

Key Projects

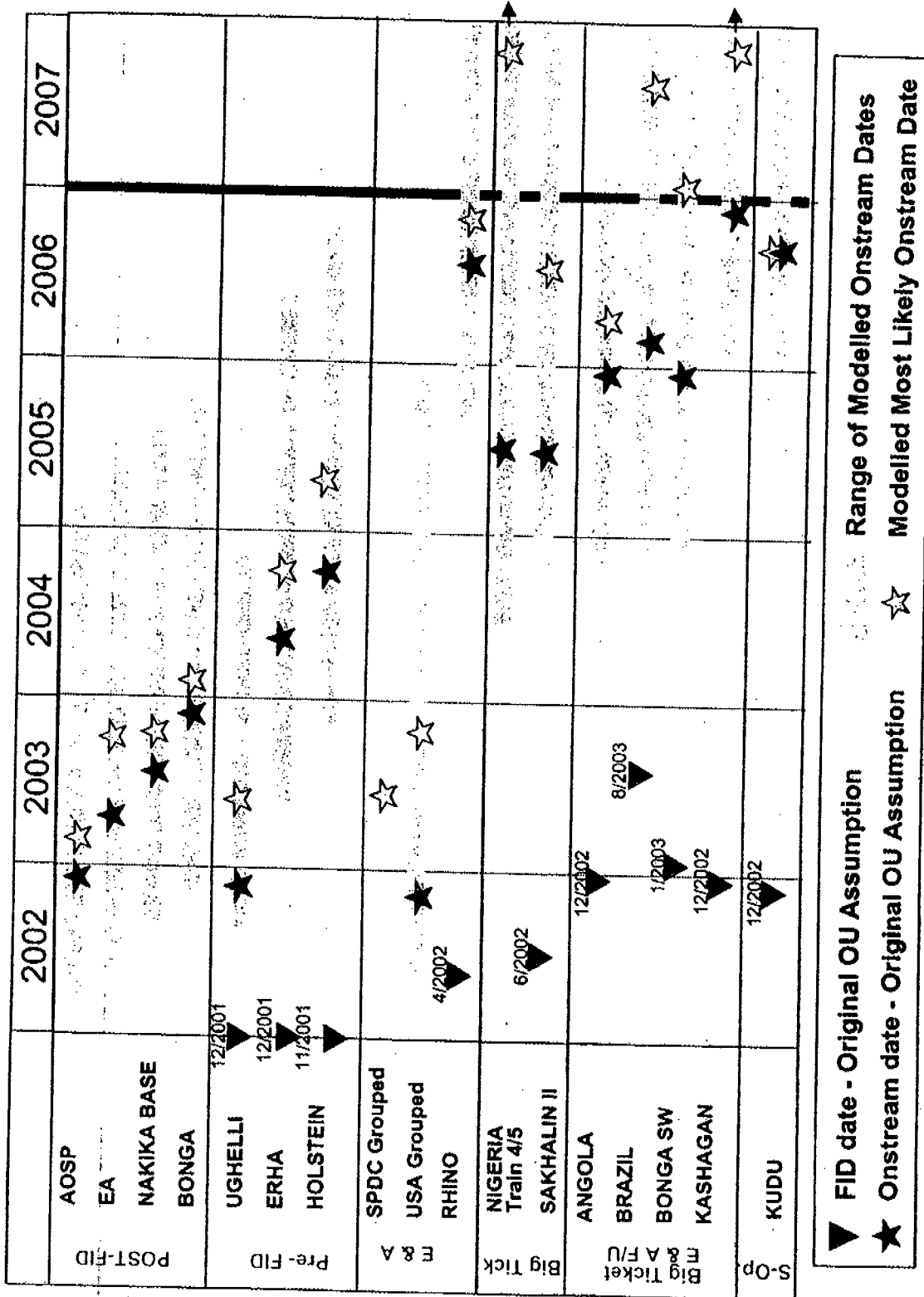
	Original FID	Modelled Capex '02-'06	Modelled VIR-MID	Modelled Onstr. Year	Prod. kboe/d '02-'06 avg.
POST-FID	AOSP	416		2003	76
	90 EA	455	0.45	2003	65
	NAKIKA BASE	438	0.67	2003	43
	BONGA	920	0.41	2004	68
Pre-FID	49 UGHELLI	192	0.79	2003	22
	ERHA	932	0.7	2004	40
	HOLSTEIN PHASE 1	433	0.52	2005	20
Big Tick	NIGERIA Train 4/5	55	0.59	2005	2
	SAKHALIN	1821	0.54	2006	1
E & A Follow-Up	ANGOLA	768	0.52	2006	15
	BONGA SW	684	0.37	2006	1
	BRAZIL	672	0.77	2007	0
	KASHAGAN	592	0.65	2006	2
	RHINO	169	0.41	2006	6
	SPDC	182	0.85	2003	16
	USA	699	0.4-0.6	2003	43
Str.-Op.	KUDU	508	0.56	2006	5

