From: Tooms, Paul J

Sent: Fri Jun 11 00:04:01 2010

To: Wells, Kent; Birrell, Gordon Y; Clarkson, David; O'Bryan, Patrick L; Dupree, James H; Lynch,

Richard; Inglis, Andy G (UPSTREAM)

Cc: Roberts, Jamie Y; Caldwell, Jason; Thierens, Harry H; Maguire, Niall J; Verchere, Christina C; Looney, Bernard; Mazzella, Mark; Grounds, Cheryl A.; Bond, Stan L; Hill, Trevor; Wood, Douglas G;

Sprague, Jonathan D

Subject: Historical BOP Pressure

Importance: Normal

Attachments: BOP Pressure History rev3.xls

Attached is a chart showing BOP pressure over time, from when the acoustic transmitter has been operating. The pressures from the transmitter below the BOP test rams have been calibrated against the gauges we installed for the Top Kill and have a correction factor of 966 psi already applied. A number of points can be taken from the graphs, including:

- 1. Pressures below and across the BOP (with the test rams closed) are broadly the same now as they were prior to the Top Kill. This suggests that overall flow rates have not changed much, unless there is some unexplained mechanism in the well.
- 2. The pressure drop across the BOP has been relatively consistent, and it can be inferred that drillpipe is present and that flow through it has remained relatively unchanged
- 3. The test rams would appear to be holding back pressure when they are closed, which suggests that there is at least some flow past the pipe rams.

This graph will be included in a more complete report on pressures and flow indications which will be issued shortly. However, I thought it useful to share this now as it can dispel certain myths that have taken root amongst the teams. Note that it might be tempting to try and interpret trends for individual parts of the graph – this is not advisable since there is quite a lot of noise in the readings and they are taken infrequently.

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Paul

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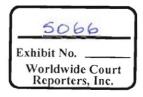
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7LN

Company Details: BP Exploration Operating Company Ltd

Registered Office: Chertsey Road Sunbury-on-Thames Middlesex TW16 7BP

Registered in England and Wales Number 305943



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BPD122-004636

10-Jun	Closed 10/06 06:30	2270	2270											4280	2010
	Closed 07/06 14:50													4220	1950
24 Hours After 2nd Riser Cut	Closed 06/06 00:00	2270	2270											4088	1818
Post 2nd Riser Cut	Closed 03/06 09:00 Too BOB	2270	2270											4266	1996
Post 1st Riser Cut	Closed 02/06 00:00	2270												4290	
Pre 1st Riser Cut	Closed 01/06 10:00	2270	2500											4372	1872
Post Test Ram Closure														4354	1854
Post Kill #3	Open 28/05 22:00	2270	2500					2743		3153		3395		3496	966
Post Kill #2	Open 28/05 11:00	2270	2479			2479		2587		3381		3665		3697	1218
Post Kill #1	Open 27/05 09:00	2270	2500			2500		2620		3130		3280		3320	820
Pre Kill Diagnostics	Closed 25/05 21:00	2270	2560			2560		2620		3240		3670		4400	1840
Acoustic Transponder Activated	Closed 20/05 00:00	2270	2600											4440	1840
Timing	Test Ram Status Date /Time	Egress Pressure	Top of BOP Pressure	Mud Boost Line Pressure	Lower and Upper Annular	Vent Line Pressure	Blind/Shear Rams	Upper Kill Line Pressure	Casing Shear Rams Upper VBRs	Upper Choke Line Pressure	Lower Pipe Rams	Lower Kill/Choke Line Pressure	Test Rams	Below BOP Pressure	Pressure Difference Across BOP

## Historical Records Of BOP Pressures

