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Subject: Partial PVT study on RFT sample from 34/10-2.

Enclosed are the results from a partial PVT analysis performed on a RFT sample collected in the Brent formation, 34/10-2.

The entire content of the RFT tool was while ashore transferred to a 20 l gas sample container. The HC content of the 6 gal. RFT chambre was measured to approx. 8 l gas and 1.4 l of condensate á 1200 psig. The final pressure and also opening pressure in the storage flash was 800 psig.

Once in the lab., the entire volume of hydrocarbons was transferred to our gas condensate celle, and a dew point observed at 6000 psig.

The sample was then studied for maximum liquid drop out, 3,75% (table 2) and composition (table 1).

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*waste analyses*

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Issued: 23.8.79.	34/10-2, RFT # 4 BRENT FORMATION	Report: PVT-6
File: 050-ALF 34/10-2 050-P5.17.04		Page: 1

Table 1: Hydrocarbon analysis of Reservoir fluid.

Component	Reservoir fluid Mole %	Mean average boiling pt.	Mean Mol.wt.	Density g/cc
Nitrogen	0,50			
Carbondioxide	0,45			
Methane	90,60			
Ethane	4,25			
Propane	1,00			
iso-Butane	0,18			
n-Butane	0,60			
iso-Pentane	0,22			
n-Pentane	0,27			
Hexanes	0,34	63,9°C	84	0,685
Heptanes plus	1,59	211,0°C*	169	0,8144

Properties of stabilized oil:

Mean average mol. wt.: 161  
 Density at 15°C : 0,8047 g/cc

Estimated reservoir fluid specific gravity:

$\gamma_g = 0,703$  (air = 1)

Estimated GOR from composition:

36500 SCF/BBL at 2 stages: 1st: 800 psig, 100°F  
 2nd: 0 psig, 50°F

$\gamma_g \approx 0,615$  at 800 psig

\* Estimated from correlations.

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 D-4.4

Issued: 23.8.79.	34/10-2, RFT # 4 BRENT FORMATION.	Report: PVT-6
File: 050-ALF 34/10-2 050-P5.17.04.		Page: 2

Table 2: Constant composition expansion at 115,6°C.

Pressure (Bar)	Relative vol. (v/v sat.)	Liquid drop out (% of vol. at DP)	Z-Factor
475	0.926		1.161
462	0.941		1.147
445	0.961		1.129
435	0.976		1.120
421	0.993		1.104
417 DP	1.000	0	1.100
407	1.016	0.10	
390	1.042	0.33	
370	1.077	0.60	
352	1.115	0.87	
330	1.171	1.18	
307	1.234	1.54	
288	1.300	1.83	
268	1.378	2.15	
242	1.505	2.54	
215	1.672	2.82	
182	1.963	3.28	
146	2.464	3.75	
111	3.233	3.56	
81	4.537	3.53	
66	5.594	3.47	

Gas formation volume factor at dew point:

$$B_g = 276.7 \text{ m}^3/\text{m}^3 = 1.155 \text{ MSF/BBL.}$$

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 A.nr.: D-4.4

Issued: 23.8.79.	34/10-2, RFT # 4 BRENT FORMATION	Report: PVT-6
File: 050-ALF 34/10-2 050-P5.17.04		Page: 3

Table 3: Extended hydrocarbon analysis of Reservoir fluid.

Component	Reservoir fluid Mole %	
Nitrogen	0,50	
Carbondioxide	0,45	
Methane	90,60	
Ethane	4,25	
Propane	1,00	
iso-Butane	0,18	
n-Butane	0,60	
iso-Pentane	0,22	
n-Pentane	0,27	
Hexanes	0,34	
Benzene	0,06	
Heptanes	0,42	
Toluen	0,15	
m+p-xylene	0,08	1.59 = C <sub>7</sub> +
o-xylene	0,02	
C <sub>8</sub> +	0,86	
	100,00	

Properties of Heptane plus:

Molecular weight: 169  
Density at 15°C : 0,8144 g/cc

Properties of stabilized oil:

Average molecular weight: 161  
Density at 15°C : 0,8047 g/cc

