

## CORE ANALYSIS RESULTS

Company PHILLIPS PETROLEUM CO. Formation \_\_\_\_\_ File UKCA 447  
Well 2/4-7X Core Type \_\_\_\_\_ Date Report 10.10.71.  
Field \_\_\_\_\_ Drilling Fluid \_\_\_\_\_ Analysts R. F. B.  
County \_\_\_\_\_ State \_\_\_\_\_ Elev. \_\_\_\_\_ Location \_\_\_\_\_

### Lithological Abbreviations

SAND - SD      DOLOMITE - DOL      ANHYDRITE - ANHY      SANDY - SDY      FINE - FN      CRYSTALLINE - XLN      BROWN - BRN      FRACTURED - FRAC      SLIGHTLY - S  
SHALE - SH      CHERT - CH      CONGLOMERATE - CONG      SHALY - SHY      MEDIUM - MED      GRAIN - GRN      GRAY - GY      LAMINATION - LAM      VERY - V/  
LIME - LM      GYPSUM - GYP      FOSSILIFEROUS - FOSS      LIMY - LMY      COARSE - CSE      GRANULAR - GRNL      MUDGY - MGY      STYLOLITIC - STY      WITH - W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm. Ka      Kl	Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER			
<u>CORE NO. 1</u>									
	10406	0.17	0.10	21.7				2.67	Calc, lt/dk g
	10408	0.08	0.04	19.9				2.67	fg, few frac & dk incl.
	10410	0.11	0.07	21.7				2.67	AA & dk oval round particles.
	10412	0.12	0.07	21.0				2.68	AA whiter te fg.
	10414	0.17	0.10	12.2				2.73	AA & arg.
	10416	0.03	0.02	14.2				2.72	AA
	10418	0.03	0.02	17.3				2.68	AA
	10420	0.06	0.03	15.7				2.67	Calc, lt/dk g fract end.
	10422	0.28	0.17	22.7				2.69	Calc, wh/gy text, fg, sty jnts +.
	10424	+	+	9.0				2.69	AA no sty.
	10426	0.01	+	11.9				2.69	AA
	10428	0.01	+	12.1				2.70	AA
	10430	0.01	+	10.1				2.70	AA
	10432	0.01	+	10.4				2.69	AA
	10434	+	+	6.4				2.68	AA
	10436	0.01	+	9.2				2.69	AA
	10438	0.01	+	12.6				2.71	Calc, fg, sty jnts, lt gy.
	10440	0.01	+	5.4				2.68	Calc, dk gy, fg, arg.
<u>CORE NO. 2</u>									
	10445	0.16	0.09	20.6				2.73	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

File UKCA 447 Page No. 2

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYs		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 2 (Continued)</u>										
10447		0.06	0.03	19.1					2.70	Soft chky lst, fg, sty, jnts + veins.
10449		0.04	0.02	17.5					2.71	AA fewer sty.
10451		0.07	0.04	23.6					2.71	AA
10453		0.12	0.07	23.3					2.72	AA
10455		0.13	0.08	21.3					2.71	AA
10457		0.13	0.08	24.8					2.71	AA
10459		0.16	0.09	24.2					2.73	AA
10461		0.12	0.07	21.1					2.72	AA
10463		0.07	0.04	20.3					2.72	AA
10465		0.12	0.07	24.0					2.72	AA
10467		0.16	0.09	21.2					2.74	AA
10469		0.04	0.02	11.7					2.75	AA
10471		0.15	0.09	21.3					2.73	Chky, lst, lt gy, h fg & arg inclusions
10473		0.10	0.06	19.6					2.73	AA
10475		0.08	0.04	19.8					2.73	AA
10477		0.08	0.04	18.4					2.73	AA
10479		0.03	0.02	20.9					2.72	AA
10481		0.09	0.05	23.2					2.72	Lst, bf/wh, numerous dk diffuse veins
<u>CORE NO. 3</u>										
10483		0.04	0.02	18.4					2.72	Lst, dull white, fg fg.
10485		0.11	0.07	22.5					2.73	AA
10487		0.08	0.04	19.6					2.71	AA
10489		0.06	0.03	23.5					2.72	AA
10491		0.04	0.02	24.4					2.72	AA
10493		0.07	0.04	20.9					2.72	AA
10495		0.09	0.05	20.4					2.73	AA
10497		0.01	+	11.4					2.70	Lst, dull wh, fg, dense & dk & diff, arg inclusions.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

