reporter has handed you what's been marked as Bichsel 10 for purposes of identification. It is a four-page document bearing Bates stamp RJW 00780060 and continuing sequentially to RJW 00780063. And it also bears the legend "FOIA confidential treatment requested." I'd ask that you take a look at what's been marked Bichsel 10 and look up when you've had an opportunity to review it. I'd like to ask you some questions, please.

A. Yes, I'm okay.

Q. You see that this is an email, it seems to be from the email

0331

pack of or computer of John Darley. It's an email from Frank Coopman. It was sent on December 2nd, 2003, and the recipients of this email were John Bell, yourself, John Darley, and with a cc to John Pay. The subject is proved reserves. The cover email says "Please find attached our draft note which is now with Walter." Am I correct in assuming that Walter is Walter van de Vijver?

A. I don't know that you're correct when you assume that. I assume it is Walter, yes.

Q. Okay. And it says "No comments as yet. My functional boss is not happy." Do you have an understanding of who Mr. Coopman's functional boss was as of December 2nd, 2003?

A. I presume he meant the chief financial officer.

Q. And who was that?

A. If my recollect -- I do not

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recall who that was at that time.
Q. Okay. Can you give me your best guess as to who that was at this time?
MS. ASHTON: Objection.
MR. LUDWIG: Objection.
Q. Do you know whether that was Judith Boynton?
MS. ASHTON: Objection. If you remember.
A. I cannot remember whether Judy Boynton on December 2003 was chief financial officer or not.
Q. Well let me ask you this. Have you ever had any reason to interact with Ms. Boynton?
A. I met Ms. Boynton once.
Q. And what was the nature of your meeting with Ms. Boynton, do you recall?
A. We were at an investor relations presentation where I gave a presentation, that was on the EP business, where the presentation that

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MATTHIAS BICHSEL

was given by Mr. van de Vijver, by Mr. Darley, and myself, we were the three presenters, and I happened -- Ms. Boynton was there also and I happened to be talking to her after the presentation actually in an airline lounge.
Q. Did your conversation with Ms. Boynton ever revolve around the subject of proved reserves?
A. No.
Q. Did your discussions with Ms. Boynton have anything to do with the recategorization of proved reserves?
A. Not at all.
Q. Okay. I'd like to turn your

attention to the second page of what's been marked as Bichsel 10 for purposes of identification. You'll see in the middle of the page -- well, first, the top of the page -- the top of the second page, it's the document is titled "Script for Walter on the proved

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MATTHIAS BICHSEL

reserves position." Is it your understanding that the Walter referenced in this title is Walter van de Vijver?

A. Yes.

Q. Okay. And if you look at the materiality section, I'd like you to pay specific attention to the first three paragraphs. I'll let you read them to yourselves -- to yourself, and could you please explain to me what your understanding is of these three paragraphs.

A. I read it, could you please repeat the question.

Q. I'd like to know if you have an understanding of what is being discussed in the three paragraphs, the first three paragraphs of the section titled materiality on the bottom of the second page of what's been marked Bichsel 10 for identification. If you need more help in where it is, I'll be happy to help you.

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A. No, I -- yes, I do understand what is meant.

Q. Okay. What is meant by that?

A. We had several discussions at the ExCom in previous -- in 2003 around the exposure issue, as we explored just a few minutes ago. And

what was discussed was -- is the materiality level and what we discussed was that since the reserves bookings every year for every field they tend to fluctuate, they can go up or down, there's a degree of slack in that whole system, and what we said is that within, I recall around 10 percent, that would -- in the -- of the total resource base that would not be considered a material volume. That pertains to this particular issue, that with -- given the application of the -- and the understanding of SEC guidelines against some of these issues on SPDC and PDO, that we would approach or

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perhaps even exceed the materiality threshold that was discussed at ExCom.

Q. And do you recall having discussed this issue at all with your colleagues at ExCom on or about December of 2003?

A. No, I did not discuss that with any of my colleagues at ExCom. That was not a discussion at an ExCom meeting.

Q. Did you have any discussions specifically with Mr. Coopman with respect to the issue of materiality as you've just discussed it?

A. In December or thereabouts of 2003, I was informed by Mr. Coopman that I shall be a member of the reserves committee. And as part of that reserves committee, I was afforded to see this particular note, and we had discussions around the issue of the facts of the materiality, etcetera, etcetera, as they are pertaining to this note.

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Q. You mentioned just a moment ago the reserves committee. What is the reserves committee?
A. The reserves committee was -- okay. Let me go back. As I explained earlier this morning, the reserves committee was -- we did not have a reserves committee prior to December of 2003. I was informed that there shall be a reserves committee for EP and that I shall be a member of this particular thing.
At the time I inquired with Mr. Coopman and I also discussed with Mr. John Darley what is this reserves committee actually all about, what are we going to do, what's the charter of it.
As it turned out, this particular reserves committee fell into disrepair, it didn't -- never really properly constituted itself, and the reserves committee effectively was reformulated in the second quarter of
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MATTHIAS BICHSEL
2004 under a new chairman, Mr. Simon Henry, and a number of other members.
Q. We discussed that this morning, that's correct.
I want to go back to something that you said. You mentioned a few moments ago that you attended a presentation with Ms. -- where you met Ms. Boynton. Do you recall having said that?
A. That's correct.
Q. Okay. Where did that presentation take place?
A. That particular presentation took place in London in March of 2003.
Q. Did anybody accompany you

from ExCom to that presentation?
A. The -- the presentation, there was Mr. Walter van de Vijver who was the head of EP at the time, and Mr. John Darley who represented the technology aspects of the EP business. All three of us gave a presentation. I talked about exploration, I presented a

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new exploration strategy that Shell was embarking on as part of my new role and explained to the investor community what our plans are and -- yes.
MR. ARANOFF: Bichsel 11.
(Bichsel Exhibit 11 for identification, Bates stamped V 00231035 through V 00231085.)
Q. Before we get to the next exhibit, do you have a recollection, Mr. Bichsel, of whether or not the presentation in which Ms. Boynton attended was reprised the next day in New York?
A. Yes, we traveled to New York and we gave a presentation the following day here in New York to the investor community.
Q. Did Ms. Boynton attend that as well?
A. I do not recall. I was talking to Ms. Boynton in London.
Q. And just so that we have a reference in terms of time, that would

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be the London presentation was in March of 2003 and thus the New York presentation would also have been in March of 2003, correct?
A. Yes.
Q. Okay.
A. As far as I recall.

Q. The court reporter has handed you what's been marked as Bichsel 11 for purposes of identification. It's a rather lengthy document, but it bears two different Bates numbers. We'll use the duller Bates number for identification. It's Bates stamped V 00231035 and it continues to V 00231085. I'd ask that you review this document, Mr. Bichsel, look up when you're done, I'd like to ask you some questions, please.

A. Ready to go.

Q. Okay. Mr. Bichsel, I've shown you what's been marked as Bichsel 11 for purposes of identification. This is a cover email from Marian Van

der Laan on behalf of Walter van de Vijver, it's dated September 26th, 2002, and it seems to be sent to the members of ExCom at the time; is that accurate?

A. Partly accurate, yes.

Q. And the subject is a forward of an EP delivery with the importance high. And it says "Please note that these slides are strictly confidential and therefore not meant for further distribution. Regards, Walter." There's a string of email. And there's then what appears to be a series of slides. Do you see that, Mr. Bichsel?

A. I do not have the string of email.

Q. Well it's just two emails. It's the one from Mr. van de Vijver.

A. Oh, okay.

Q. And then another one from Mr. van de Vijver?

A. Yes, I have that.

Q. I apologize, I misspoke. Do

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you recall having participated or seen these slides before?

A. Yes, I have.

Q. When did you see these slides?

A. Apparently in September 2002. I don't recollect the exact date when these slides were shown and produced.

Q. Did you see this in the context with your colleagues from ExCom?

A. This piece of -- these slides, they are the work that the ExCom undertook in -- throughout the year 2002. They partly pertain to what I already alluded to earlier, that in 2003 -- starting from 2003 we introduced a new operating model, a new structure for EP and the business case as well as the outline of the structure, as well as the schedule was effectively discussed and agreed at the ExCom and then that was shared with the

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CMD at the time.

Q. If you look at the second page of the slide -- of the presentation, or the first page of the presentation, the second page of what's been marked as Bichsel 11, you'll see that it says at the top, if you turn the document sideways, it says "The EP dilemma: Caught in the box?" with a question mark.

A. Yes.

Q. Do you have an understanding as to what is meant by the term caught in the box?

A. Absolutely, yes.

Q. What is caught in the box?
A. Shell over the years, Shell EP over the years prior to 2002, effectively went out to the markets and what Shell did was effectively indicate production growth, so made a promise to the market on production growth. It made indications as to the -- the rate of the average capital employed, the

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ROACE at the top, also the unit cost reductions to the market. And we also -- we did not indicate reserves replacement, but it's competitive measures that the investment community of course sees.

What we felt is that you simply cannot deliver on all these measures at the same time. If you want to grow, then you're hurting your return on capital employed. Because what you're doing is during the growth of the development phase, when you're actually sinking money into the business, the return on the capital employed will go down.

At the same time, depending on where we're operating, and we shifted our portfolio to its higher cost areas, for instance, the deepwater, the unit cost reduction was another challenge that needed to be addressed.

And what we found ourselves

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is that in earlier years we talked about the return on capital employed and that was in particular in the mid-nineties. In the second half of the nineties we talked a lot about the unit cost reduction, in particular in

the wake of the oil price collapse in 1998. And then following that particular period, we talked about production growth.

So out there in the market we seemed to have a number of metrics out there that effectively contradicted themselves. And that's what we -- what we actually then named being caught in the box. The box that we constructed ourselves with the sides as you see indicated by these four particular metrics.

Q. If you turn to the next page of this document you see that it references the terms reserve replacement and unit F&D costs. Do you have an understanding of what is meant by unit

F&D costs?

A. Yes, I do.

Q. What's unit F&D costs?

A. It means the unit finding and development costs which are measured as the costs reported in the annual report over the proved reserves which is the other measure that is reported in the annual report.

Q. And what is this particular slide which says "Reserves replacement & unit F&D costs, Shell is losing its historical edge," what is this slide meant to depict?

A. Well, on the right-hand side you see a graph which talks about the unit, the unit finding and development costs and you can see on the Shell that our unit -- unit finding and development costs in the -- in earlier years, which these bars represent, were low, lower than the competition. However, that unit finding costs effectively rose in the

period of 1999 to 2001 to levels which
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were either -- you know, similar or even higher than some of the competition.
That was what we meant by the edge that we had. In the earlier parts in the -- in the second half of the nineties against that measure that we performed better than that when we were performing compared to the competition in the latter part of the -- of the measure.
Q. And I don't -- maybe I missed it, but did you discuss the left-hand slide?
A. I discussed the right-hand side around the unit finding and development cost.
Now obviously, the left-hand side, because the numerator and denominator are linked to the same thing, if you -- it reserves -- if the reserves figure, not the replacement ratio goes down, then obviously that affects also the unit development, finding and development costs. So
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these two things are linked.
Q. Do you have -- you can put that document away, Mr. Bichsel. Do you have an understanding who Shell's outside auditors are?
A. I do not recall who they currently are, no.
Q. Have you had any contact at all with any of Shell's outside auditors, specifically KPMG accountants or PricewaterhouseCoopers accountants?
A. No, I did not.
MR. ARANOFF: I have nothing further. I don't know if anybody else

has anything that they want to ask. Okay, Mr. Bichsel, thank you very much for your time. I'm glad I was able to get you out on time.

THE WITNESS: Thank you so much.

MR. ARANOFF: Thank you very much for being such a good sport. And thank you, Charles and Ann and everybody else.

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THE VIDEO OPERATOR: Going off the record at 5:48, this is the end of tape 4, volume 1.

(Time noted: 5:48 p.m.)

_____

MATTHIAS BICHSEL

Subscribed and sworn to before me this _____ day of _____, 2006.

_____

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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 MATTHIAS BICHSEL, 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 _____, 2006.

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

E X H I B I T S

DESCRIPTION	PAGE	LINE
(Bichsel Exhibit 1 for identification, Mr. Bichsel's curriculum vitae.)	11	21
(Bichsel Exhibit 2 for identification, email with attached updated executive talent book.)	110	13
(Bichsel Exhibit 3 for identification, Bates stamped 00017513 through SMJ 00017519.)	240	14
(Bichsel Exhibit 4 for identification, Bates stamped SMJ 00038662 through SMJ 00038663.)	254	3
(Bichsel Exhibit 5 for identification, Bates stamped WCK 00010051 through WCK 00010052.)	259	3
(Bichsel Exhibit 6 for identification, Bates stamped SMJ 00035959 through SMJ 00035962.)	275	14
(Bichsel Exhibit 7 for identification, Bates stamped SMJ 00038852 through SMJ 00038854.)	291	12
(Bichsel Exhibit 8 for identification, Bates stamped SMJ 00029692 through SMJ 00029694.)	300	6
(Bichsel Exhibit 9 for	305	13

14	identification, Bates		
15	stamped V 00230616 to V		
16	00230629.)		
17	(Bichsel Exhibit 10 for	330	7
18	identification, Bates		
19	stamped RJW 00780060 through		
20	RJW 00780063.)		
21	(Bichsel Exhibit 11 for	339	7
22	identification, Bates		
23	stamped V 00231035 through V		
24	00231085.)		
25			

Curriculum Vitae - Matthias Bichsel

Name:	Bichsel, Matthias Felix
Sex:	male
Date of Birth:	24 July 1954
Place of Birth:	Basle, Switzerland
Nationality:	Swiss
Qualifications	1980 Doctor of Philosophy, Univ. of Basle, Switzerland 1978 MSc Earth Sciences, University of Basle, Switzerland 1982 Active Member, American Assoc. of Petroleum Geologist
Languages:	German (MT), English (excellent), French (good), Dutch (good)
Jobs:	1980-today Royal/Dutch Shell; various technical and managerial functions 1978-1980 Research Assistant, University of Basle
Civil Status	married; one daughter (born: 1993)

Shell Group Experience

Chairman of the Board, Enventure Global Technology. Jul 2000 -
Expandable tubular company. Revenue $10 mln in 2000, rapid sales growth and technology development. In 2000 turnaround.

Director, Shell Deepwater, Houston, USA Aug 1999 - (SG SEG)
Single point accountable for performance management of Deepwater Services organisation (exploration, well delivery, field development, dev project engineering and execution (own budget 2001: $170 mln; budget managed on behalf of customers: $ 300 mln expex, $1.2 bn dev capex, 500 Shell staff, 250 contract engineering staff). Member of Shell global Technology organisation (technology strategy development, technology implementation)
Achievements:
Skills acquired

Exploration Director, Petroleum Development Oman, Muscat, Oman Sept 1995-Aug 1999 (SG B)
Member of PDO Management Team
Accountable for performance of Exploration and New Field Development Directorate (40 wells p.a., 5 seismic parties, 1 field development project, annual budget $270 mln, 260 staff); in charge of 3 Asset Teams: Frontier Exploration, GeoSolutions (Service Provider), Athel Development (Field Development).
Achievements: Met stringent (oil and gas) reserves additions, expenditure and HSE targets; successful implementation of radically new exploration strategies and concepts; turnaround of exploration unit from basin creaming to growth/new opportunities focus, and from inward looking "self sufficient" unit to externally aware directorate; masterminded new ways of working in exploration leading to successful integration of functions; built powerful exploration leadership team resulting in disappearance of functional barriers and 'fiefdoms'; established excellent relationship with host government; directed, managed and achieved Breakthrough Performance (e.g. highly acclaimed seismic technology breakthroughs leading to 40% savings in acquisition costs); managed and implemented aggressive staff regionalisation programme. Achieved top quartile in benchmarking exercises of Exploration Organisation (SEPI) and Seismic (3rd party). Key role in transforming PDO: Formulated new Management Framework, formulated team reward pay structure (first EP company in Shell); chairman of new management framework implementation committee.
Skills acquired: Managing a large and complex business directorate encompassing service providers, exploration and field development; effective Company management team member; team building; change management and transformation; corporate strategy and planning; building relationships in culturally difficult circumstances, balancing Shell and Host Government requirements in Shell minority shareholding situation.

