



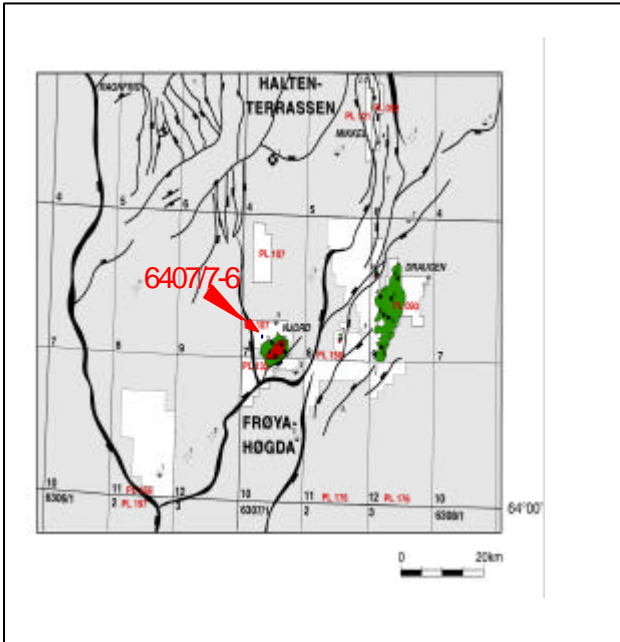
COMPOSITE LOG

NJORD FIELD, B-segment

Scale: 1:500

Well: 64077-6

Location Map



KB Elevation	26m	Country	Norway
Water Depth	336m	Licence	PL 107
Depth Reference	RKB	Owners	Norsk Hydro, Statoil, ExxonMobil, PetroCanada
Total Depth (Driller)	3931.0 3927.0	Field	Njord
Total Depth (Logger)	N.A. N.A.	Drilling rig	Scarabeo 6
Formation at Total Depth	Åre Formation	Drilling Contractor	Saipem
Date Spudded	October 18, 2000	Mudlogging Company	Halliburton Sperry-Sun
Date Reached TD	November 16, 2000	Logging Company	Schlumberger Wireline
Date Completed	December 17, 2000	MWD Company	Schlumberger Anadrill
Well Status	Plugged and abandoned as an Oil discovery	Geologists	M.Eien, K.Kalgraff, E.Scottlien, Å.Halvorsen
Well Classification	Exploration	Prepared by	K.Kalgraff, B.Schenningss
Controlled by	F.Johansen	Controlled by	F.Johansen
Date	June 2001	Date	June 2001
Well Coordinates	Revised Spud UTM (re-spud) Revised Spud Geographical	7 131 390.0m N 64° 17' 40.66" N ED 50 - UTM 32	408 270.3m E 07° 06' 16.21" E CM 9°E

Casing Records			LOT / FIT				Comments			
Diameter	Shoe depth m MD RKB	Shoe depth m TVD RKB	Type	Result sg	Depth m MD RKB	Depth m TVD RKB	MWD logs in 36" and 26" sections affected by hole size. The well was drilled from 3930m MD to 3975m MD (3970m TVD) to provide sufficient rathole for perforation guns. The drilling was done without MWD. The well was tested.			
30" Casing shoe	446.5	446.5	LOT	1.80	1224.0	1223.9				
20" Casing shoe	1224	1223.9	FIT	1.76	3094.0	3093.8				
9 5/8" Casing shoe	3094	3093.8								

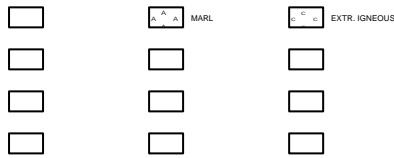
Logs			Cores					Pressure points (MDT)									
Run no.	Log type	Logged interval	Core no.	Cored interval m MD RKB	Recovered interval m MD RKB	Rec. mMD	Rec. %	Test no.	Depth m MD RKB	Depth m TVD RKB	F.M.H. Press. bars	Test no.	Depth m MD RKB	Depth m TVD RKB	F.M.H. Press. bars		
1A	AIT-IPLT(LDS-APS-HNGS)	3930.4 - 3092.8	1	3701.0	3709.0	3701.0	3707.6	6.6	82.5	1A, 1	3880.0	3876.0	0.00	1A,36	3242.5	3241.7	299.04
1A	UBI-DSI	3925 - 2900	2	3743.0	3770.5	3743.0	3769.1	26.1	94.8	1A, 2	3879.5	3876.2	463.00	1A,37	3228.0	3226.0	483.05
1A	MDT	3880 - 3187.5	3	3770.5	3786.0	3770.5	3785.7	15.2	97.7	1A, 3	3861.0	3857.0	456.15	1A,38	3215.0	3213.7	0.00
1A	CMR-ESC-VSP	3913 - 2900	4	3786.0	3809.0	3786.0	3808.7	22.7	98.7	1A, 4	3860.0	3857.0	401.15	1A,39	3215.0	3213.7	318.13
1A	CMR plus	3881.5 - 3440	5	3809.0	3837.0	3809.0	3837.3	28.3	101.2	1A, 5	3827.0	3823.3	381.20	1A,40	3213.0	3211.7	309.05
1A	CST	3900 - 3125	6	3837.4	3864.9	3837.4	3864.9	27.4	101.7	1A, 6	3808.0	3804.5	337.73	1A,41	3187.5	3186.8	291.59
										1A, 7	3803.0	3799.6	413.49				
										1A, 8	3789.0	3785.7	473.02				
										1A, 9	3783.0	3779.8	322.49				
										1A,10	3778.0	3774.8	569.00				
										1A,11	3768.0	3764.9	559.73				
										1A,12	3756.0	3753.1	525.09				
										1A,13	3748.0	3745.1	561.13				
										1A,14	3748.0	3745.1	560.94				
										1A,15	3744.0	3741.2	561.82				
										1A,16	3743.0	3740.9	484.22				
										1A,17	3736.0	3733.3	251.02				
										1A,18	3710.0	3707.5	559.48				
										1A,19	3699.0	3696.6	559.13				
										1A,20	3693.5	3691.6	559.25				
										1A,21	3687.5	3685.7	257.65				
										1A,22	3549.5	3548.3	529.62				
										1A,23	3542.0	3540.3	275.19				
										1A,24	3489.0	3487.4	524.38				
										1A,25	3488.5	3487.2	524.05				
										1A,26	3484.0	3482.4	494.68				
										1A,27	3476.0	3474.4	522.17				
										1A,28	3465.5	3464.5	523.07				
										1A,29	3465.0	3464.3	523.78				
										1A,30	3452.5	3451.5	261.99				
										1A,31	3449.0	3447.5	519.49				
										1A,32	3320.0	3318.7	257.22				
										1A,33	3302.0	3301.2	270.98				
										1A,34	3259.0	3257.7	270.61				
										1A,35	3252.0	3250.7	289.93				

