SIMON PETROLEUM TECHNOLOGY WELL: 25/11-14s

Print: 11978 H	Units: (M) F	Top	Bottom	Scale	TD
Length: 18 FT	Initials: JAT	440	1910	1/500	1908

DIGITAL WIRELINE LOGS PACKAGE
1995
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SIMON PETROLEUM TECHNOLOGY SPT

COMPLETION LOG

[redacted] [redacted]

U-648 H .3

ESSO NORGE a.s ●

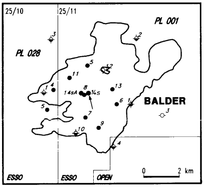
COMPLETION LOG

LICENSE : **001** ROUND : **1**

Esso

26 .6. 1991
REGISTRERT
OLJEDIREKTORATET

25/11-14s



SURFACE LOCATION
LAT: 59° 11' 17.306" N
LONG: 2° 22' 11.638" E
Y: 6561 323.6m N
X: 463 995.5m E
TOTAL DEPTH: 1908m MDRKB
1749.0m TVDRKB
80m N and 460m W
of surface loc.
KB.ELEVATION: 25m
WATER DEPTH: 127m
RIG: BYFORD DOLPHIN

OPERATOR ESSO NORGE a.s.
ARRIVED ON LOCN 11 Sep. 1990
SPUD DATE 13 Sep. 1990
REACH T.D 9 Oct. 1990
RIG RELEASE 6 Jan. 1991
WELL STATUS Plugged and abandoned
MUDLOGGING BY EXLOG
PREPARED BY APC/AIJ
DATE JANUARY 1991

CASING

SIZE	DEPTH (m RKB)
30"	187m
20"	452m
13 3/8"	1564m

LITHOLOGY SYMBOLS

- CONGLOMERATE
- CHERT, GLAUCONITE, PYRITE, MICA (△ ✕ ◆ M)
- SAND, SANDSTONE
- LIMESTONE CALCAREOUS
- SILT, SILTSTONE
- DOLOMITE DOLOMITIC
- CLAY, CLAYSTONE
- CHALK
- SHALE
- MARL
- LIGNITE/COAL, CARBONACEOUS, BITUMINOUS
- SALT
- TUFF
- ANHYDRITE
- MACRO, MICRO FOSSILS

LOG	RUN NO	DATE	INTERVAL (mKB)	BIT SIZE	MAX BHT (°C)	TIME SINCE CIRC / CIRC DURATION	MUD TYPE	MUD RESISTIVITY (Ω M) TEMP (°C) SURFACE	MUD RESISTIVITY (Ω M) TEMP (°C) BHT	MUD FILTRATE RESISTIVITY (Ω M) TEMP (°C)
ANADRILL MWD	1	—	187m-469m	9 7/8"	—	—	KCL POLY	—	—	—
ANADRILL MWD	2	—	469m-1576m	17"	—	—	KCL POLY	—	—	—
ANADRILL MWD	3	—	1579m-1908m	12 1/4"	—	—	KCL POLY	—	—	—

DUE TO STUCK PIPE NO OPEN HOLE WIRELINE LOGS WERE RUN

HYDROCARBON INDICATION

- SHOW OR STAIN
- CUT
- FLOURESCENCE
- GAS SHOW

CASING SHOE.LINER

DIP AZIMUTH
1.4° / 101.6°

DIPMETER
2050M DEPTH MKB
(-2025M) DEPTH SUB SEALEVEL
1984MS TWO WAY TIME FROM SEALEVEL (VELOCITY SURVEEY)

