SIMON PETROLEUM TECHNOLOGY

WELL: 2/8-14

Print: 12214 R **Units:** [✓ M] F

Length: 35. FT **Initials:**

Top	Bottom	Scale	TD
80	4400	1:500	4397.

DIGITAL WIRELINE LOGS PACKAGE
1994
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SIMON PETROLEUM TECHNOLOGY
SPT

COMPLETION LOG

1:200

COMPOSITE WELL LOG

WELL: 2/8-14 ST-1

A.P.I. NO.: 97-577-03405-01

COMPANY : AMOCO NORWAY OIL COMPANY
COUNTRY : NORWAY
AREA : NORTH SEA
LICENCE : 006
BLOCK : 2/8
NPD PERMIT NO : L 0647
GROUP INTEREST : AMOCO: 28.33%
AMERADA: 28.33%
ENTERPRISE: 28.33%
NOCO: 15.00%

GEOGRAPHICAL COORDINATES SURFACE:(derrick coordinates)
LAT: 56° 15' 48.93"N UTM: 522 078.5m E
6 235 612.5m N
LONG: 03° 21' 23.11"E
K.B.ELEVATION: 22m
WATER DEPTH: 67m
TOTAL DEPTH: 4392m MD RKB
4370m MD SS
BOTTOM HOLE FORMATION: UPPER JURASSIC

WELL CLASSIFICATION : EXPLORATION
DATE ON LOCATION : 13 AUGUST 1990
SPUD DATE : 14 AUGUST 1990
DATE T.D. REACHED : 03 JANUARY 1991
COMPLETION DATE : 22 JANUARY 1991
RIG RELEASE DATE : 22 JANUARY 1991
STATUS : DRY HOLE
TESTS : NONE
CORES : NONE

RIG: WEST VANGUARD
DRILLING CONTRACTOR : SMEDVIG
LOGGING CONTRACTOR : ATLAS WIRELINE
MWD CONTRACTOR : TELECO
MUD LOGGING CONTRACTOR : EXPLORATION LOGGING
WELLSITE GEOLOGIST: FEARN/HUSSEY & MILLAR/ORR
CONTRACTOR : CAMBRIAN CONSULTANTS/QUAD CONSULTING
AMOCO GEOLOGISTS: HUMPHREVILLE, ØSTVOLD, ØVERLI
COMPILED BY: FEARN/HUSSEY

VERTICAL SCALE : 1 : 500

CASING RECORD

30" CASING AT	184.8m RKB
20" CASING AT	944.8m RKB
13 3/8" CASING AT	2549.0m RKB
11 3/4"LINER AT	3062.0m RKB
TOP OF LINER AT	2426.0m RKB
7" LINER AT	4202.0m RKB
TOP OF LINER AT	3111.0m RKB

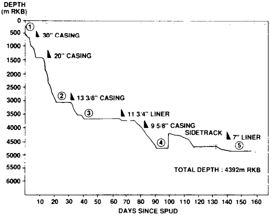
DRILLING FLUID DATA

FLUID TYPE	INTERVAL
PREHYDRATED BENTONITE/SEA WATER	36" & 26"
KCL/PHPA-POLYDRILL	17 1/2"
ANCOTEMP POLYDRILL/ANCORESIN PHPA	12 1/4", 10", 8 1/2" AND DOWN TO APPROX. 3855m IN 8 1/2" SIDETRACK
ANCOTEMP POLYDRILL/HOSTADRILL PHPA	8 1/2" & 5 7/8"

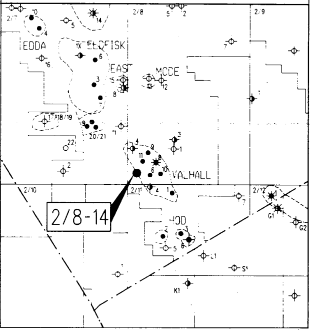
DRILLING TIME CURVE

OPERATIONAL HIGHLIGHTS

1) SPUDDED WELL 2/8-14 ON 14/08/90
2) EXPERIENCED SEVERE HOLE STABILITY PROBLEMS IN TERTIARY SEQUENCE WHILST RUNNING 13 3/8" CASING
3) EXPERIENCED HIGH PORE PRESSURES IN L.CRETACEOUS (~15.3 ppg EMW). THAT REQUIRED PLUGGING WELL BACK AND SETTING 11 3/4" LINER.
4) HIGH PORE PRESSURES IN U.JURASSIC (~17.0ppg EMW) RESULTED IN HAVING TO PLUG BACK, SIDETRACK (2/8-14 ST-1), AND SET 7" LINER
5) PORE PRESSURES OF APPROX. 18.1 ppg EMW IN U.JURASSIC FORCED PREMATURE END TO WELL AT 4392m RKB.



WELL LOCATION MAP



SUMMARY RECORD OF CORES,SIDEWALL CORES,DST'S & FMT'S

OPERATION	TOP DEPTH	BTM.DEPTH	RECOVERY/REMARKS
SIDEWALL CORES :			
RUN 2A	3102m	3245m	25 SHOTS FIRED, 22 CORES RECOVERED (88%)
RUN 3A	3496m	4205m	39 SHOTS FIRED, 14 CORES RECOVERED (36%)
RUN 3B	3300m	4202m	50 SHOTS FIRED. 0 CORES RECOVERED (0%)
RUN 4A	4212m	4395m	26 SHOTS FIRED, 12 CORES RECOVERED (46%)
FMT'S :			
RUN 1A	2615.0m	2690.5m	10 PRETESTS, 2 SUCCESSFUL, 3 TIGHT, 5 SEAL FAILURES
RUN 2A	3101.8m	3239.0m	19 PRETESTS, 4 SUCCESSFUL, 10 TIGHT, 5 SEAL FAILURES
RUN 4A	4211.2m	4382.5m	10 PRETESTS, 1 SUCCESSFUL, 6 TIGHT, 3 SEAL FAILURES

MWD & WIRELINE LOGGING PROGRAM

DATE	RUN	LOGS	DEPTH INTERVAL (m RBK)	B.H.T.°F	CIRC TIME HR.	TIME SINCE CIRC HR.
TELECO MWD LOGS						
	1-2	RGDxi(16"S.N. RESISTIVITY,GR, DIRECTIONAL)	193.0-595.0	–	–	–
	3	DPR (EMW RESISTIVITY, GR, DIRECTIONAL)	595.0-687.0	–	–	–
	3-	RGDxi (16"S.N. RESISTIVITY,GR,DIRECTIONAL)	687.0-4274.0	–	–	–
SIDETRACK						
		RGDxi(16"S.N.RESISTIVITY,GR, DIRECTIONAL)	3797.0-4202.0			
ATLAS WIRELINE LOGS						
01/10/90	1A	DIFL/AC/ZDL/CN/GR	2549.0-3075.3	172	3hr 05min	10hr 10min
01/10/90	1A	ACSIG	2550.0-2910.0	172	3hr 05min	10hr 10min
01/10/90	1A	CBL/VDL/GR	405.0-2549.0	–	3hr 05min	–
02/10/90	1A	4-ARM DIPLOG/GR	2549.0-3077.2	183	3hr 05min	2hr 15min
02/10/90	1A	HP FMT/GR	2615.0-2690.5	192	3hr 05min	34hr 40min
06/10/90	1A	4-ARM CALIPER	2549.0-3067.7	180	9hr 15min	9hr 40min
20/10/90	2A	DIFL/AC/GR/CAL	3064.0-3248.2	192	2hr 30min	8hr 00min
20/10/90	2A	ACSIG	3064.0-3248.2	192	2hr 30min	8hr 20min
20/10/90	2A	CBL/VDL/GR	2414.0-3064.0	–	2hr 30min	–
21/10/90	2A	ZDL/CN/GR/CAL	3064.0-3248.0	206	2hr 30min	12hr 20min
21/10/90	2A	HP FMT/GR	3101.8-3239.0	199	6hr 00min	7hr 00min
21/10/90	2A	4-ARM DIPLOG/GR	3064.0-3248.0	202	6hr 00min	18hr 30min
21/10/90	2A	COREGUN/GR	3102.0-3245.0	209	6hr 00min	26hr 30min
27/11/90	2A	CHECKSHOT SURVEY	2614.0-3780.0	–	–	–
SIDE TRACK						
09/12/90	3A	DIFL/AC/ZDL/CN/SP/GR/CAL	3151.5-4207.8	278	8hr 50min	16hr45min
10/12/90	3A	CBL/VDL/GR	3234.2-4500.0	–	8hr 50min	–
10/12/90	3A	SWING ARM DIPLOG/GR	3234.2-4208.5	284	8hr 50min	29hr 25min
11/12/90	3A	COREGUN/GR	3496.0-4205.0	–	11hr 40min	12hr 00min
15/12/90	3B	COREGUN/GR	3300.0-4202.0	–	7hr 50min	
22/12/90	3A	VSP	2580.0-4190.0	–	–	–
04/01/91	4A	DIFL/AC/SP/GR	4130.0-4396.7	302	6hr 30min	13hr 00min
04/01/91	4A	CBL/VDL/GR	3107.2-4206.5	–	6hr 30min	–
05/01/91	4A	HP FMT/GR	4211.2-4282.5	311	6hr 30min	30hr 00min
10/01/91	4A	ZDL/CN/GR/CAL	4153.0-4396.4	301	29hr 00min	10hr 00min
10/01/91	4A	SWING ARM DIPLOG/GR	4206.5-4397.1	302	29hr 00min	16hr 00min
10/01/91	4A	CHECKSHOT	4150.0-4390.0	–	29hr 00min	–
11/01/91	4A	COREGUN/GR	4212.0-4395.0	306	29hr 00min	27hr 00min

LITHOLOGICAL SYMBOLS

- BRECCIA
- CONGLOMERATE
- SANDSTONE
- SILTSTONE
- CLACAREOUS SILTSTONE
- CLAY
- CLAYSTONE
- SHALE
- MARL
- CHALK
- ARGILLACEOUS LIMESTONE
- LIMESTONE
- DOLOMITIC LIMESTONE
- DOLOMITE
- GYPSUM
- ANHYDRITE
- SODIUMSALT
- POTASSIUM SALT
- COAL
- CHERT
- VOLCANICS
- BASEMENT

