatively little uncertainty and use of a single expectation estimate should be considered in this situation.

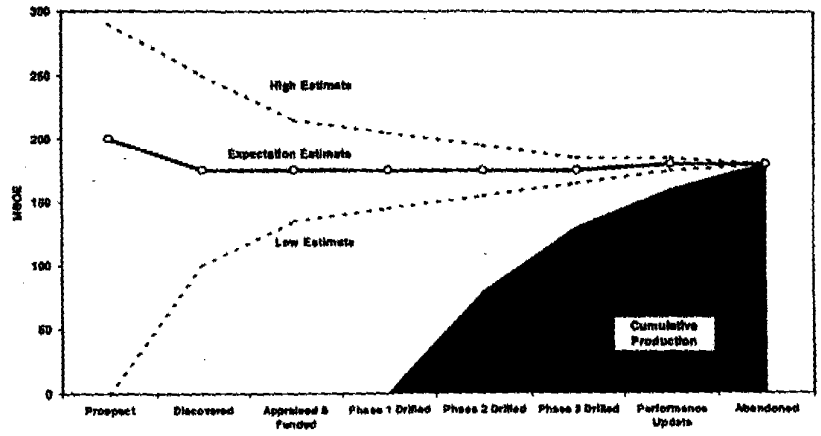


Figure 3: Uncertainty Reduction during the Field Life Cycle

Figure 3 illustrates the narrowing of the uncertainty with field appraisal and development. This is a near ideal example where the expectation remains constant for most of the life cycle. This example is also used in Appendix 2 to show the migration of resources between internal and external reporting categories during the field life cycle.

The reduction in uncertainty based on performance should be adequately reflected in the annual reserve and scope for recovery estimates for the field.

Addition of Resource Volumes

Resource volumes are added together at various levels during the resource assessment and reporting process. Addition of reserves at or above the level used for depreciation calculations must be arithmetical for consistency with financial accounting. Below this level, i.e. normally below the field level, addition should be done taking into account the dependency between the volumes to truly reflect the recoverable volumes associated with a project. Arithmetical addition is appropriate for dependent volumes, but usually overstates the uncertainty range for the sum of partially independent volumes. Probabilistic addition should be used for partially independent volumes when the difference with arithmetic addition is significant.

Below are two examples where the method of addition is important to handle properly.

1) Field A is comprised of separate layers and the properties of these layers are independent of each other. In other words, a low result in one layer would not increase or decrease the chance of a low result in the other layers. Low, expectation and high estimates are calculated for each layer separately. Probabilistic addition should be used to account for the reduced uncertainty of adding together independent volumes. Arithmetical addition of these estimates would understate the low estimate and overstate the high estimate of the total field.

2) A project develops three independent fields as sub-sea satellites connected to one platform. In this case, the investment in surface facilities may be totalled for depreciation[1] and consequently the reserves estimates should relate to the combined fields. Probabilistic addition should be used to calculate the total reserves associated with the platform.

Careful consideration should be given to Commercial SFR by proved techniques where eventual development is only incremental to an existing or planned development. These volumes may have a probability of success (POS) less than one, but with probabilistic addition will contribute at all levels - low, expectation and high - of reserves estimates. Examples of where this would apply are:

1) A fault block that is not yet tested and may be reasonably interpreted as an extension of the delineated area of the field. The project itself is technically and commercially mature. The untested block would be developed through existing field facilities without significant additional investment other than additional wells, which is recognised in the project scope. The uncertainty is geological and volumes are classed as reserves.

2) A phased development where there is uncertainty in the scope (e.g. number of wells) of a project due to geological uncertainty. However, the nature of the project remains essentially unchanged and additional wells could be accommodated within the flexibility of the field facilities design, then the whole range of recoverable volumes should be considered in deriving reserves. A scenario tree can be developed to represent the range of outcomes, both in recovered volumes and optimised number of wells, dependent on geological uncertainty. The uncertainty is resolved, with time, through planned data gathering eventually determining the number of wells. Hence the volumes can be regarded as technically mature. If one branch of the scenario tree is not economic, then the volumes associated with that arm do not contribute to reserves.

If probabilistic addition is used, ensure the methodology and parameters used are documented in the audit trail.

[1] Group Accounts should be consulted when considering combining surface facilities for different fields for depreciation purposes.

3.5 Cumulative Production

The resource volume category "Cumulative Production" pertains to summation of sales quantities of production volumes up to the date of reporting. Consistency is required between sales and field quantities. Production Operations and Finance functions must reconcile their figures prior to any submission (annual oil/NGL production [0933] and gas sales [0323] as reported in CERES upstream sector **must equal** the volumes reported in the annual resource statement using the appropriate unit conversion factors).

3.6 Reserves

Reserves are the sales quantities anticipated to be produced and monetised from a discovered field associated with a project that is **technically and commercially mature** (see definition in Section 3.3). Petroleum volumes have been demonstrated to be producible through wells from the field. A market must reasonably be expected to be available.

The production forecast, and therefore the reserves, must be cut off at the point where cash generation becomes negative, i.e. when operating costs (with appropriate treatment of abandonment costs) exceeds sales revenues after royalties. If the remaining tail production is significant, it may be booked as Non-Commercial SFR (see below).

The production forecasts must be adjusted for any volumes flared/vented and 'own use' (fuel for production facilities, compressors etc) in the upstream operations prior to transfer of the volumes to the buyer (Third Party or 'Downstream').

The restriction of marketability is relevant to gas reserves and for the classification of those NGL products that are subject to go-ahead of a non-associated gas project. Apart from an assessment of the local market and identification of the type of export project (e.g. pipeline, LNG, methanol), this restriction implies earmarking the gas resources suitable to feed these outlets. The restriction applies to all confidence levels (low, expectation and high estimates) of reserves.

To minimise fluctuations over time, OUs and NVOs should exert caution in transferring volumes between the reserves and SFR categories. Demonstrable technical and commercial maturity will be required when new fields and reservoirs are added to the reserves base. The same requirement applies in principle when undeveloped reserves are retained. To retain developed reserves, their production should have a positive cash generation after subtraction of operating costs, tax and royalties.

Existing volumes classified as reserves, but which are no longer commercially mature, may be retained as reserves only in cases when there is an overriding strategic interest, or where a current small operating loss is expected to be reversed in the short term. In both cases support from shareholders must be obtained.

Developed Reserves

Developed reserves are the portion of reserves that is producible through currently existing completions, with installed facilities for treatment, compression, transportation and delivery, using existing operating methods. Outstanding project activities, such as initial completions, recompletions, hook-up and modifications to existing facilities, can be considered as existing or installed if the outstanding capital investment is minor (<10%) compared to the total project cost and if budget approval has been obtained. Volumes behind pipe are considered developed if additional activities (e.g. 'lower' zone abandonment, perforating, stimulating) do not require a full well entry/re-completion and if the future investment (normally opex) is minor (<10%) compared to a new well.

Developed reserves are estimated by forecasting the production that will be contributed by the existing wells through the currently installed facilities assuming no future development activity. Future wells or facilities may be planned that add reserves and/or accelerate the reserves that would be produced by the existing investments. However, the portion of reserves expected to be accelerated by future investments are classified as developed with the existing investments and not after the future investments. If future investment accelerates production such that additional reserves are recovered within time limits (e.g. sales contract periods, field life), the additional reserves are classified as developed only after these investments are made.

Undeveloped Reserves

Undeveloped reserves are the complement of developed reserves in the total reserves, requiring capital investment in new wells and/or production facilities in order to be produced.

For new development projects, developing additional reserves may defer field / platform abandonment and may thereby also increase the reserves producible from existing completions. Such gains should be included in the economic evaluation of the new development project and can only be classified as reserves if the project meets the technical and commercial criteria.

3.7 Scope for Recovery

Scope for Recovery is the recovery estimate of any notional project for which implementation cannot yet be shown with sufficient confidence to be technically sound or commercially viable. However, there must be an expectation that this project could mature based on reasonable assumptions about the success of additional data gathering, a maturing technology from current research, relaxation in the market constraints and/or the terms and conditions for implementing such a project.

The economic evaluation should include any future pre-investment costs required to reduce technical uncertainty.

In the case of immature projects, the associated scope for recovery may be reported as a single estimate for the undiscounted average recoveries in the case of success (mean success volume, MSV) together with a probability of success (POS). For aggregation purposes the risked expectation volumes are used (POS*MSV).

Commercial SFR

SFR which is expected to be commercially viable should be reported in one of the following three Commercial SFR categories.

Commercial SFR by Proved Techniques

SFR by proved techniques is the volume estimated to be recoverable from discovered resources, by a project utilising a recovery process or technique which has been demonstrated to be technically feasible in the area or in the field. Implementation is expected to be commercially viable, but a large range of technical uncertainty precludes the formulation of a technically sound project proposal.

Commercial SFR by Unproved Techniques

SFR by unproved techniques is the volume believed to be recoverable from discovered resources by a project utilising any recovery technique or process that has not yet been demonstrated to be technically feasible in the field where its application is considered, but which through laboratory or trials elsewhere has a reasonable chance of being technically feasible in the future. If feasible, the process should be expected to be commercial.