- CORED INTERVAL
- (NO RECOVERY)
- SIDEWALL CORE RECOVERED
- REC W/SHOWS
- PERFORATION INTERVAL
- CEMENT PLUG INTERVAL

DST

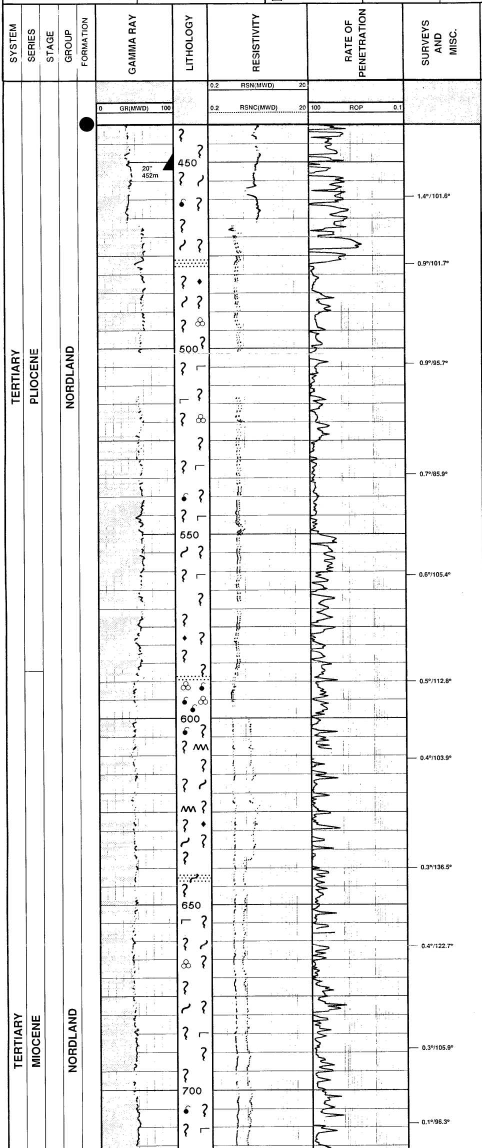
- THROUGH CASING
- 2 OPEN HOLE
- RE-RUN 2
- 1 RFT/FIT

WELL SUMMARY

OBJECTIVES: IB4 & IB3 SANDSTONE RESERVOIRS.

RESULTS: NO IB4 RESERVOIR WAS ENCOUNTERED.
THE IB3 SANDSTONE RESERVOIR WAS INTERSECTED @ 1903m MDRKB.
HOWEVER, WHILE TRIPPING THE PIPE BECAME STUCK & THE WELL WAS PLUGGED & SIDETRACKED.

Completion Log 25/11-14s



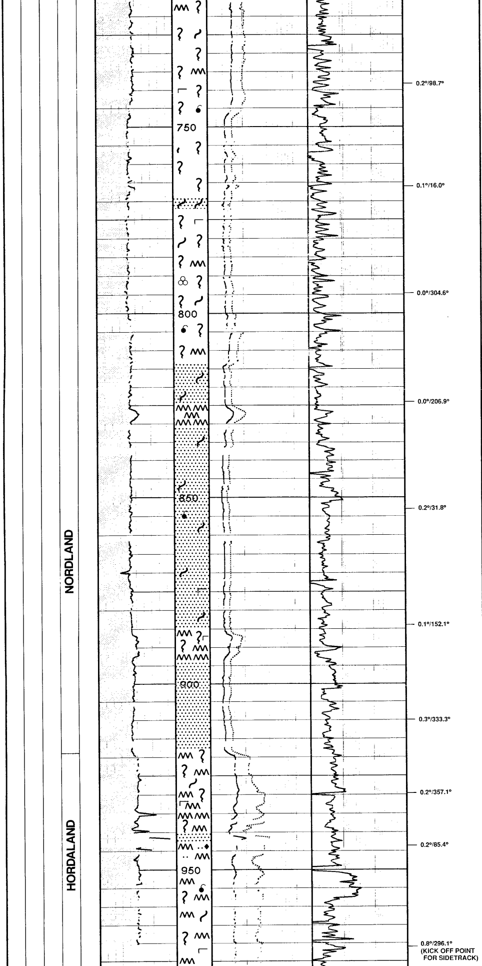
DESCRIPTIONS

Claystone: Medium grey, argillaceous, occasionally micaceous, trace glauconite, sticky, soft.
Sandstone: Offwhite to clear loose, fine grained, well sorted, well rounded, no cement, trace shell fragments.

MW = 9.2 PPG

Claystone: Light to medium grey, calc'rudite, argillaceous, common glauconite, trace mica, rare fine rounded quarts grains, soft
Sandstone: Dark green, fine to medium, well sorted, subrounded, trace mica, trace fossil fragments.

