

+ Core Description

SERVICE COMPANY : SPE
 ASKED : 30
 RECOVERED : 23
 SHOT : 29
 LOST : 7
 FULL BULLET : 21

SIDE WALL CORES DESCRIPTION

WELL : 25/1-4

RUN N° 2

LICENCE :

PAGE N° 2

DATE : 13/5/74

tr : trace - M : medium - G : good

N°	DEPTHS	REC	LITHOLOGY	Fluorescence			
				base	cut		
19	2482	70	sd gryish vf f fair sort subang qtz shaly laminae				
20	2441	0	empty bullet				
21	2400	90	sh sft fissile sdy gry to grnish gry				
22	2371	30	sh indur gry sdst laminae slqty calc pyr				
23	2322		lost				
24	2274		misfire				
25	2247	40	sh sft fissile gry sdy no calc				
26	2218		lost				
27	2176	100	sd f md fair sort subang gr slqty argill mic interbed sh drk gry				
28	2153		lost				
29	2119	90	sh sft grn no calc				
30	2067	100	sd gryish argill f well sort subang musc				

SIDE WALL CORES DESCRIPTION			SERVICE COMPANY : SPE
			ASKED : 30
			RECOVERED : 23
			SHOT : 29
WELL : 25/1-4			LOST : 7
			FULL BULLET : 21
LICENCE :			
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tr : trace - M : medium - G : good

N°	DEPTHS	REC	LITHOLOGY	Fluorescence		
						CUT
19	2482	70	sd: gryish, vf. f., fair sort, subang. qtz, shaly laminae			
20	2441	0	empty bullet			
21	2400	90	sh: sft, fissile, sdy, gry to grnish-gry			
22	2371	30	sh: indur, gry, sdst laminae: slqty calc, pyr.			
23	2322		lost			
24	2274		misfire			
25	2247	40	sh: sft, fissile, gry, sdy, no calc.			
26	2218		lost			
27	2176	100	sd: f. md, fair sort, subang. gr, slqty argill, mic. interbed sh: drk gry			
28	2153		lost			
29	2119	90	sh: sft, grn, no calc.			
30	2067	100	sd: gryish, argill, f., well sort, subang, musc.			

SERVICE COMPANY : SPE
 ASKED : 30
 RECOVERED : 23
 SHOT : 29
 LOST : 7
 FULL BULLET : 21

SIDE WALL CORES DESCRIPTION

WELL : 25/1-4
 LICENCE : 024

RUN N° 2
 PAGE N° 1
 DATE : 13/5/74

tr : trace - M : medium - G : good

N°	DEPTHS	REC	L I T H O L O G Y	Fluorescence	
				base	CUT
1	2763	20	chlky lmst beige gry compact calc recryst stylo joints slight hydroc smell		
2	2759,5	15	a.a		
3	2793	50	mrl/cal sh sft fissile grnish gry f mic subvertical friction plans		
4	2791	30	sh v calc fissile gry musc		
5	2789	70	sh v calc fissile drk gry musc		
6	2745	30	sh v calc drk gry slgty sdy mic		
7	2716	25	a.a rare qtz gr		
8	2673,5	90	sd clean f to v crs bad sort subang gr rare musc and sh sft fissile grnish slgty calc sd/sh contact = 45°		
9	2662	25	sd a.a		
10	2653,5		lost		
11	2646		lost		
12	2640		lost		
13	2630	40	sh sft fissile grnish gry slgty calc		
14	2603	40	sh fissile gry slgty calc friction plans		
15	2575		lost		
16	2557	70	sh sft fissile gry slgty calc f musc		
17	2532	90	sh sft fissile gry tr sh brnish		
18	2512	100	sh sft fissile grnish gry f musc		