Sensitivities - ROACE Impact @ \$14

	2002	2003	2004	2005	2006
Operational/Project Performance Improvement					
No Mgmt. Adjustment	0.3%	0.8%	1.1%	1.0%	1.5%
Production gain of 1%					
Exploration Improvement					
No Undesired Exploration	0.4%	0.3%	0.2%	0.2%	0.2%
Reduced USA Exploration (\$100 mln pa reduction)	0.2%	0.2%	0.2%	0.1%	0.0%
Portfolio Management/Big Tickets					
No Brazil	0.2%	0.2%	0.2%	0.3%	0.5%
No Angola	0.2%	0.2%	0.2%	0.3%	0%
Further Dil. Of Sakhalin by 30%	0.1%	0%	0.1%	0.1%	0.1%
Defer Pilton/Luskoye by 2 yrs	0.3%	0%	-0.2%	0%	0%

N.B. There will be loss of production & ROACE from 2007 by dropping these projects

Major Project Assumptions



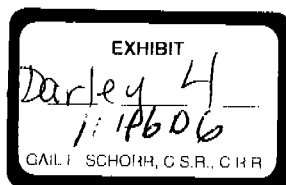
Deepwater Steering Council Meeting
5 October 2001
8-9 Houston Time/3-4 Hague Time
Agenda

Attendees: Mssrs: Lorin Brass, Heinz Rothermund, John Darley – Hague, C23.1B35

Mssr: Matthias Bichsel; Mdm: Lori Priess – Houston, Wck 1454

Mdm: Fran Lohr – via telephone

Item	Lead	Time	Purpose
Agenda	Lorin	5 min	Agreement
General Resourcing	John/Matthias	15 min	Discussion
Issues – Q&A			
General Focus of Seahorse including items not covered in Business Plan	Lorin	30 min	Discussion/Support
Other : Next Meeting / Close	Lorin	10 min	Discussion/Decision



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RJW00650711

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RJW00650712

Resourcing 2002 Deepwater Activities

SDS Resourcing Models

	2001 Level		2002 BP "50/50"		2002 BP "10/90"	
Subsurface	195	10*	214	16	225	16
Well Delivery	84**		94		104	
Engineering	260	125	290	130	320	140
	539	125	598	146	649	156
	664		744		805	

Requires regrets

Examples (indicative):

- Bonga SW
- Angola Block 34
- Brazil BS-4/BC-2
- Morocco Rimella
- Regional Studies
- Angola/Congo UUD

Allows execution
of DW business
plan

Allows optional projects
(unfirm in SDS Plan).

Examples:

- GoM Regional Study
- Great White Follow-up
- OPL 219 Success
- Rhino Success
- Brunei EEZ Success

* Shell Staff / Contract Staff

** includes operations staff assigned to OU's

Resourcing 2002 DW Activities I

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RJW00650714

Project "Seahorse" Renewal

5 October 2001 Update

(Updates in Blue)

BS-4-OP
BS-2 EIC
Working

Traditional Operator/Non-Operator Enhancements:

- BC-10 may be best monetized by assigning our equity to Petrobras while retaining an over-riding production royalty with incentives for early production
- Unlocking oil and monetizing gas in West Africa utilizing FONG/FLNG (significant potential LNG business of 20-30 mtpa) – EP/GP have agreed to pursuing the following top projects, FLNG/FONG in Nigeria, OPL 219, FLNG in Namibia, acquiring Alba Field in Equatorial Guinea (provides entry point to significant deepwater opportunities in Blocks C & E among others) Update: West Africa Gas Strategy – At the Global LNG Forum meeting 3 October, it was agreed the major challenge is to obtain market access in the Atlantic Basin and Med Rim through existing and new Regassification Terminals in US, Mexico, Canada, Brazil and Iberia. The Forum identified high priority terminal projects for study focus and optimization of Shell commercial and technical resources. The offshore GoM terminal alternative being pursued by EPB features prominently in the value chain approach that is required to mature upstream supply projects to FID and get access to large scale regassing capacity in the US. This and other N American terminal capacity opportunities should be vigorously pursued in parallel with the maturation work on WA LNG supply projects, capitalizing on Shell's FLNG and FONG technologies and our LNG experience and global scope. OPL 219 – A project team is in place, FONG is being customized for application on 219 and a value proposition is being compiled. Both a FONG and FPSO solution are currently being pursued; final selection will take place during 1Q02, after the completion of the Bolla exploration well. Acquisition of Alba Field – Shell has been selected to proceed to the next phase of the process; evaluation work ongoing.
- NOV best operator approach has yielded some success (e.g., Nigeria Erha, Angola Block 18, and GoM Holstein); however, significant value is still seen to justify pursuing new approaches (i.e., GoM Nakika)
- New basin studies for entry following Morocco example – low cost, easy exit, reconnaissance approach. Update: Potential new basins have been identified internally for further screening; methodology and process to be further detailed following up on GEPI, Playsim, and peer review learnings.

Stat 0:1

NEMED
Why? Implication

Leveraging Technology:

- ✓ Internal leveraging has very significantly increased project value – on Shell operated as well as NOV projects (ex. Blk 18, Plutonia – convinced bp to drill deeper => 100MMBO addition, Erha, convinced Exxon to drill appraisal, proving development plans needed to be changed). There are many other examples of internal leveraging. Update: Quantification of these successes has been done which includes a comparison vs our competitors identifying Shell's competitive edge and potential leverage points for pursuing externally.
- Joint heavy oil initiative with Petrobras to the benefit of both companies, pilot on BS-4
- Evaluate tax benefits of joint technical team with Petrobras, if value add, pursue pilot in conjunction with BS-4 or BC-10 / BC-60 efforts
- Pursue using Stena Tay for drill to earn in Brazil and W. Africa
- ✓ External leveraging – Shell has not attempted to use our capabilities to access acreage through NOCs or independents. Form a team of RBAs, BDC, and SDS to develop plans to approach owners and NOCs to acquire W1% of key properties using coveted property lists. Update: Establish a full time Technical Marketing Team for external marketing.

Business Negotiators

Breakthrough
w/ Petrobras
PNC
BC-10

Portfolio Actions:

Mega mergers have provided other majors with advantaged portfolios as compared to Shell.
Acquisitions / swaps are needed to improve Shell's position.

- TFE / Shell swap Brazil / Angola assets, specifically Shell Block 18 for TFE BC-2
Update: Hosted discussions with TFE to identify areas of synergies and generate ideas for potential opportunities. Near term ideas included- leverage operational synergies in Cameroon and Gabon, including terminal logistics, to reduce costs and identify near term production opportunities. Longer term - seek to identify swaps to increase Shell's position in Angola in exchange for US or other W. African interests. Alternatively, swap TFE interests Brazil- BC2 for Shell's interest in Blk 18 Angola.
- Swaps of certain GOM interests (Holstein and other potential satellite developments) for Angola Blk 18 or Brazil assets. Update: Teams updating asset values; swap requires methodology to normalize risk profiles.
- Revisit corporate acquisitions of Marathon, Kerr McGee, AHC, AGIP-Brazil, Anadarko, and Enterprise
 - value in light of market discontinuities
 - evaluate opportunities to carve out deepwater properties only
 Update: DW acquisition candidate prioritization is aligned with EPB-M&A. Exploration is working with OUs to build asset based valuation models using the GEPI portfolio characterization and DW strategy objectives as input to the value building blocks. Expect to complete analysis of top tier candidates by 1 November.
- Ocean III revival of the prior initiative involving the swapping of GoM and Brazil assets
- Alliance with William Energy, El Paso or another US power company to allow selective exit options and additional access to US gas markets. Update: Integrated into evolving W Africa gas strategy.
- Provide structured financing options to enhance new development risk/return profile in Brazil

