



PALYNOLOGICAL RESULTS

OF

WELL

31/2-13

M.F. WHITAKER
EPXT/2

NSEP 237

a.s Norske Shell
Exploration and Production

PALYNOLOGICAL RESULTS

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SUMMARY (LGD = log depths; all others are drillers depths).

Interval

1754.9 - 1766.0 m	? EARLY KIMMERIDGIAN	? NS 9.1
1769.5 - 1771.0 m	LATEST OXFORDIAN	NS 8.3
1772.0 - 1775.0 m	LATE LATE OXFORDIAN	NS 8.2
1777.4 - 1837.4 m	LATE LATE OXFORDIAN	NS 8.1
1840.0 - 1885.0 m	EARLY LATE OXFORDIAN	NS 7
1885.5 - 1902.0 m (LGD)	EARLY OXFORDIAN	NS 6.2
1906.0 m (LGD)	EARLY OXFORDIAN	NS 6.1
1912.0 - 1932.0 m (LGD)	LATE CALLOVIAN	NS 5.3
1934.5 - 2000.0 m (LGD)	MIDDLE CALLOVIAN	NS 5.2

DISCUSSION OF RESULTS

A discussion of the palynofacies will be included at a later date.

Interval: 1729.5 - 1730.0 m

Age: Probably PALEOCENE

Top & Base: Presence of Cordosphaeridium gracilis,
Florentina deanei and Areoligera spp.

Interval: 1754.9 - 1766.0 m

Age: EARLY KIMMERIDGIAN (? subzone 9.1)

Top : Upper limit of Stephanelytron sp.
Scriniodium crystallinum and Lithodinia sp. 3
also have their top occurrences within this
interval.

Base : Immediately above the top occurrence of
Endoscrinium galeritum.

Discussion: Presence of forms comparable to Egmontodinium
polyplacophorum and the appearance of the chorate type at
1756.0 also indicate Zone 9.

Interval: 1769.5 - 1775.0 m
Age: LATEST OXFORDIAN (subzone 8.3)
Top : Upper limit of Endoscrinium galeritum
Base : Immediately above Dinocyst type A.

Interval: 1772.0 - 1775.0 m
Age: LATE LATE OXFORDIAN (subzone 8.2)
Top : Upper limit of Dinocyst type A
Base : Lower limit of Glossodinium dimorphum

Interval: 177.4 - 187.4 m
Age: LATE LATE OXFORDIAN (subzone 8.1)
Top : Immediately below the basal occurrence of
G. dimorphum
Base : Lowest occurrence of Occisucysta cf. evittii
and immediately above top occurrence of
Gonyaulacysta jurassica var. longicornis.

Interval: 1840.0 - 1885.0 m

Age: EARLY LATE OXFORDIAN (subzone 7)

Top : Upper limit of Gonyaulacysta jurassica var. longicornis.

Base : lower limit of commonly occurring G. jurassica var. longicornis and immediately above the top occurrence of Gonyaulacysta scarburghensis.

Interval: 1888.5 - 1902.0 m

Age: EARLY OXFORDIAN (subzone 6.2)

Top : Upper limit of Gonyaulacysta scarburghensis

Base : Lower limit of abundant blade-shaped palynomaceral 4 and Chytroeisphaeridia cf. cerastes.

Interval: 1906.0 m

Age: EARLY OXFORDIAN (subzone 6.1)

Top : Immediately below base of C. cf. cerastes and base abundant P.4. Systematophora dirarica also has its 'acme' within this subzone.

Base : Lower limit of Gonyaulacysta scarburghensis.

Interval: 1912.0 - 1932.0 m

Age: LATE CALLOVIAN (subzone 5.3)

Top : Upper limit of Lithodinia jurassica and immediately below of Wanaea fimbriata and Gonyaulacysta scarburghensis.

Base : Immediately above top occurrence of Nov. gen. D. sp. 1 (Hystrichogonyaulax pectinigera).

Interval: 1934.5 - 2000.0 m

Age: MIDDLE CALLOVIAN (subzone 5.2)

Top : Upper limit of Nov. gen D. sp.1 (Hystrichogonyaulax pectinigera)

Base : Presence of Lithodinia suturocomplexa and Polystephanephorus sp.1.

Discussion: Interval 1950.0 - 1967.5 m is characterized by the type Lithodinia sp. D (formerly ? Parvocavatus sp.) a correlatable event within the Middle Callovian interval. Interval 1970.0 - 1973.5 m is characterised by Chalmydophorella sp. A (C. rectilinea), and Pareodinia ceratophora which is probably representative of the 'Pareodinia ceratophora Association'.