ACCESSORY SYMBOLS

CEMENT

- SILICEOUS
- ARGILLACEOUS
- CALCAREOUS

MINERALS

▰	PYRITE
□	LIMONITE / HEMATITE
S	SIDERITE
P	PHOSPHATE
•	GLAUCONITE
F	FELDSPAR
M	MICA
K	KAOLINITE
○	CONCRETIONS
⊙	OOLITHS / PISOLITHS

FOSSILS

- SHELL DEBRIS
- FORAMINIFERA
- BRYOZOA
- SPICULES
- PLANTS
- CARBONACEOUS DEBRIS

OPERATIONAL SYMBOLS

CORED INTERVALS (WITH DEPTHS & RECOVERY)

SIDEWALL CORES
RECOVERED
NOT RECOVERED

WIRELINE FMTN. TESTS
FLUID
PRESSURE
(IF UNSUCESSFUL USE DASHED LINE)

DRILL STEM TESTS

PERFORATED INTERVAL

CASING
SHOE
TOP OF LINER

BRIDGE PLUG

CEMENT PLUG

FISH

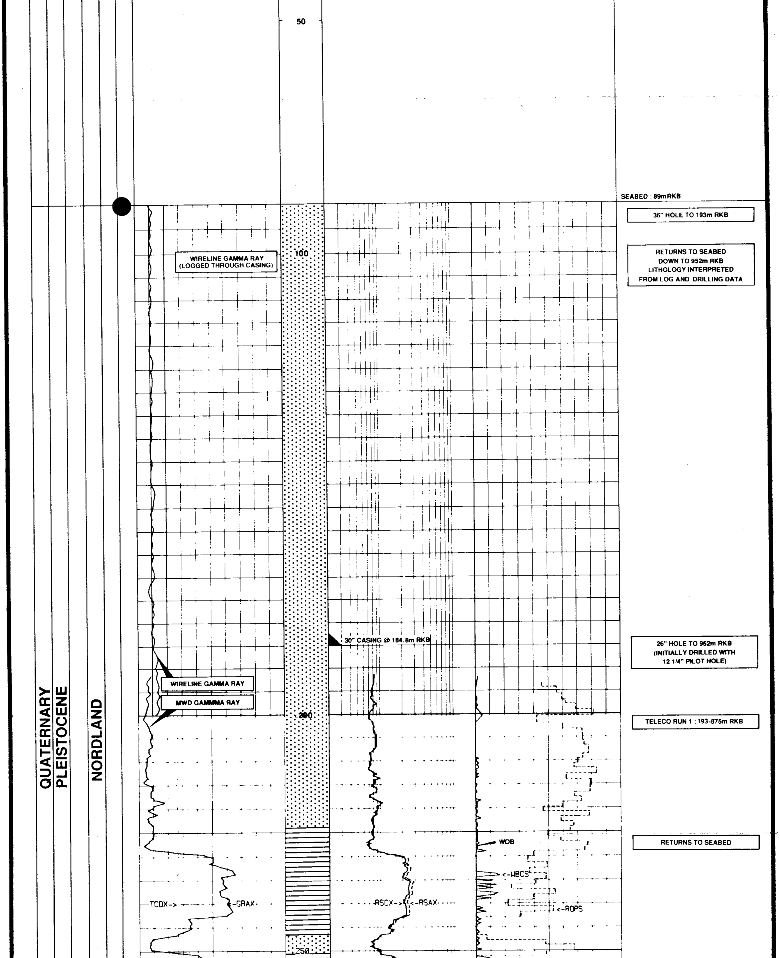
D-DEPTH

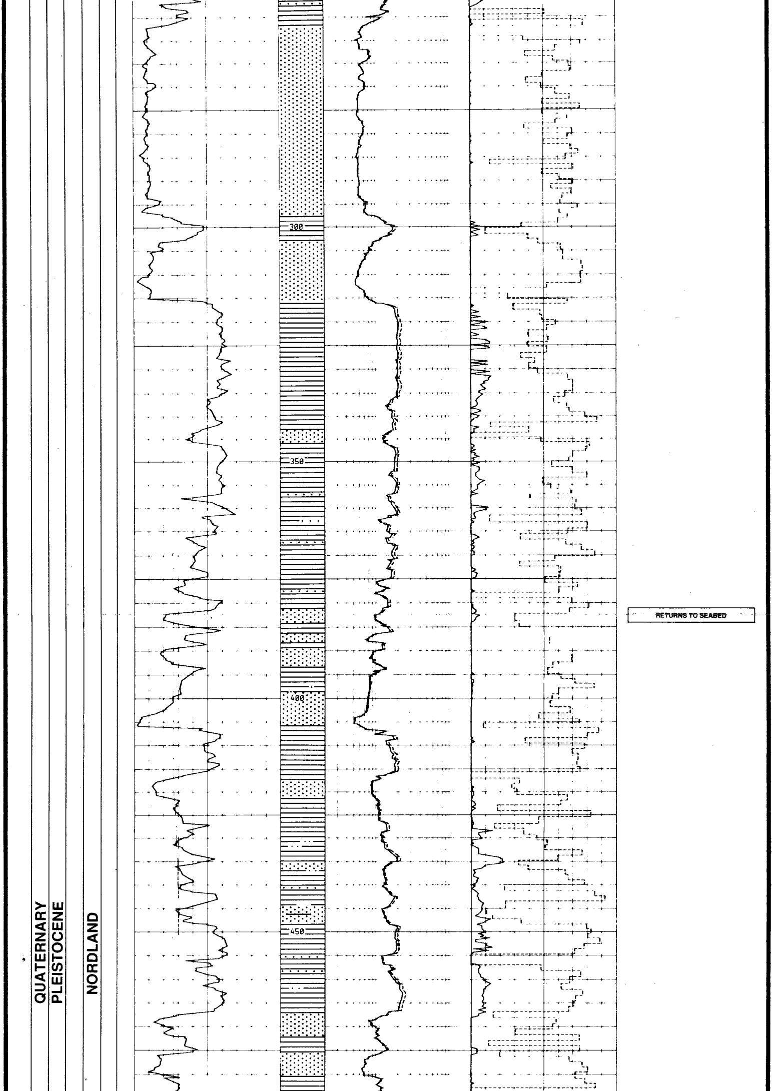
SYSTEM	SERIES	STAGE (paleo-dating performed by Stratlab.)	GROUP	FORMATION	MEMBER	GAMMA RAY (API UNITS)	DEPTH meters RKB	RESISTIVITY OHMS-M	INTERVAL TRANSIT TIME △T MICROSECONDS PER FOOT		LITHOLOGICAL DESCRIPTION AND REMARKS
						GR (API) 0.0 – 150.0		DEEP INDUCTION Rild (OHMM) 0.2 – 20.0 MEDIUM INDUCTION Rilm (OHMM) 0.2 – 20.0 SPHERICALLY FOCUSED RESISTIVITY RFOC (OHMM) 0.2 – 20.0	DT (MS/FT) 140.0 – 0.0	WIRELINE LOG HEADER	
						CDS Temperature (MWD) deg F 0.0 – 250.0 Gamma Ray App (MWD) MWD-API 0.30m Smoothing 0.0 – 150.0		Resistivity (SN) Cor (MWD) ohm-m 0.2 – 20.0 Resistivity (SN) App (MWD) ohm-m 0.2 – 20.0	Surface WOB klbs 0.0 – 100.0 Rate Of Peneration 100.0 – 0.0	MWD LOG HEADER	