EP Study Team, Shell Intl. Petroleum Mij. B, The Hague Feb 1995-August 1995 (SG 1)
Member of the specially selected Shell Central Offices Re-engineering team.
Responsible for the redesign of the Shell Regional Business Directorates and Strategy /Business Services.
Achievements: Re-definition of: shareholder role and governance, management of Shell's E and P sector, Corporate Planning, Appraisal and Review, streamlining of support units (HSE, Audit, Finance, IT, Business Improvement, Planning and Economics). Established lean cost effective Regional Directorates and Business Services.
Skills acquired: Lateral thinking, increased creativity and imagination, team-work in a diverse team from different backgrounds and international business consultants, working with senior-most Shell Management

Evaluation Manager, NAM, Exploration Business Unit, Assen, Netherlands Nov 1992- Feb 1995 (SG 1)
Accountable for meeting reserves targets and portfolio replenishment in Exploration Business Unit. 70 staff, annual budget US$ 175 mln. Responsible for directing and managing performance of 4 evaluation teams, a Petroleum Engineering team and a drilling /geological operations team.
Achievements: Annual reserves target exceeded in every year. Acquisition of new key offshore licences in highly competitive round. Acreage swap with Elf in offshore leading to significantly higher added value. Moved exploration from volume to value focus; introduced integrated asset reference plans between E and P which reduced cycle time from discovery to gas sales by factor 2-4. Maintained excellent relationship with private and government shareholders.
Skills acquired: Managing large integrated E and P department with a substantial budget, integrating various function, change management, managing and influencing large industry partnerships

Secretary to EP Senior Exec Conference, Shell International EP, The Hague, Netherlands
August 1992- November 1992 (SG 2)
Responsible for organising the bi-annual EPSEC conference under the auspices of the Shell E&P Coordinator and Group MD.
Achievements: Organised successful conference, fast, accurate recording and dissemination of key EP issues prior, during and after the conference.
Skills acquired: Deep understanding of the global issues of Shell's E and P business, working with senior Shell management

Head of Exploration/Chief Geologist, Shell Co. Indonesia, Jakarta November 1989 –July 1992 (SG 2)
In charge of the exploration department with 20 staff and a budget of $ 15 mln pa.
Achievements: Successfully turned company around through aggressive development of new business opportunities (e.g. identification of domestic gas sales) and successful acquisition of 4 new licences in hotly contested environment as result of good relationship with host government.
Skills acquired: Project management, Business Venture Evaluation, man-management, managing joint venture partners building business relationships in Asian culture.

Senior Explorer, Shell Canada Resources Ltd, Calgary, Canada June 1987-November 1989 (SG 4)
Senior explorer in Foothills District responsible for the Triassic plays in British Columbia.
Achievements: Identification of successful new play fairway leading to acquisition of large acreage holding through lease sales and licence swaps. Significant increase in asset value.
Skills acquired: Economic valuation of E and P assets, negotiation skills for land purchases and swaps. Deepening of professional skills.

Senior Interpreter, Petroleum Development Oman, Muscat, Sultanate of Oman
April 1984-May 1987 (SG 4)
Team member/Deputy Team leader (1986/7) of an Exploration Evaluation team in PDO.
Achievements: Prolific prospect mapping and evaluation. Comprehensive acreage evaluation and reporting. Contributed to successful exploration results.
Skills acquired: Seismic Interpretation. Petrophysics, basin evaluation, reporting and professional presentation, self-management.

Field Geologist/Exploration Geologist, Bangladesh Shell Petr. Dev., Chittagong, Bangladesh

September 1981- March 1984 (SG 4)

Member of small single string venture.

Achievements: Field party leader in rebel held territory for two field seasons without HSE incidents. Built excellent relationship with both parties at war. Identification of several prospects. Successfully run company during frequent absences of managing director.

Skills acquired: Professional tools and techniques. Managing a small company. Working in politically hostile environment.

Trainee, Shell Intl. Petroleum Mij BV November 1980-August 1981 (SG P4)

From:	MARKUS-ODENKIRCHEN, ELLEKE E.
To:	Cooper, Jim J.A.
CC:	Dubnicki, Carol C.
BCC:	
Sent Date:	2002-06-17 14:25:21.000
Received Date:	2002-06-17 14:25:38.000
Subject:	Updated Executive Talent Book
Attachments:	Ward.doc , Megat.doc , Warren.doc , Darley.doc , Sprague.doc , Bichsel.doc , Brass.doc , Gardy.doc , Dubnicki.doc

Jim,

Carol asked me forward you the updated forms.

Alsjeblieft ....

Regards,
Elleke

PERSON OVERVIEW

Name	Ward	Brian	
Position	• Director, Technical and Operational Excellence • RBD Europe and Africa; SIEP		
Held Since	December 2001		
Education	BSc Physics	Norwich	
Gender	Male	**Date of Birth**	30 November 1946
Nationality	British	**Date to Group**	August 1968
		Retirement Date	October 2003

CAREER OVERVIEW

Year	Job Title	Company	Location
1999	General Manager	NAM	Netherlands
1994	Country Chairman	Petroleum Development Oman	Oman
1990	Production Director	Shell Expro	UK
1990	Operations Director	Shell Expro	UK
1987	Head Subsurface Operations	SIPM	The Hague
1984	Operations Manager	Sarawak Shell	Malaysia
1982	Head Operations Engineering	NAM	Netherlands
1981	Chief Petroleum Engineer	Shell Hydrocarbons	Argentina
1979	Head Technical Agreements and Economics	Brunei Shell	Brunei
1978	Senior Petrophysical Engineer	SIPM	The Hague
1975	Senior Petrophysical Engineer	SPDC	Nigeria

PENSKETCH

Brian is a highly effective, experienced, confident, performance-oriented EP manager. He has an exceptionally direct, open, leadership style, and a willingness to grasp nettles without hesitation. He has demonstrated a high level of management effectiveness in major jobs in Expro, Oman and NAM. He analyses issues objectively and communicates clearly and effectively to all stakeholders. He has moved effectively into both his regional and technical and operational excellence roles. He has the largest portfolio in Excom.

KEY DEVELOPMENT AREAS

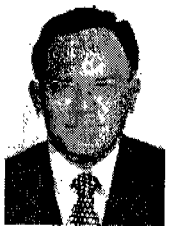
Even though near the end of his career, his behaviours related to key EP and Shell initiatives such as T&OE and diversity are critical to EP future business success. Brian needs to take care against slipping back in his natural Shell "operations management" role thereby diluting his all-round abilities as "role model EP leader".

COMMENTS

Hope he will consider staying beyond NRD.

PERSON OVERVIEW

Name	Megat	Zaharuddin	
Position	Regional Business Director, Middle East, Central and South Asia and Russia, SIEP		
Held Since	November 1999		
Education	BSC Mining Engineering	London, Royal School of Mines	
Gender	Male	**Date of Birth**	29/01/49
Nationality	Malaysian	**Date to Group**	February 1973
		Retirement Date	Jan 2009 (January 2004 if at 55)



CAREER OVERVIEW

Year	Job Title	Company	Location
1995	Chairman	Shell Companies of Malaysia	Malaysia
1992	General Representative	Shell Company of Turkey	Turkey
1989	Technical Director	Sarawak Shell	Malaysia
1986	Petroleum Engineering Manager	Sarawak Shell	Malaysia
1985	Area Production Liaison	SIPM	The Hague
1983	EP Representative Kuala Lumpur	Sarawak Shell	Malaysia
1981	Head Production Technology	Sarawak Shell	Malaysia
1980	Sr. Production Technologist	Sarawak Shell	Malaysia
1979	Production Technologist	Sarawak Shell	Malaysia
1976	Production/RE Operations	Shell Expro	UK
1973	Junior Petroleum Engineer	Brunei Shell	Brunei

PENSKETCH

Din is a tough-minded businessman with a track record of delivering business results and managing sensitive external interfaces. He demonstrates good intellect, commercial instinct and dealmaking skills. He is perfectionistic and meticulous in his approach with a corresponding management style. He demands excellence from his staff and from himself. He is hardworking and tenacious in his follow up. He demonstrates ability to learn and initiative to continue to improve on how he organises and leads his Directorate. Din's portfolio was reduced on April 1, 2002 to better align scope and capabilities.

KEY DEVELOPMENT AREAS

Din does not always choose his words carefully when communicating with staff which has resulted in misunderstandings, anger and frustration for several of them this past year. He needs to work on his ability to build effective working relationships with, and more effectively motivate, those reporting to him. He is actively working on his communications and has began to improve in this area.

COMMENTS

Din is keen to deliver some new legacy positions for the Group before retiring.

PERSON OVERVIEW

Name	Warren	Tim	
Position	Regional Business Director, East Asia, Australia, Shell Int. E		
Held Since	April 2001		
Education	BSc Applied Mathematics	St. Andrews	
Gender	Male	**Date of Birth**	19 December 1948
Nationality	British	**Date to Group**	September 1970
		Retirement Date	April 2006

CAREER OVERVIEW

Year	Job Title	Company	Location
1999	Director STEP	SIEP	The Hague
1996	Director RTS	SIEP	The Hague
1995	Special Assignment Servco	SIEP	The Hague
1993	General Manager West	SPDC	Nigeria
1992	General Manager Operations	SPDC	Nigeria
1991	Head EP Liaison ME and Africa	SIEP	The Hague
1988	Head EP Computing	SIEP	The Hague
1986	Head Petrophysical Engineering	SIEP	The Hague
1983	Operations Superintendent	Petroleum Development Oman	Oman
1981	EP Representative Kuala Lumpur	Sarawak Shell	Malaysia
1980	Sr. Economics Engineer	Sarawak Shell	Malaysia

PENSKETCH

Tim is widely recognised for his thinking and problem solving ability as well as for his phenomenal memory. He demonstrates tremendous drive and energy. He is quickly able to assess complex issues and determine a reasonable course of action. Tim is limited only by the ability of those he leads to follow up on the many ideas and initiatives he generates. He demonstrates courage in bringing about and managing organisational change. He is also a persuasive communicator. He has been effective in his Regional role in both identifying and beginning to sort out some of the critical issues in Australia and New Zealand as well as progressing the complex China East West pipeline project.

KEY DEVELOPMENT AREAS

Tim is in the process of moving to his new role as Country Chair in Australia as well as GM of SDA. Tim's long work hours are a legend at Shell. Given our current struggles with work-life balance, he would be well served to lead by example in managing his own work hours and ensuring those he leads focus on the most critical strategic initiatives/issues.

COMMENTS

(Own views/wishes; mobility; any other points)

PERSON OVERVIEW

Name	Darley	John	
Position	Director Shell Technology EP; SIEP		
Held Since	April 2001		
Education	Petroleum Engineering	Imperial College, London	
	Mathematics		
Gender	Male	**Date of Birth**	25/5/48
Nationality	British	**Date to Group**	September 1971
		Retirement Date	May 2006

CAREER OVERVIEW

Year	Job Title	Company	Location
1997	Chairman, Brunei	Brunei Shell	Brunei
1994	General Manager	AFPC	Syria
1991	Planning Development Manager	NAM	Assen
1988	Senior Assistant	SIPC	The Hague
1986	Sr. Reservoir Engineer ME	SIPM	The Hague
1985	Sr. Reservoir Engineer EOR	SIPM	The Hague
1982	Sr. Reservoir Engineer	Norske Shell	Norway
1978	Reservoir Engineer	Maraven	Venezuela
1976	Reservoir Engineer	SIPM	The Hague
1973	Reservoir Engineer	QGPC (Offshore)	Qatar
1972	WSPE	QGPC (Offshore)	Qatar

PENSKETCH

John presents himself as a knowledgeable, thoughtful and fair leader. He demonstrates a strong drive to achieve results. He is able to move into a situation, identify what is important and clearly communicate a sense of vision, purpose and focus to staff. He sets high standards and leads by example. John is an attentive listener and is methodical and pragmatic in his decision-making. He demonstrates courage in making choices and initiative in bringing about change. He is quietly persuasive with peers and uses his all-round capabilities effectively for the benefit of the total business. John is highly valued within the EP community.

KEY DEVELOPMENT AREAS

John has made a very encouraging start in STEP this past year. The opportunity to lead this complex service organisation should continue to provide excellent skill broadening as well as further test his ability as a leader. STEP needs to be taken to a new performance level with improved transparent strategies and prioritisation of competitive edge work programmes. The start up of the Global Projects organisation and the execution of recommendations related to technical service delivery from the cost FRD study will be significant tests of his capability. A somewhat more forceful approach to areas of conflict will accelerate implementation progress.

PERSON OVERVIEW

Name	Sprague	Bob	
Position	RBD Americas; SIEP		
Held Since	April 1997		
Education	MSEE	Cornell	
Gender	Male	**Date of Birth**	20 March 1945
Nationality	US	**Date to Group**	
		Retirement Date	March 2005

CAREER OVERVIEW

Year	Job Title	Company	Location
1999	RBD North America, Europe	SIEP	The Hague
1995	Director Business Services	SIEP	The Hague
1994	EP Co-ordinator	SIPM	The Hague
1991	Head EP Operations and Liaison	SIPM	The Hague
1987	President SWEPI	Shell Oil Company	US
1985	VP Corporate Planning	Shell Oil Company	US
1984	Division Manager, Kemridge	Shell Oil Company	US
1980	Manager Central Engineering	Shell Oil Company	US
1979	Production Superintendent	Shell Oil Company	US
1978	Corporate Planning	Shell Oil Company	US

PENSKETCH

Bob demonstrates an excellent understanding of strategic EP business issues. He is respected by the other Excom members for the quality of his thinking. He is able to quickly identify the essence of a complex issue and the options for moving forward. He is direct in his communication with others, sometimes uncomfortably so when stating his concerns or objections (particularly through e-mail!). He displays respect for those who are well prepared with facts and data and intolerance for decisions/ recommendations where staff work has not been thorough or the thinking well organised. His lack of natural engagement skills and absence of pro-active behaviour towards changing performance or business climates can "downgrade" his overall excellent in-depth expertise and perspectives.
Bob's directorate has recently been reconfigured to focus on the Americas. He enthusiastically responded to his new regional responsibilities and his relocation to The Hague.

KEY DEVELOPMENT AREAS

Shell will be well served if Bob stays in his Excom role until NRD. He can be a good role model and coach for senior leaders and a significant contributor to EP's future strategic direction, particularly as EP works to reconfigure its asset portfolio.

PERSON OVERVIEW

Name	Bichsel	Matthias	
Position	Director, Exploration; SIEP		
Held Since	March 2002		
Education	Dr Geology	Basel	
Gender	Male	**Date of Birth**	24/07/54
Nationality	Swiss	**Date to Group**	November 1980
		Retirement Date	July 2014

CAREER OVERVIEW

Year	Job Title	Company	Location
1999	Director, Shell Deepwater Services	SIEP	The Hague
1995	Exploration Director	Petroleum Development Oman	Oman
1992	Head Exploration Evaluation	NAM	Netherlands
1989	Team Leader	Asam Asam Shell	Indonesia
1987	Geologist	Shell Canada	Canada
1984	Seismic Interpreter	Petroleum Development Oman	Oman
1981	Senior Operations Geologist	Shell Bangladesh	Bangladesh
1980	Seismic Interpreter	SIPM	The Hague

PENSKETCH

Matthias is an excellent all round performer with good strategic skills. He displays a high level of energy coupled to strong intellectual and analytical capabilities. He is a good team builder and can instill a vision. He has a proven ability to lead transformation and change. Matthias is doing an excellent job of developing his new position as head of Exploration on the EP Excom and sharpening Exploration focus and direction. The latter includes setting a strategic agenda and re-building the exploration community.

KEY DEVELOPMENT AREAS

Matthias needs to continue to build his working relationships with his Excom colleagues as well as further refine the Exploration agenda and work to assure results.