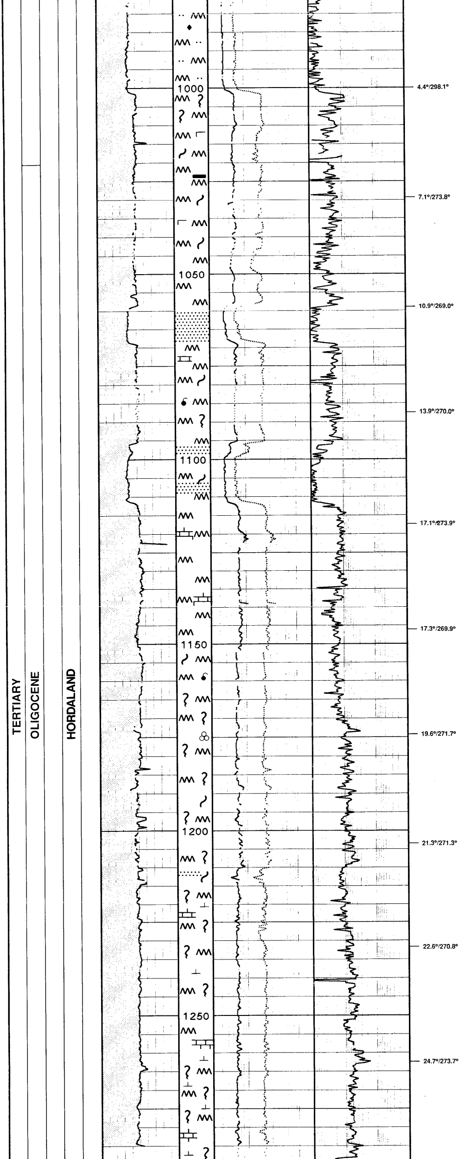
MW = 9.5 PPG



Claystone: Light to medium grey, occasionally grey/green, calc'rudite, trace fossil fragments, trace mica flecks, dispersive clays.

Sandstone: Off white to white, clear to off-white, fine to medium, moderately sorted, subrounded, trace mica, trace fossil fragments, common glauconite, excellent inferred porosity.

Siltstone: Dark grey to grey/brown, argillaceous-arenaceous, micaceous, speckled, subblocky, firm.

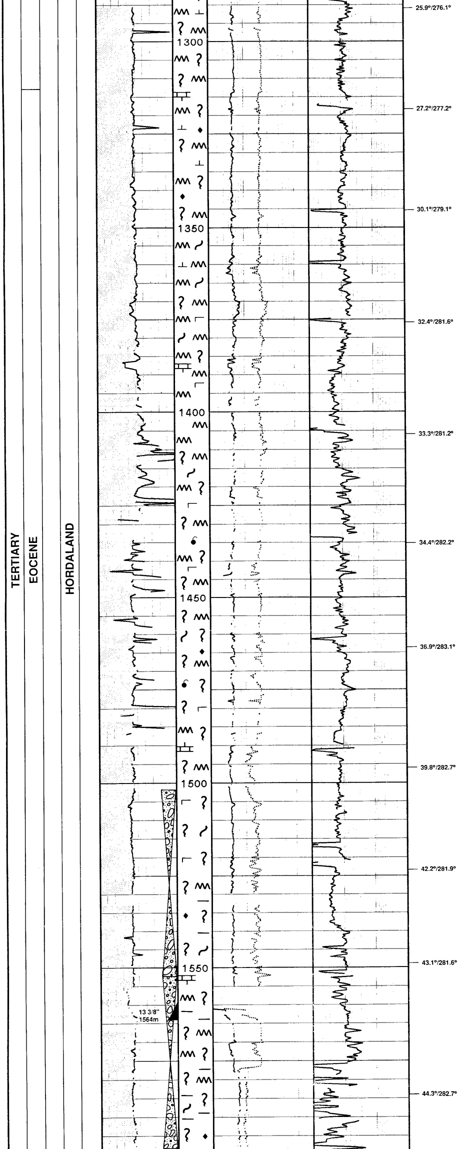


MW = 9.6 PPG

Sandstone: Clear to off white, translucent to milky, fine grained, well sorted, subrounded to rounded, glauconitic, excellent inferred porosity.

MW = 9.7 PPG

Siltstone: Medium grey to grey/brown, argillaceous to arenaceous, trace glauconite, blocky
Claystone: Medium grey, argillaceous/calcareous, calc'rudite, trace pyrite, trace glauconite, firm, blocky.