Future data gathering may disprove the technique, and with it the possibility of development, and these SFR volumes must therefore be discounted for the risk that the considered technique will not prove to be feasible.

Undiscovered Commercial SFR

Undiscovered SFR is the volume believed to be recoverable from as yet undrilled potential accumulations by any process that has been a technical success elsewhere, under similar conditions, and the development of which is expected to be commercial.

These SFR volumes must be discounted for the risk that petroleum is not present or is not commercial to develop (Probability of Success, see Appendix 6).

Future data gathering may result in a total write-off of these resources. Following drilling results, the resource volumes are revised and, in the case of a discovery, the economics re-assessed, whereupon the resource is either discarded or reclassified.

Non-Commercial SFR

SFR in discovered resources is considered non-commercial for development projects which, even if technically successful, would not be commercially viable. To avoid unrealistic situations the reporting of Non-Commercial SFR is restricted to projects with a Unit Technical Cost below an annually advised ceiling.

Non-commercial SFR is reported in order to retain an indication of the discovered resources that could become commercial with a change of circumstances (e.g. an increase in oil price,

a change in tax regime, development of a gas market, flared/vented/re-injected gas volumes if recoverable and significant enough to be marketed).

The volumes reported for the four SFR resource categories numbers are based on full life cycle. In addition, total Commercial SFR within licence should also be reported.

3.8 Initial In Place

The petroleum volume Initially In Place (IIP) are expressed in volumes of Stock Tank Oil Initially In Place (STOIIP), Condensate Initially In Place (CIIP) and Gas Initially In Place (GIIP) under standard conditions. For standard conditions the same PVT data must be used as adopted for the reporting of field recoveries.

4. RESOURCE VOLUME CLASSIFICATION FOR EXTERNAL REPORTING

4.1 Classification Scheme

Externally reported resource volumes have two primary purposes – financial calculations and investor assessments. The reported figures are used to calculate the depreciation of EP sector capital investments. The amount of depreciation affects the company's book earnings that are also externally reported. Shareholders and the investment community use the reported volumes and earnings to assess the performance and value of the company. It is essential that externally reported proved reserves volumes are a true reflection of shareholder value. Externally reported proved reserves volumes should be equal to internally used proved reserves numbers.

The resource categories for external reporting are shown in Figure 4. Cumulative production, total proved reserves and proved developed reserves are externally reported annually for oil, gas and NGL sales quantities as of the 1st of January. The reported volumes must comply with SEC definitions, reproduced in Appendix 3. The Shell Group definitions contained in this section are in full compliance with these definitions. Where Group guidelines interpret SEC definitions, as listed in Appendix 4, these interpretations have been accepted by external auditors as fulfilling SEC requirements. A summary of the Group definitions for the external categories is provided in Appendix 1.

Cumulative Production	
Proved Reserves:	Proved Developed Reserves Proved Undeveloped Reserves

Figure 4: Resource Categories for External Reporting

Cumulative production for external reporting has the same definition as used in the Shell internal classification scheme (see Section 3.5). An example of the migration of resource volumes between externally reported categories during a field's life cycle is shown in Appendix 2.

4.2 Proved Reserves

Proved reserves are the portion of reserves, as defined for internal reporting, that is **reasonably certain** to be produced and sold during the remaining period of existing production licences and agreements. Extension periods are only included if there is a legal right to extend, which may derive either from the initial concession agreement or from a subsequent letter of assurance. Any applicable government restrictions on oil export and contractual or practical market limitations to gas delivery rates should be taken into account. Only the Group share of proved reserves is reported.

If probabilistic methods are used, reserves are reasonably certain when there is an 85% probability that the quantities actually recovered will equal or exceed the estimate. This is the P85 value of the cumulative probability curve. If scenario deterministic methods are used, the term reasonable certainty is intended to express a high degree of confidence that the quantities will be recovered. This is the low side estimate. When the estimate assumes significant volumes of hydrocarbons outside the defined fluid contacts, or when the recovery mechanism is untested in the field or analogue fields, a lower estimate should be used that reflects this uncertainty.

As discussed in Section 3.4, proved reserve estimates should be updated annually based on development and performance data.

Proved Developed Reserves

Proved developed reserves are the reasonably certain portion of internally reported developed reserves (i.e. produced from existing wells through installed facilities). Drilling and completing a well essentially proves the hydrocarbons that it develops and therefore proved developed reserves are based on the expectation estimate of developed reserves adjusted to take into account of undefined fluids contacts, untested recovery mechanisms, licence periods, government restrictions and market limitations, as discussed above. The expectation estimate is the mean value if probabilistic methods are used or the base case estimate if scenario deterministic methods are used and should tie-in with the expected No Further Activity (NFA) production forecast.

Proved Undeveloped Reserves

Proved undeveloped reserves are the reasonably certain portion of internally reported undeveloped reserves (i.e. require additional capital investment for new wells or facilities). Reasonable certainty is met by using the P85 value or low side estimate of undeveloped reserves and taking into account undefined fluids contacts, untested recovery mechanisms, licence periods, government restrictions and market limitations, as discussed above.

Total proved reserves and proved developed reserves are often determined, and then proved undeveloped reserves is the difference between the two. In mature fields when most of the reserves have been developed, this approach can result in values for total proved reserves and proved undeveloped reserves that are no longer reasonable. Once a field is at this level of maturity, a deterministic approach should be used for both proved developed reserves and proved undeveloped reserves consistent with the SEC and SPE definitions (Appendix 3, Reference 8). Total proved reserves is then the sum of proved developed reserves and proved undeveloped reserves.

Estimates of proved reserves should be benchmarked against the "proved area" deterministic method consistent with the SEC and SPE definitions (Appendix 3, Reference 8). This method first defines the proved area[2] of the field and then estimates the volumes expected to be recovered from the proved area. If the proved and proved developed reserve estimates are significantly different using the proved area method (as generally used in the industry), a reconciliation should be made for the OU to assure itself that the reported reserves are a true reflection of shareholder value.

Asset holders should be aware of the differences between probabilistic and deterministic techniques since third parties, e.g. gas buyers and hence external reserves auditors for certification, may adopt different practices.

External Financing

For projects which require some degree of external financing (e.g. LNG projects, major new venture start-ups), project financing must be expected to be available before proved reserves are disclosed externally. This could, by exception, be a reason why the reserves of some viable projects are excluded from external reporting.

Improved Recovery Projects in External Disclosures

Advances in reservoir modelling techniques have greatly enhanced the systematic assessment of project recoveries across the full range of uncertainties, increasing confidence in the use of simulation results as the basis for investment decisions and reserves estimation. This improved quantification has in some cases shown that pilot testing is not necessary prior to project commitment (based on a Value of Information approach). Under these circumstances, recovery from improved recovery projects (e.g. fluid injection, reservoir blowdown) may be considered proved when the following three conditions are met:

1) A comprehensive assessment of uncertainties results in confidence that the actual volume will be greater than the low estimate.
2) The main features of the recovery process are supported by confirmed responses in analogous reservoirs.

[2] The area of the reservoir considered as proved area includes (1) the area delineated by drilling and defined by fluid contacts, if any, and (2) the undrilled portions of the reservoir that can reasonably be judged as commercially productive on the basis of available geological and engineering data. In the absence of data on fluid contacts, the lowest known occurrence of hydrocarbons controls the proved limit unless otherwise indicated by definitive geological, engineering or performance data (Reference 8).

3) Project financing has been obtained or is expected to be available without a pilot testing phase.

In the case of improved gas recovery, the additional conditions in the following section also apply.

Proved Gas Reserves in External Disclosures

In addition to the foregoing conditions, proved reserves of natural gas should include only quantities falling in the following categories:

1) that are contracted to sales; or

2) that can be considered as reasonably certain of being sold based on a reasonable expectation of the availability of markets, along with transportation/ delivery facilities that are in place; or

3) that, while not firmly planned, have been earmarked for future development and hence may reasonably be anticipated to be sold based upon expectation of availability of markets and project financing.

These restrictions also apply to the external disclosure of condensate/NGL products that are subject to the go-ahead of a non-associated gas project.

Proved Reserves under Constrained Production

When operating under a combined production constraint (e.g. oil production quota) and production beyond the licence or agreement period is expected, the capability to accelerate the post licence production provides a safeguard against under-performance of the planned development programme during the licence period. This capability increases the confidence level that can be assigned to the constrained production forecast during the licence period. In this circumstance, the proved reserves should be based on an accelerated development programme that could be followed in the event that the base plan delivered less production than expected.

Types of Agreements

Under US Financial Accounting Standards Board (FASB) regulations, separate disclosure is required for oil and gas volumes applicable to different types of agreements. These requirements are illustrated in Figure 5.

Minority Interest

Reserves are reported on a 100% basis for companies in which the Group holds a controlling interest (in line with financial reporting) rather than on a Group share basis. Minority interest volumes included in the total proved reserves are disclosed separately.[3]

[3] Inclusion of minority interest requires prior agreement with the Group.