Lithology Legend

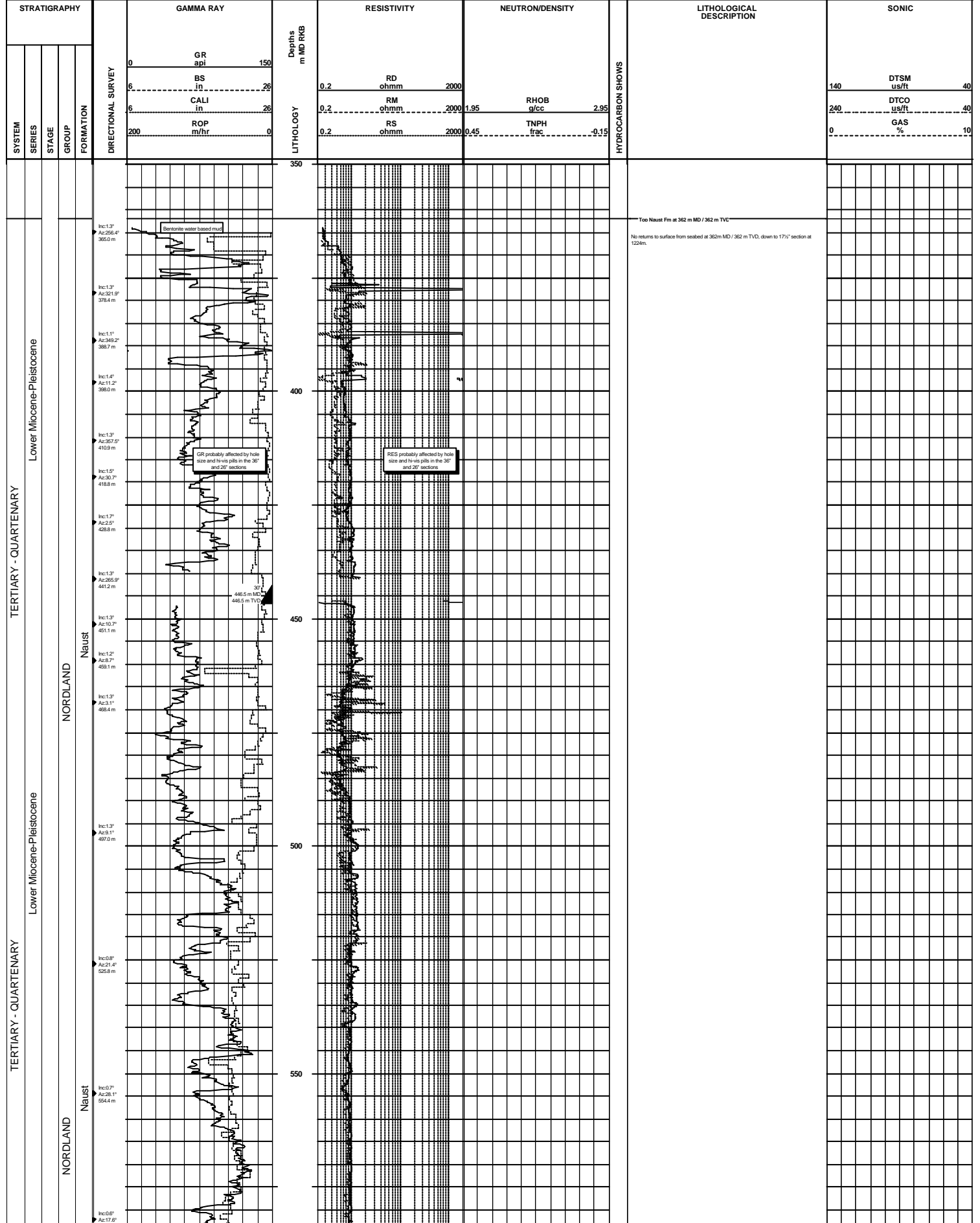
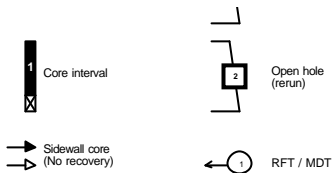
	CONGLOMERATE		LIMESTONE		ANHYDRITE)	SANDY, VERY	C	CARBONACEOUS MAT.
	SAND/SANDSTONE		DOLOMITE		SALT	(SANDY	Q	CHERT
	SILT/SILTSTONE		DOL. LIMESTONE		GYPSUM	.	SANDY, SLIGHTLY	U	GLAUCONITE
	CLAY/CLAYSTONE		CALC. DOLOMITE		TUFF	·	SILTY, VERY	M	MCA
	SHALE		CHALK		INTR. IGNEOUS	!	SILTY	U	PYRITE
					INTR. ARGILLACEOUS	!	SILTY, SLIGHTLY	*	MACROFOSSILS
					CALCAREOUS	✓		+	MACROFOSSILS FRAG

Symbol legend

	Casing shoe		Through casing		Oil stain
	Liner hanger		Fluorescence		Visible cut
	Liner shoe		Fluorescence cut		Gas shows
	Deviation survey - MWD		Open hole		Perforation interval
	Deviation survey - Other		Through casing (rerun)		



MARL
EXTR. IGNEOUS
CEMENT: QUARTZ
CEMENT: CARBONATE
CEMENT: KAOLINITE



TERTIARY - QUARTERNARY
TERTIARY - QUARTERNARY
TERTIARY - QUARTERNARY

Lower Miocene-Pleistocene

Lower Miocene-Pleistocene

ane

Lower Miocene-Pleistocene

NORDLAND

NORDLAND

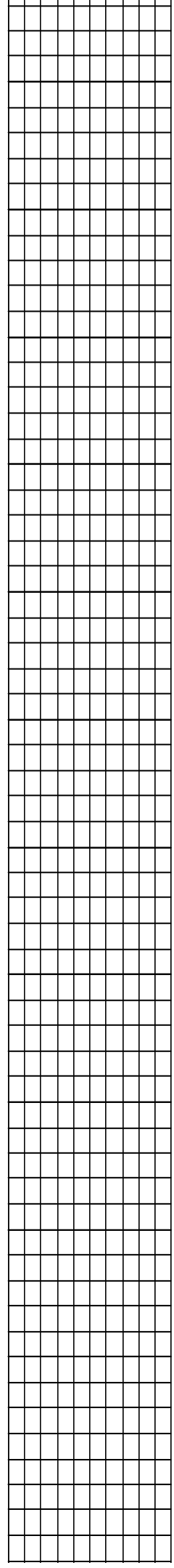
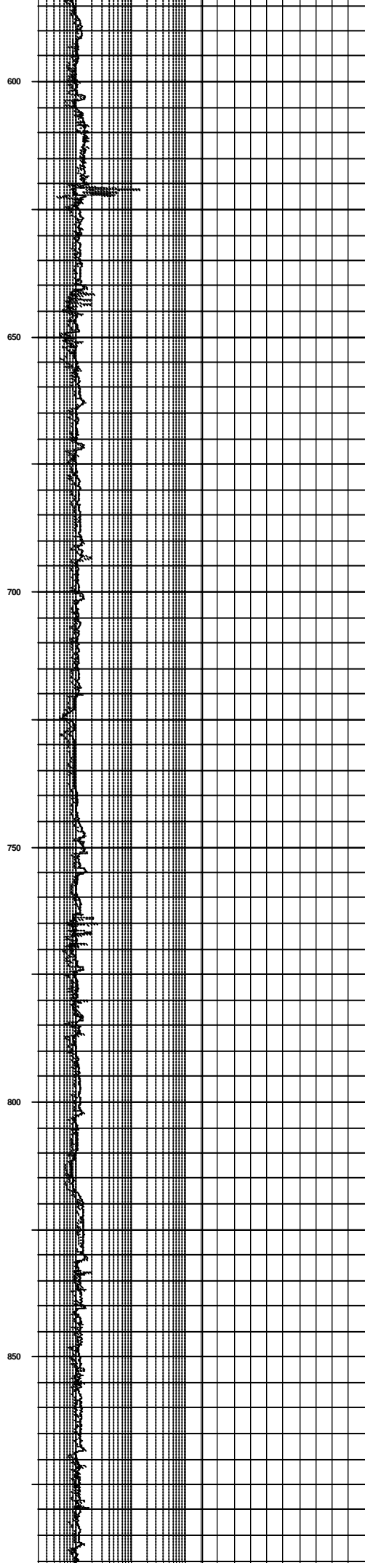
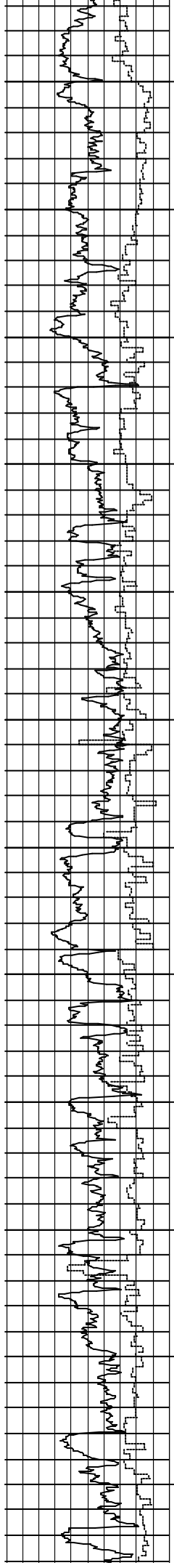
NORDLAND

