# Appendix B: Paleontology - megafossils, conodonts, and forams, in Furer, L.C., and Amoco Oil Co., Data compilation of the 1972 field party, southeast Brooks Range and Fort Yukon, Alaska; Vol 2

Furer, L.C., and Amoco Oil Co.

GMC DATA REPORT 465B

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2019
State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys
**GEOLOGIC MATERIALS CENTER**

APPENDIX B 1972

PALEONTOLOGY - MEGAFOSSILS,
CONODONTS, & FORAMS

Amoco Production Company
Tulsa, Oklahoma

February 21, 1973

File: Technical Service No. 5825 IR
Locality No. 6798

MEMORANDUM

Re: Megafossils and interpretation of
the Deacon Rock Section
Sections 18 + 22, T 25N, R 22E
Coleen Quad., Alaska

Paleontologic study demonstrates the presence in this section of a considerable thickness of Salmontrout Limestone of a non-brachiopodal reef facies which is different from the brachiopod-rich type section.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DR 8731 | 6798-3 | Barren of megafossils | - |
| | | A dolomitic limestone breccia | |
| DR 8732 | 6798-4 | Barren of megafossils | - |
| | | A finely brecciated dolomitic limestone | |
| DR 8734 | 6798-6 | Barren of megafossils | - |
| | | A finely oolitic limestone | |
| DR 8735 | 6798-7 | Barren of megafossils | |
| | | Brecciated dolomitic limestone | |
| DR 8739 | 6798-11 | Barren of megafossils | - |
| | | A dense calcilutite | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DR 8740 | 6798-12 | Eofletcharia cf. incerta<br>Indet. trilobites | Lower or Middle Ordovician |
| | | A dense calcilutite | |
| DR 8742 | 6798-14 | Indet. ostracodes | - |
| | | Coarsely crystalline dolomitic limestone | |
| DR 8745 | 6798-17 | Indet. gastropod | - |
| | | A mottled, sandy, dolomitic limestone | |
| DR 8319 | 6798-18 | Maclurites sp.<br>Ostracodes? | Ordovician |
| | | Coarsely crystalline dolomite | |
| DR 8772 | 6798-23 | Protaraea sp.<br>Corrugopora cf. rhabdota<br>Fletcharia sp.<br>Paleofavosites cf. kirki<br>Heliolites cf. spongiosa<br>Prasopora sp.<br>Pycnolithus sp. | Lower or Middle Silurian |
| | | A crinoidal grainstone | |
| DR 8771 | 6798-24 | Columnostroma sp.<br>Eridotrypa ? sp.<br>Syringoporella sp.<br>Entelophyllum cf. porvum<br>Indet. ostracodes<br>Crinoid columnals<br>Rhabdocanthis sp. | Silurian |
| | | A crinoidal packstone | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DR 8770 | 6798-25 | Paleophyllum ?<br>Eridotrypa ? sp.<br>Columnostroma ? sp.<br>Crinoids | Silurian ? |
| | | A laminar stromatoporoid bindstone | |
| DR 8769 | 6798-26 | Rhabdacanthia 20884<br>Heliolites cf. banandei<br>Columnostroma sp.<br>Favosites sp.<br>Indet. brachiopod<br>Eridotrypa ? sp. | Upper Silurian or<br>Lower Devonian |
| | | A crinoidal grainstone | |
| DR 8768 | 6798-27 | Rhabdacanthia 20884<br>Columnostroma sp.<br>"Stromatactis"<br>Stromatopora sp.<br>Crinoids | Upper Silurian or<br>Lower Devonian |
| | | A bindstone with packstone matrix | |
| DR 8767 | 6798-28 | Rhabdacanthia 20884<br>Clathracoilona sp.<br>Columnostroma sp.<br>Euryamphipora sp.<br>Indet. gastropods<br>algal ? coats | Upper Silurian or<br>Lower Devonian |
| | | A stromatoporoid bindstone | |
| DR 8766 | 6798-29 | Trupetostroma sp.<br>Coenites sp.<br>Euryamphipora sp.<br>Indet. zaphrentid coral<br>Indet. gastropods<br>Algal ? coats | Lower Devonian<br>Salmontrout Limestone |
| | | A stromatoporoid framestone to bindstone | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DR 8765 | 6798-30 | Indet. stromatoporoids<br>Coenites sp.<br>Syringopora sp.<br>Crinoid columnals | Lower Devonian<br>Salmontrout Limestone |
| | | A crinoidal wackestone | |
| DR 8763 | 6798-32 | Vepresiphyllum sp.<br>Rhabdacanthia sp.<br>"Stromatactis"<br>Gasterocoma N. sp. | Lower Devonian<br>Salmontrout Limestone |
| | | A stromatactis grainstone | |
| DR 8762 | 6798-33 | Utaratuia 20551<br>Favosites 20561<br>Parachaetetes sp.<br>Cornuproetus sp.<br>Conocardium sp.<br>Desquamatia ? sp. | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | Rock is a coral floatstone | |
| DR 8759 | 6798-35 | Gasterocoma N. sp. | Devonian<br>Salmontrout Limestone |
| | | Rock is a crinoidal grainstone | |
| DR 8758 | 6798-36 | Indet. laminar stromatoporoid<br>Crinoid 20611 | Lower Devonian<br>Salmontrout Limestone |
| | | A stromatoporoid bindstone, grainstone matrix | |
| DR 8757 | 6798-37 | Parachaetetes sp.<br>Crinoid 20611<br>Coenites sp.<br>"Stromatactis" | Lower Devonian<br>Salmontrout Limestone |
| | | Crinoidal grainstone with binding organisms | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DR 8756 | 6798-38 | Utaratuia 20551<br>Favosites 20561<br>Vepresiphyllum sp.<br>Indet. stromatoporoid | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | Coral bindstone, grainstone matrix | |
| DR 8755 | 6798-39 | Warburgella sp.<br>Utaratuia 20551<br>Heterotrypa sp.<br>Favosites 20561<br>Alveolites sp.<br>Vepresiphyllum sp.<br>Clathrocoilona sp.<br>Crinoid 20611 | Lower Devonian<br>Gedinnian<br>Salmontrout Limestone |
| | | A stromatoporoid - coral bindstone | |
| DR 8754 | 6798-40 | Utaratuia 20551<br>Fasciphyllum ? sp.<br>Favosites 20561<br>Alevolites 20607<br>Crinoid columnals | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | A coral bindstone | |
| DR 8760 | 6798-41 | Rhabdacanthia 20884<br>Cyphotrypa 20886<br>Syringopora sp.<br>Indet. ostracodes | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | A coral-bryozoan bindstone, wachestone matrix | |
| DR 8753 | 6798-42 | Utaratuia 20511<br>Syringopora sp.<br>Heterotrypa sp. | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | A coral framestone | |
| DR 8752 | 6798-43 | Rhabdacanthia 20884<br>Cyphotrypa 20886 | Lower Devonian<br>Gedinnian or |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DR 8752 Cont'd | 6798-43 | Alveolites 20607<br>Vepresiphyllum sp.<br>Heterotrypa sp.<br>Syringopora sp.<br>Crinoid 20611<br>Indet. bryozoa | Siegenian<br>Salmontrout Limestone |
| | | Bryozoan - rich packstone | |
| DR 8751 | 6798-44 | Favosites 20561<br>Syringopora sp.<br>Heterotrypa sp.<br>Various Indet. bryozoa | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | A tabulate - bryozoan bindstone with wackestone matrix | |
| DR 8750 | 6798-45 | Favosites 20561<br>Crinoid columnals | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | A tabulate coral bindstone, wackestone matrix | |
| DR 8749 | 6798-46 | Alveolites sp.<br>Favosites 20561<br>Indet. bryozoa<br>Indet. trilobite<br>large crinoid columnals | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | Rock is a wackestone with abundant Alveolites | |
| DR 8748 | 6798-47 | Rhabdacanthia 20884<br>Heterotrypa sp.<br>Indet. ostracodes<br>Crinoid columnals | Lower Devonian<br>Gedinnian or<br>Siegenian<br>Salmontrout Limestone |
| | | A bindstone with a wackestone matrix | |
| DR 8747 | 6798-48 | Barren of megafossils | - |
| | | A brecciated dolomitic limestone | |

Discussion

The section includes Ordovician strata related to those in the Amoco J section (Locality 6372) overlain by Silurian carbonates (6798-23, 24) rich in tabulate corals. Still higher are rocks of definite reef character, the lower part of which is either Upper Silurian or Lower Devonian and the upper part of which is Lower Devonian Salmontrout Reef differing from the type section in being essentially barren of shelly fossils.

The proximity of the Deacon Rock reef to a basinal Lower Devonian shale section (Locality 6261, sample LCF 61) together with the non-shelf biofacies that is represented, suggest the possibility that the Salmontrout at Deacon Rock is an intra-basinal pinnacle reef rather than the shelf-edge type of reef represented by the type Salmontrout. If correctly interpreted, the idea of intra-basinal reefing beyond the limits of the Salmontrout-age carbonate bank must be considered.

Allen R. Ormiston

ARO:mjh

AMOCO

Amoco Production Company


Tulsa, Oklahoma
March 29, 1973

File: Technical Service No. 5825IR

Mr. P. H. Garrison
Denver Division

Attention: Mr. Terry Cooper

Dear Sir:

SUBJECT: Paleontological Analysis, Deacon Rock Section, Black River Quadrangle, Alaska

The attached report by H. R. Lane deals with Ordovician through Devonian conodonts recovered from the subject section. This is another of the 1972 field sections from the Fort Yukon area.

Yours very truly,

WILLIAM R. WALTON

By_____
G. A. Sanderson

GAS:lc 8.9
Attachment

cc: G. J. Verville
E. E. Lafaye
A. B. Shaw

Amoco Production Company
Tulsa, Oklahoma
Research Center

74 0014
CF 74 0230

September 15, 1972

Re: Megafossils from Angry Bee Creek (Upper part - 1972), SW Sec. 24, T13S, R21E, Philip Smith Mountains Quad., Alaska

File: Technical Service 5813IR
Locality 6503

MEMORANDUM

The 1971 samples from the beds underlying the reef have been previously reported. In 1972 the work begun in 1971 was completed by measuring through and collecting the reef body (Smoke Creek Member). Those collections are reported here in descending order.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| AB 8602 | 6503-38 | Thamnopora cf. polyforata<br>Acinophyllum sp.<br>Tabulophyllum? sp.<br>Amphipora sp.<br>Stachyodes sp.<br>laminar stromatoporoid<br>Nervostrophia sp.<br>Tenticospirifer sp.<br>Carinatina sp. indet.<br>Spinatrypa sp.<br>Cyrtospirifer sp.<br>Homoctenus sp.<br>crinoid columnals | Upper Devonian<br>mid-Frasnian |

This rock is a bafflestone with micrite matrix. The presence of tentaculitids indicates exchange with the basinal shales.

| | | | |
|---|---|---|---|
| AB 8603 | 6503-37 | Hexagonaria cf. schucherti | Upper Devonian<br>mid-Frasnian |

Coral heads up to 18" across are present at this horizon, matrix is packstone.

| | | | |
|---|---|---|---|
| AB 8604 | 6503-36 | laminar stromatoporoid indet.<br>Thamnopora cf. polyforata<br>Amphipora sp. | Upper Devonian<br>Frasnian |

A laminar stromatoporoid bindstone with micrite matrix.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| AB 8605 | 6503-35 | Stachyodes cf. costulata<br>laminar stromatoporoid indet.<br>Tabulophyllum? sp.<br>indet. brachiopod<br>crinoid columnals | Upper Devonian<br>Frasnian |

A laminar stromatoporoid bindstone with a micrite matrix.

| | | | |
|---|---|---|---|
| AB 8607 | 6503-33 | Thamnopora sp.<br>Amphipora sp.<br>Stachyodes cf. costulata<br>Acinophyllum sp. | Upper Devonian<br>Frasnian |

A bafflestone with a micrite matrix.

| | | | |
|---|---|---|---|
| AB 8608 | 6503-32 | laminar stromatoporoid cf. Trupetostroma<br>Euryamphipora sp.<br>Stachyodes costulata<br>Thamnopora cf. cervicornis | Upper Devonian<br>Frasnian |

A complex bindstone.

| | | | |
|---|---|---|---|
| AB 8609 | 6503-31 | Stachyodes costulata<br>Thamnopora cf. cervicornis<br>Acinophyllum cf. camselli<br>Amphipora sp.<br>Aulopora sp.<br>Thamnopora cf. polyforata<br>indet. laminar stromatoporoid | Upper Devonian<br>mid-Frasnian |

Rock is partly a bafflestone, partly a bindstone with packstone matrix.

| | | | |
|---|---|---|---|
| AB 8610 | 6503-30 | laminar stromatoporoid cf. Syringostroma<br>Stachyodes sp. | Upper Devonian<br>mid-Frasnian |

Rock is a bindstone with a packstone matrix.

| | | | |
|---|---|---|---|
| AB 8611 | 6503-29 | Thamnopora cf. cervicornis<br>Hexagonaria cf. schucherti<br>Coenites? sp.<br>indet. gastropods<br>indet. stromatoporoid | Upper Devonian<br>mid-Frasnian |

Rock is a floatstone

| | | | |
|---|---|---|---|
| AB 8612 | 6503-28 | Thamnopora sp.<br>Amphipora sp.<br>indet. atrypid<br>laminar stromatoporoid | Upper Devonian |

A laminar stromatoporoid bindstone.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| AB 8614 | 6503-26 | Amphipora sp.<br>Stachyodes costulata<br>indet. stromatoporoid | Upper Devonian<br>Frasnian |

Rock is a bafflestone with micrite matrix

| | | | |
|---|---|---|---|
| AB 8615 | 6503-25 | Thamnopora cf. cervicornis<br>Amphipora sp.<br>indet. stromatoporoid | Upper Devonian<br>Frasnian |

Rock is a bafflestone with micrite matrix

| | | | |
|---|---|---|---|
| AB 8616 | 6503-24 | massive stromatoporoid cf. Stromatoporella | Upper Devonian<br>Frasnian |

A framestone.

| | | | |
|---|---|---|---|
| AB 8617 | 6503-23 | Parallelopora cf. dartingtonensis<br>Amphipora sp. | Upper Devonian<br>mid-Frasnian |

A framestone.

| | | | |
|---|---|---|---|
| AB 8618 | 6503-22 | indet. massive stromatoporoid | - |

A framestone.

Discussion

The framestone core of this reef accounts for less of the total reef thickness than at the Upper Wind River Section. There is a great deal of lime mud in the upper part of the reef, mostly bound together by laminar stromatoporoids or trapped by branching forms such as Amphipora, Thamnopora and Stachyodes.

Allen R. Ormiston

Thomas L. DeKeyser (per A.R.O.)

ARO/TLD:skw

Amoco Production Company
Tulsa, Oklahoma

January 9, 1973

File: Technical Service No. 5806 IR
Locality No. 6701

MEMORANDUM

Re: Megafossils from the Your Creek Section,
sections 23 + 24, T 15S, R 15E,
Phillip Smith Mountains, Quad., Alaska

The following megafossils are recognized from this important off-reef Hunt Fork section:

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| YC 8261 | 6701-1 | Coactilium sp.<br>Girvanella sp.<br>Euryamphipora sp.<br>Thamnopora sp.<br>Indeterminate gastropods | Upper Devonian Frasnian |
| | | An oncolite bed. Clasts of Thamnopora encrusted by Euryamphipora serve as nuclei which have algal coats of Coactilium and Girvanella. This unit was deposited in shallow agitated water and is correlative with the oncolite bed at the top of the Upper Wind River reef (6651-4). | |
| YC 8263 | 6701-3 | Phillipsastraea whittakeri<br>Thamnopora sp. A<br>Coenites sp.<br>Tabulophyllum sp.<br>Synaptophyllum sp.<br>Schizophoria sp. | Upper Devonian Mid-Frasnian |
| | | A coralline biostrome about 2.5' thick consisting mostly of Phillipsastraea heads. | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| YC 8264 | 6701-4 | New Hyalosponge Genus *Coactilium* ? sp. | Devonian |

A sponge bed. This distinctive biotope, if persistent, might be a useful local marker. The sponges are abundant and finely preserved and apparently represent a new genus. They are thick-walled forms in contrast to most described Devonian sponges. Sponges have not previously been reported from the Alaskan Devonian.