COMMENTS

PERSON OVERVIEW

Name	Brass	Lorin	
Position	Director Bus. Development Support; SIEP		
Held Since	February 2000		
Education	BS Metallurgical Engineering	South Dakota School of Mines	
	BS Materials Science		
Gender	Male	**Date of Birth**	14/07/53
Nationality	American	**Date to Group**	July 1977
		Retirement Date	July 2013

CAREER OVERVIEW

Year	Job Title	Company	Location
1999	Remuneration Study	SIEP	The Hague
1998	CEO	Shell Services International	US
1995	Vice President	Shell Services International	US
1993	Special Assignment	Shell Oil Company	US
1993	Manager Plans and strategy	Shell Oil Company	US
1991	Division Production Manager, Kernridge	Shell Oil Company	US
1990	Engineering Manager, West Coast Division	Shell Oil Company	US
1988	Budget Co-ordinator	Shell Oil Company	US
1986	Production Superintendent, Coastal Division	Shell Oil Company	US
1984	Senior Drilling Engineer, Head Office	Shell Oil Company	US
1981	Drilling Engineer, Rocky Mountain Division	Shell Oil Company	US
1977	Research Engineer	Shell Oil Company	US

PENSKETCH

Lorin continues to demonstrate excellent conceptual and strategic thinking ability. He is effective at orchestrating results through others and building teams. He has a participative leadership style. He is articulate and clear in his communications, although sometimes reticent in expressing his views. Lorin calmly and tenaciously works through conflictual situations. He is a good relationship builder with peers as well as with those reporting to him. He is currently leading the integration of the Enterprise acquisition. The acquisition process has gone relatively well given that Shell does not have a track record of significant acquisitions.

KEY DEVELOPMENT AREAS

Lorin needs to work at more forceful, persuasive presentation of his position.

The integration of the Enterprise acquisition has been a good test of his ability to lead and produce results in a timely fashion. He has led the process effectively even though a bit slow on the initial formulation and roll out of the integration plan. Recommendation is to move him to leadership of a major OU in the coming 2 years to further build his track record and to test his leadership skills in a conventional EP environment.

COMMENTS

Mobility restricted to children's education continuity.

PERSON OVERVIEW

Name	Gardy	Dominique	
Position	Chief Financial Officer; SIEP		
Held Since	May 1999		
Education	Civil Engineering	Paris	
Gender	Male	**Date of Birth**	02/10/51
Nationality	French	**Date to Group**	December 1976
		Retirement Date	October 2011

CAREER OVERVIEW

Year	Job Title	Company	Location
1997	VP Finance	Shell Oil Company	US
1996	Director General	Sos. des Petroles Shell	France
1993	VP Finance	Soc. de Petroles Shell	France
1990	Dir. Manuf. Supply & Marketing	A/S Norske Shell	Norway
1987	Treasurer	Shell Francaise	The Hague
1985	EUFI/13 HD Info & Info Dev	SIPM	France
1982	Budget Analyst & Controller	Shell Francaise	France
1979	IC Head of Unit	Shell Francaise	France
1977	IC Anal & Program Econ & Tech	Shell Francaise	France
1976	IC Training	Shell Francaise	France

PENSKETCH

Dominique has done an excellent job building the EP Finance Function over the past three years. He has led from the front in creating a global community of Finance professionals who work together with increasing effectiveness to support EP business initiatives. Dominique is hard working putting in very long hours in the office. He has built excellent working relationships with his Excom colleagues and is able to add significant value to discussions of general EP business issues.

KEY DEVELOPMENT AREAS

Dominique is now moving into the position of Regional Business Director for the Far East. This is in keeping with his development plan as discussed at MDC 4 months ago. During his tenure as CFO, Dominique at times has appeared to be spread a bit thin and needed to consider more effective delegation, time management and perhaps more effective use of resources. This development need is still relevant and must be addressed to assure not only his own resilience but also his ability to act as an effective leadership model.

COMMENTS

Dominique is very pleased with new opportunity provided. He still would like to be considered for senior finance positions in the future.

PERSON OVERVIEW

Name	Dubnicki, C	Carol
Position	HR Director, EP; SIEP	
Held Since	July 2000	
Education	PhD	Chicago

Gender	Female	**Date of Birth**	6 February 1951
Nationality	US	**Date to Group**	July 2000
		Retirement Date	February 2011

CAREER OVERVIEW

Year	Job Title	Company	Location
1998	Senior VP Human Resources	CNA	Chicago
1997	VP Human Resources Chemicals	Amoco	Chicago
1995	VP Human Resources EP	Amoco	Chicago
1993	GM Organisation Capability Group	Amoco	Chicago
1984	VP and Managing Partner	Hay Group	California
1980	Manager, Employee Relations and Development	Lawrence Livermore National Laboratory	California
1978	Manager, Employee Development and Counselling Services	Chicago, Rock Island and Pacific Railroad	Chicago

PENSKETCH

Carol has been with the Shell Group in the EP HR role for 2 years now and is beginning to establish traction in a variety of ways. Her relationships with EP Excom members are advancing to the levels of trust and respect that facilitate her impact. She is evolving a robust EP HR agenda, building on the work that preceded her and making it better. She is well known for her deep professionalism and knowledge of the functional requirements of a holistic and systematic approach to HR leadership. She has moved rapidly in the past two years to organise HR resources in the centre and to build capability on her team. She has travelled extensively to build an understanding of the EP business in Shell and to increase her knowledge of talent and HR issues in operating units. She has also introduced a number of effective team-building efforts to bring more unity and leverage synergies across diverse operating companies. She is a team player among her business and senior HR colleagues, continuously questioning whether the "whole" is benefiting as well as the "parts." The signs are increasingly obvious that her role suits her and the business, as well as the Group. She has recognisable growth potential for the future. She has also begun to deliver significant redesign and implementation of global EP people processes over the past year. Her problem-solving and analytical capabilities are profound. In addition her keen sensitivity to issues and concerns reflects her insights and professional savvy.

KEY DEVELOPMENT AREAS

Tangible contributions by implementing the people agenda in the business will continue to strengthen her leadership role in Shell.

COMMENTS

(Own views/wishes; mobility; any other points)

Carol has adapted well to operating in her first out-of-country assignment at Shell. She demonstrates cultural sensitivity and respect for the differences she is experiencing. She is developing full appreciation for the needs of the business and responding appropriately. Her professionalism is of significant value to the HR community in EP.

From:	ROTHERMUND, H.C.
To:	PARRY, G.; Inglis, Robert R.B. /SIEP /SDAN-AM; HASAN, MAHDI S.M. /SIEP /EPT-DD /777124
CC:	LOVELOCK, S.; MINDERHOUD, M.; BICHSEL, MATTHIAS M. /SIEP /EPT-D /777264
BCC:	
Sent Date:	2000-09-18 03:06:48.000
Received Date:	2000-09-18 03:06:50.000
Subject:	Cluster development Angola
Attachments:	

Gentlemen,

Against the background of Martijn Minderhoud's e-mail, with which I fully agree, let me make a few supporting comments:

- One of the important elements in the EP scorecard is reserves replacement. It is essential that we should come up with imaginative ways of booking those reserves we have. Martijn's approach is such an imaginative approach. Let's now use it, and use it for what it is meant to be: Not a final scheme for (sub-optimal) field development, but a scheme for the early booking of value!

- I am getting quite disenchanted to notice that each time a new idea for reserves booking is coming up we spend determined time to shoot it down rather than to see how to progress it.

- It is a great shame that we did not manage to drill appraisal wells first, in Block 18. I would not be surprised that one of the reasons for this is that "ideal" field development was seen as more important that early booking of value.

Please be guided accordingly.

Regards
Heinz

---Original Message---
From: MINDERHOUD, M.
Sent: 13 September 2000 15:07
To: PARRY, G. /SIEP /EPG
Cc: ROTHERMUND, H.C. /SEPI /EPG; LOVELOCK, S. /SEPI /EPG
Subject: FW: Cluster development Angola

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EXHIBIT
Bichsel 3
10/3/09
GAIL F. SCHORR, C.S.R., C.R.R.

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Gordon,

sorry to keep on harping on this one. But the way I see it, is (i) to get reserves booked in 2000 one way or another and (ii) to then start drilling appraisal wells as Capex thereafter. I fully understand now that the full, most optimal development of Block 18 requires more than a 'simple Min DVA' concept. But I also quote from below note :

"The min-DVA concept may be of interest for
selective sweet spot development of individual reservoir structures
(e.g. for Plutonio) if this system proves cost effective for the
predicted recoverable volumes."

If I understand it well, for reserves booking it is required that there exists a doable, economic development scheme ; I quote from your note sent separately:

"Proved reserves can be booked if it can be demonstrated that the development project of a discovered field is technically and commercially mature (and a market is expected to be available). Commercial maturity should be demonstrated over a sufficiently large range of possible scenario's (including all surface and subsurface uncertainties). A project is deemed commercial if the NPV7% @ PSV14 > 0. "

However NOBODY SAID THAT YOU ACTUALLY HAVE TO EXECUTE THAT SCHEME !! As you state, you do not require to take FID. You can happily continue drilling to prove up a better scheme. The existence of such smaller, "dummy" scheme would probably not allow you to book more than the reserves you can actually produce with it, but it would be a start.

I think it would be worthwhile to pursue this idea – if I am completely crazy, tell me where I got it wrong

Or maybe your other plans have sufficiently progressed - then shred this

cheers

martijn

-----Original Message-----
From: Inglis, Robert R.B.
Sent: 24 August 2000 09:04
To: MINDERHOUD, M.
Cc: PARRY, G. /SIEP /EPG; Osborne, Peter L. /SDANG /GM; LOHR, FRAN F.A. /SIEP /EPB /157182; HASAN, MAHDI S.M. /SIEP /EPT-DD /777124; KNIGHT, BARRY B.P. /SIEP /EPT-DE /777890; Hines, Ian I. /SIEP /EPT-DE /777319; SMITH, PATRICK P.L. /SIEP /EPT-DD /535313; Simon, Grigore G. /SIEP

/SDAN-AM
Subject: RE: Cluster development Angola

Martijn,
See attached SDS info on applicability of Min-DVA concept for Block 18.

We are looking at these concepts in the work being done in SDS, but as I indicated earlier, they are not likely to offer a step change in economics for this development. BP are also working on minimum dry tree options, drawing on the joint industry work done as part of WADO (West Africa Deepwater Operators), where these type of concepts were worked extensively with a number of contractor groups about 5 years ago.

We will continue to ensure that all development options are explored, but the real enabler for B18 is to be able to place high productivity, high ultimate wells.

Regards,

Rob

-----Original Message-----
From: Hines, Ian I. /777319 On Behalf Of Hines, Ian I. /777319
Sent: Thursday, August 24, 2000 1:29 AM
To: Inglis, Robert R.B.; Smith, Patrick P.L. /535313
Subject: RE: Cluster development Angola

Rob,

As discussed, some discussion on the DVA concepts . The real issue here now is managing the potentially unrealistic expectations which may have been created by generalizing the existing min-DVA experience. Its on our radar screen but a second order effect compared to the subsurface uncertainty which we are facing right now.

Development of the Block 18 reserves combines the challenges of two other ongoing deepwater developments projects: i.e. Erha (with a series of complex stacked amalgamated channel turbidite reservoirs) and Nakika (with its multiple reservoir aerially distributed reserves). This combination presents a very significant and unique development challenge.

DVA systems are one of a number of development options being considered for Block 18, they are also being evaluated for Erha and Holstein.

However, unlike these other developments the aerially distributed nature of the reserves and the variable reserves density within the separate structures in Block 18 require much larger numbers of wells and are such that a single DVA structure is not a viable development option for the entire Block. The min-DVA concept may be of interest for selective sweet spot development of individual reservoir structures (e.g. for Plutonio) if this system proves cost effective for the predicted recoverable volumes.

Development of the wider reserves base will require a large number of wells (current estimates range from 40 - 80wells), infield storage (e.g. an FPSO or an FSU) and either several DVA systems, significant numbers of subsea wells, or most probably a combination of these options given the aerial extent of the reserves in individual structures. The choice between subsea wells and dry trees (and hence the cost effectiveness of DVA systems) will depend upon the subsurface, flow assurance, well engineering and development system assessments which are part of ongoing concept screening exercises being conducted by both BP and Shell. The focus of current effort is to develop a good understanding of the range of subsurface uncertainties/key drivers in the complex multiple reservoir setting within Block 18. The number of separate structures results in a large number of potential development sceanrios. However, the surface engineering screening work is not sufficiently mature to make a choice between the dry tree and wet tree options. It is expected that the DVA concept and the dry tree versus wet tree decision will almost certainly be carried forward into the concept selection stage (post VAR2) as was the case for Bonga/Nakika and is currently anticipated for Erha.

In summary, the cost benefit assessment of using DVA systems at Block 18 is more complex and less clear cut than for some other ongoing developments. However the ongoing evaluation is benefiting from the development work carried out in SDS in recent years in terms of capturing representative lower bound costs for potential minimum systems.

-----Original Message-----
From: MINDERHOUD, M.
Sent: 17 August 2000 16:33
To: Inglis, Robert R.B.
Cc: PARRY, G. /SIEP /EPG; Osborne, Peter L. /SDANG /GM; LOHR, FRAN F.A. /SIEP /EPB /157182; HASAN, MAHDI S.M. /SIEP /EPT-DD /777124
Subject: RE: Cluster development Angola

Rob,

what is the latest on this? with our new discovery, the light at the end of the tunnel is very near. Can we make a competitive proposal to BPA?

(By the way, this is the latest e-mail I could find on this, maybe there is later correspondence).

Martijn

-----Original Message-----
From: Inglis, Robert R.B.
Sent: 29 April 2000 11:49
To: MINDERHOUD, M.
Cc: PARRY, G. /SIEP /EPG
Subject: RE: Cluster development Angola

Martijn,
Sorry I have not responded to this request - all the focus on B34 has diverted attention.

I have had some material from SDS, but none of this indicates that Min DVA will do much for Block 18. I'll discuss further during my visit to Houston next week.

So do not hold your breath - Min DVA is a niche application which does not fit easily in Angola.

Regards,

Rob

-----Original Message-----
From: MINDERHOUD, M.
Sent: Monday, April 17, 2000 6:11 PM
To: Inglis, Robert R.B. /SIEP /SDA-AM
Cc: PARRY, G. /SIEP /EPG
Subject: FW: Cluster development Angola

Rob,

I have some months ago extended this challenge to SDS, to see whether their miniDVA concept could be the winner in Angola (at least Block 18). I am very curious to hear from you what the status of this is, as I was very intrigued by the idea.

Greetings

Martijn

---Original Message---
From: MINDERHOUD, M.
Sent: 15 February 2000 08:46
To: Hasan, Mahdi S.M. /777124
Cc: PARRY, G.
Subject: RE: Cluster development Angola

Mahdi,

Indeed you sold me that very idea, and this is why I contacted you.

I think that your exciting ideas on this mini development are or could be the competitive edge bringing us back great in Angola. I would love to prove that we Shell think that Block 18 is already economic, whilst BP-Amoco still think they need the fourth well. Having said that, I cannot judge whether the high level screening look is sufficient to start taking steps or whether more in-depth work is required. And what the budgettary consequences are. I think Gordon could comment here.

I look forward to hearing more on this topic

Martijn

---Original Message---
From: Hasan, Mahdi S.M. /777124
Sent: 15 February 2000 00:43
To: MINDERHOUD, M.
Cc: PARRY, G.
Subject: RE: Cluster development Angola

Martijn,

Sorry for the late reply - but your comment about us "actively looking..." caught me off guard. Rob Inglis has been asked to give a view on the BP cost estimates and he was planning to use some broad brushed comparisons to possible alternatives we might use and what they would cost. That is a long way from having work done on it even to establish whether the concept would be technically feasible for this application.

Having said that, this capability certainly exists in SDS - actually is the heart of what we provide. However, I caution that a high level, screening type look, should be mis-read as actively studying it to find

a solution. However, if that is what you/Angola wish us to do, we shall be delighted to provide you a service - a service that you will not find anywhere in quality and reliability.

Mahdi

From: Minderhoud, Martijn M SEPI-EPG
Sent: Thursday, February 10, 2000 5:57 AM
To: Hasan, Mahdi SM SIEP-EPT-DD
Cc: Parry, Gordon G SIEP-EPG
Subject: Cluster development Angola

Mahdi,

I understand from Gordon, that you guys are actively looking at applying
your miniDVA satelite development approach to see whether Angola Block
18 could be made commercial already with the three developments there
are (approx 600 mmbbls). Can you tell me what the current views on this
are, and are you in a position to say anything concrete, in the context
of portfolio management?
Thanks

Martijn

Martijn Minderhoud
Regional Vice-President SubSaharan Africa EPG
office (31)-(70)-377-1402
mobile (31)-(0)6-21573760
e-mail m.minderhoud@sepi.shell.com

From: Simon, Grigore G.
To: Inglis, Robert R.B. /SIEP /SDAN-AM
CC:
BCC:
Sent Date: 2000-10-30 07:24:42.000
Received Date: 2000-10-30 07:24:52.000
Subject: FW: Angola - Reserves LE 3Q00
Attachments:

Bichsel under pressure!