*Overexposed
in W Africa
Angola
Not sure about
1/10/07*

Seahorse Renewal – Project Matrix (WIP)

High	Medium	Low
<p>Revisit corporate acquisition candidates</p>	<p>NOV best operator Joint heavy oil study w/ Petrobras on BS4 Unlocking oil and monetizing gas in W. Africa External leveraging of technology*</p>	<p>Internal leveraging of technology New basin studies for entry*</p>
<p>BC-10 monetization Stena Tay for drill to earn in Brazil/W Africa Structured financing options to enhance dev'l risk/return profile in Brazil Alliance w/ US power company</p>	<p>Joint technical team w/ Petrobras TFE/Shell swap Brazil/Angola assets</p>	
<p>GoM swap Angola/Brazil assets Ocean III revival – GoM swap Brazil assets</p>		

High

Medium

Low

Traditional Operator/Non-Operator Enhancements
Leveraging Technology
Portfolio Actions

Do-ability

* Item Not Currently Funded

Value

2001 Deepwater Business Plan Projects For 2002

Option/Option

Base	Option
Angola	
Block 18 Development - Greater Plutonio Area	Block 18 Outside Greater Plutonio Area
Block 34	Block 34 - Option
Brazil	
BC-2	BC10
BMS-8	BMC-10
BS-4	FZA-1
Cousteau High	
SBEP Corporate	
Egypt	
NEMED Firm	
Gabon	
AM2000 UCF	Kenguerie HS
Astrid OFB	Olonga OFB
Douka OFB	Olonga UCF
Igoumou HS	
NM2000 UFC	
Panga OFB	
Malaysia	
Block G : Limbayong	Block G : Pisagan
Block G : Morongo	
Rhino	
Morocco	
Rimella	
Nigeria (SNEPCO)	
Bonga South-West	Bolla
Erha-Deep	Bonga West
Erha-South	Doro Floating LNG
Oberan	Doro South-East (Oil Rims)
Ultra Deepwater Block OPL245	Ultra Deepwater Block
Acquisition	OPL248/OPL256 Acquisition
	Ultra Deepwater Block
Unallocated Overheads	OPL250 Acquisition
Norway	
New E&A Deepwater Licences	
New E&A Open Area SH3	
(Deep Water)	

Base	Option
Oman Offshore Oman Deep Water	
Philippines SC-38 Acreage Commitments	
SEAPOs Stena Tay Under-Recovery	
Trinidad Block 25(a)	
UK 620 - New E&A - Seismic future years - Cwest	612 - New E&A - 2004 - Assynt 621 - New E&A - 2002 - Kunoy 622 - New E&A - 2003 - Svinoy
USA Auger A15EB2 (Risked) Auger Shallow Gas Baha Risked Bohr 551MSV Risked Delmos Risked DW Lse Rent Risk DW Seismic Model Risked Glider Phase II Nakika Base Oregano Phase 2 Ryddawg Risked Serrano Phase II Shawnee Risked Tranche 3.DW.EB2 FID 2001 Urse Base	Deep Mensa Risked DW L&M Model Risk Great White Risked Roseldon Risked Scout Risked Vrede Risked
Not Currently Funded: New basin studies for entry (\$3MM) External leveraging of technology (\$1MM)	

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RJW00650720

DARLEY, JOHN J.

From: VERTAL, JERRY G.S.
 Sent: 20 October 2001 12:01
 To: DARLEY, JOHN J.; SULLIVAN, PAUL P.R.
 Cc: DAVIS, PHIL P.; DUHON, CHRIS C.; VERTAL, JERRY G.S.
 Subject: FW: SPDC Production Optimisation

Importance: High

John and Paul,

Please see attached notes. SPDC and EPG have agreed a one week SPDC/EPG/EPT workshop in late January to assess potential opportunities for production enhancement from reduced community/operational deferrals, optimized RtL application and accelerated/broadened technology implementation. (I understand from Phil that Heinz agrees with this approach.) This will defer firming up the production gain potential from SPDC until Q1 2002.