Naust

Naust

Naust

Incl: 0.8° Az: 3.4° 699.1 m
Incl: 0.7° Az: 10.3° 793.3 m
Incl: 0.7° Az: 266.5° 811.4 m
Incl: 0.6° Az: 254.1° 755.0 m
Incl: 0.7° Az: 4.5° 726.3 m
Incl: 0.6° Az: 254.8° 698.3 m
Incl: 0.9° Az: 1.5° 698.8 m
Incl: 0.8° Az: 255.2° 641.3 m
Incl: 1.0° Az: 3.5° 612.9 m

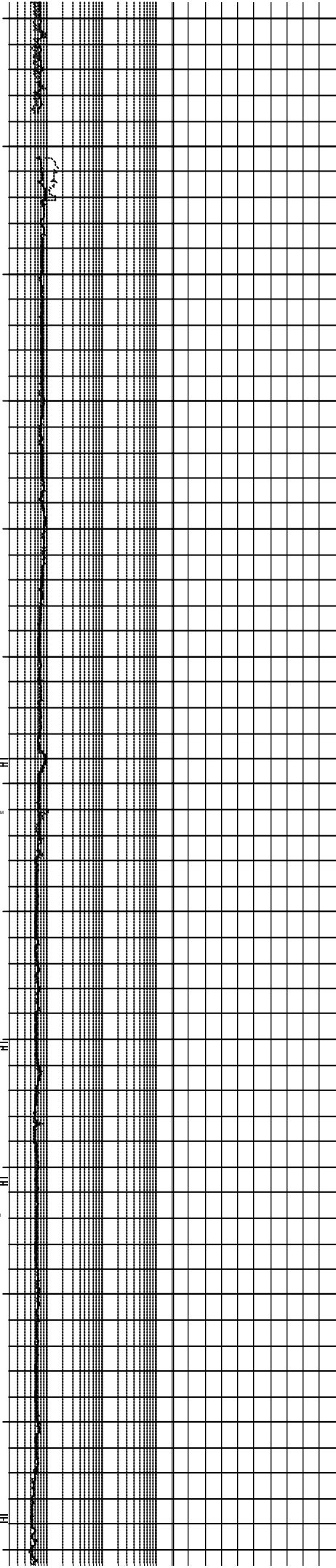
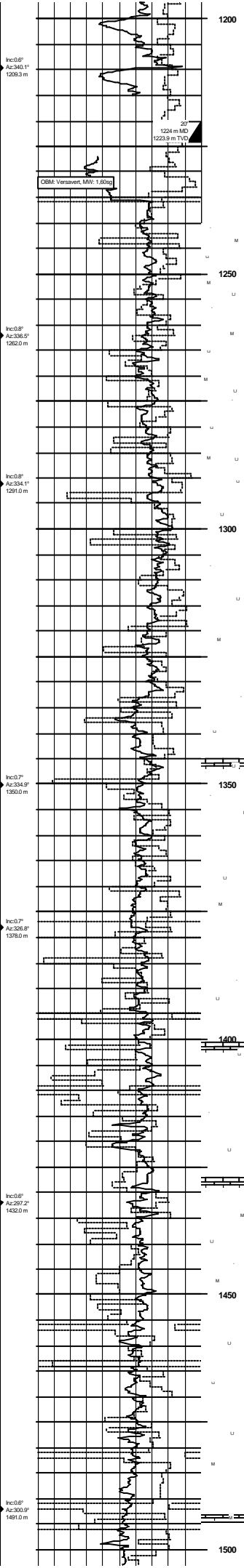