SERVICE COMPANY SPE
 ASKED 30
 RECOVERED 23
 SHOT 29
 LOST 7
 FULL BULLET 21

SIDE WALL CORES DESCRIPTION

WELL 25/1-4
 LICENCE 024

RUN N° 2
 PAGE N° 1
 DATE 13/5/74

tr trace M medium G good

N°	DEPTHS	REC	LITHOLOGY	Fluorescence	
				UV	CUT
1	2763	20	chlky lmst: beige gry, compact, calc. recryst, stylo. joints, slight hydroc smell		
2	2759,5	15	a.a		
3	2793	50	mrl/cal sh: sft, fissile, grnish gry, f. mic, subvertical friction plans		
4	2791	30	sh: v. calc, fissile, gry, musc.		
5	2789	70	sh: v. calc, fissile, drk gry, musc.		
6	2745	30	sh: v. calc, drk gry, slqty sdy, mic.		
7	2716	25	a.a rare qtz gr.		
8	2673,5	90	sd: clean, f. to v. crs, bad sort, subang. gr, rare musc. and sh: sft, fissile, grnish, slqty calc; sd/sh contact = 45°		
9	2662	25	sd a.a		
10	2653,5		lost		
11	2646		lost		
12	2640		lost		
13	2630	40	sh: sft, fissile, grnish-gry, slqty calc.		
14	2603	40	sh: fissile, gry, slqty calc, friction plans		
15	2575		lost		
16	2557	70	sh: sft, fissile, gry, slqty calc, f. musc.		
17	2532	90	sh: sft, fissile, gry, tr sh: brnish		
18	2512	100	sh: sft, fissile, grnish-gry, f. musc.		

SERVICE COMPANY :	SPE
ASKED :	30
RECOVERED :	28
SHOT :	30
LOST :	2
FULL BULLET :	25

SIDE WALL CORES DESCRIPTION

WELL	25/1-4	RUN N°	1
LICENCE :	024	PAGE N°	2
		DATE	13/5/74

tr trace - M - medium - G - good

N°	DEPTHS	REC	L I T H O L O G Y	Fluorescence		
				1	2	CUT
19	2482	40	sd:vf. f.well sort.subang.qtz	/		
20	2441	70	sd:gryish,mainly f.with crs qtz, argill. cmt, and sh : sft, fissile, grnish .	/		
21	2400	90	sh:sft, fissile, sdy with crs round. qtz, gry argnish- gry, musc.			
22	2371	90	sh:indur, gry, musc.			
23	2322	40	sh:indur, gry, friction plans.			
24	2274	90	sh:fissile, gry, laminae sdst:vf, no calc.			
25	2247	50	sh:sft, fissile, gry, no calc .			
26	2218	100	sh:grnish, v. mic. and sdy .			
27	2176	100	sd:f. md. fair sort. subang gr. laminae sh:gry, lght blue and sh:drk gry, no calc.	/		
28	2153	70	sdst:gry, v. argill. f. gr. fair sort, crs subround. qtz , nodule sh:drk-gry	/		
29	2119	100	sh:sft, grn, slty beds, no calc.			
30	2067	100	sd:clean, whtish and sd:gryish, very argill, f, well sort. subang, musc.	/		

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SIDE WALL CORES DESCRIPTION

WELL : 25/1-4 RUN N° 1
 LICENCE : 024 PAGE N° 2
 DATE : 13/5/74

tr : trace - M : medium - G : good

N°	DEPTHS	REC	LITHOLOGY	Fluorescence	
				Blue	CUT
19	2482	40	sd vf f well sort subang qtz		
20	2441	70	sd gryish mainly f with qrs qtz argill cmt and sh sft fissile grnish		
21	2400	90	sh sft fissile sdy with crs round qtz gry grnish gry musc		
22	2371	90	sh indur gry musc		
23	2322	40	sh indur gry friction plants		
24	2274	90	sh fissile gry laminae sdst vf no calc		
25	2247	50	sh sft fissile gry no calc		
26	2218	100	sh grnish v mic and sdy		
27	2176	100	sd f md fair sort subang gr laminae sh gry lght blue and sh drk gry no calc		
28	2153	70	sdst gry v argill f gr fair sort crs subround qtz nodule sh drk gry		
29	2119	100	sh sft grn slty beds no calc		
30	2067	100	sd clean whitish and sd gryish very argill f well sort subang musc		