Please let me know if you have any issues with this or would like to discuss. If not, we will proceed with the plan outlined in Phil's and my notes below.

Thanks.

Jerry Vertal
 "The Difference is Technology"
 31-70-311-2801 (NL); 713-245-7506 (US)

> -----Original Message-----

> From: VERTAL, JERRY G.S.
 > Sent: Saturday, October 20, 2001 11:32 AM
 > To: DAVIS, PHIL P.
 > Cc: DUHON, CHRIS C.; VERTAL, JERRY G.S.
 > Subject: RE: SPDC Production Optimisation

> Phil,

> Thanks for the note. One comment: I believe many of the
 > technology gains could be captured in parallel with other
 > SPDC production enhancement activities through use of STEP
 > resources or SPDC resources that wouldn't be directly
 > involved in such other activities. However, we won't know for
 > certain until we've engaged with SPDC on this.

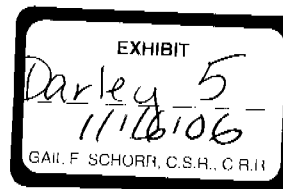
> I'll discuss with John Darley and Paul Sullivan. Assuming
 > that they agree with the approach you've outlined, we'll plan
 > to be fully involved in the planning and participation for
 > the January workshop. As you suggest we'll seek to firm up
 > the potential production gains at that time. In the meantime,
 > we'll work with SPDC through normal channels (i.e. seamless
 > team) to seek ways to accelerate technology implementation
 > and capturing of PtL gains. If they don't agree, then we'll
 > need to discuss further.

> Thanks.

> Jerry Vertal
 > "The Difference is Technology"
 > 31-70-311-2801 (NL); 713-245-7506 (US)

> -----Original Message-----

> From: DAVIS, PHIL P.
 > Sent: Saturday, October 20, 2001 10:52 AM
 > To: VERTAL, JERRY G.S.
 > Cc: DARLEY, JOHN J.; DUHON, CHRIS C.



> > Subject: RE: SPDC Production Optimisation

> >

> >

> > Jerry,

> >

> > Re our telephone conversation yesterday.

> >

> > On reflection, I do not believe that the approach the we are
> > taking with SPDC necessarily conflicts with the Excom
> > initiative on implementing technology based production gains.
> > As you know conditions in Nigeria are very different from
> > other OU's. They have severe resource constraints, are
> > operating against a background of daily community
> > disturbances and have a far more ambitious development
> > program than other OU's. Against this background the main
> > challenge is not to identify where additional production can
> > be achieved, but to prioritize efforts (SPDC and EPT) so that
> > we get most additional barrels in the tank.

> >

> > At this stage it is not clear whether application of new
> > technology would be better use of resources than e.g. trying
> > to implement the PtL gains that have already been identified,
> > or focusing efforts on the approx 400 Mb/d of community and
> > operational deferment. It is for this reason that we have
> > proposed a more fundamental review of how SPDC and EPT's
> > efforts are managed and prioritized. SPDC have accepted this
> > challenge, and have committed to incorporate the findings of
> > the planned workshop in their 2002 program. They appreciate
> > the importance of the issue and reading between the lines, I
> > believe they want some time to consider this issue themselves
> > - in my mind this is probably time very well spent - in the
> > end of the day they have to manage the situation and having
> > reviewed their situation internally they will be in a much
> > better position to engage with us. Their buy-in to the
> > process is also essential.

> >

> > EPT have identified a number of very interesting potential
> > technology based ways of increasing production potential. I
> > suggest we table these as proposed 2002 activities, to be
> > considered alongside other SPDC and RtL initiatives in SPDC's
> > current planning process, with the objective of reaching a
> > firm prioritized program during the workshop in January. I
> > am sure that there would be a lot of useful work that could
> > be done between now and January to firm-up the resource
> > requirements and benefits from the proposed technology so
> > that we will be in a better position to rank it alongside
> > other opportunities in the workshop. If you agree with this
> > approach, I suggest we incorporate this explicitly into the
> > draft TOR for the workshop and so that SPDC can prepare
> > themselves accordingly.