Allen R. Ormiston

Allen R. Ormiston

ARO:mjh

Amoco Production Company

Tulsa, Oklahoma
July 27, 1973

File: Technical Service No. 5806IR
Locality No. 6701
Job No. 9792

MEMORANDUM

Subject: Conodonts from the Your Creek Section, Lat. 68° 07' 25" N., Long. 148" 33' W., Philip Smith Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts and found to be barren.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| YC 8263 C,F | 3 | 0501 | Barren of conodonts |
| YC 8264 C,F | 4 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 4.07

**Amoco Production Company**
Tulsa, Oklahoma
Research Center

September 14, 1972

Re: Megafossils from FCH 674 Reef, Section 35, T14S, R25E, Arctic Quad., Alaska

File: Technical Service 5805IR
Locality 6667

MEMORANDUM

Grab samples FCH 670-674 were made at this locality in 1971 and samples 8600 and 8601 were taken in 1972. The 1971 grab samples have previously been reported, but are repeated here for the sake of completeness. This stromatoporoid buildup can be assigned to the Smoke Creek Member of the Hunt Fork Formation, a new unit to be fully defined in a later report. Although small in area the FCH 674 Reef is probably more than 400 feet thick (estimated) and has a well developed core of massive stromatoporoid framestone. Intergrowths of corals and stromatoporoids are also present.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8600 | 6667-1 | *Spinatrypa* sp.<br>*Atelodictyon* sp.<br>*Alveolites multiperforatus* | Upper Devonian<br>Frasnian |

This rock is a boundstone with layers of *Alveolites* alternating with stromatoporoid layers.

| | | | |
|---|---|---|---|
| 8601 | 6667-2 | *Phillipsastraea* cf. *whittakeri*<br>*Alveolites* sp.<br>*Clathrocoilona* sp.<br>*Thamnopora* sp. | Upper Devonian<br>Frasnian |

This boundstone consists of an intergrowth of massive stromatoporoid and the colonial coral, *Phillipsastraea*.

| | | | |
|---|---|---|---|
| FCH 670 | 6667-3 | *Schizophoria* sp.<br>*Anatrypa*? sp.<br>cf. *Trupetostroma*<br>large gastropods | Devonian<br>probably<br>Frasnian |
| FCH 672 | 6667-4 | indet. massive stromatoporoid | Devonian<br>probably<br>Frasnian |

Rock is a framestone.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| FCH 673 | 6667-5 | Alveolites cf. multiperforatus<br>Thamnopora sp.<br>Cyrtina sp.<br>gastropods<br>crinoid columnals<br>indet. atrypid | Devonian<br>probably<br>Frasnian |
| FCH 674 | 6667-6 | Disphyllum? sp.<br>indet. stromatoporoid<br>crinoid columnals | Middle or<br>Upper Devonian |

This rock is a floatstone.

Discussion

Sample 8601 comes from about 200' below the top of this reef, so that at least the upper part of this reef is Frasnian and can be correlated with the Angry Bee (Locality 6503) and Upper Wind River (Locality 6651) reefs.

Allen R. Ormiston

Allen R. Ormiston

ARO:skw

<table>
<tr><th colspan="6">ALLOCHTHONOUS LIMESTONES<br>ORIGINAL COMPONENTS NOT ORGANICALLY BOUND DURING DEPOSITION</th><th colspan="3">AUTOCHTHONOUS LIMESTONES<br>ORIGINAL COMPONENTS ORGANICALLY BOUND DURING DEPOSITION</th></tr>
<tr><td colspan="4">LESS THAN 10% > 2mm COMPONENTS</td><td colspan="2">GREATER THAN 10% > 2mm COMPONENTS</td><td rowspan="2">BY ORGANISMS WHICH ACT AS BAFFLES</td><td rowspan="2">BY ORGANISMS WHICH ENCRUST AND BIND</td><td rowspan="2">BY ORGANISMS WHICH BUILD A RIGID FRAMEWORK</td></tr>
<tr><td colspan="2">CONTAINS LIME MUD (<.03 mm)</td><td>NO LIME MUD</td><td rowspan="3">MATRIX SUPPORTED</td><td rowspan="3">> 2mm COMPONENT SUPPORTED</td></tr>
<tr><td colspan="2">MUD SUPPORTED</td><td colspan="2" rowspan="2">GRAIN SUPPORTED</td></tr>
<tr><td>LESS THAN 10% GRAINS (>.03mm < 2mm)</td><td>GREATER THAN 10% GRAINS</td></tr>
<tr><td>MUD-STONE</td><td>WACKE-STONE</td><td>PACK-STONE</td><td>GRAIN-STONE</td><td>FLOAT-STONE</td><td>RUD-STONE</td><td>BAFFLE-STONE</td><td>BIND-STONE</td><td>FRAME-STONE</td></tr>
</table>

**Fig. 2.** Classification of limestones according to depositional texture.

Amoco Production Company
Tulsa, Oklahoma

February 22, 1973

File: Technical Service Nos. 5825 and 5821

Mr. P. H. Garrison
Denver Division

Attention: L. C. Furer

Dear Sir:

Attached are two megafossil reports by Allen Ormiston on the Deacon Rock and Deacon Rock West Sections in Alaska. Both are 1972 field sections. The Deacon Rock Section is currently being processed for conodonts, and we anticipate completion of this section in the near future.

Yours very truly,

WILLIAM R. WALTON

By: G. A. Sanderson
G. A. Sanderson

GAS:mjh
Attachments
cc: G. J. Verville/Research Center
E. E. Lafaye/Denver
A. B. Shaw/Denver

Amoco Production Company
Tulsa, Oklahoma

February 21, 1973

File: Technical Service No. 5826 IR
Locality No. 6799

MEMORANDUM

Re: Megafossil examination of Deacon Rock
West Section,
Section 11, T 25N, R 21E,
Black River Quad., Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| DW 8781 | 6799-3 | Stromatolites | - |
| DW 8783 | 6799-5 | Barren of megafossils | - |
| | | Rock is a dense pel-micrite, pellets appear to be fecal in origin | |
| DW 8786 | 6799-8 | Stromatolites | - |
| | | Rock is a stromatolitic dysmicrite with fenestral porosity interbedded with oolites | |
| DW 8788 | 6799-10 | Barren of megafossils | - |
| | | Rock is a brecciated sandy dolomite | |

Discussion:

The sequence is supratidal to shallow subtidal in origin. The oolitic beds (6799-8) are reminiscent of the oolites at Oolite Creek (Locality 6247) and the two may be correlative.

Allen R. Ormiston

Allen R. Ormiston

ARO:mjh

Amoco Production Company

Tulsa, Oklahoma
July 6, 1973

File: Technical Service No. 5793IR
Job No. 9779
Locality No. 6661

MEMORANDUM

Subject: Conodonts from the Total Eclipse Section, Lat. 69° 0' N., Long. 145° 20' W., Demarcation Quad., Alaska.

## INTRODUCTION

The following samples were processed and found barren of conodonts.

## FAUNA

| Footage | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 8209 | 3 | 0501 | Barren of conodonts |
| 8210 | 4 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 25.02

Amoco Production Company

Tulsa, Oklahoma
March 26, 1973

File: Technical Service No. 5825IR
Job No. 9811
Locality No. 6798

MEMORANDUM

Subject: Conodonts from the Deacon Rock Section (Loc. 6798), Sections 18-22, T25N, R22E, Black River Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| DR-72-8730 | 2 | 3071 | Belodina sp. | 1 |
| -8731 | 3 | 0501 | Barren of conodonts | |
| -8732 | 4 | 3071 | Belodina sp. | 1 |
| -8733 | 5 | 0501 | Barren of conodonts | |
| -8735 | 7 | 0501 | Barren of conodonts | |
| -8737 | 9 | 2618 | Indet. conodont | 1 |
| -8738 | 10 | 0501 | Barren of conodonts | |
| -8740 | 12 | 0501 | Barren of conodonts | |
| -8319 | 18 | 0501 | Barren of conodonts | |
| -8318 | 19 | 3072 | Drepanodus sp. | 2 |

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| DR-72-8318 | 19 | 2618 | Indet. conodonts | 11 |
| Samples 2-19 contain conodonts which are Middle or Upper Ordovician in age | | | | |
| DR-72-8320 | 20 | 0501 | Barren of conodonts | |
| -8746 | 22 | 0501 | Barren of conodonts | |
| -8772 | 23 | 2851 | Trichonodella sp. | 1 |
| | | 3051 | Hindeodella sp. | 1 |
| | | 2865 | Panderodus sp. | 2 |
| | | 2618 | Indet. conodonts | 4 |
| -8771 | 24 | 2618 | Indet. conodonts | 2 |
| -8770 | 25 | 2618 | Indet. conodonts | |
| -8769 | 26 | 0501 | Barren of conodonts | |
| -8767 | 28 | 0501 | Barren of conodonts | |
| -8765 | 30 | 0501 | Barren of conodonts | |
| -8764 | 31 | 20894 | Ozarkodina 28094 | 4 |
| | | 3039 | Plectospathodus sp. | 1 |
| | | 2861 | Neoprioniodus 2861 | 1 |
| | | 2858 | Neoprioniodus sp. | 1 |
| | | 2726 | Spathognathodus sp. | 2 |
| | | 3051 | Hindeodella sp. | 1 |
| | | 2851 | Trichonodella sp. | 2 |
| | | 2618 | Indet. conodonts | 35 |

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| Samples 23 and 31 contain conodonts which suggest Middle and Upper Silurian ages, respectively. | | | | |
| DR-72-8762 | 33 | 2731 | Spathognathodus 2731 | 5 |
| | | 4050 | Spathognathodus 4050 | 3 |
| | | 3051 | Hindeodella sp. | 9 |
| | | 2858 | Neoprioniodus sp. | 2 |
| | | 2618 | Indet. conodonts | 21 |
| The conodonts in sample 33 are Lower Devonian (Gedinnian) in age. | | | | |
| -8761 | 34 | 4051 | Ozarkodina 4051 | 1 |
| | | 20896 | Spathognathodus 20896 | 1 |
| -8758 | 36 | 0501 | Barren of conodonts | |
| -8757 | 37 | 2618 | Indet. conodonts | 3 |
| -8755 | 39 | 0501 | Barren of conodonts | |
| -8754 | 40 | 2726 | Spathognathodus sp. | 3 |
| | | 2618 | Indet. conodonts | 6 |
| -8753 | 42 | 0501 | Barren of conodonts | |
| -8752 | 43 | 0501 | Barren of conodonts | |
| -8751 | 44 | 2731 | Spathognathodus 2731 | 3 |
| | | 4050 | Spathognathodus 4050 | 4 |
| | | 2618 | Indet. conodonts | 7 |
| -8749 | 46 | 4050 | Spathognathodus 4050 | 6 |
| | | 2845 | Ozarkodina sp. | 2 |
| | | 2618 | Indet. conodonts | 4 |

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|

The conodonts in samples 44 and 46 are Lower Devonian (Gedinnian) in age.

| | | | | |
|---|---|---|---|---|
| DR-72-8748 | 47 | 0501 | Barren of conodonts | |
| -8747 | 48 | 0501 | Barren of conodonts | |

H. Richard Lane

HRL:glj 21.02

Gmod -7642

AMOCO

Amoco Production Company

Judi.
1 copy + file
LF.

Tulsa, Oklahoma
March 23, 1973

File: Technical Service No. 5827IR

Mr. P. H. Garrison
Denver Division

Attention: Lloyd Furer

Dear Sir:

Subject: Paleontological Analysis on John Herbert Section, Coleen Quadrangle, Alaska

The attached report by A. R. Ormiston describes megafossils recovered from the subject section. These are 1972 field collections from the Fort Yukon Basin, Alaska. Conodont work on this section is in progress and will be reported as completed.

Yours very truly,

WILLIAM R. WALTON

By _____
G. A. Sanderson

GAS:er 2.04
Attachment

cc: G. J. Verville
E. E. Lafaye - Denver
A. B. Shaw - Denver

AMOCO

Amoco Production Company

Tulsa, Oklahoma
March 22, 1973

File: Technical Service No. 5827IR
Locality No. 6800

MEMORANDUM

Subject: Megafossils from John Herbert Village Section, N 1/2, Sec. 15 T24N, R21E, Coleen Quad., Alaska

Early Mississippian rocks absent from the unconformity at the base of the South Old Camp Section (Locality 6163) are represented by this section.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| HV 8795 | 6800-5 | Unispirifer cf. U. 2320<br>Knightites (Retispira) sp.<br>Pseudorthoceras sp.<br>Hemiplethorhynchus sp.<br>Edmondia sp.<br>indet. nuculanid | Lower Mississippian Kinderhook or Osage |
| HV 8796 | 6800-6 | Hemiplethorhynchus sp. | Lower Mississippian Kinderhook or Osage |
| HV 8797 | 6800-7 | Prospira sp.<br>Amplexizaphrentis sp.<br>indet. Rhynchonellid<br>crinoid columnals | Lower Mississippian Kinderhook or Osage |
| HV 8798 | 6800-8 | crinoid columnals<br>Zoophychus | - |
| HV 8799 | 6800-9 | Amplexizaphrentis cf. taylori<br>Menophyllum? sp. | Lower Mississippian Kinderhook or Osage |
| HV 8800 | 6800-10 | Schuchertella sp. | - |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| HV 8801 | 6800-11 | Kakwiphyllum sp. A Sutherland<br>Amplexizaphrentis sp.<br>Syringopora harveyi<br>Brachythris aff. suborbicularis | Lower Mississippian Osage |
| HV 8803 | 6800-13 | Spirifer sp.<br>Brachythris sp. indet.<br>Hemiplethorhynchus sp.<br>Fenestella sp. | Lower Mississippian Osage |
| HV 8804 | 6800-14 | Avonia cf. pustulifera<br>Echinoconchus sp.<br>Geniculifera? sp.<br>Marginatia? sp.<br>"Brachythyris" n. sp. (probably a new genus)<br>Rugosochonetes sp.<br>Streptorhynchus sp.<br>Aviculopecten?<br>indet. bivalves<br>fenestellid bryozoa<br>crinoid columnals | Lower Mississippian Osage |

Discussion:

Lower Mississippian rocks are cut out by unconformity at the South Old Camp Section, but a grab sample (ARO-7, 6261-7) from a nearby fault slice probably conrrelates with sample 6800-14 of the subject section. The presence of Punctospirifer in the Rock Slough Section (Locality 6797) suggests those sandstones are no older than Osage and may overlie the rocks of the John Herbert Village Section.

Allen R. Ormiston

ARO:skw 1.01

Amoco Production Company

Tulsa, Oklahoma
May 31, 1973

File: Technical Service No. 5827IR
Job No. 9813
Locality No. 06800

MEMORANDUM

Subject: Conodonts from the John Herbert Village Section, N 1/2, Sec. 15, T25N, R21E, Porcupine River Area, Coleen Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Footage | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8797 F,C,L | 7 | 21076 | Spathognathodus 21076 | 1 |
| 8798 F,C,L,f | 8 | 21076 | Spathognathodus 21076 | 14 |
| | | 21084 | Dollymae 21084 | 5 |
| | | 21086 | Spathognathodus 21086 | 5 |
| | | 2868 | Apatognathus sp. | 7 |

The conodonts in samples 7 and 8 suggest an upper Kinderhook or lower Osage (Lower Mississippian) age for the samples.

H. Richard Lane

HRL:mk13.08

Amoco Production Company

Tulsa, Oklahoma
September 19, 1973

File: Technical Service No. 5834IR
Locality No. 6807
Job No. 9820

MEMORANDUM

Subject: Paleontology of the Keenan Quartzite Section, Charley River Quadrangle, Alaska.

## INTRODUCTION

Three small collections of fragmentary fossils were submitted for study. A single ammonite fragment was inadequate for identification, consequently a "field identification" of Middle Jurassic is rejected. Fragmentary Inoceramus specimens resemble various species from the Middle Jurassic through Upper Cretaceous, therefore a Middle Jurassic to Upper Cretaceous age is assigned.