File UKCA 447 Page No. 3

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYs		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 3 (Continued)</u>										
10499		0.01	+	14.2					2.70	Lst, dull wh, fg, dense & dk diff, arg inclusions.
10501		0.01	+	14.2					2.71	AA
10503		0.02	0.01	13.4					2.71	AA
10505		0.01	+	14.2					2.70	AA
10507		0.03	0.02	16.0					2.72	AA
10509		0.04	0.02	14.1					2.70	AA
10511		0.04	0.02	17.1					2.70	Chky lst, dense, wh fg & dk arg.
10513		0.07	0.04	18.3					2.70	AA & rounded elongated particles
10515		0.06	0.03	12.8	0	95.3			2.70	AA
10517		0.06	0.03	16.9					2.71	AA
10517'6"	SELECTED FOR WHOLE CORE ANALYSIS									
10518		0.04	0.02	18.3					2.70	AA
10520		0.06	0.03	11.8	55.9	23.7			2.68	AA
10522		0.06	0.03	19.9					2.71	AA
10524		0.02	0.01	14.1					2.70	AA
10526		0.10	0.06	21.5					2.72	AA
10528		0.16	0.09	17.0					2.70	AA less arg material
10530		0.09	0.05	21.5					2.71	AA dk elongated/round particles.
<u>CORE NO. 4</u>										
10532		0.04	0.02	20.2					2.71	AA
10534		0.06	0.03	19.8					2.67	Chky, fg & many f sty jnts.
10536		0.04	0.02	20.9					2.72	Chky, off-wh, fg.
10538		0.07	0.04	19.6					2.72	AA
10538'6"							0.08	0.05		
10540		0.17	0.10	20.6					2.70	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

File UKCA 447 Page No. 4

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYs		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 4 (Continued)</u>										
10542		0.03	0.02	12.1					2.69	Chky, gy/wh, fg + numerous fossil burrows, irreg with whiter infill fg.
10544		SELECTED FOR WHOLE CORE ANALYSIS								
10546		0.06	0.03	15.4					2.70	Chky, lt/dk gy, fg + sty jnts.
10548		0.02	0.01	13.0					2.69	Chky, lt/dk gy, fg, frac sub vert.
10550		0.03	0.02	13.3					2.69	Chky, lt/dk gy, fg.
10552		0.02	0.01	13.3					2.69	AA + random arg mat
10554		0.02	0.01	15.3					2.71	Chky, lt/dk gy, fg.
10556		0.06	0.03	19.1	0	97.4			2.71	AA inclusions dkr & more widespread.
10558		0.04	0.02	18.2					2.72	AA
10560		0.03	0.02	18.1					2.69	AA
10562		0.08	0.04	17.6					2.70	AA
10564		0.10	0.06	19.7					2.71	AA + imprints - burrows?
10566		0.09	0.05	21.7					2.71	AA - no imprints.
10568		0.03	0.02	15.8					2.72	AA
10570		0.06	0.03	19.4					2.70	Chky, gy, fg, particles.
10572		0.02	0.01	14.3					2.71	AA
10574		0.02	0.01	14.1					2.67	AA + clear imprints
10576		0.02	0.01	5.2					2.70	AA + clear imprints
10578		0.02	0.01	9.7					2.72	AA & dk gy arg particles.
<u>CORE NO. 5</u>										
10580		0.04	0.02	15.8					2.70	Chky, off-wh & dk gy particles.
10582		0.03	0.02	16.8					2.70	AA softer.
10584		0.07	0.04	16.8					2.69	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

File UKCA 447 Page No. 5

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYS		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 5 (Continued)</u>										
	10586	0.04	0.02	15.8					2.70	Chky, off-wh & dk gy particles.
	10588	0.03	0.02	10.8					2.69	AA
	10590	0.02	0.01	11.0					2.69	AA
	10592	0.04	0.02	6.4					2.64	Chky, gy- fg, + arg particles (inclusions)
	10594	0.04	0.02	14.4					2.67	AA
	10596	0.08	0.04	19.4					2.71	AA
	10598	0.02	0.01	12.1					2.69	AA
	10600	0.07	0.04	18.4					2.70	AA + many hairline fracs.
	10602	0.02	0.01	11.8					2.68	Chky, gy/wh, fg, dense
	10604	0.02	0.01	12.0					2.69	AA
	10606	0.06	0.03	18.3					2.70	AA
	10608	+	+	13.4					2.69	AA
	10610	0.01	+	13.4					2.69	AA
	10612	+	+	8.3					2.66	AA darker.
	10614	+	+	19.0					2.71	AA
<u>CORE NO. 6</u>										
	10631	+	+	3.1					2.67	AA darker.
	10633	+	+	11.1					2.68	AA
	10635	0.02	0.01	16.7					2.70	AA
	10637	0.01	+	13.7					2.69	AA
	10639	0.04	0.02	18.5					2.68	AA
	10641	0.03	0.02	17.2					2.70	AA
	10643	+	+	4.7					2.68	AA
	10645	+	+	1.7					2.67	AA darker.
	10647	+	+	9.8					2.69	AA
	10649	0.03	0.02	17.1					2.70	AA
	10651	0.06	0.03	18.5					2.70	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