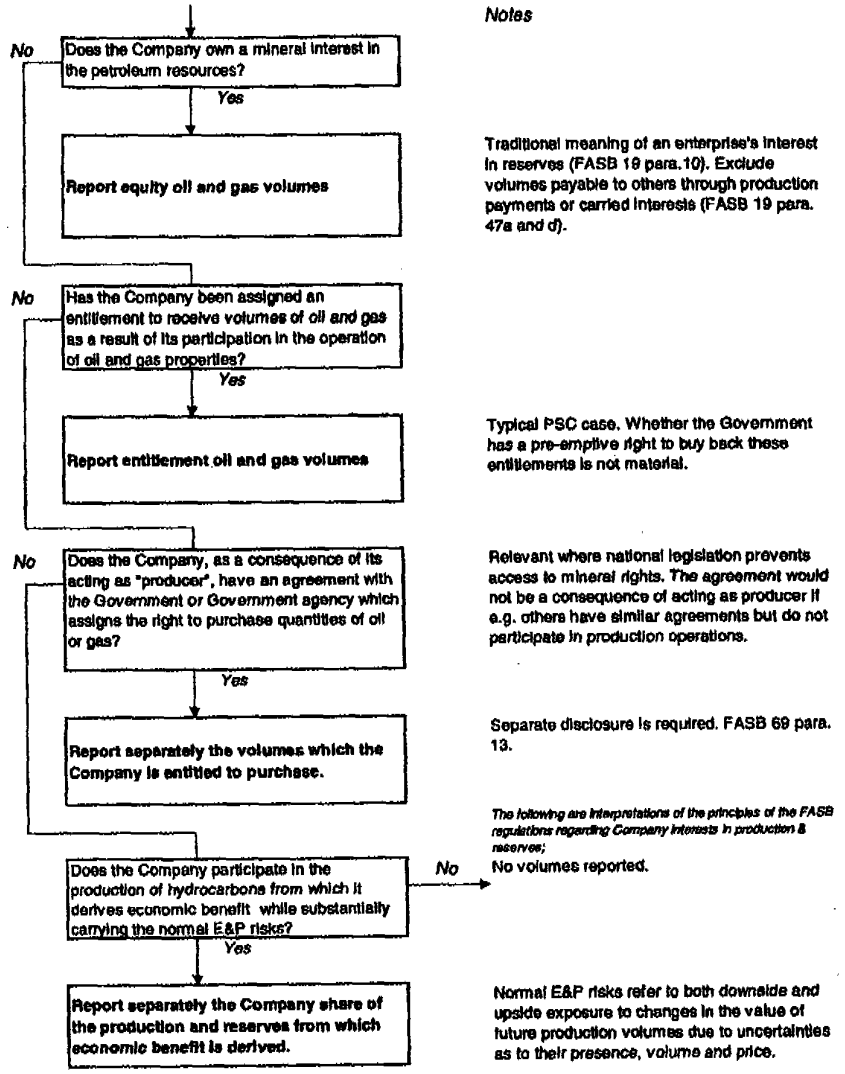


Figure 5: Types of External Disclosures in Relation to FASB Regulations

5. RESOURCE VOLUME REPORTING, RESPONSIBILITIES AND AUDITS

5.1 Shareholder Requirements

EP Planning will communicate a timetable and the details about submission requirements to OUs and NVOs each year for both internal and external reporting.

Volumes will be reported based on the classification systems described in Sections 3 and 4. Additional information is reported for the calculation of the Standardized Measure required by the US Financial Accounting Standards Board (FASB).

5.2 Methods and Systems

OUs and NVOs are responsible for selecting the methods and systems that are technically most appropriate for quantifying the resource volumes of their assets consistent with these guidelines. The preferred methods and systems may vary depending on the type of resource and with time as the resource matures and technology improves. Best practices will be developed, updated and shared in the Hydrocarbon Resource Volumes Management Common Interest Network (Reference 7). This network will replace the material previously covered in Volume 2 of the 1988 guidelines (Reference 1).

A variety of commonly used Group and 3rd party systems are available to support resource volume assessment. Group systems are tailored to these requirements and methods and will generally provide an inherent level of quality assurance through input constraints, internal calibrations, and other "reality checks". Where more generalised 3rd party systems are used, OU and RBD management should be aware of the greater burden of quality control that will be required.

The Group Reserves Auditor will review decisions on methods and systems during the periodic audits. As far as these methods bear on the estimation of externally reported resource volumes, the Group Reserves Auditor will ensure that recommended methods are acceptable to the external auditors.

In some cases, OUs and NVOs may be unable to follow Group guidelines and/or recommended practice, due to government requirements, hardware constraints or other reasons. It is the responsibility of the OU Reserves Custodian to bring such cases to the attention of the Group Reserves Auditor, to enable him to obtain external auditors' approval of the OUs and NVOs specific methods and systems.

5.3 Responsibilities and Audit Requirements

EP Planning Responsibilities

EP Planning is responsible for compiling of the Group statistics of resource volumes, the analysis thereof and the communication to other functions. EP Planning also maintains the resource volume guidelines.

Reserves Auditor Responsibilities

The Group Reserves Auditor will carry out regular detailed reserves reviews in OUs and NVOs to ensure compliance with SEC requirements. The Terms of Reference of the SEC Audit are included in Appendix 5. The external auditor will verify the data for external reporting.

Operating Unit Responsibilities

Within OUs and NVOs, a Management System should be established (see Reference 6), clearly defining internal reporting requirements, tasks and responsibilities. Technical and Financial functions must co-ordinate and reconcile their figures (particularly production volumes) prior to submission.

All levels in an OU, including Asset managers and the reservoir engineer preparing the individual field reserves estimates, should be aware of the importance of externally reported reserves (proved, proved developed) and their impact on financial indicators.

Asset and OU managers are responsible to ensure that the guidelines are implemented in such a way as to best represent to the shareholders the true value of the asset.

Non-operated Reserves

Where Shell is not the operator, the local Shell EP representative should prepare the reserves submission. In this case the Shell representative has the responsibility of ensuring that resource volume assessments by the operator are aligned with Group guidelines before submission. This may include reclassification of volumes between reserves and SFR categories where the operator's criteria differ from Group criteria. As usual, an audit trail (Note for file) should be available to document the reserves estimate.

If there is no EP representative or if the necessary data are not available locally, then the submission is prepared by SEPI (responsible RBA).

Annual Review of Petroleum Resources

Until 1995, the Annual Review of Petroleum Resources (ARPR) was a constituent document of the annual EP Programme Documentation, providing an inventory of the status of petroleum resources. While OUs and NVOs no longer submit ARPR's to SEPIV/SEPI, the compilation of such an overview report will generally be necessary to satisfy the requirements of OU governance and as such will be a key element of the OU reserves Management System referred to above.

Audit Trail

For all the reported resource volumes an audit trail must be available of the assumptions made and process followed. This will allow any subsequent assessor to modify these estimates based on new information in a reconcilable manner. Thus, evaluation reports must be compiled (preferably on a field basis) giving the basic data, the way it has been interpreted and processed, the development options considered, and the resultant volumes with the assigned probabilities. In addition, a description should be given of the development strategy, including data gathering activities. These reports may be working files (if acceptable to local auditors), but it is recommended to make a duplicate 'for file' in order to ensure that the data are preserved in field reports.

Where subsequent small revisions are made, an update note must be compiled. Multiple changes may be combined in one overall update of the resource volumes if they all belong to the same change category. After several years of small changes or following a development study, a new evaluation report must be issued. When a proposed change has a significant impact on the Company's total reserves or financials, SEPIV/SEPI should be advised at the earliest opportunity.