> >

> > With this approach the target for technology based production
> > gains for SPDC would have to remain subject to confirmation
> > in January. However, I genuinely believe that this is
> > justified given the conditions in Nigeria, particularly the
> > need to prioritize activities.

> >

> > Regards

> > Phil

> >

> >

> >

> >

> > -----Original Message-----

> > From: DAVIS, PHIL P.

> > Sent: 19 October 2001 16:31

> > To: VERTAL, JERRY G.S.

> > Cc: DUHON, CHRIS C.

> > Subject: RE: SPDC Production Optimisation

> >

> > Jerry,

> >

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> > I should be the primary contact as I will be liaising with
 > > SPDC on the planned workshop in January.
 > >
 > > We asked for this workshop at an earlier stage, but SPDC gave
 > > strong business reasons against this. They have a number of
 > > ongoing initiatives which they are very reluctant to disrupt
 > > at this stage (e.g. Ron van den Berg has instigated a
 > > programme to get production up to the psychologically
 > > important level of 1 mln b/d). Production so far in October
 > > is averaging 945 Mb/d, well up on the yearly target of 780
 > > Mb/d. SPDC are also preparing their detailed plans for 2002 -
 > > rather than disrupt what is a complex process, they would
 > > like the workshop to review their 2002 plans in January,
 > > before they are finalized. As you know there are also many
 > > other issues to contend with. You will have seen from Samuel
 > > Inyang's e-mail, that SPDC are fully committed to the
 > > workshop in January and have appointed John Hofland as
 > > co-ordinator.

> >
 > > I would be grateful for your advice on who should (can)
 > > attend the workshop from EPT. We obviously want staff with a
 > > strong production planning / operations background, but who
 > > can also take a higher level perspective about how to manage
 > > and prioritize SPDC's and EPT efforts going forward.

> > Regards
 > > Phil

> > -----Original Message-----

> > From: VERTAL, JERRY G.S.
 > > Sent: 19 October 2001 13:26
 > > To: DAVIS, PHIL P.
 > > Cc: DUHON, CHRIS C.
 > > Subject: RE: SPDC Production Optimisation

> > Phil,

> > Sorry for leaving you off my note. Who should be my primary
 > > contact for this issue; you or Chris?

> > Thanks.

> > Jerry Vertal
 > > "The Difference is Technology"
 > > 31-70-311-2801 (NL); 713-245-7506 (US)

> > -----Original Message-----

> > From: DAVIS, PHIL P.
 > > Sent: Thursday, October 18, 2001 5:01 PM
 > > To: VERTAL, JERRY G.S.
 > > Cc: DUHON, CHRIS C.
 > > Subject: RE: SPDC Production Optimisation

> > Jerry,

> > Chris and I have just tried to call you on this. Please call
 > > back on x1402 or x7695. Grateful if you can also keep me in
 > > the loop on this.

> > Phil

> > -----Original Message-----

> > From: DUHON, CHRIS C.
 > > Sent: 18 October 2001 16:40
 > > To: DAVIS, PHIL P.
 > > Subject: FW: SPDC Production Optimisation
 > > Importance: High

> > > > -----Original Message-----
> > > > From: VERTAL, JERRY G.S.
> > > > Sent: 18 October 2001 16:29
> > > > To: DUHON, CHRIS C.
> > > > Cc: VERTAL, JERRY G.S.
> > > > Subject: RE: SPDC Production Optimisation
> > > > Importance: High
> > > >
> > > > Chris,
> > > >
> > > > If I don't hear from you today, I'll try and call you Friday
> > > > (I'll be back in Rijswijk Friday). The reason for my
> > > > telephone call today is the decision taken by Excom this week
> > > > to firm up the potential production gains from the OU's by
> > > > mid November. This will require significant interaction
> > > > between STEP and the OU's over the next couple weeks and in
> > > > the case of SPDC seems contrary to the agreement with Joshua
> > > > in your meeting last week.
> > > >
> > > > I would like to discuss with you the plans that you/Heinz
> > > > have for discussing this with Ron and the go forward plan
> > > > for engaging with SPDC to firm up the production gains in
> > > > time for the EPLF note mid November.
> > > >
> > > > Thanks.
> > > >
> > > > Jerry Vertal
> > > > "The Difference is Technology"
> > > > 31-70-311-2801 (NL); 713-245-7506 (US)