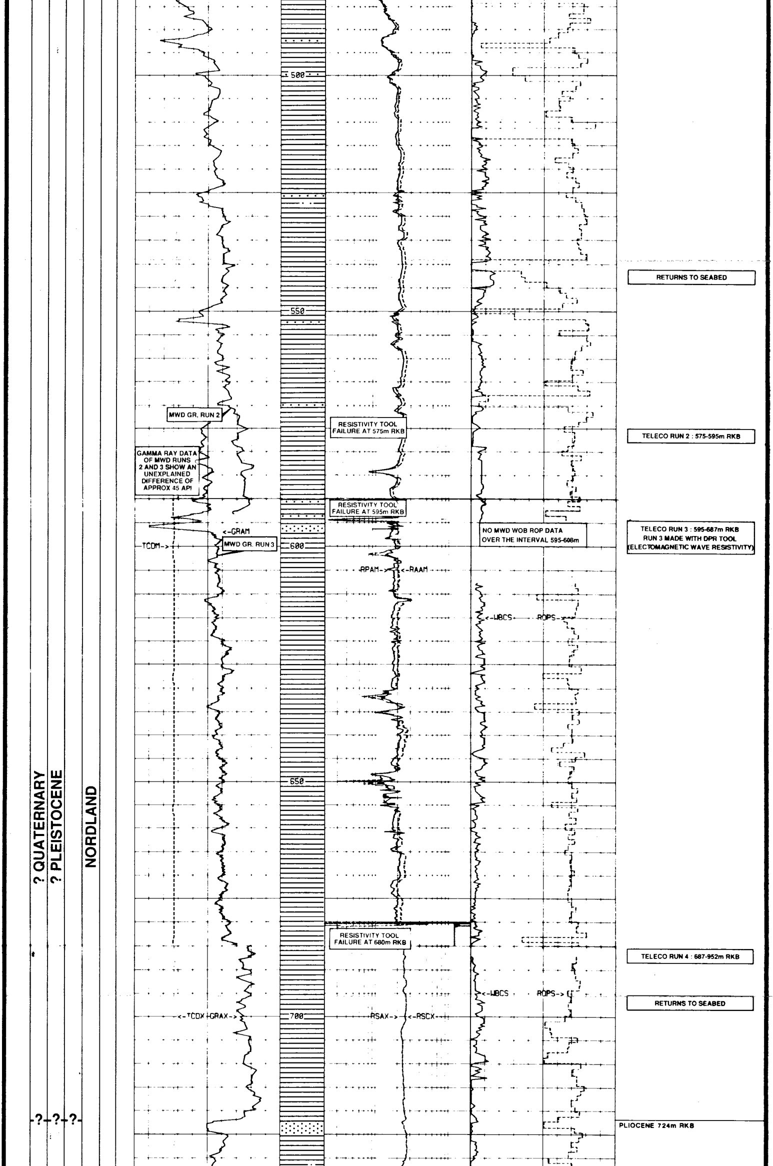
MWD GR FROM 192-952m RKB

RKB : 0m

MSL : 22m RKB







GAMMA RAY DATA OF MWD RUNS 2 AND 3 SHOW AN UNEXPLAINED DIFFERENCE OF APPROX 45 API

RESISTIVITY TOOL FAILURE AT 575m RKB

RESISTIVITY TOOL FAILURE AT 595m RKB

RESISTIVITY TOOL FAILURE AT 680m RKB

NO MWD WOB ROP DATA OVER THE INTERVAL 595-608m

RETURNS TO SEABED

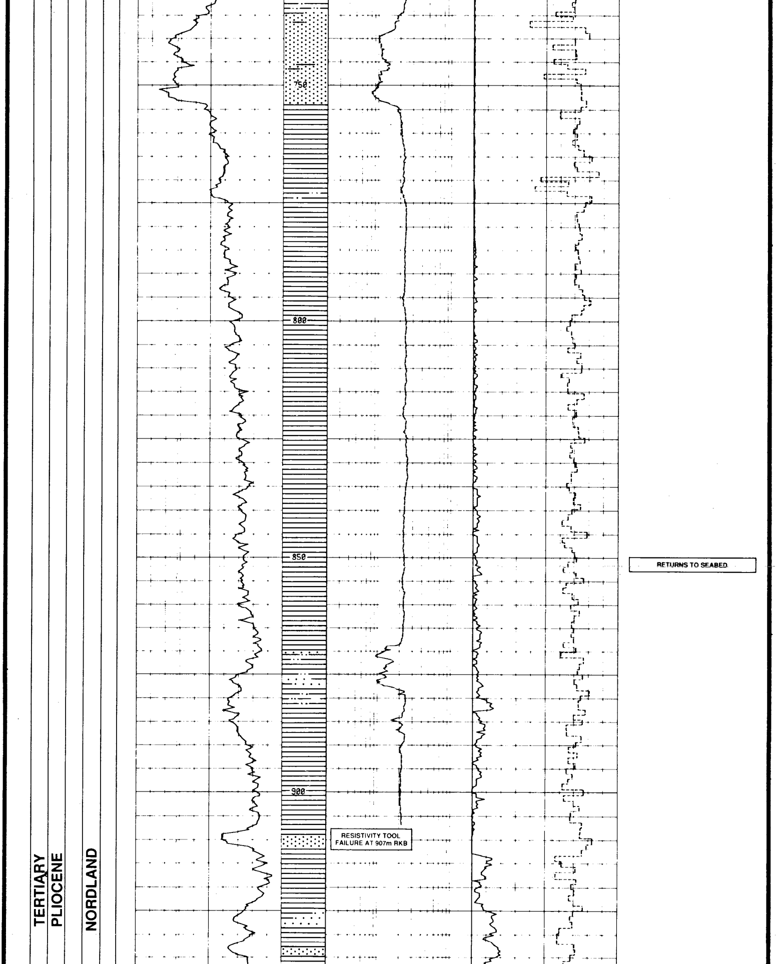
TELECO RUN 2 : 575-595m RKB

TELECO RUN 3 : 595-687m RKB
RUN 3 MADE WITH DPR TOOL
(ELECTOMAGNETIC WAVE RESISTIVITY)

TELECO RUN 4 : 687-952m RKB

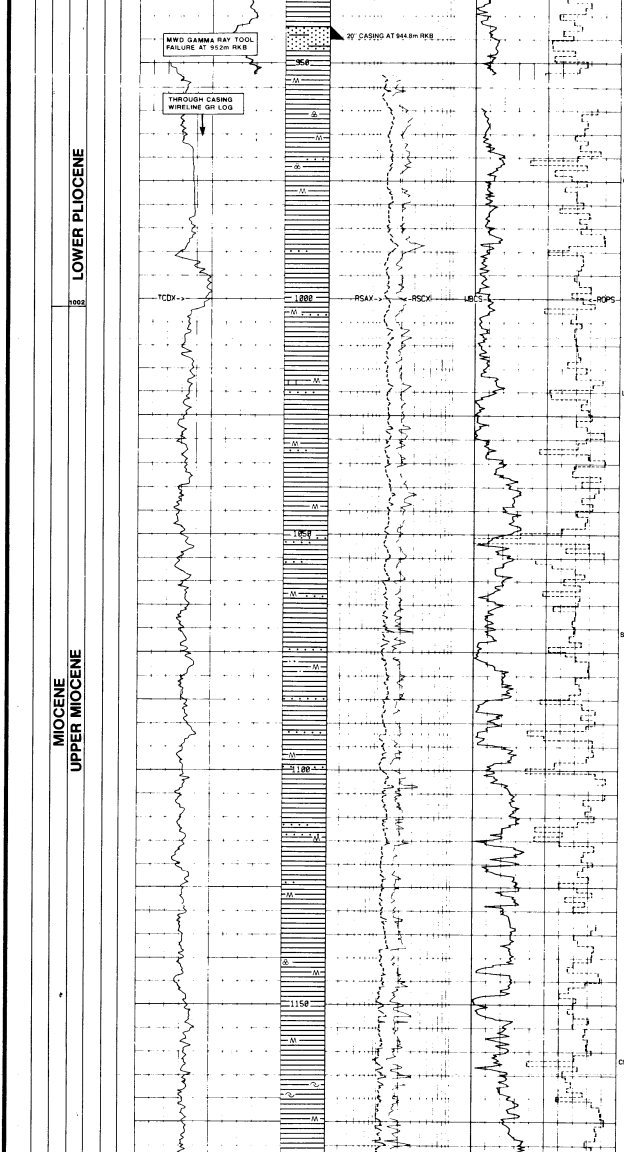
RETURNS TO SEABED

PLIOCENE 724m RKB



RESISTIVITY TOOL FAILURE AT 907m RKB

RETURNS TO SEABED



LOT : 14.47 PPG EMW

17 1 2" HOLE TO 2560m RKB

FIRST RETURNS FROM 956m RKB

TELECO TOOL RUN 5 : 956-2560m RKB

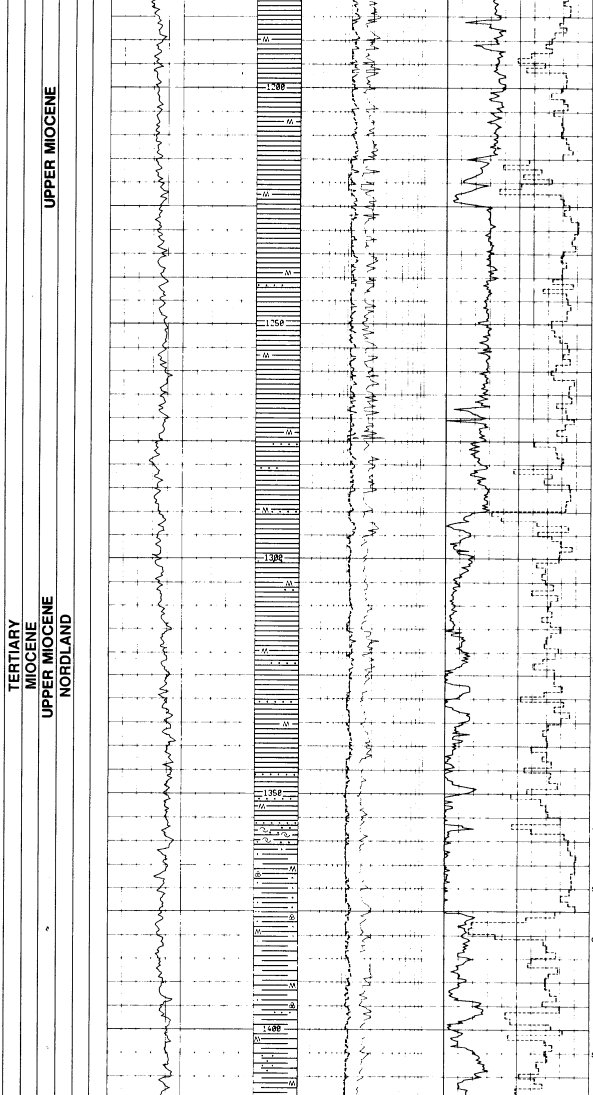
CLY :
GRN GRY, SFT, PLAS, AMOR, HYDRATED, SLTY/SDY, COM MIC (MUSC AND BIOT), SCT SHELL FRAG/MICRO-FOSS, OCC LAM W/PL GRY-WH CARB SS, ALSO. COM W SCT LSE QTZ SD GN, TRNSP-OP, ORNG, RND, W SRT

U. MIOCENE 1002m RKB

LS :
TR, YEL BRN, HD, MICRO-X

SLTST :
GRY, SFT, SL CARB

CLY :
BCM PRED DK GRY-BLK, DK GRN GRY, SFT, PLAS, AMOR, GSY, SL SLTY, MIC, W/COM SCT SD GN, CLR, F, RND, W SRTD



CLY :
DK GRY-DK GRN GRY, OCC LT BRN, SFT, GRSY, AMOR, HYDRATED, SL SLTY, MIC W/COM SHELL FRAG, MICRO-FOSS, W/ SCT LSE QTZ SD GN

