UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Availability of petrographic thin-sections from measured sections and wells in Early- to Late-Cretaceous Nanushuk Group rocks, National Petroleum Reserve in Alaska, North Slope, Alaska

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A collection of thin sections from rocks of the Early to Late Cretaceous Nanushuk Group, North Slope, are available for study. The thin sections are from measured sections collected in 1977 and 1978, and from wells drilled within the boundaries of the National Petroleum Reserve in Alaska. The thin sections, which are predominantly sandstones, have been stained with sodium cobaltinitrite for potassium-feldspar and with alizarin red-s for calcite. They have been injected, under vacuum, with blue plastic dye in order to examine the pore space for diagenetic and porosity characteristics. The majority of the samples from measured sections have not undergone petrographic analysis. Details of the stratigraphy and locations of many of the surface samples are discussed in Huffman, Ahlbrandt, Pasternack, Fox and others and in Huffman, Ahlbrandt, Pasternack, Stricker, and others (1981). Discussions of the petrographic characteristics of the sandstones comprising selected measured sections and all of the well samples have been reported in the following publications:

Bartsch-Winkler, Susan, and Huffman, A. Curtis, in preparation, Petrography of the Nanushuk Group and Torok Formation, in Gryc, George, editor, Geology of the National Petroleum Reserve Alaska, U.S. Geological Survey Professional Paper.

Bartsch-Winkler, Susan, 1979, Textural and mineralogical study of some surface and subsurface sandstones from the Nanushuk Group, western North Slope, Alaska, in Ahlbrandt, T. S., ed., Preliminary geologic, petrologic, and paleontologic results of the study of the Nanushuk Group rocks, North Slope, Alaska: U.S. Geol. Survey Circular 794, p. 61-76.

Bartsch-Winkler, Susan, and Huffman, A. C., 1979, Petrographic study of some surface and subsurface sandstone, Nanushuk Group, North Slope, Alaska: Geological Society of America Abstracts with Programs, Cordilleran Section, April, 1979.

Bartsch-Winkler, Susan, and Huffman, A. C., 1980, Compositional variation in Nanushuk Group sandstones, Arctic North Slope, in (Albert, Nairn R. D., and Hudson, Travis, eds.) The United States Geologic Survey in Alaska: Accomplishments during 1980: U.S. Geol. Survey Circular 823-B, p. B -B.

Bartsch-Winkler, Susan, and Huffman, A. Curtis, 1981, Petrography of the Nanushuk Group and Torok Formation, U.S. Geological Survey Open-File report 81-1222.

Collins, F. R., 1958, Test wells, Meade and Kaolak areas, Alaska, with Micropaleontology of Meade test well 1 and Kaolak test well 1, northern Alaska, by H.R. Berqquist: U.S. Geologic Survey Professional Paper 305-F., p. 341-376.

Collins, F. R., 1958, Test wells, Topogoruk arrea, Alaska, with Micropaleontologic study of the Topagoruk test wells, northern Alaska, by H.R. Berqquist: U.S. Geological Survey Professional Paper 305-D, p. 265-316.

A map showing locations of the measured sections and wells from which the samples were collected and a listing of the sample numbers of available thin sections by measured section are shown in figure 1 and table 1, respectively.

The sets of thin sections will be sent out on 3-week loan. Loans will be made in the order that requests are received. The slides may be retained for study by the U.S. Geological Survey for up to three weeks between successive loans. There are no facilities for systematic on-site examination of the slides in Menlo Park, California.

Requests for loans should be directed to:

Irvin L. Tailleur
Office of National Petroleum Reserve in Alaska
U.S. Geological Survey, M.S. 87
345 Middlefield Road.
Menlo Park, CA 94025

TABLE 1. List of sample numbers of available thin sections.

Arc Mountain		
78 AAh	6	AM
	9	
	10	
	13	
	15	
	16	
	17	
	18	
	19	
	20	
	22	
	25	
	26	
	27	
	30	
	31	
	32	
	41	LMU
E Archimedes Ridge		
77 AJF	5	
	10	A,B,C
	12	
	14	
	15	
	16	L,U
	18	
	20	
Awuna River		
78 AAh	1	AW
	7	"
	9	"
	12	"
S. Limb Barabara Syncline		
77 ACh	82	
	83	
	85	
	87	L,U
	89	L,U
	90	L,U
	92	
	93	L,M,U
	97	
	98	L,U
	100	
	101	L,M,U
	104	L,U
	108	L,M,U
	110	
	113	
	116	
	120	L,U
	123	
77 ACh	126	
	127	
	129	
Carbon Creek Anticline		
77 ACh	180	
	183	
	184	
	188	
	195	
	198	
	201	
	202	
	205	
Carbon Creek		
78 AAh	4	CC
	5	"
	6	"
	8	"
	9	"
	10	"
	12	"
	13	"
Coke Basin		
77AAh	80	
	81	
	82	
	83	L
	87	
	88	
	89	
	91	
	92	
	94	A,B,C, Pebble conglomerate
	97	L,M
Corwin Bluff		
77AAh	29	
	31	A,B,C
	33	Cobbles
	39	
	40	
	42	
	43	
	46	
	48	A,B
	76	
	77	
	100	A,B
	101	
	103	
	104	
	105	
	106	
	107	A,B
	110	
	111	
	112	
	113	

TABLE 1 (continued).

Kurupa Anticline

78 ACh 1 KA
4
7
9
11
12
13
15
16
17
18
20
21
23
24
25
26
27
28
29
30
31
32
33
35
37 A,B
40
43
44
46
47
48
49
53
54
55
57
59
61
62
63
64
67
70
71
72
73
74
76
78
79
80
103
78ACh 108
113
116

Lupine River

78 APE 3 LR
5
7
8
11
14 L,U
15
17
18
19
20 L,U
21
22

Marmot Syncline

78 ACh 1 MS
10
14
16
18
20
24, 24A
25
26
28
29
30
31
32
34
35
37
38
39
40
41
43
44
45
46
48
51
52
53
54
56

Niakogen Tongue

78 ARS 1 NT
2
4
5
7

Subsurface Samples

Kaolak 1(937)
Kaolak 1(2453)
Kaolak 1(3187)
Kaolak 1(4078)
Meade 1(2953)
Meade 1(4133)
Oumalik 1(979-984)
Oumalik 1(1606)
Oumalik 1(3260)

Knifeblade 2A(172)
Knifeblade 2A(792)
Knifeblade 2A(1557)
Titaluk 1(539)
Titaluk 1(2675)
Titaluk 1(3004)
Titaluk 1(3431)
Wolf Creek 1(867)
Wolf Creek 3(1553)
Wolf Creek 3(2050)
Wolf Creek 3(2532)
Square Lake (1916)
Square Lake (3036)
Square Lake (3480)
Grandstand (364-69)
Grandstand (862-82)
Gubik 2(3529)
Gubik 2(3822)
Simpson (829)
Topagoruk 1(603)
Topagoruk 1(1204)