REFERENCES

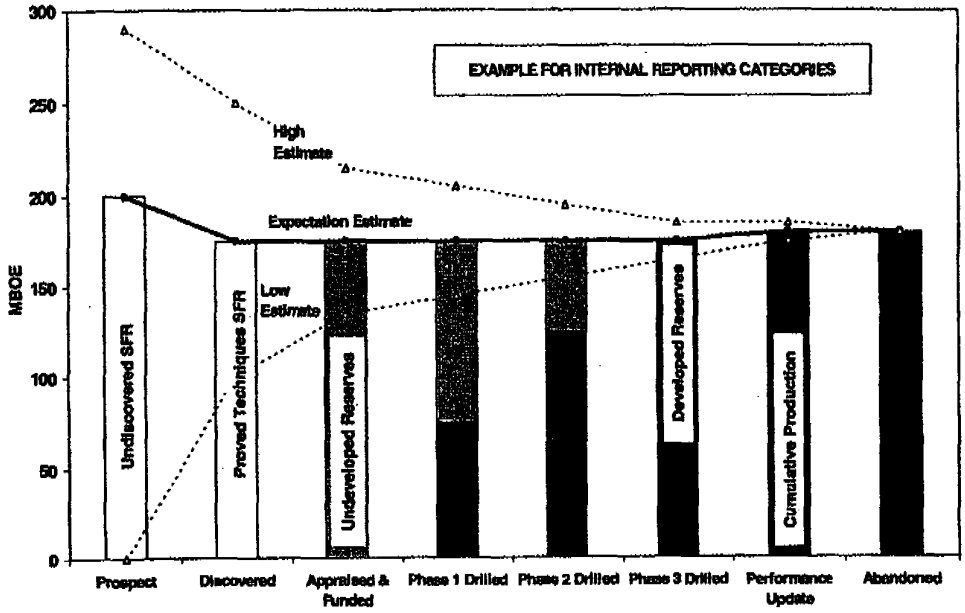
1. EP 88-1140 Part 1, Classification, definitions and reporting requirements,
1a. EP 88-1145 Part 2, Methods and procedures for resource volume estimation, SIPM, April 1988
2. EP93-0075 Petroleum Resource Volume Guidelines, May 1993
3. Revision of Report EP93-0075, 12 August 1994
4. Revision of Report EP93-0075, 10 November 1995
5. Revision of Report SIEP97-1100, September 1997
5a. Revision of Report SIEP98-1100 & 1101, September 1998
6. EP92-0945 Business Process Management Guideline, SIPM, EPO/72, June 1992
7. Hydrocarbon Resource Volume Common Interest Network, http://sww1.epglobal.shell.com/value/index.htm
8. Petroleum Reserves Definitions, Society of Petroleum Engineers and World Petroleum Congresses, http://www.spe.org/technology2/reserves.html
9. Project Evaluation and Screening Criteria, SIEP 99-2030, June 1999
10. Handbook of SEC Accounting and Disclosure
11. Financial Accounting Standards Board (FASB), e.g. Statements 19, 25 and 69.

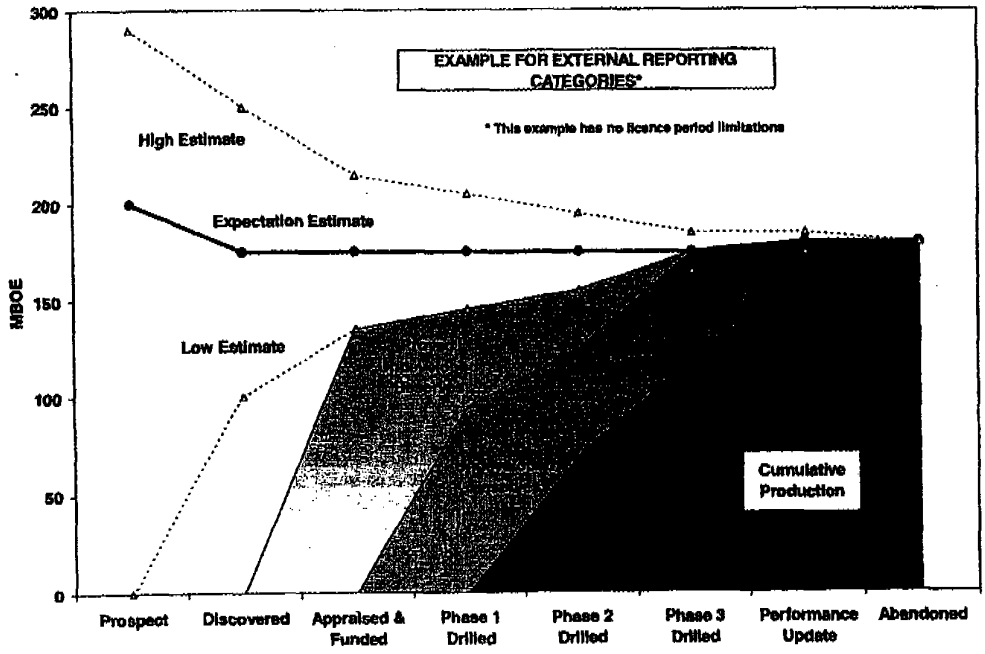
INDEX

APPENDIX 1: RESOURCE CATEGORY (QUICK REFERENCE)

External Reporting	Internal Reporting			
		Proved Reserves	• Portion of reserves, as defined for internal reporting, that are reasonably certain • Restricted by licence periods, government constraints and market limitations • External financing, when used, must be expected to be available • Deterministically estimated volumes should reflect undefined fluid contacts and untested recovery mechanisms	
			Proved Developed Reserves	• Proved reserves producible through existing completions and installed facilities using existing operation methods • Outstanding project activities considered completed if remaining cost <10% of total
			Proved Undeveloped Reserves	• Proved reserves which require capital investment (wells and/or facilities)
		Reserves	• Project is "technically and commercially mature" Note: Formal project approval or economic viability is not required • Market is reasonably expected to be available • Includes only production with positive cash flow • Not restricted by licence period • Group share reported	
			Developed Reserves	• Reserves producible through existing completions and installed facilities using existing operation methods • Outstanding project activities considered completed if remaining cost <10% of total
			Undeveloped Reserves	• Reserves which require capital investment (wells and/or facilities)
		Scope for Recovery	• Project is not technically and/or commercially mature • Not restricted by licence period • Group share reported	
			Commercial SFR by Proved Techniques	• Discovered • Commercially viable • Techniques have been proved to be feasible in this resource • A sound technical project proposal is not possible yet due to large range of technical uncertainty • Market not currently available
			Commercial SFR by Unproved Techniques	• Discovered • Commercially viable • Recoverable by techniques that have been successful elsewhere, but cannot yet be demonstrated to be feasible in this field • Laboratory work or trials elsewhere have a reasonable chance of demonstrating feasibility in this field • Discounted for the risk that the considered technique will not prove to be feasible
			Non-Commercial SFR	• Discovered • Not commercially viable even if technically successful • Commercially viable with a change of commercial circumstances • Unit Technical cost below an annually advised ceiling • Remaining tail production if it is significant
			Undiscovered Commercial SFR	• Recovery from undrilled prospects • Commercially viable exploration and development • Techniques have been successful elsewhere under similar conditions • Discounted for the risk that commercial volumes are not present

APPENDIX 2: RESOURCE MIGRATION DURING FIELD LIFE





APPENDIX 3: SEC PROVED RESERVES DEFINITIONS

(Transcribed from the Handbook of SEC Accounting and Disclosure 1998, pages F3-63 to F3-64)

Proved Reserves

Proved reserves are the estimated quantities of crude oil, natural gas, and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions, i.e. prices and costs as of the date the estimate is made. Prices include consideration of changes in existing prices provided only by contractual arrangements, but not on escalations based upon future conditions.

A. Reservoirs are considered proved if economic productibility is supported by either actual production or conclusive formation test supports. The area of a reservoir considered proved includes:

1. that portion delineated by drilling and defined by gas-oil and/or oil-water contacts, if any, and
2. the immediately adjoining portions not yet drilled, but which can be reasonably judged as economically productive on the basis of available geological and engineering data. In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons controls the lower proved limit of the reservoir.

B. Reserves which can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the "proved" classification when successful testing by a pilot project, or the operation of an installed program in the reservoir, provides support for the engineering analysis on which the project or program was based.

C. Estimates of proved reserves do not include the following:

1. oil that may become available from known reservoirs but is classified separately as "indicated additional reserves";
2. crude oil, natural gas, and natural gas liquids, the recovery of which is subject to reasonable doubt because of uncertainty as to geology, reservoir characteristics, or economic factors;
3. crude oil, natural gas, and natural gas liquids, that may occur in undrilled prospects; and
4. crude oil, natural gas, and natural gas liquids, that may be recovered from oil shales, coal (excluding certain coalbed methane gas), gilsonite and other such sources.

Proved Developed Reserves

Proved developed reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods. Additional oil and gas expected to be obtained through the application of fluid injection or other improved recovery techniques for supplementing the natural forces and mechanisms of primary recovery should be included as "proved developed reserves" only after testing by a pilot project or after the operation of an installed program has confirmed through production response that increased recovery will be achieved.

Proved Undeveloped Reserves

Proved undeveloped reserves are reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion. Reserves on undrilled acreage shall be limited to those drilling units offsetting productive units that are reasonably certain of production when drilled. Proved reserves for other undrilled units can be claimed only where it can be demonstrated with certainty that there is continuity of production from the existing productive formation. Under no circumstances should estimates for proved undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery techniques is contemplated, unless such techniques have been proved effective by actual tests in the area and in the same reservoir.