It is our understanding that additional specimens from float at the base of the section may be present in personal collections in the Denver Office. If a more precise age determination is required these specimens should be obtained, if possible, and submitted for additional study.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Specs. |
|---|---|---|---|---|
| KQ-72-9039F | 3 | 20881 | Indet. ammonite fragment | 1 |
| KQ-72-9038F | 4 | 02230 | Inoceramus sp. (fine ribs) | 1 |
| | | 02230 | Inoceramus sp. (fragments, coarse ribs) | 1 |
| KQ-72-9036F | 6 | 02230 | Inoceramus sp. (fragments, coarse ribs) | 3 |

## REMARKS

Sample 3 contains an ammonite fragment bearing a distinctive pattern of bifurcating ribs and umbilical nodes. Rib and node patterns of this type are

extremely common in Middle Jurassic ammonites, especially the Stephanoceratáceae, hence the field age determination. However, similar patterns are present in various Upper Jurassic and Cretaceous genera. A more complete specimen with at least the whorl profile is required for identification.

Sample 4 contains about half of a single left valve of a fine-ribbed species of Inoceramus such as I. labiatus (Turonian), I. concentricus (Cenomanian), and I. yokoyami (Coniacian-Santonian). This would appear to suggest an Upper Cretaceous age. However, samples 4 and 6 also contain fragments of a coarse-ribbed Inoceramus. This ribbing is most like that of I. porrectus of Middle Jurassic age, although it could be the coarse marginal plications of finer-ribbed younger species.

In view of the uncertain identifications and somewhat conflicting nature of the suggestive evidence, it seems best to assign a Middle Jurassic through Upper Cretaceous age for these samples.

James R. Derby

James R. Derby

JRD:skw 27.06

Amoco Production Company

Tulsa, Oklahoma
July 27, 1973

File: Technical Service No. 5823IR
Locality No. 6796
Job No. 9809

MEMORANDUM

Subject: Conodonts from the Mouth Coleen Section, NE 1/4, Sec. 12, T26N, R23E, Coleen Quad., Alaska.

## INTRODUCTION

The following samples were processed for conodonts and found to be barren.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 8316 CP | 8 | 0501 | Barren of conodonts |
| 8314 L,C | 9 | 0501 | Barren of conodonts |
| 8315 F,C | 10 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 4.09

AMOCO

Amoco Production Company
4502 East 41st Street
P.O. Box 591
Tulsa, Oklahoma 74102

Research Center
918-627-3400

January 18, 1973

File: Technical Service No. 5822 IR
Locality No. 6795

P. H. Garrison
Denver Division

Attn: Terry Cooper

Attached is a paleontological report by Allen Ormiston on megafossils from the 1972 Nelson Bluff Section in Alaska. The samples, which are of Lower and Middle Devonian age, add to our understanding of the regional paleogeography of the Salmontrout.

Very truly yours,

WILLIAM R. WALTON

By: G A Sanderson
G. A. Sanderson

GAS:jd
cc: G. J. Verville/Research Center
A. B. Shaw/Denver
E. E. Lafaye/Denver

Amoco Production Company
Tulsa, Oklahoma

January 11, 1973

File: Technical Service No. 5822 IR
Locality No. 6795

MEMORANDUM

Re: Megafossils from Nelsen Bluff,
NW section 29, T 21N, R 23E
Black River Quad., Alaska

Lower and Middle Devonian megafossils are reported from the subject locality:

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NB 8287 | 6795-1 | Moelleritia cf. canadensis<br>Indeterminate crinoid columnals<br>Emanuella ? sp. | Lower Devonian<br><br>Siegenian or Emsian |
| | | Rock is a dark wackestone | |
| NB 8285 | 6795-3 | Idiostroma sp. (abundant)<br>Clathrocoilona cf. subclathrata<br>Alveolites sp.<br>Thamnopora sp. | Lower Devonian |
| | | Rock is a complex bindstone with two generations of stromatoporoid encrusting Thamnoporas and Alveolites sheets coating everything. | |
| NB 8284 | 6795-4 | Favosites cf. 20069<br>Loxonema sp. (abundant)<br>Indeterminate gastropods<br>Indeterminate stromatoporoid crinoid columnals | Lower Devonian |
| | | Rock is a gastropod-rich pelletoidal micrite | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NB 8283 | 6795-5 | Barren of megafossils | - |
| NB 8281 | 6795-6 | Sample missing | |
| NB 8282 | 6795-7 | *Lingula* sp.<br>*Ganinella* 20828<br>*Nowakia acuaria*<br>*Conocardium* sp.<br>*Abditoloculina* sp.<br>Other ostracodes<br><br>An Ostracode - trilobite-rich wackestone | Lower Devonian Siegenian or early Emsian |
| NB 8289 | 6795-8 | *Gasterocoma bicaula*<br><br>Rock is a crinoidal wackestone | Upper Emsian or Eifelian |
| NB 8288 | 6795-9 | *Gasterocoma bicaula*<br><br>Rock is a crinoidal wackestone with stromatoporoid clasts. | Upper Emsian or Eifelian |

Discussion:

Samples 1-7 of this sequence represent a distinctive facies of the Salmontrout Limestone. These rocks are far muddier than the type Salmontrout. The presence of the lagoonal ostracode, *Moelleritia*, abundant gastropods and pelletoidal micrites suggests deposition in a muddy lagoon within which small (6795-3) patch reefs grew. Nelsen Bluff can be added as a control point to the Salmontrout paleogeography map where its lagoonal nature fits well between the shore facies at Salmon Village and the conjectured reef to the west (see Figure 2 in Research Department Report No. M72-G-4). Samples 8 and 9 are probably best assigned to the overlying Ogilvie Formation.

Allen R. Ormiston

Allen R. Ormiston

ARO:mjh

Amoco Production Company

Tulsa, Oklahoma
May 4, 1973

File: Technical Service No. 5822IR
Job No. 9808
Locality No. 06795

MEMORANDUM

Subject: Conodonts from the Nelsen Bluff Section, NW 1/4, Sec. 29, T21N, R23E, Black River Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts:

## FAUNA

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| NB8287LCF | 1 | 0501 | Barren of conodonts | |
| NB8286LC | 2 | 21060 | Spathognathodus 21060 | 10 |
| NB8284FCL | 4 | 21060 | Spathognathodus 21060 | 1 |
| Samples 2 and 4 are Lower Devonian in age. | | | | |
| NB8282FCL | 7 | 1990 | Polygnathus 1990 | 3 |
| | | 3051 | Hindeodella sp. | 6 |
| | | 20055 | Belodella 20055 | 1 |
| | | 2865 | Panderodus sp. | 3 |
| NB8289FC | 8 | 1990 | Polygnathus 1990 | 2 |
| | | 1992 | Pelekysgnathus 1992 | 2 |

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| | | 1983 | Spathognathodus 1983 | 2 |
| | | 2865 | Panderodus sp. | 9 |
| | | 2901 | Belodella sp. | 12 |
| NB8288C | 9 | 1990 | Polygnathus 1900 | 2 |
| | | 1992 | Pelekysgnathus 1992 | 1 |
| | | 4704 | Spathognathodus 4704 | 3 |
| | | 2845 | Ozarkodina sp. | 1 |
| | | 2901 | Belodella sp. | 14 |
| | | 2865 | Panderodus sp. | 13 |
| | | 2618 | Indet. conodonts | 2 |

Samples 7, 8 and 9 are Late Emsian (Lower Devonian) in age.

H. Richard Lane

HRL:er 18.04

Amoco Production Company

Tulsa, Oklahoma
April 6, 1973

File: Technical Service No. 5836IR
Locality No. 6809

MEMORANDUM

Subject: Megafossils from North Salmon Village Section,
Secs. 31 and 32, T21N, R24E,
Black River Quadrangle, Alaska

| Field No. | Sample No. | Identification | Age |
|---|---|---|---|
| NS 8368 | 6809-1 | Nowakia parabarrandei<br>Metastyliolina sp. | Middle Devonian<br>Eifelian |
| NS 8369 | 6809-2 | Nowakia parabarrandei<br>Metastyliolina sp. | Middle Devonian<br>Eifelian |
| NS 8373 | 6809-6 | Saccarchites? sp.<br>Moelleritia n. sp. | Upper Emsian<br>or Eifelian |
| NS 8374 | 6809-7 | Leiopteria sp.<br>Amphipora ramosa<br>Treposella sp. | Middle Devonian<br>probably Givetian |

A shallow-water, lagoonal or similar depositional environment is suggested by the abundance of Amphipora and Leiopteria.

| | | | |
|---|---|---|---|
| NS 8375 | 6809-8 | Stachyodes sp.<br>Amphipora sp.<br>indet. ostracodes | Middle or<br>Upper Devonian |

The dolomites of this sample can not be precisely dated, but suggest a lagoonal environment.

| | | | |
|---|---|---|---|
| NS 8376 | 6809-9 | indet. ostracodes | ---- |

This rock is a partly dolomitized pelmicrite. No determinable microfossils were seen in thin section.

Discussion

Middle Devonian rocks of lagoonal facies are present toward the top of this section. It can not be established whether Upper Devonian lagoonal deposits such as occur at the top of the Fort Creek (Loc. 6182) section are also present.

Allen R. Ormiston

Allen R. Ormiston

ARO:sd 23.3

Amoco Production Company

Tulsa, Oklahoma
July 12, 1973

File: Technical Service No. 5836IR
Job No. 9822
Locality No. 6809

MEMORANDUM

Subject: Conodonts from the North Salmon Village Section, Sec. 31-32, T21N, R24E, Black River Quad., Alaska

FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8368 F | 1 | 0501 | Barren of conodonts | |
| 8369 C | 2 | 1990 | Polygnathus 1990 | 7 |
| | | 21174 | Spathognathodus 21174 | 4 |
| | | 4051 | Ozarkodina 4051 | 2 |
| | | 2901 | Belodella sp. | 6 |
| | | 2618 | Indet. conodonts | 11 |

The fauna in sample 3 is upper Emsian (late Early Devonian) in age and correlates approximately with sample 57 (HRL 60) at the type Salmontrout Section (Loc. 6214).

| | | | | |
|---|---|---|---|---|
| 8370 C | 2 β | 4702 | Polygnathus 4702 | 3 |
| | | 2618 | Indet. conodonts | 27 |

The age of sample 3 is equivocal, being either latest Early Devonian or earliest Middle Devonian. The same fauna occurs in the type Salmontrout above sample 57 (HRL 60) to the top of the formation.

| | | | |
|---|---|---|---|
| 8371 C | 4 | 0501 | Barren of conodonts |
| 8372 C | 5 | 0501 | Barren of conodonts |

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8373 FC | 6 | 0501 | Barren of conodonts | |
| 8374 FC | 7 | 2865 | *Panderodus* sp. | 4 |

*Panderodus* ranges from Middle Ordovician through the Middle Devonian.

| | | | | |
|---|---|---|---|---|
| 8375 FC | 8 | 0501 | Barren of conodonts | |
| 8376 L, C | 9 | 0501 | Barren of conodonts | |

H. Richard Lane

HRL:skw 28.04

AMOCO

Amoco Production Company

May 7, 1973

File: Technical Service No. 5835IR

Mr. P. H. Garrison
Denver Division

Attention: L. C. Furer

Dear Sir:

Subject: Paleontological Analysis - Steamboat Mountain Section, Alaska

Attached is a report by A. R. Ormiston concerning the Lower Paleozoic megafossils from the subject section. These are all 1972 Alaska field samples.

Yours very truly,

JAMES A. MOMPER

By G. A. Sanderson
G. A. Sanderson

GAS:er 33.14
Attachment

cc: G. J. Verville
E. E. Lafaye - Denver

Amoco Production Company

Tulsa, Oklahoma
April 16, 1973

File: Technical Service 5835IR
Locality 6808

MEMORANDUM

Subject: Megafossils from the Steamboat Mountain Section, Section 26, T16N, R29E, and Sections 32-33, T16N, R30E, Black River Quadrangle, Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| SB 9070 | 6808-4 | barren of megafossils | -- |
| | Rock is a calcilutite | | |
| SB 9062 | 6808-7 | laminar stromatoporoids?<br>Stachyodes? sp. | Ordovician to Devonian |
| | Rock is a dololutite with recrystallized fossils | | |
| SB 9063 | 6808-8 | Loxonema sp.<br>indet. stromatoporoids<br>indet. leptostrophic gastropods | " |
| SB 9066 | 6808-11 | indet. laminar stromatoporoid<br>Stachyodes? sp. | " |
| | Rock is a mottled dolomite, probably originally a bindstone. | | |
| SB 9059 | 6808-14 | barren of megafossils | -- |
| | Rock is coarsely crystalline dolomite | | |

Discussion:

The few fossils present are too poorly preserved for precise identification, but the fossil groups present suggest an Ordovician through Devonian age.

Allen R. Ormiston

Allen R. Ormiston

ARO:er 24.02

Amoco Production Company

Tulsa, Oklahoma
July 31, 1973

File: Technical Service No. 5835IR
Locality No. 6808
Job No. 9821

MEMORANDUM

Subject: Conodonts from the Steamboat Mtn. Section, Sec. 26, T16N, R29E and Sec. 32-33, T16N, R30E, Black River Quad., Alaska

## INTRODUCTION

The following samples were processed and examined for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Specimens |
|---|---|---|---|---|
| SB-72-9067C | 1 | 0501 | Barren of conodonts | |
| SB-72-9068LC | 2 | 0501 | Barren of conodonts | |
| SB-72-9069LC | 3 | 0501 | Barren of conodonts | |
| SB-72-9070FC | 4 | 0501 | Barren of conodonts | |
| SB-72-9071CL | 5 | 0501 | Barren of conodonts | |
| SB-72-9072CL | 6 | 0501 | Barren of conodonts | |
| SB-72-9062C | 7 | 2910 | Acontiodus 2910 | 5 |
| | | 2909 | Scolopodus 2909 | 2 |
| | | 21242 | Acontiodus 21242 | 6 |
| | | 2891 | Paltodus sp. | 11 |
| | | 2618 | Indet. conodonts | 33 |

The fauna in sample 7 is middle Lower Ordovician in age.

| Field No. | Sample No. | Taxon No. | Identification | No. Specimens |
|---|---|---|---|---|
| SB-72-9066C | 11 | 0501 | Barren of conodonts | |
| SB-72-9061CL | 12 | 0501 | Barren of conodonts | |
| SB-72-9060CL | 13 | 0501 | Barren of conodonts | |
| SB-72-9059CL | 14 | 0501 | Barren of conodonts | |

H. Richard Lane

HRL:skw 10.01

Amoco Production Company
Tulsa, Oklahoma

January 3, 1973

File: Technical Service No. 5832 IR
Job No. 9818
Locality No. 6805

MEMORANDUM

Re: Paleontology of "Triassic Oil Section", SE/4, 7-4N-30E, Charley River Quad, Yukon-Nation Rivers area, Alaska

In response to a recent telecon request by L. C. Furer, the megafossil samples from the "Triassic Oil Section" in east central Alaska were examined for age determinations. Three samples from the "Triassic" indicate that this section is clearly Upper Triassic in age. One sample from the top of the Tahkandit (Permian) Formation appears to contain a typical Permian fauna.

| Sample No. | Approx. Footage below top of section | Field No. | IBM No. | Identification | Count | Age |
|---|---|---|---|---|---|---|
| 1 | 900' | 9058 | 02389 | Spiriferella sp. Productids, other Paleozoic brachiopods | | Permian, top of Tahkandit Fm. |
| 4 | 496' | 9055 | 20701 | Monotis scutiformis pinensis | 11 | Middle Norian (Columbianus Zone) of Upper Triassic |
| 5 | 490' | 9054 | 20700 | Monotis sp. | 10 | Norian-Upper Triassic |
| 16 | 90' | 9044 | 20702 | Halobia cordillerana | 4 | Upper Karnian (Welleri Zone) of Upper Triassic |

Remarks

These faunas indicate a range in age from Upper Karnian through Middle Norian for the Triassic Oil Section. The age determinations suggest that the section is structurally complicated. The lowest samples (4 & 5) indicate a younger age than the highest sample (16). (See attached chart of Triassic zones). Literature on the area has described local folding and folding, so this reversal of the section is not unexpected.