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WELL 25/1-4
 LICENCE 024

RUN N° 1
 PAGE N° 1
 DATE 13/5-74

tr trace - M medium - G good

N°	DEPTHS	REC	LITHOLOGY	Fluorescence	
				W	CUT
1	2763	15	chlky lmst: beige gry, compact, calcite recryst. slight hydroc. smell.		
2	2759,5	25	a.a		
3	2793	/	lost		
4	2791	25	mrl/calc sh: sft, fissile, slghty detr., gryish grn.		
5	2789	50	sh: calc, fissile, gry, large musc. common.		
6	2745	50	sh: fissile, drk gry, v. calc., slgty sdy, mic.		
7	2716	25	a.a rare qtz gr.		
8	2673,5	/	lost		
9	2662	25	sd: clean, f. v. crs, v. bad sort, subang. gr. musc, tr. pyr.		
10	2653,5	0	empty bullet only & sh: indur gry probably caving		
11	2646	0			
12	2640	70	sh: fissile, sft, grnish-gry, slgty calc.		
13	2630	50	a.a		
14	2603	70	sh: fissile, gry, v. slgty calc, friction plans		
15	2575	0	empty bullet only & sh: grnish gry		
16	2557	90	sh: indur, drk gry, calc, f. musc.		
17	2532	80	sh: sft, fissile, gry, friction plans		
18	2512	80	sh: sft, fissile, grnish-gry, f. musc.		

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LICENCE :	024	PAGE N°	1
		DATE :	13/5-74

tr : trace - M : medium - G : good

N°	DEPTHS	REC	L I T H O L O G Y	Fluorescence			
							CUT
1	2763	15	chlky lmst beige gry compact calcite recryst. slight hydroc. smell				
2	2759,5	25	a.a				
3	2793		lost				
4	2791	25	mrl/calc sh sft fissile slghty detr gryish orn				
5	2789	50	sh calc fissile gry large musc common				
6	2745	50	sh fissile drk gry v calc slaty sdy mic				
7	2716	25	a.a rare qtz gr				
8	2673,5		lost				
9	2662	25	sd clean f v crs v bad sort subang or musc tr pyr				
10	2653,5	0	empty bullet only sh indur gry probably caving				
11	2646	0					
12	2640	70	sh fissile sft grnish gry slgty calc				
13	2630	50	a.a				
14	2603	70	sh fissile gry v slaty calc friction plans				
15	2575	0	empty bullet only sh grnish gry				
16	2557	90	sh indur drk gry calc f musc				
17	2532	80	sh sft fissile gry friction plans				
18	2512	80	sh sft fissile ornish gry f musc				

Cut 13.5m
 Recovered 11m
 Loss 2.5m

81.5%

Company ELF-NORGE
 Well no 25/1-4
 Core no ONE

Date: 23/4/1974
 Depths: -----

Depths	Co ² Ca	PERM	POROS	SHOVS	DIPS	Log	DESCRIPTION
1922							<p>THE CORE IS COMPOSED OF GREY-GREEN, DARK GREY, LOC. BROWN SHALE, HOMOGENEOUS, RARELY SLIGHTY SILTY, MEDIEUM HARD, FISSILE AND FRIABLE IN BEDDING PLANES UNCALCAREOUS.</p> <p>IN TOP OF THE CORE SOME INCLUSIONS (2-4cm) OF HARD AND DENSE LIGHT GREY SILTSTONE WITH CALCAREOUS - ARBILACEOUS MATRIX OOLITIC OCCURS.</p>
1924							
1926							
1928							
1931							

TRACES

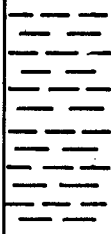
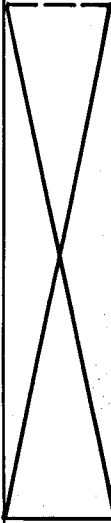
ABOUT 10%

Cut : 13.5 m
Recovered : 11 m
Loss : 2.5

21.5 %

Company: ELF NORGE
Well no : 25/1-4
Core no : One

Date: 23-4-74
Depth: 1935.5

Depth	Gr Co	TEAM	Poros	Swamp	DIPS	Log	DESCRIPTION
1932							A/R
1934							
1935.5							