File UKCA 447 Page No. 6  
 Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYs		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 6 (Continued)</u>										
	10653	0.03	0.02	11.4					2.70	Chky, gy/wh, fg, dense.
	10655	0.03	0.02	19.4					2.71	AA + arg incl.
	10657	0.04	0.02	18.8					2.70	AA
	10659	0.02	0.01	13.1					2.70	AA
<u>CORE NO. 7</u>										
	10671	0.04	0.02	16.4					2.69	AA gy-dk gy.
	10673	0.08	0.04	17.5					2.71	AA
	10675	0.03	0.02	14.6					2.71	AA
	10677	0.09	0.05	19.2					2.71	AA
	10679	0.04	0.02	14.7					2.70	AA
	10681	0.07	0.04	16.5					2.71	AA
	10683	0.04	0.02	16.4					2.71	AA
	10685	0.08	0.04	16.3			0.06	0.03	2.66	AA
	10687	0.04	0.02	15.5					2.70	AA
	10689	0.03	0.02	14.2					2.71	AA
	10691	+	+	8.0					2.73	AA
	10693	0.02	0.01	7.6					2.70	AA
	10695	0.04	0.02	15.0					2.70	AA gy/wh.
	10697	SELECTED FOR WHOLE CORE ANALYSIS.								
	10699	0.02	0.01	5.0					2.68	AA
	10701	0.06	0.03	11.8					2.70	AA + dk arg incl. imprints (burrows)
	10703	0.07	0.04	19.5					2.69	Chky, off-wh, fg, dense.
	10705	0.01	+	12.0					2.68	AA
	10707	0.01	+	10.5					2.725	AA but gy/wh.
<u>CORE NO. 8</u>										
	10708	0.01	+	2.2					2.71	AA lt/dk gy.
	10710	+	+	7.8					2.70	AA + dk inclusion imprints & burrows

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

File UKCA 447 Page No. 7

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYs		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 8 (Continued)</u>										
10712		0.01	+	13.4					2.68	Chky, lt/dk gy, fg, dense.
10714		0.01	+	13.4					2.68	AA + dk inclusions in lines.
10716		+	+	14.6					2.69	Chky, lt/dk gy/wh, fg, dense.
10718		0.01	+	7.5					2.70	AA
10720		0.01	+	17.4					2.68	AA
10722		0.01	+	9.7					2.70	AA
10724		0.01	+	17.0					2.71	AA
10726		0.02	0.01	15.7					2.71	AA
10728		+	+	7.7					2.69	AA + lines of dk inclusions.
10730		0.01	+	10.5					2.70	AA
10732		+	+	9.9					2.70	AA
10734		+	+	7.3					2.68	AA
10736		0.01	+	6.4					2.68	AA
10738		0.01	+	5.9					2.67	AA
10740		+	+	6.4					2.66	AA
10742		+	+	6.4					2.68	AA
10744		0.01	+	15.9					2.69	AA
10746		0.01	+	9.1					2.71	AA
10748		0.04	0.02	16.5					2.71	AA
10750		+	+	6.3					2.70	AA
10752		0.01	+	8.9					2.69	AA
10754		+	+	10.5					2.67	AA
10756		0.01	+	6.9					2.65	AA
10758		0.01	+	5.1					2.66	AA
10760		+	+	6.8					2.69	AA + wh/gy.
10762		+	+	9.1					2.68	AA + arg inclusions
10764		0.07	0.04	4.6					2.67	AA
10766		0.01	+	9.9					2.66	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