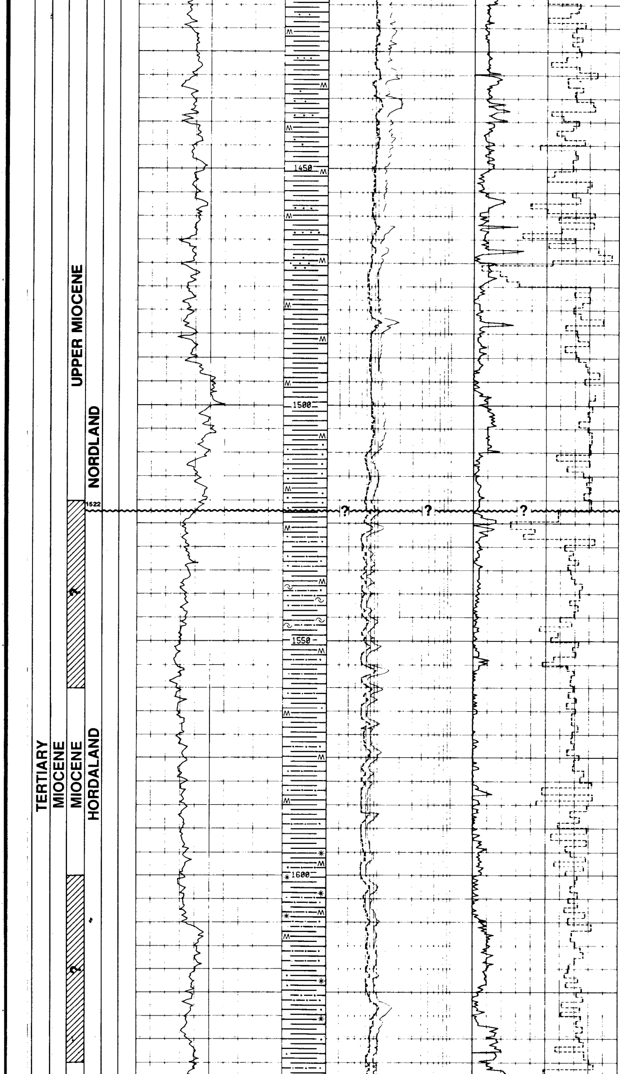
CLY :
DK GRY, SFT, AMOR, VAR HYDRATED; GSY TEXT, SLTY/SDY, W/COM SCT VF-F QTZ SD GN, ALSO RR TR SS, GRY, FRI, ARG, CARB

ABDT SHELL FRAG AND MICRO-FOSS

SS :
TR, LT BRN, FRI, VF, SLTY/ARG, GRDG SLTST, M GRY, FRM, CARB, MIC.

CLYST:
DK GRY, GSY, SFT-FRM, BLKY-SUB FIS, SPLTY, SLTY/SDY, MIC, CARB, W/GD TR PYR (WORM BURROWS), TR MICRO-FOSS

SS:
LT GRY, FRI, VF, ARG, CARB



CLYST :
GEN A/A, ALSO LT GRY, SFT-FRM, ERTY, BLKY, SLTY, MIC, LAM W/PL BRN-LT GRY, VF, FRI SS

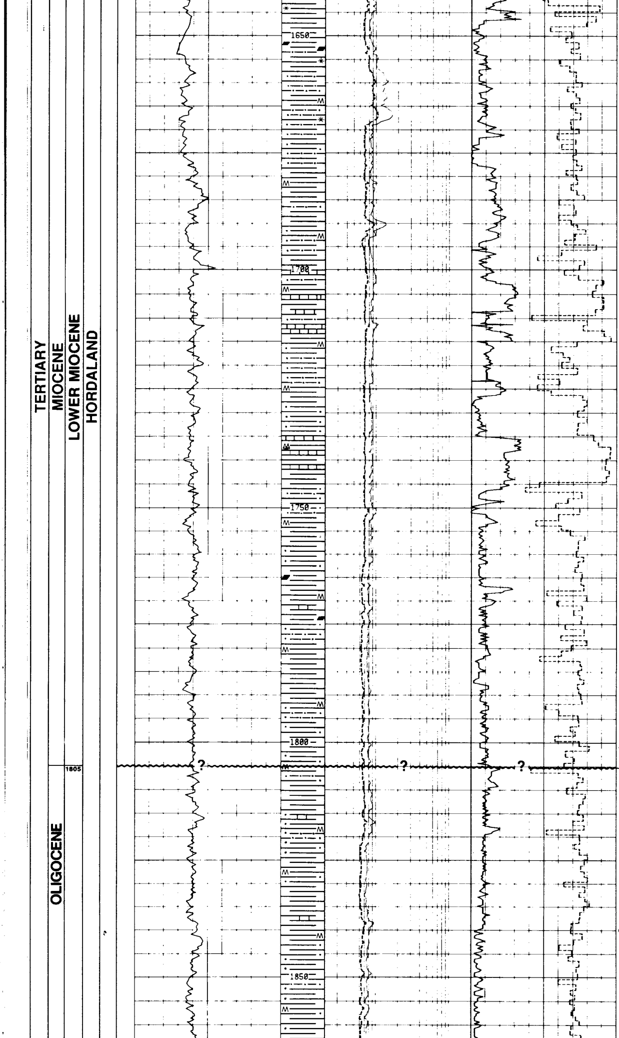
CLYST :
PRED GRY BRN, ALSO GRN GRY, SFT-FRM, GSY-ERTY, BLKY-SPLTY, SLTY, MIC

CLYST :
BELOW 1510m, PL BRN, SFT-FRM, GSY-ERTY, BLKY-SPLTY, SLTY, GRDG ARG SLTST IN PT, MIC, W/TR RED BRN, VF, FRI, SS
SHOW : PR-FR YEL DIR FLU IN 60-80% GN, MOD FAST, STRM BRI YEL CUT

MARKER: 1522m RKB
HORDALAND GP "LOWER MIOCENE"

CLYST:
PL-M BRN, ALSO PL GRN, FRM, GSY-ERTY, BLKY-SPLTY, GEN V SLTY, GRDG SLTST IN PT, COM W/LSE SCT QTZ SD GN, MICRO-MIC, TR CARB, GLAUC
SHOW: VAR IN 10-90% GN, PCHY DULL-BRI YEL DIR FLU, GEN SLOW, STRM YEL-WH CUT, IMPROVED W CRUSH

SS:
TR, WH, FRI, VF, PRLY CMTD



CLYST:
GEN A/A, W/GD TR PYR, GLAUC

LS:
TN, SFT-FRM, OCC HD, XLN, SUC
SHOW: FR, BRI YEL DIR FLU, SLOW-FAST (FLASH), STRM-BLOOMING YEL CUT, MOD YEL-WH RES

CLYST:
BCM PRED GRY BRN, ALSO PL BRN, PL GRN, SFT-FRM, ERTY, SUB BLKY-SUB FIS, SPLTY IN PT, N CALC, SLTY, LOC GRDG SLTST, MICRO-MIC, OCC TR GLAUC, PYR, CARB,
10-20% GN, PCHY PL YEL DIR FLU, SLOW, DIFFUSE YEL-WH CUT/CRUSH CUT, FR-MOD YEL-WH RES
SHOW: VAR PR IN 10-20%

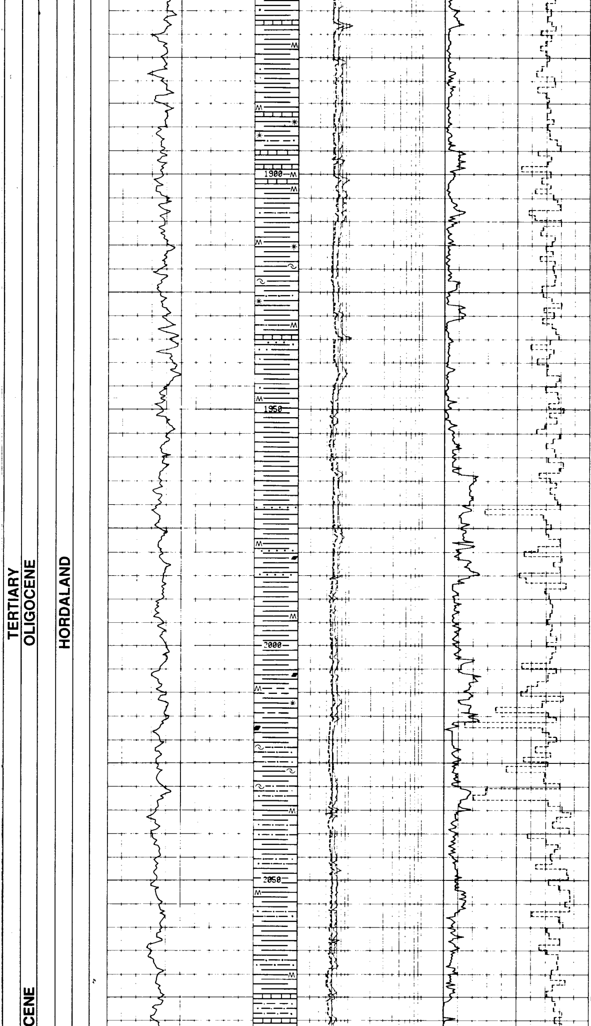
SS:
SCT TR THRU, PL GRY, F, PR CMTD

LS:
TN, SFT-HD, XLN, SUC, W/PR-FR
SHOW: A/A

CLYST:
GRY BRN, ALSO DK GRY, PL BRN, PL GRN, SFT-FRM, ERTY, BLKY-SUB FIS, N CALC, COM V SLTY, GRDG SLTST, MICRO-MIC, OCC TR PYR, GLAUC, CARB MTL
SHOW: VAR PR A/A

OLIOCENE 1805m RKB

CLYST:
GEN A/A, OCC LAM W/MRL, TN, SFT



LS:
TN, FRM-HD, XLN, ARG
SHOW: FR- MOD BRI YEL DIR FLU,
INST STRM YEL CUT

CLYST:
PRED LT GRN-GRN GRY, ALSO GRY
BRN, DK GRY, FRM, BLKY-SUB FIS, N-
SL CALC, OCC LAM W/TN, SFT, MRL,
SLTY, OCC GRDG SLTST, MICRO-MIC, W/
TR GLAUC, PYR, SHELL FRAG
SHOW: WK, PCHY DYING OUT BELOW
1910m