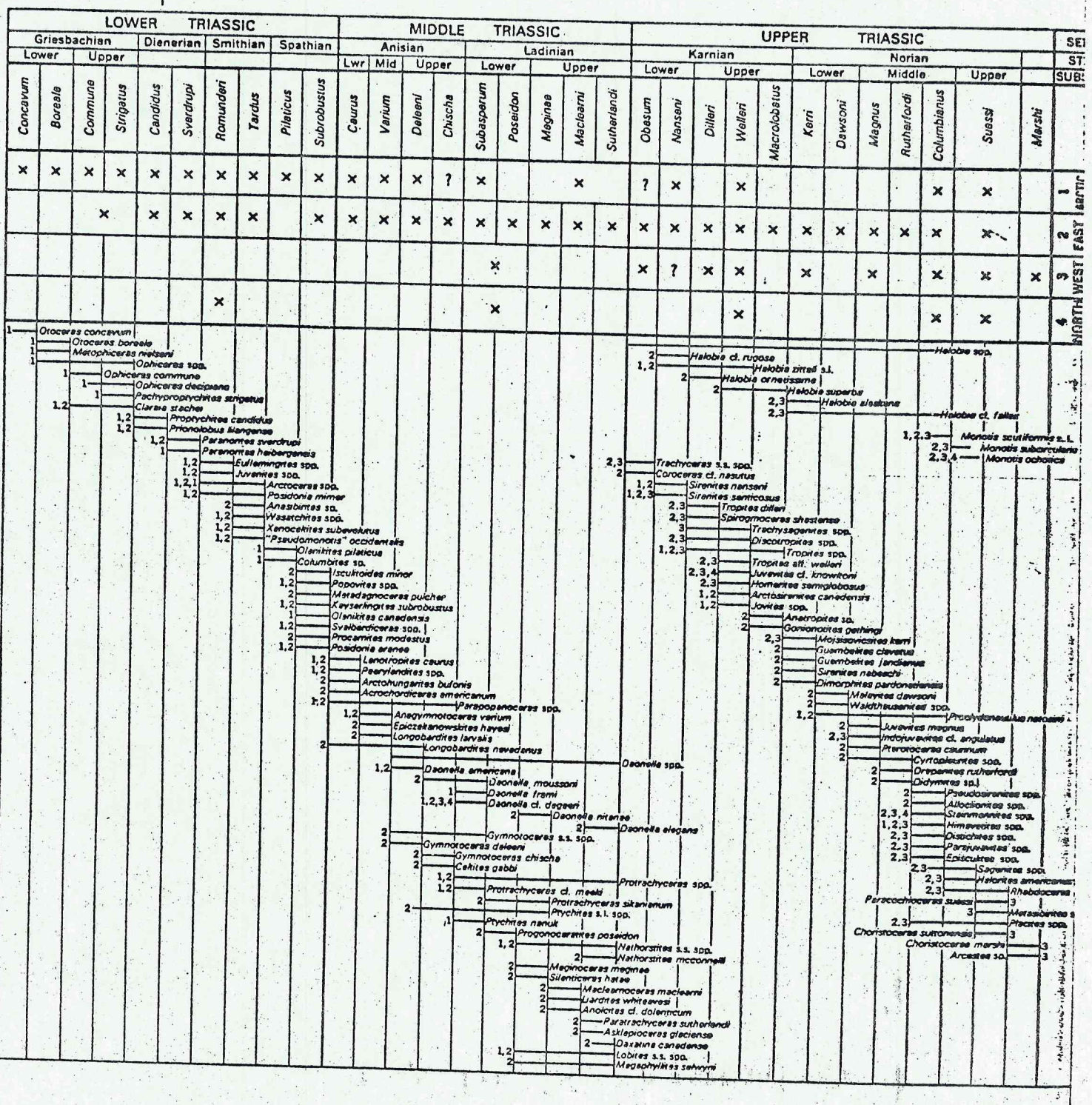
James R. Derby

James R. Derby

JRD:mjh
Attachment

# TRIASSIC FAUNAL ZONES IN NORTH AMERICA

**TABLE XI-6** *Range and distribution of Triassic pelagic faunas. (Numbers refer to occurrence in the appropriate region.)*




(Distribution of Triassic faunas in four areas of the Cordillera of Canada, from Tozer, E.T., 1970, p. 634, in: Biochronology: Standard of Phanerozoic Time, Ch. XI from Geology and Economic Minerals of Canada, Econ. Geol. Rept. No.1, 5th ed.: Canada Dept. Energy, Mines, and Resources.)

Amoco Production Company
Tulsa, Oklahoma

September 13, 1972

Re: Megafossils from Fossil Mtn. Section, Sec. 9, T9N, R2E,
Livengood Quad., Alaska, Locality 6706
Technical Service 5803IR

MEMORANDUM

Megafossils of late Upper Ordovician age are recognized from the subject section.

| Sample No. | Field No. | Taxa | Age |
|---|---|---|---|
| 6706-7 | 8384F | Heliolites cf inordinatus<br>Holorhynchus sp.<br>Hesperorthis sp.<br>Maclurites sp.<br>Beatricea sp.<br>Eofletcharia sp.<br>indet. rhynchonellid<br>Lobocorallium? sp.<br>tabular stromatoporoids<br>indet. crinoid<br>nautiloid | Upper Ordovician Ashgillian |
| 6706-8 | 8383F | Eofletcharia sp.<br>Saffordophyllum sp. | Upper Ordovician |
| 6706-11 | 8393C,F | indet. tabulate | - |

Allen K. Ormiston
Allen R. Ormiston

Thomas L. DeKeyser (per ARO)
Thomas L. DeKeyser

ARO/TLD:uw

Amoco Production Company


Tulsa, Oklahoma
April 2, 1973

File: Technical Service No. 5803IR

Mr. P. H. Garrison
Denver Division

Attention L. C. Furer

Dear Sir:

Subject: Paleontological Analysis,
Fossil Mountain Section, Alaska

The attached memorandum by H. R. Lane reports on the attempted conodont recoveries from the subject samples. Megafossil results have been reported previously.

Yours very truly,

JAMES A. MOMPER

By G. A. Sanderson
G. A. Sanderson

GAS:sd 1.8
Attachment

cc: G. J. Verville
A. B. Shaw
E. E. Lafaye

Amoco Production Company

Tulsa, Oklahoma
March 29, 1973

File: Technical Service No. 5803IR
Job No. 9789

MEMORANDUM

Subject: Conodonts from the Fossil Mtn. Section, Sec. 9, T9N, R2E, Livengood Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 8391C | 9 | 0501 | Barren of conodonts |
| 8392C | 10 | 0501 | Barren of conodonts |
| 8393C | 11 | 0501 | Barren of conodonts |

All samples were barren of conodonts.

H. R. Lane

HRL:skw

Amoco Production Company

Tulsa, Oklahoma
May 30, 1973

File: Technical Service No. 5831IR
Locality No. 6804

MEMORANDUM

Subject: Megafossils from the East Crazy Mountain Section, Secs. 2-11, T10N, R14E, Circle Quadrangle, Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| EC-9014 | 6804-2 | Stromatoporoids? | -- |
| EC-9018 | 6804-5 | Indeterminate organic fabric | -- |
| EC-9017 | 6804-6 | Amphipora cf. ramosa<br>indeterminate ostracodes | Devonian |
| EC-9022 | 6804-10 | Gasterocoma bicaula | Devonian<br>Late Emsian or<br>Early Eifelian |
| EC-9023 | 6804-11 | Gasterocoma bicaula<br>Alveolites sp. A | Devonian<br>Late Emsian or<br>Early Eifelian |

DISCUSSION

The upper carbonate of this section is late Lower or early Middle Devonian in age and probably equivalent to the Ogilvie Formation of Canada, which carries the same fossils.

Thomas L. DeKeyser

Thomas L. DeKeyser

Allen R. Ormiston

Allen R. Ormiston

TLK/ARO:sd 9.9

Amoco Production Company

Tulsa, Oklahoma
July 12, 1973

File: Technical Service No. 5831IR
Job No. 9817
Locality No. 6804

MEMORANDUM

Subject: Conodonts from the East Crazy Mountain Section, Sec. 2-11, T10N, R14E, Circle Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts and all were found to be barren.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 9013 LC | 1 | 0501 | Barren of conodonts |
| 9014 LC | 2 | 0501 | Barren of conodonts |
| 9016 LC | 4 | 0501 | Barren of conodonts |
| 9018 LC | 5 | 0501 | Barren of conodonts |
| 9017 FCL | 6 | 0501 | Barren of conodonts |
| 9020 CL | 8 | 0501 | Barren of conodonts |
| 9021 CL | 9 | 0501 | Barren of conodonts |
| 9022 CL | 10 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 28.03

Amoco Production Company

Tulsa, Oklahoma
June 11, 1973

File: Technical Service No. 5829IR
Locality No. 6802

MEMORANDUM

Subject: Megafossils from the Takoma Bluff Section,
Section 5, T7N, R20E, Charley River Quad., Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| TB-8715 | 6802-1 | barren of megafossils | --- |
| TB-8714 | 6802-2 | barren of megafossils | --- |
| TB-8716 | 6802-6 | ostracod fragments<br>brachiopod shell fragments<br>crinoid fragments | Paleozoic |

DISCUSSION

Sample 6 was taken from an outcrop about 500 feet south of the south end of the measured section and is not shown on the log.

Thomas L. DeKeyser

Thomas L. DeKeyser

ARO:sd 20.13

Amoco Production Company

Tulsa, Oklahoma
July 12, 1973

File: Technical Service No. 5830IR
Job No. 9816
Locality No. 6803

MEMORANDUM

Subject: Conodonts from the West Crazy Mountain Section, Sec. 8-17, T10N, R13E, Circle Quad., Alaska

## INTRODUCTION

The following samples were processed and found to be barren of conodonts.

FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| WC-72-8304 C | 1 | 0501 | Barren of conodonts |
| 8303 FCL | 2 | 0501 | Barren of conodonts |
| 8302 FCL | 3 | 0501 | Barren of condonts |
| 8300 C | 5 | 0501 | Barren of condonts |
| 8299 FC | 6 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 28.05

Amoco Production Company

Tulsa, Oklahoma
June 18, 1973

File: Technical Service 5866IR
Locality 7168

MEMORANDUM

Subject: Megafossils from Windy Gap North, Section 13, Township 9 North, Range 1 East, Livengood Quad., Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8419 | 7168-2 | Indet. Loxonemid Gastropod | Paleozoic |
| 8418 | 7168-3 | Maclurites? sp. Rock is a microbrecciated, light colored limestone. | Probably Ordovician |
| 8417 | 7168-4 | Barren of megafossils. Rock is an oolitic grainstone. | - |

Discussion: An Ordovician age seems likeliest for this short section.

Thomas L. DeKeyser

Thomas L. DeKeyser

Allen R. Ormiston

Allen R. Ormiston

ARO:lc 6.2

Amoco Production Company
4502 East 41st Street
P.O. Box 591
Tulsa, Oklahoma 74102
Research Center
918-627-3400



Tulsa, Oklahoma

May 23, 1973

File: Technical Service No. 5828IR

Mr. P. H. Garrison
Denver Division

Attention: Mr. L. C. Furer

Dear Sir:

Subject: Paleontological Analysis, Woodchopper Limestone Section, Alaska

Attached is a report by Allen Ormiston on the megafossil fauna of the subject section. These are 1972 Alaska field collections. Work on the conodonts from this material is in progress and will be reported shortly.

Yours very truly,

JAMES A. MOMPER

By _____
G. A. Sanderson

GAS:el 12.01

Attachment

cc: G. J. Verville
E. E. Lafaye

Amoco Production Company

Tulsa, Oklahoma
April 9, 1973

File: Technical Service No. 5810IR
Job No. 9796
Locality No. 6793

MEMORANDUM

Subject: Conodonts from the Windy Gap South Section,
Sections 34 and 35, T9N, R1E, Livengood Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8809 FL | 5 | 0501 | Barren of Conodonts | |
| 8810 FCL | 6 | 0501 | Barren of Conodonts | |
| 8813 FCL | 10 | 0501 | Barren of Conodonts | |
| 8814 FCL | 12 | 0501 | Barren of Conodonts | |
| 8821 FL | 19 | 0501 | Barren of Conodonts | |
| 8822 FCL | 20 | 0501 | Barren of Conodonts | |
| 8824 FL | 22 | 0501 | Barren of Conodonts | |
| 8825 FCL | 23 | 0501 | Barren of Conodonts | |
| 8833 FCL | 31 | 0501 | Barren of Conodonts | |
| 8835 FL | 33 | 0501 | Barren of Conodonts | |
| 8849 FC | 47 | 2865 | Panderodus sp. | 2 |

Panderodus ranges from Middle Ordovician through the Middle Devonian.

H. Richard Lane

HRL:mk8.01

Amoco Production Company

Tulsa, Oklahoma

September 13, 1972

Re: Megafossils from Windy Gap South Section, Secs. 34 and 45, T9N, R1E, Livengood Quad., Alaska, Locality 6793
Technical Service 5810IR

MEMORANDUM

| Sample No. | Field No. | Taxa | Age |
|---|---|---|---|
| 6793-4 | WS8808 | Barren of megafossils | - |
| | Rock is a plemicrite | | |
| 6973-6 | WS8810 | Eofletcharia sp.<br>Chaetetes sp.<br>streptelasmid indet.<br>indet. trilobites | Middle or Upper<br><br>Ordovician |
| | Rock is a packstone | | |
| 6973-5 | WS8809 | indet. brachiopods | - |
| | Rock is a grainstone | | |
| 6973-7 | WS8815 | Paleophyllum argus<br>Paleofavosites sp.<br>Saffordophyllum sp. | Upper Ordovician |
| 6973-8 | WS8811 | undet. streptelasmid | Ordovician or Silurian |
| 6973-9 | WA8812 | Paleofavosites sp. | |
| | Rock is a packstone | | |
| 6793-10 | WS8813 | Propora sp.<br>Paleofavosites sp.<br>Catenipora sp.<br>indet. stromatoporoid<br>crinoid columnals | Middle or Upper Ordovician |
| | Rock is a floatstone (Sensu Klovan and Embry, 1971) | | |

| Sample No. | Field No. | Taxa | Age |
|---|---|---|---|
| 6793-12 | WS8814 | Paleofavosites sp.<br>Favosites sp.<br>indet. ostracodes | Middle or Upper Ordovician |
| | Rock is ostracodal micrite to packstone | | |
| 6793-14 | WS8816 | Barren of megafossils | " |
| | Rock is a micrite with birdseye texture | | |
| 6793-15 | WS8817 | Barren of megafossils | - |
| | Rock is a micrite | | |
| 6793-16 | WS8818 | Barren of megafossils | - |
| 6793-17 | WS8819 | Eofletcharia sp. | Middle or Upper Ordovician |
| 6793-18 | WS8820 | Barren of megafossils | - |
| 6793-19 | WS8821 | Stromatoporoids? | - |
| | Possibly a boundstone | | |
| 6793-20 | WS8822 | Barren of megafossils | - |
| 6793-21 | WS8823 | Barren of megafossils | - |
| 6793-22 | WS8824 | Zaphrentis? sp. | Ordovician? |
| | Rock is a grainstone | | |
| 6793-23 | WS8825 | Pentamerid? brachiopods<br>indet. streptelasmid | Ordovician or Silurian |
| 6793-26 | WS8828 | Barren of megafossils | - |
| 6793-27 | WS8829 | Barren of megafossils | - |
| | Laminated micrite | | |
| 6793-28 | WS8830 | Barren of megafossils | - |
| | A micrite with birdseye fenestrae | | |

| Sample No. | Field No. | Taxa | Age |
|---|---|---|---|
| 6793-29 | WS8831 | Stromatolites? A laminated micrite of possible algal origin | - |
| 6793-30 | WS8832 | Barren of megafossils | - |
| | Rock texture obliterated by shear | | - |
| 6793-31 | WS8833 | Barren of megafossils | - |
| 6793-32 | WS8834 | Barren of megafossils | - |
| | Rock is a finely laminated micrite with 15% intraclasts, 5% pellets, and birdseye fenestrae, a lophorite | | |
| 6793-33 | WS8835 | indet. gastropod | - |
| | Rock is an oolitic grainstone, most of nuclei being pellets, but gastropods rarely serving as nuclei | | |
| 6793-34 | WS8836 | Barren of megafossils | - |
| 6793-33 | WS8837 | Barren of megafossils | - |
| 6793-36 | WS8838 | Favosites sp. | Ordovician to Divonian |
| | Rock is a packstone | | |
| 6793-37 | WS8839 | Barren of megafossils | - |
| | Rock is a micrite | | |
| 6793-38 | WS8840 | Barren of megafossils | - |
| 6793-39 | WS8841 | Crinoid columnals | - |
| | Rock is a packstone | | |
| 6793-41 | WS8843 | Barren of megafossils | - |
| 6793-42 | WS8844 | Paleofavosites sp. | Ordovician or Silurian |
| 6793-43 | WS8845 | Safforodophyllum? sp. | Ordovician? |
| 6793-44 | WS8846 (float) | Safforodophyllum? sp. | |

| Sample No. | Field No. | Taxa | Age |
|---|---|---|---|
| 6793-47 | WS8849 | Favosites sp.<br>Halysites? sp.<br>crinoid columnals | Silurian? |

Discussion:

Field interpretation of this section as including abundant stromatoporoid boundstones has been shown to be incorrect. The dominant rock type is micrite; some of these may be stromatolitic, but rock fabrics are too poorly preserved to be certain. Dominance of shallow water (probably intertidal rather than supratidal) carbonates is clear from the presence of oolitic grainstones (WS8835), ostracodal micrites (WS8814) and related rock types.