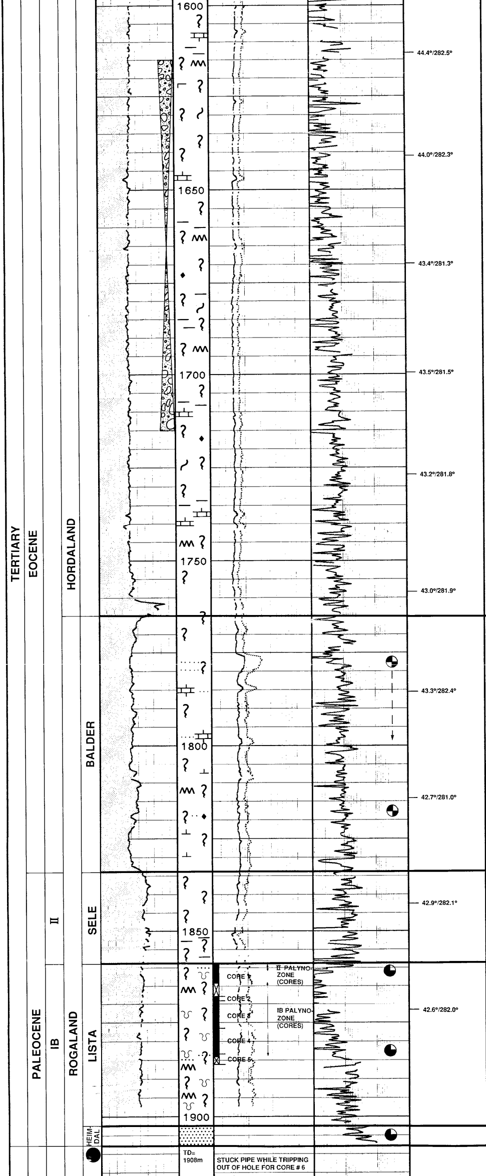


MW = 9.7 PGG

Siltstone: Medium grey/brown, argillaceous/calcareous, trace mica, trace pyrite, firm, slightly sticky, dispersive.
Claystone: Medium grey, argillaceous, calcareous, grading in part to siltstone, sticky, dispersive, swelling clays.

MW = 9.7 PGG

Siltstone: Grading in part to claystone, medium grey to brown/grey, argillaceous, slightly arenaceous, trace glauconite, trace pyrite, subfissile to fissile, waxy in part, firm.



Claystone/shale: Medium to dark grey, occasionally green/grey, blocky-subfissile, firm, non-calcareous, becoming silty in part.

MW = 10.5

TOP BALDER FM 1765M MDRKB

1645.0m TVDRKB (-1620.0m TVDSS)

Claystone/shale: medium grey to dark grey occasionally green/grey and grey/brown trace glauconite, trace micromica, trace pyrite, trace limestone, buff to light brown and trace sandstone, fine to very fine, no shows to trace dull yellow fluorescence, very slow streaming yellow cut.

TOP PALEOCENE

TOP SELE FM 1834m MDRKB

1695.6m TVDRKB (-1670.6m TVDSS)

Claystone/shale: Medium to dark grey, occasionally brown/grey to grey/black, fissile, firm, non-calconeous, non-bioturbated, micaceous, slighty carbonaceous, well laminated

TOP LISTA FM 1859m MDRKB

1713.8m TVDRKB (-1688.8m TVDSS)

MW = 10.5 ppg

Claystone: Medium to dark grey, green/grey, blocky, waxy, firm, non-calcareous, silty in part, micromicaceous, trace pyrite, trace carbonaceous flecks, bioturbated, common microfractures.