> > > > -----Original Message-----
> > > > From: DUHON, CHRIS C.
> > > > Sent: Thursday, October 18, 2001 1:19 PM
> > > > To: VERTAL, JERRY G.S.
> > > > Subject: RE: SPDC Production Optimisation
> > > >
> > > > Jerry,
> > > >
> > > > After a hectic week, I have just found your following e-mail
> > > > in my in-box. Hope you didn't wonder why I didn't respond ...
> > > >
> > > > Chris

> > > > -----Original Message-----
> > > > From: Duhon, Chris D.
> > > > Sent: 10 October 2001 14:54
> > > > To: DUHON, CHRIS C.
> > > > Subject: FW: SPDC Production Optimisation

> > > > -----
> > > > From: Vertal, Jerry GS SIEP-EPT-AW
> > > > Sent: Wednesday, October 10, 2001 2:51:56 PM
> > > > To: Duhon, Chris CD SIEP-EPG
> > > > Subject: FW: SPDC Production Optimisation
> > > > Auto forwarded by a Rule

> > > > Chris,
> > > >
> > > > If you thought it beneficial, I could try to attend.
> > > >
> > > > Let me know.

RJW00301262A

> > > > > Thanks.

> > > > >
 > > > > > Jerry Vertal
 > > > > > "The Difference is Technology"
 > > > > > 31-70-311-2801 (NL); 713-245-7506 (US)

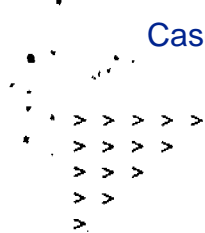
> > > > >
 > > > > > -----Original Message-----
 > > > > > From: INYANG, SAMUEL E.
 > > > > > Sent: Wednesday, October 10, 2001 8:24 AM
 > > > > > To: DUHON, CHRIS C.
 > > > > > Cc: Antheunis, Dan D.; Darley, John J.; Wink, Maarten A.;
 > > > > > Imomoh, Egbert
 > > > > > E.U.; ROTHERMUND, H.C.; Udofia, Joshua J.R.; Vertal,
 > > > > > Jerry G.S.;
 > > > > > OGHENEJOBO, MASON M.O.
 > > > > > Subject: RE: SPDC Production Optimisation

> > > > >
 > > > > > Chris,
 > > > > >
 > > > > > I will be available during my visit to discuss
 > the subject
 > > > > > and will liaise with Joshua and Maarten tomorrow to take
 > > > > > preliminary company wide views.

> > > > >
 > > > > > One of our key Area managers, Mason Oghenejobo,
 > will join me
 > > > > > for the discussions with you. Mason will be
 > attending the
 > > > > > Ogoni Strategy Review meeting.
 > > > > >
 > > > > > Samuel.

> > > > >
 > > > > > -----Original Message-----
 > > > > > From: Duhon, Chris C SIEP-EPG
 > > > > > Sent: Tuesday, October 09, 2001 17:50
 > > > > > To: Inyang, Samuel E SPDC-Gpe; Wink, Maarten A SPDC-GPW
 > > > > > Cc: Antheunis, Dan D SIEP-EPT-A; Darley, John J SIEP-EPT;
 > > > > > Imomoh, Egbert
 > > > > > U SPDC-DMD; Rothermund, Heinz HC SEPI-EPG;
 > Udofia, Joshua R
 > > > > > SPDC-PDD;
 > > > > > Vertal, Jerry GS SIEP-EPT-AW
 > > > > > Subject: SPDC Production Optimisation

> > > > >
 > > > > >
 > > > > > Sam, Maarten
 > > > > >
 > > > > > As you know, production continues to be one of
 > Excom's main
 > > > > > priorities.
 > > > > > Heinz and I discussed this with Egbert in our
 > > > > > mid-August visit; I
 > > > > > followed this up with yourselves during my early
 > > > > > September visit.
 > > > > > Attached is a brief summary of the conclusions from these
 > > > > > visits and
 > > > > > follow-up investigations.
 > > > > >
 > > > > > EPT has also reviewed the overall EP scope to increase
 > > > > > production
 > > > > > through refocused and enhanced RtL based
 > initiatives. They
 > > > > > presented
 > > > > > some initial conclusions to Excom this week. Attached is
 > > > > > an edited
 > > > > > version of their note which summarizes recommendations
 > > > > > relating to SPDC.