Middle and/or Upper Ordovician rocks are definitely present, but Silurian rocks only questionably so. Conodont studies may provide more definite dating.

Allen R. Ormiston

Allen R. Ormiston

Thomas L. DeKeyser (per ARO)

Thomas L. DeKeyser

ARO/TLD:uw

Amoco Production Company

Tulsa, Oklahoma
June 11, 1973

File: Technical Service No. 5814IR
Locality No. 6788

MEMORANDUM

Subject: Megafossils from the July 9 Section, Latitude 68°58'N., Longitude 143°24'W., Table Mountain Quadrangle, Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| JN-8657 | 6788-1 | Syringopora cf. virginica<br>brachiopod fragments<br>crinoid columnals<br>gastropod fragments<br>ostracodes | Mississippian<br>Meramec |
| JN-8656 | 6788-2 | Lithostrotionella mclareni | Mississippian<br>Late Meramec or<br>Chester |
| JN-8655 | 6788-3 | Echinoconchus cf.<br>genevievensis<br>gastropod fragments<br>crinoid columnals | Mississippian<br>Late Meramec<br>or Chester |
| JN-8654 | 6788-4 | Lithostrotionella sp. | Mississippian<br>Late Meramec or<br>Chester |
| JN-8650 | 6788-8 | fenestellid bryozoa | --- |
| JN-8648 | 6788-10 | Lithostrotionella mclareni<br>crinoid columnals<br>brachiopod fragments | Mississippian<br>Late Meramec<br>or Chester |
| JN-8647 | 6788-11 | Gigantoproductus cf.<br>brauzerianus | Mississippian<br>Late Meramec<br>or Chester |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| JN-8646 | 6788-12 | echinoderm plates | --- |
| JN-8645 | 6788-13 | echinoderm plates<br>indet. tetracoral | --- |
| JN-8644 | 6788-14 | echinoderm plates | --- |
| JN-8639 | 6788-19 | Girtyella? sp.<br>indet. productid<br>crinoid columnals<br>fenestellid bryozoa | Mississippian<br>Meramec? |
| JN-8638 | 6788-20 | sample missing | --- |
| JN-8634 | 6788-24 | Spirifer cf. rowleyi<br>crinoid columnals | Mississippian<br>Late Meramec<br>or Chester |
| JN-8633 | 6788-25 | fenestellid bryozoa<br>crinoid columnals | --- |
| JN-8631 | 6788-27 | Dictyoclostus cf. americanus<br>fenestellid bryozoa<br>crinoid columnals | Mississippian<br>Late Meramec<br>or Chester |
| JN-8630 | 6788-28 | Dictyoclostus sp.<br>indet. gastropod<br>crinoid columnals<br>fenestellid bryozoa | Mississippian<br>Late Meramec<br>or Chester |
| JN-8628 | 6788-30 | barren of megafossils | --- |
| JN-8627 | 6788-31 | indet. inadunate<br>crinoid | --- |
| JN-8625 | 6788-32 | Spiriferella rajah "A"<br>crinoid columnals<br>fenestellid bryozoa<br>ostracodes | Pennsylvanian |
| JN-8626 | 6788-33 | Yakovlevia sp.<br>crinoid columnals | Early Permian |

## DISCUSSION

As in other nearby sections, the Kayak shale at this locality gets as young as Meramec.

Thomas L. DeKeyser

Thomas L. DeKeyser

Allen R. Ormiston

Allen R. Ormiston

ARO:sd 20.11

Amoco Production Company

Tulsa, Oklahoma

June 5, 1973

File: Technical Service No. 5815IR
Locality 6789

MEMORANDUM

Subject: Megafossils from the Nichenthraw Mountain Section, Section 2, T11S, R29E, Arctic Quad., Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8693 | 6789-1 | Paraconularia sp.<br>Neochonetes sp. | Lisburne, Chester or Pennsylvanian |
| 8694 | 6789-2 | Choristites sp.<br>Straparollus (Euomphallus) sp.<br>Martinia sp. A<br>? Pseudosyrinx sp.<br>Indet. productid brachiopod<br>Indet. disphyllid tetracoral<br>Indet. turbinate tetracoral | Early Permian |
| 8695 | 6789-3 | Organic burrows | -- |

DISCUSSION

Paraconularia and Neochonetes occur together elsewhere at the South Old Camp Section (Locality 6163) in rocks considered Pennsylvanian.

Thomas L. DeKeyser

Thomas L. DeKeyser

Allen R. Ormiston

ARO:el 11.04

Amoco Production Company

Tulsa, Oklahoma
July 27, 1973

File: Technical Service No. 5815IR
Locality 6789
Job No. 9801

MEMORANDUM

Subject: Conodonts from the Nichenthraw Mountain Section, SW 1/4, Sec. 2, T11S, R29E, Arctic Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts and found to be barren.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 8693 FCL | 1 | 0501 | Barren of conodonts |
| 8694 FCL | 2 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 4.11

Amoco Production Company
Research Center
Tulsa, Oklahoma

October 5, 1972

File: Technical Service 5804IR
Locality No. 6666

MEMORANDUM

Re: Megafossils from reef east of Old John Lake, section 17, T15S, R34E, Arctic Quad., Alaska

Megafossils systematically collected from the subject locality in 1972 are reported in descending order:

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8710 | 6666-13 | Actinostroma n. sp.<br>Australophyllum 20413<br>Cystiphylloides cf. spinosum<br>Pachyfavosites sp.<br>indet. atrypid<br>crinoid columnals | Middle Devonian |

A stromatoporoid bindstone with wackestone pockets rich in corals.

| | | | |
|---|---|---|---|
| 8709 | 6666-12 | Actinostroma n. sp.<br>indet. gastropod | Middle Devonian |
| 8708 | 6666-11 | Actinostroma n. sp.<br>Aulopora sp.<br>Stachyodes sp.<br>indet. tetracoral | Middle Devonian |

A framestone formed by a consortium of stromatoporoid and Aulopora.

| | | | |
|---|---|---|---|
| 8707 | 6666-10 | Clathrocoilona sp.<br>Aulopora sp.<br>crinoid columnals | Devonian |

A stromatoporoid bindstone.

| | | | |
|---|---|---|---|
| 8706F | 6666-9 | Cystiphylloides cf. spinosum<br>Alveolites sp.<br>Aulopora sp.<br>Actinostroma n. sp.<br>Schizophoria<br>indet. atrypid<br>crinoid columnals | Middle Devonian |

A stromatoporoid bindstone with coralline wackestone.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8705F | 6666-8 | Actinostroma n. sp.<br>Alveolites sp.<br>crinoid columnals | Middle Devonian |

A stromatoporoid framestone with growth cavities.

| | | | |
|---|---|---|---|
| 8704F | 6666-7 | Clathrocoilona sp.<br>Alveolites sp.<br>Dohmophyllum sp.<br>Thamnopora sp.<br>crinoid columnals | Middle Devonian |

A stromatoporoid - tabulate coral floatstone.

| | | | |
|---|---|---|---|
| 8703F | 6666-6 | Actinostroma sp.<br>Cystiphylloides sp.<br>Anatrypa arctica<br>crinoid columnals | Middle Devonian |

A stromatoporoid bindstone with packstone matrix.

| | | | |
|---|---|---|---|
| 8702F | 6666-5 | Clathrocoilona sp.<br>Alveolites sp.<br>Thamnopora sp. | Devonian |

A stromatoporoid bindstone, packstone matrix.

| | | | |
|---|---|---|---|
| 8701F | 6666-4 | Australophyllum 20413<br>Alveolites sp.<br>Anatrypa arctica<br>crinoid columnals<br>Chaetetes sp. | Middle Devonian |

A tabulate coral bindstone with grainstone matrix.

| | | | |
|---|---|---|---|
| 8699F | 6666-2 | Amphipora sp.<br>Dendrostella aff. trigemme<br>Stachyodes sp.<br>Mesophyllum? sp.<br>Euryamphipora sp.<br>indet. gastropods | Middle Devonian |

A dark coralline micrite forming a platform on which reef grew.

| | | | |
|---|---|---|---|
| 8700F | 6666-3 | Spinatrypa sp.<br>Dechenella cf. paragranulata<br>Ambothyris? sp.<br>Conocardium sp.<br>crinoid columnals<br>pterioid indet. | Middle Devonian |

This sample (6666-3) comes from Hunt Fork shales adjacent to the reef and demonstrates that the shales are essentially coeval with the reef itself.

Discussion

There is no question of the Middle Devonian age of both this reef and its surrounding shales. The exact age is either late Eifelian or early Givetian. While differing in age from the Smoke Creek reefs west of Arctic Village, it has the same basic architecture.

Allen R. Ormiston

Allen R. Ormiston

ARO:skw

Amoco Production Company

Tulsa, Oklahoma
July 6, 1973

File: Technical Service No. 5804IR
Job No. 9790
Locality No. 6666

MEMORANDUM

Subject: Conodonts from the Reef east of Old John Lake Section, Sec. 17, T15S, R34E, Arctic Quad., Alaska

INTRODUCTION

The following sample was examined and found to be barren of conodonts.

FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 8699 F,C | 2 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 25.01

Amoco Production Company

Tulsa, Oklahoma
June 11, 1973

File: Technical Service No. 5816IR
Locality No. 6790

MEMORANDUM

Subject: Megafossils from the Saviukviayuk River Section, W 1/2, Sec. 21, T8S, R19E, Philip Smith Mtns. Quad., Alaska

The shale unit in this section appears to be Permian rather than Kayak as shown on the log.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8222 | 6790-4 | plant megafossils | - |
| 8223 | 6790-5 | Attenuatella sp.<br>Linoproductus sp.<br>Yakovlevia? sp. | Early Permian |
| 8224 | 6790-6 | crinoid columnals | - |
| 8226 | 6790-8 | Neospirifer sp.<br>crinoid columnals | Probably Pennsylvanian |
| | 6790-9 | Neospirifer sp.<br>Punctospirifer? sp.<br>crinoid columnals | Probably Pennsylvanian |

DISCUSSION

This short section apparently represents high Lisburne Formation and overlying Siksikpuk.

Thomas L. DeKeyser
Thomas L. DeKeyser

Allen R. Ormiston
Allen R. Ormiston

TLD/ARO:skw 7.03

AMOCO

Amoco Production Company

Tulsa, Oklahoma
September 5, 1973

File: Technical Service No. 5866IR
Locality No. 06956
Job No. 9861

MEMORANDUM

Subject: Conodonts from the Amoco 1972 Grab Samples, Northern Alaska.

## INTRODUCTION

The following samples were processed and examined for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8403 C | 1 | 1983 | Spathognathodus 1983 | 4 |
| | | 4051 | Ozarkodina 4051 | 2 |
| | | 2618 | Indet. conodonts | 15 |

Conodonts in sample 1 are Siegenian or lower Emsian (Lower Devonian) in age.

| | | | | |
|---|---|---|---|---|
| 8364 | 7 | 4704 | Spathognathodus 4704 | 6 |
| | | 1990 | Polygnathus 1990 | 1 |
| | | 2845 | Ozarkodina sp. | 1 |
| | | 2928 | Acodina sp. | 6 |
| | | 2865 | Panderodus sp. | 26 |
| | | 2618 | Indet. conodonts | 33 |

The fauna in sample 7 is upper Emsian (Lower Devonian) in age.

| | | | |
|---|---|---|---|
| 8205 L,C | 9 | 0501 | Barren of conodonts |
| 8388 L,C | 10 | 0501 | Barren of conodonts |
| 8404 C | 11 | 0501 | Barren of conodonts |
| 8408 C | 12 | 0501 | Barren of conodonts |

| Field No. | Sample No. | Taxon No. | Identification | No Sp |
|---|---|---|---|---|
| 8414 C | 13 | 0501 | Barren of conodonts | |
| 8415 C | 14 | 0501 | Barren of conodonts | |
| 8421 C | 15 | 0501 | Barren of conodonts | |
| 8422 C | 16 | 0501 | Barren of conodonts | |
| 8425 C | 17 | 0501 | Barren of conodonts | |
| 8337 C | 18 | 21268 | Neoprioniodus 21268 | 1 |
| | | 2860 | Neoprioniodus 2860 | 1 |
| | | 2865 | Panderodus sp. | 1 |
| | | 2618 | Indet. conodonts | 2 |

The fauna in sample 18 appears to be Ludlow (Silurian) in age.

| | | | | |
|---|---|---|---|---|
| 8339 L,C | 19 | 0501 | Barren of conodonts | |
| 8343 C | 20 | 0501 | Barren of conodonts | |
| 8352 C | 21 | 21270 | Eobelodina 21270 | 3 |
| | | 21242 | Acontiodus 21242 | 1 |
| | | 2618 | Indet. conodonts | 3 |

The fauna in sample 21 is Middle Ordovician in age.

| | | | | |
|---|---|---|---|---|
| 8365 C | 22 | 4704 | Spathognathodus 4704 | 3 |
| | | 2928 | Acodina sp. | 4 |
| | | 2865 | Panderodus sp. | 15 |
| | | 2618 | Indet. conodonts | 11 |

Sample 22 is from the same locality as sample 7. This fauna is compatible with an upper Emsian age but could be as young as Eifelian (Middle Devonian).

| | | | | |
|---|---|---|---|---|
| 8201 L,C | 23 | 0501 | Barren of conodonts | |
| 8202 C | 24 | 0501 | Barren of conodonts | |
| 8204 L,F,C | 25 | 0501 | Barren of condonts | |
| 8200 C | 26 | 0501 | Barren of conodonts | |
| 8218 C | 27 | 0501 | Barren of conodonts | |
| FCH 789 C | 28 | 0501 | Barren of conodonts | |

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8398 CFL | 31 | 0501 | Barren of conodonts | |
| 8402 FC | 33 | 0501 | Barren of conodonts | |
| 8214 CF | 38 | 0501 | Barren of conodonts | |
| 8215 CF | 39 | 0501 | Barren of conodonts | |
| 8217 CF | 40 | 0501 | Barren of conodonts | |
| 8219 C | 41 | 0501 | Barren of conodonts | |
| 8221 F | 42 | 0501 | Barren of conodonts | |
| 8295 CF | 44 | 0501 | Barren of conodonts | |
| 8336 FC | 46 | 0501 | Barren of conodonts | |
| 8338 CF | 47 | 0501 | Barren of conodonts | |
| 8340 F | 48 | 0501 | Barren of conodonts | |
| 8696 FCL | 49 | 2618 | Indet. conodonts | 8 |

The fauna in sample 49, although very poorly preserved, is upper Mississippian or Pennsylvanian in age.

| | | | | |
|---|---|---|---|---|
| 8322 CF | 52 | 0501 | Barren of conodonts | |
| 8323 FF | 54 | 4052 | Spathognathodus 4052 | 6 |
| | | 4691 | Spathognathodus 4691 | 8 |
| | | 4692 | Spathognathodus 4692 | 1 |
| | | 2731 | Spathognathodus 2731 | 1 |
| | | 4051 | Ozarkodina 4051 | 2 |
| | | 2618 | Indet. conodonts | 23 |

The fauna in sample 54 is upper Gedinnian in age and correlates with the upper part of the exposed Road River Formation at the Type Salmontrout section and near but above the base of the Salmontrout Limestone at Linear Ridge.