GD TR SHELL FRAG/DEB

LS:
WH-TN, SFT-FRM, OCC HD, XLN, ARG
SD:
TR, CLR, F, RND, W SRTD

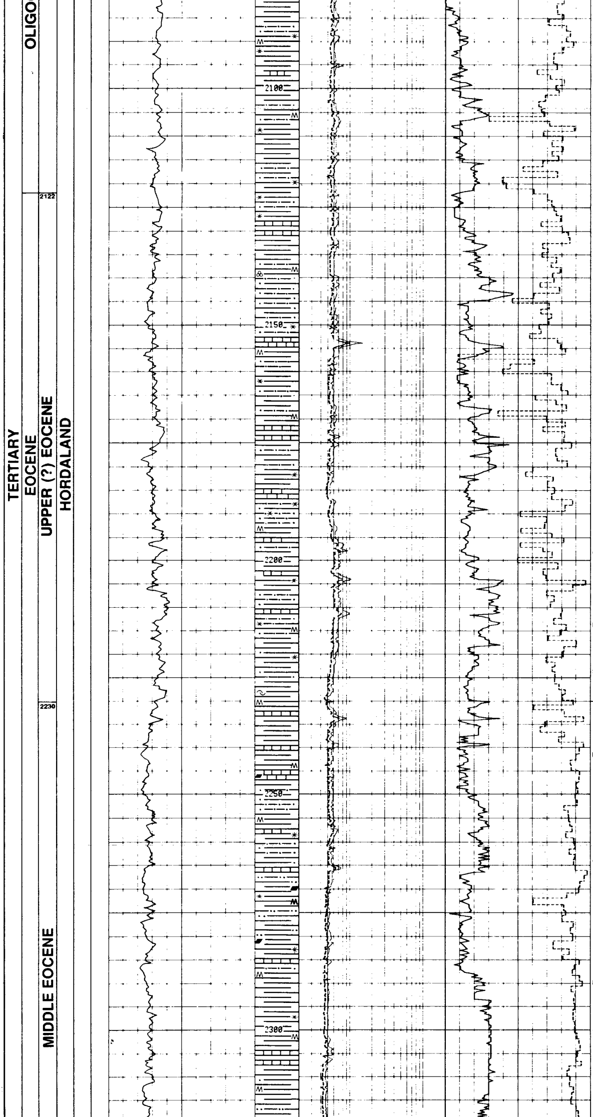
CLYST:
BCM VARC, GRN-GRN GRY, BRN-BRN
GRY, DK GRY, FRM, SUB FIS, N CALC,
SLTY, MICRO-MIC, W/SCT TR PYR,
GLAUC, SHELL FRAG

SS:
SCT TR, TN, GRY, FRI, VF-F, PRLY CMTD,
TR GLAUC

GD TR SHELL FRAG/DEB

CLYST:
BCM PRED BRN-BRN GRY, ALSO PL
GRN-GRN GRY, SFT-FRM, BLKY-SUB
FIS, N CALC, SLTY, COM GRDG ARG
SLTST, MICRO-MIC, W/ SCT TR PYR,
GLAUC, CARB MTL, OCC LAM W/MRL,
TN, SFT, CARB, GLAUC

LS:
WH, SFT-FRM, SUC, ARG, GRDG CALC
CLYST IN PT



CLYST:
GRN-GRN GRY, ALSO BRN, BRN GRY, SFT-FRM, CALC IN PT, GEN V SLTY, GRDG SLTST/VF SLTY SS, MIC, W/SCT, OCC ABDT TR GLAUC, PYR, SHELL FRAG, CARB MTL
SHOW: PR, PCHY BELOW 2130m

? UPPER EOCENE 2122m RKB

LS:
TN, HD, XLN, SUC
SHOW: BRI YEL DIR FLU, INST STRM MILKY WH CUT

CLYST:
GRN-GRN GRY, BRN GRY, SFT-FRM, BLKY-PLTY, CALC IN PT, SLTY-V SLTY, COM GRDG ARG SLTST/VF SS, MIC, GLAUC
SHOW: PR THRU, PCHY DULL YEL DIR FLU, SLOW PL YEL CUT/CRUSH CUT

LS:
YEL BRN, HD, XLN, SUC, LAM W/WH, SFT, MICRITIC, ARG LS

SLTST:
BLU GRN, ALSO PL-M BRN, FRI, ARG, GRDG SLTY CLYST A/A, ALSO SDY IN PT, GRDG GRN GRY, F, PRLY CMTD SS, N-SL CALC, GEN V GLAUC, W/TR PYR, CARB MTL, SHOW: PR AS IN CLYST ABOVE

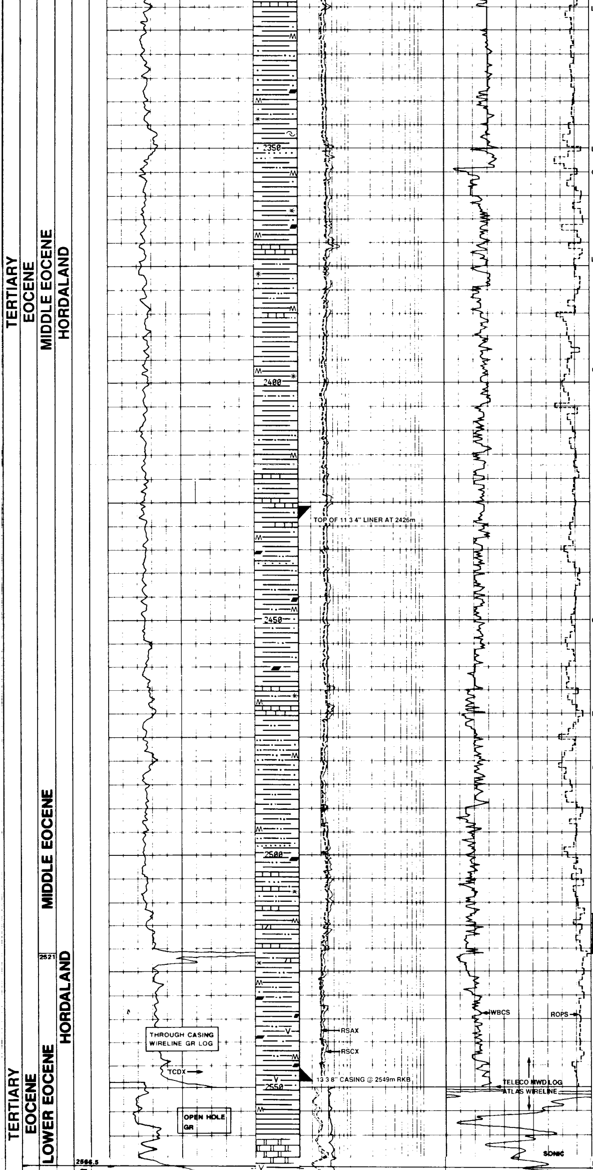
MARKER: MIDDLE EOCENE 2230m RKB

LS:
WH, SFT-HD, XLN, GRANL, MICRITIC IN PT, LOC W/TR CARB/ARG STRKS, TR PYR

CLYST:
PRED BLU GRY, GRDG BLU GRN, SFT-FRM, BLKY-FIS, N CALC, COM SLTY, GRDG SLTST, MICRO-MIC, TR MICRO-PYR, COM SPEC W/VF BLK CARB MTL, SCT W/ABDT GLAUC
SHOW: PCHY DULL YEL FLU IN UP TO 70% GN, NON-SLOW, OCC MOD FAST, DIFFUSE-STRM YEL-WH CUT/CRUSH CUT, FR YEL-WH RES

LS:
WH-PL YEL BRN, SFT-FRM, XLN, MICRITIC, ARG
SHOW: PCHY DULL-BRI YEL DIR FLU, FR PL YEL-WH CUT

CLYST:
VARC (M-DK GRY, BRN GRY, BLU GRY, BLU GRN, DUSKY YEL BRN), SFT-FRM, BLKY-PLTY, N CALC, SLTY, GRDG SLTST, MICRO-MIC, TR CARB, W/GD TR GLAUC, PYR
SHOW: PR THRU, PCHY PL YEL DIR FLU, PR-FR PL YEL CUT, FR YEL RES



LS:
PL YEL BRN, OFF WH, FRM, MICRO-CRPTO-X, ARG, GRDG CALC CLYST
SHOW: A/A

LS:
DK BRN-DUSKY BRN, V HD, CRPTO-X, DOLIC

CLYST:
GEN A/A, LOC BCM V SLTY, GRDG SLTST/VF SLTY SS, ALSO LOC BCM V CALC, W/TR PYR (OCC AS PYR WORM TUBES), GLAUC, CARB MTL
SHOW: A/A

LS:
WH-PL YEL BRN, XLN, MICRITIC, ARG, W/GD TR XLN CALC: ALSO MNR M-DK BRN DOL LS, HD, CRPTO-X
SHOW: PCHY PL YEL DIR FLU, PR-FR YEL-WH CUT, GD YEL-WH RES

CLYST:
BCM PRED PL BLU GRY, MNR BRN GRY, M-DK GRY VARC A/A, SFT-FRM, BLKY-PLTY, N-SL CALC, SLTY, TR MICRO-MIC, RR MICRO-PYR, TR F DISM CARB MTL,
SHOW: PCHY

CLYST:
GEN M GRY, GRDG BLU GRY IN PT, ALSO MNR M-DK BRN, BRN GRY, SFT-FRM, BLKY-PLTY, SLTY, LOC GRDG SLTST/VF SS, MICRO-MIC, TR MICRO-PYR, W/VF DISM CARB MTL, TR GLAUC, NON CALC
SHOW: PCHY DULL YEL DIR FLU IN 25- 50% GN, NON-V WK, DIFFUSE PL YEL CUT, FR YEL RES

