

PHILLIPS PETROLEUM COMPANY

NORWEGIAN SECTOR, NORTH SEA, LICENSE 7, BLOCK 11, WELL NO. 1X

TAUSHETSPLIKT

GAS, LIQUID, AND COMPOSITE WELL STREAM COMPOSITIONS

Gas 132	Gas 133	Liquid 134	Compo- site***	Gas 135	Gas 136	Liquid 137	No com- posite computed	Gas 138	Liquid 139	Compo- site**	Gas 140	Gas 141	Liquid 142	Compo- site***
2	3	3	3	3	4	4	4	4	4	4	5	5	5	5
5/31/68	6/5/68	6/5/68	6/5/68	6/4/68	6/10/68	6/10/68	6/10/68	6/10/68	6/10/68	6/10/68	6/11/68	6/11/68	6/11/68	6/11/68
2215	0800	0800	0800	1645	0415	0415	0020	0020	0020	0020	2112	2040	2045	2045
Formation not named as of June 11, 1968														
10175-	9770-	9770-	9770-	9770-	9527-	9527-	9527-	9527-	9527-	9527-	9440-	9440-	9440-	9440-
10197	9800	9800	9800	9800	9697	9697	9697	9697	9697	9697	9455	9455	9455	9455
Well head	Down-stream	Separation		Down-stream	Separation	Separation		Separation	Separation		Separation	Separation	Separation	Separation
	Separator	Liquid Dump		Separator	Orifice	Liquid Dump		Orifice	Liquid Dump		Orifice	Meter	Liquid Dump	Liquid Dump
	Orifice Meter			Orifice Meter				Meter			Meter			
—	260	260	260	85	118	118		790	790	790	210	210	210	210
—	80	80	80	85	118	118		93	93	93	54	54	54	54
87	—	—	—	*	*	*		*	*	*	*	*	*	*
48	—	—	—	*	*	*		*	*	*	*	*	*	*
121,000	6,670,	6,670,	6,670,	5,670,	25,200,	25,200,		18,000,	18,000,	18,000,	6,040,	6,040,	6,040,	6,040,
No record	560	560	560	446	850	850		868	868	868	516	516	516	516
No record	11900	11900	11900	12713	29,700	29,700		20,700	20,700	20,700	11,700	11,700	11,700	11,700

Separator pressure, psig
Separator temperature, °F
Pressure at source of sample, psig
Temperature at source of sample, °F
Type of and pressure in sample bottle
Volume of separator gas, scfd

Hydrocarbon liquid, stbd**
Gas/liquid ratio, cf/bbl.

COMPONENT

	MOL PER CENT							MOL PER CENT					
Helium	0.02	0.02	—	0.02	0.02	0.02		0.02	—	0.02	0.02	<0.01	<0.01
Carbon dioxide	3.38	2.42	0.51	2.28	2.41	2.46		2.46	1.18	2.38	2.46	2.29	0.28
Nitrogen	0.82	0.82	0.07	0.76	0.83	0.78	All	0.79	0.04	0.74	0.75	0.75	0.07
Methane	83.86	83.66	7.70	77.94	83.62	83.99		84.91	20.75	80.71	85.08	85.73	5.69
Ethane	7.05	7.53	3.71	7.24	7.57	7.19	Water	7.01	6.71	6.99	7.11	6.77	3.46
Propane	2.75	3.07	5.09	3.22	3.18	2.88		2.67	6.48	2.92	2.67	2.58	4.95
i-Butane	0.76	0.58	1.08	0.62	0.59	0.57	In	0.50	2.19	0.61	0.50	0.46	2.21
n-Butane	1.12	0.99	5.49	1.33	1.07	1.00		0.83	5.03	1.10	0.81	0.75	5.50
i-Pentane	0.15	0.28	3.63	0.53	0.26	0.35	Both	0.24	3.12	0.43	0.21	0.19	3.90
n-Pentane	0.06	0.27	4.73	0.64	0.24	0.32		0.23	3.74	0.48	0.19	0.17	4.93
Cyclopentane	—	—	0.50	—	—	—	Samples	—	0.36	—	—	—	0.45
Hexane	0.01	0.19	8.50	1.16	0.17	0.24		0.19	6.16	0.82	0.12	0.17	8.26
Cyclohexane	—	—	3.24	—	—	—		—	2.49	—	—	—	3.07
Benzene	—	—	1.35	—	—	—		—	1.13	—	—	—	1.53
Heptane and heavier	0.02	0.17	54.40	4.26	0.14	0.19		0.15	40.62	2.80	0.08	0.14	55.70
Total	100.00	100.00	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	100.00	100.00
Specific gravity of gas (air=1.0000)	0.6825	0.6905			0.6890	0.6915		0.6786			0.6731	0.6702	
Heating value, Btu/cf at 14.696 psia and 60°F	1116.	1153.			1151.	1154.		1134.			1126.	1126.	
dry gas (water free)													
Water Saturated	1096.	1133.			1131.	1134.		1114.			1106.	1106.	
Molecular weight of heptanes and heavier			152.7						156.				147.
Specific gravity of heptane and heavier at 60°F			0.790						0.780				0.793

Mr. J. K. Petters took all samples.

Bottom hole temperature - 257°F at 10,178' RKB

The pressure base for gas measurements in Norway is 14.70 psia.

* 2-gallon, 2-valve stainless steel bottles with 25 psig pressure for gas except gas samples for D.S.T. No. 5 which were in 3 1/2" x 18" high pressure bottles.

Oil samples in 75 cc stainless 2-valve Huke bottles except oil from D.S.T. No. 5 which was in a 1 3/4" x 23" high pressure bottle.

** No record of the stock tank oil temperature - temperature of oil assumed to be 60°F.

***The cyclopentane was combined with the n-pentane and the cyclohexane and benzene were combined with the n-hexane for computing the composite well stream.