APPENDIX 4: SHELL INTERPRETATION OF SEC RESERVE DEFINITIONS

SEC Definition	Shell Interpretation for External Reporting
Reasonable certainty; Proved area includes portion delineated by drilling and defined by gas-oil and/or oil-water contacts, if any, and the immediately adjoining portions not yet drilled...In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons controls the lower proved limit of the reservoir.	If probabilistic methods are used, reserves are reasonably certain when there is an 85% probability that the quantities actually recovered will equal or exceed the estimate. This is the P85 value of the cumulative probability curve. If scenario deterministic methods are used, the term reasonable certainty is intended to express a high degree of confidence that the quantities will be recovered. This is the low side estimate. When the estimate assumes significant volumes of hydrocarbons outside the defined fluid contacts, or when the recovery mechanism is untested in the field or analogue fields, a lower estimate should be used that reflects this uncertainty. Drilling and completing a well essentially proves the hydrocarbons that it develops and therefore proved developed reserves are based on the expectation estimate of developed reserves adjusted to take into account of undefined fluids contacts and untested recovery mechanisms.
Fixed RT prices at level prevailing at date of estimate	Prices fixed by SIEP ca. 6 months prior to estimate date, but amended if there is a subsequent significant change.
Fixed RT costs at level prevailing at date of estimate.	Costs fixed by OUs and NVOs at date of estimate. Flat MOD costs must be supported by technology plans to show that implied cost reductions are viable.
Economic productibility	Technically and commercially mature (i.e. positive discounted real terms cash flow for sufficient range of scenarios).
Productibility supported by either actual production or conclusive formation test supports	Productibility should normally be demonstrated by a conclusive test, but may be based on log or core evaluation in an area where many similar reservoirs have been conclusively tested.
Improved recovery processes included only after successful testing by a pilot project or the operation of an installed program	Reserves from improved recovery processes are normally included following an in-situ test; by analogy with the same process being used elsewhere under similar conditions, or occasionally as a result of lab tests or simulation studies.
No gas qualifier	Include only gas contracted or reasonably expected to be sold.
Developed reserves are from existing wells (including minor cost recompletions), existing facilities and operating methods	Existing wells, installed facilities and existing operating methods. Outstanding project activities can be considered existing or installed if outstanding costs are minor and approved. This includes volumes behind pipe if future costs are minor.

APPENDIX 5: SEC AUDIT - TERMS OF REFERENCE

The purpose of the SEC Reserves Audit is to verify that appropriate processes are in place in the OU to ensure that the proved and proved developed reserves estimates for external (SEC) reporting are prepared in accordance with the latest Group prescribed guidelines (SIEP 99-1100/1101) and the FASB Statement of Financial Accounting Standards no.69 (SFAS-69).

The Audit will be carried out by the Group Reserves Auditor. His specific tasks during the audit shall be:

1. To verify the technical maturity of the reported proved and proved developed reserves estimates by assessing the quality of the engineering data and study work supporting the estimates and by verifying that undeveloped reserves are based on identifiable projects that can be considered technically mature.
2. To verify the commercial maturity of the reported reserves volumes by assessing the robustness of project economics and by establishing that these volumes can reasonably be expected to be sold in present or future markets.
3. To verify the 'reasonable certainty' of the reserves estimates by assessing the validity of uncertainty ranges used for their constituent parameters, by verifying that estimates are realistic in comparison with expectation estimates, by verifying that appropriate methods are used for mature fields and by establishing that appropriate methods of reserves addition (probabilistic / arithmetic) have been applied.
4. To verify that the Group share of proved and proved developed volumes has been calculated properly and that these volumes are producible within prevailing licence periods.
5. To verify that reported volumes are up-to-date and consistent with previous estimates, that changes are reported in the appropriate categories and that appropriate audit trails are in place for the study work supporting the reported reserves estimates
6. To verify that reported reserves are net sales volumes and that the reported annual production (sales) volumes are consistent with those reported in submissions to Group Finance.

In case of deviations from the Group and FASB guidelines, the auditor shall establish whether and to what extent resulting estimates are likely to differ significantly from those that might be expected from the application of the standard guidelines.

The audit will be carried out by reviewing the reserves estimation and submission process through interviews of OU staff and by taking at random a number of fields for detailed analysis.

The audit will in principle be carried out on OU premises and will be based on documentation available in the OU. Assistance of OU staff may be called upon.

An audit report will be submitted to the Managing Director of the OU, to the EP CEO and EP RBA, to the OU's Hydrocarbon Resource Manager and to KPMG the external auditors. It will be prepared and discussed in draft form on site, after which a final report will be prepared in The Hague, once formal OU comments are received. The report will contain an overall judgement (Good, Satisfactory, or Unsatisfactory), with itemised conclusions and recommendations.

APPENDIX 6: TERMINOLOGY

A) Petroleum Resources Terminology

Reservoir A reservoir is a discovered petroleum resource where internal pressure communication is known to exist between all identified geological sub-units.

In case of doubt, reservoirs are restricted to fault blocks / sedimentary units until production performance proves communication to exist across faults/ barriers. PVT properties can vary within a reservoir.

Field A field is the collection of all petroleum resources within a closed areal boundary that belong to the same confining geological structure, and where the presence of petroleum has been demonstrated in at least one reservoir by a successful exploration well.

Field boundaries must be defined upon discovery and should encompass the unpenetrated petroleum resources in adjacent fault blocks and stratigraphic traps, if they are considered to be part of the same overall confining structure. Field boundaries may be re-defined on the basis of new geological information.

Potential Accumulations Potential petroleum resources beyond existing field boundaries, where the presence of petroleum has not yet been demonstrated, are collectively called potential accumulations.

Producibility Should normally be supported by a conclusive test in a drilled or immediately adjoining reservoir, but may be based on log or core evaluation in an area where many similar reservoirs have been conclusively tested.

Production Facilities The production facilities consist of all hardware installed to recover petroleum from the sub-surface resources and to deliver a quality controlled end-product for sale. These comprise the production and injection wells and the surface facilities for treatment, conversion, compression/ pumping, transport and delivery.

Surface Facilities That part of the production facilities accessible at surface, connecting the wellheads ultimately to the delivery points.

Existing Development The collection of all completed projects or sub-projects is referred to as the existing development.

Field quantities Field quantities (also called "Wellhead" quantities) are those quantities routinely measured at surface for individual well strings and expressed in terms of the stabilised products oil, condensate and (wet) gas or in terms of the type of injected fluids. These quantities may subsequently be reconciled with fiscalised sales and other product outlets, see below.

Sales quantities The quantities sold after fiscal metering and delivered at the locations where the upstream company ceases to have an interest in the end-products. These can be expressed in terms of the general end-products oil, (dry) gas and natural gas liquids (NGL) or in terms of the actual product.

Field products and the subsequent sales products may be different and will be affected by own use and losses. The properties and volumes of end-products may be influenced by mixing and the petroleum type itself may be altered during surface processing. Since surface processing conditions may change during a project life, sales products may vary in specification and in relation to field products. To avoid ambiguity and double counting, a clear distinction must be made between recoveries in the field and the quantities estimated to be available for sale.

For general sales products, oil, gas and NGLs, only the quantities sold by the upstream E&P company can contribute to Group reserves. Condensates mixed with crude oil in the same stream and sold as such are reported under oil. Separator condensate from gas wells and light hydrocarbon liquid products, derived from surface processing, if collected in a separate stream and sold as such are reported under NGL. Bitumen may be reported under oil in summary reports (with an appropriate footnote). In line with SEC requirements, sales volumes for gas should be those committed or commitable to a gas contract. Committed Gas

is covered by a gas contract. Commitable gas reasonably expected to be assigned to a contract in the future.

It is necessary to maintain a more detailed internal administration of the actually sold products by stream in two cases: 1) If the upstream E&P company has separate contracts for delivery of special converted sales products such as LNG, methanol, ethane, LPG, C5+, or 2) if there are special sales products like helium, sulphur or generated electricity.

Reconciliation A monthly reconciliation is made between the fiscalised sales quantities and the quantities produced in the field. This is reported in the Monthly Report of Producing Wells (MRPW). The reconciliation process corrects for own use, flaring, losses and product conversion, and provides the end-product yield.

For reserves estimating purposes an average future yield factor is to be estimated (e.g. LPG/ wet gas yield, dry gas/ wet gas yield).

Ultimate Recovery The ultimate recovery (UR) of a petroleum type is the sum of cumulative production and the estimated volume of reserves.

B) Probabilistic Terminology

Probability Distribution Function The probability distribution function of a stochastic variable indicates the probability that the actual variable value lies within a narrow interval around a particular value of the possible range, divided by the width of that interval.

P85 The value that has a 85% probability that it will be exceeded.

P15 The value that has a 15% probability that it will be exceeded.

Mean The statistical mean of a stochastic variable is the weighted average over the entire probability range.

Mean Success Volume (MSV) The probability weighted average of all realisations that equal or exceed the minimum reserves required for a commercial development of the resource.

Probability of Success (POS) The probability that the minimum commercial volume will be exceeded and which therefore indicates the likelihood of any future development. The product of MSV and POS is the recovery expectation.

C) Commercial Terminology

Discount Rate A rate at which future real terms costs or cash-flow are discounted over time to calculate their present value.

Net Present Value (NPV) The net present value of a project is the sum of the discounted annual cash flow, expressed in real terms money, over the period from the first project expenditure to abandonment. The net present value is expressed in million US$ at the relevant discount rate.

Expected Monetary Value (EMV) The expected monetary value is a probabilistic balance of investments and revenues, expected from a set of conditional operational activities, comprising data acquisition and one or more development projects, which are arranged in an ordered sequence with probabilities assigned to each action (decision tree).

The EMV is the summation of the NPV's of projects, reduced by the costs of data acquisition activities, all expressed in discounted real term money and multiplied by their assigned probabilities. EMV is expressed in million US$ at the relevant discount rate.