Cut 18 m.
 Recovered 14 m.
 Loss 4

78 %

Company ELE-NORGE
 Well no 25/1-4
 Core no 2

Date 24.4.74
 Depths: -----

Depths	CO ₂ Ca	FeMn	POROS	GROUT	DIPS	Log	DESCRIPTION
1935.5							
1937.5							
1939.5							1. SHALE GREY-GREEN, DRK GRY, LOC. BRWN-RDISH HOMOGENOUS OCC. SILTY MED. HARD, FISSILE AND FRIABLE, NON CALCAREOUS.
1941.5							
1943.5							2. LEVELS (5-15 cm) OF HRD AND DENSE ROCK COMPOSED OF SH AND SLTST WITH CALCAREOUS AND ARGILLACEOUS MATRIX. SOME JOINTS AND FISSURES ARE FILLED WITH CALCITE AND PYRITE.

TRACES TO DETERMINE
 DIFFICULT

Cut 18 m
 Recovered 14 m
 Loss 4 m

78 %

Company ELF-NORGE
 Well no 25/1-4
 Core no 2

Date 24-4-74
 Depth: 1953.50

Depths	G Co	PERM	POROS	SUMM	DIPS	Log	DESCRIPTION
1945.5						[Hatched pattern]	SHALE A.A.
1947.5						[Hatched pattern]	
1949.5						[Hatched pattern]	2 - A.A.
1951.5						[X pattern]	
1953.5						[X pattern]	

TRACES

Cut 17 m
 Recovered 17 m
 Loss: -----

100 %

Company ELE-NORGE
 Well no 25/1-4
 Core no 3

Date 25-4-74
 Depths: -----

Depths	Gr Co	PERM	POROS	SHALT	DIPS	Log	DESCRIPTION
--------	-------	------	-------	-------	------	-----	-------------

1963.5

1965.5

1967.5

1969.5

1970.5

T R A C E S
 D E T E R M
 T D
 T
 U L T
 C
 F I C
 F
 D I
 0.2% Cl

2. SHALE A A

SILTSTONE GRAY TO LIGHT GREY, DENSE AND WELL INDURATED,
 LOCALLY FRIABLE, SOME MICA (MUSCOVITE),
 WELL CEMENTED (CALCAREOUS), OCC. BITUMEN
 HYDROCARBONS ODOR.

Cut Recovered: 13.5m
 Loss: 6.0m
 7.5m

44%

Company: ELF Norge
 Well no: 25/1-4
 Core no: 4

Date: 28/4/74
 Depths: 1970,5 - 1984

Depths	Core	TEAM	Poros	Shrink	DIPS	Log	DESCRIPTION
1971	Box 1		VERY GOOD				1970,50 SAND POOR CONSOLIDATED, GREYISH, FINE TO MEDIUM, SUBANGULAR GRAINS, FAIR TO MODERATE SORTING, SCATTERED COARSE QUARTZ SOME GREEN TRANSLUCENT MINERALS
1972	Box 2		VERY GOOD				ABUNDANT MUSCOVITE RARE ARGILLACEOUS JOINTS
1973	Box 3		VERY GOOD				LOCALLY INDURATED VERY SLIGHTLY CALCAREOUS
1974	Box 4		VERY GOOD		SUB HORIZONTAL		AT 1976,50 SHALE JOINTS WITH ROBBETTED MARKS - SLUMMING FIGURES
1975	Box 5		VERY GOOD TO FAIR				1974,60 - 1975,40 SHALE INDURATED FINE GREENISH GREY DETRITIC
1976	Box 6		VERY GOOD TO FAIR				BELOW 1974,90 SAND / SANDSTONE ARGILLACEOUS
1977							1976,50 NB: CORE EXTRACTION UNDER WATER PRESSURE
1978							SAND NOT CONTAMINATED APPEARS NOT WATERWET
1979							IN CORING GAS BOUNDS $C_{1 MAX} = 0,202$