TERTIARY - QUARTENARY
 TERTIARY - QUARTENARY
 TERTIARY - QUARTENARY
 TERTIARY - QUARTENARY

Upper Eocene
 Oligocene
 Upper Oligocene-Lower Miocene
 Lower Miocene-P

LAND
 HORDALAND
 HORDALAND
 HORDALAND

je
 Brygge
 Brygge
 Brygge

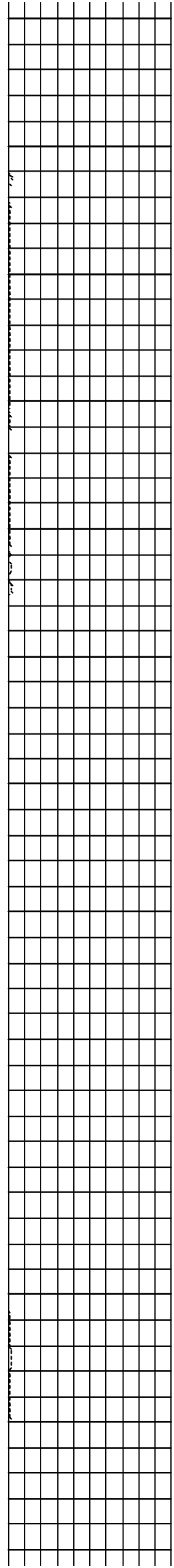


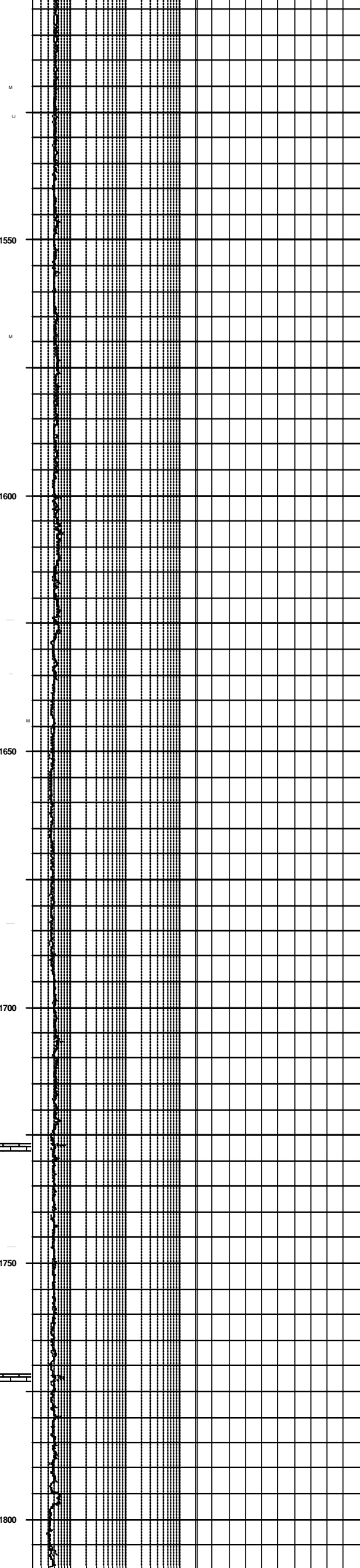
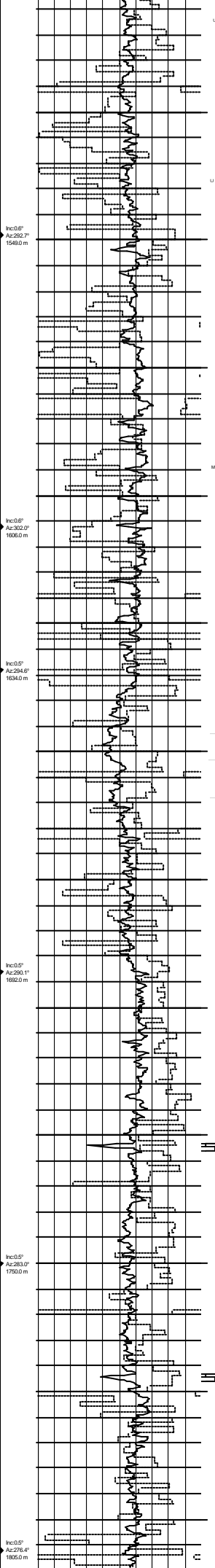
med dk. gry - olv gry, bly, occ stfks, occ sils, Tr Micromic, Tr Micropyr, r Glauc

olv blk - olv gry - brash blk, fm, bly, occ stfks, non - sils calc, Tr Micromic, Tr Micropyr, r Glauc

olv gry - med fl gry, fm - mod hd, bly, microwh, arg lam.

olv gry - med fl gry, fm - mod hd, bly, microwh, arg lam.





	greyish blk - olv blk, frm, blk, non calc, l.P. sily - v f sdy, r Micromic, r Microphy.
	olv gry, frm, blk, non calc, sily sty, gd Tr Micromic, Tr Microphy, r Glauc, r carb mat
	olv gry, frm, blk, non calc, sily sty, occ sily calc, Tr Micromic, Tr Microphy, r Glauc, r carb mat
	lt olv gry - med lt gry, frm - med hd, blk, microsh, dol
	v lt gry-yl gry, sily-v f w rnd, w srt, sh-frm, occ hd, cal-dol crnt, no vis por
	ch-wh, cl trnsd qz, f-med, pred med, w rnd, w srt, sh-frm, sily calc crnt, no vis por
	olv gry-med bl gry, blk, frm, non calc, sily sty, Tr Micromic, v f carb frag
	wh- lbm gry-pl yel org, sh-frm, occ dol, pred arg, occ microsh
	cl trnsd, f-med, pred med, sbang-ang, hd, v w sl crnt, occ sily dol crnt, pred lge gms, no vis por
	olv gry-olv blk, med bl gry- bl gry, blk, frm, non-occ sily calc, occ sty, Tr Micromic, Tr Glauc, occ v f carb frag

TERTIARY - QUATERNARY

TERTIARY - QUATERNARY

TERTIARY - QUATERNARY

Lower

Late Paleocene

Late Paleocene

Late Paleocene

H

ROGALAND

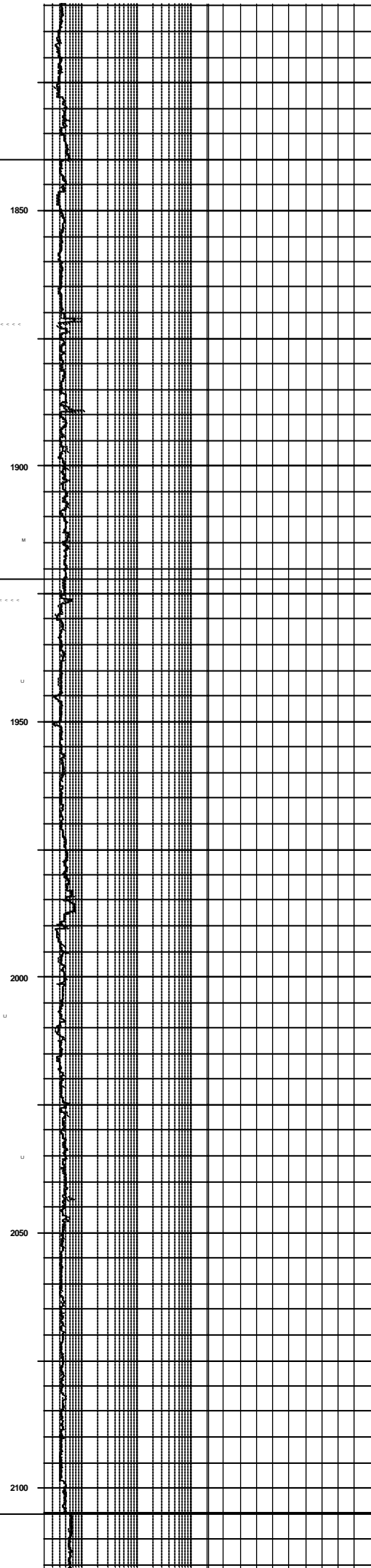
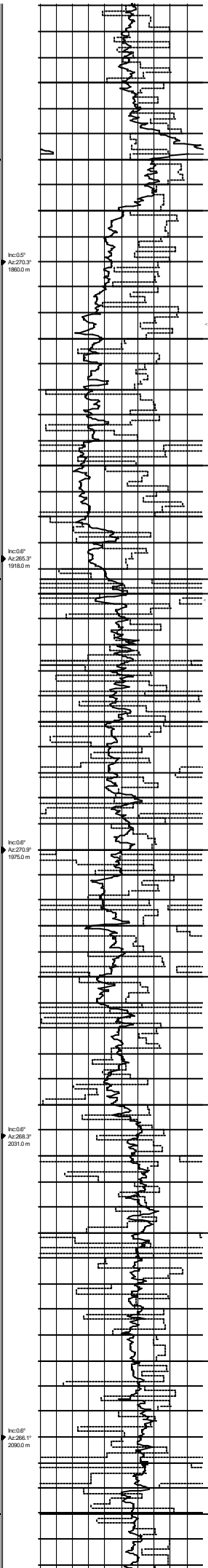
ROGALAND

ROGALAND

H

Tare

Tang



vertical, mod sd tm-gry, st, olv-gry-olv blk, med bl gry, bl gry, blk, sh-fm, pred fm, non calc-calc, occ silty-sly, occ silty sh, Tr Micromic, Tr Glauc, occ v carb frag

Top Tare Fm at 1840 m MD / 1839.9 m TVD

wh-lt bm gry-pl yel org, sh-fm, occ dol, pred arg, occ microssh

cl trsil, v f4, sbmdd-midd, w srt, hd, occ sil crnt, occ silty dol crnt, pred lse gms, no vis por

olv gry-olv blk, occ med bl gry-bl gry, blk, sh-fm, pred fm, pred non-silty calc, occ v calc, occ silty sh, Tr Micromic, Tr Glauc, occ v carb frag

Top Tang Fm at 1922 m MD / 1921.8 m TVD

lt bm gry-pl yel org, blk, fm-hd, occ dol, occ arg, pred microssh

med lt gry-bl gry, cl trsil-wh org, v f4, sbmdd-midd, w srt, fm-hd, occ sil crnt, occ silty calc crnt, arg, pred lse gms, it vis por

olv gry-olv blk, dk grsh gry- med dk gry, fm, blk, non calc, r Micromic, r Glauc.

olv gry-olv blk, grsh gry, fm, blk, non calc, r Micromic, occ micropyr.

