

Table 2. Depositional environments interpreted from carbonate-microlithofacies and conodont-biofacies data, Wahoo Limestone, eastern Sadlerochit Mountains, northeast Brooks Range, Alaska

[Conodont genera: *Ad.*, *Adetognathus*; *C.?*, *Cavusgnathus?* (includes only *C.?* *tythos*); *Cav.*, *Cavusgnathus*; *De.*, *Declinognathodus*; *Gn.*, *Gnathodus*; *Hi.*, *Hindeodus*; *Idg.*, *Idiogonathodus*; *Idid.*, *Idiogonathoides*; *Idp.*, *Idioproniodus*; *Kld.*, *Kladognathus*; *Rh.*, *Rhachistognathus*; *Vo.*, *Vogelgnathus*; 1?, assignment to taxon uncertain]

Meters (abw) ¹	Carbonate Texture	Abundant (>50%)	Common (10-50%)	Minor (1-10%)	Rare (<1%)	Sorting	Micritization	Abrasion	Depositional Environment (Microlithofacies)	Conodont Genera (Includes only genera having more than 5 specimens in each sample)						Conodont Biofacies	Depositional Environment (Conodont-based)	Univ. Alaska Museum Sample No.
										C.?	Ca.	Gn.	Hi.	Kld	Rh			
MISSISSIPPIAN PART OF THE LOWER MEMBER OF THE WAHOO LIMESTONE CAVUSGNATHID BIOFACIES (NEAR RESTRICTED TO OPEN PLATFORM)																		
13.2	Grainstone	Y	★	☆	○	well	A	moderate	open marine or open platform, high energy	59		8	9	10	cavusgnathid	open platform	AK22M16.2	
22	Grainstone, packstone	YH	★	☆	○	moderate	M	moderate	open marine or open platform, moderate to high energy	1	69	1			cavusgnathid	open platform, near restricted(?)	AK22M25	
32	Grainstone	YH	★	☆	○	moderate	C	moderate	open marine or open platform, moderate to high energy	53	6	9			cavusgnathid	open platform	AK22M35	
42	Grainstone	YH	★	☆	○	moderate	0	strong	open marine or open platform, moderate to high energy	21					cavusgnathid	open platform, near restricted(?)	AK22M45	
47	Grainstone	YH	★	☆	○	moderate	C	moderate	open marine or open platform, moderate to high energy	1	63		14		cavusgnathid	open platform	AK22M50	
50.5	Grainstone	YH	★	☆	○	moderate	C	moderate	open marine, near restricted platform	4	16				cavusgnathid	open platform, near restricted(?)	AK22M53.5	
CAVUSGNATHID-KLADOGNATHID BIOFACIES (OPEN PLATFORM TO OPEN MARINE)																		
0.4	Packstone	YH	★	☆	○	poor	C	moderate	open marine to open platform, moderate energy	108	67	97			cavusgnathid-kladognathid	open platform to open marine	AK22M3.4	
6	Grainstone, packstone	YH	★	☆	○	moderate	M	moderate	open platform, near restricted platform	81	18	30	14		cavusgnathid-kladognathid	open platform to open marine	AK22M9	
7	Grainstone, packstone	Y	★	☆	○	well	C	moderate	open marine near restricted platform	88	15	46	15		cavusgnathid-kladognathid	open platform near open marine	AK22M10	
27	Grainstone	YH	★	☆	○	moderate	C	moderate	open marine or open platform, moderate energy	3	7	5	10		cavusgnathid-kladognathid	open platform to open marine	AK22M30	
37	Grainstone, muddy	★	Y	☆	○	moderate	M	moderate	open marine or open platform, moderate energy	8	6	7			cavusgnathid-kladognathid	open marine, near open platform	AK22M40	
GNATHODID-HINDEODID BIOFACIES (LOW ENERGY, OPEN MARINE)																		
53	Packstone	Y	★	☆	○	poor	C	weak	open marine, low energy		67	32	5		gnathodid-hindeodid	open marine, low energy	AK22M56	

