

An examination and interpretation of megafossil fragments and
microfossils from cuttings of the Arco Alaska Hemi Springs State
No. 1 well

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INTRODUCTION

Composite 180' samples from 80-10,944' were analyzed.

By using composite samples of 180', the faunal content of each sample is so diluted that very few specimens represent the individual species. The top of the ages could be in error by 360' and ages present in thin intervals are probably missed completely.

RESULTS

Depth
80-4410'

Age: Indeterminate.

Paleoenvironment: Indeterminate

Remarks: This interval is barren of microfossils.

4410-5430'

Age: Late Cretaceous.

Paleoenvironment: Probably shelf, inner to middle neritic.

Remarks: The faunal assemblage consists of Haplophragmoides excavata, H. albertensis, Verneuilinoidea fischeri, and Bathysiphon varians.

5,430-6,410'

Age: Indeterminate.

Paleoenvironment: Indeterminate.

Remarks: The rare occurrences of Haplophragmoides rota and H. excavata are assumed to be caved.

6,410'-7,030'

Age: Possibly Campanian/Turonian.

Paleoenvironment: Probably shelf, (outer neritic) to bathyal.

Remarks: The faunal assemblage consists of Inoceramus prisms, species Sethocyrtis spp., Cenosphaera spp., and Dictyomitra multicosata.

7,030'-7,240'

Age: Possibly late early Cretaceous.

Paleoenvironment: Probably shelf (outer neritic) to bathyal.

- Remarks: The fauna in this interval consists only of Lithocampe spp.
- 7,240' -7,450' Age: Aptian/Barrimian.
- Paleoenvironment: Probably middle neritic to bathyal.
- Remarks: The faunal assemblage consists of Gaudryina tailleuri, Haplophragmoides coronis, H. duoflatis, H. goodenoughensis, Trochammina squamata and H. inflatigrandis.
- 7,450' -7,660' Age: Valanginian/Berriasian.
- Paleoenvironment: Shelf probably outer neritic.
- Remarks; The faunal assemblage consists of Ammobaculites fragmentarius, A. alaskensis, Gaudryina milleri, G. tailleuri, Globulina prisca, Glomospira subarctica, Haplophragmoides coronis, H. duoflatis, H. goodenoughensis, H. inflatigrandis, Lenticulina muensteri and Trochammina septagonalis.
- 7,660' -7,840' Age: Possibly Late Jurassic.
- Paleoenvironment: Marine, probably middle to outer neritic.
- Remarks: The faunal assemblage consists of Ammobaculites alaskensis, Anmodiscus cheraospiris, Lenticulina volgensis, Marginulinopsis cephalotes, Oolina apiculata, and Rectoglandulina hamcilis.
- 7,870' -8,470' Age: Possibly Oxfordian/Callovian.
- Paleoenvironment: Open marine, probably middle to outer neritic.
- Remarks: The faunal assemblage consists of Ammobaculite cf A. cobhani, A. barrowensis, Dentalina exilis, Globulina topagorukensis, Haplophragmoides canui, Lenticulina audax, Recurvoides turbinatus, Anmodiscus asperus, Astacolus dubius, Citharina entypomatus, Marginulinopsis phragmites, Nodosaria aphelolocula, Reophax liassica and Lenticulina quenstedti. This fauna has been observed in Oxfordian - Callovian strata.

8,500'-9,310'

Age: Possibly Middle Jurassic.

Paleoenvironment: Marine.

Remarks: Faunal assemblage consists of Tasmanites (megaspores), Ammodiscus siliceus and Bathysiphon anomalocoelia. The fauna present in this interval that was observed uphole is considered caved.

9,340'-9,521'

Age: Triassic.

Paleoenvironment: Marine, probably shelf.

Remarks: Astacolus conudatus, Haplophragmoides cf. H. vetusta, and Montis/Halobia fragments were observed in this interval.

9,550'-10,360'

Age: Permian to Early Triassic (by Micropaleo Consultants, Inc.)

Paleoenvironment: Non-marine to marginal marine (MCI).

Remarks: The fauna observed by MCI includes Ammodiscus spp. and Penna? spp.

10,390'-10,944'

Age: Late Mississippian to Pennsylvanian (by MCI).

Paleoenvironment: Shoaling shelf (MCI).

Remarks: Samples are barren of Foraminifera in washed samples. However, Paleozoic fauna was observed in cuttings (MCI).

to Leskin
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