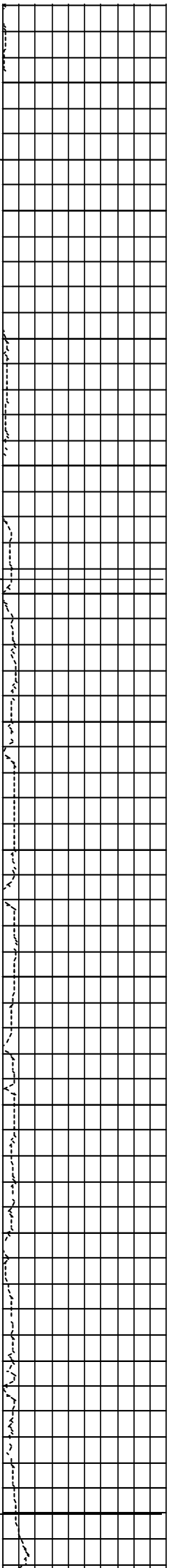
wh-lt gry, yelsh gry, fm-mo hd, blk, occ arg lam, pred microssh

wh-lt gry, yelsh gry, mod yelsh bm-dk yelsh or blk, fm-hd, occ Dol, occ arg lam, pred microssh

olv gry-olv blk, grsh gry, dk gry, fm, blk, non-silty calc, r micromic

wh-lt gry, yelsh gry, mod yelsh bm, fm-mod hd, l.p. arg

Top Sorlinar Fm at 2105 m MD / 2104.8 m TVD



CRETACEOUS

CRETACEOUS

CRETACEOUS

ACEOUS

Campanian

Campanian

Santonian

Santonian

SHELLAND

SHELLAND

SHELLAND

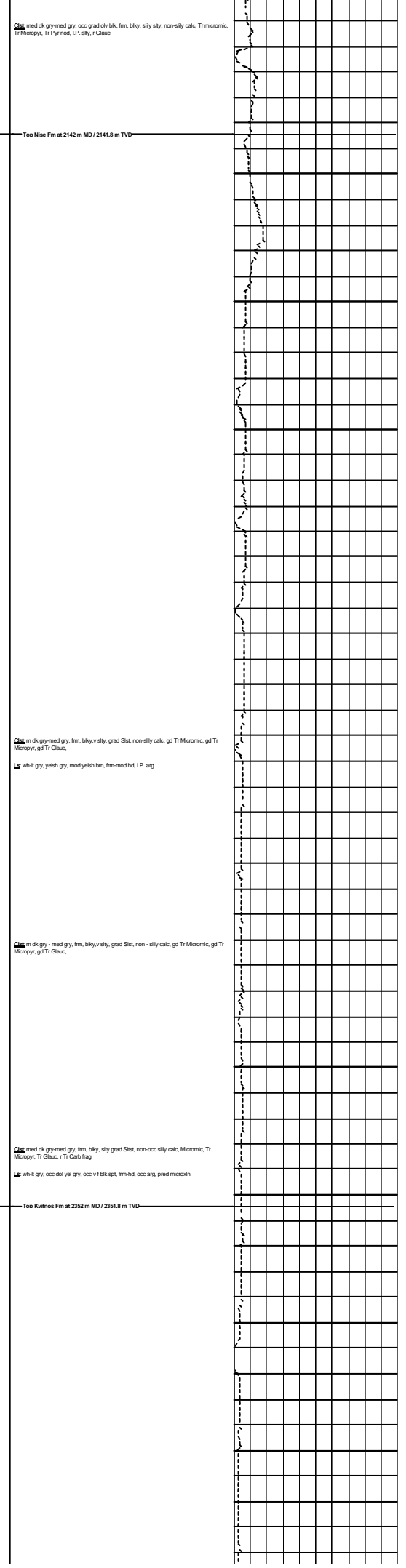
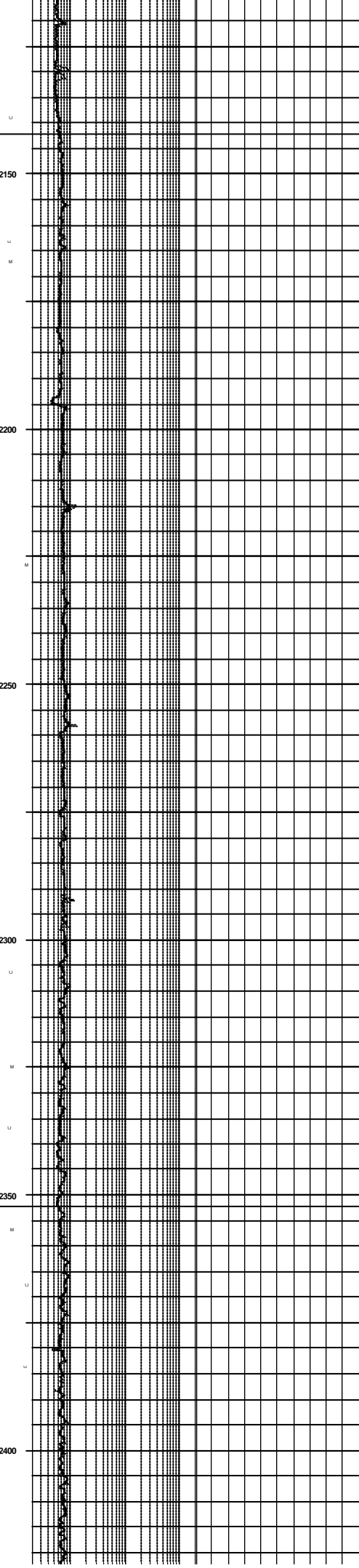
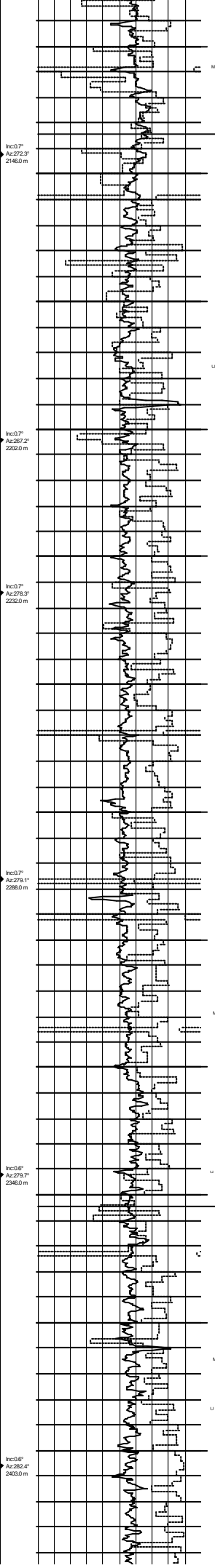
ID