CP

Cut : 12.5 m
 Recovered : 6 m
 Loss : 7.5 m

44 %

Company: ELF NORGE
 Well no : 25/1-4
 Core no : 4

Date: 26/4/74
 Depths: 1970,5 - 1984

Depths	no Co 3 Co	PERM	poros	SHOWN	DIPS	Log	DESCRIPTION
1979							NOT RECOVERED
1980							
1981							
1982							
1983							
1984							

Cut Recovered: 9 m
 Loss: 3 m

67%

Company: ELF NORGE
 Well no: 25/1-A
 Core no: 5

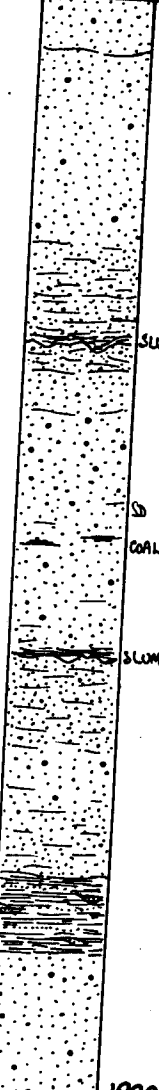
Date: 27/4/74
 Depths: 1984 - 1993 m

Depths	GR	FEIN	FOROS	SMOYR	DIPS	Log	DESCRIPTION
--------	----	------	-------	-------	------	-----	-------------

1984	Box 1
1985	Box 2
1986	Box 3
1987	Box 4
1988	Box 5
1989	Box 6
1990	
1991	
1992	
1993	

VERY GOOD	NO FLUO NO CUT
MODER.	NO FLUO NO CUT
GOOD - VERY GOOD	STRONG HYDROCARBON SMELL
MODER.	STRONG HYDROCARBON SMELL
MODER. GOOD	STRONG HYDROCARBON SMELL
VERY GOOD	STRONG HYDROCARBON SMELL

SUB HORIZONTAL



SAND GREYISH MORE OR LESS CONSOLIDATED
 VERY FINE TO MEDIUM MODERATE SORTED
 SCATTERED COARSE SUBROUNDED QUARTZ - MUSCOVITE
 GREEN GRAINS
 SOME SOFT BITUMINOUS INCLUSIONS AND LIGNITIC PARTS
 SHALE LAMINAE DARK GREY BLUISH GREY
 MAINLY BETWEEN 85,60 - 86, 87,55 - 88
 AND 88,25 - 88,70 (PARALLEL STRATIFICATION)
 WITH THIN PLANTS REMAINS - LOCALLY CARBONACEOUS
 (THIN COAL LEVELS DARK BROWN CONCHOIDAL
 BRIGHT FRACTURES)
 SOFT FISHL SHALE DARK GREY
 LOCALLY FINELY SANDY (REWORKING FIGURES)
 FROM 88,70 TO 89,15

NS = IN CORING GAS BOUND $C_{MAX} = .22$
 SAND LOOKS NOT WATER BEARING

UPP

Cut: 8 m
 Recovered: 6 m
 Loss: 2 m

75%

Company: ELE NORGE
 Well no: 25/4-4
 Core no: 6

Date: 28/4/74
 Depth: 1993-2001 m

Depth	Box	Notes	Dips	Log	DESCRIPTION
1993	Box 1				<p>SAND VERY FINE TO MEDIUM, MODERATELY SORTED, SUBANGULAR GRAINS.</p> <p>SCATTERED COARSE SUBROUNDED QUARTZ - MUSCOVITE</p> <p>RARE BITUMEN AND LIGNITIC DEBRIS</p> <p>RARE LAMINAE / JOINTS SHALE DARK GREY</p>
1994	Box 2				
1995	Box 3				
1996	Box 4	VERY GOOD	SUB HORIZONTAL		
1997	Box 5				
1998	Box 6	SLIGHT HYDROCARBON SMELL NO FLOW			
1999				LIGNITE SH	<p>NB = EXTRACTED CORE UNDER WATER PRESSURE, CONTAMINATION BY WATER AND MUD FROM 1993 TO 1997 m</p> <p>SAND SEEMS TO BE NOT WATER BEARING IN CORING RARE TRACES C₁</p>
2000					
2001					

48

Cut 9 m
 Recovered: 8 m
 Loss: 0 m

100 %

Company: ELE NORGE
 Well no: 25/A-4
 Core no: 7

Date: 28/4/74

Depths: 2001 - 2010 m.