| | | | | |
|---|---|---|---|---|
| 8429 FC | 57 | 0501 | Barren of conodonts | |
| FCH 803 LC | 66 | 0501 | Barren of conodonts | |
| FCH 790 FC | 67 | 0501 | Barren of conodonts | |

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8335 CF | 68 | 0501 | Barren of conodonts | |
| 8220 C | 69 | 0501 | Barren of conodonts | |
| FCH 804 FCL | 70 | 0501 | Barren of conodonts | |
| 8380 LC | 71 | 0501 | Barren of conodonts | |
| FCH 791 C | 77 | 0501 | Barren of conodonts | |
| FCH 802 LC | 80 | 0501 | Barren of conodonts | |

H. Richard Lane

HRL:skw 4.02

AMOCO

Amoco Production Company

Tulsa, Oklahoma
June 18, 1973

File: Technical Service 5866IR
Locality 6956

MEMORANDUM

Subject: Megafossils from Remaining Amoco 1972 Grab Samples Northern Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8351 | 6956-29 | Eoleperditia sp.<br>Crinoid columnals<br>Streptelasmid coral<br>Trepostome bryozoan | Ordovician |
| 8398 | 6956-31 | Barren of megafossils | - |
| 8381 | 6956-32 | Amphipora cf. ramosa<br>Indet. Alveolitid coral | Middle? Devonian |
| 8402 | 6956-33 | Amphipora sp.<br>Probable Stromatoporoid | Middle? Devonian |
| 8206 | 6956-37 | Barren of megafossils | - |
| 8214 | 6956-38 | Barren of megafossils | - |
| 8215 | 6956-39 | Barren of megafossils | - |
| 8217 | 6956-40 | Dolomite, barren of megafossils | - |
| 8219 | 6956-41 | Barren of megafossils. Rock is pisolitic. | - |
| 8221 | 6956-42 | Syringopora sp.<br>Indet. gastropods<br>Loxonemid gastropod<br>Crinoid columnals | Mississippian? |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8281 | 6956-43 | Amphipora cf. ramosa<br>Alveolites sp.<br>Parallelopora? sp.<br>Tabulophyllum cf. mcconnelli<br>Strictostroma? sp.<br>Anostylostroma cf. laxum<br>Stromatopora cf. mikkwaensis<br>Aulopora sp. | Devonian<br>Probably Fransian |
| 8295 | 6956-44 | Indet. Organic Fabric | - |
| 8331 | 6956-45 | Rhipidomella? sp.<br>Crinoid columnals<br>Ichnofossils | Mississippian? |
| 8338 | 6956-47 | Alveolites sp.<br>Indet. Stromatoporid<br>Crinoid columnals | Lower or Middle<br>Devonian |
| 8336 | 6956-46 | Acanthopyge cf. branikensis<br>Cheirurus? sp.<br>Desquamatia sp.<br>Athyris sp.<br>Stromatoporids<br>Grypophyllum? sp.<br>Parachaetetes sp.<br>Coenites sp. | Lower Devonian<br>Ensian |
| 8340 | 6956-48 | Barren of megafossils | - |
| 8696 | 6956-49 | Crinoid columnals | Paleozoic |
| 8321 | 6956-51 | Orulgania sp. A<br>Neochonetes sp.<br>Neospirifer cf. tegulatus | Mississippian<br>Chester |
| 8322 | 6956-52 | Orulgania sp. A<br>Choristites sp.<br>Neochonetes sp. | Mississippian<br>Chester |
| 8323 | 6956-54 | Quadrithyris cf. minuens<br>Atrypa sp.<br>Sieberella cf. problematica<br>Metaplasia cf. pauciocostata<br>Rhynchospirina? sp.<br>Coenites sp.<br>Enterolasma? sp.<br>This rock is a brachiopodal packstone and apparently represents a shelf facies of Salmon-trout age. | Lower Devonian<br>Gedinnian |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| FCH 790 | 6956-66 | Stromatolites | Ordovician? |
| FCH 804 | 6956-70 | Barren of megafossils | - |
| 8249 | 6956-50 | Barren of megafossils. Rock is a dark carbonate with coated grains and angular sandstone clasts. | - |
| 8430 | 6956-53 | Barren of megafossils | - |
| 8781 | 6956-55 | Stromatolites | Probably Ordovician |
| 8428 | 6956-56 | Sample missing | - |
| 8429 | 6956-57 | Sample missing | - |
| 9000 | 6956-64 | Laminated micrites that do not appear to be stromatolitic | - |
| 8335 | 6956-68 | Barren of megafossils | - |
| FCH 803 | 6956-66 | Barren of megafossils | - |
| FCH 790 | 6956-67 | Stromatolites? | Ordovician? |
| 8220 | 6956-69 | A pelmicrite with coated grains and no megafossils | - |
| 9005 | 6956-30 | Alveolites cf. winchellana<br>Grypophyllum sp.<br>Probable stromatoporoid | Middle Devonian<br>Eifelian |
| 9006 | 6956-58 | Alveolites cf. winchellana<br>Indet. favositid | Middle Devonian<br>Eifelian |
| 9007 | 6956-59 | Alveolites sp.<br>Thamnopora sp.<br>Acinophyllum sp.<br>Anatrypa sp.<br>Indet. stick stromotoporoid | Middle Devonian<br>Eifelian |
| 9008 | 6956-60 | Alveolites sp.<br>Thamnopora sp.<br>Calcispheres?<br>Crinoid columnals | Middle Devonian<br>Eifelian |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 9009 | 6956-61 | Alveolites sp.<br>Thamnopora sp.<br>Crinoid columnals<br>Calcispheres?<br>Indet. gastropods<br>Indet. brachiopods<br>Indet. stromatoporoid<br>Indet. disphyllid coral<br>Indet. atrypid<br>Warrenella? sp.<br>Ostracods | Middle Devonian<br>Eifelian |
| 9010 | 5956-62 | Alveolites winchellana<br>Warrenella sp.<br>Grypophyllum? sp.<br>Carinatina cf. trigonica | Middle Devonian<br>Eifelian |
| 9011 | 6956-63 | Alveolites winchellana<br>Crinoid columnals<br>Indet. Favositid<br>Indet. brachiopods | Middle Devonian<br>Eifelian |
| 9012 | 6956-64 | Alveolites sp.<br>Thamnopora sp.<br>Calcispheres?<br>Crinoid columnals<br>Indet. brachiopods<br>Indet. gastropods<br>Warrenella? sp. | Middle Devonian<br>Eifelian |

Thomas L. DeKeyser

Thomas L. DeKeyser

Allen R. Ormiston

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ARO:lc 6.3.5

Amoco Production Company
Tulsa, Oklahoma

January 9, 1973

File: Technical Service No. 5866 IR
Locality No. 6956

MEMORANDUM

Re: Amoco 1972 grab samples,
Northern Alaska - megafossils

Initial work on megafossils from selected grab samples has yielded the following identifications:

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8403 F | 6956-1 | *Thamnopora* cf. *cervicornis*<br>*Squameofavosites mixtus*<br>*Syringostroma* sp.<br>*Alveolites* sp.<br>*Hexagonaria* sp.<br>*Gasterocoma bicaula*<br>*Heliophyllum* sp. | Middle Devonian Eifelian |
| | | Rock is a tabulate-stromatoporoid floatstone and clearly belongs to the North Schwatka Mountain (Locality 6794) reef complex near which the sample was taken. | |
| 8804 F | 6956-2 | *Glyptograptus euglyphus*<br>*Diplograptus* sp.<br>*Dicranograptus ramosus*<br>*Climacograptus* aff. *innotatus* | Upper Ordovician Caradocian |
| | | These shales are only slightly older than the carbonates in the Fossil Mountain Section. This graptolite assemblage has not previously been reported from Alaska. | |
| 8395 F | 6956-3 | Barren of megafossils | - |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8357 F | 6956-4 | Buchia aff. keyserlingi<br>Indeterminate pectinoid | Lower Cretaceous Berriasian or Valanginian |
| 8358 F | 6956-5 | Indeterminate bivalves | - |
| 8359 F | 6956-6 | Aucellina ? sp. | Cretaceous? |
| 8364 F | 6956-7 | Coenites cf. rectilineatus<br>Favosites sp. (small)<br>Alveolites sp.<br>Amphipora ? sp.<br>Emanuella sp.<br>Indeterminate bivalve | Lower Devonian |
| | | The faunal assemblage is reminiscent of the Lower Devonian part of the Fort Creek Section (Locality 6182) and indicates a lagoonal environment of deposition. | |
| 8360 F | 6956-8 | Pseudolimea cf. hettangensis<br>Myopholas sp.<br>Liopistha ? sp.<br>Indeterminate nuculanid | Jurassic probably Upper Jurassic |
| | | This sample provides our first megafossil evidence for Jurassic sediments in the Black River area. | |

Allen R. Ormiston

Allen R. Ormiston

ARO:mjh

Amoco Production Company

Tulsa, Oklahoma
July 12, 1973

File: Technical Service No. 5828IR
Job No. 9814
Locality No. 6801

MEMORANDUM

Subject: Conodonts from the Woodchopper Limestone Section, Sec. 12, T16N, R21E, Charley River Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| FCH 786 | 3 | 0501 | Barren of conodonts | |
| WL 8727 FCL | 4 | 4699 | Polygnathus 4699 | 2 |
| | | 2928 | Acodina sp. | 5 |
| | | 2901 | Belodella sp. | 1 |
| | | 2865 | Panderodus sp. | 3 |
| WL 8726 | 5 | 0501 | Barren of conodonts | |
| WL 8725 | 6 | 0501 | Barren of conodonts | |
| WL 8724 | 7 | 2928 | Acodina sp. | 1 |
| | | 2618 | Indet. conodonts | 2 |
| WL 8723 | 8 | 0501 | Barren of conodonts | |
| WL 8722 | 9 | 0501 | Barren of conodonts | |
| WL 8721 | 10 | 4696 | Pelekysgnathus 4696 | 8 |
| | | 2928 | Acodina sp. | 11 |
| | | 2865 | Panderodus sp. | 13 |
| | | 3051 | Hindeodella sp. | 1 |
| | | 1983 | Spathognathodus 1983 | |

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| WL 8720 | 11 | 4696 | Pelekysgnathus 4696 | 5 |
| | | 1938 | Spathognathodus 1983 | 3 |
| | | 2865 | Panderodus 2865 | 14 |
| | | 2928 | Acodina sp | 4 |
| | | 3051 | Hindeodella sp. | 1 |
| WL 8719 | 12 | 2928 | Acodina sp. | 8 |
| | | 2865 | Panderodus sp. | 26 |
| | | 2901 | Belodella sp. | 3 |
| | | 4699 | Polygnathus 4699 | 1 |
| WL 8718 | 13 | 2901 | Belodella sp. | 1 |
| WL 8717 | 14 | 2865 | Panderodus sp. | 7 |
| | | 2928 | Acodina sp. | 1 |
| | | 2726 | Spathognathodus sp. | 4 |

Conodonts in samples 4-12 are early Emsian in age and correlate somewhere within the interval from sample 44 (HRL-47) through sample 56 (HRL-59) at the type Salmontrout section (Loc. 6214).

H. Richard Lane

HRL:skw 28.10

Amoco Production Company

Tulsa, Oklahoma
May 18, 1973

File: Technical Service No. 5828 IR
Job No. 9814
Locality No. 6801

MEMORANDUM

Subject: Megafossils from Woodchopper Limestone Section, Sec. 12, T6N, R21E, Charley River Quad., Alaska

## INTRODUCTION

The Woodchopper Limestone which has been dated as Middle Devonian by Gryc, et al. (1968, p. 713) is shown to be Lower Devonian and coeval with part of the type Salmontrout Limestone.

## FAUNA

| Field No. | Footage Above Base | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|---|
| FCH 785 | 6 | 3 | 20571 | Gracianella 20571 | 2 |
| | 6 | 3 | 4771 | Nucleospira sp | 2 |
| | 6 | 3 | 3213 | Coenites sp. | 3 |
| | 6 | 3 | 21067 | Clathrocoilona sp. | 2 |
| WL 8727 | 6 | 3 | 20611 | Crinoid 20611 | 6 |
| | 7 | 4 | 20549 | Xystriphyllum 20549 | 2 |
| | 7 | 4 | 20571 | Gracianella 20571 | 4 |
| | 7 | 4 | 2240 | Schizophoria sp. | 1 |
| WL 8726 | 15 | 5 | 20553 | Heterotrypa 20553 | 18 |
| | 15 | 5 | 20609 | Trupetostroma sp. | 3 |
| | 15 | 5 | 20611 | Crinoid 20611 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| WL 8725 | 25 | 6 | 20610 | Trupetostroma 20610 | 2 |
| | 25 | 6 | 20603 | Favosites 20603 | 3 |
| WL 8724 | 35 | 7 | 20560 | Desquamatia 20560 | 2 |
| | 35 | 7 | 20100 | Spongophyllum halysitoides | 2 |
| | 35 | 7 | 3220 | Favosites sp. | 2 |
| WL 8723 | 47 | 8 | 3213 | Coenites sp. | 5 |
| | 47 | 8 | 20603 | Favosites 20603 | 2 |
| | 47 | 8 | 20609 | Trupetostroma sp. | 2 |
| | 47 | 8 | 21068 | Pseudamplexus sp. | 1 |
| | 47 | 8 | 20612 | Canutrypa 20612 | 4 |
| WL 8722 | 63 | 9 | 20617 | Linguopugnoides 20617 | 1 |
| WL 8721 | 75 | 10 | 2378 | Indet. orthid | 2 |
| WL 8720 | 93 | 11 | 20611 | Crinoid 20611 | 8 |
| | 93 | 11 | 4771 | Nucleospira sp. | 2 |
| WL 8719 | 93 | 11 | 2935 | Indet. ostracods | 2 |
| WL 8718 | 110 | 12 | 2216 | Indet. bryozoa | 4 |
| WL 8717 | 135 | 13 | 0502 | Barren of megafossils | |
| | 160 | 14 | 0502 | Barren of megafossils | |

## INTERPRETATION

Samples 3-11 contain megafossils indicative of a late Siegenian or, more probably, early Emsian age and can be correlated with the interval between samples 6214-34 and 6214-48 of the type Salmontrout Limestone.

The corals and stromotoporoids in the Woodchopper Limestone are dominantly small clasts that have apparently transported in. The Woodchopper carbonates are wackestones and packstones, lacking organically bound fabrics. These carbonates are therefore not reefal and probably had an intrabasinal environment of deposition. Megafossil abundances are very low.