Springar

Nise

Nise

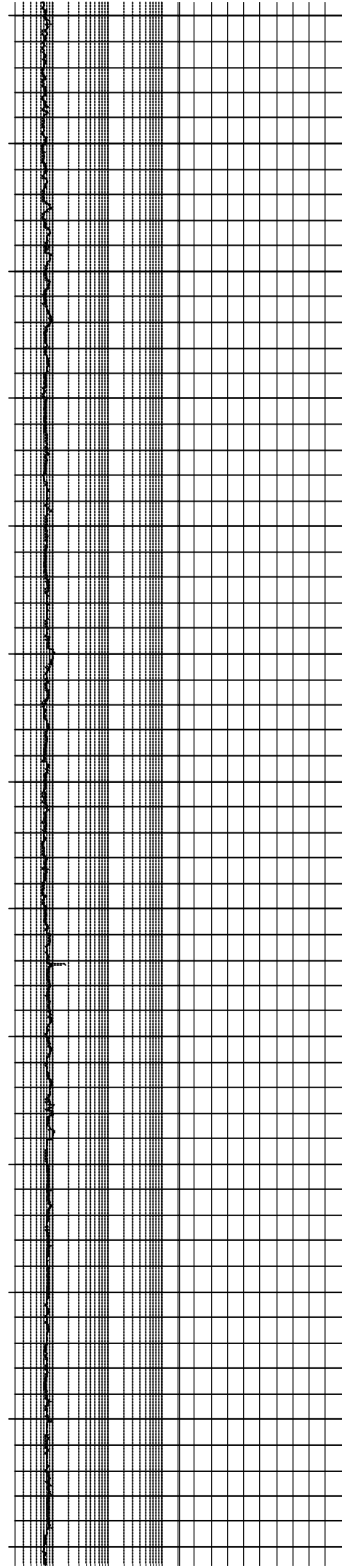
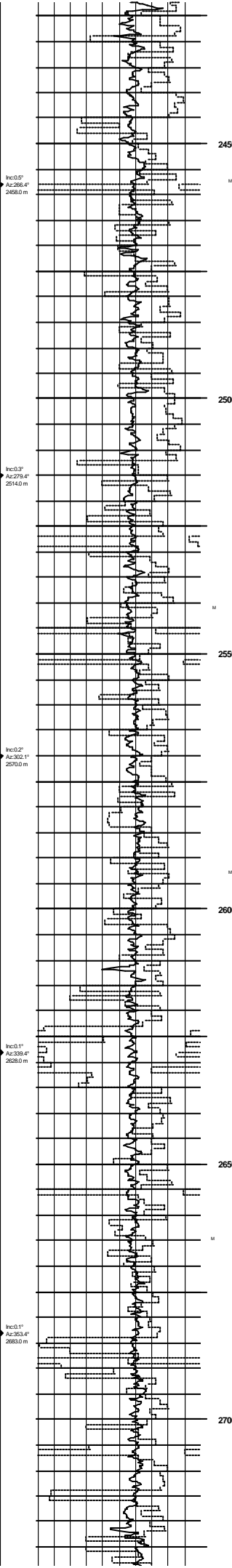
Nise



er Turonian-Coniacian Coniacian-Lower Santonian Santonian

IETLAND SHETLAND SHETLAND SHETLAND

Kvitinos Kvitinos Kvitinos Kvitinos



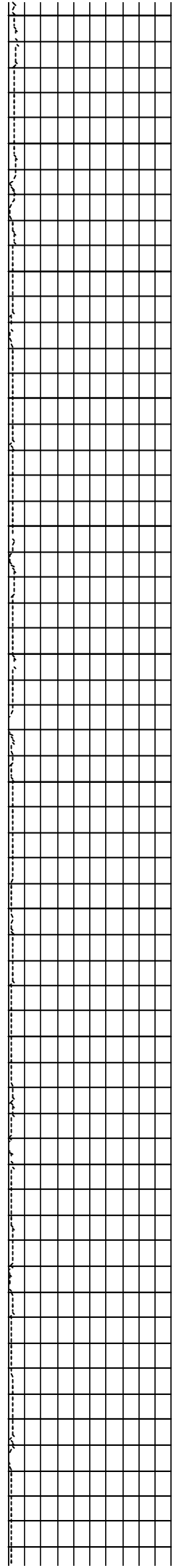
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ch' trsd, f-v cns, abndd-mtd, pr art, hd, no vis cont, lse Oz gms

wh-med l gry, occ yel gry, frm-hd, occ dol, occ arg lam, occ slty, pred microal

dk gry-med dk gry, frm, blk, silty slty, non-occ silty calc, Tr Micromic

wh-med l gry, occ yel gry, frm-hd, occ dol, occ arg lam, occ slty, pred microal



CRETACEOUS

Turonian

Turonian

CRETACEOUS

Turonian

CRETACEOUS

Turonian

Upp

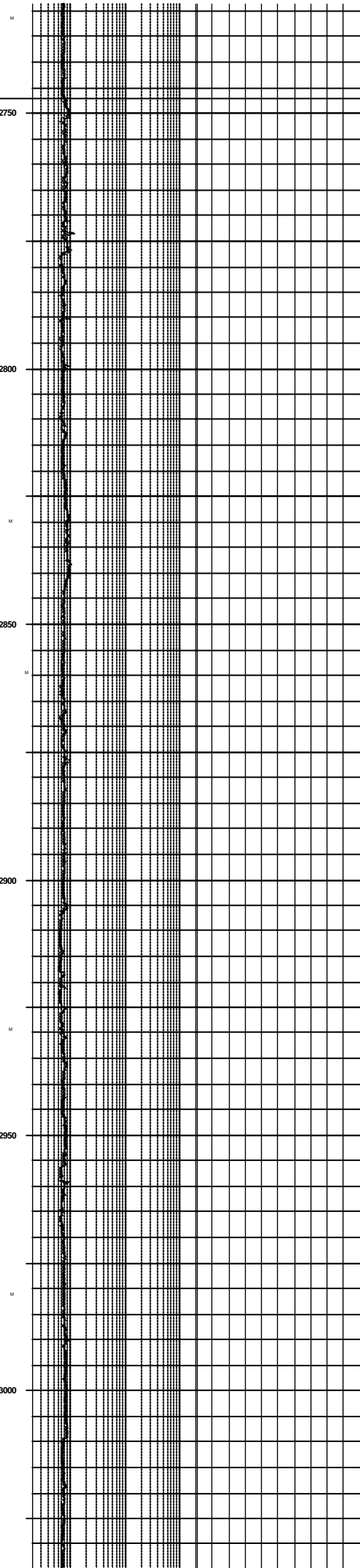
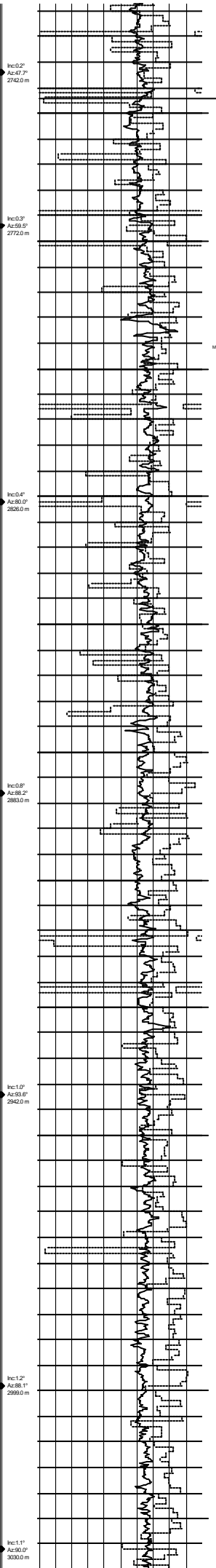
CROMER KNOLL