Sandstone: Light brown, fine grained, well sorted, subrounded to subangular, weak silica cement, firm, friable, micaceous, oil stained, moderately bright yellow fluorescence, white bright, streaming cut, brown oil residue.
MW = 10.5 ppg

TOP HEIMDAL FM 1903m MDRKB

1746.3m TVDRKB (-1721.3m TVDSS)

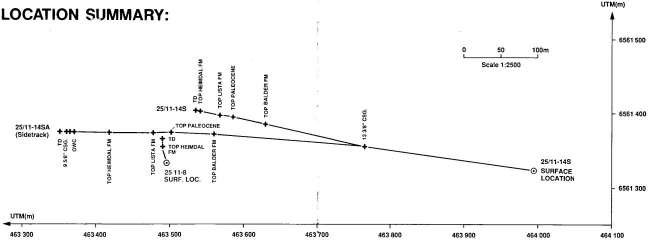
TD 1908m MDRKB

1749.0m TVDRKB (-1724.0m TVDSS)

TOPS SUMMARY:

TOP	MDRKB [m]	TVDRKB [m]	Delta-X [m]	Delta-Y [m]	UTM - X [m]	UTM - Y [m]
KBE	0	0	0.0	0.0	463 995.5	6561 323.6
13 3/8" casing shoe	1564	1499.6	-228.8	30.9	463 766.7	6561 354.5
Top Balder Fm	1765	1645.0	-364.6	59.9	463 630.9	6561 383.5
Top Paleocene	1834	1695.6	-410.6	69.5	463 584.9	6561 393.1
Top Lista Fm	1859	1713.8	-427.2	73.0	463 568.3	6561 396.6
Top Heimdal Fm	1903	1746.3	-456.4	79.2	463 539.1	6561 402.8
TD	1908	1749.0	-459.7	79.9	463 535.8	6561 403.5

LOCATION SUMMARY:



PALYNOLOGICAL SUMMARY:

Depth [m]	Palynozone
1859.05	II
1861.00	II
1863.97	IB
1869.00	IB
1873.77	IB
1876.40	IB
1883.25	IB
1883.85	IB

CORING SUMMARY:

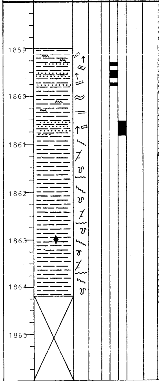
CORE #	CUT INTERVAL [mMDRKB]	RECOVERED [m]	RECOVERY [%]
1	1859.0 - 1868.0	5.2	57.8
2	1868.0 - 1869.0	1.0	100.0
3	1869.0 - 1876.5	7.6	100.0
4	1876.5 - 1883.3	6.8	100.0
5	1883.3 - 1886.0	0.6	22.0
	1859.0 - 1886.0	21.2	78.5

CORE DESCRIPTIONS:

CONVENTIONAL CORE DESCRIPTION

COMPANY: ESSO
WELL: 25/11-14s
COUNTRY (On/Offshore): Norway
DATE: 6/10/90 GEOL.: D.BERGSLIEN
CORE No: 1
INTERVAL: FROM: 1859m TO: 1868mMDRKB
RECOVERY: 5.2m 57.8 %

DEPTH | LITHOLOGY Contacts Accessories Fossils | Sed. Structures | DIP | POROSITY % OBSER. P F G Meas. | K | LITHOLOGIC DESCRIPTION (REMARKS) | SHOWS



1859.00 - 1859.34
SHALE : Dark grey/black carbonaceous shale, non-silty in lower section, thinly laminated evidence of carbonate cemented sand clast (or possibly an injection feature). Sandstone is very fine to medium with faint laminae.

1859.34 - 1859.86
INTERBEDDED SAND AND SHALE BRECCIA : Shale clasts in sand and sand dyking between clasts. Possibly a number of flows ripping up the shale interbeds
SAND : Buff to pale grey/brown, fine to medium, subangular to subrounded, homogeneous, some carbonate cementing, trace disseminated plant fragments, increasing occurance and thickness of sand laminae upwards.
SHALE : Medium to dark grey occasionally olive grey, finely laminated with thin silty interlaminae, trace siderite nodules, rare sand dykes,

1859.86 - 1860.10
SILTSTONE : Light grey, argillaceous/ arenaceous, carbonate cemented, faint parallel laminae

1860.10 - 1860.50
INTERLAMINATED SHALE AND SILTSTONE : Partly discontinuous silty laminae, trace of small sideritic nodules, silt content increasing upwards, some very fine sand grains in silty laminae.

1860.50 - 1860.80
INTERBEDDED SAND AND SHALE : Sand beds 3 to 10cm thick separated by centimetre thick silty laminated shale, shale beds slightly scoured at top, angular shale rip up clasts, shale and silt laminae drape at top of upper wavy sand bed.