LS:
OFF WH-PL YEL BRN, SFT-FRM MICRO-X, MICRITIC, ARG, OCC SL DOL, GRDG PL YEL BRN-TAN DOL LS, FRM, XLN, GRANL

CLYST:
GEN A/A, LOC BCM V SLTY/SDY, W/MTRX SUPPORTED VF QTZ SD GN

SD:
GD TR, LSE QTZ SD GN, TRNSP-OPQ,VF, SUBANG-SUBRND, MOD SRTD

LOWER EOCENE 2521m RKB

LS/DOL LS:
PL YEL BRN, GRDG ORNG BRN-DK BRN, FRM-MOD HD, XLN-MICRO-X, GRANL, SLTY- ARG, LOC SL SDY

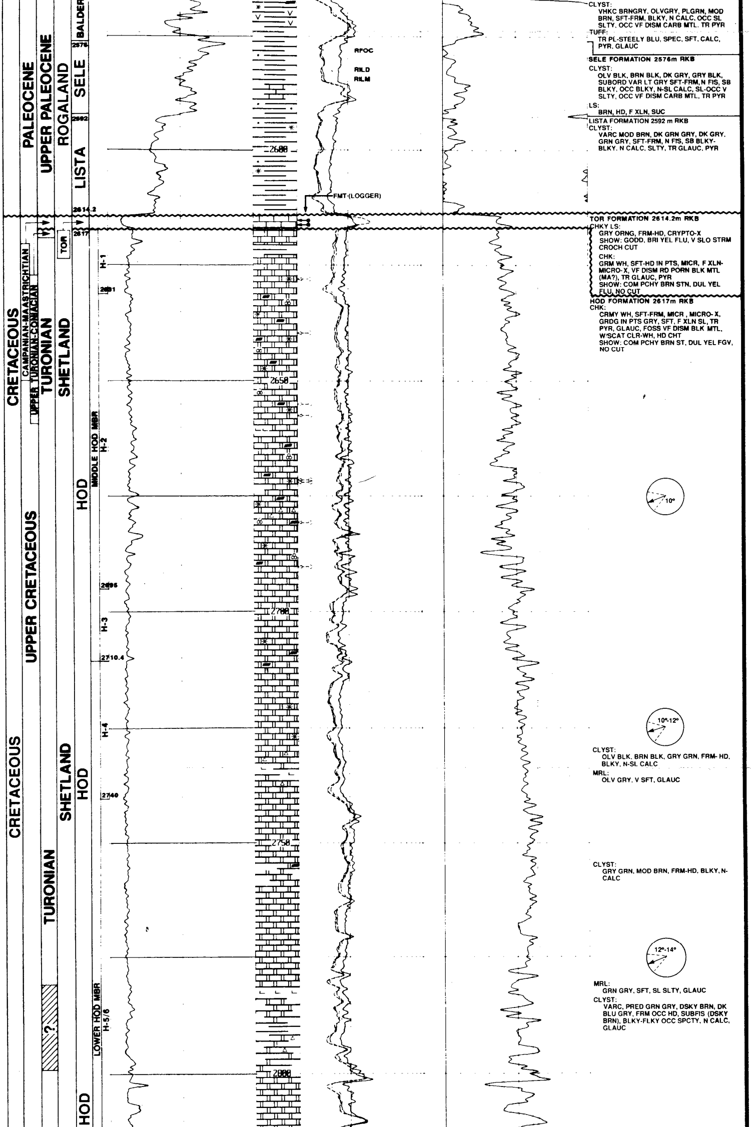
CLYST:
PRED M BRN GRY-BRN, SFT-FRM, BLKY, N CALC, GEN V SLTY, GRDG SLTST, OCC SL SDY, GD TR MICRO-PYR, VF DISM CARB MTL, INTBD W/M GRY-GRN GRY CLYST, FRM, SUB FIS, N CALC, SL SLTY, MICRO-MIC W/PYR, GLAUC,
SHOWS A/A,PCHY,PR

TUFF?:
RR SCT TR, VARC, M-DK BRN, DK GRY, MOT W/PL GN PURP RED SPEC, FRM-HD, SLTY, TR MICRO-MIC, CARB, VAR CALC

CLYST:
AT 2550m, RED BRN,SFT-FRM, BLKY-PLTY, N CALC, BCM MOD CALC BELOW 2556m, SL SLTY, TR VF CARB MTL, ALSO MNR PL BLU GRY-GRN GRY CLYST

LS:
WH-OFF WH, OCC PL GN, PNK, SFT, MICRO-X, CHKY

BALDER FORMATION 2566.5m RKB



CLYST:
VHKC BRNGRY, OLVGRY, PLGRN, MOD BRN, SFT-FRM, BLKY, N CALC, OCC SL SLTY, OCC VF DISM CARB MTL. TR PYR

~~TUFF:~~
TR PL-STEELY BLU, SPEC, SFT, CALC, PYR, GLAUC

SELE FORMATION 2576m RKB

CLYST:
OLV BLK, BRN BLK, DK GRY, GRY BLK, SUBORD VAR LT GRY SFT-FRM, N FIS, SB BLKY, OCC BLKY, N-SL CALC, SL-OCC V SLTY, OCC VF DISM CARB MTL, TR PYR

LS:
BRN, HD, F XLN, SUC

LISTA FORMATION 2592 m RKB

CLYST:
VARC MOD BRN, DK GRN GRY, DK GRY. GRN GRY, SFT-FRM, N FIS, SB BLKY-BLKY. N CALC, SLTY, TR GLAUC, PYR

TOR FORMATION 2614.2m RKB

CHKY LS:
GRY ORNG, FRM-HD, CRYPTO-X
SHOW: GODD, BRI YEL FLU, V SLO STRM CROCH CUT

CHK:
GRM WH, SFT-HD IN PTS, MICR, F XLN-MICRO-X, VF DISM RD PORN BLK MTL (MA?), TR GLAUC, PYR
SHOW: COM PCHY BRN STN, DUL YEL FLU, NO CUT

HOD FORMATION 2617m RKB

CHK:
CRMY WH, SFT-FRM, MICR, MICRO-X, GRDG IN PTS GRY, SFT, F XLN SL, TR PYR, GLAUC, FOSS VF DISM BLK MTL, W/SCAT CLR-WH, HD CHT
SHOW: COM PCHY BRN ST, DUL YEL FGV, NO CUT

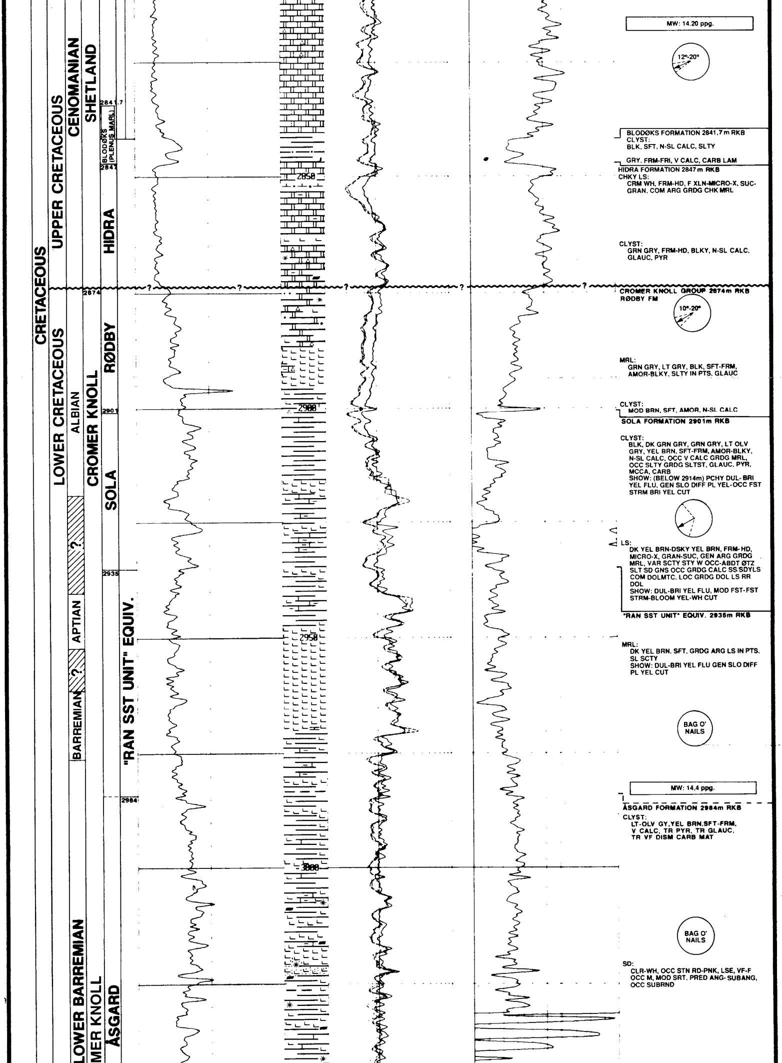
CLYST:
OLV BLK, BRN BLK, GRY GRN, FRM-HD, BLKY, N-SL CALC

MRL:
OLV GRY, V SFT, GLAUC

CLYST:
GRY GRN, MOD BRN, FRM-HD, BLKY, N-CALC

MRL:
GRN GRY, SFT, SL SLTY, GLAUC

CLYST:
VARC, PRED GRN GRY, DSKY BRN, DK BLU GRY, FRM OCC HD, SUBFIS (DSKY BRN), BLKY-FLKY OCC SPCTY, N CALC, GLAUC



MW: 14.20 ppg.