Meters (abw) ¹	Carbonate Texture	Abundant (>50%)	Common (10-50%)	Minor (1-10%)	Rare (<1%)	Sorting	Micritization	Abrasion	Depositional Environment (Microlithofacies)	Conodont Genera (Includes only genera having more than 5 specimens in each sample)						Conodont Biofacies	Depositional Environment (Conodont-based)	Univ. Alaska Museum Sample No.
										Ad.	C.?	De.	Hi.	Rh.				
PENNSYLVANIAN PART OF THE LOWER MEMBER OF THE WAHOO LIMESTONE ADETOGNATHID-RELATED BIOFACIES (NEAR RESTRICTED PLATFORM TO LOW ENERGY, OPEN MARINE)																		
56	Packstone-wackestone, grainstone	●	Y★	☆	○	moderate	C	weak	open to restricted platform	1	15	19	10		declinognathid-rhachistognathid	mixed: near restricted to open platform near shoal	AK22M59	
59	Grainstone, packstone	Y	★	☆	○	moderate	C	moderate	open marine, moderate energy	61	37	58	14		adetognathid-declinognathid	open marine to open platform	AK22M62	
69	Packstone (dolomitic)	Y	★	☆	○	poor	C	strong	open marine, low energy	11	8	18	10		hindeodid-adetognathid	open marine	AK22M72	

Meters (abw) ¹	Carbonate Texture	Abundant (>50%)	Common (10-50%)	Minor (1-10%)	Rare (<1%)	Sorting	Micritization	Abrasion	Depositional Environment (Microlithofacies)	Conodont Genera (Includes only genera having more than 5 specimens in each sample)						Conodont Biofacies	Depositional Environment (Conodont-based)	Univ. Alaska Museum Sample No.
										Ad.	De.	Hi.	Idg.	Idp.	Rh.			
PENNSYLVANIAN UPPER MEMBER OF THE WAHOO LIMESTONE ADETOGNATHID-RHACHISTOGNATHID BIOFACIES(?) (RESTRICTED TO NEAR OPEN PLATFORM)																		
246	Grainstone	●	○	☆	○	very poor	A	strong	restricted to open platform	26		7		23	adetognathid-rhachistognathid	open platform, near shoal	AK22M249	
261.5	Packstone, mudstone	●	★	☆	○	very poor	0		restricted to open platform	15				18	adetognathid-rhachistognathid	restricted to open platform	AK22M264.5a	
ADETOGNATHID-RHACHISTOGNATHID BIOFACIES (OPEN PLATFORM TO NEAR SHOAL AND SHOAL TO TIDAL CHANNEL)																		
84	Grainstone	YH	★	☆	○	moderate	C	moderate	open platform, moderate energy	27				31	adetognathid-rhachistognathid	open platform, near shoal	AK22M87	
113	Grainstone		Y★	☆	○	very well	A	strong	open platform to open marine, high energy, tidal channel(?)	66	7			142	adetognathid-rhachistognathid	shoal to tidal channel	AK22M116	
118	Grainstone	★	Y★	☆	○	poor	C	moderate	open platform, near shoal	11				11	adetognathid-rhachistognathid	open platform, near shoal	AK22M121	
157	Grainstone	○	★	☆	○	moderate	A	strong	shoal, near platform	29				34	adetognathid-rhachistognathid	open platform, near shoal	AK22M160	
203	Grainstone	★	Y★	☆	○	well	A	strong	open platform	12				18	adetognathid-rhachistognathid	open platform, near shoal	AK22M206	
241	Grainstone, packstone		★	☆	○	moderate	C	moderate	open platform	13	5			11	adetognathid-rhachistognathid	open platform, near shoal	AK22M244	
RHACHISTOGNATHID BIOFACIES (NEAR SHOAL TO OPEN PLATFORM)																		
95	Grainstone	○	★	☆	○	well	C	strong	open platform, near shoal or tidal channel	17				41	rhachistognathid	open platform, near shoal	AK22M98	
107	Grainstone, packstone	○	★	☆	○	well	A	strong	open platform, near shoal, high energy	36				147	rhachistognathid	open platform, near shoal	AK22M110	
257.5	Grainstone, packstone	YH	★	☆	○	poor	C	moderate	open platform, moderate energy	7				26	rhachistognathid	open platform	AK22M260.5	
RHACHISTOGNATHID BIOFACIES (SHOAL OR TIDAL CHANNEL)																		
85	Grainstone	YH	★	☆	○	very well	A	strong	open platform or tidal channel, high energy	26				118	rhachistognathid	shoal or tidal channel	AK22M88	
91	Grainstone (dolomitic)	○	★	☆	○	very well	A	strong	open marine, near shoal, or tidal channel, high energy	26				245	rhachistognathid	shoal	AK22M94	
97	Grainstone	★	Y★	☆	○	well	C	strong	shoal and (or) tidal channel	7				19	rhachistognathid	shoal or tidal channel	AK22M100	
102	Grainstone	★	Y★	☆	○	very well	C	strong	tidal channel or open marine, near shoal, high energy	30				130	rhachistognathid	shoal	AK22M105	
122	Grainstone	○	★	☆	○	well	A	strong	open platform, near shoal or tidal channel, high energy	34	8			180	rhachistognathid	shoal or tidal channel	AK22M125	
RHACHISTOGNATHID BIOFACIES (OPEN MARINE, NEAR SHOAL)																		
133.5	Grainstone	Y	★	☆	○	moderate	C	moderate	open marine to open platform, near shoal, moderate energy	36	24			192	rhachistognathid	open marine, near shoal	AK22M136.5	
187	Grainstone, packstone	YH	★	☆	○	moderate	C	weak	open platform or open marine, moderate energy	10	33	19		276	rhachistognathid	open marine, near shoal	AK22M190	
232	Grainstone	YH	★	☆	○	well	C	strong	open marine to open platform, moderate energy	8	7	16		37	rhachistognathid	open marine, near shoal	AK22M235	