CROMER KNOLL

SH

Lange

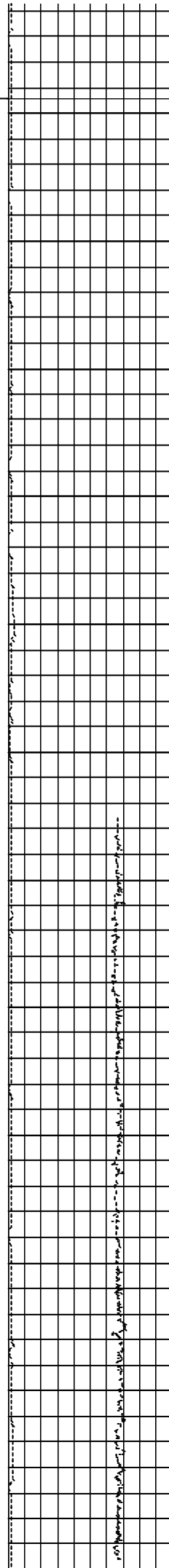
Lange



Top Lange Fm at 2747.2 m MD / 2747 m TVC

pred dk. yelsh. bn, occ wh-t gry, frm, blk, pred microin, I.P. arg, occ dol

wh-t gry, occ yel bn, fm, blk, pred arg, occ microin, occ dol



JURASSIC

Bajocian

Aalenian-Lower Bajocian

Upper Toarcian

JURASSIC

BAT

U.Oxi.-Rya.

Oxfordian

Bathonian-Calloviaan

Not

Bajocian

Aalenian-Lower Bajocian

Upper Toarcian

JURASSIC

BAT

VIKING

Not

Bajocian

FANGST

Ile

Ror

Spekk

Melke

Not

Bajocian

FANGST

Ile

Ror

3413.1 m

3400

3463.0 m

3513.0 m

3570.6 m

3628.4 m

3413.1 m

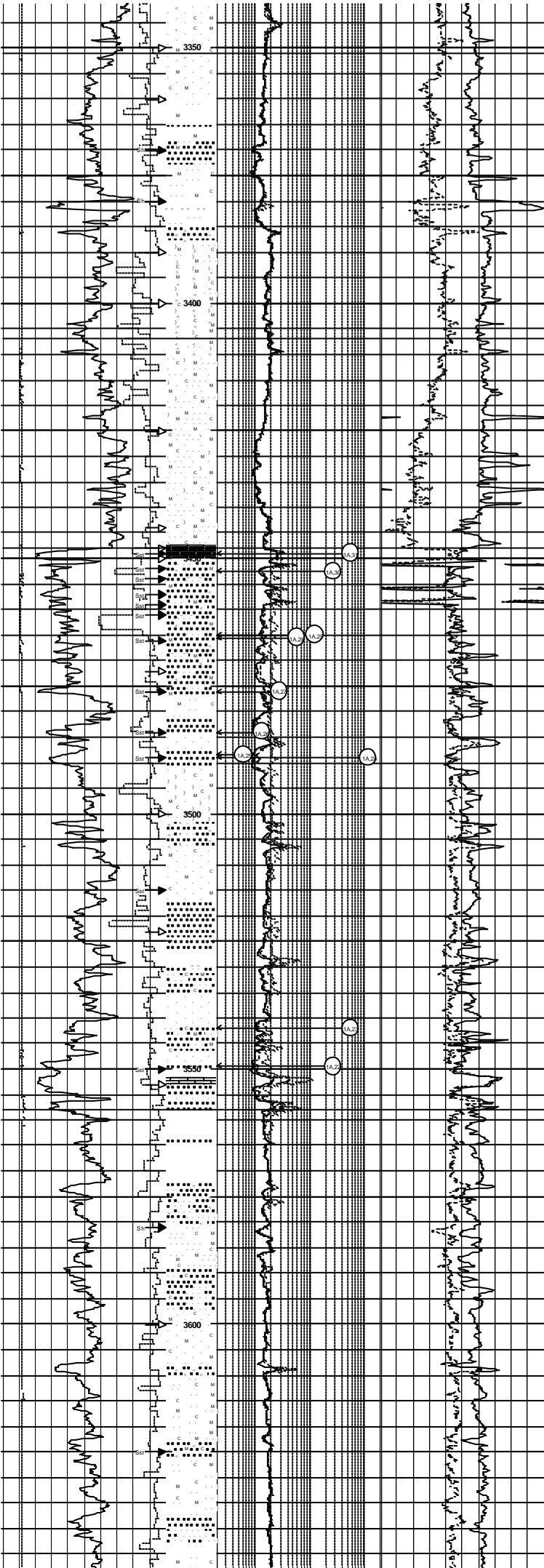
3400

3463.0 m

3513.0 m

3570.6 m

3628.4 m



Top Melke Fm at 3350.9 m MD / 3350.5 m TVD

Sst med h gry-med dk gry, dk-mky Qtz, v-f, sbang-sbrndd, w/ mod st, fr-fm.v calc: cmf v argshly, micromic, n.v.p., n/s

Qst dk gry-gry blk, sbfs-fs, fm-mod hd, non-sily calc, Tr Micromic

L vyl gry-gry org, bly, fm sily arg

Sst h gry-m dk gry, dk-mky Qtz, v-f, Tr m, arg -sbrndd, mod st, fr-mod hd, gen v calc: LP, grad sdy Ls, argshly Mtx loc grad Sst/Cst sdy, micromic, Tr carb, n.v.p., n/s

Top Not Fm at 3407 m MD / 3406.5 m TVD

Sst dk gry, sbfs, mod hd, calc, micromic, Tr carb, LP v sdy grad Sst vl., Tr Pyr.

Qst dk gry-gry blk, sbfs, mod hd, non calc, loc calc, micromic, Tr carb, LP, v sdy grad Sst, gen v sily grad Sst, Tr Pyr.

Top Ile Fm at 3447.9 m MD / 3447.4 m TVD

Q blk-bm blk, Anthr, r vskrk, arg, mod hd

Sst h olv gry, dk-mky Qtz, v-f, pred f, sbang-sbrndd, mod st, gen non calc, LP calc, micromic, Tr carb, loc v arg sily grad Sst/Cst, n.v.p., n/s

Sst h gry-med h gry, amor, st-occ frm, sily calc, v sdy grad Sst als, v arg, micromic, Tr carb

Sst h olv gry-med gry, dk-mky Qtz, v-f, pred v f, sbang-sbrndd, w/ st, sily calc-calc, micromic, carb, v arg sily grad Sst/Cst, n.v.p., n/s