Projects with a negative NPV for certain resource model realisations should be excluded from the EMV calculation, if the assumption is valid that data gathering will prevent such projects being implemented.

Unit Technical Cost (UTC) The unit technical cost of a development project is defined as the sum of capital plus operating costs, expressed in real terms money, divided by the total production over the period from start-up to abandonment. In addition, both the cost and the production must be discounted. The reference date for the discounting should be the same for denominator and numerator (e.g. the first year of expenditure) and should be stated. The unit technical costs is expressed in US$/bbl (oil equivalent) at the relevant discount rate.

D) Exploration versus Development Wells

The classification of a well as either an exploration well or as a development well is determined (in line with SEC rules) based on the proved area as follows:

Proved Area The **proved area** is the part of a property to which proved reserves have been specifically attributed.

Exploration Well An **exploration well** is a well that is not a development well, a service well, or a stratigraphic test well.

Development Well A **development well** is a well drilled within the proved area of an oil or gas reservoir to a depth of a stratigraphic horizon known to be productive.

Service Well A **service well** is basically any well which is either an injection well, a disposal well or a water supply well.

Appraisal Well An **appraisal well, or stratigraphic test well** is a well drilled for geological information (not to test a prospect), either 'development-type' drilled in a proved area or 'exploratory-type' if not drilled in a proved area.

Unknown

From: Jager, Robert R.J.
Sent: 24 December 1999 10:53
To: Graham, Sheila S. /SDA /FP/44
Cc: Blaauw, Robert R.; Jager, Robert R.J.
Subject: ARPR update

Sheila, further to our discussion last week regarding the ARPR update and in particular the change you were suggesting in respect to Gorgon reserves (from proven to SFR-uncommercial - which at least seemed logical to me) I am keen to check with the relevant bodies here what the possible fall out from such a change could/would be (before it happens) Accordingly I would appreciate you providing some early information on the "size" (both total and relative) this change.

Regards

Rob J. Jager
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EXHIBIT
Graham 2
1/11/07
GAIL F. SCHORR, C.S.R., C.R.R.

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V00100166

FOIA Confidential
Treatment Requested

A. 5. a

FAXED

Shell Development (Australia) Proprietary Limited

Facsimile message

Date:	8th May 2000	Queries and replies:	
From:	Mark Chittleborough DCG General Manager – Greater Gorgon	Tel: Fax:	+61 8 9213 4611 +61 8 9213 4691

To:	Location	Fax number
Paul Oen	Texaco	08-9366 8800
Neil Theobald	ExxonMobil	08-9322 2400
Alan Dunlop	Chevron	08-9216 4166

Number of pages: 3 (incl cover sheet)
Our ref: DCC087 **Reg No:**

Subject: Gorgon LNG Project

Please find a Kogas letter attached with regard to the Gorgon LNG Project.

Kind Regards

Mark Chittleborough
GENERAL MANAGER – GREATER GORGON

Shell Development (Australia) Pty. Ltd. ACN 009 663 576
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EXHIBIT Graham 3 11/1/07 GAIL F. SCHORR, C.S.R., C.R.R.

A. S. a.

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August 21, 1998

Mr. R. H. Matzke
President
Chevron Overseas Petroleum Inc.

Mr. Robert A. Solberg
President International Production
Texaco Inc.

Dr. J. Roland Williams
Chairman and Chief Executive Officer
Shell Australia Ltd.

Mr. R. Billings
President, Global Gas and Power
Mobil Oil Corp.

RE : Gorgon LNG Project

Dear Gentlemen:

We would like to thank you for your consistent interest to KOGAS which you have shown to us, and also would like to have your understanding for not being responded as your proposal letters to supply LNG to KOGAS, which is dated respectively on March 8, 1998 and April 14, 1998.

Your proposal looked very attractive to KOGAS because it includes principal requirements of KOGAS, such as equity participation, shipping and construction involvement in the project, which are generally required as prerequisite conditions by KOGAS to open a discussion with suppliers. We also know that the Gorgon Project, which is located in a politically stable country, has lots of advantages to KOGAS in many ways. So we have thought the Gorgon Project as one of our attractive and promising sources for KOGAS' diversification policy.

As you are well aware, Korean economy suffers from the financial difficulties. It may reduce LNG demand for a short-term basis. Nevertheless, we are confident that Korean economy will recover in near future. Therefore, we will continue to study your project as one of promising sources well meeting our requirement of the diversification policy for the long-term importing energy sources in a long-term point of view.

We sincerely hope a continuous discussion and a cooperative relationship with your sides for a prosperous gas business.

We would like to extend our best wishes for the success of your business.

Sincerely yours,

Kang, Yong Soo

Kang, Yong-Soo
Vice President
International Projects

From: Aalbers, Remco RD SEPIV-EPB-P
Sent: Wednesday, January 5, 2000 4:12 AM
To: Graham, Sheila S SDA-FP/44
Cc: Jespers, Bea BL SEPIV-EPB-P
Subject: RE: Group Resource Submission January 2000

Sheila,

What's exactly in the last few days? In principle booking is as per 31.12.1999 so if it's before that date the answer would be yes if it's after this date the answer is no. What type of interests have they acquired - exploration acreage only or also proved reserves??

As to your question on Gorgon we indeed do not have that data easily available - when was Gorgon discovered I had a look and it's not in my list (1986-1998). Maybe you could check with Helge Hammer?

Regards,

Remco

> ---Original Message---
> **From:** Graham, Sheila SDA-FP/44
> **Sent:** Wednesday, 05 January , 2000 9:46 AM
> **To:** Aalbers, Remco SEPIV-EPB-P
> **Subject:** RE: Group Resource Submission January 2000
>
> Remco,
> Beste wensen!!
>
> Evidently in the last few days Woodside have acquired interest in the Gulf of mexico. Getting info out of them will be a nightmare at this stage-do I need to submit this data or not?
>
> Sheila
>
> > ---Original Message---
> > **From:** Aalbers, Remco RD SEPIV-EPB-P
> > **Sent:** Wednesday, January 05, 2000 4:06 PM
> > **To:** Graham, Sheila S SDA-FP/44
> > **Subject:** RE: Group Resource Submission January 2000
> >
> > Sheila,
> >
> > Happy New Year and thnaks for the draft submissions (will have a look at them some time today).
> >
> > As to your question on paper copies - yes I need signed paper copies. Best not to fax them but send them by Mail/Courier - they can arrive some days later.

Regards,

Remco

—Original Message—
From: Graham, Sheila SDA-FP/44
Sent: Thursday, 23 December , 1999 3:31 AM
To: Aalbers, Remco SEPIV-EPB-P
Cc: Hoonhorst, Jeroen SEPIV-EPB-P
Subject: RE: Group Resource Submission January 2000

Remco,
Please find attached SDA's draft submissions for Mauritania, Cambodia and PNG. There is still an error under "Field data" but there is no data for that sheet. I'm still working on the direct and indirect sheets.

I've been looking back at our data and am unable to find when Gorgon was booked as reserves (my data goes back to 95) and the rational for the booking. Is that information available in any central archive?

Do we also have to Fax paper copies of the final submission to the Hague or are the electronic submissions sufficient?

Regards, Sheila

From: Aalbers, Remco RD SEPIV-EPB-P
Sent: Friday, January 7, 2000 2:50 AM
To: Graham, Sheila S SDA-FP/44
Cc: Jespers, Bea BL SEPIV-EPB-P
Subject: FW: Reserves report SDA
Attach: Untitled1.XLS; Untitled2.XLS

Sheila,

Proved Reserves - externally reported - were first booked in 1997 (for 1.1.98) - see attached files from Helge. I am not sure (yet) when expectation reserves were first booked! There should be some more info in our archieves - Bea Jespers is back on Monday 10/1/00 from leave and I will ask her to see if see can find the old field reserves files.

Regards,

Remco

-----Original Message-----
From: Hammer, Helge A.
Sent: Tuesday, 27 January , 1998 11:54 PM
To: AALBERS, R.D.; JESPERS, B.L.; DELAMAR, A.J.; SWINKELS, W.J.A.
Cc: Strobl, Wolfgang J.; Tait, Julie A.
Subject: Reserves report SDA

Remco/Ad de la Mar,

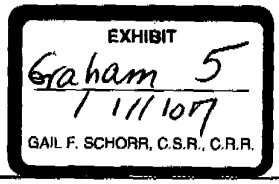
Yesterday afternoon and evening, we were not able to get e-mails sent off to Holland, but the problem now seems to have been fixed. Please let me know if I still need to re-send any of the data. The fax with the signed copies will be sent again this morning from a better quality fax machine.

I have attached two excel spreadsheets which should give you the backup info which you request:

In Reserves_98.xls, the 1.1.97 and 1.1.98 reserves (P,E and H values for developed and undeveloped) per field and the changes are tabulated. (Note that for the TVI fields minor increases of UR have been included for Cowle, Saladin and Yammaderry. The other fields also change, but this is because I have brought the cumulative production as per 1.1.98 in line with figures provided by the operator. The minor corrections of 1.1.97 cumulative production have been included as technical revisions.)

SFR_98.xls gives tabulations of all the SFR numbers and the changes since 1.1. 97.