File UKCA 447 Page No. 8

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYS		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 9</u>										
	10767	0.01	+	9.3					2.67	Chky, lt/dk gy/wh, fg, dense.
	10769	0.01	+	5.4					2.68	AA
	10771	0.01	+	13.4					2.68	AA + arg inclusions
	10773	+	+	9.0					2.67	AA
	10775	SELECTED FOR WHOLE CORE ANALYSIS								
	10779	0.01	+	14.4					2.69	AA
	10781	0.01	+	12.2					2.69	AA whiter, imprints at one end.
	10783	0.01	+	8.7					2.69	AA
	10785	+	+	7.6					2.69	AA
	10787	+	+	7.9					2.69	AA + dk inclusions.
	10789	+	+	6.5					2.69	AA
	10791	+	+	10.3					2.71	AA much arg inclusions.
	10793	0.01	+	7.7					2.69	AA much arg inclusions.
	10795	+	+	7.3					2.68	AA many arg inclusions.
	10797	0.01	+	2.6					2.69	AA v dense.
	10799	0.01	+	2.0					2.69	Chky, lt/dk gy + arg, fg.
	10801	0.01	+	1.4					2.68	AA
	10803	0.01	+	2.7					2.66	AA
	10805	0.01	+	1.4					2.67	AA
	10807	0.01	+	1.1					2.60	AA
	10809	0.01	+	0.6					2.67	AA
	10811	0.02	0.01	5.8					2.66	AA
	10813	0.01	+	0.3					2.60	AA
<u>CORE NO. 10</u>										
	10814	0.01	+	1.4					2.65	Chky, lt gy/wh, fg, dense
	10815	0.01	+	Less than 0.1					2.63	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

File UKCA 447 Page No. 9

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYs			POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl			OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 10 (Continued)</u>											
	10816	0.02	0.01	0.4						2.60	Chky, lt gy/wh, fg dense.
	10817	0.01	+	2.2						2.67	AA
	10818	0.03	0.02	1.2						2.66	AA
	10819	0.01	+	0.8						2.68	AA
	10820	+	+	0.9						2.69	AA + sty jnts & arg
	10821	0.01	+	3.4						2.70	AA gy.
	10822	+	+	0.6						2.71	AA lt/dk gy.
	10823	0.01	+	4.4						2.72	AA
	10824	0.12	0.07	13.4						2.71	AA
	10825	0.12	0.07	16.0						2.70	AA + fine arg sty.
	10826	0.15	0.09	15.3	22.5	27.1				2.72	AA lt gy.
	10827	0.06	0.04	7.0						2.72	AA fine arg sty.
	10828	SELECTED FOR WHOLE CORE ANALYSIS									
	10829	+	+	0.6						2.69	AA
	10830	0.01	+	3.6	0.0	91.8				2.68	AA off-white.
<u>CORE NO. 11</u>											
	10874	SELECTED FOR WHOLE CORE ANALYSIS									
	10875	1.2	0.8	22.7						2.69	Chky, gy/wh, fg, arg inclusions.
	10876	1.1	0.7	22.3	13.5	43.5				2.72	AA off-white.
	10877	18	15	23.0						2.69	AA + fine arg sty.
	10878	3.1	2.2	21.6						2.72	AA + fine arg sty.
	10879	0.4	0.2	20.0	19.2	54.9				2.71	AA + dk hair line frac.
	10880	0.2	0.1	12.3						2.68	AA
<u>CORE NO. 12</u>											
	10904	0.01	+	4.3						2.71	Chky, gy/wh, fg + long arg inclusions
	10904'11"				0.40	0.26					
	10905	0.2	0.1	15.9						2.72	AA no inclusions
	10906	0.3	0.2	14.3	22.5	24.0				2.68	AA

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

File UKCA 447 Page No. 10

Well 2/4-7X

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	Horizontal PERMEABILITY MILLIDARCYS		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	Kl		OIL	TOTAL WATER	Ka	Kl		
<u>CORE NO. 12 (Continued)</u>										
10907		0.4	0.3	19.1					2.72	Chky, off-white, fg, + long arg inclusions
10908		0.2	0.1	15.2					2.72	AA lt gy.
10908'2"								+	+	
10908'9"								+	+	
10909		0.09	0.05	9.0					2.71	AA + dk sty.
10910		0.02	0.01	9.0	7.8	68.8			2.71	AA no sty.
10911		0.01	+	6.1					2.70	AA softer
10912		0.03	0.02	8.5					2.71	AA softer
10913		0.02	0.01	6.7					2.70	AA softer
10914		0.2	0.1	15.1					2.71	AA softer
10915		0.4	0.3	17.1					2.71	AA softer + arg inclusions in frac.
10915'3"								0.04	0.02	
10916		0.01	+	6.8					2.70	AA
10917		0.02	0.01	8.1					2.70	AA very soft
10918		0.06	0.04	11.3					2.71	AA
10918'6"								0.10	0.06	
10919		3.5	2.5	16.9					2.70	AA + arg sty abundant.
10919'7"								0.13	0.08	
10920		0.06	0.03	11.8					2.71	AA
10921		0.6	0.4	19.4					2.71	AA
10922		1.6	1.1	21.9					2.72	AA
<u>CORE NO. 13</u>										
10935		0.5	0.3	19.7					2.73	Chky, gy/wh, fg, arg inclusions.
10937		0.7	0.4	22.8					2.71	AA
10939		4.0	2.9	18.7					2.71	AA
10941		0.3	0.2	18.8	4.8	75.8			2.70	AA
10943		0.04	0.02	10.2					2.71	AA + sty.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.  
 Petroleum Reservoir Engineering  
 DALLAS, TEXAS