----Original Message----
From: ROTHERMUND, H.C.
Sent: Sunday, October 29, 2000 5:27 PM
To: BICHSEL, MATTHIAS M. /SIEP /EPT-D /777264
Cc: LOVELOCK, S.; Simon, Grigore G.; PARRY, G.; Aalbers, Remco R.D.; Warren, Tim T.N. /SIEP /EPT; MINDERHOUD, M. /SEPI /EPG
Subject: Angola - Reserves LE 3Q00

Matthias,

Below please find a good summary by Sue Lovelock and Remco Aalbers on the reserves situation in Amgola. As mentioned to you on earlier occasions, there is a critical need for EP to be in a position to book these reserves in 2000. SDS plays a key role in this. Grateful you keep very close to this.

Regards
Heinz

----Original Message----
From: Aalbers, Remco R.D.
Sent: 27 October 2000 17:27
To: ROTHERMUND, H.C.
Cc: LOVELOCK, S.; Simon, Grigore G.; PARRY, G.
Subject: Angola - Reserves LE 3Q00

Heinz,
Understand from Sue that you would like to get an update on the Angola reserves position. She had to leave before the numbers were finalised so she asked me to send this.
Regards,
Remco
==========

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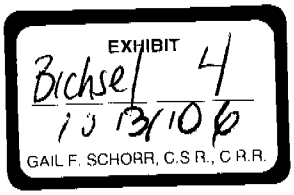

Proved Reserves LE - 293 mln bbl
This number is LE Shell PSC entitlement for the first hub (Plutonio/Galio/Paladio/Cromio/Cobalto).
Plutonio estimates are under downward pressure as technical evaluation continues in Houston, in this case static modeling. Revision here may drop proved reserves to 265 mln bbl (being challenged). There is still some additional upside for Cobalto (if no gas is encountered) of 30 mln bbl, the well is currently being drilled, resulting in an upward range for proved reserves of 295 mln bbl. LE is still achievable.
Booking of any reserves is based on commerciality and here team is making progress. Positive NPV looks possible, (although peer review in Houston still in progress). Although current position does not meet screening VIR (which is being worked), this alone would not prevent reserves booking, which is based on commerciality test. Notional Development Plan is part of model, so in progress. Angola Team will maintain pressure on SDS in Houston.
We understand that BPA is not under any pressure to book further reserves this year, so will not book Block 18 reserves. Their target remains FID date (Sanction in BP's terminology), which overall is still good news for Shell. It would have been helpful if they also booked Blk 18, but understand we have deviated from partners before in our booking of proved reserves.
Another booking test is move from exploration licence to production licence. Team have reviewed PSC. View is that as long as venture declares commercial project within 24 months from formal notice of discovery there is automatic right to 25 year production licence. Formal Notices will no doubt be required, but there seems nothing legal to prevent reserves booking. Production term is long enough to support booking of reserves. Proved reserves booking will be visible externally and therefore available to Angolan Govt etc. We would not necessarily want to have this be seen as trigger FID for production licence and be committed to development expenditure. This is issue raised before, but not concluded - we really need to watch carefully. Will take up with team, Gordon and Martijn on return.
SFR Maturation to expectation reserves LE - 367 mln bbl
Expectation reserves of 367 mln bbl is for 1st hub and includes same fields as above. Similar to proved reserves there is pressure on the Plutonio expectation estimate which might drop to SFR maturation to 328 mln bbl, again possible upside for Cobalto of some 40 mln bbl to 368 mln bbl.
Given move within same year from SFR maturation to proved reserves we will get some bbls in both SFR maturation and proved reserves additions.
Good news.
Susan Lovelock

Hines, Ian IM SIEP-EPT-DE

From: Bichsel, Matthias M SIEP-EPT-D
Sent: Tuesday, October 31, 2000 4:41 PM
To: Sears, Richard RA SIEP-EPT-DE; Knight, Barry BP SIEP-EPT-DE; Hines, Ian IM SIEP-EPT-DE; Justus, Mary Ann MA SIEP-EPT-D
Cc: Bichsel, Matthias M SIEP-EPT-D
Subject: FW: Angola - Reserves LE 3Q00

Importance: High

Gents, see message below by Heinz and progress report on Angola reserves.

I'd like Mary Ann to book a short meeting to a) review where we stand and b) reconcile with Susan Lovelock's note and c) agree on a modus on how to proceed AND keep Heinz uptodate.

Another thought is that perhaps we can roll all reserves booking issue into one meeting and decide on how we monitor progress and keep all stakeholders apprised (Barry?)?

Mary Ann, grateful if you could find a convenient slot.

Thanks,

Matthias

-----Original Message-----
From: Rothermund, HC SEPI-EPG
Sent: 29 October 2000 10:27
To: Bichsel, Matthias M SIEP-EPT-D
Cc: Aalbers, Remco RD SIEP-EPB-P; Lovelock, Susan S SEPI-EPG; Oderhoud, Martijn M SEPI-EPG; Parry, Gordon G SIEP-EPG; Simon, Grigore G SIEP-SDAN-AM; Warren, Tim TN SIEP-EPT
Subject: Angola - Reserves LE 3Q00

Matthias,

Below please find a good summary by Sue Lovelock and Remco Aalbers on the reserves situation in Angola. As mentioned to you on earlier occasions, there is a critical need for EP to be in a position to book these reserves in 2000. SDS plays a key role in this. Grateful you keep very close to this.

Regards
Heinz

-----Original Message-----
From: Aalbers, Remco R.D.
Sent: 27 October 2000 17:27
To: ROTHERMUND, H.C.
Cc: LOVELOCK, S.; Simon, Grigore G.; PARRY, G.
Subject: Angola - Reserves LE 3Q00

Heinz,
Understand from Sue that you would like to get an update on the Angola reserves position. She had to leave before the numbers were finalised so asked me to send this.
Regards,
Remco

EXHIBIT
Bichsel 5
10/31/06
GAIL F. SCHORR, C.S.R., C.R.R.

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WCK00010051

Proved Reserves LE - 293 mln bbl
This number is LE Shell PSC entitlement for the first hub (Plutonio/Galio/Paladio/Cromio/Cobalto).
Plutonio estimates are under downward pressure as technical evaluation [redacted]tinues in Houston, in this case static modeling. Revision here may [redacted]p proved reserves to 265 mln bbl (being challenged). There is still some additional upside for Cobalto (if no gas is encountered) of 30 mln bbl, the well is currently being drilled, resulting in an upward range for proved reserves of 295 mln bbl. LE is still achievable.
Booking of any reserves is based on commerciality and here team is making progress. Positive NPV looks possible, (although peer review in Houston still in progress). Although current position does not meet screening VIR (which is being worked), this alone would not prevent reserves booking, which is based on commerciality test. Notional Development Plan is part of model, so in progress. Angola Team will maintain pressure on SDS in Houston.
We understand that BPA is not under any pressure to book further reserves this year, so will not book Block 18 reserves. Their target remains FID date (Sanction in BP's terminology), which overall is still good news for Shell. It would have been helpful if they also booked Blk 18, but understand we have deviated from partners before in our booking of proved reserves.
Another booking test is move from exploration licence to production licence. Team have reviewed PSC. View is that as long as venture declares commercial project within 24 months from formal notice of discovery there is automatic right to 25 year production licence. Formal Notices will no doubt be required, but there seems nothing legal to prevent reserves booking. Production term is long enough to support booking of reserves. Proved reserves booking will be visible externally and therefore available to Angolan Govt etc. We would not necessarily want to have this be seen as trigger FID for production licence and be committed to development expenditure. This is issue raised before, but [redacted]concluded - we really need to watch carefully. Will take up with [redacted]n, Gordon and Martijn on return.
SFR Maturation to expectation reserves LE - 367 mln bbl
Expectation reserves of 367 mln bbl is for 1st hub and includes same fields as above. Similar to proved reserves there is pressure on the Plutonio expectation estimate which might drop to SFR maturation to 328 mln bbl, again possible upside for Cobalto of some 40 mln bbl to 368 mln bbl.
Given move within same year from SFR maturation to proved reserves we will get some bbls in both SFR maturation and proved reserves additions. Good news. .
Susan Lovelock

From:	Bichsel, Matthias M SIEP-EPT-D
To:	Minderhoud, Martijn M SEPI-EPG; Parry, Gordon G SIEP-EPG
CC:	Aalbers, Remco RD SIEP-EPB-P; Lewis, Keith K SEPI-EPG; Lohr, Fran FA SIEP-EPB; Lovelock, Susan S SEPI-EPG; Rothermund, HC SEPI-EPG; Wink, Maarten MN SEPI-EPG; Sears, Richard RA SIEP-EPT-DE; Knight, Barry BP SIEP-EPT-DE
BCC:	
Sent Date:	2000-11-23 13:49:29.000
Received Date:	2000-11-23 13:49:31.000
Subject:	RE: West Africa reserves 2000
Attachments:	

Martijn,

we obviously need to involve our RE and reserves auditors in your questions. An observation I can make however and that it is not necessary to penetrate ALL channels. It is one of confidence and using analogue settings. At the moment we only have Bonga and as you know in Bonga, we did not penetrate each and every reservoir body, but with the appraisal wells results and the ensuing seismic calibration, a strong story can be built to support booking of proved reserves (proved is the operative word here) over a whole hc bearing structure. This was the main comment by the reserves auditors that we do not have any appraisal data and little understanding of the reservoir model in block 18 (as you may have heard, whilst we have at least Bonga from West Africa, bp is using North Sea analogues!) Incidentally that also applies to Bonga, where SDS has identified significant in-field scope, in somewhat deeper horizons, but because they have not yet been penetrated we cannot booked proved reserves. As you know the development drilling campaign has built in exploratory/appraisal elements exactly for this reason.

I still believe in the large volumes in block 18, that, given a programme of appraisal (which I don't think needs to be overly ambitious)are realisable as booked reserves in the short term.

Re. GoM, please be assured that we are using SEPCo reservoir engineers AND the SEPCo reserves auditor to ensure that we capture all possibilities regarding booking away from well penetration. I do not believe that we are missing a trick here, but I agree that we need to be continuously vigilant.

Let me know when you want to meet.

Matthias

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SMJ00035959

EXHIBIT
Bichsel 6
10/3/06
GAIL F. SCHORR, C.S.R., C.R.R.

101403366

-----Original Message-----
From: Minderhoud, Martijn M SEPI-EPG
Sent: 23 November 2000 03:51
To: Bichsel, Matthias M SIEP-EPT-D; Parry, Gordon G SIEP-EPG
Cc: Aalbers, Remco RD SIEP-EPB-P; Lewis, Keith K SEPI-EPG; Lohr, Fran FA SIEP-EPB; Lovelock, Susan S SEPI-EPG; Rothermund, HC SEPI-EPG; Wink, Maarten MN SEPI-EPG
Subject: RE: West Africa reserves 2000

Gordon, Matthias,

can we have another meeting shortly to address these issues, as I think they are of wider consequence for deep water settings.

If I understand Matthias e-mail correctly, the originally quoted volumes are the MSV (pre-drill) and SFR (after discovery) of the ENTIRE PROSPECTIVE STRUCTURE; this may comprise a complex of individual channels, the total of which makes up the number. For proved reserves booking, a very strict rule appears to apply, essentially related to PENETRATED hydrocarbon occurrences; obviously, in a complex channel setting potentially only a subset of the total is being penetrated and the remainder can only be booked as proved reserves after penetration thru appraisal wells. This I think is the "incorrect" that Matthias refers to.
A number of questions come to mind:
- how many of additional appraisal wells are required prior to taking FID
- is that taken into account in the pre-drill economics?
- for new prospects, how are we going to define pre-drill MSV, when we know we are not going to penetrate all channels in the well?
I could see the dilemma of first wells not penetrating enough channels to make an economic development if taken strictly. To make it pre-drill, would require the entire structure volume to be quoted for MSV/expectation purposes; however, after discovery only a smaller volume is bookable as reserves, but even that only if we have proven up the additional reserves through appraisal, to demonstrate an FID-able project. It means spending more money to prove up the necessary reserves, is that still economic? How does this impact the attractiveness of Block 34, the SNEPCO UDW blocks or Brazil? We may come to the conclusion that economic exploration wells cannot be drilled in these settings; if that is correct, are we doing the right thing here then?

How did the GoM overcome these problems, which they must have also faced in drilling turbidite channels. I hope there are some learnings

exportable.

Martijn

-----Original Message-----
From: ROTHERMUND, H.C.
Sent: 23 November 2000 08:21
To: PARRY, G. /SIEP /EPG
Cc: MINDERHOUD, M. /SEPI /EPG; WINK, M.N. /SEPI /EPG; LOVELOCK, S. /SEPI
/EPG; Lewis, Keith K. /SEPI /EPG; BICHSEL, MATTHIAS M. /SIEP /EPT-D /777264
Subject: West Africa reserves 2000

Gordon,

I am obviously disappointed by the attached information. In some way, however, we can say that it was not for lack of trying. Equally, however, I am concerned about the the second paragraph in the e-mail, since it states that we simply made an error, and this I do not understand! What does this statement refer to, and why is it only now that we realise that we are not doing our reservoir engineering "properly"?

Regards
Heinz

-----Original Message-----
From: Bichsel, Matthias M. /777264
Sent: 22 November 2000 01:28
To: ROTHERMUND, H.C.
Cc: Warren, Tim T.N.
Subject: West Africa reserves 2000

Heinz,

I am responding to your e-mail from 29th October regarding reserves booking in Angola. I attach a note that addresses the issue in the wider context of West Africa, since we are also working on identifying additional volumes in Bonga.

As you will have heard already, the earlier quoted figures of some 300 MMB of proved reserves to be booked in 2000 were incorrect and represent volumes of entire structures rather than what can be booked with confidence in 2000, and in accordance to SEC rules and Shell guidelines.

I can assure you that I am personally pushing and cajoling my staff to get the most out of what is possible. Contrary to what you have heard, we are not "covering our back side" and are "overly conservative" but are exploring every avenue to trying to increase reserves bookings.

The current total reserves booking potential is, on a P50 basis, 195 to 315 MMB and on a P85 (proved) basis 130-190 MMB. I have asked for another set of eyes of reservoir engineering expertise from SepTAR and SEPCo to ensure that we are not missing anything and literally leave no stone unturned at our next peer review session.

Regards,
Matthias

From: Knight, Barry BP SIEP-EPT-DE
To: Wilhelm, Chandler CT SIEP-EPT-DE; Hines, Ian IM SIEP-EPT-DE
CC:
BCC:
Sent Date: 2000-11-28 13:37:48.000
Received Date: 2000-11-28 13:37:48.000
Subject: FW: West Africa reserves 2000
Attachments:

FYI

-----Original Message-----
From: Bichsel, Matthias M SIEP-EPT-D
Sent: Monday, November 27, 2000 9:43 AM
To: Sears, Richard RA SIEP-EPT-DE; Knight, Barry BP SIEP-EPT-DE
Subject: FW: West Africa reserves 2000

Gently, clearly a reprimand from Heinz. Not quite clear how I deserved that, as if we reported MSV figures to him in the first place. We need to keep working on guys like Grigori et al. - they seem to be dropping us in it whenever they have a chance.

Matthias

-----Original Message-----
From: Rothermund, HC SEPI-EPG
Sent: Thursday, November 23, 2000 3:21 PM
To: Bichsel, Matthias M SIEP-EPT-D
Cc: Lewis, Keith K SEPI-EPG; Lovelock, Susan S SEPI-EPG; Minderhoud, Martijn M SEPI-EPG; Parry, Gordon G SIEP-EPG; Wink, Maarten MN SEPI-EPG
Subject: West Africa reserves 2000

Matthias,

I would describe the problem differently. There has been a historical shift, in the past two to five years. Ever since we are reviewing booking of reserves closely, in the context of financial results and our focus on actual performance, the old focus on exploration success and the much "looser" talk about reserves has become obsolete. Yet, particularly amongst explorers, and whenever we book a technical success, we forget that volumes found with an "exploration mindset" are not the same as reserves defined in terms of Financial results. And this we must get after and communicate with greater focus.

Regards
Heinz

----Original Message----
From: Bichsel, Matthias M. /777264
Sent: 23 November 2000 14:00
To: ROTHERMUND, H.C.; PARRY, G.
Cc: Lewis, Keith K.; LOVELOCK, S.; MINDERHOUD, M.; WINK, M.N.; Bichsel, Matthias M. /777264
Subject: RE: West Africa reserves 2000

Heinz,

I don't think it is an issue of doing reservoir engineering properly but an issue of definition. An age-old problem in Shell.