Meters (abw) ¹	Carbonate Texture	Abundant (>50%)	Common (10-50%)	Minor (1-10%)	Rare (<1%)	Sorting	Micritization	Abrasion	Depositional Environment (Microlithofacies)	Conodont Genera (Includes only genera having more than 5 specimens in each sample)						Conodont Biofacies	Depositional Environment (Conodont-based)	Univ. Alaska Museum Sample No.
										Ad.	De.	Hi.	Idg.	Idp.	Idid.			
PENNSYLVANIAN UPPER MEMBER OF THE WAHOO LIMESTONE DECLINOGNATHOD-RELATED BIOFACIES (OPEN MARINE, NEAR SHOAL)																		
177	Grainstone	○	★	☆	○	poor	A	moderate	open platform, near shoal, or tidal channel(?)	23				20	declinognathid-rhachistognathid	open marine, shoal apron	AK22M180	
197.5	Grainstone, packstone	Y	★	☆	○	moderate	C	moderate	open marine, near shoal	23				8	declinognathid	open marine, near shoal	AK22M200.5	
207	Grainstone, packstone	Y	★	☆	○	moderate to poor	C	moderate	open marine, near shoal	30	15	8			declinognathid-idiogonathid	open marine	AK22M210	
DECLINOGNATHOD-RELATED BIOFACIES (LOW ENERGY, OPEN PLATFORM AND (OR) OPEN MARINE)																		
142	Packstone (dolomitic)	Y	★	☆	○	poor	0	moderate	open marine to open platform, low energy	21	15			33	rhachistognathid-adetognathid	open platform or open marine	AK22M145	
152	Mudstone (dolomitic)			★	○	not applicable	0	not applicable	open marine, low energy	34					declinognathid	open marine	AK22M155	
162	Packstone, wackestone (dolomitic)	Y★	★	☆	○	poor	C	strong	open marine to open platform, low energy	44	41	6		61	rhachistognathid-adetognathid-declinognathid	open platform or open marine	AK22M165	
178	Packstone	Y★	★	☆	○	poor	C	moderate	open marine, low energy	21					declinognathid	open marine	AK22M181	
217.5	Packstone (dolomitic)	Y★	★	☆	○	poor	C	moderate	open marine, low energy	34	75	12	3		declinognathid-idiogonathid	open marine	AK22M220.5	
237	Packstone	Y★	★	☆	○	poor	0	moderate	open platform to open marine	17	8				declinognathid-idiogonathid	open marine	AK22M240	
250	Wackestone, mudstone (dolomitic)			★	○	not applicable	0	not applicable	open marine, low energy	17					declinognathid	open marine	AK22M253	