Allen R. Ormiston

ARO:mk6.06

Amoco Production Company

Tulsa, Oklahoma
April 9, 1973

File: Technical Service No. 5821IR
Job No. 9807
Locality No. 6794

MEMORANDUM

Subject: Conodonts from the North Schwatka Mountain Section, Sections 19 and 30, T13N, R3E, Livengood Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 9085 CL | 4 | 20437 | Polygnathus 20437 | 13 |
| | | 2712 | Polygnathus 2712 | 9 |
| | | 2751 | Icriodus sp. | 12 |
| | | 3065 | Pelekysgnathus sp. | 2 |
| | | 4704 | Spathognathodus 4704 | 1 |
| | | 2618 | Indet. Conodonts | 48 |

The conodont fauna in Sample 4 is Eifelian (Middle Devonian) in age.

| | | | |
|---|---|---|---|
| 9083 FC | 6 | 0501 | Barren of Conodonts |
| 9082 FC | 7 | 0501 | Barren of Conodonts |
| 9081 FC | 8 | 0501 | Barren of Conodonts |
| 9073 FCL | 16 | 0501 | Barren of Conodonts |

| | | | | |
|---|---|---|---|---|
| 9090 FCL | 18 | 0501 | Barren of Conodonts | |
| 9091 FL | 19 | 4699 | Polygnathus 4699 | 3 |
| | | 4696 | Pelekysgnathus 4696 | 7 |
| | | 2618 | Indet. Conodonts | 27 |

The conodont fauna in Sample 19 is Lower Devonian (Lower Emsian) in age.

| | | | | |
|---|---|---|---|---|
| 9096 FC | 24 | 2618 | Indet. Conodonts | 1 |
| 9098 FC | 26 | 0501 | Barren of Conodonts | |
| 9099 FC | 27 | 0501 | Barren of Conodonts | |
| 9100 FC | 28 | 0501 | Barren of Conodonts | |
| 9104 FC | 32 | 0501 | Barren of Conodonts | |
| 8428 FC | 34 | 0501 | Barren of Conodonts | |

H. Richard Lane

HRL:mk19.06

Amoco Production Company
Tulsa, Oklahoma

January 5, 1973

File: Technical Service No. 5821 IR
Locality No. 6794

MEMORANDUM

Re: Megafossils from the North Schwatka Mountain Section, T13N, R3E, Livengood Quad., Alaska

Paleontologic study of these samples shows that much of the subject section consists of a Devonian stromatoporoid reef complex:

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NS 9085 | 6794-4 | indeterminate crinoid columnals | - |
| | | Rock consists of a dark, laminated wackestone | |
| NS 9083 | 6794-6 | Atelodictyon sp.<br>indeterminate brachiopod | Devonian |
| | | Rock is a stromatoporoid framestone | |
| NS 9082 | 6794-7 | Trupetostroma sp.<br>indeterminate ostracodes | Devonian |
| | | Rock is a stromatoporoid framestone | |
| NS 9081 | 6794-8 | Stromatoporella cf. subvesiculosa<br>Squameofavosites nodulosus<br>Maikottaphyllum sp.<br>minute gastropods | Devon, Emsian or Eifelian |
| | | Rock is a stromatoporoid bindstone | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NS 9080 | 6794-9 | Atelodictyon ? sp. | - |
| | Rock is a stromatoporoid framestone | | |
| NS 9079 | 6794-10 | Stromatoporella sp.<br>Aulocystis aff. nobilis | Middle Devonian Eifelian |
| | Rock is a stromatoporoid bindstone | | |
| NS 9078 | 6794-11 | Amphipora ramosa<br>Syringostroma ? sp. | Middle Devonian |
| | Rock is an Amphipora bafflestone | | |
| NS 9077 | 6794-12 | Actinostroma cf. clathratum<br>Thamnopora sp. | Middle Devonian |
| | Rock is a stromatoporoid framestone | | |
| NS 9076 | 6794-13 | Amphipora ramosa<br>Squameofavosites mixtus<br>Stromatopora sp. | Middle Devonian Eifelian |
| | Rock is a complex bindstone and bafflestone | | |
| NS 9075 | 6794-14 | Indeterminate laminar stromatoporoid<br>Amphipora sp. | - |
| | Rock is a stromatoporoid bindstone | | |
| NS 9074 | 6794-15 | Amphipora ramosa<br>Thamnopora cervicornis<br>Euryamphipora sp. | Middle Devonian |
| | Rock is an Amphipora bafflestone | | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NS 9073 | 6794-16 | Indeterminate stromatoporoid<br>Aulocystis aff. nobilis<br>Squameofavosites mixtus<br>Cyclochaetetes cf. inflatus<br>Thamnopora sp. | Middle Devonian Eifelian |
| | | Rock is a complex framestone | |
| NS 9080 | 6794-17 | Indeterminate stromatoporoid<br>Indeterminate favositid<br>Alveolites sp.<br>Cyclochaetetes sp. | Middle Devonian |
| | | Rock is a stromatoporoid - tabulate bindstone | |
| NS 9090 | 6794-18 | Thamnopora cervicornis<br>Alveolites sp.<br>Sociophyllum sp. | Middle Devonian |
| | | Rock is a coralline calcilutite | |
| NS 9091 | 6794-19 | Thamnopora cervicornis<br>Gasterocoma bicaula<br>Squameofavosites mixtus<br>Neostringophyllum sp.<br>Anatrypa ? sp. | Middle Devonian Eifelian |
| | | Rock is a crinoidal calcilutite | |
| NS 9092 | 6794-20 | Atelodictyon sp.<br>Gasterocoma bicaula<br>Squameofavosites mixtus<br>Alveolites sp.<br>Thamnopora sp.<br>Sociophyllum sp. | Middle Devonian Eifelian |
| | | Rock is a stromatoporoid framestone | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NS 9093 | 6794-21 | Laminar stromatoporoids<br>Macgeea ? sp.<br>Aulocystis ? sp.<br>Thamnopora sp.<br>Indeterminate gastropods | Devonian |
| | | Rock is a stromatoporoid bindstone | |
| NS 9095 | 6794-23 | Stromatoporella sp. | Devonian |
| | | A stromatoporoid framestone | |
| NS 9096 | 6794-24 | Crinoid columnals | - |
| | | Rock is a light colored calcilutite | |
| NS 9097 | 6794-25 | Thamnopora cervicornis<br>Cyclochaetetes sp.<br>Atelodictyon sp. | Middle Devonian |
| | | Rock is a Thamnopora bafflestone | |
| NS 9098 | 6794-26 | Crinoid columnals | - |
| | | Rock is a light colored calcilutite | |
| | | S E C T I O N F A U L T E D | |
| NS 9099 | 6794-27 | Gasterocoma bicaula<br>other crinoid columnals | Middle Devonian Eifelian |
| | | Rock is a crinoidal wackestone | |
| NS 9100 | 6794-28 | Indeterminate massive stromatoporoid<br>Amphipora sp.<br>Stringocephalus? sp. | Middle Devonian Givetian? |
| | | Rock is a stromatoporoid floatstone with good skelmoldic porosity in dolomitized stromatoporoids | |

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| NS 9101 | 6794-29 | Squameofavosites cf. mixtus<br>Atelodictyon cf. stelliferum | Middle Devonian Eifelian or Givetian |
| | | Rock is a stromatoporoid bindstone - mud matrix | |
| NS 9102 | 6794-30 | Thamnopora cf. polyforata<br>Atelophyllum sp. | Middle Devonian Eifelian or Givetian |
| | | Rock is a Thamnopora - tetracoral bafflestone | |
| NS 9103 | 6794-31 | Thamnopora polyforata<br>Thamnopora sp. (encrusting)<br>Stachyodes cf. verticillata | Middle Devonian or Frasnian |
| | | Rock is a Thamnopora bindstone | |
| NS 9104 | 6794-32 | Parallelopora sp.<br>Alevolites sp.<br>Trupetostroma sp.<br>crinoid columnals | Middle Devonian or Frasnian |
| NS 8428 | 6794-34 | barren of megafossils | - |
| | | Rock is a dark, cherty micrite | |

Discussion:

The stromatoporoid reefs which form the bulk of this section are significant by virture of their location on the southern side of the Fort Yukon Basin and by virtue of their age which is (at least partly) intermediate between that of the Salmontrout Reef (Siegenian-Emsian) and the oldest of the Smoke Creek reefs to the north (e.g. Reef East of Old John Lake - late Eifelian or early Givetian).

The tabulate corals in the North Schwatka Mtn. section suggest an Eifelian (probably early Eifelian) age for most of the reef, but the higher part may be Givetian or possibly even Frasnian (6794-31, 32).

The age of the North Schwatka Mountain reef complex is compatible with the suggested (Research Department Report No. M72-G-27) westward (or northwestward) migration of Devonian reefs in this part of Alaska.

Allen R. Ormiston

ARO:mjh

AMOCO

Amoco Production Company

Tulsa, Oklahoma
August 29, 1973

File: Technical Service No. 5819IR
Job No. 9805
Locality No. 6791

MEMORANDUM

Subject: Conodonts from the West Wind River Section, W 1/2, Sec. 8, T15S, R21E, Philip Smith Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Footage | Spl. No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| WW 8233 F,C | 8 | 3093 | Ligonodina, sp. | 1 |
| | | 2726 | Spathognathodus, sp. | 1 |
| | | 2618 | Indet. conodonts | 3 |
| WW 8234 C | 9 | 1395 | Spathognathodus 1395 | 33 |
| | | 2828 | Cavusgnathus 2828 | 1 |
| | | 2826 | Cavusgnathus, sp. | 2 |
| | | 1393 | Geniculatus 1393 | 1 |
| | | 2618 | Indet. conodonts | 27 |

The conodonts in sample 9 are upper Meramec in age (Fauna E) and are very similar to, and correlate with, conodonts recovered from the East Kelly (samples VG-124C-VG-130C).

| | | | | |
|---|---|---|---|---|
| WW 8235 F,C | 10 | 0501 | Barren of conodonts | |
| WW 8237 L,C,F | 12 | 1395 | Spathognathodus 1395 | 7 |
| | | 2618 | Indet. conodonts | 21 |

| | | | | |
|---|---|---|---|---|
| WW 8238 C,L | 13 | 2618 | Indet. conodonts | 19 |
| WW 8240 C | 15 | 1395 | Spathognathodus 1395 | 2 |
| | | 2618 | Indet. conodonts | 12 |

The fauna in samples 12-15 is Meramec or lower Chester in age.

| | | | | |
|---|---|---|---|---|
| WW 8241 C | 16 | 2718 | Polygnathus 2718 | 6 |
| | | 2618 | Indet. conodonts | 23 |

The fauna in sample 16 is no younger than middle Osage and indicates that the top of this section is disturbed.

H. Richard Lane

HRL:mk2.12

Amoco Production Company

Tulsa, Oklahoma
June 4, 1973

File: Technical Service 5819IR
Locality 6791

MEMORANDUM

Subject: Megafossils from the West Wind River Section 8, T15S, R21E, Phillips Smiths Mountain Quadrangle, Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| ~~8322~~ 8233 | 6791-8 | Quadratia cf. hirsutiformis<br>Flexaria cf. arkansana<br>Leiorhynchus sp. | Mississippian Late Meramec or Chester |
| 8235 | 6791-10 | Cancrinella sp.<br>Acanthopecten ? sp.<br>Crinoid columnals<br>Fenestellid bryozoa | Mississippian Late Meramec or Chester |
| 8236 | 6791-11 | Lithostrotion (Siphonodendron) succinctus | Mississippian Late Meramec or Chester |
| 8238 | 6791-13 | Amplexizaphrentis sp.<br>Indet. tetracoral | Mississippian |
| 8239 | 6791-14 | Sample missing | -- |
| 8240 | 6791-15 | Barren of megafossils | -- |

DISCUSSION

A Late Meramec or Chester age for the Kayak Formation (6791-8) in this section is compatible with other age determinations on this unit in the area.

Thomas L. DeKeyser
Thomas L. DeKeyser

Allen R. Ormiston
Allen R. Ormiston

ARO:er 3.07

Amoco Production Company

Tulsa, Oklahoma
July 12, 1973

File: Technical Service No. 5794IR
Job No. 9780
Locality No. 6651

MEMORANDUM

Subject: Conodonts from the Upper Wind River Section, SW 1/4, NW 1/4, T13S, R20E, Philip Smith Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8659 L | 3 | 3051 | Hindeodella sp. | 1 |
| 8660 FCL | 4 | 21175 | Ancyrodella 21175 | 1 |
| | | 1425 | Polygnathus 1425 | 1 |
| | | 2618 | Indet. conodonts | 7 |

Conodonts in sample 4 are middle to late Frasnian in age and occur in the Ancyrognathus triangularis through Palmatolepis gigas Zones of the Upper Devonian conodont succession.

| | | | | |
|---|---|---|---|---|
| 8663 FCL | 6 | 2618 | Indet. conodonts | 5 |
| 8672 FCL | 15 | 0501 | Barren of conodonts | |
| 8675 FCL | 18 | 0501 | Barren of conodonts | |
| 8679 FCL | 22 | 0501 | Barren of conodonts | |
| 8681 FCL | 24 | 1425 | Polygnathus 1425 | 27 |
| | | 2763 | Icriodus 2763 | 1 |
| | | 2618 | Indet. conodonts | 11 |

T.S. 5794IR
Locality No. 6651



| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| 8683 F | 25 | 1425 | Polygnathus 1425 | 12 |
| | | 2618 | Indet. conodonts | 5 |
| 8686 FCL | 29 | 2805 | Ancyrodella 2805 | 1 |
| | | 2700 | Polygnathus sp. | 5 |
| | | 2618 | Indet. conodonts | 14 |

Conodonts in sample 29 are lower to middle Frasnian in age and known from the Middle P. asymmetricus Zone. This zone occurs in the Christina through Moberly Members of the Waterways Formation in Alberta.

H. Richard Lane

HRL:skw 28.07

Amoco Production Company
Tulsa, Oklahoma
Research Center

September 22, 1972

Re: Megafossils from the Upper Wind River Section, SW NW, T13S, R20E, Philip Smith Mtns. Quad., Alaska

File: Technical Service No. 5794IR
Locality No. 6651

MEMORANDUM

Fossils from the reefal Smoke Creek Member are described in descending order. The lowest sample is from the underlying Hunt Fork shales.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| UW 8659 | 6651-3 | No identifiable megafossils | - |
| UW 8660 | 6651-4 | Coactilium sp.<br>Girvanella sp.<br>Euryamphipora<br>Thamnopora<br>indet. gastropods<br>indet. brachiopods<br>Parathurammina? sp.<br>Nanicella sp. | Upper Devonian<br>Frasnian |

An oncolite bed. Clasts of Thamnopora encrusted by Euryamphipora serve as nuclei which have algal coats of Coactilium and Girvanella. Rock was deposited in shallow, agitated water. Identifications of foraminifers and algae are by D. F. Toomey (see memo of July 25, 1972).

| | | | |
|---|---|---|---|
| UW 8662 | 6651-5 | Trupetostroma? sp. | Devonian |

A stromatoporoid bindstone with a pelmicrite matrix.

| | | | |
|---|---|---|---|
| UW 8663 | 6651-6 | Amphipora sp.<br>Thamnopora sp.<br>Desquamatia sp.<br>indet. laminar stromatoporoid | Upper Devonian |

An Amphipora bafflestone with packstone matrix, transitional to a bindstone.

| | | | |
|---|---|---|---|
| UW 8664 | 6651-7 | Thamnopora sp.<br>Euryamphipora sp.<br>Charactophyllum sp.<br>Spinatrypa sp. | Upper Devonian<br>mid-Frasnian |

A Thamnopora-stromat[illegible]

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| UW 8665 | 6651-8 | Stachyodes cf. verticillata<br>indet. laminar stromatoporoid | Upper Devonian<br>mid-Frasnian |

A complex bindstone with two generations of overgrowth.

| | | | |
|---|---|---|---|
| UW 8666 | 6651-9 | Stachyodes verticillata<br>Syringostroma sp. | Upper Devonian<br>mid-Frasnian |

A stromatoporoid bindstone with complex overgrowths.

| | | | |
|---|---|---|---|
| UW 8667 | 6651-10 | Stromatoporella sp. | Devonian |

A stromatoporoid framestone.

| | | | |
|---|---|---|---|
| UW 8668 | 6651-11 | Trupetostroma sp. | Upper Devonian |

A stromatoporoid framestone.

| | | | |
|---|---|---|---|
| UW 8669 | 6651-12 | Syringostroma? sp.<br>Stachyodes sp. | Upper Devonian |

A stromatoporoid framestone with idiostromatids.

| | | | |
|---|---|---|---|
| UW 8670 | 6651-13 | Atelodictyon sp.<br>Stachyodes cf. costulata<br>Amphipora sp.<br>Thamnopora sp.<br>indet. gastropods | Upper Devonian<br>mid-Frasnian |

A stromatoporoid floatstone and bafflestone.

| | | | |
|---|---|---|---|
| UW 8671 | 6651-14 | Syringostroma? sp.<br>Stachyodes sp. | Upper Devonian<br>mid-Frasnian |

A stromatoporoid framestone.

| | | | |
|---|---|---|---|
| UW 8672 | 6651-15 | Clathrocoilona sp.<br>Amphipora sp.<br>Stachyodes sp. | Upper Devonian<br>mid-Frasnian |

An Amphipora-Stachyodes floatstone gradational to a stromatoporoid bindstone.

| | | | |
|---|---|---|---|
| UW 8673 | 6651-16 | indet. laminar stromatoporoid | - |

A stromatoporoid framestone.

| | | | |
|---|---|---|---|
| UW 8674 | 6651-17 | Syringostroma sp.<br>crinoid columnals | Upper Devonian |

A stromatoporoid framestone with pockets of crinoidal grainstone.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| UW 8675 | 6651-18 | Anostylostroma cf. phricum<br>Stachyodes sp.<br>Amphipora sp.<br>indet. laminar stromatoporoid<br>indet. pelecypod | Upper Devonian<br>mid-Frasnian |

Rock consists of a stromatoporoid framestone (Anostylostroma) and associated Stachyodes-Amphipora bindstone.

| | | | |
|---|---|---|---|
| UW 8676 | 6651-19 | Clathrocoilona cf. inconstans | Upper Devonian<br>mid-Frasnian |

A stromatoporoid framestone with calcite-filled growth cavities.

| | | | |
|---|---|---|---|
| UW 8677 | 6651-20 | Euryamphipora sp.<br>Stachyodes sp.<br>indet. stromatoporoid<br>algae? | Upper Devonian<br>mid-Frasnian |

A stromatoporoid-algal? bindstone.

| | | | |
|---|---|---|---|
| UW 8678 | 6651-21 | Clathrocoilona sp.<br>indet. laminar stromatoporoids | Upper Devonian |

A stromatoporoid framestone with minor packstone matrix.

| | | | |
|---|---|---|---|
| UW 8679 | 6651-22 | Clathrocoilona sp.<br>Stictostroma? sp.<br>Orecopia sp.<br>indet. brachiopods | Upper Devonian |

A stromatoporoid floatstone with crinoidal grainstone matrix.

| | | | |
|---|---|---|---|
| UW 8680 | 6651-23 | indet. massive stromatoporoid | - |

A stromatoporoid framestone.

| | | | |
|---|---|---|---|
| UW 8681 | 6651024 | Actinostroma cf. clathratum<br>Clathrocoilona sp.<br>Orecopia sp.<br>Gypidula cornuta<br>Schizophoria cf. lata<br>Desquamatia sp.<br>Athyris sp.<br>Melocrinites cf. whittakeri | Upper Devonian<br>mid-Frasnian |

Rock is a stromatoporoidal, crinoidal calcarenite with layers of bindstone.

| | | | |
|---|---|---|---|
| UW 8682 | 6651-25 | Clathrocoilona cf. inconstans<br>indet. ostracodes | Upper Devonian<br>mid-Frasnian |

Rock is a stromatoporoid framest[illegible].