If you have questions, send me an e-mail, or phone me (The time difference is 10hrs.)



Regards Helge

tel. work: 3 - 9666 5489
tel. mobile: 4 - 1834 9156
tel. home: 3 - 9859 5512

Developed and Undeveloped Reserves as at 1-1-98

Oil Resource Volumes (MMbls) - 100%

Field	Shell Share		Operator	Cumulative Production	Developed Reserves P2			Undeveloped Reserves P3/E3			Initial In Place P8
	Direct	Indirect			P	E	H	P	E	H	Expectation
Barrow Island	28.57%	-	WAPET	275.87	42.7	69.9	69.9	10.0	23.8	32.7	1337.0
Cowle	35.71%	-	WAPET	2.49	0.2	0.2	1.0	0.0	0.0	0.0	10.3
Crest	35.71%	-	WAPET	1.63	0.0	0.0	0.1	0.0	0.0	0.0	9.3
Dongara				1.42							
Roller	35.71%	-	WAPET	30.02	5.4	6.2	8.2	0.0	0.0	0.0	55.9
Saladin	35.71%	-	WAPET	73.69	0.7	1.3	2.7	0.0	0.0	0.0	123.0
Saladin MGS	35.71%	-	WAPET	5.66	5.3	8.8	11.6	0.0	0.0	0.0	42.1
Skate	35.71%	-	WAPET	1.36	0.6	2.3	4.7	0.0	0.0	0.0	18.5
Yammaderry	35.71%	-	WAPET	5.24	0.2	0.5	1.0	0.0	0.0	0.0	12.6
Subtotal			**WAPET**	397.38	55.00	89.14	99.07	10.0	23.8	32.7	1608.8
Cossack	16.67%	5.71%	WOP	21.57	18.4	35.4	55.4	0.0	0.0	0.0	119.0
Corallina	25.00%	17.13%	WOP	0.00	0.0	0.0	0.0	33.0	56.1	78.0	91.0
Hermes	16.67%	5.71%	WOP	0.57	0.2	0.4	0.6	12.2	26.0	42.8	50.9
Lambert	16.67%	5.71%	WOP	0.00	0.0	0.0	0.0	7.0	23.0	37.0	48.0
Laminaria	25.00%	17.13%	WOP	0.00	0.0	0.0	0.0	78.0	118.0	162.0	323.0
Wanaea	16.67%	5.71%	WOP	27.18	106.5	138.8	177.5	8.3	16.0	27.3	385.0
Subtotal			**WOP**	49.32	125.18	174.68	233.58	138.5	239.1	347.1	1016.9
Total				446.71	180.17	263.82	332.65	148.5	262.9	379.8	2625.7

Dry Gas (Non-Associated) Resource Volumes (Tcf) - 100%

[@ 1 atm, 0°C & 9500 kcal/Nm³]

Field	Shell Share		Operator	Cumulative Production	Developed Reserves P2			Undeveloped Reserves P3/E3			Initial In Place P8
	Direct	Indirect			P	E	H	P	E	H	Expectation
Dongara		-	WAPET								
Gorgon	28.57%	-	WAPET	0.00	0.00	0.00	0.00	9.83	11.79	13.86	20.80
Subtotal			WAPET	0.00	0.00	0.00	0.00	9.8	11.79	13.86	20.8
Angel	14.27%	9.00%	WOP	0.00				1.29	1.54	1.78	2.69
Dixon	14.27%	9.00%	WOP	0.00				0.13	0.16	0.19	0.25
Echo/Yodel	14.27%	9.00%	WOP	0.00				0.48	0.58	0.68	1.19
Goodwyn	14.27%	9.00%	WOP	0.30	2.65	2.77	2.98	1.17	1.38	1.51	7.55
Keast/Dockrell	14.27%	9.00%	WOP	0.00				0.64	0.75	0.86	1.44
Lambert Deep	14.27%	9.00%	WOP	0.00				0.23	0.26	0.29	0.40
North Rankin	14.27%	9.00%	WOP	3.70	6.95	7.40	7.83	0.00	0.00	0.00	12.38
Perseus	14.27%	9.00%	WOP	0.38	0.05	0.23	0.50	7.68	8.78	9.78	10.84
Rankin/Sculptor	14.27%	9.00%	WOP	0.00				0.70	0.85	1.00	1.51

Searipple	14.27%	9.00%	WOP	0.00		9.65	10.40	11.31	0.03	0.04	0.07	0.11			
Tidepole	14.27%	9.00%	WOP	0.00					0.34	0.40	0.47	0.67			
Wilcox	14.27%	9.00%	WOP	0.00					0.27	0.32	0.37	0.60			
			WOP	4.38					12.95	15.05	17.00	39.64			

NGL Resource Volumes (MMbls) - 100%

Field	Shell Share		Operator	Cumulative	Developed Reserves P2			Undeveloped Reserves P3/E3			Initial In Place P8
	Direct	Indirect		Production	P	E	H	P	E	H	Expectation
Barrow Island	28.57%	-	WAPET	1.35	0.4	0.6	0.8	0.0	0.0	0.0	3.9
Gorgon	28.57%	-	WAPET	0.00	0.0	0.0	0.0	109.0	137.0	167.0	201.0
Subtotal			WAPET	1.35	0.42	0.61	0.77	109.0	137.0	167.0	204.9
Angel	14.75%	8.34%	WOP					49.0	69.5	88.6	143.7
Cossack	14.75%	8.34%	WOP	0.21	0.2	0.3	0.5	0.0	0.0	0.0	1.2
Dixon	14.75%	8.34%	WOP					5.7	8.2	11.1	14.1
Echo/Yodel	14.75%	8.34%	WOP					43.6	65.9	90.2	157.7
Goodwyn	14.75%	8.34%	WOP	54.00	174.8	213.8	250.8	0.0	0.0	0.0	524.9
Hermes	14.75%	8.34%	WOP					0.2	0.3	0.5	0.6
Keast/Dockrell	14.75%	8.34%	WOP					17.1	23.9	31.5	75.0
Lambert	14.75%	8.34%	WOP					0.1	0.3	0.5	0.6
Lambert Deep	14.75%	8.34%	WOP					3.4	5.6	8.0	12.0
North Rankin	14.75%	8.34%	WOP	110.61	75.0	100.2	125.9	0.0	0.0	0.0	337.2
Perseus	14.75%	8.34%	WOP	13.26	15.0	32.0	49.0	137.9	181.5	226.8	366.8
Rankin/Sculptor	14.75%	8.34%	WOP					15.6	29.8	44.1	68.3
Searipple	14.75%	8.34%	WOP					1.8	5.4	10.5	23.7
Tidepole	14.75%	8.34%	WOP					9.0	14.0	20.1	31.2
Wanaea	14.75%	8.34%	WOP	0.91	3.6	4.7	6.0	0.3	0.5	0.9	12.9
Wilcox	14.75%	8.34%	WOP					15.0	20.4	26.2	45.0
Subtotal			WOP	179.00	268.5	351.0	432.2	298.6	425.3	559.0	1814.9

Dry Gas (Associated) Resource Volumes (Bcf) - 100%

Field	Shell Share		Operator	Cumulative	Developed Reserves P2			Undeveloped Reserves P3/E3			Initial In Place P8
	Direct	Indirect		Production	P	E	H	P	E	H	Expectation
Cowie	35.71%	-	WAPET	1.4	0.0	0.2	0.6	0.0	0.0	0.0	5.3
Crest	35.71%	-	WAPET	1.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Roller	35.71%	-	WAPET	11.7	4.8	5.6	6.1	0.0	0.0	0.0	16.1
Saladin	35.71%	-	WAPET	33.0	0.5	0.8	1.2	0.0	0.0	0.0	54.2
Saladin MGS	35.71%	-	WAPET	5.3	1.4	3.3	7.0	0.0	0.0	0.0	18.3
Skate	35.71%	-	WAPET	0.9	2.4	5.8	11.6	0.0	0.0	0.0	16.6
Yammaderry	35.71%	-	WAPET	2.4	0.0	1.1	3.2	0.0	0.0	0.0	11.2
Subtotal			WAPET	55.64	9.18	16.68	29.72	0.0	0.0	0.0	126.4
Wanaea	16.67%	5.71%	WOP	32.6	98.4	132.7	175.5	0.0	0.0	0.0	462.0
Cossack	16.67%	5.71%	WOP	3.3	2.0	3.8	6.0	0.0	0.0	0.0	18.0
Hermes	16.67%	5.71%	WOP	0.3	0.0	0.0	0.0	3.9	8.4	13.7	22.6

Lambert													
	Subtotal	16.67%	5.71%	WOP	0.0	0.0	0.0	0.0	0.0	2.2	7.3	11.7	21.3
				WOP	36.1	100.4	136.5	181.5	6.1	15.6	25.4	523.8

Filename: C:\Documents and Settings\Administrator\Desktop\reserves e_mail 10th Feb 2004\ARPR Sheila hand-over\[0108_a01 (Untitled1.XLS]8:32 AM

