Re: pictures of the plume

Franklin Shaffer to: James Riley, Marcia K McNutt 06/18/2010 09:40 PM

Cc: ira.leifer, pdy, savas, antonio.possolo, pedro.espina, Bill.Lehr, Wereley, aaliseda, lasheras

All,
To make these photos easier to compare, I scaled the images so the top hat is the same size in each image, and I put all images side-by-side on the same slide. The powerpoint file with these adjustments is attached.

An important point to notice is that different sides of the ROV are shown in most of the photos. Only the June 3 photo and one of the June 14 photos show the same side of the Top Hat. Since the ROV is significantly tilted, it is likely that the flow rate will be greater on the higher side of the Top Hat, and less on the lower side.

Only the June 17, 25,000 bpd photo, shows the lower side of the Top Hat.

So the only conclusion I could draw from these photos is that the flow appears to be slightly lower in one of the June 13 (15,000 bpd) photos compared to the June 4 (6,000 bpd) photo. But the difference could also just be natural fluctuation in large eddies.

We need long segments of video of the same side of the Top Hat to draw any conclusions.

Regards,
Frank

>>> "James Riley" <rileyj@u.washington.edu> 6/18/2010 8:01 PM >>>

Marcia,

Although it might also depend on at least the unsteadiness of the flow and the positioning of the ROV (as well as on the flow rate), the legs of the skirt appear to be much more visible in the second image compared to the first. This could indicate a noticeably different flow rate from the skirt.

I think that a view encompassing as much of the flow around the top hat as possible, from the skirt to above the top hat, can be very useful in understanding the overall flow, although there might be problems with lighting in doing this. On the other hand closer views of the skirt and the vents could be useful to make speed estimates. -- Jim

Marcia K McNutt wrote:
> Hi all.
>
> I got from BP some frame grabs of different shots of the plume taken at
> three different levels of collection up from the Top Hat. In the first
> image, collection up the riser was just ramping up, and only 6000
> barrels was being collected. In image #2 (actually 2 frame grabs), the
> Enterprise was at full production of 15,000 barrels per day. So the
> difference between the first slide and the second slide is about 9000
> barrels per day. The third slide is when the Q-4000 was being brought on
> line but before it reached full production, so it was at about 7000
> barrels. So to my eye, anyway, I think I am seeing a much skinnier plume

> and a lot more of the cap exposed. The last 7000 barrels, in particular,
> seemed to have made a noticeable difference.
>
> Bill and I decided that we should task BP to give us videos of the plume
> before and after the Q-4000 was brought on line. Anything special I
> should ask for from the videos in this request? Close ups? Further away?
> I want to make sure I get you what you want.
>
> Marcia
>

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James J. Riley, PACCAR Professor of Engineering

Department of Mechanical Engineering
Box 352600
University of Washington
Seattle, WA 98195

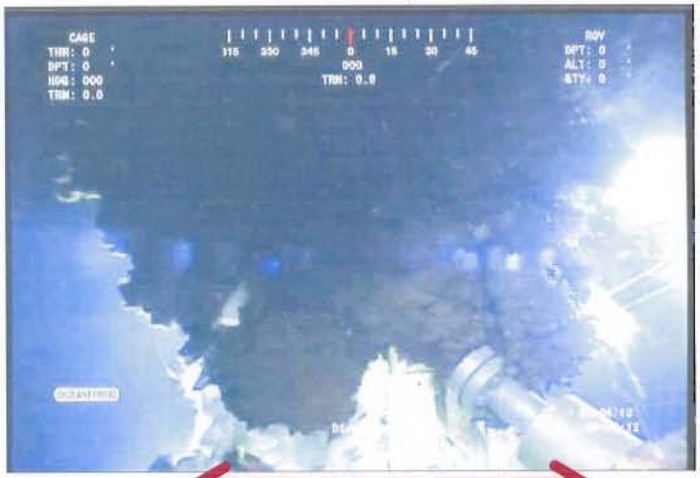
Phone: (206) 543-5347
FAX: (206) 685-8047
email: rileyj@u.washington.edu

website: http://faculty.washington.edu/rileyj/

Plume_during_collection_stages_scaled.pptx

Oil flow outside top hat at various collection rates: images scaled to show same width of top hat wings

June 4th: 6,000 bpd collection



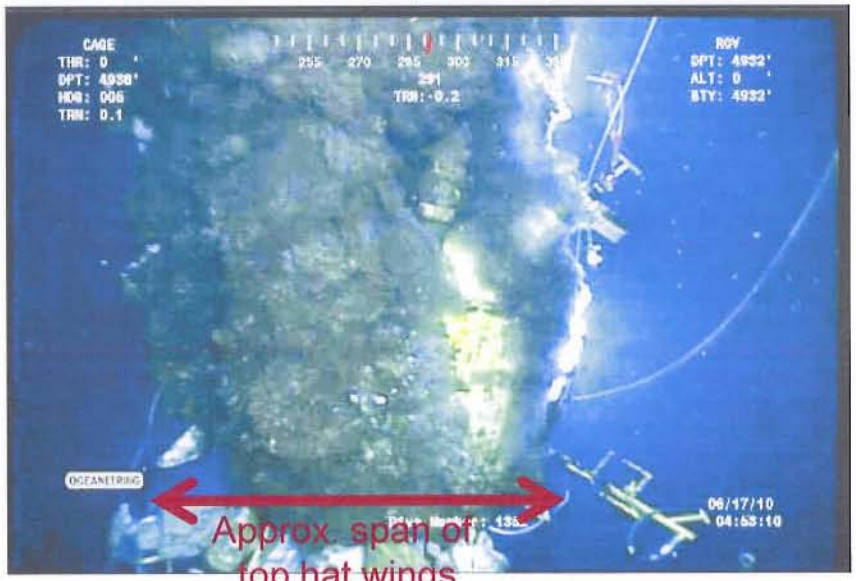
Approx. span of top hat wings

June 13th: 15,000 bpd collection

Approx. span of top hat wings

Approx. span of top hat wings

June 17th: 25,000 bpd collection



Approx. span of top hat wings