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| UW 8683 | 6651-26 | Phillipsastraea sp.<br>indet. massive stromatoporoid | Upper Devonian<br>mid-Frasnian |

A coral-stromatoporoid bindstone.

| | | | |
|---|---|---|---|
| UW 8684 | 6651-27 | Thamnopora sp.<br>indet. laminar stromatoporoids | Devonian |

A laminar stromatoporoid bindstone.

| | | | |
|---|---|---|---|
| UW 8685 | 6651-28 | Thamnopora sp.<br>indet. laminar stromatoporoids<br>crinoid columnals | Devonian |

A stromatoporoid-Thamnopora bindstone, packstone matrix.

| | | | |
|---|---|---|---|
| UW 8686 | 6651-29 | indet. stromatoporoids<br>Carinatina sp.<br>crinoid columnals<br>conodonts | Devonian |

A crinoidal packstone with stromatoporoid debris and brachiopods.

| | | | |
|---|---|---|---|
| UW 8687 | 6651-30 | indet. laminar stromatoporoids<br>crinoid columnals | Devonian |

A crinoidal packstone with thin stromatoporoid stringers inclined up to 15 degrees.

| | | | |
|---|---|---|---|
| UW 8688 | 6651-31 | laminar stromatoporoid cf. Hermatostroma<br>crinoid columnals | Devonian |

A laminar stromatoporoid bindstone with packstone matrix.

| | | | |
|---|---|---|---|
| UW 8689 | 6651-32 | Syringostroma? sp.<br>Thamnopora sp. | Devonian |

A stromatoporoid framestone.

| | | | |
|---|---|---|---|
| UW 8690 | 6651-33 | Alveolites multiperforatus<br>Thamnopora cf. polyforata<br>Stictostroma sp.<br>Tabulophyllum sp.<br>Hypothyridina emmonsi<br>Tectocyrtina sp.<br>Athyris sp. | Upper Devonian<br>mid-Frasnian |

An Alveolites-laminar stromatoporoid bindstone.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| UW 8692 | 6651-35 | Cyrtospirifer sp.<br>indet. tetracoral<br>crinoid columnals | Upper Devonian<br>Frasnian |

Discussion

This stromatoporoid reef can be correlated with $D_3$ or slightly younger Frasnian reefs in Alberta on the presence of Clathrocoilona cf. inconstans, Actinostroma cf. clathratum, Hypothyridina emmonsi and Stachyodes verticillata. The generic identity of many of the stromatoporoids in this reef cannot be determined because of stretching and recrystallization.

Allen R. Ormiston

ARO:skw

Amoco Production Company

Tulsa, Oklahoma

September 13, 1972

Re: Megafossils from the Total Eclipse Section, Lat. 69°00'01"N, Long. 143°20'W., Demarcation Quad., Alaska, Locality 661, Technical Service 5793IR

MEMORANDUM

| Sample No. | Field No. | Taxa | Age |
|---|---|---|---|
| 6661-1 | TE8207 | Reticulariopsis cf reticularioides<br>Astutorhynchia cf proserpina<br>Fuscinipyge? sp.<br>Actinodesma sp.<br>Deceptrix sp.<br>Grammysioidea cf princiana | Devonian Upper Emsian or Eifelian |
| 6661-3 | TE8209 | Reticulariopsis cf reticularioides<br>Deceptrix sp.<br>Gastropods indet. | " |
| 6661-4 | TE8210 | Reticulariopsis cf reticularioides<br>Astutorhynchia cf proserpina<br>Deceptrix sp.<br>Isorthis? sp.<br>Actinodesma sp.<br>indet. clam.<br>Lingula sp. | " |
| 6661-6 | TE8212 | Actinodesma sp.<br>abundant burrow casts | " |

Discussion:

The littoral environment of deposition of this sequence is apparent enough from the sedimentary structures present. Such a setting is further substantiated, however, by the fauna (abundant clams and Lingula) and ichnofossils.

Megafossils permit a dating no finer than Upper Emsian to Eifelian, and no conodonts have been recovered from samples so far processed.

The Total Eclipse Section thus represents a shore-line control point for Upper Emsian - Eifelian time.

Allen R. Ormiston

Allen R. Ormiston

ARO:uw

Amoco Production Company

Tulsa, Oklahoma
July 27, 1973

File: Technical Service No. 5816IR
Locality No. 6790
Job No. 9802

MEMORANDUM

Subject: Conodonts from the Saviukviayak River Section, W 1/2, Sec. 21, T8S, R19E, Philip Smith Mts. Quad., Alaska

## INTRODUCTION

The following samples were processed and examined for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Specimens |
|---|---|---|---|---|
| SR 8225 C,P | 7 | 4909 | Spathognathodus 4909 | 1 |
| | | 1426 | Gnathodus 1426 | 2 |
| | | 2816 | Gnathodus 2816 | 1 |
| | | 2618 | Indet. conodonts | 11 |
| SR 8228 C | 10 | 0501 | Barren of conodonts | |

## DISCUSSION

The fauna in sample 7 is earliest Morrowan (Early Pennsylvanian) in age and occurs widely in the southeastern Brooks Range at the top of the Lisburne.

H. Richard Lane

HRL:skw 4.10

Amoco Production Company

Tulsa, Oklahoma
July 12, 1973

File: Technical Service No. 5813IR
Job No. 9799
Locality No. 6503

MEMORANDUM

Subject: Conodonts from the Angry Bee Creek Section, SW 1/4, Sec. 24, T13S, R21E, Philip Smith Quad., Alaska

## INTRODUCTION

The following sample was processed for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| AB-72-8602 FCL | 38 | 1425 | Polygnathus 1425 | 7 |
| | | 2618 | Indet. conodonts | 16 |

The occurrence of P. 1425 in this sample suggests a Frasnian (Upper Devonian) age for this sample.

H. Richard Lane

HRL:skw 28.06

Amoco Production Company

Tulsa, Oklahoma
June 11, 1973

File: Technical Service No. 5830IR
Locality No. 6803

MEMORANDUM

Subject: Megafossils from the West Crazy Mountains,
Sections 8-17, T10N, R13E, Circle Quad., Alaska

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| WC-8303 | 6803-2 | barren of megafossils | --- |
| WC-8299 | 6803-6 | barren of megafossils | --- |

DISCUSSION

The rocks in these subject samples have been considerably fractured and recrystallized so that any fossil material originally present would no longer be recognizable. No age can be assigned the subject samples.

Thomas L. DeKeyser

Thomas L. DeKeyser

ARO:sd 20.12

Amoco Production Company
Research Center
Tulsa, Oklahoma

October 11, 1972

File: Technical Service No. 5813IR
Locality No. 6503
Job No. 9799

MEMORANDUM

Re: Algae and forams from the Angry Bee Creek Section, Philip Smith Mountains Quadrangle, Alaska

Examination of one thinsection containing obvious foram material prepared from a sample collected at the Angry Bee Creek outcrop section, Philip Smith Mountains Quadrangle, Alaska, yielded the following identifiable remains:

| Sample Number | Description and Identifications |
|---|---|
| AB-8617(23) | Recrystallized stromotoporoid rock with sparse skeletal debris (mainly ostracodes); some pelletoidal/intraclasts and calcispheres; forams very poorly preserved, with parathuramminids the most abundant but difficult to distinguish from calcispheres except where aperatures are apparent; many of the parathuramminids/calcispheres are circumscribed by micrite envelopes; Calcispheres (R-C), ?Vermiporella sp. fragment (VR); Parathurammina spp., most are probably P. of the group P. paracushmani Reitlinger (23), ?Nanicella sp. (1), Bisphaera sp. cf. B. malevkensis Birina (2), Eonodosaria? sp. fragment (1), indet. foram (2). |

The above biota suggests that this collection is of Upper Devonian (Frasnian) age.

Donald F. Toomey

Donald F. Toomey

DFT:skw

Amoco Production Company

Tulsa, Oklahoma
June 18, 1973

File: Technical Service 5820IR
Locality: 6792

MEMORANDUM

Subject: Megafossils from Mississippian on Neruokpuk Section, Section 17, Township 5 South, Range 37 East, Demarcation Quad, Alaska

At this section plant-bearing, nonmarine Mississippian rocks rest directly on Neruokpuk Formation. The plant fossils in the Mississippian rocks are not discussed in this report.

| Field No. | Sample No. | Taxa | Age |
|---|---|---|---|
| 8619 | 6792-1 | Barren of megafossils. Rocks consist of dense cherts and shale interbeds. | - |

Thomas L. DeKeyser
Thomas L. DeKeyser

Allen R. Ormiston
Allen R. Ormiston

ARO:lc 6.3

Amoco Production Company

Tulsa, Oklahoma
July 27, 1973

File: Technical Service No. 5829IR
Locality No. 6802
Job No. 9815

MEMORANDUM

Subject: Conodonts from the Takoma Bluff Section, NW 1/4, Sec. 5, T17N, R20E, Charley River Quad., Alaska.

## INTRODUCTION

The following samples were processed for conodonts and found to be barren.

FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| TB 8715 C | 1 | 0501 | Barren of conodonts |
| TB 8714 C | 2 | 0501 | Barren of conodonts |
| TB 8713 F,C | 3 | 0501 | Barren of conodonts |
| TB 8711 L,C | 5 | 0501 | Barren of conodonts |
| TB 8716 F,C,L | 6 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 4.08

AMOCO

Amoco Production Company

Tulsa, Oklahoma
September 13, 1973

File: Technical Service No. 5820IR
Locality No. 6792
Job No. 9806

MEMORANDUM

Subject: Conodonts from the Mississippian on Neroukpuk Section, SE 1/4 Sec. 17, T15S, R37E, Demarcation Quad., Alaska.

## INTRODUCTION

The following sample was processed and found to be barren of conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification |
|---|---|---|---|
| 8619 FC | 1 | 0501 | Barren of conodonts |

H. Richard Lane

HRL:skw 19.02

AMOCO

Amoco Production Company

Tulsa, Oklahoma
September 5, 1973

File: Technical Service No. 5814IR
Locality No. 6788
Job No. 9800

MEMORANDUM

Subject: Conodonts from the July Ninth Section, Latitude 68° 58' N., Longitude 143° 24' W., Table Mtn. Quad., Alaska

## INTRODUCTION

The following samples were processed for conodonts.

## FAUNA

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| JN 8657 FCL | 1 | 0501 | Barren of conodonts | 2 |
| JN 8655 CFL | 3 | 2869 | Apatognathus 2869 | 1 |
| | | 2826 | Cavusgnathus sp. | 2 |
| | | 2618 | Indet. conodonts | |

Conodonts in sample 3 are late Meramec in age.

| | | | | |
|---|---|---|---|---|
| JN 8653 LCF | 5 | 0501 | Barren of conodonts | |
| JN 8651 LFC | 7 | 0501 | Barren of conodonts | |
| JN 8648 LCF | 10 | 0501 | Barren of conodonts | |
| JN 8647 FC | 11 | 0501 | Barren of conodonts | |
| JN 8645 FCL | 13 | 0501 | Barren of conodonts | |
| JN 8644 LCF | 14 | 2828 | Cavusgnathus 2828 | 1 |
| | | 2741 | Spathognathodus 2741 | 1 |
| | | 2618 | Indet. conodonts | 6 |

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| JN 8643 LFC | 15 | 1395 | Spathognathodus 1395 | 2 |
| | | 2828 | Cavusgnathus 2828 | 2 |
| | | 2826 | Cavusgnathus sp. | 1 |
| | | 2741 | Spathognathodus 2741 | 1 |
| | | 2726 | Spathognathodus sp. | 1 |
| | | 3093 | Ligonodina sp. | 1 |
| | | 2858 | Neoprioniodus sp. | 1 |
| | | 2957 | Synprioniodina sp. | 1 |
| | | 2618 | Indet. conodonts | 17 |
| JN 8642 LFC | 16 | 2828 | Cavusgnathus 2828 | 1 |
| | | 2826 | Cavusgnathus sp. | 1 |
| | | 2618 | Indet. conodont | 1 |
| JN 8641 LFC | 17 | 2828 | Cavusgnathus 2828 | 1 |
| | | 2826 | Cavusgnathus sp. | 1 |
| | | 2618 | Indet. conodont | 1 |
| JN 8640 LFC | 18 | 0501 | Barren of conodonts | |
| JN 8639 LCF | 19 | 2828 | Cavusgnathus 2828 | 11 |
| | | 2827 | Cavusgnathus 2827 | 6 |
| | | 2826 | Cavusgnathus sp. | 12 |
| | | 4489 | Magnilaterella sp. | 4 |
| | | 3093 | Ligonodina sp. | 5 |
| | | 2618 | Indet. conodonts | 57 |
| JN 8637 LCF | 21 | 2828 | Cavusgnathus 2828 | 2 |
| | | 2826 | Cavusgnathus sp. | 37 |
| | | 2618 | Indet. conodonts | 75 |
| JN 8636 LCF | 22 | 2827 | Cavusgnathus 2827 | 3 |
| | | 2826 | Cavusgnathus sp. | 6 |
| | | 2618 | Indet. conodonts | 4 |
| JN 8635 LCF | 23 | 2726 | Spathognathodus sp. | 1 |
| | | 2618 | Indet. conodonts | 2 |
| JN 8632 LC | 26 | 0501 | Barren of conodonts | |
| JN 8631 CLF | 27 | 0501 | Barren of conodonts | |
| JN 8630 CLF | 28 | 2826 | Cavusgnathus sp. | 3 |
| | | 4489 | Magnilaterella sp. | 1 |
| | | 2858 | Neoprioniodus sp. | 1 |
| | | 2618 | Indet. conodonts | 6 |

| Field No. | Sample No. | Taxon No. | Identification | No. Spec. |
|---|---|---|---|---|
| JN 8629 CLF | 29 | 2727 | Spathognathodus 2727 | 1 |
| | | 2828 | Cavusgnathus 2828 | 1 |
| | | 2826 | Cavusgnathus 2826 | 4 |
| | | 2618 | Indet. conodonts | 11 |

The faunas in samples 14-29 are late Meramec to Chester in age.

| | | | | |
|---|---|---|---|---|
| JN 8628 F | 30 | 0501 | Barren of conodonts | |
| JN 8625 LF | 32 | 3076 | Idiognathoides 3076 | 2 |
| | | 2618 | Indet. conodont | 1 |

Conodonts in sample 32 are Lower Pennsylvanian (Morrowan) in age.

H. Richard Lane

HRL:skw 4.01