We often quote success volumes pre-drill and in case of success than adjust net pay and other parameters across the whole structure to reflect what we found. These then are volumes for the whole structure - volumes that indeed are likely there, but because of the way we have to book proved reserves, non-connected bodies etc are very heavily discounted, particularly in virgin areas such as block 18 - and Angola as a whole.

What my comment referred to was that the information on what we can book as proved reserves with one exploration well was pre-mature when reported in mid-year and, hence, when used for the global reserves monitor, not "correct" information.

Best regards,
Matthias

----Original Message----
From: Rothermund, HC SEPI-EPG
Sent: 23 November 2000 01:21
To: Parry, Gordon G SIEP-EPG
Cc: Bichsel, Matthias M SIEP-EPT-D; Lewis, Keith K SEPI-EPG; Lovelock, Susan S SEPI-EPG; Minderhoud, Martijn M SEPI-EPG; Wink, Maarten MN SEPI-EPG
Subject: West Africa reserves 2000

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however, I am concerned about the the second paragraph in the e-mail, since it states that we simply made an error, and this I do not understand! What does this statement refer to, and why is it only now that we realise that we are not doing our reservoir engineering "properly"?

Regards
Heinz

----Original Message----
From: Bichsel, Matthias M. /777264
Sent: 22 November 2000 01:28
To: ROTHERMUND, H.C.
Cc: Warren, Tim T.N.
Subject: West Africa reserves 2000

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As you will have heard already, the earlier quoted figures of some 300 MMB of proved reserves to be booked in 2000 were incorrect and represent volumes of entire structures rather than what can be booked with confidence in 2000, and in accordance to SEC rules and Shell guidelines.

I can assure you that I am personally pushing and cajoling my staff to get the most out of what is possible. Contrary to what you have heard, we are not "covering our back side" and are "overly conservative" but are exploring every avenue to trying to increase reserves bookings.

The current total reserves booking potential is, on a P50 basis, 195 to 315 MMB and on a P85 (proved) basis 130-190 MMB. I have asked for another set of eyes of reservoir engineering expertise from SepTAR and SEPCo to ensure that we are not missing anything and literally leave no stone unturned at our next peer review session.

Regards,
Matthias

From:	Varley, Chris CJ SIEP-EPT-DE
To:	Sears, Richard RA SIEP-EPT-DE
CC:	Bichsel, Matthias M SIEP-EPT-D; Knight, Barry BP SIEP-EPT-DE; Varley, Chris CJ SIEP-EPT-DE
BCC:	
Sent Date:	2002-01-23 13:44:34.000
Received Date:	2002-01-23 13:44:34.000
Subject:	FW: Bonga rev 5 Proved Reserves Addition
Attachments:	

Rich,

The latest communication from SNEPCO regarding the Bonga + IFO proven reserves booking.

The work is underway and should be completed tomorrow, to support a 62 MM bbl proven reserves increase.

I'm glad to see this issue is getting turned around and back on track again.

De-booking reserves at Bonga is not only incorrect, but sends all the wrong messages.

Regards

Chris

-----Original Message-----
From: Agrawal, Arun A SNEPCO-SNCP
Sent: Wednesday, January 23, 2002 2:50 AM
To: Varley, Chris SIEP-EPT-DE; Mcfadden, Sean H SNEPCO-SNPE
Cc: Okpere, Kisito O SNEPCO-SND; Lewis, Keith SEPI-EPG; Birch, Roger R SNEPCO-SNAM; Distel, Matthieu J SNEPCO-SNIM; Uzoh, Ojay SIEP-; Asanga, Ekong J SPDC-DTW-ITS; Knight, Barry SIEP-EPT-DE
Subject: RE: Bonga rev 5 Proved Reserves Addition

Gents,

Thanks for your email and the efforts.

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1. You are right on the expectation increase (576 to 689/698), but this is immaterial.

SMJ00029692

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2. Your explanation on the proved reserves is the important one (803 to 865). We will wait for the forecast and associated project data. The ARPR would require re-submission.

3. Ekong - if you are getting this email, then please revert with your availability! If this does not work out, then we will try our best in SNCP to crack through the spreadsheet.

Regards,
Arun

-----Original Message-----
From: Varley, Chris CJ SIEP-EPT-DE
Sent: Tuesday, January 22, 2002 6:24 PM
To: Agrawal, Arun A SNEPCO-SNCP; Mcfadden, Sean H SNEPCO-SNPE
Cc: Okpere, Kisito O SNEPCO-SND; Lewis, Keith K SEPI-EPG; Birch, Roger R SNEPCO-SNAM; Distel, Matthieu J SNEPCO-SNIM; Uzoh, Ojay SIEP; Asanga, Ekong J SPDC-DTW-ITS; Knight, Barry BP SIEP-EPT-DE
Subject: RE: Bonga rev 5 Proved Reserves Addition

Arun,

We had a lot of discussion here yesterday and this morning on the Bonga forecast which was used for the proved reseves submission looking at ways to try and improve it. Hence the delay in replying to your mail. See answers to your questions below.

SEAN
-----Original Message-----
From: Agrawal, Arun A SNEPCO-SNCP
Sent: Monday, January 21, 2002 11:48 AM
To: Varley, Chris SIEP-EPT-DE; Mcfadden, Sean H SNEPCO-SNPE
Cc: Okpere, Kisito O SNEPCO-SND; Lewis, Keith SEPI-EPG; Birch, Roger R SNEPCO-SNAM; Distel, Matthieu J SNEPCO-SNIM; Uzoh, Ojay SIEP-
Subject: Bonga rev 5 Proved Reserves Addition
Importance: High

Chris (please try to get hold of Sean McFadden as well),

First of all, a happy new year!

We have a rather urgent situation wrt SNEPCO proved reserves increase for 2001 (working interest share, not entitlement). As you are aware, the Bonga SW proved reserves are not accepted. We would like to get a feel for the additional proved reserves due to Bonga rev 5 and at least book these.

Q1. (For Sean) - did the ARPR submission already address this addition? There is a comment somewhere in the ARPR, but not entirely clear.
Yes it did.
The P85 technical reserves for Bonga (Total of Bonga Main +IFO) increased from 803 MMbo to 865 MMbo. However the forecast that was used to calculate the entitlement share placed some of the reserves outside the 20 year license period by honouring all the current system constraints. This lead to the small reduction in entitlement share that we see in the reserves submission. There was also a change in the project start date (from April 2003 to 1/1/2004) which had an impact on the reserves within the license period. We have had a look at this here this morning with the BIST team and have developed an optimised case which brings most of the reserves within the license period but requires an upgrade of the waterinjection facilities in 2012. A forecast for this case + cost profile will be ready on Thursday. If we want to go ahead with this it will potentially increase the proven reserves by 62 MMbo. I will be in the office on Thursday and if you can run the economics straight away we can make an update to the submission by the end of the week. We need to also mobilise Ekong or OJ (see below).

Q2. I have received a project sheet from Matt covering Bonga rev5. This shows a total production of 698MMbbl (opposed to 576 we used to have earlier with rev 4). Is this the new proven number? Please confirm. If so, then I can make the rest of the calculations. If not, then can you please advise on this.
I think you are talking about the expectation reserves from the Bonga Main project which increased from 579 MMbo to 689 MMbo.

3. (Sean) If indeed, we have 698 as the new Bonga proved reserves, then SNEPCO must submit an update of the ARPR to take care of this situation and also to de-book BSW. Please see how this would be resourced.
This would either have to be done by Ekong or OJ as they are the only ones familiar with the submission workbook. Can someone there check on Ekong's availability on Thurs and Friday.

Thanks for your help in the above.

Regards,

Arun Agrawal
Portfolio Development
Shell Nigeria Exploration & Production Co. Ltd.,
SNCP, Lagos, Nigeria
Phone: +234-1-2601600 ext. 62040
Fax : +234-1-2637165
email: Arun.A.Agrawal@snepco.shell.com

Unknown

From: Brass, Lorin LL SIEP-EPB
Sent: 20 February 2002 07:02
To: Gardy, Dominique D SIEP-EPF; Cook, Linda LZ SIG-GP; Megat, Zaharuddin Z SEPI-EPM; Warren, Tim T SEPI-EPA; Sprague, Bob RM SI-SEPI-EPN; Ward, Brian BJ SEPI-EPG; Darley, John J SIEP-EPT; Bichsel, Matthias M SIEP-EPX; Dubnicki, Carol C SIEP-EP-HR; Van De Vijver, Walter SI-MGDWV
Subject: Note For Information - Reserves - CMD - February 2002

Excom,

The following was the NFI to CMD regarding our Reserves situation. I should've put in Excom preread for last Monday but forgot. At the end are some of the "action items" identified, but clearly there are more.

CMD_NFI_FINAL1_RRR.ZIP

CMD note tachments final.ZIP

EXHIBIT
Bichsel / 9
10/31/06
GAIL F. SCHORR, C.S.R., C.R.R.

VIJVER 0616

V00230616

Note For Information
CMD 11th February 2002
EP Hydrocarbon Resources Update 1/2002

This note summarises the end 2001 Group resources situation, cleared by external audit, and in part reported in the Q4'01 and FY'01 press release. All numbers include the effects of A&D activities unless otherwise indicated.

Summary

The total barrel of oil equivalent proved hydrocarbon reserves replacement ratio (RRR) for 2001 was **74%** (52% excluding A&D), leading to a proved RRR three year rolling average, including AOSP additions (mining reserves) in 1999 of **81%**, 101% excluding A&D). The 2001 RRR is below the results quoted by our main competitors (BP 191%, XOM 110%), and highlights a portfolio that is under-performing in terms of adding reserves through exploration and maturing existing scope. Future RRR performance over the plan period relies on the delivery of 'big ticket' bookings, *e.g.* Kudu, Sakhalin LNG and Kashagan.

Our overall resource base contains some 20 bln boe of proved reserves (c.f BP 16 bln boe, XOM 22 bln boe) , some 13 bln boe of expectation reserves (of which some 8 bln boe currently fall outside of license expiry), some 17 bln boe of discovered Scope for Recovery (SFR). Our total discovered resources base is thus ca. 50 bln boe (c.f. XOM 70 bln boe) and additionally we have some some 27 bln boe of undiscovered SFR. Together with any volumes resulting from new exploration licenses and acquisitions these volumes represent a significant opportunity to increase our proved reserves replacement performance and the EP organization is being geared up to tackle each and every element.

Reserves and Resources

2001 Actual Additions (See Table 1)

The Group proved reserves base at end 2001 is 19.1 bln boe (19.7 incl. AOSP) and remains split at 50:50 oil/gas. The 2001 proved RRR of 74% amounts to a reserves addition of 1020 mln boe, which in Figure 1 is broken out by type of revision;

- 360 mln boe of Discoveries & Extensions, mainly in USA, UK and Brunei
- 350 mln boe of Revisions & Improved Recovery, mainly Netherlands, Denmark and Sakhalin offsetting negatives from Canada (50 mln boe based on field performance), New Zealand (50 mln boe based on studies on Maui field) and Oman Gisco (110 mln boe as a consequence of the renegotiation of the GISCO contract and acceleration of repayments)
- 310 mln boe of Acquisitions & Divestments, mainly Fletcher and Pinedale.

The proved **oil** RRR is 65%, taking the 3 year average to 102% including mining reserves and 77% without, and the proved **gas** RRR is 86% contributing to a 3 year

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average of some 50%. During 2001 there were no changes to the reserves for AOSP. Including AOSP, the three year average proved **boe** RRR is 81% (101% excl A&D) and excluding AOSP, the equivalent numbers are 67% (86%).

The Total Resource base (the sum of expectation reserves and commercial discovered SFR) has increased by 2.7 bln boe to 49.4 bln boe (see Table 2); this includes a 1.3 bln boe addition from Venezuela Urdaneta West which falls outside of the current licence period. It should be further noted that total resources include some 1.1 bln boe from the consolidation of Sakhalin.

The Unit Finding and Development Cost (UFDC) for 2001 defined as the exploration and development cost incurred ($6.1bln) divided by Group oil and gas additions, excl. purchases and sales, (0.73 bln boe) now stands at $8.3/boe for the year 2001, and $4.8/boe on a 3-year rolling average base (up from $3.50/boe in 2000, see Figure 2). An increase in UFDC was forecast at the time of developing the Business Plan in 2000 when it was recognised that there would be a lag between stepping up capital spending and the increase in subsequent reserves bookings. Together with the lower than planned bookings in 2001 this impacts directly on our competitive position on this indicator where, up until this year, we were the leading player. The Unit Finding Cost (funding share) is $1.0/boe yielding a 3-year average of $0.62/boe, reflecting a continuation of an improving trend. Unit Finding Costs on a proved reserves additions basis are $ 3.8/boe.

Comparison versus Business Plan

The EP scorecard target for 2001 was 80% (excl. A&D and strategic options), or 1120 mln boe at target production. The actual addition excl. A&D and strategic options was 710 mln boe, or 52% RRR at actual production. The main contributors to the lower than planned RRR are detailed in Figure 3.

None of the strategic options associated with reserves bookings in 2001 materialised, *e.g.* Saudi Gas, T2T, Salym, Bangestan, China, Libya.

Total SFR maturation to expectation reserves over 2001 was 0.92 bln boe or 2.2% of the commercial SFR.

Exposures

Securities and Exchange Commission (SEC) Alignment

Recently the SEC issued clarifications that make it apparent that the Group guidelines for booking Proved Reserves are no longer fully aligned with the SEC rules. This may expose some 1,000 mln boe of legacy reserves bookings (*e.g.* Gorgon, Ormen Lange, Angola and Waddenzee) where potential environmental, political or commercial 'showstoppers' exist.

End of License

In Oman PDO, Abu Dhabi and Nigeria SPDC (18% of EP's current production) no further proved reserves can be booked since it is no longer 'reasonably certain' that the proved reserves will be produced within license. The overall exposure should the OU business plans not transpire is 1,300 mln boe. Work has begun to address this important issue.

Appraisal

Historical Perspective

In 1999 - 2001 the proved reserves additions have not fully replaced production and the 2001 3-year rolling average RRR's no longer benefit from the recent 'bookings rich' period of 1996-98 (see Figures 4/5, reflecting performance with and without the effects of A&D and showing the impact of AOSP). Over that period, substantial proved reserves additions were realised from major discoveries (Australia,Gorgon, SNEPCo (Bonga), total 1.2bln boe), major revisions (Venezuela 0.3mln boe) and new business (Oman GISCO, 0.4bln boe). In addition, in 1998 significant bookings were made by bringing proved reserves closer to expectation in mature fields (total 1.2 bln boe) - this action brought us to industry standard from a much more conservative position.

Competitive Landscape

The Group RRR of 74% is low in comparison with competitors who all posted RRRs in excess of 100% (Figure 6). The competitors are able to draw benefit from portfolios which, following the rounds of industry rationalisation, appear to offer wider choices in key exploration and scope maturation targets.

2002 and Beyond: Outlook for RRR

The outlook for Group reserves replacement in 2002 and beyond remains challenging (see Figure 7);

- We can expect fewer additions through the base plan, because of OUs affected by 'end of license', OUs with limited remaining exploration potential and the challenge to find ways to increase expectation reserve levels in mature fields.
- And an increased reliance on strategic options and other big-ticket bookings. Control on timing of these bookings is an issue, as they are commonly occur in frontier areas (Kashagan), face fierce competition for markets (T4/T5, Sakhalin LNG), rely on emerging technologies (Kudu, SURE), or are in areas with limited control (Saudi, Whale). The subsequent reserves booking profile may be "lumpier" than in the past and these major bookings will require additional steer to ensure delivery of new reserves within the tighter SEC framework.

Actions taken

In Q4 2001 and Q1 2002 a number of actions have been initiated to address this emerging issue;

- even greater focus is being placed on succeeding in exploration, a key challenge is to focus on the maturation of our 27 bln boe of undiscovered scope for recovery
- similarly EP is refocusing the organization to reinstate Technical and Operational Excellence across the whole of its core operations; hydrocarbon resources maturation is a key element of this drive
- EP is looking again at the opportunities to accelerate the maturation of our 17 bln boe of discovered scope for recovery and specifically with GP looking at the opportunities to monetize gas SFR

- Stepping up the drive to extend licenses e.g. in Abu Dhabi, Nigeria, Brunei, Oman and open up the opportunity to move the 8 bln boe expectation reserves which currently fall outside of license expiry back into our within license resource base and ultimately move to proved reserves.