BLODØKS FORMATION 2841,7 m RKB
CLYST:
BLK, SFT, N-SL CALC, SLTY

GRY. FRM-FRI, V CALC, CARB LAM

HIDRA FORMATION 2847 m RKB
CHKY LS:
CRM WH, FRM-HD, F XLN-MICRO-X, SUC-GRAN, COM ARG GRDG CHK MRL

CLYST:
GRN GRY, FRM-HD, BLKY, N-SL CALC, GLAUC, PYR

CROMER KNOLL GROUP 2874m RKB
RØDBY FM

MRL:
GRN GRY, LT GRY, BLK, SFT-FRM, AMOR-BLKY, SLTY IN PTS, GLAUC

CLYST:
MOD BRN, SFT, AMOR, N-SL CALC

SOLA FORMATION 2901m RKB

CLYST:
BLK, DK GRN GRY, GRN GRY, LT OLV GRY, YEL BRN, SFT-FRM, AMOR-BLKY, N-SL CALC, OCC V CALC GRDG MRL, OCC SLTY GRDG SLTST, GLAUC, PYR, MCCA, CARB
SHOW: (BELOW 2914m) PCHY DUL-BRI YEL FLU, GEN SLO DIFF PL YEL-OCC FST STRM BRI YEL CUT

LS:
DK YEL BRN-DSKY YEL BRN, FRM-HD, MICRO-X, GRAN-SUC, GEN ARG GRDG MRL, VAR SCTY STY W OCC-ABDT ØTZ SLT SD GNS OCC GRDG CALC SS/SDYLS COM DOLMTC, LOC GRDG DOL LS RR DOL
SHOW: DUL-BRI YEL FLU, MOD FST-FST STRM-BLOOM YEL-WH CUT

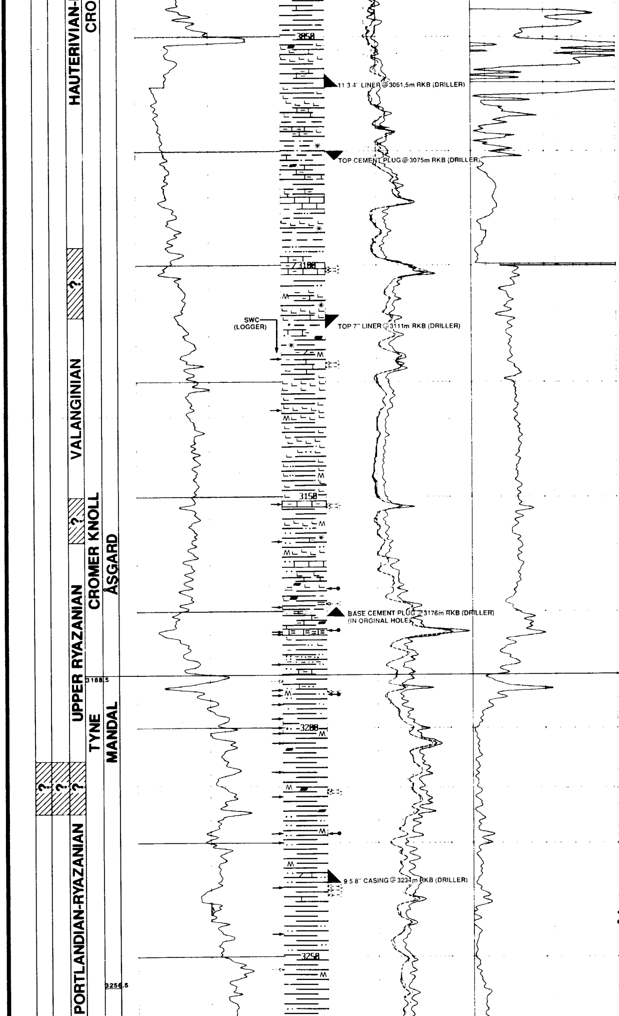
"RAN SST UNIT" EQUIV. 2935m RKB

MRL:
DK YEL BRN, SFT, GRDG ARG LS IN PTS, SL SCTY
SHOW: DUL-BRI YEL FLU GEN SLO DIFF PL YEL CUT

MW: 14,4 ppg.

ÅSGARD FORMATION 2984m RKB
CLYST:
LT-OLV GY, YEL BRN, SFT-FRM, V CALC, TR PYR, TR GLAUC, TR VF DISM CARB MAT

SD:
CLR-WH, OCC STN RD-PNK, LSE, VF-F OCC M, MOD SRT, PRED ANG-SUBANG, OCC SUBRND



MW: 14,6 ppg.

LOT: 17,1 ppg. EMW

TO BRING WELL UNDER CONTROL PLUGGED BACK FROM 3176m RKB

MRL:
DK YEL BRN, FRM, BLKY, GRDG, ARG LS IN PTS. SL SLTY, TR PYR, TR GLAUC

MN: 14,8 ppg.

BELOW 3096m RKB (DRILLER) WELL UNINTENTION NACCY SIDETRACKED WHILE DRILLING OUT CEMENT PLUG. LOG AND LITHOLOGIC COLUMN REPRESENTS THIS SIDETRACKED INTERVAL.

BAG O' NAILS

SS:
M-DK YEL BRN, OCC OFF WH-LT GRY, MOD HD-HD OCC FRI, VF-F, OCC M, MOD SRTD, PRCD SUBANG-ANG, OCC SUBRND, ARG/SLTY MTRX, COM MTRY SUPP. CALC CMT, GRDG-INTBO W/SDY LS/LS W/SS LAM, FR SH FGAG. PYR. GLAUC, MIC, NO VIS POR, TITE
SHOW: BRI YEL FLU, SLO STRM- BLOOM BR. YEL-WH CUT. IMP W/CRUSH

SLTST:
RD BRN, SFT-FRM, BLKY, MODCALC, W ABDT VF QTZ SD GNS GRDG, SLTY SS. MIC, CARB DEB
SHOW: BRI YEL FLU, SLO-MOD FST STRM-BLOOM MLKY YEL CRUSH CUT

TYNE GROUP AT 3188.5m RKB
MANDAL FORMATION

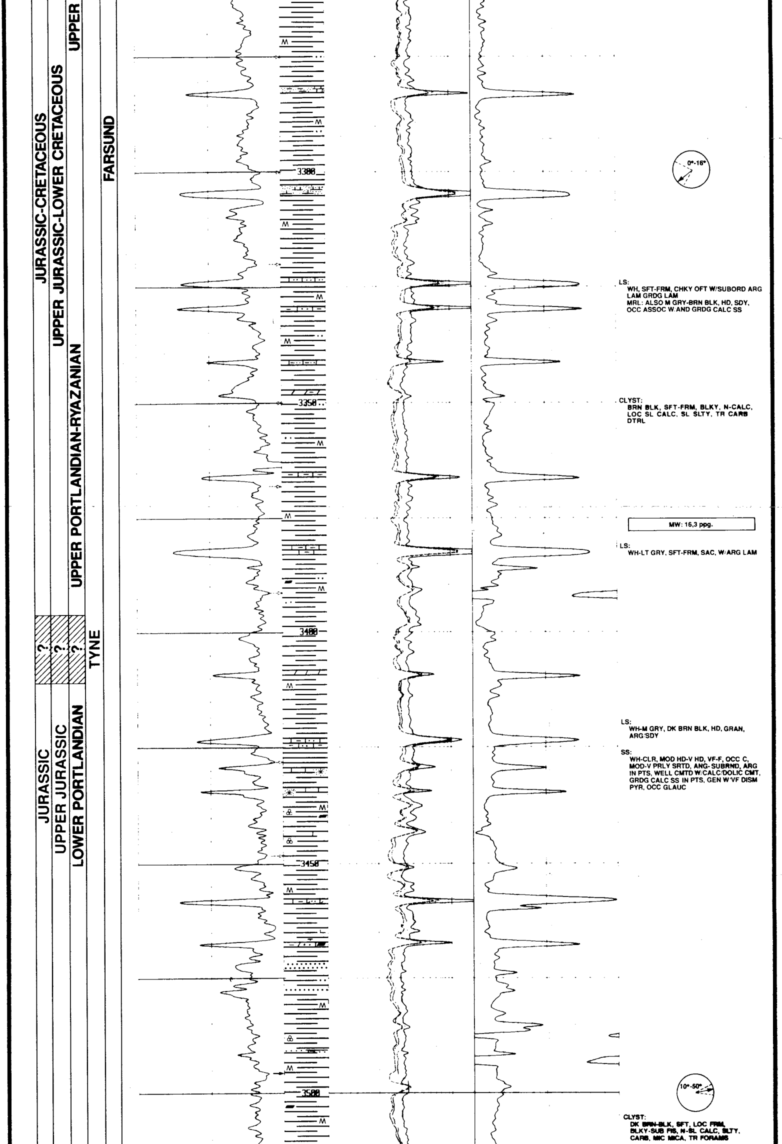
MW: 16,2 ppg.

CLYST:
DSKY YEL BRN, DK GRY-GRY BLK, LT GRY, SFT-FRM, AMOR-BLKY, SL CALC/DOLIC, SL SLTY-V SLTY GRDG SLTST/VF ARG SS IN PTS, BCM INC SLTY-VF SDY W/OCC VF SS LAM W/DEPTH, MICRO-MIC, PYR (XLN, FRAMB) CARB, W/OCC-ABTD XLN CALC VNS
SHOW: GEN NO DIR FLU, VAR N-V SLO STRM, BLOOM, DIFF YEL-WH CUT

LOT: 17,3 ppg. EMW

DOL:
BRN BLK, V HD, CRYPTO-MICRO-X W/ASSCO XLN VN INFILL OF WH-CLR, OCC YEL BRN, C-F XLN MOD HD-BRIT, XL AGG, W/COM XLN QTZ, CALC, PYR
SHOW: VN INFILL GEN BRI YEL DIR FLU, OCC VAR SLO-FST STRM-BLOOM YEL-WH CUT