File UKCA 447 Page No. 11

Well 2/4-7X

### CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	HORIZONTAL PERMEABILITY MILLIDARCYS		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.		Grain Density	Remarks
		Ka	KI		OIL	TOTAL WATER	Ka	KI		
<u>CORE NO. 13 (Continued)</u>										
	10945	0.07	0.04	12.0					2.69	Chky, gy/wh, fg, arg inclusions.
	10947	0.4	0.2	19.0					2.71	AA
	10949	0.3	0.2	17.1					2.71	AA largely clay.
	10949'3"						0.22	0.13		
	10951	0.2	0.1	16.5					2.73	AA largely clay.
	10953	0.3	0.2	8.9					2.70	AA largely clay.
	10955	0.3	0.2	16.2					2.73	AA largely clay.

+ INDICATES A PERMEABILITY VALUE OF LESS THAN 0.01 MILLIDARCIES.

## CORE ANALYSIS RESULTS

Company PHILLIPS PETROLEUM CO Formation \_\_\_\_\_ File UKCA 447  
 Well 2/4-7X Core Type \_\_\_\_\_ Date Report 7.12.71  
 Field \_\_\_\_\_ Drilling Fluid \_\_\_\_\_ Analysts R. E. B.  
 County NORTH SEA State NORWAY Elev. \_\_\_\_\_ Location \_\_\_\_\_

### Lithological Abbreviations

SAND - SD      DOLOMITE - DOL      ANHYDRITE - ANHY      SANDY - SDY      FINE - FN      CRYSTALLINE - XLN      BROWN - BRN      FRACTURED - FRAC      SLIGHTLY - S  
 SHALE - SH      CHERT - CH      CONGLOMERATE - CONG      SHALY - SHY      MEDIUM - MED      GRAIN - GRN      GRAY - GR      LAMINATION - LAM      VERY - V/  
 LIME - LM      GYPSUM - GYP      FOSSILIFEROUS - FOSS      LIMY - LMY      COARSE - CSE      GRANULAR - GRNL      VUGGY - VUG      STYLOLITIC - STY      WITH - W/

SAMPLE NUMBER	DEPTH FEET	Horiz PERMEABILITY MILLIDARCYs		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		Vertical Perm.	REMARKS
		<del>XXXXXX</del> Ka	<del>XXXXXX</del> Kl		OIL	TOTAL WATER		
3H	10,546'6"	0.056	0.03				Ka Kl	Sub-horiz.healed discontinuous plane.
	10,546'6"	0.067	0.04					Faint sub-horiz. healed plane.
1H	10,558'6"	0.123	0.07					Numerous discontinuous very fine shale laminae, generally horizontal.
1V	10,558'6"					0.0122 < 0.01		A.A.
1VB	10,558'6"					0.0122 < 0.01		A.A.
2H	10,720	0.0122	< 0.01					Faint sub-horiz. healed discontinuous plane.
7H	10,720	0.0122	< 0.01					Two faint sub-horiz.healed planes.
6H	10,721	0.0122	< 0.01					One faint horiz. healed plane.
4HB	10,721	0.0122	< 0.01					Two faint sub-horiz. discontinuous healed planes.
6V	10,721					0.0122 0.01		Two faint horiz. healed planes, one continuous, one discontinuous

The above plugs were drilled in addition to regular selected samples to study permeability effects of fine apparent cracks or laminae. Examination of plugs indicated apparent cracks were healed planes, possibly filled with calcite.

Sandblasting of core plug faces prior to permeability measurement showed these planes were harder than matrix material.

There is no evidence to suppose that such apparent cracks would either contribute or reduce permeability beyond matrix values.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.