Conclusion

Our reserves replacement performance over the past few years clearly illustrates the emerging problems with our resource base and is becoming a source of competitive disadvantage. Over the plan period, the challenge will be to secure sufficient volumes from major bookings to supplement additions from a base plan portfolio and ensure that existing exposures, if they transpire, are adequately offset.

However, we do have some nearly 50 bln boe of SFR and expectation reserves currently outwith license in our overall resource base which presents a significant opportunity. We are refocusing our efforts on exploration and will pursue more aggressively the transfer from SFR to reserves but this will not be sufficient to reverse the trends – success in major strategic options in MRH's or a major acquisition is necessary.

Table 1 : Summary of 2001 Reserves/Resources Replacement

proved RRR	Production	1 year 2001				3 year 1999-2001			
		Incl A&D		Excl A&D		Incl A&D		Excl A&D	
		Incl AOSP	Excl AOSP	Incl AOSP	Excl AOSP	Incl AOSP	Excl AOSP	Incl AOSP	Excl AOSP
Oil/NGL	**0.81**	65%	65%	58%	58%	102%	77%	130%	106%
Gas	**0.57**	86%	86%	42%	42%	50%	50%	55%	55%
Total BOE	**1.38**	**74%**	74%	**52%**	52%	81%	67%	**101%**	86%

Production	2002 Target	
	Incl A&D	Excl A&D
0.83	91%	49%
0.58	113%	69%
1.41	100%	57%

Additions bln boe	Production	1 year 2001				3 year 1999-2001			
		Incl A&D		Excl A&D		Incl A&D		Excl A&D	
		Incl AOSP	Excl AOSP	Incl AOSP	Excl AOSP	Incl AOSP	Excl AOSP	Incl AOSP	Excl AOSP
Oil/NGL	**0.81**	0.53	0.53	0.47	0.47	0.82	0.63	1.05	0.86
Gas	**0.57**	0.49	0.49	0.24	0.24	0.28	0.28	0.31	0.31
Total BOE	**1.38**	**1.02**	1.02	**0.72**	0.72	1.12	0.92	**1.39**	1.18

Production	2002 Target	
	Incl A&D	Excl A&D
0.83	0.76	0.41
0.58	0.66	0.40
1.41	1.42	0.81

Resources (bln boe)	2000	2001	Delta
SFR (com discovered)	14.1	16.7	
Expectation (incl proved)	32.6	32.7	
Total	46.7	49.4	2.74
less Urdaneta West (license)			1.28
Resources added (net)			1.46
Production			1.38
Resources added (gross)			2.84

Reserves (bln boe)		Proved		Developed	
Balance 31.12.2000			20.1		9.0
Additions	*Extensions*	0.36			
	Revisions	0.35		0.17	
	A&D	0.31			
	Transfer to Dev			1.02	
			1.02		1.19
Production			-1.38		-1.38
Balance 31.12.2001			19.7		8.8

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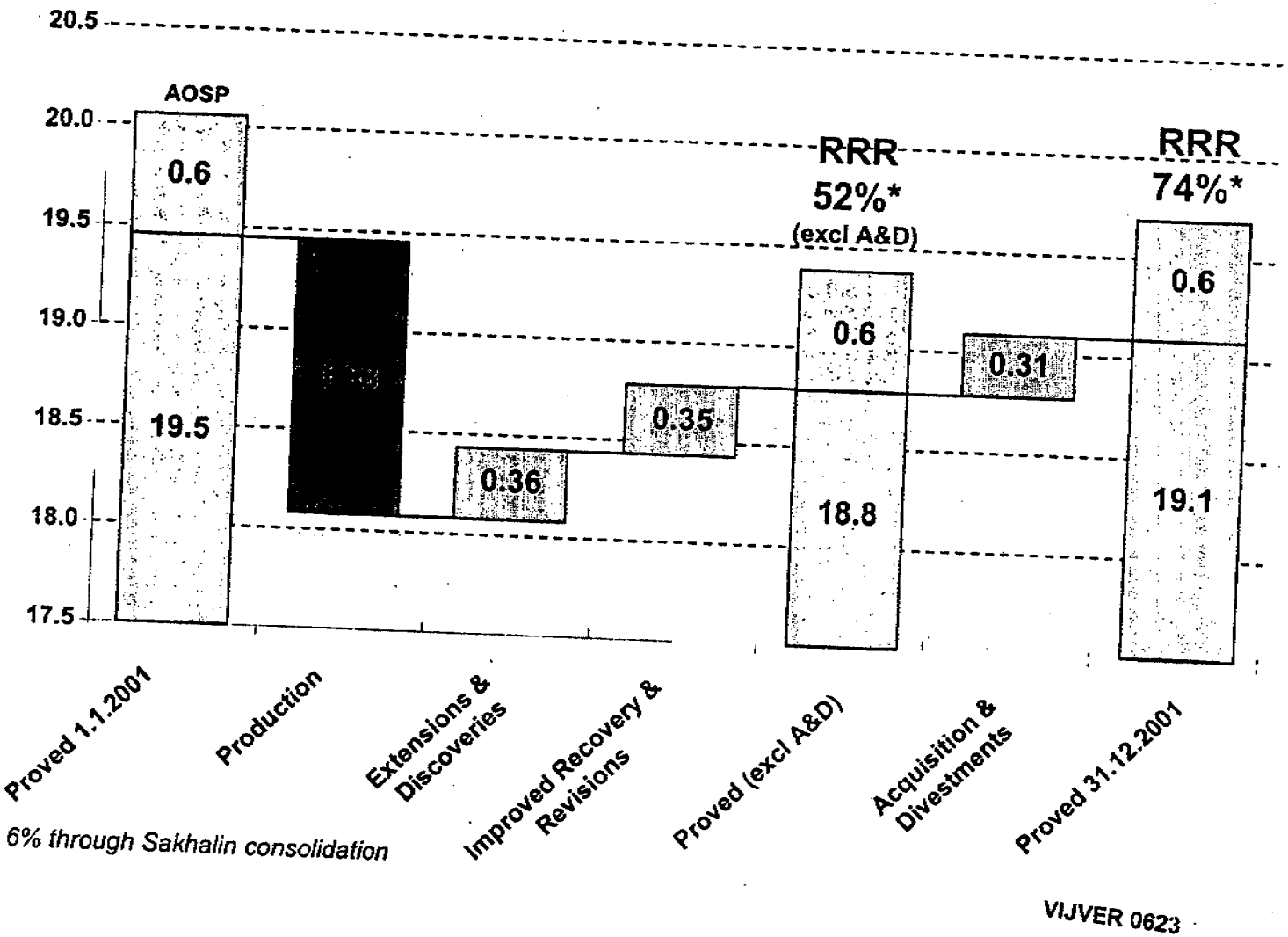
Table 2: Total Resource Base as at 31.12.01

bln boe	Oil&NGL	Gas	Total
Proved Developed	*4.3*	*4.4*	*8.8*
Proved Undeveloped	*5.7*	*5.2*	*10.9*
Total Proved	**10.1**	**9.6**	**19.7**
Expectation minus Proved	*6.5*	*6.2*	*12.7*
Total Expectation	**16.9**	**15.8**	**32.7**
(of which in license)	*(12.7)*	*(12.0)*	*(24.7)*
SFR			
Proved techniques	*7.9*	*5.9*	*13.8*
Unproved techniques	*2.7*	*0.2*	*2.9*
Total Resources	**27.5**	**21.9**	**49.4**
Undiscovered	*15.6*	*11.9*	*27.5*
Non commercial	*2.4*	*2.6*	*5.0*
Total Volume	**45.5**	**36.4**	**81.9**

Table 2 *Total resource base at 1.1.2002. AOSP Mining reserves are included*

Figure 1: Total BOE Proved Reserves 2001



*Including 6% through Sakhalin consolidation

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Figure 2 : Finding and Development Cost

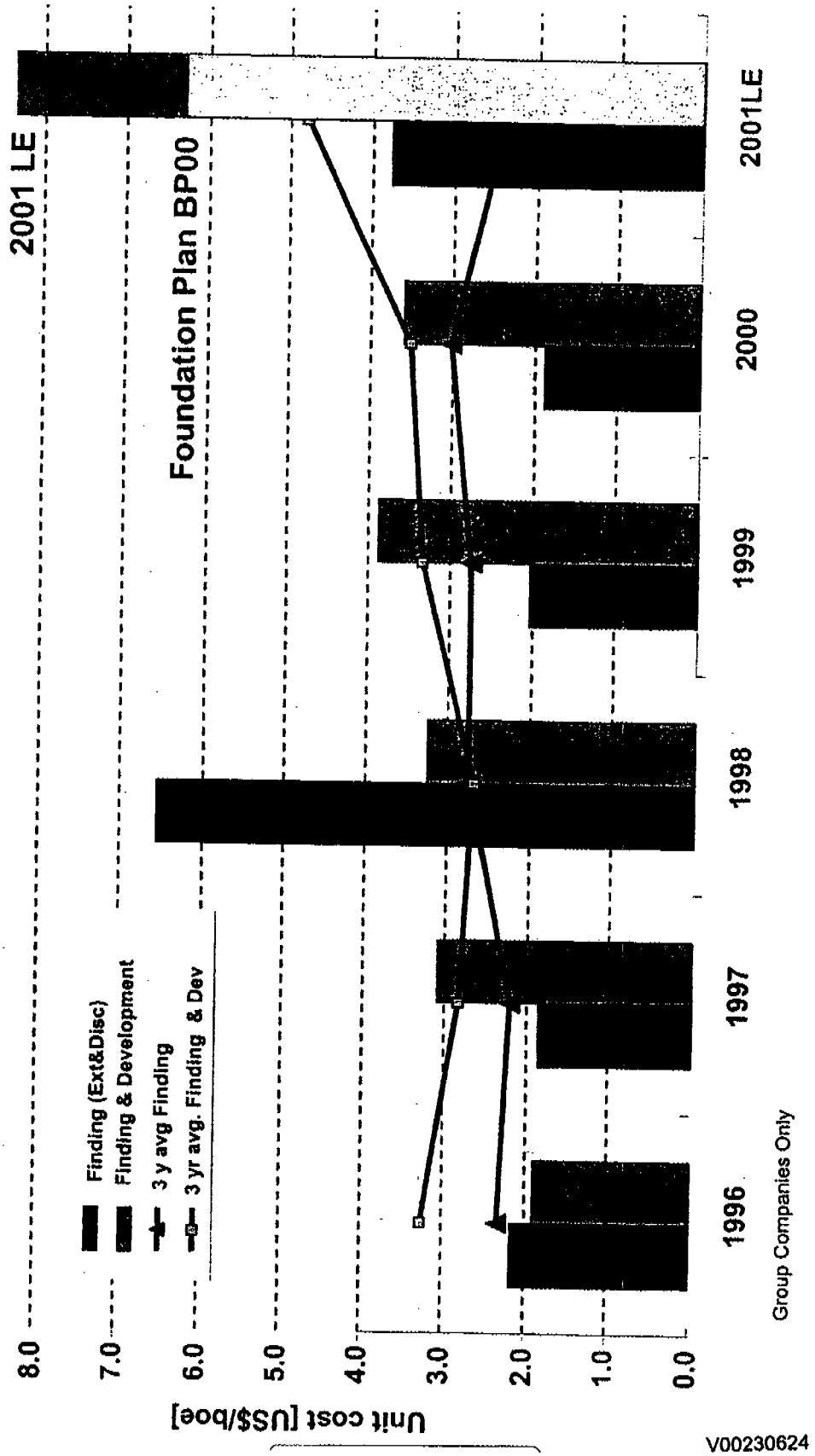

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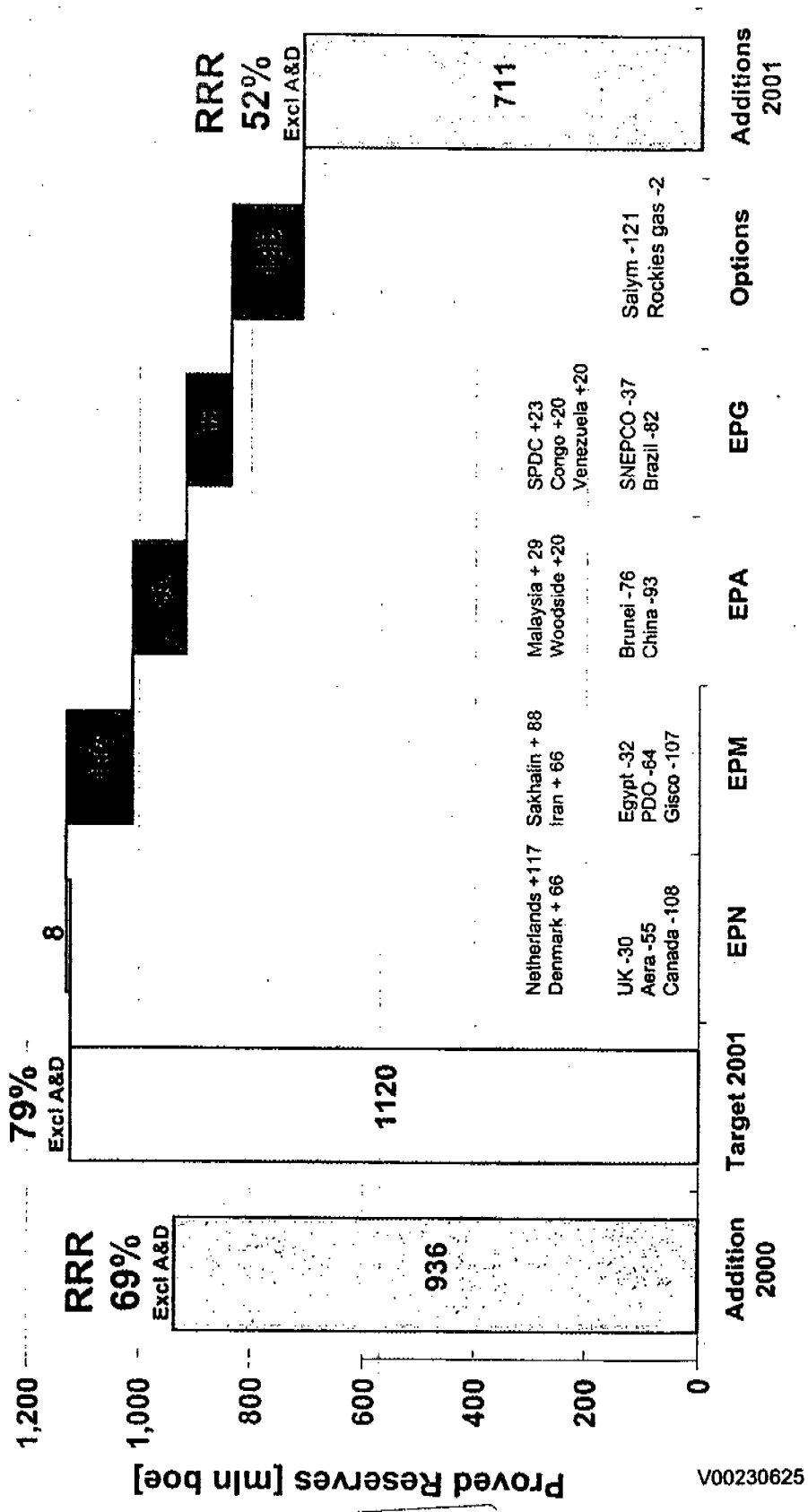
Figure 3 : 2001 Reserves Actual versus Target