FARSUND FORMATION 3256.5m RKB



LS:
WH, SFT-FRM, CHKY OFT W/SUBORD ARG LAM GRDG LAM
MRL: ALSO M GRY-BRN BLK, HD, SDY, OCC ASSOC W/AND GRDG CALC SS

CLYST:
BRN BLK, SFT-FRM, BLKY, N-CALC, LOC SL CALC, SL SLTY, TR CARB DTRL

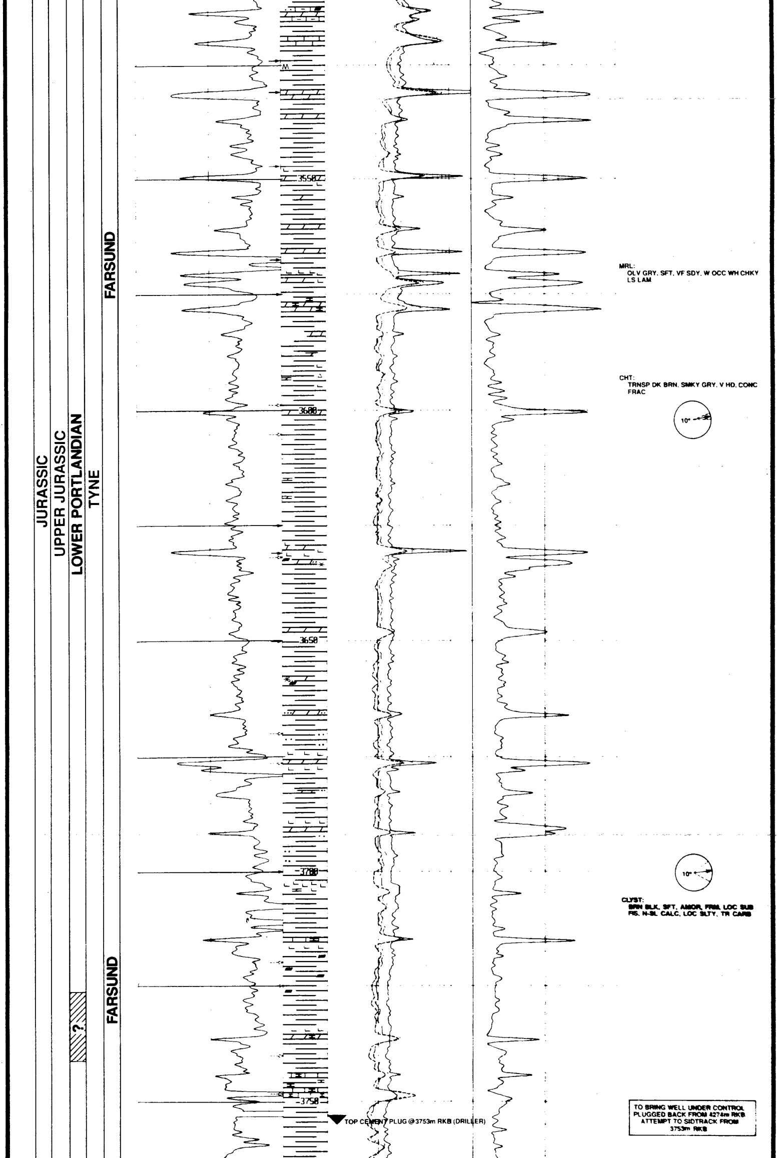
MW: 16,3 ppg.

LS:
WH-LT GRY, SFT-FRM, SAC, W/ARG LAM

LS:
WH-M GRY, DK BRN BLK, HD, GRAN, ARG/SDY

SS:
WH-CLR, MOD HD-V HD, VF-F, OCC C, MOD-V PRLY SRTD, ANG-SUBRND, ARG IN PTS, WELL CMTD W/CALC/DOLIC CMT, GRDG CALC SS IN PTS, GEN W/VF DISM PYR, OCC GLAUC

CLYST:
DK BRN-BLK, SFT, LOC FRM, BLKY-SUB FIS, N-SL CALC, SLTY, CARB, MIC MICA, TR FORAMS



MRL:
OLV GRY, SFT, VF SDY, W OCC WH CHKY LS LAM

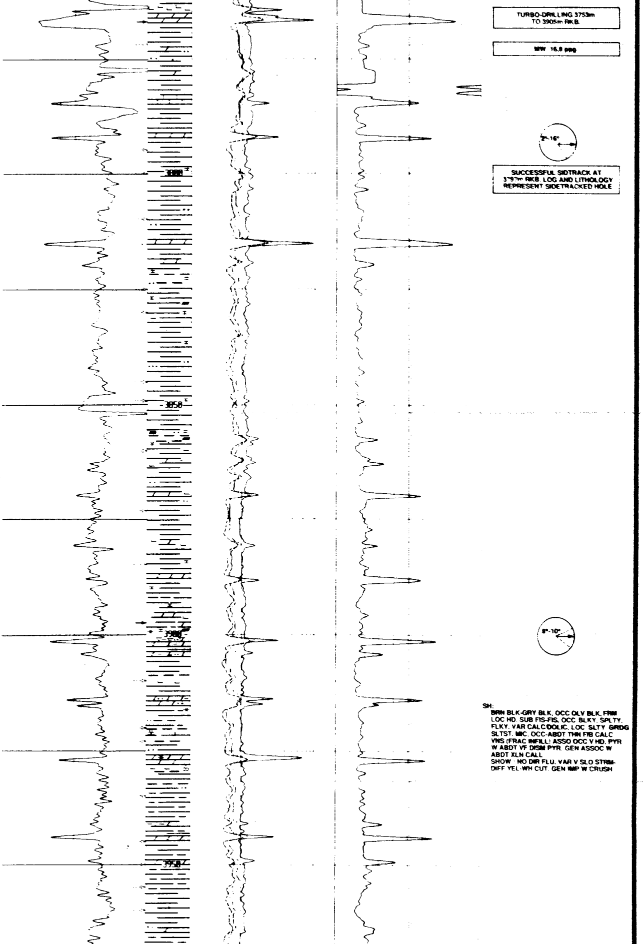
CHT:
TRNSP DK BRN, SMKY GRY, V HD, CONC FRAC

CLYST:
BRN BLK, SFT, AMOR, FRM, LOC SUB FIS, N-SL CALC, LOC SLTY, TR CARB

TOP CEMENT PLUG @3753m RKB (DRILLER)

TO BRING WELL UNDER CONTROL
PLUGGED BACK FROM 4274m RKB
ATTEMPT TO SIDTRACK FROM
3753m RKB

JURASSIC
UPPER JURASSIC
UPPER KIMMERIDGIAN-LOWER PORTLANDIAN
TYNE

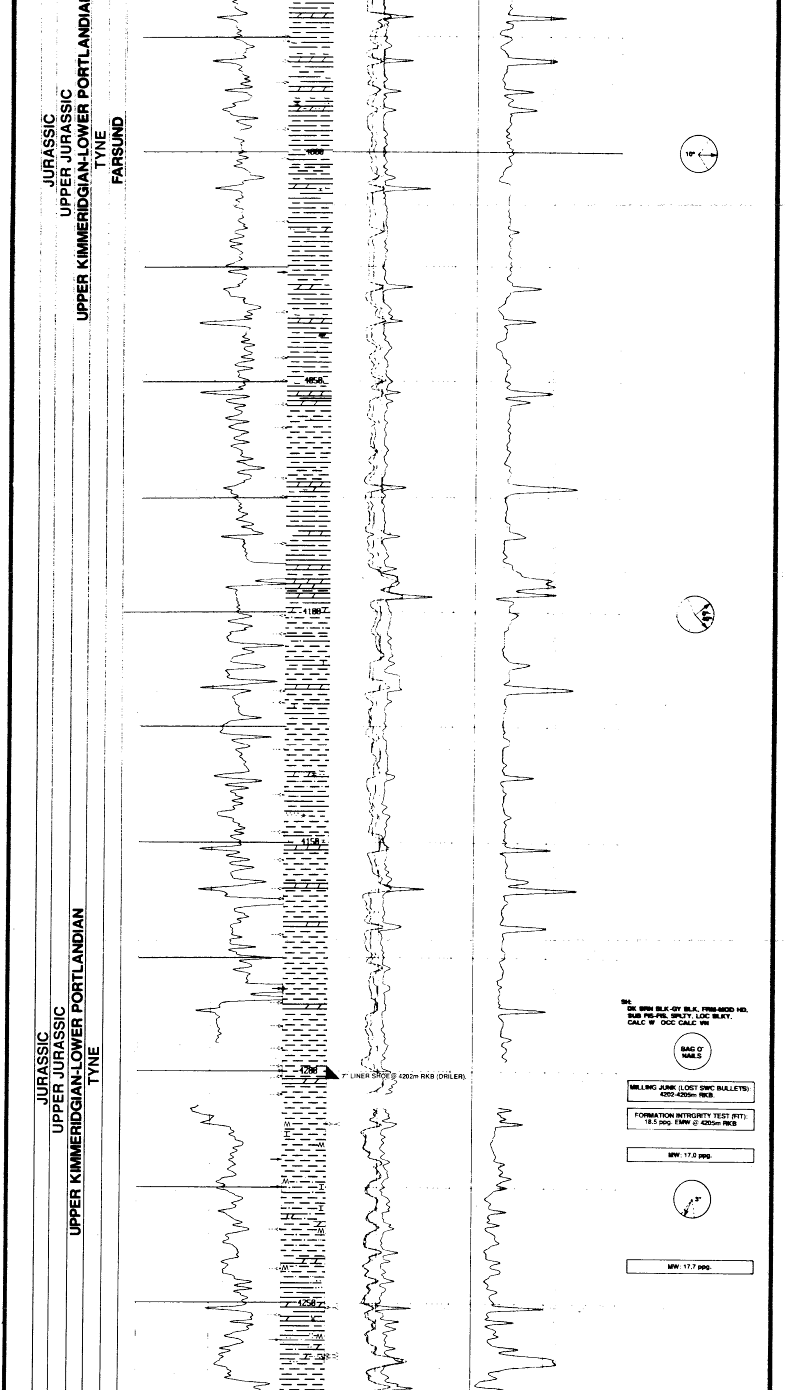


TURBO-DRILLING 3753m
TO 3905m RKB.

MW 16.8 ppg

SUCCESSFUL SIDTRACK AT
3797m RKB. LOG AND LITHOLOGY
REPRESENT SIDETRACKED HOLE

SH:
BRN BLK-GRY BLK, OCC OLV BLK, FRM
LOC HD. SUB FIS-FIS, OCC BLKY, SPLTY,
FLKY. VAR CALC/DOLIC, LOC SLTY GRDG
SLTST. MIC, OCC-ABDT THN FIB CALC
VNS (FRAC INFILL) ASSO OCC V HD, PYR
W ABDT VF DISM PYR. GEN ASSOC W
ABDT XLN CALL
SHOW : NO DIR FLU, VAR V SLO STRM-
DIFF YEL-WH CUT. GEN IMP W CRUSH



JURASSIC
UPPER JURASSIC
UPPER KIMMERIDGIAN-LOWER PORTLANDIAN
TYNE
FARSUND
4000
10°
4050
4100
4150
JURASSIC
UPPER JURASSIC
UPPER KIMMERIDGIAN-LOWER PORTLANDIAN
TYNE
SH:
DK BRN BLK-GY BLK, FRM-MOD HD.
SUB FIS-FIS, SPLTY, LOC BLKY,
CALC W OCC CALC VN
BAG O' NAILS
4200
7" LINER SHOE @ 4202m RKB (DRILER).
MILLING JUNK (LOST SWC BULLETS): 4202-4205m RKB.
FORMATION INTRGRITY TEST (FIT): 18.5 ppg. EMW @ 4205m RKB
MW: 17,0 ppg.
3°
MW: 17,7 ppg.
4250