From: Bichsel, Matthias M. /777264
To: Darley, John J.
CC: Lohr, Fran F.A. /157182; Malouta, Dean D.N. /172958; WARD, BRIAN B.J.
BCC:
Sent Date: 2002-01-20 09:30:41.000
Received Date: 2002-01-20 10:41:57.000
Subject: FW: SHELL BRASIL TECHNOLOGY PLAN
Attachments: SBEP TechPlan final.doc

John,

see attached the technology plan for Shell Brazil. When browsing through it, you will note the emphasis on several key challenges that you have mentioned such as oil production of intermediate API crude and cluster development (=novel engineering concepts), but also further effort in hc prediction from seismic and drilling/operating in ever increasing waterdepths to allow us to monetize both the current as well as future discoveries within the time frame stipulated by the PSCs.

I would like to suggest that you spend some time on your February visit to Houston with the Brazil teams and Dean Malouta and his technology focal points to satisfy yourself that your requirements are met and concerns addressed. We realise that Brazil poses a huge challenge and we know we need to pull in all resources that we can to deliver BS-4 and other discoveries successfully.

We will include a summary of the plan into the Deepwater Business plan.

Regards,
Matthias

-----Original Message-----

From: Haney, John BRAZIL-UT
Sent: Friday, January 18, 2002 6:04 AM
To: Bichsel, Matthias SIEP-EPT-D
Subject: SHELL BRASIL TECHNOLOGY PLAN

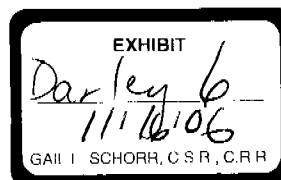
Matthias,

First of all, Happy New Year and congratulations on your new ExCom assignment!

I understand that you will be giving a deepwater presentation at the ExCom on Monday with one area being Technology. Attached for your information is the SBEP Technology Plan that we completed in December with SDS's assistance:

The first monthly meeting (which I will chair as the owner for this process) will be held at the end of January to ensure progress and management alignment.

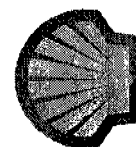
Regards,
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SHELL BRASIL EP

Technology Plan 2001

December 2001



SUMMARY

Summary

Shell Brasil E&P (SBEP) is an NVO based in Rio de Janeiro with technical support provided by SDS in Houston. It was staffed up between 1998 and 2000 as a division of Shell Brasil S.A., with the challenge of building a balanced deepwater portfolio. During the past year significant progress was made against this mandate. Current assets include exploration blocks (3 Shell operated and 4 non-Shell operated) and the Merluza field, operated by Petrobras. SBEP has concluded an initial nine well exploration program in the BC-10, BS-4 and BC-2 blocks resulting in five discoveries. Appraisal planning and evaluation of remaining exploration potential has started, and the Stena Tay drilling unit has been committed to remain in country to execute the extended drilling campaign.

Having achieved initial success we must move decisively to appraisal and development planning to achieve effective FID by August 2003, the license expiry date of our Round "0" blocks. The present SBEP deepwater portfolio consists of predominantly satellite sized discoveries and prospects with intermediate gravity oil. The successful development of these discoveries will depend on novel cluster development solutions and the application and progression of the Group's latest technologies. In addition to the deepwater oil portfolio, the Brazil focus has been extended to consider non-associated gas opportunities.

The SBEP technology plan has been developed to provide a framework for the technology effort required to mature the Brazil portfolio. The document describes the technology requirements and an implementation plan. Key themes are hydrocarbon prediction from seismic, intermediate API oil production, cluster development and pushing the deepwater envelope. The technology Plan will serve as a vehicle to raise awareness and will enable SBEP to apply new technologies ahead of the competition.

The document is intended for the SBEP and SDS-Brazil community and will be kept evergreen and updated with the latest Technology views and requirements as information comes available.

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