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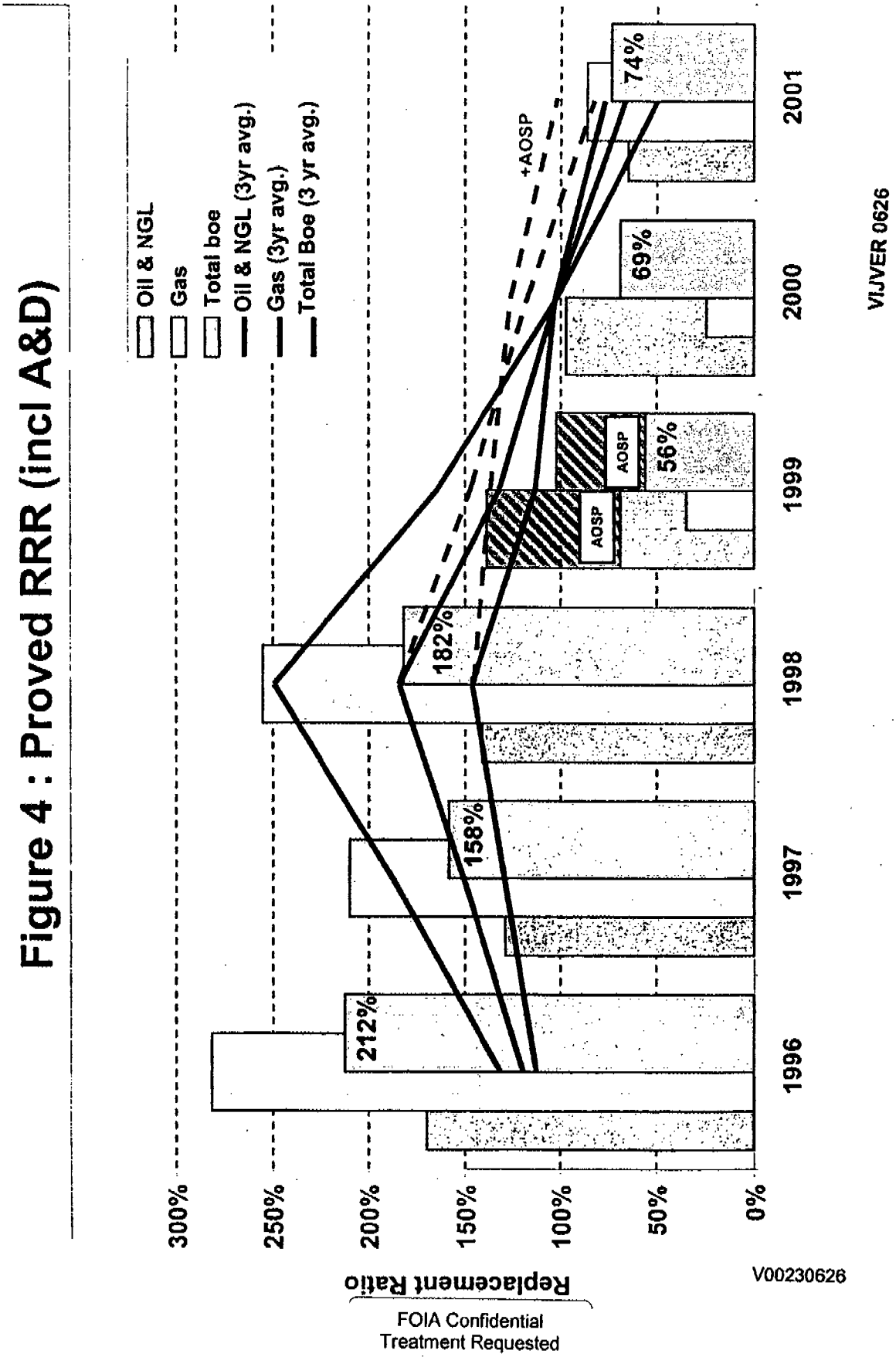
Figure 4 : Proved RRR (incl A&D)
Oil & NGL
Gas
Total boe
Oil & NGL (3yr avg.)
Gas (3yr avg.)
Total Boe (3 yr avg.)
+AOSP
AOSP
AOSP
74%
69%
56%
182%
158%
212%
1996
1997
1998
1999
2000
2001
300%
250%
200%
150%
100%
50%
0%
Replacement Ratio
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Figure 5 : Proved RRR (excl. A&D)

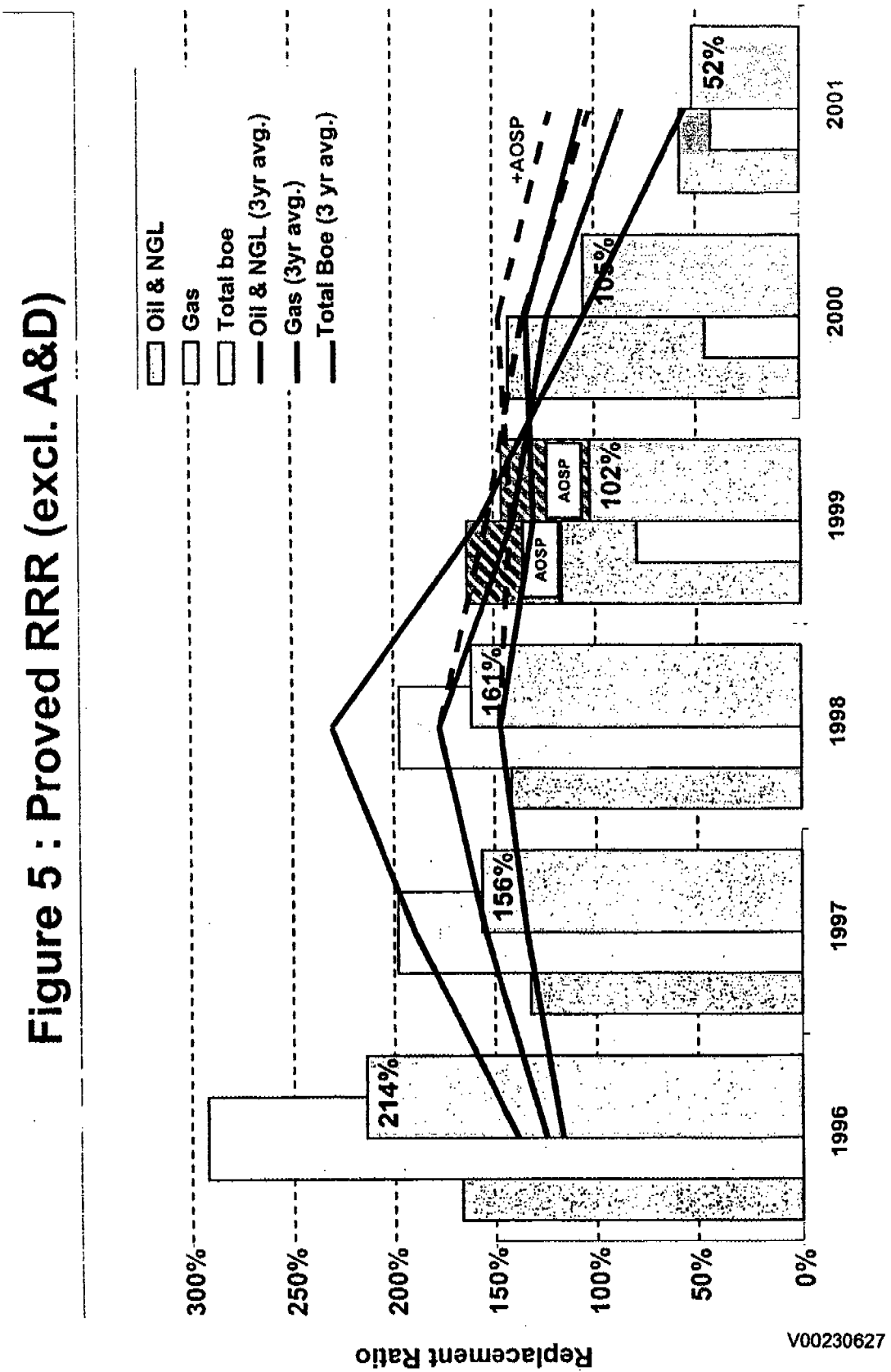

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Figure 6 : Majors Proved Reserves Replacement Ratio [boe]

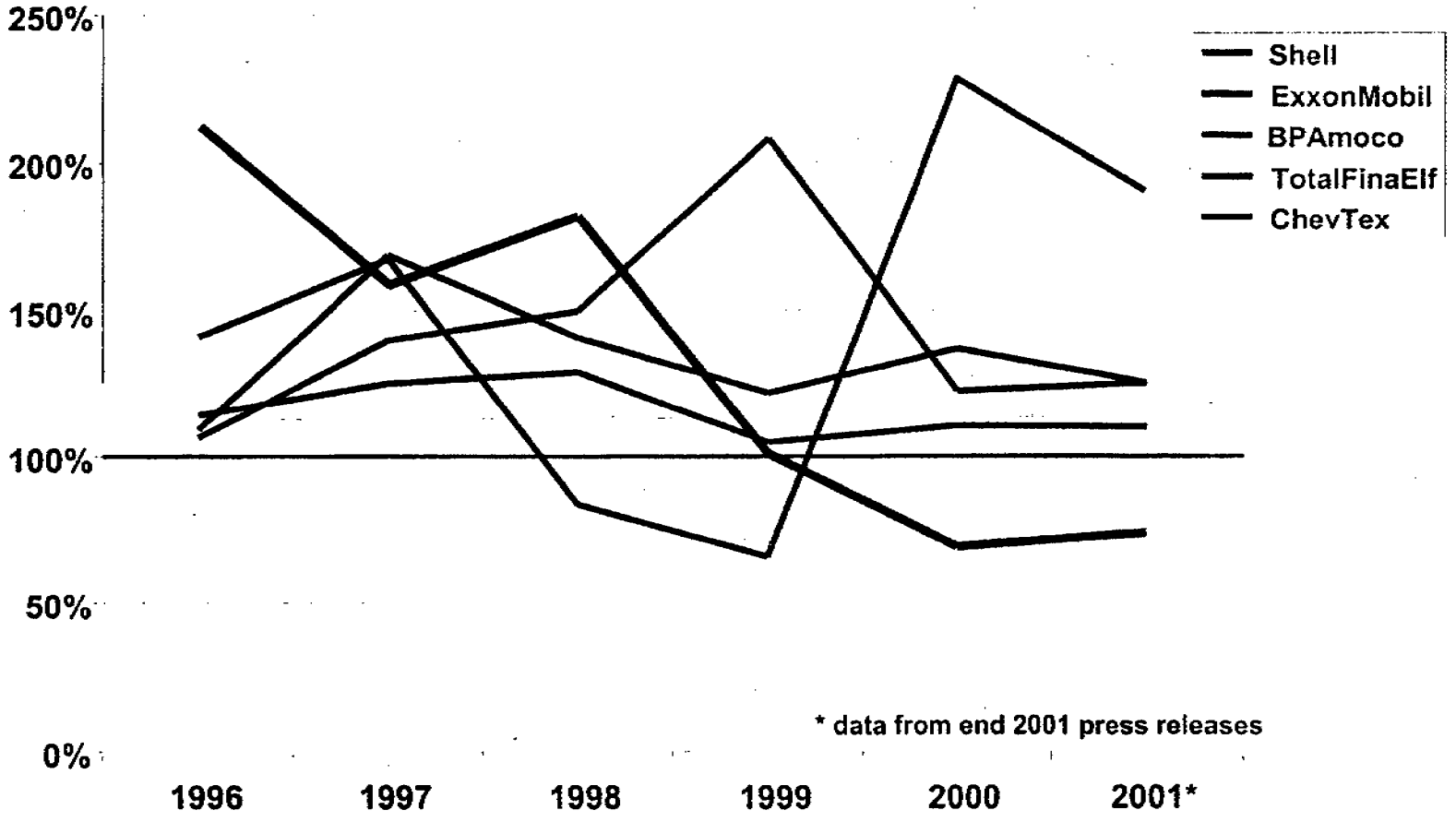
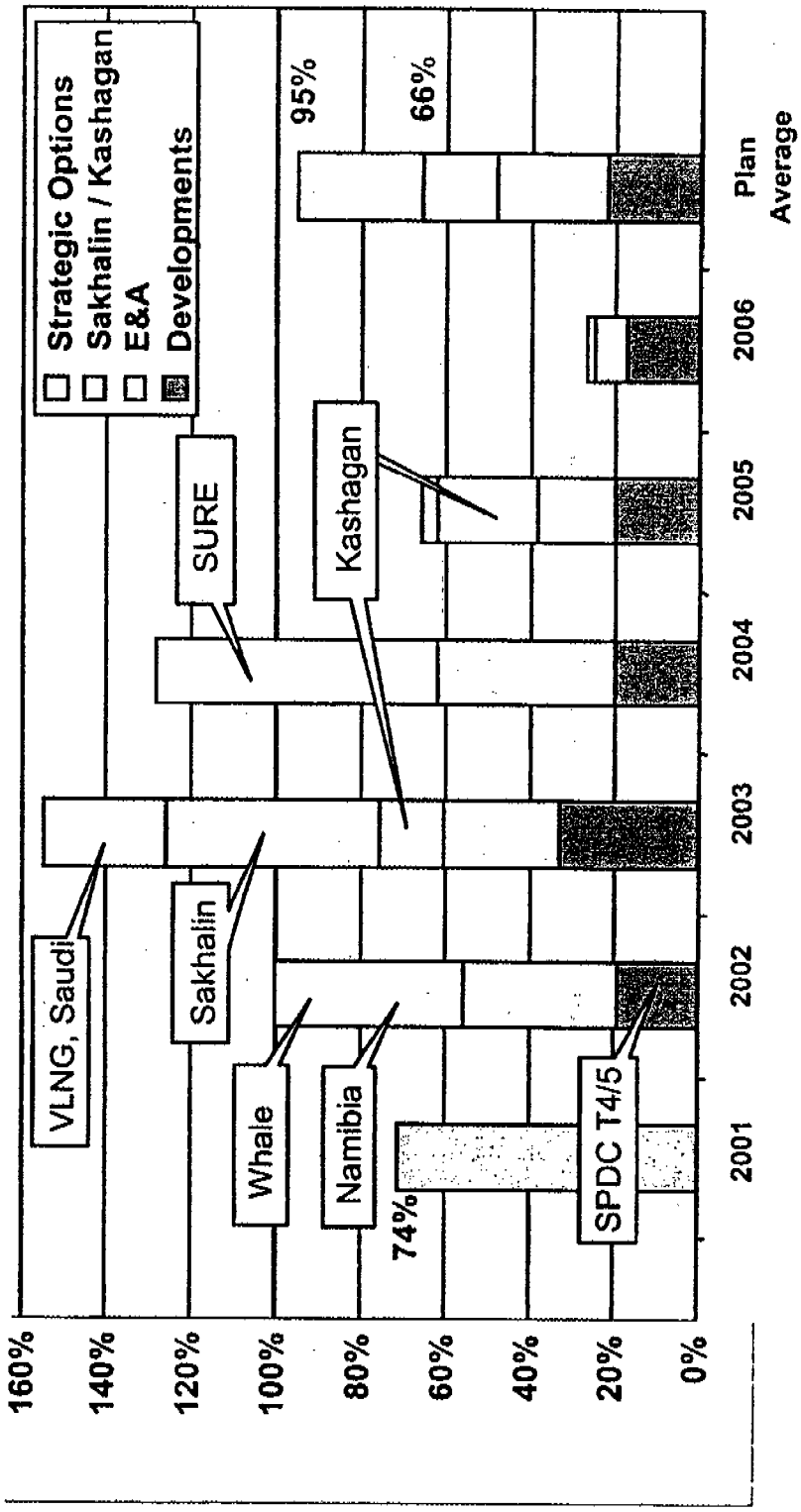


Figure 7 : BP'01 Planned Reserves Replacement



VIJVER 0629

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Darley, John J SIEP-EPT

From: Coopman, Frank F SIEP-EPF
Sent: 02 December 2003 07:54
To: Bell, John J SIEP-EPS; Bichsel, Matthias M SIEP-EPX; Darley, John J SIEP-EPT
Cc: Pay, John JR SIEP-EPS-P
Subject: proved reserves

Please find attached our draft note which is now with Walter. No comments as yet.
My functional boss is not happy.

Script for Walter on the prove...

Frank Coopman
Chief Financial Officer for EP
Shell International Exploration and Production B.V.
PO Box 60, 2280 AB Rijswijk ZH, The Netherlands

Tel: +31 70 447 4303 **Fax:** +31 70 447 5959
Email: Frank.Coopman@shell.com
Internet: http://www.shell.com/eandp-en

Script for Walter on the proved reserves position

Facts

1. Recent (October –November) audit reports and completion of reserves studies concerning the proved reserves positions as per year end 2002 for SPDC and PDO Oman tell us that the 31/12/02 proved reserves for those companies were overstated by approximately 1.3 bln boe.

2. Correspondence with the SEC in 2003 (last letter received in September) on the topic of the LKH issue leaves us with the message from the SEC to de-book the volumes below the Lowest Known Hydrocarbon logged. These volumes are estimated to be approximately 300 mln boe.