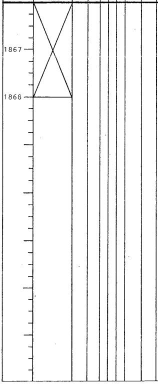
1860.80 - 1862.00
INTERLAMINATED SHALE/SILTSTONE/SANDSTONE : Thin interlaminae, some evidence of normally graded beds, some scouring at base, common pyrite aggregates, shale partly bioturbated/ partly undisturbed, generally dark to medium grey, occasionally olive green, bioturbation increases upwards, silt and sand grains present throughout shale laminae.

1859.00 - 1868.00
FLUORESCENCE: Trace dull orange-weak yellow fluorescence, very slow yellow streaming cut, moderately bright yellow crush cut, bright thin yellow ring residue. Oil staining in sandstringers.

CONVENTIONAL CORE DESCRIPTION

COMPANY: ESSO
WELL: 25/11-14s
COUNTRY (On/Offshore): Norway
DATE: 6/10/90 GEOL.: D.BERGSLIEN
CORE No: 1
INTERVAL: FROM: 1859m TO: 1868mMDRKB
RECOVERY: 5.2m 57.8 %

DEPTH | LITHOLOGY Contacts Accessories Fossils | Sed. Structures | DIP | POROSITY % OBSER. P F G Meas. | K | LITHOLOGIC DESCRIPTION (REMARKS) | SHOWS

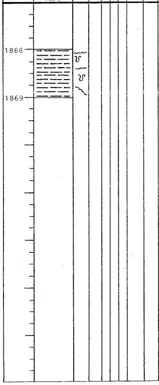


1862.00 - 1864.20
SHALE : Medium to dark grey, occasionally olive green, rare silty interlaminae, predominantly mottled and churned due to bioturbation, microfractures with slickensides increasing in abundance towards base of section, abundant worm burrows of varying shapes (mostly flattened), some burrows carbonate cemented and containing sitly/shale fragments and sideritic pelets, most tubes are not cemented and are flattened due to compaction, some carbonate/ sideritic concretions, both dwelling and feeder traces, 1863.66 : calcite cemented worm tubes.

CONVENTIONAL CORE DESCRIPTION

COMPANY: ESSO
WELL: 25/11-14s
COUNTRY (On/Offshore): Norway
DATE: 6/10/90 GEOL.: D.BERGSLIEN
CORE No: 2
INTERVAL: FROM: 1868m TO: 1869mMDRKB
RECOVERY: 1m 100 %

DEPTH | LITHOLOGY Contacts Accessories Fossils | Sed. Structures | DIP | POROSITY % OBSER. P F G Meas. | K | LITHOLOGIC DESCRIPTION (REMARKS) | SHOWS



1868.00 - 1869.00
SHALE : Medium to dark grey, occasionally olive green, rare silty interlaminae, predominantly mottled and churned due to bioturbation, microfractures with slickensides increasing in abundance towards base of section, abundant worn burrows of varying shapes (mostly flattened),

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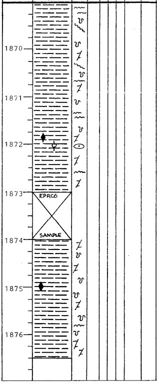
CONVENTIONAL CORE DESCRIPTION

COMPANY: ESSO
WELL: 25/11-14s
COUNTRY (On/Offshore): Norway
DATE: 7/10/90 GEOL.: D.BERGSLIEN
CORE No: 3
INTERVAL: FROM: 1869m TO: 1876.5mMDRKB
RECOVERY: 7.6m 100 %

DEPTH | LITHOLOGY Contacts Accessories Fossils | Sed. Structures | DIP | POROSITY % OBSER. P F G Meas. | K | LITHOLOGIC DESCRIPTION (REMARKS) | SHOWS



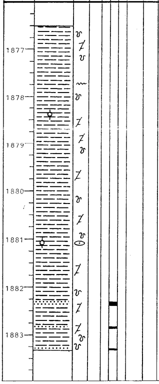
1869.00 - 1876.50
SHALE : Medium to dark grey, occasionally olive green, rare silty interlaminae, predominantly mottled and churned due to bioturbation, microfractures with slickensides increasing in abundance towards base of section, abundant worm burrows of varying shapes (mostly flattened), some burrows carbonate cemented and comtaining sitly/shale fragments and sideritic pelets, most tubes are not cemented and are flattened due to compaction, some carbonate/ sideritic concretions, both dwelling and feeder traces, less bioturbation from 1876 down, trace pyrite nodules, swelling clays.