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GAMMA RAY LOG

PALYNOZONES

AGE

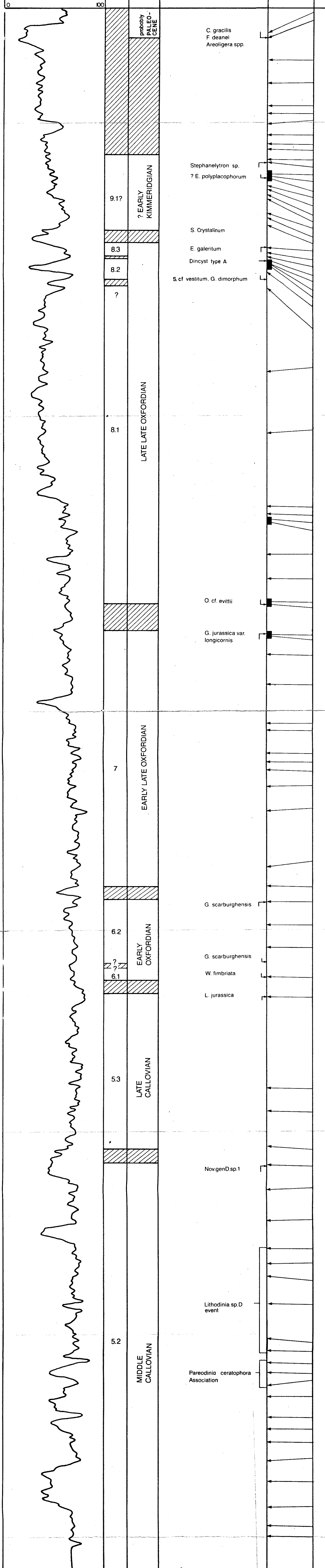
COMMENTS

SAMPLE TYPE

UNO 3 1/2-13 (18)

40 ref 133 no CORE SWS DITCHCUTTING

Shell 1985



MICROPLANKTON

DEPTH IN METERS

17295

17300

17350

17380

17425

17440

17465

17480

17500

17510

17545

17560

17565

17576

17580

17595

17615

17630

17640

17660

17695

17710

17720

17730

1774

17747

17750

1775

17774

17775

1793.2

1804.5

18166

18175

18184

18202

18255

18308

18362

18400

18407

18435

18505

18555

18575

18610

18640

18670

18710

18745

18805

18850

18885

18920

18985

19020

19060

19120

19150

19195

19245

19295

19329

19345

19395

19450

19500

19530

19560

19590

19645

19675

19700

19720

19735

19755

19795

19820

19845

19875

19910

19955

19985

20000

20000

Aeroligera sp.

Conopsea gracilis

Florentia deseri

Pareodinia fimbriata (m.s.)

Synochroa dicyclia

Symptopoda sp.

Symptopoda cf. vestium

Microgam testis

Sensillum sp.

Goniatites jurassica

Hydrogoniatites clathrata

Chlamydomonadea sp.

Oocystis cf. evitii

Stephanelytron sp.

Stephanelytron sp. 2

Pareodinia cf. subatum

Sophasteridium sp. 3

Proterocentrum 12

Lithodinia autocomplexa

Pleurodium sp.

Hydrogoniatites cf. clathrata

Symptopoda gracilis

Eggonodinium polylacporum

Chorate type

Aeroligera sp.

Alveolium sp.

Eschschmidia cf. infraglobulatum (D.7)

Chlamydomonadea sp. B (Wh.)

Symptopoda crystallinum

Eggonodinium lundum

Eggonodinium galatum

Dincyst sp. A (Wh.)

Nov gen F sp. (Mog)

Nov gen G sp. (Mog)

Conopsea gracilis

Eschschmidia sp.

Werneriella cf. ovata

Werneriella cf. ovata

Glossodinium dimorphum

Glossodinium apatum

Eggonodinia parvula

Eggonodinium acutum

Conopsea gracilis

Synochroa ovata

Synochroa ovata

Werneriella cf. ovata

Werneriella cf. ovata

Protophthalmidium inailium

Chlamydomonadea jurassica

Chlamydomonadea jurassica

Chlamydomonadea jurassica

Eschschmidia jurassica

Nov gen D.G. (de Hoan)

Symptopoda sp.

Werneriella cf. ovata

Chlamydomonadea sp. (de Hoan)

Lithodinia sp. 1 (Mog)

Werneriella ovata

Werneriella ovata