3. The proved reserves bookings as filed in the 2002 20F included a number of items which, while in compliance with our own guidelines at that time, were possibly at odds with the strictest possible interpretation of the SEC guidelines. It was decided to leave them as, in aggregate, they were regarded as immaterial in relation to our total proved reserves position. The largest single position was Gorgon (557 mln boe). All others added up to less than 200 mln boe.

Consistency with previous presentations

The position described above is consistent with an October presentation to the GAC and a related NFI to CMD. What is new are the items under point 1 above, which became known only very recently.

Materiality

With the SPDC and PDO Oman volumes, the total volume not in compliance with SEC guidelines in the proved reserves filing in the 20F as per 31/12/02 has become significant (2.1 bln boe or 11% of the Group's total proved reserves).

The materiality test is whether the total change in reported reserves would be viewed by a reasonable investor as having significantly altered the total investment information available. Applying that parameter, the absolute quantity and the percentage is material.

If a de-booking or restatement was considered, the financial impact thereof is very limited (approximately 40 mln dollars after tax in 2003) and not material in Group (or EP) terms. This is because virtually all volumes to be adjusted are registered as proved undeveloped reserves – this category only rarely drives DD&A.

There is no effect on existing or past reserve addition bonus schemes (in Oman and Nigeria).

Completeness

If we were to de-book /restate points 1 – 3 above, would we then be in full compliance with the SEC guidelines?

There is a possible issue around our Kashagan reserves (380 mln boe). Total is being challenged right now by the SEC to de-book on the grounds of the absence of a government approved development plan.

Both PDO Oman and SPDC will have to further mature field development plans in 2004 to be fully compliant and avoid further adjustments.

Fuel and Flare

All major competitors include fuel and incidental flare in proved gas reserves, with the exception of BP who report on the same "as sold" basis as Shell.

Including fuel and flare would result in approximately 300 mln boe additional reserves as reported at 31.12.2002. However, implementation is not as straightforward as it would at first appear. Inclusion of fuel and flare requires a corresponding Opex charge to be made (at fair market value of the gas consumed), offset by a revenue entry. Consequently, including fuel and flare in any restatement of historically disclosed reserves would also require changes to several financial report line items. Whilst feasible, this would be a major undertaking requiring dedicated study work on the part of every operating company that disclosed production in recent years.

Therefore, it is recommended not to include fuel and flare in the restatement.

Legal Consequences and Required Steps

If and from the time onwards that it is accepted or acknowledged by the management of the issuers (Royal Dutch and STT) that, when applying the SEC rules, the 2002 proved reserves as reported in the Form 20-F are materially wrong, the issuers are under a legal obligation to disclose that information to all investors at the same time and without delay. Not to disclose it would constitute a violation of US securities law and the multiple listing requirements. It would also increase any potential exposure to liability within and outside the US. Note that the reserves information also appears in the non 20-F Annual Reports.

Disclosure cannot await the next Form 20-F 2003 appearing in April 2004. With respect to the 2002 Form 20-F there are two possible approaches to address the previously reported reserves: (i) a stock exchange release stating the key issues on reserves restatement followed by a filing of a restated 2002 Form 20-F as soon as possible thereafter or (ii) the same stock exchange release with the added message that the changes will be reflected in the 2003 Form 20-F and no filing of a restated 2002 Form 20-F. The preference is for the more robust approach in i) as the SEC is likely to request for a restated 2002 Form 20-F and the reliance by investors on an uncorrected 2002 Form 20-F remains an issue.

A significant number of additional measures will be required around a restatement of the 2002 Form 20-F and the previous dissemination of incorrect proved reserves data on Group websites and in other publications. Sox 302 re-certification, Form 6 K filing, consultation with external auditors, communication with the SEC, briefing for analysts etc.

IR issues

The announcement of restating or de-booking the reserves will be a significant negative IR event. We will point out that we did not lose any significant hydrocarbon volumes, as this is basically a re-classification. Our expectation estimate of the total volume of resources will be largely unaffected. Our own strict rules and governance triggered this adjustment. The LKH issue remains controversial in the industry (but rules are rules, etc). The Gorgon development decision is getting closer, as the recent bi –lateral declaration of intent demonstrated.

Frank Coopman
John Pay

1 December 2003

Unknown

From: Van der Laan, Marian M SI-MGDWV/DIRMB on behalf of Van De Vijver, Walter SI-MGDWV
Sent: 26 September 2002 13:32
To: Bichsel, Matthias M SIEP-EPX; Brass, Lorin LL SIEP-EPB; Cook, Linda LZ SIG-GP; Coopman, Frank F SIEP-EPF; 'Darley, John J SIEP-EPT'; Dubnicki, Carol C SIEP-EP-HR; Gardy, Dominique D SEPI-EPA; Megat, Zaharuddin Z SEPI-EPM; Sprague, Bob RM SEPI-EPW; 'Ward, Brian BJ SEPI-EPG'; Van De Vijver, Walter SI-MGDWV
Subject: FW: EP Delivery

Importance: High

Please note that these slides are strictly confidential and therefore, not meant for further distribution.

Regards,

Walter

-----Original Message-----
From: Van der Laan, Marian M SI-MGDWV/DIRMB **On Behalf Of** Van De Vijver, Walter SI-MGDWV
Sent: 26 September 2002 13:00
To: Bichsel, Matthias M SIEP-EPX; Brass, Lorin LL SIEP-EPB; Cook, Linda LZ SIG-GP; Coopman, Frank F SIEP-EPF; Darley, John J SIEP-EPT; Dubnicki, Carol C SIEP-EP-HR; Gardy, Dominique D SEPI-EPA; Megat, Zaharuddin Z SEPI-EPM; Sprague, Bob RM SEPI-EPW; Van De Vijver, Walter SI-MGDWV; Ward, Brian BJ SEPI-EPG
Subject: EP Delivery

Attached you will find the package I had for the CMD on 24th September.

EP Delivery CMD 24-09-2002.ZIP...

Regards,
Walter

Incoming mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.567 / Virus Database: 358 - Release Date: 24/01/2004

EXHIBIT
Bichsel 11
10/3/06
GAIL F. SCHORR, C.S.R., C.R.R.

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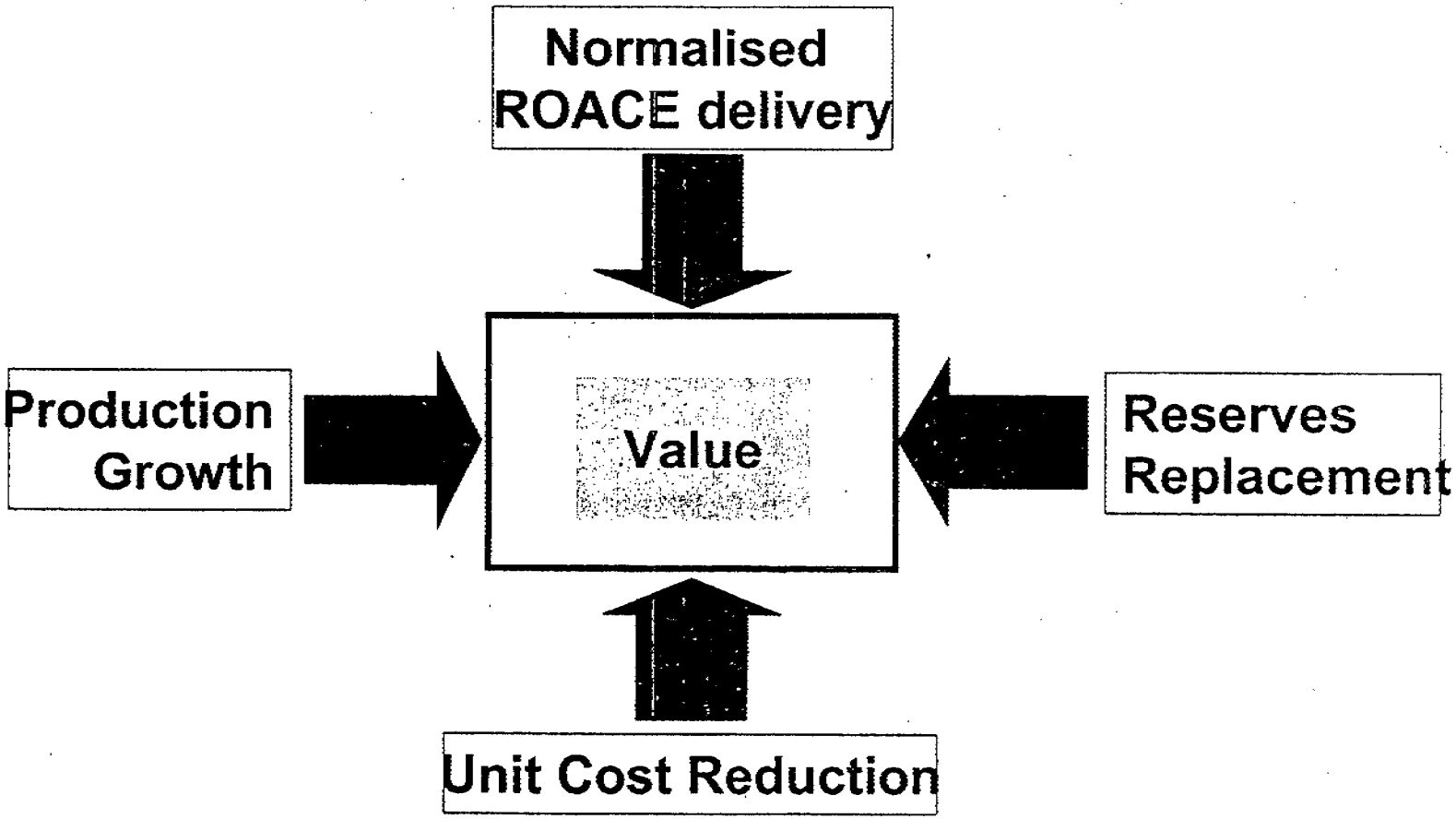
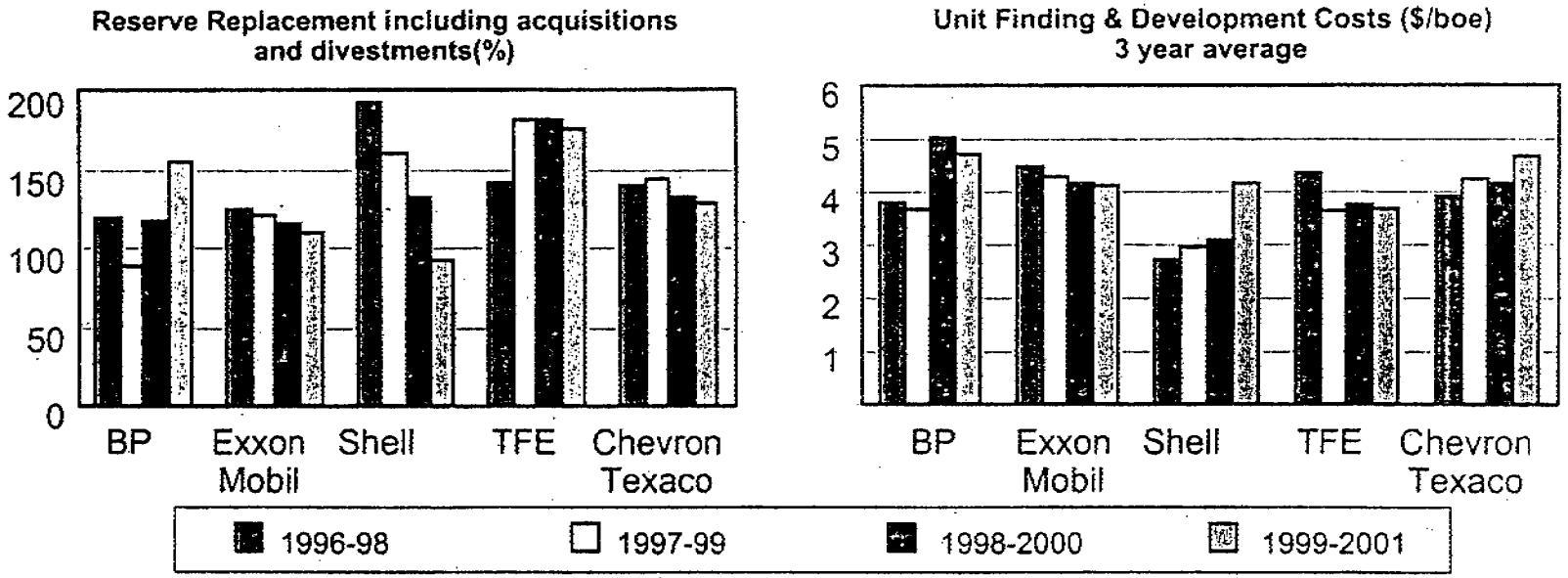
The EP Dilemma: Caught in the box?



VIJVER 1036

Reserves Replacement & Unit F&D Costs

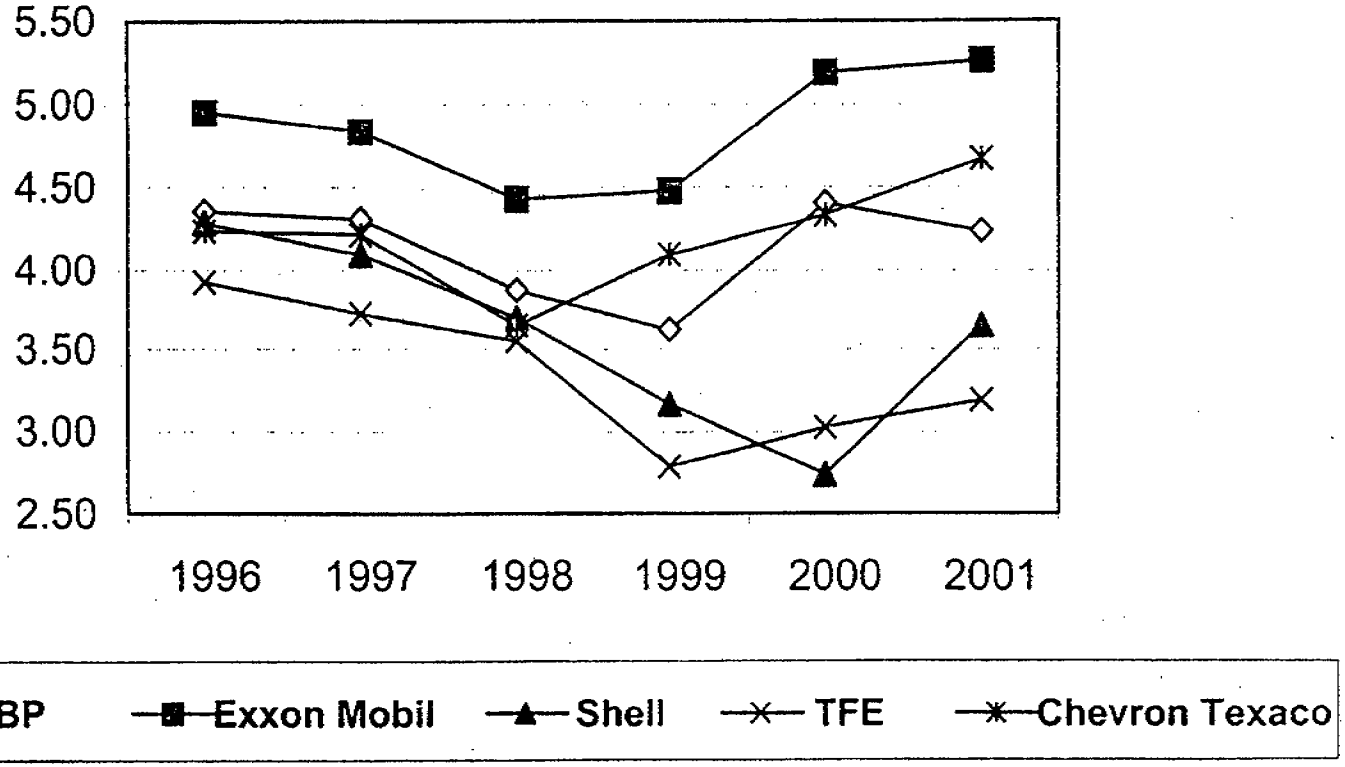
Shell is losing its historical edge



Source: Prudential July 2002

Unit Adjusted Production Costs Worldwide

Shell is # 2 after TFE.



Source: Prudential July 2002