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Sent: Wednesday, June 2, 2010 12:26 AM
To: McAughan, Kelly <Kelly.McAughan@bp.com>; Stephanie Heard Intertek <stephanie.heard@intertek.com>
Cc: Wang, Yun <Yun.Wang@bp.com>
Subject: RE: Lab Results
Attach: WTC-10-001812 BP CCE Tables.xls

Yun/Kelly

Attached are tables in xls extended with more points below the saturation pressure.
Yun as we discussed earlier today, we expect to have the repeat CCE test by the end of this week. We are going to start the viscosity study at 243 F and the single stage and multi-stage separator tests tomorrow. The CCE at 100 F and viscosity study at 100F will be completed early next week.

Regards,

Edmond

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From: McAughan, Kelly [mailto:Kelly.McAughan@bp.com]
Sent: Tuesday, June 01, 2010 1:35 PM
To: Edmond Shtepani Intertek; Stephanie Heard Intertek
Cc: Wang, Yun
Subject: Lab Results

Can you give us an update on the current status of testing and also a report of all the results to date?

Yun and I would appreciate it!

Thanks,
Kelly

DW 0007218

TREX 010418.0001

TREX-010418.0001

ATTACHMENT INFO

Name: WTC-10-001812 BP CCE Tables.xls

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ATTACHMENT INFO

DW 0007219

TREX 010418.0002

TREX-010418.0002

TABLE 1
AVERAGE FLUID COMPRESSIBILITIES

Pressure Range		Average Fluid Compressibility (psi ⁻¹)
From (psia)	To (psia)	
13500	12500	1.2284E-05
12500	11500	1.2789E-05
11500	10500	1.3753E-05
10500	9500	1.5323E-05
9500	8500	1.7331E-05
8500	7500	2.0654E-05
7500	6438 Psat	2.6101E-05

Pressure Range		Average Fluid Compressibility (MPa ⁻¹)
From (MPa)	To (MPa)	
93.08	86.18	1.7816E-03
86.18	79.29	1.8550E-03
79.29	72.39	1.9947E-03
72.39	65.50	2.2225E-03
65.50	58.61	2.5137E-03
58.61	51.71	2.9957E-03
51.71	44.39 Psat	3.7857E-03

Psat - Saturation Pressure

TABLE 2
CONSTANT COMPOSITION EXPANSION @ 243.0 F (390.4 K)

Pressure (psia) (MPa)		Relative Volume [1]	Y-Function [2]	Liquid Volume (% of Vtot)	Fluid Density (g/cc)
13500	93.08	0.886046			
12500	86.18	0.897065			
11500	79.29	0.908687			
10500	72.39	0.921358			
9500	65.50	0.935696			
8500	58.61	0.952199			
7500	51.71	0.972281			
6438 *	44.39	1.000000		100.00	
6378	43.98	1.002437	3.8373	86.50	
6299	43.43	1.005779	3.8117	74.51	
6230	42.96	1.008803	3.7894	70.01	
6155	42.44	1.012208	3.7652	68.68	
6141	42.34	1.012860	3.7606	68.67	
5844	40.29	1.027735	3.6647	66.27	
5547	38.25	1.045009	3.5688	64.25	
5250	36.20	1.065157	3.4729	62.52	
4953 **	34.15	1.088782	3.3770	60.48	
4656 **	32.10	1.116648	3.2811	58.81	
4359 **	30.05	1.149738	3.1852	57.08	
4062 **	28.01	1.189343	3.0893	55.03	
3765 **	25.96	1.237177	2.9934	52.87	
3468 **	23.91	1.295569	2.8975	50.09	
3171 **	21.86	1.367750	2.8016	47.17	
2874 **	19.82	1.458330	2.7057	43.55	
2577 **	17.77	1.574099	2.6098	40.12	
2280 **	15.72	1.725457	2.5138	36.03	
1983 **	13.67	1.929138	2.4179	31.75	
[1] Volume at indicated pressure per volume at saturation pressure					
[2] Y Function = ((Psat-P)/P)/(Relative Volume - 1)					
* Saturation Pressure					
** Asphaltenes Precipitation					