CONODONT SAMPLES NOT QUALIFYING FOR BIOFACIES ANALYSIS

Meters (abw) ¹	Carbonate Texture	Abundant (>50%)	Common (10-50%)	Minor (1-10%)	Rare (<1%)	Sorting	Micritization	Abrasion	Depositional Environment (Microlithofacies)	Conodont Genera											Univ. Alaska Museum Sample No.
										Ad.	C.?	Cav	De.	Gn.	Hi.	Idg.	Idp.	Idid	Kld	Rh.	
RESTRICTED PLATFORM																					
76.8	Mudstone (dolomitic)						0		intertidal to restricted; conodonts confirm	1							AK22M79.8				
80.8	Packstone		Y★	☆	○	well	A	strong	restricted platform; conodonts suggest open platform near shoal							9	AK22M83.8				
253	Grainstone, mudstone	●	★	☆	○	very well	A	strong	restricted platform; conodonts suggest open platform near shoal			1				4	AK22M256				
260.5	Grainstone	●				very well	A	strong	restricted platform; conodonts suggest near shoal, open platform	8						9	AK22M263.5				
OPEN TO RESTRICTED PLATFORM																					
55.5	Packstone, bafflestone	★	Y★	☆	○	poor	C	weak	restricted to open platform; conodonts confirm	3	2						AK22M58.5				
65	Grainstone, packstone	YH	★	☆	○	poor to weak	A	moderate to weak	open to restricted platform; conodonts confirm	4	2	1					AK22M68				
74	Wackestone, mudstone, packstone	Y★	★	☆	○	poor	R	weak to moderate	restricted to open platform, low energy; rarity of conodonts suggest restricted to open platform	1							AK22M77				
76.5	packstone	Y	★	☆	○	moderate to well	A	moderate to strong	restricted to open platform; conodonts confirm	1			1			1	AK22M79.5				
212	Grainstone, mudstone	●	★	☆	○	very well	A	strong	restricted to open platform; conodonts suggest restricted to near shoal							7	AK22M215				
OPEN PLATFORM																					
88	Packstone, wackestone (dolomitic)		★	☆	○	poor	M	weak	open platform; conodonts suggest open platform near shoal							14	AK22M91				
137	Grainstone	YH	★	☆	○	moderate	R	weak	open platform; conodonts confirm	3	9	2				7	AK22M140				
167	Grainstone, packstone	Y★	★	☆	○	poor to moderate	C	weak to moderate	open platform; conodonts confirm	1		1?				7	AK22M169.9				
191.5	Grainstone, bafflestone	Y★	★	☆	○	poor	A	moderate	open platform; conodonts confirm	12						5	AK22M194.5				
222	Grainstone	○	★	☆	○	well	C	strong	open platform, behind shoal; 3 indet. conodont fragments								AK22M225				
243	Grainstone, packstone	Y	★	☆	○	poor	A	weak	open platform to open marine	3		5		3		10	AK22M246				
OPEN PLATFORM OR OPEN MARINE TO SHOAL																					
62	Grainstone, packstone	YH	★	☆	○	poor to moderate	A	moderate to weak	open platform near shoal; conodonts confirm	5	2	2	12				AK22M65				
169	Grainstone	YH	★	☆	○	very well to well	A	strong	open marine to shoal; conodonts suggest open marine to shoal	4		7				8	AK22M172				
171	Grainstone	○	★	☆	○	well to very well	A	strong	shoal to open platform; conodonts confirm	4											