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Page 1

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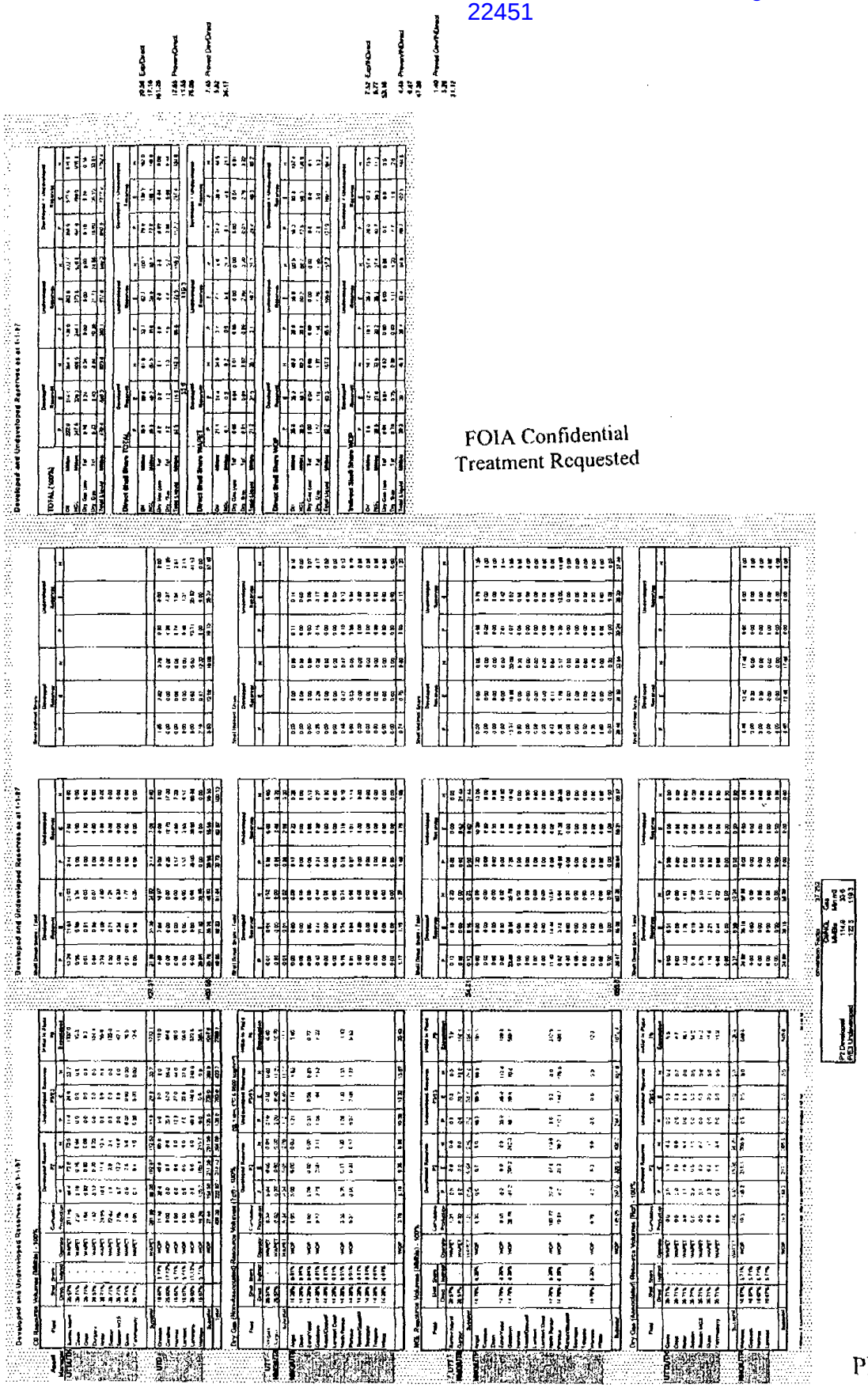

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ANNUAL REVIEW OF PETROLEUM RESOURCES AS AT 1.1.1998

FOR SHELL DEVELOPMENT AUSTRALIA

SDA's share of oil reserves declined from 129 to 117 million bbl during 1997. Gas and NGL reserves increased significantly from 5.7 to 7.0 tcf and from 108 to 154 million bbl, respectively.

The main changes since the 1.1.97 ARPR are:

OIL

The oil reserves in the Laminaria field has been revised downwards by 28.0 million bbl (100% share) as a result of new 3D seismic and reservoir modelling work.

In Corallina, the reserves have increased by 13.1 million bbl also as a result of a 3D seismic interpretation.

The Cornea discovery has been classified as SFR unproved techniques, since a valid production test not yet has been achieved. The risked SFR has been estimated at 94 million bbl.

A possible future reserves increase of 28 million bbl in the Barrow Island field has been included in SFR proved techniques, pending internal SDA review. The scope estimate is based on production performance extrapolation.

GAS / NGL

The gas in place estimate for Goodwyn has been reassessed leading to a reduction in the gas reserves of 0.46 tcf.

For North Rankin and Perseus, an increase of 3.04 tcf has been estimated as a consequence of reservoir modelling and simulation work.

Nine smaller gas fields on the North West Shelf (Dixon, Keast, Dockrell, Lambert Deep, Rankin, Sculptor, Searipple, Tidepole and Wilcox) have been transferred from Commercial SFR to reserves. The fields form part of the NWS development plan, and contain 2.78 tcf of gas. Several of the fields are rich in condensate ~~rich gas~~ leading to a significant increase in NGL reserves of 107 million bbl

A technical revision of the Gorgon field (by RTS/SDA) has resulted in an increase of the gas reserves of 2.39 tcf. Based on new PVT analysis, a higher condensate gas ratio has been estimated, resulting in condensate reserves increasing by 103 million bbl.

The dependencies between the NWS gas fields have been assessed and a probabilistic addition has been carried out. This has been done on the basis that the NWS fields are

P-1288/44

EXHIBIT
Graham 6
1/11/07
GAIL F. SCHORR, C.S.R., C.R.R.

developed collectively under one project. 2.30 tcf of additional proven gas reserves result from the probabilistic addition. For the purpose of reserves reporting, this volume has been added back to the individual fields.

Woodside's documentation of reserves sufferers from the following weaknesses:

- The absence of a split in developed and undeveloped categories
- The absense of field specific average heating values needed to normalise volumes for Group reporting

Estimate of End Year Reserves Volumes for Internal Reporting

Input sheet 1997

Country Name : Australia (Direct)

Estimate for Company: Shell Australia

Estimate for year ending: 31 December 1997
Company share of expectation recoverable volumes excluding royalty in kind.

Group interest in company is 100%

	1997 - Input			
	Oil[a] 10^6 m³	NGL 10^6 m³	Gas[b] 10^9 std. m³ (tel quel)	Gas[c] 10^9 Nm³ (39.748 MJ/Nm³)
Expectation of reserves at 1.1.1997(d,e)	20.56	17.18	157.829	161.279
New Fields		2.51	10.964	11.211
Extensions				
Terms & Conditions				
Purchases in place				
Sales in place	0.01		0.411	0.420
Improved recovery		1.39	12.010	12.280
Economic revisions				
Technical revisions	-0.53	4.31	16.539	17.006
Production (sales) during 1997(f)	1.40	0.94	2.169	2.216
Expectation of reserves 31.12.1997	18.62	24.45	194.762	199.140
Entitlement share of exp. reserves at 1.1.1997(g)	18.98	17.18	157.829	161.279
Net changes in expectation	-1.94	7.27	36.93	37.86
Transfer to post licence	0.25			
Entitlement share of exp. reserves. at 31.12.1997(h)	16.79	24.45	194.762	199.140
Associated developed reserves (h)	8.90	8.25	41.100	42.000
Check	OK	OK	OK	OK
Entitlement check	OK	OK	OK	OK
Commited gas 31.12.1997			23.920	24.458
Committable gas reserves at 31.12.1997			170.842	174.682
Discovered IIP at 31.12.1997 (field volumes)	108.60	51.86	321.195	328.420
Cumulative production (sales) at 31.12.1997	20.66	4.26	17.320	17.710

A brief description of the reasons for any significant changes in the above estimates should be given seperately.

(a) If bitumen is included in the oil volumes this must be noted.
(b) Gas volumes "tel quel" at standard conditions (15°C, 101.325 kPa).
(c) Gas volumes converted to 39.748 MJ/Nm³ GHV at normal conditions (0°C, 101.325 kPa).
(d) Under PSC legislations, expectation is company entitlement share of production plus potential entitlement share of production post licence expiry.
(e) Opening value should agree with last year's preliminary submission NOT with last year's final ARPR figures.
(f) Agreed with the quarterly production reported by Finance through the GFI system.
(g) Volumes covered by a right to extend the licence period or a letter of assurance should be included in entitlement share of reserves.
(h) Also used for Standardized Measure calculation.

All figures input for Standardized Measure calculation.

Date: 27/1/98

Signed by Petr. Eng. Mgr:

Original to SIEP - EPS-SE Strategy Development and Economic FAX (+31) 70 377 2460

Exp97aud.xls 27/01/98 8.55