Depths	Core	TEAM	Poros	Event	DIPS	Log	DESCRIPTION
2001							
	Box 1		VERY GOOD				SAND GREYISH FINE TO MEDIUM MODERATELY SORTED SUBANGULAR GRAINS.
2002							SCATTERED COARSE SUBROUNDED GRAINS
	Box 2						MUSCOVITE - RED AND GREEN COLOURED ^(HEAVY) MINERALS
2003							SOME BITUMINOUS AND LIGNITIC INCLUSIONS
	Box 3						(BELOW 2005,5 m SAND BECOMES BROWNISH)
2004							<u>2001,70 - 2001,90 AND 2005,65 - 2005,72</u>
	Box 4						SHALE: DARK GREY, SANDY WITH LIGNITIC DEBRIS
2005			GOOD				<u>2007 - 2007,70</u>
	Box 5						NODULAR CLAY RED BROWN CALCAREOUS
2006			VERY	HYDROCARBON SMELL			WITH INCLUSIONS OF SHALE: DARK GREY - GREENISH
	Box 6						GREY AND SHALE: YELLOWISH HARD SILICEOUS
2007							AND CALCAREOUS
	Box 7						6%
2008							<u>NB = CORE EXTRACTED UNDER WATER</u>
	Box 8						PRESSURE - SAND NOT CONTAMINATED LOOKS
2009			VERY GOOD	STRONG HYDROCARBON SMELL			NOT WATER BEARING DOWN TO
	Box 9						2005,50 m
2010				STRONG YELLOW FLUO STRONG YELLOW COLOURED CUT			NO GAS SHOW DURING CORING

48

Cut: 18.14
 Recovered: 13.54
 Loss: 4.60

75%

Company: ELF NORGE
 Well no: 25/1-4
 Core no: 8

Date: 29/4/74

Depths: 2010-2028 m

Depths	Core no	PERM	Poros	SHAL	DIPS	Log	DESCRIPTION
2019	Box 10		VERY GOOD				
2020	Box 11		VERY GOOD				
2021	Box 12		POOR				FROM 2020,50 TO 2021,30
2022	Box 13		VERY GOOD				SANDSTONE: VERY HARD, FINE TO COARSE, CALCAREOUS CEMENT - PSEUDO STYLOLITIC JOINT AT 21,30 THIN CLAY LEVEL DARK GREY CALCAREOUS SANDY
2023	Box 14		VERY GOOD				
2024							NB: NO GAS FOUND IN CORING CORE EXTRACTED UNDER WATER PRESSURE LOCKS SAND WATERWET EXCEPT ON THE 08 cm ON THE TOP
2025							
2026							
2027							
2028							

49

Cut: 18 m
 Recovered: 13.5 m
 Loss: 4.5 m

75%

Company: ELF NORGE
 Well no: 25/1-4
 Core no: 8

Date: 29/4/74

Depth: 2010 - 2018 m

Depth	Beam	Porosity	Shrink	Dips	Log	DESCRIPTION
2010	Pbox 1					- O/W
2011	Pbox 2					SAND: GREYISH, FINE TO COARSE SUBANGULAR GRAINS, MODERATE SORTING RARE MUSCOVITE, SOME BITUMEN INCLUSIONS ^{OF} SHALE: GREEN TO GREY AROUND 2015, 40 AND SHALE LAMINAE DARK GREY LIGNITE (ABOVE 2010, 08 m SAND SLIGHTY BROWNISH WITH FAIR DIRECT FLOW AND CUT)
2012	Pbox 3					
2013	Pbox 4					
2014	Pbox 5					
2015	Pbox 6					
2016	Pbox 7					
2017	Pbox 8					
2018	Pbox 9					
2019	Pbox 10					

VERY GOOD

SALTY TASTE

NO CUT

NO FLOW

SUB HORIZONTAL

41