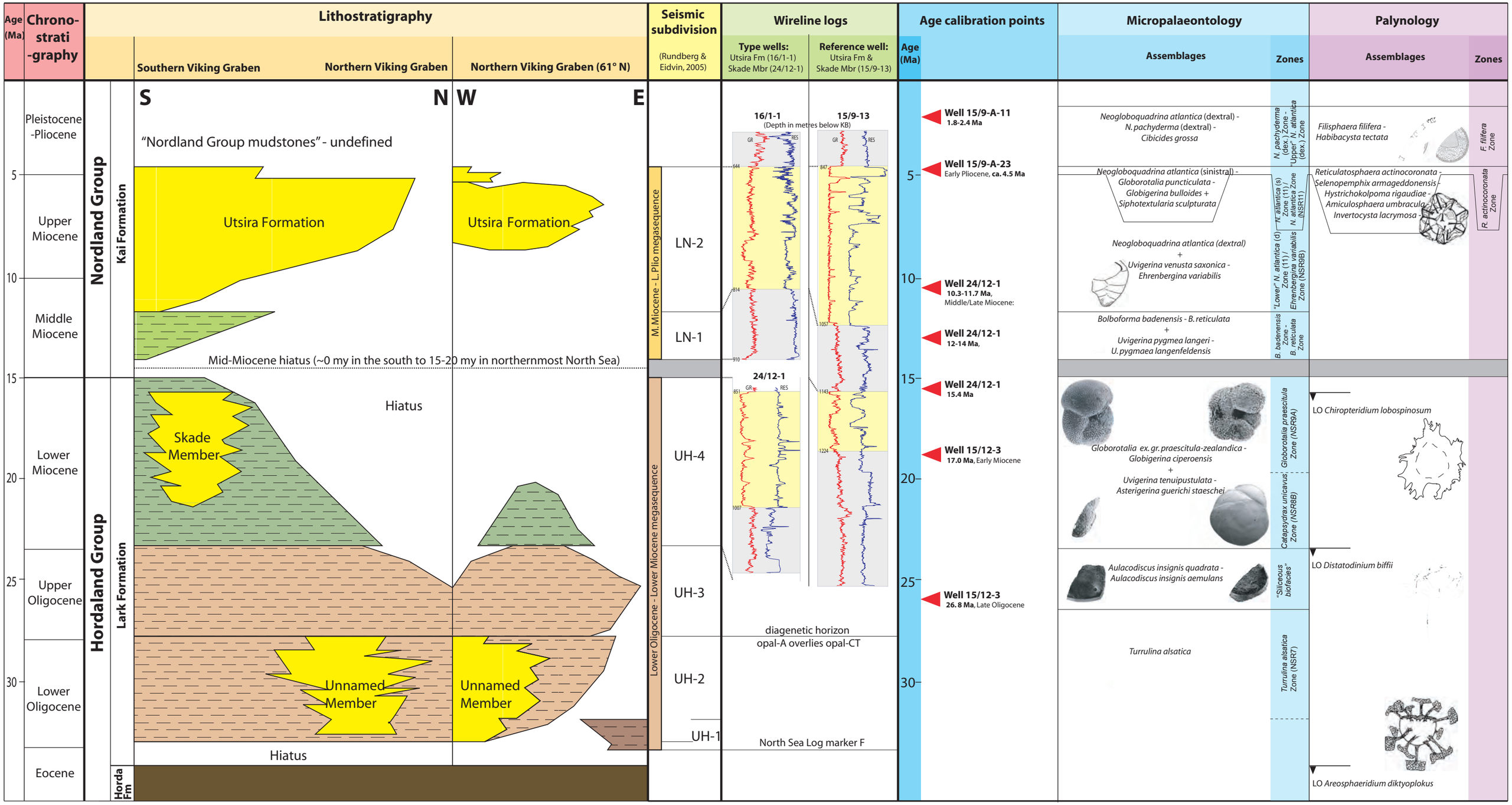
Age (Ma)
Chrono-strati-graphy
Lithostratigraphy
Southern Viking Graben
Northern Viking Graben
Northern Viking Graben (61° N)
Seismic subdivision
(Rundberg & Eidvin, 2005)
Wireline logs
Type wells: Utsira Fm (16/1-1) Skade Mbr (24/12-1)
Reference well: Utsira Fm & Skade Mbr (15/9-13)
Age calibration points
Age (Ma)
Micropalaeontology
Assemblages
Zones
Palynology
Assemblages
Zones
S
N
W
E
"Nordland Group mudstones" - undefined
Pleistocene -Pliocene
Upper Miocene
Middle Miocene
Lower Miocene
Upper Oligocene
Lower Oligocene
Eocene
Nordland Group
Kai Formation
Utsira Formation
Utsira Formation
Mid-Miocene hiatus (~0 my in the south to 15-20 my in northernmost North Sea)
Hordaland Group
Lark Formation
Hiatus
Skade Member
Unnamed Member
Unnamed Member
Hiatus
Horda Fm
M. Miocene - L. Plio megasequence
LN-2
LN-1
Lower Oligocene - Lower Miocene megasequence
UH-4
UH-3
UH-2
UH-1
16/1-1
15/9-13
(Depth in metres below KB)
GR
RES
24/12-1
diagenetic horizon
opal-A overlies opal-CT
North Sea Log marker F
Well 15/9-A-11
1.8-2.4 Ma
Well 15/9-A-23
Early Pliocene, ca. 4.5 Ma
Well 24/12-1
10.3-11.7 Ma,
Middle/Late Miocene:
Well 24/12-1
12-14 Ma,
Well 24/12-1
15.4 Ma
Well 15/12-3
17.0 Ma, Early Miocene
Well 15/12-3
26.8 Ma, Late Oligocene
Neogloboquadrina atlantica (dextral) - N. pachyderma (dextral) - Cibicides grossa
N. pachyderma (dex.) Zone
"Upper" N. atlantica (dex.) Zone
Neogloboquadrina atlantica (sinistral) - Globorotalia puncticulata - Globigerina bulloides + Siphotextularia sculpturata
N. atlantica (s) Zone (11)
N. atlantica Zone (NSR11)
Neogloboquadrina atlantica (dextral) + Uvigerina venusta saxonica - Ehrenbergina variabilis
"Lower" N. atlantica (d) Zone (11)
Ehrenbergina variabilis Zone (NSR9B)
Bolboforma badenensis - B. reticulata + Uvigerina pygmea langeri - U. pygmaea langenfeldensis
B. badenensis Zone
B. reticulata Zone
Globorotalia ex. gr. praescitula-zealandica - Globigerina ciperoensis + Uvigerina tenuipustulata - Asterigerina guerichi staeschei
Globorotalia praescitula Zone (NSR9A)
Catapsydrax unicavus Zone (NSR8B)
Aulacodiscus insignis quadrata - Aulacodiscus insignis aemulans
"Siliceous biofacies"
Turrulina alsatica
Turrulina alsatica Zone (NSR7)
Filisphaera filifera - Habibacysta tectata
F. filifera Zone
Reticulatosphaera actinocoronata - Selenopemphix armageddonensis - Hystrichokolpoma rigaudiae - Amiculosphaera umbracula - Invertocysta lacrymosa
R. actinocoronata Zone
LO Chiropteridium lobospinosum
LO Distatodinium biffii
LO Areosphaeridium diktyoplokus

Figure 4