1871.00 : worm tubes with carbonate matrix, shell fragments.
1872.30 : sideritic nodules.
1874.30 : worm tubes with sideritic/ carbonate matrix and associated pelets (sideritic).

CONVENTIONAL CORE DESCRIPTION

DATE: 8/10/90 GEOL: D.BERGSLIEN	COMPANY: ESSO	
	WELL: 25/11-14s	COUNTRY (On/Offshore) Norway
CORE No: 4	INTERVAL: FROM: 1876.5m TO: 1883.3mMDRKB	RECOVERY: 6.8m 100 %

DEPTH | LITHOLOGY Contacts Accessories Fossils | Sed. Structures | DIP | POROSITY % OBSER. P F G Meas. | K | LITHOLOGIC DESCRIPTION (REMARKS) | SHOWS



1876.50 - 1882.20
SHALE: Medium to dark grey, occasionally olive green, rare silty interlaminae, predominantly mottled and churned due to bioturbation, microfractures with slickensides increasing in abundance towards base of section, abundant worm burrows of varying shapes (mostly flattened), some burrows carbonate cemented and containing silty/shale fragments and sideritic pelets, most tubes are not cemented and are flattened due to compaction, some carbonate/sideritic concretions, both dwelling and feeder traces, trace pyrite nodules, swelling clays.
1878.40 : sideritic nodules, circular and oval, may be burrow related.
1879.00 : microfaults with 2cm vertical displacement, bed above not affected.
1881.00 : sideritic nodules.

1882.20 - 1883.30
INTERBEDDED SHALE AND SAND: shale decimeters thick separated by 5-20cm sandbeds. Shale is medium dark grey to olive green, rare silty interlaminae, commonly mottled and partly churned by bioturbation, fractures and microfaults with slickensides increasing in abundance down section. Sand is buff to grey, very fine to occasionally medium, well to subrounded, occasionally angular, 2-3cm thick beds with abundant small (2mm) shale clasts (intraformational). Sharp boundaries between sand and shale. Scouring observed at base of one sandbed.

FLUORESCENCE: Brown oil staining, 80% bright yellow/white fluorescence, instant streaming cut, bright yellow, white crush cut, brown oil residue.

SHOWS: ◕ ◕

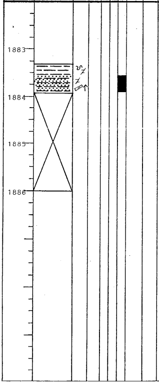
CORE LOG LEGEND:

— EVEN PARALLEL LAMINATION
〰 WAVY PARALLEL LAMINATION
↑ DIKE, FLUID ESCAPE
BRECCIA
MOTTLED, CHURNED
MICROFRACTURE, MICROFAULT
BURROW
⊙ CONCRETION, NODULE
RIP UP CLASTS
WOOD/PLANT REMAINS

CONVENTIONAL CORE DESCRIPTION

DATE: 8/10/90 GEOL: D.BERGSLIEN	COMPANY: ESSO	
	WELL: 25/11-14s	COUNTRY (On/Offshore) Norway
CORE No: 5	INTERVAL: FROM: 1883.3m TO: 1886mMDRKB	RECOVERY: 0.6m 22 %

DEPTH | LITHOLOGY Contacts Accessories Fossils | Sed. Structures | DIP | POROSITY % OBSER. P F G Meas. | K | LITHOLOGIC DESCRIPTION (REMARKS) | SHOWS



1883.30 - 1883.65
SHALE : Medium grey to dark olive green, fissile, bioturbated, microfaults, mottled and churned, burrows common

1883.65 - 1884.00
SAND : buff to grey, very fine to occasionally medium, well to subrounded, occasionally angular, shale clasts in sand, possibly brecciated (intraformational conglomerate), very friable, excellent visual porosity,
FLOURESCENCE: Some brown oil staining, 80% bright yellow/white flourescence, instant streaming cut, bright yellow/ white crush cut, brown oil residue.

SHOWS: ◕