L v h gry-yel gry, st, pred sily arg, occ micromic

Top Ror Fm at 3558 m MD / 3557.2 m TVD

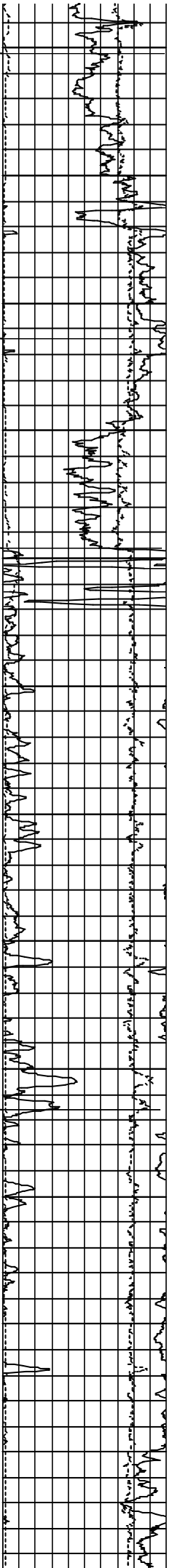
Qst med gry-med dk gry, sbfs-fs, fm, sily calc, sly

Sst med h gry-med gry, dk-mky Qtz, v-f, pred v f, sbang-sbrndd, w/ st, fr sft, calc v calc arg, micromic, Tr Carb, n.v.p., n/s

Qst dk gry-gry blk, fs, spln, mod hd-hd, micromic, non calc

Sst h gry-h olv gry-dk-mky Qtz, v-f, Tr m, sbang-sbrndd, mod st, fr-mod hd, gen calc: cmf, loc st/sil cmf, micromic, LP, v sily grad Sst, n.v.p., n/s

Qst gen gry-olk-olk blk, mrv olv gry-m dk gry mod hd, sbfs-fs, st calc v dot cmf, micromic, gen sily loc grad Sst, loc v sdy grad Sst



JURASSIC

JURASSIC

Lower Toarcian

Pliensbachian

Sinemurian-Lower Pliensbachian

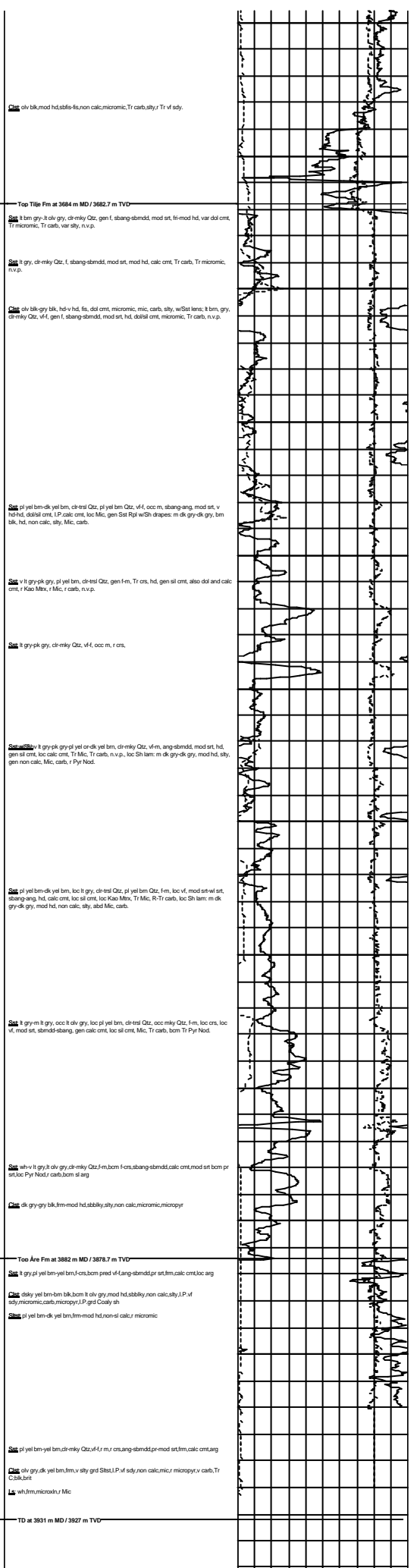
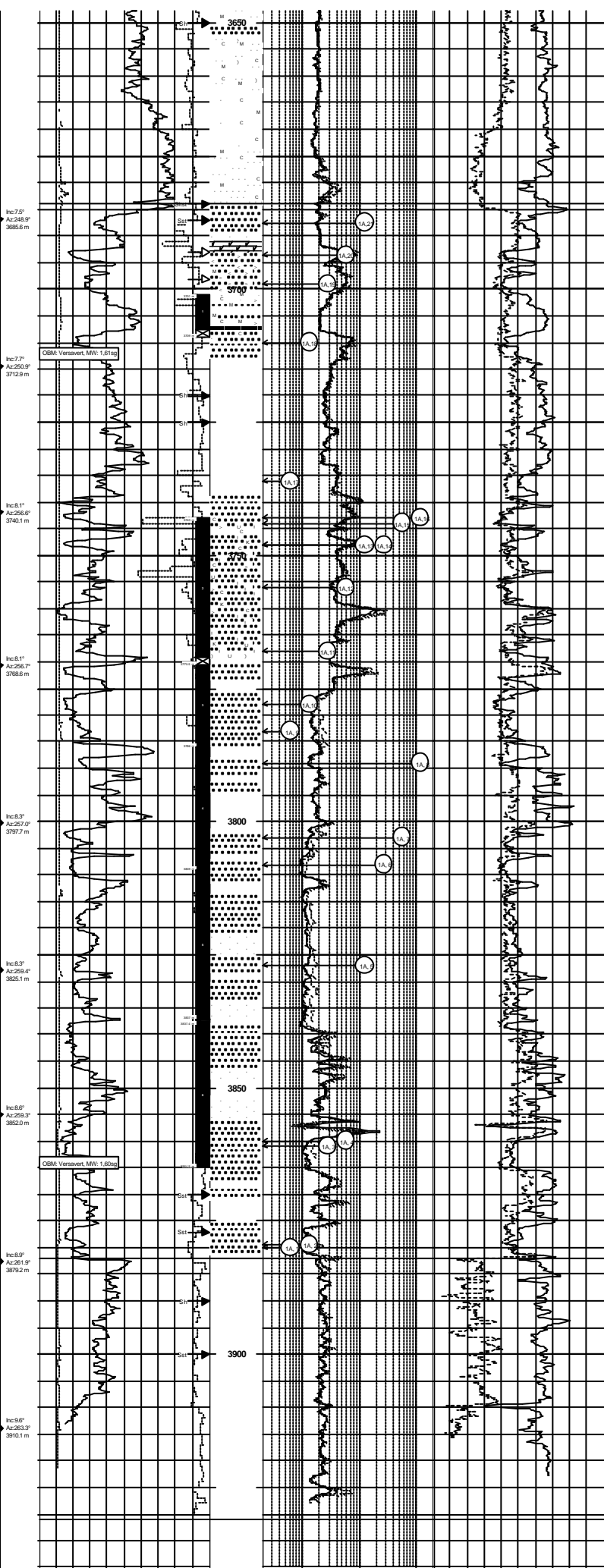
Sinemurian

BAT

BAT

Tilje

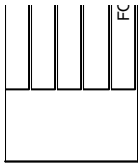
Åre



200	ROP m/hr	0
6	CALI in	26
	BS	

0.2	RS ohmm	2000	0.45	TNPH frac	-0.15
0.2	RM ohmm	2000	1.95	RHOB g/cc	2.95
	RD				

0	GAS %	10
240	DTCO us/ft	40
	DTSM	



6	in	26
0	GR	150
	api	

GAMMA RAY

0.2	ohmm	2000
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RESISTIVITY

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NEUTRON/DENSITY

140	us/ft	40
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SONIC